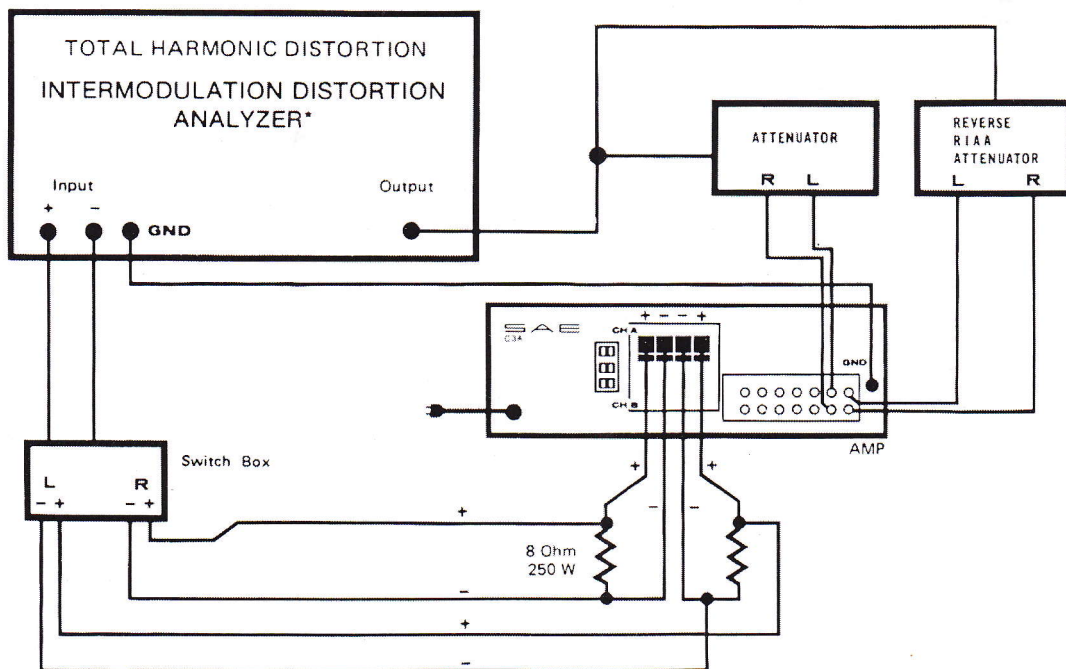


RECOMMENDED TEST HOOKUP



*Recommended instruments: Sound Technology 1700B,
Hewlett-Packard 339A or,
BPI 3000C

SPECIFICATIONS

C3A Integrated Amplifier

Power @ 8 Ohms	50W
20Hz to 20kHz	
Total Harmonic Distortion	0.05%
Intermodulation Distortion	0.05%
S/N—	
Phono (IHF-A, ref. 10mV)	—85dB
Aux (IHF-A)	—97dB
Overload—phono	150mV
Tuner, aux, tape	4V
Frequency response—phono	±0.25dB
aux	±0.25dB
Loudness compensation 100Hz	+8dB
(variable with level) 10kHz	+4dB

Sensitivity (ref. 50W)

Phono — 2.5mV

Tuner, Aux, Tape — 150mV

Rec Output —
150mV

Tone Controls

100Hz ±8dB

10kHz ±8dB

Low Filter —

30Hz —3dB

(6dB/octave)

Power Requirements:

120VAC 50-60Hz 200 watts max.

Net Weight — 20 lbs (9.1kg)

Shipping Weight — 23 lbs (10.4kg)

Product specifications are subject to change without notice. SAE TWO carries a three year limited warranty. (U.S.A. only.)

