Jopix AT6666PRO

Jopix AT-6666 PRO Amateur Radio Station Instruction Manual

Model: AT-6666 PRO | Brand: Jopix

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your Jopix AT-6666 PRO Amateur Radio Station. The AT-6666 PRO is an advanced transceiver designed for amateur radio enthusiasts, supporting AM, FM, SSB (USB/LSB), and CW modes across the 28.000-29.700 MHz frequency range. Please read this manual thoroughly before operating the device to ensure proper use and to maximize its performance and longevity.

2. Package Contents

Carefully unpack the box and verify that all the following items are included:

- Jopix AT-6666 PRO Radio Unit
- Microphone
- Microphone Holder
- Station Mounting Bracket
- Power Cord
- Mounting Hardware (screws, washers, knobs)



Image: Power cord with fuses for connecting the radio to a 13.8V power source.



Image: Included mounting bracket, screws, knobs, and other small accessories for installation.

3. Product Overview

The Jopix AT-6666 PRO is a compact and robust amateur radio transceiver. Its front panel features a clear LCD display, various control knobs, and function buttons for easy operation. The rear panel includes connections for power, antenna, and external accessories.



Image: Front view of the Jopix AT-6666 PRO radio unit, showing the display, control knobs, buttons, and connected microphone.



Image: Side view of the Jopix AT-6666 PRO radio, highlighting its compact design and the microphone connection port.

Front Panel Controls:

- **FUNC Button:** Accesses secondary functions.
- **MODE Button:** Selects operating mode (AM, FM, USB, LSB, CW).
- **BAND Button:** Changes frequency band.
- **SCAN Button:** Initiates channel scanning.
- **DIM Knob:** Adjusts display brightness.
- **CDR Knob:** Clarifier control.
- **DW Button:** Activates Dual Watch function.

- **VOL/SQL Knob:** Adjusts volume and squelch level.
- **RF GAIN Knob:** Adjusts receiver RF gain.
- **NB/ANL Button:** Activates Noise Blanker/Automatic Noise Limiter.
- **HI-CUT Button:** Activates High-Cut audio filter.
- **SPLIT Button:** Enables split frequency operation.
- **ECHO Button:** Activates echo function.
- **MEN Button:** Accesses menu settings.
- **TSQ Button:** Activates Tone Squelch (CTCSS/DCS).
- **NRC Button:** Noise Reduction Control.
- **EMG Button:** Selects emergency channels (9/19).
- **CH Knob:** Selects operating channel/frequency.

4. Setup

4.1 Power Connection

The Jopix AT-6666 PRO requires a **13.8V DC** power supply. Connect the supplied power cord to the radio's DC input jack on the rear panel. Ensure correct polarity: red wire to positive (+), black wire to negative (-). Connect the other end to a stable 13.8V DC power source capable of supplying sufficient current for transmission.

4.2 Antenna Connection

Connect a suitable 10-meter band antenna (28-29.7 MHz) to the SO-239 antenna connector on the rear panel. Use a high-quality coaxial cable with a PL-259 connector. Ensure the antenna system is properly tuned for the operating frequency to prevent damage to the transceiver.

4.3 Microphone Connection

Plug the 6-pin microphone connector into the microphone jack on the front panel of the radio.

4.4 External Speaker (Optional)

An external speaker (3.5 mm jack, 8 Ω impedance) can be connected to the dedicated jack on the rear panel for enhanced audio output.

4.5 Mounting

The radio can be mounted using the supplied station mounting bracket. It is designed for 1 DIN mounting. Secure the bracket in a stable location, then attach the radio to the bracket using the provided screws and knobs.



Image: Rear view of the Jopix AT-6666 PRO, showing the antenna connector, power input, and heatsink for heat dissipation.

5. Operating Instructions

5.1 Basic Operation

1. **Power On/Off:** Turn the VOL/SQL knob clockwise to power on the unit. Turn counter-clockwise until it clicks to power off.
2. **Volume Adjustment:** Rotate the outer ring of the VOL/SQL knob to adjust the audio output level.
3. **Squelch Adjustment (SQ):** Rotate the inner part of the VOL/SQL knob to set the squelch level. Adjust until background noise is suppressed, but weak signals can still be heard.

5.2 Frequency and Channel Selection

- **Channel Selection:** Rotate the **CH** knob to select the desired operating channel. The radio supports 40 channels.
- **Frequency Step Adjustment:** Use the menu (MEN button) to adjust the frequency step size for fine-tuning.
- **Clarifier (CDR):** Use the **CDR** knob for fine adjustment of the receive frequency, especially useful in SSB mode.
- **Emergency Channels:** Press the **EMG** button to quickly switch to emergency channels 9 or 19.

