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## FrSky Archer Plus RS

# FrSky Archer Plus RS Receiver User Manual

Model: Archer Plus RS

## Introduction

The FrSky Archer Plus RS Receiver is an advanced component designed for remote control systems, enhancing the Archer line with improved performance and features. This receiver offers enhanced anti-RF-interference capabilities, ensuring stable radio frequency performance, and includes existing anti-interference measures for spark ignition processes. It supports both ACCESS and ACCST D16 modes, with the RF protocol intelligently matched during the binding process. In ACCESS mode, the receiver provides Over-The-Air (OTA) wireless firmware upgrades, extended range, and improved telemetry. Additional functions include configurable telemetry power (RS), S.Port / F.Port / FBUS switching, and VFR indicators.

## Product Overview



Top view of the FrSky Archer Plus RS Receiver, showing the main circuit board and dual antennas extending from one side.




Side view of the FrSky Archer Plus RS Receiver, highlighting the compact size and the connection points for the antennas.



Angled view of the FrSky Archer Plus RS Receiver, providing a perspective of its overall form factor and antenna orientation.

## Setup and Installation

### Physical Installation and Wiring

The Archer Plus RS receiver is designed to be tiny and super lightweight, making it suitable for various applications. Proper wiring is crucial for reliable operation.

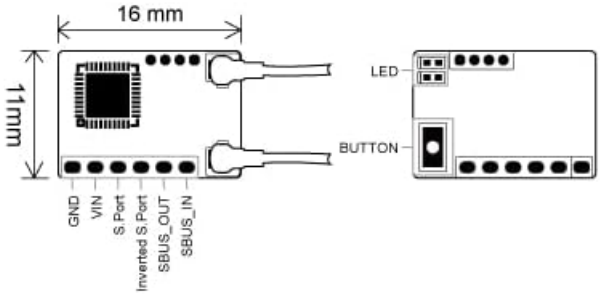



Diagram illustrating the dimensions (16mm x 11mm) and pinout configuration of the FrSky Archer Plus RS Receiver. Key connection points include GND, VIN, S.Port, Inverted S.Port, SBUS_OUT, and SBUS_IN. The diagram also shows the location of the LED indicators and the binding button.

Refer to the diagram above for pin assignments:

- **GND:** Ground connection.
- **VIN:** Voltage input for the receiver. Ensure the voltage is within the specified operating range.
- **S.Port / F.Port / FBUS:** Configurable telemetry port. This port can be switched between S.Port, F.Port, or FBUS depending on your setup and firmware configuration.

- **Inverted S.Port:** Provides an inverted S.Port signal, useful for certain flight controllers or devices.
- **SBUS_OUT:** SBUS output port, supporting 16-channel or 24-channel mode.
- **SBUS_IN:** SBUS input port, used for signal redundancy setups.
- **LED:** Indicator lights for status.
- **BUTTON:** Used for binding and other configuration modes.

The receiver features an IPEX4 antenna connector. Ensure antennas are securely connected and positioned for optimal signal reception. For full range performance, proper antenna placement, away from carbon fiber or metal obstructions, is critical.

### Binding Procedure

The Archer Plus RS receiver supports both ACCESS and ACCST D16 modes. The RF protocol is automatically matched during the binding process with your FrSky transmitter.

1. Power on your FrSky transmitter and navigate to the binding menu. Select the appropriate mode (ACCESS or ACCST D16).
2. Press and hold the **BUTTON** on the Archer Plus RS receiver while powering it on. The red and green LEDs on the receiver should illuminate, indicating it is in binding mode.
3. On your transmitter, initiate the binding process. The receiver's LEDs will change to indicate successful binding (e.g., green LED solid).
4. After successful binding, power cycle both the receiver and the transmitter. Verify control and telemetry functionality.

*Note:* Ensure your transmitter's firmware is up-to-date, especially if using older ACCST radios. Some older v1 internal module firmware versions may require an update to v2 to bind with these newer receivers.

