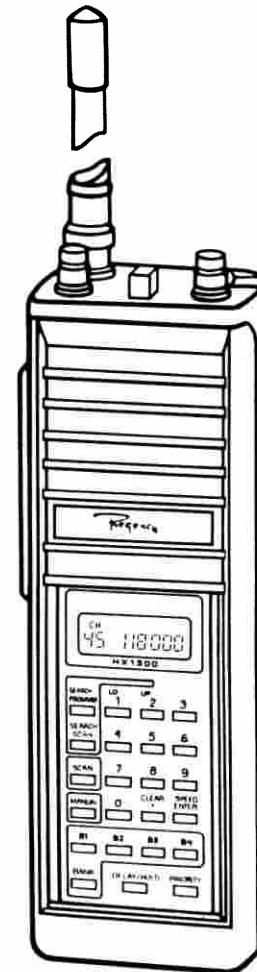


REGENCY SCANNER MODEL HX1500 OWNER'S MANUAL



7001-1500-500

ELECTRONICS, INC.
7707 Records St., Indianapolis, IN 46226

Printed in Japan

2-86

PACKING LIST

- 1 — Receiver Unit
- 1 — Flexible Rubber Antenna
- 1 — Instruction Manual
- 1 — Earphone
- 1 — Beltclip

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MAINTENANCE

All servicing should be referred to the Regency Customer Service Department

UNAUTHORIZED ADJUSTMENTS MAY DAMAGE THE EQUIPMENT OR RESULT IN IMPROPER OPERATION AS WELL AS INVALIDATE THE WARRANTY.

IMPORTANT

The sections on Preparation for Use and Operation should be thoroughly read before operating the unit. Reading the instructions will result in maximum performance and enjoyment of your radio.

GENERAL DESCRIPTION

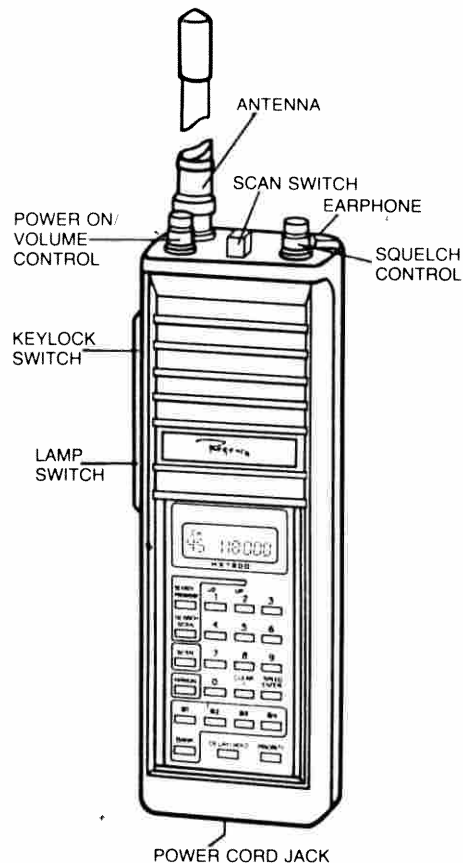
Your HX1500 is a handheld, programmable, 55 channel, AM/FM monitor receiver for use at home or anywhere you wish to go. Sophisticated microprocessor-controlled circuitry eliminates the need for crystals. Instead, the frequency for each channel is programmed through the numbered keyboard.

Any combination of two to fifty-five channels or four banks of channels can be scanned automatically. In the manual mode, a single channel can be monitored continuously.

The Search function locates unknown frequencies within a band.

Other features include scan delay, search hold or delay, scan/search speed, priority, keylock, channel lock and display illumination.

The HX1500 can be operated on its internal batteries alone or by 120 VAC (with the optional wall-mounted transformer) with the internal batteries in place. The scanner features a unique, non-volatile memory that retains all channel information for 10 years without the need for memory back-up batteries.



PREPARATION FOR USE

Before operating your HX1500, read the following directions carefully.

