

Sporty's®
Air-Scan® SP -125
AM/FM Radio
with Aviation Interrupt™

Operator's Manual



**sporty's®
pilot shop**

The FCC wants you to know

This equipment has been tested and found to comply with the limits for a scanning receiver, 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 not 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 and 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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions.

1. This device may not cause harmful interference.
2. This device must accept and 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 consent 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 pick up those transmissions. Any changes or modifications not expressly approved by Sportsman's Market, Inc. for compliance could void the user's authority to operate the equipment. 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 four AA batteries.
2. Turn the unit on (rotate volume knob clockwise).
3. Select AM, FM or AIR by pushing the **Band** key until the desired band appears in the upper left-hand corner of the screen.
4. Using the keypad, enter the desired frequency.
5. Listen and enjoy.

Directions for Sporty's® Exclusive Aviation Interrupt™ Feature

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 in the upper left-hand corner of 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.

NOTE: Memory channel P1 has priority over everything including all other memory channels. Enter the frequency that is most important to you here.

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

3. Press the **Priority** 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.

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General Information

Introduction

This manual contains only operational information relative to Sporty's® Air-Scan® SP-125. This manual is not intended as a service or maintenance manual and does not contain any theory or schematic diagrams.

Sporty's SP-125 is a hand-held, AM/FM/Aviation radio with 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
- 118 AM broadcast frequencies (530 kHz to 1700 kHz)
- 102 FM broadcast frequencies (87.7 MHz to 107.9 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)
- Key Lock
- Low Battery Indicator
- External Power and Antenna Options
- Easiest to use hand-held radio available

Warranty

Our Limited Warranty is simple. If, in the first five years, your SP-125 radio fails due to defective workmanship or parts under normal use, we will replace it or repair it at our option.

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, units with altered or removed serial numbers, 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 (antenna, carry case, etc.).

If your SP-125 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.

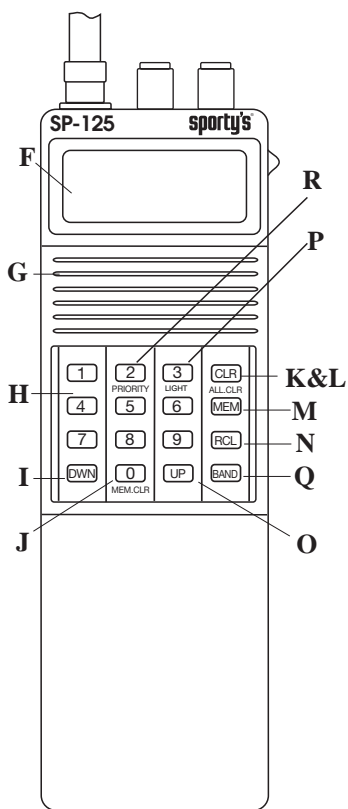
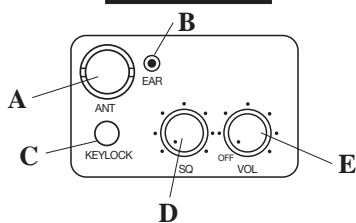
Precautions

- 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.

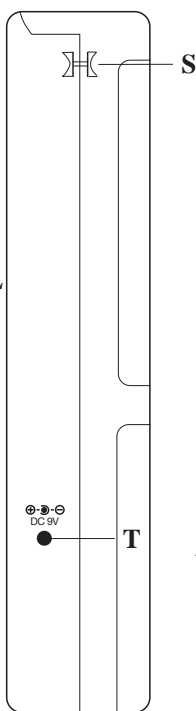
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- Do not leave the radio near heat sources, such as radiators or air ducts, or place the radio in an environment where it will be subjected to moisture, excessive dust, shock or mechanical vibration.
 - Never touch an external antenna when the danger 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 -20°F to 122°F (-30°C to 50°C), the LCD (screen) may not display the selected frequency. If the SP-125 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 SP-125, when operation is resumed within the recommended temperature range.

Controls

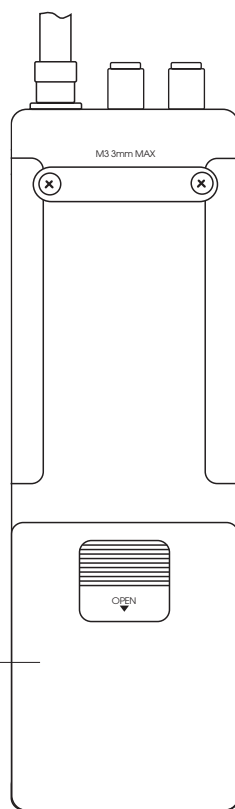
TOP



FRONT



RIGHT SIDE



REAR

This section serves only to identify and briefly describe the SP-125's external features. Please see the *Operating Instructions* section for detailed instructions on the use of the SP-125.

Top View

(A) Antenna Connector

The flexible rubber antenna or a remote antenna may be attached to this BNC connector.

