P-51D MUSTANG 350

Instruction Manual

Specifications

Wingspan:	29.5 in (750mm)
Length:	25.6 in (650mm)
Weight with Battery:	12.2-12.8 oz (345-365 g)
Battery:	600mAh 3S 11.1V LiPo (included with RTF, 500-600mAh 3S 11.1V LiPo required for RFR)
Charger:	DC 3S 11.1V LiPo Balancing and AC adapter (included with RTF, 3S 11.1V LiPo balancing required for RFR)
Transmitter:	6-channel 2.4GHz (included with RTF, 4+ channel required for RFR)
On-Board Electronics:	Receiver (installed in RTF, 4+ channel required for RFR), ESC and 3 servos (installed in RTF and RFR)

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Introduction

The Ares™ [*air-eez*] P-51D Mustang 350 is a park flyer size scale model of the venerable North American P-51D Mustang. Our version of the classic warbird includes a variety of scale details that will make you proud to show it off to your friends, along with other practical features like main landing gear that can be installed and removed without the use of tools and a steerable tailwheel for improved ground handling. It even includes both two-blade and four-blade propellers and matching spinners so you can choose your preference between scale looks and flight performance.

Speaking of performance, the Ares P-51D offers full 4-channel control right out of the box along with a factory-installed 350 brushless motor that together combine to provide smooth, yet agile flight performance that's perfect for both scale and aerobatic flying. The unique airfoil design of this Mustang also allows for improved handling at lower speeds making it a great model for pilots looking for their first warbird. Plus, the advanced EPO foam airframe design is lightweight, durable and easy to repair, which comes in handy when you have an occasional rough landing.

The Ares P-51D Mustang 350 is available in both RTF (Ready-To-Fly) and RFR (Ready-For-Receiver) versions. Both include the 350 brushless motor, a 15-amp brushless ESC and three 9-gram sub-micro servos. The RTF also includes a standard-size 6-channel transmitter and factory-installed 6-channel receiver with 2.4GHz technology, a lightweight 600mAh 3S 11.1V LiPo battery, and a DC balancing charger with an AC adapter. With nothing extra to buy and only minor assembly to complete, you can have the Ares P-51D flying at a local park, schoolyard or flying field in almost no time!

And although the P-51D Mustang 350 is nearly ready to fly right out the box please take the time to read through this manual for information on assembly, control checks and more before making your first flight. Please also visit our web site at www.Ares-RC.com for additional information including product updates, bulletins, videos and more.

Safety Precautions and Warnings

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/helicopter 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/rotor blades away from the propeller/rotor, including loose clothing, tools, etc. Be especially sure to keep your hands, face and other parts of your body away from the propeller/rotor blades.

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 is 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.).
- 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. not specifically designed and protected for use in water.
- Never lick or place any portion of your model in your mouth as it could cause serious injury or even death.

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

P-51D Mustang 350 RFR (Ready-For-Receiver) Contents

Item	Description
Not Available Separately	P-51D Mustang 350 RFR Airframe

P-51D Mustang 350 RTF (Ready-To-Fly) Contents

Item	Description
Not Available Separately	P-51D Mustang 350 RTF Airframe
AZS1208AMD2	6HPA 6-Channel HP Airplane Transmitter, Mode 2
Not Available Separately	AA Batteries (8)
AZSB6003S20J	600mAh 3-Cell/3S 11.1V 20C LiPo Battery, JST Connector
AZSC305C	305C 3-Cell/3S 11.1V LiPo, 0.5A DC Balancing Charger
AZSC1305PS	1305PS 100-120V AC to 13V DC Adapter, 0.5-Amp Power Supply

Required to Complete

The P-51D Mustang 350 RTF (Ready-To-Fly) version includes everything needed to fly right out of the box. There's nothing extra to buy or provide!

The P-51D Mustang 350 RFR (Ready-For-Receiver) version requires the following items:

- ☐ 4+ channel transmitter (with suitable range for a 'park flyer' class model)
- ☐ 4+ channel receiver (compatible with the transmitter that will be used)
- ☐ 3-Cell/3S 11.1V 500–600mAh LiPo battery (20+C continuous discharge rate capable)
- ☐ LiPo battery charger (compatible with the battery that will be used)

Before the First Flight Checklist (RTF Version Only)

PLEASE NOTE: This checklist is NOT intended to replace the content included in this instruction manual. Although it can be used as a quick start guide, we strongly suggest reading through this manual completely before proceeding.

- Remove and inspect all contents
- Begin charging the LiPo flight battery (connect it to the DC balancing charger)
- Assemble/install the wing, tail and landing gear
- Install the eight (8) AA batteries in the transmitter
- Install the LiPo flight battery in the airplane (after it's been fully charged)
- Install the propeller
- Test the controls to confirm proper operation
- Familiarize yourself with the controls
- Find a suitable area for flying

Installing the Receiver (RFR Version Only)

Use the included adhesive-backed 'hook-and-loop' material to install the 4+ channel receiver (not included) compatible with the transmitter you've chosen to use. Install the receiver in the recessed area located just behind the rudder and elevator servos. Or, if for any reason the receiver will not fit in the recessed area, install it in the area just behind the 'bump' located behind the recessed area. Plug the 3-wire lead from the ESC into the 'throttle' channel, the elevator servo lead into the 'elevator' channel and the rudder servo lead into the 'rudder' channel on the receiver.

NOTE: It's important to ensure correct polarity when plugging the leads/connectors into the receiver. Refer to the markings on the receiver (or the instruction manual for the receiver) to identify which pins accept the black color (negative/ground), red color (positive) and white color (signal) wire leads. Also, depending on the make/model of receiver it may be necessary to slightly 'bevel' the edges of the black color connectors so they fit easily into the case of the receiver. We recommend using a small file or sanding block and EXTREME CARE to bevel the appropriate edges of the connectors as needed.

LiPo Battery Warnings and Usage Guidelines

IMPORTANT NOTE: Lithium Polymer (LiPo) batteries are significantly more volatile than the alkaline, NiCd and NiMH batteries also used in RC applications. All instructions and warnings must be followed exactly to prevent property damage and/or personal injury as 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.

And although the 600mAh 3-Cell/3S 11.1V 20C LiPo Battery (AZSB6003S20J) included with the P-51D Mustang 350 RTF version is intended to be charged safely using the included 305C 3-Cell/3S 11.1V LiPo, 0.5A DC Balancing Charger (AZSC305C), you must read the following safety instructions and warnings before handling, charging or using the LiPo battery.

- **You must charge the LiPo battery in a safe area away from flammable materials.**
- **Never charge the LiPo battery unattended at any time. 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. Also, it is NOT necessary or recommended to discharge the battery 'completely' before charging (LiPo batteries have no 'memory' and it's safe to charge partially discharged batteries when using an appropriate charger and settings).**
- **To charge the battery you must use only the included 305C 3-Cell/3S 11.1V LiPo, 0.5A DC Balancing Charger (AZSC305C) or a suitably compatible LiPo battery charger. 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 it 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.**
- **Store the battery partially charged (approximately 50% charged/3.85V per cell), at room temperature (approximately 68–77° Fahrenheit [F]) and in a dry area for best results.**

- **When transporting or temporarily storing the battery, the temperature range should be from approximately 40–100°F. Do not store the battery or model in a hot garage, car or direct sunlight whenever possible. If stored in a hot garage or car the battery can be damaged or even catch fire.**

- **Do not over-discharge the LiPo flight battery. Discharging the LiPo flight battery to a voltage that is too low can cause damage to the battery resulting in reduced power, flight duration or failure of the battery entirely.**

  LiPo cells should not be discharged to below 3.0V each under load. In the case of the 3-Cell/3S 11.1V LiPo battery used to power the P-51D Mustang 350 you will not want to allow the battery to fall below 9.0V during flight.

  The included 15-Amp Brushless Motor ESC (AZS1410) features a 'soft' low voltage cutoff (LVC) that smoothly reduces power to the motor (regardless of the power level you have set with the left-hand/throttle stick) to let you know the voltage of the battery is close to the 9.0V minimum. However, even before this reduction in power, if you find that more than the typical amount of throttle/power is required to cruise or climb you should land the model and disconnect the battery immediately to prevent over-discharge.

  And while it is possible to continue flying the model after the soft LVC occurs this is NOT recommended. Continued discharging can result in reaching the 5.0V 'hard' LVC which may cause permanent damage to the LiPo battery resulting in reduced power and flight duration during subsequent fights (or failure of the battery entirely which is not covered under warranty).

  Also, it is not recommended that you fly to the soft LVC every time you fly. Instead you should be aware of the power level of the battery/airplane throughout the flight, and if at any time the airplane begins to require more throttle/power than typical to maintain cruise or climb you should land the airplane and disconnect the LiPo battery immediately. Constantly discharging the battery to the soft LVC can still cause permanent damage to the battery so it's best to use a timer or stop-watch to time the duration of your flights and to stop flying at a reasonable time before the soft LVC is reached.

  IMPORTANT NOTE: DO NOT LEAVE THE LIPO BATTERY CONNECTED TO THE ESC UNLESS YOU ARE READY TO FLY. IF THE BATTERY IS LEFT CONNECTED TO THE ESC WHEN IT IS NOT IN USE THE LIPO BATTERY WILL BE OVER-DISCHARGED BY THE SMALL AMOUNT OF CURRENT THE ESC PULLS. It can sometimes take a few hours or even up to a few days to over-discharge the battery this way but doing so will likely cause permanent damage to or failure of the battery entirely (which is not covered under warranty).