ADJUSTMENT

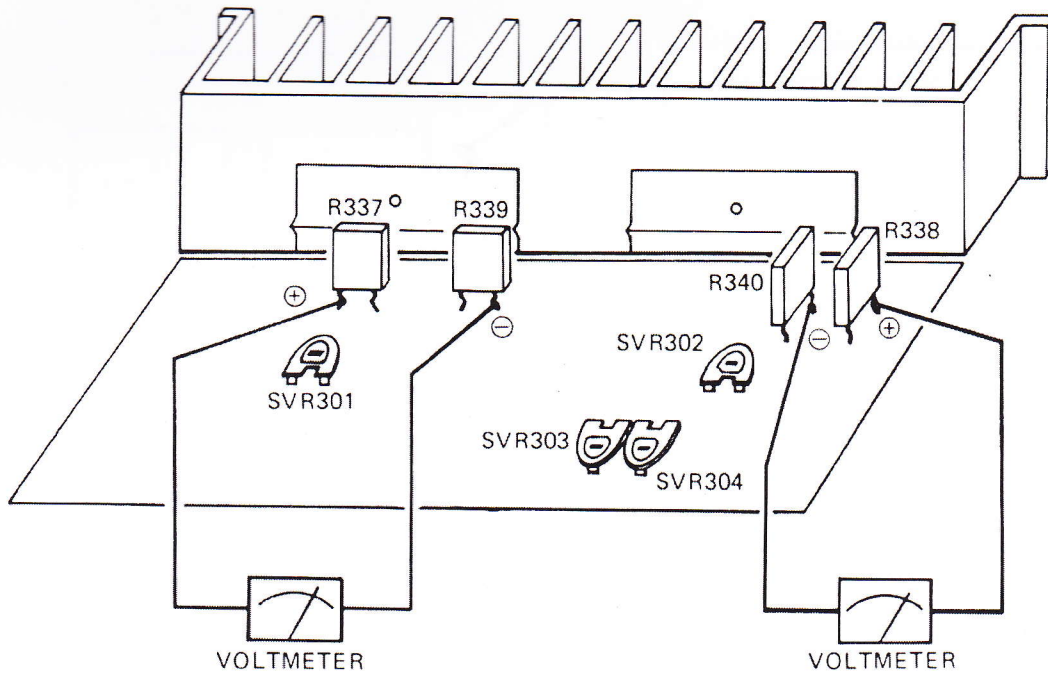


Fig. 5

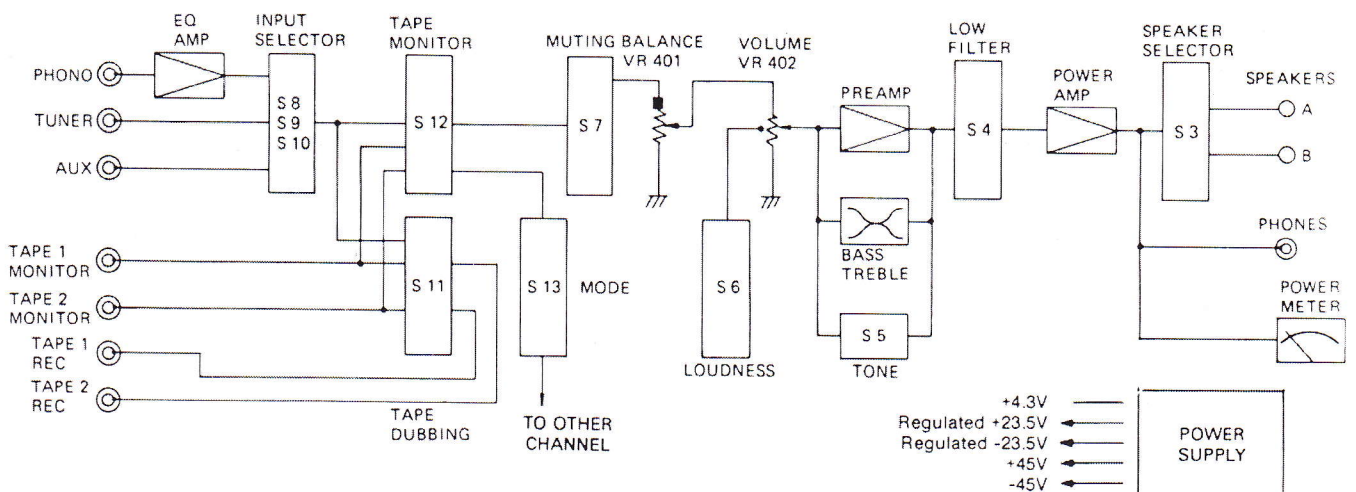
METER RANGE

1. Connect an 8 ohm dummy resistor and a V.T.V.M. to the SPEAKER terminals.
2. Connect an audio generator to the AUX input jacks, and then apply signals (1kHz approx. 150mV).
3. Set the VOLUME control so that the V.T.V.M. indicates 5 W (6.32 volt).
4. Adjust carbon trimmers SVR303, 304 so that the power meters indicate 5 W.

BIAS CURRENT

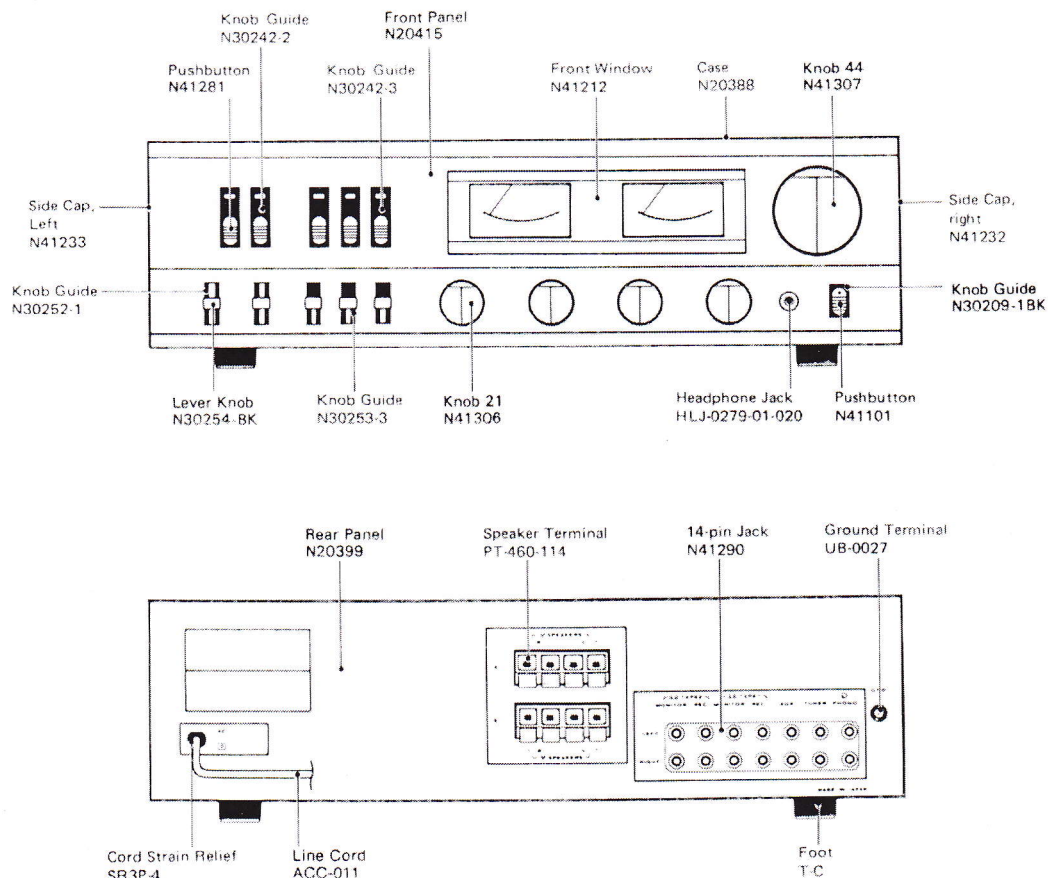
1. Turn the VOLUME control to fully counter-clockwise.
2. Connect a voltmeter as shown in Fig. 5.
3. Adjust carbon trimmers SVR301, 302 so that the voltmeter indicates 35mV.

