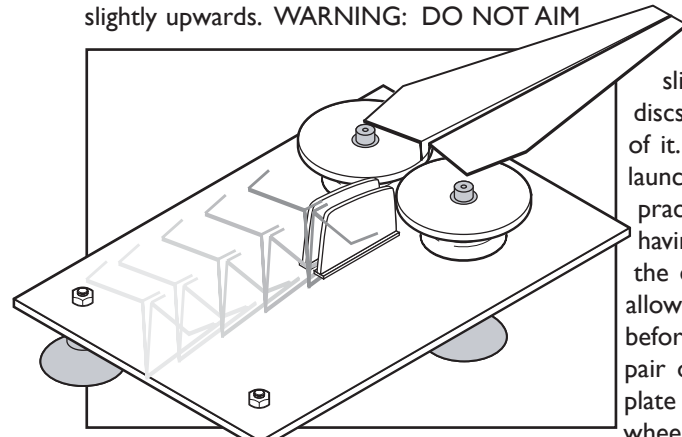


E. USING YOUR ELECTRIC PLANE LAUNCHERS

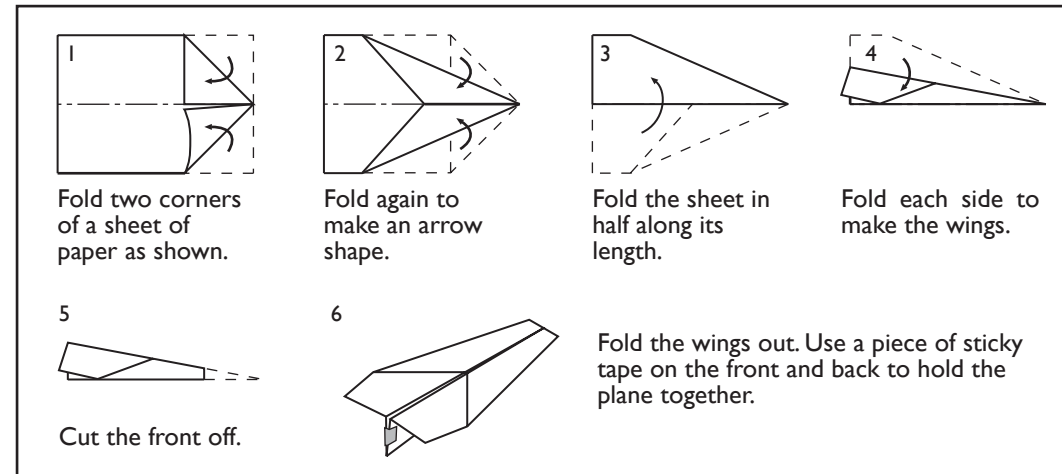
Fold a piece of paper to make a paper plane. One way of making a paper plane is shown below. Switch on the plane launcher and hold it in one hand with the plastic discs at the front pointing slightly upwards. **WARNING: DO NOT AIM**



THE LAUNCHER AT ANOTHER PERSON. With the other hand, gently slide the paper plane towards the spinning discs. As soon as the discs grip the plane let go of it. The plane should be pulled through and launched at high speed. Note: It may take some practice to achieve a good launch. If you are having problems check that the gap between the discs is not too big. Also, make sure you allow a few seconds for the discs to speed up before launching a plane. Your kit includes a pair of guides that can be fitted into the base plate to help guide your plane into the spinning wheels when launching. You may adjust the base

plate tilt angle by installing the long screw suction cup to holes along the centre line, then fine tune the angle by adjusting the nuts positions. Or you may simply take away the long screw suction cup and adjust the angle by holding the base plate with your hand.

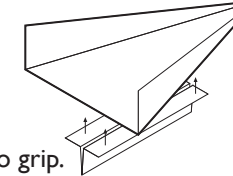
F. HOW TO FOLD A PAPER PLANE



WARNINGS: DO NOT FOLD POINTED PLANE DESIGN FOR SAFETY CONCERN.

G. WHAT NEXT

Try out some different paper plane designs. You might get some ideas from books or the internet. Which designs fly farthest? Which designs stay in the air the longest? Can you make an acrobatic paper plane? Note: the paper plane must have a vertical base strip for the launcher to grip. For paper planes with a flat base a separate 'launch strip' may be stuck on with tape. Design your own paper plane graphics.



H. FUN FACTS

Your electric plane launcher has been designed to launch paper planes at high speed. With your launcher you can try out different paper plane designs to see which ones fly farthest or which ones do the best acrobatics.

