

## **FifeX Compact Colour Mixer™**

### **Use of Kit**

The FifeX Compact Colour Mixer™ has been produced to accompany the larger FifeX Colour Mixer™. This smaller kit still allows pupils to explore the effects of colour mixing with light, aids the explanation of how colour is perceived and allows them to experiment with transmission and absorption of light through coloured filters.

### **Kit Contents**

Documentation  
1 x FifeX Compact Colour Mixer™  
1 x 5V 1A DC power supply

### **Operating Instructions**

1. Unpack the FifeX Compact Colour Mixer™ and ensure that all sliders are in the far left position.
2. Plug in DC power supply
3. Adjust coloured corresponding knobs to control the intensity of the LEDs

### **Experiments**

The FifeX Compact Colour Mixer™ can be used for many different colour exploration experiments including:

#### **Colour Mixing**

1. Follow the operating instructions above to prepare the kit for use.
2. Cut a 50mmx50mm square out of black cardboard.
3. Punch a small (3mm diameter) circular hole in the centre of the cardboard cut out.
4. Slide the cardboard into the slot on the top of the FifeX Compact Colour Mixer™
5. Create a white screen, perhaps use a piece of paper.
6. Lay the FifeX Compact Colour Mixer™ on its side, point the device at the screen. Adjust the sliders to create the text book 3 ring pattern.
7. Explore the difference when the size of the 'pin-hole' in the card is altered.

#### **Transmission and Absorption using coloured filters**

1. Again follow the operating instructions above.
2. Leave the FifeX Compact Colour Mixer™ in the vertical position.
3. Slide various coloured filters in the slot, one at a time, exploring each time what colour LEDs pass through the filter and which ones don't.

#### **Colour Perception**

1. Follow operating instructions above.
2. Place a diffuser into slot and lie the FifeX Compact Colour Mixer™ on its side.
3. Place different items (for example, KitKat wrappers, patterned coffee mugs, magazines) in front of the light.
4. Adjust the LEDs to explore the absorption/reflection of the object.

N.B. All these experiments work best in low ambient light levels. Extra caution must be taken when working in low ambient light levels.

### **Online Support**

Further information including examples of experiments for colour mixing can be found at <http://www.fifex.co.uk/ccmonline.htm>

### **Safety**

1. **The FifeX Compact Colour Mixer™ must only be used with the supplied regulated power supply. If this is lost or suspected damaged in any way, contact your supplier immediately.**
2. **When working in ambient light levels that are below the norm, extra caution must be taken. FifeX accepts no responsibility for damage or personal injury caused by using this product in an environment that is unsafe.**
3. **The FifeX Compact Colour Mixer™ should always be turned off when not in use.**
4. **FifeX Ltd accept no responsibility for injury or damage caused by the misuse of the FifeX Compact Colour Mixer™**

### **Troubleshooting**

#### **If one or more LED's fail:**

1. Switch off DC supply immediately
2. Check the DC supply is connected correctly.
3. Check the cable and connector are intact and undamaged.
4. Ensure all three sliders on FifeX Compact Colour Mixer™ Control Box are completely to the left hand side of the unit.
5. Switch on the DC supply.
6. If this has not solved the problem, turn DC supply off again and contact your supplier.

### **Contact for Supplier:**

Unilab,  
Hyde Buildings,  
Ashton Road,  
Hyde,  
SK14 4SH,  
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