The FCC wants you to know

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. -Consult the dealer or an experienced radio/TV technician for help.

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.

Scanning Legally

Your receiver covers frequencies used by some different groups including Aircraft communications and Military operations, Space-operations, Meteorological-Satellite, Space research, Mobile-satellite. It is legal to listen to almost every transmission your receiver can receive, however, there are some transmissions you should never intentionally listen to. These include:

1. Telephone conversations (private means of telephone signal transmission).
2. Any scrambled or encrypted transmissions.

According to the Electronic Communications Privacy Act (ECPA), you are subject to fines and possible imprisonment for intentionally listening to, using, or divulging the contents of such a transmission unless you have the content of a party to the communication (unless such activity is illegal).

This receiver has been designed to prevent reception of illegal transmissions. This is done to comply with the legal requirement that receivers be manufactured so as to not be easily modifiable to pickup those transmissions. Modifications not authorized by the manufacturer may void user's authority to operate this device. Doing so could subject you to legal penalties.

We encourage responsible, legal receiver use.

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

Simplified Directions

1. Install the six C cell batteries.

2. Turn the unit on (slide the power switch to the left).

3. Select AM, FM or AIR (AVIATION) by pushing the **Band** key until the desired band appears on the screen.

4. Using the keypad, enter the desired frequency.

5. Listen and enjoy.

Directions for Sporty's® Exclusive Aviation Interrupt™ Feature

> **NOTE:** Memory channel 1 has priority over everything including all other memory channels. Enter the frequency that is most important to you here.

1. To use the Aviation Interrupt feature, frequencies must first be stored in memory.

   A) Select AIR by pushing the **Band** key until AIR appears on the screen.

   B) Using the keypad, enter the desired frequency, such as 122.975.

   C) Press the **Memory** key. The first available memory channel will be displayed on the screen.

   D) Press the **Memory** key a second time—the frequency is now stored.

   E) To store up to four more memory frequencies repeat steps A-D.

2. Select the AM or FM frequency you want to listen to.

3. To activate Aviation Interrupt, press the **Interrupt** button (2 Key). Now you can listen to AM or FM broadcasts without missing an important aviation transmission.

4. Press the **Interrupt** button (2 Key) a second time to exit Aviation Interrupt and return to normal mode.

Directions for Deleting All Stored Memory Channels

1. Hold down the **Clear** key while turning on the power.

   NOTE: There is no way to reverse this process.

Table of Contents

General Information

Introduction

This manual contains only operational information relative to Sporty's® Air-Scan® V. This manual is not intended as a service or maintenance manual and does not contain any theory or schematic diagrams.

Sporty's Air-Scan V is a desktop scanner with AM/FM/Aviation radio and an exclusive Aviation Interrupt™ feature. It is ideal for use in your home, office or hangar.

Features:

- Aviation Interrupt — exclusive feature allows you to listen to the ballgame, talk radio or music and never miss an important aviation transmission.

- 2,280 Aviation frequencies (118.000 MHz to 142.975 MHz)

- 8.33 kHz spacing on Aviation Band

- 111 AM broadcast frequencies (530 kHz to 1630 kHz)

- 201 FM broadcast frequencies (88.0 MHz to 108.0 MHz)

- Back-Lit Screen

- Five Memory Channels on Aviation Band

- Full Feature Scanner — Scan the five Memory Channels or the entire frequency range on each band (AM/FM/Aviation)

- Low Battery Indicator

- External Power, Antenna, and Speaker Options

- Easiest to use desktop radio available

Warranty

Our Limited Warranty is simple. If, in the first five years, your Air-Scan® V radio fails due to defective workmanship or parts under normal use, we will replace it or repair it.

This warranty does not apply to units subject to misuse, battery leakage, neglect or accidents. Nor does this warranty apply to units damaged by lightning, excess current, moisture, units repaired or altered outside the factory, or units used with accessories other than those listed in the *Accessories* section of this manual.

To have your unit serviced under this warranty, return it postage paid with proof of purchase to: Sporty's Pilot Shop, Clermont County/Sporty's Airport, Batavia, Ohio 45103-9747.

