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OPERATING AND SERVICE MANUAL

MODEL 6200B

DC POWER SUPPLY

MANUFACTURING CODE 6A

OPERATING AND SERVICE MANUAL

**HEWLETT
PACKARD**  **HARRISON
DIVISION**

OPERATING AND SERVICE MANUAL

MODEL 6200B

DC POWER SUPPLY

MANUFACTURING CODE 6A

January, 1966

SECTION VI REPLACEABLE PARTS

6-1 INTRODUCTION

6-2 This section contains information for ordering replacement parts.

6-3 Table 6-1 lists parts in the alpha-numerical order of the circuit designators and provides the following information:

- A. Description (See list of abbreviations below).
- B. Total quantity used in the instrument.
- C. Manufacturer's part number.
- D. The Manufacturer's code number as listed in the Federal Supply Code for Manufacturers H4-1.
- E. The H-P Stock Number.
- F. The recommended spare parts quantity for complete maintenance during one year of isolated service. (Column A).

6-4 ORDERING INFORMATION

6-5 To order a replacement part, address order or inquiry to your local Hewlett-Packard field office (see lists at rear of this manual for addresses).

6-6 Specify the following information for each part:

- A. Model and complete serial number of instrument.
- B. Hewlett-Packard stock number.
- C. Circuit reference designator.
- D. Description.

6-7 To order a part not listed in the tables, give a complete description of the part and include its function and location.

Reference Designators

A	= assembly	K	= relay	T	= transformer
B	= motor	L	= inductor	V	= vacuum tube, neon blub, photocell, etc.
C	= capacitor	M	= meter	X	= socket
CR	= diode	P	= plug	XF	= fuseholder
DS	= device signaling (lamp)	Q	= transistor	XDS	= lampholder
E	= misc. electronic part	R	= resistor	Z	= network
F	= fuse	RT	= thermistor		
J	= jack	S	= switch		

ABBREVIATIONS

a	=	amperes	K	=	kilo = 1000
c	=	carbon	obd	=	order by description
cer	=	ceramic	p	=	peak
coef	=	coefficient	pc	=	printed circuit board
com	=	common	pf	=	picofarads = 10^{-12} farads
comp	=	composition	pp	=	peak-to-peak
conn	=	connection	ppm	=	parts per million
crt	=	cathode-ray tube	pos	=	position (s)
dep	=	deposited	poly	=	polystyrene
elect	=	electrolytic	pot	=	potentiometer
encap	=	encapsulated	prv	=	peak reverse voltage
f	=	farads	rect	=	rectifier
fxd	=	fixed	rot	=	rotary
GE	=	germanium	rms	=	root-mean-square
grd	=	ground (ed)	s-b	=	slow-blow
h	=	henries	sect	=	section (s)
Hg	=	mercury	Si	=	silicon
imp	=	impregnated	sil	=	silver
ins	=	insulation (ed)	sl	=	slide
lin	=	linear taper	td	=	time delay
log	=	logarithmic taper	TiO ₂	=	titanium dioxide
m	=	milli = 10^{-3}	tog	=	toggle
M	=	megohms	tol	=	tolerance
ma	=	milliamperes	trim	=	trimmer
μ	=	micro = 10^{-6}	tw	=	traveling wave tube
mfr	=	manufacturer	var	=	variable
mtg	=	mounting	w/	=	with
my	=	mylar	W	=	watts
NC	=	normally closed	ww	=	wirewound
Ne	=	neon	w/o	=	without
NO	=	normally open	cmo	=	cabinet mount only
nsr	=	not separately replaceable			

6-8 CODE LIST OF MANUFACTURERS (Sheet 1 of 2)

The following code numbers are from the Federal Supply Code for Manufacturers Cataloging Handbooks H4-1 (Name to Code) and H4-2 (Code to Name) and their latest supplements. The date of revision and the date of the supplements used appear at the bottom of each page. Alphabetical codes have been arbitrarily assigned to suppliers not appearing in the H4 handbooks.

