

CARVER

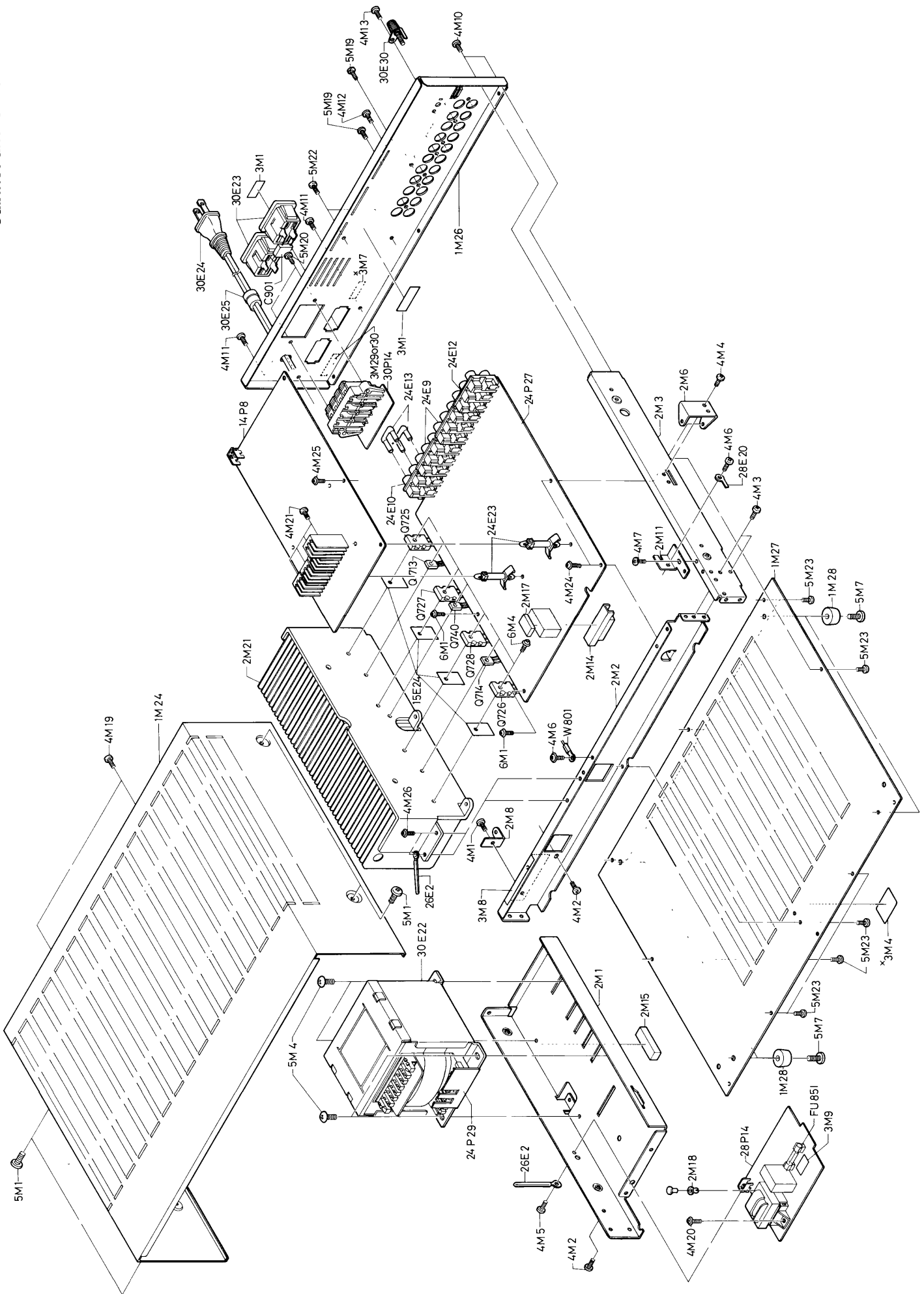
Model CM-1090

SERVICE MANUAL

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Cabinet and Chassis



PARTS LIST

Parts marked with * vary according to destinations.
For details, refer to the different parts list.

HCLDGRAM P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD			
14E 8	1	HGM-8108	PRINTED CIRCUIT BOARD
SEMICONDUCTORS			
0501	1	Z050-040	ZENER 0100E, 1/2W, 4V
0507*601	2	1N4002	0100E
0602	1	Z050-057	ZENER 0100E, 1/2W, 5.7V
0807*812, 814*815	8	1N4002	0100E
Q602*603	2	25C1815-Y*GR	TRANSISTOR
IC512	1	LB1641	IC
IC601*610	10	UPC4570HA-1	IC
IC801	1	UPC78M10HF	IC
IC802	1	UPC78M05HF	IC
IC804	1	UPC78M15HF	IC
IC805	1	UPC79M15HF	IC
CAPACITORS			
C553	1	NS-25TW470M	ELECTROLYTIC CAPACITOR
C601*602	2	MY-50VU332J	MYLAR CAPACITOR
C603*604	2	MY-50VU473J	MYLAR CAPACITOR
C605	1	HE40SJY8681K	CERAMIC CAPACITOR
C606*607	2	MY-50VU122J	MYLAR CAPACITOR
C608	1	MY-50VU272J	MYLAR CAPACITOR
C609	1	MY-50VU823J	MYLAR CAPACITOR
C610	1	ECQV1H124JZ	METALLIZED FILM CAPACITOR
C611	1	MY-50VU683J	MYLAR CAPACITOR
C612*613	2	MY-50VU562J	MYLAR CAPACITOR
C615*628	14	MY-50VU102J	MYLAR CAPACITOR
C629*630	2	NS-25TW47M	ELECTROLYTIC CAPACITOR
C631*632	2	HE40SJY8221K	CERAMIC CAPACITOR
C633*634	2	MY-50VU222J	MYLAR CAPACITOR
C635*638	4	MY-50VU182J	MYLAR CAPACITOR
C639*640	2	HE70SJYF103Z	CERAMIC CAPACITOR
C641*642	2	MY-50VU102J	MYLAR CAPACITOR
C643*645	3	HE70SJYF103Z	CERAMIC CAPACITOR
C646	1	NS-16TW471M	ELECTROLYTIC CAPACITOR
C650	1	NS-16TW470M	ELECTROLYTIC CAPACITOR
C801*804	4	NS-50TW180M	ELECTROLYTIC CAPACITOR
C805*806	2	NS-35TW102M-KF	ELECTROLYTIC CAPACITOR
C614	1	NS-35TW222M-KF	ELECTROLYTIC CAPACITOR
RESISTORS			
R601*602	2	KA16ST203J	CARBON RESISTOR
R603*604	2	KA16ST362J	CARBON RESISTOR
R605*606	2	KA16ST392J	CARBON RESISTOR
R607*608	2	KA16ST352J	CARBON RESISTOR
R609*610	2	KA16ST822J	CARBON RESISTOR
R611*612	2	KA16ST293J	CARBON RESISTOR
R613*618	6	KA16ST392J	CARBON RESISTOR
R619*620	2	KA16ST293J	CARBON RESISTOR
R621	1	KA16ST912J	CARBON RESISTOR
R622	1	KA16ST102J	CARBON RESISTOR
R623	1	KA16ST183J	CARBON RESISTOR
R624	1	KA16ST362J	CARBON RESISTOR
R625	1	KA16ST192J	CARBON RESISTOR
R626	1	KA16ST392J	CARBON RESISTOR
R627	1	KA16ST112J	CARBON RESISTOR
R628	1	KA16ST183J	CARBON RESISTOR
R629	1	KA16ST392J	CARBON RESISTOR
R630	1	KA16ST302J	CARBON RESISTOR
R631*633	3	KA16ST392J	CARBON RESISTOR
R634	1	KA16ST162J	CARBON RESISTOR
R635	1	KA16ST302J	CARBON RESISTOR
R636	1	KA16ST682J	CARBON RESISTOR
R637	1	KA16ST273J	CARBON RESISTOR
R638	1	KA16ST682J	CARBON RESISTOR
R639*640	2	KA16ST512J	CARBON RESISTOR
R641*642	2	KA16ST752J	CARBON RESISTOR
R643*644	2	KA16ST203J	CARBON RESISTOR
R645*646	2	KA16ST752J	CARBON RESISTOR
R647*648	2	KA16ST122J	CARBON RESISTOR
R649	1	KA16ST512J	CARBON RESISTOR
R650	1	KA16ST182J	CARBON RESISTOR
R651*652	2	KA16ST752J	CARBON RESISTOR
R653*654	2	KA16ST203J	CARBON RESISTOR
R655*656	2	KA16ST752J	CARBON RESISTOR
R657	1	KA16ST122J	CARBON RESISTOR
R658	1	KA16ST512J	CARBON RESISTOR
R659	1	KA16ST681J	CARBON RESISTOR
R660	1	KA16ST122J	CARBON RESISTOR
R661*662	2	KA16ST301J	CARBON RESISTOR
R663*664	2	KA16ST512J	CARBON RESISTOR
R665*666	2	KA16ST752J	CARBON RESISTOR
R667*668	2	KA16ST203J	CARBON RESISTOR
R669*670	2	KA16ST752J	CARBON RESISTOR
R671*672	2	KA16ST122J	CARBON RESISTOR
R673*674	2	KA16ST361J	CARBON RESISTOR
R675*676	2	KA16ST512J	CARBON RESISTOR
R677*678	2	KA16ST752J	CARBON RESISTOR
R679*682	4	KA16ST103J	CARBON RESISTOR
R683*684	2	KA16ST203J	CARBON RESISTOR
R685*686	2	KA16ST752J	CARBON RESISTOR
R687*688	2	KA16ST122J	CARBON RESISTOR
R689*690	2	KA16ST752J	CARBON RESISTOR
R691*692	2	KA16ST361J	CARBON RESISTOR
R693	1	KA16ST273J	CARBON RESISTOR
R694	1	KA16ST100J	CARBON RESISTOR
R695*696	2	KA16ST473J	CARBON RESISTOR
R697*698	2	KA16ST470J	CARBON RESISTOR
R699*700	2	KA16ST511J	CARBON RESISTOR
R701*706	4	KA16ST303J	CARBON RESISTOR
R707*708	2	KA16ST193J	CARBON RESISTOR
R709*710	2	KA16ST153J	CARBON RESISTOR
R724	1	KA16ST103J	CARBON RESISTOR
R727*728	2	KA16ST361J	CARBON RESISTOR
R781*782	2	KA16ST102J	CARBON RESISTOR
R793*794	2	KA16ST103J	CARBON RESISTOR
R811	1	SA-2WT470J-LP	METAL OXIDE RESISTOR
R850	1	SA-2WT271J	METAL OXIDE RESISTOR
R951	1	KA16ST162J	CARBON RESISTOR

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
MISCELLANEOUS			
2E17*E19	2	B3B-EH-A	CONNECTOR
CN303	1	52011-0710	CONNECTOR
CN305	1	52011-0510	CONNECTOR
CN501	1	52011-0710	CONNECTOR
CN502*503, 606	3	52011-0610	CONNECTOR
CN807	1	B3B-EH-A	CONNECTOR
CN808	1	52011-0310	CONNECTOR
CN809	1	52011-0510	CONNECTOR
EL601	1	M1698	GND LUG
RY601	1	AG80239	RELAY
14E17	33	E050	JUMP WIRE
14E22	39	E100	JUMP WIRE
14E27	3	E125	JUMP WIRE
14E29	2	E200	JUMP WIRE
20E26	1	N45833-40	HEAT SINK
20E27	3	OSH-1625-MP	HEAT SINK

TDNE CONTROL P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD			
9E28	1	TON-8108	PRINTED CIRCUIT BOARD
SEMICONDUCTORS			
IC401	1	TC9214P	IC
IC403*404	2	NJM45655B	IC
CAPACITORS			
C401-404	4	NS-25TW47M	ELECTROLYTIC CAPACITOR
C405*406	2	ECQV1H334JZ	METALLIZED FILM CAPACITOR
C407*408	2	MY-50VU123J	MYLAR CAPACITOR
C409*410	2	MY-50VU823J	MYLAR CAPACITOR
C411*412	2	ECQV1H334JZ	METALLIZED FILM CAPACITOR
C413*414	2	MY-50VU123J	MYLAR CAPACITOR
C415*416	2	MY-50VU272J	MYLAR CAPACITOR
C417*420	4	NS-25TW47M	ELECTROLYTIC CAPACITOR
C421*422	2	HE40SJY8221K	CERAMIC CAPACITOR
C423*424	2	HE40SJY8471K	CERAMIC CAPACITOR
C425*426	2	MY-50VU473J	MYLAR CAPACITOR
C427*428	2	NS-16TW101M	ELECTROLYTIC CAPACITOR
C429*430	2	NS-25TW47M	ELECTROLYTIC CAPACITOR
RESISTORS			
R401*402	2	KA16ST474J	CARBON RESISTOR
R403*404	2	KA16ST104J	CARBON RESISTOR
R405*406	2	KA16ST333J	CARBON RESISTOR
R407*408	2	KA16ST562J	CARBON RESISTOR
R409*410	2	KA16ST152J	CARBON RESISTOR
R411*412	2	KA16ST562J	CARBON RESISTOR
R413*414	2	KA16ST152J	CARBON RESISTOR
R415*416	2	KA16ST103J	CARBON RESISTOR
R417*420	4	KA16ST152J	CARBON RESISTOR
R421*422	2	KA16ST222J	CARBON RESISTOR
R423*426	4	KA16ST152J	CARBON RESISTOR
R427*428	2	KA16ST103J	CARBON RESISTOR
R429*430	2	KA16ST274J	CARBON RESISTOR
R431*432	2	KA16ST104J	CARBON RESISTOR
R433*434	2	KA16ST562J	CARBON RESISTOR
R435*436	2	KA16ST471J	CARBON RESISTOR
R437*438	2	KA16ST105J	CARBON RESISTOR
R439*440	2	KA16ST562J	CARBON RESISTOR
R455*456	2	KA16ST683J	CARBON RESISTOR
R457*458	2	KA16ST153J	CARBON RESISTOR
R461*462	2	SA-1WT681J	METAL OXIDE RESISTOR
R463*464	2	KA16ST472J	CARBON RESISTOR
VR401-403	3	VB114-203R21F4	ROTARY POTENTIOMETER
SWITCHES			
SW401	1	SW-1301279	PUSH SWITCH
SW402	1	SW-1301291	PUSH SWITCH
MISCELLANEOUS			
1W 1	1	4685263809-J-J	3-LEAD, FLAT CABLE
1W10	1	4685265820-J-Z	5-LEAD, FLAT CABLE
1W12	1	4685265833-J-Z	5-LEAD, FLAT CABLE
9E15	13	E050	JUMP WIRE
9E17	20	E100	JUMP WIRE
CN401	1	M203-778	MICRO SOCKET ASS'Y
CN403	1	B3B-EH-A	CONNECTOR
CN504	1	M209-774	MICRO SOCKET ASS'Y
FW408	1	M203-781	MICRO SOCKET ASS'Y
FW409	1	M203-782	MICRO SOCKET ASS'Y
FW508	1	M204-763	MICRO SOCKET ASS'Y
FW510	1	M203-780	MICRO SOCKET ASS'Y
FW800	1	4685263840-J-Z	3-LEAD, FLAT CABLE

SPEAKER TERMINAL P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD			
30E14	1	SPT-8108	PRINTED CIRCUIT BOARD
MISCELLANEOUS			
CN408*409	2	B3B-EH-A	CONNECTOR
JK401	1	YK021-0027B	SOCKET 2P (S.P.)

