

ROBOT ARM - Teaching Unit

This teaching unit must be purchased from Scorpio Technology.

The teaching unit is a 16 page document that contains detailed drawings and a thorough description of the construction processes.

1. DESCRIPTION

The *ROBOT ARM* is a five-axis pick-and-place manipulator. Each of the axes is driven by an electric motor. The *ROBOT ARM* is controlled by five two-way switches and is powered by four AA batteries. The axes provide the following functions: gripper, gripper rotation, wrist, forearm and arm.

To carry out the project, the student must:

- Determine the requirements.
- Design the components.
- Mark out the component shape and size.
- Fabricate the component parts.
- Assemble the components.
- Connect and solder the wiring, switches and motors.

The student will learn and use a variety of skills - designing, marking out, cutting materials to shape, bending, assembling and soldering. The *ROBOT ARM* has scope for experimentation and development of alternative forms of control.

