REGENCY SCANNERS
MODEL HX2000
OWNER'S MANUAL

PACKING LIST

1 – Receiver Unit
1 – Frequency Antenna
4 – AA Nicad Rechargeable batteries
1 – Plug in charger/adapter
1 – Instruction Manual

INDEX

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.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

GENERAL DESCRIPTION

Your HX2000 is a handy, programmable 20 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 twenty channels can be scanned automatically or the unit can be set on manual for continuous monitoring of any one channel. In addition, the search function locates unknown frequencies within a band.

Other features include scan delay, scan hold, scan speed, priority and light switch to sidelite the liquid crystal display. The HX2000 can be operated on either 6 VDC or 120 VAC (with included wall-mounted transformer for 120 VAC operation).

PREPARATION FOR USE

Before operating your HX2000, read the following directions carefully.

1. 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.
2. Insert the AC Power adapter into a 120 V receptacle and the other end into the power cord jack provided on the left side of your scanner.
3. Insert the flexible antenna into the antenna receptacle on the top panel of the scanner. The shorter antenna provides better reception for higher frequencies. The longer antenna provides better reception of lower frequencies.
4. Before turning on the receiver, set the "SQUELCH" slide knob to the far left. Also, set the "VOLUME" slide knob to the far left, or minimum setting.
5. Now, turn the Power switch on to apply power to the receiver.
6. Set the squelch by sliding the squelch knob to right until static is heard. Turn the knob back until static just disappears.

CONTROLS AND RECEPTACLES

Volume: When sliding 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 search.

Power On/Off: When it is set to "ON", it provides power to the unit.

– 12.5 KHz SHIFT Switch: Used to shift 800 MHz frequencies down by 12.5 KHz (see page 3).

Flexible Antenna: Prior to operation, insert the flexible antenna in the

socket located on the top of your unit. Tighten until metal base of antenna is secured against top of radio.

Wire Antenna: A special wire antenna, complete with phone plug attachment, can be used instead of the flexible antenna if better reception is desired. Insert the plug at the end of wire antenna into the jack marked "ANT" on the top of your unit. Stretch the wire to its fullest vertical extension for maximum reception capability.

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 (EAR) on the unit. The speaker will be automatically disconnected and the radio reception will be heard only through the earphone.

Reset Switch: (Located under the battery compartment door.) If the unit does not operate or respond normally, use a small blunt instrument to press in the Reset button.

PROGRAM PANEL

The HX2000 has 23 touch-entry keys for easy operation.

Mode Keys

SEARCH: Starts the search process.

SCAN: Puts the unit into the scan mode.

MANUAL: For manual advance during search or to take the unit out of the scan mode.

PRY: Selects priority feature.

DLY/HLD: Allows for delay in the resumption of the SCAN and hold or delay in the SEARCH processes.

SEARCH PROG: To program the lower frequency and upper frequency for SEARCH.

SCAN PROG: To program a group of channels to be scanned (see page 4).

INC: Selects 5 KHz, 10 KHz, 12.5 KHz or 25 KHz SEARCH frequency increment.

FM/AM: Selects AM mode or FM mode.

SPEED: During the SCAN or SEARCH mode, you may choose between two scan or search speeds.

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

CLEAR: To clear any mistakenly entered frequency before pressing the ENTER key.

ENTER: For entering frequencies.

KEY LOCK: When turned on, disables the keyboard to prevent inadvertent entries.

LIGHT: When turned on, illuminates the liquid crystal display.

PROGRAMMING CHANNELS

The HX2000 has 20 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.

Example: Enter the FM frequency of 465.750 into channel 01.

1. Press MANUAL, a digit will flash to prompt frequency entry.
2. PRESS 4 6 5. 7 5 0 and ENTER.
3. After pressing ENTER, "FM" or "AM" will blink indicating the unit is waiting for you to select the FM or AM mode and to put the frequency into a specific memory channel. Press FM/AM to select. The indicator **not** flashing is the mode selected.
4. Then enter the selected frequency to a specific channel by pressing, for example 01, for channel 1.

