P-51 D MUSTANG GS
INSTRUCTION MANUAL

1.60 cubic inch displacement 2-cycle (Glow)
1.80 cubic inch displacement 4-cycle (Glow)
Radio required : 6 channels, 9 servos airplane radio

Specifications

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>Wing Span</td>
<td>80.5 in / 2040 mm</td>
</tr>
<tr>
<td>Wing Area</td>
<td>1155 sq in / 74.5 sq dm</td>
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<tr>
<td>Flying Weight</td>
<td>15 lbs / 6800 g</td>
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<tr>
<td>Fuselage Length</td>
<td>70.5 in / 1790 mm</td>
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</table>

Warning! This model is not a toy.
It is designed for maximum performance. Please seek advice if one is not familiar with this kind of engine powered precision model. Operating this model without prior preparation may cause injuries. Remember, safety is the most important thing. Always keep this instruction manual at hand for quick reference.
P-51 D MUSTANG GS

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BEFORE YOU BEGIN

1. Read through the manual before you begin, so you will have an overall idea of what to do.

2. Check all parts. If you find any defective or missing parts contact your local dealer. Please DRY FIT and check for defects for all parts that will require CA or Epoxy for final assembly. Any parts you find to be defective after the gluing process may be difficult to remove for warranty replacement. The manufacturer will replace any defective parts, but will be difficult to extend to the good parts that are good before gluing to defective parts during assembly.

3. Symbols used throughout this instruction manual comprise of the following:

- **AB** Apply epoxy glue.
- **L/R** Assemble left and right sides the same way.
- **3mm** Drill holes with the specified diameter (here: 3mm).
- **!** Pay close attention here!
- **C.A.** Apply instant glue (C.A. glue, super glue.)
- **Ensure smooth non-binding movement while assembling.**
- **Cut off shaded portion.**
- **Must be purchased separately!**
- **Pierce the shaded portion covering film.**
- **Warning!** Do not overlook this symbol!
Parts List