CODE NO.	MANUFACTURER	ADDRESS	CODE NO.	MANUFACTURER	ADDRESS	CODE NO.	MANUFACTURER	ADDRESS
00334	Humidial Co.	Colton, Calif.	07115	Corning Glass Works	Bradford, Pa.	40920	Miniature Precision Bearings, Inc.	Keene, N.H.
00335	Westrex Corp.	New York, N.Y.		Electronic Components Dept.	Pasadena, Calif.	42190	Muter Co.	Chicago, Ill.
00373	Garlock Packing Co.,	Camden, N.J.	07126	Digitran Co.	Minneapolis, Minn.	43990	C. A. Norgren Co.	Englewood, Colo.
00656	Aerovox Corp.	New Bedford, Mass.	07137	Transistor Electronics Corp.	Elmira, N.Y.	44655	Ohmite Mfg. Co.	Skokie, Ill.
00779	Amp, Inc.	Harrisburg, Pa.	07138	Westinghouse Electric Corp.	Los Angeles, Calif.	47904	Polaroid Corp.	Cambridge, Mass.
00781	Aircraft Radio Corp.	Boonton, N.J.	07261	Avnet Corp.	Mountain View, Calif.	48620	Precision Thermometer and	Philadelphia, Pa.
00815	Northern Engineering Laboratories, Inc.	Burlington, Wis.	07263	Fairchild Semiconductor Corp.	Hawthorne, Calif.		Inst. Co.	Lexington, Mass.
00853	Sangamo Electric Company,	Marion, Ill.	07910	Continental Device Corp.	Mountain View, Calif.	49956	Raytheon Company	Selma, N.C.
00866	Goe Engineering Co.	Los Angeles, Calif.	07933	Rheem Semiconductor Corp.	Mountain View, Calif.	54294	Shallcross Mfg. Co.	Chicago, Ill.
00891	Carl E. Holmes Corp.	Los Angeles, Calif.	07966	Shockley Semi-Conductor	Palo Alto, Calif.	55026	Simpson Electric Co.	Elmsford, N.Y.
01121	Allan Bradley Co.	Milwaukee, Wis.		Laboratories	Boonton, N.J.	55933	Sonotone Corp.	So. Norwalk, Conn.
01255	Lifton Industries, Inc.	Beverly Hills, Calif.	07980	Boonton Radio Corp.	Los Angeles, Calif.	56137	Spaulding Fibre Co., Inc.	Tonawanda, N.Y.
01281	Pacific Semiconductors, Inc.	Culver City, Calif.	08145	U.S. Engineering Co.	Niagara Falls, Ontario, Canada	56289	Sprague Electric Co.	North Adams, Mass.
01295	Texas Instruments, Inc.	Dallas, Texas	08358	Burgess Battery Co.	Burbank, Calif.	59446	Telex, Inc.	St. Paul, Minn.
01349	The Alliance Mfg. Co.	Alliance, Ohio			Phoenix, Ariz.	61775	Union Switch and Signal, Div. of	Swissvale, Pa.
01561	Chassi-Trak Corp.	Indianapolis, Ind.	08717	Sloan Company	Phoenix, Ariz.	62119	Westinghouse Air Brake Co.	Owosso, Mich.
01589	Pacific Relays, Inc.	Van Nuys, Calif.	08718	Cannon Electric Co.	Lowell, Mass.	64959	Western Electric Co., Inc.	New York, N.Y.
01930	Amerock Corp.	Rockford, Ill.	08792	CBS Electronics Semiconductor	Indianapolis, Ind.	65092	Weston Inst. Div. of Daystrom, Inc.	Newark, N.J.
01961	Pulse Engineering Co.	Santa Clara, Calif.		Operations, Div. of C.B.S. Inc.	Costa Mesa, Calif.	66346	Wollensak Optical Co.	Rochester, N.Y.
02114	Ferroxcube Corp. of America	Saugerties, N.Y.	08994	Mel-Rain	Houston, Texas	70276	Allen Mfg. Co.	Hartford, Conn.
02286	Cole Mfg. Co.	Palo Alto, Calif.	09026	Babcock Relays, Inc.	Chicago, Ill.	70309	Allied Control Co., Inc.	New York, N.Y.
02660	Amphenol-Borg Electronics Corp.	Chicago, Ill.	09134	Texas Capacitor Co.	Chicago, Ill.	70485	Atlantic India Rubber Works, Inc.	Chicago, Ill.
02735	Radio Corp. of America	Somerville, N.J.	09250	Electro Assemblies, Inc.	Toronto, Ontario, Canada	70563	Amperite Co., Inc.	New York, N.Y.
02771	Vocaline Co. of America, Inc.	Old Saybrook, Conn.	09569	Mallory Battery Co. of	Los Angeles, Calif.	70903	Belden Mfg. Co.	Chicago, Ill.
02777	Hopkins Engineering Co.	San Fernando, Calif.	10214	General Transistor Western Corp.	Berkeley, Calif.	70998	Bird Electronic Corp.	Cleveland, Ohio
03508	G.E. Semiconductor Products Dept.	Syracuse, N.Y.	10411	Ti-Tal, Inc.	Niagara Falls, N.Y.	71002	Birnbach Radio Co.	New York, N.Y.
03705	Apex Machine & Tool Co.	Dayton, Ohio	10646	Carborundum Co.	Berne, Ind.	71041	Boston Gear Works Div. of	Quincy, Mass.
03797	Eldema Corp.	El Monte, Calif.	11236	CTS of Berne, Inc.	So. Pasadena, Calif.		Murray Co. of Texas	Cleveland, Ohio
03877	Transitron Electronic Corp.	Wakefield, Mass.	11237	Chicago Telephone of California, Inc.	Palo Alto, Calif.	71218	Bud Radio Inc.	Paramus, N.J.
03888	Pyrofilm Resistor Co.	Morristown, N.J.	11312	Microwave Electronics Corp.	Santa Ana, Calif.	71286	Camloc Fastener Corp.	Plainville, Conn.
03954	Air Marine Motors, Inc.	Los Angeles, Calif.	11534	Duncan Electronics, Inc.	Newark, N.J.	71313	Allen D. Cardwell Electronic	St. Louis, Mo.
04009	Arrow, Hart and Hegeman Elect. Co.	Hartford, Conn.	11711	General Instrument Corporation	Buena Park, Calif.		Prod. Corp.	Elkhart, Ind.
04062	Elmenco Products Co.	New York, N.Y.	11717	Imperial Electronics, Inc.	Palo Alto, Calif.	71400	Bussmann Fuse Div. of McGraw-	Los Angeles, Calif.
04222	Hi-Q Division of Aerovox	Myrtle Beach, S.C.	11870	Melabs, Inc.	Dover, N.H.		Edison Co.	Burbank, Calif.
04298	Elgin National Watch Co.,	Burbank, Calif.	12697	Clarostat Mfg. Co.	So. Plainfield, N.J.	71482	C. P. Clare & Co.	Chicago, Ill.
04404	Dymec Division of	Palo Alto, Calif.	14655	Cornell Dubilier Elec. Corp.	Livingston, N.J.	71528	Standard-Thomson Corp.,	Waltham, Mass.
04651	Sylvania Electric Prods., Inc.	Mountain View, Calif.	15909	The Daven Co.	Long Island City 1, N.Y.		Clifford Mfg. Co. Div.	Centralab Div. of Globe Union Inc.
04713	Motorola, Inc., Semiconductor	Phoenix, Arizona	16688	De Jur-Amsco Corporation	Kokomo, Ind.	71590		Milwaukee, Wis.
04732	Filtron Co., Inc.	Culver City, Calif.	16758	Delco Radio Div. of G. M. Corp.	Wilmington, Del.	71700	The Cornish Wire Co.	New York, N.Y.
04773	Automatic Electric Co.	Northlake, Ill.	18873	E. I. DuPont and Co., Inc.	Teterboro, N.J.	71744	Chicago Miniature Lamp Works	Chicago, Ill.
04796	Sequola Wire & Cable	Redwood City, Calif.	19315	Eclipse Pioneer, Div. of		71753	A. O. Smith Corp., Crowley Div.	West Orange, N.J.
04870	P. M. Motor Co.	Chicago 44, Ill.	19500	Thomas A. Edison Industries,		71785	Cinch Mfg. Corp.	Chicago, Ill.
05006	Twentieth Century Plastics, Inc.	Los Angeles, Calif.		Div. of McGraw-Edison Co.	West Orange, N.J.	71984	Dow Corning Corp.	Midland, Mich.
05277	Westinghouse Electric Corp.,	Youngwood, Pa.	19701	Electra Manufacturing Co.	Kansas City, Mo.	72136	Electro Motive Mfg. Co., Inc.	Willimantic, Conn.
05347	Ultronix, Inc.	San Mateo, Calif.	20183	Electronic Tube Corp.	Philadelphia, Pa.	72354	John E. Fast & Co.	Chicago, Ill.
05593	Illumintron Engineering Co.	Sunnyvale, Calif.	21520	Fansteel Metallurgical Corp.	No. Chicago, Ill.	72619	Dialight Corp.	Brooklyn, N.Y.
05624	Barber Colman Co.	Rockford, Ill.	21335	The Fafnir Bearing Co.	New Britain, Conn.	72656	General Ceramics Corp.	Keasbey, N.J.
05729	Metropolitan Telecommunications Corp.,	Brooklyn, N.Y.	21964	Fed. Telephone and Radio Corp.	Clifton, N.J.	72758	Girard-Hopkins	Oakland, Calif.
05783	Stewart Engineering Co.	Santa Cruz, Calif.	24446	General Electric Co.	Schenectady, N.Y.	72765	Drake Mfg. Co.	Chicago, Ill.
06004	The Bassick Co.	Bridgeport, Conn.	24455	G.E., Lamp Division	Nela Park, Cleveland, Ohio	72825	Hugh H. Eby Inc.	Philadelphia, Pa.
06555	Beede Electrical Instrument Co., Inc.	Penacook, N.H.	26462	General Radio Co.	West Concord, Mass.	72928	Gudeman Co.	Chicago, Ill.
06812	Torrington Mfg. Co., West Div.	Van Nuys, Calif.	26992	Grobet File Co. of America, Inc.	Carlstadt, N.J.	72982	Erie Resistor Corp.	Erie, Pa.
			28480	Hamilton Watch Co.	Lancaster, Pa.	73061	Hansen Mfg. Co., Inc.	Princeton, Ind.
			33173	Hewlett-Packard Co.	Palo Alto, Calif.	73138	Helipot Div. of Beckman	Fullerton, Calif.
			35434	G.E. Receiving Tube Dept.	Owensboro, Ky.		Instruments, Inc.	
			37942	Lectrohm Inc.	Chicago, Ill.	73293	Hughes Products Division of	Newport Beach, Calif.
			39543	P. R. Mallory & Co., Inc.	Indianapolis, Ind.	73445	Hughes Aircraft Co.	North American Phillips Co., Inc.
				Mechanical Industries Prod. Co.	Akron, Ohio			Hicksville, N.Y.

