

**Dennis Tapsfield's simple to build aerobatic/soarer uses a basic and cheap Ferrite buggy 22-turn motor, standard radio gear and a 7 cell flight pack, easy to charge from 12 volts (car battery). All up weight 44ozs. KEEP IT LIGHT!**

The undercarriage has been so designed that it can be removed completely quite easily should you be flying from very rough terrain. This really makes Lecky a versatile model that should suit a wide variety of situations.

This model was designed for 6 good reasons:

- 1 To be easy to launch on one's own - e.g. high wing.
- 2 Cheap to build and operate.
- 3 Reasonably aerobatic on rudder and elevator.
- 4 To be flown over rough fields if necessary.
- 5 To use a 7 cell flight battery e.g. no Mega Bucks charger required.
- 6 To use a cheap Ferrite buggy motor, in this case a 22 turn Club 10 Schumacher buggy 540 that costs around £6.00 (\$10.00).

This is, one of my more recent forays into the world of electrics

**It is even more important in an electric model than it is in an i.c. model to get the CG right by moving radio gear and battery about rather than adding lead. When you have the CG in the correct position, do make sure that the power pack can't move in flight!!**

(my last was in 1974). I can put it in the car, 2 minutes up the road, onto the field, switch on and fly. 10 minute flights are the norm, if you catch a thermal, even longer. I have 2 or 3 charged flight packs with me, if I wish to fly more I charge them up from the car battery.

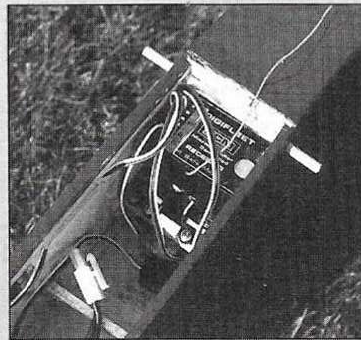
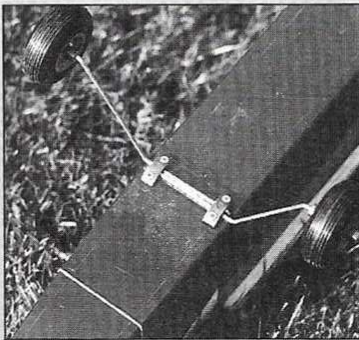
If the area is a rough field, I remove the landing gear and belly land it perfectly safely.

I do not claim it to be anything special in looks but it does fly well. It climbs away well from a hand launch, to a height where you could easily catch a thermal and soar with the smaller wing, even better with the bigger one. Snap rolls are quick when combined rudder and elevator are applied, loops are really sharp from level flight, stall turns are good, it spins very well with the CG (balance point) where shown on the plan coming out instantly on neutralising the controls. It's not too good on inverted flight, mainly due to the thick wing section but you can't win 'em all!

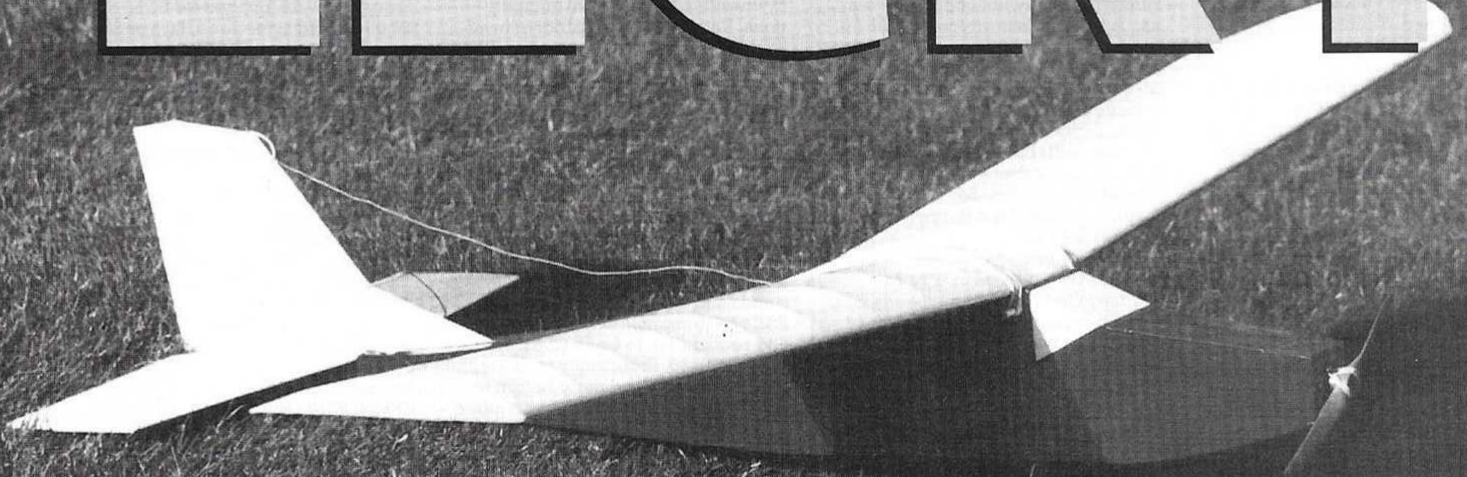
**THE WING**

Decide on which wing you need - clipped or standard (48in. or 53in.). It is most aerobatic with the clipped (small) wing.

