

SERVICE MANUAL

P O W E R
AMPLIFIER

MA-930

interM

ELECTRICAL PARTLIST

Part No.	Description	QTY
MAIN AMP B'D (4005119011)		
2008206104-T	TR,SG,PNP,100mA,120V,KTA1268,TO-92,TA	2
2008206997-T	TR,SG,PNP,150mA,50V,KTA1024,TO-92L,TA	2
2008207100-T	TR,SG,PNP,100mA,120V,2SA970BL,TO-92,TA	2
2008606104-T	TR,SG,NPN,150mA,50V,KTC3198,TO-92,TA	4
2008606107-T	TR,SW,NPN,150mA,50V,KTC3206,TO-92L,TA	2
2008606108-T	TR,SG,NPN,100mA,120V,KTC3200,TO-92,TA	2
3039223475	RES,MF,22K,1W,5%,AX N	4
3409210141-T	CAP,E,SM,SG,85C,100uF,25V,M,6P,TA	4
3409210971-T	CAP,E,SM,SG,85C,1uF,50V,M,5P,TA	4
3409222171-T	CAP,E,SM,SG,85C,220uF,25V,M,10P,TA	2
3409222871-T	CAP,E,SM,SG,85C,0.22uF,50V,M,5P,TA	2
3409247071-T	CAP,E,SM,SG,85C,47uF,50V,M,6P,TA	6
3409247871-T	CAP,E,SM,SG,85C,0.47uF,50V,M,5P,TA	2
3409247971-T	CAP,E,SM,SG,85C,4.7uF,50V,M,5P,TA	8
3509103450-T	CAP,CE,HI-DI,0.01uF,500V,Z,RA,TA	2
3509103450-T	CAP,CE,HI-DI,0.01uF,500V,Z,RA,TA	2
3609104122-T	CAP,FILM,POLYESTR,SM,0.1uF,100V,J,TA	2
3609153120-T	CAP,FILM,POLYESTR,0.015uF,100V,J,TA	2
3609222120-T	CAP,FILM,POLYESTR,0.0022uF,100V,J,TA	2
3609273120-T	CAP,FILM,POLYESTR,0.027uF,100V,J,TA	4
3609333120-T	CAP,FILM,POLYESTR,0.033UF,100V,J,TA	2
3609472120-T	CAP,FILM,POLYESTR,0.0047uF,100V,J,TA	6
3609473120-T	CAP,FILM,POLYESTR,0.047UF,100V,J,TA	2
2008207100-T	TR,SG,PNP,100mA,120V,2SA970BL,TO-92,TA	1
2058100996	DIODE,RE,1A,800V,1N4006,DO-41,TA	14
2058304100	DIODE,SW,100mA,75V,1N4148M,DO-34M,TA	46
2058502100	DIODE,ZN,500MW,BM,10V,DO-35,TA	4
3009102973	RES,MF,1K,1/5W,5%,AX N,TA	2
3009103973	RES,MF,10K,1/5W,5%,AX N,TA	6
3009104973	RES,MF,100K,1/5W,5%,AX N,TA	10
3009113973	RES,MF,11K,1/5W,5%,AX N,TA	2
3009121973	RES,MF,120,1/5W,5%,AX N,TA	4
3009152973	RES,MF,1.5K,1/5W,5%,AX N,TA	2
3009153973	RES,MF,15K,1/5W,5%,AX N,TA	2
3009182973	RES,MF,1.8K,1/5W,5%,AX N,TA	2
3009183973	RES,MF,18K,1/5W,5%,AX N,TA	4
3009184973	RES,MF,180K,1/5W,5%,AX N,TA	2
3009202973	RES,MF,2K,1/5W,5%,AX N,TA	4
3009222973	RES,MF,2.2K,1/5W,5%,AX N,TA	2
3009223973	RES CF 22K 1/5W J N	2
3009333973	RES,MF,33K,1/5W,5%,AX N,TA	6
3009392973	RES,MF,3.9K,1/5W,5%,AX N,TA	2
3009393273	RES,MF,39K,1/4W,5%,AX N,TA	4
3009471973	RES,MF,470,1/5W,5%,AX N,TA	8
3009472973	RES,MF,4.7K,1/5W,5%,AX N,TA	6
3009473973	RES,MF,47K,1/5W,5%,AX N,TA	4
3009474973	RES,MF,470K,1/5W,5%,AX N,TA	4
3009561973	RES,MF,560,1/5W,5%,AX N,TA	2
3009562973	RES,MF,5.6K,1/5W,5%,AX N,TA	6
3009563973	RES,MF,56K,1/5W,5%,AX N,TA	2
3009564973	RES,MF,560K,1/5W,5%,AX N,TA	4
3009822973	RES,MF,8.2K,1/5W,5%,AX N,TA	4
3079101275	RES,FS,MF,100,1/4W,5%,RA R,TA	26
3079121275	RES,FS,MF,120,1/4W,5%,RA R,TA	2
3079150275	RES,FS,MF,15,1/4W,5%,RA R,TA	2
3079151275	RES,FS,MF,150,1/4W,5%,RA R,TA	8
3079331275	RES,FS,MF,330,1/4W,5%,RA R,TA	2
3079470275	RES,FS,MF,47,1/4W,5%,RA R,TA	6
3079680275	RES,FS,MF,68,1/4W,5%,RA R,TA	2
3089221275	RES,FS,MF,220,1/4W,5%,RA R,TA	4
3089479275	RES,FS,MF,4.7,1/4W,5%,RA R,TA	24
3509101231-A	CAP,CE,HI-DI,Y5P,100pF,50V,K,AX,TA	6
3509103450-T	CAP,CE,HI-DI,0.01uF,500V,Z,RA,TA	4
3509271231-A	CAP,CE,HI-DI,Y5P,270pF,50V,K,AX,TA	2
3529220311-A	CAP,CE,TEMP,SL,22pF,50V,J,AX,TA	2
3529330311-A	CAP,CE,TEMP,SL,33pF,50V,J,AX,TA	2

