


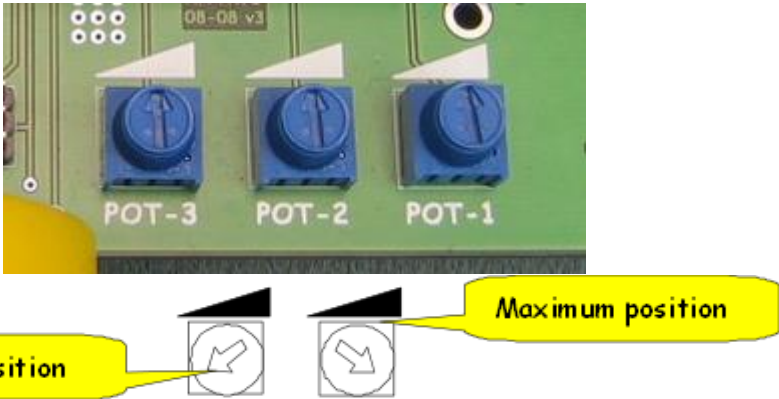
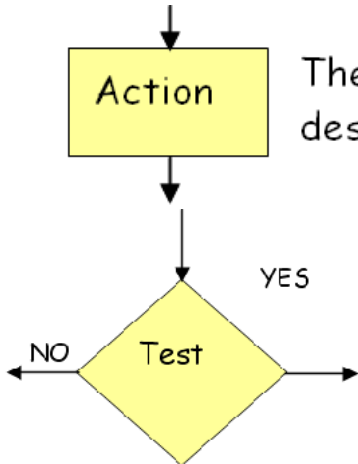
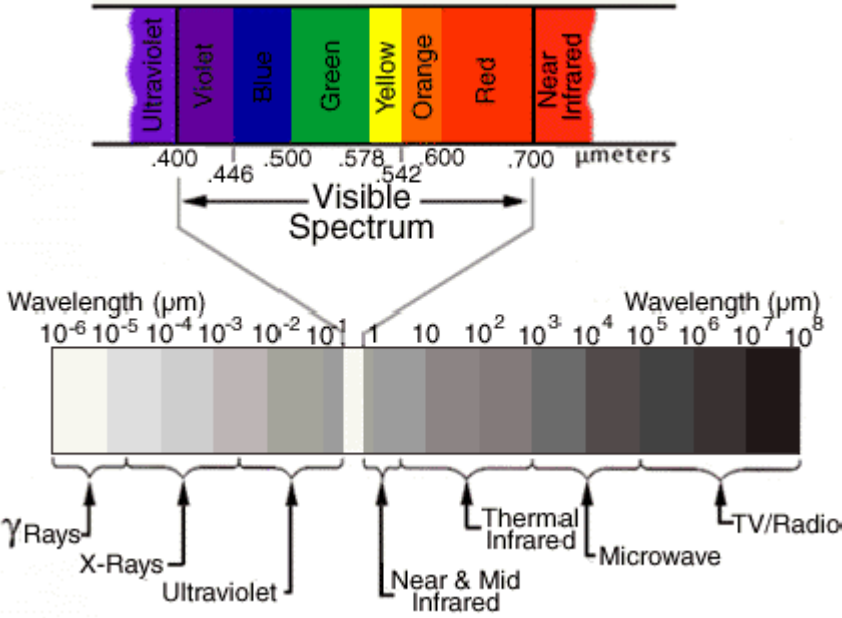
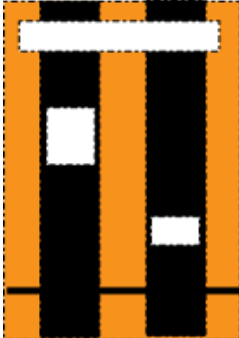


Glossary

Term	Description
Connector terminal	<p>The screw points where wires can be connected to the circuit board. The robot has 16 screw terminals: four sets of three for the front and rear bump sensors, and two sets of two for the motor connections.</p> 
Circuit board	<p>Technology which creates electricity: the wires are made of copper and run on both sides of the board, and the electronic components are soldered onto the board to make electrical connections.</p> 
Switch controller	<p>Robot control unit with two switches; each switch has three positions.</p> 
Differential or Differential speed	<p>The robot has two motors. Although made with identical materials they are never exactly the same, so when the same speed is set on the two motors the robot does not keep a straight path – it moves on a curve because one motor will be slightly faster than the other. The differential adjustment allows the user of the robot to input a small adjustment to make up for this.</p>

Term	Description
Mode	Robots work in many different ways, called modes.
POT	<p>Short for potentiometer. There are three blue POTs on the board, which can be turned to adjust.</p>  <p>The computer is able to read the position and convert it into a number from 0 to 255. In modes where adjustments are possible, pressing SWITCH-B allows the robot to read all three POTs.</p>
Solder	A metal that melts at a low temperature and is used to connect components to wires and circuit boards.
Algorithm	A recipe to solve a problem, usually based on a sequence of steps.
Flowchart	<p>Method of describing an algorithm using a set of graphical symbols. The two main symbols are:</p>  <p>The rectangular box describes a step</p> <p>The diamond box describes a test that has two outcomes -</p> <ol style="list-style-type: none"> 1. YES the test is TRUE 2. NO the test is FALSE

Term	Description
Infrared	<p>Our eyes see only part of the full spectrum of radiation, from visible violet to visible red. Just above visible red is radiation called infrared radiation, usually termed 'IR radiation'. Some animals can see infrared (e.g. snakes) and special cameras have been developed that can see it, often used by nature programmes on TV to watch animals at night, as animals emit IR radiation in the form of heat. The following picture shows that the infrared light is just beside the RED end of the visible light spectrum:</p>  <p>The diagram illustrates the electromagnetic spectrum with wavelength in micrometers (μm) on a logarithmic scale from 10⁻⁶ to 10⁸. The visible spectrum is shown as a rainbow with labels: Ultraviolet (0.400 μm), Violet (0.446 μm), Blue (0.500 μm), Green (0.578 μm), Yellow (0.542 μm), Orange (0.600 μm), Red (0.700 μm), and Near Infrared. Below this, a grayscale bar represents the full spectrum, with labels for γ Rays, X-Rays, Ultraviolet, Near & Mid Infrared, Thermal Infrared, Microwave, and TV/Radio.</p> <p>The most common use of IR is in remote controls.</p>
Sensor	Electronic component that converts a physical quantity (e.g. light, heat, position) into an electrical signal that can be read by a computer.
Strip sequence	<p>Set of commands that are input from two strips of black and white lines on a card. A strip looks like this:</p>  <p>The strip consists of a sequence of vertical bars of varying widths and heights, alternating between black and white, used for data encoding.</p>