(B) Earphone Jack

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

(C) Key Lock

This toggle switch is used to lock out all inputs to the keyboard.

(D) Squelch

Rotate clockwise to increase squelch and counterclockwise to decrease squelch on the Aviation Band.

(E) On/Off and Volume Control

Combination on/off and volume control. Turn the knob clockwise from the OFF position to turn the unit on and to increase volume. Turn the knob counterclockwise to decrease volume and to turn the unit off.

Front View

(F) Screen

This LCD displays the current band and frequency.

(G) Internal Speaker

(H) Numeric Keypad

These keys are used whenever the SP-125 requires a numeric input such as setting the frequency.

(I) Down Key

This key is used to select the next lower frequency and to initiate search and scan functions.

(J) Memory Clear Key

This key is used to delete a selected memory channel.

(K) All Clear Key

This key is used to delete all memory channels.

(L) Clear Key

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

(M) Memory Key

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

(N) Recall Key

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

(O) Up Key

This key is used to select the next higher frequency or to initiate search and scan functions.

(P) Light Key

This key activates the back lighting for the screen.

(Q) Band Key

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

(R) Priority Key

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

Right Side View

(S) Wrist Strap Pin

The wrist strap (included as standard equipment) attaches to this location.

(T) External Power Jack

The SP-125 may be powered externally by plugging the optional 12/24 Volt Power Adapter (#8634A) or the 115 Volt Wall Power Adapter (#8633A) into this location.

Rear View

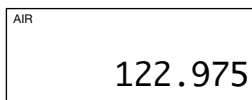
(U) Removable Battery Cover

To replace old batteries, simply slide the cover down and remove it from the radio. Then insert new batteries in proper position as indicated in the SP-125 battery compartment. Next, replace the cover.

Operating Instructions

Manual Frequency Selection

The SP-125 will receive 2,280 Aviation frequencies (118.000 MHz to 142.975 MHz), 118 AM frequencies (530 kHz to 1700 kHz) and 102 FM frequencies (87.7 MHz to 107.9 MHz). The frequency currently selected and band are always displayed on the SP-125's screen.



From the example above, the SP-125 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 in the upper left-hand corner of the SP-125's screen.

Once you have selected the desired band, enter the frequency using the numeric keypad. As each digit is entered, the flashing cursor moves to the next digit.

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

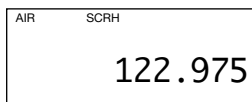
The SP-125 will return to the previous frequency if there is a pause of five seconds or more between key entries while entering a new frequency. The **Clear** key may be pressed any time prior to entering the last digit to clear the digits entered and return to the previous frequency.

Any frequency outside of the range of the current band will not be accepted. The SP-125 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 SCRH as seen below.



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 SP-125 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.

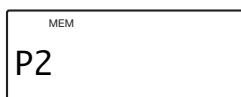
Frequency Memory

The SP-125 has five memory channels on the Aviation band numbered P1 to P5 to store those aviation frequencies used most often and for use with the Aviation Interrupt™ feature.

NOTE: In Aviation Interrupt mode, memory channel P1 has priority over everything, including all other memory channels.

Enter the frequency that is most important to you in memory channel P1.

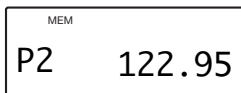
To store a frequency, select the aviation band by pressing the **Band** key until AIR appears in the upper left-hand corner of the screen. Then select a desired frequency, such as 122.975 to be stored by using either manual frequency selection or frequency search. To store this frequency, press the **Memory** key. The following screen will appear.



The first available memory channel will be displayed on the screen. In this example, memory channel P2 is the first available location, meaning that a frequency is already stored in memory channel P1. 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.



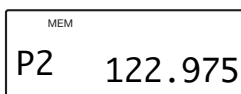
Once the desired memory channel is selected, press the **Memory** key and the frequency will be stored. If you are overwriting an existing memory channel, the SP-125 will beep to let you know that a frequency is already stored there. You must push the **Memory** key a second time to store the new frequency. 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 (i.e., 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 SP-125.

In this example, memory channel P2 is listed first, meaning that no frequency is currently being stored in memory channel P1.



At this point you may select any stored memory channel by either pressing the **Up** or **Down** key to scroll through the stored frequencies or by entering the memory channel number by using the Numeric Keypad. For example, to receive memory channel P5 you may either:

1. Press the **Recall** key followed by the **Up** or **Down** key to scroll to P5
- or
2. Press the **Recall** key followed by 5.

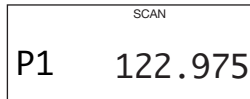
Once in the Recall mode, the SP-125 stays in Recall until the **Clear** key is pressed. This allows you to sequence your frequencies in the order you may wish to use them. For example, you may wish to store your airport's ATIS in memory P1, Clearance Delivery in P2, Ground Control in P3, Tower in P4 and Departure Control in P5. 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 Numeric Keypad entries between 1 and 5, the **Up** or **Down** key, the **Clear** key or the **Light** key. All other inputs cause the SP-125 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 SP-125 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 in the upper left-hand corner of

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 SP-125 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.