HEADPHONE P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 30E 9	1	HP-8108	PRINTED CIRCUIT BOARD
MISCELLANEOUS JK402	1	YK824-5010	H.P JACK

MAIN AMP P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 2AE27	1	MA-809A	PRINTED CIRCUIT BOARD
SEMICONDUCTORS			
D503	1	1N4148	DIODE
D504	1	1N4002	DIODE
D505	1	Z050-070	ZENER 0100E+1/2W+7.0V
D506,511~ 516,702~ 705,707~ 711	16	1N4148	DIODE
D751	1	Z050-215	ZENER 0100E+1/2W+21.5V
D801	1	Z050-060	ZENER 0100E+1/2W 6.0V
D803~806	4	1N5402-F	DIODE
D813	1	1N4002	DIODE
DB16	1	1N4148	DIODE
D885,886	2	Z050-127	ZENER 0100E+1/2W+12.7V
7501,502	2	2SC2878-A+B	TRANSISTOR
9503	1	RN-2204	TRANSISTOR
9504	1	RN-1204	TRANSISTOR
9505	1	RN-2204	TRANSISTOR
9506	1	RN-1204	TRANSISTOR
9507	1	RN-2204	TRANSISTOR
9508	1	RN-1204	TRANSISTOR
9509	1	RN-2204	TRANSISTOR
9510	1	RN-1204	TRANSISTOR
Q701,702	2	2SC2878-A+B	TRANSISTOR
Q703,704	2	2SC2240-Y+GR	TRANSISTOR
Q705,706	2	2SA970-Y+GR	TRANSISTOR
Q707,708	2	2SC2240-Y+GR	TRANSISTOR
Q709,710	2	2SC1815-Y+GR	TRANSISTOR
Q711,712	2	2SA1145-O+Y	TRANSISTOR
Q715,716	2	2SC2705-O+Y	TRANSISTOR
Q717	1	RN-2204	TRANSISTOR
Q718,719	2	2SA1015-Y+GR	TRANSISTOR
Q721,722	2	2SC3298-O+Y	TRANSISTOR
Q723,724	2	2SA1306-O+Y	TRANSISTOR
Q729,730	2	2SC2240-Y+GR	TRANSISTOR
Q731	1	2SA970-Y+GR	TRANSISTOR
Q732	1	2SC1627A-O+Y	TRANSISTOR
IC501~505	5	NJM4565B	IC
IC506,507	2	TC9214P	IC
IC508	1	TC4069UBP	IC
IC509	1	TC9214P	IC
IC510	1	LC7818	IC
IC511	1	TA7317P	IC
CAPACITORS			
C501,502	2	HE40SJY8101K	CERAMIC CAPACITOR
C503,504	2	NS-16TW100M	ELECTROLYTIC CAPACITOR
C505,506	2	HE50SJY8102K	CERAMIC CAPACITOR
C507,508	2	NS-16TW100M	ELECTROLYTIC CAPACITOR
C509,510	2	NS-10TW101M	ELECTROLYTIC CAPACITOR
C511,512	2	MY-50VU562J	MYLAR CAPACITOR
C513,514	2	MY-50VU182J	MYLAR CAPACITOR
C515~522	8	HE40SJY8101K	CERAMIC CAPACITOR
C523~526	4	NS-25TW47M	ELECTROLYTIC CAPACITOR
C527,528	2	HE40SJY8101K	CERAMIC CAPACITOR
C529~540	12	NS-25TW47M	ELECTROLYTIC CAPACITOR
C541,542	2	HE12SJYF473Z	CERAMIC CAPACITOR
C551	1	NS-25TW470M	ELECTROLYTIC CAPACITOR
C552	1	NS-16TW102M-KF	ELECTROLYTIC CAPACITOR
C554	1	NS-25TW100M	ELECTROLYTIC CAPACITOR
C555	1	NS-50TW180M	ELECTROLYTIC CAPACITOR
C561,562	2	NS-16TW101M	ELECTROLYTIC CAPACITOR
C571,572	2	HE40SJY8101K	CERAMIC CAPACITOR
C701,702	2	HE40SJY8391K	CERAMIC CAPACITOR
C703,704	2	NS-25TW47M	ELECTROLYTIC CAPACITOR
C707,708	2	NS-10TW101M	ELECTROLYTIC CAPACITOR
C709,710	2	HE40SJS120K	CERAMIC CAPACITOR
C715,716	2	NS-25TW100M	ELECTROLYTIC CAPACITOR
C717,720	4	MY-50VU472J	MYLAR CAPACITOR
C721,722	2	MY-50VU102J	MYLAR CAPACITOR
C723,724	2	HM60SJS1101K	CERAMIC CAPACITOR
C725	1	NS-50TW47M	ELECTROLYTIC CAPACITOR
C726,727	2	NS-25TW470M	ELECTROLYTIC CAPACITOR
C728	1	NS-25TW220M	ELECTROLYTIC CAPACITOR
C729	1	NS-50TW47M	ELECTROLYTIC CAPACITOR
C730	1	H11SEYF223Z	CERAMIC CAPACITOR
C731,734	2	HM60SJS1101K	CERAMIC CAPACITOR
C751	1	NS-25TW470M	ELECTROLYTIC CAPACITOR
C773	1	MY-50VU223K	MYLAR CAPACITOR
C777,778	2	HE40SJY8391K	CERAMIC CAPACITOR
C807,808	2	BC71822MC50CC4	ELECTROLYTIC CAPACITOR
C809	1	NS100TW180M	ELECTROLYTIC CAPACITOR
C810,811	2	H11SEYF223Z	CERAMIC CAPACITOR
C931,932	2	NS-50TW180M	ELECTROLYTIC CAPACITOR
RESISTORS			
R501,502	2	KA16ST471J	CARBON RESISTOR
R503,504	2	KA16ST103J	CARBON RESISTOR
R505,506	2	KA16ST561J	CARBON RESISTOR
R507,508	2	KA16ST471J	CARBON RESISTOR
R509,510	2	KA16ST513J	CARBON RESISTOR
R511,512	2	KA16ST514J	CARBON RESISTOR
R513,514	2	KA16ST433J	CARBON RESISTOR
R515,516	2	KA16ST911J	CARBON RESISTOR
R517,518	2	KA16ST104J	CARBON RESISTOR

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
R519,520	2	KA16ST102J	CARBON RESISTOR
R521,522	2	KA16ST104J	CARBON RESISTOR
R523,524	2	KA16ST102J	CARBON RESISTOR
R525,526	2	KA16ST104J	CARBON RESISTOR
R527,528	2	KA16ST102J	CARBON RESISTOR
R529,530	2	KA16ST221J	CARBON RESISTOR
R533,534	2	KA16ST561J	CARBON RESISTOR
R535,538	4	KA16ST104J	CARBON RESISTOR
R539,540	2	KA16ST471J	CARBON RESISTOR
R541,542	2	KA16ST224J	CARBON RESISTOR
R543,546	4	KA16ST221J	CARBON RESISTOR
R547,548	2	KA16ST561J	CARBON RESISTOR
R549,552	4	KA16ST104J	CARBON RESISTOR
R553,554	2	KA16ST471J	CARBON RESISTOR
R555,560	6	KA16ST224J	CARBON RESISTOR
R561,562	2	KA16ST471J	CARBON RESISTOR
R563,564	2	KA16ST473J	CARBON RESISTOR
R565,566	2	KA16ST471J	CARBON RESISTOR
R567,572	6	KA16ST104J	CARBON RESISTOR
R573,574	2	KA16ST102J	CARBON RESISTOR
R581,582	2	KA16ST432J	CARBON RESISTOR
R583	1	KA16ST105J	CARBON RESISTOR
R584	1	KA16ST682J	CARBON RESISTOR
R585,586	2	KA16ST104J	CARBON RESISTOR
R587,588	2	KA16ST471J	CARBON RESISTOR
R589,590	2	KA16ST103J	CARBON RESISTOR
R592	1	KA16ST471J	CARBON RESISTOR
R593	1	KA16ST105J	CARBON RESISTOR
R596	1	KA16ST224J	CARBON RESISTOR
R597	1	KA16ST104J	CARBON RESISTOR
R598	1	KA16ST564J	CARBON RESISTOR
R599	1	KA16ST103J	CARBON RESISTOR
R701,702	2	KA16ST561J	CARBON RESISTOR
R711,712	2	KA16ST273J	CARBON RESISTOR
R713,714	2	KA16ST621J	CARBON RESISTOR
R715,716	2	KA16ST273J	CARBON RESISTOR
R717,720	4	KA16ST121J	CARBON RESISTOR
R723,724	2	KA25ST112J	CARBON RESISTOR
R725,726	2	FR25ST220J-LP	FLAME PROOF RESISTOR
R728	1	KA25ST162J	CARBON RESISTOR
R729,732	4	KA25ST102J	CARBON RESISTOR
R733,734	2	KA25ST162J	CARBON RESISTOR
R735,736	2	FR25ST220J-LP	FLAME PROOF RESISTOR
R737,738	2	FR50ST221J-LP	FLAME PROOF RESISTOR
R739,740	2	MPC725R22KX2LF	CEMENT RESISTOR
R741,742	2	KA25ST122J	CARBON RESISTOR
R743,744	2	KA25ST103J	CARBON RESISTOR
R745,748	4	CE10WTR47K-M	CEMENT RESISTOR
R749,750	2	KA25ST103J	CARBON RESISTOR
R751,753	3	KA16ST563J	CARBON RESISTOR
R754	1	KA16ST473J	CARBON RESISTOR
R755	1	KA16ST563J	CARBON RESISTOR
R756	1	KA16ST473J	CARBON RESISTOR
R757	1	KA16ST104J	CARBON RESISTOR
R758,759	2	KA16ST233J	CARBON RESISTOR
R760	1	KA16ST224J	CARBON RESISTOR
R761	1	KA16ST333J	CARBON RESISTOR
R762	1	KA16ST563J	CARBON RESISTOR
R763	1	SA-2WT152J-LP	METAL OXIDE RESISTOR
R765	1	KA16ST332J	CARBON RESISTOR
R766	1	KA16ST102J	CARBON RESISTOR
R767,768	2	KA16ST104J	CARBON RESISTOR
R769,770	2	KA16ST103J	CARBON RESISTOR
R771	1	KA16ST562J	CARBON RESISTOR
R772	1	KA16ST103J	CARBON RESISTOR
R773	1	KA25ST103J	CARBON RESISTOR
R774	1	KA25ST104J	CARBON RESISTOR
R775	1	KA16ST472J	CARBON RESISTOR
R777,778	2	KA16ST221J	CARBON RESISTOR
R779	1	KA50S5392J	CARBON RESISTOR
R783,784	2	KA16ST103J	CARBON RESISTOR
R785,786	2	KA16ST273J	CARBON RESISTOR
R787,790	4	KA16ST101J	CARBON RESISTOR
R795,796	2	KA25ST332J	CARBON RESISTOR
R801	1	KA16ST682J	CARBON RESISTOR
R802	1	KA16ST103J	CARBON RESISTOR
R805,806	2	KA16ST473J	CARBON RESISTOR
R808	1	KA16ST103J	CARBON RESISTOR
R952	1	KA25ST162J	CARBON RESISTOR
VR701,702	2	SVR-06T38102	SEMI-VARIABLE RESISTOR
MISCELLANEOUS			
WB92	1	R-020-15	CABLE ASS'Y
1W14	1	4685266916-J-Z	6-LEAD, FLAT CABLE
1W15	1	4685266814-J-Z	6-LEAD, FLAT CABLE
1W18	1	4685267814-J-Z	7-LEAD, FLAT CABLE
1W29	1	0155220812-J-J	SOLOER-PLATED WIRE
1W30	1	0155220812-E-J	SOLOER PLATED WIRE
2E18	1	B38-EH-A	CONNECTOR
2W11	1	0075240015-B-J	SOLOER PLATED WIRE
CN508	1	B48-EH-A	CONNECTOR
CN509	1	52011-0510	CONNECTOR
CN510	1	B38-EH-A	CONNECTOR
CN511,880	2	52011-0310	CONNECTOR
F4306	1	B68-EH-A	CONNECTOR
F4307	1	B78-EH-A	CONNECTOR
F4504	1	B98-EH-A	CONNECTOR
JP801-803	3	0075260805-C-C	SOLOER PLATED WIRE
PY701	1	AJR32329	RELAY
TP501-504	4	RP-003	TERMINAL PIN
23E25	1	WE-3	TERMINAL PIN

POWER TRANSFORMER P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 24E29	1	PT-809A	PRINTED CIRCUIT BOARD
RESISTORS R803~806	4	ER025FAJ1R0	FLAME PROOF RESISTOR
MISCELLANEOUS 1W11	1	4685265844-J-Z	5-LEAD, FLAT CABLE

