

Sporty's SP-200

Handheld NAV/COM

Operator's Manual



**sporty's
pilot shop**

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Simplified Directions

1. Install the batteries.
2. Turn the unit on (rotate volume knob clockwise).
3. Enter the first six digits of desired frequency
(1 2 2 9 7 5 for 122.975 MHz).
4. Listen and transmit.

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General Information

Introduction

This manual contains only operational information relative to Sporty's SP-200 NAV/COM. This manual is not intended as a service or maintenance manual and does not contain any theory or schematic diagrams.

Features

Sporty's SP-200 is a hand-held, aircraft communication and navigation transceiver with the following features:

- 2,280 COMM frequencies (118.000 MHz to 136.975 MHz)
(unit will also receive 137.000 MHz to 142.975 MHz)
- 8.33KHz spacing
- 200 NAV frequencies (108.000 MHz to 117.950 MHz)
- Last Frequency Function
- Duplex communications — unit transmits on the Flight Service Station (FSS) frequency, 122.100 MHz, while listening over the VOR frequency
- Course Deviation Indicator (CDI) with Omni Bearing Selector (OBS) and TO/FROM Indicator
- Localizer with CDI
- VOR with CDI
- Back-Lit Keypad and Screen
- 20 Memory Channels
- Full Feature Scanner — Scan the 20 Memory Channels or the entire frequency range
- Key Lock
- Low Battery Indicator
- External Power and Antenna Options
- Easiest to use hand-held transceiver available

Warranty

Our Warranty is simple. If, in its first five years, your SP-200 NAV/COM fails due to defective workmanship or parts under normal use, we will replace it or repair it at our option.

The warranty does not apply to units subject to misuse, battery leakage, neglect or accidents. Nor does the 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 (belt clip, headset adapter, etc.).

If your SP-200 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.

License Requirements

Operating the transceiver in an aircraft that has an aircraft radio station license requires no additional license. To get an aircraft radio station license fill out FCC Form 601. Operating the radio on the ground requires a ground station authorization. This form is available from the FCC by calling 800.418.3676.

Antenna Requirements

Included with the SP-200 is a flexible rubber antenna (Rubber Duck), which may be used for both COMM and NAV frequencies. However, an external antenna may be needed if operating inside an aircraft (must be properly installed by an aircraft radio shop), automobile or other metal enclosure.

On top of the SP-200 is a BNC connector, which is standard for use on aircraft radios. Therefore, little difficulty should be encountered in connecting an existing aircraft radio antenna to the SP-200.

When using the flexible antenna inside an aircraft or other enclosure, the optional remote antenna mount allows the antenna to be positioned in a side window or other favorable location for improved reception. The SP-200 can also be positioned in a side window or other favorable location by using the optional suction cup transceiver holder. See the accessories section of this manual for these products.

Batteries

An Alkaline Battery Pack is standard equipment with the SP-200. Alkaline batteries, such as Eveready® Energizers, are a good power source for a backup radio because they have excellent storage life and no maintenance is required.

The Alkaline Battery Pack is NOT rechargeable. The batteries must be replaced. To replace the batteries, turn the power OFF and then remove the battery pack from the unit by pushing the Battery Pack Release up (see Controls section of this manual) and sliding the battery pack left toward the Battery Pack Release. The case splits into two sections by pressing on the top of the case. Push in the center on the positive (+) terminal side and gently pull the two sections apart. Eight 1.5 volt AA alkaline batteries are required.

Replace the batteries by following the positive (+) and negative (-) terminal markings inside the case. When the batteries are replaced, snap the two sections back together and attach the battery pack to the radio.

To attach the Alkaline or Nicad Battery Pack, make sure the power is OFF and then align the grooves on the SP-200 and battery pack. Slide the battery pack onto the radio until it locks in place.

The following table is a conservative estimate of the life of fresh Alkaline batteries at some common duty cycles with the audio background noise silenced by the Squelch.

