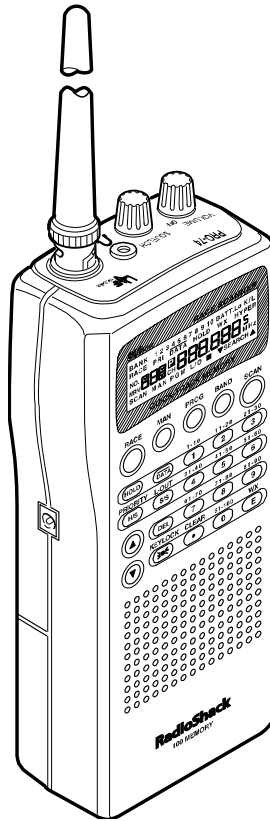


Owner's Manual

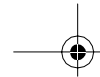
Cat. No. 20-513

PRO-74 100-Channel VHF/UHF/Air/800 MHz Race Scanner

Please read before using this equipment.



RadioShack®



FEATURES



Your new RadioShack PRO-74 100-Channel VHF/UHF/Air/800 MHz Race Scanner lets you in on the action in the pits at the big race or on the streets of your home town. This scanner gives you direct access to more than 30,000 frequencies, including those used by participants and staff at auto races and air shows, by government agencies, police and fire departments, ambulance and transportation services, and amateur radio. You can select up to 100 channels for your scanner to scan, and you can change any of those selections at any time.

We have included a frequency guide with your PRO-74 that includes listings by state for many of the frequencies you can listen to.

Your scanner has these special features:

Quick-Track Memory — lets you store a car's number and any frequencies used by the driver's team into the scanner's channels. You can recall any of those frequencies by entering the car's number.

Two Supplied Antennas — let you select the antenna that best meets your needs. The supplied stub antenna helps your scanner receive strong local signals and makes the scanner easy to carry and use at events, while the supplied flexible antenna provides excellent reception and is designed to help prevent antenna breakage.

Twelve Service Banks — lets you search preset frequencies in separate auto racing, marine, VHF, aircraft, military, ham radio, government, UHF, TV, and 800 MHz banks, to make it easy to locate specific types of calls.

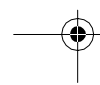
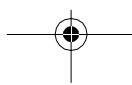
Weather Search — lets you easily search the scanner's 7 preprogrammed weather frequencies.

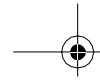
Ten Memory Banks — let you store 10 channels in each of 10 banks to group channels so you can more easily identify calls.

Priority Channels — lets you program one channel in each bank (10 in all) and then have the scanner check it every 2 seconds so you don't miss transmissions on that channel.

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Hypersearch is a trademark used by Tandy Corporation.





Hypersearch™ — lets you set the scanner to search at up to 300 steps per second, to help you quickly find interesting broadcasts. (The normal search speed is 100 steps per second).

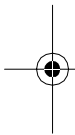
Two-Second Scan Delay — automatically delays scanning for about 2 seconds before moving to another channel, so you can hear more replies.

Lock-Out Function — lets you set your scanner to skip over specified channels.

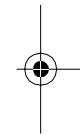
Direct Frequency Search — lets you search all frequencies, starting directly from a specified frequency.

Data Signal Skip — lets you set the scanner to skip non-modulated or data signals during searches. This lets the scanner avoid non-voice signals, making a search faster.

Search Skip — lets you set the scanner to skip up to 20 frequencies you select during searches. This lets the scanner avoid unwanted signals.



Three Power Options — let you power the scanner using alkaline or rechargeable nickel-cadmium batteries, external AC power using an optional AC adapter/charger, or DC power using an optional DC adapter.



Memory Backup — keeps the frequencies stored in memory for up to 3 days if the PRO-74 loses power.

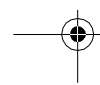
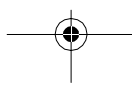
Key Confirmation Tones — the scanner sounds a tone when you perform an operation correctly, and an error tone if you make an invalid entry. You can turn the key confirmation tones on or off.

Display Backlight — makes the scanner easy to read in low-light situations.

Battery Low Alert — warns you when battery power gets low.

Battery Save — saves battery power when the scanner does not detect any transmissions for more than 5 seconds while a channel is manually selected or while you are programming the scanner.

Key Lock — lets you lock the scanner's keys to help prevent accidental changes to the scanner's programming.



Resume Start — the scanner saves its settings when you turn the power off. This returns you to the function you were using if you accidentally turn the scanner off or the batteries are weak.

Triple-Conversion Circuitry — virtually eliminates any interference from IF (intermediate frequency) images, so you hear only the selected frequency.

Your scanner can receive these bands:

Frequency Range (MHz)	Step (kHz)	Transmission
29–29.7	5	10-Meter Ham Band
29.7–50	5	VHF Lo
50–54	5	6-Meter Ham Band
108–136.975	12.5	Aircraft/Air Shows
137–144	5	Auto Racing, Aircraft/Air Shows, Government, Motion Picture/Video Industry, Pro Sports Teams, Radio/TV Remote Broadcast Pickup, Stadiums/Venues
144–148	5	2-Meter Ham Band
148–174	5	VHF Hi
406–450	12.5	70-cm Ham Band and Federal Government
450–470	12.5	UHF Standard Band
470–512	12.5	UHF “T” Band
806–823.9375	12.5	Public Service “800” Band, except cellular band
851–868.9375	12.5	UHF Hi
896.1125–956.000	12.5	UHF Hi

We recommend you record your scanner’s serial number here. The number is on the back panel.

Serial Number: _____



FCC NOTICE

Your scanner might cause radio or TV interference even when it is operating properly. To determine whether your scanner is causing the interference, turn off your scanner. If the interference goes away, your scanner is causing it. Try the following methods to eliminate the interference:

- Move your scanner away from the receiver
- Connect your scanner to an outlet that is on a different electrical circuit from the receiver
- Contact your local RadioShack store for help

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

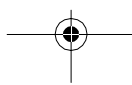
SCANNING LEGALLY

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 it is not legal to listen to. Doing so could subject you to legal penalties. We encourage responsible, legal scanner use.

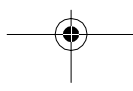
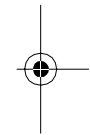
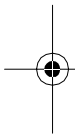


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PREPARATION

POWER SOURCES

You can power your scanner from any of three sources:

- Internal batteries (not supplied)
- Standard AC power using an optional AC adapter
- Vehicle battery power using an optional DC adapter

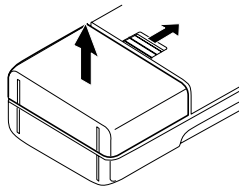
Using Internal Batteries

You can power your scanner using four AA batteries. For the longest operation and best performance, we recommend you use alkaline batteries (such as RadioShack Cat. No. 23-552).

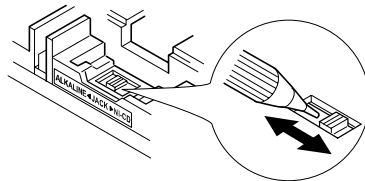
You can also use four rechargeable nickel-cadmium batteries (Cat. No. 23-125). Before you use nickel-cadmium batteries, you must charge them (see "Charging Nickel-Cadmium Batteries" on Page 10).

Follow these steps to install batteries.

1. While pushing up the tab above the battery compartment cover on the back of the scanner, lift open the battery compartment cover to remove it.

