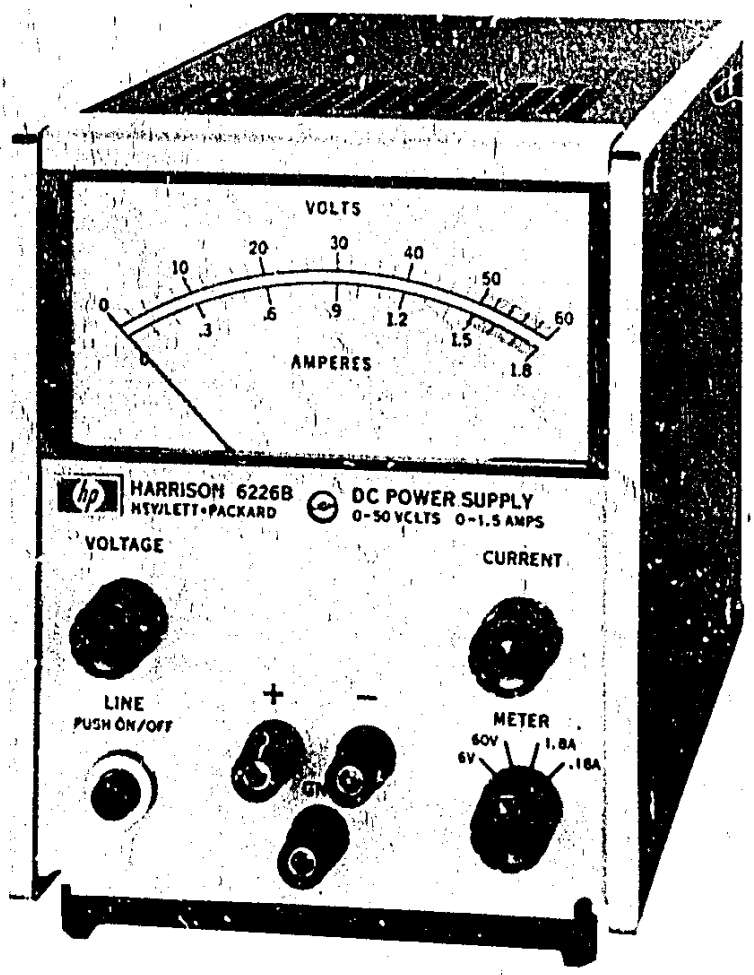

Figure 1-1. DC Power Supply, Model 6226B

SECTION I
GENERAL INFORMATION

1-1 DESCRIPTION

1-2 This power supply, Figure 1-1, is completely transistorized and suitable for either bench or relay rack operation. It is a compact, well-regulated, Constant Voltage/Constant Current supply that will furnish full rated output voltage at the maximum rated output current or can be continuously adjusted throughout the output range. The front panel CURRENT control can be used to establish the output current limit (overload or short circuit) when the supply is used as a constant voltage source and the VOLTAGE controls can be used to establish the voltage limit (ceiling) when the supply is used as a constant current source. The supply will automatically crossover from constant voltage to constant current operation and vice versa if the output current or voltage exceeds these preset limits.

1-3 The power supply has both front and rear terminals. Either the positive or negative output terminal may be grounded or the power supply can be operated floating at up to a maximum of 300 volts off ground.

1-4 A single meter is used to measure either output voltage or output current in one of two ranges. The voltage or current ranges are selected by a METER switch on the front panel.

1-5 The programming terminals located at the rear of the unit allow ease in adapting to the many operational capabilities of the power supply. A brief description of these capabilities is given below:

a. **Remote Programming.** The power supply output voltage or current may be programmed from a remote location by means of an external voltage source or resistance.

b. **Remote Sensing.** The degradation in regulation which occurs at the load because of the voltage drop in the load leads can be reduced by using the power supply in the remote sensing mode of operation.

c. **Series and Auto-Series Operation.** Power supplies may be used in series when a higher output voltage is required in the constant voltage mode of operation or when greater voltage compliance is required in the constant current mode of operation. Auto-Series operation permits one knob control of the total output voltage from a "master" supply.

d. **Parallel and Auto-Parallel Operation.** The power supply may be operated in parallel with a similar unit when greater output current capability is required. Auto-Parallel operation permits one knob control of the total output current from a "master" supply.

e. **Auto-Tracking.** The power supply may be used as a "master" supply, having control over one (or more) "slave" supplies that furnish various voltages for a system.

1-6 SPECIFICATIONS

1-7 Detailed specifications for the power supply are given in Table 1-1.

1-8 OPTIONS

1-9 Options are factory modifications of a standare instrument that are requested by the customer. The following options are available for the instrument covered by this manual. Where necessary, detailed coverage of the options is included throughout the manual.

Option No.	Description
13	**Three Digit Graduated Decadial Voltage Control:** Includes graduated ten-turn control replacing standard ten-turn voltage control.
14	**Three Digit Graduated Decadial Current Control:** Includes graduated ten-turn control replacing standard current control.
28	**Rewire for 230V, Single Phase Input:** Supply as normally shipped is wired for 115Vac input, and must be internally reconnected for 230Vac operation.

1-10 ACCESSORIES

1-11 The accessories listed in the following chart may be ordered with the power supply or separately from your local Hewlett-Packard Sales Office. (Refer to list at rear of manual for addresses.) Additional information and illustrations on accessories are given in Section II.

Part No.	Description
5060-0797	**Adapter Frame.** — As illustrated in Figure 1-2, Adapter Frame includes all necessary hardware for mounting one, two, or three supplies in a standard 19" EIA rack. The adapter frame also accepts Filler Panels and Accessory Drawers.