<u>Life</u>	<u>Transmit</u>	<u>Receive</u>	<u>Standby</u>	<u>Light</u>
15.4 hrs	2%	3%	95%	Off
12.8 hrs	2%	3%	95%	On
9.5 hrs	10%	10%	80%	Off
7.9 hrs	10%	10%	80%	On
6.0 hrs	20%	20%	60%	Off
5.0 hrs	20%	20%	60%	On

The optional Nicad (nickel-cadmium) Battery Pack is rechargeable and must be charged upon receipt before using. If possible, completely discharge the Nicad Battery Pack before recharging. Repeated recharging, after minimal usage (discharging) of Nicad batteries, results in very poor battery performance.

The Nicad Battery Pack is not recommended when the SP-200 will be used as a backup radio. The storage life of Nicad batteries is not as predictable as Alkaline batteries. The Nicad Battery Pack is recommended when the SP-200 will be used on a daily or frequent basis.

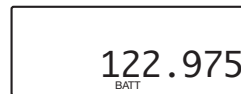
The following table is a conservative estimate of the life of a fully charged Nicad Battery Pack at some common duty cycles with the audio background noise silenced by the Squelch.

<u>Life</u>	<u>Transmit</u>	<u>Receive</u>	<u>Standby</u>	<u>Light</u>
6.0 hrs	2%	3%	95%	Off
5.0 hrs	2%	3%	95%	On
3.8 hrs	10%	10%	80%	Off
3.2 hrs	10%	10%	80%	On
2.5 hrs	20%	20%	60%	Off
2.1 hrs	20%	20%	60%	On

Use only the chargers listed in the Accessories section of this manual.

When the alkaline batteries need replaced or the Nicad Battery Pack needs recharged, the screen will display "BATT" as shown below and the selected frequency will flash.

Note: Will maintain memory one hour with batteries removed.