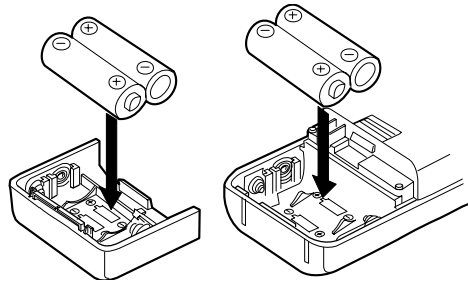


2. If you are installing alkaline batteries, use a pointed object such as a pen to set **ALKALINE ◀ JACK ▶ NI-CD** inside the compartment to **ALKALINE**. Or, if you are installing nickel-cadmium batteries, set it to **NI-CD**.



Warning: Never set **ALKALINE ◀ JACK ▶ NI-CD** to **NI-CD** if you are installing non-rechargeable batteries. Non-rechargeable batteries can get hot or explode if you try to recharge them.

3. Install two batteries in the compartment and two in the cover as indicated by the polarity symbols (+ and -) marked inside those locations.

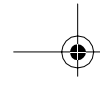


Cautions:

- Use only fresh batteries of the required size and recommended type.
 - Always remove old or weak batteries. Batteries can leak chemicals that destroy electronic circuits.
 - Do not mix old and new batteries, different types of batteries (alkaline or rechargeable), or rechargeable batteries of different capacities.
4. Replace the cover.

If **BATT. Lo** flashes and the scanner beeps every 15 seconds, replace (alkaline) or recharge (rechargeable nickel-cadmium) the batteries.

Caution: Always dispose of old batteries promptly and properly. Do not bury or burn them.



Charging Nickel-Cadmium Batteries

The scanner has a built-in circuit that lets you recharge nickel-cadmium batteries while they are in the scanner. To charge the batteries, set **ALKALINE ◀ JACK ▶ NI-CD** to **NI-CD**, install the nickel-cadmium batteries in the scanner, and connect an external AC or DC adapter to the scanner's **POWER** jack (see "Using Standard AC Power" on Page 11 or "Using Vehicle Battery Power" on Page 12).

Warning: Do not connect either adapter to the scanner if you have non-rechargeable batteries (such as alkaline batteries) installed in the scanner and **ALKALINE ◀ JACK ▶ NI-CD** is set to **NI-CD**, or you are unsure of the switch's position. Non-rechargeable batteries will get hot and can even explode if you try to recharge them.

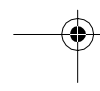
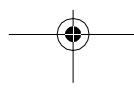
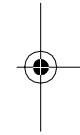
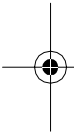
Before you use nickel-cadmium batteries for the first time, charge them at least 24 hours to bring them to a full charge.

Discharged batteries take about 10 to 18 hours to fully recharge. It takes longer to fully charge them if you operate the scanner while you recharge them.

Notes:

- Nickel-cadmium batteries last longer and deliver more power if you occasionally let them fully discharge. To do this, simply use the scanner until it begins beeping every 15 seconds and **BATT Lo** flashes.
- To prevent damaging nickel-cadmium batteries, never charge them in an area where the temperature is above 113°F or below 40°F.

Important: At the end of a rechargeable battery's useful life, it must be recycled or disposed of properly. Contact your local, county, or state hazardous waste management authorities for information on recycling or disposal programs in your area. Some options that might be available are: municipal curb-side collection, drop-off boxes at retailers such as your local RadioShack store, recycling collection centers, and mail-back programs.



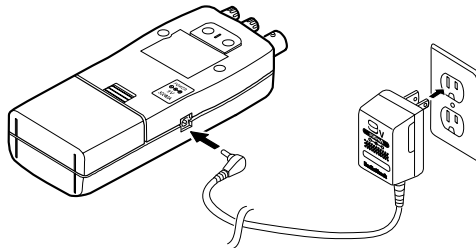
Using Standard AC Power

You can power the scanner from a standard AC outlet using an optional AC adapter (such as Cat. No. 273-1665).

Warning: Do not use an AC adapter's polarized plug with an extension cord, receptacle, or other outlet unless the blades can be fully inserted to prevent blade exposure.

Cautions:

- The recommended AC adapter supplies 9 volts and delivers at least 300 milliamps. It has a barrel plug with a center negative tip that correctly fits the scanner's **POWER** jack. Using an adapter that does not meet these specifications could damage the scanner or the adapter.
 - To protect your scanner and AC adapter, always plug the adapter into the scanner before you plug it into the AC outlet, and always unplug the adapter from the AC outlet before you unplug it from the scanner.
 - If batteries are installed, make sure **ALKALINE ◀ JACK ▶ NI-CD** is set to the correct position (see "Using Internal Batteries" on Page 8).
1. Turn **VOLUME** counterclockwise until it clicks to make sure power is turned off.
 2. Plug the adapter's 3.4 mm outside diameter/1.3 mm inside diameter barrel plug into your scanner's **POWER** jack.



3. Plug the other end of the adapter into a standard AC outlet.

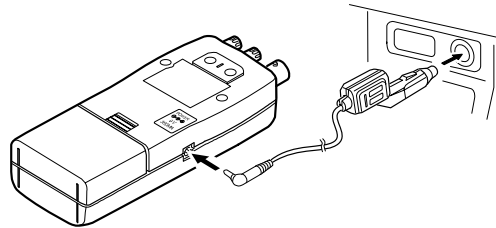
Using Vehicle Battery Power

To power the scanner from your vehicle's cigarette-lighter socket, you need a DC adapter, such as Cat. No. 270-1560.

Cautions:

- The DC adapter must be capable of delivering 9 volts and at least 300 milliamps, its center tip must be set to negative, and its barrel plug must correctly fit the scanner's **POWER** jack. The recommended adapter meets these specifications. Using an adapter that does not meet these specifications could damage the scanner or the adapter.
- To protect your vehicle's electrical system, always plug the adapter into the scanner before you plug it into your vehicle's cigarette-lighter socket. Always unplug the adapter from the vehicle's cigarette-lighter socket before you unplug it from the scanner.
- If batteries are installed, make sure **ALKALINE ◀ JACK ▶ NI-CD** is set to the correct position (see "Using Internal Batteries" on Page 8).

1. Turn **VOLUME** counterclockwise until it clicks to make sure power is turned off.
2. Set the DC adapter's voltage switch to 9V.
3. Connect the adapter's 3.4 mm outer diameter/1.3 mm inner diameter tip to the adapter's cord, matching **TIP** to **-**.
4. Plug the adapter's barrel plug into your scanner's **POWER** jack.



5. Plug the other end of the adapter into your vehicle's cigarette-lighter socket.

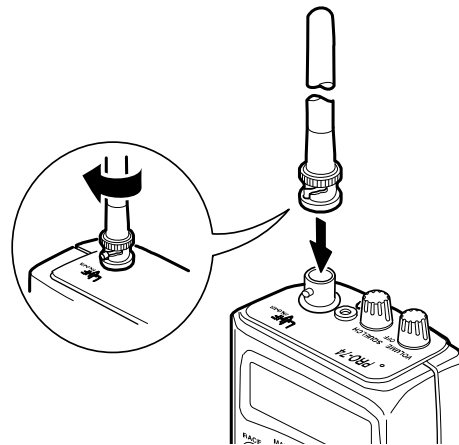
When you finish using the DC adapter, disconnect it from the cigarette-lighter socket, then disconnect it from your scanner.

Note: If the scanner does not operate properly when you connect a DC adapter, unplug the adapter from the cigarette-lighter socket and clean the socket to remove ashes and other debris.