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H4-1 Dated: April 1962
H4-2 Dated: March 1962

6-8 CODE LIST OF MANUFACTURERS (Sheet 2 of 2) CONT'D

CODE NO.	MANUFACTURER	ADDRESS	CODE NO.	MANUFACTURER	ADDRESS	CODE NO.	MANUFACTURER	ADDRESS
73743	Fischer Special Mfg. Co.	Cincinnati, Ohio	82389	Switchcraft, Inc.	Chicago, Ill.	95263	Leecraft Mfg. Co., Inc.	New York, N.Y.
73793	The General Industries Co.	Elyria, Ohio	82647	Metals and Controls, Inc., Div. of		95264	Lercro Electronics, Inc.	Burbank, Calif.
73905	Jennings Radio Mfg. Co.	San Jose, Calif.		Texas Instruments, Inc., Spencer Prods.	Attleboro, Mass.	95265	National Coil Co.	Sheridan, Wyo.
74455	J. H. Winns, and Sons	Winchester, Mass.	82866	Research Products Corp.	Madison, Wis.	95275	Vitramon, Inc.	Bridgeport, Conn.
74861	Industrial Condenser Corp.	Chicago, Ill.	82877	Rotron Manufacturing Co., Inc.		95354	Methode Mfg. Co.	Chicago, Ill.
74868	R.F. Products Division of Amphenol-Borg Electronics Corp.	Danbury, Conn.			Woodstock, N.Y.	95987	Weckesser Co.	Chicago, Ill.
74970	E. F. Johnson Co.	Waseca, Minn.	82893	Vector Electronic Co.	Glendale, Calif.	96067	Huggins Laboratories	Sunnyvale, Calif.
75042	International Resistance Co.	Philadelphia, Pa.	83053	Western Washer Mfr. Co.	Los Angeles, Calif.	96095	Hi-Q Division of Aerovox	Olean, N.Y.
75173	Jones, Howard B., Division of Cinch Mfg. Corp.	Chicago, Ill.	83058	Carr Fastener Co.	Cambridge, Mass.	96256	Thordarson-Meissner Div. of Maguire Industries, Inc.	Mt. Carmel, Ill.
75378	James Knights Co.	Sandwich, Ill.	83086	New Hampshire Ball Bearing, Inc.	Peterborough, N.H.	96296	Solar Manufacturing Co.	Los Angeles, Calif.
75382	Kulka Electric Corporation	Mt. Vernon, N.Y.	83125	Pyramid Electric Co.	Darlington, S.C.	96330	Carlton Screw Co.	Chicago, Ill.
75818	Lenz Electric Mfg. Co.	Chicago, Ill.	83148	Electro Cords Co.	Los Angeles, Calif.	96341	Microwave Associates, Inc.	Burlington, Mass.
75915	Littelfuse Inc.	Des Plaines, Ill.	83186	Victory Engineering Corp.	Union, N.J.	96501	Excel Transformer Co.	Oakland, Calif.
76005	Lord Mfg. Co.	Erie, Pa.	83298	Bendix Corp., Red Bank Div.	Red Bank, N.J.	97464	Industrial Retaining Ring Co.	Irvington, N.J.
76210	C. W. Marwedel	San Francisco, Calif.	83330	Smith, Herman H., Inc.	Brooklyn, N.Y.	97539	Automatic and Precision Mfg. Co.	Yonkers, N.Y.
76433	Micamold Electronic Mfg. Corp.	Brooklyn, N.Y.	83501	Gavitt Wire and Cable Co., Div. of Amerace Corp.	Brookfield, Mass.	97966	CBS Electronics, Div. of C.B.S., Inc.	Danvers, Mass.
76487	James Millen Mfg. Co., Inc.	Malden, Mass.	83594	Burroughs Corp., Electronic Tube Div.	Plainfield, N.J.	98141	Axel Brothers Inc.	Jamaica, N.Y.
76493	J. W. Miller Co.	Los Angeles, Calif.	83777	Model Eng. and Mfg., Inc.	Huntington, Ind.	98220	Francis L. Mosley	Pasadena, Calif.
76530	Monadnock Mills	San Leandro, Calif.	83821	Loyd Scruggs Co.	Festus, Mo.	98278	Microdot, Inc.	So. Pasadena, Calif.
76545	Mueller Electric Co.	Cleveland, Ohio	84171	Arco Electronics, Inc.	New York, N.Y.	98291	Sealectro Corp.	Mamaroneck, N.Y.
76854	Oak Manufacturing Co.	Crystal Lake, Ill.	84396	A. J. Glesener Co., Inc.	San Francisco, Calif.	98405	Carad Corp.	Redwood City, Calif.
77068	Bendix Pacific Division of Bendix Corp.	No. Hollywood, Calif.	84411	Good All Electric Mfg. Co.	Ogallala, Neb.	98734	Palo Alto Engineering Co., Inc.	Palo Alto, Calif.
77221	Phaoston Instrument and Electronic Co.	South Pasadena, Calif.	84970	Sarkes Tarzian, Inc.	Bloomington, Ind.	98821	North Hills Electric Co.	Mineola, N.Y.
77252	Philadelphia Steel and Wire Corp.	Philadelphia, Pa.	85454	Boonton Molding Company	Boonton, N.J.	98925	Clevite Transistor Prod. Div. of Clevite Corp.	Waltham, Mass.
77342	Potter and Brumfield, Div. of American Machine and Foundry	Princeton, Ind.	85474	R. M. Bracamonte & Co.	San Francisco, Calif.	98978	International Electronic Research Corp.	Burbank, Calif.
77630	Radio Condenser Co.	Camden, N.J.	85660	Koiled Kords, Inc.	New Haven, Conn.	99109	Columbia Technical Corp.	New York, N.Y.
77638	Radio Receptor Co., Inc.	Brooklyn, N.Y.	85911	Seamless Rubber Co.	Chicago, Ill.	99313	Varian Associates	Palo Alto, Calif.
77764	Resistance Products Co.	Harrisburg, Pa.	86197	Clifton Precision Products	Clifton Heights, Pa.	99515	Marshall Industries, Electron Products Division	Pasadena, Calif.
78189	Shakeproof Division of Illinois Tool Works	Elgin, Ill.	86684	Radio Corp. of America, RCA Electron Tube Div.	Harrison, N.J.	99707	Control Switch Division, Controls Co. of America	El Segundo, Calif.
78283	Signal Indicator Corp.	New York, N.Y.	87216	Philco Corp. (Lansdale Division)	Lansdale, Pa.	99800	Delevan Electronics Corp.	East Aurora, N.Y.
78471	Tilley Mfg. Co.	San Francisco, Calif.	87473	Western Fibrous Glass Products Co.	San Francisco, Calif.	99848	Wilco Corporation	Indianapolis, Ind.
