

You can store up to 90 frequencies into either a permanent memory location called a channel, or a temporary memory location called a monitor memory.

You can store up to 80 channels and up to 10 monitor memories. Your scanner also has eight frequency bands, each covering a specific range of frequencies you can search.

#### Channel-Storage Banks

To make it easier to identify and select the frequencies you want to listen to, the scanner's channels are divided into 10 channel-storage banks (1-10) of 8 channels each. You can use each channel-storage bank to group frequencies, such as those used by the police department, fire department, ambulance services, and aircraft (see "Guide to the Action Bands" on Faxback Doc. # 38288).

For example, there might be three or four police departments in your area, each using several different frequencies. Additionally, there might be other law enforcement agencies such as state police, county sheriffs, or SWAT teams that use their own frequencies.

You could program all law enforcement frequencies starting with Channel 1 (the first channel in Bank 1), then program the fire department, paramedic, and other public safety frequencies starting with Channel 17 (the first channel in Bank 3).

#### Monitor Memories

Monitor memories are temporary storage areas where you can store up to 10 frequencies during a band search or direct search while you decide whether to save them into channels. You can manually select and listen to monitor memories.

#### Frequency Bands

Your scanner has eight frequency bands, each covering a specific range of frequencies. You can search these bands for specific broadcasts by repeatedly pressing BAND until the scanner displays the band you want.

For example, you can search through all frequencies between 29.000 and 54.000 MHz for specific broadcasts by repeatedly pressing BAND until 29-54 appears on the display. The scanner then automatically searches the frequencies in that band.

This table shows the frequency band range displayed by the scanner and the typical usage, frequency coverage, and step rate for each.

DISPLAYED FREQUENCY BAND RANGE	TYPICAL USAGE	FREQUENCY COVERAGE (MHz)	STEP RATE (MHz)
29-54	10-Meter Amateur Radio VHF Lo, 6-Meter Amateur Radio	29.000 to 54.000	5.0
108-136	Aircraft	108.000 to 136.9750	12.5

137-144	Government	137.000 to 144.0000	5.0
144-148	2-Meter Amateur Radio	144.000 to 148.0000	5.0
148-174	VHF Hi	148.000 to 174.0000	5.0
406-450	Government, 70-Centimeter Amateur Radio	406.000 to 450.0000	12.0
450-470	UHF Lo	450.000 to 470.0000	12.5
470-512	UHF "T" Band	470.000 to 512.0000	12.5

NOTES: Your scanner searches at the preset frequency step rate (5 or 12.5 kHz) for each frequency. You cannot change the frequency step rate.

While searching through a frequency band, you might hear a frequency you want to store. You can store any frequency into a monitor memory.

When you store a frequency in a monitor memory, that frequency also remains in the frequency band.

You cannot change or delete any of the frequencies in the frequency bands.

(EB 3/10/97)

Privacy Policy

PRO-2044 Programmable 80-Channel Home Scanner  
(200-0416) Controls/Display

Faxback Doc. # 38284

### Understanding Your Scanner

NOTE: Some of the scanner's keys perform more than one function and are marked with more than one label. The steps in your owner's manual show only the label on the key appropriate to the action being performed.

### A Look at the Front Panel

A quick glance at this section should help you understand each control's function.

VOLUME - Turns the scanner on or off and adjusts the volume.

SQUELCH - Adjusts the scanner's squelch. See "Turning On the Scanner/Setting Volume and Squelch" on Faxback Doc. # 38286.

\ / - / \ - Enters the direction the scanner will search.

HOLD - Holds/resumes a direct or band search.

MONITOR - Stores frequencies into and accesses the 10 monitor memories. See "Monitor Memories" on Faxback Doc. # 38285.

LOCKOUT/S/S - Locks out selected channels during scanning, or skips

(lockout/search/skip) a specified frequency during a band or direct search.

PROGRAM - Programs frequencies into channels.

BAND - Searches a band you select. See "Frequency Bands" on Faxback Doc. # 38285.

DATA - Turns the scanner's data detection feature on or off.

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

PRIORITY/H/S (priority/hyper-search) - Sets and turns on or off priority for a particular channel, or selects the hypersearch speed.

SCAN - Scans through the channels.

MANUAL - Stops scanning to let you listen to a monitor memory or directly enter a channel number.

NUMBER KEYS - Each key has a single-digit label and a range of numbers. Use the digits on the keys to enter the numbers for a channel or a frequency. Use the range of numbers above the key (57-64, for example) to select the channels in a channel-storage band. See "Channel-Storage Banks" on Faxback Doc. # 38285.

CLEAR/. - Clears an incorrect entry, or enters the decimal point when you enter a frequency.

WX/E (weather/enter) - Stores frequencies into channels, or scans the preset weather frequencies.

#### 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 your scanner.

MON Appears with a number (1-10) to the right to show which monitor memory you are listening to.

BANK Appears with a number (1-10) to the right to show which channel-storage banks are turned on for scanning. See "Understanding Banks and Bands" on Faxback Doc. # 38285.

[P] Appears when you tune to a priority channel.

CH Appears with a number (1-80) to the left to show which of the scanner's 80 channels it is tuned to.

MHz Appears with digits to the left to show which frequency your scanner is currently tuned to.

SCAN Appears when you scan channels.

MAN Appears when you manually select a channel.

PGM Appears when you program the scanner.

L/O (lockout) Appears when you skip a channel or frequency, when you manually select a channel or frequency that is locked out or skipped. Or when a frequency is stored in search skip memory during a direct search or band search hold.

PRI Appears when the priority feature is turned on.

DLY Appears when scanning stops at a channel you have programmed for a 2-second delay.

DATA Appears when the data detection feature is turned on.

WX (weather) Appears when the scanner is searching the weather band.

SRCH Appears during band or direct search, or while scanning the weather band. Also blinks in hypersearch mode.

/\ - \/ Indicates the search direction during a search.

-b- Appears instead of the channel number during a band search.

-d- Appears instead of the channel number during a direct search.

-H- Appears during a band search hold.

-h- Appears during a direct search hold.

(EB 3/7/97)

Privacy Policy

PRO-2044 Programmable 80-Channel Home Scanner  
(200-0416)

Features

Faxback Doc. # 38281

Your Radio Shack PRO-2044 Programmable 80-Channel Home Scanner lets you in on all the action! This scanner gives you direct access to over 23,000 exciting frequencies, including those used by police and fire departments, ambulance and transportation services, aircraft communications, government agencies, and amateur radio services. You can select up to 80 channels to scan and you can change your selections at any time.

The scanner's frequency bands let you search specific pre-set ranges of frequencies quickly and easily. The data detection feature lets you prevent the scanner from stopping on data signals, so you can quickly scan for interesting signals.

Your scanner has all these special features:

Hyperscan - lets you scan 50 channels per second.