BLOCK DIAGRAM



Q'TY OR REF. NO.	PART NO.	DESCRIPTION
MISCELLANEOUS PARTS		
C801	ECQ-U1A103MD	Polyester Film Cap. 0.01 μ F
1	ESB-704T	AC ON/OFF Switch
1	NPT-0314S	Power Transformer
1	T-20704L514-5385	Thermostat
	L217-41	
2	KL258T-3	Meter
1	HLJ-0279-01-020	Headphone Jack
2	PT460-114	Speaker Terminal
1	S-I6460	AC Outlet
1	ACC-011	Line Cord
1	SR-3P-4	Strain Relief, Line Cord
1	UB-0027	Ground Terminal
1	2L4P	AC Terminal Strip
2	BQ141-26404A	Lamp
1	N20379	Front Chassis
1	N20380	Center Chassis
1	N30223	P.Trans. Mtg. Chassis
2	N41211	Transistor Cover
2	N41210	P.C. Board Mtg. Bkt.
1	N41223	Phones Jack Mtg. Bkt.
1	N30226	Right Chassis End
1	N30227	Left Chassis End
1	N30231	Bottom Cover
1	N41411	Shield Plate, VOLUME
1	N20382	Meter Frame
1	N41388	Fiber
1	N30224-BK	Meter PLate
1	N41218	Wire, Meter Holding
2	N41366	Label, Caution
1	N41239	Felt, VOLUME
4	N41240	Felt, Audio Control
5	N41268	Felt, Lever Switch

Q'TY OR REF. NO.	PART NO.	DESCRIPTION
1	N41329	Felt, Cabinet
1	N41391	Label, Fuse Caution
1	N41331	Label, Attention
2	N41392	Spacer
APPEARANCE PARTS		
1	N20415	Front Panel
1	N20399	Rear Panel
1	N20388	Case
5	N30254-BK	Knob, Lever Switch
6	N41281	Pushbutton
1	N41232	Side Cap, Right
1	N41233	Side Cap, Left
1	N41307	Knob 44, Volume
4	N41306	Knob 21, Audio Control
1	N41212	Front Window
4	T-C	Foot
2	N30252-1	Knob Guide, Lever Switch
1	N30252-3	Knob Guide, Lever Switch
1	N30242-2	Knob Guide, Pushbutton
1	N30242-3	Knob Guide, Pushbutton
1	N30209-1BK	Knob Guide, Power
PACKING MATERIAL		
1	N20389	Pad, Right
1	N20390	Pad, Left
1	N41321	Pad, Top
1	N41338	Inner Carton
1	N41339	Outer Sleeve
1	N41318	Poly. Bag, Unit
1	N40487	Poly. Bag, Accessory
1	32-0070	Instruction Manual



PREAMP BOARD (PA-128B)

REF. NO.	PART NO.	DESCRIPTION
RESISTORS		
R411, 412	R1/4J 100K Ohm	Carbon, $\pm 5\%$, 1/4 W
R413, 414	R1/4J 2.2K Ohm	Carbon, $\pm 5\%$, 1/4 W
R415, 416	R1/4J 100K Ohm	Carbon, $\pm 5\%$, 1/4 W
R417, 418	R1/4J 820K Ohm	Carbon, $\pm 5\%$, 1/4 W
R419, 420	R1/4J 39K Ohm	Carbon, $\pm 5\%$, 1/4 W
R421, 422	R1/4J 270K Ohm	Carbon, $\pm 5\%$, 1/4 W
R423, 424	R1/4J 68K Ohm	Carbon, $\pm 5\%$, 1/4 W
R425, 426	R1/4J 56K Ohm	Carbon, $\pm 5\%$, 1/4 W
R427, 428	R1/4J 5.6K Ohm	Carbon, $\pm 5\%$, 1/4 W
R429, 430	R1/4J 6.8K Ohm	Carbon, $\pm 5\%$, 1/4 W
R431, 432	R1/4J 1.2K Ohm	Carbon, $\pm 5\%$, 1/4 W
R433, 434	R1/4J 82K Ohm	Carbon, $\pm 5\%$, 1/4 W
R435, 436	R1/4J 560 Ohm	Carbon, $\pm 5\%$, 1/4 W
R437, 438	R1/4J 27K Ohm	Carbon, $\pm 5\%$, 1/4 W
R439, 440	R1/4J 4.7K Ohm	Carbon, $\pm 5\%$, 1/4 W
R442, 443, 444, 445	R1/4J 680 Ohm	Carbon, $\pm 5\%$, 1/4 W
SEMICONDUCTORS		
IC401, 402	HA1457-02	IC

