

ARES

SOPWITH PUP

**Owner's Manual &
Technical Information (RTF)**



SOPWITH PUP

Specification

Wingspan:..... 352mm (13.87")

Wing chord:..... 70mm (2.75")

Wing area:..... 71sq. in.

Length:..... 255mm (10")

Flying weight:..... 24g (0.85oz)

Battery: 1S 70mAh LiPo

Motor:..... Brushed geared

Propeller:..... 4.7 x 2.75"

Transmitter: 4-channel; 2.4GHz Hitec Red protocol

3-in-1 control unit:..... Hitec Red receiver; two servos; ESC

No. of channels: 3 (rudder, elevator, throttle)

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IMPORTANT! This radio control model is not a toy. It must be operated and flown according to these instructions and may cause serious injury to persons or damage to property if not used responsibly or if operated without due caution. Unsuitable for children under 14 years of age.

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Introduction

With sensitive controls and the ability to remain fully aerobatic at up to 15,000 feet, the World War I-era Sopwith Pup was so light and maneuverable that it became the first aircraft to land on a moving ship in 1917. Nearly 1,800 Pups were built by Sopwith and its sub-contractors between the years 1916 and 1917 when it was at the peak of its operational development.

The Ares [air-eez] Sopwith Pup is a lightweight, three-channel ultra-micro semi-scale model of the original. It features durable foam construction and numerous scale touches such as molded wing rib detail, an authentic trim scheme, plus a wood texture and color propeller and interplane struts. Technically advanced the Sopwith Pup incorporates a Hitec Red 2.4GHz receiver that's compatible with all current Hitec 2.4GHz aircraft transmitters. For convenience, two versions of this model are available both supplied with Hitec Red protocol: choose either Ready-To-Fly (including a Hitec Red-enabled transmitter and receiver) or Pair-To-Fly (supplied with a Hitec Red receiver that's compatible with your existing Hitec air transmitter). Weighing less than an ounce, the Sopwith Pup is ideal for indoor flight or outdoor flight in calm conditions.

- 100% ready to fly, straight out of the box
- Semi-scale appearance with molded wing rib detail
- The model's micro size and light weight make it ideal for indoor spaces
- Fully proportional throttle, elevator and rudder control for exceptional maneuverability
- The lightweight 1S LiPo flight battery attaches with magnets
- Slow flying characteristics mean the Pup is ideal for the less experienced pilot
- Intermediate and expert pilots will enjoy the Pup's exciting performance

Contents

1 x 100% factory assembled Sopwith Pup.

1 x 4-channel transmitter with integral 100mA charger.

1 x 70mAh 3.7V 1S LiPo battery.



Required To Complete

- 4 x AA alkaline cells for the transmitter

FCC Information

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Changes or modifications not expressly approved by the party responsible for

compliance could void the user's authority to operate the equipment.

This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400GHz to 2.4835GHz frequency range.

The associated regulatory agencies of the following countries recognize the noted certifications for this product as authorized for sale and use: USA

Safety Precautions

Failure to use this product in the intended manner as described in the following instructions can result in damage and / or personal injury. A Radio Controlled (RC) airplane is not a toy! If misused it can cause serious bodily harm and damage to property.

Keep items that could become entangled in the propeller away from the propeller, including loose clothing, tools, etc. Be especially sure to keep your hands, face and other parts of your body away from the propeller.

As the user of this product you are solely and wholly responsible for operating it in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

This model is controlled by a radio signal that is subject to possible interference from a variety of sources outside your control. This interference can cause momentary loss of control so it's advisable to always keep a safe distance from objects and people in all directions around your model as this will help to avoid collisions and / or injury.

- Never operate your model if the voltage of the batteries in the transmitter is too low.
- Always operate your model in an open area away from obstacles, people, vehicles, buildings, etc.
- Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable batteries, etc.).

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- Keep all chemicals, small parts and all electronic components out of the reach of children.
- Moisture causes damage to electronic components. Avoid water exposure to all electronic components, parts, etc. that are not specifically designed and protected for use in water.

LiPo Battery Warnings

IMPORTANT NOTE: Lithium Polymer batteries are significantly more volatile than the alkaline, NiCd or NiMH batteries also used in RC applications. All instructions and warnings must be followed exactly to prevent property damage and / or personal injury as the mishandling of LiPo batteries can result in fire. By handling, charging or using the included LiPo battery you assume all risks associated with LiPo batteries. If you do not agree with these conditions please return the complete product in new, unused condition to the place of purchase immediately.