Hypersearch - lets you set the scanner to search at up to 300 steps per second in frequency bands with 5 kHz steps, to help you quickly find interesting broadcasts.

Weather Band Key - scans seven preprogrammed weather frequencies to keep you informed about current weather conditions.

Ten Channel-Storage Banks - lets you store eight channels in each bank to

group channels so calls are easier to identify.

Ten Monitor Memories - lets you temporarily save 10 frequencies located during a frequency search, so you can decide if you want to move them to permanent channel storage.

Ten Priority Channels - lets you set the scanner to check up to 10-channels every 2 seconds so you do not miss important calls.

Eight Frequency Bands - lets you quickly and easily search preset frequency ranges, so you can find new and unlisted broadcasts.

Band Search - lets you select and search a frequency band.

Direct Search - lets you select up to 20 frequencies for the scanner to skip during a search, so you can search more efficiently.

Search Skip - lets you select up to 20 frequencies for the scanner to skip during a search, so you can search more efficiently.

Data Detection - while scanning or searching, you can set the scanner to detect non-modulated data signals, such as preamble signals for pagers, to keep the scanner from stopping on these frequencies.

Two-Second Channel Scan/Search Delay - lets you set the scanner so it delays scanning or searching for 2 seconds before moving to another channel/frequency, so you can hear more replies.

Key Confirmation Tones - the scanner sounds a tone when you perform an operation correctly, and sounds an error tone if you make an error.

Memory Backup - keeps channel frequencies stored in memory for 3 days or more during a power loss.

Lock-Out Function - keeps channels you select from being scanned, so you can skip over busy channels such as those with a continuous transmission.

Squelch Control - lets you adjust the scanner's sensitivity low enough to receive weak signals or high enough to eliminate receiver noise when not receiving a signal.

Backlit Display - makes it easy to view and change programming information at any time.

AUDIO Jack - lets you connect an amplified external speaker, or an earphone or headphones for private listening.

Supplied Telescoping Antenna - lets you receive strong local signals

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

WARNING: To prevent fire or shock hazard, do not expose this product to rain or moisture.

CAUTION: To reduce the risk of electric shock, do not remove cover or back, No user-serviceable parts inside. Refer servicing to qualified personnel.

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

Serial Number: \_\_\_\_\_

Your PRO-2044 Scanner can receive all of these bands:

29-54 MHz (10-Meter Amateur Radio, VHF Lo, 6-Meter Amateur Radio)  
108-136.9750 MHz (Aircraft)  
137-144 MHz (Government)  
144-148 MHz (2-Meter Amateur Radio)  
148-174 MHz (VHF Hi)  
406-450 MHz (Government, 70-Centimeter Amateur Radio)  
450-470 MHz (UHF Lo)  
470-512 MHz (UHF "T" Band)

Your scanner can also receive these preprogrammed weather channel frequencies:

162.400 MHz  
162.425 MHz  
162.450 MHz  
162.475 MHz  
162.500 MHz  
162.525 MHz  
162.550 MHz

#### FCC Notice

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

Moving your scanner away from the receiver

Connecting your scanner to an outlet that is on a different electrical circuit from the receiver.

Contacting your local Radio Shack store for help.

If you cannot eliminate the interference, the FCC requires that you stop using your scanner.

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

(EB 3/7/97)

Privacy Policy

PRO-2044 Programmable 80-Channel Home Scanner  
(200-0416)

Frequencies

Faxback Doc. # 38289

#### Band Allocation

To help decide which frequency ranges to scan, use the following listing of the

typical services that use the frequencies your scanner receives. These frequencies are subject to change, and might vary from area to area. For a more complete listing, refer to the "Police Call Radio Guide including Fire and Emergency Services", available at your local Radio Shack 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, Busses, Railroad, Other)
TSB	Trunked Systems
TVn	FM-TV Audio Broadcast
USXX	Government Classified
UTIL	Power & Water Utilities
WTHR	Weather

High Frequency (HF) - (3 MHz-30 MHz)

10-Meter Amateur Band (28.0-29.7 MHz)

29.000-29.700 ..... Ham

Very High Frequency (VHF) - (30 MHz-300 MHz)

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

29.700-29.790	IND
29.900-30.550	GOVT, MIL
30.580-31.980	IND, PUB
32.000-32.990	GOVT, MIL
33.020-33.980	BUS, IND, PUB
34.010-34.990	GOVT, MIL
35.020-35.980	BUS, PUB, IND, TELM
36.000-36.230	GOVT, MIL
36.230-36.990	Oil Spill Cleanup, GOVT, MIL
37.020-37.980	PUB, IND
38.000-39.000	GOVT, MIL
39.020-39.980	PUB
40.000-42.000	GOVT, MIL, MARI
42.020-42.940	POL
42.960-43.180	IND
43.220-43.680	TELM, IND, PUB
43.700-44.600	TRAN
44.620-46.580	POL, PUB
46.600-46.990	GOVT, 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
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Aircraft Band (108-136 MHz)

108.000-121.490	AIR
121.500	AIR Emergency
121.510-136.000	AIR

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

137.000-144.00	GOVT, MIL
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2-Meter Amateur Band (144-148 MHz)

144.000-148.000	HAM
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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  
 157.540 ..... 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  
 173.5625-173.58.75 ..... MIL, Medical/Crash Crews  
 173.60-173.9875 ..... GOVT

Ultra High Frequency (UHF) - (300 MHz-3 GHz)

U.S. Government Band (406-450 MHz)

406.125-419.975 ..... GOVT, USXX

70-Centimeter Amateur Band (420-450 MHz)

420.000-450.000 ..... HAM

Low Band (450-470 MHz)

450.050-450.925 ..... RTV  
 451.025-452.025 ..... IND, OIL, TELM, UTIL  
 452.0375-453.00 ..... IND, TAXI, TRAN TOW, NEWS  
 453.0125-454.000 ..... PUB, OIL  
 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 ..... BUD, 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  
 512.000 ..... Channel 20

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

#### Avoiding Image Frequencies

You might discover one of your regular stations on another frequency that is not listed. It might be what is known as an image frequency. For example, you might find a service that regularly uses a frequency of 453.075 also on 474.775.

To see if it is an image, do a little math.

Note the new frequency.	474.775
Double the intermediate frequency of 10.85 MHz (21.700)	
and subtract it from the new frequency.	-21.700
	<hr/>
If the answer is the regular frequency,	453.075
then you have tuned to an image.	

Occasionally, you might get interference on a weak or distant channel from a strong broadcast 21.7 MHz below the tuned frequency. This is rare, and the image signal is usually cleared whenever there is a broadcast on the actual frequency.

#### 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:  
 $9.62 \text{ (MHz)} \times 1,000 = 9620 \text{ kHz.}$

To convert from kHz to MHz, divide the number of kilohertz by 1,000:  
 $2780 \text{ (kHz)} / 1,000 = 2.780 \text{ MHz.}$

To convert MHz to meters, divide 300 by the number of megahertz:  
 $300 / 7.1 \text{ MHz} = 42.25 \text{ meters.}$



a frequency.