Unpacking

Unpack the unit from the carton and check for damage. If the unit is damaged, contact the place of purchase immediately as required by the warranty agreement.

CAUTION: DO NOT operate a damaged unit.

The unit can be operated with eight (8) AA Nicad batteries (rechargeable) or eight (8) AA dry cells (both not supplied).

BATTERY INSTALLATION

The battery compartment is located on the back of the unit. Remove the cover by pressing down on the ridges and sliding downward in direction of arrow.

Nickel-Cadmium Batteries

Insert the eight AA batteries (not supplied) into the compartment as indicated by the diagram inside the battery compartment. Replace compartment cover. Ask your dealer for replacement Nicad batteries or dry cells. **Important:** Be sure to observe battery polarity during installation. If batteries are incorrectly inserted, the unit will not operate and possible damage to the batteries and/or unit may result. To charge, insert the optional AC power adapter (not supplied) into a 120 volt AC receptacle and the plug end into the power cord jack on the bottom of the Scanner (See page 2).

Charging Ni-Cd Batteries

Rechargeable Nickel-Cadmium batteries offer greater operating economy than dry cells. They should be recharged when the unit fails to scan and/or the volume becomes low.

NOTE: When the charge is low, the BAT annunciator appears on the display's right side.

CAUTION: To avoid damage to the receiver and batteries, use only the optional AC charger. The charger can be used to charge the AA Ni-Cad batteries as needed. Insert one end of the charger into the jack on the bottom of the unit. Plug the other end into any 120V wall outlet. **NOTE: CENTER PIN IS NEGATIVE.**

IMPORTANT: DO NOT plug the AC charger into the jack unless rechargeable batteries are installed (**See CAUTION label on unit**). Regular batteries (i.e. zinc-carbon, mercury, alkaline) may **EXPLODE** if recharging is attempted. **ONLY THOSE BATTERIES CLEARLY MARKED RECHARGEABLE NICKEL-CADMIUM ARE TO BE LEFT INSTALLED WHEN THE BOTTOM POWER CORD JACK IS USED. NEVER PLUG THE UNIT TO A CAR CIGARETTE LIGHTER JACK.**

Use of Dry Cells

The unit can also be operated on eight AA dry cells (not supplied). We recommend alkaline batteries for longer life.

Install the dry cells into the battery compartment observing proper polarity.

Replace the dry cells when the receiver fails to scan and/or the volume becomes low, or when the BAT annunciator appears on the display.

DO NOT leave discharged batteries in the unit for any length of time as leakage may damage the receiver.

NOTE: If unit is to be unused for several months, remove AA dry cell batteries to prevent possible power loss and leakage.

Antenna Connection

Insert the flexible antenna into the antenna receptacle on the top panel of the Scanner.

PERMANENT MEMORY

All memory functions of the Scanner are handled by an integrated circuit that includes a unique, non volatile memory. Channel information is retained in the memory for ten years without the need for back-up battery power.

Unit Turn-on

Rotate the SQUELCH and VOLUME controls to the far left. Rotate VOLUME control until pointer is at ANT jack. Rotate the SQUELCH control to the right until you hear the noise disappear.

OPERATING CONTROLS AND CONNECTORS

(See Figure, Page 2)

VOLUME: When turned toward the right, it increases the audio level to the desired or most comfortable listening level.

SQUELCH: Eliminates background noise and allows the unit to scan or squelch.

