

BVM F-15B

1:8 Scale

GO FLY GOLD



Length: 96", Wing Span: 65"

Weight: 34# Dry

Fuel Capacity: 4.0L, Smoke: 2.2L

CONSTRUCTION AND OPERATING MANUAL

Version 1.2

December 2023

Vne 180 MPH Limit Thrust to 36 lbs.

Equipped with HV Servos and should not be operated below 7.2 volts

BVM

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INTRODUCTION

Thank you for purchasing the BVM GO Fly F-15. This model represents the latest in manufacturing technology and completion for the R/C jet enthusiast. The factory has expertly crafted and thoroughly inspected all aspects of the model. Only a small amount of work is required to complete the assembly of your F-15.

This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all of the instructions and warnings in the manual.

Please read the entire manual to become familiar with the processes and procedures before you begin to assemble your aircraft.

DISCLAIMER

Bob Violett Models Inc. assumes no liability for the operation and use of these products. The owner and operator of these products should have the necessary experience and exercise common sense. Said owner and operator must have a valid Academy of Model Aeronautics license and a "Turbine Waiver" for operation in the U.S.A.

This is a sophisticated jet model aircraft. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or other property.

Notice: Do not use with incompatible components or alter this product in any way outside of the instructions provided by BVM, Inc. The BVM F-15 has been designed and flight tested around 36 lbs class engines. Damage to the aircraft may result from exceeding this thrust limitation (36lbs).

Recommended Accessories

You may have some of these products in your shop, but if not, refer to this list.

- 140N-160N engine of your choice.
- #2 x 3/16 Button Head SMS Package (BVM # 5625)
- BVM UAT (BVM# 6044)
- Spektrum 20310T Power Safe Receiver (# VJ-SPMAR20310T)
- (2) 7.4v Pulse 3600 mah Rx packs (#V-PLURX15-3600)
- Demon Aero Cortex Gyro Pro (# V-DA-BD-CortexPro)
- BVM Over Flow Tank (BVM # 6037)
- 8" Warbird Jet Pilot (#V-WB 10"/8 JET PILOT)

BVM Ultimate Air Trap



Required Tools

A combination of Metric and SAE hex socket and drivers along with a small standard and Phillips head drivers will be necessary.

List of Adhesives/Lubricants/Heat Shield+ Available at BVMjets.com

- BVM Aeropoxy (BVM # 9566)
- BVM Qt Poxy (# 9580)
- Slo-Zap (# PT20)
- Pacer Z-42 (#PT42)
- Super O-Lube (BVM # 5779)
- BVM Thin Lube for "O" Rings (BVM # 1945)
- Axle Super Lube (BVM # 5784)
- BVM Dry Lube (BVM # 1947)



Accessories Used to Complete Prototype

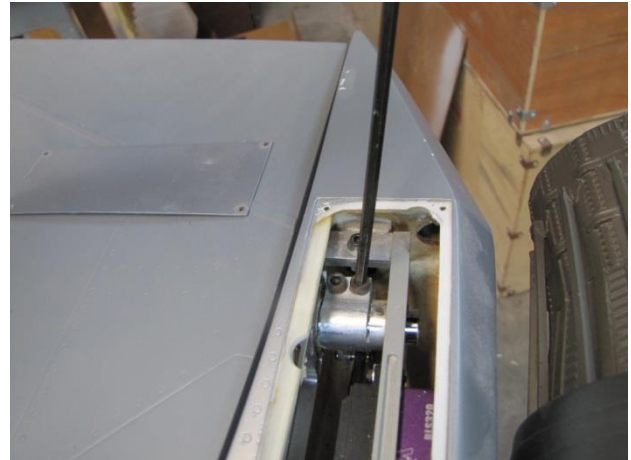
- 1 x AR20310T 20-Channel PowerSafe Integrated Telemetry Receiver (SPMAR20310T)
- 2 x 3600mAh 2S 7.4V LiPo Receiver Battery
- 1 x Cortex Pro Gyro
- 1 x Turbine

Begin assembly by removing and inspecting all airframe components. Carefully become familiar with the wiring, landing gear, gear doors, etc. The BVM F-15 GO Fly is not meant to be a primary turbine trainer. The manual assumes you already have experience with high performance aircraft.