3. Press PROGRAM. BANK and the bank number, the selected channel number and CH, PGM, L/O (if the selected channel number is empty), and 000.0000 MHz appear on the display.
4. Using the number keys, enter the frequency you want to store into that channel, including the decimal point.

NOTE: Your scanner automatically rounds the entered frequency up to the closest valid frequency. For example, if you try to enter a frequency of 151.473, your scanner accepts it as 151.475.

5. Press E to store the frequency.

NOTE: If you enter an invalid frequency in Step 4, the scanner displays Error. Press CLEAR, then repeat Steps 4 and 5.

6. To program the next channel in sequence, repeat Steps 3-5. To program another channel (not in sequence), repeat Steps 2-5.

#### Searching for and Temporarily Storing Active Frequencies

You can search for transmissions within any of the scanner's eight frequency bands using either a frequency band or direct search, then temporarily store the frequencies into monitor memories.

#### Band Search

You can select a frequency band and search for transmissions within that band.

NOTE: You can use the scanner's delay feature while using band search. See "Delay" on Faxback Doc. # 38287.

1. Repeatedly press BAND until you see the frequency band you want to search.

The scanner displays SRCH and /\ or \/ and the range for each frequency band, and the number of the current monitor memory blinks on the display. Then the scanner starts to search the frequencies in the band. When the scanner finds a transmission, it stops and displays the frequency's number until the transmission stops, then it starts searching again.

2. To manually search the band, press HOLD after the scanner starts automatically searching the frequencies. The scanner displays -H- (hold), SRCH /\ or \/ SRCH, and a frequency within the band you selected.

Repeatedly press /\ to search from the lower to the upper range, or \/ to search from the upper to the lower range.

Press and hold down /\ or \/ or press HOLD to return to automatic search.

3. When the scanner finds an active frequency, you can do any of the following:

To save the frequency into the current monitor memory, press MONITOR.

To continue searching, press /\ or \/.

To stop searching and listen to the frequency, press HOLD. -H- (hold) appears on the display.

NOTES: You can change the direction of either an automatic or manual search by pressing /\ or \/ once.

If you manually tune to a search skip frequency, the display shows L/O (see "Skipping Frequencies/Channels" on Faxback Doc. # 38387).

#### Direct Search

You can enter a frequency, then search for transmissions above or below that frequency within the frequency bands.

NOTE: You can use the scanner's delay feature while using direct search. See "Delay" on Faxback Doc. # 38287.

1. Press MANUAL.
2. Use the number keys to enter the frequency where you want to start the search. Press . to enter the decimal point.
3. Press /\ or \/ to search up or down from the selected frequency. -d- (direct), SRCH, and /\ or \/ appear on the display, and the next available monitor memory number flashes.

NOTE: If you enter an invalid frequency in Step 2, the scanner displays Error. Press ., then repeat Steps 2 and 3.

4. When the scanner finds an active frequency, you can do any of the following:

To save the frequency into the current monitor memory, press MONITOR.

To continue searching or change the search direction, press /\ or \/.

To stop searching and listen to the frequency, press HOLD. -h- (hold) appears on the display.

To manually step through frequencies one at a time after you stop a search, repeatedly press /\ or \/. To continue searching after you stop a search, either press HOLD or press and hold down /\ or \/ for about 1 second.

NOTE: If you manually tune to a search skip frequency, display shows L/O (see "Skipping Frequencies/Channels" on Faxback Doc. # 38287).

#### Listening to Monitor Memories

After you temporarily store frequencies into the scanner's monitor memories, you can listen to them by pressing MANUAL, MONITOR, then the number for the desired monitor memory.

NOTE: To listen to the monitor memories, the priority channel feature must be turned off (see "Priority" on Faxback Doc. # 38287).

### Moving a Frequency from a Monitor Memory to a Channel

1. If the scanner is scanner, press MANUAL.
2. Use the number keys to enter the channel number where you want to store the monitor frequency, then press PROGRAM. PGM appears on the display.
3. Press MONITOR, then use the number keys to enter the monitor memory number that has the frequency you want to store into the channel. The channel number flashes, and MON and the frequency appear.
4. Press E. The scanner stores the frequency in the selected channel number.

### Deleting a Frequency From a Channel

Follow these steps to delete a frequency from a channel.

1. If the scanner is scanning, press MANUAL.
2. Using the number keys, enter the channel number containing the frequency you want to delete.
3. Press PROGRAM.
4. Press O, then E. The frequency is deleted from the channel.

To delete a frequency from a monitor memory, store a new frequency in that monitor memory.

### Scanning Channels

NOTE: You cannot scan channels until you have stored frequencies in them.

To scan channels stored in the channel-storage banks, press SCAN. The scanner scans through all non-locked channels in the active banks.

To select one or more channel-storage banks while scanning, select each bank you want to scan by pressing its number key until the bank's number appears on the display.

To turn off channel-storage banks, press the number key for the bank(s) until the bank's number disappears. The scanner does not scan any of the stored channels within banks you have turned off.

NOTE: You can manually select any channel in a bank, even if the bank is turned off.

### Manually Selecting a Channel

You can continuously monitor a specific channel without scanning. This is useful if you hear an emergency broadcast on a channel and want to hear all the details (even though there might be periods of silence) or if you want to monitor only a specific channel or a locked-out channel.

Follow these steps to manually select a channel.

1. Press MANUAL.

2. Use the number keys to enter the channel number you want to hear, then press MANUAL again.

NOTES: If your scanner is scanning and stops at the channel you want, simply press MANUAL to manually select the channel.

If you repeatedly press MANUAL, the scanner steps through the channels.

(EB 3/10/97)

Privacy Policy

PRO-2044 Programmable 80-Channel Home Scanner

(200-0416)

Preparation

Faxback Doc. # 38283

This scanner is primarily designed for use in the home as a base station. You can place it on a desk, shelf, or table.

Your scanner's front feet fold up or down. Adjust them to give you the best view of the display.

Connecting an Antenna

Connecting the Supplied Antenna

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

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

The scanner's sensitivity depends on the antenna's length and various environmental conditions. For the best reception of the transmissions you want to hear, adjust the antenna's length.

FREQUENCY	ANTENNA LENGTH
29-54 MHz	Extent fully
108-174 MHz	Collapse one segment
406-512 MHz	Collapse both segments

Connecting an Outdoor Antenna

Instead of the supplied antenna, you can connect an outdoor base-station or mobile antenna (not supplied) to your scanner. Your local Radio Shack store sells a variety of antennas. Choose the one that best meets your needs.

When deciding on a mobile or base-station antenna and its location, consider these points:

The antenna should be as high as possible on a vehicle or the house.

The antenna and its cable should be as far as possible from sources of electrical noise (appliances, other radios, etc.).

