PRO-67 Scanner

(200-0512) Operation Faxback Doc. # 38891

TURNING ON THE SCANNER AND SETTING SQUELCH

1. Turn SQUELCH fully clockwise.

2. Turn VOLUME/OFF clockwise until it clicks. The scanner automatically scans the programmed channels from selected banks.

3. Press MAN (Manual) to stop scanning. The display shows the current channel and the channel's frequency (or all zeroes if the channel is empty).

4. Turn VOLUME/OFF clockwise to set the scanner's volume about halfway.

5. Slowly turn SQUELCH counterclockwise until you hear a hissing sound.

6. Adjust VOLUME/OFF to a comfortable listening level.

7. Slowly turn SQUELCH clockwise until the hissing sound stops.

Note:

If you want to listen to a weak or distant station, turn SQUELCH counterclockwise to increase receiver sensitivity. If reception is poor, turn SQUELCH clockwise to decrease sensitivity.

PERMANENTLY STORING KNOWN FREQUENCIES

Good references for active frequencies are Radio Shack's "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 get a current copy.

Follow these steps to store frequencies into channels.

1. Press MAN, enter the channel number where you want to store a frequency, then press PROG. The desired channel number appears on the display.

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.

   Notes:

   If you make a mistake in Step 2, Error appears on the display and the scanner beeps three times. Simply start again from Step 2.

   Your scanner automatically rounds the entered frequency to the nearest valid frequency. For example, if you enter a frequency of 151.475.

   While scanning, press DELAY if you want the scanner to pause 2 seconds after a transmission ends before it proceeds to the next channel.

4. If you want to program the next channel in sequence, just press PROG and repeat Steps 2 and 3.

   Note:

If the scanner loses power, it protects the frequencies stored in memory for about 3 days.

SEARCHING FOR AND TEMPORARILY STORING ACTIVE FREQUENCIES

If you do not have a reference to frequencies in your area, use a limit, direct, or service search to find a transmission. Also see "Guide to the Action Bands," Faxback Doc. # 38892.

Notes:

While using the limit, direct, or service bank search modes, you can press:

DELAY if you want the scanner to pause 2 seconds after a transmission ends before it proceeds to the next frequency.

DATA if you want the scanner to skip data signals (such as fax signals) and search only for audio (voice) signals.

(Note: The data skip function does not work in the AIR frequency band.)

Limit Search

A limit search lets you search within a specific range of frequencies.
-L- appears on the display during a limit search.

1. Press PROG, then LIMIT. Lo and 29.000 MHz appear on the display.

2. Enter the frequency that is the lower limit of the range you want to search (including the decimal point), then press E.

3. Press LIMIT. Hi and 1000.000 MHz appear on the display.

4. Enter the frequency that is the upper limit of the range you want to search (including the decimal point, then press E again.

5. Press Down Arrow to search from the upper to the lower limit or Up Arrow to search from the lower to the upper limit.

6. When the scanner stops on a transmission, quickly press:

   MON to store the displayed frequency into the current monitor memory, or

   Down or Up Arrow to continue searching, or

   0/Hold to stop searching so you can listen to the transmission. -H- appears on the display.

   To release hold and continue searching, hold down 0/HOLD, Down or Up arrow for more than 1 second.

Notes:

To step through the frequencies while -H- appears, press Down or Up Arrow.

If you tune to a search skip frequency, L/O appears on the display.

Direct Search

Direct search lets you search up or down from the currently displayed frequency.

1. Press MAN.

2. Use the number keys and CLEAR/. to enter the frequency (including the decimal point) where you want to start the search, or enter the channel number containing the starting frequency, then press MAN again.

3. Press DOWN Arrow to search downward or UP Arrow to search upward from the selected frequency. -d-, SEARCH, and DOWN or UP Arrow appear on the display.

4. When the scanner stops on a transmission, quickly press:

   ON to store the displayed frequency into the current monitor memory, or

   DOWN or UP Arrow to continue searching, or

   0/HOLD to stop searching so you can listen to the transmission. -h- appears on the display

   To release hold and continue searching, hold down I-/HOLD, DOWN or UP Arrow for more than 1 second.

Notes:

To step through the frequencies while -h- is displayed, press arrow down or up.

If you tune to a search skip frequency, L/O appears on the display.

Service Bank Search

You can search for air, marine, fire, or weather transmissions even if you do not know the specific frequencies being used in your area. The scanner is preprogrammed with all the frequencies allocated to these services. To use this feature, press SVC. The AIR, MARINE, FIRE, and WX indicators flash. Then press the desired service bank key (AIR, MRN, FIRE, or WX). The indicator for the selected service stops flashing and the scanner starts searching the band.