> **NOTE**: When returning your unit for warranty service, do NOT
> include any accessories.

If your Air-Scan V is no longer under warranty, you may still have it serviced at Sporty's®. Call Sporty's Customer Service at 513.735.9000 for instructions.
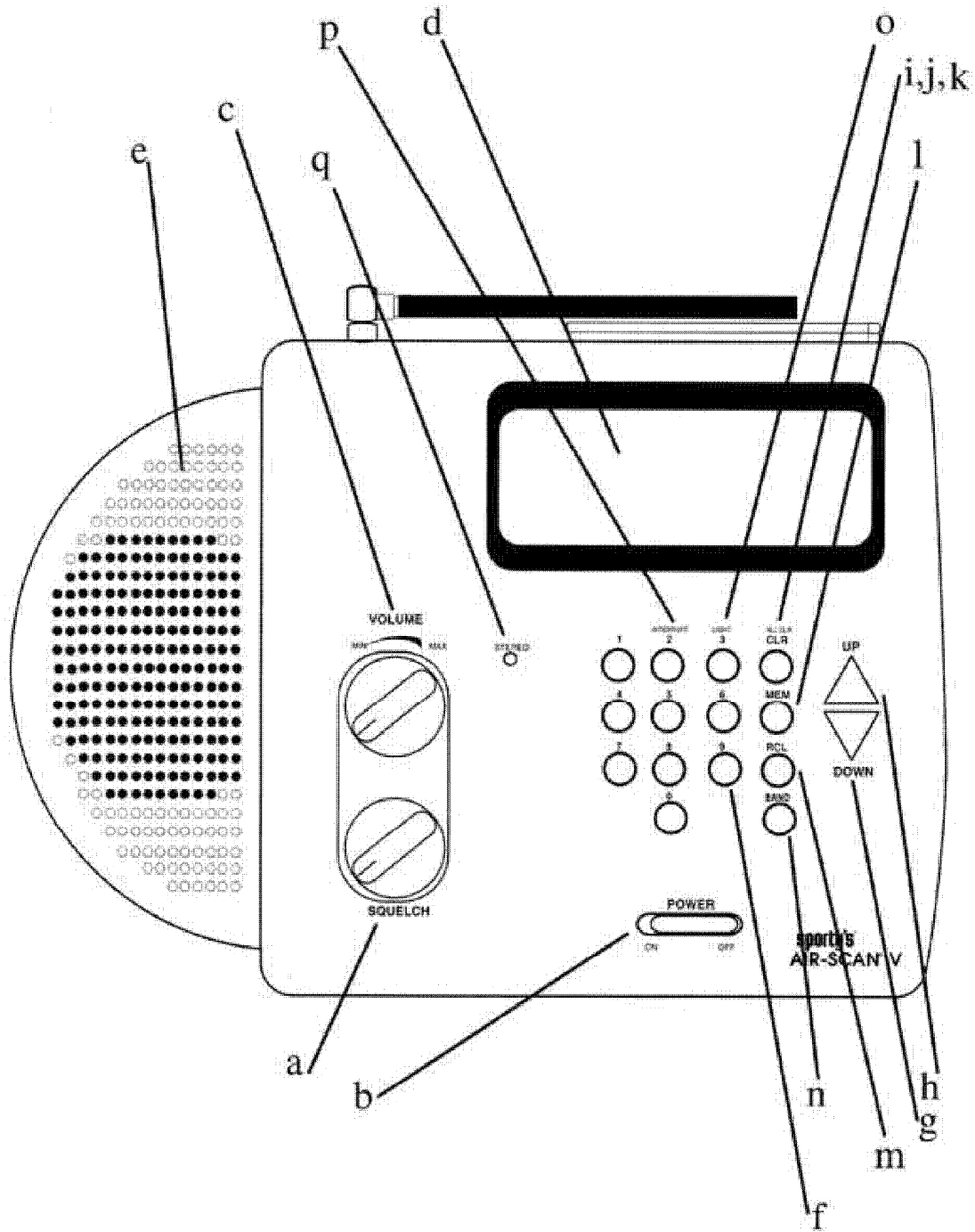
Precautions

- Changes or modifications not expressly approved by the manufacturer for compliance could void the user's authority to operate the equipment.