REF. NO.	PART NO.	DESCRIPTION
CAPACITORS		
C405, 406	25V 4.7 μ F (M)	Electrolytic, Low Leak
C407, 408	FC50PF	Ceramic, $\pm 10\%$, 25V
C409, 410	FC100PF	Ceramic, $\pm 10\%$, 25V
C411, 412	FC20PF	Ceramic, $\pm 10\%$, 25V
C413, 414	25V 4.7 μ F	Electrolytic
C415, 416	FC15PF	Ceramic, $\pm 10\%$, 25V
C417, 418	50V 0.012 μ F (J)	Mylar, $\pm 5\%$
C419, 420	50V 0.047 μ F (J)	Mylar, $\pm 5\%$
C421, 422	50V 0.0033 μ F (J)	Mylar, $\pm 5\%$
C423, 424	50V 0.015 μ F (J)	Mylar, $\pm 5\%$
C425, 426	25V 4.7 μ F (M)	Electrolytic, Low Leak
C427, 428	50V 0.1 μ F (J)	Mylar, $\pm 5\%$
C429, 430, 431, 432	25V 220 μ F	Electrolytic
CONTROLS & SWITCHES		
S4, 5 VR401 VR403, 404	SW4225011 EWK-G4A323375 EWK-G4A323C15	Lever Switch (L.F., TONE) Potentiometer (BAL.), 100K Ohm Potentiometer (BASS, TREBLE) 100 K Ohm

SWITCH BOARD (FSW-129A)

REF. NO.	PART NO.	DESCRIPTION
RESISTORS		
R401, 402, 403, 404	R1/4J 560 Ohm	Carbon, $\pm 5\%$, 1/4 W
R405, 406	R1/4J 4.7K Ohm	Carbon, $\pm 5\%$, 1/4 W
R407, 408	R1/4J 39K Ohm	Carbon, $\pm 5\%$, 1/4 W
R409, 410	R1/4J 12K Ohm	Carbon, $\pm 5\%$, 1/4 W
R446, 447, 448	R1/4J 10K Ohm	Carbon, $\pm 5\%$, 1/4 W

Q'TY OR REF. NO.	PART NO.	DESCRIPTION
CAPACITORS		
C401, 402	FC330PF	Ceramic, $\pm 10\%$, 25V
C403, 404	50V 0.047 μ F (M)	Mylar, $\pm 20\%$, 50V
CONTROLS & SWITCHES		
S6, 7, 8, 9, 10	SW1501010	Push Switch Ass'y.
HARDWARE & MISC.		
(Q'TY . . . 1)	171825-06	Micro Plug 6-pin

VOLUME CONTROL BOARD (VR-127A)

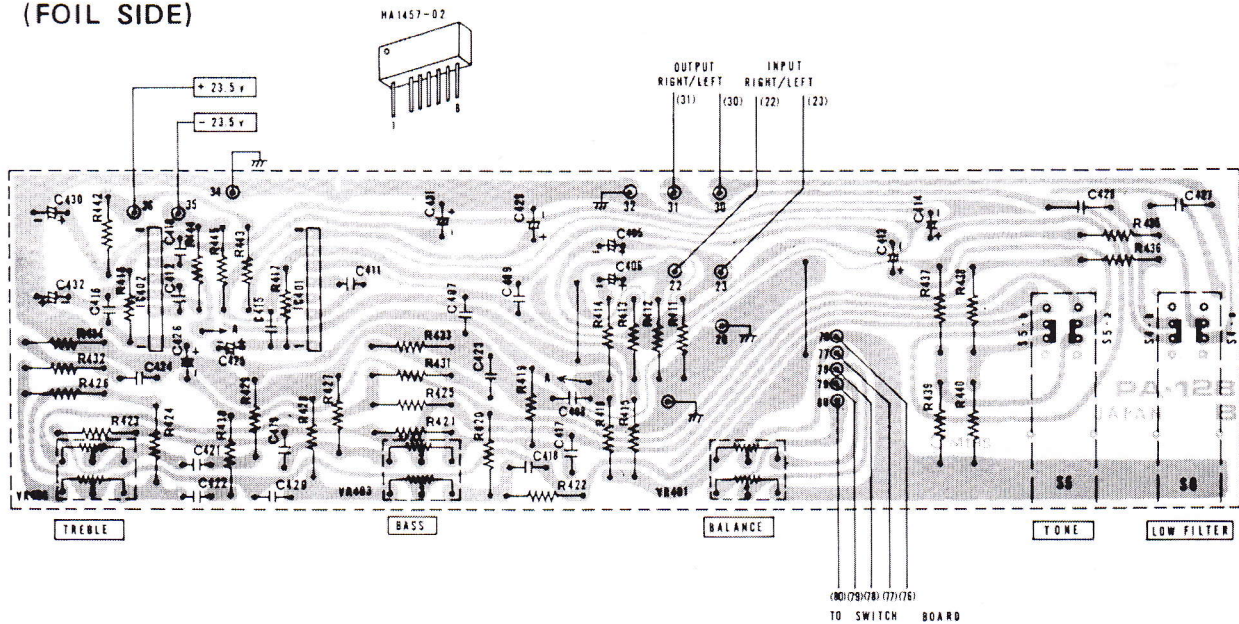
REF. NO.	PART NO.	DESCRIPTION
VR402	EWC-5JAP30 BF5	Potentiometer (VOLUME), 250K Ohm