78488	Stackpole Carbon Co.	St. Marys, Pa.	88140	Cutler-Hammer, Inc.	Lincoln, Ill.	99934	Renbrandt, Inc.	Boston, Mass.
78553	Tinnerman Products, Inc.	Cleveland, Ohio	88220	Gould-National Batteries, Inc.	St. Paul, Minn.	99942	Hoffman Semiconductor Div. of Hoffman Electronics Corp.	Evanston, Ill.
78790	Transformer Engineers	Pasadena, Calif.	89473	General Electric Distributing Corp.	Schenectady, N.Y.	99957	Technology Instrument Corp. of Calif.	Newbury Park, Calif.
78947	Ucinite Co.	Newtonville, Mass.	89636	Carter Parts Div. of Economy Baler Co.	Chicago, Ill.	THE FOLLOWING H-P VENDORS HAVE NO NUMBER ASSIGNED IN THE LATEST SUPPLEMENT TO THE FEDERAL SUPPLY CODE FOR MANUFACTURERS HANDBOOK.		
79142	Veeder Root, Inc.	Hartford, Conn.	89665	United Transformer Co.	Chicago, Ill.			
79251	Wenco Mfg. Co.	Chicago, Ill.	90179	U.S. Rubber Co., Mechanical Goods Div.	Passaic, N.J.			
79727	Confidential-Wirt Electronics Corp.	Philadelphia, Pa.	90970	Bearing Engineering Co.	San Francisco, Calif.			
79963	Zierick Mfg. Corp.	New Rochelle, N.Y.	91260	Connor Spring Mfg. Co.	San Francisco, Calif.	0000F	Malco Tool and Die	Los Angeles, Calif.
80031	Mepco Division of Sessions Clock Co.	Morristown, N.J.	91345	Miller Dial & Nameplate Co.	El Monte, Calif.	0000I	Telefunken (c/o American Elite)	New York, N.Y.
80120	Schnitzer Alloy Products	Elizabeth, N.J.	91418	Radio Materials Co.	Chicago, Ill.	0000M	Western Coil Div. of Automatic Ind., Inc.	Redwood City, Calif.
80130	Times Facsimile Corp.	New York, N.Y.	91506	Augat Brothers, Inc.	Attleboro, Mass.	0000N	Nahm-Bros. Spring Co.	San Leandro, Calif.
80131	Electronic Industries Association standards	Washington, D.C.	91637	Dale Electronics, Inc.	Columbus, Nebr.	0000P	Ty-Car Mfg. Co., Inc.	Holliston, Mass.
80207	Unimax Switch, Div. of W. L. Maxson Corp.	Wallingford, Conn.	91662	Elco Corp.	Philadelphia, Pa.	0000T	Texas Instruments, Inc. Metals and Controls Div.	Versailles, Ky.
80248	Oxford Electric Corp.	Chicago, Ill.	91737	Gremar Mfg. Co., Inc.	Wakefield, Mass.	0000U	Tower Mfg. Corp.	Providence, R.I.
80294	Bourns Laboratories, Inc.	Riverside, Calif.	91827	K F Development Co.	Redwood City, Calif.	0000W	Webster Electronics Co. Inc.	
80411	Acro Div. of Robertshaw Fulton Controls Co.	Columbus 16, Ohio	91921	Minneapolis-Honeywell Regulator Co., Micro-Switch Division	Freepport, Ill.	0000X	Spruce Pine Mica Co.	Spruce Pine, N.C.
80486	All Star Products Inc.	Defiance, Ohio	92196	Universal Metal Products, Inc.	Bassett Puente, Calif.	0000Y	Midland Mfg. Co. Inc.	Kansas City, Kans.
80583	Hammerlund Co., Inc.	New York, N.Y.	93332	Sylvania Electric Prod. Inc., Semiconductor Div.	Woburn, Mass.	0000Z	Willow Leather Products Corp.	Newark, N.J.
80640	Stevens, Arnold Co., Inc.	Boston, Mass.	93369	Robbins and Myers, Inc.	New York, N.Y.	000AA	British Radio Electronics Ltd.	Washington, D.C.
81030	International Instruments, Inc.	New Haven, Conn.	93410	Stevens Mfg. Co., Inc.	Mansfield, Ohio	000BB	Precision Instrument Components Co.	Van Nuys, Calif.
81312	Winchester Electronics Co., Inc.	Norwalk, Conn.	93983	Insuline-Van Norman Ind., Inc. Electronic Division	Manchester, N.H.	000CC	Computer Diode Corp.	Lodi, N.J.
81415	Wilkor Products, Inc.	Cleveland, Ohio	94144	Raytheon Mfg. Co., Industrial Components Div., Receiving Tube Operation	Quincy, Mass.	000EE	A. Williams Manufacturing Co.	San Jose, Calif.
81453	Raytheon Mfg. Co., Industrial Components Div., Industr. Tube Operations	Newton, Mass.	94145	Raytheon Mfg. Co., Semiconductor Div., California Street Plant	Newton, Mass.	000FF	Garmichael Corrugated Specialties	Richmond, Calif.
81483	International Rectifier Corp.	El Segundo, Calif.	94148	Scientific Radio Products, Inc.	Loveland, Colo.	000GG	Goshen Die Cutting Service	Goshen, Ind.
81860	Barry Controls, Inc.	Watertown, Mass.	94154	Tung-Sol Electric, Inc.	Newark, N.J.	000HH	Rubbercraft Corp.	Torrance, Calif.
82042	Carter Parts Co.	Skokie, Ill.	94197	Curtiss-Wright Corp., Electronics Div.	East Paterson, N.J.	000II	Birtcher Corporation, Industrial Division	Monterey Park, Calif.
82142	Jeffers Electronics Division of Spear Carbon Co.	Du Bois, Pa.	94310	Tru Ohm Prod. Div. of Model Engineering and Mfg. Co.	Chicago, Ill.	000KK	Amatom	New Rochelle, N.Y.
82170	Allen B. DuMont Labs., Inc.	Clifton, N.J.	94682	Worcester Pressed Aluminum Corp.	Worcester, Mass.	000LL	Avery Label	Monrovia, Calif.
82209	Maguire Industries, Inc.	Greenwich, Conn.	95236	Allies Products Corp.	Miami, Fla.	000MM	Rubber Eng. & Development	Hayward, Calif.
82219	Sylvania Electric Prod. Inc., Electronic Tube Div.	Emporium, Pa.	95238	Continental Connector Corp.	Woodside, N.Y.	000NN	A "N" D Manufacturing Co.	San Jose 27, Calif.
82376	Astron Co.	East Newark, N.J.				000PP	Atohm Electronics,	Sun Valley, Calif.
						000QQ	Cooltron	Oakland, Calif.

