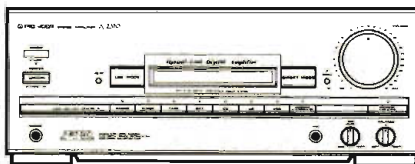


# Service Manual



ORDER NO.  
ARP2158

## STEREO AMPLIFIER

# A-Z370

### MODEL A-Z370 HAS FOLLOWING VERSIONS :

Type	Power requirement	Export destination
HE	AC220V, 240V(switchable) *	European continent
HB	AC220V, 240V(switchable) *	United Kingdom
HEWZIW	AC220V, 240V(switchable) *	Germany and Italy
SD	AC110V,120V-127V, 220V, 240V(switchable)	Kingdom of Saudi Arabia and general market

\* : Change the primary wiring.

- This manual is applicable to the A-Z370/HE, HB and HEWZIW types.
- As to the HB and HEWZIW types, refer to page 37.
- As to the other types, refer to applicable service manuals.
- This product is a component of a system. As to the system composition, refer to the system manual.
- This product does not function properly when independent ; to avoid malfunctions, be sure to connect it to the prescribed system component, otherwise damage may result.

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# 1. SPECIFICATIONS

Continuous Power Output (DIN) .....	60 W + 60 W (1 kHz, T.H.D. 1 %, 8 Ω)
Music power (DIN) .....	100 W + 100 W (1 kHz, T.H.D. 1 %, 8 Ω)
D/A converter section	
Signal-to-Noise Ratio .....	More than 96 dB (EIAJ)
Dinamic range .....	More than 94 dB (EIAJ)
Frequency range .....	25 Hz to 20 kHz
Total Harmonic Distortion (1 kHz, 30 W, 8 Ω) .....	No more than 0.06 % **
Input sensitivity	
PHONO (MM) .....	2.5 mV
VCR .....	150 mV
LD .....	250 mV
Output level	
DAT, VCR .....	150 mV
MUTING .....	- ∞

## Power Supply/Miscellaneous

Power requirements .....	a.c.240 Volts ~ , 50/60 Hz
Power consumption .....	300 W
AC outlets switched (x 1) .....	50 W
Dimensions .....	360 (W) x 343 (D) x 135.5 (H) mm
Weight (without package) .....	8.2 kg

## Accessories

Operating instructions .....	1
Remote control unit .....	1
Dry cell batteries "AAA" (IEC R03/UM-4) .....	1

\*\* Measured By Audio Spectrum Analyzer.

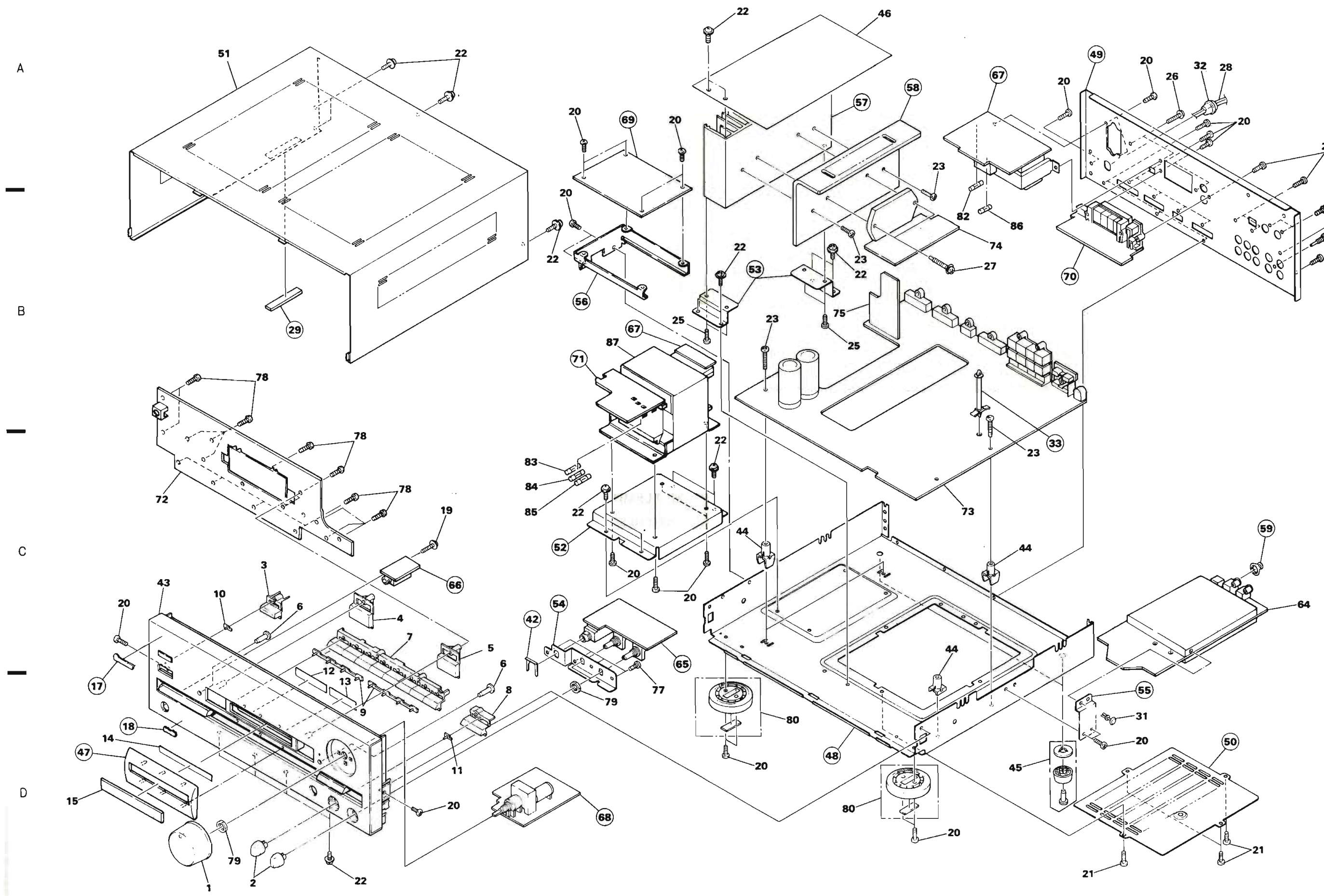
## 2. EXPLODED VIEWS, PACKING AND PARTS LIST

- NOTES:**
- Parts without part number cannot be supplied.
  - Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
  - The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

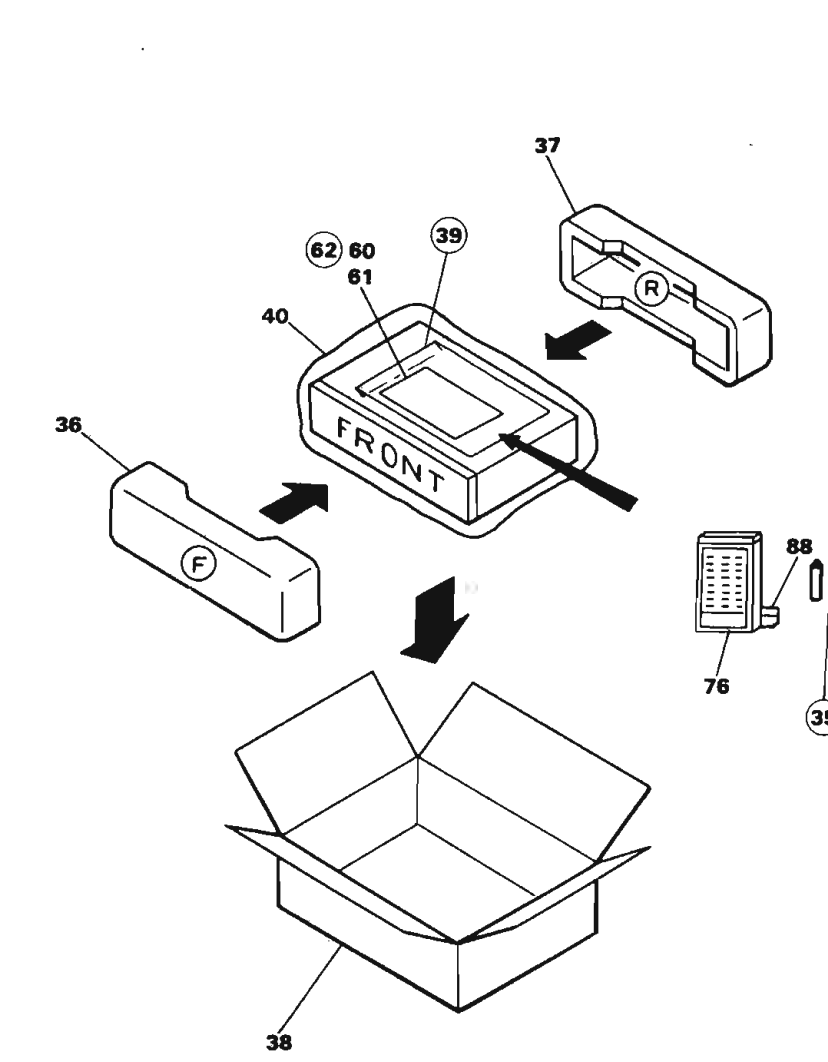
### 2.1 PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	VOL KNOB(VOLUME)	AAB1117		49	REAR PANEL	
	2	ROTARY KNOB(MIC LEVEL,BALANCE)	AAB1130		50	BOTTOM PLATE	
	3	POWER BUTTON	AAD1595		51	BONNET CASE	ANE1208
	4	BOTTUN L (LSS MODE)	AAD1596		52	TRANS. HOLDER	
	5	BUTTON L (DIRECT MODE)	AAD1597		53	HEAT SINK HOLDER	
	6	KIN BUTTON (MUTING, LSS SET)	AAD1682		54	VOLUME HOLDER	
	7	FUNCTION BUTTON	AAD1967		55	HOLDER	
	8	BUTTON S (SPEAKERS)	AAD1970		56	HOLDER A	
	9	LENS L	AAK1757		57	HEAT SINK	
	10	LENS S	AAK1758		58	HEAT SINK	
	11	LENS	AAK1759		59	GROUND PLATE	
	12	SHEET			60	OPERATING INSTRUCTIONS (Dutch, Swedish, Spanish, Portuguese)	ARC1248
	13	SHEET			61	OPERATING INSTRUCTIONS (English, German, French, Italian)	ARE1180
	14	PVC SHEET			62	WARRANTY CARD	
	15	PANEL	AAK2116		63	.....	
	16	.....			64	DAC ASSEMBLY	AWK1384
	17	NAME PLATE(PLASTIC)			65	MIC ASSEMBLY	
	18	NAME PLATE			66	HEAD PHONE ASSEMBLY	
	19	SCREW (STEEL)	ABA-283		67	SUB TRANS ASSEMBLY	
	20	SCREW	ABA-298		68	POWER VR ASSEMBLY	
	21	SCREW (STEEL)	ABA1009		69	RELAY ASSEMBLY	
	22	SCREW (STEEL)	ABA1011		70	SP TERMINAL ASSEMBLY	
	23	SCREW	ABA1018		71	FUSE ASSEMBLY	
	24	SCREW (STEEL)	ABA1047		72	DISPLAY ASSEMBLY	AWZ3360
	25	SCREW (STEEL)	ABA1050		73	AF ASSEMBLY	AWZ3402
	26	SCREW (STEEL)	ABA1072		74	POWER ASSEMBLY	AWZ2734
	27	SCREW	ABA1098		75	STANDBY ASSEMBLY	AWZ3505
	28	AC POWER CORD	ADG1019		76	REMOTE CONTROLLER (CU-AZ019)	AXD1193
	29	RUBBER CUSHION			77	SCREW	BBZ26P060FMC
	30	.....			78	SCREW	BBZ26P080FMC
	31	NYLON RIVET	AEC-510		79	NUTS	NK90FZB
	32	STRAIN RELIEF	AEC-882		80	FOOT(PLASTIC)	RXA1276
	33	PCB SUPPORT			81	.....	
	34	.....			82	FU1 FUSE(T2.5A)	AEK-403
	35	BATTERY (R03, AAA)			83	FU2 FUSE(T2A)	AEK-017
	36	FRONT PAD	AHA1272		84	FU3 FUSE(T1.6A)	AEK-405
	37	REAR PAD	AHA1273		85	FU4 FUSE(T1.6A)	AEK-405
	38	PACKING CASE	AHD2007		86	FU5 FUSE(T2A)	AEK-017
	39	LITERATURE BAG	AHG1016		87	T1 POWER TRANSFORMER	ATS1223
	40	PACKING SHEET			88	BATTERY COVER	AZN2072
	41	TERMINAL SCREW					
	42	MOUNTING PLATE					
	43	FRONT PANEL ASSY	AMB1759				
	44	PCB MOULD					
	45	LEG ASSY(S)					
	46	PLATE	AMR2133				
	47	SASH					
	48	CHASSIS					

### 2.2 EXPLODED VIEWS



### 2.3 PACKING



### 3. P.C.B's PARTS LIST

- NOTES :**
- Parts without part number cannot be supplied.
  - Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
  - The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
  - When ordering resistors, first convert resistance values into code form as shown in the following examples.
- Ex.1** When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).
- |      |                      |     |       |         |   |   |   |   |
|------|----------------------|-----|-------|---------|---|---|---|---|
| 560Ω | 56 × 10 <sup>1</sup> | 561 | ..... | RD1/4PS | 5 | 6 | 1 | J |
| 47kΩ | 47 × 10 <sup>3</sup> | 473 | ..... | RD1/4PS | 4 | 7 | 3 | J |
| 0.5Ω | 0R5                  |     | ..... | RD2H    | 0 | R | 5 | K |
| 1Ω   | 010                  |     | ..... | RD1P    | 0 | 1 | 0 | K |
- Ex.2** When there are 3 effective digits (such as in high precision metal film resistors).
- |        |                       |      |       |         |   |   |   |   |   |
|--------|-----------------------|------|-------|---------|---|---|---|---|---|
| 5.62kΩ | 562 × 10 <sup>1</sup> | 5621 | ..... | RD1/4SR | 5 | 6 | 2 | 1 | F |
|--------|-----------------------|------|-------|---------|---|---|---|---|---|