BACKUP P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 28E14	1	BU-814A	PRINTED CIRCUIT BOARD
SEMICONDUCTORS D861	1	1B4B42	DIODE
D852	1	1N4002	DIODE
D853,854	2	Z040-057	ZENER DIODE, 2.5W, 5.7V
D855	1	1N4002	DIODE
Q851	1	2SC1815-Y,GR	TRANSISTOR
Q852	1	2SA1015-Y,GR	TRANSISTOR
CAPACITORS C851	1	YE103	METALLIZED FILM CAPACITOR
C852	1	NS-50TW2R2M	ELECTROLYTIC CAPACITOR
C853	1	NS-16TW221M	ELECTROLYTIC CAPACITOR
C854	1	NS-16TW101M	ELECTROLYTIC CAPACITOR
RESISTORS R853	1	KA16ST221J	CARBON RESISTOR
R854	1	KA16ST103J	CARBON RESISTOR
R855	1	KA16ST223J	CARBON RESISTOR
R856	1	KA16ST102J	CARBON RESISTOR
COILS PT851	1	NPT-2794	POWER TRANSFORMER
MISCELLANEOUS PB51,863	2	RP-001	TERMINAL PIN
1W13	1	4685266833-J-Z	6-LEAD, FLAT CABLE
2W 6	1	R-31Y16Y34	CABLE ASS'Y
2W 7	1	R-31Y16R28	CABLE ASS'Y
2W 8	1	R-31Y16A30	CABLE ASS'Y
EL851	1	M1698	GND LUG
RY851	1	AJR32117	RELAY
23E 7	2	CNT41-0013	FUSE HOLDER
23E11	6	1PS-1041-4	JUMP WIRE
23E16	1	1PS-1041-2	JUMP WIRE

VOLUME CONTROL P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 29E24	1	VR-814A	PRINTED CIRCUIT BOARD
RESISTORS VR801	1	EUW-MHJF25B15	ROTARY POTENTIOMETER
VR802	1	V8B16-154MNIK4	ROTARY POTENTIOMETER
MISCELLANEOUS 1W 3	1	4685263813-J-Z	3-LEAD, FLAT CABLE
1W 4	1	4685263821-J-Z	3-LEAD, FLAT CABLE
CN401	1	B38-EH-A	CONNECTOR
CN403	1	MZ03-779	MICRO SOCKET ASS'Y
CN406	1	52011-0510	CONNECTOR
JM808	1	MZ02-7B4	MICRO SOCKET ASS'Y

MAIN VOLUME LED P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 30E 3	1	VO-814A	PRINTED CIRCUIT BOARD
SEMICONDUCTORS D850	1	SPR-54MVWF	LED
MISCELLANEOUS CN807	1	MZ03-777A	MICRO SOCKET ASS'Y

POWER METER P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 2E16	1	PM-825	PRINTED CIRCUIT BOARD
SEMICONDUCTORS Q101,102	2	1SS176	DIODE
Q101-104	4	2SC1815-Y,GR	TRANSISTOR
Q105,106	2	2SC2876-A,B	TRANSISTOR
Q107	1	2SA1015-Y,GR	TRANSISTOR
IC101,102	2	NJM4558L	IC

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
CAPACITORS C101,102	2	NS-16TW220M	ELECTROLYTIC CAPACITOR
C103,104	2	HE405JSL470K	CERAMIC CAPACITOR
C105,106	2	NS-16TW220M	ELECTROLYTIC CAPACITOR
C107,108	2	HE505JSL101K	CERAMIC CAPACITOR
C109,110	2	NS-50TW4R7M	ELECTROLYTIC CAPACITOR
C111-114	4	NS-16TW101M	ELECTROLYTIC CAPACITOR
C115,116	2	NS-25TW470M	ELECTROLYTIC CAPACITOR
C117,118	2	HE705JYF103Z	CERAMIC CAPACITOR
C121,122	2	NS-16TW221M	ELECTROLYTIC CAPACITOR
RESISTORS R101,102	2	KA16ST155J	CARBON RESISTOR
R103,104	2	KA16ST133J	CARBON RESISTOR
R105,106	2	KA16ST473J	CARBON RESISTOR
R107,108	2	KA16ST561J	CARBON RESISTOR
R109,110	2	KA16ST203J	CARBON RESISTOR
R111,112	2	KA16ST432J	CARBON RESISTOR
R113,114	2	KA16ST202J	CARBON RESISTOR
R115,116	2	KA16ST102J	CARBON RESISTOR
R117,118	2	KA16ST101J	CARBON RESISTOR
R119,120	2	KA16ST394J	CARBON RESISTOR
R121,122	2	KA16ST180J	CARBON RESISTOR
R123-126	4	KA16ST911J	CARBON RESISTOR
P127,128	2	KA16ST470J	CARBON RESISTOR
R129,130	2	KA16ST304J	CARBON RESISTOR
R131,132	2	KA16ST103J	CARBON RESISTOR
R133,134	2	KA16ST221J	CARBON RESISTOR
R136	1	KA16ST102J	CARBON RESISTOR
R137	1	KA16ST471J	CARBON RESISTOR
R138	1	KA16ST393J	CARBON RESISTOR
R139,140	2	KA16ST103J	CARBON RESISTOR
VR101,102	2	SVR-06539504	SEMI-VARIABLE RESISTOR
MISCELLANEOUS 1W 7	1	4685263815-J-J	3-LEAD, FLAT CABLE
2E13	1	E150	JUMP WIRE
2E14	13	E100	JUMP WIRE
2E15	1	E200	JUMP WIRE
2E27	1	MZ03-797	CONNECTOR
EL103	1	M1698	GND LUG

MICON P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 6E30	1	FPL-825	PRINTED CIRCUIT BOARD
SEMICONDUCTORS D316,317	2	1SS176	DIODE
D339,340, 342-346, 348-350	10	SLB-550U5F	LED
Q311	1	RN1204	TRANSISTOR
Q312	1	2SC1815-Y,GR	TRANSISTOR
IC302	1	LC6546C-4186	IC
IC303	1	TC9135P	IC
CAPACITORS C308	1	S7-10TW221M	ELECTROLYTIC CAPACITOR
C309,310	2	HE505JCH300J	CERAMIC CAPACITOR
C311	1	NS-50TW1R0M	ELECTROLYTIC CAPACITOR
C313	1	NS-50TW33M	ELECTROLYTIC CAPACITOR
RESISTORS R320,321, 325-327	5	KA16ST102J	CARBON RESISTOR
R328-330	3	KA16ST103J	CARBON RESISTOR
R331,332	2	KA16ST472J	CARBON RESISTOR
R333-335	3	KA16ST104J	CARBON RESISTOR
R336	1	KA16ST473J	CARBON RESISTOR
R337	1	KA16ST271J	CARBON RESISTOR
R338	1	KA16ST221J	CARBON RESISTOR
P340-342	3	KA16ST271J	CARBON RESISTOR
Q344	1	KA16ST103J	CARBON RESISTOR
RA301	1	RA-SP-09104J	BLOCK RESISTOR
SWITCHES S4317,318, 320-324, 326-328	10	SDA-124HS	TACT SWITCH
MISCELLANEOUS X302	1	CSA3-68MG	CERAMIC OSCILLATOR UNIT
1W 2	1	4685263934-J-J	3-LEAD, FLAT CABLE
1W 6	1	4685264835-J-J	4-LEAD, FLAT CABLE
1W 9	1	4685265815-J-Z	5-LEAD, FLAT CABLE
1W19	1	4685267827-J-Z	7-LEAD, FLAT CABLE
2E26	1	MZ03-796	CONNECTOR
6E25	9	E050	JUMP WIRE
6E26	13	E100	JUMP WIRE
6E27	3	E150	JUMP WIRE
FW306	1	MZ06-776	MICRO SOCKET ASS'Y
FW307	1	MZ07-775	MICRO SOCKET ASS'Y
LE302,303	2	59BS1692	GND LUG
28E20	1	R-020-15	CABLE ASS'Y

POWER SWITCH P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 26E30	1	PSW-825	PRINTED CIRCUIT BOARD
SWITCHES SW341	1	SOA-124HS	TACT SWITCH

REMOCON RECEIVER P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 6E11	1	IR-825	PRINTED CIRCUIT BOARD
SEMICONDUCTORS 9318 0351	1 1	1SS176 SLB-55VR5F	DIODE LED
CAPACITORS C307	1	S7-10TW470M	ELECTROLYTIC CAPACITOR
RESISTORS R316	1	KA16ST681J	CARBON RESISTOR
MISCELLANEOUS RV301	1	S9X1483-11	REMOTE SIGNAL RECEIVING UNIT

LED HOLDER P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 2E23	2	LH-825	PRINTED CIRCUIT BOARD

LAMP P.C. BOARD

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
P.C. BOARD 2E24	1	LP-825	PRINTED CIRCUIT BOARD
MISCELLANEOUS 2E25	1	M203-798	MICRO SOCKET ASS'Y
EL104,105	2	M1698	GND LUG

OTHER PARTS

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
MISCELLANEOUS 1W24	1	015Y160910MFMF	WIRE
1W26	1	015S220R15-E-E	SOLDER PLATED WIRE
1W27	1	015S220A15-E-E	SOLDER-PLATED WIRE
1W28	2	015S220N07-E-E	SOLDER PLATED WIRE
2W 1	1	015S220044-E-E	SOLDER PLATED WIRE
2W 2	1	015S220R42-E-E	SOLDER PLATED WIRE
2W 3	1	015S220Y43-E-E	SOLDER PLATED WIRE
26E 3	11	BK-1	CORD CLAMP
26E 4	6	NO.5167	CORD CLAMP
26E 5	1	GT-M10W20	GLASS TUBE

EXPLODED VIEWS

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
SEMICONDUCTORS Q713,714	2	25C1846-Q,R	TRANSISTOR
Q725,726	2	25C3281-R,D	TRANSISTOR
Q727,728	2	25A1302-R,D	TRANSISTOR
Q740	1	25C1846-Q,R	TRANSISTOR
CAPACITORS C901	1	YE103	METALLIZED FILM CAPACITOR
COILS 39E22	1	NPT-27745	POWER TRANSFORMER
MISCELLANEOUS M101,102	2	KL-258T-30	METER
W801	1	R-020-15	CABLE ASS'Y
1M 1	1	N21755-4	FRONT PANEL
1M 2	1	N45635-2	SUB PANEL L
1M 3	1	N45649-1	SUB PANEL C
1M 4	1	N31127-1	SUB PANEL R
1M 5	2	N44093A-BK1	HANDLE
1M 6	4	N44092-BK1	HANDLE SPACER
1M 8	1	N10570-1	FRONT BASE
1M11	1	N45788-1	REMOTE GLASS
1M14	1	N31110-T-BK1	KNOB 33
1M15	3	N45691-BK	KNOB 17
1M16	1	N44260-T-9K1	KNOB 12
1M17	1	N45522	LED CHIP
1M18	2	N45668-65	TACT BUTTON
1M21	6	N45431	PUSH BUTTON
1M24	1	N21789	CABINET
1M26	1	N21842-2	REAR PANEL
1M27	1	N21782	9DTTOM COVER
1M28	4	NO.7104	FOOT

REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
2M 1	1	N21759	SUPPORT CHASSIS (P.T)
2M 2	1	N21760	CENTER CHASSIS
2M 3	1	N31062A	SIDE CHASSIS
2M 6	1	N45688A	FITTINGS(P.C.B.)
2M 7	1	N45687	FITTINGS (POTENTIOMETER)
2M 8	1	N45453	ANGLE S(HEAT SINK)
2M11	1	N45763	FITTINGS (PCB)
2M14	1	N45789B	RT CUSHION
2M15	1	N45772	RT CUSHION
2M17	1	N45742	CUSHION
2M18	1	RP-4060-NB	NYLON PUSH RIVET (BLACK)
2M21	1	N31111-80	HEAT SINK
2M23	1	N45832	SHIELD SHEET
3M 1	2	N45335	LABEL, SERIAL NO.
3M 3	2	N42235	SHEET, SERIAL NUMBER
3M 4	1	N44043	LABEL, SA1965(LIGHTNING FLASH)
3M 7	1	N45487	LABEL, UL
3M 8	1	N41939	LABEL, FUSE
3M 9	1	N41941-702	LABEL, FUSE
3M11	1	N31136	WARRANTY R
3M12	1	N31137	LIMITED WARRANTY
3M13	1	OM-968	INSTRUCTION MANUAL
3M16	1	N41318-1	POLYETHYLENE BAG
3M17	1	N40487	POLYETHYLENE BAG (ACCESSORIES)
3M19	2	N21790	PACKING PAD
3M22	1	N21792-5	INNER CARTON
3M23	1	N21792-6	INNER CARTON
3M26	1	N45776	PAD (FRONT)
3M29	1	N45382	LABEL, CHINA
3M30	1	N45468	LABEL, JAPAN
4M 1-M 7	10	TSB+30X06-Y	TAP SCREW S, BIND HEAD, Y
4M10-M13	6	TSB+30X06-B	TAP SCREW S, BIND HEAD, B
4M19-M21	7	TSB+30X08-B	TAP SCREW S, BIND HEAD, B
4M24-M27	6	TSC+30X06-Y	TAP SCREW S, WASHER FACED, Y
4M29	4	TSS+30X08-Y	TAP SCREW S, FLAT HEAD, Y
5M 1	4	TSB+40X06-B	TAP SCREW S, BIND HEAD, B
5M 4	4	TS1+40X08-Y	TAP SCREW S, TRUSS, Y
5M 7	4	TSP+40X10-Y	TAP SCREW S, PAN HEAD, Y
5M10-M13	9	TBB+26X08-Y	TAP SCREW B, BIND HEAD, Y
5M16	2	TB6+30X06-Y	TAP SCREW B, BIND HEAD, Y
5M19-M20, M22-M25	25	TBB+30X08-B	TAP SCREW B, BIND HEAD, B
6M 1	2	TBC+30X08-Y	TAP SCREW B, WASHER FACED, Y
6M 4	7	TBC+30X12-Y	TAP SCREW B, WASHER FACED, Y
6M 7	4	SSPS2+40X10-B	SCREW-SP ASSY, PAN HEAD, B
6M11	1	2TWX30-Y	TOOTHED LOCK WACHER
HM402	1	MET41-0105	SNAP PLATE
FU851	1	FU-617C24T	FUSE
PL151,152	2	BQ141-35853A	LAMP,12V,0.07A
15E24	4	AC262	MICA
24E 9	2	YKC21-2229	RCA JACK 6P
24E10	1	YKC21-2226	RCA JACK 4P
24E12	1	YKC21-2339	RCA JACK 6P
24E13	2	CNT31-0059	SHORT PIN
24E23	2	KGLS-185	LOCKING SUPPORT
26E 2	2	VJR-3	SNAKE LUG
30E20	1	RC-HR752	REMOTE CONTRL TRANSMITTER
30E21	1	UM-4-2	BATTERY
30E23	2	AC-T055809	AC OUTLET
30E24	1	ACC-022E5-4EE1	LINE CORD
30E25	1	SR-4N-4	CORD STOPPER
30E30	1	YK041-0004	GROUND TERMINAL