The antenna should be vertical for the best performance.

To connect an optional base-station or mobile antenna, first remove the supplied antenna from the scanner. Always use 50-Ohm coaxial cable, such as

RG-58 or RG-8, to connect the base-station or mobile antenna. For lengths over 50 feet, use RG-8 low-loss dielectric coaxial cable. If the antenna cable's connector does not fit in the ANT. Jack, you might also need a Motorola-to-BNC antenna plug adapter, such as Radio Shack Cat. No. 278-117. Your local Radio Shack store carries a wide variety of coaxial antenna cable and connectors.

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

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

Do not run the cable next to power cables or other antenna cables.

WARNING: Use extreme caution when you install or remove an out-door 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.

#### Connecting Power

##### Using AC Power

The scanner's supplied AC adapter lets you power the scanner from a standard AC outlet. To connect power to the scanner, insert the AC adapter's barrel plug into the DC 12 V jack on the back of the scanner, then plug the AC adapter into a standard AC outlet.

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

CAUTIONS: Be sure to connect the AC adapter to the scanner before you connect it to an AC outlet, and disconnect the AC adapter from the AC outlet before you disconnect it from the scanner.

The supplied AC adapter supplies 12 volts DC power and delivers 500 milliamps. Its center tip is set to positive, and its plug properly fits the scanner's DC 12V jack. Using an adapter that does not meet these specifications could damage the scanner or the adapter.

##### Using Your Vehicle's Battery

If your AC power does not work in an emergency, you can power your scanner from your vehicle's cigarette lighter socket with an optional DC cigarette lighter power cable, such as Cat. No. 270-15633 (not supplied).

To connect an optional DC cigarette lighter power cable, insert its barrel plug into the DC 12V jack on the back of the scanner, then plug the power cable into your vehicle's cigarette lighter socket.

CAUTIONS: If you use a DC cigarette lighter power cable with the scanner, it must supply 12 volts and deliver at least 500 milliamps. Its



center tip must be set to positive, and its plug must correctly fit the DC 12V jack on the back of the scanner. The recommended power cable meets these specifications. Using a power cable that does not meet these specifications could seriously damage the scanner or the power cable.

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

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

#### Connecting an External Speaker

You can connect an optional amplified external speaker with a 1/8 inch plug (such as Cat. No. 21-541) to the scanner.

Insert the speaker's plug into the (symbol) jack on the front of the scanner.

NOTE: Plugging in an external speaker disconnects the scanner's internal speaker.

#### Connecting an Earphone/Headphones

You can connect an optional earphone (such as Cat. No. 33-175) or a pair of monaural headphones (such as Cat. No. 20-210) with a 1/8-inch plug to the scanner.

Insert the earphone's or headphones' plug into the (symbol) jack on the front of the scanner.

NOTE: Plugging in an earphone or headphones disconnects the scanner's internal speaker.

#### Listening Safely

To protect your hearing, follow these guidelines when you use an earphone or headphones. you put on the earphone or headphones, adjust VOLUME to a comfortable level.

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

Once you set 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.

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PRO-2044 Programmable 80-Channel Home Scanner

(200-0416)

Scanning Guide

Faxback Doc. # 38288

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.

## Ham Radio Frequencies

Ham radio operators often broadcast emergency information when other means of communication break down.

The following chart shows the voice frequencies that you can monitor:

WAVELENGTH (Meters)	VOICE (MHz)
10-meter	29.000-29.700
6-meter	50.100-54.000
2-meter	144.100-148.000
70-cm	420.000-450.000

## National Weather Frequencies

161.650*	161.775*	162.400	162.425
162.440*	162.450	162.475	162.500
162.525	162.550	163.275*	

\*Not programmed in this scanner.

## 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 to watch for with this scanner are:

114.4000 MHz	448.9875 MHz	128.7250 MHz	449.0000 MHz
135.2000 MHz	449.0125 MHz	135.7750 MHz	450.5500 MHz
409.3125 MHz	453.5625 MHz	410.3125 MHz	455.5750 MHz
418.3625 MHz	458.5875 MHz	425.4000 MHz	462.6125 MHz
426.4125 MHz	466.6375 MHz	431.4375 MHz	474.6875 MHz
433.4500 MHz	475.6875 MHz	438.4750 MHz	480.1875 MHz
442.5000 MHz	480.2000 MHz	448.9750 MHz	

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

Occasionally, the searching will stop as if it had found a signal, often without any sound. That is a birdie. Make a list of all the birdies in your scanner for future reference.

## United States Broadcast Band

In the United States, there are several broadcast bands. The standard AM and FM bands are probably the most well known. There are also four television audio broadcast bands - the lower three transmit on the VHF band and the fourth transmits on the UHF band. You can use your scanner to monitor the 470-512 MHz portion of the UHF band.

## Guide to the Action Bands

## Typical Band Usage

### VHF Band (29.00-174.0 MHz)

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

### UHF Band (300.00 MHz-512 MHz)

U.S.Government	406.00-420.00 MHz
70-Meter Band	420.00-450.00 MHz
Low Range	450.00-470.00 MHz
FM-TV Audio Broadcast, Wide Band	470.00-512.00 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 Emergency Services	153.785-155.980 MHz
Railroad	158.730-159.460 MHz
	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.

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PRO-2044 Programmable 80-Channel Home Scanner

(200-0416)

Special Features

Faxback Doc. # 38287

### Delay

Many agencies use a two-way radio system that might have a pause of several seconds between a query and a reply. To avoid missing a reply, you can program a 2-second delay into any of your scanner's channels or frequencies. Then, when the scanner stops on the channel or frequency, DLY appears on the display and the scanner continues to monitor the channel/frequency for 2 seconds after the transmission stops before it resumes scanning.

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

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

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

If the scanner is searching, press DELAY during the search. DLY appears on the display and the scanner automatically adds a 2-second delay to every transmission it stops on.

To turn off delay on any channel or frequency, press DELAY when the channel or frequency appears on the display. DLY disappears.

#### Skipping Frequencies/Channels

You can scan channels and search for frequencies faster by skipping ones that have a continuous transmission, such as a weather channel. You can skip up to all 80 channels while scanning or up to 20 frequencies during a band or direct search.

NOTE: If you skip all channels, the scanner will not scan.

To skip a channel/frequency while scanning or searching, press S/S when the scanner stops on it.

NOTES: If you skip more than 20 frequencies, each new frequency replaces earlier ones, starting from the first stored frequency.

You can manually select skipped frequencies after you press HOLD to stop a search. The scanner displays L/O when you select a skipped frequency.

#### Removing Skip from Frequencies

To remove the skip from a frequency while searching, press HOLD to stop the search, press /\ or \/ to select the skipped frequency, then press S/S until L/O disappears from the display. To remove the skip from all frequencies at once while searching, press and hold down S/S until the scanner beeps twice.