Charging the LiPo Flight Battery

For the P-51D Mustang 350 RTF version you must charge the included 600mAh 3-Cell/3S 11.1V 20C LiPo Battery (AZSB6003S20J) using only the included 305C 3-Cell/3S 11.1V LiPo, 0.5A DC Balancing Charger (AZSC305C) or a suitably compatible LiPo battery charger. Charging the LiPo battery using a non-LiPo battery compatible 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 included charger:

- Plug the included 1305PS 100-120V AC to 13V DC Adapter, 0.5-Amp Power Supply (AZSC1305PS) into a compatible 100-120V AC outlet then connect the power output lead to the receptacle on the side of the 305C charger. The adapter/power supply and charger are powered on when the red color LED indicator is glowing.

- **PLACE THE 305C CHARGER ON A FLAT, SMOOTH AND HEAT-RESISTANT SURFACE. It's important that air is able to circulate through the charger during the charging process in order to keep it from over-heating. It's especially important that the vent openings on the bottom and sides of the charger are not blocked. DO NOT place the charger on carpeted or other similar surfaces that may block the vent openings. Also, DO NOT place the charger in direct sunlight before, during or after use.**
- Connect the white 4-pin connector from the battery (typically referred to as the 'balance connector') to the mating connector on the charger. **YOU MUST BE CAREFUL TO ENSURE PROPER POLARITY BEFORE MAKING THE CONNECTION.** And while the white 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. When the connectors are properly aligned for correct polarity, connecting them should require only a moderate amount of pressure to achieve the 'click' that indicates a secure connection.

- When the battery is connected to the charger securely and with the proper polarity both the red color and green color LED indicators will glow. The battery will be charging anytime the green LED indicator is glowing.

- It will take approximately 1.0–1.5 hours to fully charge a mostly or fully discharged (not over-discharged) battery (**NOTE: Please see the following information in this section for more details regarding optional 'fast' charging that can reduce charge times to as little as 30-45 minutes**). And when the battery is fully charged the green LED indicator will stop glowing entirely. When the green LED indicator is no longer glowing you can disconnect the battery from the charger as it is now fully charged and ready for use.

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

  IMPORTANT NOTE: DO NOT STORE THE LIPO FLIGHT BATTERY FULLY CHARGED.
  For improved safety and longevity of the LiPo battery it's best to store it only partially charged for any length of time. Storing the LiPo battery at approximately 50% charged (which is approximately 3.85V per cell) is typically best, however, it will take some careful management of the charge time and the use of a volt meter to achieve this voltage.

  If you have the equipment and skills to achieve the 50% charge level for storage it is recommended. If not, simply be sure to not store the battery fully charged whenever possible. In fact, as long as the battery will be stored at approximately room temperature and for no more than a few weeks before the next use, it may be best to store the battery in the discharged state after the last flight (as long as the battery was not over-discharged on the last flight).

Optional 'Fast' Charging

The included 600mAh 3-Cell/3S 11.1V 20C LiPo Battery (AZSB6003S20J) can be 'fast' charged at rates up to 2C (2x the Capacity of the battery; 2 x 600mAh = 1200mAh = 1.2A) when using approved and compatible LiPo battery chargers. It will take approximately 30-45 minutes to fully charge a mostly or fully discharged (not over-discharged) battery when charging at 2C.

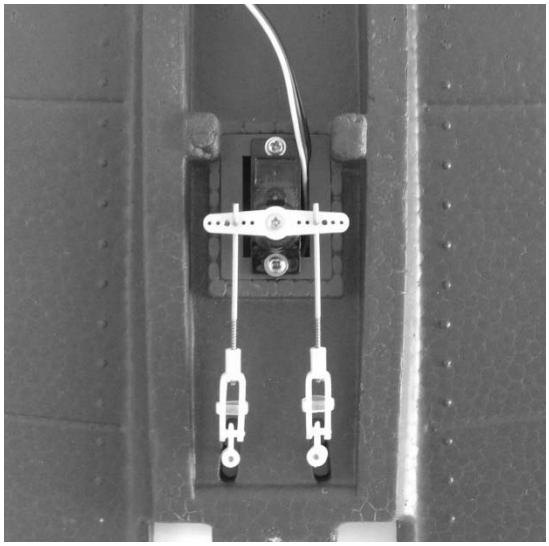
For 'fast' charging we recommend using the Radient™ Primal or Ascend chargers. Both chargers are capable of charging the included LiPo battery at rates up to 2C/1.2A and can also be used to charge other higher and lower capacity LiPo, NiCd and NiMH batteries. Also, both chargers include connectors compatible with the JST-XH (balance) connector installed on the included LiPo battery and can be powered from a 100–240V AC outlet. The Ascend charger can also be powered from a 12–15V DC power source, such as a 12V 'car' battery, for quick and convenient charging at the field or beyond.

Preparing the Wing

The wing arrives factory-assembled and nearly ready to use right out of the box. However, before it can be attached to the fuselage there are a few details to check first.

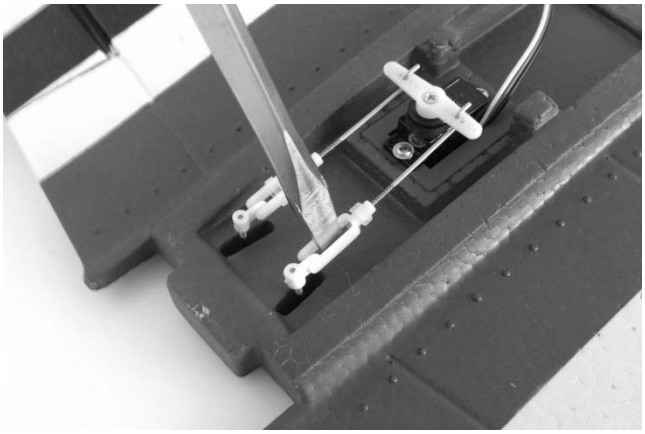
Plug the 3-wire lead from the aileron servo into the aileron (AILE) channel of the receiver. Turn the transmitter on, center the aileron channel trim and connect a suitable LiPo battery to the ESC to power on the receiver and servos. Check to be sure the aileron servo responds to left and right control inputs correctly then center the right-hand stick.

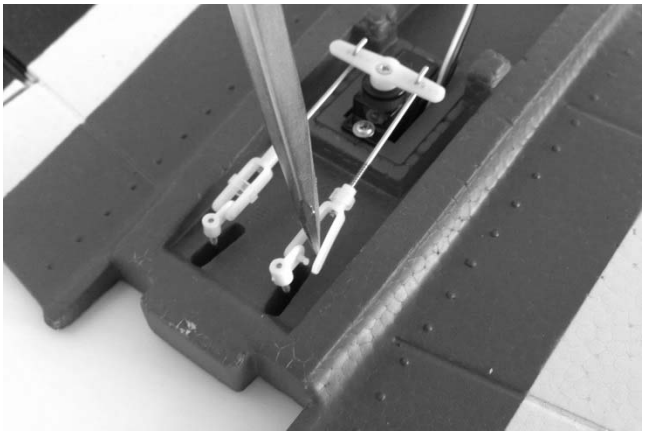
With the right-hand stick and aileron trim centered the servo should also be centered. Check to be sure that the servo arm is as close to perpendicular to the 'long' sides of the servo case as possible. It's OK if the arm is not exactly perpendicular to the case as long as it's close. However, if the arm is more than 5–10 degrees away from perpendicular we suggest removing the arm from the output gear/shaft of the servo then rotating it approximately one 'tooth' at a time until it's as close to perpendicular as possible. You can also remove the pushrods and rotate the servo arm 180-degrees to find the position that offers the best alignment overall.



After ensuring the servo arm is in the position that offers the best alignment overall check to see if the ailerons are properly ‘centered’ by viewing the trailing edges of the wing and ailerons from behind. The trailing edges of the ailerons should be ‘in line’ with the trailing edges of the wing when ailerons are properly ‘centered’. However, if the ailerons are ‘off center’ you can adjust the length/position of the pushrods/clevises as needed.

If either aileron is ‘above’ or ‘below’ center carefully remove the corresponding clevis from the control horn/bracket. It may be helpful to insert a flat blade screwdriver (not included) into the clevis then to carefully ‘twist’ it until it disengages the pin from the hole in the clevis. Also, it is not necessary to ‘snap’ the clevis back together until the centering adjustments are complete.





If the aileron is ‘below’ center screw the clevis ‘in’ (clockwise) one half to one full turn then insert the pin back into the control horn/bracket. Or, if the aileron is ‘above’ center screw the clevis ‘out’ (counter-clockwise) one half to one full turn then insert the pin back into the control horn/bracket. View the trailing edges of the ailerons and wing from directly behind again and continue adjusting the length/position of the pushrod/clevis until both ailerons are properly centered.

NOTE: In some cases it may not be possible to exactly center the inboard and outboard portions of an aileron relative to the trailing edges of the wing. If you find this to be the case simply adjust the length/position of the pushrod/clevis to ‘split the difference’ between the inboard and outboard portions relative to the trailing edges of the wing.

