# Instruction Manual

.J.VE

**Specification:** Wingspan: 1332mm (51.3") Length: 1055mm (41.5") Weight: 1660g (Approx.) Radio: 4-5 Channel (Required) IC Engine: Irvine .36 or .39 (Recommended)



#### Introduction

Congratulations on your purchase of the J!VE Fun Fly. This fun model is ideal for use as a sports model or top level competition machine using its large control surfaces and detachable Side Force Generators.

Before you build the model, please read the instructions the whole way through to understand the construction sequence.

#### Required to Complete

- 5 Minute Epoxy
- Thin & Medium Cyano
- Screwdriver (X Head)
- Adjustable Spanner
- Wire Cutters
- Drill & Drill Bits

#### Contents

- Wings
- Ailerons (x2)
- Fuselage
- Tailplane
- Elevator
- Fin
- Rudder

- Knife & Sharp Blades
- 4~5 Channel Radio
- 4x Standard Servos
- 1x Mini Servo
- 2x 200mm Extension Lead
- 2x 100mm Extension Lead
- Side Force Generators (x2)
- Tail Skid
- Dowel Rods (x2)
- Engine Mount
- Undercarriage
- Wheels
- Hardware Pack

- Switch Assembly
- 4.8v 1000mAh Square Battery
- Fuel Tubing
- .36 ~ .39 2-Stroke Engine
- Wing Bands
- Closed Loop Pack
- Packing Foam
- Fuel Tank
- Velcro Strips
- Decal Sheet







The hinges are all supplied loose fitted ready for installation. Glue the hinges into the ailerons with a couple of drops of thin cyano on each to secure. Ensure the glue soaks into the hinge & surrounding wood.

#### Step 2

Slot the aileron onto the hinges, ensuring a gap free hinge line and making sure both ailerons line up with the wing tips. Minimise any hinge gap then add a couple of drops of cyano to each hinge. Turn the wing over and drop more cyano onto each hinge.

#### Step 3

Connect an extension lead to your aileron servo. It is a good idea to secure the extension using a lead-lock, insulation tape or heat-shrink tube.

#### Step 4

Cut the film away from the servo aperture in the bottom of the wing.

#### Step 5

Tie the end of the extension lead to one end of the string in the wing.











Cut away the film from the hole in the centre of the wing. You can now pull the string gently through the hole and feed out the extension lead.

#### Step 7

Position the aileron servo in the wing with the horn pointing towards the wing tip and output arm towards the trailing edge of the wing. Now pilot-drill holes for the mounting screws with a small drill.

#### Step 8

Fit the rubber grommets and ferrules, then screw the servo in position using the screws supplied with your servo.

#### Step 9

Position the aileron horn 1mm back from the leading edge on the underside of the aileron in the centre of the ply reinforcement as per

the ply reinforcement as per the diagram. Pilot-drill the holes for the mounting screws.

e	
1mm	

#### Step 10

Screw on the aileron horn, ensuring you hold the horn back plate in position so that the mounting screws thread into the moulded back plate.









Turn the wing over and trim off any excess thread using side cutters.



#### Step 12

Now hold the aileron pushrod wire firmly and attach a plastic clevis.



#### Step 13

Clip the clevis onto the horn in the hole 2nd out from the surface of the wing.



#### Step 14

With the aileron held in its neutral position and the servo centred, mark the wire where it crosses the servo arm. If the wing is fitted to the fuselage, the ailerons are at neutral when the bottom surface of the trailing edge is 7mm above the surface of the fuselage.

#### Step 15

Bend the wire up at 90 degrees where marked.





Slide the aileron servo horn over the wire, re-fit to the servo, then slide the swing-in keeper onto the wire and clip into place.



#### Step 17

Trim the excess wire 2mm above the keeper using side cutters.

Repeat this process for the other aileron servo.

#### Step 18

If you wish to use the Side Force Generators, trim the covering away from the bolt holes on the wing tips.





#### Step 19

Also trim the covering away from the mounting holes on both sides of the Side Force Generators.



#### Step 20

Bolt the Side Force Generators to the wing tips using the nylon bolts supplied.