INDICATOR BOARD (FL-129A)

Q'TY OR REF. NO.	PART NO.	DESCRIPTION
D901, 902, 903, 904, 905 (Q'TY . . . 1)	GL-9PR2 MC06-012	L.E.D. Micro Connector Ass'y. 6-hole

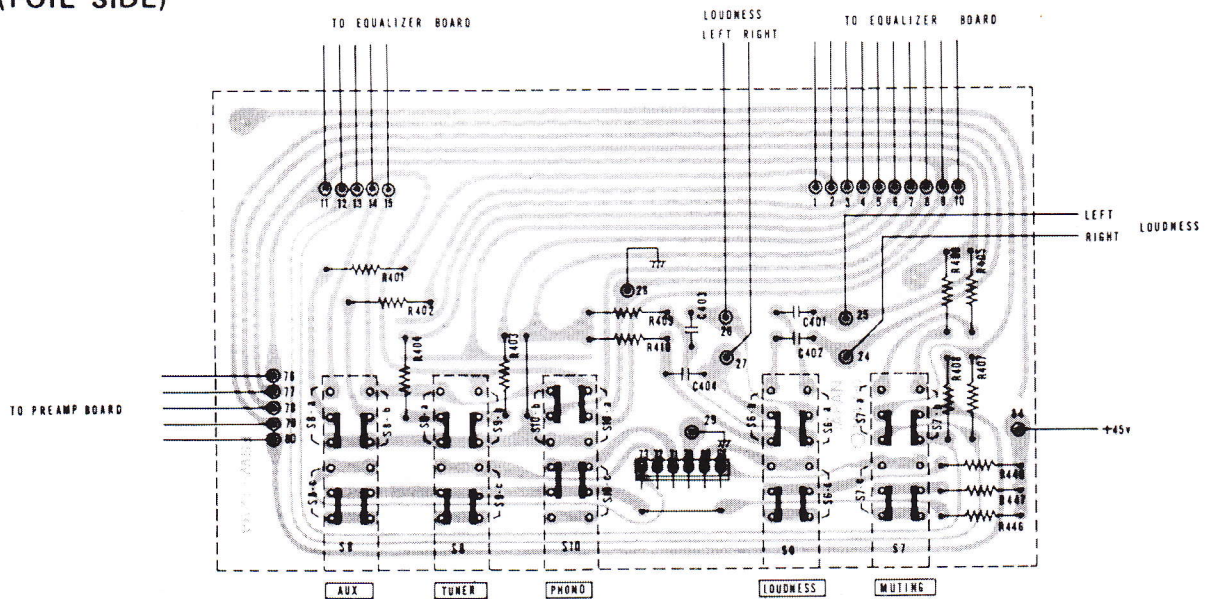
PREAMP BOARD

(FOIL SIDE)



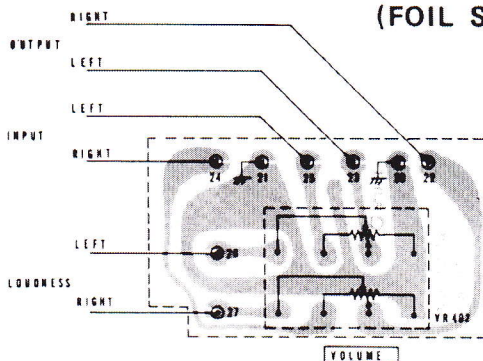
SWITCH BOARD

(FOIL SIDE)



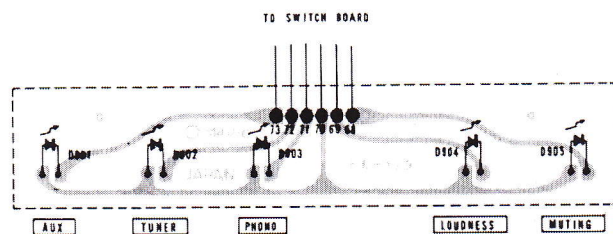
VOLUME CONTROL BOARD

(FOIL SIDE)



INDICATOR BOARD

(FOIL SIDE)

