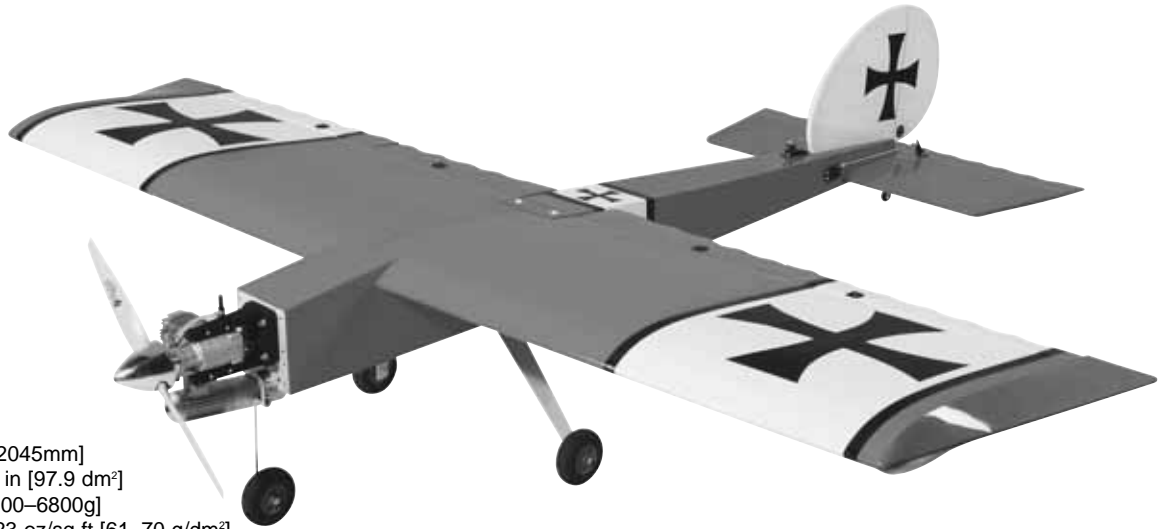


GIANT BIG STIK™ ARF

INSTRUCTION MANUAL



Wingspan: 80.5 in [2045mm]
Wing Area: 1518 sq in [97.9 dm²]
Weight: 13-15 lb [5900-6800g]
Wing Loading: 20-23 oz/sq ft [61-70 g/dm²]
Length: 54.5 in [1385mm]
Radio: 4 or 5-channel, 7 to 8 servos
Engine: 1.2-1.6 cu in [19.5-26.0cc] two-stroke,
1.2-1.8 cu in [19.5-29.5cc] four-stroke,
1.5-2.1 cu in [25-35cc] gas

WARRANTY

Great Planes® Model Manufacturing Co. guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This warranty does not cover any component parts damaged by use or modification. In no case shall Great Planes' liability exceed the original cost of the purchased kit. Further, Great Planes reserves the right to change or modify this warranty without notice.

In that Great Planes has no control over the final assembly or material used for final assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability.

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

To make a warranty claim send the defective part or item to Hobby Services at the address below:

Hobby Services
3002 N. Apollo Dr., Suite 1
Champaign, IL 61822
USA

Include a letter stating your name, return shipping address, as much contact information as possible (daytime telephone number, fax number, e-mail address), a detailed description of the problem and a photocopy of the purchase receipt. Upon receipt of the package the problem will be evaluated as quickly as possible.

READ THROUGH THIS MANUAL BEFORE STARTING CONSTRUCTION. IT CONTAINS IMPORTANT INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THIS MODEL.