## Operation

### Telemetry and Features

The Archer Plus RS receiver offers advanced telemetry capabilities, providing real-time data back to your transmitter. In ACCESS mode, these features are further enhanced:

- **Configurable Telemetry Power (RS):** Allows adjustment of telemetry transmission power.
- **S.Port / F.Port / FBUS Switching:** Flexibility to choose the serial communication protocol based on your flight controller or device.
- **VFR Indicators:** Provides Voltage, RSSI, and other flight-related data.
- **OTA (Over-The-Air) Firmware Updates:** Firmware can be updated wirelessly via your compatible FrSky transmitter, simplifying the update process.

The receiver supports a full control range of approximately 2km or more, though actual range may vary based on environmental conditions, obstacles, and antenna placement.

## Maintenance

To ensure the longevity and optimal performance of your FrSky Archer Plus RS Receiver, consider the following maintenance guidelines:

- **Environmental Protection:** Protect the receiver from moisture, dust, and extreme temperatures. If operating in harsh environments, consider conformal coating or a protective enclosure.
- **Antenna Care:** Regularly inspect antennas for damage. Ensure they are securely attached to the IPEX4

connectors and are not kinked or frayed. Proper antenna orientation is crucial for signal integrity.

- **Connections:** Periodically check all soldered connections and wire harnesses for looseness or damage. Ensure power and signal wires are not under strain.
- **Firmware Updates:** Keep the receiver firmware updated to the latest version available from FrSky. This can improve performance, add features, and address potential issues. Utilize the OTA update feature for convenience.
- **Cleaning:** If necessary, gently clean the receiver board with a soft, dry brush or compressed air to remove dust and debris. Avoid using liquids or harsh chemicals.

## Troubleshooting

This section addresses common issues you might encounter with your Archer Plus RS Receiver.

| Problem | Possible Cause | Solution |
|---|---|---|
| Receiver does not bind or loses connection after binding. | Incorrect binding procedure.<br>Transmitter firmware incompatibility (e.g., ACCST v1 with receiver v2).<br>Receiver too close to transmitter during binding.<br>Interference. | Review the binding procedure carefully.<br>Ensure both transmitter and receiver have compatible and updated firmware. Update transmitter firmware if necessary.<br>Maintain a distance of at least 1 meter between transmitter and receiver during binding.<br>Check for sources of RF interference. |
| Poor range or signal loss during operation. | Improper antenna placement or damage.<br>Excessive RF interference in the operating environment.<br>Obstructions between transmitter and receiver.<br>Low power to receiver. | Ensure antennas are positioned correctly (e.g., 90 degrees to each other) and away from carbon fiber or metal. Inspect for damage.<br>Avoid operating near strong Wi-Fi, video transmitters, or other RF noise sources.<br>Maintain clear line of sight where possible.<br>Verify stable power supply to the receiver. |
| Difficulty with soldering connections. | Small pad size.<br>Lack of proper tools or technique. | Use a fine-tipped soldering iron.<br>Consider using flux and thin solder.<br>Utilize magnifying tools and "helping hands" if available.<br>Practice on scrap boards if new to soldering small components. |

## Specifications

- **Model:** Archer Plus RS
- **Dimensions:** 16mm x 11mm (0.63 x 0.43 inches)
- **Weight:** Approximately 0.317 ounces (9 grams)
- **Antenna Connector:** IPEX4
- **Control Range:** Full range (≥2km, actual range may vary based on local conditions)
- **Compatibility:** All FrSky ACCESS/ACCST D16 transmitters
- **Features:** S.Port / F.Port / FBUS (Configurable via S.Port), Over-The-Air (OTA) FW update, SBUS Out (16CH / 24CH mode), SBUS In (Signal Redundancy), Inverted S.Port, Configurable Telemetry Power (RS), VFR Indicators.
- **Manufacturer Recommended Age:** 14 years and up

- **Manufacturer:** FrSky

## Warranty and Support

For specific warranty information regarding your FrSky Archer Plus RS Receiver, please refer to the documentation provided with your purchase or contact the authorized FrSky dealer from whom you purchased the product. Warranty terms and conditions may vary by region and retailer.

For technical support, firmware updates, and additional resources, please visit the official FrSky website or contact FrSky customer support directly. You may also find helpful information and community support through online forums dedicated to FrSky products.

**FrSky Official Website:** www.frsky-rc.com

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