Install the "Aileron 1" and "Aileron 2" identification tags to the extension leads.



#### Step 22

Secure the hinges in the tailplane using a couple of drops of cyano on each.



#### Step 23

Slot the elevator onto the hinges keeping the hinge gap to a minimum and run thin cyano in the hinges on both sides, ensuring the glue soaks into the hinge and surrounding wood.

#### Step 24

Now secure the hinges into the fin using a couple of drops of cyano on each.





#### Step 25

Slot the rudder onto the hinges and keeping the hinge gap to a minimum, run cyano into both sides of each hinge.



Place the tailplane in position on the fuselage and turn it upside down. Carefully check that the tailplane is square and centred in relation to the fuselage. Now mark the position of the fuselage on the tailplane.



#### Step 27

Using a sharp knife blade, carefully cut the film from the tailplane inside the marked lines.

IMPORTANT: Do not cut the wood, as this will seriously weaken the tailplane.

#### Step 28

Thoroughly mix up some 5 minute epoxy.





#### Step 29 Apply the epoxy evenly to the fuselage.



#### Step 30

Position the tailplane on the fuselage ensuring it is square and hold firmly in position until the glue has cured.



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Carefully cut the film away from the fin slot.



#### Step 32

Place the fin in its slot and mark the position of the fuselage on the film on the fin.



#### Step 33

Mark the fuselage where the fin is positioned. Remove the fin then cut and remove the film from the fuselage so that the fin has a completely film free surface to bond to.

#### Step 34

Cut the film away from the bottom of the fin below the marked lines.

IMPORTANT: Do not the cut the wood, as this will seriously weaken the structure.



#### Step 35

Thoroughly mix some 5 minute epoxy and apply it to the base of the fin and where it joins the fuselage.



Glue the fin in position in its slot in the fuselage. A great way to ensure the fin is perpendicular to the tailplane is to use an empty CD case or set square.



#### Step 37

Just as you did with the fin, trim the excess film from the tab on the tail skid.



#### Step 38

Trim away the film from the slot in the bottom of the fuselage. Insert the skid and mark its position then remove it and cut the excess film away from the fuselage.

#### Step 39

Now glue the skid in place using thick cyano, ensuring that it is square to the fuselage.





#### Step 40

Place the landing gear in position at the front of the fuselage ensuring that it is centred on its plywood mounting plate. Clip the mounting brackets in place as shown and mark the position of the mounting holes.



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Pilot-drill the holes for the retaining screws.



#### Step 42

Screw the landing gear in position. Note that the undercarriage should be angled forwards.



#### Step 43

Install the wheels by fitting a collet on the axle, then install the wheel, followed by another collet. Take care to ensure the wheel moves freely but doesn't slide sideways on the axle. Tighten the grubscrews in both collets using thread locking compound if required.

#### Step 44

Trim away the film covering from the wing dowel holes.





#### Step 45

Place the wing dowels in position ensuring that they are centred, then glue in place using thin cyano. Note that the longer dowel is for the front and the shorter dowel is for the rear.



Cut the unused moulding away from the engine mount as shown and trim flush.



#### Step 47

Assemble the mount and position in place on the firewall. Screw the mount in position but do not tighten the screws fully yet.



#### Step 48

Position the engine on the mount, ensuring there is room for the fuel lines behind it and mark the engine mounting holes.

#### Step 49

Drill the holes for the self-tapping mounting screws. Do not drill the holes too large or the screws will not be secure.





#### Step 50

Tighten the firewall mounting screws. Now screw the engine firmly in place.





#### Step 51 Bolt the silencer in position.



#### Step 52

Assemble the bung for the fuel tank as shown. Bend the breather pipe up and place that high in the rubber bung, and the small pipe lower for the fuel feed. Use the supplied thin walled tubing for the clunk ensuring that the clunk doesn't hit the back of the tank. Use the screw and metal plates to tighten the bung in the neck of the fuel tank.

#### Step 53

Overlap the Velcro strips 30mm and glue them together making a strap. Now feed the strap under the fuel tank mounting plate as shown.