NOTE: You should always rotate the clevis until the pin is perpendicular with the control horn to ensure the pin is not under any excessive load/pressure when inserted in the hole and during operation. In some cases it may not be possible to ‘exactly’ center the surface mechanically while properly aligning the pin. In these cases be sure the pin is

properly aligned then adjust the position of the trim (or sub-trim) slightly as needed. Also, it will likely be necessary to make further adjustments to the trim setting during flight as most surfaces do not end up in exactly the centered position when an airplane is trimmed properly for actual flight (but 'centered' is still the best starting point).

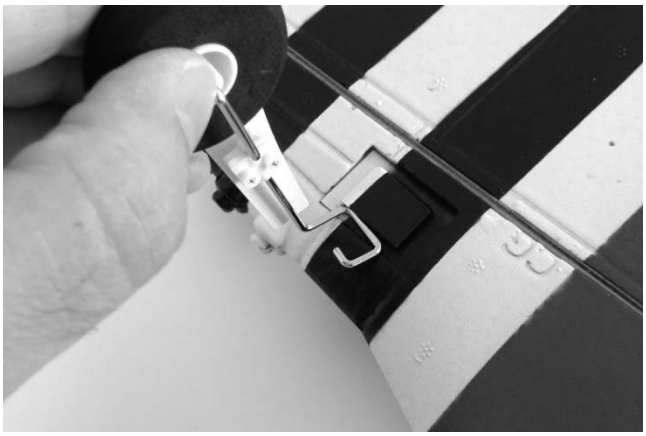
IMPORTANT NOTE: If they are not already installed we strongly recommend installing the included flexible clear tubing 'clevis keepers' to provide added security for the clevises. Typically you can slide the keeper over the clevis when it's not connected to the control horn. Then, after connecting the clevis to the control horn and 'snapping' the clevis together you can slide the keeper into a position that does not allow it to 'bind' against the control horn during movement of the surface.

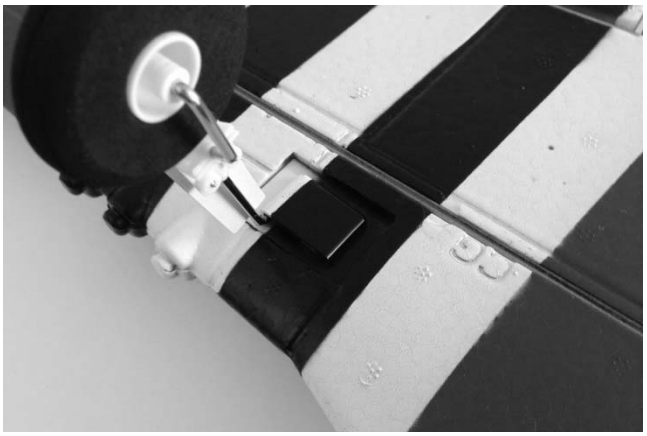
Installing the Main Landing Gear

Parts/Tools Required:

- ☐ Main Landing Gear Assemblies
- ☐ Wing

If you plan to take off and land on hard surfaces or short grass the main landing gear should be installed. To install the landing gear carefully slide the bent wire end into the slot in the main landing gear mount. Be careful to not break the mount free from the wing, and in some cases it may be helpful to use a flat blade screwdriver or another suitable object to help press/slide the wire into the slot. Also, the landing gear leg covers should be oriented toward the tip of the wing on each side when you have the left and right landing gear assemblies installed correctly.





After installing both landing gear assemblies view each wheel from above. Adjust the position of the landing gear in the mount to ensure that the centerline of each wheel is perpendicular to the wooden wing spar (or very slightly 'toed-in') for improved ground tracking/handling.

Attaching the Wing

Parts/Tools Required:

- Wing
- Fuselage
- M3 x 30mm ‘button’ head screw; 1pc
- Phillips screwdriver

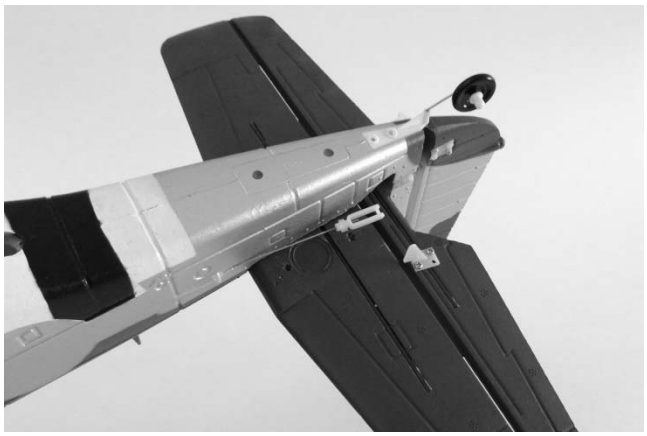
Before attaching the wing to the fuselage plug the 3-wire lead from the aileron servo into the aileron (AILE) channel of the receiver (or into an optional ‘servo extension’ already connected to the aileron channel of the receiver). Then, carefully slide the trailing edge of the wing into the space between the ‘radiator scoop’ and the ‘wing saddle’ area of the fuselage. And before pushing the wing against the wing saddle/ fuselage be sure that the 3-wire lead from the aileron servo is ‘tucked’ securely inside of the fuselage and is not in the way of the rudder and elevator servo arms. Use an M3 x 30mm ‘button’ head screw to secure the wing to the fuselage.

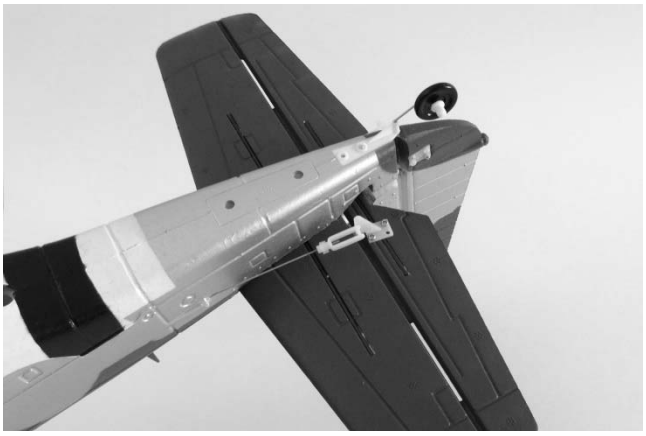
Installing the Horizontal Stabilizer/Tail

Parts/Tools Required:

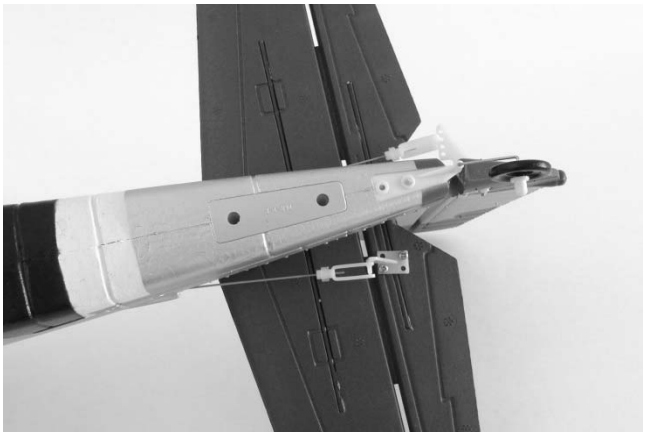
- Fuselage
- Horizontal tail/stabilizer
- T2 x 25mm ‘button’ head screw; 2pcs
- Phillips screwdriver

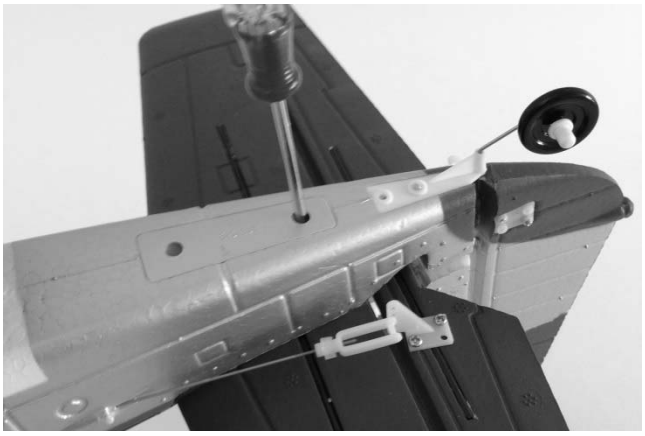
To install the horizontal stabilizer/tail, start by sliding it through the opening at the rear of the fuselage. The side of the horizontal tail with the carbon fiber spars should be oriented downward (toward the bottom of the fuselage), and because the elevator control horn is located on the right side you should slide the left side of the horizontal tail through the right side of the opening in the fuselage (when viewing the airplane from behind). Then, align the horizontal tail so it’s ‘centered’ in and against the front of the opening in the fuselage.





With the horizontal tail properly aligned slide the two T2 x 25mm ‘button’ head screws into the openings/slots in the bottom of the fuselage. The screws should pass through the horizontal tail and into the openings of the plastic mount located in the upper part of the fuselage (above the opening for the horizontal tail). Adjust the position of the horizontal tail slightly as needed until the screws engage the plastic mount then tighten them securely. Be careful when tightening these screws because tightening them too much can strip/break the plastic mount and/or damage the fuselage/tails. Also, ensure that the tail is properly centered and aligned after tightening the screws.





The horizontal tail/stabilizer is now installed, and be sure to proceed through the following sections of the manual before attaching the clevises to the rudder and elevator control horns.