5.3 Mode Selection

Press the **MODE** button repeatedly to cycle through the available operating modes:

- **AM (Amplitude Modulation):** Standard amplitude modulation.
- **FM (Frequency Modulation):** Standard frequency modulation.
- **USB (Upper Sideband):** Single Sideband operation.
- **LSB (Lower Sideband):** Single Sideband operation.
- **CW (Continuous Wave):** Morse code operation.

5.4 Special Features

- **VOX (Voice Operated Transmit):** Enables transmission automatically when voice is detected, without pressing the PTT button. Adjust sensitivity in the menu.
- **Roger Beep:** Transmits a short tone at the end of your transmission to signal that you have finished speaking. Activate/deactivate via menu.
- **Dual Watch (DW):** Allows monitoring two channels simultaneously.

- **Channel Scan:** Press **SCAN** to automatically search for active channels.
- **RF Gain:** Use the **RF GAIN** knob to adjust the sensitivity of the receiver, useful for reducing strong signal interference.
- **ASQ (Automatic Squelch):** Provides automatic squelch control for convenience.
- **Keypad Lock:** Prevents accidental changes to settings. Activate via menu.
- **Noise Filters:**
  - **NB (Noise Blanker):** Reduces impulse noise.
  - **ANL (Automatic Noise Limiter):** Limits strong noise peaks.
  - **HI-CUT:** Filters out high-frequency audio components to improve readability.
- **RF Power Control:** Adjusts the output power level.
- **Echo Function:** Adds an echo effect to your transmitted audio.
- **Programmable Features:** Many settings can be customized via the menu system.
- **SWR Meter:** Built-in Standing Wave Ratio meter to check antenna matching.
- **S-meter:** Displays received signal strength.
- **TOT (Time Out Timer):** Limits continuous transmission time to prevent overheating.
- **Key Sound:** Toggles audible feedback for button presses.
- **Security Codes (CTCSS/DCS):** Use Tone Squelch (TSQ button) for private communication within groups.

6. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the radio's exterior. Do not use abrasive cleaners or solvents.
- **Environmental Conditions:** Operate the radio within the specified temperature range of -20°C to +55°C. Avoid exposure to direct sunlight, excessive dust, moisture, or extreme temperatures.
- **Ventilation:** Ensure adequate ventilation around the heatsink on the rear panel to prevent overheating during prolonged transmission.
- **Fuse Replacement:** If the radio does not power on, check the fuses in the power cord. Replace with fuses of the same rating.

7. Troubleshooting

Common Issues and Solutions:

No Power:
Check power cord connections and ensure the 13.8V DC power supply is active. Verify fuses in the power cord are intact.

No Transmission:
Ensure the microphone is properly connected. Check antenna connection and SWR. Verify RF power control settings. Ensure TOT has not been triggered.

Poor Reception / No Audio:
Adjust the VOL/SQL knob. Check squelch level (SQ) and ASQ settings. Ensure antenna is connected and tuned. Check RF Gain setting. Disable noise filters (NB, ANL, HI-CUT) temporarily to see if they are over-filtering signals.

Distorted Audio:
Check microphone connection. Adjust microphone gain (if available in menu). Ensure external speaker (if used) is functioning correctly.

Keypad Unresponsive:

Check if Keypad Lock is active. Deactivate it via the menu or a dedicated button if available.

8. Specifications

Feature	Specification
Frequency Range	28.000 - 29.700 MHz
Band Type	AM, FM, USB, LSB, CW
Channels	40
Power Supply	13.8 V DC
Dimensions (W x H x D)	155 x 50 x 205 mm (6.1 x 2.0 x 8.1 inches)
Weight	1.57 kg (3.46 lbs) / 1.82 kg (4.01 lbs) with packaging
Microphone Type	6 pins
Sensitivity (20dB SINAD)	1.0 µV AM/FM; 0.25 µV SSB
Speaker Audio Power	3 W @ 8 Ω
External Speaker Jack	Yes, 3.5 mm
Operating Temperature	-20°C to +55°C
Special Features	Dual Watch, Channel Scan, RF Gain, ASQ, Keypad Lock, NB, ANL, HI-CUT, Roger Beep, Clarifier, Frequency Step Adjustment, Emergency Channel, RF Power Control, Echo, Programmable, SWR Meter, VOX, S-meter, TOT, Key Sound, CTCSS/DCS

