Radiolink AT9S Pro

Radiolink AT9S Pro 10/12 Channels Radio Transmitter and R9DS Receiver User Manual

Brand: Radiolink | Model: AT9S Pro

1. PRODUCT OVERVIEW

The Radiolink AT9S Pro is a versatile 10/12 channel radio transmitter designed for a wide range of RC models including airplanes, helicopters, gliders, multirotors, cars, and boats. It features advanced DSSS&FHSS communication technology for stable and long-range control, extending up to 2.1 miles (3.4km) in the air. This transmitter offers a user-friendly interface with both basic and advanced menus, ensuring ease of use for various skill levels. Key functionalities include information telemetry, RSSI telemetry, dual/triple rates, throttle lock, failsafe settings, end point adjustment (EPA), and 8 programmable mixes.

The AT9S Pro is built with high-quality components, ensuring durability and reliable performance. It supports various additional functions such as simulator connectivity, TBS Crossfire Protocol, ELRS long-range control modules, and Radiolink's wireless trainer mode. Safety features include signal strength indicator (RSSI) alerts, low voltage alarms, and failsafe protection, all communicated through clear sounds, vibrations, and on-screen displays on its 2.8-inch LCD screen.

Figure 1: Radiolink AT9S Pro Transmitter with R9DS Receiver.

2. WHAT'S IN THE BOX

Upon unboxing your Radiolink AT9S Pro, you should find the following components:

- 1x AT9S Pro Grey Transmitter
- 1x R9DS Receiver
- 1x Throttle Self-return Accessory
- 1x Strap
- 1x Quick Start Guide

Figure 2: All components included in the AT9S Pro package.

3. KEY FEATURES

The AT9S Pro is packed with features designed to enhance your remote control experience:

- **Excellent Anti-interference:** DSSS&FHSS communication technology ensures a stable transmission signal and long-range control up to 2.1 miles (3.4km) in the air.
- **10/12 Channels:** Offers flexible channel configuration for various model types.
- **Information Telemetry:** Real-time monitoring of aircraft voltage (with PRM-01) and other flight data like speed, altitude, RSSI, and distance (with PRM-03 and compatible flight controllers).
- **RSSI Telemetry:** Provides signal strength indication for enhanced safety.
- **Dual/Triple Rates & Throttle Lock:** Customizable control settings for different flight styles and safety.
- **Failsafe Setting:** Configurable failsafe protection for unexpected signal loss.
- **End Point Adjustment (EPA) & Switch Assignments:** Fine-tune control surfaces and assign functions to

various switches.

- **8 Programmable Mixes Control:** Advanced mixing capabilities for complex model setups.
- **3-in-1 Multi-function Port:** Supports most simulators, TBS Crossfire Protocol (915 Module), ELRS long-range control modules, and Radiolink's wireless trainer mode.
- **Safety Reminders:** Audible (DD sounds), vibratory, and on-screen (2.8-inch LCD) alarms for low voltage and low RSSI.
- **User-Friendly Interface:** Intuitive menu system for easy navigation and setup.
- **Wide Compatibility:** 15 model memory capacity, compatible with Radiolink R12DS, R12DSM, R12DSE, R9DS, R6DS, R6DSM receivers.

Figure 3: Visual representation of the AT9S Pro's core features.

