PJ2+

COM RADIO

Operator's Manual

71322PS

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Important Notice

FCC RF Exposure Compliance Requirements for Occupational Use Only

This radio has been tested and complies with the Federal Communications Commission (FCC) RF exposure limits for Occupational Use/Controlled Exposure Environment. In addition, it complies with the following Standards and Guidelines:

- FCC 96-926, Guidelines for Evaluating the Environmental Effects of Radio-Frequency Radiation.
- FCC OET Bulletin 65 Edition 97-01 (1997) Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- ANSI/IEEE C95.1-1992, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- ANSI/IEEE C95.3-1992, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave.
- When transmitting, hold the radio in a vertical position with its microphone 1 to 2 inches (2.5 to 5 cm) away from your mouth and keep the antenna at least 1 inch (2.5 cm) away from your head and body.
- The radio must be used with a maximum operating duty cycle not exceeding 50%, in typical Push-to-Talk configurations. DO NOT transmit for more than 50% of total radio use time (50% duty cycle). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when TX is on the front panel of the radio is illuminated. You can cause the radio to transmit by pressing the P-T-T button.
- Always use Sporty's authorized accessories.

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Simplified Directions

1. Install the batteries.
2. Turn the unit on
   (rotate volume knob clockwise).
3. Enter the desired frequency
   (1 2 2 9 7 5 for 122.975 MHz).
   Note: Six digits may be required to select certain frequencies.
4. Listen and transmit.

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General Information

Introduction

This manual contains only operational information relative to the PJ2+ COM radio. This manual is not intended as a service or maintenance manual and does not contain any theory or schematic diagrams.

Features

Rexon PJ2+ COM is a hand-held, aircraft communication transceiver with the following features:

- Standard twin plug aviation headset jacks
- 3.5mm earbud/headset jack
- Accepts USB type C power (2.4 amps)
- 760 COMM frequencies (118.000 MHz to 136.975 MHz)
- 6 watts (PEP) transmit power while on batteries
- Auto-Lit keypad and screen
- 20 Visual memory channels
- Automatic noise limiting (ANL)
- Full feature scanner—Scan the 20 memory channels or the entire frequency range
- Key lock
- Large 1.5" x 1.63" LCD screen
- Low battery indicator
- NOAA weather band
- External power and antenna options
- 121.5 emergency frequency button
- Last frequency function with visible last frequency
- Side-tone
- Adjustable LCD screen
- Night mode
- Easy to use

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Warranty

If, during the first year, your PJ2+ COM transceiver 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 approved by the factory.

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
2001 Sportys Drive
Batavia, Ohio 45103-9719

If your PJ2+ COM is no longer under warranty, you may still have it serviced at Sporty's. See above for return address instructions.

Antenna Requirements

Included with the PJ2+ COM is a flexible rubber antenna (Rubber Duck). 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 PJ2+ COM 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 PJ2+ COM.

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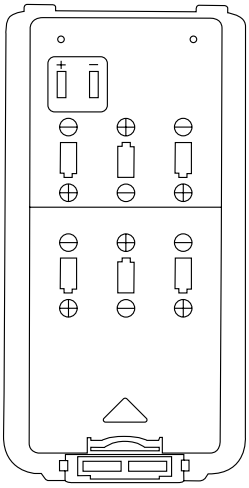
Batteries



An Alkaline Battery Pack is standard equipment with the PJ2+ COM. Alkaline batteries 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 holding the belt clip (if installed) in the out position, and then lift the latch mechanism found at the bottom of the battery pack. Remove the battery cover by pulling the thumb latch in the direction of the arrow. Six 1.5 volt AA Alkaline batteries are required. Energizer batteries are the recommended battery for the PJ2+ COM. Results may vary when using off brand batteries.

Replace the batteries by following the positive (+) and negative (-) terminal markings inside the case. When the batteries are replaced, replace the battery cover and attach the battery pack to the radio.