### Step 54

Wrap the fuel tank in a piece of foam, feed the two fuel tubes through the firewall and retain the tank in place with the velcro strap.

#### Step 55

Screw the black clevis onto the bowden style throttle cable. Slide the cable into the throttle tube from the front and connect the clevis to the carburettor throttle arm.





Pilot-drill the servo mounting holes and screw them in place as shown right, noting the orientation. Use the rubber grommets & ferrules supplied with your radio.



#### Step 57

Install the pushrod connector to the throttle servo horn and use a drop of cyano to secure the retaining nut in place.



#### Step 58

Position the carburettor half open.



#### Step 59

With the throttle in its mid-position, screw the cable in position with the horn at 90 degrees to the cable.



#### Step 60

Remove any excess throttle cable using side cutters.



Cut the last hole off of the elevator horn and trim along the red lines shown in the diagram right.

#### Step 62

Screw the clevis onto the elevator pushrod, and clip to the horn.

#### Step 63

Slide the elevator pushrod down the pushrod tube in the fuselage and mark the position of the horn on the elevator. Now screw the horn to the elevator

using the same method as the ailerons.

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#### Step 64

With the elevator level and the elevator stick at its neutral position, mark the elevator pushrod where it crosses the elevator servo arm.

#### Step 65

Bend the pushrod 90 degrees in the same way as the ailerons and clip off any excess wire.

(Shown outside of the fuselage for clarity)







Connect the pushrod to the elevator horn and install the swing-in keeper.



#### Step 67

Cut the film away from the rudder control horn mounting hole.



#### Step 68

Assemble one half of the rudder closed loop horn as shown.



#### Step 69

Install the horn in the rudder checking carefully that it is in the centre and tight. Then use a drop of cyano to lock into position.



#### Step 70

Cut the closed loop wire exactly in half using side cutters.



Loop one end of wire through one of the closed loop adaptors and slide the crimp tube over the looped wire. Crimp the tube on the wire gently using a pair of wire cutters at multiple points. For additional security use a drop of cyano too.

Repeat for the other cable and adaptor.

#### Step 72

Cut the film away from the closed loop cable tubes in the fuselage. Connect the clevises fitted to the closed loop adaptors to the rudder horn and slide the cables down the tubes.

#### Step 73

Slide a crimp tube over the cables and feed them through the adaptors. Now clip the two remaining adaptors (not screwed tight so there is still adjustment) to the servo arm. Pull both cables tight keeping the rudder straight and squeeze the cables at the adaptors. This bends the wire so you can re-install it in the same place as you crimp them separately.

#### Step 74

Remove the arm from the servo to reduce tension. Ensuring the cables are in the same position as the bends carefully crimp the tubes to secure the cables in place. Now re-attach the servo arm and slide the retaining fuel tubes onto the clevises.

#### Step 75

Cut off the excess cable a few millimetres after the crimps. For additional security add some cyano onto the wire crimps.







Install the battery on a piece of foam behind the fuel tank using the same method as the fuel tank with the remaining Velcro straps.



#### Step 77

Mark and cut a hole for the switch in the balsa on the right hand side of the fuselage.



#### Step 78

Install the switch, being careful not to overtighten and crush the balsa.



#### Step 79

Install the receiver on the other side the fuselage using two layers of double sided tape. There is extra tubing included in the kit allowing you to glue them to the side of the fuselage and slide the aerial wires in. At this point connect your servo/switch/battery leads and use the included cable ties to bundle the wires neatly together and clear of the throttle servo.

#### Step 80

Install your choice of Fun-Fly propeller and the construction is complete.





#### Control Throws

For initial flights we recommend you fly with the sport settings first until you get a 'feel' for the airframe.

#### Sport

Ailerons	Up	35mm	(35% Exponential)
	Down	35mm	(35% Exponential)
Elevator	Up	30mm	(30% Exponential)
	Down	25mm	(20% Exponential)
Rudder	Left	50mm	(0% Exponential)
	Right	50mm	(0% Exponential)

#### Advanced

Ailerons	Up	70mm	(50% Exponential)
	Down	70mm	(50% Exponential)
Elevator	Up	55mm	(50% Exponential)
	Down	35mm	(40% Exponential)
Rudder	Left	75mm	(25% Exponential)
	Right	75mm	(25% Exponential)

#### Flaperons

Enabling a flaperon mix will help the model to loop tighter at slower speeds. On Advanced settings the ailerons should move 30mm down with up elevator and 20mm up with down elevator. If you can, add this mix on a switch so that you can disable it for spins.