#### Removing Skip from Channels

To remove the skip from a channel while scanning, press MANUAL to stop the scan, use the number keys to enter the channel number, press MANUAL, then press S/S until L/O disappears from the display.

To remove the skip from all channels at once while scanning, select the banks containing the skipped channels, press MANUAL, then press and hold down S/S until the scanner beeps twice.

#### Priority

The priority feature lets you scan through programmed 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 each bank, it checks that bank's priority channel every 2 seconds for activity.

NOTES: You cannot use the priority and data detection features at the same time (see "Detecting Data Signals", below).

You can skip priority channels. If you skip all priority channels, the display shows P CH LOC Out when you turn on the priority feature. See "Skipping Frequencies/Channels", above.

The priority feature must be turned off to listen to monitor memories.

The scanner automatically designates the first channel in each bank as that bank's priority channel.

Follow these steps to program a different channel as the priority channel.

1. Press PROGRAM.
2. Use the number keys to enter the channel number you want to program as the priority channel, then press PRIORITY. P appears on the display to the right of the channel number.
3. Repeat Steps 1-2 for each channel you want to program as a priority channel.
4. To confirm all priority channel numbers for all banks, press PROGRAM then repeatedly press PRIORITY.

To turn on the priority feature, press PRIORITY during scanning. PRI appears on the display, and the scanner checks the priority channel in each selected bank every 2 seconds. It stays on the channel if there is activity, and P appears on the display.

To turn off the priority feature, press PRIORITY. PRI disappears from the display.

NOTE: If you are scanning more than one bank in which a priority channel has been programmed, the scanner stops on the lowest-numbered priority channel first while scanning.

#### Changing The Search Speed

You can adjust your scanner's search speed. You can set the scanner to search at either 100 steps per second (normal search speed) or 300 steps per second (hypersearch speed).

NOTE: You can use the hypersearch speed only in 5 kHz-step bands. See "Band Mode and Frequency Step", below.

To select the hypersearch speed during a band or direct search, press H/S. SRCH flashes on the display.

#### Detecting Data Signals

You can set the scanner to detect un-modulated carriers or data signals (such as preamble signals for pagers) during scanning, band search, or direct search.

NOTE: You cannot detect data signals in the air band (AM Mode). See "Band Mode and Frequency Step", below.

To detect data signals, press DATA until DATA appears on the display. If the scanner pauses on a transmission and detects a data signal, it resumes searching in 2 or 3 seconds.

To stop detecting data signals, press DATA until DATA disappears from the display.

#### Listening to The Weather Band

The FCC (Federal Communications Commission) has allocated 11 channels for use by the National Oceanic and Atmospheric Administration (NOAA). NOAA broadcasts your local forecast and regional weather information. We have preprogrammed your scanner with seven of the U.S. frequencies available to NOAA.

NOTE: For a list of all 11 national weather frequencies, see "National Weather Frequencies" on Faxback Doc. # 38288.

To scan the preprogrammed weather channels, press WX. WX appears on the display, and the scanner searches through the weather band and stops on an active broadcast. If a broadcast is weak, press WX again to continue to search through the weather band.

#### Band Mode and Frequency Step

The scanner scans in the following band modes:

AM (amplitude modulation) - used in aircraft bands

NFM (narrowband Frequency modulation)- used in action bands such as police, fire, ambulance, Amateur Radio, etc.

The table below shows the preset band modes and frequency steps your scanner uses for each frequency range.

FREQ. RANGE (MHz)	BAND MODE	FREQ. STEP (kHz)
29.000-54.000	NFM	5
108.000-136.975	AM	12.5
137.000-144.000	NFM	5
144.000-148.000	NFM	5
148.000-174.000	NFM	5
406.000-450.000	NFM	12.5
450.000-470.000	NFM	12.5
470.000-512.000	NFM	12.5

NOTE: The band modes and frequency steps are preset. You cannot change them.

#### Turning The Key Tone On or Off

Each time you press any of the scanner's keys, the scanner sounds a tone.

Follow these steps to turn the scanner's key tone on or off.

1. If the scanner is on, turn VOLUME counterclockwise until it clicks to turn the scanner off.







Scanner locks on frequencies that have an unclear transmission.

Be sure SQUELCH is adjusted properly. See "Turning On the Scanner/Setting Volume and Squelch" on Faxback Doc. # 38286.

Be sure birdie frequencies are not programmed, or listen to birdie frequencies manually. See "Birdie Frequencies" on Faxback Doc. # 38288.

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PRO-2044 80CH HOME SCANNE

Faxback Doc. # 36059

To order parts call 1-800-843-7422 or visit your local RadioShack store.

Reference #	Cat.No.	Description	NP Part #
D014 D023	11318540	DIODE 1N4003A RECT SI	1N4003A
	11318540	BLACK GRAY BAND	1N4003A
Q705	10511459	TRANSISTOR DTA143XK-T-96	1TD0061
	10511459	CASE STYLE S0T23	1TD0061
Q001 Q002 Q004	10511707	XSTR 2SC3356-R24 SI BIPOL	1TD0127
	10511707	CASE STYLE S0T23	1TD0127
Q701 Q707	10511798	XSTR 2SC3121 BIPOLAR MICR	1TD0144
	10511798	CASE STYLE S0T23	1TD0144
Q708 Q710	10512176	XSTR 2SC3121-T5L	1TD0211
	10512176	CASE STYLE S0T23	1TD0211
Q012 Q013 Q014 Q015	10513174	XSTR SC DTA114YK	1TD0452
	10513174	CASE STYLE S0T23	1TD0452
Q003 Q704 Q709	10516136	XSTR 2SA1162-Y SI LOW PWR	1TD0760
	10516136	CASE STYLE S0T23	1TD0760
Q005 Q006 Q007 Q016	10516458	XSTR 2SC2712-Y SI LOW PWR	1TD0793
Q706	10516458	CASE STYLE S0T23	1TD0793
Q702 Q703	11512621	XSTR 2SC4246-T5L	1TD0919
	11512621	CASE STYLE S0T23	1TD0919
Q008	11652229	XSTR 2SD1683-S DB-440	2SD1683S
	11652229	CASE STYLE TO-126ML	2SD1683S
Q008	11652229	USE 2SD1683S	2TR00008
T951	10539120	ANTENNA, ROD TELESCOPIC	A0269
T001		USE CB0716	C2016
		REPLACED BY CB0716	C2016
L006	11718673	COIL, LB-797	CA00009
L013	11652278	COIL	CA00036
L004		COIL, LB-736	CA1754
L011	12237418	COIL, LC-226	CA1757
L009	10562320	COIL, LB607 CAN TYPE	CA3064
L010	10562338	COIL, LB-799 CAN TYPE	CA3065
L001 L012		COIL, LE-127 D2.5 2 1/2TRN	CA3069
L005	10563948	INDUCTOR, MOLDED	CA3801
L008	10567881	COIL, FM DISC LB233	CA8962
T002	12065553	FILTER, CERAMIC FL-142	CB0249
T001	10571297	FILTER, CRYSTAL FL-195	CB0716
C002 C006	11561222	CAP CER 50V 2PF +-.25PF	CDA020CJBC
	11561222	CASE STYLE 0805 PKG OF 5	CDA020CJBC
C004	10575660	CAP CER 50V 4PF +-.25PF	CDA040CJBC
	10575660	CASE STYLE 0805 PKG OF 5	CDA040CJBC
C018	11652245	CEP CER 50V 9PF +-.5PF	CDA090DJBC
	11652245	CASE STYLE 0805 PKG OF 5	CDA090DJBC

