

Electrical Circuits (EA01A)

BASIC POWER ELECTRICITY



Fully equipped Learning Station shown. Learning station and some panels shown sold separately.

Electrical Circuits (EA01A) introduces students to fundamental electrical concepts including:

- Lockout/tagout and safety
- Connecting circuits
- Measuring voltage and current



The skills-based curriculum presents hands-on activities using a digital multimeter and other industrial-grade electrical components mounted on five included Flexponent™ panels which attach to the JobMaster™ Learning Station (not included). Panels are easily added and exchanged allowing the workspace to be re-configured as multiple students progress through the course.

Core concepts are taught through self-paced e-learning curriculum. All the necessary resources, including printable instructions and wiring diagrams are available online, ready for use at the JobMaster Learning Station.

Instructors are also provided comprehensive resources, including a detailed instructors' guide. Teachers' versions of schematics and wiring diagrams as well as tips and tricks are all one click away.

With JobMaster, you can be sure your training program will deliver the skills needed for success in automated manufacturing careers!

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JOB MASTER



SKILLS-BASED TRAINING

The JobMaster™ Industrial Maintenance and Mechatronics Training teaches the specialized skills required for today's industrial technicians. JobMaster™ provides a superior blended learning solution for automated manufacturing training by combining industrial-grade components with engaging e-learning content.

JobMaster™ courses are entirely skill-based, consisting of individual exercises that reproduce essential tasks performed by maintenance technicians, equipment operators, and machine repairmen. Each skill has been analyzed and field-tested by qualified maintenance technicians to teach the specific skills needed in the industrial environment.

intelitek's partners in development of the curriculum include twelve major US industrial companies, including Boeing, Caterpillar, Ford, GE, and US Steel.

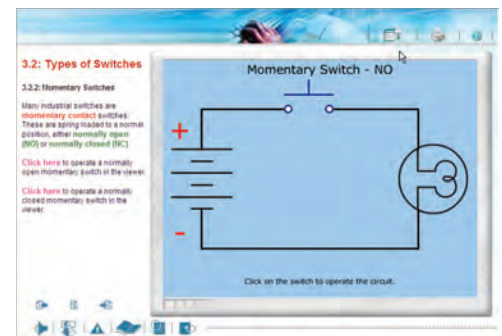
**JobMaster™, the new standard in
industrial maintenance and mechatronics training!**

P O W E R E D B Y

LearnMate™

JobMaster™ courses are powered by LearnMate™- intelitek's innovative e-learning platform. LearnMate's self-paced interactive content may be deployed stand-alone or through the robust learning management system (LMS). The LearnMate™ e-learning suite provides everything needed for the ultimate blended learning experience:

- SCORM-compliant interactive content
- Anytime, anywhere accessibility
- Student and class management
- Grade tracking
- Skill/competency reporting mapped to national academic skill standards



Electrical Circuits (EA01A)

Materials Included

Order #14-EA01A:

- Electrical Circuits (EA01A) E-Learning Course and Teachers' Guide
- Flexponent™ panels:
 - E040: Switch Lamp and Buzzer Panel
 - E045: Sources of Electricity Panel
 - E047: Heat and Light Source Panel
 - E151: Series/Parallel Lamp Circuits Panel
 - E152: Adjustable Power Supply Panel
- Digital Multimeter (Fluke Model 115 or equivalent)

Materials required (sold separately):

- JobMaster™ Learning Station Order #10-LS00-0200
- Power Control Panel: (120V)* Order #10-PC04-0000

* International step-down transformer package (Order #10-PC09-0000) required for international applications.

Skills Acquired



- Skill 1: Performing Lockout/Tagout
- Skill 2: Connecting a Basic Circuit
- Skill 3: Identifying Switches
- Skill 4: Connecting a Momentary Switch
- Skill 5: Connecting a Toggle Switch
- Skill 6: Identifying Sources of Electricity
- Skill 7: Measuring DC Voltage
- Skill 8: Constructing a Series Circuit
- Skill 9: Constructing a Parallel Circuit
- Skill 10: Applying DC Voltage Principles
- Skill 11: Testing an Electrolytic Cell
- Skill 12: Testing a Battery
- Skill 13: Testing a Thermocouple
- Skill 14: Testing a Photovoltaic (PV) Cell



BASIC POWER ELECTRICITY

Electrical Circuits (EA01A) is the first in the four-course Basic Power Electricity series, which teaches the introductory electrical skills essential for success in automated manufacturing.

The Basic Power

Electricity series includes:

- Electrical Circuits (EA01A)
- Resistors and Conductors (EA01B)
- LCR Circuits (EA01C)
- Motors and Generators (EA01D)

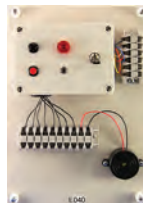


Panel & Hardware Specifications

All included Flexponent™ panels meet the following specifications:

- Construction: 3/8" (9.5 mm) thick environmentally stabilized, chemically resistant, non-conductive, high density polyethylene.
- Terminal strips Industry-standard recessed and insulated fasteners rated for 50-amps at 600 volts.
- Dimensions 8"W x 11.5"H x 0.375"D (203 mm x 292 mm x 9.525 mm)

Panel E040: Switch, Lamp and Buzzer



- Panel type: Single
- 1 87dB Piezo Pulse buzzer
- 1 12V Jumbo Lamp
- 1 SPST Toggle switch
- 1 DPDT toggle switch
- 1 NO pushbutton switch
- 1 NC push button switch

Panel E045: Sources of Electricity



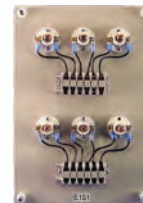
- Panel type: Single
- 1 Encapsulated PV Cell
- 1 J-type surface thermocouple
- 1 Battery box
- 4 D-cell batteries

Panel E047: Heat and Light Source



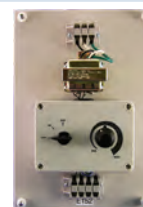
- Panel type: Single
- 1 Heat gun
- 1 Flashlight

Panel E151: Series/Parallel Lamp Circuits



- Panel type: Single
- 6 miniature bulb sockets
- 3 3.7V@0.30A bulbs
- 3 6.3V@0.30A bulbs

Panel E152: Adjustable Power Supply



- Panel type: Single
- 1 8V/16V/24V transformer
- 1 1000uF 50V 20% axial-lead electrolytic capacitor
- 1 4A 50PIV bridge rectifier
- 1 100-ohm rheostat

Digital Multimeter



- True-rms
- CAT III 600 V safety rated
- AC/DC volts, millivolts, amps
- Continuity
- Resistance
- Diode Test
- Capacitance
- Hz (V or A input)

Most courses require a JobMaster™ Learning Station, sold separately.

Some courses require other hardware purchased separately or as part of prerequisite courses in the same series. All included and required materials are noted on each product data sheet.

Affiliated with:



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