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# CARVER

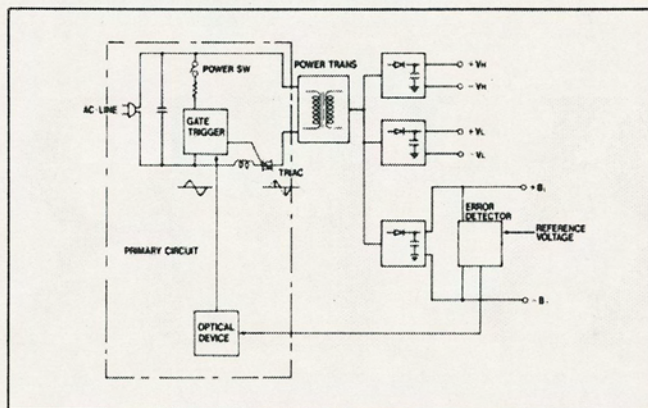
## M-500t Power Amplifier

### SERVICE MANUAL

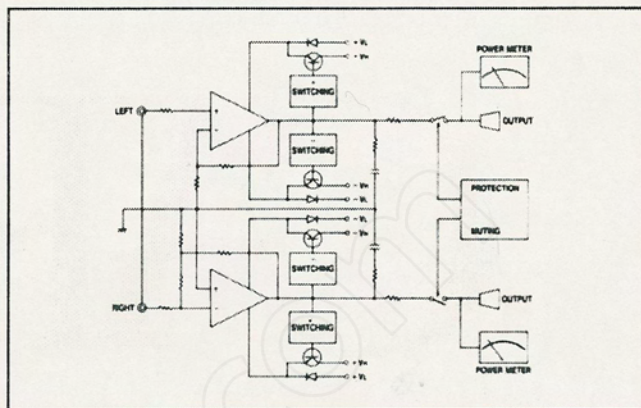
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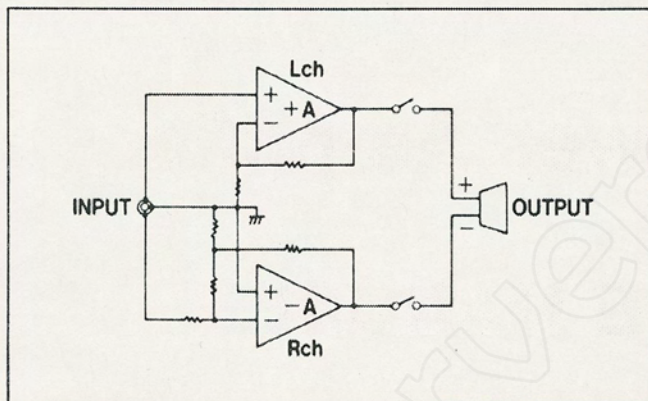
**POWER SUPPLY CONTROL**



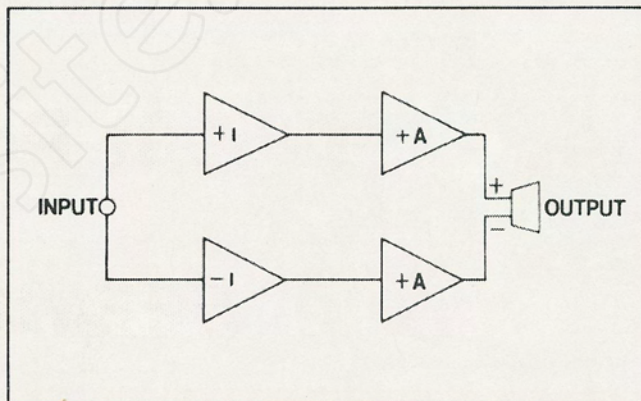
**AMPLIFICATION**



**BTL CIRCUIT**



**UNIT**



**SPECIFICATIONS**

- **Sensitivity** ..... 2.0V  
 Input : 1000Hz  
 Output: 200W
- **Output power** ..... more than 200W  
 Input : Main in  
 Output: 0.05% THD  
 20Hz-20000Hz continuous both CH. driven
- **IM Distortion factor** ..... less than 0.05%  
 Input : Aux 60Hz: 7000Hz/4.1  
 Output: 200W
- **Frequency response** ..... 20Hz-20000Hz  
 Input : Main in  
 Output: 1000Hz 20W±0.5dB
- **Signal to noise ration (IHF-A)** ..... more than 100dB  
 (input short) Main in
- **Residual noise (IHF-A)** ..... 300µV
- **Damping factor** ..... more than 30  
 Input : Aux 150Hz  
 Output: 20W

- **Input impedance** ..... 15 Kohm  
 at 1000Hz Main in
- **Dynamic head room** ..... stereo +1dB (8Ω)  
 mono +1dB (8Ω)
- **Crosstalk**  
 Between the channels of stereo equipment  
 Output: 20W  
 Main in (Input: Shorted)  
 1000Hz ..... more than 80dB  
 20000Hz ..... more than 60dB
- **Output load**  
 Speaker output ..... 8ohm
- **Maximum power consumption** ..... 1100watts
- **AC power supply** ..... 220V, 50/60Hz
- **Netweight** ..... 10.5kg
- **Dimension** ..... W=440 H=110 D=348mm

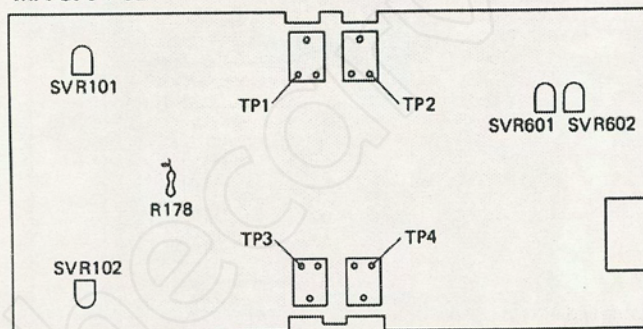
Specifications and design are subject to change without notice.

**ALIGNMENT PROCEDURES**

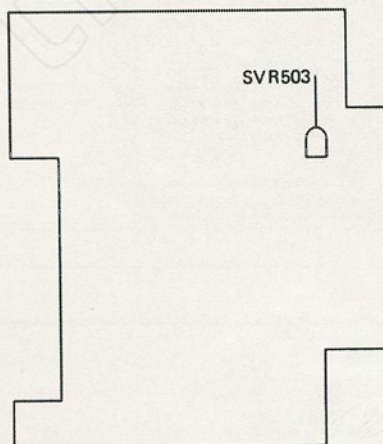
Step	Connect	Ajust	Adjust for
<b>POWER SUPPLY</b>			
1	Rotate SVR503 and SVR504 fully counter-clockwise.		
2	<u>VTVM</u> R178 (test point side)	SVR503	74V
<b>BIAS CURRENT</b>			
3	Preheat for more than 5 minutes.		
4	<u>DC digital voltmeter</u> LIVE/GND TP1/TP2 (L) TP3/TP4 (R)	SVR101 (L) SVR102 (R)	6mV ± 1mV
<b>METER</b>			
5	Confirm that the meters indicate 0 watt at no input.		
6	Input . . . . . 1kHz to input jacks. Output . . . . . Speaker out		Speaker out 100W
7		SVR601 (L) SVR602 (R)	Meters 100W