Commence by making the main spars from the 1/2" x 1/4" hard balsa and gluing the 1/8" x 1/4" spruce top and bottom. It is best to use PVA glue for this. Bind the spars with a soft cord or string and check for straightness while the glue is still wet. Set aside and allow to dry. Cut all the standard ribs - 14 or 16 - from 3/32" sheet and the 4 centre ribs from 1/8". Make the dihedral braces from 1/8" hardwood (not ply!). Clean up the spars and glue the dihedral braces onto one spar. When set, take it and pin it in place on the plan together with the 1/16" x 1 1/4" bottom trailing edge. Make sure that the ribs are not too tight a fit on the spar as this could distort the wing. Glue the ribs in place on the spar and trailing edge and the 1/4" x 1/4" leading edge and the top of the trailing edge. Allow the assembly to set. Glue in the other main spar between the dihedral braces at the correct dihedral angle. When set, build the second wing in the same way as the first. When all is set, sheet the centre section with 1/16" sheet, top and bottom, and add the wing tips. When all is set, clean up generally, shape the leading edge and PVA glue one layer of 1 1/2" wide glass cloth over the centre join of the wing.



**LECKY**



The completed model. Span is 47" with a chord of 8 1/2". Motor is a Schumacher Club 22 turn 540 which sells at around £5.95. Standard servos, receiver and battery are installed on elevator, rudder and motor only - motor being operated via a Fleet controller. AUW is just 44ozs and this makes her very aerobatic.

**The front end is always neat and simple on an electric job! The fuselage sides are drawn together at the front and glued just like the tail end.**

## FUSELAGE

Cut the two sides from 3/32" sheet balsa (medium). Cut the slots for the formers, add the 3/32" x 5/8" stiffeners for the wing seating, add the 3/16" x 3/16" balsa stiffeners forward of F1. Cut the motor mount and the formers from the materials specified on the plan (it is important that the motor mount is cut from Birch or similar ply for strength). Join the two sides together with formers 1 and 2 and allow to set. Draw the tail ends together with a piece of 1/8" balsa sandwiched between the sides, clamp together and check that the fuselage is not twisted. Pull the nose together and glue in the motor mount formers. When all is dry, glue in the blocks for the landing gear. Position them so that they stand proud of the bottom of the fuselage and finish flush with the bottom sheeting.

Sheet the bottom of the fuselage with 3/32" sheet, cross-grain up to F1 and 1/16" sheet cross grain behind F1. (Do not sheet the top of the fuselage yet). You should now fit the two standard servos where shown.

Make the tailplane and elevator from 3/16" soft balsa and the fin and rudder from 1/8" soft balsa.

Sheet in the last 4" (forward of the horizontal stabiliser) with 1/16" sheet, make the holes for the snakes and thread them through former 3 and epoxy in place.

You can now complete the sheeting and clean up all round prior to covering. Drill the vertical blocks for the landing gear (you can drill the blocks prior to gluing them into the fuselage if you find it easier).

## LANDING GEAR

This is bent up from 12swg (.104") wire as shown on the plan. Both left and right are the same. Retain the wheels with collets each side. Do make sure that you have the lightest wheels you can get to avoid too much cargo! Retain gear in place with two wire saddles.

## COVERING AND FINISHING

The entire model is covered with Solarfilm for lightness.

