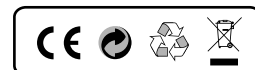


Item No.: F1901



F/A 18E

Super Hornet
Vectored Thrust EDF Jet



Instruction Manual

The manual suit for every color shame of Freewing F/A-18 Super Hornet.
The manual only choose one color shame as an example.

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Thank you for purchasing for the Freewing F/A 18E Super Hornet 90mm EDF that includes scale electric retractable landing gear with suspension, 360 degree thrust vectoring nozzles and working position lights. A great deal of the assembly is pre-done for you. This is a receiver ready jet that only requires some simple assembly and the installation of the flight batteries and programming of your radio equipment to be ready to fly. Please read the assembly manual carefully to familiarize you with all the steps before starting.

Main Specifications

Wingspan.....	37-3/8" [950mm]
Fuselage length.....	52" [1320mm]
Flight weight.....	4-1/2 LB. [<2100g]
Wing Area.....	387 sq.in.approx
EDF Fan.....	90mm
Thrust.....	84-1/2 oz.
Motor.....	1700kv out-runner brushless motor.
Battery.....	6-cell, 22.2V, 3700mAh 30C Li-po Battery
Speed Control.....	85A ESC with 5A switch model BEC
Servos.....	9g 8pcs

Parts Included

Regarding to the different of configuration, the spareparts also is different. Please refer according to the following contents.

RTF

Contents include:

- *Pre-painted fuselage
- *Pre-painted canopy & nose cone
- *Rudder
- *Pre-painted Main wing set
- *Pre-painted Drop tanks
- *Retract landing gear
- *LED flash light [pre-installed 7pcs]
- *90mm EDF [pre-installed 1pcs]
- *AB Glue
- *85A ESC
- *Out runner brushless motor
- *Servo[8pcs]
- *6-Cell Li-poly Battery 30C[1pcs]
- *Parts bag
- *Manual

ARF

Contents include:

- *Pre-painted fuselage
- *Pre-painted canopy
- *nose cone
- *Rudder
- *Pre-painted Main wing set
- *Pre-painted Drop tanks
- *Retract landing gear
- *LED flash light [pre-installed 7pcs]
- *90mm EDF [pre-installed 1pcs]
- *AB Glue
- *Water sticker
- *Parts bag
- *Manual
- Parts Included



Read Before Flight (general safety guidelines)

1. Before each flight, please check the aircraft using the radio system. Check the operation of all control surfaces and the motors to make sure they are operating properly and that none of the clevises or connectors are damaged.
2. This aircraft is not a toy! Its operation is quite different from RC cars and RC boats. Before flying, please read the user manual carefully and obey the regulation in order to enjoy a safe and pleasant flight.
3. Before flying your model, make sure there are no other pilots using the same frequency within 1.2 miles of your model if flying using a 72MHz radio system. Please refrain from flying until you have discussed who flies when so your plane does not become damaged from stray radio signals.
4. If you find any parts included with this model that are defective, contact Freewing or our dealers before starting assembly.

Safety Instructions for Charging and Using Li-Poly Batteries

- * Do not put the battery on, or near anything, that can catch fire when charging.
- * Always charge the battery on a non-flammable base i.e. a metal tray.
- * Do not disassemble the battery.
- * Do not short-circuit the battery.
- * Do not use, or leave, the battery nearby a fire, stove or heated place.
- * Do not immerse the battery in water or seawater, do not get it wet.
- * Do not charge the battery near a fire or under the blazing sunlight.
- * Do not drive a nail into the battery, strike it with hammer or apply excessive weight to the battery.
- * Do not impact or throw the battery.

Safety Precautions

1. Please do not change any part of the plane without checking with Freewing. You will be responsible for any damages caused by these changes.
2. Your flying area should be wide-open and free of obstacles. Never fly near highways, railways, airports, power lines or in residential areas.
3. To avoid personal injury, never fly your model near or facing people, or throw the plane in their direction.
4. Do not fly your model in strong winds or severe weather.
5. Do not allow loose objects, tools or body parts to get near the intake of your model. Items can be pulled in and can damage the model or cause personal injury.
6. Never dispose of batteries or parts of your model in a fire as it could lead on an explosion and personal injury.

