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PNI PNI-PACK120

PNI Escort HP 446 UHF Radio Transmitter Pack User Manual

Model: PNI-PACK120

Introduction

This user manual provides comprehensive instructions for the installation, operation, and maintenance of your PNI Escort HP 446 UHF Radio Transmitter Pack. Please read this manual thoroughly before using the product to ensure proper function and safety.



Image: The PNI Escort HP 446 UHF Radio Transmitter Pack components.

What's in the Box



Image: All components included in the PNI Escort HP 446 UHF Radio Transmitter Pack.

The PNI Escort HP 446 UHF Radio Transmitter Pack includes the following components:

- UHF Radio Station (PNI Escort HP 446)
- Microphone
- Power Cable
- Mounting Supports
- Cigarette Lighter Plug
- User Manual (this document)
- RG58 Cable (5 meters)
- PL259 Plug
- Magnetic Foot (for antenna)
- Mounting Bracket (for radio)
- PNI UF500 UHF Antenna

Product Overview

The PNI Escort HP 446 is a robust UHF radio station designed for reliable communication. It features a wide frequency range and multiple channels, along with advanced signal processing capabilities.



Image: Front panel of the PNI Escort HP 446 radio, displaying the screen and primary controls.

Key Features:

- **Frequency Range:** 400 - 470 MHz (UHF band)
- **Channels:** 199 programmable channels
- **Security Codes:** 1024 DCS / 51 CTCSS
- **Output Power:** Selectable 0.5W, 5W, or 15W
- **ASQ Squelch:** 9 adjustable levels for clear reception
- **NRC (Noise Reduction Circuit):** Improves audio quality
- **Scan Function:** Automatically scans channels
- **Dual Watch:** Monitors two channels simultaneously
- **BCL (Busy Channel Lockout):** Prevents transmission on occupied channels
- **Key Lock:** Prevents accidental button presses
- **LCD Screen:** Displays frequency, channel, and other information

Setup

1. Radio and Microphone Connection

Connect the microphone to the designated port on the front of the PNI Escort HP 446 radio unit. Ensure the connection is secure.



Image: The PNI Escort HP 446 radio with the microphone connected.

2. Power Connection

Connect the provided power cable to the radio unit. For vehicle use, utilize the cigarette lighter plug. Ensure the power source is 13.8 Vdc.

3. Antenna Installation (PNI UF500)

The PNI UF500 UHF antenna is designed for vehicle mounting. Attach the antenna to the magnetic foot, then connect the RG58 cable to the antenna and the radio unit's antenna port (PL259 plug). Place the magnetic foot on a flat, metallic surface of your vehicle for optimal performance.



Image: The PNI UF500 UHF antenna with its magnetic base and connecting cable.



Image: Detailed view of the PNI UF500 UHF antenna.

Important: For maximum antenna performance and to prevent damage to the radio, a check and calibration of the antenna (SWR adjustment) is required after assembly. Consult a professional if you are unsure about this step.

Operating Instructions

Power On/Off

To power on the unit, rotate the volume knob clockwise until the display illuminates. To power off, rotate it counter-clockwise until it clicks off.

Frequency/Channel Mode (FRQ/CH/NM)

The PNI Escort HP 446 can operate in frequency mode, channel mode, or display both with channel names. Use the **V/M** button to switch between these display modes (FRQ, CH, NM).

Channel Programming

Channels can be manually programmed. Refer to the detailed programming section in the full user manual for specific steps on setting frequencies, CTCSS/DCS codes, and other parameters for each of the 199 channels.

Adjusting Squelch (ASQ)

The Automatic Squelch (ASQ) function helps to eliminate background noise. It has 9 adjustable levels. Rotate the **SQL** knob to adjust the squelch level. A higher level requires a stronger signal to open the squelch.

Noise Reduction Circuit (NRC)

Activate the NRC function to significantly reduce ambient noise and improve the clarity of received audio. This function is particularly useful in noisy environments.