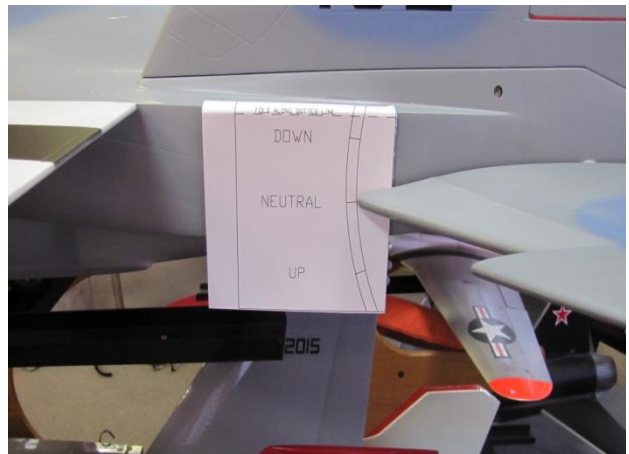
Installing the Horizontal Stabilizers

- Use a Phillips head screw driver to remove the (4) screws holding the cover plate in place.
- The elevator clamping block uses (2) 8/32 bolts. A 9/64 wrench is required to tighten these.

NOTE: Final adjustment should be done with the radio on.

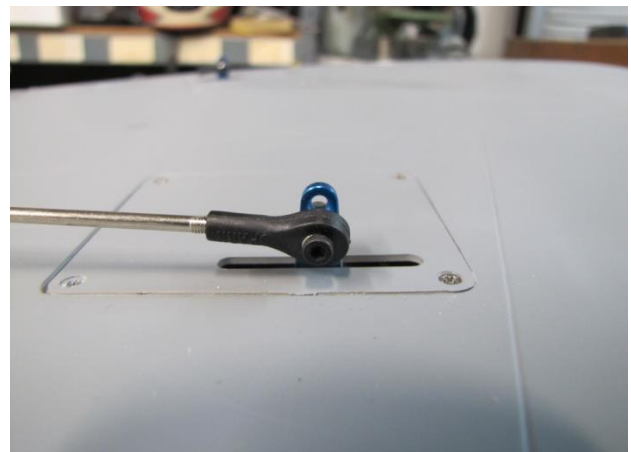


Use the provided Template to set the neutral point for the Elevator. This will be used later as well for surface throws.



Preparing The Wings

- On the BVM demo model we moved the aileron linkage to a lower hole on the servo to improve resolution. The flaps do not need to be changed.



Wing Installation

- The servo wires and light plugs are all different. Match them accordingly. Use tape to secure them.

Pro Tip: Use BVM Dry Lube (#1947) to allow dowel pins, tubes, and spars to be inserted with less friction.

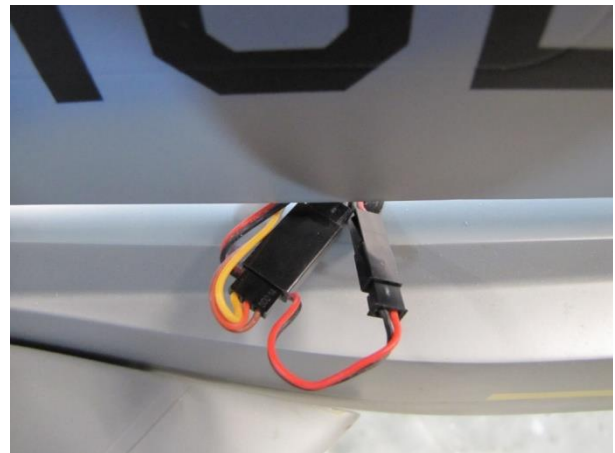


- The wings are secured to the fuse by clamping brackets. You need a 9/64 wrench to complete this.



Installing The Vertical Fins

- Connect the LED and Servo connection. One side will have (2) and one will have (1).
- Use a 9/64" driver to secure the clamp.



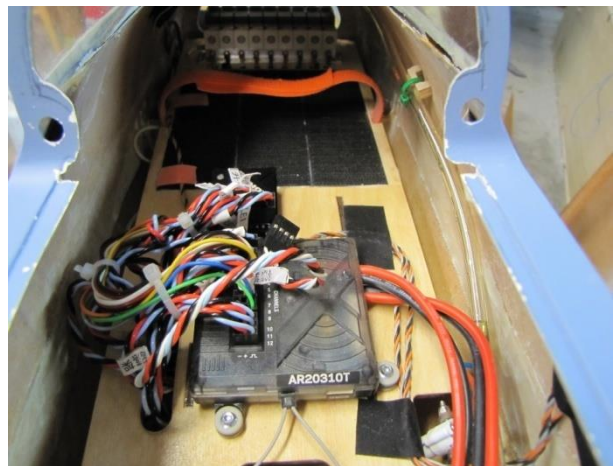
- Use a 9/64" driver to secure the clamp. There is (2) clamps. One front and one aft.