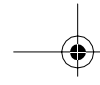
CONNECTING AN ANTENNA

The supplied stub antenna helps your scanner receive most strong transmissions at events and makes the scanner easier to carry and use. The supplied flexible antenna provides slightly better reception and helps your scanner receive strong local signals. You can attach either of the supplied antennas or an optional antenna to the scanner (see "Connecting an Optional Antenna" on Page 14).

Follow these steps to attach either of the supplied antennas to the connector on the top of your scanner.



1. Align the slots around the antenna's connector with the tabs on the scanner's BNC connector.
2. Slide the antenna's connector down over the scanner's connector and rotate the antenna connector's outer ring clockwise until it locks into place.



Connecting an Optional Antenna

The scanner's antenna jack makes it easy to use the scanner with a variety of antennas. Instead of either of the supplied antennas, you can attach a different one, such as an external mobile antenna or outdoor base station antenna. Your local RadioShack store sells a variety of antennas.

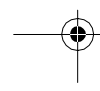
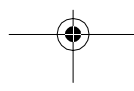
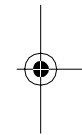
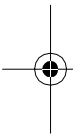
Always use 50-ohm coaxial cable, such as RG-58 or RG-8, to connect an outdoor antenna. For lengths over 50 feet, use RG-8 low-loss dielectric coaxial cable. If your antenna's cable does not have a BNC connector, use a BNC adapter, available at your local RadioShack store.

Follow the installation instructions supplied with the antenna, route the antenna cable to the scanner, then connect it to the antenna jack following the steps in "Connecting an Antenna" on Page 13.


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, contact with 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.

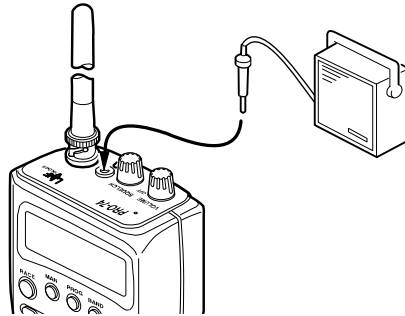
Cautions:

- Do not run the cable over sharp edges or moving parts.
- Do not run the cable next to power cables or other antenna cables.
- Do not run the cable through a vehicle's engine compartment or other areas that produce extreme heat.
- Follow all cautions and warnings included with the antenna.




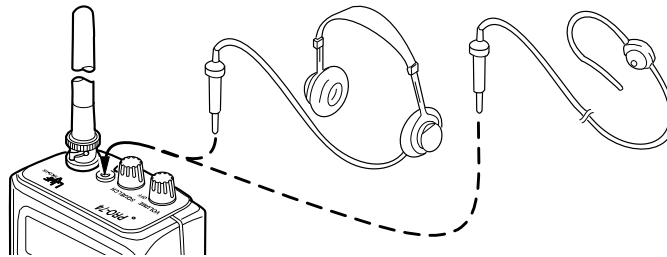
CONNECTING AN EXTENSION SPEAKER

In a noisy area, an extension speaker (such as Cat. No. 21-549), positioned in the right place, might provide more comfortable listening. Plug the speaker cable's 1/8-inch mini-plug into your scanner's  jack.



CONNECTING AN EARPHONE/HEADPHONES

For private listening, you can plug an earphone or headphones with a 1/8-inch mini-plug (such as Cat. No. 33-178 or 20-210) into the  jack on top of your scanner. This automatically disconnects the internal speaker.



Listening Safely

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

- Do not listen at extremely high volume levels. Extended high-volume listening can lead to permanent hearing loss.
- Set the volume to the lowest setting before you begin listening. After you begin listening, adjust the volume to a comfortable level.
- Once you set the volume, do not increase it. Over time, your ears adapt to the volume level, so a volume level that does not cause discomfort might still damage your hearing.

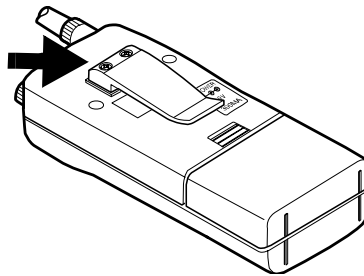
Traffic Safety

Do not use an earphone/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/headphones with your scanner, 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.

ATTACHING THE BELT CLIP

You can attach the supplied belt clip to make your scanner easier to use when you are on the go. Use a Phillips screwdriver and the two supplied screws to attach the belt clip to the scanner. Then slide the belt clip over your belt or waistband.



UNDERSTANDING YOUR SCANNER

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

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

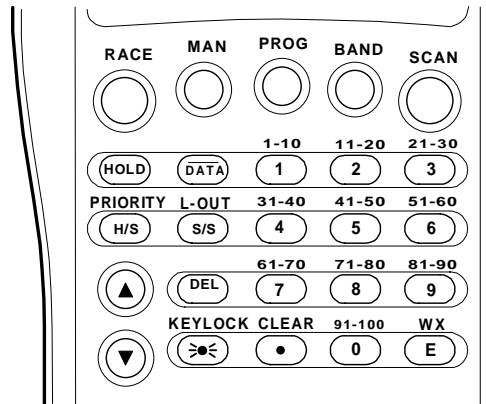
You can also search the **memory banks**, which are preset groups of frequencies categorized by type of service.

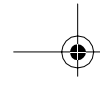
When you find a frequency, you can store it into a programmable memory location called a **channel**, which is grouped with your other channels in a memory bank. You can then **scan** the memory banks to see if there is activity on the frequencies stored there. Each time the scanner finds an active frequency,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

Remember, you *search* frequencies and *scan* channels.

A LOOK AT THE KEYPAD

Your scanner's keys might seem confusing at first, but this information should help you understand each key's function.





RACE — lets you store car numbers and frequencies in the scanner's channels, add and delete frequencies from car numbers, display car numbers, and listen to the channel where a car number is stored.

MAN — stops scanning and lets you directly enter a channel number or frequency.

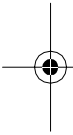
PROG — stores frequencies into channels.

BAND — lets you search service banks.

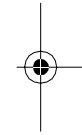
SCAN — scans through stored channels.

HOLD — holds a frequency search.

DATA — turns on or off the data signal skip feature, and lets you sequentially recall channels where car numbers and frequencies are stored during manual operation.



PRIORITY/H/S — sets and turns on and off priority for a particular channel. Also turns Hypersearch on and off.



L-OUT/S/S — lets you lock out a selected channel and skips a specified frequency during a service bank, direct, or weather search.

t and s — enters the search direction (down or up).

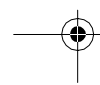
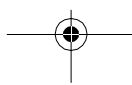
DEL — deletes the frequencies and car numbers stored in the memory.

KEYLOCK/☞●☚ — locks the keypad to prevent accidental program changes. Also turns on the display light for 15 seconds.

Number Keys — each key is marked with a single digit, and has a range of numbers printed above it. The single digits are used to enter a channel or frequency. The range of numbers (31–40, for example) indicates the channels that make up a memory bank.

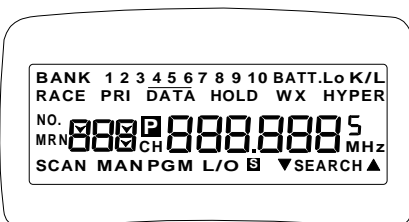
CLEAR/● — erases an incorrect entry or an error, and enters a decimal point.

WX/E — selects a weather channel, and enters the frequency when you store a frequency into a channel.



A LOOK AT THE DISPLAY

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



BANK — appears with numbers (1–10) to show which memory banks are turned on for scanning.

