Helping out with...
Distance Learning

LJ CREATE™
Learning for life

We have packaged special trainers to support our online software with practical activities.

The trainers are supplied in robust, self-contained packages that can be posted out to your students - allowing them to tackle a wide variety of hands-on activities from home.

1

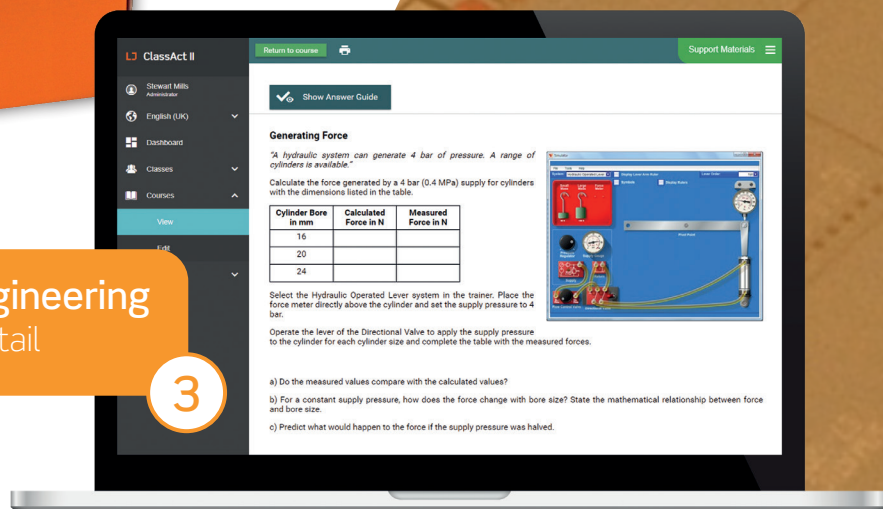## Mobile PLC Trainer
See p2 for more detail

Mobile Electronics Workstation
See p3 for more detail

2

Online Lessons for Engineering
See back page for more detail

3

ClassAct II

Stewart Mills
Administrator

English (UK)

Dashboard

Classes

Courses

View

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Show Answer Guide

Support Materials

Generating Force

"A hydraulic system can generate 4 bar of pressure. A range of cylinders is available."

Calculate the force generated by a 4 bar (0.4 MPa) supply for cylinders with the dimensions listed in the table.

Cylinder Bore in mm	Calculated Force in N	Measured Force in N
16		
20		
24		

Select the Hydraulic Operated Lever system in the trainer. Place the force meter directly above the cylinder and set the supply pressure to 4 bar.

Operate the lever of the Directional Valve to apply the supply pressure to the cylinder for each cylinder size and complete the table with the measured forces.

a) Do the measured values compare with the calculated values?

b) For a constant supply pressure, how does the force change with bore size? State the mathematical relationship between force and bore size.

c) Predict what would happen to the force if the supply pressure was halved.

Industrial Control

Mobile PLC Trainer (291-04/SI)

This training system offers a platform that enables students to perform a comprehensive range of programming tasks culminating in the control of the unit using an industrial PLC.

The unit is designed to sort metal discs one at a time, checking them for a machined hole and dispensing them into one of two bins, based upon programming logic.

Order As:

291-04/SI Mobile PLC Trainer

Includes:
- Industrial Control Sorter Application
- Power Supply and USB Lead
- PLC Simulation Software
- Curriculum in Digital Format

Aligned to: Engineering BTEC (2016) Unit 36 - Programmable Logic Controllers

Analogue motor-controlled sorting disc with infrared hole detection sensor

Parts dispenser

Sorted parts bins

Siemens PLC - programs are developed in the Step 7 programming software on a PC and downloaded to the Siemens PLC to control the sorting disc

Manual control panel with sensor status indication
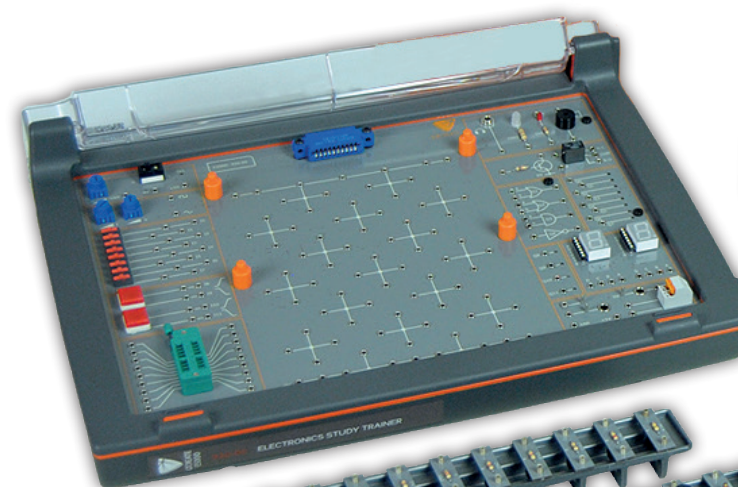
Electronics

Mobile Electronics Workstation (320-10)

This mobile electronics workstation allows the practical study of a wide range of electronics subjects, including DC and AC circuits, semiconductors, analogue and digital systems, telecommunications and microcontrollers.