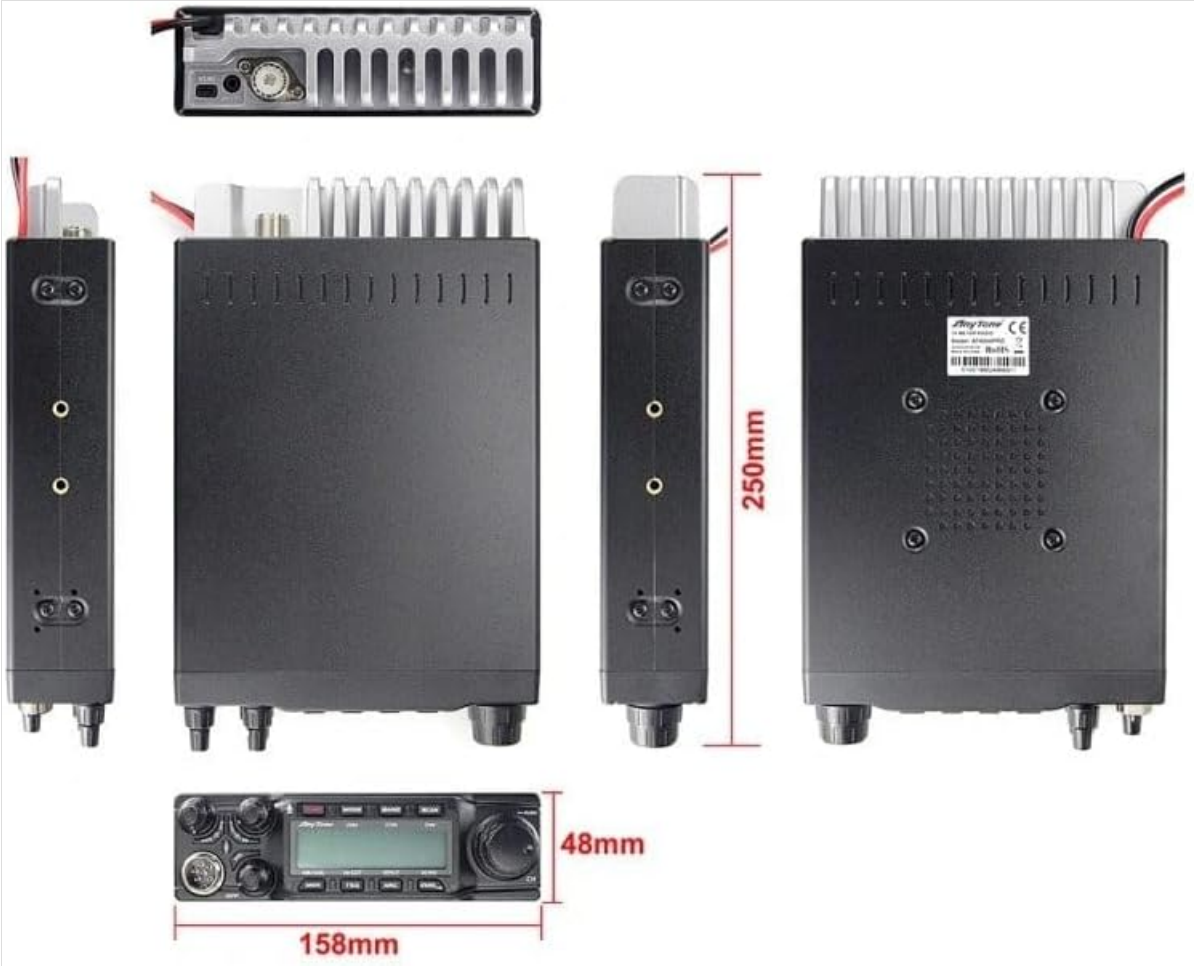


Image: Technical drawing illustrating the dimensions of the Jopix AT-6666 PRO radio unit.

9. Warranty Information

Jopix products are manufactured to high-quality standards. This product is covered by a limited warranty against defects in materials and workmanship. The specific terms and duration of the warranty may vary by region. Please retain your proof of purchase for warranty claims. For detailed warranty information, refer to the documentation provided with your purchase or contact your local dealer.

10. Support

For technical assistance, troubleshooting, or service inquiries, please contact your authorized Jopix dealer or visit the official Jopix website for support resources. When contacting support, please have your product model (AT-6666 PRO) and serial number ready.

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