

How To Use Your
CHEROKEE™

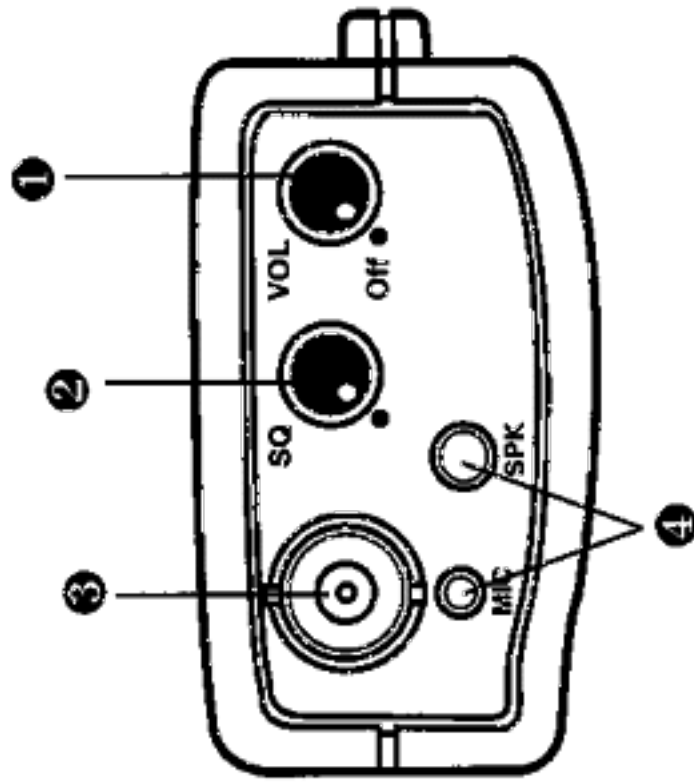
**6 Meter Amateur Band
Two-Way Portable Hand Held Radio**

Model AH-50

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DESCRIPTION OF FEATURES

Top Panel Features

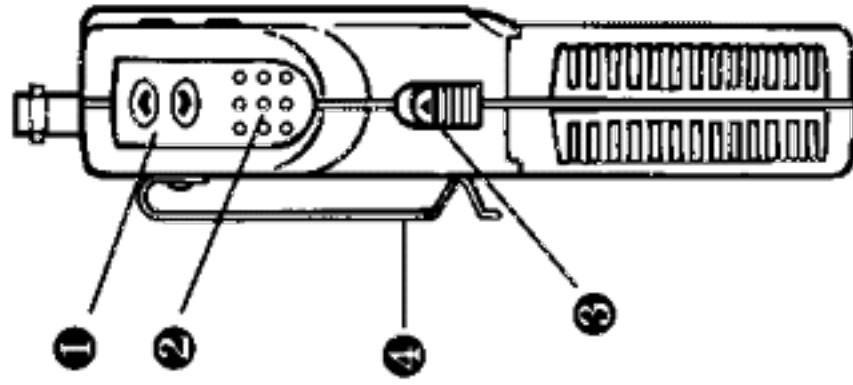


- 1. Off/On, Volume:** Turn this button clockwise to turn power on and set desired listening volume.
 - 2. Squelch:** This control is used to cut off or eliminate receiver background noise in the absence of an incoming signal. For maximum receiver sensitivity, the control should be adjusted only to the point where the reception of ambient background noise is eliminated. Any incoming signals that are received will be stronger than the background noise.
 - 3. Antenna Connector:** This radio uses a BNC type connector for use with the supplied custom flexible antenna. This antenna provides good performance given its overall size. However, longer antennas will substantially increase the range performance. Please refer to the accessories section of this manual for a complete listing of available full-length antennas.
 - 4. Microphone and Speaker Jack:** Jack for connection of optional speaker microphone accessory. (See accessories section of this manual).
- Dust Cover:** When speaker/microphone are not being used, this prevents dirt and moisture from getting inside the radio.

DESCRIPTION OF FEATURES (Con't.)