4. PRODUCT COMPONENTS AND DIMENSIONS

Familiarize yourself with the layout and dimensions of your AT9S Pro transmitter:
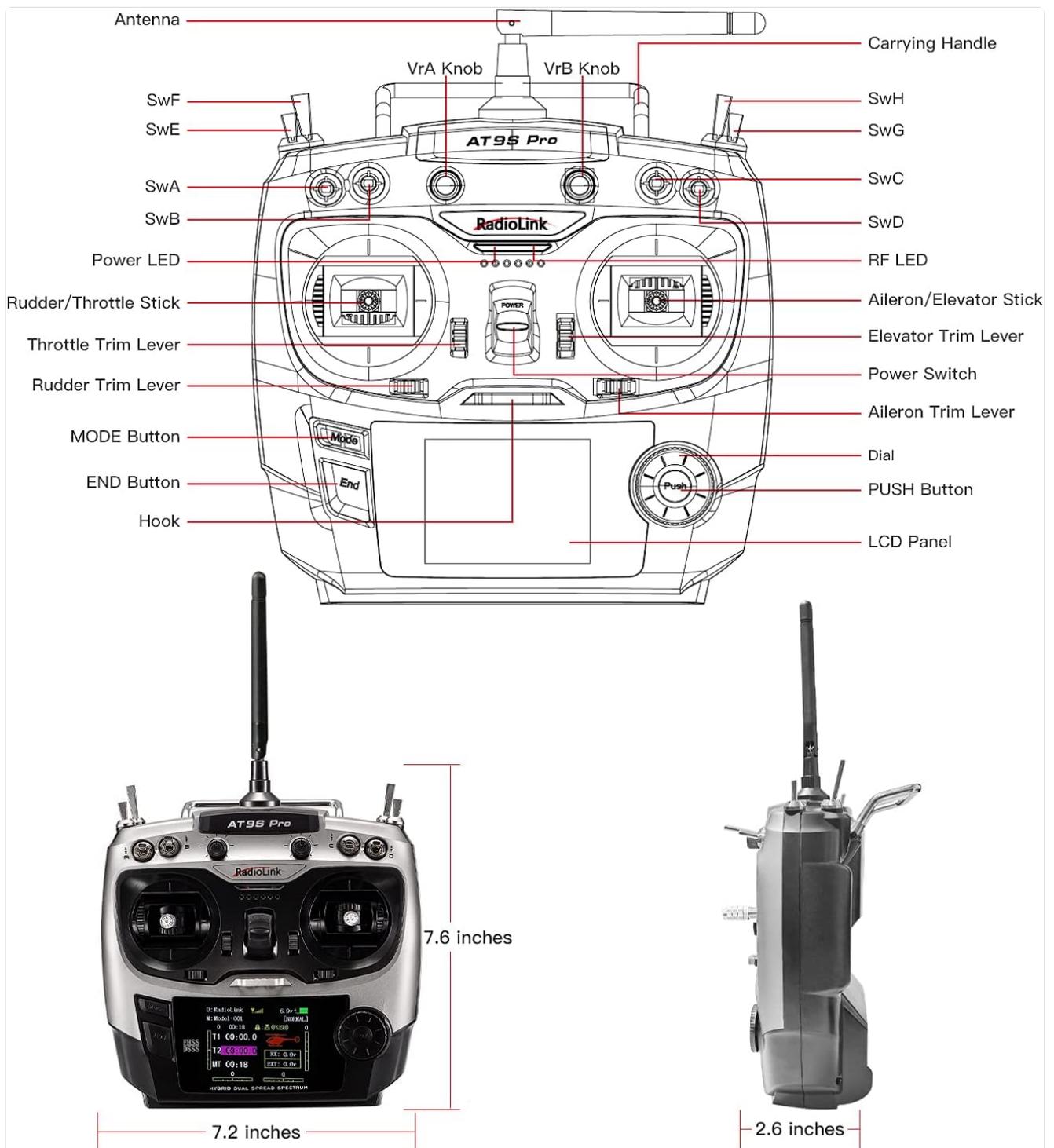
Figure 4: Detailed diagram of the AT9S Pro with labeled components and dimensions.

- **Dimensions:** 7.2"L x 3.9"W x 7.6"H
- **Weight:** 1.94 pounds (880 Grams)
- **Ergonomic Features:** Includes 3 knobs, 3 three-way switches, 4 two-way position switches, and a reset trainer switch. Sticks are adjustable for length and tension, utilizing Noble brand potentiometers for linearity.
- **Display:** 2.8-inch color LCD screen with switchable white background for clear visibility.
- **Dial Switch:** For fast setting adjustments.

Ergonomic Features of AT9S Pro

Types of Switch for Your Needs

With 3 of Knobs, 3 of three-way and 4 of two-way position switches, 1 of reset trainer switch for different setting, switches can be customized for any aux channels.

