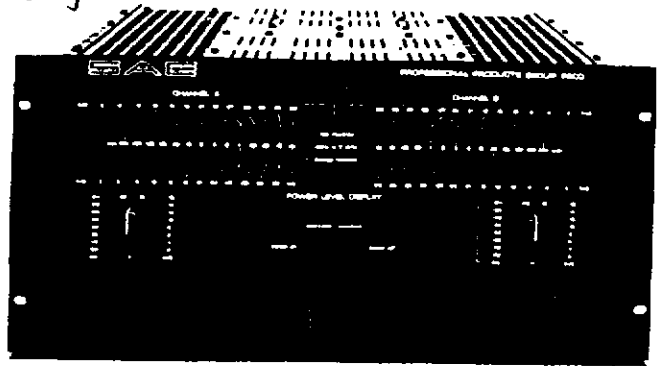


CHRIS FLENTKE 244 High St



SCIENTIFIC AUDIO ELECTRONICS, INC.

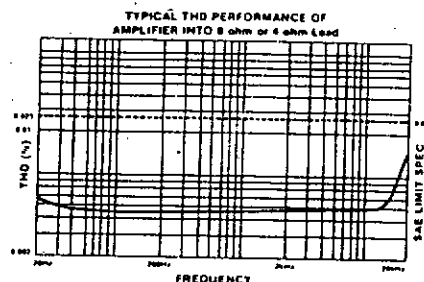
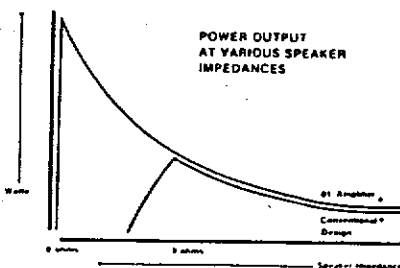


P500 Professional Power Amplifier

It isn't enough to say that our P500 Professional Series Power Amplifier will deliver 500 watts into 8 ohms per FTC standards. A loudspeaker, regardless of its rated impedance, presents a constantly changing (dynamic) load to the amplifier that only occasionally appears as 8 ohms. Often, the load drops well below 8 ohms, even as low as 1 ohm. When this occurs, an amp must be able to deliver over 500 watts to maintain musical control. Simply stated, more current must be available. Two high capacity power supplies and four filter capacitors with 24 output transistors per channel in the P500 provide the extended capabilities necessary for this "real world" amplification.

The P500 features a symmetrical, balanced circuit design. Two mirror-imaged amplifiers for each channel accurately reproduce the positive and negative slopes of the musical waveform. This "Complementary" design leads to virtual cancellation of out-of-phase information appearing at the outputs and, therefore, greatly reduces harmonic distortion.

Conventional amplifiers rely on "artificial" methods of damping, generated within the amplifier's negative feedback loop. Such damping is both level and frequency dependent and, therefore, is virtually non-existent at frequency extremes and high signal levels. The amp loses control of the loudspeaker and the resulting sound is no longer accurate. This "natural" form of damping is present in the P500 and is actually the internal resistance (impedance) of the amp itself, determined by the size and quality of the internal wiring and power supply. The amp remains stable even under complex loads and is not dependent upon level or frequency, thus, there is a system of Natural Damping achieved across the entire audio bandwidth.



An Automatic Bridging Circuit is accessed by inserting the proper connector into a rear panel $\frac{1}{4}$ " or XLR jack. Mono output of the P500 is 1500 watts at 4 ohms. The stereo channel inputs are also provided access through both Hi-Z $\frac{1}{4}$ " and Lo-Z, line balanced XLR jacks. Speaker output terminals are five-way, gold-plated binding posts for maximum contact security.

Dual average and peak response LED power meters are incorporated along with stepped output level attenuators for each channel. Inside, the power supply is a massive toroidal transformer and maximum heat dissipation is accomplished with the SAE-exclusive Turbo-Flow heat sink configuration. The P500 is built to EIA standard rack-mount dimensions and weighs in at a hefty 67 pounds.