Side and Back Panel Features

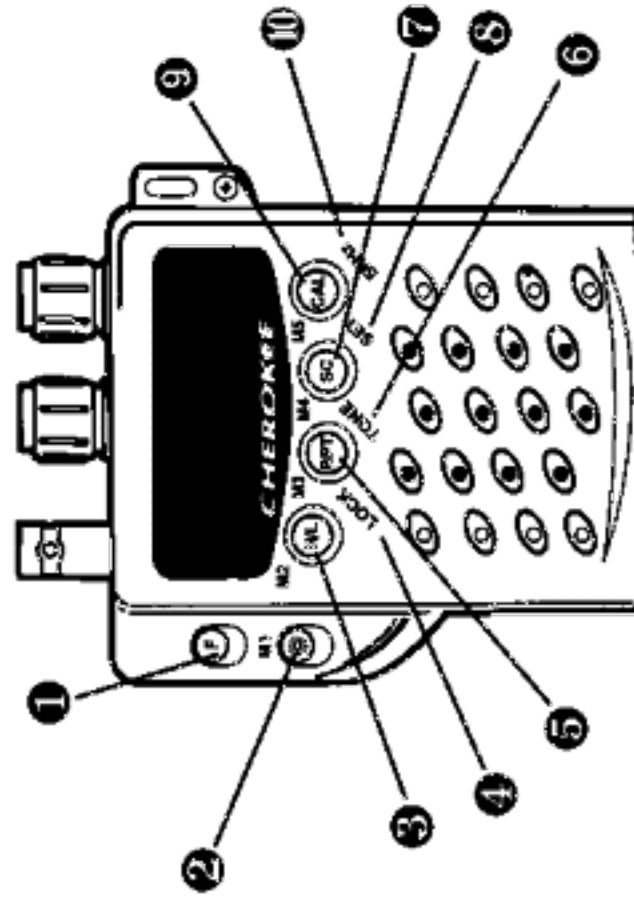
- 1. Frequency Up/Down Buttons:** When pressed, these buttons are used to select the desired frequency. Press the "▲" arrow to move to a higher frequency. Press the "▼" arrow to move to a lower frequency. When pressed and held for longer than one half of a second, the frequency will continue to change until the button is released.



- NOTE:** When the "CAL" button has been activated, the up/down buttons will not operate. When the "CAL" button has been deactivated, the up/down buttons will again operate normally.
- 2. Push-To-Talk (PTT) Switch:** The receiver and transmitter are controlled by the push-to-talk switch. Press the switch and the transmitter is activated: you can now send a message. To receive, release the push-to-talk switch. When transmitting, hold the AH-50 two inches from your mouth and speak clearly in a normal voice into the front of the speaker grill area.
 - 3. Battery Pack Latch:** Sliding this button up in its tracks allows the battery case to be removed. In the down position, the battery pack is held securely.
 - 4. Belt Clip:** Allows for ease of carrying while attached to user's belt.
 - 5. Flexible Wrist Strap:** Place strap around the wrist to prevent radio from falling to the ground in the event it falls out of user's hand.

DESCRIPTION OF FEATURES (Con't.)

Front Panel Features



1. Function Button/Five Memory Presets: The **F** button, when used in conjunction with the **M1-M5** buttons on the front panel of the radio, allows for access of the five preset memory locations. The memory presets are great for storing your most frequently used frequencies and tones, allowing for immediate access to them in a very simplistic, convenient manner.

■ To Store Frequencies in the Memory locations:

- Select the frequency you want to store with the ▼ and ▲ buttons.
- Press and hold the **F** button. The press once and release the corresponding memory location (**M1-M5**).

■ To Access a Memory location:

Press the **F** button once, followed immediately by pressing the memory location you want to access. The desired frequency number will appear on the display, with the corresponding memory location indicated next to it.

■ To Change a Memory location:

If you desire to change the frequency being stored within a memory location, simply repeat the process described in "To Store Frequencies in the Memory locations". The new frequency will be stored over the information that was previously in that memory location.

Note: Additionally, it is possible to store "Tone Frequency, Tone On/Off, Repeater On/Off and +5KHz information.