When the scanner stops on a transmission, quickly press:

MON to store the displayed frequency into the current monitor memory,

or

Arrow down or up to continue searching,

or

0/HOLD to stop searching so you can listen to the transmission. -H- appears on the display

To release hold and continue searching, hold down 0/HOLD, arrow down, or arrow up for more than 1 second.

Note:

Because there are many different frequencies allocated to fire and police departments, it takes several minutes to search all these frequencies.

Search Skip Memory

You can skip up to 20 specified frequencies during a limit, direct, or service bank search. This lets you avoid unwanted frequencies or ones you have already stored in a channel.

To skip a frequency, press L-OUT/S/S when the scanner stops on the frequency during a limit, direct, or service search. The scanner stores the frequency in memory and automatically resumes the search.

To clear a single frequency from skip memory so the scanner can stop on it during a limit, direct, or service bank search:

1. Press 0/HOLD to hold the search.

2. Press Down or UP Arrow to select the frequency. L/O appears on the display.

3. Press L-OUT/S/S until L/O disappears form the display.

To clear all the skip frequencies at once, while in the search mode, press O/HOLD, then press and hold L-OUT/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 skip all frequencies within the search range, the scanner sounds three beeps and will not start searching.

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 select a skipped frequency when the scanner is in the hold mode. The scanner displays L/O when you select a skipped frequency.

LISTENING TO THE MONITOR MEMORIES

You can listen to any one of ten monitor memories by pressing MAN, MON, then the number of the monitor memory you want to listen to (0-9).

Note:

To listen to the monitor memories, the priority channel feature must be turned off.

MOVING A FREQUENCY FROM A MONITOR MEMORY TO A CHANNEL

Follow these steps to move a frequency stored in a monitor memory to a CHANNEL.

1. Press MAN. MAN appears on the display.

2. Enter the number for the channel where you want to store the monitor frequency, then press PROG. PGM appears on the display.

3. Press MON and enter the monitor memory number that contains the frequency you want to store.

4. Press E. The scanner stores the frequency into the selected channel.

SCANNING THE STORED CHANNELS

To begin scanning the channels, press SCAN. The scanner scans through all non-locked channels in the activated banks. When the scanner finds a transmission, it stops on it. When the transmission ends, the scanner resumes scanning.

Note:

Set SQUELCH as described in "Turning On the Scanner and Setting SQUELCH" so the scanner scans through channels properly.

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.

Follow these steps to manually select a channel.

1. Press MAN.

2. Enter the CHANNEL number.

3. Press MAN again.

Or, if your scanner is scanning and stops at the desired channel, press MAN one time. (Pressing MAN additional times causes your scanner to step through the channels.) To resume automatic scanning, press SCAN.

SPECIAL FEATURES

DELAY

Many agencies use a two-way radio system that might have a period of 2 or more seconds between a query and a reply. To keep from missing a reply on a specific channel, You can program a 2-second delay into any channel or on frequencies during a frequency search. The scanner continues to monitor the frequency for 2 seconds after the transmission stops before resuming scanning or searching.

To program a 2-second delay:

If the scanner is scanning and stops on an active channel, quickly press DELAY before it continues scanning again.

If the desired channel is not selected, manually select the channel, then press DELAY.

If the scanner is searching, press DELAY while the scanner is searching. DLY appears on the display 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, Press DELAY while the scanner is monitoring the channel or while the scanner is searching. DLY disappears from the display.

TURNING CHANNEL-STORAGE BANKS ON AND OFF

You can turn each channel-storage bank on and off. When you turn off a bank, the scanner does not scan any of the 20 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 on the display, the scanner scans all the channels within the displayed banks that are not locked out.

Notes:

You can select any channel within a bank, even if that bank is turned off.

You cannot turn off all banks. One bank is always 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/S/S so L/O appears on the display. You can manually select locked out channels.

To remove the lock-out from a channel, manually select the channel and press L-OUT/S/S so L/O disappears from the display. You can manually select locked out channels.

To unlock all channels in the banks that are turned on, press MAN to stop scanning, then hold down L-OUT/S/S until the scanner beeps twice.

PRIORITY

The priority feature lets you scan through channels and still not miss important or interesting calls on specific channels. You can program one stored channel in each bank as a priority channel (up to 10 stored channels). As the scanner scans the bank, if the priority feature is turned on, the scanner checks the priority channels 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 for a bank.

1. Press PROG.

2. Enter the channel number you want to select as the priority channel, then press PRIORITY/H/S. P appears on the display 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/H/S to see the priority channels.