Receiver, Gyro and Battery Installation

- The BVM demo uses a Cortex Pro and a Spektrum 20ch RX. The gyro is mounted in front of the RX. The Pulse 3600 mah RX batteries sit on the Velcro just in front of the Gyro.

NOTE: The air bottles are under the front tray.



CCU/ Air Fill Valve

- The CCU and Air Fill valve are mounted under the nose cone. This has been programmed from the factory and shouldn't need to be touched.



UAT Mounting

- The UAT has spot under the canopy on the right side of the fuse. We routed the fill line for the fuel system under the nose cone.

Note The UAT opening may need to be enlarged to fit properly.



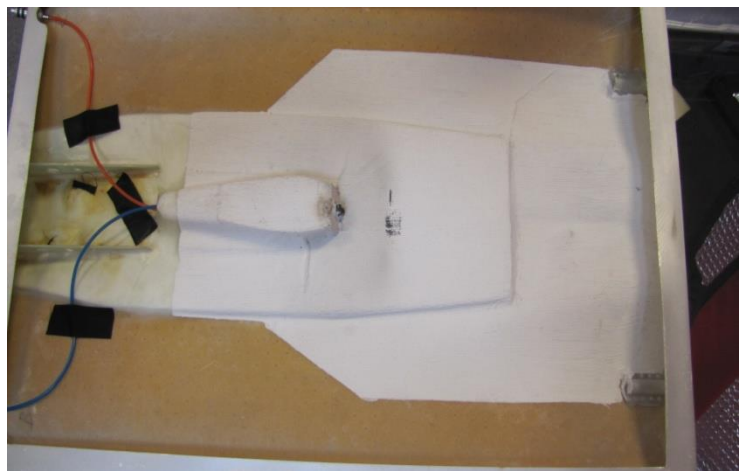
Turbine and Pump Mounting

- Our demo model has a BVM T-16 for power. We mounted the Fuel Pump on the right side and the ECU Battery on the left. Our ECU is built into the front cover of the engine, so you will not see it in the photos. Follow your turbine manufactures guide lines for mounting.

NOTE: The engine rails will look a bit different on the production versions.



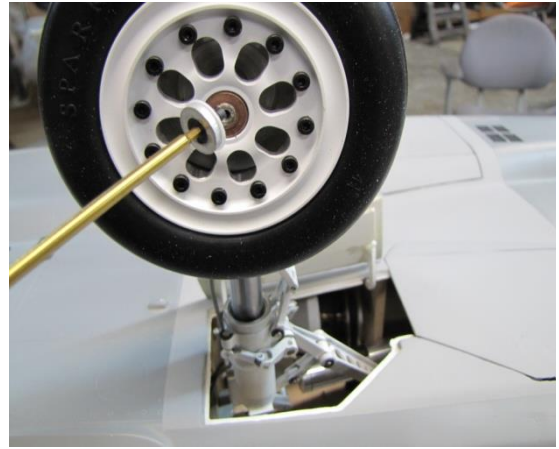
- Heatshield was used on the inside of Turbine Hatch as added protection. (BVM#PA-MA-1940)



Wheels & Brakes Preparation

- Remove the wheel retaining screw with a 2mm driver. Use a small amount of Z-42 when re installing.

NOTE: If you need to remove the O'Ring. Use a sharpened wood stick to help remove the O-Ring. Don't use anything metal. This will scratch the inside of the brake hub.



- Use a small amount of Axle Grease on the wheel axle. (BVM#5784)



- Use a small amount of BVM Dry Lube on the pivot joints on your gear. (BVM1947) Also use a small amount of Super-O-Lube on the brake O-ring. (BVM5779) This will help the brakes work smoothly.



Connecting RX wires

The wires are labeled from the factory. If you are using the IX20, the program is available from BVM. Follow the chart below to connect the servos.