DESCRIPTION OF FEATURES (Con't.)

2. Display Lamp: Provides lighting of entire digital liquid crystal display (LCD) for use in dark or nighttime applications. Press the "*" once, and the lamp will stay on for six to seven seconds, after which it will extinguish automatically. If you wish to quickly extinguish the light, press the "*" again. If you need continuous lighting, press and hold (one-half second) the "*" until a soft beep sound is heard. The light will stay on continuously until the "*" is pressed again.

3. Selectable Hi-Low Power: The AH-50 has been designed with proprietary circuitry that gives it superior transmitting performance. This enables the user the ability, depending on the usage application, to select between two power levels. The Power Hi-Low button changes the radio from full power output to low power output when a short range communication situation is at hand. Low power output mode will give the user significantly longer battery life, estimated to be twice as long as when in the full power mode. It is recommended that when as when in the full power mode. It is recommended that when a range of 1/2 mile or less is required, the LOW should provide more than adequate distance. If longer distances are required, the radio should be in High power mode.

To Change Power Output—simply press the **H/L** button. **LOW** will appear on the LCD display. To return to full power, press the **H/L** button again.

4. Key Lock: The Key Lock feature allows the user to "lock" virtually all of the buttons so they cannot be accidentally activated. This will protect the radio from having its operation mode changed from that desired by the user.

To Activate: Press and hold the **H/L** button for approximately one and one-half seconds. The **L** will appear on the right side of the LCD display. Also a beep will sound.

To De-Activate: Repeat process described in "To Activate".

The **L** will disappear from the LCD display.

5. RPT (Repeater): A repeater receives signals and retransmits them on them on a different frequency with higher power. This provides for longer-range communication than would be available without the repeater. The difference between the repeater input and output frequency is called the "Offset Frequency". The Offset Frequency is selectable, and can be activated through the "Set Mode", which is described on page 7.

DESCRIPTION OF FEATURES (Con't.)

A) To Access the Repeater:

- Press the RPT Button. The transmitting frequency will be increased by either 500 KHz or 1 MHz compared to the receiving frequency. A "+" will appear on the LCD display.

NOTE: The selection between the 500 KHz or 1 MHz setting is done through the "Set Mode" function.

B) To Change to the "Reverse Setting":

- Press the RPT Button at the Repeater mode...the transmitting frequency will be decreased by either 500 KHz or 1 MHz compared to the receiving frequency. A "-" will disappear from the LCD display.

C) To Turn-off the Repeater Setting:

- Press and release the RPT button while the radio repeater is in the "Reverse" mode. The "-" will disappear from the LCD display.

6. CTCSS Tone Frequency Selector Mode: The Continuous Tone Coded Squelch System (CTCSS) is a sub-audible tone that is transmitted with the FM carrier signal to access other radios using the same code. To activate, press and hold the "RPT" button for about 2 seconds. The word "TONE" will appear on the display. You can now select a tone frequency by pressing and holding SC button (SET) from the 47 frequencies available through the CTCSS programming table. Refer to the table on page 9 to find the tone that you desire. If you do not select a tone frequency, the pre-programmed frequency in this mode is the 8th frequency (85.4 Hz).

If you press the PTT button or SC button when setting the CTCSS Tone frequency, the last tone frequency used will be stored and the CTCSS mode will be released. In the Tone (CTCSS) frequency selector mode, only the LAMP button and the High/Low button will operate. Also, if the tone frequency does not correspond with the repeater that you are trying to access, the receive audio will stay off until you access the same frequency. Transmit and receive are possible at the same frequency.

To De-Activate this feature:

- Press and hold the "TONE" button for more than 2 seconds. The "TONE" on the display will disappear.

DESCRIPTION OF FEATURES (Con't.)

Front Panel Features

7. Scan: The Frequency Scan feature allows the radio to automatically scan through all the frequencies, stopping at any frequency that is busy with signals being communicated. It will remain on that frequency during the conversation, and will not reactivate scanning until 7 seconds after the conversation has ended.

A. To Activate Scan: Simply press the SC button. The decimal point "." will begin flashing on the display, and the radio will start the scanning process.