C030					CAP CER 50V 10PF +- .5PF	CDA100DJBC
					CASE STYLE 0805 PKG OF 5	CDA100DJBC
C003	C005	C020	C021	10575751	CAP CER 50V 100PF +-5	CDA101JJBC
C037	C087	C090	C093	10575751	CASE STYLE 0805 PKG OF 5	CDA101JJBC
C094	C095	C096	C097	10575751		CDA101JJBC
C098	C099	C100	C101	10575751		CDA101JJBC
C102				10575751		CDA101JJBC
C001	C010	C028	C031	10575793	CAP CER 1000PF +-10 50V	CDA102KJBC
C052	C053	C059	C060	10575793	CASE STYLE 0805 PKG OF 5	CDA102KJBC
C074	C075	C077	C081	10575793		CDA102KJBC
C084	C085	C086	C088	10575793		CDA102KJBC
C089	C091	C105	C106	10575793		CDA102KJBC
C008	C009	C011	C036	10575843	CAP CER .01UF +-10 50V	CDA103KJBC
C038	C040	C041	C042	10575843	CASE STYLE 0805 PKG OF 5	CDA103KJBC
C046	C065			10575843		CDA103KJBC
C024	C025	C034	C047	11561255	CAP CER 25V .1UF +-10	CDA104KFBC
C051	C064	C067	C070	11561255	CASE STYLE 0805 PKG OF 5	CDA104KFBC
C076	C078	C083	C092	11561255		CDA104KFBC
C107	C108	C109	C113	11561255		CDA104KFBC
C713				11561255		CDA104KFBC
C073				11716404	120PF +-5 50V CER	CDA121JJBC
				11716404	CASE STYLE 0805 PKG OF 5	CDA121JJBC
C039				10575983	15PF +-5 50V CER	CDA150JJBC
				10575983	CASE STYLE 0805 PKG OF 5	CDA150JJBC
C072				10576056	CAP CERAMIC 50V 18PF +-5	CDA180JJBC
				10576056	CASE STYLE 0805 PKG OF 5	CDA180JJBC
C066				10576171	CAP CER 50V 2200PF +-10	CDA222KJBC
				10576171	CASE STYLE 0805 PKG OF 5	CDA222KJBC
C054	C056	C068	C080	10576205	CAP CER 50V .022UF +-10	CDA223KJBC
				10576205	CASE STYLE 0805 PKG OF 5	CDA223KJBC
C023	C043			10576254	CAP CERAMIC 50V 270PF +-5	CDA271JJBC
				10576254	CASE STYLE 0805 PKG OF 5	CDA271JJBC
C026					CAP CER 50V 2700PF +-10	CDA272KJBC
					CASE STYLE 0805 PKG OF 5	CDA272KJBC
C017	C045	C110	C111	10576288	33PF +-5 50V CER	CDA330JJBC
				10576288	CASE STYLE 0805 PKG OF 5	CDA330JJBC
C007	C012	C019	C044	10576379	47PF +-5 50V CER	CDA470JJBC
				10576379	CASE STYLE 0805 PKG OF 5	CDA470JJBC
C027				10576403	470PF +-5 50V CER	CDA471JJBC
				10576403	CASE STYLE 0805 PKG OF 5	CDA471JJBC
C013	C029			10576411	CAP CER 50V 4700PF +-10	CDA472KJBC
				10576411	CASE STYLE 0805 PKG OF 5	CDA472KJBC
C050	C062			10576437	CAP CER 50V .047UF +-10	CDA473KJBC
				10576437	CASE STYLE 0805 PKG OF 5	CDA473KJBC
C016	C022			11561354	CAP CERAMIC 50V 68PF +-5	CDA680JJBC
				11561354	CASE STYLE 0805 PKG OF 5	CDA680JJBC
C048	C069	C082		12237012	1UF +80-20 16V CER	CDR105ZDCC
				12237012	CASE STYLE 1206 PKG OF 5	CDR105ZDCC
C720					1UF +80-20 25V CER	CDR105ZFBC
					CASE STYLE 1206 PKG OF 5	CDR105ZFBC
C033	C049			11876687	.22UF +-10 16V CER	CDR224KDCC
				11876687	CASE 1206 PKG OF 5	CDR224KDCC
C716				11722121	CAP CER 50V 10PF +- .5PF	CDS100DJBC
				11722121	CASE STYLE 0603 PKG OF 5	CDS100DJBC
C711				11716578	CAP CER 50V 100PF +-5	CDS101JJBC
				11716578	CASE STYLE 0603 PKG OF 5	CDS101JJBC
C702	C704	C706	C709	10577799	CAP CER 50V 1000PF +-10	CDS102KJBC
C712	C721			10577799	CASE STYLE 0603 PKG OF 5	CDS102KJBC
C703					CAP CER 50V 1.5PF +- .25PF	CDS1X5CJBC