Mark	Symbol & Description	Part No.	Mark	Symbol & Description	Part No.
<b>DAC ASSEMBLY (AWK1384)</b>					
<b>SEMICONDUCTORS</b>					
IC801	LOGIC IC	TC74HCU04AP	C818	ELECTR.CAPACITOR	CEAS101M10
IC802	DIGITAL I.F._IC	PD0037	C819	MICA CAPACITOR	CMA220J500
IC803	IC DIGITAL FILTER	PD0060	C820	ELECTR.CAPACITOR	CEAS470M10
IC804	LOGIC IC	TC74HC32AP	C821,C822	CERAMIC CAPACIT	CKDYX473M16
IC805	D/A CONVERTER	SAA7350GP	C823	CERAMIC CAPACITOR	ACG1021
IC806,IC807	IC	NJM072D-E	C824	ELECTR.CAPACITOR	CEAS010M50
IC808	OP-AMP IC	RC4558DXP	C825	ELECTR.CAPACITOR	CEAS101M10
Q801,Q802	TRANSISTOR	RN2203	C826	CERAMIC CAPACITOR	ACG1021
Q804,Q805	TRANSISTOR	25C2458	C827	CERAMIC CAPACITOR	CKDYX473M16
Q806,Q807	TRANSISTOR	25C2878	C828	ELECTR.CAPACITOR	CEAS470M10
Q808,Q809	TRANSISTOR	RN1203	C829	CERAMIC CAPACITOR	CKDYX473M16
Q810	TRANSISTOR	RN2203	C830	ELECTR.CAPACITOR	CEAS470M10
Q811	TRANSISTOR	RN2201	C831,C832	CERAMIC CAPACITOR	ACG1019
Q812	TRANSISTOR	RN2203	C833,C834	CERAMIC CAPACITOR	CCDSL390J50
D801,D809,D810	DIODE	HSS104-02	C835	CERAMIC CAPACITOR	ACG1019
D811	ZENER DIODE	RD6.2ESB	C836	CERAMIC CAPACITOR	CKDYB471K50
<b>COIL</b>					
L801	AXIAL INDUCTOR	LAU330K	C837,C838	CERAMIC CAPACITOR	CCDSL390J50
L809	FERRITE BEAD	ATX1008	C839,C840	CERAMIC CAPACITOR	CKDYX473M16
L814	FERRITE BEAD	ATX1008	C841,C842	ELECTROLYTIC CAPACIT	CEAS470M10
L818	FERRITE BEAD	ATX1008	C843	CERAMIC CAPACITOR	CKDYX473M16
L821,L822	AXIAL INDUCTOR	LAU220K	C844,C845	CERAMIC CAPACITOR	CKDYB222K50
L823-L826	AXIAL INDUCTOR	LAU010M	C847	ELECTR.CAPACITOR	CEAS101M10
L827	FERRITE BEAD	ATX1009-A	C848	CERAMIC CAPACITOR	CKDYX473M16
<b>CAPACITORS</b>					
C805	CERAMIC CAPACITOR	CKDYX473M16	C849-C852	ELECTROLYTIC CAPACIT	CEAS470M10
C806	CERAMIC CAPACITOR	ACG1021	C853,C854	CERAMIC CAPACITOR	CKDYX473M16
C807	ELECTR.CAPACITOR	CEAS010M50	C855-C858	CERAMIC CAPACITOR	ACG1017
C808	CERAMIC CAPACITOR	ACG1021	C859,C860	MYLOR FILM CAPACITOR	CQMA102J50
C809	ELECTR.CAPACITOR	CEAS101M10	C861,C862	PL.STYRENE CAPACITOR	CQSA101J50
C810	ELECTR.CAPACITOR	CEAS010M50	C863,C864	ELECTROLYTIC CAPACIT	CEYA2R2M50
C811	AUDIO FILM CAPACITOR	CFTXA224J50	C865,C866	MYLOR FILM CAPACITOR	CQMA683J50
C812	ELECTR.CAPACITOR	CEAS470M10	C867,C868	CERAMIC CAPACITOR	ACG1018
C813	CERAMIC CAPACITOR	ACG1021	C869,C870	ELECTROLYTIC CAPACIT	CEYA2R2M50
C814	CERAMIC CAPACITOR	CCDCH220J50	C871-C876	ELECTR.CAPACITOR	CEAS470M10
C815	ELECTR.CAPACITOR	CEAS101M10	<b>RESISTORS</b>		
C816	CERAMIC CAPACITOR	ACG1022	R870-R873	CARBON FILM RESISTOR	RD1/4PM390J
<b>OTHERS</b>					
	DIGITAL JACK 1-P	AKB1073	Other resistors		
	PHOTO SENSOR MODULE	AKX1015			

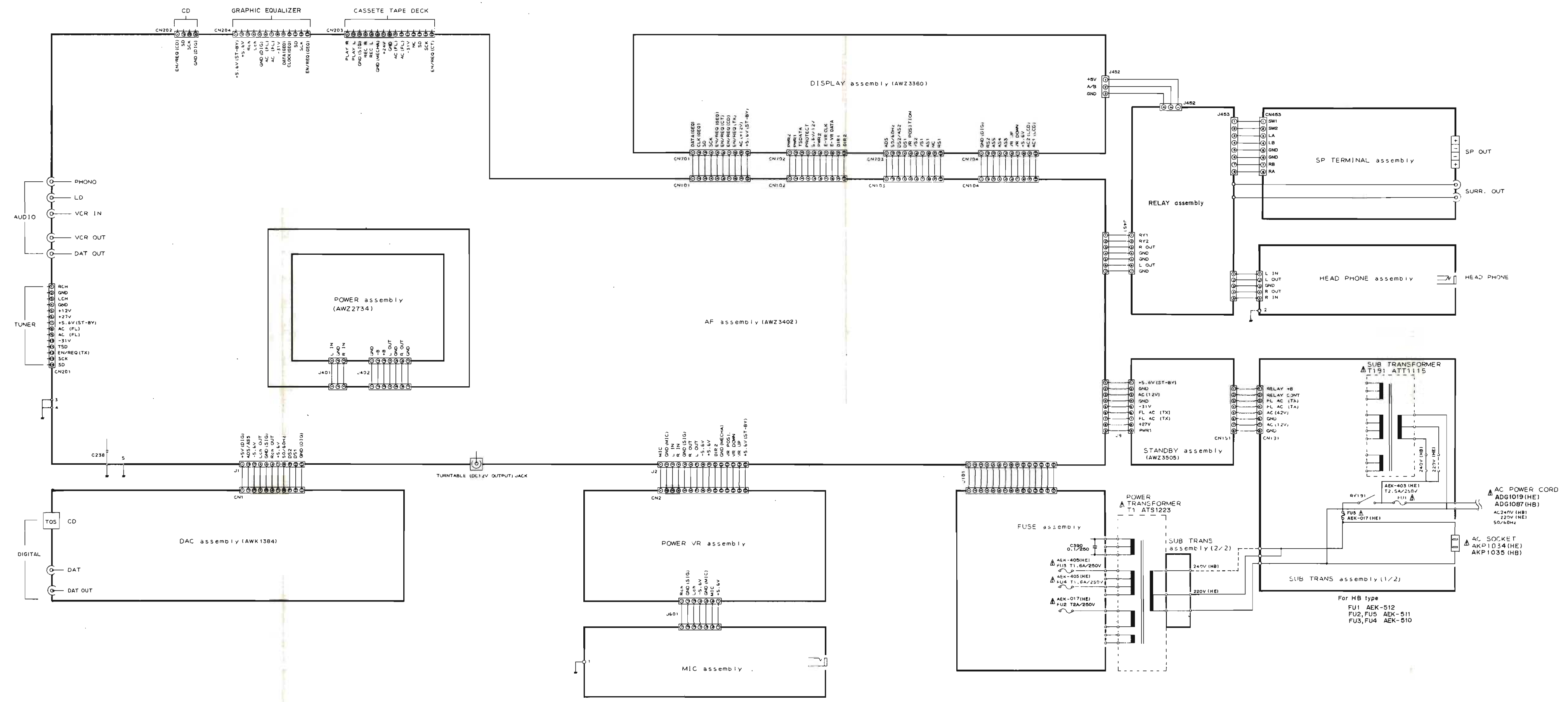
Mark	Symbol & Description	Part No.	Mark	Symbol & Description	Part No.
CN1	CONNECTOR(11P)	KPE11	<b>CAPACITORS</b>		
T801	OSC TRANSFORMER	ATX1003	C651,C652	ELECTR.CAPACITOR	CEAS100M25
<b>MIC ASSEMBLY</b>					
<b>SEMICONDUCTORS</b>					
IC601	OP-AMP IC	RC4558DXP	C653	ELECTR.CAPACITOR	CEAS470M10
Q601,Q602	TRANSISTOR	25C2458	C654	ELECTROLYTIC CAPACIT	CEYA470M25
D601,D602	DIODE	HSS104-02	C655	CERAMIC CAPACITOR	CKCYX103M25
			C656	ELECTROLYTIC CAPACIT	CEYA470M25
<b>CAPACITORS</b>					
C601	ELECTROLYTIC CAPACIT	CEJA220M16	C657,C658	CERAMIC CAPACITOR	CCCSL390J50
C602	CERAMIC CAPACITOR	ACG1019	C661,C662	ELECTR.CAPACITOR	CEAS100M50
C603	ELECTROLYTIC CAPACIT	CEJA3R3M50	<b>RESISTORS</b>		
C604	CERAMIC CAPACITOR	ACG1017	R659-R661	CARBON FILM RESISTOR	RD1/4PM390J
C605	AUDIO FILM CAPACITOR	GFTXA474J50	VR651	VARIABLE RESISTOR	ACX1027
			Other resistors		
C606	CERAMIC CAPACITOR	CKCYB681K50	<b>OTHERS</b>		
C607	ELECTROLYTIC CAPACIT	CEJA100M25	CN2	CONNECTOR(15P)	KPE15
C608	ELECTR.CAPACITOR	CEJA010M50	<b>◎DISPLAY ASSEMBLY (AWZ3360)</b>		
C609	ELECTR.CAPACITOR	CEAS470M10	<b>SEMICONDUCTORS</b>		
C610	ELECTR.CAPACITOR	CEJA470M10	IC701	SYSTEM CONTROL IC	PD5160A
			Q701-Q704	TRANSISTOR	DTA124ES
C611	CERAMIC CAPACITOR	CKCYF103Z50	Q705,Q706	TRANSISTOR	DTA143ES
C612,C613	ELECTROLYTIC CAPACIT	CEJA100M25	Q711	TRANSISTOR	DTC124ES
			Q712,Q713	TRANSISTOR	25C2458
<b>RESISTORS</b>					
R614,R615	CARBON FILM RESISTOR	RD1/4PM390J	Q716	TRANSISTOR	DTC124ES
R617,Q718	VARIABLE(100K-X1)	25C2458	Q717,Q718	TRANSISTOR	25C2458
VR602	VARIABLE(10K-X1)	ACS1025	Q719	TRANSISTOR	2SA1048
Other resistors			Q720	TRANSISTOR	25C2458
			Q721-Q723	TRANSISTOR	2SA1048
<b>OTHERS</b>					
JACK		AKN1017	D701,D702	DIODE	HSS104-02
<b>HEAD PHONE ASSEMBLY</b>					
<b>CAPACITOR</b>					
C451	CERAMIC CAPACITOR	CKDYX104M25	D703	LED(RED)	AEL1099
<b>RESISTORS</b>					
Δ R453-R456	METAL OXIDE RESISTOR	RS2LMF331J	D704-D706	DIODE	HSS104-02
<b>OTHERS</b>					
JACK		AKN1010	D707,D708	LED(RED)	AEL1099
			D709	LED	AEL1100
<b>SUB TRANS ASSEMBLY</b>					
<b>SEMICONDUCTORS</b>					
D191,D192	ZENER DIODE	RD6.2ESB3	D710-D715	LED(RED)	AEL1099
<b>CAPACITORS</b>					
C191,C192	CKA (0.01/AC400V)	ACG1003	D719-D721	DIODE	HSS104-02
			D722	LED(RED)	AEL1099
			D723	DIODE	HSS104-02
			D725,D726	LED	AEL1091
<b>OTHERS</b>					
AC SOCKET 1-P		AKP1034	D727	LED	AEL1074
SOCKET 8-P		AKP1045	D728	LED(RED)	AEL1038
RY191	RELAY	ASR1024	D729	LED	AEL1091
T191	POWER TRANSFORMER	ATT1115	D731	DIODE	HSS104-02
<b>POWER VR ASSEMBLY</b>					
<b>SEMICONDUCTORS</b>					
IC651	OP-AMP IC	RC4558DXP			

Mark	Symbol & Description	Part No.	Mark	Symbol & Description	Part No.
<b>RESISTORS</b>					
R742	RESISTOR ARRAY 100K	RA5T104J	<b>RESISTORS</b>		
R744	RESISTOR ARRAY(100K)	RA6T104J	R405,R406	CARBON FILM RESISTOR	RDR1/4PM563J
R761	RESISTOR ARRAY (10K)	RA4T104J	R411-R414	CARBON FILM RESISTOR	RD1/2PM332J
Other resistors			R417,R418	CARBON FILM RESISTOR	RD1/4PMFL222J
			R419	CARBON FILM RESISTOR	RD1/2PM102J
			R420	CARBON FILM RESISTOR	RD1/4PMFL101J
<b>OTHERS</b>					
X701	CERAMIC RESONATOR	ASS1025	Δ R421	CARBON FILM RESISTOR	RD1/4PMFL471J
	SOCKET(10P)	AKP1044	Δ R422	CARBON FILM RESISTOR	RD1/4PMFL101J
	REMOTE RECEIVER UNIT	AXX1010	Other resistors		
<b>RELAY ASSEMBLY</b>					
<b>SEMICONDUCTORS</b>					
Q451	TRANSISTOR	DTC124ES	<b>FUSE ASSEMBLY</b>		
Q452,Q453	TRANSISTOR	25D438	<b>CAPACITORS</b>		
Q454	TRANSISTOR	DTC124ES	C390	MYLOR FILM CAPACITOR	CQMA104K250
Q455,Q456	TRANSISTOR	25D438	<b>◎AF ASSEMBLY (AWZ3402)</b>		
D451-D460	ZENER DIODE	RD12ESB3	<b>SEMICONDUCTORS</b>		
<b>COILS</b>					
L451,L452	COIL	ATH1004	IC101	REGULATOR IC	UPC78M05H
<b>CAPACITORS</b>					
C461-C464	MYLOR FILM CAPACITOR	CQMA104J50	IC102	REGULATOR IC	NJM78M56FAS
<b>RESISTORS</b>					
R461-R464	CARBON FILM RESISTOR	RD1/4PMFL100J	IC103	REGULATOR IC	NJM79M05FA
R474-R476	METAL OXIDE RESISTOR	RS2LMF821J	IC104	REGULATOR IC	UPC78M12H
Other resistors			IC105	MECHANISM DRIVER IC	TA7291S
			IC201	OP-AMP IC	RC4558DXP
			IC202	LOGIC IC	TC4066BP
			IC203	LOGIC IC	MC14052BCP
			IC204	OP-AMP IC	M5218ALF
			IC205	LOGIC IC	TC4066BP
			IC206	LOGIC IC	MC14052BCP
<b>OTHERS</b>					
CN451	CONNECTOR(7P)	KPC7	IC207	OP-AMP IC	RC4558DXP
RY451-RY455	RELAY	ASR-112	IC301,IC302	GEQ IC	LA3607
			IC303	GEQ EVR IC	LC7522
			Q101	TRANSISTOR	2SB560
<b>SP TERMINAL ASSEMBLY</b>					
<b>SWITCHES</b>					
S451	SWITCH	ASH1015	Q102	TRANSISTOR	2SA970
<b>CAPACITORS</b>					
C465	ELECTROLYTIC CAPACIT	CEANP4R7M100	Q103-Q105	TRANSISTOR	25C2458
<b>OTHERS</b>					
PIN JACK(2P)		AKB1039	Q106	TRANSISTOR	25D438
SPEAKER TERMINAL 8-P		AKE-111	Q107,Q108	TRANSISTOR	DTC124ES
CN453	JUMPER CONNECTOR	KPC8	Q551	TRANSISTOR	2SA1048
<b>◎POWER ASSEMBLY (AWZ2734)</b>					
<b>SEMICONDUCTORS</b>					
IC401	AUDIO IC	STK4192-2GP	Q552	TRANSISTOR	25C2603
<b>CAPACITORS</b>					
C401,C402	POLYESTER CAPACITOR	CQMXA472J100	Q553	TRANSISTOR	2SA1048
C403	ELECTR.CAPACITOR	CEAS4R7M50	D101	DIODE	RBV402
C404	ELECTROLYTIC CAPACIT	CEHAQ4R7M50	D102-D107	DIODE	S5566
C405,C406	CERAMIC CAPACITOR	CCDSL470J50	D108	DIODE	RB152
C407,C408	ELECTROLYTIC CAPACIT	CEYA101M50	D109	DIODE	HSS104-02
			D110	ZENER DIODE	RD33ESB2
			D111	ZENER DIODE	RD6.2ESB
			D112,D113	DIODE	HSS104-02
			D114	ZENER DIODE	RD3.0ESB1
			D115	DIODE	HSS104-02
			D116	ZENER DIODE	RD4.7ESB
			D117	DIODE	HSS104-02
<b>CAPACITORS</b>					
C101	CKA (0.01/AC250V)	ACG1005	<b>RESISTORS</b>		
C102,C103	CERAMIC CAPACITOR	CKDYF103Z50	Δ R101,R102	METAL OXIDE RESISTOR	RS2LMFR22J
C104,C105	ELECTROLYTIC CAPACIT	ACH1031	Δ R103	METAL OXIDE RESISTOR	RS2LMF222J
C106,C107	ELECTR.CAPACITOR	CEAS222M16	Δ R105,R106	CARBON FILM RESISTOR	RD1/4PMFL470J
C108	ELECTR.CAPACITOR	CEAS471M50	Δ R129	CARBON FILM RESISTOR	RD1/2PMFL2R2J
			Δ R132	CARBON FILM RESISTOR	RD1/4PM100J
C109	ELECTR.CAPACITOR	CEAS332M25	Δ R133-R135	CARBON FILM RESISTOR	RD1/4PM100J
			R136	METAL OXIDE RESISTOR	RS3LMF2R2J
			R217,R218	CARBON FILM RESISTOR	RD1/4PM390J
			R257,R258	CARBON FILM RESISTOR	RD1/4PM390J