**ALIGNMENT POINTS**

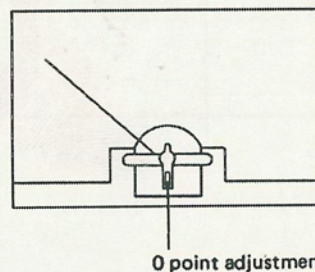
**MA-375 PCB**



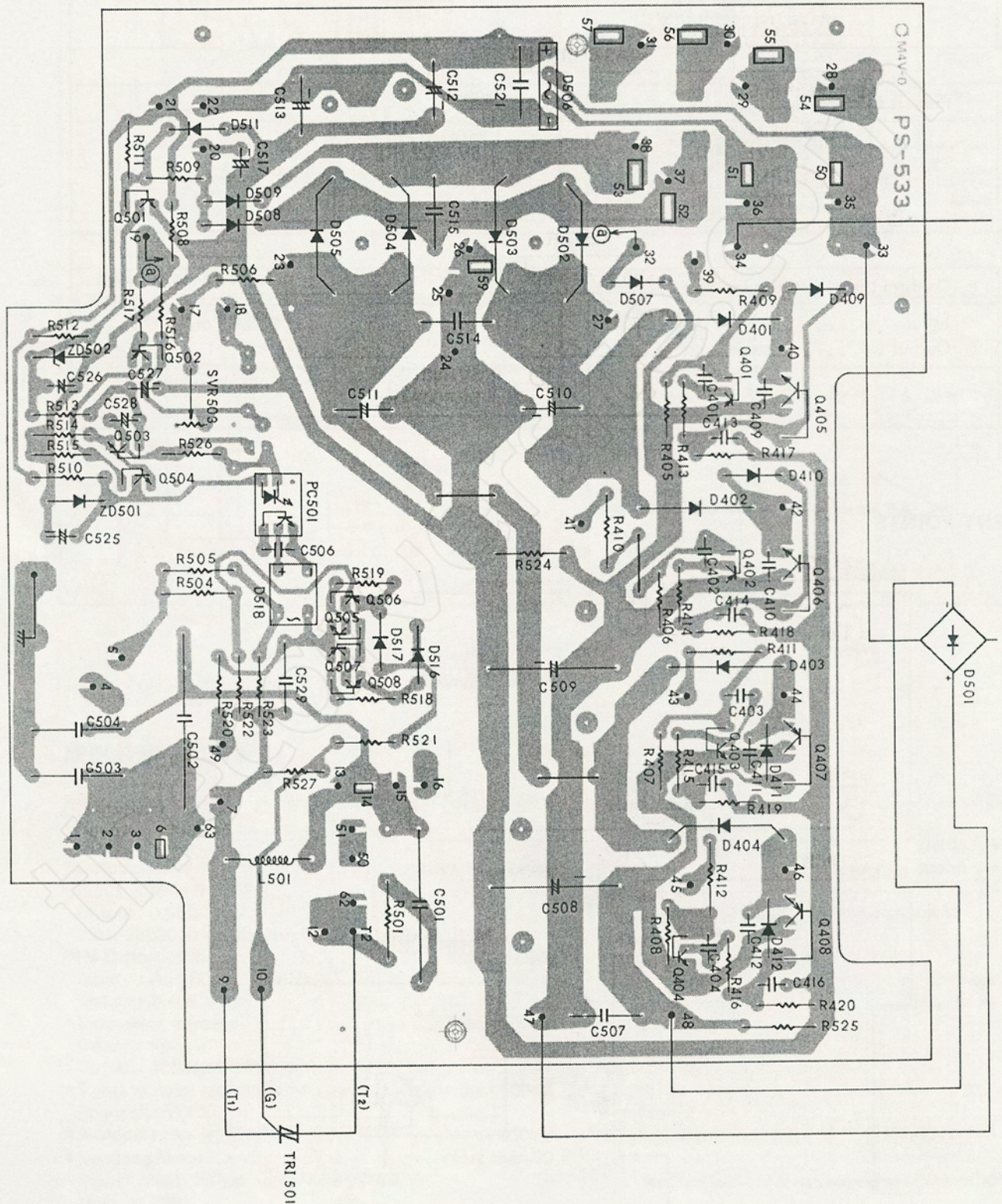
**PS-533 PCB**

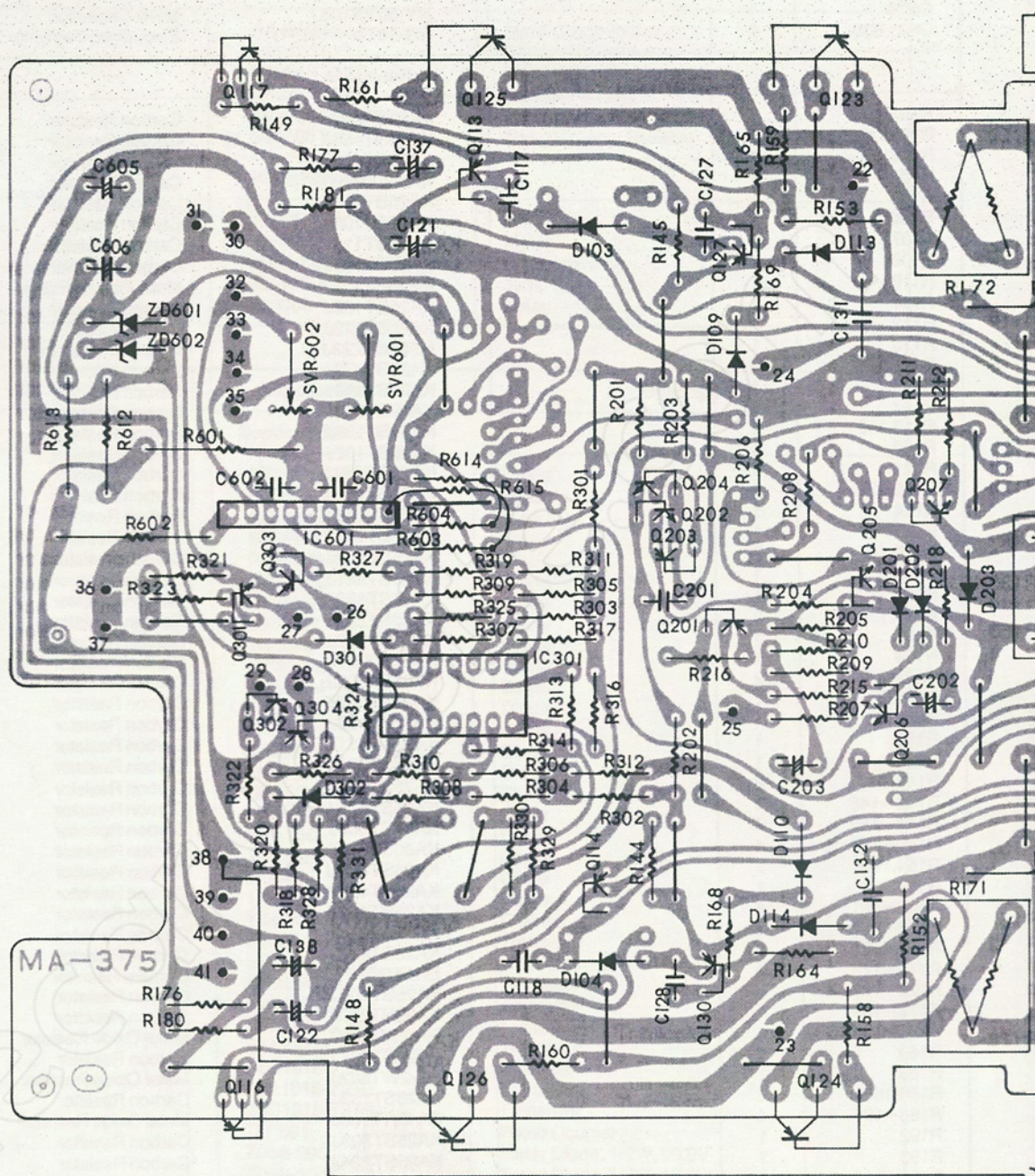


**METER UNIT**



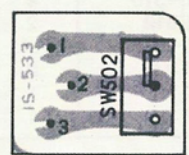
POWER SUPPLY BOARD (PS-533)