I. HOW DOES IT WORK?

The plane launcher uses two rotating plastic wheels. A lot of energy is stored in these wheels when they are spinning. If you slip a paper plane in between, some of the energy is transferred to it and the plane is thrown out at high speed. Ball launchers for tennis and cricket practice work in the same way except the gap between the wheels is much greater.

Strange but true

The plane launcher can throw a paper plane much faster than you can by hand. If you scaled the plane up, it would be flying faster than a real one!

Strange but true

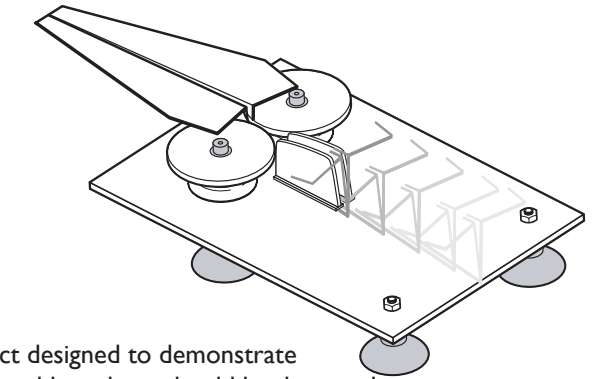
Paper has been made for over 500 years and is now one of the most common and inexpensive materials. But many trees are needed each year just to supply one family with all the paper it needs.

The design and flying of paper planes is big business with professional engineers taking part in world-wide competitions. Many claim to have made the perfect plane, but can you do better - and prove it.

J. QUESTION AND COMMENTS

We treasure you as a customer and your satisfaction with this product is important to us. In case you have any comments or questions, or you find any parts of this kit missing or defective, please do not hesitate to contact our distributor in your country, whose address is printed on the package. You are also welcome to contact our marketing support team at Email: infodesk@4M-IND.com, Fax (852) 25911566, Tel (852) 28936241, Web site: WWW.4M-IND.COM

ELECTRIC PLANE LAUNCHER



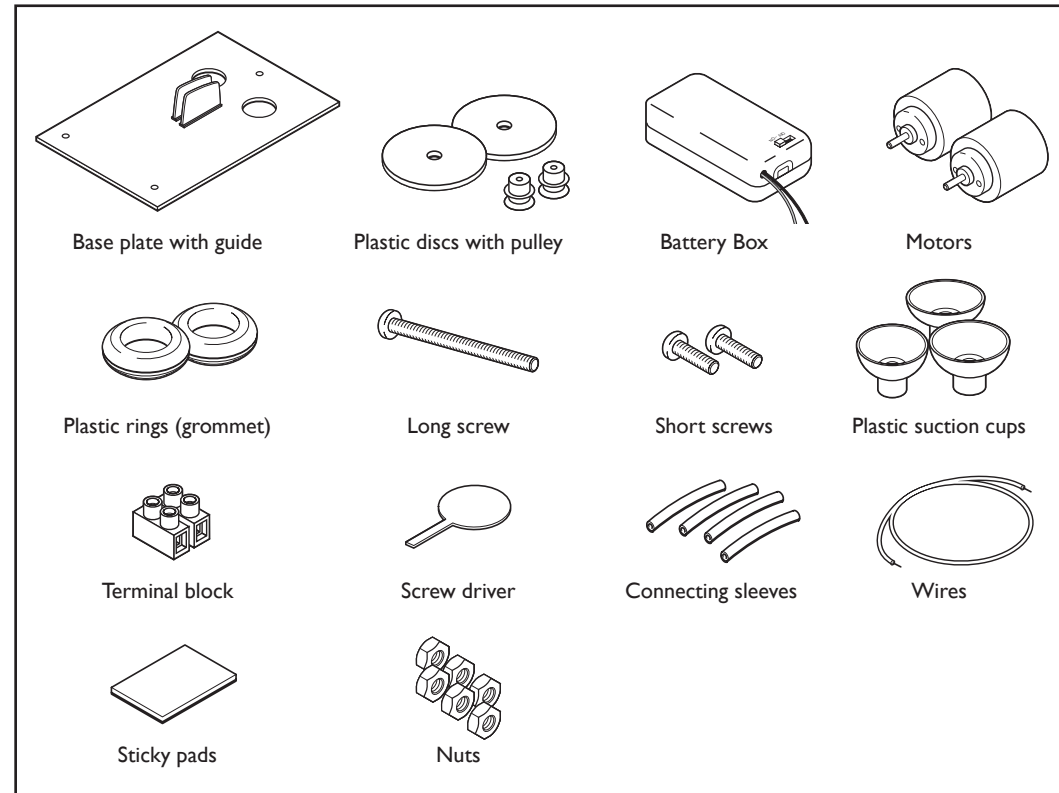
A. SAFETY MESSAGES

1. This is not a toy. This is an educational aid product designed to demonstrate scientific concepts taught in school curriculum. Assembly and use should be done and supervised by adults or by age over 14. Read through the instructions before use. Misuse of contents may cause safety hazards.
2. Metal wires plate and wires may contain sharp points, adult assistance required during connection.
3. Never touch the contacts inside the battery case to prevent possible short circuit.