Mark	Symbol & Description	Part No.	Mark	Symbol & Description	Part No.
C110	ELECTR.CAPACITOR	CEHAQ101M50	R321-R324	CARBON FILM RESISTOR	RD1/4PM390J
C111,C112	ELECTR.CAPACITOR	CEAS101M50	R327,R328	CARBON FILM RESISTOR	RD1/4PM390J
C113	ELECTROLYTIC CAPACIT	CEHAQ220M50	Other resistors		
C114	ELECTROLYTIC CAPACIT	CEHAQ470M50	<b>OTHERS</b>		
C115	ELECTROLYTIC CAPACIT	CEHAQ470M16	PHONO JACK 4-P		AKB-115
			PIN JACK(6P)		AKB1123
			PLUG(10P)		AKM1037
			JACK		AKN-203
			SOCKET(4P)		AKP1046
C116	ELECTROLYTIC CAPACIT	CEHAQ221M10	SOCKET(13P)		AKP1047
C117	ELECTR.CAPACITOR	CEAS100M25	SOCKET(14P)		AKP1048
C118	CERAMIC CAPACITOR	CKCYX103M25	SOCKET(15P)		AKP1049
C119	ELECTR.CAPACITOR	CEAS221M10	SCREW		PBZ30P080FMC
C120	ELECTR.CAPACITOR	CEAS010M50	<b>◎STANDBY ASSEMBLY (AWZ3505)</b>		
C121	CERAMIC CAPACITOR	ACG1021	<b>SEMICONDUCTORS</b>		
C201,C202	CERAMIC CAPACITOR</				

# 4. SCHEMATIC DIAGRAMS AND P.C.BOARD CONNECTION DIAGRAMS

## 4.1 OVER ALL SCHEMATIC DIAGRAM



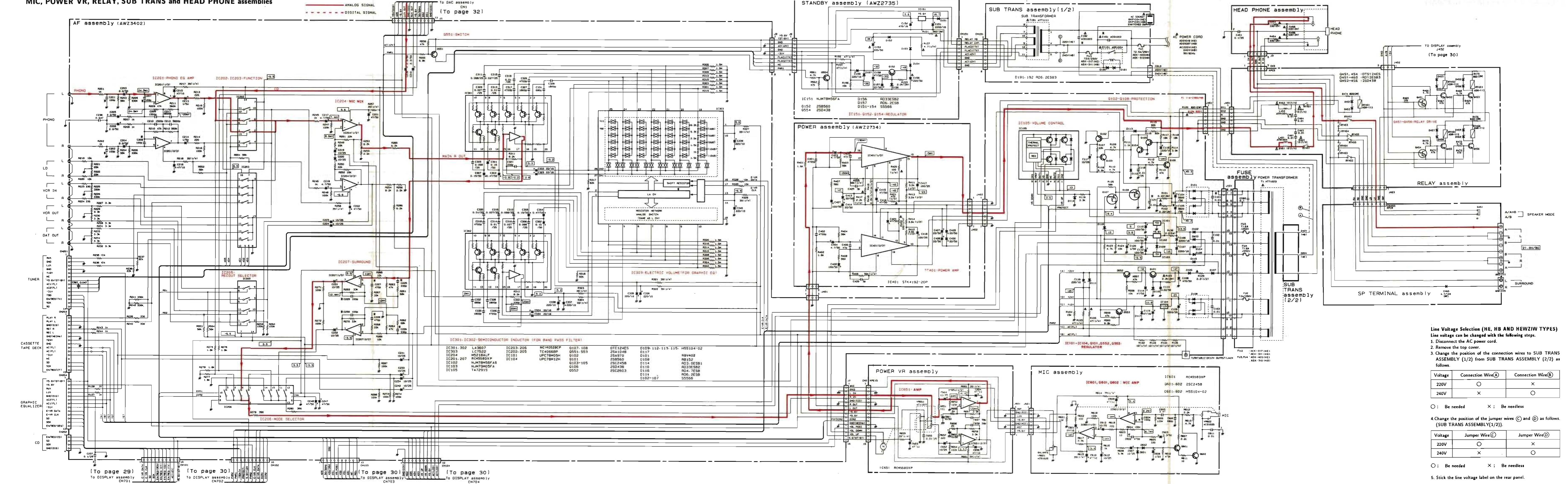
- RESISTORS:**  
Indicated in  $\Omega$ , 1/8, 1/4W.,  $\pm 5\%$  tolerance unless otherwise noted  
k; k $\Omega$ , M; M $\Omega$ , (F);  $\pm 1\%$ , (G);  $\pm 2\%$ , (K);  $\pm 10\%$ , (M);  $\pm 20\%$  tolerance.
- CAPACITORS:**  
Indicated in capacity ( $\mu F$ )/voltage(V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.
- VOLTAGE, CURRENT:**  
  - V: Signal voltage at 60 W + 60 W, 8 $\Omega$  output(1kHz).
  - DC: DC voltage (V) at no input signal.
  - Value in ( ) is DC voltage at rated power.
  - mA: DC current at no input signal.
- OTHERS:**
  - ◆: Signal route.
  - ⊗: Adjusting point

The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.  
 \* marked capacitors and resistors have parts numbers.  
 This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.
- SWITCHES:**

**DISPLAY ASSEMBLY**

  - S701: POWER
  - S702: LSS SET
  - S703: LSS MODE
  - S704: PHONO
  - S705: TUNER
  - S706: TAPE
  - S707: DAT
  - S708: CD
  - S709: LD
  - S710: VCR
  - S711: SURROUND & STEREO WIDE
  - S712: DIRECT MODE
  - S713: MUTING
  - S714: SPEAKERS A/B OR A+B

4.2 AF(AWZ3402), STANDBY(AWZ2735), SP TERMINAL, FUSE, POWER(AWZ2734),  
MIC, POWER VR, RELAY, SUB TRANS and HEAD PHONE assemblies



**Line Voltage Selection (HE, HB AND HEWZIW TYPES)**  
 Line voltage can be changed with the following steps.

1. Disconnect the AC power cord.
2. Remove the top cover.
3. Change the position of the connection wires to SUB TRANS ASSEMBLY (1/2) from SUB TRANS ASSEMBLY (2/2) as follows.
4. Change the position of the jumper wires (C) and (D) as follows. (SUB TRANS ASSEMBLY (1/2)).
5. Stick the line voltage label on the rear panel.

Voltage	Connection Wire(A)	Connection Wire(B)
220V	○	×
240V	×	○

○ : Be needed      × : Be needless

Voltage	Jumper Wire(C)	Jumper Wire(D)
220V	○	×
240V	×	○

○ : Be needed      × : Be needless

Parts No.	Description
AXX-193	220V label
AXX-192	240V label

1 2 3 4 5 6 7 8 9

A

B

C

D

A

B

C

D

AF assembly (AWZ3402)

ANP1330-F

POWER VR assembly

MIC assembly

HEADPHONE assembly

SP TERMINAL assembly

POWER assembly (AWZ2734)

RELAY assembly

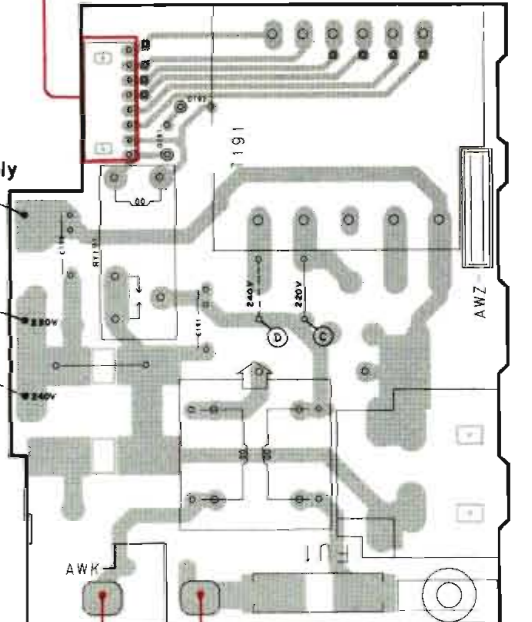
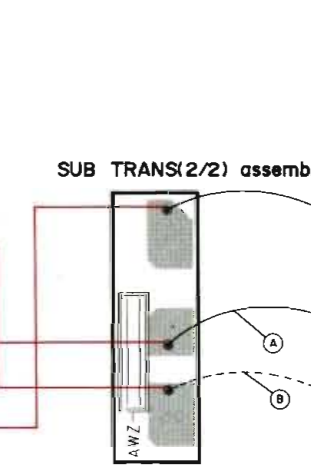
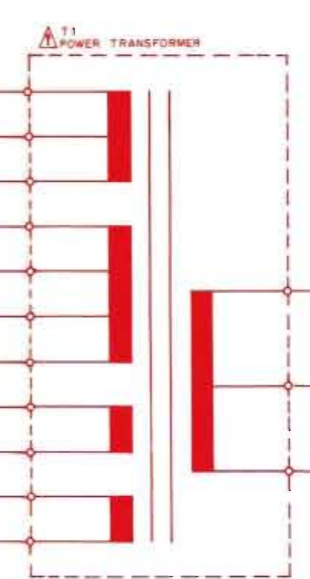
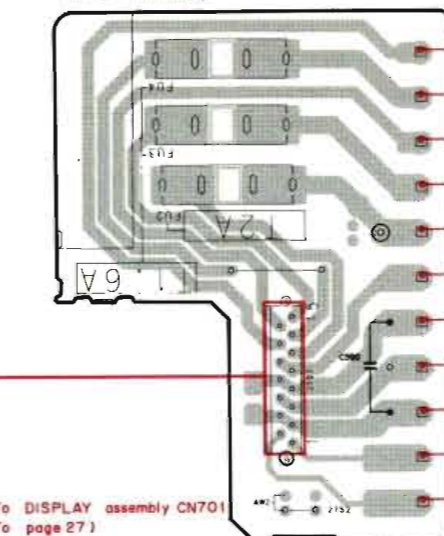
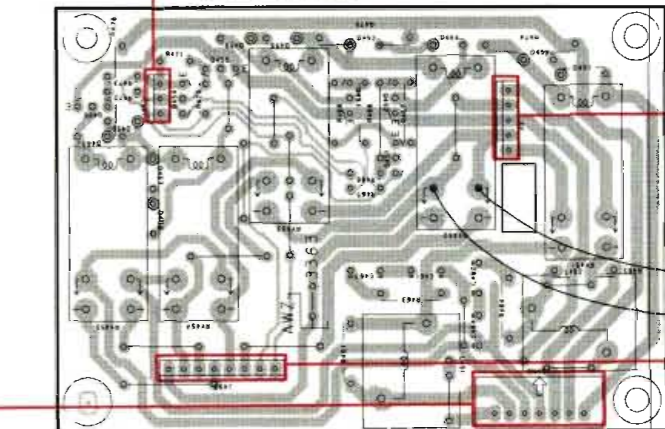
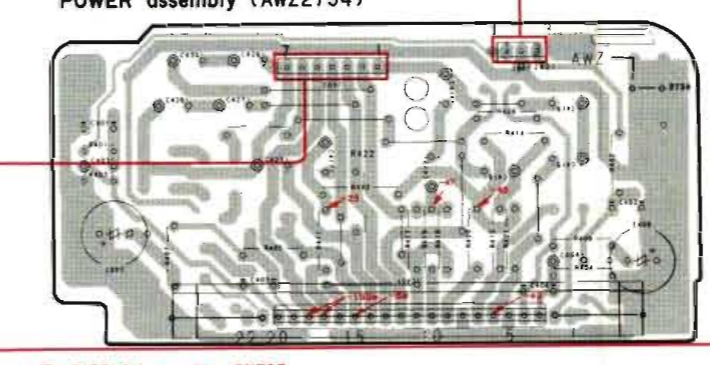
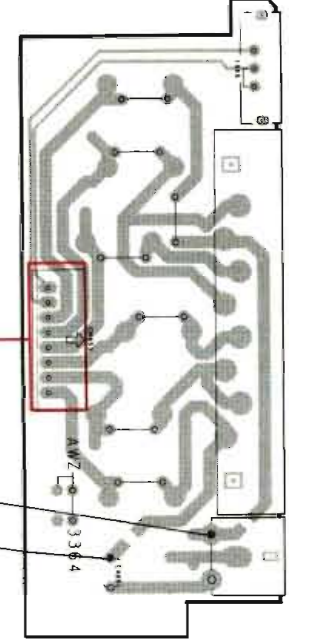
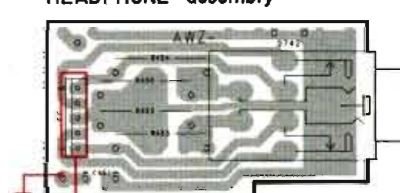
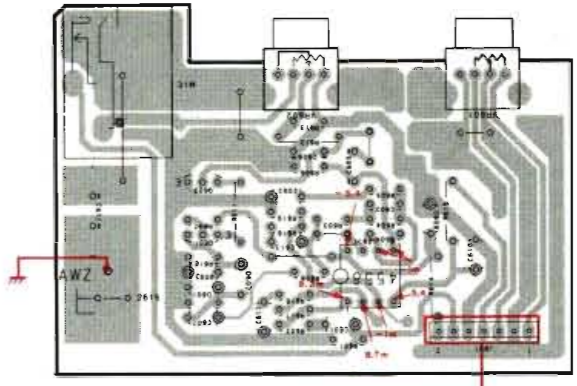
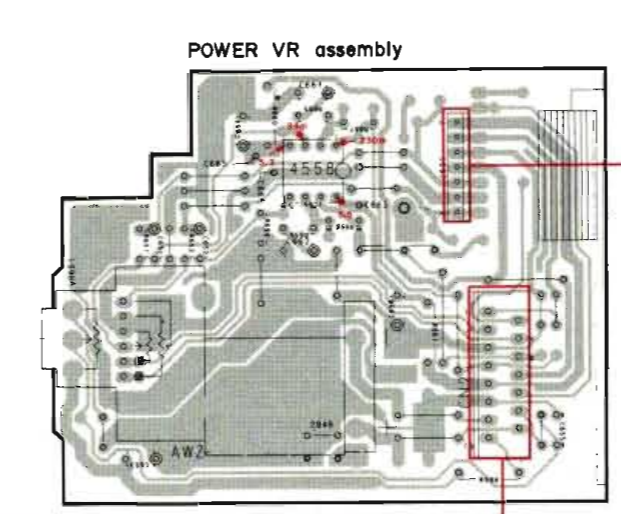
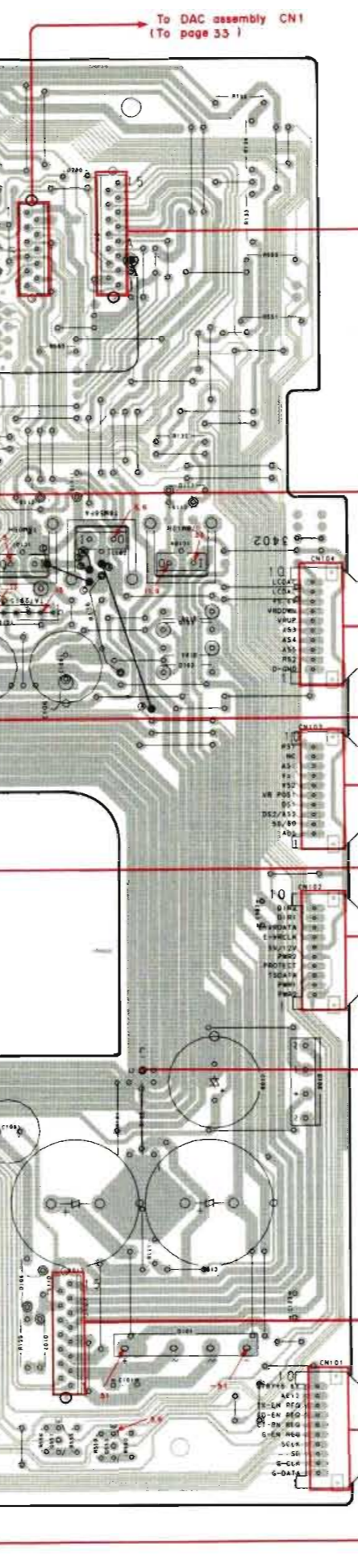
FUSE assembly