- Never attempt to service this unit yourself. It should be referred to qualified service personnel. Please read the *Warranty* section in this manual.

- If liquid spills or some solid object falls into the unit, have the unit checked by a qualified person before further operation.

- Never dispose of batteries in a fire. They may explode.

- Do not leave the radio near heat sources, such as radiators or air ducts, or place the radio in an environment where it will be subjected to moisture, excessive dust, shock or mechanical vibration.

- Never touch an external antenna when the danger of lightning is present.

- Abrasive cleaners or chemical solvents may mar or damage the case. Clean the transceiver with a soft cloth dampened with a mild detergent solution.

- If operating the radio at temperatures outside the range of 32°F to 122°F (0°C to 50°C), the LCD (screen) may not display the selected frequency. If the Air-Scan® V is used in temperatures lower than the recommended range, the characters being displayed may change very slowly. These irregularities will disappear, with no harm to the Air-Scan V, when operation is resumed within the recommended temperature range.
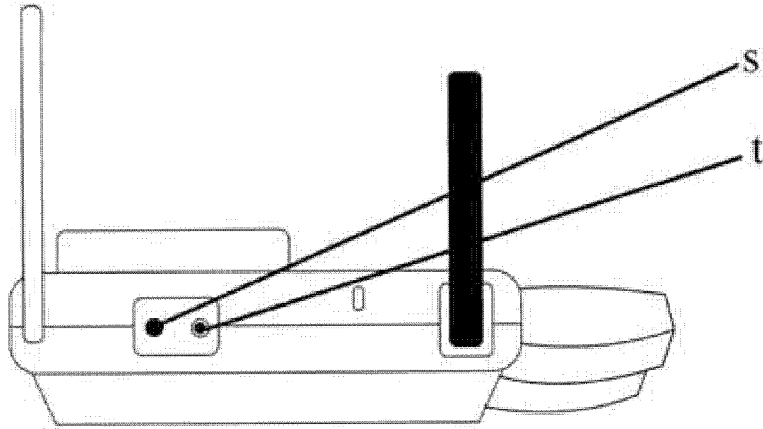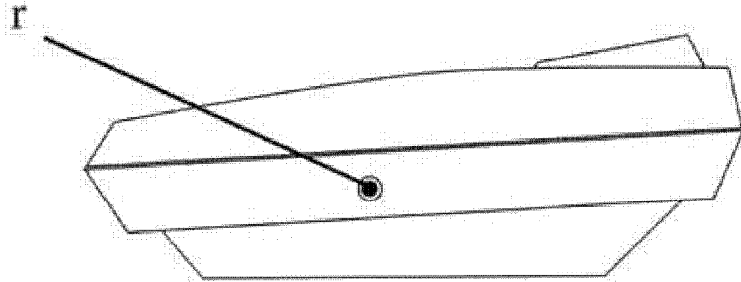
Controls