P.C. BOARD ASS'Y

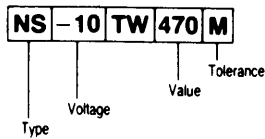
REF. NO.	Q'TY	CARVER PART NO.	DESCRIPTION
2P16	1		POWER METER P.C. BOARD
2P23	1		LED HOLDER P.C. BOARD
2P24	1		LAMP P.C. BOARD
6P11	1		REMOCON RECEIVER P.C. BOARD
6P30	1		MICRON P.C. BOARD
9P23	1		TONE CONTROL P.C. BOARD
14P 8	1		HOLOGRAM P.C. BOARD
24P27	1		MAIN AMP P.C. BOARD
24P29	1		POWER TRANSFORMER P.C. BOARD
26P36	1		POWER SWITCH P.C. BOARD
23P14	1		BACKUP P.C. BOARD
29P24	1		VOLUME CONTROL P.C. BOARD
30P 3	1		MAIN VOLUME LED P.C. BOARD
30P 9	1		HEADPHONE P.C. BOARD
30P14	1		SPEAKER TERMINAL P.C. BOARD

DIFFERENT PARTS LIST

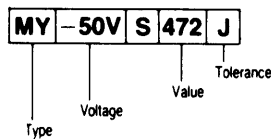
Ref.No.	Description	CM-1090(UL)	CM-1090(EX)
BACKUP P.C. BOARD			
SW851,852	SWITCH	-	SW-5220218
OTHER PARTS			
1W26	SOLDER PLATED WIRE	015S220R15-E-E	-
1W27	SOLDER PLATED WIRE	015S220A15-E-E	-
1W28	SOLDER PLATED WIRE	015S220N07-E-E	-
2W11	SOLDER PLATED WIRE	-	015S220T15-E-E
2W12	SOLDER PLATED WIRE	-	015S220R13-E-E
2W13	SOLDER PLATED WIRE	-	015S220O11-E-E
2W14	SOLDER PLATED WIRE	-	015S220Y15-E-E
2W15	SOLDER PLATED WIRE	-	015S220A12-E-E
2W16	SOLDER PLATED WIRE	-	015S220N15-E-E
EXPLODED VIEWS			
3M 4	LABEL, SA1965(LIGHTNING FLASH)	N44043	-
3M 7	LABEL, UL	N45487	-

Capacitors Description

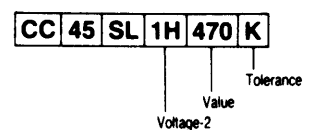
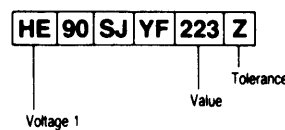
• Electrolytic



• Mylar - Styrol

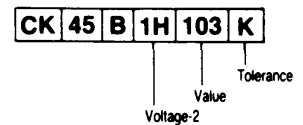


• Ceramic



• Electrolytic

Type	Voltage	Value	Tolerance
LL Low Leak	-10 10V	R47 0.47 μ F	K \pm 10%
NP: Non-Pole	-50 50V	4R7 4.7 μ F	M \pm 20%
NS Standard	6R3 6.3V	470 47 μ F	K \pm 10%
		471 470 μ F	
		472 4700 μ F	



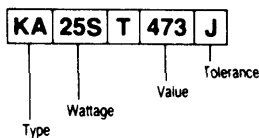
• Mylar Styrol

Type	Voltage	Value	Tolerance	
MY Mylar	-25V 25V	4R7 4.7pF	G \pm 2%	
ST Styrol	125V 125V	470 47pF	J \pm 5%	
		-63T 63V	471 470pF	K \pm 10%
		472 4700pF	M \pm 20%	
		473 0.047 μ F		
		474 0.47 μ F		
		(1000pF=0.001 μ F)		

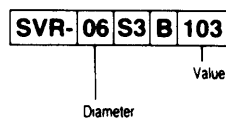
Voltage-1	Voltage-2	Value	Tolerance
HC 25V	1E 25V	4R7 4.7pF	C: \pm 0.25pF
HE 50V	1H 50V	470 47pF	D: \pm 0.5pF
H 100V	2H 500V	471 470pF	F: \pm 1pF
HK 250V		472 4700pF	J: \pm 5%
HM 500V		473 0.047 μ F	K: \pm 10%
		474 0.47 μ F	M: \pm 20%
		(1000pF=0.001 μ F)	Z +80~-20%

Resistors Description

• Fixed



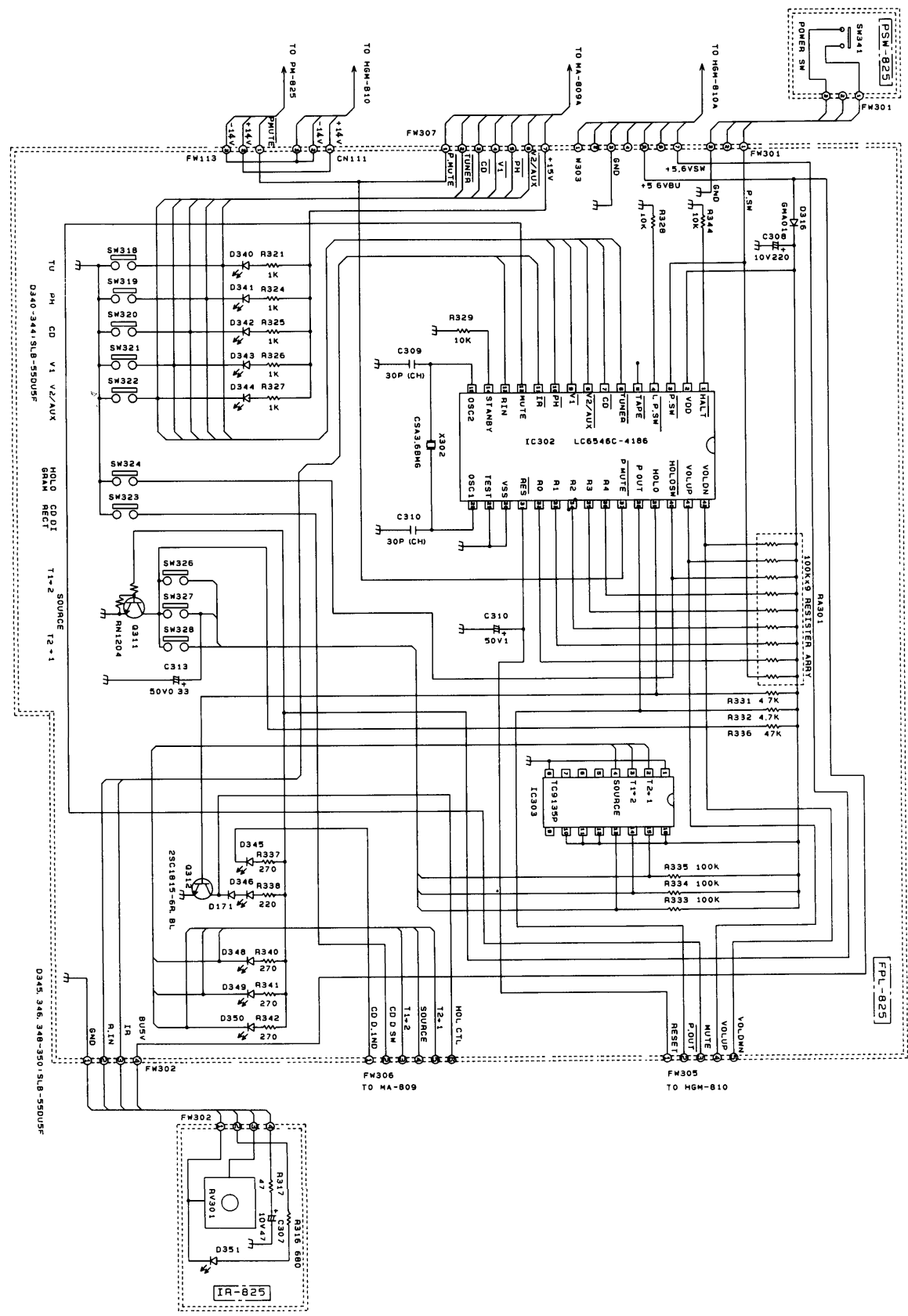
• Semi-Variable

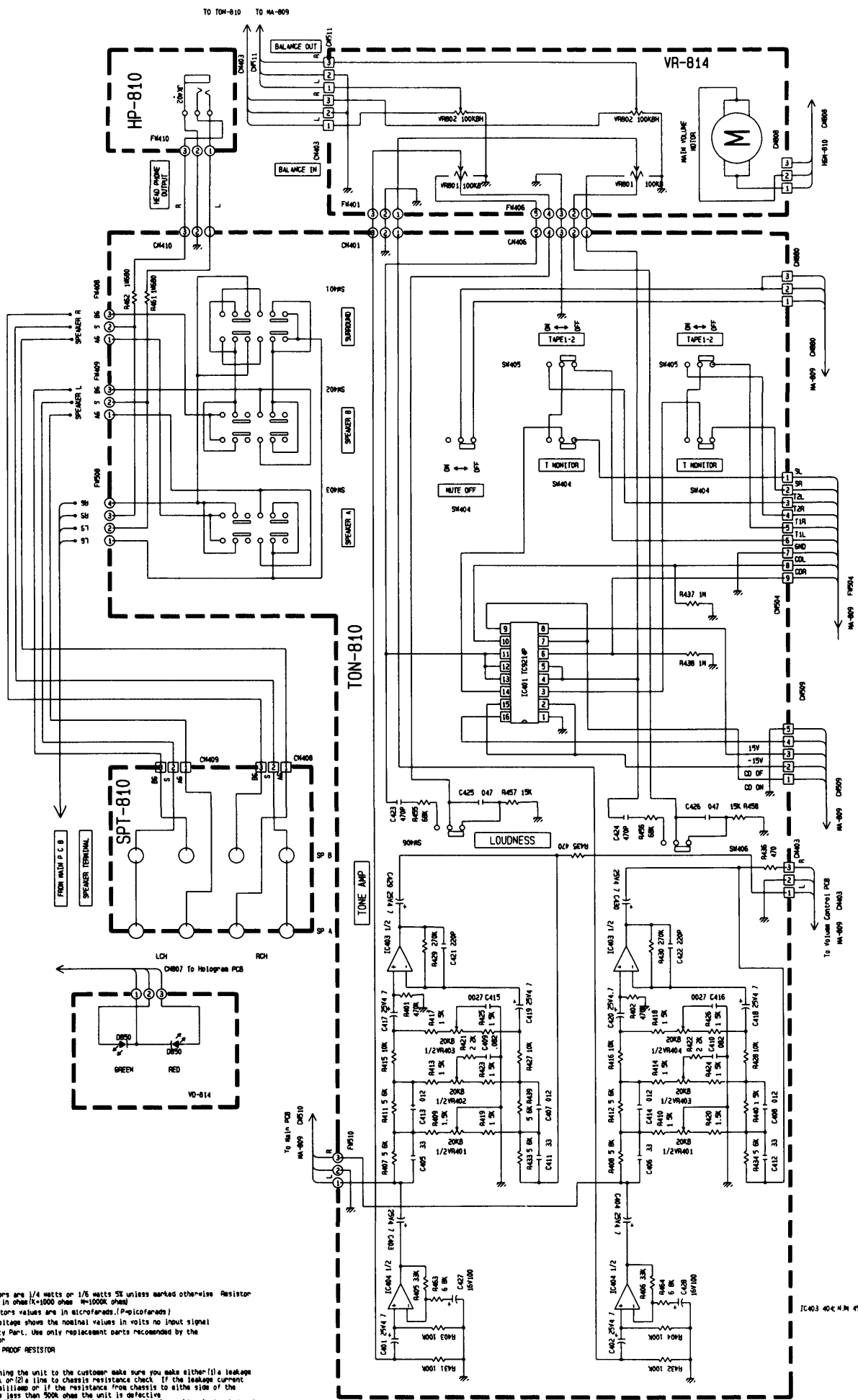


Type	Wattage	Value	Tolerance	Diameter
CE Cement Case	-2W 2W	R47 0.47 Ω	M: \pm 20%	08 8 ϕ
FR Flame Proof	10W 10W	4R7 4.7 Ω	K \pm 10%	10 10 ϕ
KA Carbon	16S 1/6W	470 47 Ω	J \pm 5%	06 6 ϕ
MF Metal Film	20S 1/5W	471 470 Ω	G \pm 2%	
RF Fusible	25S 1/4W	472 4.7k Ω	F \pm 1%	
SA Metal Oxide	50S 1/2W	473 47k Ω	D \pm 0.5%	
	50X 1/2W	474 470k Ω		
	S3W 3W	475 4.7M Ω		

SCHEMATIC DIAGRAMS

(UL Version only)