Part No.	Description	QTY
3529680311-A	CAP,CE,TEMP,SL,68pF,50V,J,AX,TA	2
3539102231-A	CAP,CE,SEMI,Y5P,1000pF,50V,K,AX,TA	8
3678050177	CAP,FILM,MICA,5pF,500V,J	2
1605998310	COOL SHEET BFG-20 32"178	4
6503984910	TR BRACKET FORCE-180	4
6538998310	RETAINER COIL (DARC-2)	4
6705998410	SPACER HOLDER	6
6705998510	SPACER PS-A152	6
6715997610	SPONGE	4
6715997610	SPONGE	4
8009130063	SCREW BM 3X6B	2
8095996930	ASS'Y SCREW PM4X18B	16
8095997110	ASS'Y SCREW PM 3"22B	6
7502095010	HEAT SINK FORCE-180	2
1373996710	EXT MS-2278 2.85M 16.78KG	0.2
1608199726	COOL SHEET TO-220 (NOT HOLE)	10
2008400960	TR,SG,NPN,100mA,50V,2SC1567A,TO-126	2
2028107984	TR,PW,PNP,1.5A,180V,KTA1659A,TO-220IS	4
2028117994	TR,PW,PNP,15A,180V,2SA1492,TO-3P(N)	12
2028407990	TR,PW,NPN,1.5A,180V,KTC4370A,TO-220IS	6
2028427998	TR,PW,NPN,15A,180V,2SC3856,TO-3P(N)	12
2028611998	TR,SG,MF P,500mA,180V,2SJ78,TO-220AB	2
2028811998	TR,SG,MF N,500mA,180V,2SK215,TO-220AB	2
2118010232	IC,OP AMP,NJM072D,DIP8	2
2118010590	IC,OP AMP,NJM4558D,DIP8	2
2118050410	IC,SPEAKER PROTECTION,TA7317P,SIP9	2
2438209012	THERMIST,NTC,50ohm,125C	2
2648099890	COIL,AIR,0.6uH	2
3039101572-F	RES,MF,100,2W,5%,AX P	2
3039223475	RES,MF,22K,1W,5%,AX N	4
3049478783	RES,CE,WW,0.47,5W,5%,RA T	24
3059479782	RES,CE,WW,4.7,5W,5%,AX N	2
3248510320-T	RES SEMI FT-63 TP(10K)	2
4355921803	CON WIRE 2P	2
4428595002	CON WAFER,BOX(M),2P,ST	2
4428598303	CON WAFER,LOCK(M),3P,ST	1
4428598305	CON WAFER,LOCK(M),5P,ST	4
4678699430	CNT PLUG 3P	2
5528006700	RELAY,SPST,24V,1A,500V	2
6165169110	PATTERN BKT	4
2128610800	IC,VOLT REG,-15V,1A,7915,TO-220AB	1
2128610900	IC,VOLT REG,15V,1A,7815,TO-220AB	1
7505299310	HEAT SINK(30MM) REG TR	2
8195000310	HEAT SINK SCREW	2
VR B'D (4005100022)		
2008606104-T	TR,SG,NPN,150mA,50V,KTC3198,TO-92,TA	8
2300050105	LED,RND 5MM,RED,DIF,1U,ST2.5	5
2300052105	LED,RND 5MM,GRN,DIF,1U,ST2.5	4
3409210071-T	CAP,E,SM,SG,85C,10uF,50V,M,5P,TA	4
3409210141-T	CAP,E,SM,SG,85C,100uF,25V,M,6P,TA	7
3409247071-T	CAP,E,SM,SG,85C,47uF,50V,M,6P,TA	3
3409247971-T	CAP,E,SM,SG,85C,4.7uF,50V,M,5P,TA	4
3609104122-T	CAP,FILM,POLYESTR,SM,0.1uF,100V,J,TA	2
3609333120-T	CAP,FILM,POLYESTR,0.033UF,100V,J,TA	1
3908609980	FILTER,EMI,2200PF	4
2058304100	DIODE,SW,100mA,75V,1N4148M,DO-34M,TA	5
2058502056	DIODE,ZN,500mW,BM,5.6V,DO-35,TA	2
3009101973	RES,MF,100,1/5W,5%,AX N,TA	4
3009102973	RES,MF,1K,1/5W,5%,AX N,TA	6
3009104973	RES,MF,100K,1/5W,5%,AX N,TA	7
3009105973	RES,MF,1M,1/5W,5%,AX N,TA	2
3009122973	RES,MF,1.2K,1/5W,5%,AX N,TA	13
3009123973	RES,MF,12K,1/5W,5%,AX N,TA	2
3009153973	RES,MF,15K,1/5W,5%,AX N,TA	10
3009184973	RES,MF,180K,1/5W,5%,AX N,TA	2
3009222973	RES,MF,2.2K,1/5W,5%,AX N,TA	4
3009223973	RES CF 22K 1/5W J N	2