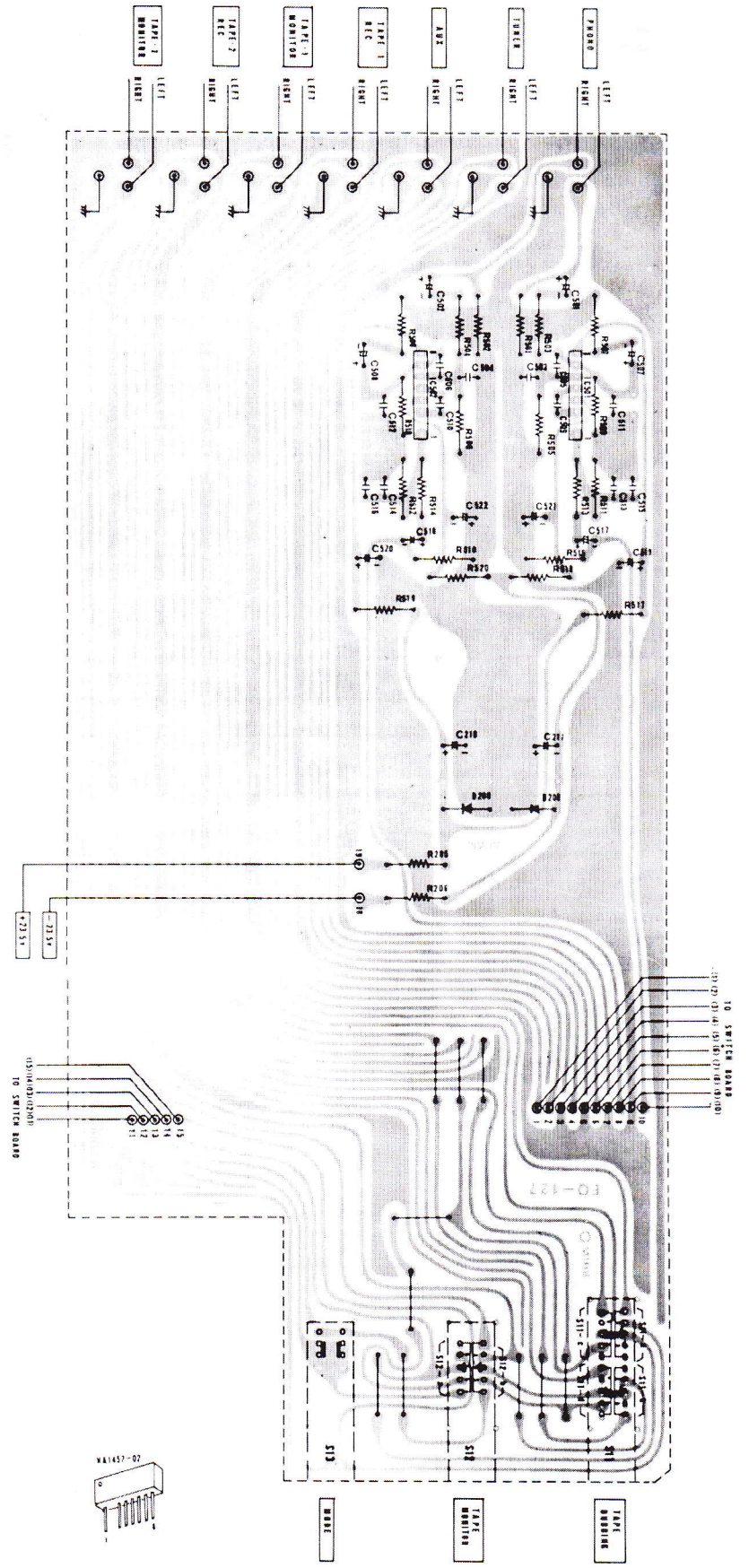
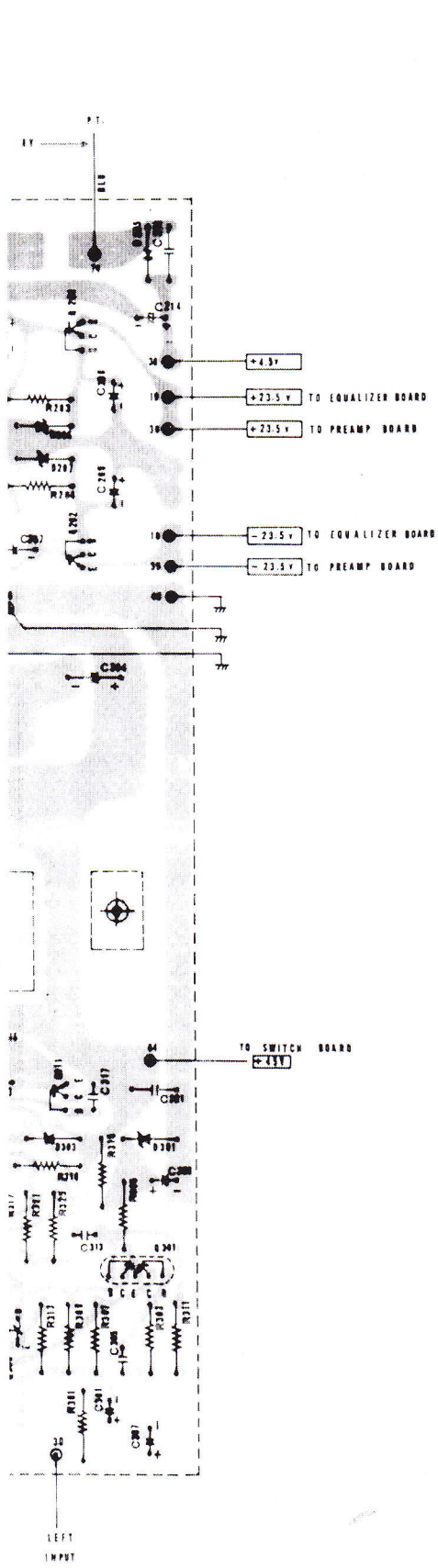


(FOIL SIDE)



EQUALIZER BOARD

(FOIL SIDE)



EQUALIZER BOARD (EQ-127)

(VR-127A)

PREAMP BOARD (PA-128B)

LEFT CHANNEL

PLAY
TAPE 2
REC

PLAY
TAPE 1
REC

AUX
TUNER
PHONO

REC
TAPE 1
PLAY

REC
TAPE 2
PLAY

REC
TAPE 1
PLAY

REC
TAPE 2
PLAY

REC
TAPE 1
PLAY

REC
TAPE 2
PLAY

REC
TAPE 1
PLAY

REC
TAPE 2
PLAY

RIGHT CHANNEL

PLAY
TAPE 2
REC

PLAY
TAPE 1
REC

AUX
TUNER
PHONO

REC
TAPE 1
PLAY

REC
TAPE 2
PLAY

REC
TAPE 1
PLAY

REC
TAPE 2
PLAY

REC
TAPE 1
PLAY

REC
TAPE 2
PLAY

REC
TAPE 1
PLAY

REC
TAPE 2
PLAY

SWITCH BOARD (FSW-129A)