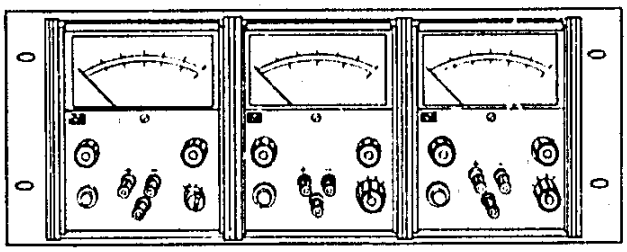

Figure 1-2. Rack Mounting Adapter Frame

5060-0793	**Filler Panel.** — One-third rack width panel for blocking off unused portions of the frame.
5060-0788	**Accessory Drawer.** — One-third rack width drawer for convenient storage of leads, probes, etc.

Part No.	Description
1052A	**Combining Case.** — Can be used for a multi-instrument package that is portable and easily rack mounted with the hardware provided. The combining case also accepts the Filler Panels and Accessory Drawers mentioned above. To maintain proper ambient temperature, it is recommended that Cooling Kit 5060-0789 (115V, 50-60 Hz) or 5060-0796 (230V, 50-60 Hz) be employed with 1052A Combining Cases housing these supplies.

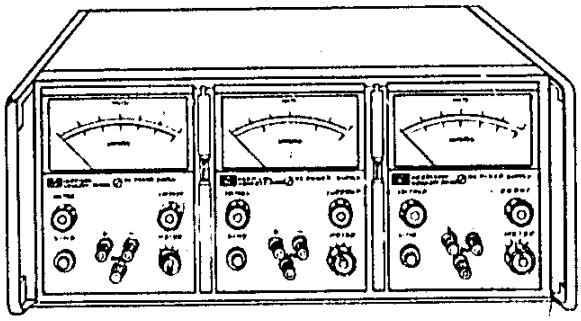

Figure 1-3. Combining Case

Table 1-1. Specifications

INPUT:
105-125/210-250 VAC, single phase, 50-60Hz, 1.8A, 164W.

OUTPUT:
0-50 volts @ 0-1.5 amps.

LOAD REGULATION:
Constant Voltage -- Less than 0.01% plus 2mV for a full load to no load change in output current.
Constant Current -- Less than 0.01% plus 250μA for a zero to maximum change in output voltage.

LINE REGULATION:
Constant Voltage -- Less than 0.01% plus 2mV for any line voltage change within the input rating.
Constant Current -- Less than 0.01% plus 250μA for any line voltage change within the input rating.

RIPPLE AND NOISE:
Constant Voltage -- Less than 200μVrms, 1mV p-p (dc to 20MHz).
Constant Current -- Less than 200μArms, 1mA p-p (dc to 20MHz).

TEMPERATURE RANGES:
Operating: 0 to 55°C. Storage: -40 to +85°C.

TEMPERATURE COEFFICIENT:
Constant Voltage -- Less than 0.02% plus 500μV per degree Centigrade.
Constant Current -- Less than 0.02% plus 0.8mA per degree Centigrade.

STABILITY:
Constant Voltage -- Less than 0.10% plus 2.5mV total drift for 8 hours after an initial warm-up time of 30 minutes at constant ambient, constant line voltage, and constant load.
Constant Current -- Less than 0.01% plus 4mA total drift for 8 hours after an initial warm-up time of 30 minutes at constant ambient, constant line voltage, and constant load.

INTERNAL IMPEDANCE AS A CONSTANT VOLTAGE SOURCE:
Less than 0.01Ω from DC to 1kHz.
Less than 0.05Ω from 1kHz to 10kHz.
Less than 0.5Ω from 10kHz to 100kHz.
Less than 5.0Ω from 100kHz to 1MHz.

TRANSIENT RECOVERY TIME:
Less than 50μsec for output recovery to within 10mV following a full load current change in the output.

METER:
The front panel meter can be used as either a 0-60 or 0-6 volt voltmeter or as a 0-1.8 or 0-0.18 amp ammeter.

OUTPUT CONTROLS:
Ten-turn output voltage and current controls permit continuous adjustment over entire output span. Meter switch selects voltage or current range.

OUTPUT TERMINALS:
Three "five-way" output posts are provided on the front panel and an output terminal strip is located on the rear of the chassis. All power supply output terminals are isolated from the chassis and either the positive or negative terminal may be connected to the chassis through a separate ground terminal located on the output terminal strip.

ERROR SENSING:
Error sensing is normally accomplished at the front terminals if the load is attached to the front or at the rear terminals if the load is attached to the rear terminals. Also, provision is included on the rear terminal strip for remote sensing.

REMOTE PROGRAMMING:
Remote programming of the supply output at approximately 200 ohms per volt in constant voltage is made available at the rear terminals. In constant current mode of operation, the current can be remotely programmed at approximately 500 ohms per ampere.

REMOTE PROGRAMMING SPEED (CV):

Time (T) required for output voltage to change from zero volts to within (X) mV of the maximum rated output or from maximum rated output to within (X) mV of zero.

UP	X = 5V	T ≤ 1.7mS
	X = 50mV	T ≤ 2.4mS
DOWN	X = 5V	T ≤13.5mS
	X = 50mV	T ≤ 15mS

COOLING:
A "pancake" fan is mounted at the rear of the unit.

SIZE:
$6\frac{1}{4}$" H x 11" D x 5-1/8" W. Two of the units can be mounted side by side in a standard 19" relay rack.

WEIGHT: 16 lbs. net. 20 lbs. shipping.

FINISH: Light gray front panel with dark gray case.