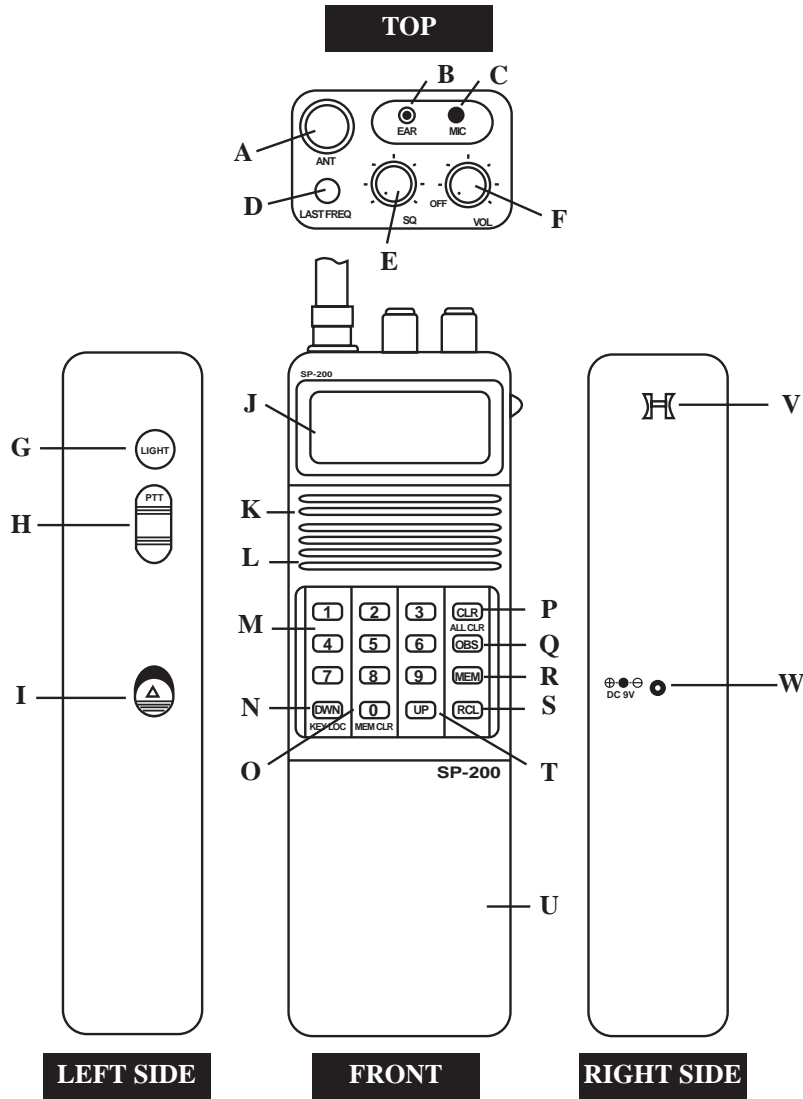


Precautions

- 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, remove the battery pack or external power adapter and have the unit checked by a qualified person before further operation.
- The optional Nicad (nickel-cadmium) Battery Pack is recyclable. It may be unlawful in your state to dispose of Nicad batteries in a municipal landfill. Please contact your local solid waste officials for disposal and recycling options.
- Never dispose of batteries or battery packs in a fire. They may explode.
- Never leave weak or dead batteries in the Alkaline Battery Pack. They may leak and cause permanent damage.
- Never store a battery pack where it may be accidentally shorted.
- Never crush or disassemble a Nicad battery pack. Nicad batteries contain toxic chemicals.
- Never store a discharged Nicad Battery Pack. The cell polarity may reverse, making it impossible to recharge.
- Use only the approved external power adapters, Nicad battery chargers and battery packs listed in the Accessories section of this manual.

- Never touch an external antenna when the danger of lightning is present.
- Do not leave the transceiver near heat sources, such as radiators or air ducts, or place the transceiver in an environment where the radio will be subjected to moisture, excessive dust, shock or mechanical vibration.
- 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 transceiver 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-200 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-200, when operation is resumed within the recommended temperature range.

Controls



This section serves only to identify and briefly describe the SP-200's external features. Please see the Operating Instructions section for detailed instructions on the use of the SP-200.

Top View

(A) Antenna Connector

The flexible rubber antenna or an external antenna may be attached to this BNC connector.

(B) Earphone Jack

Using the optional Headset Adapter (#8635A) the earphone of a standard aviation noise attenuating headset may be plugged into this jack. The internal speaker is disabled when this jack is used.

(C) Microphone Jack

Using the optional Headset Adapter (#8635A) the microphone of a standard aviation noise attenuating headset may be plugged into this jack. The internal microphone is disabled only when this jack is used with a microphone connected to the adapter.

(D) Last Frequency

Lets you toggle between your last two frequencies.

(E) Squelch

Rotate clockwise to increase squelch and counterclockwise to decrease squelch.

(F) 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.

Left Side View

- (G) **Light Button**
This button activates the back lighting for the screen and keypad.
- (H) **Push-To-Talk Button**
This button activates the internal microphone or an external microphone when using the optional headset adapter.
- (I) **Battery Pack Release**
Pushing this button upward releases the battery pack for removal.

Front View

- (J) **Screen**
This LCD displays the current frequency, Course Deviation Indicator (CDI) and other information to the operator.
- (K) **Internal Speaker**
- (L) **Internal Microphone**
- (M) **Numeric Keypad**
These keys are used whenever the SP-200 requires a numeric input such as setting the frequency or Omni Bearing Selector (OBS).
- (N) **Down Key/Key Lock Key**
This key is used to select the next lower frequency, select the next lower OBS setting or to initiate search and scan functions. This key is also used in combination with the Clear key to lock out all inputs to the keyboard.
- (O) **Memory Clear Key**
This key is used to delete a selected memory channel.