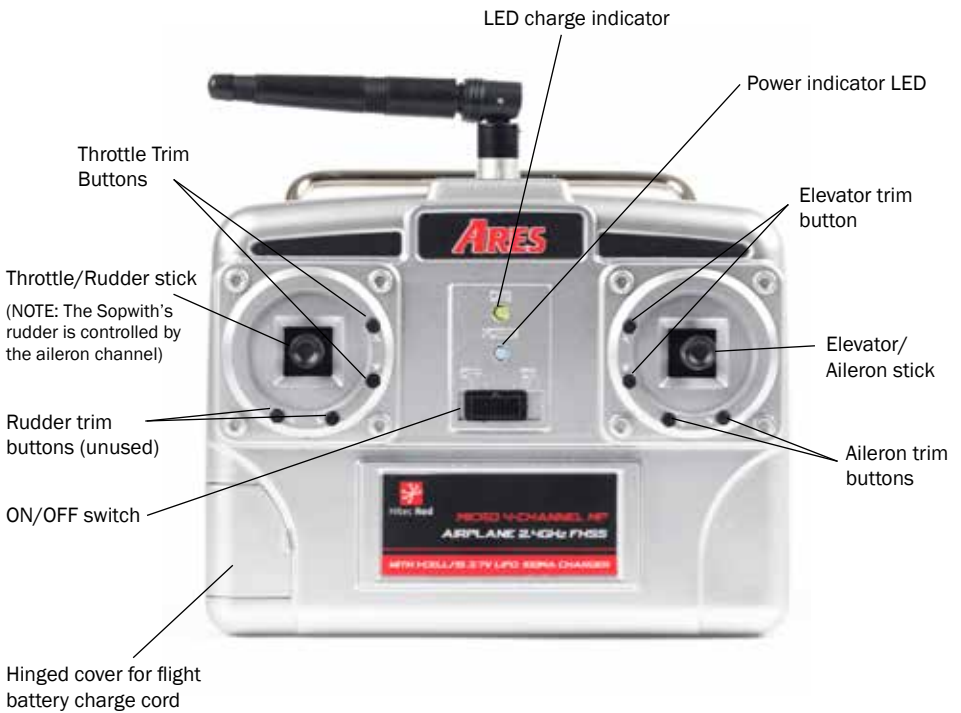
- You **MUST** charge the LiPo battery in a safe area away from flammable materials.
- **NEVER**, at any time, leave the LiPo battery unattended when it's being charged.
- When charging the battery you should **ALWAYS** remain in constant observation to monitor the charging process and react immediately to any potential problems that may occur.
- After flying / discharging the battery you must allow it to cool to ambient/ room temperature before recharging.
- To charge the LiPo battery you **MUST** use only the included charger in the transmitter. Failure to do so may result in a fire causing property damage and/or personal injury. **DO NOT** use a NiCd or NiMH charger.

If at any time during the charge or discharge process the battery begins to balloon or swell, discontinue charging or discharging immediately. Quickly and safely disconnect the battery, then place it in a safe, open area away from flammable materials to observe for at least 15 minutes. Continuing to charge or discharge a battery that has begun to balloon or swell can result in a fire. A battery that has ballooned or swollen, even a small amount, must be removed from service completely.

For best results, store the battery at room temperature – approximately 68 – 77° Fahrenheit (F) – and in a dry area.

Transmitter Details (Mode 2)

Note that since the Sopwith Pup is a 3-channel model the rudder is controlled using the aileron stick



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Preparing for Flight

- 1. Install the transmitter batteries.** Remove the transmitter battery cover and insert the four AA alkaline cells, making sure to observe the correct polarity. For guidance the cell orientation is indicated inside the battery box.



- 2. Charging the flight battery.** You must charge the included 70mAh 1-cell / 1S 3.7V 10C LiPo battery (AZSB1803) using the LiPo battery charger built into the supplied micro 4-channel airplane transmitter w/100mA charger (AZSA1838) or a suitably compatible LiPo battery charger. Charging the LiPo battery using an incompatible LiPo battery charger (such as a NiCd or NiMH battery charger), or even a different LiPo battery charger with the incorrect settings, may result in damage to the battery or even fire, resulting in property damage and / or personal injury.

Please follow these steps to charge the LiPo flight battery with the charger built into the Supplied AZSA1838 Hitec Red 4-channel transmitter:

- Carefully open the small hatch located near the bottom left-hand corner of the transmitter and extend the charge lead outside of the transmitter case. You can leave the hatch open or close it by routing the charge lead through the small cut-out / opening in the hatch door.