Installing the Transmitter Batteries

Install the eight (8) included AA batteries in the back of the transmitter by first removing the battery compartment cover/door. Ensure proper polarity of the batteries before installing them as noted by the markings molded into the battery compartment, then re-install the compartment cover/door.

Check for proper operation of the transmitter by sliding the power switch to the ON position (slide it upward). The 'POWER' LED indicator should begin to glow solid green (indicating the transmitter is powered on) and the 'RF OUTPUT' LED indicator should begin to glow solid red shortly after (indicating the transmitter is outputting an RF signal). These indications confirm the transmitter is powered on and functioning correctly.

Transmitter Details

The P-51D Mustang 350 RTF version includes a 6HPA 6-Channel HP Airplane Transmitter equipped with 2.4GHz technology, trim levers, servo reversing switches and optional-use 'delta/elevon' mixing (the RFR version requires a 4+ channel transmitter/receiver).

Low Battery Voltage/Power Indication
When the AA battery voltage/power drops to a level that's too low for safe operation, the red color LED indicator will flash. **Do NOT use the transmitter or fly when the red LED indicator is flashing. Immediately install new AA batteries before using the transmitter or flying.**

Antenna Position/Orientation
The RF output signals transmit best/strongest from the shaft of the antenna rather than from the tip. As a result you should never point the tip of the antenna directly at the model. Also, the transmitter antenna can be rotated up to 180° and folded up to 90° so be sure to hold the transmitter and position the antenna as needed to ensure the best possible signal transmission.

Control/Servo Reversing
The 6HPA transmitter features control/servo reversing functionality for the aileron, elevator, throttle and rudder channels. The control/servo directions were set correctly at the factory, however, in case the controls/servos are operating in the wrong direction, or you use the electronics in other models later on, simply change the position of the 'Servo Reverse' switch for the corresponding channel(s) as needed.

Delta/Elevon Mixing
Located to the right of the 'Servo Reverse' switches is a switch that activates/deactivates the optional-use 'Delta/Elevon' mixing. **IMPORTANT NOTE: No such mixing is used for the P-51D Mustang 350 so please be sure this switch is in the OFF/lower position (failure to do so will result in improper control and the inability to fly the P-51D Mustang 350).** However, if using this transmitter with 'flying wing', delta or other airplanes that 'combine (mix)' the elevator and aileron (often known as 'elevon') controls you can move the switch to the ON/upper position.

Installing the LiPo Flight Battery

IMPORTANT NOTE: You must ALWAYS turn the transmitter on first AND have the left-hand/throttle stick in the lowest possible position BEFORE connecting/installing the LiPo flight battery. And before proceeding with the following steps please be sure the transmitter is powered on and the throttle stick is in the lowest possible position.

After the LiPo battery has been fully charged it's ready to be installed in the airplane. To access the battery compartment on the bottom of the airplane, rotate the latch until it's out of the way of the hatch cover then remove the cover.

Before installing the battery in the airplane you'll need to connect it to the ESC. **YOU MUST BE CAREFUL TO ENSURE PROPER POLARITY BEFORE CONNECTING THE BATTERY TO THE ESC. By orienting/aligning the wire leads of the battery and ESC so they're 'red to red' and 'black to black' you'll be able to make the connection with correct polarity.**

After the LiPo battery is connected to the ESC you can insert it into the battery compartment. Carefully 'tuck' the wire leads and connectors inside the compartment ensuring they do not damage the battery or foam airframe while also allowing the hatch cover to be installed over the compartment opening. When the hatch cover is properly aligned and installed rotate the latch until it secures the cover in place.

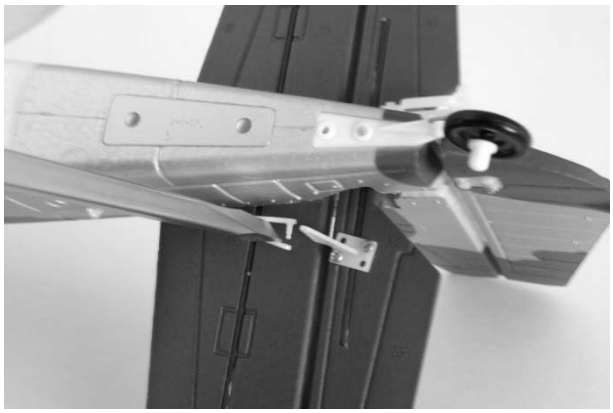
To remove the LiPo flight battery first remove the hatch cover and pull the wire leads and connectors out of the battery compartment. Then, carefully pull the battery out of the compartment. **Disconnect the battery from the ESC and DO NOT power off the transmitter until the LiPo flight battery is removed from the airplane and disconnected from the ESC. REMEMBER: The transmitter is always ON FIRST and always OFF LAST!**

Centering the Elevator and Rudder Control Surfaces

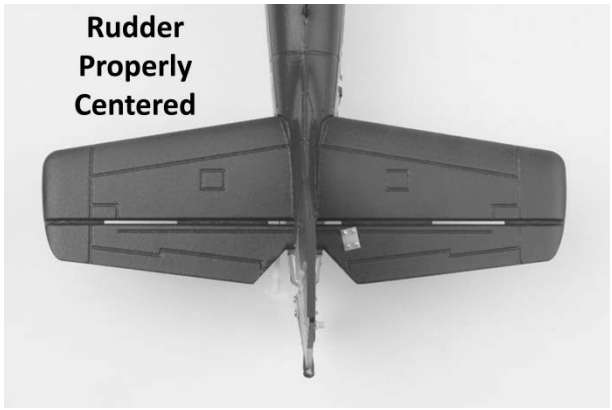
With the transmitter turned on and the LiPo flight battery connected to the ESC (and installed in the battery compartment) it's now possible to connect the pushrods to the elevator and rudder control surfaces and to 'center' the surfaces accordingly.

First, be sure to center the elevator and rudder channel trims on your transmitter. See the 'Transmitter Details' and 'Flight Controls and Trimming' sections of this manual for more information on the trim levers and their functions.

With the trims centered carefully spread open each ‘clevis’ (the white color plastic part installed on the threaded end of the metal pushrod) so you can insert the pin in the OUTERMOST hole on each control horn. It may be helpful to insert a flat blade screwdriver (not included) into the clevis then to carefully ‘twist’ it until it disengages the pin from the hole in the clevis. Also, it is not necessary to ‘snap’ the clevis back together until the centering adjustments are complete.



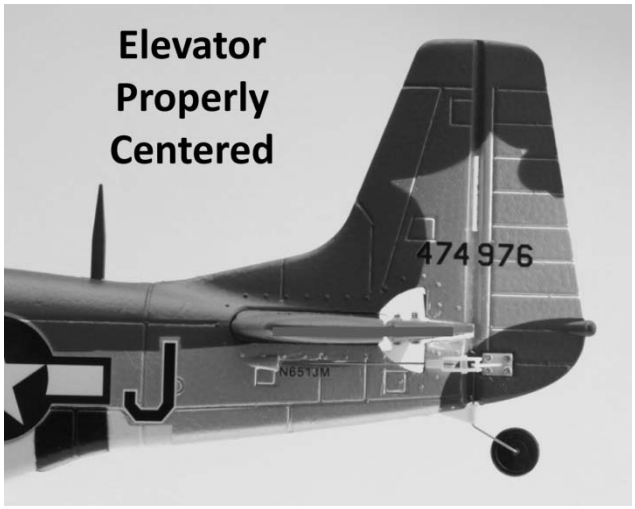
After connecting the clevises to the control horns view the vertical stabilizer/tail and rudder from directly above. The rudder should be ‘in line’ with the vertical tail when it’s properly ‘centered’. However, if the rudder is angled off to the right or left you can adjust the length/position of the pushrod/clevis so the surface is centered ‘mechanically’ while the rudder channel trim is centered.



If the rudder is angled off to the right carefully remove the clevis from the control horn and screw it ‘in’ (clockwise) one half to one full turn then insert the pin back into the outermost hole in the control horn. Or, if the rudder is angled off to the left carefully remove the clevis from the control horn and screw it ‘out’ (counter-clockwise) one half to one full turn then insert the pin back into the outermost hole in the control horn. View the vertical tail and rudder from directly above again and continue adjusting the length/position of the pushrod/clevis until the rudder is properly centered.

NOTE: You should always rotate the clevis until the pin is perpendicular with the control horn to ensure the pin is not under any excessive load/pressure when inserted in the hole and during operation. In some cases it may not be possible to 'exactly' center the surface mechanically while properly aligning the pin. In these cases be sure the pin is properly aligned then adjust the position of the trim lever (or sub-trim) slightly as needed. Also, it will likely be necessary to make further adjustments to the position of the trim lever during flight as most surfaces do not end up in exactly the centered position when an airplane is trimmed properly for actual flight (but 'centered' is still the best starting point).

If the elevator is angled upward carefully remove the clevis from the control horn and screw it 'in' (clockwise) one half to one full turn then insert the pin back into the outermost hole in the control horn. Or, if the elevator is angled downward carefully remove the clevis from the control horn and screw it 'out' (counter-clockwise) one half to one full turn then insert the pin back into the outermost hole in the control horn. View the horizontal tail and elevator from the side and continue adjusting the length/position of the pushrod/clevis until the rudder is properly centered.



IMPORTANT NOTE: If they are not already installed we strongly recommend installing the included flexible clear tubing 'clevis keepers' to provide added security for the clevises. Typically you can slide the keeper over the clevis when it's not connected to the control horn. Then, after connecting the clevis to the control horn and 'snapping' the clevis together you can slide the keeper into a position that does not allow it to 'bind' against the control horn during movement of the surface.

