Kitronik

ESSENTIAL INFORMATION

BUILD INSTRUCTIONS
HOW THE KIT WORKS
KIT CONTENTS
ONLINE INFORMATION

TEST YOUR HAND-EYE COORDINATION WITH THIS

STEADY HAND TERMINAL KIT

Version 2.0

Suggestions for using the kit

What's in the Kit?

There are enough buzzers and battery holders to build 24 steady hand games. In addition to this, there is the following:

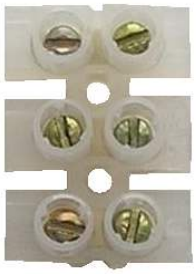
- The tinned copper wire for the loop and bent wire track, which is supplied on around a 25 metre reel.
- The heavy duty wire for connecting the loop, which is supplied on a 25 metre reel.
- The heat shrink, supplied in lengths of 1.2 metres.
- 8 pieces of twelve-way terminal connectors (blocks).

We would suggest that you set up three areas:

1. The first will have a 1 metre ruler, a pair of cutters, the tined copper and the flexible wire. The student can then measure and cut themselves a 1 metre length of each.
2. The second will have a 10cm ruler, a pair of cutters and heat shrink. The student can then measure and cut themselves a 10cm length.
3. The third will have a pair of cutters and the terminal connectors. The student should:

- Cut themselves a one-way connector.

- Cut themselves a three-way connector.



Note: The easiest way to shrink the heat shrink is by using a hot air gun.

Kitronik

TEACHING RESOURCES

SUGGESTIONS FOR USING THE KIT

TEST YOUR HAND-EYE COORDINATION WITH THIS

STEADY HAND TERMINAL KIT

Version 2.0

Steady Hand Terminal Project Essentials

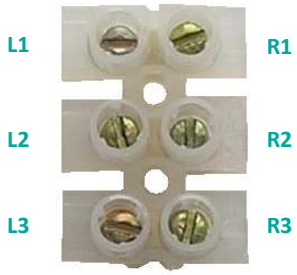
www.kitronik.co.uk/2107

Build Instructions

Build the Steady Hand Game by following these simple steps.

1 MEASURE AND CUT COMPONENTS

Before you start you will need to carefully measure and cut to size no more than:



- 1m of solid tinned copper wire.
- 1m of flexible heavy duty wire.
- 10cm of heat shrink sleeve.
- A one-way section of terminal block/connector.
- A three-way section of terminal blocks/connectors.

To make these instructions as easy to follow as possible, we will refer to the connection on the three-way terminal connector as they are shown in the picture to the right.

2 CONNECT THE BATTERY CAGE

Connect the battery leads to the three-way terminal connector. The red lead should connect to the terminal labelled L1 and the black lead should connect to L2.

3 CONNECT THE BUZZER

Connect the buzzer leads to the three-way terminal connector. The red lead should connect to the terminal labelled R3 and the black lead should connect to R2.

4 CREATE A LOOP

To create the loop cut about 15 - 20cm from your piece of solid tinned copper wire. Bend the end to form the desired sized loop and handle.

5 CONNECT THE LOOP AND WIRE

Strip both ends of the piece of flexible heavy duty wire. Connect one end to the handle of the loop using the one-way terminal connector.

6 JOIN THE WIRE AND CONNECTOR

Screw the other end of the flexible wire into terminal R1 on the three-way terminal connector.

7 HEAT SHRINK COPPER WIRE

The remaining piece of copper wire will form the shape that will have to be negotiated with the loop. Cut a 5cm piece of heat shrink and shrink it over one end of the wire (be careful as the wire will become hot). Make sure that the sharp end is fully covered.

8 CONNECT THE WIRE AND CONNECTOR

Slide the remaining 5cm piece of heat shrink over the other end of the solid tinned copper wire and shrink it so that a 1cm (or longer of it has to reach the edge of enclosure) piece of metal is sticking out the end. Screw this into terminal L3 on the three-way terminal connector.

9 BUILD THE SHAPE TRACK

Bend the wire to form your desired shape track. If the wire has to be placed through a hole in an enclosure, you will probably want to do this before bending the wire.

How the Steady Hand Terminal Project Works

The circuit is very simple and no soldering is required. The loop and wire track act as a switch: as they come into contact, the battery connects directly to the buzzer and causes it to sound.

Online Information

Two sets of information can be downloaded from the product page where the kit can also be reordered from. The 'Essential Information' contains all of the information that you need to get started with the kit and the 'Teaching Resources' contains more information on soldering, components used in the kit, educational schemes of work and so on and also includes the essentials. Download from:

www.kitronik.co.uk/2107

This kit is designed and manufactured in the UK by Kitronik

Telephone: +44 (0) 845 8380781
Sales email: sales@kitronik.co.uk
Tech support email: support@kitronik.co.uk
Web: www.kitronik.co.uk

www.kitronik.co.uk/twitter
www.kitronik.co.uk/facebook
www.kitronik.co.uk/youtube
www.kitronik.co.uk/google