C701 C708	11716628	CASE STYLE 0603	CDS1X5CJBC
	11716628	CAP CER 25V 22000PF +-10	CDS223KFBC
C705	11716636	CASE STYLE 0603	CDS223KFBC
	11716636	27PF +-5 50V CER	CDS270JJBC
C714	12351169	CASE STYLE 0603 PKG OF 5	CDS270JJBC
	12351169	39PF +-5 50V CER	CDS390JJBC
C707	11653219	CASE STYLE 0603 PKG OF 5	CDS390JJBC
	11653219	CAP 680PF +-5% 25V CER	CDS681JFBC
X001	11624772	CASE 0603 PKG OF 5	CDS681JFBC
X701	11624814	RESONATOR FK-054 4MHZ	CX00005
D706	11625266	CRYSTAL QX-631 10.4MHZ	CX00006
	11625266	DIODE HZK4BLL TR ZN	DD00001
	11625266	CASE STYLE S0T23	DD00001
	11655909	DIODE SI LLL4148	DD00005
D027 D705	10617256	USE DD0111	DD0015
	10617256	CASE STYLE S0T-23	DD0015
D012	10617272	DIODE 1SS226 HS CENTER SI	DD0021
D007 D015 D025 D701	10617546	DIODE VARACTOR ISV201-4	DD0103
D704	10617546	CASE STYLE S0T23	DD0103
	10617587	DIODE 1SS184-TE85R SI	DD0111
D028 D033	11273331	DIODE ZN HZK6B TR	DD0137
D008 D013 D017 D022	10618965	DIODE 1SS355 FAST RECT SI	DD0309
D038	10618965		DD0309
D009 D010 D016 D018	10619344	DIODE SW BAND SWITCHING 1	DD0348
D019 D020 D021 D702	10619344	CASE STYLE S0T23	DD0348
D703	10619344		DD0348
D024	11273596	DIODE VARICAP KV-1450	DX0110
D014 D023	10622306	USE 1N4003A	DX0207
	10622306	REPLACED BY 1N4003A	DX0207
D001 D002 D006 D026	10626216	USE DD00005	DX1673
D031 D032	10626216	CASE STYLE D035	DX1673
	10626216	BAND	DX1673
D003 D004 D005 D011	10630747	DIODE HVU308-1 TRF	DX3141
	11652377	FOOT, EPDM	F00001
	11652351	STAND	HC00078
		PLATE, SPRING KNOB	HC3252
	11718723		HD00003
	11652237	ICH4048412A42H 80PIN FP	HD4048412A
	11652385	KEY RUBBER SI	HJ00053
	11290657	D3X20	HW2000414
J901	10725372	JACK, ANTENNA	J0772
J201	10729432	JACK, 3.5MM HEADPHONE	J1304
	10729432	SPEAKER (EXTERNAL)	J1304
J002	10729838	JACK, DC POWER 3.5MM	J1389
J003		CONNECTOR, JACK JK-276	JE0098
		JACK SPEAKER (INTERNAL)	JE0098
	11652369	KNOB, ON/OFF VOLUME SQUELCH	K00193
P001	11652260	LCD DISPLAY DL-127 E-4509	L00028
L001	10791416	LAMP, PILOT 8V 0.2A	L0200
C004	11390929	IC, LA1186N R/W AMP 10 PIN	LA1186N
	11390929	CASE STYLE SIP 9 PIN	LA1186N
C005	10898146	IC LA1600 SIP T 9	LA1600
	10898146	CASE STYLE SIP 9 PIN	LA1600
	11652401	MANUAL, SERVICE 20-416	MS2000416
	11652393	XEROX COPY	MU2000416
C001	11624749	USE MC3361BP	MX00025
	11624749	CASE STYLE DIP 16 PIN	MX00025
C013	11652237	USE HD4048412A	MX00059
	11652237	80 PIN	MX00059

C702	11291010	IC, TLC271CDR TAPE	MX1310
	11291010	8 PIN	MX1310
C005	10880698	USE LA1600	MX1881
	10880698	REPLACED BY LA1600	MX1881
C002 IC006 IC007	10881886	IC, NJM2904M LINEAR 8 PIN	MX2044
	10881886	8 PIN	MX2044
C012	10893592	IC, RH5VA43CA-T1	MX3816
	10893592	CASE STYLE SC62	MX3816
C004	10894764	IC, LA1186N READ/WRITE	MX4041
	10894764	REPLACED BY LA1186N	MX4041
C003	10904381	IC, TBA820M POWER 8 PIN	MX6047
	10904381	REPLACED BY TBA820M	MX6047
C011	10912517	IC, TK11806M BIPOL DC-DC C	MX7813
	10912517	8 PIN	MX7813
	11809928	AFTER DATE CODE 9A6	MX90026
C008	10926715	IC, M5278L05	MX9304
	10926715	CASE STYLE T0226AE	MX9304
C701	10927119	IC, SM5158AM-E2	MX9344
	10927119	16 PIN	MX9344
R014 R018 R028 R048		10K 5% 1/10W CBF RES	ND0281EDCC
R061 R065		CASE STYLE 0805 PKG OF 5	ND0281EDCC
R040	10945780	1 5% 1/10W CBF RES	NDA0022EDC
	10945780	CASE STYLE 0805 PKG OF 5	NDA0022EDC
R055	11718780	RES CBF 1/10W 4.7 5%	NDA0047EDC
	11718780	CASE STYLE 0805 PKG OF 5	NDA0047EDC
R091	10945954	10 5% 1/10W CBF RES	NDA0063EDC
	10945954	CASE STYLE 0805 PKG OF 5	NDA0063EDC
R035 R045 R058 R059	10946325	100 5% 1/10W CBF RES	NDA0132EDC
	10946325	CASE STYLE 0805 PKG OF 5	NDA0132EDC
R006 R024	10946556	220 5% 1/10W CBF RES	NDA0149EDC
	10946556	CASE STYLE 0805 PKG OF 5	NDA0149EDC
R003	10946630	330 5% 1/10W CBF RES	NDA0159EDC
	10946630	CASE STYLE 0805 PKG OF 5	NDA0159EDC
R039 R072	10946689	470 5% 1/10W CBF RES	NDA0169EDC
	10946689	CASE STYLE 0805 PKG OF 5	NDA0169EDC
R069	11561594	820 5% 1/10W CBF RES	NDA0187EDC
	11561594	CASE STYLE 0805 PKG OF 5	NDA0187EDC
R019 R027 R044 R046	10946853	1K 5% 1/10W CBF RES	NDA0196EDC
R053 R054 R073 R074	10946853	CASE STYLE 0805 PKG OF	NDA0196EDC
R075 R076 R077 R093	10946853		NDA0196EDC
R094 R095 R096 R097	10946853		NDA0196EDC
R114 R115 R116	10946853		NDA0196EDC
R030	11561628	1.8K 5% 1/10W CBF RES	NDA0210EDC
	11561628	CASE STYLE 0805 PKG OF 5	NDA0210EDC
R034 R081 R082 R083	10946994	2.2K 5% 1/10W CBF RES	NDA0216EDC
R084 R085 R105	10946994	CASE STYLE 0805 PKG OF 5	NDA0216EDC
R010 R021 R022 R031	10947075	2.7K 5% 1/10W CBF RES	NDA0224EDC
R043	10947075	CASE STYLE 0805 PKG OF 5	NDA0224EDC
R047	11561644	3.3K 5% 1/10W CBF RES	NDA0230EDC
	11561644	CASE STYLE 0805 PKG OF 5	NDA0230EDC
R049	11561651	USE NDA0247BDC	NDA0247EDC
	11561651	CASE STYLE 0805 PKG OF 5	NDA0247EDC
R063 R086	10947430	5.6K 5% 1/10W CBF RES	NDA0257EDC
	10947430	CASE STYLE 0805 PKG OF 5	NDA0257EDC
R014 R018 R028 R048	10947570	10K 1% 1/10W CBF RES	NDA0281BDC
R061 R065	10947570		NDA0281BDC
R014 R018 R028 R048	11561701	USE NDA0281BDC	NDA0281EDC
R061 R065	11561701	REPLACED BY NDA0281BDC	NDA0281EDC
R060	10947752	12K 5% 1/10W CBF RES	NDA0288EDC