Installing the Propeller

IMPORTANT NOTE: Before installing the propeller you MUST disconnect the battery from the ESC. Failure to do so can result in serious bodily harm and/or damage to property!

Two different propellers are included with the P-51D Mustang 350. One is a 6.6x5 4-blade propeller (AZSP066504B) and the other is an 8x6 2-blade propeller (AZSP0860SF). The 4-blade propeller offers a more 'scale' look and delivers very good speed and thrust overall while the 2-blade propeller delivers additional speed and thrust. And if you will be landing without the main landing gear installed we recommend installing the 2-blade propeller.

NOTE: An optional 6.5x4 2-blade propeller (AZSP06540) is also available. The smaller diameter of this propeller (compared to the 8x6 2-blade propeller) makes it less likely to break when landing without the main landing gear installed. It also pulls upwards of 20-30% less current (compared to the included 2-blade and 4-blade propellers), while still delivering good speed and thrust overall, which makes it a great choice for use with lower capacity and/or lower discharge rate capable LiPo batteries.

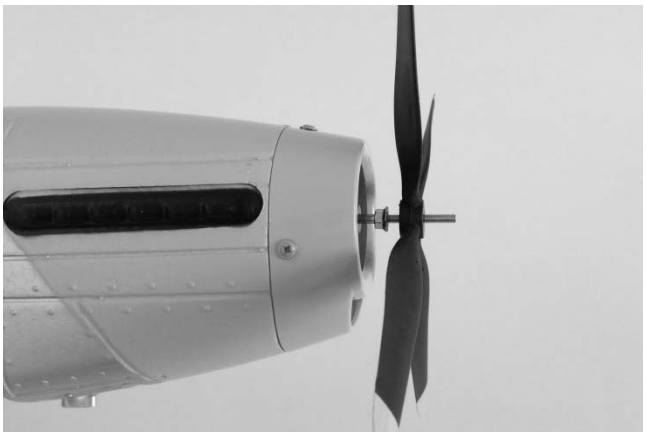
IMPORTANT NOTE: The propeller must be installed in the correct direction in order for the airplane to fly! The front of the propeller is the side that is slightly curved/rounded 'outward'. This side of the propeller must ALWAYS face forward on the P-51D Mustang 350 for proper operation and performance.

Parts/Tools Required:

- Propeller (2-blade or 4-blade)
- Spinner back plate (for 2-blade or 4-blade)
- Spinner cap/cone
- 3mm flat washer; 1pc
- 3mm hex ‘lock’ nut; 1pc (for 4-blade) or 2pcs (for 2-blade)
- 3mm ‘flanged’ nut; 1pc (for 4-blade)
- Pliers, an adjustable wrench and/or a 5.5mm socket/wrench

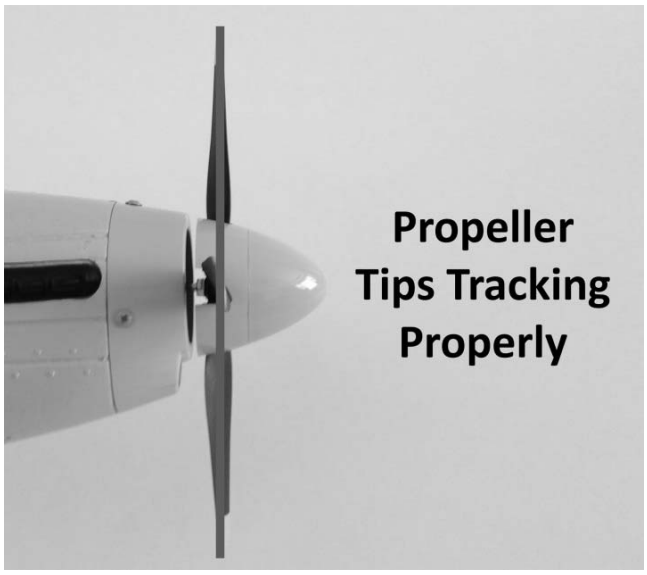
To install the 4-blade propeller start by threading the 3mm ‘flanged’ nut onto the threaded portion of the motor shaft, **with the ‘flange’ oriented toward the end of the shaft**, until it stops at the end of the threads. Tighten this nut in place (do not over-tighten!) then install the propeller on the shaft and slide it against the nut.

To install the 2-blade propeller start by threading the first (rear) 3mm hex ‘lock’ nut onto the threaded portion of the motor shaft, **with the nylon insert/’lock’ oriented toward the BACK of the airplane**, until it stops at the end of the threads. Tighten this nut in place (do not over-tighten!) then install the propeller on the shaft and rotate it as necessary until it lines up with, slides over and fully ‘engages’ the nut.



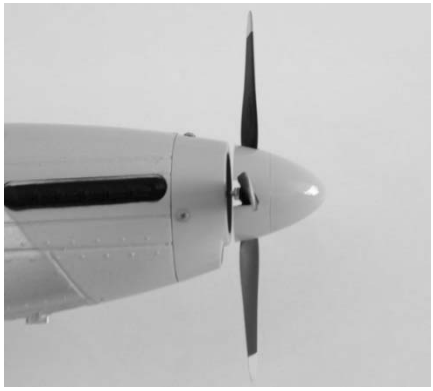
Next, install the appropriate spinner back plate on the shaft and over the propeller. Slide the flat washer onto the shaft and against the spinner back plate then thread the (front) hex ‘lock’ nut (with the nylon insert/’lock’ oriented away from the washer) onto the shaft and tighten it accordingly (do not over-tighten!). **IMPORTANT NOTE: You will need to use pliers (narrow needle nose, or even hemostats, will work best) to carefully hold the motor shaft behind the propeller while using an adjustable wrench or 5.5mm socket/wrench to tighten the hex nut in front of the propeller/spinner back plate.**

IMPORTANT NOTE: Before installing the spinner cap/cone it will be best to proceed to the 'ESC (Electronic Speed Control) Arming' section of this manual to carefully run the motor and ensure the propeller tips are 'tracking' properly. Due to possible variations in the 'hub' of the propeller, the hex nuts and threads on the motor shaft sometimes the propeller will be 'angled' slightly when installed. If the propeller is angled even slightly one tip will be 'ahead' of the other(s) when spinning resulting in an 'out-of-track' condition that can cause significant vibration and power loss.



Typically it's possible to correct the angled/out-of-track condition by loosening the front hex nut until you can rotate the 4-blade propeller or pull the 2-blade propeller forward and rotate it to the next position in which it will engage the rear hex nut. Then tighten the font hex nut and run the motor again. If the tips are still out of track repeat this process until you find the position where the propeller tips track best. Or, in very rare cases, you may need to switch to a different rear hex nut and/or propeller to ensure optimal tracking and the smoothest possible operation.

After ensuring optimal tracking you can install the spinner cap/cone. Carefully push the cap/cone over the locking tabs on the front of the spinner back plate until it 'snaps' into place. Also, you can remove the cap/cone by squeezing the back edge of the back plate and pulling it free. However, in some cases it may be necessary to use a thin flat blade screwdriver or other suitable tool to 'pop' the cap/cone off of the locking tabs.



ESC (Electronic Speed Control) Arming

IMPORTANT NOTE: The factory-installed 15-Amp Brushless Motor ESC (AZS1410) DOES NOT include an arming switch/button. Also, this ESC automatically measures the position of the left-hand/throttle stick and uses the 'current' position of the stick as the 'zero'/starting point for throttle when the ESC is first powered on. As a result you must ALWAYS be sure the transmitter is turned on and that the left-hand/throttle stick is in the LOWEST POSSIBLE POSITION before connecting a battery to the ESC. YOU MUST ALSO EXERCISE EXTREME CAUTION AS THE MOTOR/PROPELLER WILL NOW SPIN ANYTIME THE LEFT-HAND/THROTTLE STICK IS RAISED ABOVE THE LOWEST POSSIBLE POSITION!

This checklist includes the steps you must follow to ensure safe and proper arming of the ESC:

- **Before each flight you must ALWAYS turn the transmitter on and LOWER THE LEFT-HAND/THROTTLE STICK TO THE LOWEST POSSIBLE POSITION before connecting the LiPo flight battery to the ESC. Never connect the battery to the ESC before powering the transmitter on first or lowering the left-hand/throttle stick to the lowest possible position. Also, after each flight you should always disconnect the battery from the ESC before turning the transmitter off.**

- **Connect the battery to the ESC. ALSO, YOU MUST BE CAREFUL TO ENSURE PROPER POLARITY WHEN CONNECTING THE BATTERY TO THE ESC. By orienting/aligning the wire leads of the battery and ESC so they're 'red to red' and 'black to black' you'll be able to make the connection with correct polarity. 'Reverse' polarity connection will cause damage to and/or destroy the ESC and battery (and may also result in fire!)!**

- **With the transmitter powered on and the battery connected to the ESC you should have full control of the aileron, elevator and rudder servos/control surfaces. YOU MUST ALSO EXERCISE EXTREME CAUTION AS THE MOTOR/PROPLLER WILL SPIN ANYTIME THE LEFT-HAND/THROTTLE STICK IS RAISED ABOVE THE LOWEST POSSIBLE POSITION!**

- **Position the airplane so you and all objects are clear of the propeller. We recommend positioning the airplane so the propeller is pointed away from you and you are able to hold on to the fuselage and/or wing securely.**

- **With all objects clear of the propeller, including in the plane of rotation and in front of it, hold on to the model securely to test operation of the throttle/power system. HOLD THE AIRPLANE SECURELY then slowly raise the left-hand/throttle stick until it reaches the highest possible position and the power system is at 'full power'. Then lower the stick to the lowest possible position to turn the power system off.**

  After confirming the ESC has armed and the power system is performing properly the P-51D Mustang 350 is ready to fly! However, please review the following sections of the manual BEFORE proceeding with the first flight.