p   d   o
                               i,j,k
c   l
q
e

VOLUME

MIN   MAX

STEREO

1   INTERRUPT   LIGHT   ALL CLR
         2   3   CLR

UP

MEM

RCL
                               DOWN

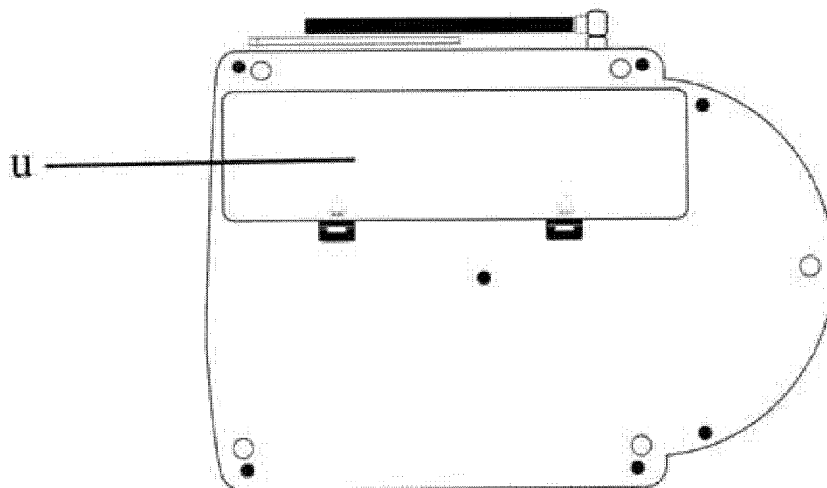SQUELCH

POWER

ON   OFF

sporty's
AIR-SCAN V

a
b

n   h
    g

m

f

6

Controls

r

s

t

u

7

This section serves only to identify and briefly describe the Air-Scan® V's external features. Please see the *Operating Instructions* section for detailed instructions on the use of the Air-Scan V.

Front View

(A) Squelch
Rotate clockwise to increase squelch and counterclockwise to decrease squelch on the Aviation Band.

(B) On/Off Switch
Push to the left to turn unit on. Push to the right to turn unit off.

(C) Volume
Rotate clockwise to increase volume, counter-clockwise to decrease volume.

(D) Screen
This LCD displays the current band and frequency.

(E) Internal Speaker

(F) Numeric Keypad
These keys are used whenever the Air-Scan V requires a numeric input such as setting the frequency.

(G) Down Key
This key is used to select the next lower frequency and to initiate search and scan functions.

(H) Up Key
This key is used to select the next higher frequency and to initiate search and scan functions.

(I) Memory Clear Key
This key is used to delete a selected memory channel.

(J) All Clear Key
This key is used to delete all memory channels.

(K) Clear Key
This key is used to clear erroneous key entries and to exit functions such as search, scan, memory storage and recall.

(L) Memory Key

This key is used while storing frequencies in one of the five memory channels.

(M) Recall Key

This key is used to recall stored frequencies from the five memory channels.

(N) Band Key

This key is used to select the band (AM, FM or Aviation).

(O) Light Key

This key activates the back lighting for the screen.

(P) Interrupt Key

This key is used to activate and deactivate the exclusive Aviation Interrupt™ feature.

(Q) Stereo Light

This feature works when the FM channel has a stereo broadcast signal and either an external speaker or headphones are connected.

Right Side View

(R) Earphone Jack

A standard Walkman® style headphone may be plugged into this jack. The internal speaker is disabled when this jack is used.

Rear View
(S) DC Adapter

(T) Speaker

Bottom View
(U) Battery Cover

Operating Instructions

Manual Frequency Selection

The Air-Scan® V will receive 2,280 Aviation frequencies (118.000 MHz to 142.975 MHz), 111 AM frequencies (530 kHz to 1630 kHz) and 201 FM frequencies (88.0 MHz to 108.0 MHz). The frequency currently selected and band are always displayed on the Air-Scan V's screen.

```
AIR

   122.975
```
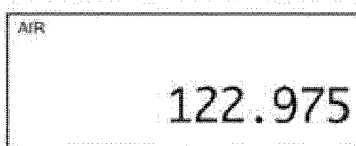
From the example above, the Air-Scan V is receiving 122.975 MHz.
To manually enter a desired frequency, first select the proper band (AM, FM or Aviation) by pressing the **Band** key. The current band will be displayed on the left side of the Air-Scan V's screen.

Once you have selected the desired band, enter the frequency using the numeric keypad.

> **NOTE:** Six digits are always required to select a frequency on the Aviation Band.

The Air-Scan V will return to the previous frequency if there is a pause of five seconds or more between key entries while entering a new frequency. The **Clear** key may be pressed any time prior to entering the last digit to clear the digits entered and return to the previous frequency.

Any frequency outside of the range of the current band will not be accepted. The Air-Scan V will beep when such a digit is entered. For example, starting any frequency selection with a number other than 1 on the Aviation band or attempting to place a 5, 6, 7, 8 or 9 in the second digit on the Aviation band will result in a beep.

Frequency Search

To manually search through the frequency range of any of the bands (AM, FM or Aviation), the **Up** key or **Down** key may be pressed at any time to select the next higher or lower frequency. This uses 10 kHz steps in the AM frequency range, 100 kHz steps in the FM frequency range and 8.33 kHz steps in the Aviation frequency range. The **Up** and **Down** keys may be pressed repeatedly to continue changing the selected frequency.