NOTES

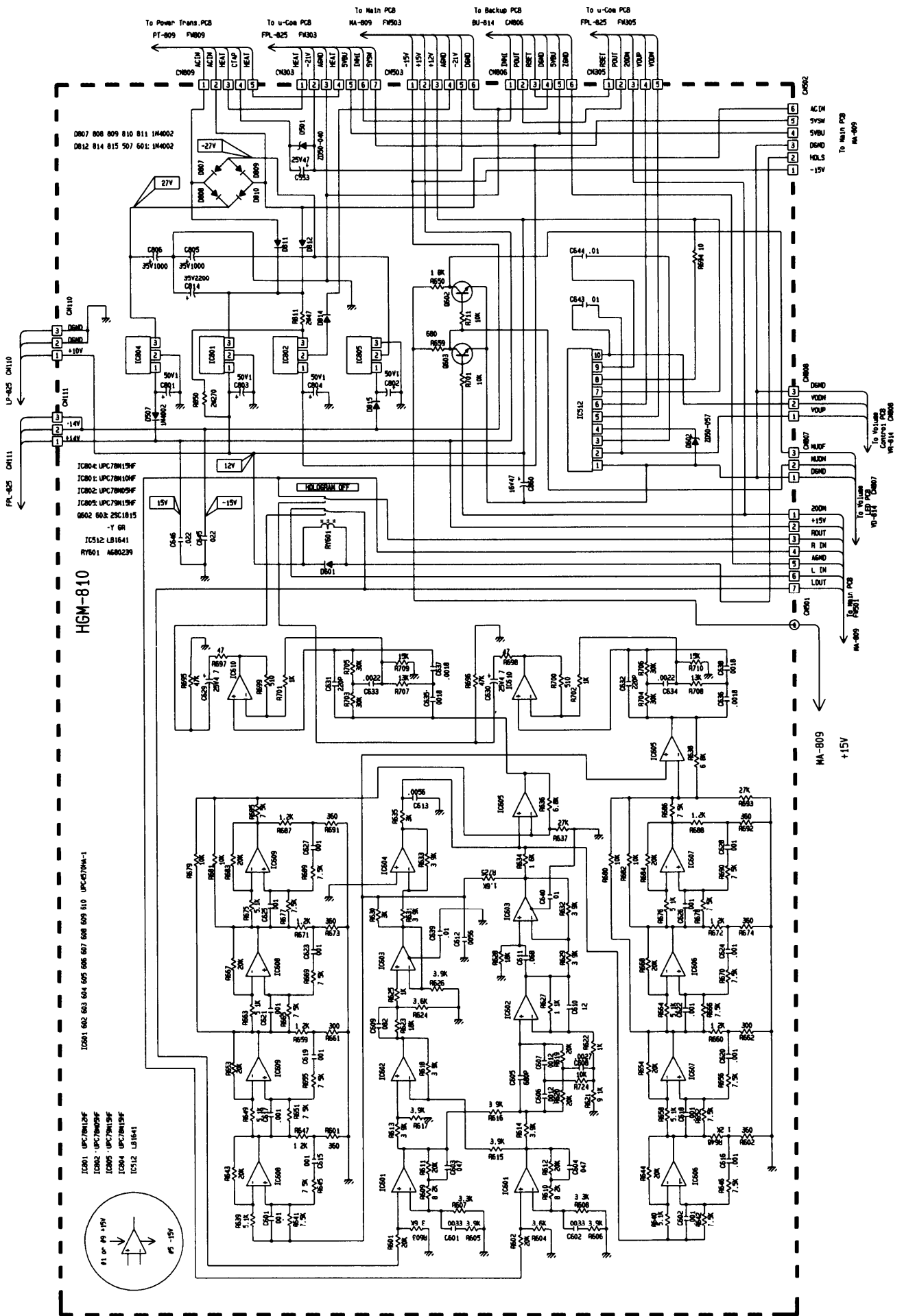
- 1 All resistors are 1/4 watts or 1/8 watts 5% unless marked otherwise. Resistor values are in ohms (1-1000 ohms), 10K (10,000 ohms), 100K (100,000 ohms).
- 2 All capacitors values are in microfarads (μF) or picofarads (pF).
- 3 Each D.C. voltage shows the nominal values in volts no input signal.
- 4 ⚡ is Safety Part. Use only replacement parts recommended by the manufacturer.
- 5 FR FLAME PROOF RESISTOR.

CAUTION

Before returning the unit to the customer make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamp or if the resistance from chassis to either side of the power cord is less than 500K ohms the unit is defective.

WARNING - DO NOT return the unit to the customer until the problem is located and corrected.

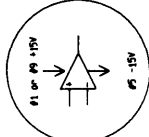
IC403 40K N.M. 456558

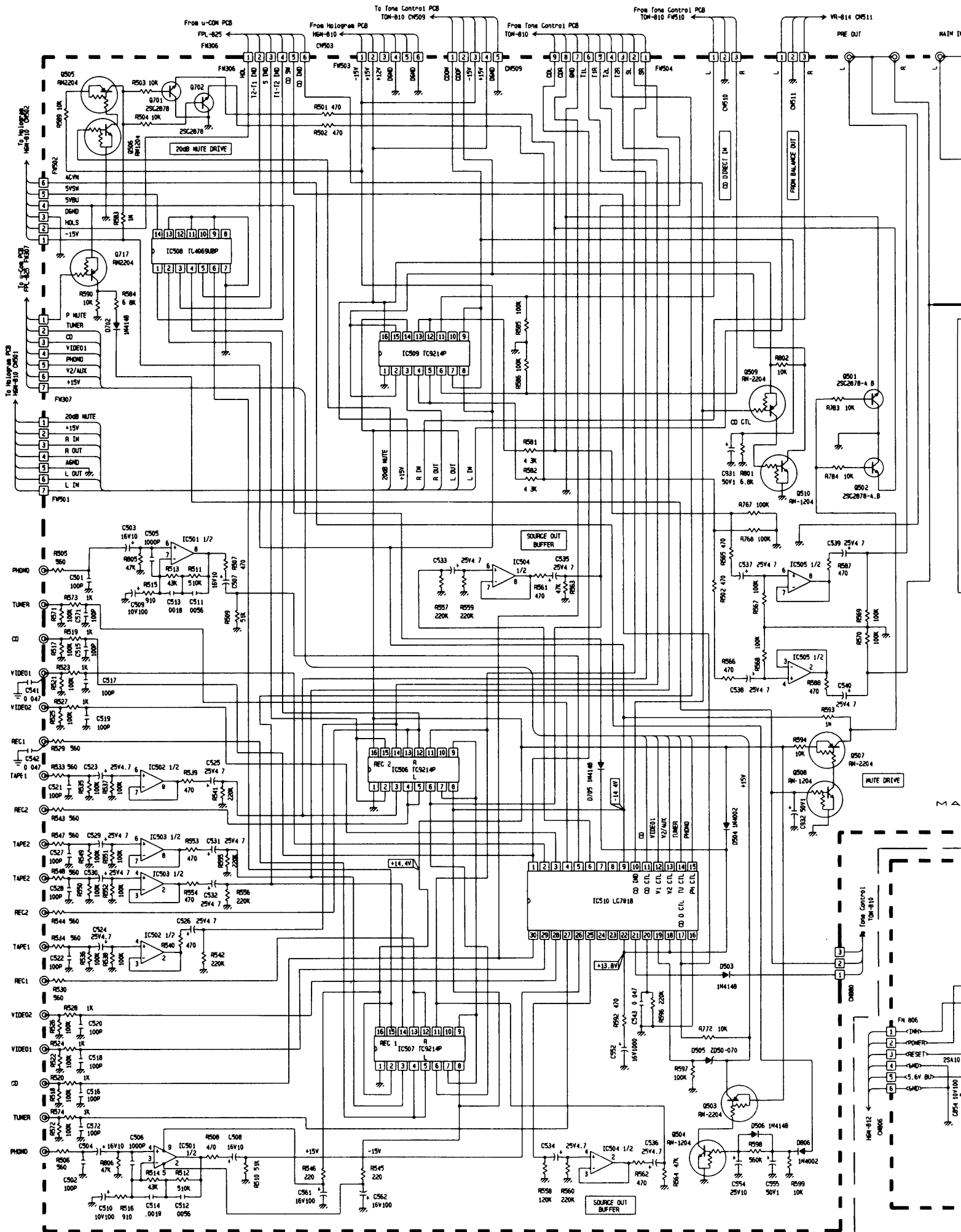


HGM-810

IC001 602 603 604 605 606 607 608 609 510 UPC-4704M-1
 IC002 UPC78M12SF
 IC003 UPC78M15SF
 IC004 UPC78M15SF
 IC012 LB1641

IC001 UPC78M12SF
 IC002 UPC78M15SF
 IC003 UPC78M15SF
 IC004 UPC78M15SF
 IC012 LB1641





SPECIFICATIONS

MAGNETIC FIELD POWER AMPLIFIER

100 watts RMS per channel, both channels driven into 8 ohms from 20 Hz to 20 kHz with less than 0.1% THD.
 150 watts RMS per channel, both channels driven into 4 ohms from 20 Hz to 20 kHz with less than 0.1% THD.

Frequency Response	: 20 Hz to 20 kHz (± 1 dB)
Gain	: 29 dB
S/N IHF A-Weighted, below rated power	: 90 dB
THD	: <0.1% (20 Hz–20 kHz)
IM Distortion (CCIR or SMPTE)	: <0.5%
TIM	: unmeasurable
Amplifier Input Impedance	: 27 kohm

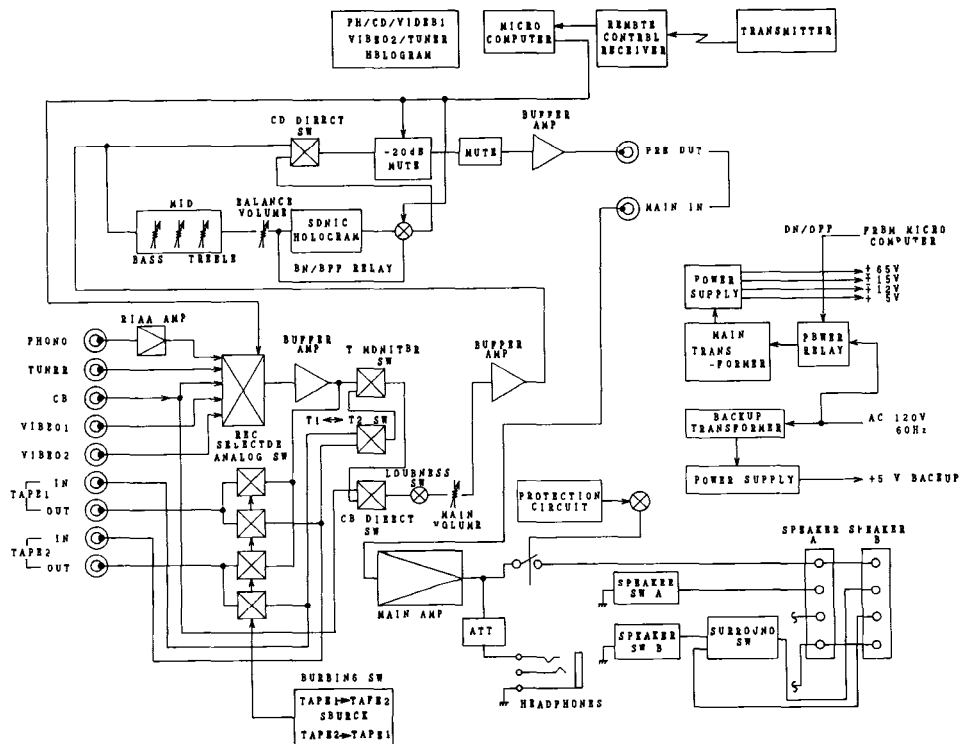
PREAMP SECTION

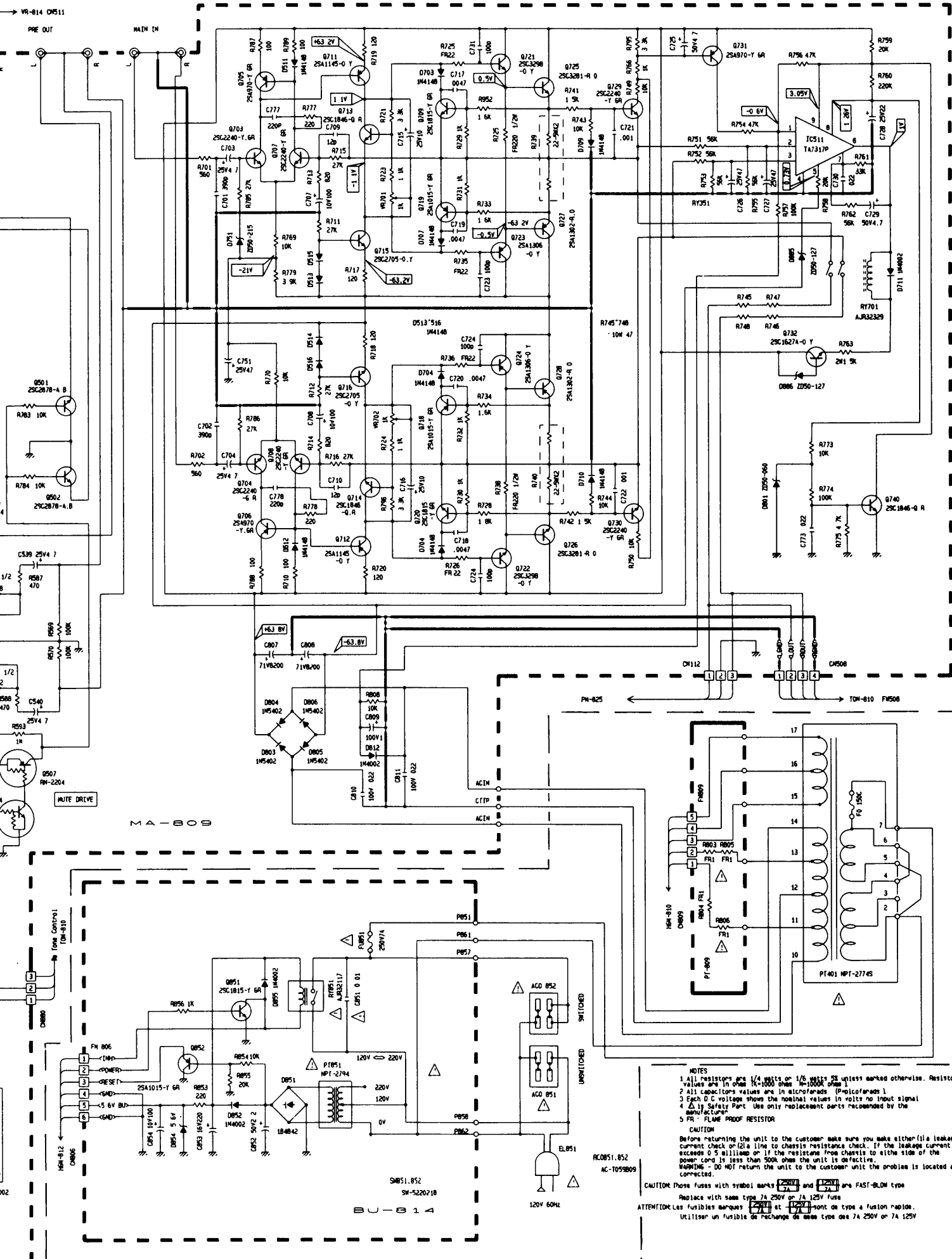
Frequency Response	: 20 Hz to 20 kHz (± 1 dB)
Maximum Gain: Tuner, CD, Video 1 and 2, Tape 1 and 2, at Preamp Out	: 16 dB (± 2 dB)
at Tape Out	: 0 dB (± 2 dB)
Phono Gain at Tape Out	: 34 dB (± 2 dB)
S/N IHF A-Weighted, below rated power output with an input of 150 mVRMS (CD, Video 1 & 2, Tape 1 & 2)	: 90 dB
Phono S/N IHF A-Weighted (at tape Out) below an input reference of 5 mVRMS at 1 kHz	: 78 dB
Tone Controls: Treble	: ± 7 dB (± 2) at 10 kHz
Midrange	: ± 6 dB (± 2) at 1 kHz
Bass	: ± 8 dB (± 2) at 100 Hz
Input Impedance, Preamp Inputs	: 47 kohm
Preamp Output Impedance	: 470 ohm
Sonic Hologram Generator Image Resolution	: 5° horizontal, 20° vertical