Flight Controls and Trimming

In the event you are not familiar with the controls of the P-51D Mustang 350 please take the time to familiarize yourself with them as follows and before attempting your first flight.

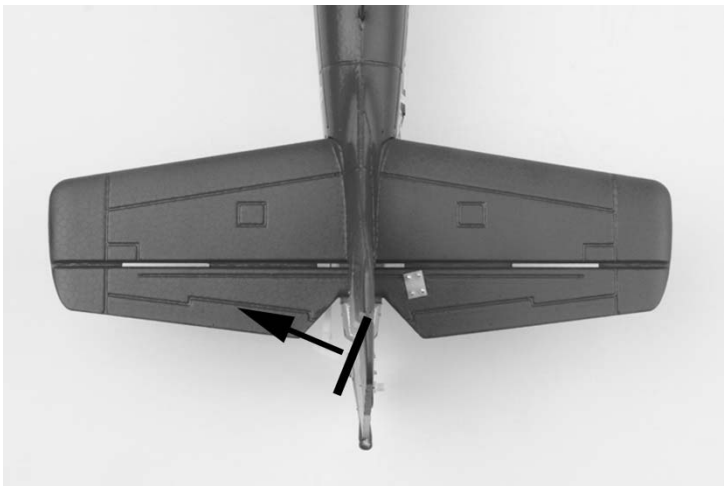
The left-hand stick on the transmitter controls the throttle and rudder. When the left-hand stick (also known as the 'throttle' stick) is in the lowest possible position the motor will not run and the propeller will not spin.

Moving the stick upward will increase the speed/RPM of the propeller. Increasing the speed/RPM of the propeller increases the speed of the model and also provides the thrust needed to climb/increase altitude.

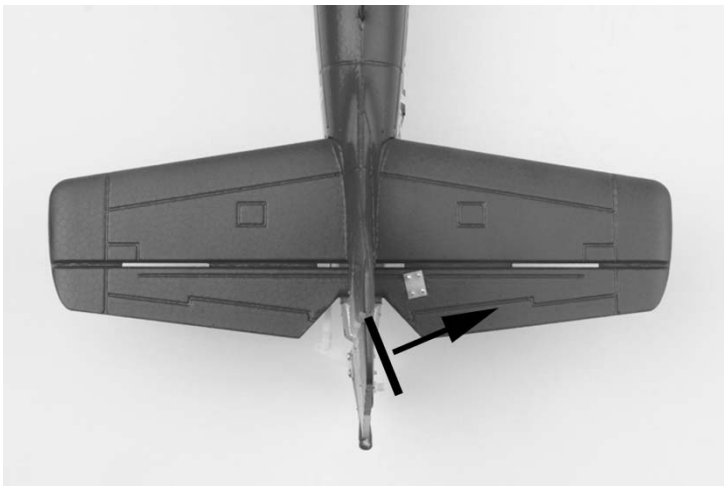
Decreasing the speed/RPM of the propeller by lowering the left-hand stick will decrease the speed of the model and reduce thrust making it possible to descend/decrease altitude.

During flight you can adjust the throttle to a position, typically around the middle (also known as 'half stick/power'), to maintain/cruise at a given altitude and increase flight duration.

Moving the left-hand stick to the left will move the rudder to the left. This will yaw/turn the nose of the airplane to the left.

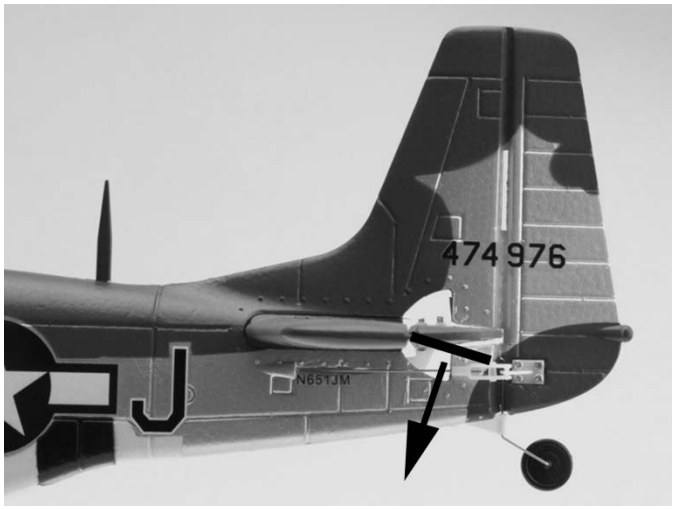


Moving the stick to the right will move the rudder to the right. This will yaw/turn the nose of the airplane to the right.

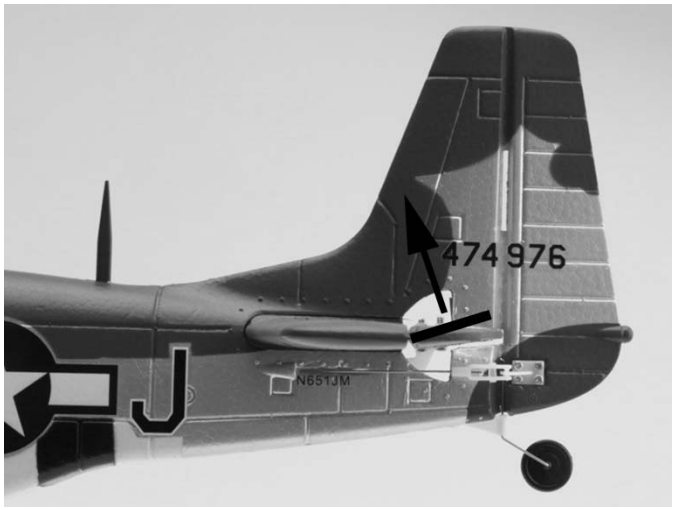


The rudder trim lever (located immediately below the left-hand stick) can be used to help keep the airplane from yawing/turning left or right during flight with no left-hand stick/rudder input. For example, if the airplane yaws to the right in flight, move the trim lever to the left until the airplane flies as straight as possible without yawing.

The right-hand stick controls both the elevator and the ailerons. Pushing the stick forward/upward will lower the elevator and pitch the nose of the airplane downward to descend.

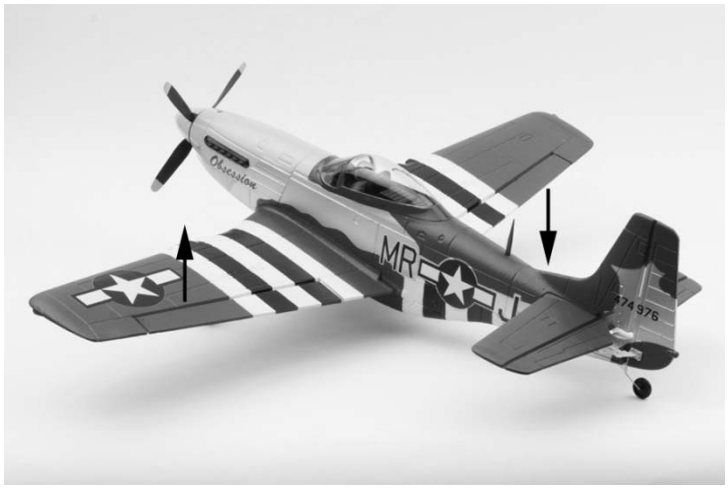


Pulling the stick backward/downward will raise the elevator and pitch the nose of the airplane upward to climb.

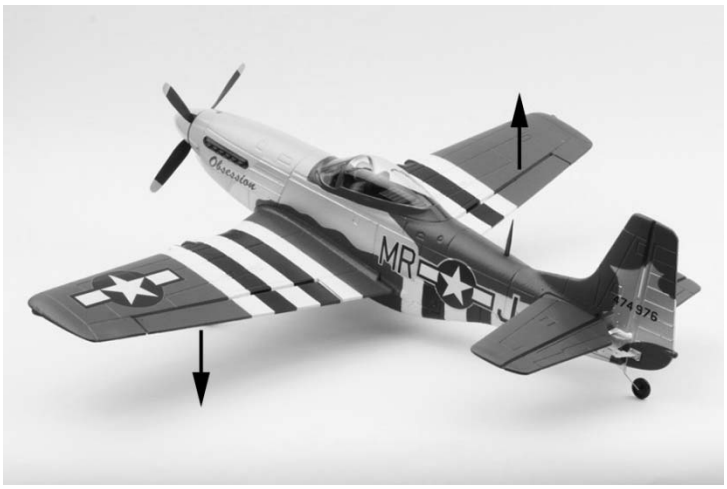


The elevator trim lever (located immediately to the left of the right-hand stick) can be used to help keep the airplane from climbing or descending when in 'cruise flight' and with no right-hand stick/elevator input. For example, if the airplane climbs when attempting to cruise and maintain a given altitude, add down elevator trim by sliding the trim lever upward until the airplane flies as level as possible and maintains the desired altitude at cruise speed.