To automatically search the entire frequency range of the current band for a broadcasting signal, the **Up** key or **Down** key may be pressed and held for one second. The Screen will display SRCH as seen below.

```
AIR    SRCH

    122.975
```
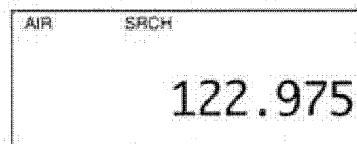
The frequencies will either scroll up or down depending upon whether the **Up** or **Down** key was used to initiate the search.

When a broadcasting signal is found, the Air-Scan® V will stop temporarily on that frequency. If the broadcasting signal is cut off for more than two seconds, the search will resume until another signal is found. When the end of the frequency range is reached during an upward search, the search automatically continues searching at the beginning of the frequency range. Likewise, when the beginning of the frequency range is reached during a downward search, the search automatically continues at the end of the frequency range.

The search may be canceled at any time by pressing the **Clear** key. The direction of the search may also be reversed at any time by pressing and holding the **Up** or **Down** key (whichever is appropriate) for one second.

> **NOTE:** On the Aviation band it is very important that the squelch be properly adjusted prior to initiating a search. The background static received with the squelch off may be strong enough to disrupt a search. If a search gets "stuck" on a frequency with too much background noise, increase the squelch or press and hold the **Up** or **Down** key for one second to skip that frequency and resume searching.
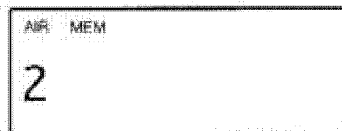
Frequency Memory

The Air-Scan® V has five memory channels on the Aviation band numbered 1 to 5 to store those aviation frequencies used most often and for use with the Aviation Interrupt™ feature.

> **NOTE:** In Aviation Interrupt mode, memory channel 1 has priority over everything, including all other memory channels.

Enter the frequency that is most important to you in memory channel 1.

To store a frequency, select the Aviation band by pressing the **Band** key until AIR appears on the screen. Then select a desired frequency, such as 122.975 to be stored by using either manual frequency selection or frequency search. To store this frequency, press the **Memory** key. The following screen will appear:

The first available memory channel will be displayed on the screen. In this example, memory channel 2 is the first available location, meaning that a frequency is already stored in memory channel 1. To store the frequency, press the **Memory** key a second time.

You may also overwrite an existing memory channel or select an available memory channel other than the first one displayed. Once again, select the desired frequency on the Aviation band and then press the **Memory** key.
Now press either the **Up** or **Down** key to scroll through the five memory channels. If a memory channel is already storing a frequency, the memory channel number and the stored frequency will be displayed.
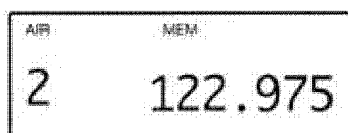
Once the desired memory channel is selected, press the **Memory** key and the frequency will be stored. If you are overwriting an existing memory channel, the Air-Scan® V will beep to let you know that a frequency is already stored there. You must push the **Memory** key a second time to store the new frequency. Remember, the old frequency will be erased when your selected frequency is stored.

You may exit the memory function by pressing the **Clear** key any time prior to storing the frequency (pressing the **Memory** key the second time).

Memory Recall

To recall a frequency stored in a memory channel, select the Aviation band by pressing the **Band** key until AIR appears in the upper left-hand corner of the screen. Then press the **Recall** key. The memory channel number and the corresponding frequency of the first memory channel that is being used will be displayed. This frequency immediately becomes the active frequency and is received by the Air-Scan V.