Service bank indicators — appear when you select the scanner's service banks (see "Service Banks" on Page 21).

BATT .Lo — flashes when the batteries are low.

K/L — appears when you lock the keypad.

RACE — appears when you store car numbers and frequencies in the scanner's channels, add and delete frequencies from car numbers, display car numbers, and move to the channel where a car number is stored.

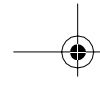
PRI — appears when you set the scanner to scan the priority channels every 2 seconds.

DATA — appears when you turn on the data skip function.

HOLD — appears during a search hold.

WX — appears when you search the preset frequencies in the weather band.

HYPER — appears when you are using Hypersearch during service bank and direct search. However, **HYPER** disappears when the scanner searches any frequency bands other than the 5 kHz step bands.



No. — appears when a car number is displayed

MRN — appears with **CH** when you select the scanner's marine service bank (see "Service Banks" on Page 21).

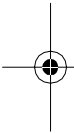
P — appears when you listen to a priority channel.

CH — digits that precede this indicator show which of the 100 channels the scanner is tuned to.

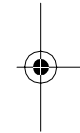
MHz — digits that precede this indicator show which frequency the scanner is tuned to. **5** appears directly above the **MHz** indicator when the displayed frequency is an odd multiple of 12.5 kHz (for frequencies between 406–956 MHz, or 108–136.975 MHz).

SCAN — appears when you scan channels.

MAN — appears when you manually select a channel.



PGM — appears while you store (program) frequencies into the scanner's channels.



L/O — appears when you manually select a locked channel or a skip frequency.

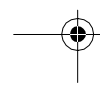
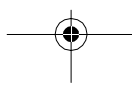
S — appears when the battery save function is active.

t and **s** — indicate the search direction.

SEARCH — appears during a service bank, direct, or weather search.

-d- — appears during a direct search.

Error — appears when you make an invalid entry.



UNDERSTANDING BANKS

Memory Banks

To make it easier to identify and select the channels you want to listen to, the PRO-74's channels are divided into 10 banks of 10 channels each. Use each memory bank to group frequencies, such as the police department, fire department, ambulance services, or aircraft (see "Guide to the Action Bands" on Page 42). For example, the police department might use four frequencies, one for each side of town. You could program the police frequencies starting with Channel 1 (the first channel in bank 1) and program the fire department frequencies starting with Channel 11 (the first channel in bank 2).

Service Banks

You can search for auto racing, marine, VHF, aircraft, military, amateur radio, government, UHF, TV, and 800 MHz transmissions even if you do not know the specific frequencies that are used in your area. And, you can store any of the frequencies you find into channels.

This table shows each service bank's name, what it is used for, and its frequencies.

Name	Typical Usage	Frequency Range (in MHz)
CAr	Auto Racing	150.9950–151.9550 152.8700–153.7250 154.4900–154.6250 460.0000–470.0000
MRN CH	Marine	Listed in "VHF FM Marine Frequencies" on Page 40.
LO	VHF Lo	29.0000–54.0000
AIr	Air	108.0000–136.9750
MIL	Military	137.0000–144.0000

Name	Typical Usage	Frequency Range (in MHz)
HAM	2-Meter Ham	144.0000–148.0000
HI	VHF Hi	148.0000–174.0000
FEd	Federal Government	406.0000–420.0000
HAM	70-Centimeter Ham	420.0000–450.0000
UHF	UHF	450.0000–470.0000
TV	TV	470.0000–512.0000
800	800 MHz	806.0000–823.9375 851.0000–868.9375 896.1125–956.0000

Your scanner also has 7 preprogrammed weather frequencies.

For example, if you wanted to search for transmissions between a driver and that driver's pit crew at an auto race, you could search only the service bank where you are most likely to hear the transmissions (**CAr**).

Notes:

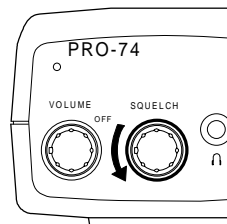
- The frequencies in the scanner's service banks are preset. You cannot change them.
- "Band Allocation" on Page 43 lists frequency ranges and the broadcasters you are likely to hear on those frequencies.

OPERATION

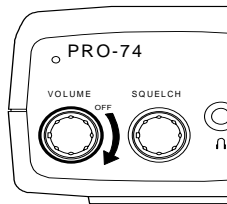
TURNING ON THE SCANNER AND SETTING SQUELCH

Note: Make sure an antenna is connected to the scanner before you turn it on.

1. Turn **SQUELCH** fully counterclockwise.



2. Turn **VOLUME** clockwise until it clicks and you hear a hissing sound.



3. Turn **SQUELCH** clockwise, then leave it set to a point just after the hissing sound stops.

Notes:

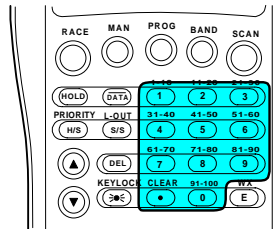
- If you have not stored frequencies into any channels, the scanner does not scan.
- If the scanner picks up unwanted, partial, or very weak transmissions, turn **SQUELCH** clockwise to decrease the scanner's sensitivity to these signals. If you want to listen to a weak or distant station, turn **SQUELCH** counterclockwise.
- If **SQUELCH** is adjusted so you always hear a hissing sound, the scanner does not scan properly.

STORING KNOWN FREQUENCIES INTO CHANNELS

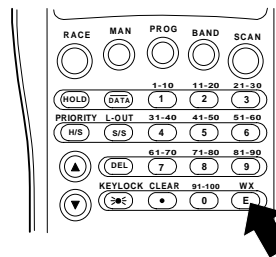
Good references for active frequencies are the RadioShack "Beyond Police Call," "Aeronautical Frequency Directory," and "Maritime Frequency Directory." We update these directories every year, so be sure to get a current copy.

Follow these steps to store a frequency into a channel.

1. Press **MAN**, enter the channel number where you want to store a frequency, then press **PROG**. The channel number appears.
2. Use the number keys and **CLEAR** to enter the frequency (including the decimal point) you want to store.

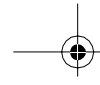


3. Press **E** to store the frequency into the channel.



Notes:

- If you entered an inappropriate frequency in Step 2, **Error** appears and the scanner beeps three times. Simply repeat Steps 2 and 3.



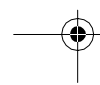
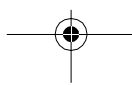
-
- Your scanner automatically rounds the entered frequency to the nearest valid frequency. For example, if you enter a frequency of 151.473, your scanner accepts it as 151.475.
 - Your scanner automatically delays scanning for 2 seconds after a transmission ends before it proceeds to the next channel.
4. To program the next channel in sequence, press **PROG** and repeat Steps 2 and 3.
- Note:** If you previously stored a car number in a channel (see “Storing a Car Number and Frequency” on Page 31), the scanner clears the number when you store a new frequency into a channel.

FINDING AND STORING ACTIVE FREQUENCIES

Searching the Service Banks

Your scanner contains groups of preset frequencies called service banks. Each service bank is associated with a specific activity (see “Service Banks” on Page 21). You can search for auto racing, marine, VHF, aircraft, military, amateur radio, government, UHF, TV, and 800 MHz transmissions even if you do not know the specific frequencies that are used in your area.