Moving the right-hand stick to the left will move the left aileron up and the right aileron down. This will roll/turn the airplane to the left.



Moving the stick to the right will move the right aileron up and the left aileron down. This will roll/turn the airplane to the right.



The aileron trim lever (located immediately below the right-hand stick) can be used to help keep the airplane from rolling/turning left or right during flight with no right-hand stick/aileron input. For example, if the airplane rolls/turns to the right in flight, add left aileron trim by sliding the aileron trim lever to the left until the airplane flies as straight as possible.

And once you're familiar with the primary controls of the airplane you're almost ready to fly!

Control Throws

After connecting the elevator and rudder pushrods/clevises per the specifications noted in this instruction manual the control throws for the elevator, rudder and ailerons should be similar to those noted below. We recommend using these approximate control throws for your first few flights and before making any changes (then you can adjust them according to your personal preference).

Also, if using a transmitter equipped with 'Dual Rates' we recommend using these control throws for 'High Rate' and approximately 20-40% less throw for 'Low Rate' (which can also be adjusted according to your personal preference).

IMPORTANT NOTE: Measure control throws at the 'widest' point on each control surface.

Ailerons
5/16" (~8mm) up/down
NOTE: In some cases the aileron will travel slightly more up than down (this is OK).

Elevator
1/4" (~6.5mm) up/down
IMPORTANT NOTE: We DO NOT recommend using more travel/control throw for the elevator than what is listed here as doing so can result in unexpected stalling/snapping.

Rudder
5/8" (~16mm) left/right

Center of Gravity (CG)

When using the factory-installed and recommended components/equipment the Center of Gravity (CG) should be within the recommended range. However, before making your first flight you should check the 'balance' of the ready to fly airplane (including an installed LiPo flight battery). The balance point/CG should be between the top and bottom of the 'CG' letters molded into the bottom of the wing.

If necessary adjust the position of the LiPo flight battery, ESC and/or receiver as needed to achieve a balance point/CG within the recommended range.

Selecting a Flying Area

Based on the size and weight of the P-51D Mustang 350 it's typically considered to be a 'park flyer' class model. As a result it's best to fly the P-51D Mustang 350 at a local park, schoolyard, flying field or other area that's large enough and free of people and obstructions. We recommend an area the size of at least one football/soccer field, however, even larger areas are better suited and preferred. **DO NOT fly in parking lots, crowded neighborhood areas or in areas that are not free of people and obstructions.**

We also suggest flying over grass as it's a much more 'forgiving' surface that causes less damage in the unfortunate event of a crash. Short grass is better for takeoffs and landings as grass that is too long can cause the airplane to nose-over/flip and be damaged. An ideal flying area allows for takeoffs and landings on a smoother surface (such as asphalt or the dirt of a baseball infield) and flying over grass.

PLEASE NOTE: The P-51D Mustang 350 is designed to be flown outdoors only.

Flight Checklist

PLEASE NOTE: This checklist is NOT intended to replace the content included in this instruction manual. Although it can be used as a quick start guide, we strongly suggest reading through this manual completely before proceeding.

- Always turn the transmitter on first and lower the left-hand/throttle stick to the lowest possible position
- Plug the LiPo flight battery into the ESC and install it in the battery compartment
- Confirm the controls are operating properly
- Fly the model (hand-launch or takeoff from a flat/level surface)
- Land the model (land on a flat/level surface)
- Unplug the LiPo flight battery from the ESC
- Always turn the transmitter off last

Flying

Now that you've selected a suitable flying area you're ready to fly! And when making your first flights we suggest following these steps:

- There are two ways to get the P-51D Mustang 350 into the air, the first way being to 'hand-launch' the airplane. This can be accomplished by holding the fuselage of the model (just behind the wing) between your fingers and thumb with the wings level (relative to the horizon and the ground) **and with the nose pointed into any wind (ALWAYS HAND-LAUNCH/TAKEOFF AND LAND WITH THE NOSE POINTED INTO ANY WIND!)**. Then, raise the left-hand/throttle stick to the highest/full-power position and 'throw' the model forward with the nose level to or just slightly above the horizon. After the airplane leaves your hand focus on keeping the wings level and the nose pointed into the wind while continuing to climb to a safe altitude.

  IMPORTANT NOTE: DO NOT hand-launch the airplane with the nose angled too high (more than 2–4 degrees) above the horizon. Also, do not attempt to climb/gain altitude with the nose of the airplane angled upward more than approximately 20–30 degrees above the horizon, or at less than full power, otherwise the airplane may lose lift, 'stall' and crash.

  The second way to get the airplane into the air is to perform a Rise Off Ground (R.O.G.) takeoff from a smooth, level surface (such as asphalt or short grass). Set the airplane on the takeoff surface **with the nose pointed into any wind** then raise the left-hand/throttle stick to the highest/full-power position. Keep the nose pointed into the wind by using rudder control, and when the airplane reaches flying speed it will slowly rise off the ground or you can pull back slightly on the right-hand stick ('up' elevator) to help the model rise off the ground. **And again, do not attempt to climb/gain altitude with the nose of the airplane angled more than approximately 20–30 degrees above the horizon, or at less than full power, otherwise the airplane may lose lift, stall and crash.**

- After hand-launch/takeoff focus on keeping the rate of climb smooth and steady, the wings level and the nose pointed into any wind until reaching an altitude of approximately 150–250 feet high. Higher is even better as long as you can still see the airplane clearly but keep the airplane at an altitude and distance that allows you time to react and also makes it possible to know the exact orientation of the airplane so you can always respond accordingly.

- At the desired altitude you can level the airplane off by pushing forward slightly on the right-hand stick ('down' elevator) until the airplane is flying level. Then, reduce the left-hand/throttle stick position/power to approximately 1/2 to 2/3 for cruise flight.

- You'll find that it only takes relatively small/minor inputs to change direction in flight. Remember to keep these inputs as minimal as possible as significant inputs, such as moving the stick all the way one way or the other could result in over-control, loss of orientation and/or a possible crash.
- If you find the airplane constantly climbs, descends or yaws/turns left or right without any control input you'll need to make adjustments to the trim settings using the trim levers on the transmitter (you can find more information regarding the location and function of the trim levers in the 'Flight Controls and Trimming' section of this manual):
    - If the airplane is rolling/turning to the left or right adjust the trim for the ailerons (using the aileron channel trim lever located immediately below the right-hand stick).
    - If the airplane is climbing at 'cruise' throttle/power, add down elevator trim (using the elevator channel trim lever located immediately to the left of the right-hand stick) and/or reduce the throttle/power setting slightly.
    - If the airplane is descending at cruise throttle/power, add up elevator trim (using the elevator channel trim lever located immediately to the left of the right-hand stick) and/or increase the throttle/power slightly.
    - If the nose of the airplane is yawing/turning to the left or right adjust the trim for the rudder (using the rudder channel trim lever located immediately below the left-hand stick).

  It's important to continue making trim adjustments as needed until the airplane maintains straight and level flight with very little to no control input. **Also, it may be best to enlist the help of an experienced pilot to trim the model for you before making your first flight. A proven flyable and properly trimmed airplane is much easier to fly!**
- When the airplane is properly trimmed practice making shallow (approximately 5–15 degree bank) turns by using a small amount of left or right aileron to roll the airplane then a small amount of 'up' elevator to keep the nose from dropping and to help 'pull' the airplane through the turn. Then apply aileron in the opposite direction to bring the wings back to level before starting the next turn.
- Sharper turns (approximately 15+ degree bank) will require more aileron and elevator input. Try not to excessively bank the model beyond 30–45 degrees as doing so can cause the airplane to lose altitude very quickly.
- **If at any time during flight you feel like the airplane is drifting out of/beyond your control, simply release the elevator and aileron controls while maintaining**

approximately 1/2 to 2/3 power. Also, if the airplane is flying too high or too far away, lower the left-hand stick/throttle completely to power off the motor and allow the airplane to descend to a more reasonable altitude (and not beyond your line of sight).

- At typical cruise throttle/power settings the P-51D Mustang 350 will fly for approximately 5–7+ minutes per charge (when starting the flight with a fully charged battery). However, the actual flight duration can vary considerably depending on the capacity and condition of the battery as well as the actual throttle/power settings used throughout the flight. We strongly recommend using a timer to keep track of your time in the air and to ensure you have plenty of power left to practice landing approaches and to 'go around' if needed.

  IMPORTANT NOTE: You can lose motor power abruptly and unexpectedly if the voltage of the battery drops too low!

- Lowering the left-hand/throttle stick and power to less than 1/2 to 1/3 will allow the airplane to enter a shallow descent. This is helpful if the airplane has climbed too high and when it's time to set up for landing.

- To land, point the nose directly into any wind at an altitude of approximately 100–150 feet above the ground and approximately 150-300 feet away from the desired landing area. Reduce the throttle/power to 1/3 as you descend slowly to approximately 20-30 feet, then lower the throttle/power to 1/4 or less. At approximately 2-4 feet above the ground lower the throttle/turn off the power completely while allowing the airplane to descend naturally. Just before the airplane contacts the ground add a small amount of 'up' elevator to bring the nose up and 'flare' for a smooth landing.

  Later on you can practice landing with a small amount of throttle/power to help smooth out the approach and touchdown. However, you must be sure to lower the throttle/turn off the power completely if the prop comes into contact with the ground.

