



DIGITAL LOGIC SYSTEM TRAINER, DEVICE 6F24

TRAINING CATEGORY:

BASIC SCIENCE (Computer)

ORIGINATING AGENCY:

CNET

SECURITY CLASSIFICATION:

Device 6F24 is unclassified.

FUNCTIONAL DESCRIPTION:

Digital Logic System: Model 4010 is a fully assembled unit, utilizing state-of-the-art TTL Logic. The power supply circuitry contains a plus five volt DC regulated source rated at one amp with an automatic current limiter and thermal sensor for short circuit protection.

The unit contains sixteen (16) JK flip-flops with individual indicator LED'S for each flip-flop; two (2) two-input AND gates; two (2) two-input OR gates; four (4) inverters; four (4) four-input NAND gates; six (6) three-input NAND gates; twelve (12) two-input NAND gates; three (3) "Exclusive" OR gates; one (1) two-input NOR gate;

one (1) Full Adder with SUM, SUM, CO and CO outputs; one (1) four-bit D/A converter; one (1) analog comparator; one (1) level shifter; one (1) one-shot with jacks for additional capacitance; four (4) logic level display LED's; four (4) manual logic level switches with complementary outputs for each; one (1) 60 Hz. clock, one (1) variable clock with manual pushbutton and switchable dual range variable output; eight (8) logic level jacks (four high, four low); and one (1) sixteen-pin interface socket with sixteen (16) input/output jacks plus supply voltage and ground.

Also included is a memory module containing 1024 x one (1) bit semiconductor RAM memory; ten (10) address lines with individual jacks for each, and a control block with separate data in and data out lines; an input/output module containing a twelve (12) push-button keyboard (0-9, * & #). Outputs are set, reset, *, #, and complementary parallel binary coded decimal (1, 2, 4, 8, 1, 2, 4, & 8); and an LED display module containing two seven-segment LED readouts with two decoder/drivers having four-line BCD input jacks for each with decimal display of each digit.

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Unit contains a minimum of twenty-one (21) LED's sixteen (16) flip-flops, thirty-four (34) basic gates, and more than thirteen (13) additional advanced logic devices. It is provided with a complete set of stackable patch leads in three (3) color-coded lengths. Teachware includes a detailed student experiment manual with an optional instructor's lesson guide available.

Unit can perform the functions of a digital voltmeter, and can illustrate experiments in multiplication and division. It interfaces with the Digiac Digital Computer, Micro-computer, Memory Trainer, Servomechanisms Trainer, Electro-hydraulic Systems and I.C. Breadboarding unit. When interfaced with the breadboarding unit, the 4010 provides + 5 VDC and ground, display, logic functions and clocks to build advanced computer circuits.

PHYSICAL INFORMATION:

Dimensions of the unit in its wood-grained cabinet shall be 17.5" (44.5cm) x 20" (50.8cm) x 6.5" (16.5cm) and the unit will weigh 15 lbs. (6.8kg). Unit shall be provided with lead package for the forty-five (45) learning concept experiments with an optional advanced project add-on package available.

INSTALLATION AREA:

The Model 4010 panel is standard 19" for rack mounting in the Digiac Model 6000 Series horizontal or vertical cabinets; the Digiac Model 844 or 845 Electromechanical Consoles; or in its stand-alone, wood-grained cabinet. In its own wood-grained cabinet, it is reversible to enable either a horizontal work surface for student use or a vertical position for demonstration purposes.

CONTRACT IDENTIFICATION:

Manufactured by Digiac Corp., Smithtown, NY under NAVTRASYS-SCEN Contract No. N61339-79-C-0013.

LOCAL STOCK NUMBER:

6910-LL-C00-5218