INDICATOR BOARD (FL-129A)

VOLUME

VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

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VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

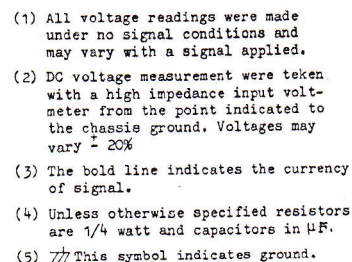
VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

VR402 250K (B)

POWER AMPLIFIER & POWER SUP



Q 201 310 320	2500092 AHC (C) (B)
Q 202	2500021 AHC (C) (B)
Q 301 302	25A700 (F) (G)
Q 303 -- 306, 311, 312	250007A (C) (B)
Q 307, 308, 313, 314	250047A (C) (B)
Q 309 310 322	25C1000 (B) (B)
Q 321	25A722 (S) (T)
Q 315, 316	2500500 (B) (B)
Q 317, 318	250010 (C) (B)

POWER AMP & POWER SUPPLY BOARD (MA-129A)

REF. NO.	PART NO.	DESCRIPTION
RESISTORS		
R201, 202	R1/2K 270 Ohm	Carbon, $\pm 10\%$, 1/2 W
R203, 204	R1/4J 1.5K Ohm	Carbon, $\pm 5\%$, 1/4 W
R301, 302	R1/4J 2.2K Ohm	Carbon, $\pm 5\%$, 1/4 W
R303, 304	R1/4J 47K Ohm	Carbon, $\pm 5\%$, 1/4 W
R305, 306	R1/4J 8.2K Ohm	Carbon, $\pm 5\%$, 1/4 W
R307, 308, 309, 310	R1/4J 1.5K Ohm	Carbon, $\pm 5\%$, 1/4 W
R311, 312	R1/4J 2.2K Ohm	Carbon, $\pm 5\%$, 1/4 W
R313, 314	R1/4J 100 Ohm	Carbon, $\pm 5\%$, 1/4 W
R315, 316	R1/4J 4.7K Ohm	Carbon, $\pm 5\%$, 1/4 W
R317, 318	R1/4J 47K Ohm	Carbon, $\pm 5\%$, 1/4 W
R319, 320	R1/4J 180 Ohm	Carbon, $\pm 5\%$, 1/4 W
R321, 322	R1/4J 470 Ohm	Carbon, $\pm 5\%$, 1/4 W
R323, 324	R1/4J 47K Ohm	Carbon, $\pm 5\%$, 1/4 W
R325, 326	R1/4J 3.9K Ohm	Carbon, $\pm 5\%$, 1/4 W
R327, 328	R1/4J 1.2K Ohm	Carbon, $\pm 5\%$, 1/4 W
R329, 330	R1/4J 150 Ohm	Carbon, $\pm 5\%$, 1/4 W
R331, 332	R1/4J 100 Ohm	Carbon, $\pm 5\%$, 1/4 W
R333, 334, 335, 336	R1/2K 150 Ohm	Carbon, $\pm 10\%$, 1/2 W
R337, 338, 339, 340	R5K 0.33 Ohm	Wire-wound, $\pm 10\%$, 5 W
R341, 342, 343, 344	RZJ 10 Ohm	Metal Film, $\pm 5\%$, 2 W
R345, 346	R1/4J 4.7K Ohm	Carbon, $\pm 5\%$, 1/4 W
R349, 350	R1/4J 100K Ohm	Carbon, $\pm 5\%$, 1/4 W
R351	R1/4J 10K Ohm	Carbon, $\pm 5\%$, 1/4 W
R352	R1/4J 100K Ohm	Carbon, $\pm 5\%$, 1/4 W
R353	R1/2K 150 Ohm	Carbon, $\pm 10\%$, 1/2 W
R354	R1/4J 68K Ohm	Carbon, $\pm 5\%$, 1/4 W
R355	R1/2K 390 Ohm	Carbon, $\pm 10\%$, 1/2 W
R360, 361	R1/4J 680 Ohm	Carbon, $\pm 5\%$, 1/4 W
R801, 802	R2J 270 Ohm	Metal Film, $\pm 5\%$, 2 W
TH301, 302	SDT-100	Thermistor

