

# Electric Retracts

## 22-33cc Size Electric Retracts

# INSTRUCTION MANUAL

Thank you for purchasing these Aircraft Mechanic Electric Retracts. These self-contained units are designed to be simple to install. They are powered from your model's receiver and do not require separate servos or tricky linkages.

Note: Mains and Nose retracts are sold separately.

The main retracts are supplied with sprung oleo struts installed, plus wheel axles, hex wrenches and a 3-into-1 wiring harness. The length of the oleos can be cut down by up to 50mm from the standard length.

The nose gear unit is steerable and is fitted with ball links to allow the installation of steering cables that slacken when the wheel is retracted and is supplied with wheel axle, wheel collar and hex wrenches.

### Specifications

(Subject to change or improvement without notice).

- Current draw at idle: 12mA
- Operating current 500-700mA (full stall 1.4-1.6A)
- Pulse width trigger points: Down 1.205ms, Up 1.786ms
- Operation with FM and DSM
- FM 22ms frame rate, 5V signal
- DSM 20ms frame rate, 3.3V signal
- Sequence time: @ 6.0V 4.0sec, @ 7.4V 3.5sec
- Operating voltage range: 6.0 – 7.4V
- Aircraft weight: 6.5kg – 9.0kg
- Unit weight: Nose gear 122g, Strut 113g
- Main gear 122g each, Struts 113g each

### BOX CONTENTS

(Mains and Nose retracts sold separately)

#### 4406355 - Electric Retracts 22-33cc Main Set And Legs (2)



Includes two (2) Aircraft Mechanics 22-33cc size 90° electric retract units, sprung oleo struts, 3-into-1 extension lead, wheel axles and hex wrenches.

#### 4406360 - Electric Retracts 22-33cc Nose Set And Leg (1)



Includes one (1) Aircraft Mechanics 25-46 size 90° electric retract nose unit, sprung oleo strut, wheel axle, wheel spacers and hex wrenches.

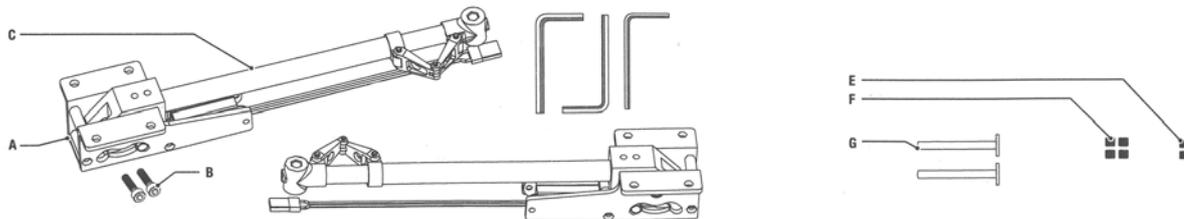
### WARNING:

- Read the ENTIRE instruction manual to become familiar with the features of these electric retracts before operating.
- These are sophisticated hobby products. They must be operated with caution and common sense and require some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury, damage to the product or other property.
- This product is not intended for use by children without direct adult supervision.
- Do not attempt to disassemble, use with incompatible components or modify the product in any way.
- It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.
- Age Recommendation: Not for children under 14 years. This is not a toy.