High Precision and Durable Sticks

Sticks can be adjustable length and tension, potentiometer of Noble brand more linear.

2.8 Inch Color Screen & Switch to White Background

Dial Switch for Fast Setting

Figure 5: Close-up view of the AT9S Pro's ergonomic switches, sticks, and dial.

5. SETUP AND BINDING

To begin using your Radiolink AT9S Pro, follow these steps for initial setup and binding with your receiver:

5.1. Powering the Transmitter

The AT9S Pro can be powered by 8 AA batteries or a 2S-4S LiPo battery. Ensure batteries are inserted correctly into the battery compartment located at the back of the transmitter. The universal JST 2 Pin battery connector features reverse polarity protection.

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Figure 6: Rear view of the AT9S Pro showing the battery compartment and connector.

5.2. Binding the Receiver

To establish communication between your AT9S Pro transmitter and the R9DS receiver, a binding process is required. No specific radio setting is needed on the transmitter for binding.

Video 1: This video demonstrates how to make the 10-channel AT9S Pro work with a 12-channel receiver (R12DS) by adjusting the channel selection in the system function. It also shows the importance of matching the transmitter's channel setting to the receiver's capabilities for stable servo operation.

5.3. Multi-function Port

The AT9S Pro features a versatile 3-in-1 multi-function port on the back, supporting various connections:

- **Simulator:** Connects to most flight simulators for practice.
- **TBS Crossfire Protocol (915 Module):** Allows connection of external long-range control modules.
- **Wireless Trainer Mode:** Enables a master-slave setup for training purposes.

Figure 7: The multi-function port on the AT9S Pro, illustrating its compatibility with TBS Crossfire, simulators, and trainer cables.

6. OPERATION MODES AND FUNCTIONS

The AT9S Pro offers various modes and functions to optimize control for different RC models and pilot preferences.

6.1. Flight Control

The transmitter provides precise control over your RC model. The intuitive stick movements translate directly to the model's actions. The 2.8-inch LCD screen provides real-time feedback on various parameters.

Figure 8: The AT9S Pro in use, demonstrating its capability to control different types of RC vehicles including drones, airplanes, and trucks.

Video 2: This video showcases the Radiolink AT9S Pro controlling an RC helicopter, demonstrating various flight maneuvers including hover, air route flight, dual rate switching, one-key aerobatics, 3D aerobatics, one-key failsafe, and one-key auto return.

6.2. One Key Auto Return

For added convenience and safety, the AT9S Pro supports a one-key auto return function, allowing your model to automatically return to a predefined home point. This feature is particularly useful in situations where visual orientation is lost or in emergencies.

6.3. Failsafe Protection

The failsafe protection feature allows you to set predefined positions for all channels in case of signal loss. This ensures that your model will react predictably and safely, for example, by returning to home or cutting the motor, minimizing potential damage or loss.

7. TELEMETRY FEATURES

The Radiolink AT9S Pro offers comprehensive telemetry capabilities, providing real-time data from your model directly to the transmitter's screen. This allows for enhanced monitoring and safer operation.

- **Airplane Voltage Monitor:** When paired with the PRM-01 module, the voltage of your airplane's battery is displayed directly on the AT9S Pro screen.
- **Advanced Telemetry with PRM-03:** Equipping the AT9S Pro with the PRM-03 module (sold separately) and a compatible flight controller (such as Crossflight, APM, PIXHAWK, or Mini Pix) enables a wider range of telemetry information. This includes battery voltage, speed, altitude, RSSI (Received Signal Strength Indicator), distance, and more.
- **RSSI Alerts:** The system provides audible (DD sounds), vibratory, and visual (words on LCD screen) alerts for low voltage and low RSSI, ensuring you are promptly notified of critical conditions.

Figure 9: Examples of telemetry data displayed on the AT9S Pro screen, including voltage monitoring, programmable mix control, and safety alerts.