To attach the battery pack, make sure the power is OFF. Slide the battery pack onto the back of the and push in on the bottom until it locks in place.

If the radio will not be used for a long period of time (six months or more), please remove the batteries from the battery pack. This will help prevent the batteries from corroding the battery pack.

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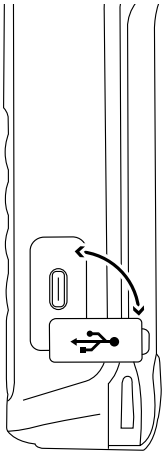
External Power

The PJ2+ COM includes a wall adapter and USB-A to USB-C power cable. The wall adapter can be used in 100-240 volt applications. The USB-A port on the wall adapter provides the needed 2.4 amps to properly power the PJ2+ COM. If less than 2.4 amps is provided, the PJ2+ COM will receive transmissions, but it won't have enough power to transmit. If attempting to transmit on less than 2.4 amps, the PJ2+ COM screen will flash intermittently and beep. To remedy this issue, change the power source to provide the needed 2.4 amps, or use the alkaline battery pack.

The PJ2+ COM does not have power delivery capability. Power should only be provided from a USB-A port.

Another option for external power is to use a backup tablet battery pack (sold separately). Be sure to use a battery pack that provides at least 2.4 amps of power.

Note: When powering the PJ2+ COM through the Type-C power port on the side of the radio, the radio will transmit at 5 Watts (PEP).



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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.
- 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.
- Use only the approved external power adapters and battery packs.
- 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 PJ2+ COM 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 PJ2+ COM, when operation is resumed within the recommended temperature range.

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Controls

This section serves only to identify and briefly describe the PJ2+ COM's external features. Please see the Operating Instructions section for detailed instructions on the use of the PJ2+ COM.

Top View

(A) Antenna Connector
The flexible rubber antenna or an external antenna may be attached to this BNC connector.

(B) 3.5mm Jack
An ear bud or compatible headset can be plugged in here. The internal microphone + speaker are disabled when the jack is used.

(C) Squelch
Rotate clockwise to increase squelch and counterclockwise to decrease squelch.

(D) 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.

(E) Earphone Jack
A standard headphone PJ plug will fit into here. The internal speaker is disabled when this jack is used.

(F) Microphone Jack
A standard microphone PJ plug will fit into here. The internal microphone is disabled when this jack is used.

(G) Wrist Strap Attachment point
A wrist strap can attach to this location.

Left Side View

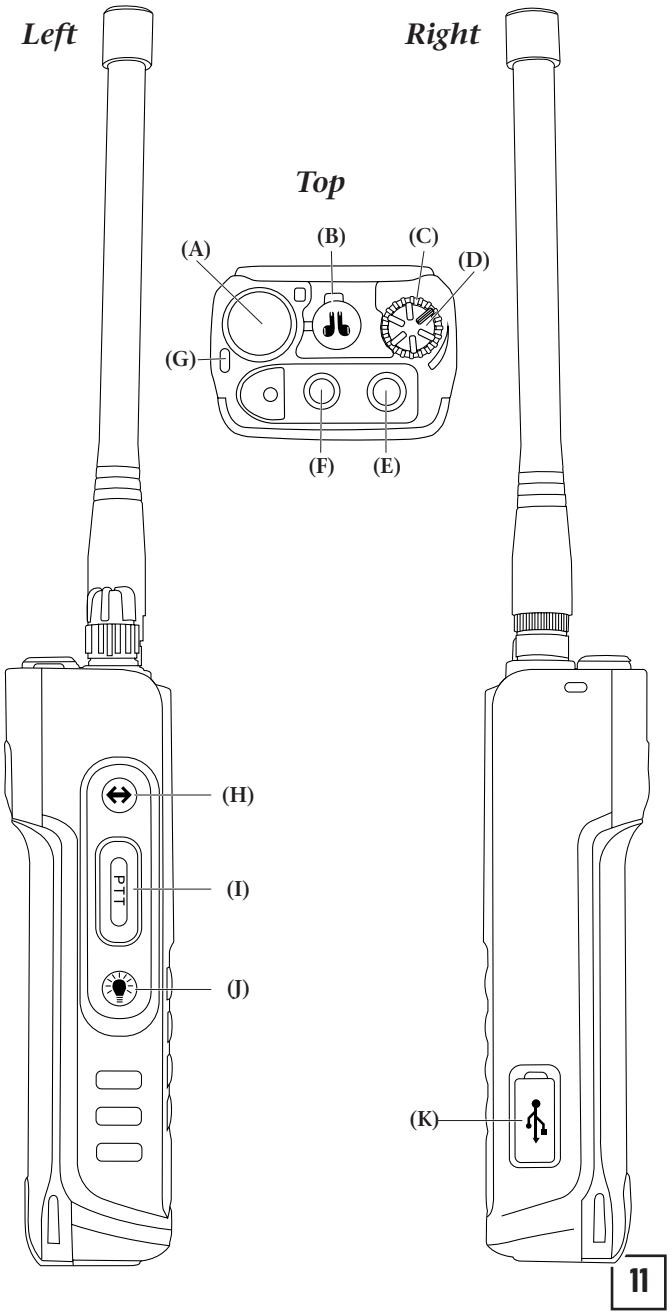
(H) Push-To-Talk Button
This button activates the internal microphone or an external microphone when using the optional headset adapter.