To Stop Scanning: Simply press the SC button again.

In the event that during the scanning process the radio stops on a frequency and conversation that you want to communicate with, simply press the Push To Talk (PTT) button. This will shut off the scanning function and allow for transmitting on this frequency.

B. Scanning of the 5 preset Memory locations: Unique software allows the AH-50 to selectively scan only the five frequencies stored in the memory locations.

To Activate Memory Scan: Simply press the SC and then the F button. The radio will now scan only the five memory locations stored in each memory.

To Stop: Simply press the SC button again.

8. Set Mode: This feature is used to establish and/or change the operational settings of the following features:

- Selecting the TX (Transmit) CTCSS tone
- Selecting the RX (Receive) CTCSS tone
- Selecting the repeater offset frequency space
- Selecting the Call Frequency
- Selecting the Power Save mode

To Activate: Press and hold the SC button for about two seconds. The word "SET" will appear on the display.



DESCRIPTION OF FEATURES (Con't.)

After a short time, the display changes to the TX tone setting mode. TX appears in the display and the ▲ and ▼ buttons will change the tone frequency.

To set a different feature requires simultaneously pressing and hold the F button and pressing either the ▲ and ▼ buttons .

To select different features that you want to establish the settings for, press and hold the F button, while pressing either the Up/Down buttons. If you use the "Up" button, the features settings will appear on the display in the following order:

- a.) Selecting the TX (Transmit) CTCSS tone
- b.) Selecting the RX (Receive) CTCSS tone
- c.) Selecting the repeater offset frequency space
- d.) Selecting the Call Frequency
- e.) Selecting the Power Save mode

If you use the "Down" button, the settings will appear in the reverse order of those listed above.

A. To Set The TX and RX Tone: The transmit tone is divided into two different tone settings: The TX tone and the RX tone.

To access the tone setting: press the F button, followed by the "Up/Down" button. On the display, the 8th tone setting, which is 85.4 Hz, will appear on the display. This is the priority or default setting. It will stay on this setting until you decide to change it.

You can now select the tone setting (frequency) that you will need for your area. Please note that the tone setting is listed in it's frequency rating, not simply a code number, like 1, 2, 3, etc.

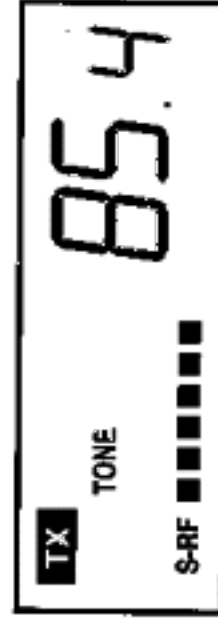
Listed is a reference chart of the 48 different tone settings. There is also a separate "Tone Card" in the back of the owner's manual that is designed to give you a reference card to carry with you for times when you need to change the setting.

DESCRIPTION OF FEATURES (Con't.)

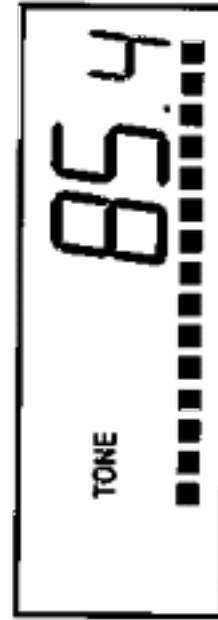
CTCSS Programming Table

NO.	CODE	FREQ (HZ)	NO.	CODE	FREQ (HZ)	NO.	CODE	FREQ (HZ)
1	3F	67.0	17	0B	114.8	33	04	186.2
2	39	69.3	18	1A	118.8	34	33	189.9
3	1F	71.9	19	0A	123.0	35	13	192.8
4	3E	74.4	20	19	127.3	36	34	196.6
5	0F	77.0	21	09	131.8	37	35	199.5
6	3D	79.7	22	18	136.5	38	03	203.5
7	1E	82.5	23	08	141.3	39	36	206.5
8	3C	85.4	24	17	146.2	40	12	210.7
9	0E	88.5	25	07	151.4	41	02	218.1
10	3B	91.5	26	16	156.7	42	11	225.7
11	1D	94.8	27	31	162.8	43	37	228.1
12	3A	97.4	28	06	168.2	44	01	233.6
13	0D	100.0	29	15	167.9	45	10	241.8
14	1C	103.5	30	05	173.8	46	00	250.3
15	0C	107.2	31	14	179.9	47	38	254.1
16	1B	110.9	32	32	183.5	48		NO TONE