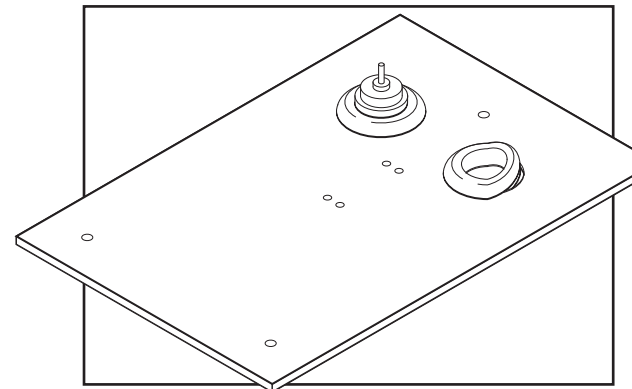
B. USE OF BATTERY

1. Requires two "AA" batteries (Not included).
2. For optimum operation, always use fresh batteries.
3. Insert batteries according to the correct polarities.
4. Make sure that the supply terminals are not short circuited.
5. Do not leave batteries in the kit if it is not in use.
6. Remove exhausted batteries from the kit.
7. Do not recharge non-rechargeable batteries.
8. Rechargeable batteries should be removed from the kit before being charged (if removable).
9. Rechargeable batteries should only be charged under adult's supervision.
10. Do not mix old and new batteries.
11. Do not mix alkaline, standard (Carbon-Zinc) or rechargeable (Nickel-Cadmium) batteries.
12. Only use batteries of the same or equivalent type.
13. The kit should not be connected to more than the recommended number of power supplies.

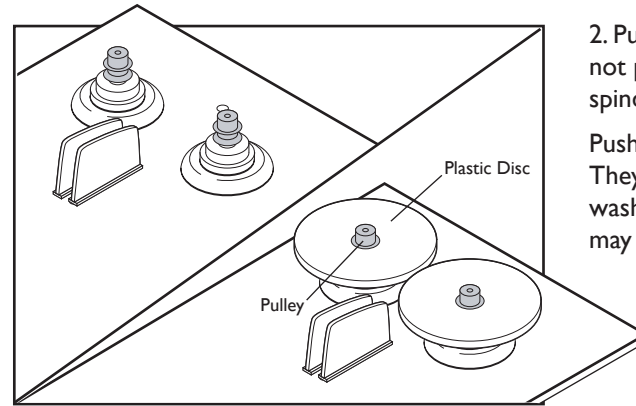
C. CONTENTS



D. ASSEMBLING YOUR ELECTRIC PLANE LAUNCHER

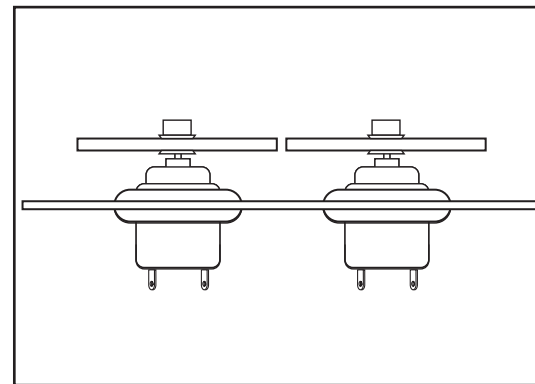


1. Push the plastic rings into the base plate holes. Push the electric motors into the plastic rings. They will be very tight, but a tiny amount of washing up liquid on the plastic will help. You may need some help with this.



