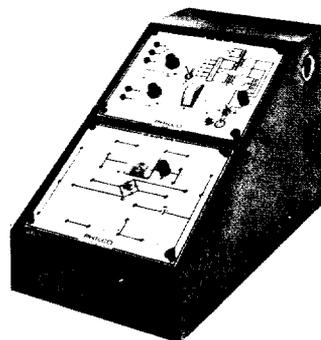


Rear View



Front View

ELECTRONICS FUNDAMENTALS ANALYSIS UNIT, DEVICE 6E7

TRAINING CATEGORY:

BASIC SCIENCE (Electronics)

ORIGINATING AGENCY:

CHNAVPERS

SECURITY CLASSIFICATION:

Device 6E7 is unclassified.

INTENDED USE:

To provide the student with a means for experimentation and practical application of various principles of basic electricity and electronic theory.

FUNCTIONAL DESCRIPTION:

Device 6E7 consists of circuit analysis units. Except for the variable power supply, these units are printed circuits. These circuits show the complete schematic diagram of the circuit being used, with each actual electronic component mounted near its schematic symbol. Experimen-

tal circuits can be constructed on the circuit patching unit by use of parts provided.

The variable power supply provides ac voltages and variable and fixed dc voltages needed in the experiments.

A circuit patching unit is provided for mounting experimental circuits.

The basic multimeter circuits unit is arranged so that, by the proper connections, the basic circuits of a standard multimeter can be constructed.

The measurement functions of which the basic multimeter circuits panel is capable are the following:

dc Ammeter and dc Voltmeter
 ac Ammeter and ac Voltmeter
 Series Ohmmeter and Shunt Ohmmeter

The unit includes a 1-ma, 98.5-ohm internal resistance meter movement which is protected by two (2) semiconductor diodes, and a 0.5 amp-fuse.

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A vacuum tube characteristics unit is provided for experiments with receiver-type vacuum tubes and basic vacuum tube circuits. Schematic overlays are provided for changing the tube symbol when tubes other than the pentode are used.

Basic amplifier circuits can be set up using plug-in components from the accessory kit.

A display and storage rack is provided for holding the fundamentals units in a convenient viewing position and for storing the units.

An electronics fundamentals accessory kit contains the necessary incidental parts needed to perform the experiments for observations of electrostatic, magnetic, electrical, and electronic phenomena.

The transistor characteristics panel provides for experiments on transistor and semiconductor diode characteristics, both static and dynamic. Provisions are made for the variation of input and output currents. Built-in meters with range switches and polarity reversing switches are included to permit monitoring both input and output currents simultaneously. The basic common-base, common-collector, and common-emitter circuits for both PNP and NPN transistors are easily developed on this panel.

Accessories furnished with the device include semiconductor fundamentals accessories, interconnecting leads, transistor schematic disks, regulated low voltage adapter, and all other items necessary to perform the semiconductor diode and transistor experiments. Disks are provided for both PNP and NPN transistors. The regulated low-voltage adapter can be used to provide two (2) regulated 10-volt outputs for bias voltages of semiconductor devices and circuits.

PHYSICAL INFORMATION:

The main chassis of the device is 12" x 18" x 12" high. The device weighs approximately 20 lbs.

POWER REQUIREMENTS:

115 Volts, 60 Hz, single phase, 0.5 ampere. Power consumption is approximately 50 watts.

PUBLICATIONS FURNISHED:

Philco-Ford Publications T-29-1, T-29-2, and T-29A.

Device Summary, NAVTRADEV P-3474 (U).

REFERENCE PUBLICATIONS (NOT SUPPLIED):

Philco-Ford Publications AN-631, AN-632, and AN-633.

PERSONNEL:

Instructors: One (1) qualified to teach theory of basic electricity and electronics.

Operator: Trainee Operated

Trainees: One (1) per device plus observers

Maintenance: One (1) technician approximately 1 hour per 40-Hr utilization week

CONTRACT IDENTIFICATION:

Manufactured by Philco-Ford Corporation, Fort Washington, PA under NAVTRASYS-SCEN Contract No. N65928-69-M-1029.

LOCAL STOCK NUMBER:

6910-LL-C00-3581