SUB TRANS(1/2) assembly

SUB TRANS(2/2) assembly

STANDBY assembly(AWZ3505)

IC201  
IC202  
IC206  
PHONO  
IC205  
IC204  
DAT OUT  
IC203  
IC207  
VCR OUT  
VCR IN  
LD IN  
IC301  
IC101  
IC302  
IC105  
IC303  
Q103  
Q102  
Q106  
Q104  
Q105  
TUNER  
CD  
CASSETE TAPE DECK  
Q108  
Q107  
Q101  
Q052  
Q051  
Q053  
GRAPHIC EQUALIZER



AC POWER CORD  
AC 220V  
240V  
50/60Hz

To DAC assembly CN1  
(To page 33)

To DISPLAY assembly CN704  
(To page 28)

To DISPLAY assembly CN703  
(To page 28)

To DISPLAY assembly CN702  
(To page 27)

To DISPLAY assembly CN701  
(To page 27)

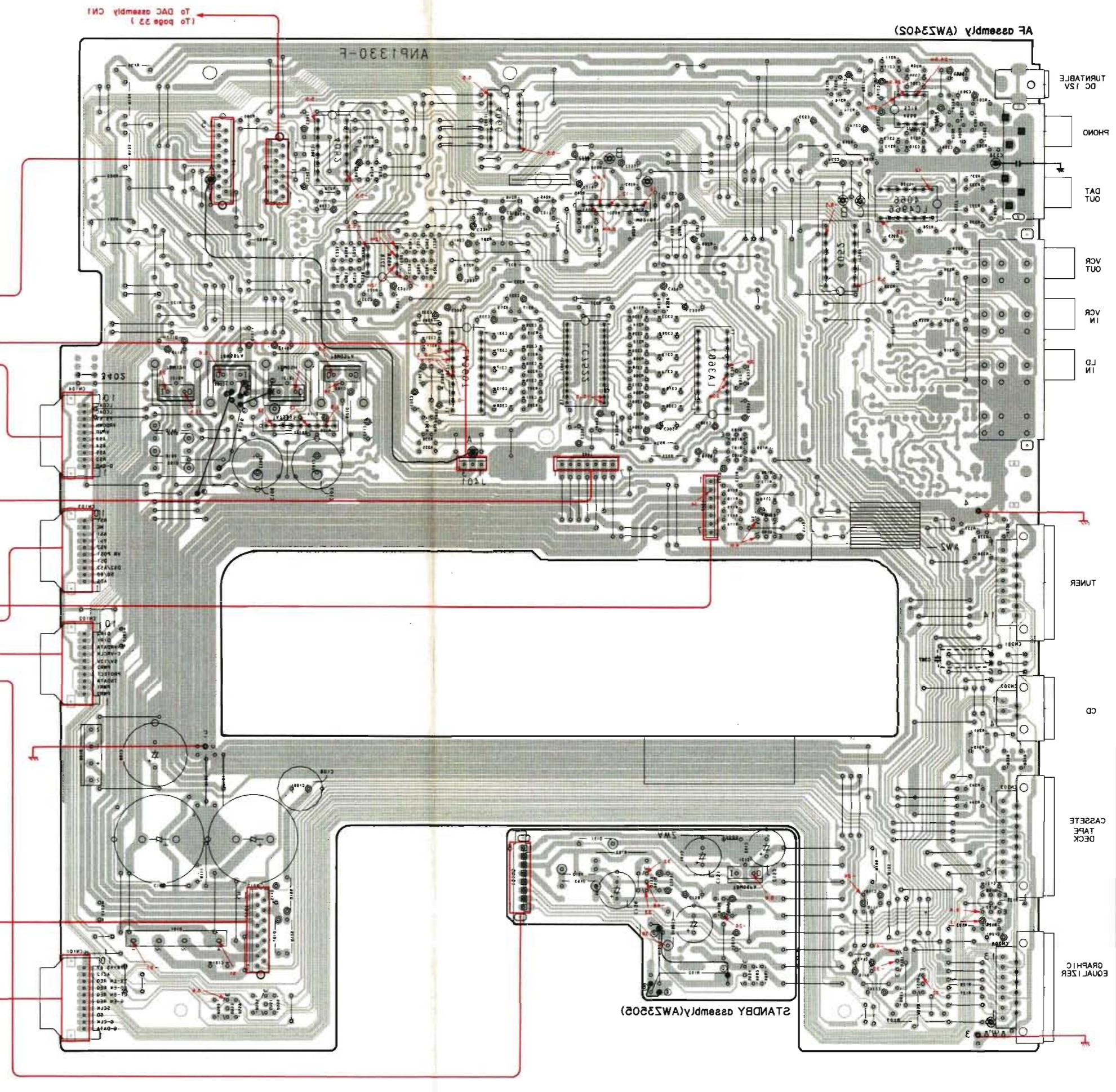
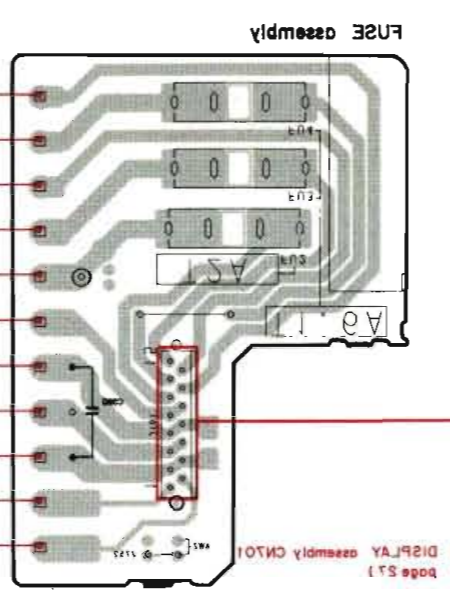
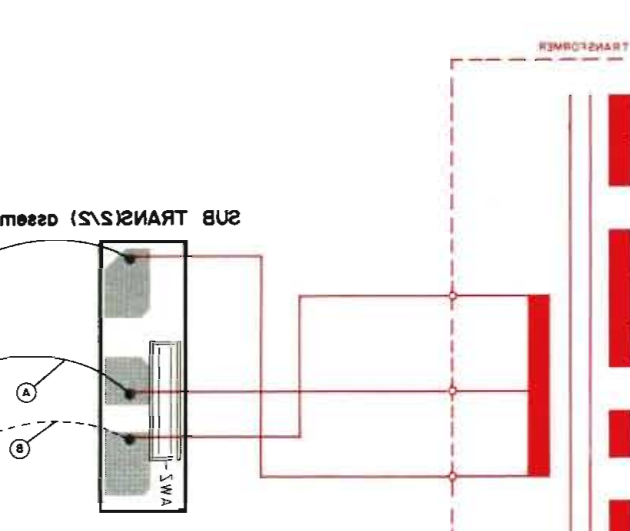
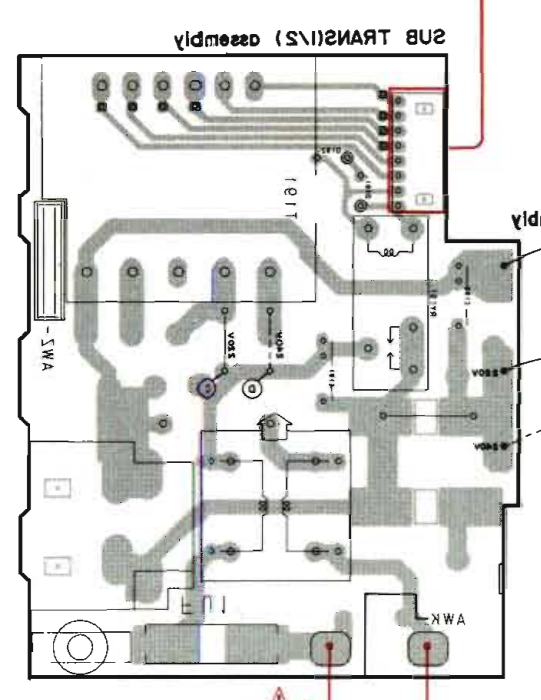
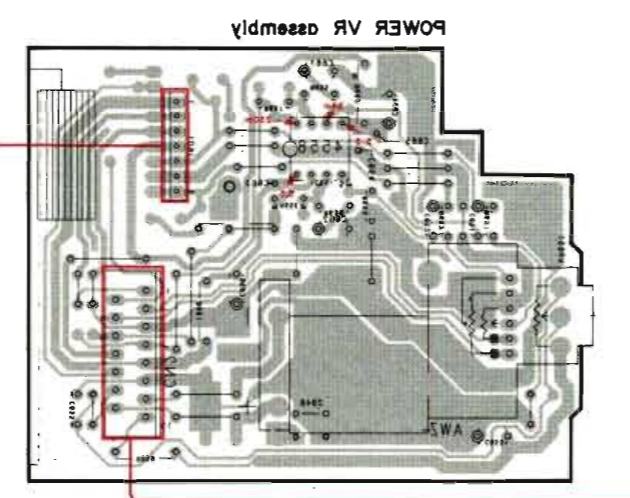
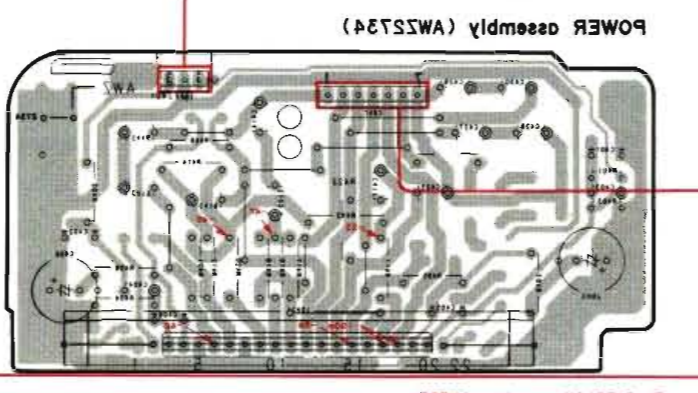
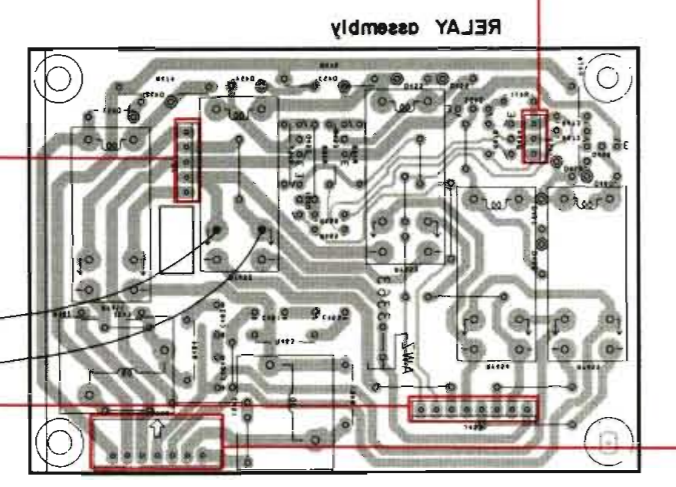
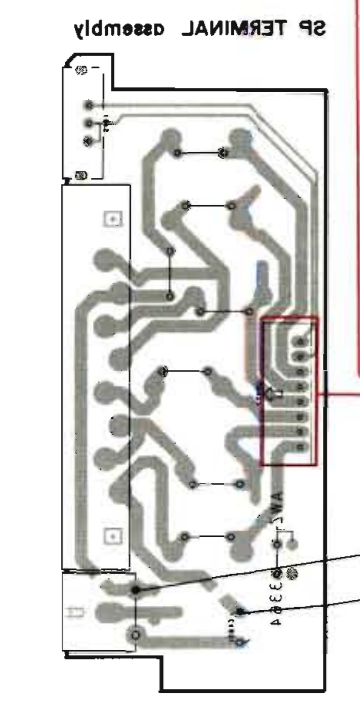
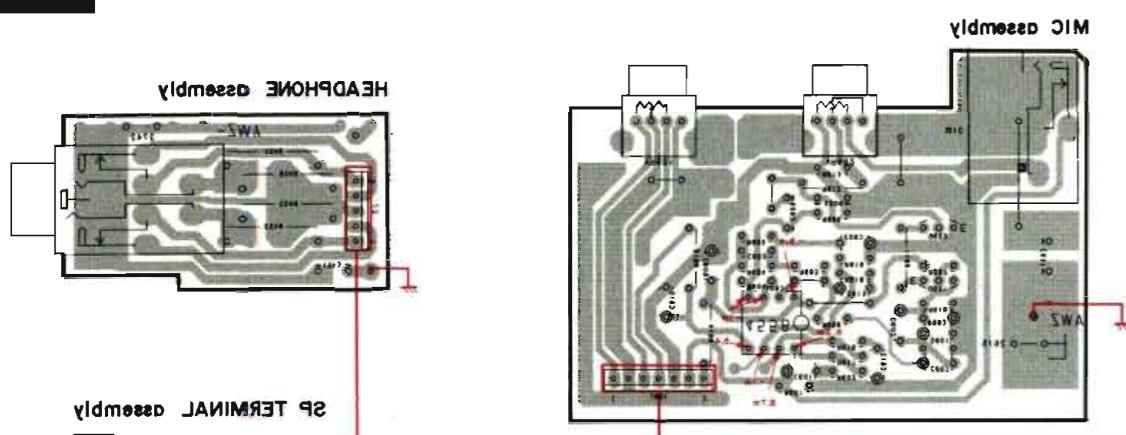
1 2 3 4 5 6 7 8 9