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H4-2 Dated: March 1962

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Revised: 25 May 1962

Circuit Reference Number	Description	Quantity	Mfg. Part # or Type	Mfg.	Mfg. Code *	Corporate Part #	A
C1	fxd, elect 4.7 μ f 50VDC	1	150D475X9050B2	Sprague	56289	0180-1731	2
C2, 18	fxd, film .01 μ f 200VDC	2	192P10392	Sprague	56289	0160-0161	4
C3	fxd, film 0.1 μ f 200VDC	1	192P10492	Sprague	56289	0160-0168	2
C4, 6, 7, 8, 11, 15	Not Assigned	-					
C5	fxd, film .001 μ f 200VDC	1	192P10292	Sprague	56289	0160-0153	2
C9	fxd, elect 4.7 μ f 35VDC	1	150D475X9035B2	Sprague	56289	0180-0100	
C10	fxd, elect 100 μ f 50VDC	1	D33218	Sprague	56289		2
C12, 13, 14	fxd, elect 490 μ f 75VDC	3	D38618	Sprague	56289		4
C16A	fxd, cer. .05 μ f 500VDC	1	33C58	Sprague	56289		2
C16B, 17	Not Used	-					
C19	fxd, elect 15 μ f 50VDC	1	150D156X0050R2	Sprague	56289		2
C20	fxd, elect 80 μ f 300VDC	1	D39041	Sprague	56289		2
CR1-5, 20, 30, 32	Rect, sil. 200ma 180PRV	8	1N485B	Sylv.	93332	1901-0033	10
CR6, 7, 10, 12-16, 18, 19, 21, 33	Not Assigned	-					
CR8, 9, 31, 35	Diode, sil. 2.4V @ 100ma	4	GD8-001	GI	11711	1901-0460	6
CR11, 17, 22, 23, 24, 25, 26, 27, 28, 29, 34	Rect. sil. 500ma 200PRV	11	1N3253	RCA	02735	1901-0026	15
DS1	Indicator lamp, neon	1	858-R	Sloan	08717	1450-0048	2
F1	Fuse cartridge 2A @ 250V 3AG	1	312002	Littelfuse	75915		3
J1, 2	Not Used						

Circuit Reference Number	Description	Quantity	Mfg. Part # or Type	Mfg.	Mfg. Code*	Corporate Part #	A
Q1, 2	SS NPN Diff Amp, Sil.	2	4JX12A839	GE	03508		4
Q3, 5, 8, 10, 12, 14, 15	SS PNP Sil.	7	2N3702	TI	01295	1853-0029	14
Q4	SS PNP Sil.	1	SJ203	HLAB	09182	1853-0040	2
Q6, 7	Power NPN Sil.	2	36616	HLAB	09182		4
Q9	SS NPN Sil.	1	2N3417	GE	03508	1854-0087	2
Q11, 13, 17	SS NPN Sil.	3	2N3391	GE	03508	1854-0071	4
Q16	Not Assigned	-					
R1	fxd, WW 1K ohm $\pm 5\%$ 3w 20ppm	1	242E1025	Sprague	56289		2
R2, 22, 23, 29	fxd, film 6.2K ohm $\pm 1\%$ 1/8w	4		IRC	07716		6
R3	fxd, film 15K ohm $\pm 1\%$ 1/8w	1		IRC	07716	0757-0446	2
R4, 64, 65	fxd, film 20K ohm $\pm 1\%$ 1/8w	3		IRC	07716	0757--0449	4
R5, 26, 76, 77	fxd, film 1.5K ohm $\pm 1\%$ 1/8w	4		IRC	07716	0757-0427	8
R6, 25	fxd, comp 360K ohm $\pm 5\%$ 1/2w	2		AB	01121	0686-3645	
R7	fxd, film 61.9K ohm $\pm 1\%$ 1/8w	1		IRC	07716	0757-0460	2
R8, 28	fxd, comp 560K ohm $\pm 5\%$ 1/2w	2		AB	01121	0686-5645	
R9, 11, 35, 36, 39, 40, 53, 79, 81, 82, 83, 37	Not Assigned	-					
R10	Var. WW DUAL 10K ohm - 100 ohm	1	100149-4	HLAB	09182	2100-0997	2
R12	fxd, WW 1,3K ohm $\pm 5\%$ 3w 20ppm	1	242E1325	Sprague	56289		2
R13, 19	fxd, comp SELECTED $\pm 5\%$ 1/2w	2		AB	01121		
R14	fxd, comp 3.3 ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-0335	
R15, 17	fxd, comp 160K ohm $\pm 5\%$ 1/2w	2		AB	01121	0686-1645	
R16	Var. WW DUAL 900-10 ohms	1	100149-1	HLAB	09182	2100-0994	2
R18	fxd, WW 3.3K ohm $\pm 5\%$ 3w 20ppm	1	242E3325	Sprague	56289		2
R20, 48	fxd, film 1K ohm $\pm 5\%$ 1/4w	2		IRC	07716	0757-0338	4
R21	fxd, comp 39 ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-3905	

