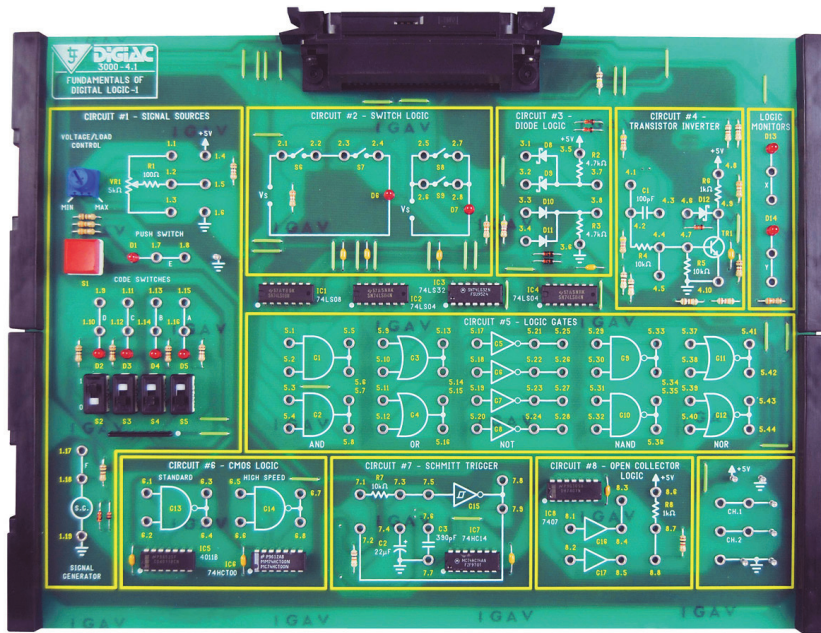


# Product Information Sheet

## Fundamentals of Digital Logic Study Module



LJ CREATE™  
Learning for life



This electronics study module is designed to connect to the 300-01 or 300-02 Advanced Electronics Experiment Platforms as part of a modular electronics programme.

The study module is designed to introduce students to the fundamental principles of logic circuits through a wide range of practical activities.

Using either of the Experiment Platforms, users can select from a range of faults to be inserted into the study module circuits to develop electronic diagnostic and faultfinding techniques.

The study module is supplied with PDF manuals that provide theory materials, practical tasks, faultfinding activities, and technical information.

### Topics Include the Following:

- Number Systems
- Switch Logic
- Diode Logic
- Diode-Transistor logic (DTL)
- Transistor-Transistor Logic (TTL)
- Logic Expression and Simplification
- Karnaugh Maps
- CMOS Gates
- Schmitt Trigger Circuits
- Open Collector Gates

### Typical Activities Include:

- Measure voltages from switched logic sources for high and low logic levels
- Complete truth tables for AND/OR connected logic switches by observation
- Measure voltages in diode AND/OR circuits
- Measure voltage levels in DTL circuits
- Identify the allowable voltage ranges for TTL inputs and outputs
- Make measurements on logic circuits to determine the equivalence of logic expressions
- Verify by observation the simplified logic functions derived from two-, three-, and four-variable Karnaugh maps

- Measure input threshold voltage and output voltage for a Schmitt trigger voltage inverter gate
- Diagnose faults in open collector and integral resistor gate circuits

### Items Included:

- Circuit Card
- Storage Case
- Curriculum Manual in PDF Format

### Other Items Required:

- 300-01 Advanced Electronics Experiment Platform
- 2 Digital Multimeters
- or
- 300-02 Advanced Electronics Experiment Platform with Virtual Instrumentation

### General Information:

Dimensions: 81 x 323 x 256 mm (W, H, D)  
Shipping Volume: Approx 0.008 m<sup>3</sup>  
Shipping Weight: Approx 2 kg

**Order Code: 304-41**

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For more information visit [www.ljcreate.com](http://www.ljcreate.com)