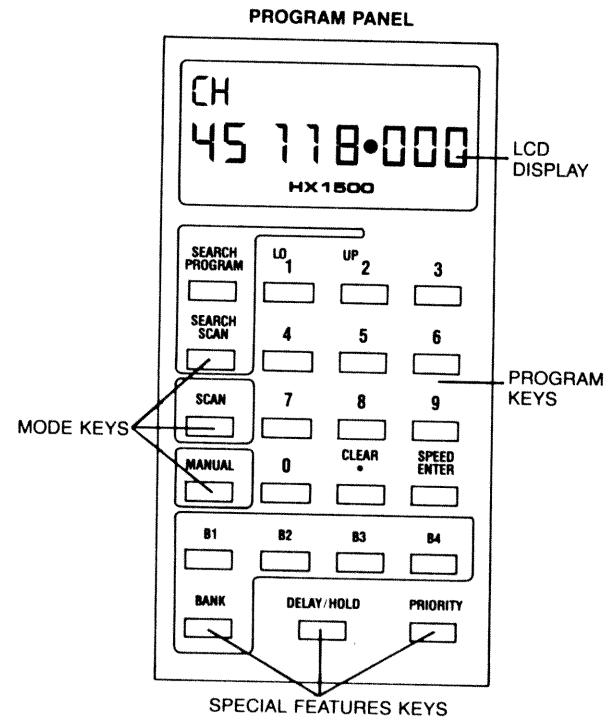
FLEXIBLE ANTENNA: Prior to operation, install the flexible antenna in the socket located on the top of your unit. Turn it clockwise until it locks in place.

EARPHONE Jack: An earphone jack is located on the top of the unit for your convenience. Simply plug the earphone attachment into the earphone socket on the top of the unit. The speaker will be automatically disconnected and the radio reception will be heard only through the earphones.

POWER CHARGE Jack: Located on the bottom of the unit. Connect the optional charger for charging the internal Nicad batteries for operating while charging.

PROGRAM PANEL

The HX1500 has 23 touch-entry keys for easy operation.



Mode Keys

SEARCH SCAN: Starts the search process.

SEARCH PROGRAM: To program the lower frequency and upper frequency for SEARCH

SCAN: Puts the unit into the scan mode.

MANUAL: For channel advance to review frequency assignment or to take unit out of SEARCH or SCAN modes.

Special Features Keys

PRIORITY: Selects priority feature.

DELAY/HOLD: Allows for delay in the resumption of SCAN, and hold or delay in the SEARCH process. (Toggle function)

BANK 1

BANK 2

BANK 3

BANK 4

For scanning banks of channels of the available 55 channels.

BANK: Permits defining the lower and upper limits of the chosen bank.

Program Keys

0-9: The numbered keys are used for entering frequencies.

1 LO: Dual-function key. 1 used for entering number 1; LOWER for defining the lower limit of SEARCH frequency band.

2 UP: Dual-function key. 2 used for entering numeral 2; UPPER for defining the upper limit of SEARCH frequency band.

CLEAR: Dual-function key. To clear any mistakenly entered frequency before pressing the ENTER key. Also for decimal point below 54 MHz.

ENTER/SPEED: Dual-function key. ENTER used for entering frequencies; SPEED for selecting two speeds while scanning or searching.

Switches (Located on left side)

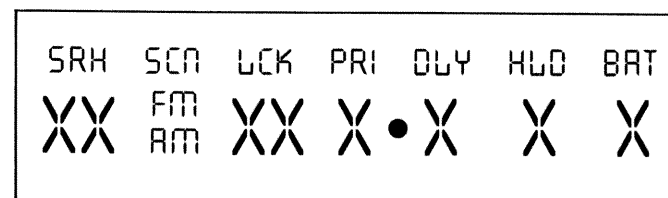
KEY LOCK: Slide the switch up to lock keyboard. Prevents inadvertent entries.

LAMP: To illuminate the liquid crystal display, press the lever on the left side.

SCAN: Located on top. Places unit in SCAN even if keyboard is locked out.

OPERATION

For turn-on, see Preparation for Use section. In course of operation of the HX1500 scanner, the display will appear with various annunciators. An explanation of these is given below.



SRH: Indicates SEARCH mode.

HLD: Appears during SEARCH if the DELAY/HOLD key has been pressed (HOLD feature activated).

DLY: Appears during SCAN and SEARCH if the DELAY/HOLD key has been pressed (DELAY activated).

SCN: Appears in the SCAN mode.

LCK: Shows up in MANUAL mode. Indicates a locked out channel.

PRI: Appears when PRIORITY has been pressed (Priority feature activated).

FM: Indicates FM mode during SEARCH and SCAN.

AM: Indicates AM mode during SEARCH and SCAN.