In this example, memory channel 2 is listed first, meaning that no frequency is currently being stored in memory channel 1.

```
┌─────────────────────────┐
│ AIR      MEM            │
│                         │
│  2    122.975          │
│                         │
└─────────────────────────┘
```

At this point you may select any stored memory channel by pressing the **Up** or **Down** key to scroll through the stored frequencies. For example, to receive memory channel 5 you may:

1. Press the **Recall** key followed by the **Up** or **Down** key to scroll to 5.

Once in the Recall mode, the Air-Scan® V stays in Recall until the **Clear** key is pressed. This allows you to sequence your frequencies in the order you may wish to use them. For example, you may wish to store your airport's Unicom in memory 1, Clearance Delivery in 2, Ground Control in 3, Tower in 4 and Departure Control in 5. For this example you would press the **Recall** key once

followed by the **Up** key for every frequency change instead of having to enter each frequency manually.

While in the Recall mode the only entries accepted are entries between 1 and 5, the **Up** or **Down** key, the **Clear** key or the **Light** key. All other inputs cause the Air-Scan V to beep. Remember, you may press the **Clear** key at any time to exit the Recall mode. Once you have left the Recall mode, the Air-Scan V will remain on the last frequency that was being received.

Memory Scan

The Memory Scan function is very similar to the Search function, except it only scans those aviation frequencies stored in the memory channels. To scan the memory channels, select the Aviation band (press the **Band** key until AIR appears on the screen) then press the **Recall** key to enter the Recall mode. Then press and hold the **Up** or **Down** key for one second to initiate either an upward or downward scan. The word SCAN will appear on the top line of the screen and the memory channel number and frequency will be displayed on the bottom line of the screen.
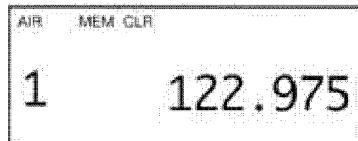

When a broadcasting signal is found, the Air-Scan® V will stop temporarily on that frequency. If the broadcasting signal is cut off for more than two seconds, the scan will resume until another signal is found.

The scan may be canceled at any time by pressing the **Clear** key. The direction of the scan may also be reversed at any time by pressing and holding the **Up** or **Down** key (whichever is appropriate) for one second.

NOTE: It is very important that the squelch be properly adjusted prior to initiating a memory scan. The background static received with the squelch off may be strong enough to disrupt a scan. If a scan gets "stuck" on a frequency with too much background noise, increase the squelch or press and hold the **Up** or **Down** key for one second to skip that frequency and resume scanning. Please note, since ATIS broadcasts continually, a scan will always stop on an ATIS frequency if it is included in the scan.

Memory Clear

To clear or erase a memory channel, select the Aviation band (press the **Band** key until AIR appears on the screen), press and hold the **Clear** key followed by the **Memory** key. Release the keys when MEM CLR is displayed on the top line of the screen.

```
┌─────────────────────────┐
│ AIR   MEM CLR           │
│                         │
│  1      122.975         │
│                         │
└─────────────────────────┘
```

The first memory channel with a stored frequency will be displayed on the bottom line of the screen. Press the **Up** or **Down** key to scroll through the memory channels to select the memory channel to clear. Once the desired memory channel is displayed, press the **Memory Clear** key (also the 0 key on the Numeric Keypad) to clear the selected channel. Additional channels may be cleared by once again pressing the **Up** or **Down** key to make another selection and then pressing the **Memory Clear** key.

Press the **Clear** key at any time to exit the Memory Clear function.

To clear every memory channel, hold down the **Clear** key while turning on the power. Please note, there is no way to reverse this process. The screen will display the following to verify all of the memory channels have been cleared.

```
┌─────────────────────────┐
│ ALL \ MEM \ CLR         │
│                         │
│                         │
│                         │
└─────────────────────────┘
```
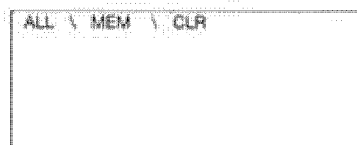
Aviation Interrupt™

This exclusive feature allows you to listen to the ballgame, talk radio or music and never miss an important aviation transmission.

> **NOTE:** To use this feature you first must have frequencies stored in the Air-Scan® V's
> memory. Please refer to the *Frequency Memory* section of this manual for
> instructions on how to store frequencies in the Air-Scan V.