TX Display



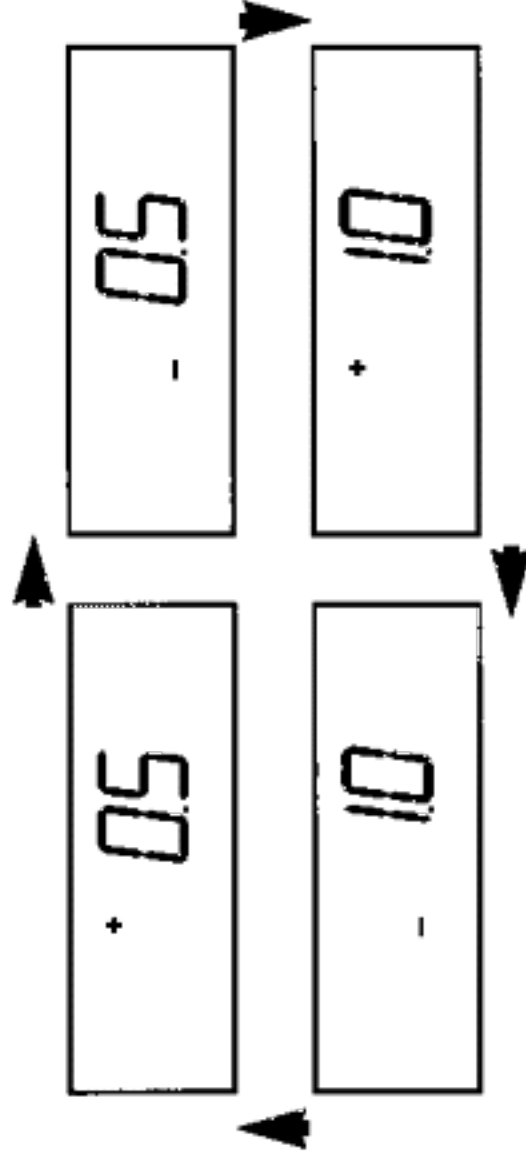
RX Display



To Store the Selected Frequency: Press either the "PTT" or the SC button. Your TX and RX selected frequencies have now been stored. Once stored, the setting feature will bypass the TX and RX modes. If you wish to change, the radio must be powered down and then powered up.

DESCRIPTION OF FEATURES (Con't.)

B. Setting the Repeater Offset Frequency Spaced: Simultaneously depressing and holding the F button and pressing and releasing the ▼ or ▲ buttons will increment the set feature to selecting the repeater offset frequency space. Four choices are available: +500KHz, -500 KHz, +1 MHz, -1 MHz. The ▼ or ▲ buttons cycle through the four choices.



Once you have set the desired frequency, press the PTT or SC button to store your selection.

C. Setting the CAL Frequency: Simultaneously depressing and holding the F button and pressing and releasing the ▼ or ▲ buttons will increment the set feature to selecting the CAL. frequency. A "C" appears on the right side of the display and the ▼ or ▲ buttons will change the frequency.



DESCRIPTION OF FEATURES (Con't.)

The pre-programmed CAL frequency is 51.00 MHz. The incremental steps are 10 KHz. If you wish, the "5 KHz" can also be used.

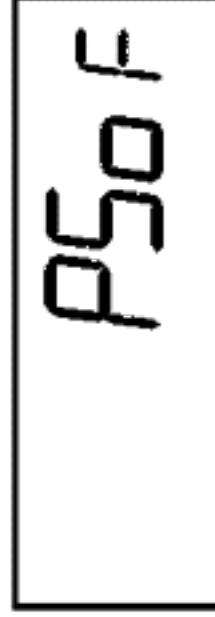
Once you have set the desired frequency, press the PTT or SC button to store your selection.

