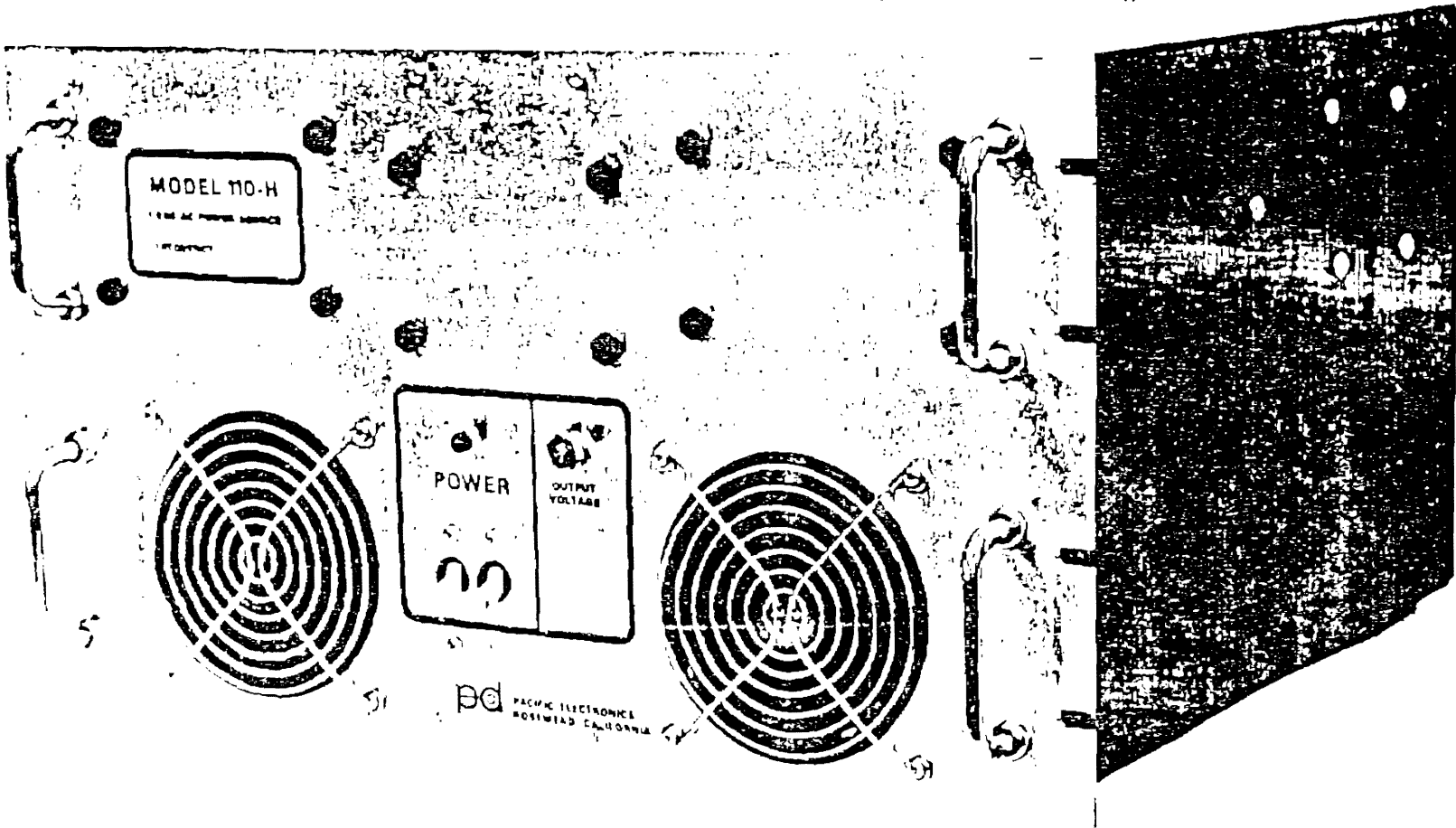




Advanced Test Equipment Rentals
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500
e1 110-H



SECTION 1

GENERAL DESCRIPTION

1.1 GENERAL DESCRIPTION

The Model 110-H is a solid-state linear power amplifier designed to serve as a rugged AC Power Source to 1000 VA at the popular power frequencies. It is designed to operate from line power of 110 or 220 VRMS, 50-60 Hz.