XX: Shows channel number (01-55) in SCAN and MANUAL modes.

XXX•XXX: Indicates 6-digit frequency in MHz in SCAN, SEARCH and MANUAL modes.

NOTE: Rolling 0's always appear in normal SCAN mode. Rolling 8's always appear in BANK/SCAN mode.

BAT: Appears when the charge is low, or when dry cells need to be replaced.

Fr Err: Indicates an error in the entered frequency (not in the permitted range).

Sr Err: Indicates an error in the entered search frequency limits (not in the permitted range). Appears if the frequencies are in different banks or if the lower limit is higher than the upper limit.

PROGRAMMING

The HX1500 has 55 channels available for your personal choice of frequencies. The sophisticated microprocessor-controlled circuitry eliminates the need for crystals and allows easy fingertip touch entry of all data.

Programming is done while in the MANUAL mode.

Assigning Frequency to Channel

1. Press MANUAL

NOTE: To enter channel number 1-9, press 0 and the desired numeral.

• **Ex:** 01 for 1.

2. Press keys corresponding to desired frequency. For example: Keys 465.750 for 465.750 MHz, and ENTER. Display will prompt for channel number.

3. Press desired number key. For example, if the frequency is to be entered in channel 1, press 01. Repeat steps 2 & 3 for entering another frequency in another channel.

NOTE: It is not necessary to press MANUAL to program other frequencies unless you want to verify that the desired frequency went into the desired channel. See Direct Channel Access (Page 11).

NOTE: If a non-allowed frequency is entered, the display will show:

Fr Err

To enter an allowed frequency, start all over.

Picking Priority Channel

The unit's Priority feature lets you program your favorite frequency to be sampled approximately once every two seconds, and also to have it override calls on other channels. Channel 1 has been set aside for this function. Enter your favorite frequency into channel 1, then press PRIORITY key.

NOTE: PRIORITY IS ACTIVE IN THE MANUAL AND SCAN MODES. The display will indicate priority with

“PRI.” While the unit is in the above modes, should a transmission begin on channel 1, the unit will go immediately to it and receive the message. After the message, the unit will resume scanning or return to the other channel. To de-activate priority, press PRIORITY key again. To change modes or channels while the unit has stopped on the Priority channel, de-activate PRIORITY.

Assigning Channels to Banks

The Receiver's 55 channels can be grouped into four banks or sections. Each bank may contain any consecutive group of channels within 01-55. A typical bank allocations could be as follows:

Channels 01-20	Law Enforcement	BANK 1
Channels 21-30	Aircraft	BANK 2
Channels 31-40	Fire/Emergency	BANK 3
Channels 41-55	Amateur	BANK 4

A bank 'b' is defined by a lower channel bs (bank start) and an upper channel bf (bank finish).

To place Channels 01-10 in BANK 1:

In this example, bs = 01, bf = 10 and b = 1

Proceed as follows:

1. Press BANK. Display will show:

_____ **bs** ,

and prompt for channel number for bank start.

2. Press 0 and 1. Display will show:

_____ **bf** ,

and prompt for channel number for bank finish.

3. Press 1 and 0. Display will show:

b _____ ,

and prompt for bank number (BANK 1 – BANK 4).

4. Press BANK 1.

Repeat procedure for placing other channels in other banks.

To recall bank assignments, press BANK and then BANK 1.

Display will show:

01 10 ,

where 01 is bs and 10 is bf.

Repeat procedure for recalling other banks.

For bank scanning, see SCANNING.

SCANNING

After you have programmed the frequencies of your choice, you can scan each one automatically when in the scan mode. To start the scanning process, press SCAN.

If necessary, adjust the squelch control by turning the knob toward the right hand side. The display will show the number of each channel and corresponding frequency as it is scanned. If a transmission is found, the scanner will stop and the display will show both the channel number and the frequency.

At the conclusion of the transmission, scanning will resume automatically.

NOTE: Normal SCANNing is indicated by rolling 0's.