Part No.	Description	QTY
3009273973	RES,MF,27K,1/5W,5%,AX N,TA	2
3009303973	RES,MF,30K,1/5W,5%,AX N,TA	2
3009330973	RES,MF,33,1/5W,5%,AX N,TA	1
3009331973	RES,MF,330,1/5W,5%,AX N,TA	2
3009393973	RES,MF,39K,1/5W,5%,AX N,TA	2
3009563973	RES,MF,56K,1/5W,5%,AX N,TA	2
3009823973	RES,MF,82K,1/5W,5%,AX N,TA	2
3529050311-A	CAP,CE,TEMP,SL,5pF,50V,C,AX,TA	2
3529220311-A	CAP,CE,TEMP,SL,22pF,50V,J,AX,TA	5
3529330311-A	CAP,CE,TEMP,SL,33pF,50V,J,AX,TA	1
3529470311-A	CAP,CE,TEMP,SL,47pF,50V,J,AX,TA	1
3539103521-A	CAP,CE,SEMI,Y5V,0.01uF,50V,Z,AX,TA	2
2118010332	IC,OP AMP,NJM5532DD,DIP8	4
3238093710	VR RK11K114030313A	2
4355922401	CON ASS'Y 10P	1
4355922519	CON ASS'Y 3P	2
4428594902	CON WAFER,BOX(M),2P,AN	2
4428594904	CON WAFER,BOX(M),4P,AN	1
4428595010	CON WAFER,BOX(M),10P,ST	1
4428595503	WAFER FLAT ANGLE 3P	1
4428598703	CON WAFER,LOCK(M),3P,AN	2
4428598705	CON WAFER,LOCK(M),5P,AN	2
4438093510	XLR JACK(XLF-3SP-5C) BELTON	2
4438097310	JACK,PHONE,1U,4P,AN	2
5528999800	RELAY,DPDT,12V,3A,250VAC,876A N-2C-S	1
6505959710	JACK B.K.T	2
POWER B'D (4005119022)		
2008206997-T	TR,SG,PNP,150mA,50V,KTA1024,TO-92L,TA	1
3409222141-T	CAP,E,SM,SG,85C,220uF,25V,J,8P,TA	1
3509103450-T	CAP,CE,HI-DI,0.01uF,500V,Z,RA,TA	5
3609104122-T	CAP,FILM,POLYESTR,SM,0.1uF,100V,J,TA	4
3609153120-T	CAP,FILM,POLYESTR,0.015uF,100V,J,TA	2
2058100996	DIODE,RE,1A,800V,1N4006,DO-41,TA	3
2058304100	DIODE,SW,100mA,75V,1N4148M,DO-34M,TA	1
2058502082	DIODE,ZN,500mW,BM,8.2V,DO-35,TA	1
2058502160	DIODE,ZN,500MW,BM,16V,DO-35,TA	1
2058502240	DIODE,ZN,500MW,BM,24V,DO-35,TA	1
3009104973	RES,MF,100K,1/5W,5%,AX N,TA	1
3009333973	RES,MF,33K,1/5W,5%,AX N,TA	1
3009561273	RES CF 560 1/4W J	1
3009822973	RES,MF,8.2K,1/5W,5%,AX N,TA	1
3509101231-A	CAP,CE,HI-DI,Y5P,100pF,50V,K,AX,TA	1
3539104531-A	CAP,CE,SEMI,Y5V,0.1uF,50V,Z,AX,TA	4
1608199726	COOL SHEET TO-220 (NOT HOLE)	2
2028107984	TR,PW,PNP,1.5A,180V,KTA1659A,TO-220IS	2
2028406113	TR,PW,NPN,3A,60V,KTD2058,TO-220AB	1
2058100979	DIODE,BR,1.5A,100V,KBP153G,KBP	1
2438007994	THERMIST,PTC,100ohm,90C	1
2438209770	THERMIST,NTC PW,TP 5D-15	2
3039100572-F	RES,MF,10,2W,5%,AX P	2
3039681572-F	RES,MF,680,2W,5%,AX P	1
3049478776	RES CE 4.7 5W J T HAN NAE	2
3408210191	CAP,E,SM,SG,85C,100uF,100V,M,13P	1
3408210261	CAP,E,SM,SG,85C,1000uF,35V,M,16P	2
3409068298	CAP,E,LA,HM,85C,6800uF,100V,M,40x60	4
3409233147-T	CAP,E,SM,SD,85C,330uF,25V,M,8x11.5,TA	2
4355877007	CON ASS'Y,DS,1P,P1.8,P1.8,150mm	1
4355921721	CON ASS'Y 4P(MA-830)	1
4355922005	CON ASS'Y 3P (120MM)	1
4355922011	CON ASS'Y 3P	1
4355922108	CON ASS'Y 5P(170MM)	1
4355922115	CON ASS'Y 5P (330MM)	1
4408195110	SPEAKER TERMINAL(R)4P	1
4428595002	CON WAFER,BOX(M),2P,ST	1
4428598303	CON WAFER,LOCK(M),3P,ST	1
4428598305	CON WAFER,LOCK(M),5P,ST	1
4458999110	FUSE CLIP 5*20	4