General Safety Statements

1. This aircraft is not a toy. It has been designed for the experienced modeler and pilot. You are responsible not to cause damage to other's personal property or cause personal injury.
2. Please follow the instructions provided to build, adjust and operate your model. Use caution not to get hands, hair or other body parts near the fans. Doing so could cause personal injury.

3. Freewing Model and our dealers are not responsible for any economic or law liability for any improper usage or operation of this model.
4. This model is designed for use by modelers age 14 and over. This model is not recommended for unsupervised modelers under 16 years age.
5. Never use the model or associated electronics in damp or rainy conditions.
6. This model is made from EPS and Polystyrene, which can be damaged by excessive heat. Keep your model away from excessive heat or out of direct sunlight for extended time periods or it can become warped and affect the flight performance of the model.
7. Never attempt to catch your model while in flight.
8. Never leave the battery connected while the model is unattended. Accidental operation can occur and cause personal injury.
9. Before operating the model, make sure to turn on the radio system and check the functions before beginning flight.
10. Always make sure the throttle at the transmitter has been moved to the low or off position before connecting the motor battery.

Battery Precautions

- * Do not use the battery if it is damaged or deformed.
- * Do not solder the motor leads directly to the battery.
- * Do not reverse charge or over discharge the battery.
- * Do not reverse charge or connect the battery in reverse to the speed control.
- * Do not connect the battery to the ordinary charger socket or car cigarette jack.
- * Do not use the battery for unspecified equipment.
- * Do not touch the leaking battery directly. Wash your skin or clothes with water if they come in contact with a damaged battery.
- * Do not mix the Li-Po battery with other unchargeable battery.
- * Do not continue charging the battery over the prescribed time.
- * Do not put the battery into a microwave oven or high-pressure container.
- * Do not use an abnormal or damaged battery.
- * Do not use or store a battery under the sunlight.
- * Do not use the battery near any sources that generate static electricity (over 64V).
- * Do not charge the battery when the environmental temperature is under 32 degrees or over 130 degrees.
- * If you find the battery leaking smelling or abnormal, stop using it.
- * Keep the battery away from children.
- * Use the specified charger and observe charging requirement provided by the battery manufacturer.
- * Parental supervision is required when charging or operation is done by minors.
- * Never discharge the battery at more than 25C and never take the voltage lower than 12V as this will damage the battery.
- * For full flight time it is recommended to cycle the battery a minimum of three cycles before use in your model.
- * Never charge the battery on a carpet floor as this can cause a fire.

Install instruction

1. This manual will help you assemble your F-18E. Let's start with the installation of the main wing panels. Apply an even coat of 5-minute epoxy to the slot for the carbon rod in the wing and fuselage and the root of the wing panel.



2. Press the wing into position on the fuselage side.



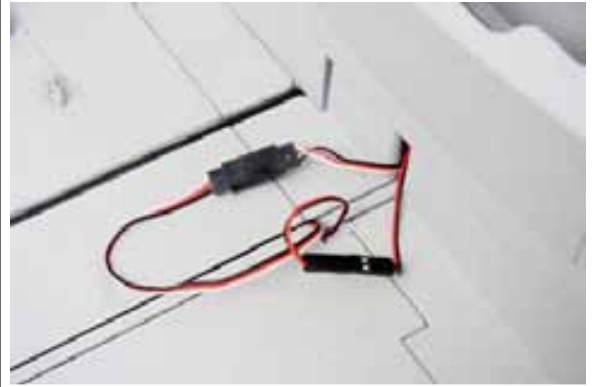
3. Check the alignment of the wing with the fuselage and wipe off any epoxy that squeezes out. A small amount of rubbing alcohol on a paper towel works well.



4. Make sure to check the alignment on the top of the wing to fuselage joint and wipe off any excess epoxy. Hold in position until the epoxy sets. Repeat this process for the other main wing. We recommend that you epoxy one wing panel at a time.



5. Plug in the servo connector and the wing tip light. Please match the polarity. On the servo connection, the orange wire matches with the white wire on the plug that exits the fuselage.