- (P) Clear Key**
This key is used to clear erroneous key entries and to exit functions such as search, scan, and memory storage and recall. This key is also used in combination with the Down key to lock out all inputs to the keyboard.
- (Q) Omni Bearing Selector Key**
This key is used to activate the Omni Bearing Selector (OBS) function for the Course Deviation Indicator (CDI).
- (R) Memory Key**
This key is used while storing frequencies in one of the 20 memory channels.
- (S) Recall Key**
This key is used to recall stored frequencies from the 20 memory channels.
- (T) Up Key**
This key is used to select the next higher frequency, select the next higher OBS setting or to initiate search and scan functions.
- (U) Battery Pack**

Right Side View

- (V) Wrist Strap Pin**
The wrist strap (included as standard equipment) attaches to this location.
- (W) External Power Jack**
The SP-200 may be powered externally, with or without a battery pack attached, or the Nicad batteries charged by plugging the optional 12/24 Volt Cigarette Lighter Power Adapter (#8634A) or the 115 Volt Wall Power Adapter (#8633A) into this location.

Operating Instructions

To perform the following functions you must be in the basic operating mode of the SP-200. To ensure that you are in the basic operating mode, press the clear key until the last frequency you entered manually is displayed.

Manual Frequency Selection

The SP-200 will receive 200 NAV frequencies (108.000 MHz to 117.950 MHz) and 3000 COMM frequencies (118.000 MHz to 142.975 MHz). The SP-200 will transmit on 2280 COMM frequencies (118.000 MHz to 136.975 MHz). The frequency currently selected is always displayed in the lower right-hand side of the SP-200's screen.

122.975

From the example above, the SP-200 is receiving 122.975 MHz.

To manually enter a desired frequency such as 118.700 MHz, enter 1 1 8 7 0 0 using the numeric keypad. As each digit is entered, the flashing cursor moves to the next digit. Six digits are always required to select a frequency.

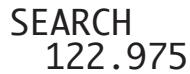
The SP-200 will return to the previous frequency if there is a pause of five seconds or more between key entries while entering a new frequency. The Clear Key may be pressed any time prior to entering the fifth digit to clear the digits entered and return to the previous frequency.

Any frequency outside of the range listed above will not be accepted. The SP-200 will beep when such a digit is entered. For example, starting any frequency selection with a number other than 1 or attempting to place a 5, 6, 7, 8 or 9 in the second digit will result in a beep.

Frequency Search

To manually search through the frequency range (COMM and NAV), the Up Key or Down Key may be pressed at any time to select the next higher or lower frequency. This uses 8.33 KHz steps in the COMM frequency range and 50 KHz steps in the NAV frequency range. The Up and Down Keys may be pressed repeatedly to continue changing the selected frequency.

To automatically search the entire COMM frequency range for a broadcasting signal, the Up Key or Down Key may be pressed and held for one second. The Screen will display SEARCH as seen below.



SEARCH
122.975

The frequencies will either scroll up or down in 8.33 KHz steps depending upon whether the Up or Down Key was used to initiate the Search.

When a broadcasting signal is found, the word SEARCH will flash and the SP-200 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 142.975 MHz is reached during an upward Search, the Search automatically continues at 118.000 MHz. Likewise, when 118.000 MHz is reached during a downward Search, the Search automatically continues at 142.975 MHz.

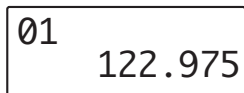
The Search may be canceled at any time by pressing the Clear Key. The direction of the Search may also be reversed at any time by pressing and holding the Up or Down Key (whichever is appropriate) for one second.

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

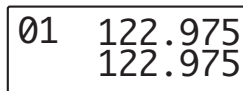
The SP-200 has 20 memory channels numbered 00 to 19 to store those frequencies used most often. These memory channels may be used to store COMM and NAV frequencies.

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.