GENERAL

Dimensions	: 4.5"H x 19"W x 14.5"D
Weight	: 21 lbs

BLOCK DIAGRAM





NOTES

- 1 All resistors are 1/4 watt or 1/2 watt 5% unless marked otherwise. Resistor values are in ohms (K=1000 ohms, M=1000K ohms).
- 2 All capacitor values are in microfarads (P=picofarads).
- 3 Each 0 C voltage shows the nominal value in volts no input signal.
- 4 Δ is Safety Part. Use only replacement parts recommended by the manufacturer.
- 5 FR - FLAME PROOF RESISTOR

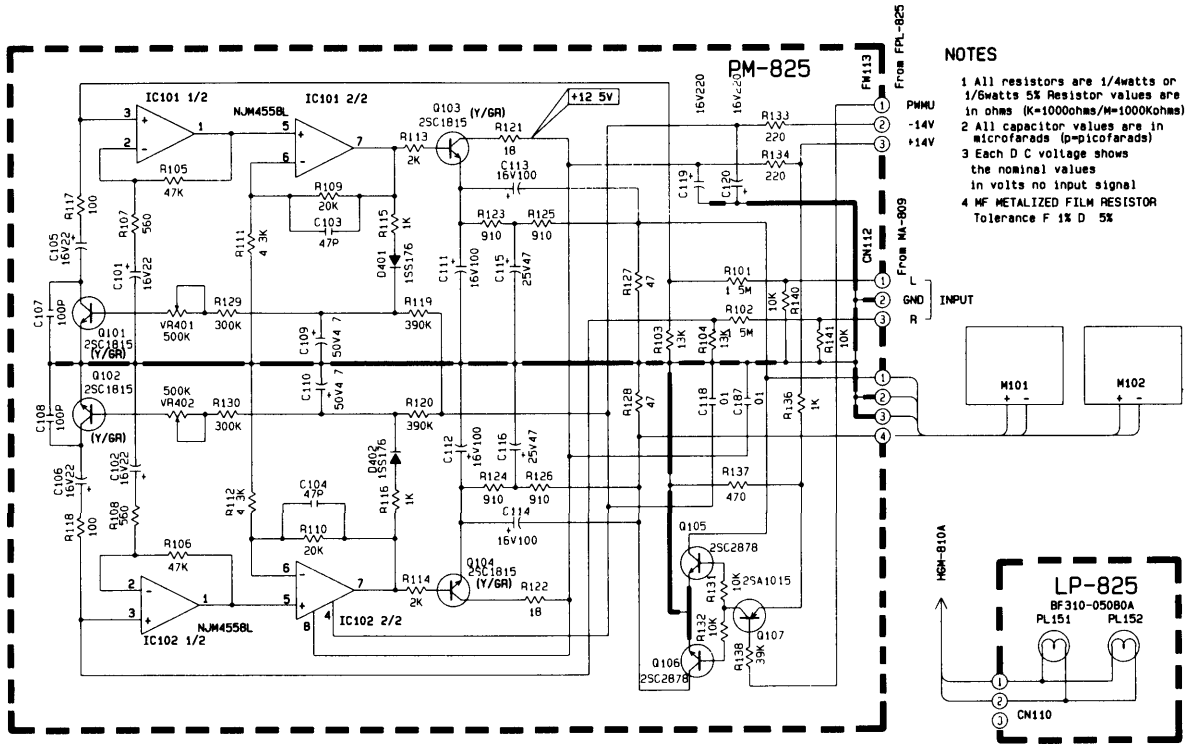
CAUTION

Before returning the unit to the customer make sure you make either (1) a leakage current check or (2) a chassis resistance check. If the leakage current exceeds 0.5 milliamperes or if the resistance from chassis to either side of the power cord is less than 500K ohms the unit is defective.

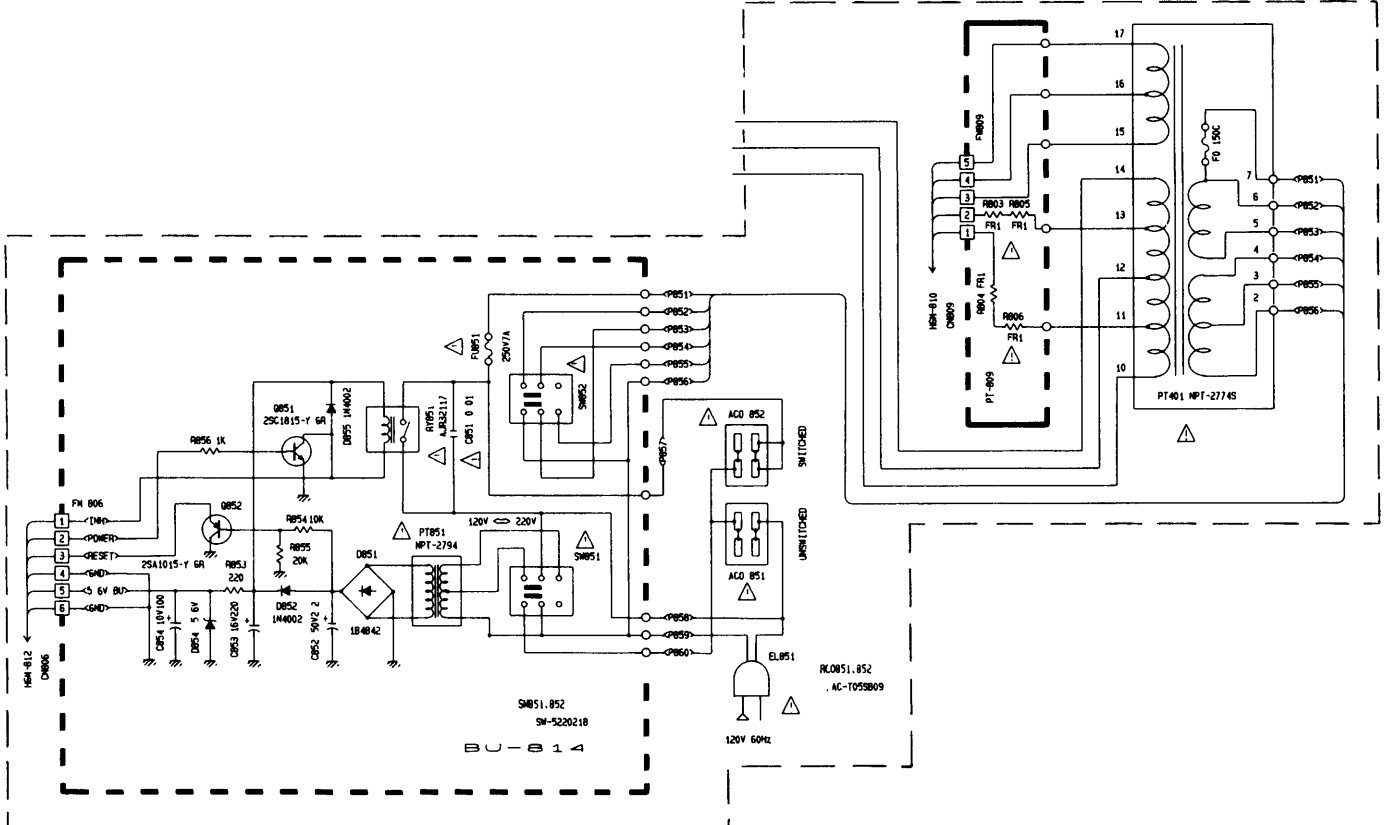
WARNING - DO NOT return the unit to the customer until the problem is located and corrected.

CAUTION Those fuses with symbol marks $\frac{250V}{7A}$ and $\frac{125V}{7A}$ are FAST-BLOW type. Replace with same type 7A 250V or 7A 125V fuse.

ATTENTION Les fusibles marqués $\frac{250V}{7A}$ et $\frac{125V}{7A}$ sont de type à fusion rapide. Utiliser un fusible de même type des 7A 250V ou 7A 125V.



- NOTES**
- 1 All resistors are 1/4watts or 1/6watts 5% Resistor values are in ohms (K=1000ohms/M=1000Kohms)
 - 2 All capacitor values are in microfarads (p=picofarads)
 - 3 Each D C voltage shows the nominal values in volts no input signal
 - 4 MF METALIZED FILM RESISTOR Tolerance F 1% D 5%



(EX Version only)

CARVER CORPORATION SERVICE BULLETIN

Service Bulletin # CM-1090-1 | Model: CM-1090 | Serial nos. As needed

REASON: If the customer complains of excessive hiss with highly efficient speakers when the hologram is switched in, reduce the preamp output gain. Date: 6/14/90

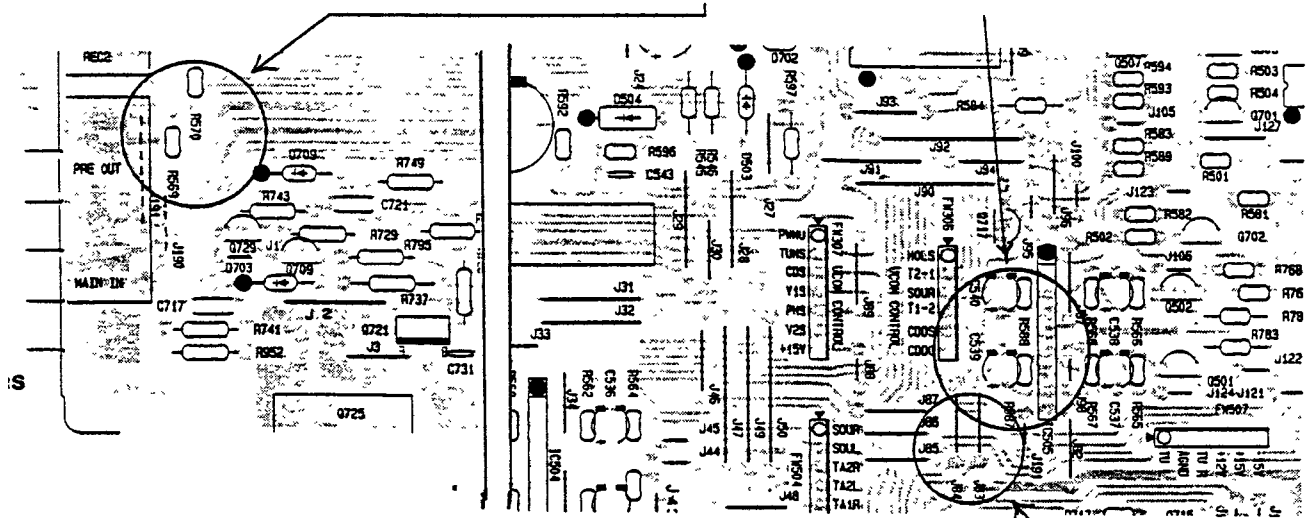
DELETE

On the Main Amp PC Board, replace R569/R570 and R587/R588 with resistors indicated on the following chart.

ADD

PROCEDURE

GAIN REDUCTION	R569/R570	R587/R588
0dB	100K	470Ω (factory installed)
6dB	5.1K	4.7K
12dB	2.7K	7.5K
18dB	1.2K	8.2K



Engineering approval *Vic Richardson*

Service approval *B. Coffey*

Optional: To avoid removing PC boards to access R587/R588, remove J83/J84 from the foil side of the amp board and install resistors in their place using the values indicated on the chart.

CARVER CORPORATION SERVICE BULLETIN

Below

Service Bulletin # CM-1090-2 Model: CM-1090

Serial nos. 90996803736

REASON:

Date: 6/27/90

Protection relay trips and shuts off speaker outputs below full power.

DELETE

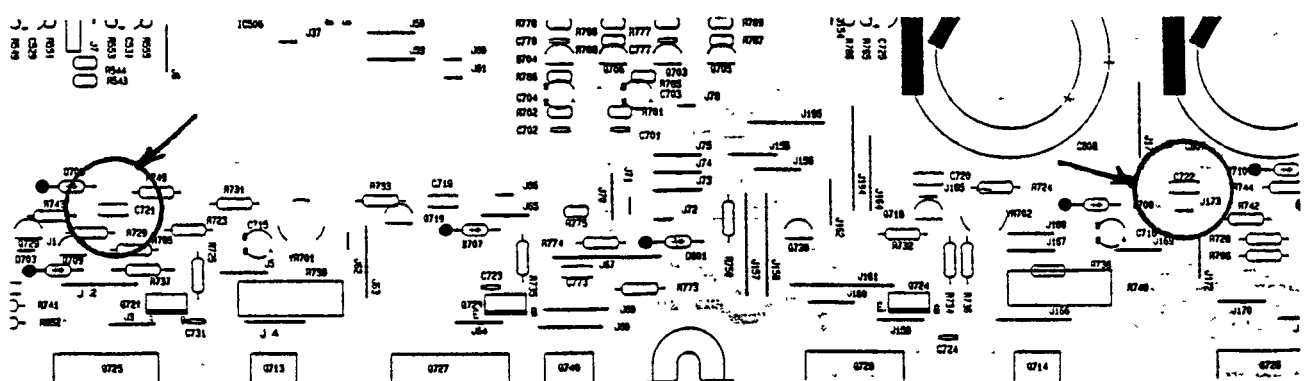
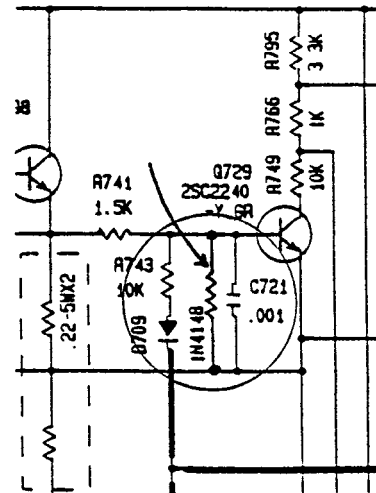
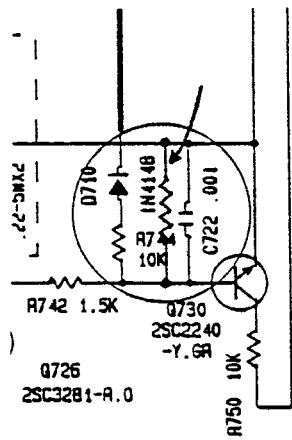
ADD

2

2.7K 1/4 watt resistor

PROCEDURE

Solder 2.7K resistors on foil side of power amp board in parallel with C721 and C722.



Engineering approval *Vic Richardson* 6-27-90

Service approval *B. C. M.*

CARVER CORPORATION

SERVICE BULLETIN

Service Bulletin # CM-1090-3

Model: CM-1090

Serial nos. As required

REASON:

Date:

10/03/90

Intermittent crackling noise in speakers.