1. Press **BAND**. A service bank’s name, **SEARCH**, and the frequency search range appear.
Note: The frequency search range does not appear if the **CAR** or **MRN CH** service bank is selected.
2. To select a different service bank, repeatedly press s or t until the desired bank name appears.
3. Press **BAND**. The scanner starts searching the frequencies within that service bank.
Note: To change the search direction, press s or t.
4. When the scanner stops on a transmission, quickly press either:
 - t or s to continue searching
 - **HOLD** to stop searching so you can listen to the transmission. **HOLD** appears.



To release hold and continue searching, press **HOLD** or hold down t or s for more than 1 second.

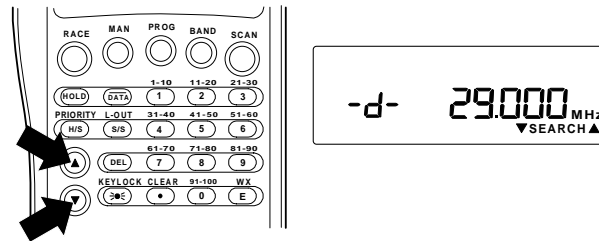
Notes:

- To step through the frequencies while **HOLD** is displayed, press t or s.
- If you tune to a search skip frequency, **L/O** appears (see “Search Skip Memory” on Page 27).
- To store a frequency into a channel while the frequency is paused or held, see “Storing Active Frequencies” on Page 27.

Searching from a Selected Frequency

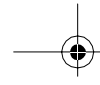
If you do not have a reference to frequencies in your area, you can search for transmissions starting with a frequency you select.

1. Press **MAN**.
2. To start the search from a frequency, enter it using the number keys and **CLEAR/***. Or, to start the search from a frequency stored in a channel, enter the channel number, then press **MAN**.
3. Press t to search downward or s to search upward from the selected frequency. **-d-**, **SEARCH**, and t or s appear.



4. When the scanner stops on a transmission, quickly press either:
 - t or s to continue searching
 - **HOLD** to stop searching so you can listen to the transmission. **HOLD** appears.

To release hold and continue searching, press **HOLD** or hold down t or s for more than 1 second.



Notes:

- To step through the frequencies while **HOLD** is displayed, press **t** or **s**.
- If you tune to a search skip frequency, **L/O** appears (see “Search Skip Memory” on Page 27).
- To store a frequency into a channel while the frequency is paused or held, see “Storing Active Frequencies.”

Storing Active Frequencies

To store an active frequency into a channel, press **PROG** while the frequency is paused or held. The lowest available channel number flashes.

- To enter the frequency into that channel, press **E**.
- To change the channel, enter the desired channel number, then press **PROG**.

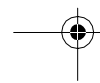
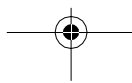
The frequency currently stored in that channel (if any) appears for about 2 seconds, then the new frequency appears. Press **E** to store the new frequency.

Notes:

- If you previously stored a car number and frequency in a channel (see “Storing a Car Number and Frequency” on Page 31), the scanner clears the number and frequency when you store a new frequency into that channel.
- If there are no empty channels, the channel number changes to **1** and **FULL** appears. To clear **FULL** from the display, press **CLEAR**.

SEARCH SKIP MEMORY

You can skip up to 20 specified frequencies during a service bank, direct, or weather search. This lets you avoid unwanted frequencies or ones you have already stored in a channel. You can specify all 20 frequencies to be skipped during one type of search (direct search, for example), or you can divide the frequencies you skip among two or all three search types.



To skip a frequency, press **S/S** when the scanner stops on the frequency during a search. The scanner stores the frequency in memory and automatically resumes the search.

To clear a skip frequency from search skip memory so the scanner can stop on it during a search, follow these steps.

1. Press **HOLD** to hold the search.
2. Press **s** or **t** to select the frequency. **L/O** appears.
3. Press **S/S**. **L/O** disappears from the display.

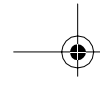
To clear all the search skip frequencies at once, during a search, press **HOLD**, then hold down **S/S** until the scanner beeps twice (about 3 seconds).

Notes:

- If you skip all the frequencies in the weather band, the scanner will not start searching. In this case, the scanner sounds three beeps.
- If you program more than 20 frequencies to skip, each new frequency replaces one you already stored, starting from the first frequency you stored.
- You can manually select a skipped frequency. **L/O** appears on the display when you select a skipped frequency.

MANUALLY SELECTING A CHANNEL

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



Note: You cannot use this procedure to select a car number. See "Viewing Frequencies Associated with a Car Number" on Page 33 to select a car number.

To manually select a channel, press **MAN**, enter the channel number, then press **MAN** again. Or, if your scanner is scanning and stops at the desired channel, press **MAN** once.

Pressing **MAN** additional times causes your scanner to step through the channels. To resume scanning, press **SCAN**.

SCANNING CHANNELS

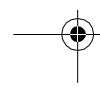
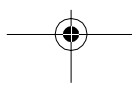
To begin scanning channels, press **SCAN**. The scanner scans through all non-locked channels in all banks that are turned on, from the lowest to the highest channel number. (See "Turning Memory Banks On and Off" and "Locking Out Channels" on Page 35).

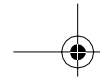
When the scanner finds a transmission, it stops on it. Two seconds after the transmission ends, the scanner resumes scanning.

Note: If **SQUELCH** is adjusted so you always hear a hissing sound, the scanner does not scan properly.

DELETING A FREQUENCY FROM A CHANNEL

1. Press **PROG**.
2. Enter the channel number that contains the frequency you want to delete, then press **PROG**.
3. Press **DEL**. The frequency is deleted.





LISTENING TO WEATHER BROADCASTS

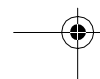
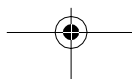
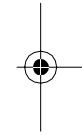
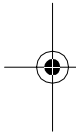
The FCC (Federal Communications Commission) has allocated frequencies for use by the National Oceanic and Atmospheric Administration (NOAA). Regulatory agencies in other countries have also allocated frequencies for use by their weather reporting authorities.

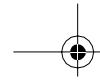
Your local weather reporting authority broadcasts your local forecast and regional weather information on one or more of these frequencies. If your scanner is within a weather reporting authority's broadcast range, you can scan these frequencies.

Your scanner has 7 weather service frequencies preprogrammed. See "National Weather Frequencies" on Page 40 for a list of these frequencies.

To hear your local forecast and regional weather information, simply press **WX**. Your scanner scans through the weather frequencies. Your scanner should stop within a few seconds on your local weather broadcast.

To manually tune to a specific preprogrammed weather frequency, press **WX**, then **HOLD**. Repeatedly press **s** or **t** to move forward or backward through the frequencies.



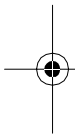


USING THE PRO-74 AT THE RACES

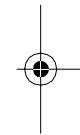


The PRO-74 is specially designed to help you listen to communications at auto races. Drivers and their pit crews and corner watchers, pace car drivers, security officers, emergency personnel, track officials, and representatives of governing organizations such as NASCAR, SCCA, and NHRA all use radios to communicate with each other during a race. You might also hear transmissions from the news media and reporters, local police departments, and paramedics and doctors at the local hospital. You can even listen to broadcasts by parking lot employees at the track, so you can find the best possible parking place when you arrive.

The scanner's quick-track memory lets you store a car number and frequency in each of the scanner's channels, associate one or more frequencies stored in channels with a car number, and recall any frequencies associated with that car number by entering the number. You can store one car number by itself, one car number and frequency, or one frequency by itself in each channel (for up to 100 car numbers and frequencies).