1. FUSELAGE -- 1 set
2. MAIN WING -- 1 pair
3. STABILIZER & ELEVATOR -- 1 set
4. VERTICAL FIN & Rudder -- 1 set
5. CANOPY -- 1 pc.
6. TRANSPARENT DUMMY COWLING -- 1 pc.
7. PILOT(#PC 001102A) -- 1 pc.
8. SPINNER Ø127mm -- 1 pc.
9. ENGINE MOUNT PL5011120 -- 1 set
10. FUEL TANK 800cc -- 1 set
11. SPONGE 10x80x200mm (For Radio Equipment) -- 2 pcs
12. MAIN LANDING GEAR -- 1 pair
13. TAIL LANDING GEAR -- 1 set
14. MAIN WHEEL COVER -- 1 pair
15. MAIN WHEEL Ø103mm -- 2 pcs
16. TAIL WHEEL Ø30mm -- 1 pc.
17. TAIL LINKAGE (For Elevator) -- 1 set
18. ANTI-VIBRATION MOUNT -- 1 set
19. SCOOPE -- 1 pc.
20. PUSHROD, PUSHWIRE & PULLWIRE:
   COPPER TUBE d2.0x0.8mm (For Elevator & Rudder) -- 8 pcs
   METAL ROD Ø1.6x90mm w/Threads (For Alleron) -- 2 pcs
   METAL ROD Ø1.8x95mm w/Threads (For Alleron) -- 2 pcs
   METAL ROD Ø1.8x27mm (For Elevator & Rudder) -- 4 pcs
   METAL ROD Ø1.8x27mm w/Threads (For Elevator & Rudder) -- 4 pcs
   METAL ROD Ø1.6x110mm w/Threads (For Elevator) -- 2 pcs
   WIRE Ø0.8x650mm (For Elevator) -- 2 pcs
   WIRE Ø0.8x700mm (For Rudder Servo) -- 2 pcs
21. THROTTLE PUSHWIRE Ø1.2x450mm
   w/Plastic tube d2x3x950mm -- 1 set
22. WOODEN PARTS:
   BALSA 2.5 x 21 x 86mm (For Main Wheel Cover) -- 2 pcs
   BALSA 6 x 6 x 40mm (For Elevator Servo & Rudder Servo Stand)
   (F20B & F20C) -- 4 pcs
   BALSA 6 x 6 x 132mm (For Elevator Servo Stand) (F30) -- 1 pc.
   BALSA 6 x 6 x 133mm (For Rudder Servo Stand) (F29) -- 1 pc.
   BALSA 6 x 6 x 136mm (For Rudder Servo Stand) (F28) -- 1 pc.
   BALSA 6 x 6 x 139mm (For Rudder Servo Stand) (F28A) -- 1 pc.
   BALSA 8 x 18 x 211mm (For Alleron Servo) -- 4 pcs
   BALSA 10 x 10 x 153mm (For Fixing Fuel Tank) -- 1 pc.
   PLYWOOD 2 x 36 x 60mm (Elevator Servo Cover) -- 2 pcs
   PLYWOOD 2 x 65 x 80.5mm (Alleron Servo Stand) -- 4 pcs
   PLYWOOD 3 x 10 x 20mm (For Servo Stand) (F20A) -- 6 pcs
   PLYWOOD 3 x 25 x 125mm (Wing Protection) -- 1 pc.
   PLYWOOD 3 x 40 x 142mm (Elevator & Rudder Servo Stand)
   (F20 & F21) -- 2 pcs
   PLYWOOD 3 x 41 x 152.5mm (Throttle Servo Stand) (F22) -- 1 pc.
   PLYWOOD 6 x 10 x 41mm (For Throttle Servo Stand)
   (F22A) -- 1 pc.
23. PLASTIC PARTS:
   CLEVIS -- 10 pcs
   STRAPER -- 6 pcs
   RIGHT ANGLE WHEEL SPACER -- 1 set
   TRI-HORN M3X14mm (Non-Base) (For Rudder) -- 2 sets
   TRI-HORN M3X14mm -- 6 Sets
   SILICON GROMMET d1.5X6.5mm -- 30 pcs
   PLASTIC TUBE d2X3X50mm (For Rudder Servo) -- 2 pcs
24. METAL PARTS:
   LINKAGE CONNECTOR -- 3 sets
   COLLAR 4.6mm w/set screw -- 2 sets
   COLLAR 2.6mm w/set screw (For Tail Landing Gear) -- 1 set
   NUT 2mm -- 15 pcs
   NUT 3mm -- 2 pcs
   NY LON INSERT LOCK NUT 3mm -- 6 pcs
   SCREW P.M 2X8mm -- 12 pcs
   SCREW P.M 2X20mm -- 6 pcs
   SCREW P.M 2X25mm -- 6 pcs
   SCREW P.M 2X30mm -- 9 pcs
   SCREW P.M 3X40mm -- 2 pcs
   SCREW P.M 3X75mm -- 2 pcs
   SCREW M 3X35mm -- 2 pcs
   SCREW M 3X35mm -- 4 pcs
   SCREW M 6x30mm -- 4 pcs
   SCREW P.M WM 3X13mm -- 3 pcs
   SCREW P.M WA 2X12mm -- 22 pcs
   SCREW P.M WA 2.3X12mm -- 10 pcs
   SCREW P.M WA 2.3X8mm -- 14 pcs
   SCREW P.M WA 2.6X12mm -- 6 pcs
   SCREW PA 3X12mm -- 2 pcs
   WASHER d3XD7 -- 10 pcs
   WASHER d3XD12 -- 8 pcs
   WASHER d4XD15mm -- 2 pcs
   WASHER 2mm -- 24 pcs
   WASHER 6mm -- 4 pcs
   WING CONNECTOR -- 4 pcs
   WING JOINER (A) Ø25.4X32mm -- 1 pc.
   WING JOINER (B) Ø9.6X34mm -- 1 pc.
   STABILIZER JOINER (A) Ø4X22mm -- 1 pc.
   STABILIZER JOINER (B) Ø9.6X265mm -- 1 pc.
   BLIND NUT Ø6 X Ø18mm -- 4 pcs
25. FUEL TUBE Ø5x5mm -- 16 pcs
26. DECALS (P/N:ST200 039) -- 1 set
1 Aileron

2 Landing Gear

KA3 x 18mm Screw

4mm Set Screw

4mm Set Screw

KA3 x 18mm

1.5mm

3 Landing Gear

3mm Set Screw

4.5mm Wheel Collar

PM2x8mm Screw

2mm Washer

2mm Nut

2mm Balsa

Right Angle Wheel Spacer

3mm Set Screw

WHEEL ASSEMBLY

P.3
8a Flap Servo

If you use one channel operation of the flaps, connect the two servos by Y-harness and cut slot on one of the servo holder plate opposite to the existing slot.

The existing slots are for 2 channels (mixing) operation of the flaps.

9 Elevator Linkage

PWA2X12mm Screw

3mm Set Screw

Adjust clearance of linkage by adding or removing washer

Copper Tube

Clamp the copper tube

10 Stabilizer
11 Stabilizer

PM3X40mm Screw  -  2
3mm Washer      -  2

PM3X40mm Screw

12 Elevator Tri-horn

PM2X20mm Screw  -  6

PM2X20mm Screw
Fuel Tube 9.6X5mm
Tri-Horn M3X14mm 2mm

Fuel Tube 3.6X5mm

13 Vertical Fin/Rudder

Don't let any glue contact the stabilizer, or you may not detach the stabilizer from the fuselage.

P.7
20 Engine Mount

M6 x 30mm Screw  4
6mm Washer  4
d6 x D18mm Blind Nut  4
M6x30mm Screw

- Apply thread locker to screws.

Engine Mount PLS911120

6mm Washer

! Blind nuts are off-centered to keep the spinner at the fuselage axis.