CAPACITORS		
C201, 202	500V 0.01 μ F	Ceramic, $\pm 80\%$, 500V
C203	MC 0.047 μ F	Ceramic, $\pm 80\%$, 25V
C204, 205	50TW 8200 μ F	Electrolytic
C206, 207	50TW 220 μ F	Electrolytic
C208, 209	35TW 220 μ F	Electrolytic
C212	SC 0.04 μ F	Ceramic, $\pm 80\%$, 50V
C213	50TW 47 μ F	Electrolytic
C214	10TW 47 μ F	Electrolytic
C301, 302	25TW 4.7 μ F	Electrolytic, Low Leak
C303, 304	25TW 47 μ F	Electrolytic
C305, 306	FC 100 μ F	Ceramic, $\pm 10\%$, 25V
C307, 308	16TW 47 μ F	Electrolytic
C309, 310	50TW 47 μ F	Electrolytic
C311, 312	FC 25P μ F	Ceramic, $\pm 10\%$, 25V
C313, 314	FC 3P μ F	Ceramic, ± 0.5 PF, 25V
C315, 316	50V 0.047 μ F (M)	Mylar, $\pm 20\%$, 50V
C317, 318, 319, 320	FC 100P μ F	Ceramic, $\pm 10\%$, 25V
C321, 322, 323, 324	50V 0.1 μ F (M)	Mylar, $\pm 20\%$, 50V
C325, 326	50V 0.022 μ F (M)	Mylar, $\pm 20\%$, 50V
C329	16TW 100 μ F	Electrolytic
C330, 331	10TW 100 μ F	Electrolytic
C332, 333	50TW 1 μ F	Electrolytic
C334, 335	16TW 10 μ F	Electrolytic

SEMICONDUCTORS		
Q201	2SD592ANC (Q) or (R)	Transistor
Q202	2SB621ANC (Q) or (R)	Transistor
Q301, 302	2SA798 (F) or (G)	Transistor
Q303, 304, 305, 306	2SD667A (C) or (D)	Transistor
Q307, 308	2SB647A (C) or (D)	Transistor
Q309, 310	2SC1685 (Q) or (R)	Transistor
Q311, 312	2SD667A (C) or (D)	Transistor
Q313, 314	2SB647A (C) or (D)	Transistor
Q315, 316	2SD588 (Q) or (R)	Transistor
Q317, 318	2SB618 (Q) or (R)	Transistor
Q319, 320	2SD592ANC (Q) or (R)	Transistor
Q321	2SA722 (S) or (T)	Transistor
Q322	2SC1685 (Q) or (R)	Transistor
D201, 202, 203, 204	ERD03-02J	Diode Silicon

REF. NO.	PART NO.	DESCRIPTION
D205	GP-08B	Diode Silicon
D206, 207	EQA01-24R1	Zener Diode
D210	GP-08B	Diode Silicon
D301, 302	EQA01-15R1	Zener Diode
D303, 304	MA-26W	Silicon Variable Resistor Diode
D305, 306, 307, 308	GP-08B	Diode Silicon
D309, 310, 311, 312	1S188FM	Diode Germanium
D313	GP-08B	Diode Silicon
COILS		
L301, 302	104001	Coil, 2.2 MH
CONTROLS & SWITCHES		
SVR301, 302, 303, 304	500 Ohm (B)	Carbon Trimmer 8 /
S3	ESA-273 ESA-23413 ESA-20433B	Speaker Switch Control Unit, Speaker Switch Wire Unit, Speaker Switch
HARDWARE & MISC.		
1	FRL264-D024-04AL-01	Relay
4	S-N5051	Fuse Clip
2	No. 37	Heat Sink, Drive Tstr.
2 (F203, 204)	6 / x 30 (5A)	Fuse, UL
4	MP-50	Mica
8	B20	Insulator
1	N30225	Heat Sink, Power Tstr.
1	N41290	14 Pin Jack

EQUALIZER BOARD (EQ-127)

REF. NO.	PART NO.	DESCRIPTION
RESISTORS		
R205, 206	R1/4J 470 Ohm	Carbon, $\pm 5\%$, 1/4 W
R501, 502	R1/4J 100K Ohm	Carbon, $\pm 5\%$, 1/4 W
R503, 504	R1/4J 2.2K Ohm	Carbon, $\pm 5\%$, 1/4 W
R505, 506	R1/4J 100K Ohm	Carbon, $\pm 5\%$, 1/4 W
R507, 508	R1/4J 820 Ohm	Carbon, $\pm 5\%$, 1/4 W
R509, 510	R1/4J 470K Ohm	Carbon, $\pm 5\%$, 1/4 W
R511, 512	R1/4J 39K Ohm	Carbon, $\pm 5\%$, 1/4 W
R513, 514	R1/4J 560 Ohm	Carbon, $\pm 5\%$, 1/4 W
R515, 516	R1/4J 100K Ohm	Carbon, $\pm 5\%$, 1/4 W
R517, 518, 519, 520	R1/4J 680 Ohm	Carbon, $\pm 5\%$, 1/4 W
CAPACITORS		
C210, 211	25TW 220 μ F	Electrolytic
C501, 502	25TW 4.7 μ F (M)	Electrolytic, Low Leak
C503, 504	FC50PF	Ceramic, $\pm 10\%$, 25V
C505, 506	FC100PF	Ceramic, $\pm 10\%$, 25V
C507, 508	16TW 47 μ F	Electrolytic
C509, 510	FC20PF	Ceramic, $\pm 10\%$, 25V
C511, 512	50V 0.0068 μ F (J)	Mylar, $\pm 5\%$, 50V
C513, 514	50V 0.0018 μ F (J)	Mylar, $\pm 5\%$, 50V
C515, 516	FC68PF	Ceramic, $\pm 10\%$, 25V
C517, 518	25TW 4.7 μ F (M)	Electrolytic, Low Leak
C519, 520, 521, 522	25TW 220 μ F	Electrolytic
SEMICONDUCTORS		
D208, 209	EQA01-18R1	Zener Diode
IC501, 502	HA1457-02	IC
CONTROLS & SWITCHES		
S11	SW4435013	Lever Switch (DUBBING)
S12	SW4435012	Lever Switch (MONITOR)
S13	SW4435011	Lever Switch (MODE)