DELETE

ADD

QTY.

DESCRIPTION

1

#18 bus wire 3in. (75mm) long

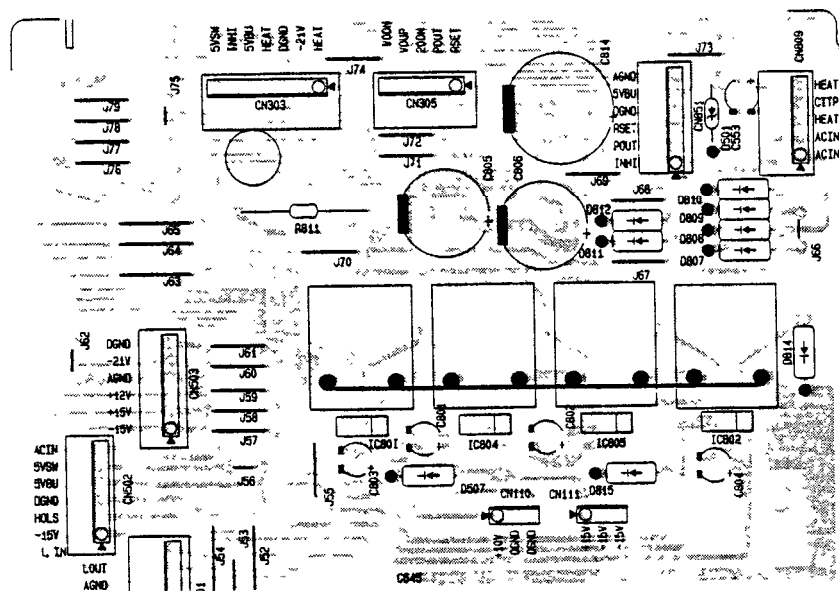
PROCEDURE

Remove Hologram PCB HGM-810B from chassis.

Solder 18 ga. bus wire across all 8 mounting pins of the voltage regulator heat sinks as shown. Do not allow the bus wire to contact any of the foil conductors between the pins.

NOTE: Use a high wattage soldering iron to heat the pins sufficiently for a good solder connection. The integrity of these ground connections is critical.

HGM-810B Hologram P.C.Board



Service Approval

Engineering approval

ALIGNMENT PROCEDURE

Amplifier

Condition

1. SPEAKERS Selector: A position
2. SPEAKER A load: 8 ohm dummy

IDLING

1. Set the VOLUME control to minimum
2. No input signal.
3. Preheat for 5 minutes
4. Connect the DC digital volt meter to the center and either of pins R739(L) / R740(R)
5. Adjust VR701(L) / VR702(R) until the voltage is $+3 \sim -3$ mV

OFFSET VOLTAGE

1. Set the VOLUME control to minimum.
2. No input signal.
3. Connect the DC digital volt meter to the center pin of R739(L) / R740(R) and chassis.
4. Check that the voltage is ± 50 mV.

ALIGNMENT POINT

MA-809A Main Amp P.C.Board

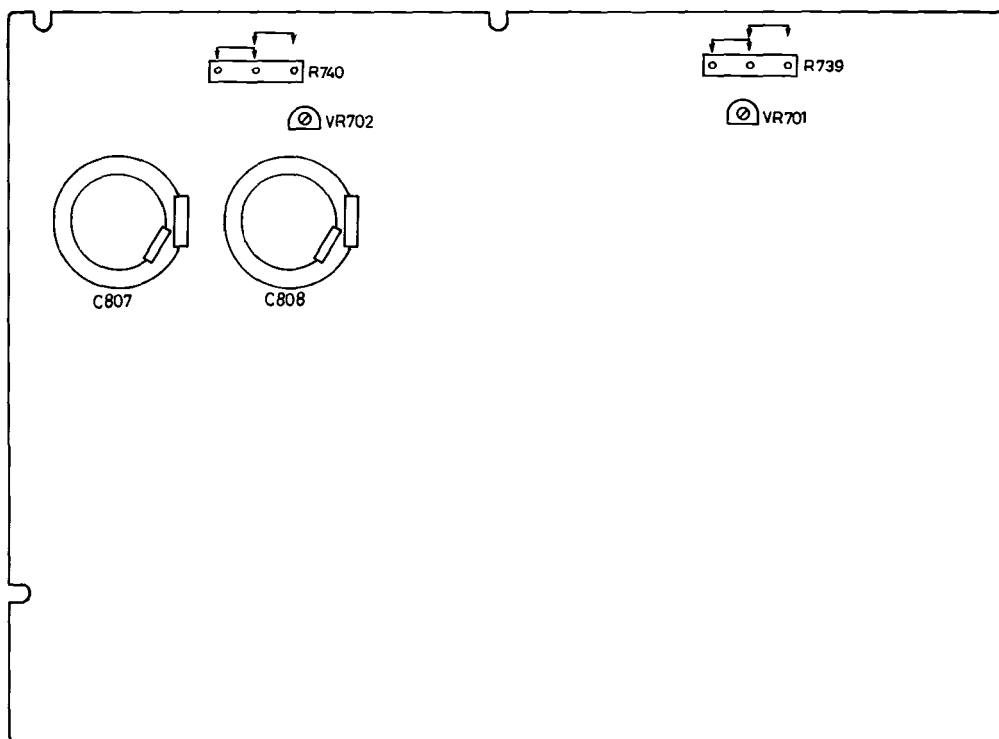


Fig.1

VOLTAGE CONVERSION (EX Version only)

220 V/50 Hz Version

Bill of Materials

Q'ty	Part No	Description
1	315-10512-00	FUSE ABC4
1	530-10089-00	LABEL ABC4
1	530-10091-00	LABEL 220 V AC 50 HZ
1	530-10147-00	LABEL VOLTAGE CONVERSION
1	530-10013-00	LABEL MILITARY CONVERSION

Direction for Change

1. Locate slide switches SW851 and SW852 on Backup P.C.Board and set each switch from Fig.2 to Fig.3

BU-814A Backup P.C.Board

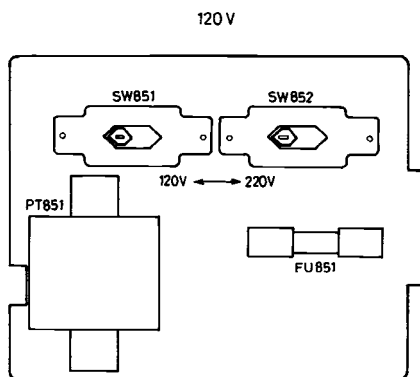


Fig.2

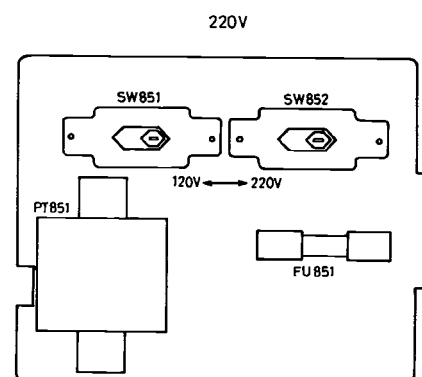
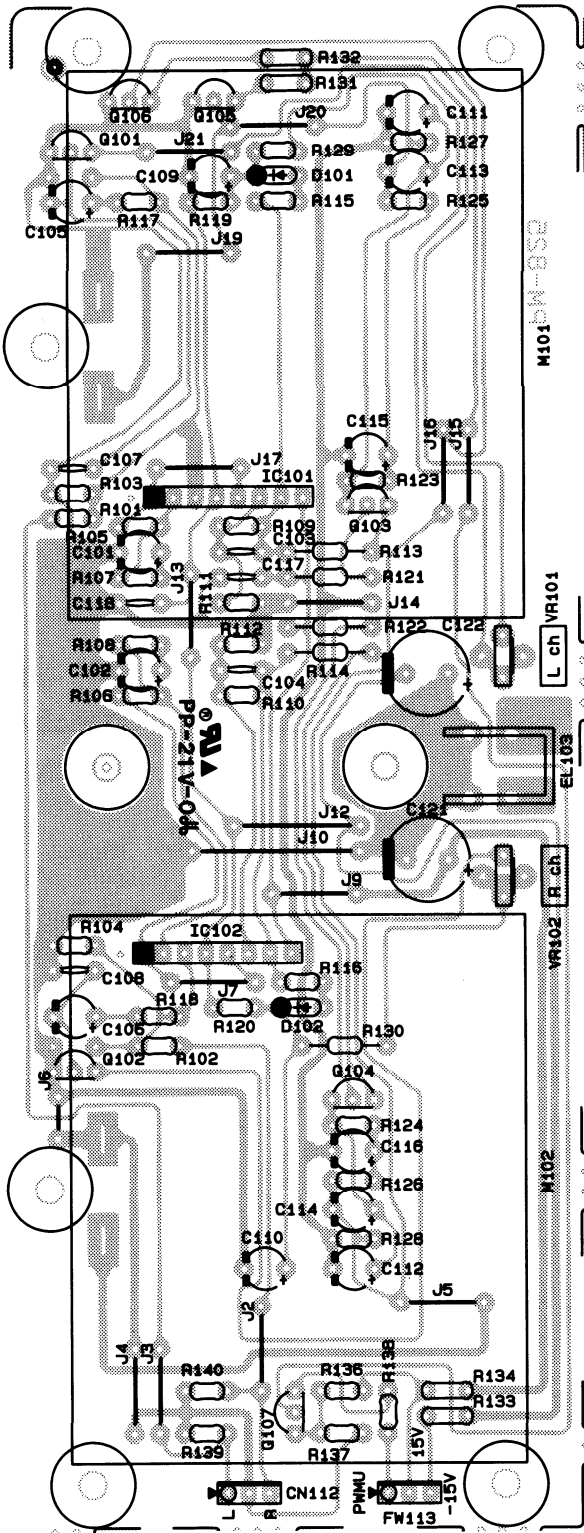


Fig.3

2. Change fuse FU851 on Backup P.C.Board from AGC7 to ABC4.
3. Apply label 530-10089-00 (ABC4) in place of existing label AGC7.
4. Apply label 530-10091-00 (220 V AC 50 HZ) in place of existing label 120 V AC 60 HZ
5. Using spray adhesive, mount label 530-10147-00 (VOLTAGE CONVERSION) to inside top cover
6. Apply label 530-10013-00 (MILITARY CONVERSION) to bottom of unit.