P500 SPECIFICATIONS

Minimum continuous RMS power per channel, both channels driven at no more than 0.05% THD, stereo, 20Hz-20kHz:

500 w/ch @ 8 ohms
750 w/ch @ 4 ohms
1000 w/ch @ 2 ohms

Intermodulation Distortion, from 250mV to rated power:

0.025%

Headroom: 1.2dB

Damping Factor: 50Hz @ 8 ohms 200
20-20k 8 ohms 60

Frequency Response:

rated power 20Hz-20kHz : +0, -0.5dB
1 watt 0.5Hz-180kHz : +0, -0.3dB (filters "out")
1 watt 20Hz -180kHz : +0, -3dB (filters "in")

Signal-to-Noise Ratio:

rated power wideband : -100dB
rated power IHF-A : -125dB
1 watt IHF-A : -100dB

Channel Separation : 90dB (20Hz-20kHz)

Input Sensitivity for rated output: 2.5 volts

Common-Mode rejection from 20Hz-20kHz: better than 75dB

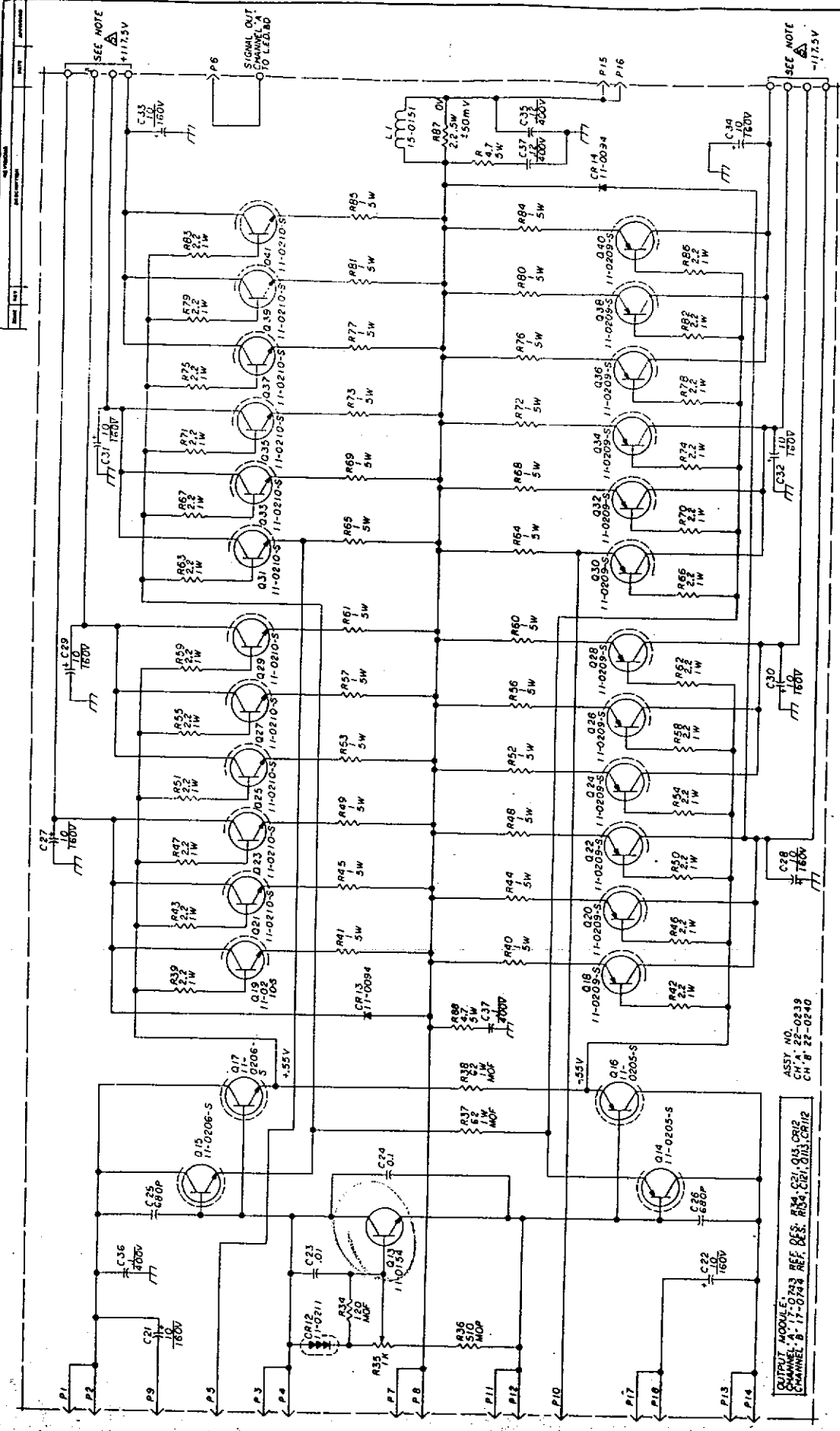
Minimum continuous RMS power in bridged mono mode from 20Hz-20kHz at no more than 0.1% THD:

1000 watts @ 8 ohms
1500 watts @ 4 ohms
2000 watts @ 2 ohms

Current Slew Rate: 20 amps/microsecond

Dimensions: (WxHxD) 19"x8.75"x17.25"

Weight : 67 lbs. (without carton and packing)



6. METAL OXIDE FILM RESISTOR DESIGNATED FLAME PROOF RESISTOR.	
7. OUTPUT TRANSISTORS ARE CONNECTED IN GROUPS OF THREE DIRECTLY TO POSITIVE POWER SUPPLY CAPACITORS VIA #16 GA. HARD WIRE BUSSES.	
8. VOLTAGES ARE 310% AT 20VAC LINE VOLTAGE.	
9. CHANNEL A SHOWN, CHANNEL B IDENTICAL.	
10. CAPACITOR VALUES IN MICROGRAMS.	
11. RESISTOR VALUES IN OHMS, UNLESS OTHERWISE SPECIFIED.	

PART LIST		REVISIONS		DATE		BY		CHECKED		APPROVED	
1	OUTPUT MODULE	1	11-0743	1	11-0743	1	11-0743	1	11-0743	1	11-0743
2	CHANNEL A	2	11-0743	2	11-0743	2	11-0743	2	11-0743	2	11-0743
3	CHANNEL B	3	11-0743	3	11-0743	3	11-0743	3	11-0743	3	11-0743

REVISIONS		DATE		BY		CHECKED		APPROVED	
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3	CHANNEL B	3	11-0743	3	11-0743	3	11-0743	3	11-0743

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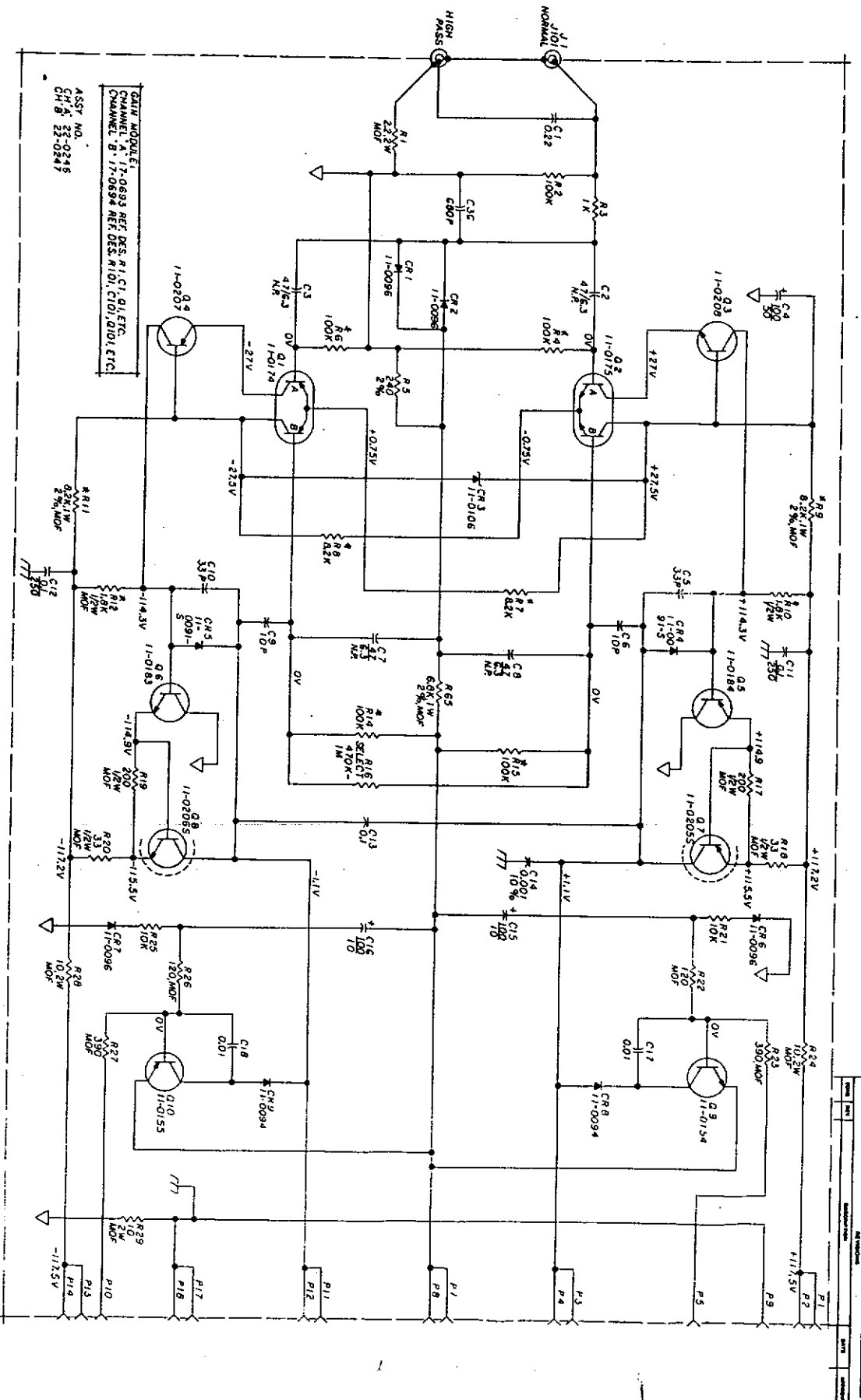
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3	CHANNEL B	3	11-0743	3	11-0743	3	11-0743	3	11-0743