01 122.975

The first available memory channel will be displayed on the top line of the screen. In this example, memory channel 01 is the first available location, so we know a frequency is already stored in memory channel 00. To store the frequency, press the Memory Key a second time. The screen will now display the following for one second to verify 122.975 has been stored in memory channel 01.



01 122.975
122.975

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 and then press the Memory Key.



01 122.975

Now press either the Up or Down Key to scroll through the 20 memory channels. If a memory channel is already storing a frequency, the memory channel number and the stored frequency will

be displayed on the top line of the screen while your selected frequency remains on the bottom line.

04	118.700
	122.975

Once the desired memory channel is selected on the top line of the screen, press the Memory Key and the frequency will be stored. Remember, if a channel was selected that was already storing a frequency, 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, 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-200.

01	122.975
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In this example, memory channel 01 is listed first, so we know that no frequency is currently being stored in memory channel 00.

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 08 you may either:

1. Press the Recall Key followed by the Up or Down Key to scroll to 08
or
2. Press the Recall Key followed by 0 8.

Once in the Recall function, the SP-200 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 channel 00, Clearance Delivery in channel 01, Ground in channel 02, Tower in channel 03 and Departure in channel 04. 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 function the only entries accepted are Numeric Keypad entries between 00 and 19, the Up or Down Key or the Clear Key. All other inputs cause the SP-200 to beep. Remember, you may press the Clear Key at any time to exit the Recall function. Once you have left the Recall function, the SP-200 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 COMM frequencies stored in the memory channels. To Scan the memory channels, press the Recall Key to enter the Recall function. 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.

SCAN
01 122.975

When a broadcasting signal is found, the word SCAN will flash and the SP-200 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.

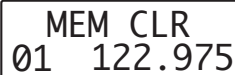
The Scan may be canceled at any time by pressing the Clear Key. The direction of the Scan may also be reversed at any time by pressing and holding the Up or Down Key (whichever is appropriate) for one second.

Once you have pressed the Clear Key to exit a Scan, you are still in the Recall function. Press the Clear Key again to exit the Recall function. The SP-200 will remain on the last frequency received.

It is very important that the Squelch be properly adjusted prior to initiating a 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, 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.



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MEM CLR
01 122.975
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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.

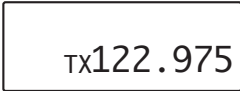
To clear every memory channel, hold down the Clear Key while turning on the power. Please note, there is no way to reverse this process. The screen will display the following to verify all of the memory channels have been cleared.



ALL
MEM CLR

Transmitting

Press the Push-To-Talk Button (PTT) at any time while tuned to a COMM frequency to broadcast over the selected frequency. While the PTT is pressed the screen will display TX next to frequency to verify the SP-200 is broadcasting.



TX122.975

Release the PTT to end the transmission and the SP-200 will once again receive the selected COMM frequency. If the optional Headset Adapter is being used with the microphone plugged in the SP-200, the SP-200's internal microphone will be deactivated and the microphone on the headset may be activated by either pressing the SP-200's PTT or pressing an inline, remote PTT.

Anytime the PTT is pressed while receiving a NAV frequency, the Duplex Communications feature will be activated. Duplex Communications enable the SP-200 to broadcast over 122.100 MHz (Flight Service Station frequency) while listening over the NAV frequency. For example, if the selected frequency is 117.000 MHz (a NAV frequency) and the PTT is pressed, the SP-200 will broadcast over 122.100 MHz. When the PTT is released the SP-200 will once again receive 117.000 MHz.

VOR Operations

Enter a NAV frequency (108.000 MHz to 117.950 MHz) by using either manual frequency selection or frequency search. The frequency selection is done in the same manner used to select a COMM frequency. As usual, the selected frequency will appear in the lower right-hand side of the screen.

If a VOR signal is not received on the selected frequency, the screen will display the selected frequency only and nothing else. This is similar to the flag on a panel-mounted NAV display. When a VOR signal is received, a screen similar to the following will be displayed.