Champaign, IL
(217) 398-8970, Ext. 5
airsupport@greatplanes.com

TABLE OF CONTENTS

INTRODUCTION	2
AMA	2
IMAA	3
SAFETY PRECAUTIONS	3
DECISIONS YOU MUST MAKE	3
Engine Recommendations.....	3
Fuel Tank Setup	4
Spinner.....	4
Building Stand.....	4
Flap & Aileron Setup.....	4
Radio Equipment	4
ADDITIONAL ITEMS REQUIRED	5
Hardware & Accessories	5
Adhesives & Building Supplies	5
Optional Supplies & Tools.....	5
IMPORTANT BUILDING NOTES.....	5
ORDERING REPLACEMENT PARTS.....	6
METRIC CONVERSIONS	6
KIT INSPECTION.....	7
PREPARATIONS.....	8
ASSEMBLE THE WINGS	8
Mount the Servos.....	8
Hinge the Flaps & Ailerons	9
Hook Up the Flaps & Ailerons	9
Finish the Wings	11
ASSEMBLE THE FUSELAGE	12
Mount the Stab	12
Mount the Fin.....	13
Mount the Landing Gear.....	15
Mount the Engine.....	16
Glow Engine	16
Gas Engine (Fuji BT-32).....	16
Install the Fuel Tank.....	18
Hook up the Throttle & Nose Gear Steering.....	19
Hook up the Elevator & Rudder Servos.....	20
GET THE MODEL READY TO FLY.....	20
Mount the Receiver & Battery.....	20
Center the Servos.....	21
Check the Control Directions	21
Set the Control Throws	22
Balance the Model (C.G.)	22
Balance the Model Laterally	23
PREFLIGHT	23
Identify Your Model.....	23
Charge the Batteries.....	23
Balance the Propellers.....	23
Ground Check.....	24
Range Check	24
ENGINE SAFETY PRECAUTIONS	24
AMA SAFETY CODE (excerpts)	24
IMAA SAFETY CODE (excerpts)	25
CHECK LIST	26
FLYING.....	27
Take Off.....	27
Flight	28
Landing	28
ENGINE MOUNTING TEMPLATES.....	31

INTRODUCTION

Thank you for purchasing the Great Planes Giant Big Stik™ ARF. Due to the popularity of the “Stik” series of models, it was only a matter of time before Great Planes released a giant version. And this Stik, like all of its predecessors, is simple and rugged. The Giant Big Stik ARF can be powered by either a spark-ignition “gas” engine or a glow engine. Refer to **“Engine Recommendations”** under the **“DECISIONS YOU MUST MAKE”** section of this manual for information that may help you decide how to power your Giant Big Stik ARF.

For the latest technical updates or manual corrections to the Great Planes Giant Big Stik ARF visit the Great Planes web site at www.greatplanes.com. Open the “Airplanes” link, then select the Giant Big Stik ARF. If there is new technical information or changes to this model, a “tech notice” box will appear in the upper left corner of the page.

AMA

We urge you to join the AMA (Academy of Model Aeronautics) and a local R/C club. The AMA is the governing body of model aviation and membership is required to fly at AMA clubs. Though joining the AMA provides many benefits, one of the primary reasons to join is liability protection. Coverage is not limited to flying at contests or on the club field. It even applies to flying at public demonstrations and air shows. Failure to comply with the Safety Code (excerpts printed in the back of the manual) may endanger insurance coverage. Additionally, training programs and instructors are available at AMA club sites to help you get started the right way. There are over 2,500 AMA chartered clubs across the country. Contact the AMA at the address or toll-free phone number below.



Academy of Model Aeronautics

5151 East Memorial Drive

Muncie, IN 47302-9252

Tele: (800) 435-9262

Fax (765) 741-0057

Or via the Internet at:

<http://www.modelaircraft.org>

IMPORTANT!!! Two of the most important things you can do to preserve the radio controlled aircraft hobby are to avoid flying near full-scale aircraft and avoid flying near or over groups of people.

IMAA

The Great Planes Giant Big Stik ARF is an excellent sport-scale model and is eligible to fly in IMAA events. The IMAA (International Miniature Aircraft Association) is an organization that promotes non-competitive flying of giant-scale models. If you plan to attend an IMAA event, obtain a copy of the **IMAA Safety Code** by contacting the IMAA at the address or telephone number below, or by logging on to their web site.

IMAA
205 S. Hilldale Road
Salina, KS 67401
(913) 823-5569
www.fly-ima.org/ima/sanction.html

PROTECT YOUR MODEL, YOURSELF & OTHERS...FOLLOW THESE IMPORTANT SAFETY PRECAUTIONS

1. Your Giant Big Stik ARF should not be considered a toy, but rather a sophisticated, working model that functions very much like a full-size airplane. Because of its performance capabilities, the Giant Big Stik ARF, if not assembled and operated correctly, could possibly cause injury to yourself or spectators and damage to property.
2. You must assemble the model **according to the instructions**. Do not alter or modify the model, as doing so may result in an unsafe or unflyable model. In a few cases the instructions may differ slightly from the photos. In those instances the written instructions should be considered as correct.
3. You must take time to **build straight, true and strong**.
4. You must use an R/C radio system that is in first-class condition, and a correctly sized engine and components (fuel tank, wheels, etc.) throughout the building process.
5. You must correctly install all R/C and other components so that the model operates correctly on the ground and in the air.
6. You must check the operation of the model before **every** flight to insure that all equipment is operating and that the model has remained structurally sound. Be sure to check clevises or other connectors often and replace them if they show any signs of wear or fatigue.
7. If you are not an experienced pilot or have not flown this type of model before, we recommend that you get the assistance of an experienced pilot in your R/C club for your first flights. If you're not a member of a club, your local

hobby shop has information about clubs in your area whose membership includes experienced pilots.

8. While this kit has been flight tested to exceed normal use, if the plane will be used for extremely high stress flying, such as racing, or if an engine larger than one in the recommended range is used, the modeler is responsible for taking steps to reinforce the high stress points and/or substituting hardware more suitable for the increased stress.

We, as the kit manufacturer, provide you with a top quality, thoroughly tested kit and instructions, but ultimately the quality and flyability of your finished model depends on how you build it; therefore, we cannot in any way guarantee the performance of your completed model, and no representations are expressed or implied as to the performance or safety of your completed model.

Remember: Take your time and follow the instructions to end up with a well-built model that is straight and true.

DECISIONS YOU MUST MAKE

This is a partial list of items required to finish the Giant Big Stik ARF that may require planning or decision-making before starting to build. Order numbers are provided in parentheses.

Engine Recommendations

The recommended engine size range for the Giant Big Stik ARF is specified on the cover of this manual. All engines within the specified range will power this model well. Never fly the Giant Big Stik ARF with an engine larger than one in the specified range because it has not been designed or tested for larger engines. Powered by a two-stroke glow engine such as the O.S.[®] MAX 1.60 FX, the Giant Big Stik ARF performs like any .60-size sport plane with the added stability and durability of any well-designed giant plane. If flying the Giant Big Stik ARF with a spark-ignition gas engine, the kit includes a plywood engine mount plate and engine mount standoffs to facilitate the Fuji Engines™ BT-32. If using another brand of gas engine, use the instructions as a guide for how to mount yours.

If you haven't yet built a model with a gas engine, but are considering using one, two of the benefits are fuel economy (not only is gasoline cheaper than glow fuel, but gas engines typically burn less fuel as well) and considerably cleaner exhaust residue. Most gas engines, however, are heavier than glow engines and require premixing gas and oil.

Here are the order numbers for O.S. MAX and Fuji engines:

- O.S. 1.60 FX ringed **with** muffler (OSMG0660)
- O.S. 1.60 FX ringed **without** muffler (OSMG0661)

- #5010 muffler for O.S. 1.60 FX engine (OSMG2846)
- Fuji BT-32S R/C gas engine (FJIG0033)

Per the IMAA Safety Code, magneto spark-ignition engines must have a coil-grounding switch on the aircraft to stop the engine and prevent accidental starting. The switch must be operated manually (without the use of the transmitter) and be accessible by the pilot and assistant. For use with the Fuji engine shown, the manually operated switch was made from a .3 amp slide switch, 16-gauge wire and a covered, crimp-on connector purchased at the local Radio Shack®. Slightly different hardware may be required if using a different spark-ignition engine. All of the components required are available at any hardware or home-improvement store.

If using the Fuji BT-32SB engine the following hardware must be purchased separately:

- (4) 1/4-20 x 2-1/4" or 1/4-20 x 2-1/2" Phillips-head bolts
- (4) 1/4-20 blind nuts
- (4) 1/4" flat washers
- (4) 1/4" lock washers
- (4) 10-32 x 3/4" socket-head cap screws
- (4) #10 lock washers

Note: If using the Fuji BT-32 (or most other gas engines), the nose-gear option may not be used and the model must be built as a taildragger. This is because of the extended distance from the firewall that the engine would have to be mounted in order to clear the nose gear hardware.

Fuel Tank Setup

The fuel tank included with this kit is suitable for use with glow fuel. However, if using a gas engine, the fuel tank must be converted to work with gasoline. This can be done by purchasing a Sullivan #484 Gasoline/Diesel fuel tank conversion kit (SULQ2684), a package of Du-Bro #813 1/8" [3.2mm] I.D. fuel line barbs (DUBQ0670) and 3' of Great Planes gasoline fuel tubing (GPMQ4135). Without the fuel line barbs some types of gas-compatible fuel line may slip off the metal fuel tubes. If the Sullivan conversion kit is not available the Du-Bro #400 gas conversion stopper (DUBQ0675) and one 12" [300mm] piece of K+S 1/8" [3.2mm] soft brass tubing (K+SR5128, box of 5) could also be used to make the conversion. Full instructions on how to set up the fuel tank and make the conversion to gas are provided in this manual.

Spinner



The model on the kit box cover is shown with a Great Planes 2-3/4" [70mm] aluminum spinner (GPMQ4555) (not included). An adapter nut for mounting the spinner cone is also required. (Order No. OSMG4588 for use with the O.S. 1.60 FX.) The Great Planes spinner is intended to be used on engines that have a threaded crankshaft—not engines that use a propeller bolt (such as most gas engines). In this case, a different type of spinner will have to be used. In most cases the propeller cutouts in the cone will also have to be enlarged. A rotary tool with a carbide cutter works great for the rough work, followed by a small metal file to clean up the edges. Always wear eye protection when working with power tools.

Building Stand



A building stand or cradle comes in handy. We use the Robart Super Stand II (ROBP1402) for all of our projects in R&D.

Flap & Aileron Setup

The Giant Big Stik ARF is intended to be flown with flaps using a radio with a minimum of five channels. If, however, you have only a four-channel radio, the Giant Big Stik ARF could be flown without flaps. In this case, the flap servos will have to be linked to the aileron servos using Y-connectors. Then, all four control surfaces on the wings will function as ailerons.

Radio Equipment

Since the Giant Big Stik ARF is a large model, standard servos should not be used to operate the control surfaces. Servos with a minimum torque rating of 50 oz-in are

suitable for the flaps and ailerons. The elevator and rudder should each be operated by a servo with approximately 70 oz-in torque. The throttle and nose wheel may be operated by standard servos.

The following servo extensions and Y-harnesses were also used to build the Giant Big Stik ARF as shown in the manual.

- (2) 36" [910mm] servo extensions for elevator and rudder (HCAM2726 for Futaba)
- (2) 24" [610mm] servo extensions for ailerons (HCAM2721 for Futaba)
- (2) 6" [150mm] servo extensions for flaps (HCAM2701 for Futaba)
- (2) Futaba AEC-13 Y-connectors for flap and aileron servos (FUTM4130)

A battery pack with a **minimum** of 1,000mAh should also be used. When flying giant-scale models such as this, ALWAYS check the battery condition before each flight.

ADDITIONAL ITEMS REQUIRED

Hardware & Accessories

In addition to the items listed in the "**Decisions You Must Make**" section, following is the list of hardware and accessories required to finish the Giant Big Stik ARF. Order numbers are provided in parentheses.

- Propeller and spare propellers suitable for your engine
 - R/C foam rubber (1/4" [6mm] – HCAQ1000, or 1/2" [13mm] – HCAQ1050)
 - 3' [900mm] standard silicone fuel tubing (GPMQ4131)
- or-
- 3' [900mm] gasoline fuel tubing (GPMQ4135)
 - Stick-on segmented lead weights (GPMQ4485)

Adhesives & Building Supplies

In addition to common household tools and hobby tools, this is the "short list" of the most important items required to build the Giant Big Stik ARF. **Great Planes Pro™ CA and Epoxy glue are recommended.**

- 1/2 oz. [15g] Thin Pro CA (GPMR6001)
- 1/2 oz. [15g] Medium Pro CA+ (GPMR6007)
- Pro 30-minute epoxy (GPMR6047)
- Denatured alcohol (for epoxy clean up)
- CA applicator tips (HCAR3780)
- Threadlocker™ thread-locking cement (GPMR6060)
- Drill bits: 1/16" [1.6mm], 3/32" [2.4mm], 1/8" [3.2mm], 3/16" [4.8mm], 13/64" [5.2mm] (or 3/16"), 15/64 [6mm] (or 1/4"), 1/4" [6.4mm], 9/32" [7.1mm]