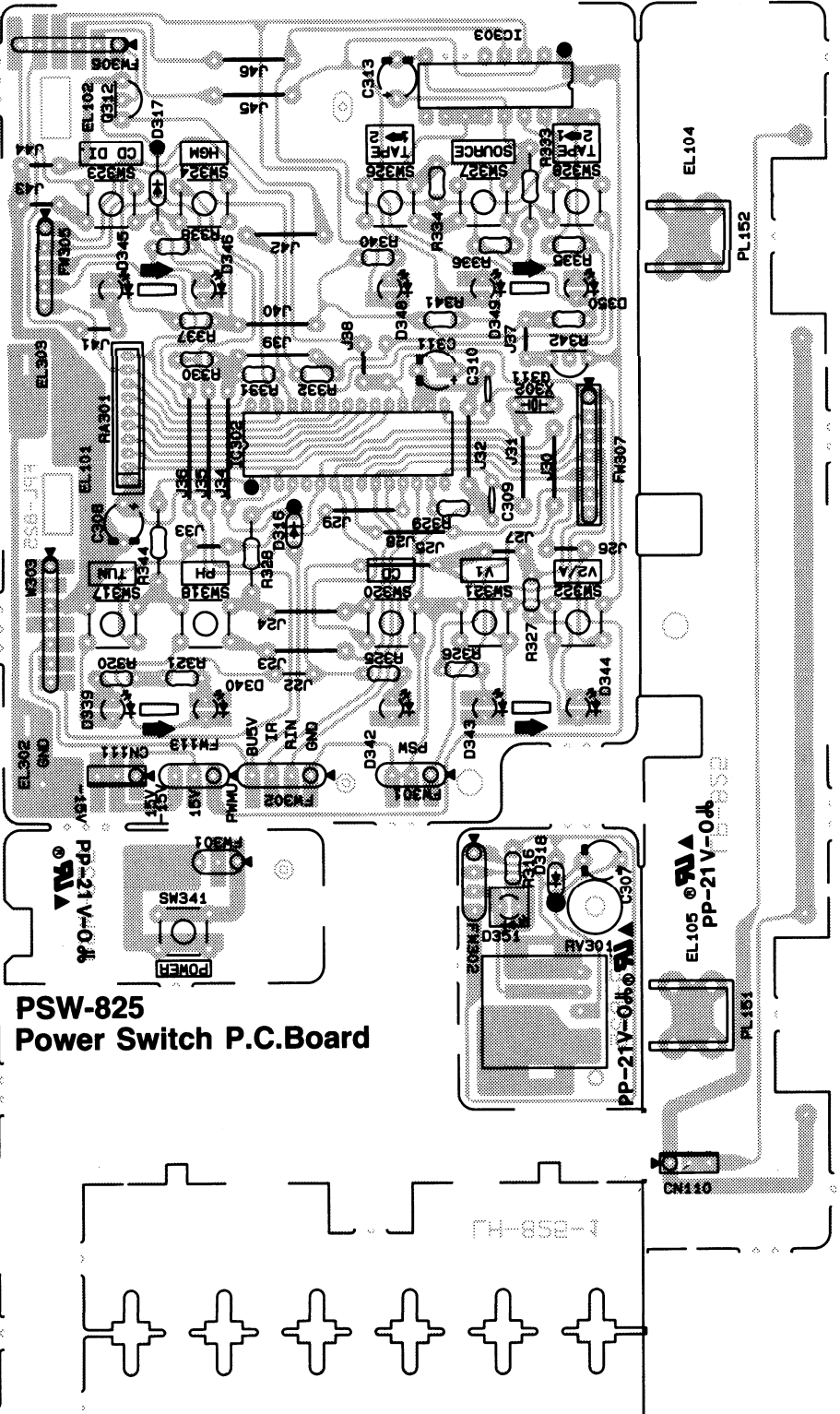
PCB COMPONENT SIDE VIEWS

PM-825 Power Meter P.C.Board



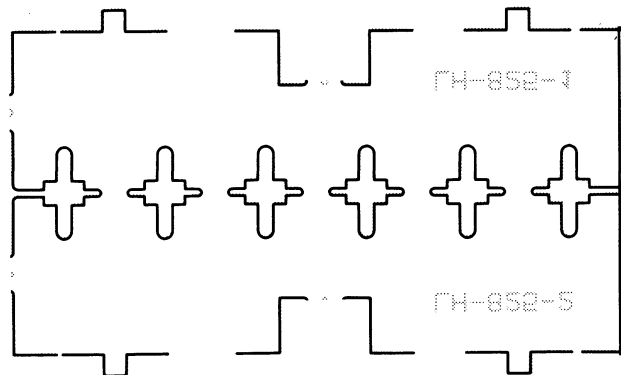
IR-825 Remocon Receiver P.C.Board

FPL-825 Micon P.C.Board



LP-825 Lamp P.C.Board

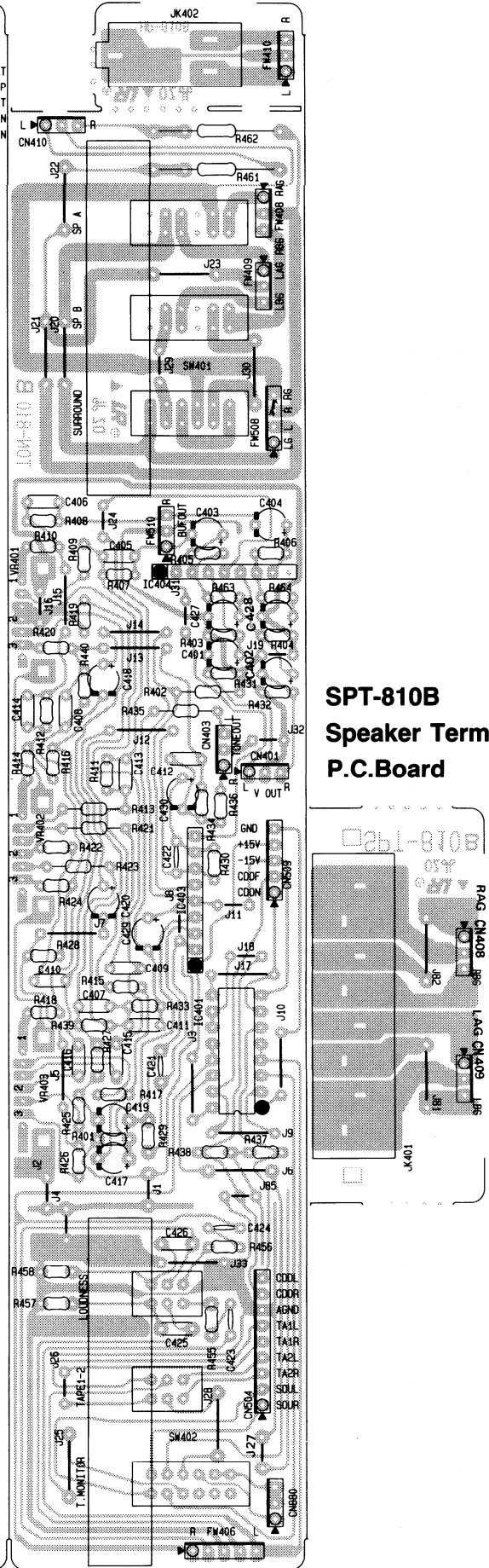
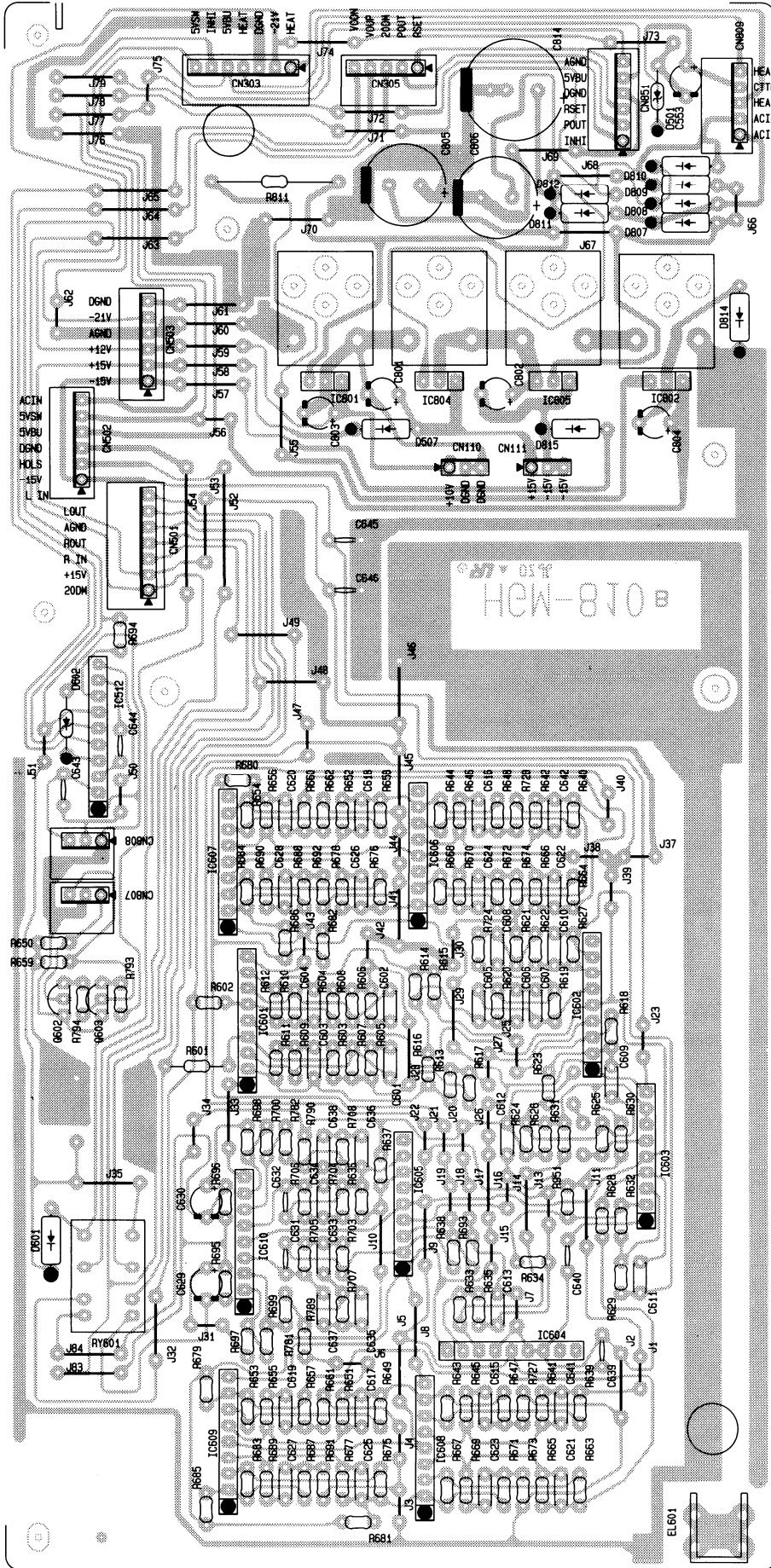
PSW-825 Power Switch P.C.Board



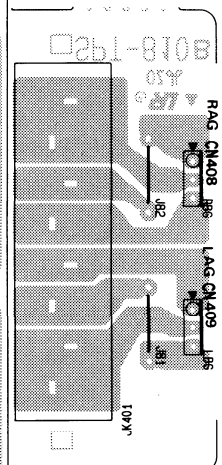
LH-825 LED Holder P.C.Board

HGM-810B Hologram P.C.Board

HP-810B Headphone P.C.Board

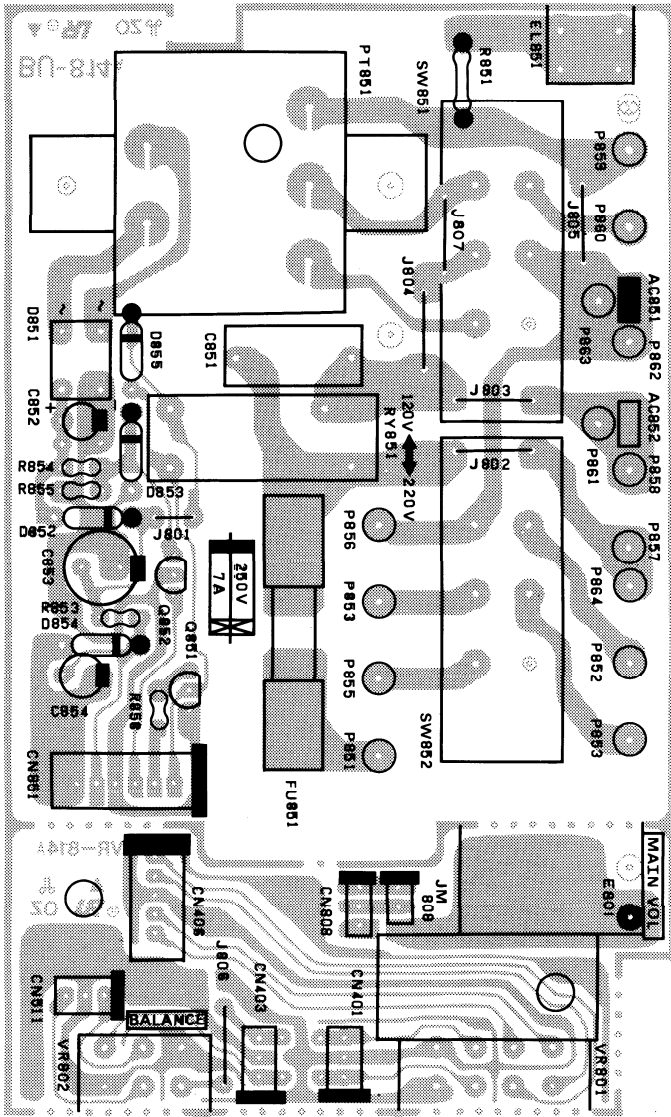


SPT-810B
Speaker Terminal
P.C.Board

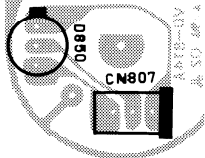


TON-810B Tone Control P.C.Board

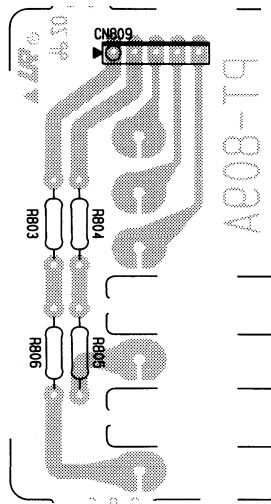
BU-814A Backup P.C.Board



**VR-814A
Volume Control P.C.Board**

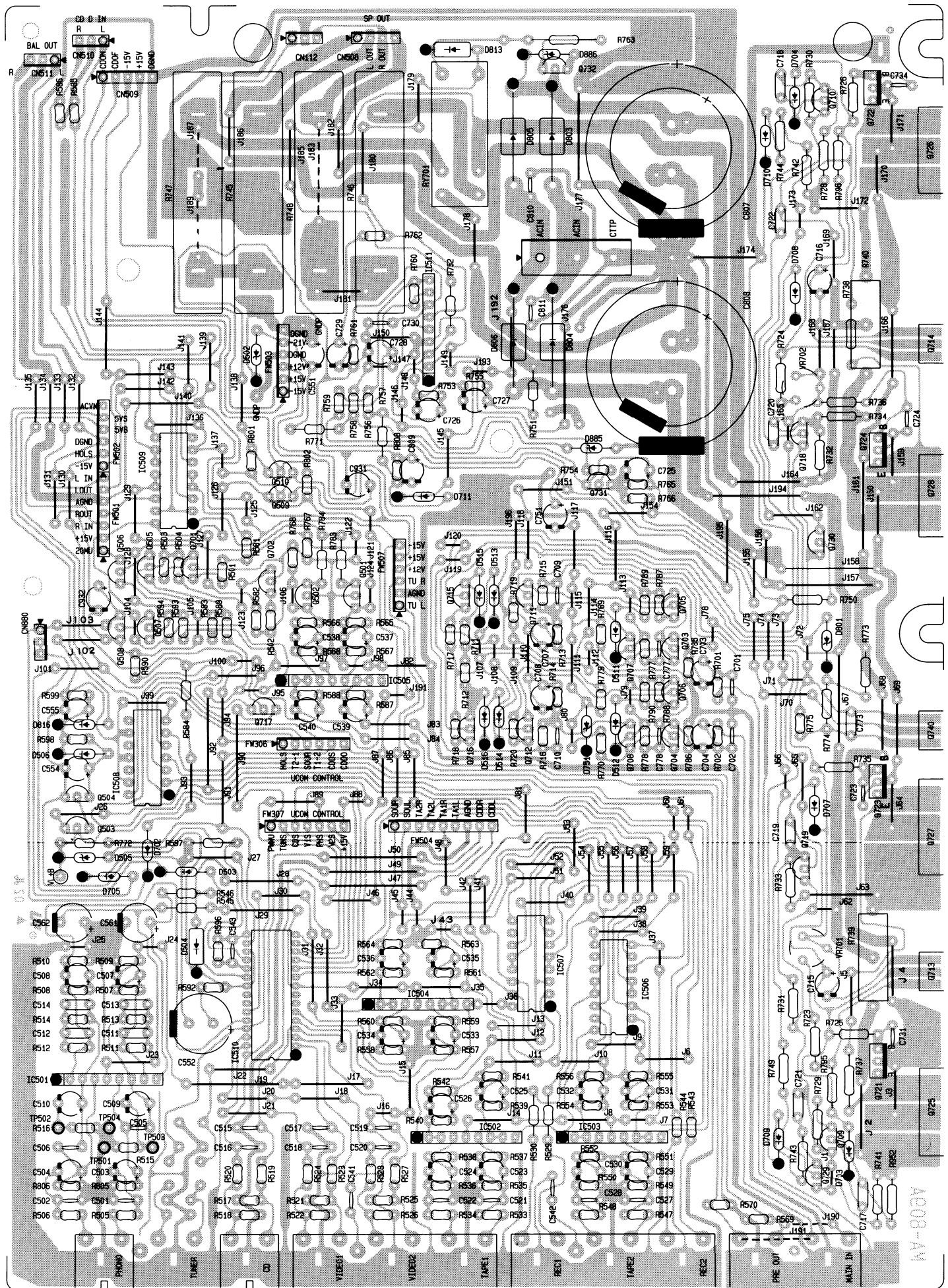


**VD-814A Main Volume
LED P.C.Board**



**PT-809A Power Trans
P.C.Board**

MA-809A Main Amp P.C. Board



EXPLODED VIEWS
Front Panel and Packing