The standard unit is equipped with a fixed internal oscillator pre-set to the desired frequency over the range of 47-500 Hz. Amplitude is continuously variable, 0 - 125 VRMS, and may be locked at a selected value.

The 110-H is fully protected against accidental shorts or overload, and against excessive internal temperature. It is designed for economy and reliability in fixed requirement applications.



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LINE VOLTAGE..... (normal)	105-125 VRMS., 50-60 HZ., or 210-250 VRMS, in series primary connection
LINE VOLTAGE..... (low line)	When connected for Low Line, will operate from 95-115 or 190-230 VRMS 50-60 HZ.
POWER FREQUENCY RANGE.....	47-500 HZ. Min.
INTERNAL OSCILLATOR RANGE.....	47-500 HZ., pre-set to the desired frequency
FREQUENCY ACCURACY.....	0.5%
FREQUENCY STABILITY ¹ (fixed frequency option)	0.02% - 10 hours 0.1% - 30 hours
AMPLITUDE STABILITY ¹	0.5% - 10 hrs @ 115 VRMS 1.0% - 30 days @ 115 VRMS
OUTPUT VOLTAGE.....	0-125 VRMS min. range
OUTPUT CURRENT.....	0-8 amps. See derating curve
POWER FACTOR.....	0.7 Inductive or Capacitive
LOAD REGULATION.....	0.5% for 0-8 amp load
LINE REGULATION.....	0.25% for 10% line change
DISTORTION.....	0.75% Thd.
SMALL SIGNAL BANDWIDTH.....	10 KHZ approximate
OUTPUT REFERENCE.....	Floating, either output terminal may be grounded to chassis
DC OFFSET.....	10 MVDC maximum
OVERLOAD PROTECTION.....	Electronic, automatic recovery



EFFICIENCY.....	.50% approximate
AMBIENT TEMPERATURE.....	.0 to 45°C operating -25 to +85°C storage
DIMENSIONS.....	.19"W x 17"D x 10½"H
WEIGHT.....	.80 pounds
COOLING.....	.Forced Air, intake fan on front panel; exhaust fan on rear panel
MOUNTING.....	.19" rack mount standard

NOTE:

1. All stability specifications apply after a forty-eight hour burn-in.



SECTION 2

OPERATING INSTRUCTIONS

2.1 GENERAL CHARACTERISTICS

The 110-H is a general purpose source of AC Power applicable for linear loads at any power factor (see derating curve for operation at extremely low power factors). It can also be used to supply non-linear or rectified loads to a peak current of 20 amps. Peak loads above 20 amps may cause current limiting.

Output power is available at a terminal strip on the rear panel. Machine output is fully isolated, and either output terminal may be grounded (tied to chassis).

CAUTION: The line power cord is equipped with a three terminal plug. The third, or ground, terminal ties chassis to house ground. It is hazardous to operate this equipment without the chassis referenced to house ground.

Each 110-H has been pre-set to a selected frequency in the 47-500 HZ range and labeled on the front panel. Should it be necessary to change the frequency setting, first consult the oscillator calibration section of this manual.

TURN ON: The unit may be turned on either with the line power switch or by plugging the power cord into the wall with the line power switch on. The machine may be turned on into a load which draws a heavy surge current for a short duration of time.

2.2 DERATING

The 110-H is designed to operate at any power factor and at any output voltage between 0 and 125 VRMS. The principal limitation on machine output is thermal stress on the output power modules. Since internal dissipation increases with deviation from unity power factor, and with reduced output voltage, the user should keep operating conditions within the limits shown on Figure 2: MODEL 110-H DERATING CURVES.