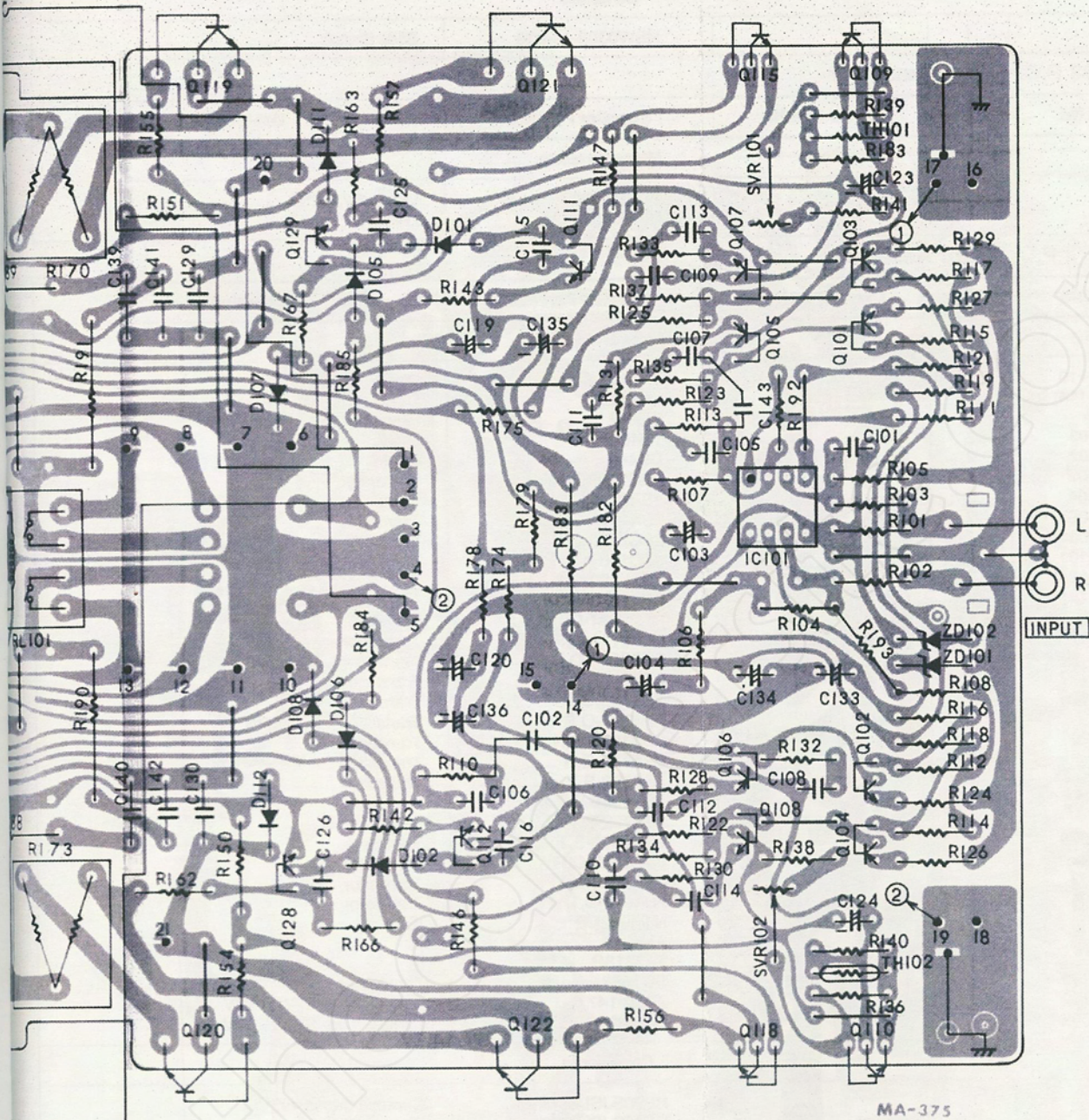




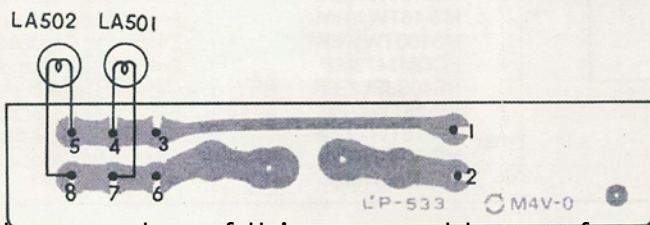
MA-375

MAIN AMP BOARD (IC-533)





**MAIN AMP BOARD (LP-533)**



Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
<b>Switches</b>				
	1		HSW0302-01-330	Slide Switch

**2. LP-533 P.C. Board Assembly**

Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
<b>Miscellaneous</b>				
LA501 LA502	1 1		BF352-53001A BF352-53002A	Lamp, 8V, 0.25A Lamp, 8V, 0.25A

**3. MA-375 P.C. Board Assembly**

Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
<b>Semiconductors</b>				
D101~110	10		1N4148	Diode
D111~114	4		1N4002	Diode
D201	1		DS442	Diode
D202,203	2		1N4002	Diode
D301,302	2		DS442	Diode
Q101,102	2		2SC1980-S,T	Transistor
Q103,104	2		2SA921-S,T	Transistor
Q105,106	2		2SA1110-Q,R	Transistor
Q107,108	2		2SC2590-Q,R	Transistor
Q109,110	2		2SC1567-Q,R	Transistor
Q111,112	2		2SC2590-Q,R	Transistor
Q113,114	2		2SA1110-Q,R	Transistor
Q115	1		2SC2591-Q,R	Transistor
Q116,117	2		2SA1111-Q,R	Transistor
Q118	1		2SC2591-Q,R	Transistor
Q119~122	4		2SD845-O,R	Transistor
Q123~126	4		2SB755-O,R	Transistor
Q127	1		2SA777-Q,R	Transistor
Q128,129	2		2SC1509-Q,R	Transistor
Q130	1		2SA777-Q,R	Transistor
Q201	1		2SA722-S,T	Transistor
Q202	1		2SC1328-S,T	Transistor
Q203	1		2SA722-S,T	Transistor
Q204~206	3		2SC1328-S,T	Transistor
Q207	1		2SC1509-Q,R	Transistor
Q301,302	2		2SC1980-S,T	Transistor
Q303,304	2		2SA921-S,T	Transistor
IC101	1		NJM072DE	IC
IC301	1		AN6912	IC
IC601	1		TA7318P	IC
TH101,102	2		SDT65	Thermistor
ZD101,102	2		ZD50-147	Zener Diode, 1/2W, 14.7V
ZD601,602	2		ZD50-117	Zener Diode, 1/2W, 11.7V

<b>Capacitors</b>				
C101	1		HE90SJSL471K	Ceramic Capacitor
C102	1		HE40SJSL220K	Ceramic Capacitor
C103,104	2		MS-16TW471M	Electrolytic Capacitor
C105	1		HE40SJSL560K	Ceramic Capacitor
C106	1		HE50SJSL820K	Ceramic Capacitor
C107~110	4		HE50SJSL101K	Ceramic Capacitor
C111~114	4		MY-50VS683J	Mylar Capacitor
C115~118	4		HM60SJSL220K	Ceramic Capacitor
C119~122	4		MS100TW1R0M	Electrolytic Capacitor
C123,124	2		MS-50TW1R0M	Electrolytic Capacitor
C125~128	4		MY-50VS103J	Mylar Capacitor
C129~132	4		ECQM1473MZ	Polyester Film Capacitor
C133	1		MS-16TW470M	Electrolytic Capacitor
C134	1		MS-16TW101M	Electrolytic Capacitor
C135~138	4		MS100TW1R0M	Electrolytic Capacitor
C139~142	4		ECQM1473MZ	Polyester Film Capacitor
C143	1		HE40SJSL220K	Ceramic Capacitor
C201	1		NP-25TW470M	Electrolytic Capacitor
C202	1		MS-16TW221M	Electrolytic Capacitor
C203	1		MS-50TW470M	Electrolytic Capacitor
C601	1		MY-50VS103J	Mylar Capacitor



Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
C602	1		MY-50VS103J	Mylar Capacitor
C605,606	2		MS-16TW470M-RT	Electrolytic Capacitor
<b>Resistors</b>				
R101	1		KA25ST333J	Carbon Resistor
R102	1		KA25ST153J	Carbon Resistor
R103	1		KA25ST102J	Carbon Resistor
R104	1		KA25ST133J	Carbon Resistor
R105	1		KA25ST333J	Carbon Resistor
R106	1		KA25ST102J	Carbon Resistor
R107	1		KA25ST112J	Carbon Resistor
R108	1		KA25ST102J	Carbon Resistor
R110	1		MF25ST223J	Metal Film Resistor
R111	1		KA25ST102J	Carbon Resistor
R112	1		KA25ST272J	Carbon Resistor
R113	1		MF25ST223J	Metal Film Resistor
R114,115	2		KA25ST272J	Carbon Resistor
R116	1		KA25ST153J	Carbon Resistor
R117	1		KA25ST272J	Carbon Resistor
R118,119	2		KA25ST153J	Carbon Resistor
R120	1		KA25ST102J	Carbon Resistor
R121	1		KA25ST153J	Carbon Resistor
R122,123	2		KA25ST102J	Carbon Resistor
R124	1		KA25ST152J	Carbon Resistor
R125	1		KA25ST102J	Carbon Resistor
R126,127	2		KA25ST152J	Carbon Resistor
R128	1		KA25ST221J	Carbon Resistor
R129	1		KA25ST152J	Carbon Resistor
R130,131	2		KA25ST221J	Carbon Resistor
R132	1		KA25ST102J	Carbon Resistor
R133	1		KA25ST221J	Carbon Resistor
R134,135	2		KA25ST102J	Carbon Resistor
R136	1		KA25ST332J	Carbon Resistor
R137	1		KA25ST102J	Carbon Resistor
R138	1		KA25ST561J	Carbon Resistor
R139	1		KA25ST332J	Carbon Resistor
R140,141	2		KA25ST561J	Carbon Resistor
R142~145	4		KA25ST471J	Carbon Resistor
R146~149	4		KA25ST560J	Carbon Resistor
R150~153	4		KA50ST680J	Carbon Resistor
R154,155	2		KA25ST4R7J	Carbon Resistor
R156	1		KA25ST4R7J	Carbon Resistor
R157~161	5		KA25ST4R7J	Carbon Resistor
R162~165	4		KA25ST271J	Carbon Resistor
R166~169	4		KA25ST472J	Carbon Resistor
R170~173	4		ERF5GEKR22N	Cement Resistor
R174~177	4		KA25ST100J	Carbon Resistor
R178~181	4		KA25ST220J	Carbon Resistor
R182	1		SA-2WT682J	Metal Oxide Resistor
R183	1		KA25ST561J	Carbon Resistor
R183	1		SA-2WT682J	Metal Oxide Resistor
R184,185	2		KA25ST183J	Carbon Resistor
R188~191	4		SA-2WT100J	Metal Oxide Resistor
R192	1		KA25ST303J	Carbon Resistor
R193	1		KA25ST224J	Carbon Resistor
R201~203	3		KA25ST563J	Carbon Resistor
R204	1		KA25ST102J	Carbon Resistor
R205	1		KA25ST563J	Carbon Resistor
R206	1		KA25ST223J	Carbon Resistor
R207	1		KA25ST562J	Carbon Resistor
R208	1		KA25ST102J	Carbon Resistor
R209	1		KA25ST104J	Carbon Resistor
R210	1		KA25ST473J	Carbon Resistor
R211	1		KA25ST223J	Carbon Resistor
R212	1		KA50ST271J	Carbon Resistor
R215	1		KA25ST102J	Carbon Resistor
R216	1		KA25ST561J	Carbon Resistor
R218	1		KA25ST223J	Carbon Resistor
R301~306	6		KA25ST103J	Carbon Resistor
R307~310	4		KA25ST474J	Carbon Resistor
R311,312	2		KA25ST182J	Carbon Resistor
R313~327	14		KA25ST103J	Carbon Resistor
R328,329	2		KA25ST683J	Carbon Resistor
R330	1		KA25ST912J	Carbon Resistor
R331	1		KA25ST822J	Carbon Resistor

Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
R601,602	2		SA-2WT182J	Metal Oxide Resistor
R603,604	2		KA25ST823J	Carbon Resistor
R612,613	2		SA-1WT332J	Metal Oxide Resistor
R614,615	2		KA25ST103J	Carbon Resistor
SVR101,102	2		SVR-08T3B501	Semi-Variable Resistor
SVR601,602	2		SVR-08T3B301	Semi-Variable Resistor
<b>Miscellaneous</b>				
	4		JP-Y24C01	Jump Wire
	2		KL-290D-1	Meter
	2		UI2-10005-200A	Thermal Relay
RL101	39		5E-T05-AT	Jump Wire
	1		180008	Relay

**4. PS-533 P.C. Board Assembly**

Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
<b>Semiconductors</b>				
D401	1		RGP30G-5001L	Diode
D401	1		30DF2FC	Diode
D402	1		RGP30G-5001L	Diode
D402	1		30DF2FC	Diode
D403	1		RGP30G-5001L	Diode
D403	1		30DF2FC	Diode
D404	1		RGP30G-5001L	Diode
D404	1		30DF2FC	Diode
D409~412	4		1N4002	Diode
D502	1		GP30D-L	Diode
D502	1		1N5402-F	Diode
D503	1		GP30D-L	Diode
D503	1		1N5402-F	Diode
D504	1		GP30D-L	Diode
D504	1		1N5402-F	Diode
D505	1		GP30D-L	Diode
D505	1		1N5402-F	Diode
D506	1		DBA10C	Diode
D507~509	3		1N4002	Diode
D511	1		DS442	Diode
D516,517	2		1N4002	Diode
D518	1		1B4B42	Diode
Q401,402	2		2SA1111-Q,R	Transistor
Q403,404	2		2SC2591-Q,R	Transistor
Q405,406	2		2SD1047-E	Transistor
Q407,408	2		2SB817-E	Transistor
Q501	1		2SC1815-Y,GR	Transistor
Q502	1		2SA921-S,T	Transistor
Q503~505	3		2SC1815-Y,GR	Transistor
Q506,507	2		2SA1015-Y,GR	Transistor
Q508	1		2SC1815-Y,GR	Transistor
PC501	1		TLP631	Photo Coupler
ZD501	1		ZD50-200	Zener Diode, 1/2W, 20.0V
ZD502	1		ZD50-100	Zener Diode, 1/2W, 10.0V

<b>Capacitors</b>				
C401~404	4		HE70SJYB272K	Ceramic Capacitor
C409~412	4		HE12SJYB103K	Ceramic Capacitor
C413~416	4		HE50SJYB102K	Ceramic Capacitor
C501	1		MMS104M	Metallized Film Capacitor
C502	1		ECQU1A104ME	Metallized Film Capacitor
C503,504	2		ECQU1A332ME	Metallized Film Capacitor
C506	1		MY-50VS393J	Mylar Capacitor
C507	1		MF-630TD103M	Metallized Film Capacitor
C507	1		TDXM-2J103KZBT	Metallized Film Capacitor
C508,509	2		BC80682YC60GH4	Electrolytic Capacitor
C510,511	2		BC50682XB50CC3	Electrolytic Capacitor
C512,513	2		BC80222M250CC2	Electrolytic Capacitor
C514	1		MF-630TD103M	Metallized Film Capacitor
C514	1		TDXM-2J103KZBT	Metallized Film Capacitor
C515	1		MF-630TD103M	Metallized Film Capacitor
C515	1		TDXM-2J103KZBT	Metallized Film Capacitor
C517	1		MS-50TW1R0M	Electrolytic Capacitor
C521	1		MF-630TD103M	Metallized Film Capacitor

Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
C521	1		TDXM-2J103KZBT	Metallized Film Capacitor
C525	1		NS-25TW101M	Electrolytic Capacitor
C526	1		NS-16TW101M	Electrolytic Capacitor
C527	1		MS-16TW100M	Electrolytic Capacitor
C528	1		MS-25TW4R7M	Electrolytic Capacitor
C529	1		ECQM1H224V	Polyester Film Capacitor
<b>Resistors</b>				
R405~408	4		KA25ST102J	Carbon Resistor
R409~412	4		KA50ST103J	Carbon Resistor
R413~416	4		KA25ST100J	Carbon Resistor
R417~420	4		KA25ST223J	Carbon Resistor
R501	1		KA50ST180J	Carbon Resistor
R504	1		KA50ST274J	Carbon Resistor
R505	1		KA50ST683J	Carbon Resistor
R506	1		KA25ST683J	Carbon Resistor
R508	1		KA25ST101J	Carbon Resistor
R509	1		KA25ST103J	Carbon Resistor
R510	1		KA50ST103J	Carbon Resistor
R511	1		KA25ST224J	Carbon Resistor
R512	1		KA25ST223J	Carbon Resistor
R513	1		KA25ST103J	Carbon Resistor
R514	1		KA25ST472J	Carbon Resistor
R515~517	3		KA25ST103J	Carbon Resistor
R518~519	2		KA25ST104J	Carbon Resistor
R520	1		KA25ST100J	Carbon Resistor
R521	1		KA25ST4R7J	Carbon Resistor
R522	1		KA25ST273J	Carbon Resistor
R523	1		KA25ST153J	Carbon Resistor
R524,525	2		KA50ST223J	Carbon Resistor
R526	1		KA25ST182J	Carbon Resistor
R527	1		KA25ST102J	Carbon Resistor
SVR503	1		SVR-08T3B503	Semi-Variable Resistor
<b>Coils</b>				
L501	1		SF-HP-8A-01	Choke Coil
<b>Miscellaneous</b>				
	1		FS-014	Receptacle
	1		FS-015	Receptacle
	1		FS-016	Receptacle
	3		JP-Y24C01	Jump Wire
	4		1S3MPB	Mica
	1		59BS4795	Gnd Lug

### 5. Inner Construction Parts

Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
<b>Switches</b>				
11E1	1		ESB70231T	Power Switch
11E19	1		HSW0302-01-330	Slide Switch
<b>P.C.Board Assembly</b>				
12E1	1		16A1P01B	P.C.Board Ass'y (MA-375)
12E2	1		16A1P01B-1	P.C.Board Ass'y (SPS-375)
12E3	1		16A1P02C	P.C.Board Ass'y (PS-533)
12E5	1		16A1P02C-1	P.C.Board Ass'y (IS-533)
12E6	1		16A1P02C-2	P.C.Board Ass'y (LP-533)
<b>Miscellaneous</b>				
1E3	1		NPT-1644	Power Transformer
1E4	1		NPT-1654	Power Transformer
5E26	4		1S3MPB	Mica
10E11	8		AC243	Mica
10E12	4		NO.18A	Mica
10E13	4		NO.24B	Insulator Bush
2M1	1		N20B22A	Front Chassis
2M2	1		N30553	Center Chassis
2M3	1		N30554	Support Chassis (P.T.)

Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
2M4	2		N30555	Joint Angle
2M5	1		N30556	Fittings (Lamp)
2M6	2		N42388	Fittings (Thermal Relay)
2M7	1		N30557A	Heat Sink
2M8	2		N30559	Heat Sink
2M9	1		N30558	Shower-Glass
2M10	2		N42666	Cushion
2M11	3		N41960	Cabinet Mat
2M12	4		N42667	Meter Cushion
2M13	1		N42669	Shield Paper (Lamp)
2M14	2		N42710	Meter Cushion
2M15	1		N42711	Cushion
2M16	1		N42789	Spacer
2M17	1		N42792	Cushion
2M20	1		N42635	Fittings (P.C.B.)
2M21	2		N43125	Spacer
3M29	4		TSP+40X14-B	Tap Screw S, Pan Head, B
3M30	2		VJR-3	Snake Lug
4M1	2		SSP+20X06-B	Screw, Pan Head, B
4M2	2		TBB+26X06-Y	Tap Screw B, Bind Head, Y
4M3	19		TSB+30X06-Y	Tap Screw S, Bind Head, Y
4M8	8		TSB+30X06-B	Tap Screw S, Bind Head, B
4M10	14		TSB+30X08-Y	Tap Screw S, Bind Head, Y
4M11	4		TSB+30X10-Y	Tap Screw S, Bind Head, Y
4M12	16		TSB+30X12-Y	Tap Screw S, Bind Head, Y
4M13	17		TSC+30X06-Y	Tap Screw S, Washer Faced, Y
4M17	2		TSS+30X06-Y	Tap Screw S, Flat Head, Y
4M18	2		SSS+30X12-Y	Screw, Flat Head, Y
4M19	3		TPM+30X08-B	Tap Screw P, Round Head, B
4M20	4		ZB+STR30X12-2Y	Tap Screw, Bind Head, Y
4M21	11		TSB+40X08-B	Tap Screw S, Bind Head, B
4M22	7		TSB+40X10-Y	Tap Screw S, Bind Head, Y
4M23	4		TSB+40X14-B	Tap Screw S, Bind Head, B
4M24	2		TSB+40X12-Y	Tap Screw S, Bind Head, Y
4M25	1		TST+40X18-Y	Tap Screw S, Truss, Y
4M26	15		2AWX0830-05-Y	Plain Washer, Y
4M27	6		2AWX1040-08-B	Plain Washer, B
4M28	2		2BNX30-2Y	Nut, Hexagonal Head
4M29	3		59BS1692	GND Lug
4M30	4		3TWX30	Toothed Washer (A.B)

**6. Appearance Parts**

Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
11E13	1		ACC-022DIG7EIA	Line Cord
11E15	1		SR-5N-4	Cord Stopper
11E17	1		FH-032C	Fuse Holder
11E25	1		UB-0029-1	Terminal (GND.)
1M1	1		N21138-GY3	Front Panel
1M2	1		N30561-1	Meter Plate
1M3	1		N42650A	Tinted Window
1M4	1		N42573-BR2	Side Cap R
1M5	1		N42574-BR2	Side Cap L
1M6	2		N43858	Trim (Window)
1M8	1		N43095-GY3	Push Button (Power)
1M9	1		N42572A	Knob Guide
1M10	1		N20824-1	Cabinet
1M12	1		N20828C-1	Rear Panel
1M13	1		N30551A-1	Bottom Board
1M14	4		T-C	Foot
1M16	2		N44093-GY3	Handle
1M17	4		N44092-GY3	Handle Spacer
1M18	2		N43847-GY3	Bracket
1M19	4		N43881	Spacer

**7. Packing Parts**

Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
3M1	1		N41318	Polyethylene Bag (Unit)
3M2	1		N40487	Polyethylene Bag (Accessories)
3M3	1		N20859	Packing Pad R
3M4	1		N20860A	Packing Pad L
3M5	1		N42674-1A	Shipping Carton
3M6	2		SL.1024	Label, Serial No.