21 Engine

M3x35 Screw  4
3mm Nylon Insert Lock Nut  4
d3XD12mm Washer  8

3mm Nylon Insert Lock Nut
d3XD12mm Washer

Illustration is for inverted mounting. You can mount the engine upright or sideways simply by rotation the engine mount. Thrust angles will not be affected.

Plastic tube
d2 x D3 x 280mm

Throttle Pushwire
Ø1.2 x 450mm

KM3x18 Screw  8
3mm Nylon Insert Lock Nut  8

Install Engine position

M3x35mm Screw

3mm Counter-sink

3mm

3mm

3mm

3mm

3mm

L/R

P.10
22 Cowling

- PWA2.6X12mm Screw: 4
- d1.5xD6.5mm Silicon Grommet: 4

! Make sure the screws hit the reinforcement plywood.

23 Chin block

- PWA2.3X8mm Screw: 8
- d1.5xD6.5mm Silicon Grommet: 8

24 Cowling

- PWA2.6X12mm Screw: 2
- PWA2.3X8mm Screw: 6
- d1.5xD6.5mm Silicon Grommet: 8
25 Canopy

PWA2.3X12mm Screw — 10
 d1.5XD6.5mm Silicon Grommet — 10

Make sure the screws hit the reinforcement plywood.

26 Main Wing

PM4X40mm Screw — 2
d4XD15 Washer — 2

27 Main Wing

PWM3X13mm Screw — 3

Secure the scoop by fastening the screws.
28 Wing Setting
Adjust the wing and fuselage configuration as in the diagrams.

29 Control Throws
Adjust the control throws as shown in the diagram. These throws are good for general flying. You can adjust according to your personal preference.

Elevator

Rudder

Flap

Aileron

30 C.G.
The ideal C.G. position is 175mm (6.9in) behind the leading edge measured at where the wing meets the fuselage. In order to obtain the C.G. specified, add weight to the fuselage or move the battery position. Check the C.G. before flying.

175mm 6.9in
**Warning!**

**Important Safety Precautions**

- First time flyer should never fly by himself / herself. Assistance from experienced flyer is absolutely necessary.
- Pre-flight adjustment must be done before flying, it is very dangerous to fly a badly pre-adjusted aircraft.
- P - 51 D MUSTANG GS is specially designed to be powered by 2C 160 or 4C 180 engine (Glow), using a more powerful engine does not mean better performance. In fact, over powered engine may cause structural damage and injuries.
- Make sure the air field is spacious, never fly the plane too close to people and never get too close to a running propeller.
- If you find wrinkles on the covering as a result of weather changes, you can use hot iron to remove the wrinkles. Please begin with lower temperature setting and gradually raise the temperature until the wrinkles are gone. Too hot an iron may damage the covering.
- Check and re-tighten up all factory assembled screws, use thread locker if applicable.

**ADDENDUM**

**Stabilizer**

Measure 131 mm (5.15 in) from one end of the stabilizer joiner and glue that section the left or right stabilizer.

![Stabilizer Diagram]

**Landing Gear**

Should you need to bend the landing gear wire, use the radio control to open or close the gear to 25% from fully retracted position and switch off the receiver. It is safer to bend the wire in this position. Bending the wire in fully open position may damage the supporting structure.

![Landing Gear Diagram]
**Flying Tips**

1. Due to location of landing wheel ahead of plane C.G., hard landing may cause the wing to bounce up. This when combines with high landing speed may cause the plane to rise up, stall and result in even harder landing. Please use long landing approach. Descend the plane slowly until it touches down smoothly on the runway.

2. We recommend delaying the installation of wheel covers (section 3 of manual) until you are familiar with the flying characteristics of the model after the first few flights. Operate the retracts in low air speed, as the wheel covers may induce large drag during high air speed and cause difficulties in retracting the wheels. Adjust the angle of the wheel covers to minimize drag.

3. When flaps are lowered, nose of model will rise. Check effect of flaps at higher altitude to avoid surprises during landing.

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**ANTI-VIBRATION MOUNT INSTALLATION**

For Engine Mount (PL5911120)

1. KM3 X 18mm Screw
2. Copper Tube
3. Snail Nylon Insert Lock Nut
4. 3mm Washer
5. PM3 X 35mm Screw

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**AIRCRAFT DOCUMENTATION**

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**LINKAGE CONNECTOR**

HW7111030 & HW7111060

Drill 2mm hole at servo horn.

Insert linkage connector into servo horn.

Make sure shoulder of screw is cleared from servo horn.
Add washer to reduce play if necessary.

Tighten up the round nut against the shoulder. Apply CA or permanent thread locker.

After fastening the round nut, make sure that the linkage connector can rotate freely.
**Engine Mount**

- **M6 x 30mm Screw**: 4
- **6mm Washer**: 4
- **d6 x D18mm Blind Nut**: 4

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- Apply thread locker to screws.

- Blind nuts are off-centered to keep the spinner at the fuselage axis.
Should you require to bend the landing gear wire, please insert a round metal bar into the spring ring and apply force there as leverage. Bending the wire directly may damage the mounting block structure.