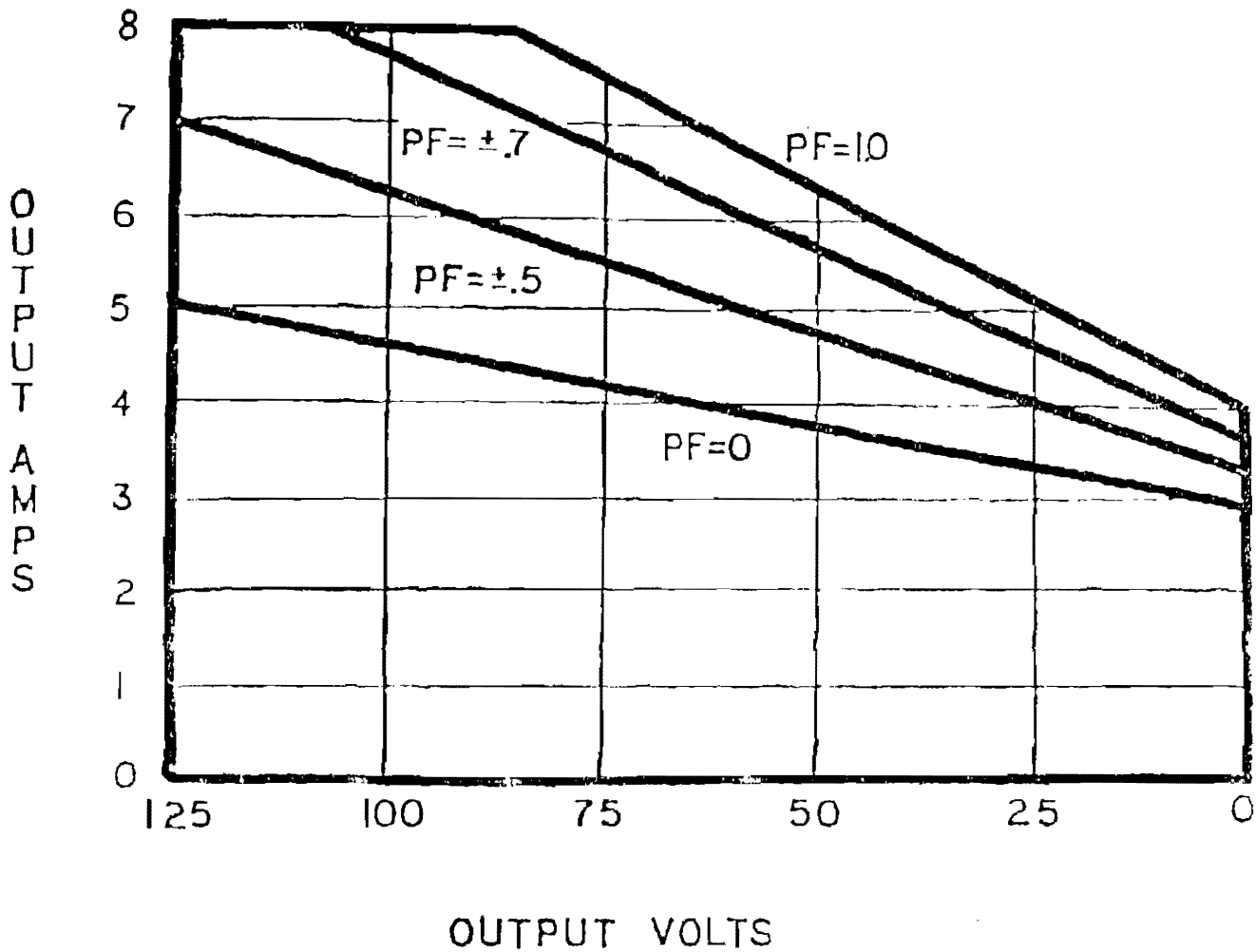


FIGURE 2 MODEL 110 H DERATING CURVE