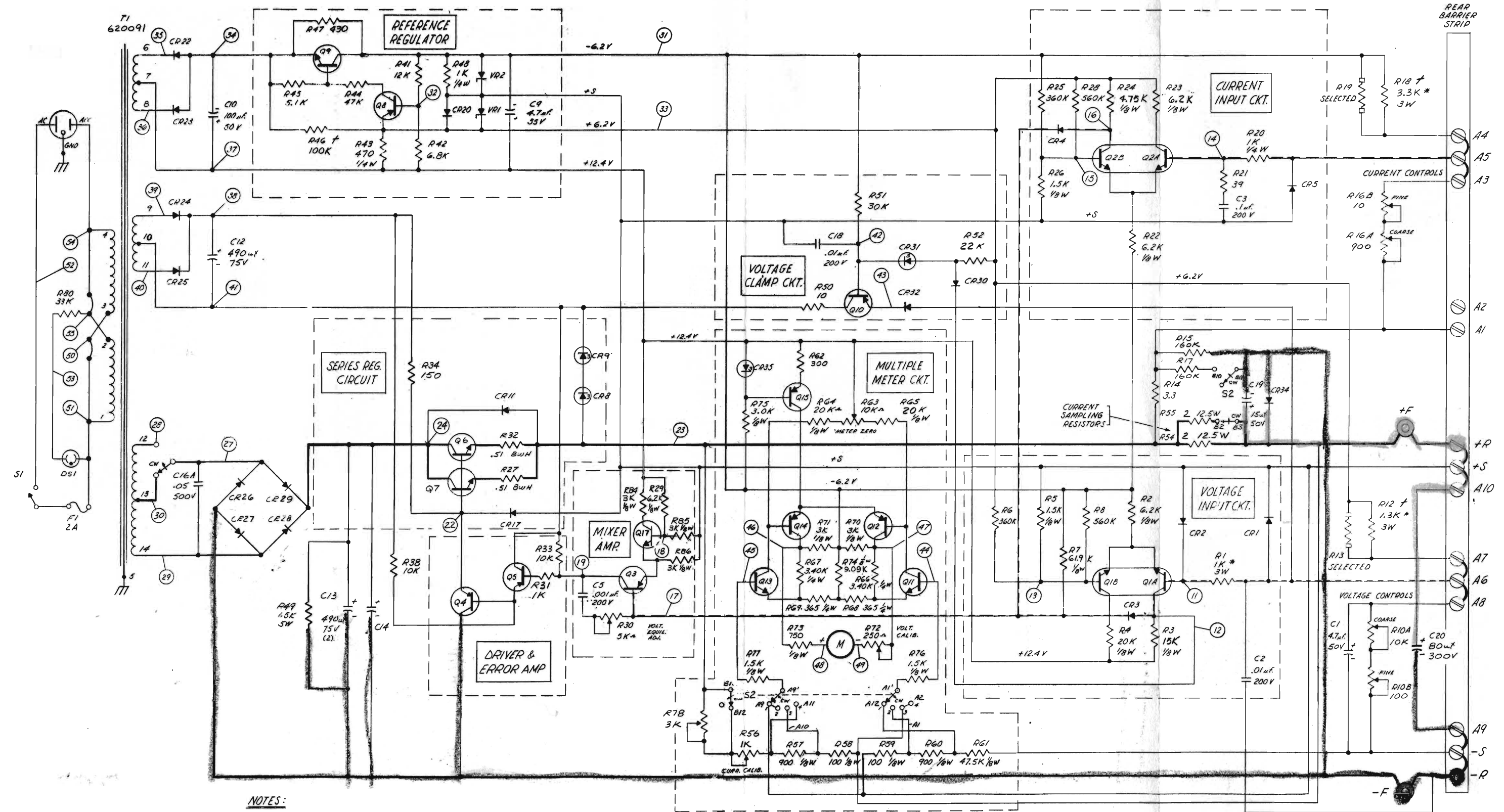
Circuit Reference Number	Description	Quantity	Mfg. Part # or Type	Mfg. Mfg.	Mfg. Code*	Corporate Part #	A
R24	fxd, film 4.75K ohm $\pm 1\%$ 1/8w	1		IRC	07716	0757-0437	2
R27, 32	fxd, WW .51 ohm $\pm 5\%$	2	Type BWH	IRC	07716		4
R30	Var. WW 5K ohm (Modify)	1	Type 110-F4	CTS	11236		2
R31	fxd, comp 1K ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-1025	
R33, 38	fxd, comp 10K ohm $\pm 5\%$ 1/2w	2		AB	01121	0686-1035	
R34	fxd, comp 150 ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-1515	
R80	fxd, comp 33K ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-3335	
R41	fxd, comp 12K ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-1235	
R42	fxd, comp 6.8K ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-6825	
R43	fxd, film 470 ohm $\pm 1\%$ 1/4w	1		IRC	07716		2
R44	fxd, comp 47K ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-4735	
R45	fxd, comp 5.1K ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-5125	
R46	fxd, comp 100K ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-1045	
R47	fxd, comp 430 ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-4315	
R49	fxd, WW 1.5K ohm $\pm 5\%$ 5w	1	Type 5XM	WL	63743		2
R50	fxd, comp 10 ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-1005	
R51	fxd, comp 30K ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-3035	
R52	fxd, comp 22K ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-2235	
R54, 55	fxd, WW 2 ohm $\pm 1\%$ 12.5w 20ppm	2	Type 12.5SX	WL	63743		4
R56	Var. WW 1K ohm (Modify)	1	Type 110-F4	CTS	11236		2
R57, 60	fxd, film 900 ohm $\pm 1\%$ 1/8w	2		IRC	07716	0757-1099	4
R58, 59	fxd, film 100 ohm $\pm 1\%$ 1/8w	2		IRC	07716	0757-0401	4
R61	fxd, film 47.5K ohm $\pm 1\%$ 1/8w	1		IRC	07716	0757-0457	2
R62	fxd, comp 300 ohm $\pm 5\%$ 1/2w	1		AB	01121	0686-3015	
R63	Var. WW 10K ohm (Modify)	1	Type 110-F4	CTS	11236		2
R66, 67	fxd, film 3.40K ohm $\pm 1\%$ 1/4w	2		IRC	07716		4
R68, 69	fxd, film 365 ohm $\pm 1\%$ 1/4w	2		IRC	07716	0757-0723	4
R70, 71, 75, 84, 85, 86	fxd, film 3K ohm $\pm 1\%$ 1/8w	6		IRC	07716	0757-1093	6
R72	Var. WW 250 ohm (Modify)	1	Type 110-F4	CTS	11236		2
R73	fxd, film 750 ohm $\pm 1\%$ 1/8w	1		IRC	07716	0757-0420	2