Video 3: This video demonstrates how to display the airplane's battery voltage on the AT9S Pro's screen using the PRM-01 telemetry module, showing the connection process and the real-time voltage readout.

8. WIRELESS TRAINER FUNCTION

The AT9S Pro supports a wireless trainer mode, allowing an experienced pilot (trainer) to connect their transmitter to a student's transmitter. This enables the trainer to take over control of the model at any time, providing a safe and effective way to teach new pilots.

Video 4: This video illustrates the setup and operation of the wireless training function on Radiolink transmitters, demonstrating both TRIGGER and HOLD modes for the trainer switch.

9. SIMULATOR SUPPORT

Practice your flying skills without risking your model by connecting your AT9S Pro to a flight simulator. The transmitter is compatible with most simulator software, providing a realistic training experience.

Figure 10: The AT9S Pro connected to a computer running a flight simulator, enabling virtual flight practice.

Video 5: This video demonstrates the plug-and-play simulator functionality of the AT9S Pro, showing both wireless and wired connection methods for flight simulation.

10. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your Radiolink AT9S Pro transmitter.

- **Cleaning:** Regularly wipe the transmitter with a soft, dry cloth. Avoid using solvents or abrasive cleaners.
- **Storage:** Store the transmitter in a cool, dry place away from direct sunlight and extreme temperatures. If storing for extended periods, remove batteries to prevent leakage.
- **Firmware Updates:** Radiolink regularly releases firmware updates to improve performance and add new features. You can update the firmware via the USB port on the transmitter. Refer to the official Radiolink website for the latest firmware and instructions.
- **Battery Care:** If using rechargeable LiPo batteries, follow proper charging and discharging procedures. Do not overcharge or over-discharge.

Figure 11: The USB port on the AT9S Pro, used for firmware updates and data copying.

11. TROUBLESHOOTING

This section addresses common issues you might encounter with your AT9S Pro transmitter.

- **Unstable Servo Behavior (when using 10CH transmitter with 12CH receiver):**Ensure the channel selection in the transmitter's system function matches the receiver's channel capability. As demonstrated in Video 1, if a 10CH transmitter is set to 10CH but connected to a 12CH receiver, servos might become unstable. Adjust the transmitter's channel setting to 12CH to resolve this.
- **Low Voltage Alarm:** The transmitter will alert you with sounds, vibrations, and on-screen messages if the

battery voltage is low. Recharge or replace the batteries immediately.

- **Low RSSI Alarm:** If the signal strength drops below a safe threshold, the transmitter will provide alerts. This indicates that your model might be too far or experiencing interference. Bring the model closer or check for obstructions.
- **Binding Issues:** If the receiver does not bind, ensure both the transmitter and receiver are powered on and within close proximity. Re-attempt the binding process as per the receiver's specific instructions.
- **No Telemetry Data:** Verify that the PRM-01 or PRM-03 module is correctly connected to both the receiver's telemetry port and the model's battery/flight controller. Check all connections and ensure the modules are functioning correctly.

12. SPECIFICATIONS

Detailed technical specifications for the Radiolink AT9S Pro:

Attribute	Value
Brand	Radiolink
Model Name	AT9S Pro
Color	AT9S Pro-Gray
Connectivity Technology	2.4Ghz
Remote Control Technology	2.4Ghz
Maximum Range	3.4E+3 Meters (3.4 km / 2.1 miles)
Item Weight	1.94 pounds (880 Grams)
Product Dimensions	7.2"L x 3.9"W x 7.6"H
Material	Plastic
Battery Cell Composition	Lithium Polymer (Note: Batteries are not included with the product, but it supports rechargeable LiPo batteries)
Manufacturer Recommended Age	14 years and up
Skill Level	All

13. WARRANTY AND SUPPORT

For any product-related inquiries, technical support, or warranty information, please contact Radiolink's customer service. You can find support resources on the Radiolink Direct store or through their online user instructions.

Additional resources such as full user manuals and FAQ troubleshooting files are often available on the product's

sales page or the manufacturer's official website.

For further assistance, please visit the official Radiolink website or refer to the provided quick start guide.