



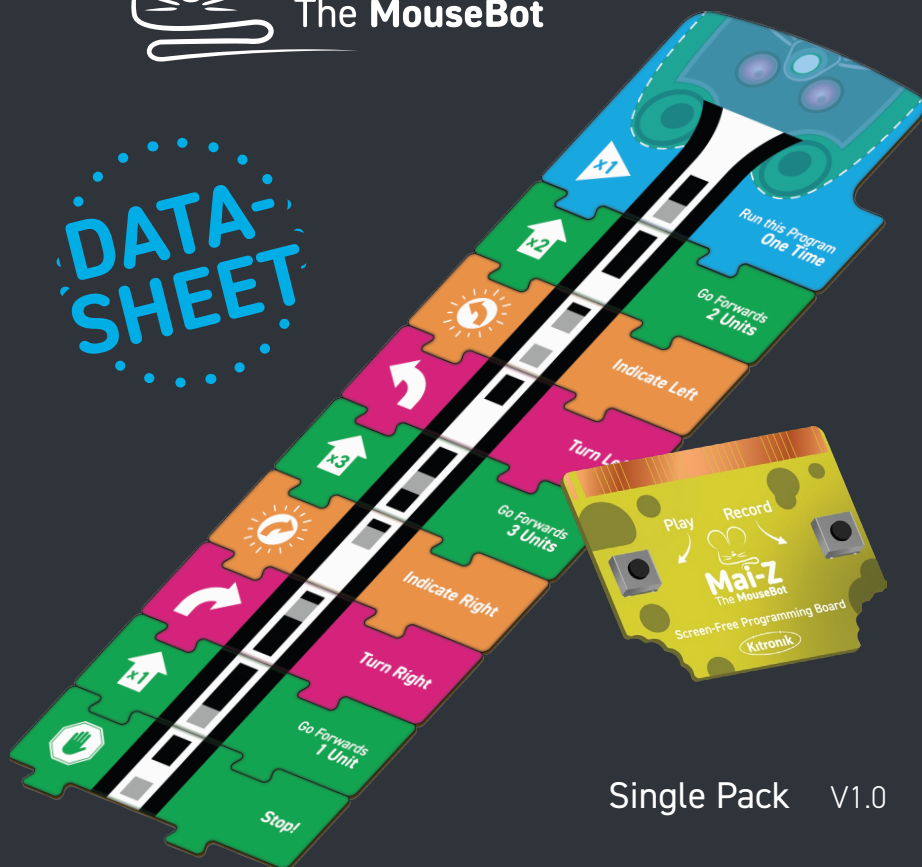
SCREEN-FREE PROGRAMMING

for



Mai-Z
The MouseBot

**DATA-
SHEET**



Single Pack V1.0

INTRODUCTION

Welcome to the world of Screen-Free Programming!

This datasheet includes information on what is included in the Kitronik Single Screen-Free Programming Pack for Mai-Z the MouseBot.

Screen-Free Programming allows Mai-Z to be programmed without the need of a computer.

Visit www.kitronik.co.uk/56139 for more information.