D. Setting the Power Save Mode: Simultaneously depressing and holding the F button and pressing and releasing the ▼ or ▲ buttons will increment the set feature to selecting the Power Save mode. Use the ▼ or ▲ to select on or off.

LCD at Power Save On



LCD at Power Save Off



Once you have set the desired mode, press the PTT or SC button to store your selection.

DESCRIPTION OF FEATURES (Con't.)

The AH-50 incorporates unique Battery Life Enhancement Circuitry (B.L.E.C.) that can significantly increase the useful life of your batteries.

If no signals are received or transmissions made, a right side "." blinks to indicate the Power Save is On. The B.L.E.C. system is actually turning the internal circuit on and off to conserve energy in a three step process:

- a. Step 1: The radio is turned on for 0.8 seconds and off for 0.2 seconds. After three minutes of inactivity, the radio will advance to step 2.
- b. Step 2: The radio is turned on for 0.2 seconds and off for 1.8 seconds. After five minutes of inactivity, the radio will advance to step 3.
- c. Step 3: The radio is turned on for 0.2 seconds and off for 2.8 seconds.

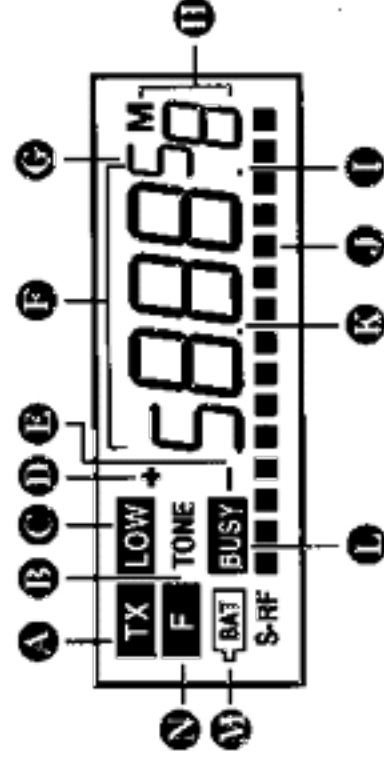
Over an eight-minute period, the Power Save mode has achieved 80% energy savings. If a signal is received or if any buttons are depressed, the radio will return to normal operation.

9. **Call Frequency:** Provides quick and easy access to the frequency that offers to best opportunity for help in an emergency situation. 51.00 MHz has been pre-programmed. To activate, press the CAL button once. To release, press CAL again.
10. **5 KHz:** This feature allows the radio to receive and transmit on frequencies between the normal 10 KHz spacing.
To activate: Press and hold the CL/5 KHz button for over 1.5 seconds. "5" will appear on the display. 5 KHz frequencies can also be stored in memory.
To deactivate: Press and hold the CL/5 KHz button for over 1.5 seconds. "5" will disappear on the display.
11. **Speaker:** High quality, impact resistant speaker for clear output reception.
12. **Electronic Microphone:** Front mounted, electrostatic condenser microphone for clear high quality transmission power. You should hold the radio 2-4 inches from your mouth and speak in a normal voice.
13. **Battery Case:** Slide on battery case, which holds the Nickel Cadmium battery. (See "batteries" for installation instructions).

DESCRIPTION OF FEATURES (Con't.)

Display Panel Features

Illustrated below are all the VISUAL INDICATORS that appear on the display, and the corresponding feature function that they associate with:



Liquid Crystal Display Panel: The state-of-the-art liquid crystal panel provides the user with a visual information center on the operation and status of the AH-50.

CAUTION: Due to the components inherent in them, liquid crystal displays should not be subjected to extremes of temperature or humidity. If the unit is exposed to temperatures below -20°C (-5°F) or above +60°C (+140°F), the display may temporarily cease to function properly, and in some cases, could result in permanent damage. Do not subject radio to extreme conditions, such as a closed automobile in direct sunlight or continuous sub-zero temperatures.