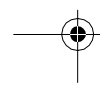
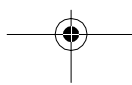
For example, if you want to listen to communications between the driver of car number 24 and that driver's pit crew, find all the frequencies used by the driver's team by using the steps in "Searching the Service Banks" on Page 25, using the supplied frequency guide, "Searching from a Selected Frequency" on Page 26, or using frequencies you already know, then store a car number and the frequencies associated with that car number in the scanner's channels. Then, you can display the car number as you scan those frequencies by using the information in "Scanning by Car Number" on Page 33.

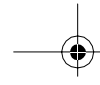


STORING A CAR NUMBER AND FREQUENCY

You can store a car number and frequency in each of the scanner's channels, and you can recall any frequencies associated with the car number by entering the number. You can store one car number in each channel (for up to 100 car numbers).

Note: After you store a car number and a frequency, you can store additional frequencies then associate those frequencies with the same car number. See "Adding Frequencies to a Car Number" on Page 32.



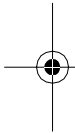


Follow these steps to store a car number and frequency.

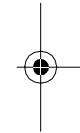
1. Press **MAN** then **RACE**. **RACE** and **Car No?---** appears.
2. Enter the car number. If the number is one or two digits, enter the number, then press **RACE**. If the number is three digits, enter the number only. The car number and **---*---** appear.

Notes:

- If you add one or more leading zeros to a single-digit car number, your scanner recognizes them as different car numbers. For example, you can enter **5** for one car number, **05** for another car number, and **005** for another car number.
 - To clear the display, press **CLEAR/•** before you press **RACE**.
3. Enter the frequency (including the decimal point) you want to associate with the car number by using the number keys and **CLEAR/•**.
 4. Press **E** to store the frequency. The car number and frequency are stored in the first available channel.

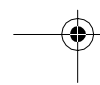
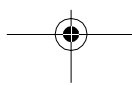


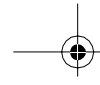
Adding Frequencies to a Car Number



Follow these steps to select a car number then associate additional frequencies with that car number.

1. Press **MAN** then **RACE**. **RACE** and **Car No?---** appears.
2. Enter the car number. If the number is one or two digits, enter the number, then press **RACE**. If the number is three digits, just enter the number. The car number and the first frequency associated with that number appears.
3. Repeatedly press **s** or **t** until **---.---** appears.
4. Enter the frequency (including the decimal point) you want to associate with the displayed car number by using the number keys and **CLEAR/•**.
5. Press **E** to store the frequency. The frequency is associated with the car number you entered.





Viewing Frequencies Associated with a Car Number

After you store a car number and associate frequencies with that number, you can view all frequencies associated with the number.

1. Press **MAN** then **RACE**. **RACE** and **Car No?---** appears.
2. Enter the car number. If the number is one or two digits, enter the number, then press **RACE**. If the number is three digits, just enter the number. One of the frequencies associated with the car number appears.
3. Repeatedly press **s** or **t** to view each of the frequencies associated with the car number you entered. When you have viewed all the frequencies, the display shows **--- .---**.

Deleting a Frequency from a Car Number

1. Recall the car number.
2. Repeatedly press **s** or **t** until the frequency you want to delete appears.
3. Hold down **DEL** for about 1 second. The scanner beeps and the frequency disappears.

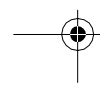
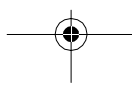
SCANNING BY CAR NUMBER

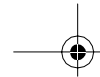
Once you store car numbers into channels, you can set the scanner so it displays the car numbers you assigned to the channels as it scans them.

To scan by car number, repeatedly press **RACE** until **BANK** and **RACE** appear, then press **SCAN**. As the scanner scans channels, the car numbers you stored appear in the order you stored them into their channels, from the lowest to the highest channel.

Notes:

- If no car number is assigned to a channel, **---** appears instead of the car number.
- If **SQUELCH** is adjusted so you always hear a hissing sound, the scanner does not scan properly.

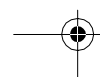
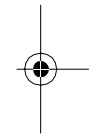
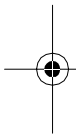


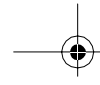


FINDING WHAT CAR NUMBERS ARE IN WHAT CHANNELS

If you are listening to a channel and want to know what car number you are hearing, simply press **RACE** twice. If a car number has been associated with this frequency, the car number and frequency appear. Press **RACE** twice to return to normal channel listening.

To see what car numbers are stored, press **MAN** then **RACE**, then repeatedly press **DATA**. The car numbers (from lowest channel number to highest) show.





SPECIAL FEATURES



TURNING MEMORY BANKS ON AND OFF

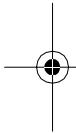
You can turn each memory bank on and off. When you turn off a bank, the scanner does not scan any of the 10 channels in that bank.

While scanning, press the number key that corresponds to the bank you want to turn on or off. When **BANK** appears, the scanner scans all the channels within the displayed banks that are not locked out (see “Locking Out Channels”).

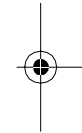
Notes:

- You can manually select any channel within a bank, even if that bank is turned off.
- You cannot turn off all banks. One bank must always be active.

LOCKING OUT CHANNELS



You can increase the scanning speed by locking out channels that have a continuous transmission, such as a weather channel. To lock out a channel, manually select the channel, then press **L-OUT** so **L/O** appears. You can still manually select locked out channels.

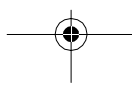


To remove the lockout from a channel, manually select the channel and press **L-OUT** so **L/O** disappears from the display. Or, to unlock all channels or frequencies in the banks that are turned on, press **MAN** to stop scanning, then hold down **L-OUT** until the scanner beeps twice.

Note: If you select a weather frequency by pressing **WX** and then lock out that frequency, the scanner stores the frequency in its search skip memory. Follow the steps under “Search Skip Memory” on Page 27 to remove the lockout from the weather frequency.

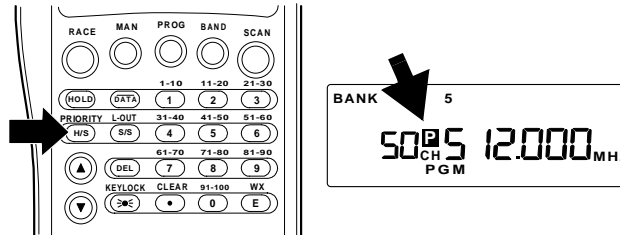
PRIORITY

The priority feature lets you scan through channels and still not miss important or interesting calls on specific channels. You can program one channel in each bank as a priority channel (for up to a total of 10 priority channels). If the priority feature is turned on, as the scanner scans a bank, the scanner checks that bank’s priority channel every 2 seconds for activity.



The scanner automatically designates each bank's first channel as its priority channel. Follow these steps to select a different channel as the priority channel.

1. Press **PROG**.
2. Enter the channel number you want to select as the priority channel, then press **PRIORITY**. **P** appears to the right of the channel number.



3. Repeat Steps 1–2 for the channel in each bank you want to program as a priority channel.

To confirm all priority channel numbers, press **PROG**, then repeatedly press **PRIORITY** to step through the priority channels.

To turn on the priority feature, press **PRIORITY** during scanning. **PRI** appears.

To turn off the priority feature, press **PRIORITY** again. **PRI** disappears.

Notes:

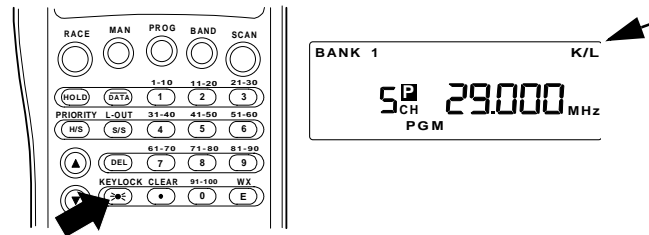
- The priority feature must be turned off to use the data skip feature (see “Skipping Data Signals” on Page 39).