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YOU WILL NEED

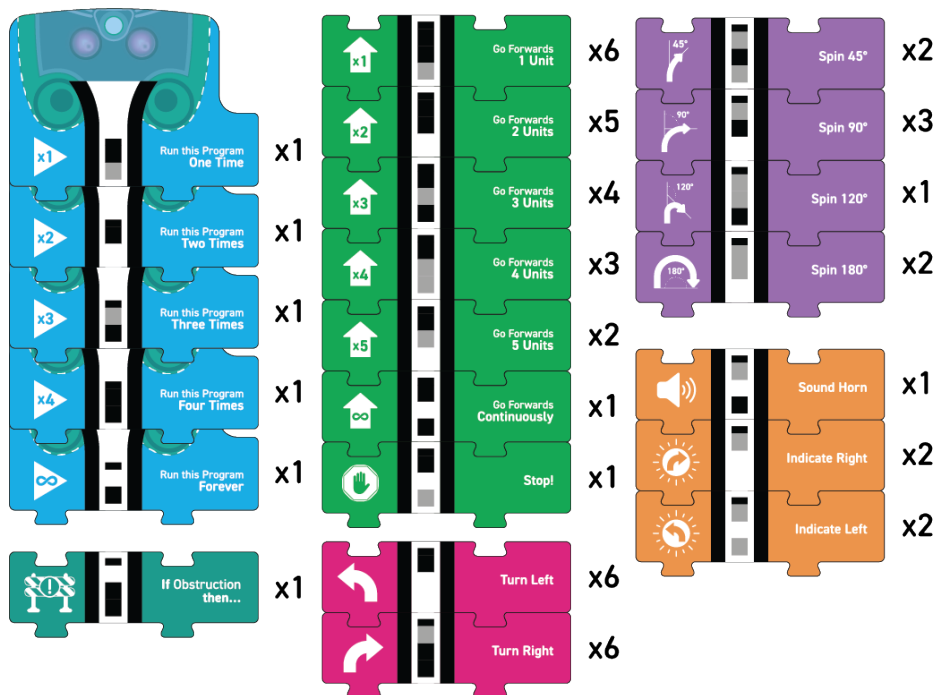


Mai-Z The MouseBot



A Sharpie®

SUPPLIED WITH THIS KIT



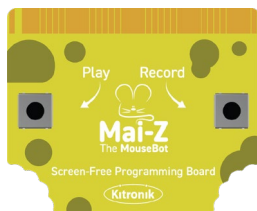
Start Block Dimensions:
106 x 140 x 2mm

Instruction Block Dimensions:
48 x 140 x 2mm

1 x Set of 53 Instruction Blocks



1 x Double-Sided Townscape Poster



1 x Screen-Free PCB

Screen-Free Board Dimensions:
42 x 51 x 1.6mm



16 Page Booklet

containing sample lessons

THE INSTRUCTION BLOCKS

The blocks have been designed to mirror the blocks found in Microsoft MakeCode for micro:bit where possible.

Blue Blocks

are *starting* Blocks

Teal Blocks

are '*If Obstruction*' blocks

Green Blocks

are for *forwards movement*

Pink Blocks

are for *turning left or right*

Purple Blocks

are for *turning specific angles*

Orange Blocks

are *indicator* and *horn* blocks



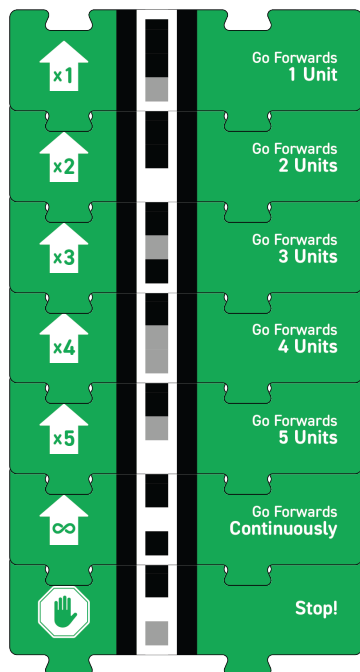
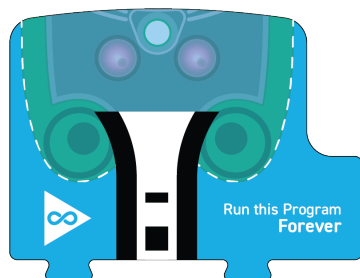
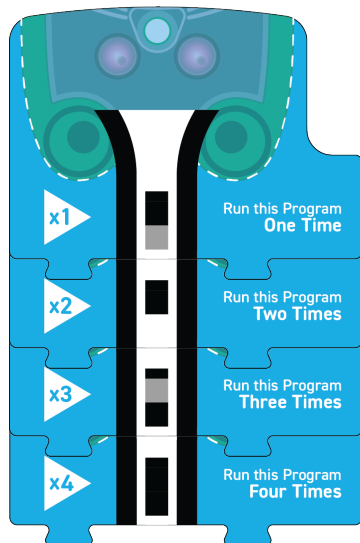
TEAL BLOCKS

The teal block is used as an 'if' statement. If Mai-Z detects an obstruction within 10cm, then the blocks you place after this one will occur. For example, 'If obstruction then... spin 120 degrees.' This block is best used with a 'Run forever' start tile so that Mai-Z continuously checks for any obstructions.