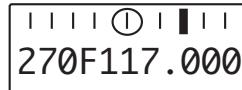


The Course Deviation Indicator (CDI) is on the top line of the screen. The CDI will always be initially centered when a VOR signal is first acquired. When receiving a VOR signal, each division on the CDI (starting with the edge of the center circle) represents a two degree deviation. Therefore, the CDI on the SP-200 has the ability to display up to a 10 degree deviation to the right or left in VOR mode. The following example shows a 6 degree deviation to the right if your desired course is flying to the station on the 90 degree radial (fly left towards the needle to be on course).



The three digits in the lower left-hand side of the screen are the Omni Bearing Selector (OBS) setting. Whenever the CDI needle is centered, such as when a VOR signal is first received, the OBS setting represents your bearing to or radial from the selected VOR station. The T or F following the OBS setting specifies whether the OBS setting is a bearing to (T) or a radial from (F) the VOR.

The Clear Key may be pressed to toggle the OBS between To and From indications. In the previous diagram, the OBS setting was 090T. By pressing the Clear Key, the following OBS setting of 270F is obtained.



270F117.000

The OBS setting will remain set to the initial bearing or radial until otherwise changed. The CDI needle will continuously update to show the deviation from the selected radial or bearing as the aircraft moves.

To enter a desired bearing or radial, press the OBS Key. The OBS setting will begin to flash. Enter the desired three digit radial or bearing using the Numeric Keypad. For example, OBS 0 3 0 will enter 30 degrees as the OBS setting. The CDI will automatically display the deviation from the selected bearing or radial. This process may be exited any time prior to entering the third digit by pressing the Clear Key. As long as the OBS setting is flashing, the SP-200 will accept numeric inputs between 0 and 360. Once three digits have been entered, or five seconds pass without an entry being completed, the SP-200 will not accept additional input until the OBS Key is pressed again.

Another method of selecting an OBS setting is using the Up and Down Keys. Once the OBS Key is pressed and the OBS setting is flashing, the Up or Down Key may be used to scroll through all 360 degrees until the desired radial or bearing is selected. Input from the Up or Down Key is accepted as long as the OBS setting is flashing. Once the desired bearing or radial is selected, the flashing will “time out” after five seconds.

The CDI needle may be centered and the actual bearing to or radial from the selected VOR station may be displayed at any time by pressing the OBS Key followed by the Clear Key. Pressing the Clear Key any time the OBS setting is flashing will center the CDI.

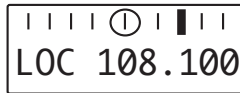
Remember, any time the OBS Key is pressed, the OBS setting will flash. During this time the SP-200 will accept three digits, the UP or Down Key or the Clear Key to change the OBS setting.

To exit the navigation function, enter a COMM frequency. As long as the OBS setting is not flashing, any inputs, such as manual frequency selection or recalling a frequency stored in a memory channel, will change the active frequency being received. If the NAV frequency was selected using the Recall Function, the Clear Key must be pressed to exit the Recall Function before using manual frequency selection.

Localizer Operations

Enter a Localizer frequency by using either manual frequency selection or frequency search. The selected frequency will appear in the lower right-hand side of the screen.

If a Localizer signal is not received on the selected frequency, the screen will display the selected frequency only and nothing else. This is similar to the flag on a panel-mounted display. When a Localizer signal is received, a screen similar to the following will be displayed.



The Course Deviation Indicator (CDI) is on the top line of the screen. When receiving a Localizer signal, each division on the CDI (starting with the edge of the center circle) represents a one degree deviation. Therefore, the CDI on the SP-200 has the ability to display up to a 5 degree deviation to the right or left in Localizer mode. The above example shows a 3 degree deviation to the left (fly right towards the needle to be on course).

The bottom line of the screen displays LOC to identify the selected frequency as a Localizer. To exit the Localizer function, enter a COMM or VOR frequency. If the Localizer frequency was selected using the Recall Function, the Clear Key must be pressed to exit the Recall Function before using manual frequency selection.