You can lock out priority channels. If you lock out all priority channels, **PRI** disappears and **P** appears when you turn on the priority feature.

USING THE KEYLOCK

Once you set up and store channels into your scanner, you can protect it from accidental changes by turning on the keylock feature. When locked, the only controls that operate are **SCAN**, **MAN**, **KEYLOCK** (with a lock symbol), **VOLUME**, and **SQUELCH**.

To turn on the keylock, hold down **KEYLOCK** until **K/L** appears. To turn it off, hold down **KEYLOCK** until **K/L** disappears.



USING THE DISPLAY BACKLIGHT

You can turn on the display backlight for easy viewing at night. Press (with a lock symbol) to turn it on for 15 seconds. To turn it off before 15 seconds elapse, press the button again.

CHANGING SEARCH SPEEDS

The PRO-74 has two search speeds.

Normal Search	Hypersearch
100 steps/second	300 steps/second

To switch between normal and Hypersearch speeds, during a service bank or direct search, press **H/S**. **HYPERS** appears during Hypersearch.

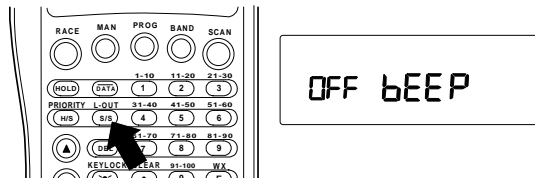
Notes:

- You can use Hypersearch only in the 5 kHz step bands (29–54 MHz and 137–174 MHz).
- Since the marine service bank is not in one of the 5 kHz step bands, you cannot use Hypersearch in the marine service bank.

TURNING THE KEY TONE OFF/ON

Your scanner comes set so each time you press a key, you hear a tone. To turn off the key tone, follow these steps.

1. Turn off the scanner.
2. While holding down **L-OUT/S/S**, turn on the scanner. **OFF bEEP** appears for about 3 seconds.



To turn the key tone back on, repeat these steps so **on bEEP** appears.

TURNING THE BATTERY SAVE FUNCTION OFF/ON

To save battery power when a channel is manually selected or when you are programming the scanner, the scanner has a battery save function which automatically sets the scanner to a standby mode if no button is pressed for 5 seconds when no signal is detected, and sets the scanner back to full power mode when it detects a button press or receives a signal. The battery save function is set to *on* at the factory, but you can change it. **s** appears when the function is active.

Note: If priority is turned on, the battery save function does not work even if a channel is manually selected.

To turn the battery save function off or back on, turn off the scanner, then hold down **PRIORITY/HIS** and turn on the scanner. **OFF SAVE** or **on SAVE** briefly appears.

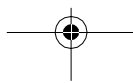
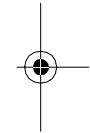
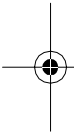


SKIPPING DATA SIGNALS

You can set the scanner so it skips nonmodulated or data signals (such as modem transmissions) during a search or scan.

Note: Since data signals are not generally found in the air band, this feature does not work in the air band.

To turn on the data skip feature, press **DATA**. **DATA** appears. To turn off the feature, press **DATA** again. **DATA** disappears.



A GENERAL GUIDE TO SCANNING

Reception of the frequencies covered by your 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	162.475	162.525
162.425	162.500	162.550
162.450		

Canadian Weather Frequencies

161.650	161.775	163.275
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Note: The Canadian frequencies are not preprogrammed in this scanner, but you can manually search or store them.

VHF FM Marine Frequencies

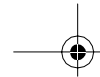
Chan- nel No.	Frequency		Chan- nel No.	Frequency	
	Ship	Shore		Ship	Shore
6	156.3000	156.3000	64	156.2550	156.2550
7	156.3500	156.3500	65	156.2750	156.2750
8	156.4000	156.4000	66	156.3250	156.3250
9	156.4500	156.4500	67	156.3750	156.3750
10	156.5000	156.5000	68	156.4250	156.4250
11	156.5500	156.5500	69	156.4750	156.4750
12	156.6000	156.6000	70	156.5250	156.5250
13	156.6500	156.6500	71	156.5750	156.5750
14	156.7000	156.7000	72	156.6250	156.6250
15	156.7500	156.7500	73	156.6750	156.6750
16	156.8000	156.8000	74	156.7250	156.7250
17	156.8500	156.8500	77	156.8750	156.8750

Chan- nel No.	Frequency		Chan- nel No.	Frequency	
	Ship	Shore		Ship	Shore
19	156.9500	156.9500	79	156.9750	156.9750
20	157.0000	161.6000	80	157.0250	157.0250
21	157.0500	157.0500	81	157.0750	157.0750
22	157.1000	157.1000	82	157.1250	157.1250
23	157.1500	157.1500	83	157.1750	157.1750
24	157.2000	161.8000	84	157.2250	161.8250
25	157.2500	161.8500	85	157.2750	161.8750
26	157.3000	161.9000	86	157.3250	161.9250
27	157.3500	161.9500	87	157.3750	161.9750
28	157.4000	162.0000	88	157.4250	157.4250

Birdie Frequencies

Every scanner has birdie frequencies. Birdies are signals created inside the scanner's receiver. These operating frequencies might interfere with broadcasts 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. The birdie frequencies (in MHz) found in this scanner are:

31.2000	41.6000	52.6000	116.0375
171.2500	410.0000	430.0000	480.4750
489.1875	489.2500	489.3500	489.4500
489.5000	813.4000	814.0000	932.6000
932.8250	938.3750	940.9000	



To find the birdies in your particular scanner, begin by disconnecting the antenna and moving it away from the scanner. Make sure that no other nearby radios or TVs are turned on near the scanner. Use the search function to search every frequency range from its lowest to the highest frequency. 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

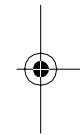
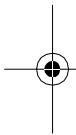
Typical Band Usage

VHF Band

Low Range	29.00–50.00 MHz
6-Meter Amateur	50.00–54.00 MHz
U.S. Government	137.00–144.00 MHz
2-Meter Amateur	144.00–148.00 MHz
High Range	148.00–174.00 MHz

UHF Band

U.S. Government	406.00–420.00 MHz
70-cm Amateur	420.00–450.00 MHz
Low Range	450.00–470.00 MHz
FM-TV Audio Broadcast, Wide Band	470.00–512.00 MHz
Public Service	806.00–823.93 MHz
Conventional Systems	851.00–856.00 MHz
Conventional/Trunked Systems	856.00–861.00 MHz
Trunked Systems	861.00–866.00 MHz
Public Safety	866.00–868.93 MHz
High Range	896.11–902.00 MHz
33-Centimeter Amateur	902.00–928.00 MHz
Private Trunked	935.00–940.00 MHz
General Trunked	940.00–941.00 MHz
Fixed Services	941.00–944.00 MHz
Studio-to-Transmitter Broadcast Links	944.00–952.00 MHz
Private Fixed Services, Paging	952.00–956.00 MHz



Primary Usage

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

VHF Band

Activities	Frequencies
Government, Police, and Fire	153.785–155.980 MHz
Emergency Services	158.730–159.460 MHz
Railroad	160.000–161.900 MHz

UHF Band

Activities	Frequencies
Land-Mobile "Paired" Frequencies	450.000–470.000 MHz
Base Stations	451.025–454.950 MHz
Mobile Units	456.025–459.950 MHz
Repeater Units	460.025–464.975 MHz
Control Stations	465.025–469.975 MHz

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

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 book "Beyond Police Call," available at your local RadioShack store.