REVISIONS		DATE		BY		CHECKED		APPROVED	
1	OUTPUT MODULE	1	11-0743	1	11				



GAIN MODULE
 CHANNEL A: 17-0693 REF. DES. R1, C1, Q1, ETC.
 CHANNEL B: 17-0694 REF. DES. R10, C10, Q10, ETC.
 ASSY NO. 22-0245
 CH A 22-0245
 CH B 22-0245

6. MOF-METAL OXIDE FILM RESISTOR DESIGNATED FILM MOF
 RESISTOR
 7. VOLTAGES ARE 10% AT 120VAC LINE VOLTAGE.
 8. CHANNEL A SHOWN CHANNEL B IDENTICAL.
 9. CAPACITOR VALUES IN OHMS 1/4W 5%.
 10. RESISTOR VALUES IN OHMS 1/4W 5%.
 NOTES: UNLESS OTHERWISE SPECIFIED.

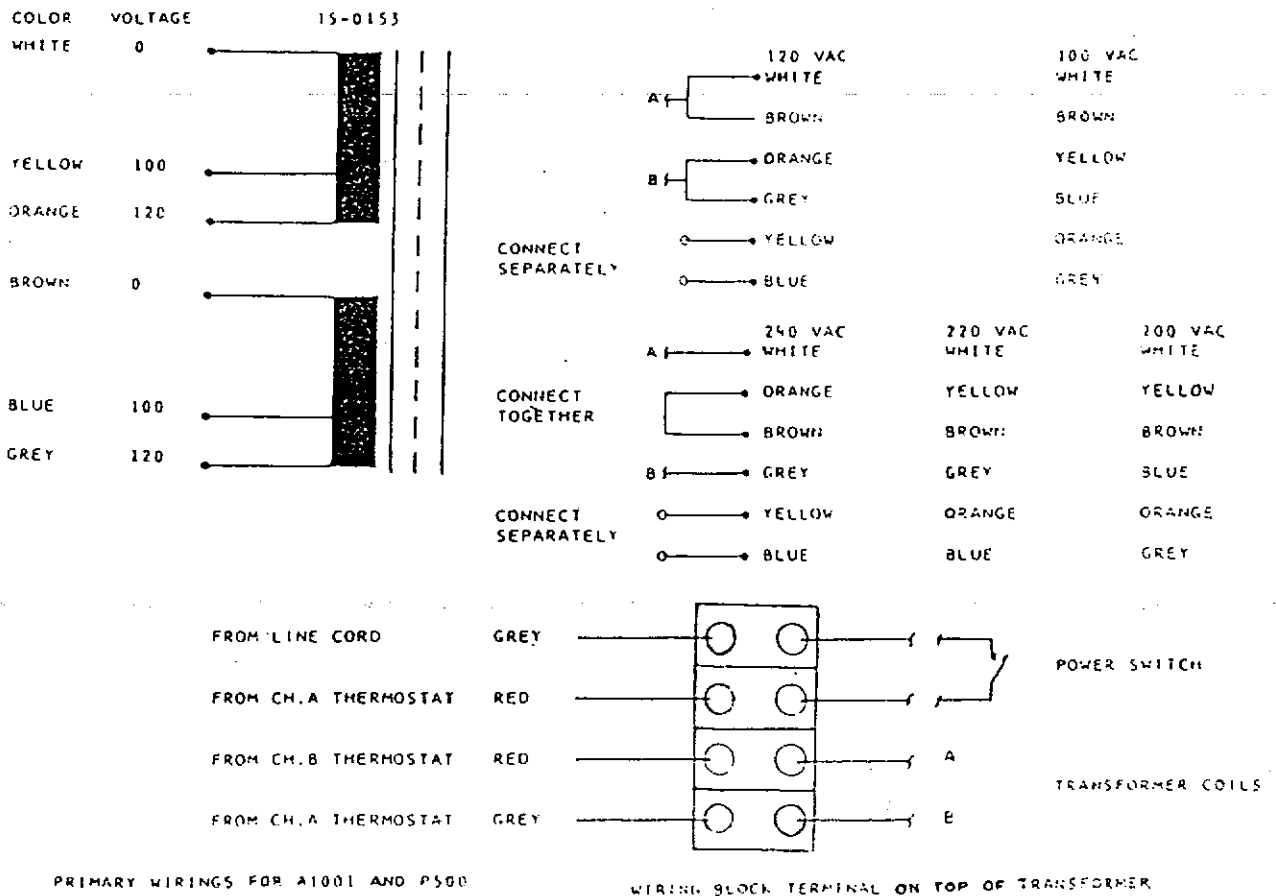
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2	REVISION	10/1/68	J. L. H.	10/1/68	J. L. H.	10/1/68	J. L. H.	10/1/68	J. L. H.
3	REVISION	10/1/68	J. L. H.	10/1/68	J. L. H.	10/1/68	J. L. H.	10/1/68	J. L. H.
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9	REVISION	10/1/68	J. L. H.	10/1/68	J. L. H.	10/1/68	J. L. H.	10/1/68	J. L. H.