Circuit Reference		Quantity	Mfg. Part #		Mfg.	Mfg. Code *	Corporate Part #	A
Number	Description		or Type					
R74	fxd, film 9.09K ohm ±1% 1/8w	1			IRC	07716	0757-0288	2
R78	Var. WW 3K ohm (Modify)	1	Type 110-F4	CTS	11236			2
S1	Switch SPST ON/OFF	1	T110-62	Carling	73559			1
S2	Meter, range rotary Switch (Concentric Shafts)	1	100319-A	HLAB	09182			1
T1	Power Transformer	1	620091	HLAB	09182			
VR1, 2	Diode, zener 6.2V	2	1N821	NA. Elect.	06486		1902-0761	4
	5 Way binding post	1	DF21RC	Superior	58474			2
	5 Way binding post	2	DF21BC	Superior	58474			4
	Line Cord plug PH151 7-1/2 ft.	1	HK-4701	Beldon	70903			2
	Strain relief bushing	1	SR-5P-1	Heyco	28520			2
	Jumper	8	422-13-11013	Cinch	71785			10
	Barrier Strip	1	100237-15	HLAB	09182			2
	Rubber Bumper	4	MB50-701	Stockwell	87575			4
	Rubber Bumper	3	4072	Stockwell	87575			3
	Knob 1/4 insert pointer	1		HLAB	09182		0370-0107	2
	Knob 17/64 insert pointer	2		HLAB	09182		0370-0101	4
	Knob, bar 1/8 insert pointer	1		HLAB	09182		0370-0102	2
	Knob 3/16 insert	2		HLAB	09182		0370-0179	4
	Bezel 1/6 Mod.	1		HLAB	09182		5040-0651	1
	Fuse holder	1	342014	Littelfuse	75915		1400-0048	2
	Meter ϕ 1/6 Mod. 1ma@88 ohm ±15%	1		HLAB	09182		1120-1139	1
	Spring	4		HLAB	09182		1460-0256	8
	Fastner	8	C8091632-4	Tinnerman	89032			12

Circuit Reference			Mfg. Part #		Mfg.	Corporate	
Number	Description	Quantity	or Type	Mfg.	Code *	Part #	A
	Mica Insulator	2	734	Reliance	08530		2
	Insulator, transistor pin	4	100146-1	HLAB	09182		4
	Insulator	4	100151-1	HLAB	09182		4

A = Recommended Spares Per 10 Units For One Year

* = As Listed In Federal Supply Code for Manufacturers' H4-1.



NOTES:

- ALL RESISTORS ARE 1/2 WATT, 5% UNLESS OTHERWISE NOTED.
- ALL 1/8 W AND 1/4 W RESISTORS ARE 1% IN TOLERANCE.
- † DENOTES NOMINAL VALUE, COMPONENTS SELECTED FOR OPTIMUM PERFORMANCE.
- * DENOTES 20 PPM WIDE TEMPERATURE COEFFICIENT.
- REAR TERMINALS ARE SHOWN IN NORMAL STRAPPING FOR USE OF FRONT PANEL CONTROLS.
- DENOTES VOLTAGE SIGNAL.
- DENOTES CURRENT SIGNAL.
- R10A & B AND R16A & B ARE DUAL SHAFT FRONT PANEL CONTROLS.
- TRANSFORMER SHOWN STRAPPED FOR 115 VAC OPERATION. SEE INSTRUCTION MANUAL FOR 200VAC.

S2 POSITIONS

- 5V
- 50V
- 1.8A
- 18A

CIRCUIT PATENTS APPLIED FOR. LICENSE TO USE MUST BE OBTAINED IN WRITING FROM HARRISON LABORATORIES.

6200B
12-15-65

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MANUAL CHANGES

DC POWER SUPPLY

Model 6200B

Manual Manufacturing Code 6A

Check each change listed below to determine whether it applies to the serial number on your power supply. If it does apply, enter the appropriate change(s) in the supporting manual.

CHANGE 1. This change updates the manuals for units with serial numbers starting from 6A0101.

1. In the replaceable parts table, make the following changes;

CR35: Delete reference number from first column and change quantity from "4" to "3".

R40, 62: Add R40 with R62 and change to read as follows:

<u>Ckt. Ref. No.</u>	<u>Description</u>	<u>Quantity</u>
R40, 62	fxd, film 619 ohms $\pm 1\%$, 1/4w	2

2. On the schematic, delete CR35 (connected to base of Q15) and connect R40 (619 ohms) in its place.

CHANGE 2. This change updates the manuals for units with serial numbers starting from 6A0251.

1. In the replaceable parts table, make the following changes;

CR26, 27, 28, 29: Delete present references from first column and change quantity from "11" to "7". Enter separately in table as follows:

<u>Ckt. Ref. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Mfg. Part #</u>	<u>Mfg.</u>
CR26, 27, 28, 29	Rect. sil 500ma, 200prv	4	G100D	GI

R54, 55: Change tolerance from " $\pm 1\%$ " to " $\pm 0.5\%$ ", wattage from "12.5w" to "8w", and "type" from "12.5SX" to "T-7A".