A

B

C

D



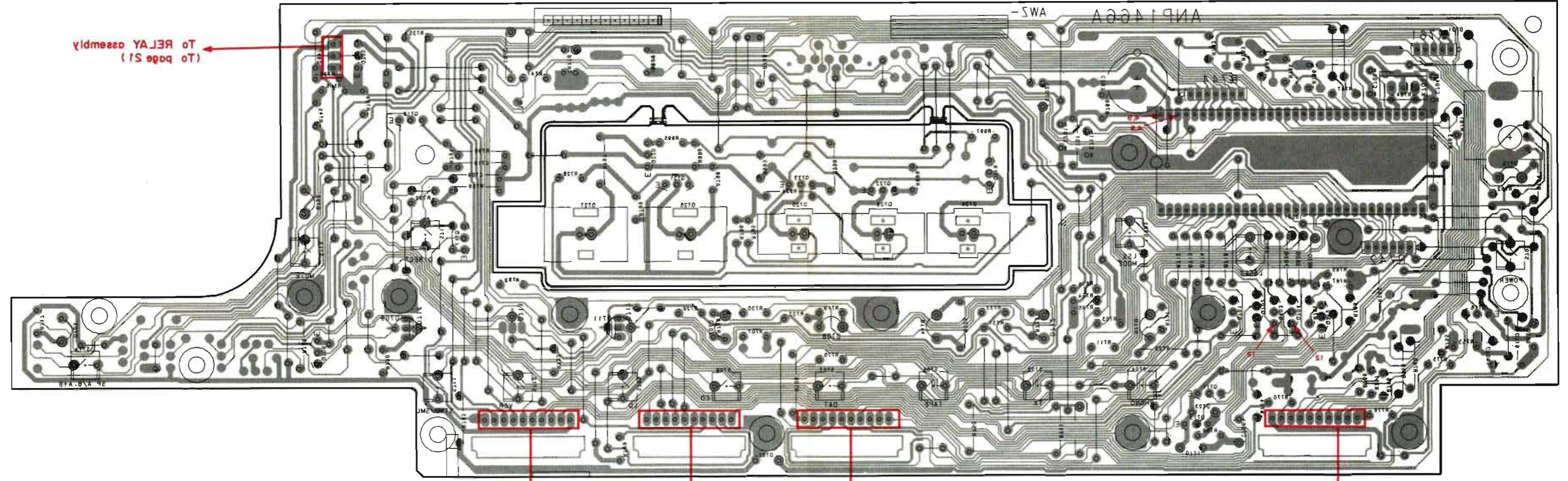
This P.C.B. connection diagram is viewed from the foil side.





This P.C.B. connection diagram is viewed from the foil side.

DISPLAY assembly(YAW3360)



To RELAY assembly  
(To page S1)

To AF assembly CN104  
(To page S0)

To AF assembly CN103  
(To page S0)

To AF assembly CN103  
(To page S0)

To AF assembly CN105  
(To page S0)

To AF assembly CN101  
(To page S0)

Q204 Q205  
Q215 Q201 Q213  
IC201 Q203 Q211

Q218 Q217 Q208 Q209

Q251 Q250 Q253 Q255

Q219

Q216

A

B

C

D

a

b

4

3

2

1

a

b

4

3

2

1

4.3 DISPLAY(AWZ3360) assembly

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

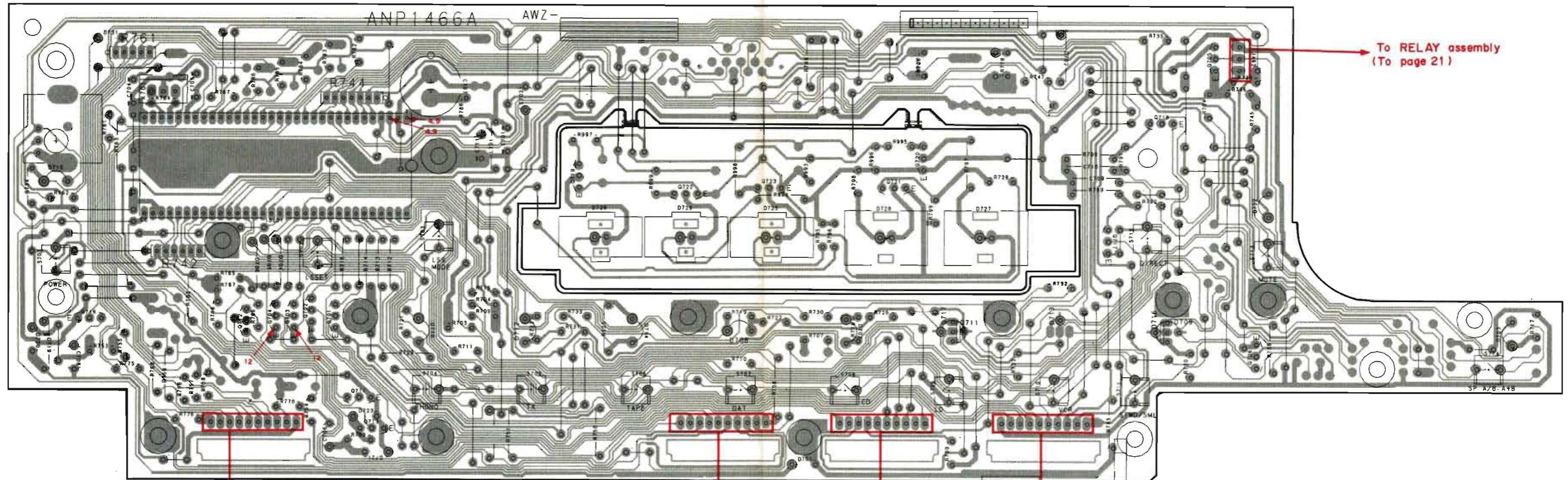
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
		Transistor
		Radiator type transistor
		Diode
		Resistor
		Capacitor (Polarity)
		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ⊖ (double circles) shows negative terminal.
4. The diode terminal marked with ⊖ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

DISPLAY assembly(AWZ3360)



Q716

IC701 Q703 Q711  
Q712 Q701 Q713  
Q704 Q702

Q719

Q722

Q723

Q721 Q720

Q717

Q718

Q705

Q706

To AF assembly CN101  
(To page 20)

To AF assembly CN102  
(To page 20)

To AF assembly CN103  
(To page 20)

To AF assembly CN104  
(To page 20)

To RELAY assembly  
(To page 21)

1 2 3 4 5 6

DISPLAY assembly (AWZ3360)

A

A

B

B

C

C

D

D

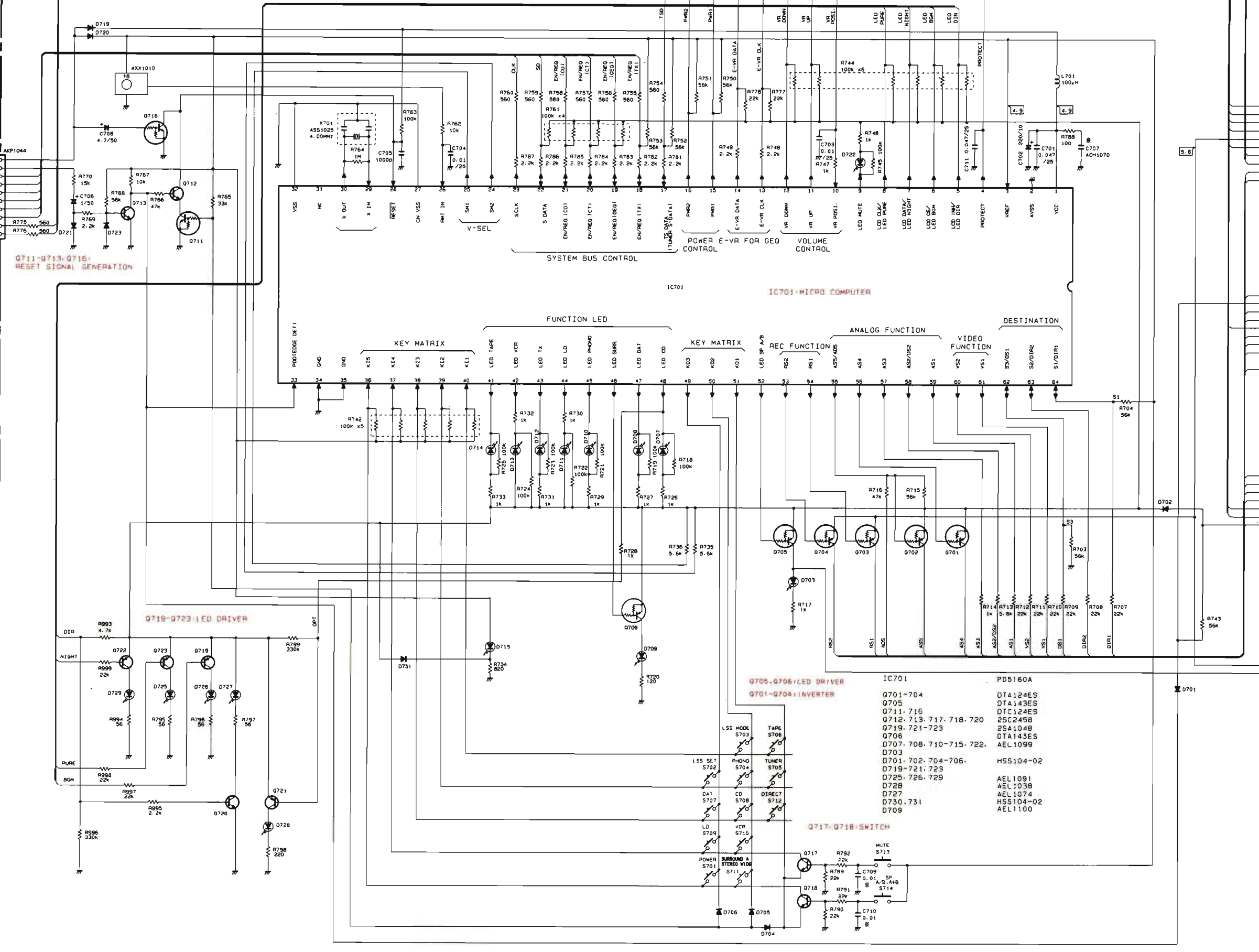
To AF assembly  
CN101  
(To page 15)

To AF assembly  
CN102  
(To page 15)

To AF assembly  
CN103  
(To page 15)

To AF assembly  
CN104  
(To page 16)

To RELAY assembly  
J452  
(To page 18)