Locking Channels

If you wish to omit a channel from the scan process, simply enter the channel number you wish to omit while you are in the scan mode. If you select the manual mode after locking out the frequency/channel, the "LCK" indicator will appear in the display when you select the channel you have locked out. To restore the locked channel to the frequency list, press the channel's number again while in the SCAN mode.

NOTE: The LOCK function is disabled during BANK scanning.

Bank Scanning

A particular bank of channels assigned to BANKS 1-4 can be scanned instead of all the 55 channels. Press, for example, BANK 1 to scan that bank if the Receiver is in the SCAN, MANUAL or SEARCH modes.

NOTE: After assigning channels to banks and verifying bank start bs and bank finish bf, if you want to scan a bank, press BANK 1-4. BANK scanning will be indicated by rolling 8's.

To reactivate normal scan from BANK scan, press MANUAL and then SCAN.

Changing Scan Speed

During the SCAN mode, you may choose between two scan speeds. By pressing the ENTER/SPEED key, you can slow or speed the scan rate.

Delaying Scan

During the SCAN and BANK scan modes, you may want to delay resumption of the scan process in order to hear a reply that might otherwise be missed once the unit has gone on to scan the other channels.

To do this, press DELAY/HOLD key. The "DLY" indicator will appear in the display.

Now whenever a signal is received, the unit will stop on the channel, display the channel number and frequency, and broadcast the message. At the conclusion of the message, the unit will wait approximately 2 seconds before scanning. To de-activate DELAY, press DELAY/HOLD again. The "DLY" will disappear from the display.

Monitoring Single Channel

If at any time you wish to monitor one channel continuously, press MANUAL repeatedly until the desired channel is reached. A channel selected in manual that had previously been locked out during scan will show "LCK" in the display.

Direct Channel Access

To access or recall any channel without stepping through each of the 55 channels, simply press MANUAL, the channel number (01-55) and MANUAL again.

NOTE: You may direct access to verify frequency in a channel before adding/deleting frequencies.

Channel Review

To activate a rapid slewing of channels as an alternate method of selecting a channel or quickly reviewing its LOCK status, press MANUAL and hold for one second or longer.

Monitoring National Weather Service

The National Weather Service provides a continuous (24-hour) broadcast of local and area weather conditions.

These weather messages are repeated until the next or updated report is issued. The Weather Service has broadcast facilities in many metropolitan areas of the country.

If you are located within 25 or 30 miles of one of these

cities, reception can usually be obtained with the flexible antenna supplied with the unit. Your local Regency dealer can advise you about your specific antenna requirement.

NOTE: When set to automatic scan, the unit will stop and remain on the Weather Channel (because it broadcasts continuously). Thus, this channel should only be activated when you desire to hear the current weather report. The broadcast frequencies (MHz) are:

162.400	162.500
162.425	162.525
162.450	162.550
162.475	

SEARCHING

The HX1500 digital scanner includes a search function that enables you to locate new frequencies in addition to those you already know. It can locate active frequencies anywhere within the entire frequency range.

Defining Lower (LO) and Upper (UP) Frequencies

To search for unknown frequencies in the range 460.350-461.350 MHz:

In this example, **LO = 460.350 MHz**
UP = 461.350 MHz

Procedure: Press SEARCH PROGRAM.
Press 460.350, ENTER then 1 LO.
Press 461.350, ENTER and then 2 UP.

To verify the search frequency limits, press SEARCH PROGRAM once. The upper limit is displayed. Press SEARCH PROGRAM again. The lower limit is displayed. Press SEARCH SCAN.

NOTE: If the frequency entered is outside of the permitted range or the upper and lower limits are valid but in different bands (Example: 35 and 144), or the lower limit is higher than the upper limit, the display will show:

Sr Err

NOTE: Be sure squelch control is set to eliminate back-

ground noise. The unit will now automatically sample every frequency within the limits you have selected. When an active frequency is received, the unit will stop searching, and display the frequency it has found. Once stopped on a frequency, you may "step up" one increment by pressing the SEARCH SCAN button. Resume the search process by pressing SEARCH SCAN.