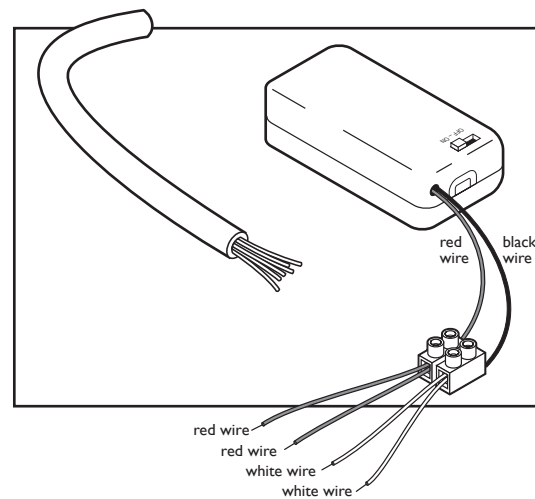
2. Push a pulley onto each motor spindle. Do not push the pulley all the way down the spindle - it could rub and slow the motor down.

Push a plastic disc onto each pulley as shown. They will be very tight, but a tiny amount of washing up liquid on the plastic will help. You may need some help with this.



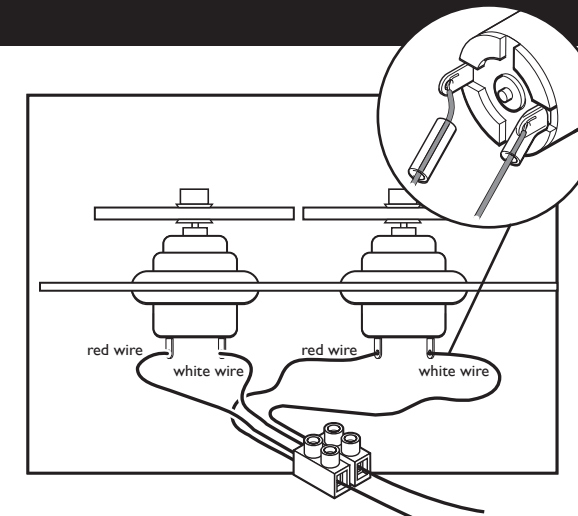
3. Adjust the motor positions so that the plastic discs are level. There should be a gap of about 1mm between the discs.

You may need to tilt the motors a bit to adjust to the right gap distance. An optimum gap distance will facilitate the discs gripping the plane body for launching.



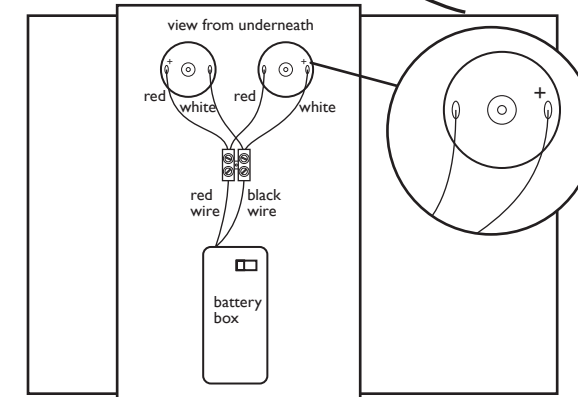
4. Cut the wire into four equal lengths. Strip the insulation off the ends using scissors or wire strippers and twist the bare wire strands together.

Connect the wires to the battery box using the terminal block. You may stick the terminal block onto the underside of the base plate with a sticky pad.

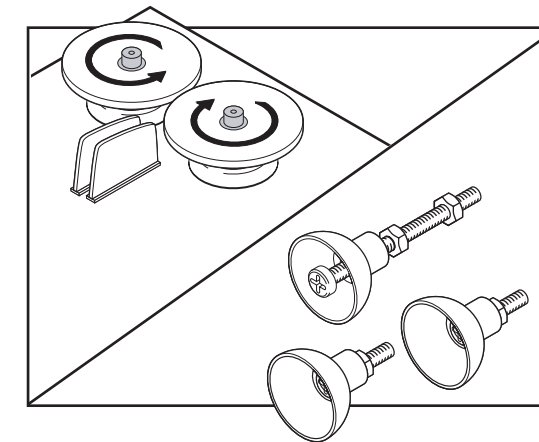


5. Connect the wires to the motors as shown. DO NOT twist the wires around the motor tags. Just pass each wire through its tag and slide over the sleeve to lock it in position.

Note: if you look carefully you will see a '+' on the back of each motor. This can be helpful when connecting the wires.



6. Slide open the lid of the battery box and insert two AA size batteries. You may stick the battery box to the underside of the base plate with two sticky pads.



7. Switch on the plane launcher and see which way the plastic discs spin. The discs should spin in the directions shown. If not, swap the wire connections to a motor to reverse its spinning direction.

Install the suction cups to the base plate. The one with long screw should be positioned at middle front near to the motors. This will make the base plate tilt upwards when launching the plane.

You may use a spanner at home to tighten the nuts. This will prevent them from being loosen by the vibration caused by the moving motors.