- Attach the battery to the connector at the end of the charge lead extending from the transmitter. **YOU MUST BE CAREFUL TO ENSURE PROPER POLARITY BEFORE MAKING THE CONNECTION** by aligning the small red circle marking on the housing of the battery with the small red circle marking on the charge lead connector. While these ultra-micro connectors are keyed to minimize the risk of a reverse polarity connection, if you force them it is possible to make connection with the incorrect polarity, potentially causing damage to the battery and/or charger (transmitter). When the circle markings are properly aligned for correct polarity, joining the connectors should require only a minimal amount of pressure to achieve the light 'click' that indicates a secure connection.



- When the battery is connected to the charge lead securely, and with the proper polarity, the 'CHG' (charge) LED indicator on the transmitter will glow solid yellow. The battery will be charging anytime the LED indicator is glowing solid yellow and whether or not the transmitter is powered on.
- The 100mA charger will charge the 70mA battery in less than 1 hour. When the battery is fully charged the LED indicator will stop glowing entirely, whereupon you can remove the battery from the charge lead / connector as it is now fully charged and ready for use.

NOTE: The LiPo battery included with each new model will arrive partially charged. For this reason the initial charge may only take 30 – 45 minutes.



- 3. Switching on.** Pull the throttle stick back to its lowest position and switch on the transmitter, noting that the LED will glow solid blue and the transmitter will emit three short beeps.



- 4. Install the flight battery.** Install the fully charged 70mAh LiPo battery in your Sopwith Pup by plugging the ultra-micro connector on the battery to the lead extending from the bottom of the aircraft. Make sure, once again, to match the red circles on the connectors to assure correct polarity. The battery attaches to the airplane with a magnet. So, simply place the battery in position with the plug end facing the tail. Slide the front of the battery into the notch to ensure that the airplane's Centre of Gravity is correct.

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- 5. Control unit initialization.** Your Sopwith Pup is equipped with a compact and advanced 3-in-1 control unit. This control unit is a lightweight combination of a Hitec Red 2.4GHz receiver, two servos, and an electronic speed control (ESC). Having plugged the flight battery in, this unit will instruct the elevator and rudder control surfaces to move to indicate that it has initialized and that the motor is now armed. The motor will now start when the throttle stick is raised.

Note: If you have servo movement but the motor is not working, unplug the flight battery, check that the throttle stick is at its lowest position, then plug the flight battery. Once again this should re-initialize and arm the electronic speed control.



- 6. Flight controls.** Check the control surfaces, as below, noting that instructions for servo reversing are given on page 13 of this manual. Note, also, that on this 3-channel airplane the rudder function is controlled by the aileron stick on the transmitter. So if the direction of the rudder needs to be reversed, it will be the aileron channel that will need to be reversed. NOTE: The pushrod for the elevator should be in the outermost hole on the control horn while the rudder pushrod should be in the hole before the outermost hole.

- With the model in front of you, facing away, move the rudder stick to the right and check that the rudder moves right in response. Left rudder stick will move the rudder to the left.



- Pull the elevator stick back and check that the elevator moves in an upward direction. Push the elevator stick forward and check that the elevator moves in a downward direction.



- With the propeller clear of obstructions and the model restrained, open the throttle slowly and check that it turns in an anticlockwise direction, when viewed from the front.



- Check to see that the elevator and rudder are centered when the transmitter is on and the airplane is powered up. Adjust as necessary with the digital trim buttons adjacent to the control stick. For example, if the elevator is raised above neutral, push the upper elevator trim button several times until the surface is centered.



7. Your Sopwith Pup is now ready to fly. Choose a flat-calm day for the first flight or use a suitable indoor venue (a sports hall is ideal) that's free of obstructions.

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Flying

The Sopwith Pup is designed primarily as an indoor model suitable for flying in a space at least the size of a basketball court. The airplane can, of course, be flown outside when there is little to no wind. Early morning Dawn Patrols and sorties flown near dusk are best.

Due to its light weight the Sopwith Pup flies easily and, as such, it is not necessary to fly at full throttle. Its light weight also keeps the model from incurring much damage in a crash. The airplane will fly at 1/2 throttle and below and at these settings flights of seven or more minutes are common.

Initial flights can be made by rising off the ground or by hand-launch however before your first flight double check that the flying surfaces are in neutral when the airplane is powered up and the transmitter is on. If not, trim them as described above. Once trimmed you are ready for flight. Smoothly advance the throttle to about 1/2 to 3/4 and the model will roll a few feet and take off without the addition of any elevator.

The Sopwith Pup is a very responsive airplane, so you need use only small movements of the control sticks. If additional trim is necessary for level flight, make those adjustments now. With a little practice you will be flying smoothly in no time. Remember, the Pup flies best with minimal interference from the pilot and tiny control movements only when necessary.

Landings are best performed by reducing the power to a level where the airplane is descending, whereupon touch-down can be made by gently increasing the power a little as you land.