Display: Frequency 465.750 is now in channel 1. Repeat this procedure for each channel to be programmed.

Important: Channels 1 through 9 require pressing "0" before pressing the channel number.

Note: If you enter an invalid frequency "ERROR" will appear in the display. Press MANUAL and begin again.

Important: Each time MANUAL is selected for the purpose of entering a frequency, the scanning process immediately stops. The channel and frequency displayed in the digital readout will in no way be affected when you enter the new frequency, unless it is the one you wish to change.

800 MHz Monitoring

With the exception of cellular telephone, 800 MHz frequencies are offset by 12.5 KHz. Receiving these frequencies requires use of the −12.5 KHz SHIFT Switch.

For example: Monitoring 863.0375 MHz. Following normal programming instructions, program 863.050 MHz. Then slide the SHIFT Switch to −12.5 KHz.

Note: The SHIFT control only affects 800 MHz frequencies. It may be left in the −12:5 KHz position during Scan, Search, or while in the Manual Mode without offsetting other frequencies.

IMPORTANT: The use of the SHIFT control does **not** change the frequency number shown in the display.

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 sliding the knob toward left 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.

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 "LOCK" 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.

Scan Delay

During the SCAN mode, 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 other channels.

To do this, press DLY/HLD. The "DELAY" 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 DLY again. The "DELAY" will disappear from the display.

Scan Speed

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

Scan Program

The scan program button is used to lock out a group of channels from the scan list. For example, if you wish to scan channels 6 through 18 only, press SCAN PROG (the channel number will blink indicating the unit is waiting for you to enter the upper and lower limits for scanning). Then, press 0, 6 and 1, 8. The "SCAN" indicator will blink indicating that the scan limits have been programmed. The next time you press SCAN, the unit will scan from channel 6 through channel 18, skipping channels 1 through 5, 19, and 20. To return the scan function to the original state, press SCAN PROG 0, 1 and 2, 0.

MANUAL OPERATION

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

SEARCHING

The HX2000 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.

Two frequencies (lower and upper) are used in the search mode. For example, to search for unknown active frequencies between 460.350 and 461.350 in the FM band.

Press the SEARCH PROG Key and then INC key to choose the desired frequency increment, 5 KHz, 10 KHz, 12.5 KHz or 25 KHz. Keep pushing the INC key until desired increment is solid (not flashing). Key in 460 . 350 , ENTER, and 461 . 350 ENTER. The unit will ask you if you would like AM or FM mode by BLINKING either AM or FM in the LCD display. Select FM or AM by pressing FM/AM key until the mode you desire is not flashing. Now all you have to do is to start the search process by pressing SEARCH key.

Note: Programming the search frequencies has no effect on the frequencies that have been programmed into SCAN or MANUAL channels.

Note: If you wish to change the search frequency increment you may do so by pressing SEARCH PROG key and then select the desired step by pushing the INC key. It is best to choose a search frequency increment that corresponds to the channel spacing of the band you are monitoring. We recommend the following search increments:

BAND	MODE	RECOMMENDED INCREMENT
118-136 MHz (Aircraft)	AM	12.5 KHz
138-174 MHz (VHF High)	FM	5 KHz
406-490 MHz (UHF)	FM	12.5 KHz
490-512 MHz (UHF "T")	FM	12.5 KHz
800-950 MHz (800/cellular)	FM	25 KHz*

*This is the only programmable range in the 800 MHz band.

Note: Be sure squelch control is set to eliminate background 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 MANUAL button. (Pressing and holding the MANUAL button will slew up in increments.) Resume the search process by pressing SEARCH. 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 DLY/HLD, the LCD display indicates the mode you are in, "DELAY" or "HOLD". If you wish to stay on the first active signal, select HOLD mode by pressing the DLY/HLD key. In order to start searching, just press the SEARCH 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 the search, press SEARCH and the unit will continue the search from that frequency.

You also have the option of entering frequencies found while searching directly into one of the 20 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, 0 5.

Note: You must press ENTER while the search is still stopped on the 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. Press SEARCH to resume the search.

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.

PRIORITY

This is a special feature that 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 PRY key.