Key Lock

Inputs from the keypad may be locked out at any time by holding the Clear key and pressing the Down key. When Key Lock is active, KEY.L is displayed at the bottom of the screen as shown below.



Key Lock is deactivated by holding the Clear key and pressing the Down key a second time. Key Lock only locks out the SP-200's keypad. The PTT and Light functions are not affected.

Screen and Keypad Lighting

Press and release the Light Button to activate the SP-200's screen and keypad lighting for five seconds. To activate the screen and keypad lighting indefinitely, press and hold the Light Button for one second until a beep is heard. When this is done, the Light Button must be pressed a second time to turn the lighting off.

Last Frequency

Pressing the Last Frequency button allows you to toggle between your last two frequencies—great for switching between ground and tower.

Accessories

Call Sporty's Pilot Shop at 1.800.SPORTYS (776.7897) or 513.735.9000, or fax 513.735.9200 to order any of the following optional accessories. Accessories are also available at www.sportys.com/sp200.

Spare Alkaline Battery Case and Rubber Terminal Cover (#7153A)

Spare Alkaline Battery Case holds eight AA batteries, allowing for a quick change of batteries while in-flight. An ideal way to ensure fresh batteries are on board if the SP-200 is to be used as a backup radio. Rubber Terminal Cover covers and protects the electrical contacts on the bottom of the SP-200.

Nicad Battery Pack (#8631A)

The Nicad Battery Pack should be used if the SP-200 will be used on a daily or frequent basis. Requires at least one of the four available Power Adapters/Chargers (#8632A, #8633A, #8628A or #8634A). Charges in 12 hours. Due to the unpredictable shelf life of Nicad (nickel-cadmium) batteries, the Nicad Battery Pack is not recommended when the SP-200 will be used as a backup radio.

Desktop Nicad Battery Charger (#8632A)

A desktop drop-in charger for the Nicad Battery Pack. This two-piece charger includes the molded desktop base and Wall Power Adapter/Nicad Battery Charger (#8633A). For desktop use, the Wall Power Adapter/Nicad Battery Charger is plugged into the desktop base. The included Wall Power Adapter/Nicad Battery Charger may also be plugged directly into the SP-200 as described below. Please note, the optional Leather Holster (#8638A) must be removed prior to using

Desktop Nicad Battery Charger. The SP-200 will not transmit while sitting in the Desktop Nicad Battery Charger. Desktop base measures 2.76" h x 3.90" w x 3.46" d. Power cord measures 6 ft. long.

115 Volt Wall Power Adapter/Nicad Battery Charger (#8633A)

Allows the SP-200 to be powered externally from a 115 Volt wall outlet. Plugs into the side of the SP-200, which allows the unit to be powered with or without a battery pack attached. Also charges the optional Nicad Battery Pack (#8631A). Included with the 115 Volt Desktop Nicad Battery Charger (#8632A). Safe for use with the Alkaline Battery Pack. Power cord measures 6 ft. long.

230 Volt Wall Power Adapter/Nicad Battery Charger (#8628A)

Allows the SP-200 to be powered externally from a 230 Volt wall outlet. Plugs into the side of the SP-200, which allows the unit to be powered with or without a battery pack attached. Also charges the optional Nicad Battery Pack (#8631A). Safe for use with the Alkaline Battery Pack. Power cord measures 6 ft. long.

Cigarette Lighter Power Adapter/Nicad Battery Charger (#8634A)

Allows the SP-200 to be powered externally from a cigarette lighter in aircraft with 12, 24 or 28 Volt electrical systems (accepts input voltage of 10 to 30 Volts DC). Plugs into the side of the SP-200, which allows the unit to be powered with or without a battery pack attached. Also charges the optional Nicad Battery Pack (#8631A). Safe for use with the Alkaline Battery Pack. Power cord measures 6 ft. long.