Ref. No	Q'ty	Carver Part No.	Supplier Part No.	Description
3M7	2		N41366B	Label, Caution
3M8	1		N42235	Sheet, Serial Number
3M11	1		OM-498	Instruction Manual
3M13	1		N42785	Packing Pad (Top)
3M16	1		N43871	Handle Case
3M17	1		N43870	Protection Sheet
3M18	1		N43874	Polyethylene Bag (Accessories)
3M19	1		N43880	Instruction (Handle)

**Capacitors description**

- Electrolytic Capacitor**

NS	-16	TW	221	M
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Tolerance (%): M = ±20  
 Value (µF): R22=0.22, 100=10, 1R0=1.0, 221=220, 3R3=3.3, 102=1000  
 Voltage (V): -16 = 16, 6R3 = 6.3
- Mylar Capacitor**

MY	-50V	S	223	M
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Tolerance (%): J = 5, K = 10, M = 20  
 Value (pF): 122 = 1200, 104 = 100000 = 0.1 (µF), 223 = 22000  
 Voltage (V): -50 = 50
- Ceramic Capacitor**

HE	90	SJ	YF	223	Z
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Tolerance (%): D = ±0.5pF, J = ±5 (%), K = ±10 (%), Z = ±20 (%)  
 Value (pF): 050 = 5, 102 = 1000, 560 = 56, 223 = 22000, 821 = 820  
 Voltage (V): HC = 25, HE = 50, HK = 250, HM = 500, H = 100

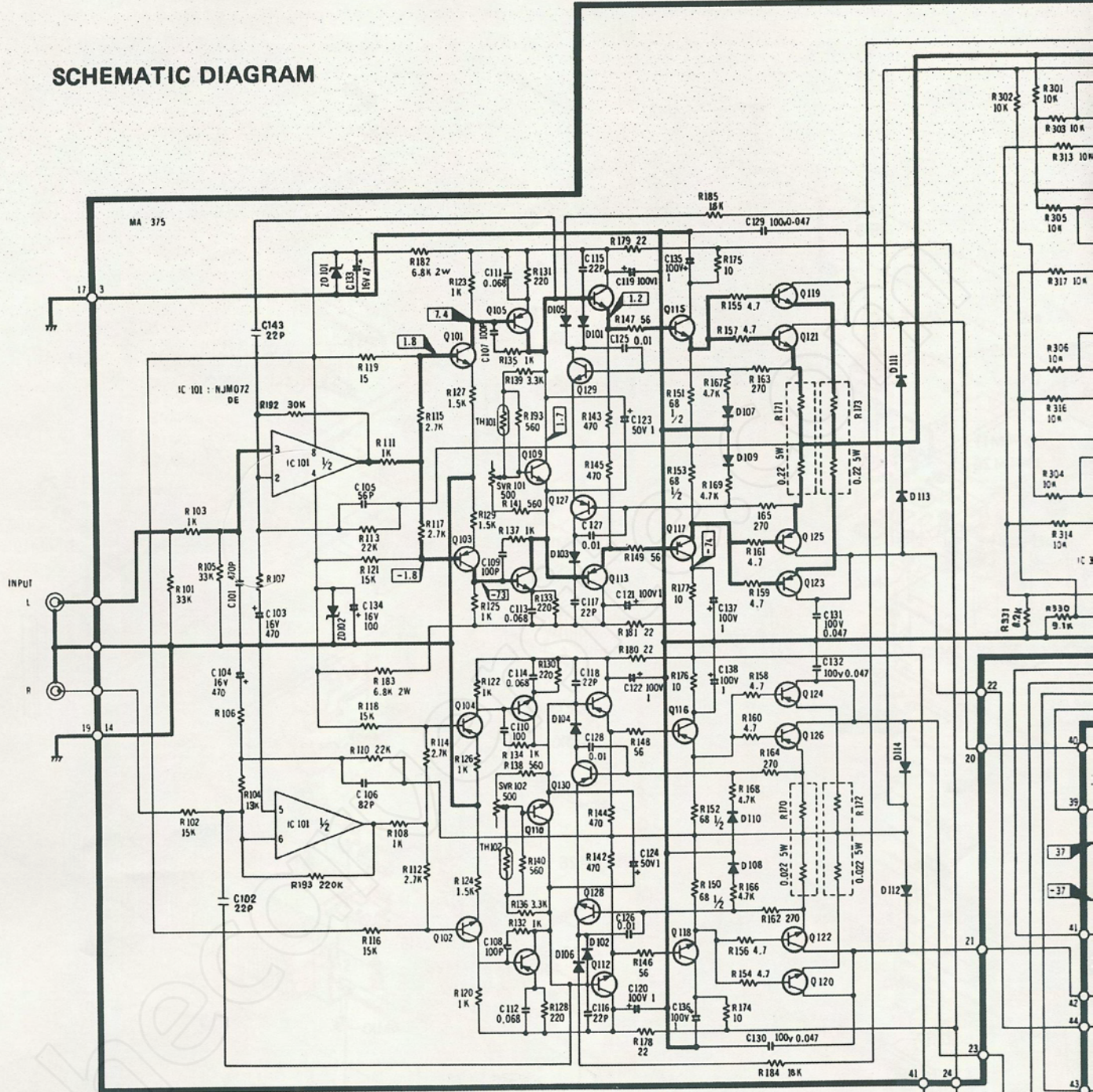
**Resistors description**

- Fixed Resistors**

KA	25S	T	473	J	-LP
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Tolerance (%): D = ±0.5, F = ±1, G = ±2, J = ±5  
 Value (Ω): 2R2 = 2.2, 682 = 6.8k, 125 = 1.2M, 470 = 47, 473 = 47k,  
 221 = 220, 394 = 390k  
 Wattage (W): 25S = 1/4, 50S or 50X = 1/2, -2W = 2  
 Type: KA = Carbon, FR = Flame Proof, SA = Metal Oxide,  
 RF = Fusible, MF = Metal Film

# SCHEMATIC DIAGRAM



**TRANSISTOR**

- Q 101, 102, 301, 302, 505 : 2SC1980 (S,T)
- Q 103, 104, 303, 304, 502, 506 : 2SA921 (S,T)
- Q 105, 106, 113 : 2SA1110 (Q,R)
- Q 107, 108, 111, 112 : 2SC2590 (Q,R)
- Q 109, 110 : 2SC1567 (Q,R)
- Q 115, 118, 403, 404 : 2SC2591 (Q,R)
- Q 116, 117, 401, 402 : 2SA1111 (Q,R)
- Q 119, 120, 121, 122 : 2SD 45 (O,R)
- Q 123~124 : 2SB7 5 (O,R)
- Q 127, 130 : 2SA777 (Q,R)
- Q 128, 129, 207, 208 : 2SC1509 (Q,R)
- Q 201~203 601 : 2SA722 (S,T)
- Q 202~206 : 2SC1328 (S,T)
- Q 405, 406 : 2SD 1047 (E)
- Q 501,503,504,505,508 : 2SC1815 (GR, BL)
- Q 602, 603 : 2SC536 (F,G)
- Q 606, 607 : 2SA1015 (GR, BL)

**ZENER DIODE**

- ZD 101, 102 : XZ147
- ZD 501 : XZ 200
- ZB 502 : XZ 100
- ZD 601, 602 : XZ117

**DIODE**

- D 101~110, 507 : IN4148
- D 111~114, 202~204, 409 412, 508, 509, 516, 517 : IN4002
- D 201, 301, 302, 511, 601 : DS 442
- D 401~404 : 30 DF 2 FC
- D 502~505 : GP30DL or 1N5402
- D 501 : KBPC 25-02
- D 506 : DBA 10C
- D 518 : 1B4842