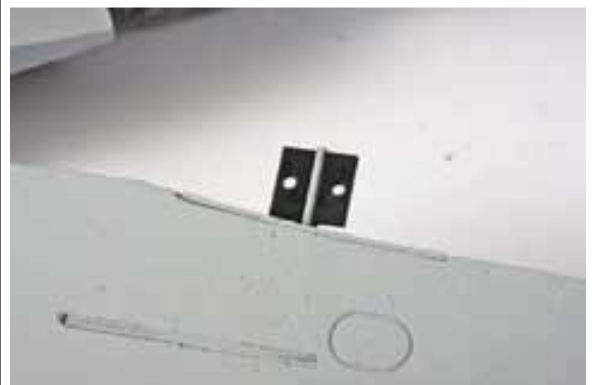
6. Feed the connected plugs into the fuselage and carefully push the wires into the slot in the wing and fuselage.



7. Locate the full flying elevators and mounting hardware.



8. Attach the plastic keeper to the elevator rod.



9. Attach the elevator to the fuselage using the supplied wood screws.



10. Connect the elevator linkage and install the foam cover using a contact adhesive.



11. Install the nose cone using foam safe CA glue, 5-minute epoxy, or contact adhesive.



12. Locat the Vertical Fins and connect the lights with the plugs making sure to match the polarity.



13. Use 5-minute epoxy to install the Vertical Fins. Be sure to push the light wires all the way into the fuselage so they do not interfere with the fit the Vertical Fins.



14. To install the drop tanks, push them into the matching tabs on the bottom of the wing. They are removable for transportation. You may glue the tanks on for a tighter fit.



15. Connect your 7-channel receiver to the servo wires at the rear of the cockpit opening.

16. Ailerons = Ail

17. Elevator = Ele

18. Rudder = Vector 3 and Steering

19. Gear = Retractable Landing Gear

20. Throttle = Throttle

21. Flap (Aux1) = Vector 1

22. Aux = Vector 2



23. The battery installs under the hatch and is held in place with the pre-installed hook and loop fasteners.

24. Use two 3-cell 3700mAh packs or a single 6-cell 3700mAh pack and plug into the Series Deans connectors. Leave the jumper plug attached if using a single 6-cell battery.



25. A 7-channel computer radio is required to fly the F-18E. The following instructions are for the Spektrum DX-7 transmitter with the Spektrum AR7000 receiver. Make sure your screen matches the photos.

26. From the **INPUT SELECT** screen, inhibit **AUX2** and **FLAP**.



27. From the **WING TYPE** screen, Make sure all selections are **OFF**



28. In the **D/R SWITCH SELECT** screen select **INDIVID**. This sets all the control surfaces onto their own D/R switch.



29. The image to the right shows the positions for servo reversing. Select **REVERSING SW** from the radio menu and set channels 2 and 3 to reverse (REV). All other channels will be in the (NORM) position.



30. From the **D/R & EXPO** screen, select the **AILE** function. Set the dual rate switch for the ailerons to the “0” POSITION. Set the EXPO for +30 % to make the Ailerons less responsive in roll around the stick center. Set the D/R to 100%.



31. From the **D/R & EXPO** screen, select the **AILE** function. Set the dual rate switch for the ailerons to the “1” POSITION. Set the EXPO for +20 % to make the Ailerons less responsive in roll around the stick center. Set the D/R to 65%.



32. From the **D/R & EXPO** screen, select the **ELEV** function. Set the dual rate switch for the elevator to the “0” POSITION. Set the EXPO for +30 % to make the elevators less responsive in pitch around the stick center. Set the D/R to 100%.



33. From the **D/R & EXPO** screen, select the **ELEV** function. Set the dual rate switch for the elevator to the “1” POSITION. Set the EXPO for +20 % to make the elevators less responsive in pitch around the stick center. Set the D/R to 50%.



34. From the **D/R & EXPO** screen, select the **RUDD** function. Set the dual rate switch for the elevator to the "0" POSITION. Set the EXPO for +20 % to make the rudder less responsive around the stick center. Set the D/R to 100%.