- 8-32 tap and drill set (GPMR8103)
- or-
- 8-32 Tap and #29 drill
 - Tap handle (GPMR8120)
 - Small metal file
 - Silver solder w/flux (GPMR8070)
 - #1 Hobby knife (HCAR0105)
 - #11 Blades (5-pack, HCAR0211)
 - 21st Century® sealing iron (COVR2700)
 - 21st Century iron cover (COVR2702)

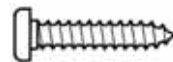
Optional Supplies & Tools

Here is a list of optional tools mentioned in the manual that will help you build the Giant Big Stik ARF.

- Pro 6-minute epoxy (GPMR6045)
- 2 oz. [57g] spray CA activator (GPMR6035)
- 4 oz. [113g] aerosol CA activator (GPMR634)
- CA debonder (GPMR6039)
- 3M 75 Repositionable spray adhesive (MMMR1900)
- Epoxy brushes (6, GPMR8060)
- Mixing sticks (50, GPMR8055)
- Mixing cups (GPMR8056)
- Builder's Triangle Set (HCAR0480)
- 36" Metal ruler (HCAR0475)
- Large T-pins (100, HCAR5200)
- Robart Super Stand II (ROBP1402)
- Switch & Charge Jack Mounting Set (GPMR1000)
- Rotary tool such as Dremel®
- Rotary tool reinforced cut-off wheel (GPMR8200)
- Hobby Heat™ Micro Torch II (HCAR0755)
- Dead Center™ Engine Mount Hole Locator (GPMR8130)
- AccuThrow™ Deflection Gauge (GPMR2405)
- CG Machine™ (GPMR2400)
- Precision Magnetic Prop Balancer™ (TOPQ5700)

IMPORTANT BUILDING NOTES

- **Sheet metal screws** are designated by a number and a length. For example, #6 x 3/4" [19mm].



This is a number six screw that is 3/4" [19mm] long.

- **Machine screws** are designated by a number, **threads per inch**, and a length. For example, 4-40 x 3/4" [19mm].



This is a number four screw that is 3/4" [19mm] long with forty threads per inch.

- When you see the term **test fit** in the instructions, it means that you should first position the part on the assembly **without using any glue**, then slightly modify or custom fit the part as necessary for the best fit.
- Whenever the term **glue** is written you should rely upon your experience to decide what type of glue to use. When a specific type of adhesive works best for that step, the instructions will make a recommendation.
- Whenever just **epoxy** is specified you may use **either** 30-minute (or 45-minute) epoxy **or** 6-minute epoxy. When 30-minute epoxy is specified it is **highly** recommended that you use only 30-minute (or 45-minute) epoxy, because you will need the working time and/or the additional strength.
- **Photos** and **sketches** are placed **before** the step they refer to. Frequently you can study photos in following steps to get another view of the same parts.
- Following are the MonoKote® colors used on the Giant Big Stik ARF in case patches or repairs are ever needed:

True Red – TOPQ0227
 Black – TOPQ0208
 White – TOPQ0204
- The stabilizer and wing incidences and engine thrust angles have been factory-built into this model. However, some technically-minded modelers may wish to check these measurements anyway. To view this information visit the web site at www.greatplanes.com and click on "Technical Data." Due to manufacturing tolerances which will have little or no effect on the way your model will fly, please expect slight deviations between your model and the published values.

ORDERING REPLACEMENT PARTS

Replacement parts for the Great Planes Giant Big Stik ARF are available using the order numbers in the **Replacement Parts List** that follows. The fastest, most economical service can be provided by your hobby dealer or mail-order company.

To locate a hobby dealer, visit the Hobbico® web site at www.hobbico.com. Choose "Where to Buy" at the bottom of the menu on the left side of the page. Follow the instructions provided on the page to locate a U.S., Canadian or International dealer. If a hobby shop is not available, replacement parts may also be ordered from Tower Hobbies® at www.towerhobbies.com, or by calling toll free (800) 637-6050.