4.4 DAC(AWK1384) assembly

A

B

C

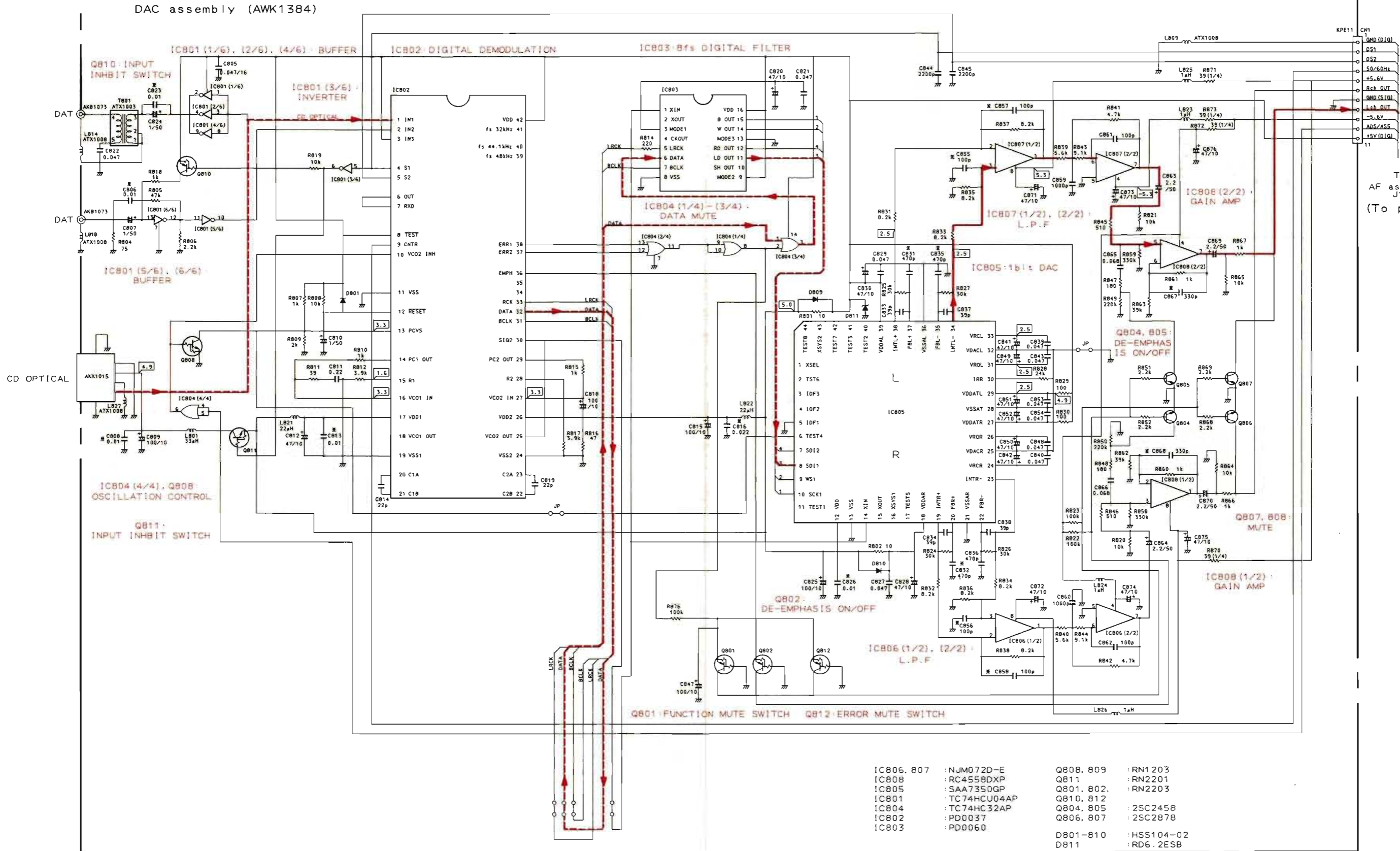
D

A

B

C

D

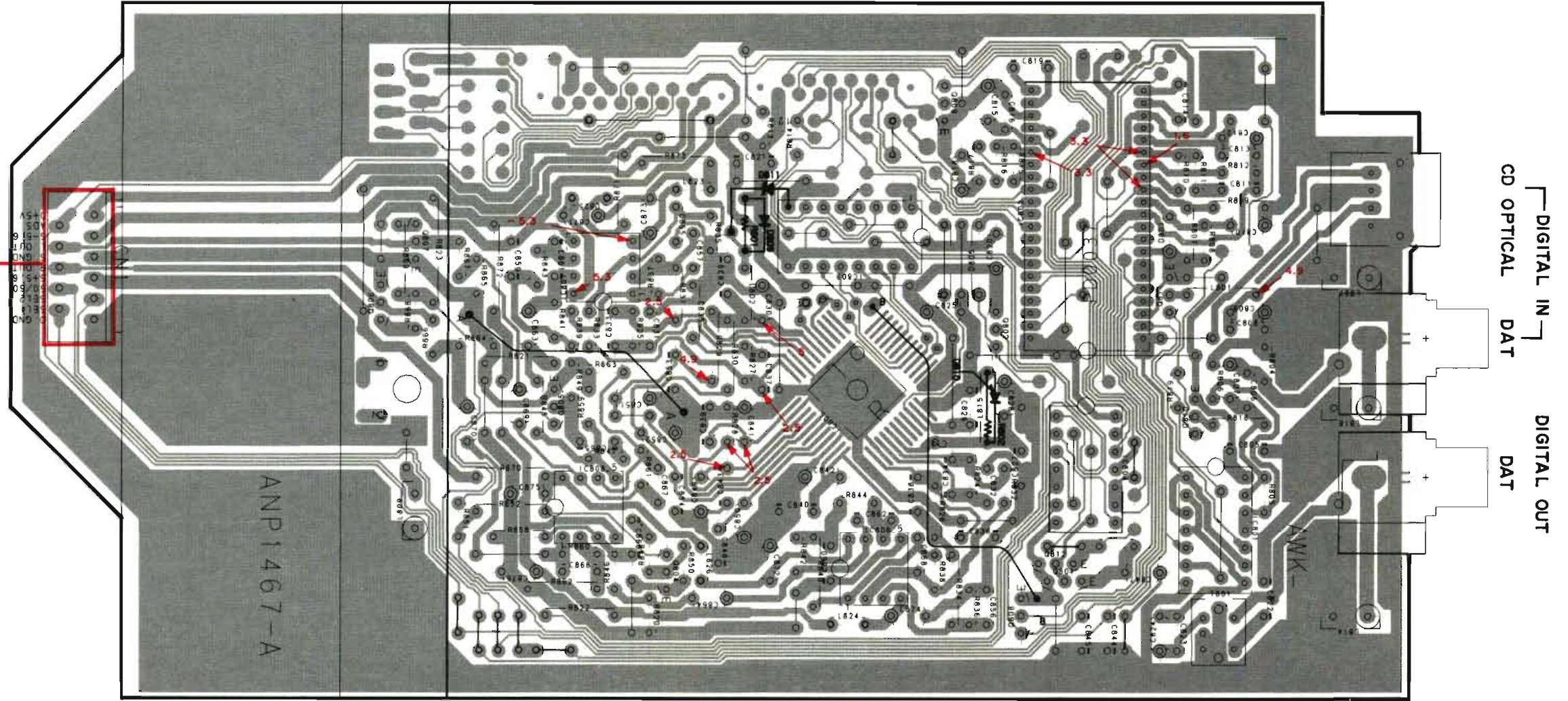


To AF assembly J1 (To page 16)

IC806, 807	: NJM072D-E	Q808, 809	: RN1203
IC808	: RC4558DXP	Q811	: RN2201
IC805	: SAA7350GP	Q801, 802	: RN2203
IC801	: TC74HC04AP	Q810, 812	
IC804	: TC74HC32AP	Q804, 805	: 2SC2458
IC802	: PD0037	Q806, 807	: 2SC2878
IC803	: PD0060	D801-810	: HSS104-02
		D811	: RD6.2ESB

DAC assembly (AWK1384)

To AF assembly J1  
(To page 20)



Q806 Q807 Q805 IC807 IC803 Q809 Q802 IC802 Q811 Q810  
IC808 Q804 IC805 IC806 Q808 IC804 IC801  
Q812  
Q801

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

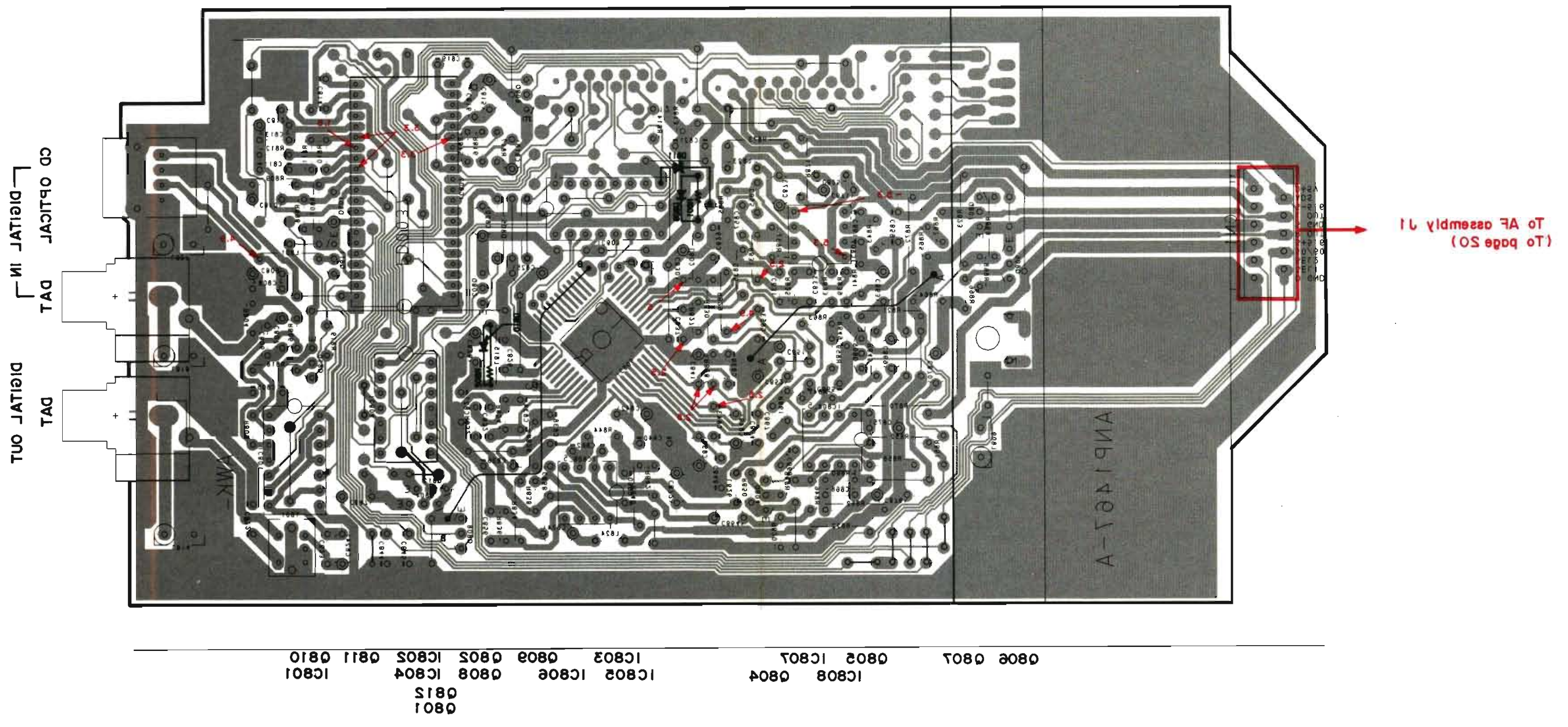
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
		Transistor
		Radiator type transistor
		Diode
		Resistor
		Capacitor (Polarity)
		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ⊕ (double circles) shows negative terminal.
4. The diode terminal marked with ⊕ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

DAC assembly (WK1384)



This P.C.B. connection diagram is viewed from the foil side.

### 5. FOR HB AND HEWZIWI TYPES

**NOTES:**

- Parts without part number cannot be supplied.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

**CONTRAST OF MISCELLANEOUS PARTS**

The A-Z370/HB and HEWZIWI types are the same as the A-Z370/HE type with the exception of the following sections.

Mark	Symbol & Description	Part No.			Remarks
		HE type	HB type	HEWZIWI type	
⊙	AF assembly	AWZ3402	AWZ3402	AWZ3405	
⊙	POWER assembly	AWZ2734	AWZ2734	AWZ2739	
	SP TERMINAL assembly	Non supply	Non supply	Non supply	
	POWER VR assembly	Non supply	Non supply	Non supply	
	HEAD PHONE assembly	Non supply	Non supply	Non supply	
	SUB TRANS assembly	Non supply	Non supply	Non supply	
	MIC assembly	Non supply	Non supply	Non supply	
Δ	AC power cord	ADG1019	ADG1087	ADG1012	
Δ	FU1 Fuse	AEK-403	AEK-512	AEK-403	
Δ	FU2,5 Fuse	AEK-017	AEK-511	AEK-017	
Δ	FU3,4 Fuse	AEK-405	AEK-510	AEK-405	
	Operating instructions (Dutch, Swedish, Spanish, Portuguese)	ARC1248	.....	.....	
	Operating instructions (English, German, French, Italian)	ARE1180	.....	.....	
	Operating instructions (English)	.....	ARB1290	.....	
	Operating instructions (German)	.....	.....	ARC1245	

**AF assembly (AWZ3405)**

The AF assembly(AWZ3405) is the same as the AF assembly(AWZ3402) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ3402	AWZ3405	
	C102, C103	CKDYF103Z50	CKDYF473Z50	
	C341-344, 347-349, 383, 386, 387	.....	CKDYF473Z50	
	C345, 346	.....	CQMA104K50	
	C351, 352	.....	ACG1020	
	C353, 354, 357, 358, 361, 362	.....	CKDYB331K50	
	C355, 356, 359, 360, 363, 364, 373-382	.....	ACG1018	
	C384, 385	.....	CKDYB391K50	
	R201, 202	RD1/8PM102J	RD1/8PM222J	

**POWER assembly (AWZ2739)**

The POWER assembly(AWZ2739) is the same as the POWER assembly(AWZ2734) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ2734	AWZ2739	
	C405, 406	CCDSL470J50	CCDSL221J50	
	C431, 432	.....	CCDSL101K500	
	C433, 434	.....	CCDSL101J50	
	C435, 436	.....	CKDYB331K50	
	R425, R429, R430	.....	RD1/8PM100J	

**SP TERMINAL assembly**

The SP TERMINAL assembly (HEWZIWI type) is the same as the SP TERMINAL assembly (HE and HB types) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		HE, HB types	HEWZIWI type	
	C365, 366	.....	CFTXA103J50	
	C471-482	.....	CQMXA103J100	
	L353, 354	.....	ATH1002	

**POWER VR assembly**

The POWER VR assembly (HEWZIWI type) is the same as the POWER VR assembly (HE and HB types) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		HE, HB types	HEWZIWI type	
	C663-665	.....	CKDYB103K50	
	C666, 667	.....	CCDSL470J50	
	R700	.....	RD1/8PM100J	

**HEAD PHONE assembly**

The HEAD PHONE assembly (HEWZIWI type) is the same as the HEAD PHONE assembly (HE and HB types) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		HE, HB types	HEWZIWI type	
	C369, 370	.....	CKDYX473M25	

**SUB TRANS assembly**

The SUB TRANS assembly (HB type) is the same as the SUB TRANS assembly (HE and HEWZIWI types) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		HE, HEWZIWI types	HB type	
	AC socket (OUTLET 1P)	AKP1034	AKP1035	

**MIC assembly**

The MIC assembly (HEWZIWI type) is the same as the MIC assembly (HE and HB types) with the exception of the following sections.

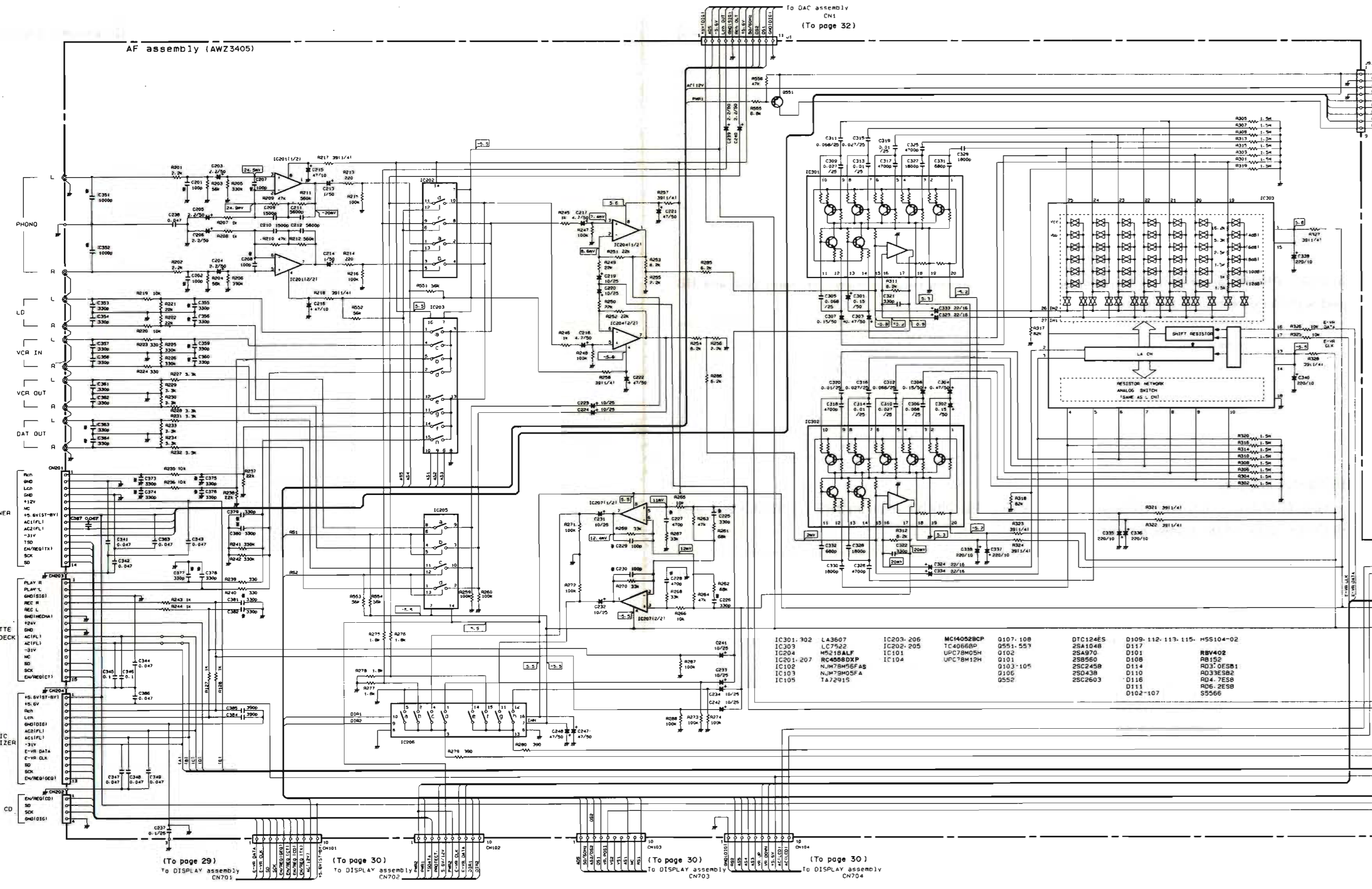
Mark	Symbol & Description	Part No.		Remarks
		HE, HB types	HEWZIWI type	
	C371	.....	ACG1020	
	C372	.....	ACG1017	
	C604	ACG1017	ACG1020	
	L601	.....	LAUR56M	
	R351	.....	RD1/8PM222J	