35. Select **PROG.MIX1** from the radio menu. Set the mix for **ELEV** to **FLAP**. Make sure that the rates are both at -100% and that the switch is set to **MIX**. There should be no offset for this mix.



36. Select **PROG.MIX2** from the radio menu. Set the mix for **ELEV** to **AUX2**. Make sure that the rates are both at +100% and that the switch is set to **MIX**. There should be no offset for this mix.



37. Select **PROG.MIX3** from the radio menu. Set the mix for **AILE** to **FLAP**. Make sure that the rates are both at -100% and that the switch is set to **ON**. There should be no offset for this mix.



38. Select **PROG.MIX4** from the radio menu. Set the mix for **AILE** to **AUX2**. Make sure that the rates are both at -100% and that the switch is set to **ON**. There should be no offset for this mix.



39. On **LOW RATES** the Ailerons should move **1/2"** in both directions. The Thrust Vector units should move in the same direction as the Ailerons.

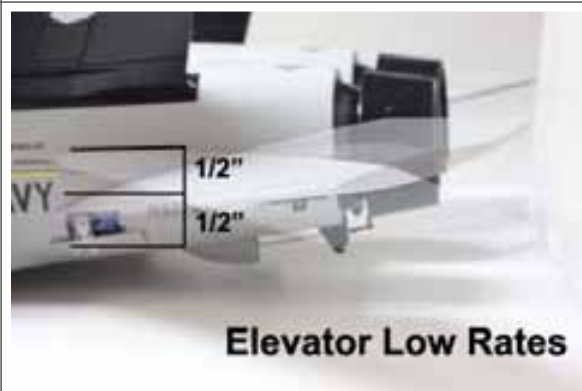
NOTE: When the Ailerons are in their neutral position the Thrust Vector Nozzles should be in their neutral positions also. If they are not you must adjust them mechanically by screwing or unscrewing the ball link connector to achieve a neutral position.



40. On **HIGH RATES** the Ailerons should move **3/4"** in both directions.



41. On **LOW RATES** the Elevators should move **1/2"** in both directions. When the Elevators moves UP both thrust vector units should move up.



42. On **HIGH RATES** the Elevators should move **3/4"** in both directions.



43. The Center of Gravity (**CG**) is measured from where the leading edge of the wing meets the fuselage. The CG range is **2-3/4" (70mm)** to **3" (75mm)**. This is an all-around good CG location; you may adjust this to your own flying style after initial test flights.



Midnight Flyers LED Position Lights

Your F/A -18E is equipped with 7 pre -installed high intensity LED's. An experienced R/C flyer that is comfortable with the F-18E can actually fly the jet in the dark with the supplied lights.

Recommended Control Throws

Ailerons	Low Rate	1/2" Up and Down
	High Rate	3/4" Up and Down
Elevators	Low Rate	1/2" Up and Down
	High Rate	3/4" Up and Down

Center of Gravity: 2-3/4" to 3" Back from the leading edge of the wing where it meets the fuselage.

Preflight

1. Aircraft assembled correctly and ready for flight.
2. All control throws and expos are set per this manual.
3. Transmitter fully charged and on correct model.
4. Aircraft balances at the recommended location.
5. Flight batteries are fully charged and secure.
6. All controls are operating correctly, proper direction, and secure.
7. Complete a radio range check per your radio manual.
8. Wait for a calm or light wind day for first flights.

Flying

We recommend that takeoffs and landings be made on LOW RATES. Initial flights should be made using LOW RATES until you are familiar with the aircraft. LOW RATES allow you to fly smooth pattern maneuvers. The jet is very stable with solid handling. On HIGH RATES with the Thrust Vectoring turned on, the airplane can perform amazing maneuvers. High Alpha Harrier flight is easy to steer using the thrust vector nozzles as your elevator and rudder controls. Flat spins are easily accomplished using full rudder and up elevator combined with a bit of opposite aileron. Example: Full left rudder, full up elevator and some right aileron to perform a left flat spin. Exit the maneuver by neutralizing the elevator and aileron and applying slight right rudder. This is a larger size model and requires the use of a scale type landing approach. Set up your final approach with a slight nose high angle of attack and about 1/4 throttle, allow the jet to settle applying a little throttle to arrest the descent and touch down on the main gear first. Let it roll out and avoid turning sharply when taxing fast.