R068	10947752	CASE STYLE 0805 PKG OF 5	NDA0288EDC
	11561719	15K 5% 1/10W CBF RES	NDA0297EDC
	11561719	CASE STYLE 0805 PKG OF 5	NDA0297EDC
R001 R004 R005 R015	11560711	22K 5% 1/10W CBF RES	NDA0311EDC
R017 R023 R026	11560711	CASE STYLE 0805 PKG OF 5	NDA0311EDC
R020 R038 R042 R056	11560729	33K 5% 1/10W CBF RES	NDA0324EDC
R057 R098	11560729	CASE STYLE 0805 PKG OF 5	NDA0324EDC
R002 R011	10948008	39K 5% 1/10W CBF RES	NDA0330EDC
	10948008	CASE STYLE 0805 PKG OF 5	NDA0330EDC
R008 R106	11561727	USE NDA0340BDC	NDA0340EDC
	11561727	CASE STYLE 0805 PKG OF 5	NDA0340EDC
R037 R052 R066 R067	10948214	100K 5% 1/10W CBF RES	NDA0371EDC
R088 R089 R103 R104	10948214	CASE STYLE 0805 PKG OF 5	NDA0371EDC
R013 R029	11560737	120K 5% 1/10W CBF RES	NDA0375EDC
	11560737	CASE STYLE 0805	NDA0375EDC
R025 R032	11561768	220K 5% 1/10W CBF RES	NDA0396EDC
	11561768	CASE STYLE 0805 PKG OF 5	NDA0396EDC
R005 R012 R062 R002	11561776	330K 5% 1/10W CBF RES	NDA0410EDC
R058 R059 R064 R065	11561776	CASE STYLE 0805 PKG OF 5	NDA0410EDC
R066 R067 R068 R069	11561776		NDA0410EDC
R071 R077	11561776		NDA0410EDC
R016	11721891	390K 5% 1/10W CBF RES	NDA0414EDC
	11721891	CASE STYLE 0805 PKG OF 5	NDA0414EDC
R050	10948511	470K 5% 1/10W CBF RES	NDA0423EDC
	10948511	CASE STYLE 0805 PKG OF 5	NDA0423EDC
R033 R036 R090 R092	10948586	680K 5% 1/10W CBF RES	NDA0433EDC
	10948586	CASE STYLE 0805 PKG OF 5	NDA0433EDC
R064 R087	10948644	1M 5% 1/10W CBF RES	NDA0445EDC
	10948644	CASE STYLE 0805 PKG OF 5	NDA0445EDC
R051	10948685	2.2M 5% 1/10W CBF RES	NDA0454EDC
	10948685	CASE STYLE 0805 PKG OF 5	NDA0454EDC
R109 R110 R111 R112	10949428	RES CBF 1/8W 0 5%	NDR0000EBC
R113	10949428	CASE STYLE 1206	NDR0000EBC
R715		RES CBF 1/16W 10 5%	NDS0063EAC
		CASE STYLE 0603 PKG OF 5	NDS0063EAC
R701 R717	10951960	RES CBF 1/16W 100 5%	NDS0132EAC
	10951960	CASE STYLE 0603 PKG OF 5	NDS0132EAC
	10952174	RES CBF 1/16W 330 5%	NDS0159EAC
R728	11717212	470 5% 1/16W CBF RES	NDS0169EAC
	11717212	CASE STYLE 0603 PKG OF 5	NDS0169EAC
R704 R705	11846920	560 5% 1/16W CBF RES	NDS0176EAC
	11846920	CASE STYLE 0603 PKG OF 5	NDS0176EAC
R710	11717253	1.8K 5% 1/16W CBF RES	NDS0210EAC
	11717253	CASE STYLE 0603 PKG OF 5	NDS0210EAC
R706 R708		2.7K 5% 1/16W CBF RES	NDS0224EAC
		CASE STYLE 0603 PKG OF 5	NDS0224EAC
R707	11876695	3.9K 5% 1/16W CBF RES	NDS0237EAC
	11876695	CASE STYLE 0603 PKG OF 5	NDS0237EAC
R719	11717287	RES CBF 1/16W 4.7K 5%	NDS0247EAC
	11717287	CASE STYLE 0603 PKG OF 5	NDS0247EAC
R711 R712	10952646	RES CBF 1/16W 6.8K 5%	NDS0262EAC
	10952646	CASE STYLE 0603 PKG OF 5	NDS0262EAC
R709 R721 R722 R729	11721933	10K 5% 1/16W CBF RES	NDS0281EAC
R731	11721933	CASE STYLE 0603 PKG OF 5	NDS0281EAC
R714 R725 R726	11717295	15K 5% 1/16W CBF RES	NDS0297EAC
	11717295	CASE STYLE 0603 PKG OF 5	NDS0297EAC
R702	11717303	18K 5% 1/16W CBF RES	NDS0303EAC
	11717303	CASE STYLE 0603 PKG OF 5	NDS0303EAC
R724 R727	11651106	22K 5% 1/16W CBF RES	NDS0311EAC

	11651106	CASE STYLE 0603	NDS0311EAC
R720	11651130	33K 5% 1/16W CBF RES	NDS0324EAC
	11651130	CASE STYLE 0603	NDS0324EAC
R713 R716	11651148	68K 5% 1/16W CBF RES	NDS0354EAC
	11651148	CASE STYLE 0603	NDS0354EAC
R723	11651122	220K 5% 1/16W CBF RES	NDS0396EAC
	11651122	CASE STYLE 0603	NDS0396EAC
R099	11647021	47 5% 1/2W CBF RES	NDW0099EFC
	11647021	CASE STYLE 2010	NDW0099EFC
R041	11647047	68 5% 1/2W CBF RES	NDW0111EFC
	11647047	CASE STYLE 2010	NDW0111EFC
T001	11647054	POT 100KB	P00027
R201	11652286	POT,RESISTOR VARIABLE VOL	P00030
	11652286	RK09711110 100KA	P00030
R202	11652294	POT,RES VARIABLE SQUELCH	P00031
	11652294	RV-851 RK09711110 100KC	P00031
P901	11084209	SPEAKER,SP-242	SP0336
	11084209	8 OHMS 2 WATT	SP0336
C003	11393147	IC,TBA820M LINEAR AMP 8P	TBA820M
	11393147	CASE STYLE DIP 8 PIN	TBA820M
D951	11125655	ADAPTOR,AC INPUT 120 VOLT	WE0255
	11125655	BARREL 90 DEGREE	WE0255
	11652211	PCB ASSY,MAIN	XB00112
	11652302	PCB ASSY,PLL	XB00113
B501	11652310	PCB,KEY	XB00114
	11652328	CASE,FRONT	Z00158
	11652336	CASE, TOP	Z00159
	11652344	CASE,BOTTOM	Z00160

(This list was generated on 07/08/2005)  
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