Once you have pressed the **Clear** key to exit a scan, you are still in the Recall mode. Press the **Clear** key again to exit the Recall function. The SP-125 will remain on the last frequency received.

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

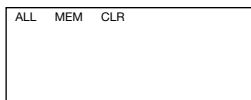
To clear or erase a memory channel, select the Aviation band (press the **Band** key until AIR appears in the upper left-hand corner of the screen), press and hold the **Clear** key followed by the **Memory** key. Release the keys when MEM CLR is displayed on the top line of the screen.



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.

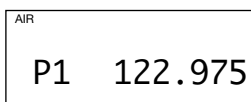


Aviation Interrupt™

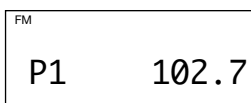
This exclusive feature allows you to listen to the ballgame, talk radio or music and never miss an important aviation transmission.

NOTE: To use this feature you first must have frequencies stored in the SP-125's memory. Please refer to the *Frequency Memory* section of this manual for instructions on how to store frequencies in the SP-125.

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 SP-125 silently scans up to five memory channels for activity. If broadcast activity is found on any of these channels, the SP-125 interrupts the original AM or FM broadcast and plays the aviation transmission.



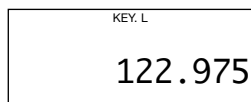
Once the transmission has ended, the SP-125 returns to the original AM or FM frequency.



Once in Aviation Interrupt, the SP-125 will continuously scan your memory channels for activity. To exit Aviation Interrupt, press the **Priority** key (2 key) a second time.

Key Lock

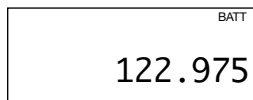
Inputs from the keypad may be locked out at any time by pressing the **Key Lock** button. When Key Lock is active, KEY.L is displayed at the top of the screen as shown below.



Key Lock is deactivated by pressing the **Key Lock** button a second time. For your convenience the SP-125's screen is lit for 10 seconds every time the **Key Lock** button is pressed.

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.



Screen Lighting

Press and release the **Light** key (3 key) to activate the SP-125's screen lighting for 10 seconds.

Key Tone

To deactivate the key tone function of the SP-125, press **CLR + "1"** key. The screen will prompt **BP OFF** as shown below.

BP OFF



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

BP ON



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.

115 Volt Wall Power Adapter (#8633A)

Allows the SP-125 to be powered externally from a 115 Volt wall outlet. Power cord measures 6 ft. long.

12/24 Volt Power Adapter (#8634A)

Allows the SP-125 to be powered externally from a cigarette lighter in aircraft with 12, 24, or 28 Volt electrical systems (except input voltage of 10, 30 Volts DC). Power Cord measures 6 ft. long.

Cordura® Carrying Case (#8629A)

A handy way to keep your SP-125 dust-free and close by. Made of Du Pont Cordura® nylon. Features sewn-in sleeve with two piece closure. This allows antenna to remain connected or to be stored in the sleeve. The case also includes a sewn-in belt loop for carrying convenience.

Metal Belt Clip (#3920A)

Attaches to the back of the SP-125 with screws installed in the unit as standard equipment.

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

118 AM Frequencies from 530 kHz to 1700 kHz

102 FM Frequencies from 87.7 MHz to 107.9 MHz

Memory/Priority Channels

Five Channels numbered P1 to P5 on Aviation Band

Weight (including antenna)

0.79 lb (360 grams) with batteries

0.59 lb (270 grams) without batteries

Dimensions

Height 6.14 IN (156 mm)

Width 2.44 IN (62 mm)

Depth 1.46 IN (37 mm)

Operating Temperature Range

14°F to 122°F (-5° C to 35° C)

Frequency Stability

± 0.002% (-10° C to 50° C)

Power Supply Requirement

Alkaline battery 6.0 VDC (four AA batteries X 1.5 VDC each, not included)

External 9.0 VDC (Optional Wall Power Adapter or 12/24 Volt Power Adapter)

Receiver

Audio Output

350mW with an 8 OHM load (within 10% distortion)

Adjacent Channel Rejection

More than -30dB

Sensitivity

Aviation Band $20\mu\text{V}$ for 20dB ((stn)/n) with 1 kHz
60% Modulation

AM $20.0\mu\text{V}$ for 20dB ((stn)/n) with 1 kHz 60% Modulation

FM $5.0\mu\text{V}$ for 20dB ((stn)/n) with 1 kHz 45 kHz Modulation

Selectivity

Aviation Band $< 40\text{dB}$ at $\pm 3\text{kHz}$ at -6dB

AM $< 40\text{dB}$ at $\pm 6\text{kHz}$ at -6dB

FM $< 40\text{dB}$ at $\pm 200\text{kHz}$ at -6dB

Power Consumption

200mA (Full Volume)

60mA (Watch and Wait)