To activate Aviation Interrupt™, select an AM or FM frequency you wish to listen to, then press the **Priority** key (2 key). While you listen to your AM or FM broadcast, the Air-Scan® V silently scans up to five memory channels for activity. If broadcast activity is found on any of these channels, the Air-Scan V interrupts the original AM or FM broadcast and plays the aviation transmission.

```
┌──────────────────────────┐
│ AIR                      │
│                          │
│  P1   122.975            │
│                          │
└──────────────────────────┘
```

Once the transmission has ended, the Air-Scan V returns to the original AM or FM frequency.

```
┌──────────────────────────┐
│ FM                       │
│                          │
│  P1      102.7           │
│                          │
└──────────────────────────┘
```

Once in Aviation Interrupt, the Air-Scan V will continuously scan your memory channels for activity. To exit Aviation Interrupt, press the **Interrupt** key (2 key) a second time.

Low Battery Indicator

When the batteries need to be replaced, BATT will be displayed at the top of the screen and the displayed frequency will flash.
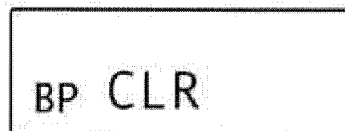
```
                              BATT

             122.975
```
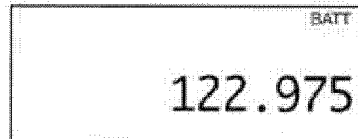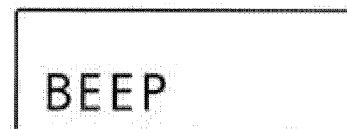
Screen Lighting

Press and release the **Light** key (3 key) to activate the Air-Scan® V's screen lighting for 10 seconds.

Key Tone

To deactivate the key tone function of the Air-Scan V, press **CLR + "1"** key. The screen will prompt BP CLR as shown below.

```
     BP CLR
```

The key tone function is also activated by pressing **CLR + "1"** key. The screen will prompt BEEP as shown below.

```
     BEEP
```

The key tone function is set in the "on" position at the factory.

Accessories

Any of the following accessories may be ordered on the
Internet at sportys.com or by calling Sporty's Pilot Shop at 1.800.SPORTYS (776.7897) or
513.735.9000, or faxing 513.735.9200.

Rooftop Aviation Antenna (#8107A)

 Includes antenna, hardware for mounting, and 50 ft. of cable.

Magnetic Base Antenna (#7986A)

 Includes antenna, magnetic base, and 10 ft. of cable.

Aviation Band Aircraft/Car Antenna Kit (#7995A)

 Includes antenna, hardware for mounting through metal surface,
 and 10 ft. of cable.

Specifications

General

Receive Frequencies

2,280 Aviation frequencies from 118.000 MHz to 142.975 MHz

111 AM Frequencies from 530 kHz to 1630 kHz

201 FM Frequencies from 88.0 MHz to 108.0 MHz

Memory/Priority Channels

Five channels numbered 1 to 5 on Aviation band

Weight (including antenna)

2.65 lb with batteries

1.75 lb without batteries

Dimensions

Height	3.50 in.
Width	9.75 in.
Depth	6.87 in.

Operating Temperature Range

14°F to 122°F (-5° C to 35° C)

Frequency Stability

± 0.03% (-10° C to 50° C)

Power Supply Requirement

Alkaline battery 9VDC(6 C-Cell batteries X 1.5 V each, not included)

External 9VDC (Wall Power Adapter, UL listed, 9VDC 300mA/120VAC 60Hz 5.3W)

Receiver

Audio Output

1W with an 4 OHM load (within 10% distortion)

External earphone jack - 3.5mm stereo, 1W per channel

Adjacent Channel Rejection

More than -30dB

Sensitivity

Aviation Band 10μV for 20dB (stn)/n) with 1 kHz

60% Modulation

AM 20.0μV for 20dB (stn/n) with 1 kHz 60% Modulation

FM 5.0μV for 20dB (stn/n) with 1 kHz 45 kHz Modulation

Selectivity

Aviation Band < 40dB at ± 3kHz at -6dB

AM < 40dB at ± 6kHz at -6dB

FM < 40dB at ± 200kHz at -6dB

Power Consumption

300mA (Full Volume)

60mA (Watch and Wait)