Note: PRIORITY IS ACTIVE IN THE MANUAL, SCAN or SEARCH modes. The display will indicate priority with "PRY".

While the unit is in the above modes, the display will blink each time channel 1 is sampled. Any audio will also be briefly interrupted. Should a transmission begin on the 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 PRY key again. To change modes or channels while the unit has stopped on the Priority channel, you must first de-activate the priority.

BATTERY INSTALLATION

Four AA Nickel-Cadmium batteries are supplied to operate your HX2000 handheld scanner. Also, your dealer stocks AA dry cells as well as the 4 pack Nickel-Cadmium rechargeable battery to fit your unit.

Dry cell batteries should be replaced when your unit fails to scan and/or the volume becomes low. In addition, do NOT leave discharged batteries in the unit for any length of time as leakage may damage the receiver. It is highly recommended that AA alkaline batteries be used because of their longer life in this type of operation. The battery compartment is located on the back of the unit. Remove the cover by pressing down on the ridges and pushing outward in direction of arrow.

Insert the four AA batteries into the compartment as indicated by the diagram inside the battery compartment.

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.

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

Nickel-Cadmium Batteries

For greater operating economy, rechargeable Nickel-Cadmium batteries are recommended. Ask your dealer for a pack which consists of 4 AA size, 1.2 V Nickel-Cadmium batteries. If Nickel-Cadmium batteries are used, they should be recharged when the unit fails to scan and/or the volume becomes low.

Charging Nickel-Cadmium Batteries

Caution: To avoid possible damage to the receiver and batteries, use only the included AC charger. The charger can be used to charge the 4 AA Ni-Cad batteries as needed. Insert one end of the charger into the jack of the left side of the unit marked "CHARGE". Plug the other end into any 120V wall outlet.

Important: DO NOT plug the AC charger into the jack labeled "CHARGE" unless rechargeable batteries are installed. 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 "CHARGE" JACK IS USED. To operate the radio with the charger when there are no batteries or non-rechargeable ones installed, plug the end of the charger into the POWER jack on the side of the radio.

Approximately 14 hours are required to fully charge the batteries. If batteries are charged for 24 hours and do not hold their charge, they should be replaced with new batteries. It is also recommended that Nickel-Cadmium batteries be recharged for the same amount of time the receiver was used. Moderate over charging will not damage the batteries, however they should receive an overnight charge if the unit has not been used for several months.

Important: The HX2000 can be operated while the Ni-Cad batteries are being recharged. Allow 30 hours for proper charging if the unit is being charged and operated at the same time.

MEMORY BATTERY

Your HX2000 has an internally installed memory battery. It will be charged when you first charge the unit for normal operation, and should remain charged for the life of the unit. If the memory function fails, consult a repair station, do not attempt to service the memory battery yourself.

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 telescopic 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.

SPECIFICATIONS

Frequency Range	118-136 MHz (Air Band)
	138-174 MHz (VHF HI)
	406-490 MHz (UHF)
	490-512 MHz (UHF "T")
	800-950 MHz (R Band)
Search Frequency increments	VHF: 5 KHz, 10 KHz, 12.5 KHz,
	UHF: 12.5 KHz
	R: 25 KHz
Sensitivity (12 dB Sinad, at tune-up)	VHF 0.5 μV
	HI. VHF 0.5 μV
	UHF 0.7 μV
	Air Band 1.0 μV (10 dB S/N)
Selectivity	±7.5 KHz @ 6 dB FM/AM
Scanning Rate approx	15 channels per second
Search Scanning rate UHF	Approx. 7 seconds per MHz
VHF @ 10 KHz Inc.	Approx. 9 seconds per MHz
Scan Delay (Normal)	Approx. 0.6 seconds
With delay option	Approx. 2.0 seconds
Priority sampling rate	Approx. 2.0 seconds
Audio output	120mW 10% or less distortion
Power requirements	6 VDC, External
	4.8 VDC, Internal
	Rechargeable type
Size (W × H × D)	3.0" × 6.9" × 1.5"
	77 × 175 × 39 mm

Specifications subject to change without notice.

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.

Regency

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

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