2008 Official Academy of Model Aeronautics National Model Aircraft Safety Code

GENERAL

1. A model aircraft shall be defined as a non-human-carrying device capable of sustained flight in the atmosphere. It shall not exceed limitations established in this code and is intended to be used exclusively for recreational or competition activity.
2. The maximum takeoff weight of a model aircraft, including fuel, is 55 pounds, except for those flown under the AMA Experimental Aircraft Rules.
3. I will abide by this Safety Code and all rules established for the flying site I use. I will not willfully fly my model aircraft in a reckless and/or dangerous manner.
4. I will not fly my model aircraft in sanctioned events, air shows, or model demonstrations until it has been proven airworthy.
5. I will not fly my model aircraft higher than approximately 400 feet above ground level, when within three (3) miles of an airport without notifying the airport operator. I will yield the right-of-way and avoid flying in the proximity of full-scale aircraft, utilizing a spotter when appropriate.
6. I will not fly my model aircraft unless it is identified with my name and address, or AMA number, inside or affixed to the outside of the model aircraft. This does not apply to model aircraft flown indoors.
7. I will not operate model aircraft with metal-blade propellers or with gaseous boosts (other than air), nor will I operate model aircraft with fuels containing tetranitromethane or hydrazine.
8. I will not operate model aircraft carrying pyrotechnic devices, which explode, burn, or propel a projectile of any kind. Exceptions include Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight. Rocket motors up to a G-series size may be used, provided they remain firmly attached to the model aircraft during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code; however, they 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 Air Show Advisory Committee Document.
9. I will not operate my model aircraft while under the influence of alcohol or within eight (8) hours of having consumed alcohol.
10. I will not operate my model aircraft while using any drug which could adversely affect my ability to safely control my model aircraft.
11. Children under six (6) years old are only allowed on a flightline or in a flight area as a pilot or while under flight instruction.
12. 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.

RADIO CONTROL

1. All model flying shall be conducted in a manner to avoid over flight of unprotected people.
2. I will have completed a successful radio equipment ground-range check before the first flight of a new or repaired model aircraft.
3. I will not fly my model aircraft in the presence of spectators until I become a proficient flier, unless I am assisted by an experienced pilot.
4. At all flying sites a line must be established, in front of which all flying takes place. Only personnel associated with flying the model aircraft are allowed at or in front of the line. In the case of airshows demonstrations straight line must be established. An area away from the line must be maintained for spectators. Intentional flying behind the line is prohibited.
5. I will operate my model aircraft using only 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.
6. I will not knowingly operate my model aircraft within three (3) miles of any preexisting flying site without a frequency-management agreement. A frequency management agreement may be an

allocation of frequencies for each site, a day-use agreement between sites, or testing which determines that no interference exists. A frequency-management agreement may exist between two or more AMA chartered clubs, AMA clubs and individual AMA members, or individual AMA members. Frequency-management agreements, including an interference test report if the agreement indicates no interference exists, will be signed by all parties and copies provided to AMA Headquarters.

7. With the exception of events flown under official AMA rules, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and located at the flightline.
8. 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.
9. Radio-controlled night flying is limited to low-performance model aircraft (less than 100 mph). The model aircraft must be equipped with a lighting system which clearly defines the aircraft's attitude and direction at all times.
10. The operator of a radio-controlled model aircraft shall control it during the entire flight, maintaining visual contact without enhancement other than by corrective lenses that are prescribed for the pilot. No model aircraft shall be equipped with devices which allow it to be flown to a selected location which is beyond the visual range of the pilot.

WARNING – THIS IS NOT A TOY! Radio controlled model aircraft are capable of inflicting serious injury and/or property damage if not assembled, operated, and maintained in a competent and safe manner. If you are not already experienced with radio controlled models, we strongly suggest that you find an experienced modeler to assist you.

Warranty

Freewing 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 event shall Freewing's liability exceed the original cost of the purchased kit.

Completely read through this manual before starting construction.



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