We're sure you'll love your Sopwith Pup and hope you have many enjoyable flights.



Propeller Replacement

Should the propeller need replacing, you will need to hold the prop shaft with a pair of needle nose pliers while you screw the propeller on in a clockwise direction. Screw the prop onto the shaft until the shaft is flush with the front of the propeller hub. The propeller should rotate without touching the cowl.



Servo Reversing

The Hitec Red 4-channel transmitter features control/servo reversing functionality for the rudder, elevator, throttle and aileron channels. The control/servo directions were set correctly at the factory for your Sopwith Pup, however if any of the controls are operating in the wrong direction or if you make use of the electronics in other models at a later date, follow these steps to change the control/servo directions as required.

Rudder channel control/servo reversing

Press and hold the right rudder trim button, then press the left rudder trim button. Release both buttons and the control / servo direction will be reversed.

Elevator channel control/servo reversing

Press and hold the right rudder trim button, then press the down elevator (top) trim button. Release both buttons and the control / servo direction will be reversed.

Aileron channel control/servo reversing

Press and hold the right rudder trim button, then press the right aileron trim button. Release both buttons and the control / servo direction will be reversed.

Transmitter Pairing

Pairing is the process of programming the receiver in the 3-in-1 control unit to recognize the Globally Unique Identifier (GUID) code of a single specific transmitter. If you ever find it necessary to replace the transmitter or the 3-in-1 control unit, it will be necessary for you to re-pair the two units (as detailed below) for proper operation.

1. Press and hold the Channel 4 right-hand trim button and simultaneously switch ON the transmitter. A flashing red LED will indicate that the transmitter is in pairing mode.

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2. Connect the flight battery to the 3-in-1 control unit.
3. Power the transmitter OFF and back ON again noting that the transmitter's LED will light solid blue.
4. The pairing process is complete when the rudder and elevator cycle back and forth briefly.

Transmitter Factory Reset

If you wish to return your Hitec Red 4-channel transmitter to factory default settings (all trims centered and all servo reverse settings reset), you can do this very easily:

1. Power the transmitter ON.
2. Press and hold the Channel 4 right-hand trim button whilst simultaneously pressing the Channel 3 trim button (+ or -).
3. The buzzer will emit a long beep signalling that the factory reset is complete.

Replacement Parts

AZSB180370mAh 1-cell/1S 3.7V 10C LiPo with ultra-micro connector
AZSA1806.....3-channel, 3-in-1 control unit – receiver/2 servos/ESC
AZS1509.....Motor with pinion gear
AZS1511.....Gearbox with shaft
AZS1512.....Propeller shaft with gear
AZS1513.....Wing set with decals
AZS1514.....Tail set with decals
AZS1515.....Fuselage with decals
AZS1516.....Main landing gear set
AZS1517.....Pushrod set
AZS1518.....Wing strut set
AZS1520.....Decal set
AZSP15224.7 x 2.75 micro scale propeller
AZSA1838M1.....Micro 4-channel airplane Tx with 100mA charger (Mode 1)
AZSA1838.....Micro 4-channel airplane Tx with 100mA charger (Mode 2)
AZS1107.....Replacement rotary servo mechanics

Warranty, support and service

30-Day Limited Warranty Term Period:

We warrant that the Product(s) purchased (the 'Product') will be free from defects in materials and workmanship when the product is new (before being used) for the limited warranty term period, 30 days, from the date of purchase by the Purchaser.

If you believe a defect in material, workmanship, etc. was not apparent when the Product was new and only became evident after the Product was used, take the following steps:

If you purchased the Product at a HobbyTown store, please contact your local HobbyTown store for warranty support and/or service.

If you purchased the Product from the Firelands website, use the contact information found under the Support heading to contact Firelands directly.

If you contact Firelands, you may be asked to send the product to Firelands, at your cost, for inspection. Provided the warranty conditions have been met within the warranty term period, the components that are found to be defective, incorrectly manufactured or assembled may be repaired or replaced, at the sole discretion of Firelands. Your warranty item will be returned to you at Firelands' expense. In the event your product needs repair or a replacement part that is not covered by this warranty, your local HobbyTown store or Firelands can assist you with support and in obtaining the genuine replacement parts to repair your Product. Firelands will charge \$40.00 per hour plus the cost of replacement parts to service your vehicle if after contacting you, you so authorize such repairs. Your product will be returned to you at your expense.

If you purchased your Product from a HobbyTown Internet site not affiliated with a local store, please consult that site for its support and service policies. You can also find more information at:

www.Hobbytown.com

by emailing customerservice@firelandsgroup.com

or by calling 800-205-6773

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