   To turn on the priority feature, press PRIORITY H/S during scanning. PRI appears on the display and every 2 seconds the scanner checks the

priority channel in each bank that is turned on, starting from the lowest numbered to the highest-numbered priority channel.

To turn off the priority feature, press PRIORITY/H/S. PRI disappears.

Notes:

The priority feature must be turned off to listen to monitor memories or to use the data skip feature.

You can lock out priority channels. If you lock out all priority channels, the display shows LOC OUt when you turn on the priority feature.

USING THE KEYLOCK

Once you program your scanner, you can protect it from accidental program changes by turning on the keylock feature. When locked, the only controls that operate are SCAN, MAN, KEYLOCK/, VOLUME/OFF, and SQUELCH.

Note:

The keylock does not prevent the scanner from scanning channels.

To turn on the keylock, press and hold KEYLOCK/ until K/L lights on the display. To turn it off, press and hold KEYLOCK/ until K/L disappears.

USING THE DISPLAY BACKLIGHT

You can turn on the display light for easy viewing at night. Press KEY-

LOCK/ to turn on the display light for 15 seconds elapse, press the button again.

CHANGING SEARCH SPEEDS

The PRO-67 has two search speeds.

Normal Search	Hypersearch
100 steps/second	300 steps/second

To switch between the normal and Hypersearch speeds, during limit search or direct search, press PRIORITY/H/S. HYPER appears on the display during a Hypersearch.

Note:

You can use Hypersearch only in the 5 kHz step bands - 29-54 MHz and 137-174 MHz.

TURNING THE KEY TONE OFF/ON

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.

To turn the key tone back on, repeat Steps 1-2 so on bEEP appears.

TURNING THE BATTERY SAVE FUNCTION OFF/ON

To save battery power when a channel is manually selected or when the scanner is in the program mode, the scanner's battery save function automatically sets the scanner to a standby mode if no button is pressed for 5 seconds when the squelch is closed (no signal detected). The battery save function is set to on at the factory. S appears when you turn it on.

Note:

The scanner's battery save function does not work if the priority function is on, 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/H/S and turn on the scanner.

OFF SAVE briefly appears when the battery save function is off.

On SAVE briefly appears when the battery save function is on.

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

Note:

These frequencies are not pre-programmed in the weather service bank but can be manually programmed into a channel.

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. This scanner's birdie frequencies (in MHz) are:

41.6000 150.7700 416.0000 447.2000

114.4000 152.6000 423.8500 457.6000

124.8000 152.6500 423.9000 485.5500

135.2000 155.2550 423.9500 485.6000

136.4125	156.0000	424.0000	485.6500
143.5900	157.9500	426.4000	485.7000
145.6000	166.4000	436.8000	499.2000

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 function range from its lowest to the highest frequency. Occasionally, the searching will stop as if it has found a signal, often without any sound. That is a birdie. Make a list of all the birdies in your scanner for future reference.

(br/km-04/14/1997)

PRO-67 Scanner
(200-0512) Features Faxback Doc. # 38889

Your Radio Shack PRO-67 200-Channel Portable scanner lets you in on all the action! This scanner gives you direct access to more than 34,000 frequencies, including those used by government agencies, police and fire departments, ambulance and transportation services, and amateur radio. You can select up to 200 channels for your scanner to scan, and You can change any of those selections at any time. The secret to your scanner's ability to scan so many frequencies is its custom designed microprocessor - a tiny, built-in computer.

Your scanner also has these features:

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

Limit or Direct Frequency Search - lets you search within a specific range of frequencies or all frequencies, starting directly from a specified frequency.

Service Bank Search - lets you search the frequencies allocated to the air traffic, fire, marine, or weather services, so you can listen to the services you prefer, even if you do not know the frequencies.

Ten Channel-Storage Banks - let you store 20 channels in each of 10 banks to group frequencies so you can easily identify calls.

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

Memory Backup - keeps the channel frequencies

stored in memory for up to
3 days during a power loss.

Lockout Function - keeps channels you select from being scanned.

Priority Channel - checks up to 10 of your most important channels every 2 seconds so you don't miss transmissions on those channels.

Monitor Memories - let you temporarily store up to 10 frequencies you locate during a frequency search.

Search Skip - lets you select up to 20 frequencies for the scanner to skip during a limit, direct, or service search, to avoid unwanted frequencies.

Hypersearch - lets you set the scanner to search at 300 steps/second (in 5 kHz steps only).

Data Signal Skip - skips non-modulated signals or data signals during a limit, direct, or service search, or channel scan.