(H) Light Button
This button activates the back lighting for the screen and keypad. This key is also used in combination with the Clear key to enable/disable the auto-light feature.

(J) Flip/Flop Button
This switch is used to flip flop between your current and last frequency.

Right Side View

(K) External USB-C Power Port
The PJ2+ COM may be powered externally, with or without a battery pack attached by plugging a 100 - 220 Volt Wall Power Adapter into this location. Note that the PJ2+ COM needs 2.4 amps to operate properly. Wall adapters providing less amps should not be used. Use the wall plug that was included in the box.



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Front View

(L) Screen
This LCD displays the current frequency, last frequency, and other information to the operator.

(M) Numeric Keypad
These keys are used whenever the PJ2+ COM requires a numeric input such as setting the frequency.

(N) 2 Key 121.5 Emergency
This key is used to select 121.5 emergency frequency. Hold down the 2 key for 3 seconds to automatically go to 121.5.

(O) 4 Key Night Vision Mode (while on the LED contrast page)
This key is used to place the PJ2+ COM in night vision mode. Automatic noise limiting (ANL) can be turned on and off by holding the Clear key and pressing 4.

(P) 5 Key Normal Vision Mode (while on the LED contrast page)
This key is used to place the PJ2+ COM in normal vision mode.

(Q) 7 Key Low Back Light
This key is used to adjust the low back light function. This is accessed by holding the Clear key and pressing the 7 key.

(R) 8 Key High Back Light
This key is used to adjust the high back light function. This is accessed by holding the Clear key and pressing the 8 key.

(S) Down Key/Key Lock
This key is used to select the next lower frequency 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.

(T) Memory Clear Key
This key is used to delete a selected memory channel after putting the PJ2+ COM in Memory Clear Mode (CLR+MEM).

(U) Internal Speaker

(V) Internal Microphone

(W) Clear Key/ALL CLR
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 used in combination with the Down key to lock out all inputs to the keyboard. It is used in combination with the Light Button to enable/disable the backlight feature. It is used in combination with the UP key to enable/disable the BEEP function. This key is also used in combination with the ON/ OFF Volume Control to clear all memory channels.

(X) Weather Key
This key is used to recall the NOAA weather frequencies.

(Y) Memory Key
This key is used while storing frequencies in one of the 20 memory channels.

(Z) 9 Key LED Contrast
This key is used to adjust the LCD contrast and night mode function.

This is accessed by holding the Clear key and pressing the 9 key.