Parts may also be ordered directly from Hobby Services by calling (217) 398-0007, or via facsimile at (217) 398-7721, but full retail prices and shipping and handling charges will apply. Illinois and Nevada residents will also be charged

sales tax. If ordering via fax, include a Visa® or MasterCard® number and expiration date for payment.

Mail parts orders and payments by personal check to:

Hobby Services
 3002 N. Apollo Drive, Suite 1
 Champaign, IL 61822

Be certain to specify the order number exactly as listed in the Replacement Parts List. Payment by credit card or personal check only; no C.O.D.

If additional assistance is required for any reason contact Product Support by e-mail at productsupport@greatplanes.com, or by telephone at (217) 398-8970.

REPLACEMENT PARTS LIST

Order Number	Description	How to Purchase
	Missing pieces.....	Contact Product Support
	Instruction manual	Contact Product Support
	Full-size plans	Not Available
GPMA2815	Wing Set	Contact Hobby Supplier
GPMA2816	Fuselage	Contact Hobby Supplier
GPMA2817	Tail Surface Kit	Contact Hobby Supplier
GPMA2818	Main Gear	Contact Hobby Supplier
GPMA2819	Nose Gear	Contact Hobby Supplier
GPMA2820	Wing Tube	Contact Hobby Supplier

METRIC CONVERSIONS

1" = 25.4mm (conversion factor)

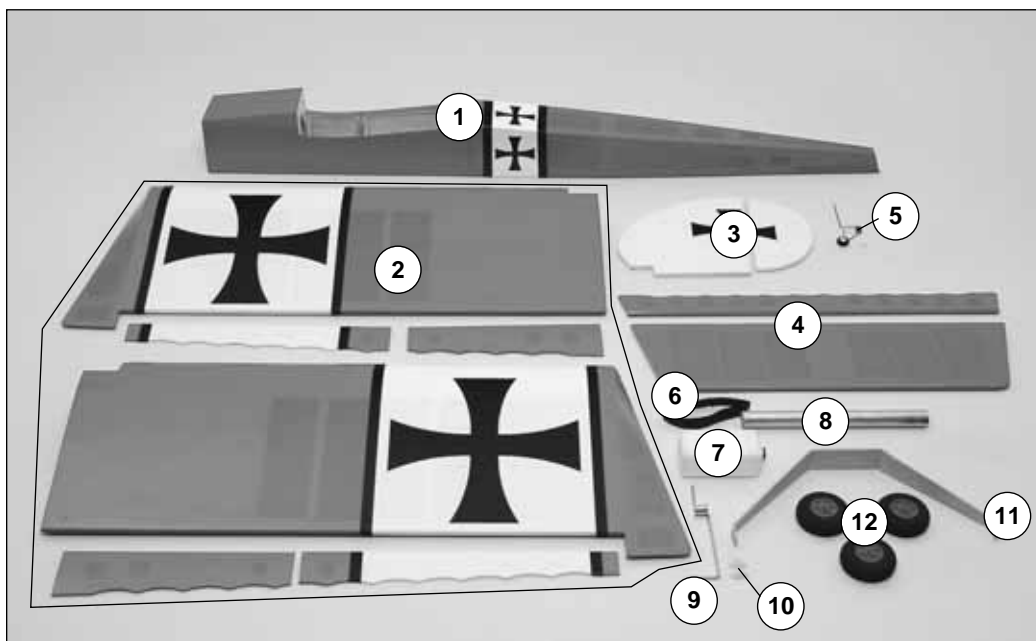
1/64" = .4 mm	3/4" = 19.0 mm
1/32" = .8 mm	1" = 25.4 mm
1/16" = 1.6 mm	2" = 50.8 mm
3/32" = 2.4 mm	3" = 76.2 mm
1/8" = 3.2 mm	6" = 152.4 mm
5/32" = 4.0 mm	12" = 304.8 mm
3/16" = 4.8 mm	18" = 457.2 mm
1/4" = 6.4 mm	21" = 533.4 mm
3/8" = 9.5 mm	24" = 609.6 mm
1/2" = 12.7 mm	30" = 762.0 mm
5/8" = 15.9 mm	36" = 914.4 mm

KIT INSPECTION

Before starting to build, use the **Kit Contents** list to take an inventory of this kit to make sure it is complete and inspect the parts to make sure they are of acceptable quality. If any parts are missing or are not of acceptable quality, or if you need assistance with assembly, contact **Great Planes Product Support**. When reporting defective or missing parts, use the part names exactly as they are written in the Kit Contents list on this page.

