



Top cover removed to
 show teaching mode

POWER SUPPLY TRAINING AID, DEVICE 6B30

TRAINING CATEGORY:

BASIC SCIENCE (Electronic)

ORIGINATING AGENCY:

CNET

SECURITY CLASSIFICATION:

Device 6B30 is unclassified.

INTENDED USE:

The power supply training aid will be used to teach students the operation of various types of power supply systems by allowing the student to measure these various circuits in an operating condition. The PC boards containing these circuits are laid out flat on the top of the training aid with the component exposed and labeled for the students identification.

FUNCTIONAL DESCRIPTION:

The training aid is a solid state power supply with a front panel mounted voltmeter, current meter, fine and coarse voltage control, and a current limiting control.

The power supply has a step-down transformer input with a full-wave rectifier. The output of this full-wave rectifier is fed to a printed circuit connector system, into which four (4) different printed circuit (PC) boards can be placed. The output of the PC board is fed to current regulating power transistor, and a voltage regulating power transistor.

The power supply output is passed through a 0-2 ampere DC current meter, and the output voltage is measured on a 0-50 volt DC voltmeter. The following four (4) PC Boards are supplied for the basic operation.

- (a) Half-wave and full-wave rectification filtered but unregulated.
- (b) Zener voltage regulation using a zener diode and transistor.
- (c) Current regulator using zener diode and transistor.
- (d) Highly regulated power supply using several transistors and zeners to provide current and voltage regulation.

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The PC Boards are mounted horizontally with components exposed to students when top or bottom cover is removed. All parts are identified by schematic number.

Test points are located at input and output of circuits so student can readily measure system performance.

PHYSICAL INFORMATION:

6" High by 15" Wide by 11" Long.
Training aid weighs 15 lbs.

ENVIRONMENTAL CHARACTERISTICS:

Classroom environment.

EQUIPMENT REQUIRED (NOT SUPPLIED):

1. Volt-ohm Meter
2. NIDA 201L Load Box

INSTALLATION AREA:

Classroom Work Table

POWER REQUIREMENTS:

115 V, single phase, 60 Hz, 3-wire

PUBLICATIONS FURNISHED:

Device Instruction Manual

PERSONNEL:

Electronic Students.

RELATED TRAINING DEVICES:

NIDA 201L Load Box

CONTRACT IDENTIFICATION:

Manufactured by NIDA Corporation,
Stamford, CT under NAVTRASYS-SCEN Contract
No. N61339-76-C-0123.

LOCAL STOCK NUMBER:

6910-LL-C00-4521