A

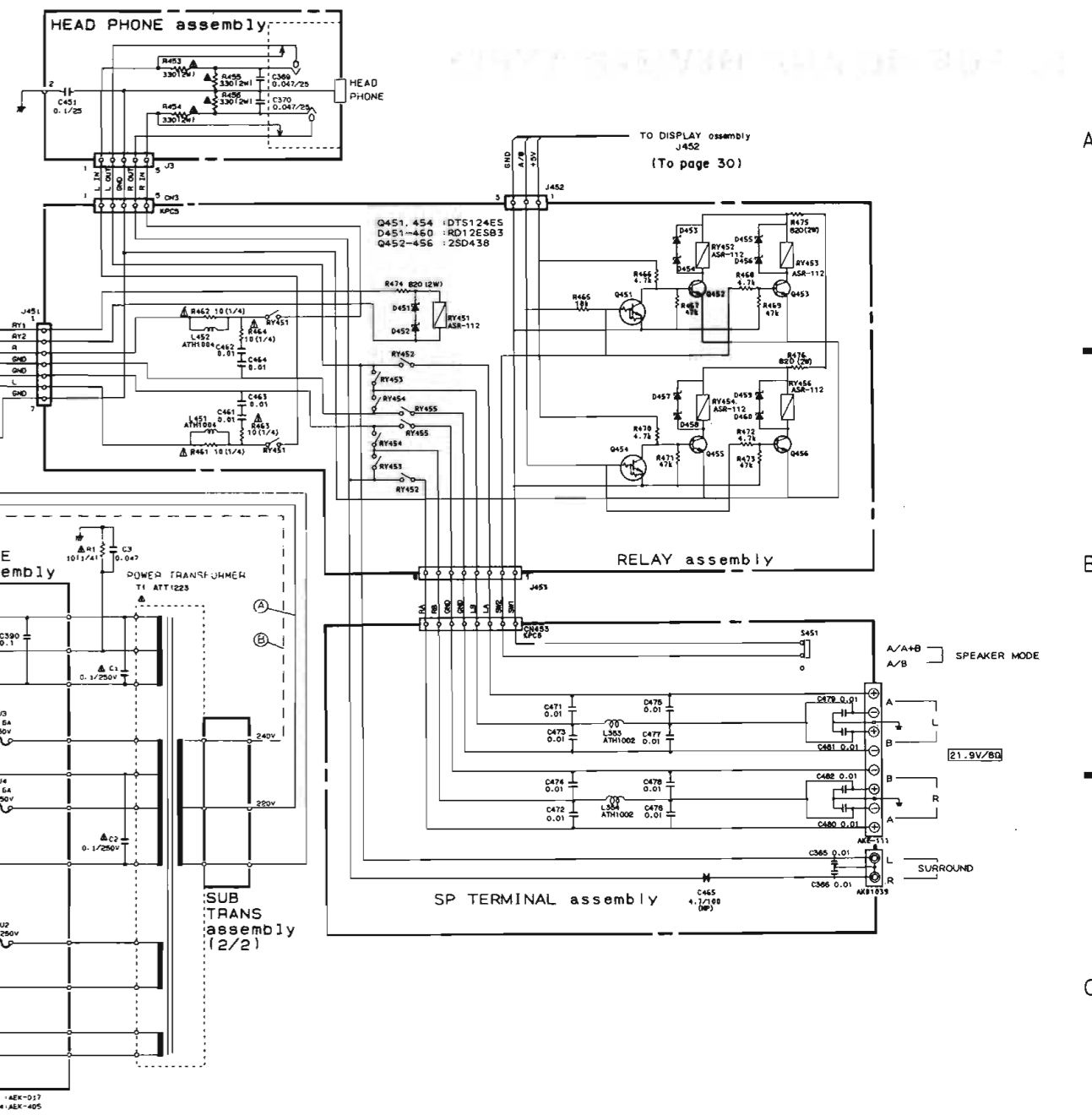
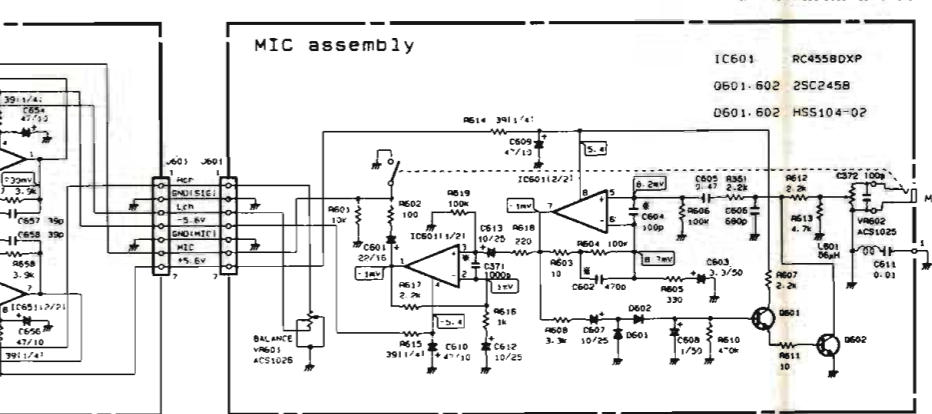
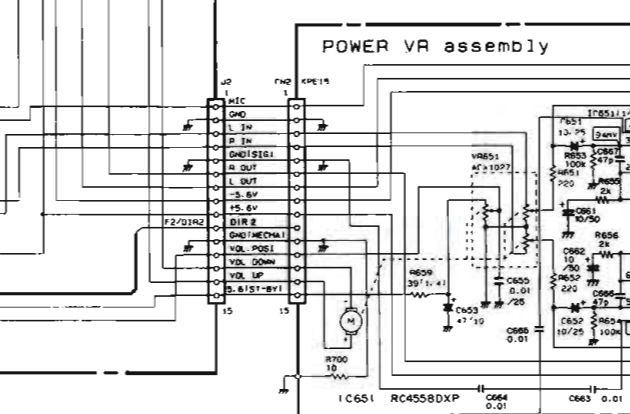
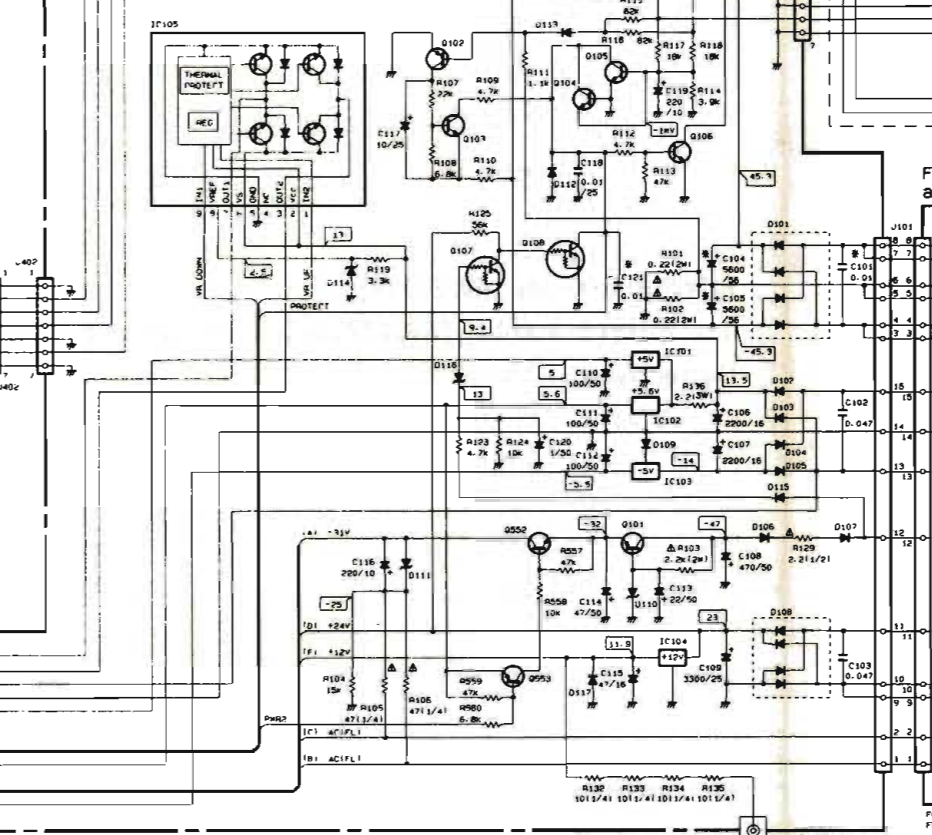
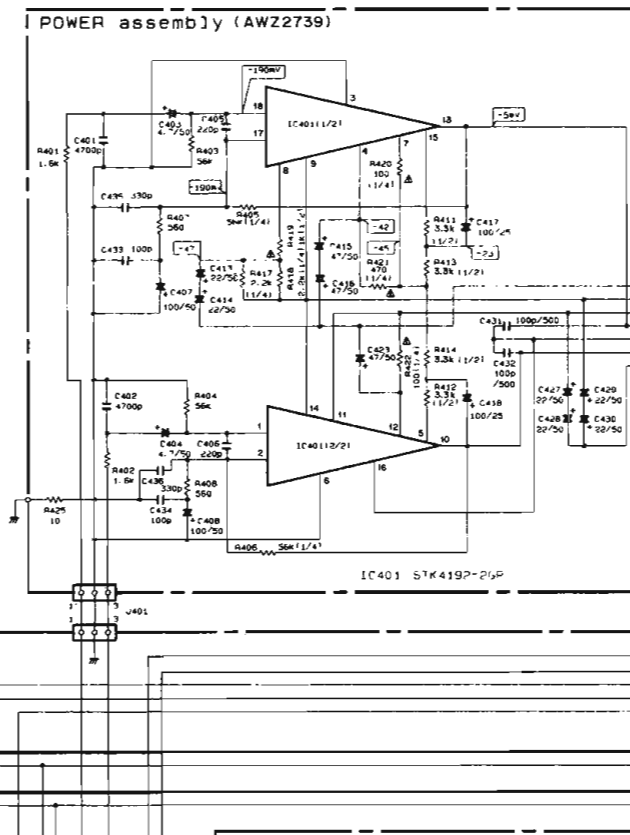
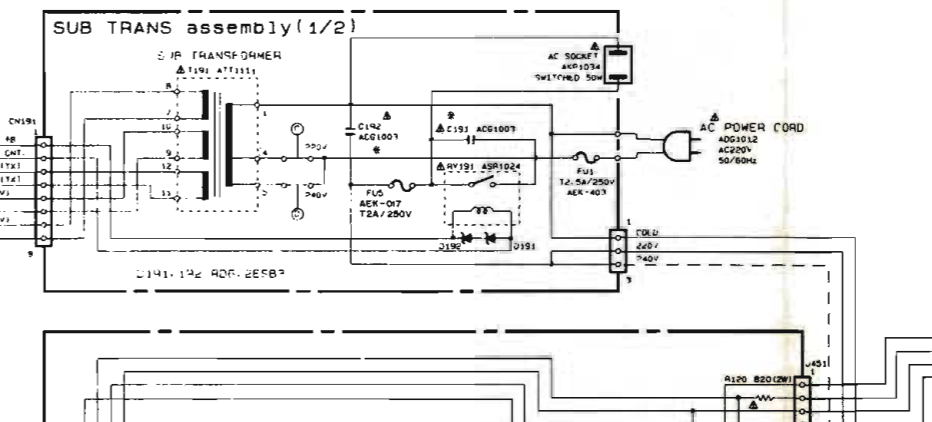
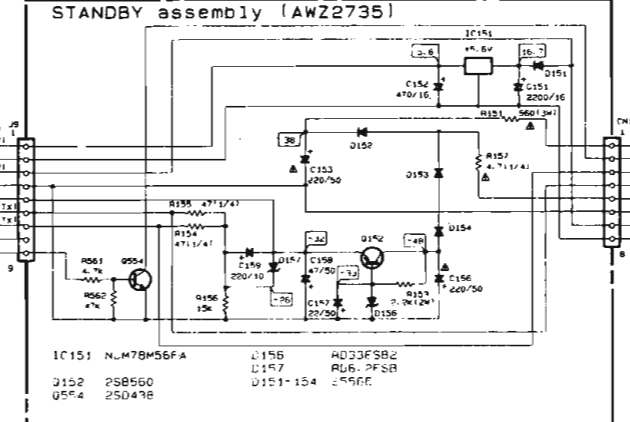
B

C

D



IC301: 902	L43607	IC203: 205	MC14052BCP	Q107: 108	DTC124E5	D109: 112-113-115	H55104-02
IC302: 303	LC7522	IC202: 205	TC4066BP	9551-553	2SA1048	D117	
IC303: 304	MC14052BCP	IC103: 104	UFC75M05H	D101	2SA470	D102	RBV402
IC304: 305	RC4558DXP	IC104	UFC75M05H	D101	2SB950	D108	RB192
IC305: 306	NJM79M5FSA	IC105	UFC75M05H	D103-105	2SC245B	D114	RD3-0E5B1
IC306: 307	Ta72915			Q106	2SD438	D110	RD3-0E5B2
				Q552	2SC2603	D116	RD4-7E5B
						D111	RD6-2E5B
						D102-107	S5566