Using the DELAY/HOLD Feature

While in the SEARCH mode, you may wish to select the Delay feature or, (in the SEARCH mode only) you may select the Hold feature. If you press DELAY/HOLD, the LCD display indicates the mode you are in, "DLY" or "HLD". If you wish to stay on the first active signal, select HOLD mode by pressing the DELAY/HOLD key. In order to start searching, just press the SEARCH SCAN key.

The Delay feature will function as previously explained. When the unit reaches the upper limit of the search, it will automatically return to the lower limit and begin again. If you decide to change modes (i.e. MANUAL or SCAN) while the unit is searching, you may do so. The unit will remember at what frequency the search was interrupted. To resume, press SEARCH SCAN and the unit will continue to search from that frequency.

Assigning Channels to Newly Found Frequencies

You also have the option of entering frequencies found while searching directly into one of the 55 scan channels. For example, entering a frequency found in search mode into channel 5: When the unit stops on an active frequency, just press ENTER, 05.

NOTE: You must press ENTER while the search is still stopped on the frequency. After entering a frequency into a channel, the unit will resume search on the next frequency.

Now the frequency found in search is entered into channel 5. Other frequencies found while searching can be entered into any of the other scan channels the same way.

NOTE: In the SEARCH mode, it is recommended that you limit the search range to 1 MHz or less. Your chances of

catching an unknown active frequency will be considerably greater since transmissions are usually short.

Changing Search Speed

By pressing the ENTER/SPEED key during the search, the rate can be reduced or increased.

SPECIFICATIONS

(Subject to change without notice)

Frequency Range	Amateur 29- 30 MHz, 10m
	VHF (Low) 30- 50 MHz
	Amateur 50- 54 MHz, 6m
	VHF (Aircraft) 118-135.975 MHz
	Canadian/WX Satellites 136-144 MHz
	VHF (Amateur) 144-148 MHz, 2m
	VHF (High) 148-174 MHz
	UHF (Low) 406-420 MHz
	UHF (Amateur) 440-450 MHz
	UHF (Standard) 450-470 MHz
	UHF (Extended) 470-512 MHz
Sensitivity (12dB Sinad at tune-up)	VHF 0.5 μ V
	HI VHF 0.7 μ V
	UHF 0.7 μ V
	Aircraft 1.0 μ V (10db S/N)
Normal Scanning Rate	
	Fast — 13 channels/Sec approx.
	Slow — 7 channels/Sec approx.
Search Scanning Rate . . .	UHF Approx. 7 Secs/MHz
	VHF Approx. 17 Secs/MHz
Scan Delay	Normal 0.6 Seconds Approx.
	With Delay Option 2.0 Second Approx.
Priority Sampling Rate. . .	Every 2.0 Seconds Approx.
Audio Output	120 mW ($\leq$ 10% distortion)
Power Requirements	
	8 AA (Internal Rechargeable Type; not supplied)
Size (W x H x D)	3.0" x 6.9" x 1.5"
	(77 mm) x (175 mm) x (39 mm)

REGENCY SCANNERS LIMITED WARRANTY

1. The warranty applies to the original or subsequent owners of the product for a period of 90 days from the original purchase date.
2. We agree to repair or replace all parts showing defects in material or workmanship.
3. Warranty service will be provided free of charge if unit is delivered to us intact, transportation charges prepaid, within 90 days of the date of sale to the original purchaser.
4. The warranty does not apply to units subject to misuse, neglect, accidents, incorrect wiring not our own, improper installation, or units used in violation of the instructions furnished by us. Nor does the warranty apply to units: damaged by lightning, excess current, repaired or altered outside the factory, or units with altered or removed serial numbers.
5. To have your unit serviced under the warranty, return it freight prepaid, with dated proof of purchase documents (sales receipt) to:

Customer Service Department
Regency Electronics, Inc.
7707 Records St.
Indianapolis, IN 46226

Only factory personnel are authorized to perform warranty service. NOTE: When returning units for warranty service, do not include accessories (antenna, power cord, batteries, etc.)

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