Power Output Selection (Hi/Low)

The radio supports selectable output power: 0.5W, 5W, and 15W. Use the appropriate button or menu option to switch between high and low power settings based on your communication needs and local regulations.

Scan Function

To activate the scan function, press the **SCAN** button. The radio will automatically scan through programmed channels or frequencies. Press the button again to stop scanning.

Dual Watch

The Dual Watch function allows you to monitor two different channels simultaneously. When a signal is detected on either channel, the radio will switch to that channel. Consult the full manual for instructions on setting up Dual Watch.

Key Lock

To prevent accidental changes to settings, activate the Key Lock function by pressing and holding the **LOCK** button. Repeat the action to unlock the keypad.

Maintenance

Regular maintenance ensures the longevity and optimal performance of your PNI Escort HP 446.

- **Cleaning:** Use a soft, dry cloth to clean the radio unit and microphone. Do not use abrasive cleaners or solvents.
- **Antenna Inspection:** Periodically check the antenna and cable for any signs of wear, damage, or corrosion. Ensure all connections are secure.
- **Storage:** When not in use for extended periods, store the radio in a cool, dry place away from direct sunlight and extreme temperatures.

Troubleshooting

Problem	Possible Cause	Solution
No power	Power cable disconnected; Blown fuse; Incorrect voltage.	Check power cable connection; Inspect and replace fuse if necessary; Ensure 13.8 Vdc power supply.

Problem	Possible Cause	Solution
No reception or poor audio	Squelch set too high; Antenna disconnected or damaged; Incorrect frequency/channel.	Adjust ASQ squelch level; Check antenna connection and condition; Verify frequency/channel settings. Activate NRC.
Cannot transmit	Busy Channel Lockout (BCL) active; Microphone not connected; Low power setting.	Wait for channel to clear or disable BCL; Ensure microphone is securely connected; Increase power output.
Keypad unresponsive	Key Lock function is active.	Press and hold the LOCK button to deactivate Key Lock.

Specifications

PNI Escort HP 446 UHF Radio Station:

- **Frequency:** 400 - 470 MHz
- **Working Band:** UHF
- **Programmable Channels:** 199
- **Security Codes:** 1024 DCS / 51 CTCSS
- **Frequency Step:** 2.5 / 5 / 6.25 / 10 / 12.5 / 20 / 25 / 30 / 50 KHz
- **Power Supply:** 13.8 Vdc
- **Consumption (RX):** ≤380mA
- **Consumption (TX):** ≤2600mA
- **Output Power:** 15W / 5W / 0.5W
- **Dimensions:** 110 x 110 x 25 mm
- **Special Feature:** Noise Reduction Circuit (NRC)
- **Color:** Black
- **Item Weight:** 3.06 pounds (radio unit only, approximate)

PNI UF500 UHF Antenna:

- **Length:** 63 cm
- **Operating Frequency:** 430 - 470 MHz
- **Maximum Applied Power:** 400 W
- **S.W.R. Minimum:** less than 1.5:1 (in the middle of the band)
- **Gain:** 6 dBi
- **Radiation:** Omnidirectional
- **Connector Type:** PL
- **Hole Diameter (for mounting):** 16mm
- **Material:** Stainless Steel
- **Weight:** 560 grams

Safety Information

Please observe the following safety guidelines:

- Do not operate the radio without a properly connected antenna.
- Ensure the power supply voltage matches the radio's requirements (13.8 Vdc).
- Avoid exposing the radio to extreme temperatures, direct sunlight, or excessive moisture.
- Do not attempt to disassemble or modify the radio unit. Refer all servicing to qualified personnel.
- Broadcasting on UHF radio frequencies may require a license in your region. Ensure compliance with local regulations.

Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or visit the official PNI website. Keep your proof of purchase for warranty claims.
Manufacturer: ONLINESHOP SRL

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