Part No.	Description	QTY
4465998210	TERMINAL,(250)PCB TAB	3
4618001110	SW,SLIDE,HOR,DPDT,NS,L7.5	2
4678699410	CNT PLUG 1P	4
4678699411	CNT PLUG 1P	4
4678699430	CNT PLUG 3P	2
5528007200	RELAY,SPST,24V,1A,250VAC,821-W	1
6505968010	BRACKET PCB PS-A152	2
ASS'Y		
4308999410	AC CORD SET,3P,16A,250VAC,V,2200MM	R
4308996710	AC CORD,3P,10A,250VAC,V,2500MM	C
4308997310	AC CORD SET,3P,7A,250VAC,K,2200MM	DOM
4308998000	AC CORD SET,3P,7.5A,250VAC,SAA,2500mm	D
4308997710	AC CORD SET,3P,13A,125VAC,U/CS,2200mm	E
2058100998	DIODE,BR,35A,400V,KBPC3504,KBPC	1
2828075231	TRANS POWER MA-930 (230V)	R,C
2828075221	TRANS POWER MA-930 (220V)	DOM
2828075241	TRANS POWER MA-930 (240V)	D
2828075211	TRANS POWER MA-930 (120V)	E
3549472407	CAP,CE,AC,Y2/X1,4700pF,250VAC,M,RA	1
3619334153	CAP,FILM,M-POLYESTR,0.33PF,250V,J	1
4355489207	SOCKET TERMINAL RED	1
4355915307	CON ASS'Y 187T-CNT BLK	1
4355915407	CON ASS'Y 187T-CNT BLU	1
4355915507	CON ASS'Y 187T-CNT RED	1
4355915607	CON ASS'Y 187T-CNT WHT	1
4355915707	SOCKET TERMINAL BLK	1
4355915818	CON ASSY 250T X2	1
4355916005	SO CKET TERMINAL	1
4355917705	SOCKET TERMINAL YEL-GRN	1
4355921903	CON ASS'Y 3P	2
4355922207	CON ASS'Y 2P	2
4355922303	CON ASS'Y 5P	2
4428299810	JACK,SPEAKON,1U,1P,ST,BTSP-01	2
4448997410	AC INLET 6100.4315 250T SCURTE	1
5508411939	FUSE,20MM,T,630MA,250V,K/U/CS	2
5568224533	CIRCUIT BREAKER,THERMAL,10A,250VAC	1
4355492810	CON ASS'Y,DS,2P,STRIP,CH0640,210mm	2
7308999010	FAN F8025*24B MA-430/830	2

SCHEMATIC DIAGRAM