All liquid crystal displays have a preferred viewing angle when the display contrast is at a maximum. The best viewing point will vary by user, depending on such variables as temperature, humidity, battery condition, and the actual user's eyesight.

- A. **TX:** Indicates that radio is in the "Transmit" mode.
- B. **TONE:** Indicates that the radio is in the "Tone" mode.
- C. **LOW Power:** Indicates that the user has selected the "low power" output mode. When the indicator is not shown, radio is in the full output mode.

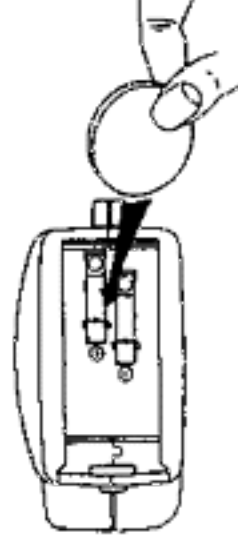
DESCRIPTION OF FEATURES (Con't.)

- D. "+": Indicates that the radio is in the "Repeater" mode.
- E. "-": Indicates that the radio is in the "Reverse" mode.
- F. **Frequency Indicator:** Indicates the frequency at which the radio is operating.
- G. "5": Indicates that the radio is in the "5 KHz" mode.
- H. "M"/"L"/"C": "M1-M5" indicate that the radio is in the "Memory" Mode.
"L" indicates that the radio is in the "Lock" mode.
"C" indicates that the radio is in the "Call" mode.
- I. ".": Indicates that the radio is in the "Power Save" mode.
- J. **Signal RF Meter:** Your Cherokee AH-50 incorporates a fifteen-segment incoming signal meter in the liquid crystal display.
When receiving a signal, the meter will indicate how strong the signal is. One or two segments will indicate a weak signal. A strong signal will have 12-15 segments.
- K. " ": Indicator will blink when radio is in the "Scan" mode.
- L. **"BUSY":** Indicates that the radio has located an incoming signal and is monitoring the conversation.
- M. **"BAT":** Indicates that the battery is getting low and needs replacement or recharging.
- N. **"F":** Indicates the "F" button has been selected.

SPECIALTY FEATURES

1. RESET:

If the radio does not respond to pressed buttons and the batteries are good, the reset feature will return the radio to proper operation.



Disconnect the battery pack and use a coin to cause a momentary short circuit across the connections on the top portion of the radio.

CAUTION: DO NOT SHORT THE CONNECTIONS ON THE BATTERY PACK.

2. FREQUENCY ADVANCE: To change the frequency in 1MHz steps, press and hold the F button while pressing the ▼ and ▲ buttons. Normal frequency advance is 10 KHz without holding the F button.

BATTERY PACK INSTRUCTIONS

Your Cherokee AH-50 has a standard Super Nickel Cadmium (Ni-Cad) rechargeable battery pack. This battery pack, part number NP-126, provides the radio with the greatest power output and the greatest user time.

Recharging the Super Ni-Cad Battery Pack

The battery pack is supplied with a 110 volt AC, UL approved recharging adapter.

1. To charge the battery pack only: Simply plug in the round recharging end into the side of the battery pack as illustrated. The red light on the front of the battery pack will light and will stay on during charging. It will take approximately 10 hours to charge a completely drained battery pack.

2. To charge the battery pack while using the radio: In the event that you want to charge the battery pack, while at the same time, use the radio, you can easily accomplish this through the use of an accessory part numbers:

DA-27 and SPW-12. This slide-on adapter will provide power to the radio, while at the same time, charging the battery pack.

To use the DA-27:

- a. Slide on the DA-27 adapter to the top half control section of the radio.
- b. Slide on the battery pack on the bottom of the adapter.
- c. Plug in the power source in to the side of the DA-27, and you can use the radio while it is being charged.