### Balancing the J!VE

The Centre of Gravity (C/G or Balance Point) should be 110mm (4.3") back from the leading edge of the wing at the root. This should be measured with the fuel tank empty. Support the completed model under the wing either side of the fuselage, add weight to the model if needed to achieve a level attitude. **Do not miss out this important step!** 

#### Spare Parts and Service

Spare parts are available for the J!VE from all Ripmax stocked model shops. In case of any difficulty, any product queries, or to locate your local Ripmax stockist, please write to the address below or visit www.ripmax.com











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#### **Pre-Flight Checks**

- Completely charge your transmitter and receiver batteries before flying.
- Carefully check your model over to ensure that all screws are tight and everything is well bonded.
- Double-check the Centre of Gravity.
- Check the control surfaces for both the correct throw and direction. Ensure that each surface moves freely, without any binding.
- Ensure the wing bands are secure.

Always fly the JIVE in a safe location at a recognised club. For further information on flying in the UK, please contact:

British Model Flying Association (BMFA) Chacksfield House, 31 St Andrews Road, Leicester. LE2 8RE

Tel: (+44) 116 2440028 Fax: (+44) 116 2440645 www.bmfa.org



#### **Flying Notes**

Fun fly models are designed for slow speed manoeuvrability and should be treated as such. The J!VE can be flown at walking pace and will even fly backwards in a head wind! Above 50% throttle should only be used for climbing. Flying the airframe around at high throttle can overload the large 3D surfaces and cause damage due to the stresses involved.

The undercarriage had been designed for use in touch and go competitions and has supports half way down the wire legs. You can use rubber bands between them and increase the strength for competition use.

The J!VE's most noticeable feature are the wing tip plates or Side Force Generators. On the J!VE they perform a few functions. They allow the model to fly in 'knife edge' with minimal coupling and help to track the model straight at slower speeds. Try flying with and without them to see the difference in flight performance.

Fun Fly style manoeuvres are about energy conservation and precision, despite how crazy they may look! Use the diagrams on the next page as a guide on how to perform some of the manoeuvres the J!VE excels at.

#### Limbo

To compete in limbo you have to fly under a ribbon as many times as possible in a designated time. You can loop around the ribbon or fly a tight circuit. The score stops when you run out of time or cut the ribbon. Typically an old VHS tape unreeled makes a great ribbon to fly under. The limbo dimensions are 6ft high & 25ft wide

#### Touch and Gos

Using the same techniques as the limbo you must perform as many touch and gos in a designated area (typically a 20ft box) within the time limit as you are able.



#### Climb and Glide

One of the simpler events, climb and glide involves a short time at full throttle (typically 20 seconds) to gain height. You then cut the engine and glide for as long as possible. Land in the a designated area (typically a 20ft box) for a 10% time bonus.

#### Triple Thrash

The triple thrash involves taking off, performing 3 Touch and Go's, 3 rolls and then 3 loops. The timer starts when the wheels leave the floor and stops when they touch again. You must take off again to prove you landed rather than 'arrived'.

## 3x Rolls 3x Touch & Go

#### Scoring

All events are scored out of 100. So the winner of each event is awarded 100 points and the others are calculated as a percentage of the highest score.



#### Photocopy to Use

# **Club Competition Chart**

#### Climb and Glide

Longest flight from 20 seconds of power.

Name	Score

#### Limbo

Perform as many passes under the limbo ribbon as possible in 2 minutes.

Name	Score

#### Photocopy to Use

# **Club Competition Chart**

#### Triple Thrash

Perform three "Touch and Gos", three rolls and three loops in the shortest time possible.

Name	Score

#### Touch and Gos

Perform as many touch and gos in the designated area in 2 Minutes.

Name	Score



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### Always Fly Responsibly and Safely.

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