Headset Adapter (#8635A)

Allows the use of a standard aviation noise attenuating headset. The SP-200's internal speaker and microphone are disabled only when the Headset Adapter is attached with the microphone plugged in the SP-200.

Leather Holster (#8638A)

Custom made to allow access to the SP-200's exterior buttons. Made of black leather with a detachable belt loop.

Metal Belt Clip (#3920A)

Attaches to the back of the SP-200 with screws installed in the unit as standard equipment.

Suction Cup Transceiver Holder (#6489A)

Allows the SP-200 to be mounted on a window or other smooth surface with a rubber suction cup. An internal ratchet locks the SP-200 firmly in place. Measures 5.00" h x 4.00" w x 3.63" d.

Antenna Adapter (#7140A)

Allows the SP-200 to be connected to an existing aircraft antenna.

Home VHF Antenna (#8107A)

Includes antenna, hardware for mounting through roof and 50 feet of cable.

Magnetic Base Antenna (#7986A)

Includes antenna, magnetic base and 10 feet of cable.

Permanent Mount Car Antenna Kit (#7995A)

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

Cordura® Carrying Case (#8629A)

Made of rugged Du Pont Cordura® nylon this patented carrying case is an ideal way to keep the SP-200 dust-free and close at hand. Features sewn-in sleeve for antenna storage. Black carrying case features a sewn belt loop.

Remote Antenna Mount (#1646A)

Suction cup mount allows the antenna to be positioned in a side window or other favorable location for improved reception. The SP-200 can then be mounted on a kneeboard, yoke or instrument panel. Cable measures 6 ft. long.

Specifications

General

Communication Frequencies

2280 Frequencies from 118.000 MHz to 136.975 MHz (8.33 KHz steps)

Receive Only Frequencies

720 Frequencies from 137.000 MHz to 142.975 MHz (8.33 KHz steps)

Navigation Frequencies

200 Frequencies from 108.000 MHz to 117.950 MHz (50 KHz steps)

Memory Channels

20 channels numbered 00 to 19

Weight with Alkaline Battery Pack (including antenna)

16.64 oz. (473 grams)

Weight with Nicad Battery Pack (including antenna)

15.68 oz. (443 grams)

Weight without battery pack (including antenna)

8.16 oz. (233 grams)

Dimensions with either battery pack

Height 6.65 in. (169 mm)

Width 2.36 in. (60 mm)

Depth 1.46 in. (37 mm)

Dimensions without battery pack

Height 3.90 in. (99 mm)

Width 2.36 in. (60 mm)

Depth 1.46 in. (37 mm)

Operating Temperature Range

-22°F to 122°F (-30°C to 50°C)

Frequency Stability
 ± 10 PPM (0.001%) at 25C

Battery Pack Power
Nicad Battery Pack 9.6 VDC / 600 mAH
Alkaline Battery Pack 12.0 VDC (8 AA batteries x 1.5 VDC each)

Receiver

Audio Output
350 mW into 8 Ohms, 10%

Adjacent Channel Rejection
-60 dB

Sensitivity
AM 6 dB (S+N)/N at 1 μ V soft

Selectivity
-6 dB ± 7 KHz

Band Width
 ± 25 KHz at 60 dB down

Power Consumption
68 mA (on; no reception, no noise)
200 mA (max at voice output)

Transmitter

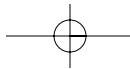
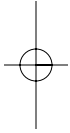
Transmitter Power
1.5 Watts $\pm 20\%$, 5 Watt (PEP) at 85% modulation

Antenna Impedance
50 Ohms

Spurious Radiation
-60 dB below carrier

Unnecessary Emissions
-60 dB or less

Power Consumption
1 A (max)



Sporty's SP-200 Handheld NAV/COM and various components are protected under patent and copyright laws of the United States of America and other nations, including U.S. Patents 4,843,399 and 5,771,018.