- **IN THE UNFORTUNATE EVENT OF A CRASH OR PROPELLER STRIKE, NO MATTER HOW MAJOR OR MINOR, YOU MUST LOWER THE LEFT-HAND/THROTTLE STICK TO THE LOWEST POSSIBLE POSITION AS QUICKLY AS POSSIBLE TO PREVENT DAMAGE TO THE ESC!**

  If you do not lower the left-hand/throttle stick to the lowest possible position in the event of a crash/propeller strike it can result in damage to the ESC which may require it to be replaced!

  NOTE: Crash damage is not covered under warranty.

Transmitter and Receiver Binding/Linking

Binding/linking is the process of programming the receiver to recognize the Globally Unique Identifier (GUID) code of a single specific transmitter. These steps outline the binding/linking process of the 6HPA 6-Channel HP Airplane Transmitter (AZS1208AMD2) and the compatible 6-Channel Park Flyer Receiver (AZS1206):

- Switch the transmitter on and ensure that both the red (power) and green (RF output) color LED indicators are glowing.
- **Move the control sticks (and switches if using channels 5 and 6) to the positions you prefer to use as the 'failsafe' positions for each function in the event the receiver loses signal from the transmitter. WE STRONGLY RECOMMEND LOWERING THE LEFT-HAND/THROTTLE STICK TO THE LOWEST POSSIBLE POSITION while also centering the rudder, elevator and aileron controls before proceeding with the binding/linking process.**
- Provide power to the receiver through the ESC or directly using a 4.8–6.0V battery or DC power source. **DO NOT connect the 3-Cell/3S 11.1V LiPo flight battery to the receiver directly as voltages above 6.0V can damage the receiver permanently.**
- If the receiver is not bound/linked to the transmitter the red LED indicator will blink slowly. Press the bind/link button on the receiver and the LED indicator will begin to blink rapidly. This indicates the receiver has entered bind/link mode.
- After approximately 10-15 seconds the LED indicator will begin to glow solid red indicating the binding/linking process is complete. You should now have full control of the receiver/ESC/servos.

Repairs

The major airframe components (wing, fuselage and tail) of the P-51D Mustang 350 are molded from lightweight and durable EPO foam. Most damage can be repaired using transparent 'packing' tape, epoxy and/or Cyanoacrylate (CA) glue (NOTE: Standard 'non-odorless' CA can be used safely on the EPO foam). We recommend Medium/Gap-Filling CA for most repairs, though Thin or even Thick viscosity can also be used for some others.

And in the unfortunate event that any part cannot be repaired, a full line of replacement parts is available separately. Please visit our web site at www.Ares-RC.com or contact the retailer you purchased the model from for more information and to purchase replacement parts.

Replacement Parts List

Item Number	Description
AZSB6003S20J	600mAh 3-Cell/3S 11.1V 20C LiPo Battery, JST Connector: P-51D Mustang 350
AZSC305C	305C 3-Cell/3S 11.1V LiPo, 0.5A DC Balancing Charger: P-51D Mustang 350
AZSC1305PS	1305PS 100-120V AC to 13V DC Adapter, 0.5-Amp Power Supply, US Plug
AZSC1305PSAU	1305PS 100-120V AC to 13V DC Adapter, 0.5-Amp Power Supply, AU Plug
AZSC1305PSEU	1305PS 100-120V AC to 13V DC Adapter, 0.5-Amp Power Supply, EU Plug
AZSC1305PSUK	1305PS 100-120V AC to 13V DC Adapter, 0.5-Amp Power Supply, UK Plug
AZS1206	6-Channel Park Flyer Receiver: P-51D Mustang 350
AZS1207	9-Gram Sub-Micro Servo: P-51D Mustang 350
AZS1207GS	9-Gram Sub-Micro Servo Gear Set: P-51D Mustang 350
AZS1208AMD1	6HPA 6-Channel HP Airplane Transmitter, Mode 1: P-51D Mustang 350
AZS1208AMD2	6HPA 6-Channel HP Airplane Transmitter, Mode 2: P-51D Mustang 350
AZS1409	350 Brushless Outrunner Motor, 1400Kv: P-51D Mustang 350
AZS1409S	350 Brushless Outrunner Motor Shaft: P-51D Mustang 350
AZS1410	15-Amp Brushless Motor ESC, JST Connector: P-51D Mustang 350
AZS1411	Firewall and Motor Mount Set: P-51D Mustang 350
AZS1413	Wing Set with Decals: P-51D Mustang 350
AZS1414	Horizontal Stabilizer/Tail: P-51D Mustang 350
AZS1415	Fuselage Set with Decals: P-51D Mustang 350
AZS1416	Main Landing Gear Set: P-51D Mustang 350
AZS1417	Battery Compartment and Cover/Hatch Set: P-51D Mustang 350
AZS1418	Tail Wheel Set: P-51D Mustang 350
AZS1419	Pushrod Set: P-51D Mustang 350
AZS1420	Control Horn Set: P-51D Mustang 350
AZS1421	Cowl: P-51D Mustang 350
AZS1422	2-Blade Spinner: P-51D Mustang 350
AZS1423	4-Blade Spinner: P-51D Mustang 350
AZS1424	Canopy: P-51D Mustang 350
AZS1425	Scale Antenna: P-51D Mustang 350
AZS1426	Main Landing Gear Mount (2pcs): P-51D Mustang 350
AZSP06540	6.5 x 4 Propeller (2pcs): P-51D Mustang 350
AZSP066504B	6.6 x 5 4-Blade Propeller: P-51D Mustang 350
AZSP0860SF	8 x 6 Slow Flyer Propeller: P-51D Mustang 350

Warranty, Support and Service

30-Day Limited Warranty Term Period:
We warranty that the Product(s) purchased (the "Product") will be free from defects in materials and work¬manship 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 Prod¬uct. 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 call 800-205-6773

AMA National Model Aircraft Safety Code

For more information regarding the Academy of Model Aeronautics (AMA) including the benefits of membership, insurance coverage and more, please visit www.ModelAircraft.org.

Effective January 1, 2011

A. GENERAL: A model aircraft is a non-human-carrying aircraft capable of sustained flight in the atmosphere. It may not exceed limitations of this code and is intended exclusively for sport, recreation and/or competition. All model flights must be conducted in accordance with this safety code and any additional rules specific to the flying site.

1. Model aircraft will not be flown:
   (a) In a careless or reckless manner.
   (b) At a location where model aircraft activities are prohibited.
2. Model aircraft pilots will:
   (a) Yield the right of way to all man carrying aircraft.
   (b) See and avoid all aircraft and a spotter must be used when appropriate. (AMA Document #540-D-See and Avoid Guidance.)
   (c) Not fly higher than approximately 400 feet above ground level within three (3) miles of an airport, without notifying the airport operator.
   (d) Not interfere with operations and traffic patterns at any airport, heliport or seaplane base except where there is a mixed use agreement.
   (e) Not exceed a takeoff weight, including fuel, of 55 pounds unless in compliance with the AMA Large Model Aircraft program. (AMA Document 520-A)
   (f) Ensure the aircraft is identified with the name and address or AMA number of the owner on the inside or affixed to the outside of the model aircraft. (This does not apply to model aircraft flown indoors).
   (g) Not operate aircraft with metal-blade propellers or with gaseous boosts except for helicopters operated under the provisions of AMA Document #555.
   (h) Not operate model aircraft while under the influence of alcohol or while using any drug which could adversely affect the pilot's ability to safely control the model.
   (i) Not operate model aircraft carrying pyrotechnic devices which explode or burn, or any device which propels a projectile or drops any object that creates a hazard to persons or property.

Exceptions:

- Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight.
- Rocket motors (using solid propellant) up to a G-series size may be used provided they remain attached to the model during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code but may not be launched from model aircraft.
- Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document (AMA Document #718).

   (j) Not operate a turbine-powered aircraft, unless in compliance with the AMA turbine regulations. (AMA Document #510-A).
3. Model aircraft will not be flown in AMA sanctioned events, air shows or model demonstrations unless:

(a) The aircraft, control system and pilot skills have successfully demonstrated all maneuvers intended or anticipated prior to the specific event. (b) An inexperienced pilot is assisted by an experienced pilot.

4. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

B. RADIO CONTROL (RC)

1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.
2. A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.
3. At all flying sites a safety line(s) must be established in front of which all flying takes place (AMA Document #706-Recommended Field Layout):
   (a) Only personnel associated with flying the model aircraft are allowed at or in front of the safety line.
   (b) At air shows or demonstrations, a straight safety line must be established.
   (c) An area away from the safety line must be maintained for spectators.
   (d) Intentional flying behind the safety line is prohibited.
4. RC model aircraft must use the radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
5. RC model aircraft will not operate within three (3) miles of any pre-existing flying site without a frequency-management agreement (AMA Documents #922- Testing for RF Interference; #923- Frequency Management Agreement)
6. With the exception of events flown under official AMA Competition Regulations, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and the pilot's helper(s) located at the flight line.
7. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual. This does not apply to model aircraft flown indoors.
8. RC night flying requires a lighting system providing the pilot with a clear view of the model's attitude and orientation at all times.
9. The pilot of a RC model aircraft shall:
   (a) Maintain control during the entire flight, maintaining visual contact without enhancement other than by corrective lenses prescribed for the pilot.
   (b) Fly using the assistance of a camera or First-Person View (FPV) only in accordance with the procedures outlined in AMA Document #550.

www.Ares-RC.com

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