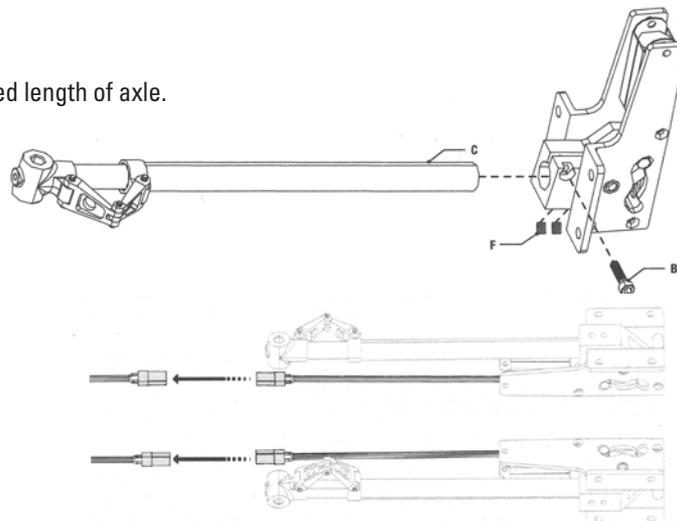
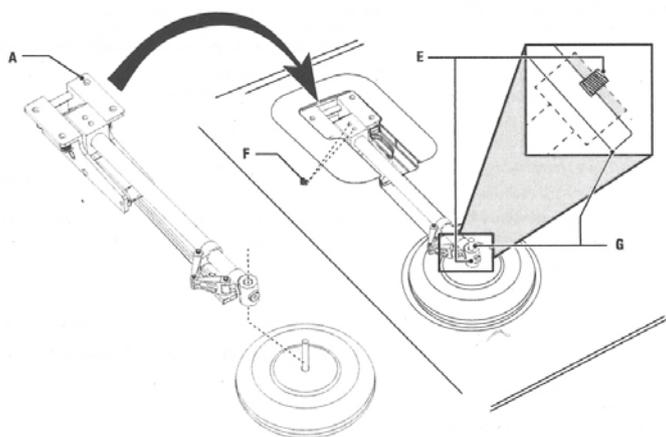
# INSTALLATION

**WARNING:** Always ensure the retracts and wheels are installed so that there are no obstructions when extending and retracting the struts and that the wheels roll straight when the rudder is at neutral. Failure to do so could result in damage to the aircraft or gear.

**Note:** If the retract unit should fail to reach the end of its travel and does not retract or extend fully, operate your retract switch again and check for an obstruction. The retract will not pull current from the battery if it is stalled and unable to retract or extend.



1. Install the left and right retract in your aircraft (right retract (A) shown below) using M4x20mm screws or M4 countersunk wood screws (purchase screws separately).
2. Assemble the axle (G), wheel and setscrew (E) onto each strut.
3. Tighten the setscrew (E) in the strut to mark the axle, then mark the required length of axle.



4. Loosen the setscrew, remove the axle and use a file to make a flat spot at the mark you made with the setscrew. Now cut the axle to length using the other mark you made.
5. Install the wheel/axle assembly on the strut (C) and tighten the setscrew (E) using thread lock.
6. Measure and cut the strut to length as needed. Install the strut into the retract, aligning the strut/wheel so that the aircraft rolls straight. Tighten the Trunion screw (B). Install the strut setscrews (F) and tighten using thread lock.

**If installing these retracts on wooden mounting rails, pre-drill holes smaller than your mounting screws first. Install the mounting screws in the drilled holes, then carefully remove them. Harden the threads in the wood using thin CA (cyanoacrylate adhesive).**

6. Operate the gear and position the wheel in the centre of the wheel well, then mark strut (H) for length.
7. Operate the gear and position the axle assembly on the strut so that the aircraft rolls straight, then tighten the axle screw to mark the strut.
8. Remove the axle assembly, cut the strut (H) to length and file flat spots (F) on the strut where you previously marked it.
9. Install the axle assembly on the strut and tighten screws using threadlock. Two setscrews (L) hold the strut into the retract unit.

## RADIO CONNECTIONS AND OPERATION

**Use caution when connecting all extension leads so you maintain correct battery polarity. The BLACK wire is negative (-), the RED wire is positive (+) and the WHITE wire is signal (Л).**

1. Plug the extension lead on each retract unit into the supplied 3-into-1 extension lead, then plug the male end of the 3-into-1 extension lead into the retract channel on your receiver. (Depending on the brand of radio, you may use the Aux or another channel you have set aside for retracts).
2. Power on your transmitter and then your receiver.
3. Operate the channel control on your transmitter to which you have connected the gear.
4. The gear channel may need to be reversed in your transmitter for correct operation.

This product complies with the EU directive on Waste Electrical and Electronic Equipment. Do not dispose of this product in household waste. At the end of the product's life, dispose of it at a designated collection point for the recycling of waste electrical and electronic equipment. Please contact your supplier for any advice required on disposal.

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