**IC 101**

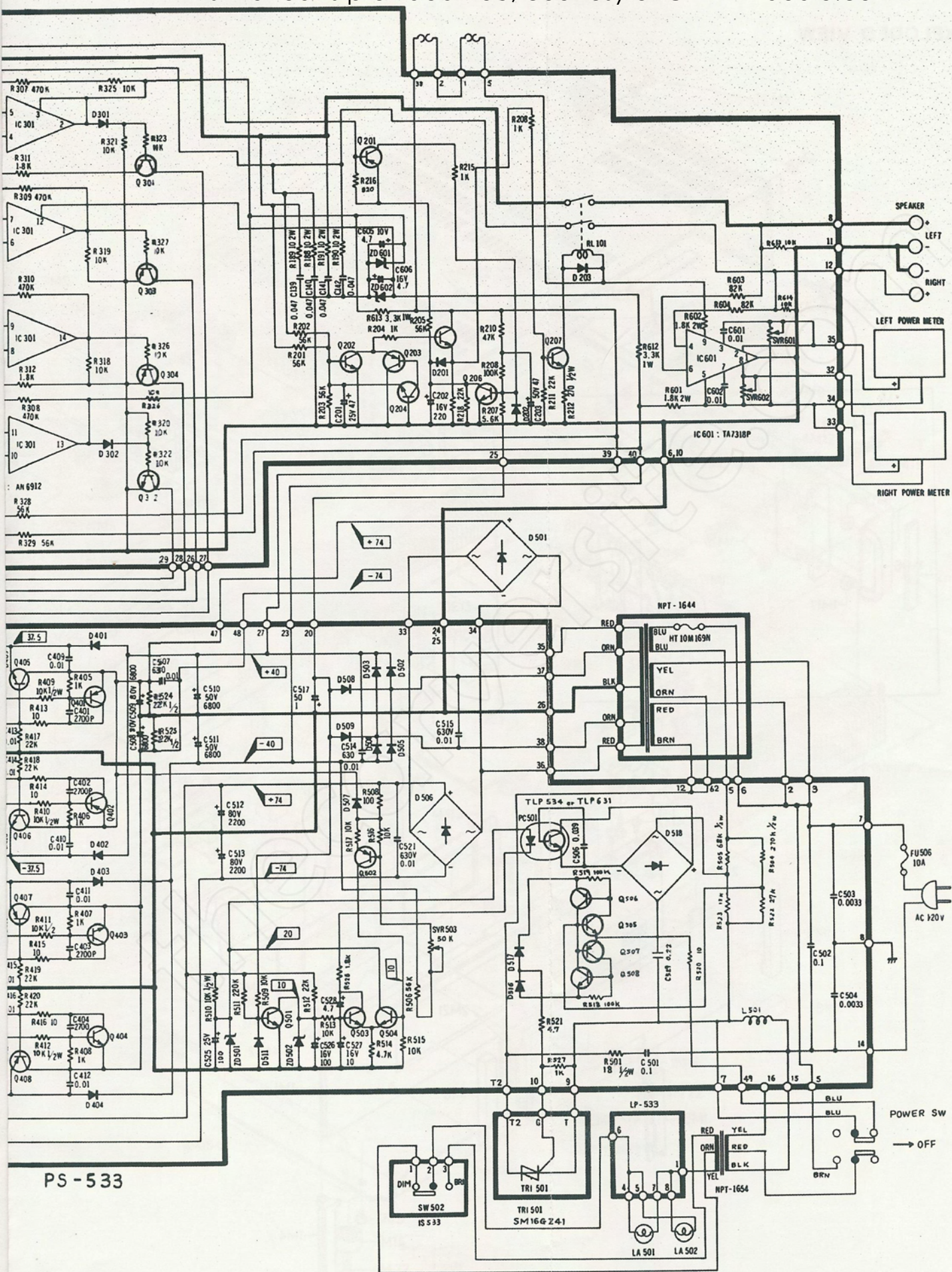
IC PIN	1	2	3	4	5	6	7	8
VOLTAGE	0	0	0	-14.7	0	0	0	+14.7

**IC 301**

IC PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14
VOLTAGE	0	-11.8	-12	-0.3	4.8	0	-5	0	-5	-0.3	5	12	-11.8	0.5