BATTERY PACK INSTRUCTIONS (Con't)

3. Using the optional "Drop-In" charger: Model DC-27

An optional accessory, the DC-27 "Drop-In" Charger, can also be used to charge the battery pack. This charger automatically charges by setting a separate battery pack or complete radio into a cradle. The battery pack has charge contacts on the rear, which when placed in the charging cradle, allow for easy, convenient charging. The DC-27 has circuitry that automatically switches from rapid charge to a trickle charge once the pack has been fully charged. For information on this charger or other accessories, ask the dealer where you purchased the radio. If they do not carry them, call us at 1-800-259-0959 for more information.

NOTE: Your super Ni-Cad battery pack should provide you the ability to recharge it several hundred times under normal conditions. Your actual results may vary either way.

USER OPERATION

1. Attach the antenna to its connector on top of the AH-50.
2. Slide in the battery pack (see battery pack instructions).
3. Turn the Power On/Off-Volume control button clockwise to turn on the radio. Adjust the volume to your preferred volume setting.
4. Adjust the SQUELCH control to desired level.
5. Adjust the channel that you prefer by pressing the Up "▲" or Down "▼" buttons located on the side of the radio.

Note: If the frequency will not change, the Call or Key Lock features may be activated. Both of these features have a symbol on the display. Turn these features off if in fact they are activated to allow the radio to operate.

To Transmit

Press and hold the "Push-To-Talk" switch on the side of the AH-50. Place the radio about 2" from your mouth and speak into the speaker area in a normal voice.

To Receive

If you have just transmitted, then release the "Push-To-Talk" switch. If you have not transmitted, just leave the AH-50 on and you will receive on your selected frequency.

In-Car Operation (Optional Accessories Required)

In the event that you would like to use the AH-50 inside an automobile, we have built into the radio unique circuitry that allows for maximum performance when used in conjunction with our exclusive MA-27 "Mobil-Com" adapter. This adapter allows for direct connection to both the cigarette lighter plug and an external antenna, which is needed to provide maximum range when used in the car. (To purchase this adapter, please call the retail location where you purchased the radio. If they do not carry it, call us at 1-800-259-0959 for more information.) The picture below illustrates how the "Mobil-Com" adapter fits onto the radio.

USER OPERATION (Con't)

To use the Mobil-Com Adapter with the AH-50:

1. Slide off the battery pack that you are using with the radio.
2. Starting on the left hand side of the radio, slide the top of the adapter onto the radio, until it slides into place in the same manner as your battery pack.
3. The Mobil-Com circuit pad on the bottom of the radio should now be in contact with the round, spring loaded contact on the adapter. This connection is vital due to the fact that this serves to redirect the antenna connection from the BNC on the top of the radio to the "male" SO-239 plug on the bottom of the adapter.
4. Connect the "male" antenna plug on the bottom of the Mobil-Com adapter to the "female" antenna connector on your external antenna.
5. Plug your cigarette lighter plug into the cigarette lighter outlet of your vehicle. You should now have a completed connection in which to use your radio. Turn on the radio, and you should be communicating freely.

AH-50 SPECIFICATIONS

General

Frequency Range:	50.00 to 54.00 MHz
Frequency Control:	Phase Lock Loop (PLL) Synthesizer
Frequency Stability:	+/- 0.001%
Operating Temperature	-10°C to +55°C +14°F to +131°F
Power Source:	DC 7.2V to 12.0V
Impedance:	50 Ohm
Dimensions:	55mm(W) X 130mm(H) X 36mm(D) 2 ¹ / ₈ "(W) X 5 ¹ / ₈ " (H) X 1 ³ / ₈ " (D)
Weight:	14 ounces
Antenna Connection:	BNC

Transmit

Power Output @ 12.0 V	High: 5.0W Low: 1.0W
Frequency Modulation:	Narrow Band FM 5 KHz maximum
Current Drain:	900 mA @ full power
Distortion:	3 % nominal @3 KHz deviation
Microphone Sensitivity:	6 mV nominal

Receive

Circuit Type:	Super Heterodyne-Dual Conversion
IF Frequency:	First IF-10.7MHz Second IF-455KHz
Audio Output:	400 mW
Standby Current:	35 mA w/o battery save
Sensitivity:	0.3 uV