IX20 Wire Connection Chart					
RX Port	CH 1	CH-2	CH-3	CH-4	
Surface	Turbine	RAL	REL	RRU	
RX Port	CH-5	Aux1 (6)	Aux2 (7)	Aux3 (8)	
Surface	LFL	LAL	RFL	LRU	
RX Port	Aux4 (9)	Aux5 (10)	Aux6 (11)	Aux7 (12)	
Surface	LEL	Gear	Lights	NWH	
RX Port	X+1 (13)	X+2 (14)	X+3 (15)	X+4 (16)	
Surface	WHL Brakes	SPD Brakes	Gyro Gain	AFTB Ring	

IX20 Control Switches					
Switch	A	B	C	D	
Surface	LG Flight Timer	Lights	Speed Brake	Flaps and F.Modes	
Switch	L. Trim	E	F	G	
Surface	NWL Trim	WHL Brakes	Smoke	Gyro Gain	

Gyro

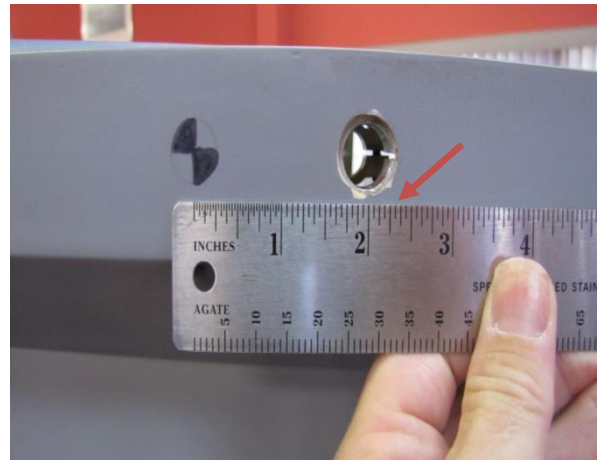
We used the Cortex Pro in our demo model. We use 40% gain for Normal Flight and 55% for landing. These will vary for each customer's preference.

Control Deflections

Surface	Direction	Measurement Location	Low	Medium	High
Rudder	Left/Right	Base of Rudder	.75"	.90"	1.2"
Elevator	Up/Down	Use Template provided			
Aileron	Up/Down	Ail/Flap Junction	.75"	.90	1.1"
Expo: Typically 15%-25% is used on all surfaces. This is pilot's discretion					
Flap Settings	Measurement	Measurement Location			
Takeoff	1.0"	Flap/Aileron Junction			
Landing	2.25"				

Center Of Gravity

- The Center of Gravity comes pre-marked from the factory. Verify that it is marked at 2" forward of the front spar.



To help mark the Center of Gravity position when the wing is in place, you can use two Buttonhead screws on the bottom of fuselage at the fuselage wing joint. (BVM # 5625)



First Flight Profile

Flight Time

The BVM demo model's transmitter timers are set for 6 min. On the first flight, land a couple minutes early to check fuel consumption. Adjust the flight timer accordingly.

Taxi Test/Engine Run Up

A taxi test should include a radio range check with the engine running at various power levels. Check that the wheel brakes are adequate and the stopping action is without skidding or pulling left or right. Be sure to shake the aircraft and push fore and aft with the engine at half power, this will help remove any trapped air bubbles in the fuel system.

Takeoff

NOTE: If a gyro is used select the off position, for first flight until gyro can be tested at a safe altitude.

Begin the takeoff roll by slowly advancing the throttle. Maintain runway center while holding about 1/2 stick up elevator; the F-15 will rotate when it is ready. If there is a cross wind, hold a small amount of aileron into the wind, be prepared with opposite rudder. The aircraft does not need flaperons, we suggest making your first flights "clean wing".

Trim

Once in the air, find a nice cruise speed to set the trims. The aircraft should fly straight and level when "hands off". When the landing gear come down, a few clicks of trim will be needed. This can be mixed in, or use flight modes to trim automatically.

Practice Approaches

Save some time at the end of your first flight to practice approaches and go arounds. It is beneficial to become familiar with the low speed handling of the aircraft.

Landing

Landing is like most jets, "power on" during the approach. The F-15 does not stall easily, it is best to land nose high, touching on the main wheels first.

The majority of the first flight should be spent trimming and practicing for the first landing. Save the aerobatics and air show stuff for later flights.

RX Battery Consumption

The average flight using the lights the entire flight consumes 500 mAh. We recommend two flights and recharge. Use this data to calculate how many flights you can achieve from your system. The use of the smoke pump will consume more mAh per flight. 3600mAh combined capacity is the minimum BVM recommends.

BVM is synonymous with “Success Jets.” It is very important to us that you are successful with our products. This extensive manual reflects our sincerity. As always, your comments and suggestions on BVM products are appreciated.

Pilot’s Notes: