

ARITHMETIC OPERATIONS USING 4-BIT ALU TRAINER

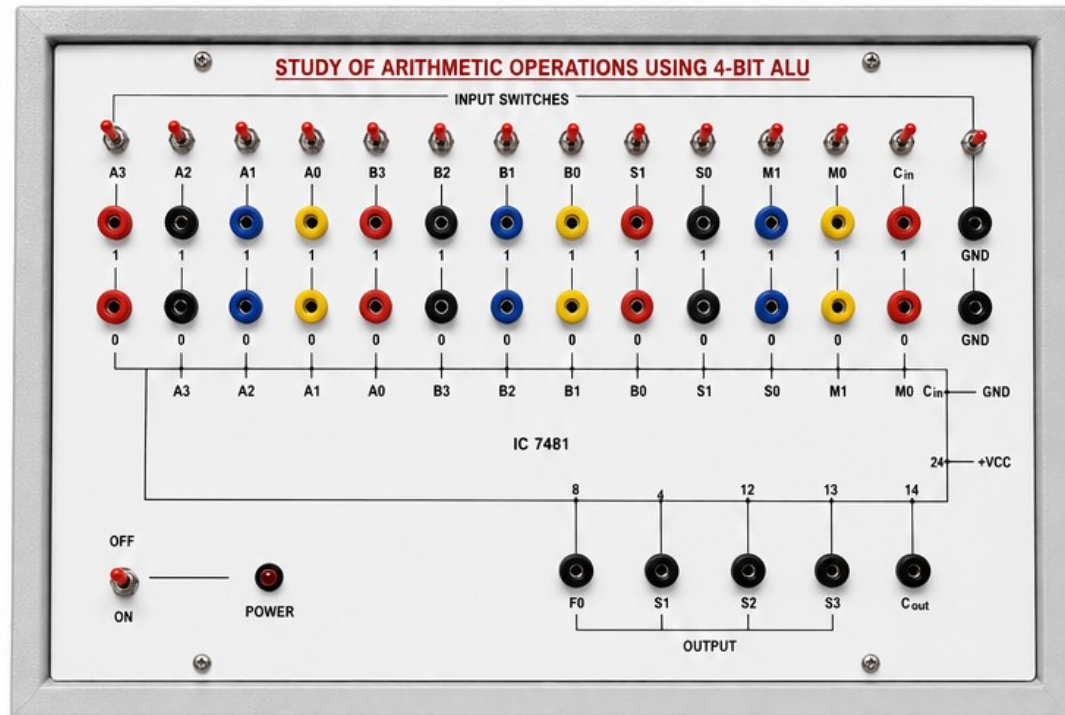
ADVANCED DIGITAL ELECTRONICS TRAINER

PRODUCT OVERVIEW

The Arithmetic Operations Using 4-Bit ALU Trainer is a comprehensive digital electronics training system designed for studying arithmetic and logical operations using a 4-Bit Arithmetic Logic Unit (ALU).

The trainer enables students to understand binary arithmetic, logic functions, carry generation, and digital data processing techniques through practical experimentation.

Ideal for Engineering Colleges,
Polytechnics, Technical Institutes,
Electronics Laboratories, and
Vocational Training Centers.



KEY FEATURES

- Based on 4-Bit ALU Architecture
- Demonstrates Arithmetic and Logical Operations
- Individual Input Toggle Switches
- LED Status Indication
- Clearly Printed Circuit Layout
- Test Points for Easy Observation
- Rugged Metal Cabinet Construction
- Maintenance-Free Design
- Educational Laboratory Grade Equipment
- User-Friendly Interface

TECHNICAL SPECIFICATIONS

Product Name	Arithmetic Operations Using 4-Bit ALU Trainer
ALU IC	7481 / 74181 Equivalent
Logic Family	TTL Compatible
Input Variables	A0-A3, B0-B3
Function Selection	Multiple Arithmetic & Logic Functions
Carry Input	Available
Outputs	F0-F3 Function Outputs, Carry Output
Indicators	LED Status Indicators
Power Supply	230V AC $\pm 10\%$, 50Hz
Operating Voltage	+5V DC Regulated
Test Points	4 mm Safety Banana Sockets
Panel	Printed Educational Circuit Diagram
Cabinet	Powder Coated Metal Enclosure
Protection	Fuse Protected Power Supply
Dimensions (Approx.)	300 mm (W) $\times$ 250 mm (H) $\times$ 120 mm (D)
Weight (Approx.)	3 - 5 Kg

EXPERIMENTS

- Study of Binary Addition
- Study of Binary Subtraction
- Verification of Arithmetic Functions
- Verification of Logical Functions
- Study of Carry Generation
- Study of Data Processing Operations
- Understanding ALU Function Selection
- Verification of Truth Tables
- Digital Logic Experimentation

APPLICATIONS



WHY CHOOSE ESEL?

- ISO 9001:2015 Certified Company
- High Quality Educational Equipment
- Reliable Laboratory Solutions
- Advanced Training Systems
- Custom Design and OEM Manufacturing
- Nationwide and International Supply

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