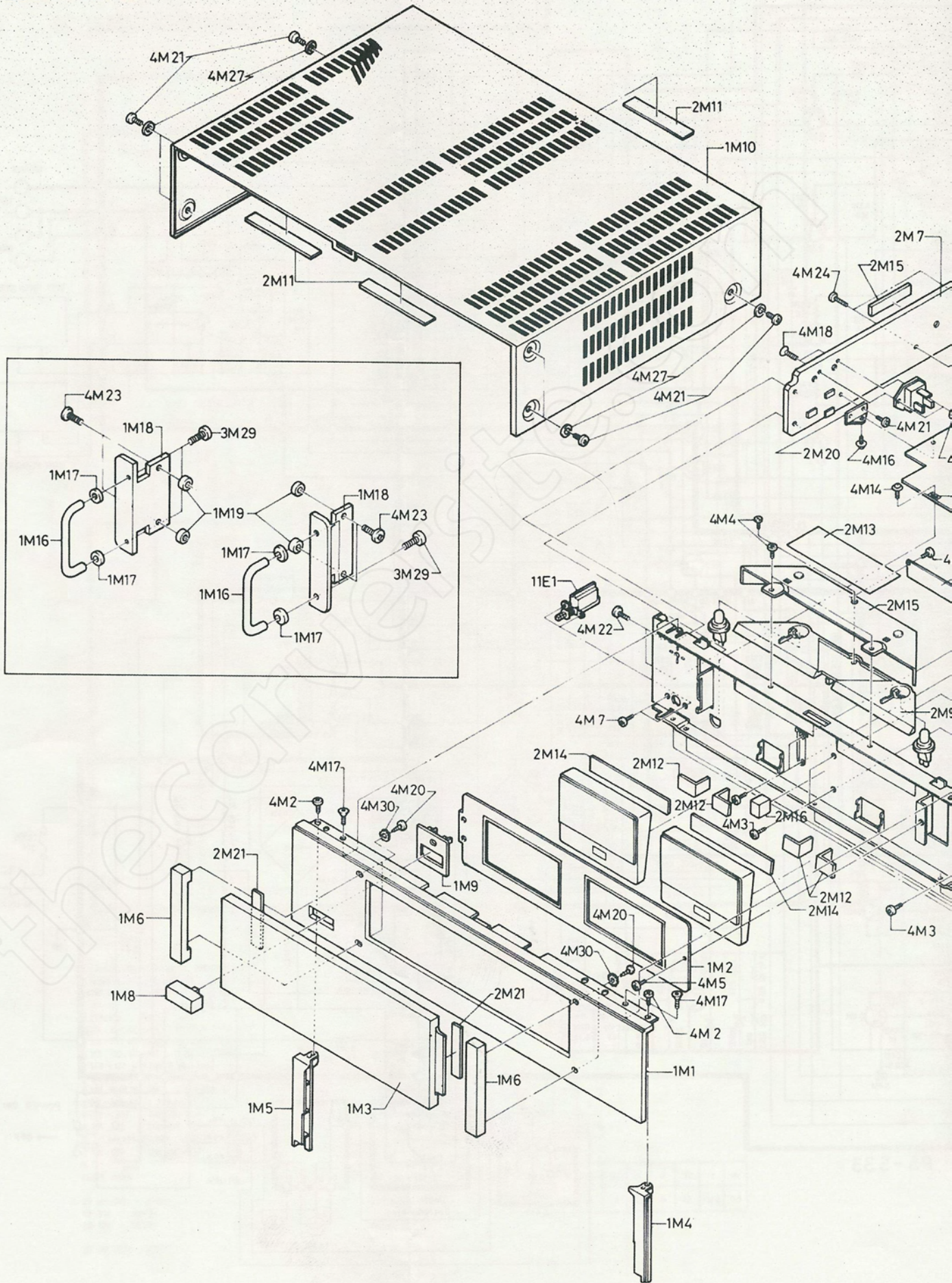
**IC 601**

IC PIN	1	2	3	4	5	6	7	8	9
VOLTAGE	0	-8.7	-0.78	0	-8.7	0	-0.79	-8.7	-8.7

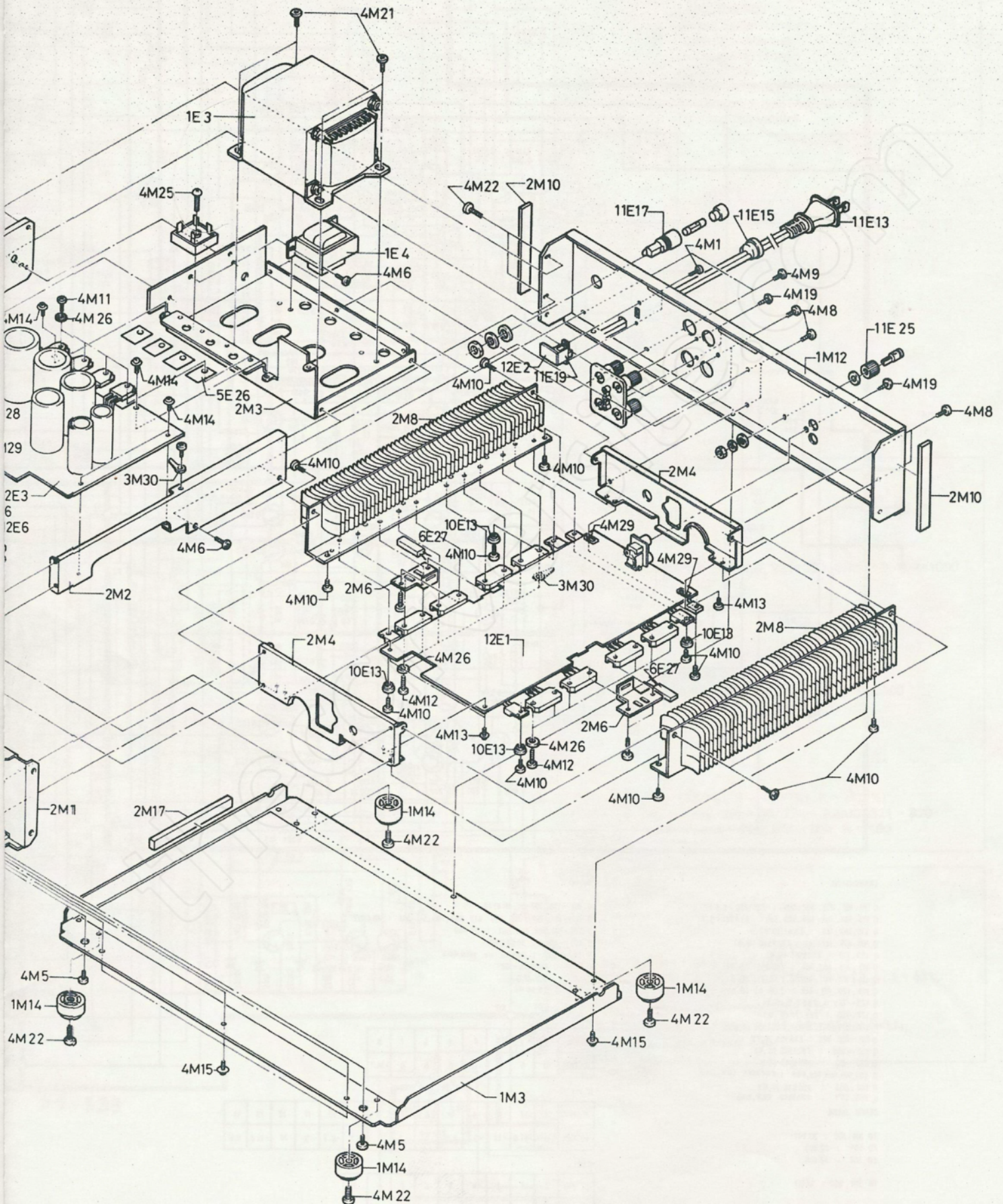


PS - 533

### EXPLODED VIEW







## VOLTAGE CONVERSION

### Direction for Change

1. Locate power supply circuit board on the left of the front panel side. (See Fig. 1 and 2)

A. Move the red wire of PT (L) from 2 to 61.

B. Move the orange wire of PT (L) from 62 to 60.

C. Move the yellow wire of PT (S) from 16 to the power switch.

D. Move the red wire of PT (S) from the power switch to 16.

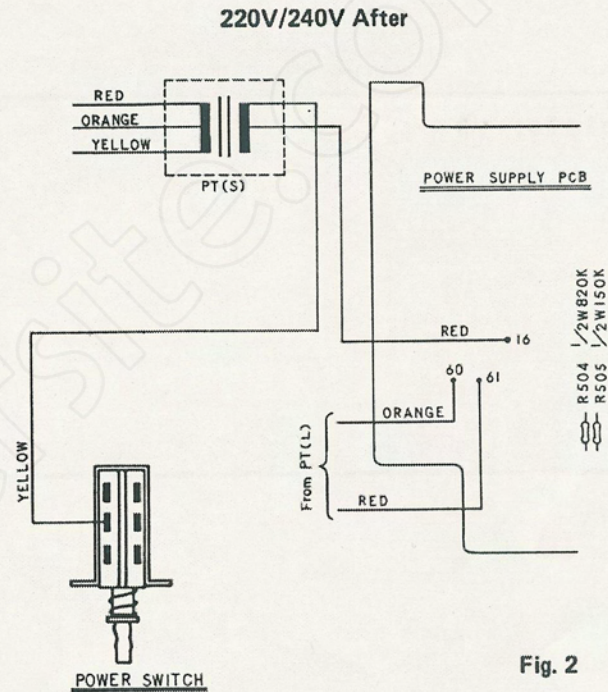
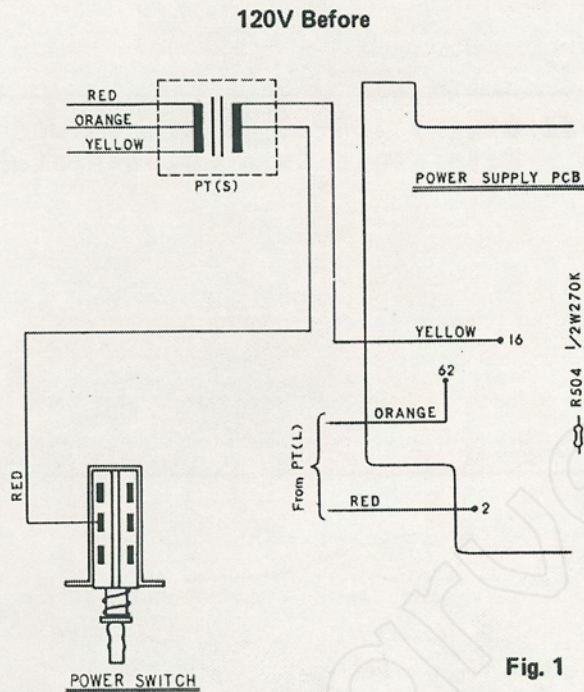
E. Change R504 from 270K 1/2W to 820K 1/2W.

F. Change R505 from 68K 1/2W to 150K 1/2W.

Note. PT(L): Power Transformer, large

PT(S): Power Transformer, small

### Power Supply P.C. Board PS-533



2. Change fuse on the right of the rear panel from AGC10 to AGC5.

**CARVER CORPORATION  
SERVICE BULLETIN**

Service Bulletin # M-500t-1

Model M-500t

Serial # all units

Reason: Proper mounting of filter caps.

Procedure: When replacing C508 and C509 on the power supply PCB please do not mount the caps directly onto the PCB. This cap (6800uf/80V) has its vent hole on the bottom so it should be mounted slightly above the PCB to allow the gas to escape. A good spacer to use is a #4 flat nylon washer placed over each leg of the capacitor.

Delete:

Add: Qty(4) 154-40001-01 #4 washer  
Note: this is a nylon flatwasher

SERVICE APPROVAL  
ENGINEERING APPROVAL