Key Conformation Tones - the scanner sounds a tone when

you perform an operation correctly, and sounds an error tone if you make an error. You can also turn off the confirmation tones.

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 while the scanner is not detecting any transmission for more than 5 seconds when a channel is manually selected or the scanner is in the program mode.

Keylock - prevents you from accidentally changing the scanner's programming.

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

Serial Number:_____

Your scanner can receive these bands:

29-29.7 MHz (10-Meter Ham Band)

29.7-50 MHz (VHF Lo)

50-54 MHz (6-Meter Ham Band)

108-136.975 MHz (Aircraft)

137-144 MHz (Government)

144-148 MHz (2-Meter Ham Band)

148-174 MHz (VHF Hi)

406-450 MHz (Ham radio and government)

450-470 MHz (UHF Standard)

470-512 MHz (UHF "T" Band)

806-823.9375 MHz (Public Service)

851-868.9375 MHz (UHF Hi)

896.1125-1000.000 MHz (UHF Hi)

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 Radio Shack 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 (either 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 conversation (unless such activity is otherwise illegal). We encourage responsible, legal scanner use.

(br/km-04/14/1997)

PRO-67 Scanner
(200-0512) Preparation Faxback Doc. # 38890

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 Radio Shack Cat. No. 23-552).

You can also use rechargeable nickel-cadmium batteries (Cat. No. 23-125). Before you use nickel-cadmium batteries, you must charge them.

Follow these steps to install batteries.

1. Turn VOLUME/OFF counterclockwise until it clicks, to make sure power is turned off.

2. Push up the tab on the back of the scanner and lift open the battery compartment cover.

3. If you are installing alkaline or general purpose batteries, set ALKALINE <- JACK -> NI-CD to ALKALINE inside the compartment using a pointed object such as a pen. Or, if you are installing nickel-cadmium batteries, set ALKALINE <- JACK -> NI-CD to Ni-CD.

   Warning:

   Never set the battery switch to NI-CD when you have non-rechargeable batteries installed inside the battery compartment. Non-rechargeable batteries can get hot or explode if you try to recharge them.

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

   Cautions:

   Use only fresh batteries of the required size and 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 (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.

5. Replace the cover.

   If BATT Lo flashes on the display and the scanner beeps every 15 seconds, replace all alkaline or general purpose batteries or recharge all rechargeable nickel-cadmium batteries.

   Caution:

   Always dispose of old non-rechargeable 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.

   Warning:

   Do not connect either adapter to the scanner if non-rechargeable batteries (such as standard, extra-life, or alkaline batteries) are 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. The charging time is lengthened when you operate the scanner while recharging nickel-cadmium batteries.

   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 on the display.

To prevent damaging nickel-cadmium batteries, never charge them in an area where the temperature is above 90 degrees F or below 40 degrees 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 curbside collection, drop-off boxes at retailers such as your local Radio Shack store, recycling collection centers, and mail-back programs.

Using AC Power

You can power the scanner from a standard AC outlet using an AC adapter (such as Cat. No. 273-1665, not supplied).

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 the battery switch inside the battery compartment is set to the correct position.

1. Turn VOLUME/OFF 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.

If rechargeable batteries are installed and ALKALINE <- JACK -> NI-CD is set to NI-CD, the adapter powers the scanner and recharges the batteries at the same time.

Using Vehicle Battery Power

You can power the scanner from your vehicle's battery power using an optional DC adapter (such as Cat. No. 270-1560, not supplied).

Cautions:

The recommended DC adapter supplies 9 volts and delivers at least 300 milliamps. It has a barrel plug with a center tip that can be set to negative and 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 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 the battery switch inside the battery compartment is set to the correct position.

1. Turn VOLUME/OFF counterclockwise until it clicks to make sure power is turned off.

2. Set the adapter's voltage switch to 9V.

3. Connect the 3.4 mm outer diameter/1.3 mm inner diameter tip to the adapter 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.

   If you have installed rechargeable batteries and set ALKALINE <- JACK -> NI-CD to NI-CD, the adapter powers the scanner and recharges the batteries at the same time.

   Note:

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

CONNECTING THE ANTENNA

Follow these steps to attach the supplied flexible antenna 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 BNC connector makes it easy to connect a variety of optional antennas (such as an external mobile antenna or outdoor base station antenna). Your local Radio Shack store sells a variety of antennas.

Note:

Always use 50-ohm coaxial cable, such as RG-58 or RG-8, to connect an outdoor antenna. If the distance from the scanner to the antenna is over 50 feet, use RG-8 low-loss dielectric coaxial cable. If your antenna's cable does not have a BNC connector, your local Radio Shack store carries a variety of BNC adapters.