Great Planes Product Support:
3002 N. Apollo Drive, Suite 1
Champaign, IL 61822
Telephone: (217) 398-8970, ext. 5
Fax: (217) 398-7721
E-mail: airsupport@greatplanes.com

Parts Layout



Kit Contents

1. Fuselage
2. Wings, Flaps & Ailerons
3. Fin & Rudder
4. Stabilizer & Elevator
5. Tail Gear Assembly
6. 13-3/4" [350mm] Velcro Strip
7. Fuel Tank
8. Wing Joiner Tube
9. Nose Gear Wire
10. Nose Gear Bearing
11. Main Landing Gear
12. Wheels (3)

Kit Contents (Not Photographed)

Wood Parts:

- (2) Plywood Fuel Tank Former Set
- (2) Plywood Fuji Engine Mount Plates
- (1) Plywood Receiver/Battery Tray
- (1) 1/4" x 1/4" x 8" [6.3 x 6.3 x 200mm] Hardwood Stick
- (1) 1/16" x 1" x 8" [1.6 x 25 x 200mm] Sheeting
- (2) 3/8" x 2" [9.5 x 50mm] Hardwood Dowels
- (1) 1/4" x 1-3/16" [6.3 x 30mm] Hardwood Dowel

Hardware:

- (1) Nylon Tail Gear Eyelet
- (4) Fuji Gas Engine Mounting Standoffs
- (1) 1.20 - 1.60 Engine Mount, Right
- (1) 1.20 - 1.60 Engine Mount, Left
- (2) 2-56 x 36" [914mm] Pushrods
- (6) 4-40 x 12" [305mm] Pushrods
- (1) 36" [914mm] White Pushrod Tube (for gas engine)
- (1) 3/16" x 36" [4.8 x 914mm] Pushrod Guide Tube
- (6) Giant Control Horns
- (6) Giant Control Horn Mounting Plates
- (2) CA Hinge Strips
- (6) Heat-Shrink Tubing
- (1) Steering Arm

Nuts, Bolts, Connectors:

- (2) 1/4-20 Blind Nuts (factory-installed in fuselage)
- (2) 1/4-20 x 2" [51mm] Nylon Wing Bolts
- (12) 6-32 Blind Nuts (8 factory-installed)
- (4) 6-32 x 1" [25mm] Screws
- (8) #6 Flat Washers
- (8) #6 Lock Washers
- (2) 3/16" x 2" [4.8 x 50mm] Bolt-on Axles
- (2) 5/16" Lock Nuts (for axles)
- (2) 3/16" [4.8mm] Wheel Collars
- (2) 6-32 Set Screws (for wheel collars)
- (4) 6-32 x 3/4" [19mm] Phillips Screws
- (1) 6-32 x 1/4" [6mm] Socket-Head Cap Screw
- (4) 8-32 x 1-1/4" [32mm] Socket-Head Cap Screws (engine mount)
- (4) 8-32 x 1" [25mm] Socket-Head Cap Screws (engine)
- (4) 8-32 Blind Nuts
- (4) #8 Flat Washers
- (8) #8 Lock Washers
- (2) Brass Screw-Lock Pushrod Connectors
- (2) Nylon Retainers (for screw-lock pushrod connectors)
- (2) 4-40 x 1/8" [3.2mm] Socket-Head Cap Screws

- (2) Nylon Clevises
- (2) 2-56 x 1" [25mm] Threaded Rod (gas)
- (1) Nylon Ball Link (gas)
- (1) 2-56 Ball Link Ball (gas)
- (1) 2-56 Lock Nut (gas)
- (6) 4-40 Clevises
- (6) Large Solder Clevises
- (6) 4-40 Nuts
- (24) 4-40 x 3/4" [19mm] Phillips Screws (control horns)
- (14) Silicone Clevis Retainers
- (8) #2 x 3/8" [9.5mm] Phillips Screws (4-fuel tank hatch cover, 4-battery/receiver tray)
- (8) #2 Washers
- (1) 3/32" [2.4mm] Wheel Collar (tail gear)
- (1) 4-40 Set Screw