Abbreviations	Services
BIFC	Boise (ID) Interagency Fire Cache
BUS	Business
CAP	Civil Air Patrol
CB	Citizens Band
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
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
TELB	.....	Mobile Telephone
	.....	(Aircraft, Radio Common Carrier, Landline Companies)
TELC	.....	Cordless Phones
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

VERY HIGH FREQUENCY (VHF)

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

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
36.250	.....	Oil Spill Cleanup
36.270–36.990	.....	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, TELC
 47.020–47.400 PUB
 47.420 American Red Cross
 47.440–49.580 IND, PUB
 49.610–49.990 MIL, TELC

6-Meter Amateur Band—(50–54 MHz)

50.00–54.00 HAM

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
 152.030–152.240 TELB
 152.270–152.480 IND, TAXI, BUS
 152.510–152.840 TELB
 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
 157.770–158.100 TELB
 158.130–158.460 BUS, IND, OIL, TELM, UTIL
 158.490–158.700 TELB
 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)

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

406.125-419.975	GOVT, USXX
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70-cm Amateur Band (420-450 MHz)

420.000-450.000	HAM
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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
454.025-454.975	TELB
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

**FM-TV Audio Broadcast, UHF Wide Band (470-512 MHz)
(Channels 14 through 69 in 6 MHz steps)**

475.750	Channel 14
481.750	Channel 15
487.750	Channel 16
.....
511.750	Channel 20

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

Conventional Systems Band – Locally Assigned

851.0125–855.9875CSB

Conventional/Trunked Systems Band – Locally Assigned

856.0125–860.9875CTSB

Trunked Systems Band – Locally Assigned

861.0125–865.9875TSB

Public Safety Band – Locally Assigned

866.0125–868.9875PSB

33-Centimeter Amateur Band (902–928 MHz)

902.0000–928.0000HAM

Private Trunked

935.0125–939.9875PTR

General Trunked

940.0125–940.9875GTR

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.

$$1 \text{ MHz (million)} = 1,000 \text{ kHz (thousand)}$$

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

$$9.62 \text{ (MHz)} \times 1000 = 9620 \text{ kHz}$$

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

$$2780 \text{ (kHz)} \div 1000 = 2.780 \text{ MHz}$$

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

$$300 \div 7.1 \text{ MHz} = 42.25 \text{ meters}$$

TROUBLESHOOTING

If you have problems, here are some suggestions that might help. If none do, take your scanner to your local RadioShack store for assistance.

PROBLEM	POSSIBLE CAUSE	REMEDY
Keys do not work or display changes at random.	Undetermined error.	Reset the scanner (see "Resetting the Scanner" on Page 49).
Scanner is on but will not scan.	SQUELCH is not correctly adjusted.	Adjust SQUELCH clockwise.
	Only one channel or no channels are stored.	Store frequencies into more than one channel.
Scanner is totally inoperative.	No power.	Check the batteries or make sure the scanner is plugged into a working AC or DC outlet.
		Be sure the adapter's barrel plug is fully plugged into the POWER jack.
		Recharge the rechargeable batteries or replace the non-rechargeable batteries.
The scanner's display dims or the scanner sounds a tone every 15–30 seconds.	Batteries are not correctly installed.	Make sure the batteries are installed with the proper polarity (+ to + and – to –).
	Batteries are low.	Recharge the rechargeable batteries or replace the non-rechargeable batteries.
Keypad does not work.	The keylock function is activated.	To turn off the keylock, press KEYLOCK until K/L disappears.

PROBLEM	POSSIBLE CAUSE	REMEDY
BATT Lo appears.	The batteries are weak.	Recharge rechargeable batteries, or replace non-rechargeable batteries.
Poor or no reception.	Batteries are weak or dead.	Check the batteries, or make sure the scanner is plugged into a working AC or DC outlet.
Error appears.	Frequency entered incorrectly.	Re-enter the frequency correctly, including the decimal point.
While scanning, the scanner locks on frequencies that have an unclear transmission.	Stored frequencies are the same as "birdie" frequencies.	Avoid storing frequencies listed under "Birdie Frequencies" on Page 41, or only listen to them manually.

RESETTING THE SCANNER

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

Caution: This procedure clears all the information you have stored into the scanner (such as frequencies and car numbers). Before you reset the scanner, try turning it off and on to see if it begins working properly. Reset the scanner only when you are sure it is not working properly.

1. Turn off the scanner.
2. While you hold down the **2** and **9** keys, turn on the scanner.

If you still have problems after resetting the scanner, take it to your local RadioShack store.

CARE AND MAINTENANCE

Your RadioShack PRO-74 100-Channel VHF/UHF/Air/800 MHz Race Scanner is an example of superior design and craftsmanship. The following suggestions will help you care for your scanner so you can enjoy it for years.



Keep the scanner dry. If it gets wet, wipe it dry immediately. Liquids can contain minerals that can corrode the electronic circuits.



Use only batteries of the required size and recommended type. Always remove old and weak batteries. They can leak chemicals that destroy electronic circuits.



Handle the scanner gently and carefully. Dropping it can damage circuit boards and cases and can cause the scanner to work improperly.



Use and store the scanner only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.



Keep the scanner away from dust and dirt, which can cause premature wear of parts.



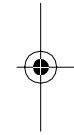
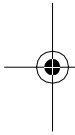
Wipe the scanner with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the scanner.

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



SPECIFICATIONS

Frequency Coverage	29–54 MHz (in 5 kHz steps) 108–136.975 MHz (in 12.5 kHz steps) 137–174 MHz (in 5 kHz steps) 406–512 MHz (in 12.5 kHz steps) 806.0000–823.9375 MHz (in 12.5 kHz steps) 851.0000–868.9375 MHz (in 12.5 kHz steps) 896.1125–956.0000 MHz (in 12.5 kHz steps)
Channels	100
Sensitivity: (FM: 20 dB S/N at 3 kHz deviation) (AM: 20 dB S/N at 60% modulation)	
29–54 MHz	0.5 µV
108–136.975 MHz	1.5 µV
137–174 MHz	0.4 µV
406–512 MHz	0.3 µV
806–956 MHz	0.8 µV
Scan Speed	50 Channels/Sec.
Search Speed	100 Steps/Sec.
Priority Sampling	2 Seconds
Delay Time	2 Seconds
IF Frequencies	380.7 MHz, 10.85 MHz, and 450 kHz
Audio Power	330 mW Maximum
Built-in Speaker	1 ⁷ / ₁₆ Inches (36 mm) 8 Ohm, Dynamic Type
Maximum Current Drain	160 mA
Power Requirement	4 AA Alkaline Batteries (6.0 VDC), or 4 AA Rechargeable Ni-Cd Batteries (4.8 VDC), or AC Adapter (Cat. No. 273-1665), or DC Adapter (Cat. No. 270-1560)
Dimensions (HWD)	6 ¹ / ₂ × 2 ⁵ / ₈ × 1 ¹¹ / ₁₆ Inches (163.9 × 66 × 43.3 mm)
Weight (w/o batteries and antenna)	8.1 oz (228.9 g)



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



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 the limitations on how long an implied warranty lasts or the exclusion 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, Dept. W, 100 Throckmorton St., Suite 600,
Fort Worth, TX 76102

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