MANUAL CHANGES DC POWER SUPPLY

This change affects Models 6200B, 6201B, 6202B, 6203B, 6204B, and 6206B.

CAUTION

It has been determined that certain special modes of operation may cause specific components within the power supplies listed above to exceed their ratings. Although there is no record of failure as a result of these special modes of operation, we are issuing this notice as a precautionary measure.

The only modes of operation which may under certain combinations of operating conditions place a strain on specific components within the power supply are:

1. Parallel Operation. However, use of Auto-Parallel operation is not restricted and will not result in any unusual component strain. Moreover, Auto-Parallel operation insures equal current sharing and is preferable to ordinary parallel operation in any case.
2. Battery Charge or Discharge -- under the condition that the battery voltage is greater than the front panel voltage control setting of the power supply.
3. Use of the power supply as a sink rather than a source, without the addition of a suitable preload resistor.

The above modes of operation result in an extra strain being placed on the "suck-down" transistor Q4, which has been included in the circuitry for the purpose of enhancing down-programming speed (of the order of 1 MS using a reducing value of output capacitors).

If the power supply is to be used in any of the above modes of operation, a diode may be added in series with the negative output terminal to prevent current from flowing backwards into the power supply and through transistor Q4. Negative sensing can be connected around this diode to retain normal regulation properties. A simple method of making this connection directly on the rear barrier strip is to remove strapping between terminals A9, -S, and "-", and then connect diode CR₅ as shown on the sketch on the following page.

It is not recommended that this diode be added unless the supply will be used in one of the three modes of operation above, which would normally result in an external source forcing current backwards through the power supply terminals and through Q4. The addition of this diode has the disadvantage of degrading transient recovery and output impedance at high frequencies.

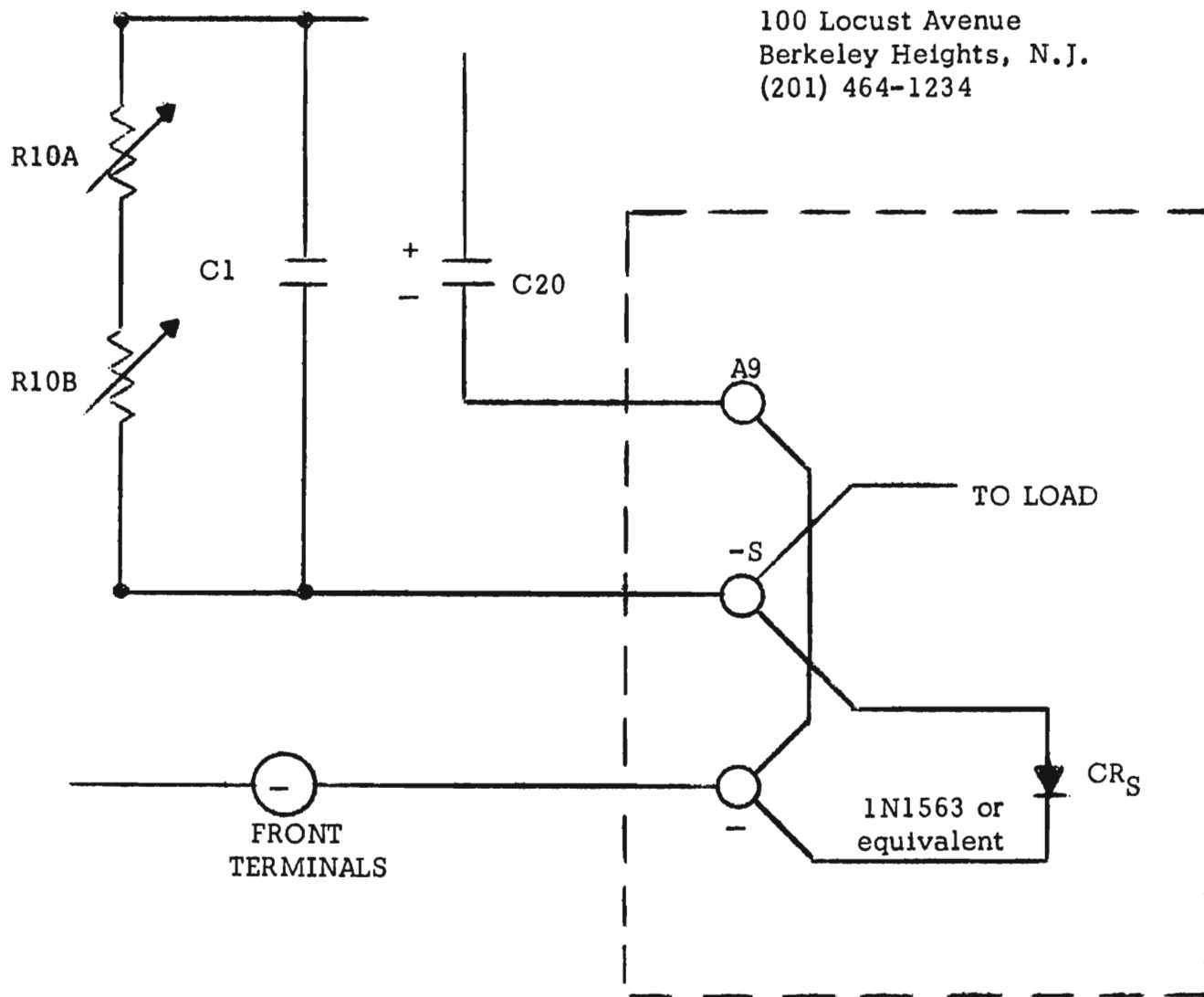
Future production units will include a modification which will permit normal operation of the supply for all modes without an external diode.

We wish to emphasize the fact that we have no record of failure in the above modes -- we are merely issuing this as a precautionary measure, since we feel that "suck-down" transistor failure is possible under certain extremes of operation.

Caution
4/15/66
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Do not hesitate to contact the factory if there are any questions concerning ways in which Models 6200B, 6201B, 6202B, 6203B, 6204B, and 6206B can be adapted to these special modes of operation listed on the previous page.

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MODIFICATION TO MODELS 6200B, 6201B, 6202B, 6203B, 6204B, and 6206B
TO PERMIT OPERATION INTO A VOLTAGE SOURCE GREATER THAN E_0 OF POWER
SUPPLY

Do not use front terminals with this diode modification or with any of the
three operating modes listed on previous page.

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