(AA) Recall Key

This key is used to recall stored frequencies from the 20 memory channels.

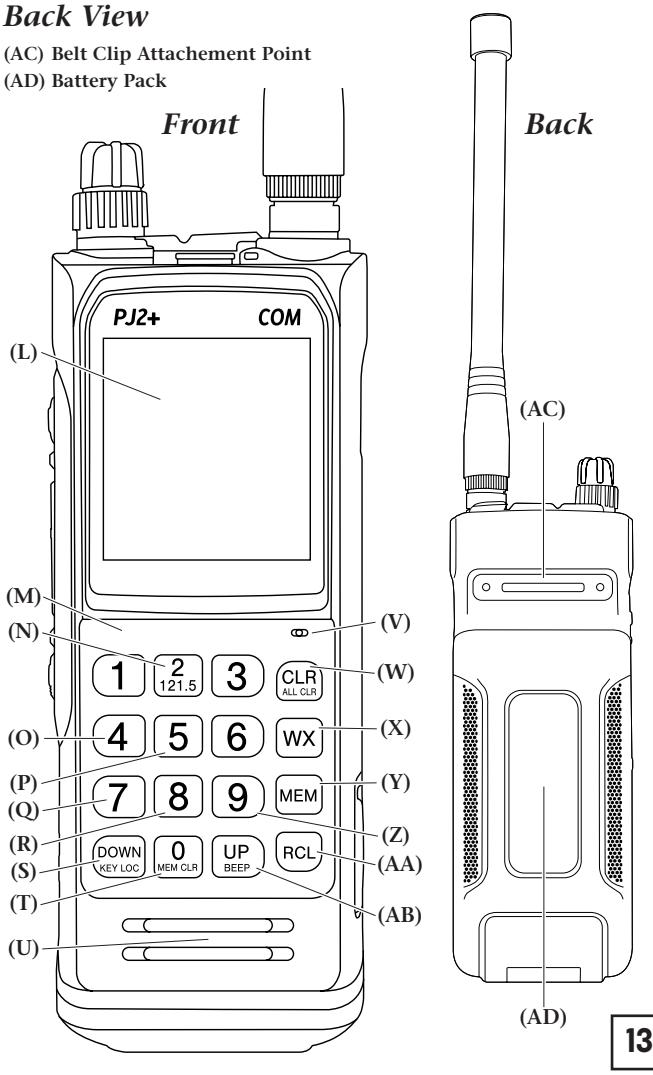
(AB) Up Key/BEEP

This key is used to select the next higher frequency, or to initiate search and scan functions. This key is also used in combination with the Clear key to enable/disable the beep feature.

Back View

(AC) Belt Clip Attachement Point

(AD) Battery Pack



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Operating Instructions

To perform the following functions you must be in the basic operating mode of the PJ2+ COM. To ensure that you are in the basic operating mode, press the Clear key until the last frequency that was entered manually is displayed.

Manual Frequency Selection

The PJ2+ COM will receive and transmit on the 760 COM frequencies (118.000 MHz to 136.975 MHz). The frequency currently selected is always displayed at the top of the PJ2+ COM's screen and the last frequency is always underneath the current frequency.

From the example above, the PJ2+ COM is receiving 122.975 MHz with the last frequency being 121.000 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 may be required to select a frequency.

The PJ2+ COM will return to the previous frequency if there is a pause of five seconds between key entries while entering a new frequency. The Clear key may be pressed at any time prior to entering the sixth 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 PJ2+ COM 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.

The PJ2+ COM can flip flop between the current frequency and the last requency by pressing the button above the PTT on the side of the radio.

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Frequency Search

To manually search through the frequency range, the Up key or Down key may be pressed at any time to select the next higher or lower frequency. The Up and Down keys may be pressed repeatedly to continue changing the selected frequency.

To automatically search the entire 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.

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 word SEARCH will flash and the PJ2+ COM 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 136.975 MHz is reached during a 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 136.975 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 and 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.

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