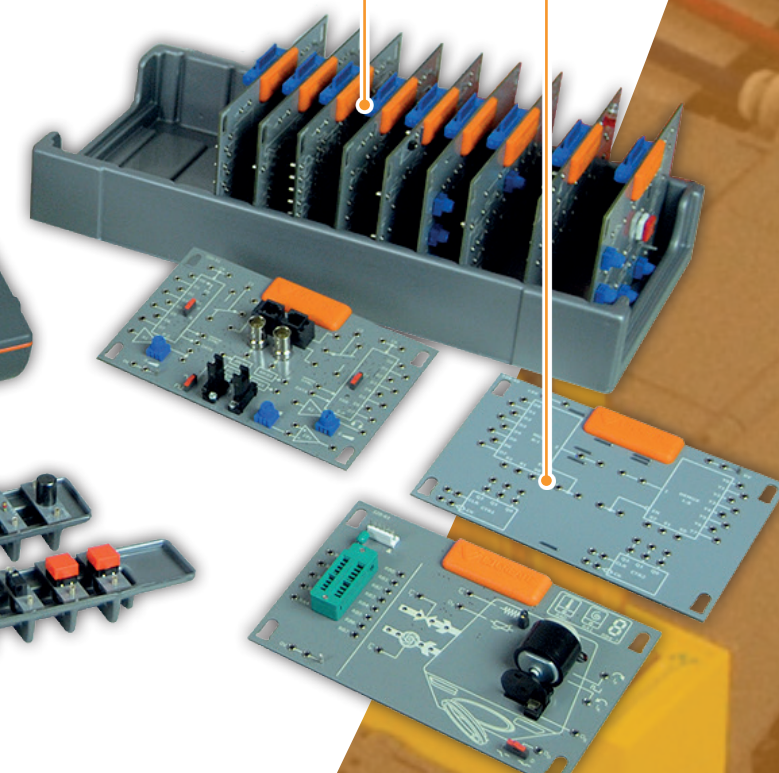The workstation comprises an electronics study trainer and component set, and a range of plug-in experiment cards.

Aligned to 9x Engineering BTECs including: Unit 23 - Digital and Analogue Electronic Systems

Interchangeable experiment cards

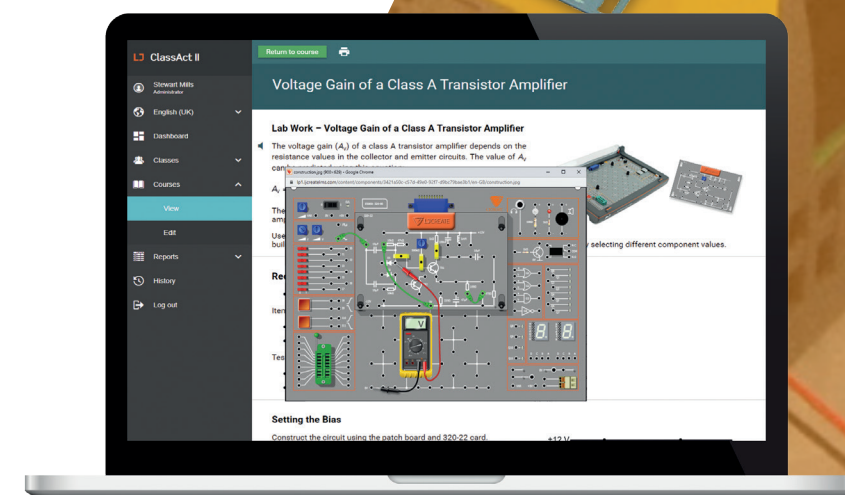Discrete electronic components mounted on carriers

Order As:

320-10 Mobile Electronics Workstation

Includes:
- Study Trainer and Storage Case
- Experiment Cards (x13)
- Curriculum in Digital Format
- Component Set and Connection Lead Set

Online LMS

Engineering Software - Site License (ENG1/AL)

Presentations

Available on an annual site licence basis, our Engineering content is packed full of ready-made **Vocational Courses and Lessons** for students aged 16+.

Lessons are integrated with our Learning Management System which automatically tracks and records the progress and attainment of your students, and the college's progress overall.

Investigations

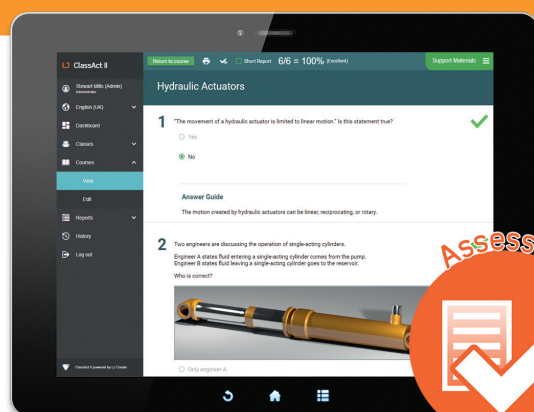### Order As:

ENG1/AL Engineering Software Site License

Includes:

- Access for as many students as you need
- Access to over 100 courses aligned to BTEC, OCR, and EAL
- Access to 1000's of library lessons (learning content not tied to any specific learning standards) including:
  - Fluid Power
  - Industrial Control
  - Manufacturing Engineering
  - Electrical Engineering

    .....and much, much more!

Assessments

If you'd like a call or a visit:

tel: **+44 (0)1603 748001**
email: **info@ljcreate.co.uk**

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