BLUE BLOCKS

These blocks go at the start of the program. When Mai-Z reads these blocks, the program that follows will run one, two, three or four times.

The 'forever' block is slightly different. This means that the program will run continuously.



GREEN BLOCKS

These blocks can be used throughout the program to move Mai-Z forwards by different amounts. Each unit is worth one tile on the Mai-Z townscape plan.

PINK BLOCKS

These blocks are used to turn Mai-Z left or right. Remember, this only changes the direction that Mai-Z is facing, so a movement block should follow.



PURPLE BLOCKS

These blocks are used to turn Mai-Z a specific angle. There are 45°, 90°, 120° and 180° blocks. These are useful for drawing specific shapes.

ORANGE BLOCKS

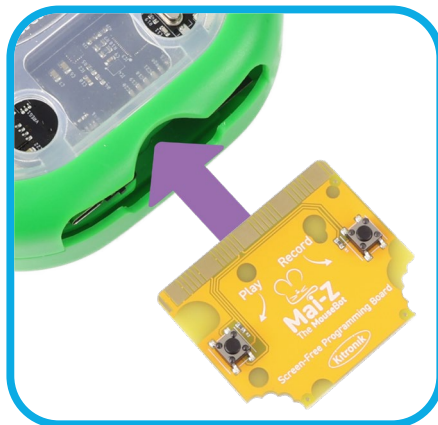
These blocks are used to turn the left or right LEDs on to indicate imminent turning, also known as turn signals. These LEDs will automatically turn off after a turn has completed. The final block is used to sound the horn.



HOW TO USE THE SCREEN-FREE BOARD

Using this board could not be simpler. There are **two buttons**: **'Play'** and **'Record'**. Mai-Z uses infrared sensors on the base of the chassis to read the barcodes on the individual instruction blocks.

It is inserted as shown here, and pushed into the edge connector.



STEP ONE

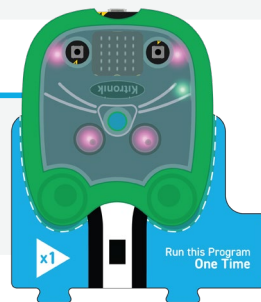
1

Create your program by putting the instruction blocks together. ***Make sure you start with a blue 'start' block!***

STEP TWO

2

Line Mai-Z up with the outline on the start block. ***Use this image to help.*** You should be able to see the dashed white outline.



STEP THREE

3

Press the **'Record'** button. Mai-Z should begin to drive over all of the blocks, and stop after the final block.

STEP FOUR

4

Move Mai-Z to a clear area and press **'Play'**. Mai-Z should now perform the program you created!

STOCK CODE: 56139

SCREEN-FREE PROGRAMMING

for  **Mai-Z**
The MouseBot

Status LED Colours

Status Key:

-  Good Battery
-  Okay Battery
-  Low Battery
-  Charging*
-  Comms Error
-  micro:bit Removed
-  Cliff Detected

* Mai-Z will charge both while switched on and switched off. While on, the Status LED indicated here will show. While off, a separate LED will indicate red while charging, and green when charged.

Status LED



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kitronik.co.uk/instagram



kitronik.co.uk/tiktok

For more information on compliance please visit kitronik.co.uk/compliance. Children assembling this product should be supervised by a competent adult. The product contains small parts so should be kept out of reach of children under 3 years old.