CONNECTING AN EARPHONE/HEADPHONES

For private listening, you can plug an earphone or mono headphones (such as Cat. No. 33-175 or 20-210) into the HEADPHONE 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 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.

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 HEADPHONE jack.

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 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 communication you want to receive, then set the scanner to scan those frequencies.

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 search bands, which are preset ranges of frequencies, or service banks, which are groups of frequencies categorized by type of service.

When you find a frequency, you can store it into a permanent memory location called a channel, which is grouped with your 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.

Another option is to store the frequency into a temporary memory location called a monitor memory until you decide to move it to a channel.

Just keep in mind - 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.

SCAN - scans through the stored channels.

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

PROG - programs frequencies into channels.

MON - stores frequencies into and accesses the 10 monitor memories.

SVC - selects AIR (aircraft), MARINE (watercraft), FIRE (Fire-fighting), and WX (weather) service banks when used with the corresponding number key.

LIMIT - turns on the limit search mode and sets the frequency range.

DATA - turns on or off the data signal skip feature.

PRIORITY/H/S - sets and turns on and off priority for a particular channel; turns on and off the Hypersearch mode.

L-OUT/S/S - lets you lock out a selected channel; skips a specified frequency during a limit, direct or service search.

KEYLOCK/ - locks the keypad to prevent accidental program changes; turns on the display light for 15 seconds.

DELAY - programs a 2-second delay for the selected channel.

Down and Up Arrow - enter the down or up search direction.

Number Keys - each key has a single digit, with a range of numbers printed above it. The single digits refer to the number of a channel or frequency entered. The range of numbers (21-40, for example) indicates the channels that make up a memory bank. Also, number keys 1-4 are used as the air traffic (AIR), marine traffic (MRN), fire department activity (FIRE), and weather reporting (WX) band keys.

CLEAR/. - erases an incorrect entry or an error; enters the decimal point in a frequency.

0/HOLD - enters the number 0; pauses the frequency search.

E - enters the frequency when you program channels.

A LOOK AT THE DISPLAY

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

MON - appears during search modes or when you listen to a monitor memory. The number to the right of this indicator shows the current monitor memory number.

BATT.Lo - flashes when the battery is low.

K/L - appears when you lock the keypad.

BANK - shows which channel-storage banks are turned on for the scan mode.

DATA - appears when you turn on the data skip function. (Note: The Data Skip function does not work in the AIR band).

AIR - appears when you search the preset frequencies in the air traffic search bank.

MARINE - appears when you search the preset frequencies in the marine service search bank.

FIRE - appears when you search the preset frequencies in the fire service search bank.

WX - appears when you search the preset frequencies in the weather service search bank.

HYPER - appears when the scanner is in scan mode or in the Hypersearch mode during limit and direct search. However, the indicator disappears when the scanner searches the frequency bands other than in 5 kHz step bands.

CH - digits that precede this indicator show which of the 200 channels the scanner is tuned to.

P - appears when you listen to a priority channel.

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 MHz and 1 GHz, or 108-136.975 MHz).

SCAN - appears when you scan channels.

MAN - appears when you manually select a channel.

PGM - appears while you program frequencies into the scanner's

channels.

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

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

DLY - appears when you listen to a channel programmed with the delay feature.

S - appears when the battery save function is active.

Down and Up Arrow - appears during a limit, direct, or service search.

-d- - appears during a direct search.

-L- - appears during a limit search.

-h- - appears during a direct search hold.

-H- - appears during a limit search hold or service search hold.

Error - appears when you make an entry error.

UNDERSTANDING BANKS

Service Banks

The scanner is preprogrammed with all the frequencies allocated by the aircraft, marine, fire-fighting, and weather services. This is handy for quickly finding active frequencies instead of searching through an entire band.

Channel Storage Banks

To make it easier to identify and select the channels you want to listen to, channels are divided into 10 banks of 20 channels each. Use each channel-storage bank to group frequencies, such as the police department, fire department, ambulance services, or aircraft (see "Guide to the Action Bands," Faxback Doc. # 38892).

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 21 (the first channel in bank 2).

Monitor Storage Bank

The scanner also has one bank of 10 temporary memory locations. You can

use these monitor memories to temporarily store frequencies while you decide whether to store them into permanent channels. This is handy for quickly storing an active frequency when you search through an entire band.

When you are in the search mode, the 10 numbers at the top of the display indicate the 10 monitor memories. MON appears and the number beside it indicates the currently active monitor memory.

(br/km-04/14/1997)