10	REVISION	10/1/68	J. L. H.	10/1/68	J. L. H.	10/1/68	J. L. H.	10/1/68	J. L. H.



SAE MODEL P500 OWNER'S MANUAL ATTACHMENT

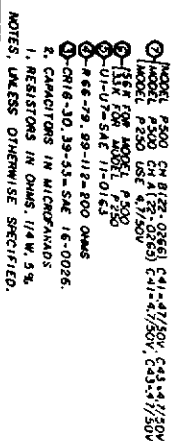
THIS UNIT IS SPECIFICALLY WIRED TO OPERATE AT 220 VAC 50/60 HZ.
HOWEVER, CAN BE INTERNALLY CONVERTED BY AN AUTHORIZED SERVICE FACILITY
TO OPERATE AT 120 VAC 50/60 HZ.

CONVERSION DIAGRAM:



Components for the Connection

P.O. Box 60271 Terminal Annex, Los Angeles, California 90060 • (213) 489-7600 • Telex 67-4062



NOTES, UNLESS OTHERWISE SPECIFIED.

DATE: TIME:		OFFICE:		SALES:	
NAME:		ADDRESS:		CITY:	
PHONE:		FAX:		E-MAIL:	
PRODUCT:		QUANTITY:		PRICE:	
TOTAL:		TAX:		NET:	
PAYMENT:		TERMS:		DATE:	
SIGNATURE:		NAME:		TITLE:	
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PHONE:		FAX:		E-MAIL:	
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