

# KaleidoScope Making Kit

**Build your own kaleidoscope. Create millions of dazzling patterns by filling in different objects into the object chamber. The fun is unlimited.**

## SAFETY MESSAGES

1. Please read through this instructions before you start.
2. Adults assistance and supervision recommended.
3. This kit contains small parts which may cause suffocation if misused. Not intended for children below 36 months.
4. Scissors from home needed. Adult supervision required.

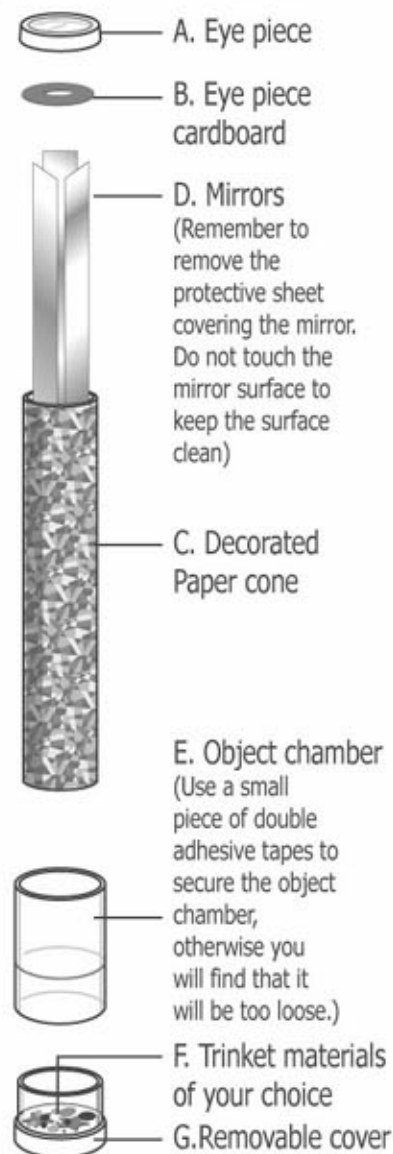
## CONTENTS

1 paper cone, 1 holographic foil, 1 set object chamber with removable cover, 3 safety mirrors, 4 bags of different trinkets (glow stars, colour beads, sequins, crystal clear beads), 1 holographic sticker, 1 eye piece cover, 1 card stripe, double adhesive tapes, detailed instructions with fun facts and ideas for making different kaleidoscopes.

## DECORATE THE PAPER CONE

Use the holographic paper included to decorate your kaleidoscope. Simply roll it around the paper cone and stick both ends with the double adhesive sticker provided. You could further decorate the paper cone body or object chamber by using the transparent stickers provided.

## ASSEMBLY DIAGRAM



## MAKE YOUR OWN KALEIDOSCOPES

The object chamber is specially designed. The cover is removable. You can fill the object chamber with different objects to create totally different styles and patterns with your kaleidoscope. Do not overfill the chamber. You should allow some room for the objects inside to move around so that patterns can be created freely. Here are some unique kaleidoscopes you could make.

### Colour Changing Kaleidoscope...

Open the cover of the object chamber, fill the chamber of the colour trinkets with the bag of colour beads provided. Replace the cover and a generic colour kaleidoscope is made. Look into the kaleidoscope and you will see dazzling patterns. The kit also includes 3 colour filters. You could use them to do some simple experiments. Insert them into the object chamber and explore the extra dimension they add to your kaleidoscope. Below is the colour mixing hints.

Yellow + Red = Orange      Yellow + Blue = Green      Red + Blue = Purple

### Mystic Glow Kaleidoscope...

Add the glow stars (the bag of greenish yellow stars provided) into the chamber. Charge it with any light source for a while. Turn the light off, or cover the object chamber with your hand. The patterns inside the kaleidoscope will glow in the dark like magic.

### Cool Snowflakes Kaleidoscope...

Take the bag of clear transparent beads provided and fill them into the chamber of the kaleidoscope. You will see millions of charming snowflakes patterns. Now remove the eyes piece, cover one mirror with the black cardboard stripe provided. The "two mirrors kaleidoscope" will show a single snowflake pattern. (Now could you tell the difference between a two mirrors kaleidoscope and a three mirrors kaleidoscope ?)

### Sparkling Light Kaleidoscope...

Use the bag of glittery and gold sequins and place them into the object chamber. For this kaleidoscope you will see more patterns by holding the kaleidoscope vertically with the object chamber at the bottom. The holographic sequin will be spread wider and will be able to reflect colourful lights more efficiently. Move the kaleidoscope gently and watch the shape and light patterns changes, it is as charming as jewels.

### Real world kaleidoscope...

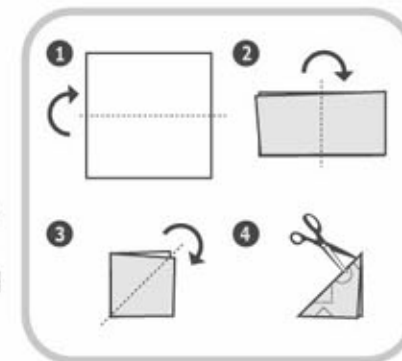
Imagine how to make things around you become kaleidoscopic? Just remove the whole object chamber from the tube body. Now use your "open ended kaleidoscope" to view objects around you. You will see an interesting kaleidoscopic world.

### Kaleidoscopic images on paper...

Kaleidoscope is the magic of reflection and symmetric properties. Imagine how you could make kaleidoscopic image without the use of mirrors? Follow the instruction diagramme to fold a piece of paper. After the folding is completed, cut the edges with different shapes. Spread open the

piece of paper and you will see a kaleidoscopic design. Now try experimenting this design technique with different shapes and cuts, you will see a lot of interesting patterns you would never have imagined.

Unleash your creativity. You may try mixing the trinkets provided to create some more unusual kaleidoscopes. You could also try using different objects as trinkets. Here are some suggestions: paper clips, buttons, pieces of coloured paper, insects, flower petals, small stones, photos..... Everything is so beautiful inside the kaleidoscopic world. ENJOY!



## FUN FACTS

Kaleidoscope was invented in 1813 by Scottish scientist, Sir David Brewster who was a renowned scientist in the field of optics and polarized light. He discovered when mirrors and loose coloured glass objects were placed inside a tube, one could see beautiful patterns from the other end of the tube. Fascinated by the optic beauty it created, he gave the device a name which was a combinations of Greek words: KALOS, EIDOS, SCOPOS, meaning beautiful(kalos)-forms(eidos)-viewer(scopos).

The kaleidoscope was meant to be a scientific device. Some designers of the time also used it as an aid for creating fabric patterns. However, it was such a fun invention that it became more popular as toy which captured the amazement of both children and adult for near to two centuries.

Kaleidoscope is basically formed by placing two or three mirrors in acute angles inside a tube. When some trinket objects like colour glass are placed in between the mirrors, a multiple reflection of the objects are formed, creating dazzling patterns which never repeat. In a two mirrors kaleidoscope, the smaller the angle between the two mirrors, the more the reflections will be formed.

## QUESTIONS & 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 addresses 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, Website: www.4m-ind.com.