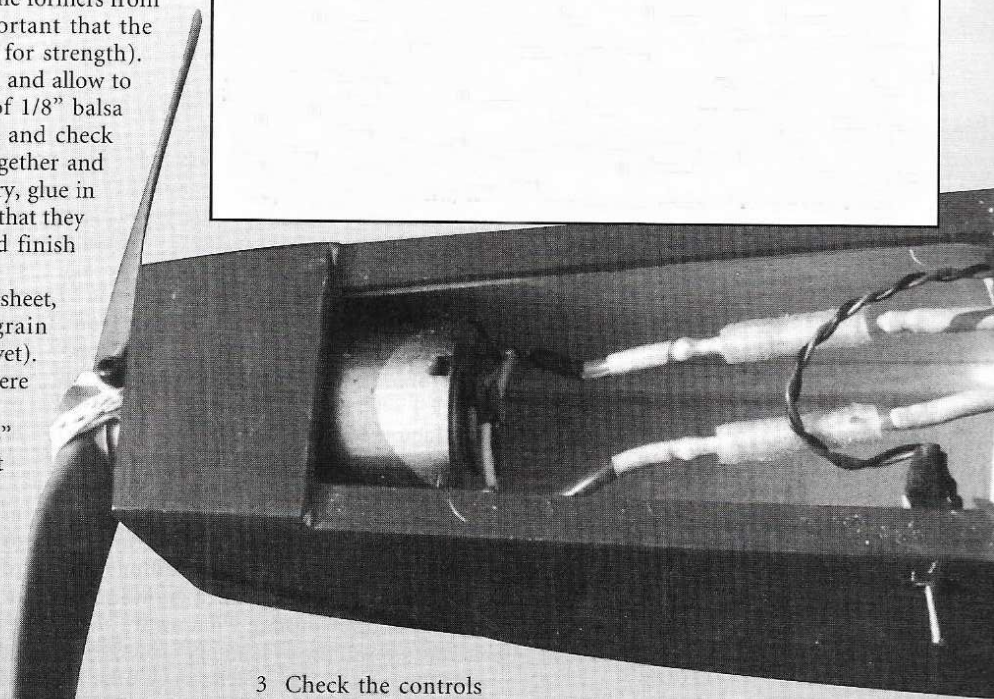
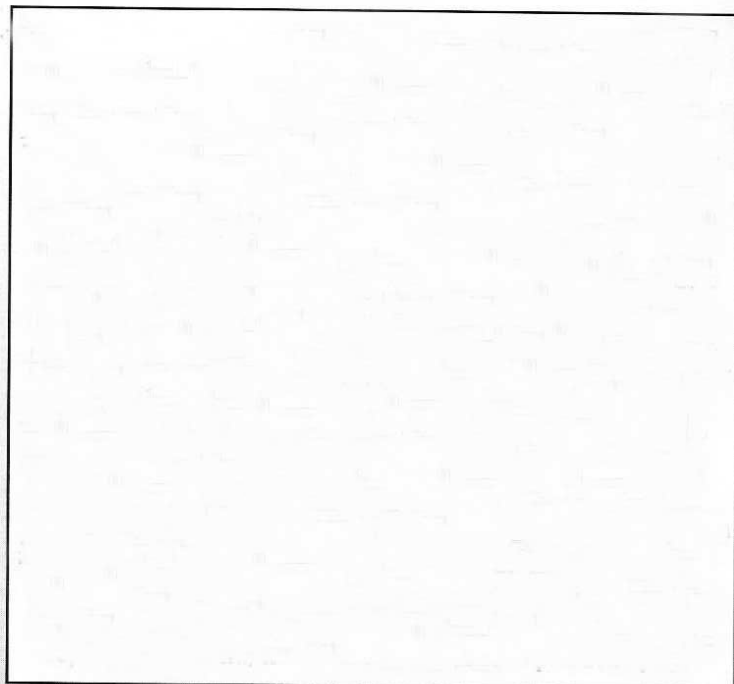
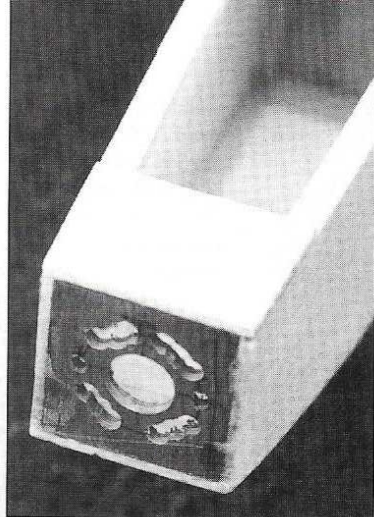
Now is the time to assemble the model and establish the balance point by fitting everything in place. It is best if you can set the balance point by moving the flight battery. Ensure that it cannot move in flight and that it can always be replaced in exactly the same position when removed and replaced by either blocking all round (not forgetting that it can lift upwards during aerobatics!). Maybe you will find Velcro a help but don't rely on it totally!

## FLYING

This is the fun bit and if you've done everything right you've got a treat in store.

1 Double check the balance point (slightly nose down).

2 Make sure everything is charged up fully, if you have a tachometer, you should get around 12,000rpm with a 7x4 APC propeller.



3 Check the controls work in the correct sense.

4 Check control movements (see drawing). Elevator 3/4" up and down, rudder 1 1/4" each way. If you prefer it, this can be reduced but aerobatics will suffer.

5 Make sure the radio does not cause any radio interference e.g. range check with the motor running. The motor should be properly suppressed to avoid this.

6 For the first flight get a friend to launch it so that you have both hands on the sticks. Once trimmed out a solo performance is a snap!

Of course, if you have a smooth surface, point the model into wind (not too strong a wind for the first flight) and take off.

Have fun with it - I do!

**There is plenty of room in the 'engine bay' for all the necessary wiring, switches etc. Do make sure that you have no radio interference from the motor before your first launch.**

**Light is Right! The basic box fuselage is kept as light as possible for maximum performance.**