A

B

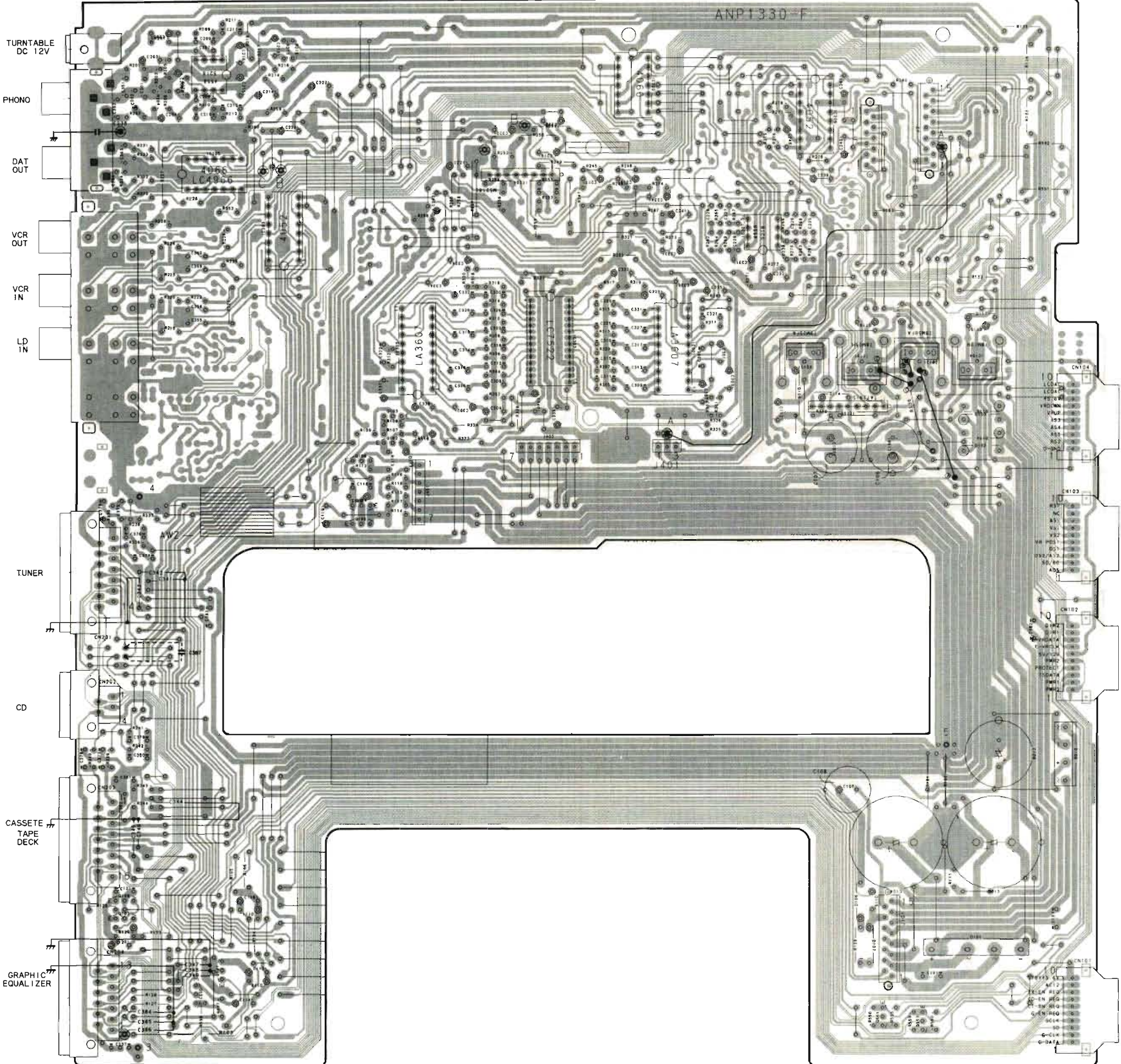
C

D

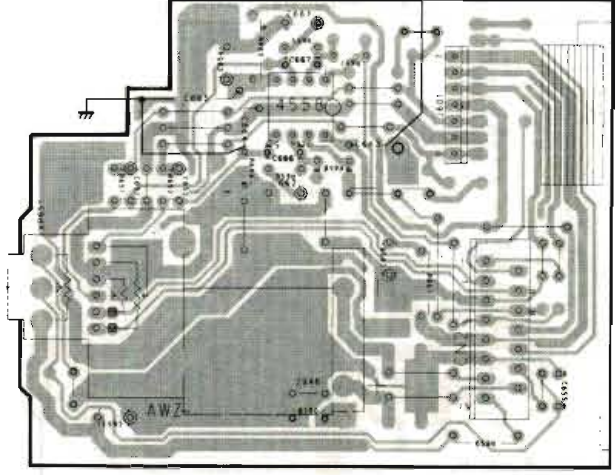


1  
A  
B  
C  
D  
1  
2  
3  
4  
5  
6  
7  
8  
9

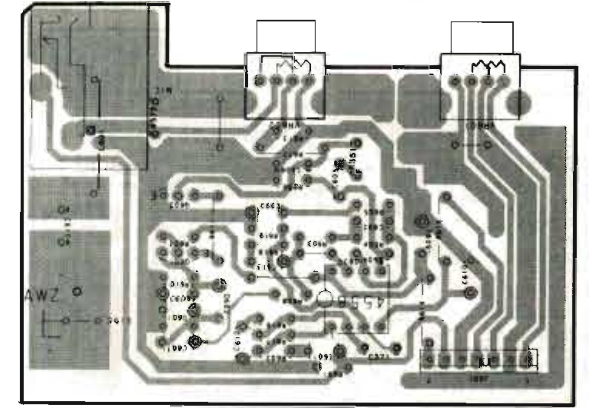
AF assembly(AWZ3405)



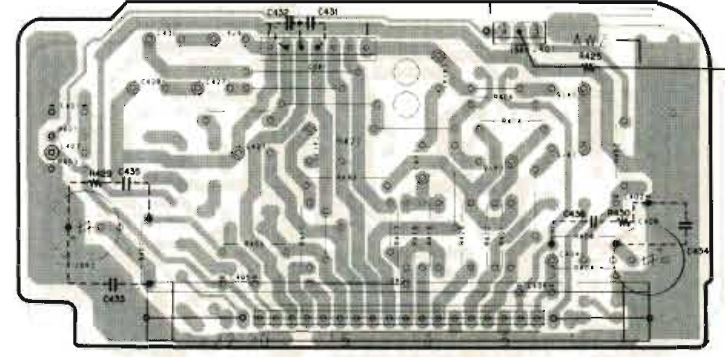
POWER VR assembly



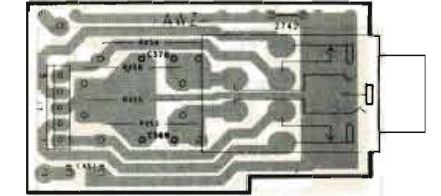
MIC assembly



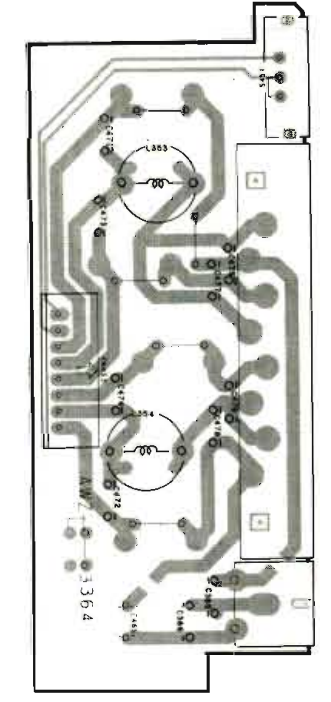
POWER assembly (AWZ2739)



HEADPHONE assembly



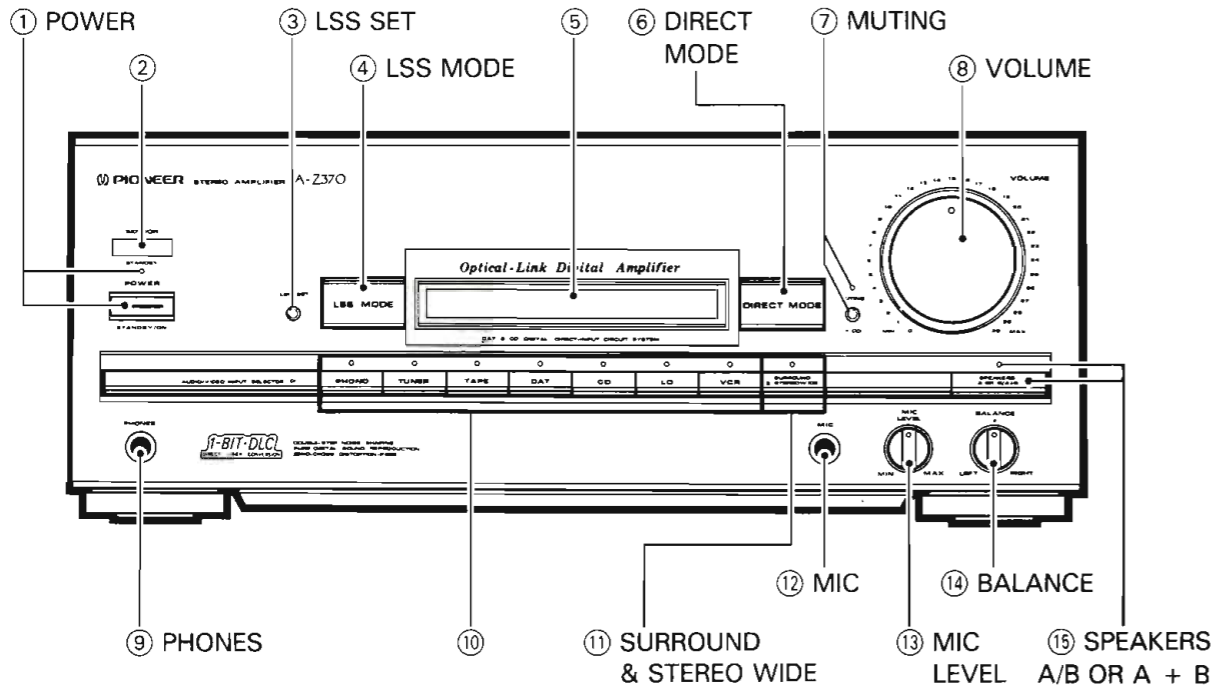
SP TERMINAL assembly



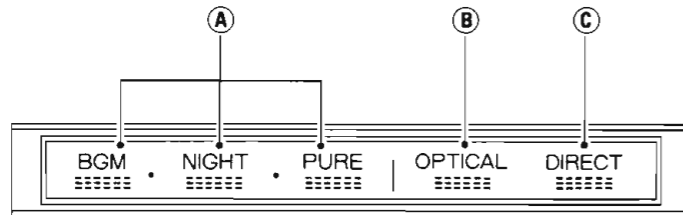


## 6. PANEL FACILITIES

Front panel



Display section



### ① POWER STANDBY/ON switch/indicator

This is the switch for electric power.

**ON** ... When set to the ON position, power is supplied and the unit becomes operational.

**STANDBY** ... When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

The indicator above the switch lights when the power is STANDBY, and goes out during ON.

### ② Remote sensor

### ③ LSS SET button

Use to operate the Listening Style Selector memory.

### ④ LSS MODE button

Use to recall the Listening Style Selector.

### ⑤ Display section

A This shows the position of the listening style selector.

B This lights when you play a CD.

C This lights when you can select CD and DAT direct mode.

### ⑥ DIRECT MODE button

Use this when you want by-pass sound quality adjustment circuitry and listen to a CD or DAT in the direct mode.

### ⑦ MUTING button/indicator

Use when you want to temporarily cut sound during playback. Press again to return to the previous volume level.

### ⑧ VOLUME control

### ⑨ PHONES jack

For stereo headphones.

### NOTE:

*There is no output from the speakers when headphones are plugged into PHONES jack.*

### ⑩ Input selector buttons/indicators

[PHONO]

Press to play records on a turntable connected to the PHONO input jacks.

[TUNER]

Press to listen to radio broadcast.

[TAPE]

Press to listen to cassette tape.

[DAT]

Press to listen to a DAT playing on a digital audio tape deck connected to the DAT jacks.

[CD]

Press to listen to compact disc.

[LD]

Press to play an LD on a video disc player connected to the LD input jacks.

[VCR]

Press to play a tape on a video cassette recorder connected to the VCR jacks.

### ⑪ SURROUND & STEREO WIDE button/indicator

By turning this button on, you can enjoy surround reproduction when rear speakers are used.

By turning this button on, you can enjoy STEREO WIDE reproduction with greater left-right spread when rear speakers are not used.

### NOTE:

- In the case of a monaural source, SURROUND & STEREO WIDE effects cannot be obtained.
- SURROUND & STEREO WIDE functions do not operate if DIRECT MODE is on.

### ⑫ MIC (microphone) jack

This is a standard jack for connecting a microphone.

### NOTE:

*Mike mixing is not possible when CD DIRECT or DAT DIRECT are ON.*

### ⑬ MIC LEVEL control

Used for adjusting the volume of microphone.

### ⑭ BALANCE control

Used for changing the balance between left and right channels. Usually set to the center position.

### ⑮ SPEAKERS button (A/ B OR A + B)/indicator

When the SPEAKER MODE selector switch on the rear panel is set to the A/B (left), use this button to switch between sound from speakers A only, and sound from speakers B only.

When the SPEAKER MODE selector switch is set to the A/A + B (right), use this button to switch between sound from speakers A only, and sound from both speakers A and B.

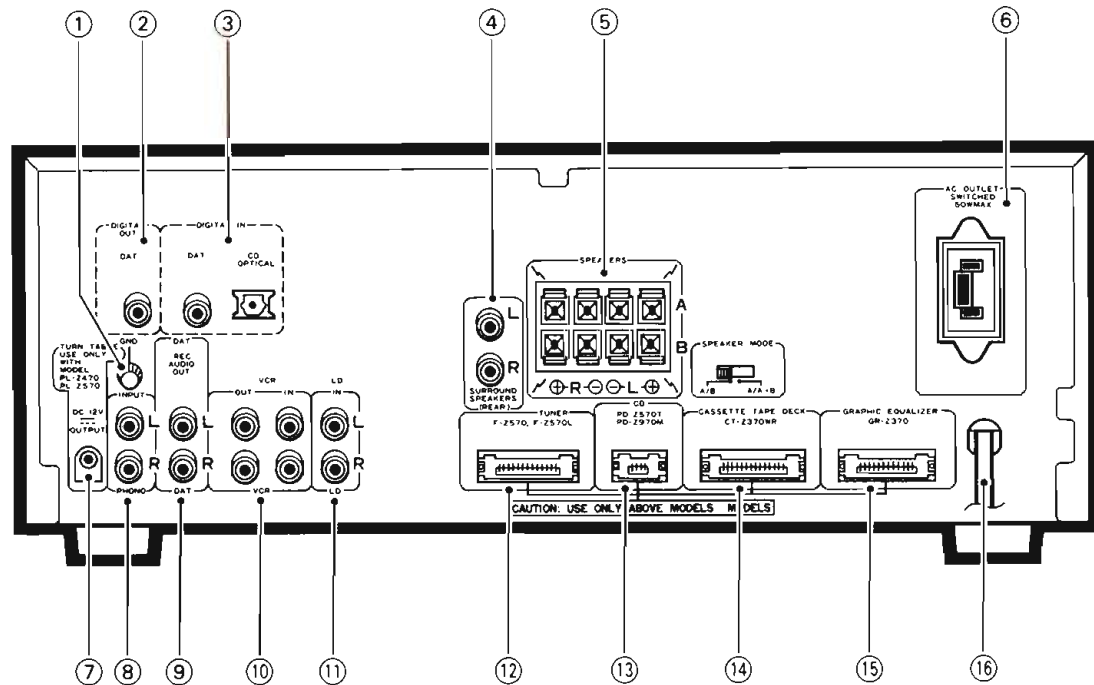
Refer to page 18 No.⑤ concerning SPEAKER MODE selector switch.

Rear panel SPEAKER MODE switch	SPEAKERS	
	Indicator off	Indicator lit
A/B	A	B
A/A + B	A	A + B

### NOTE:

*If speakers A and B are not both connected, there will be no sound when the button is set for A + B.*

REAR PANEL FACILITIES



① Ground terminal (GND)

Connect this to the ground terminal on the turntable (except for PL-Z470/PL-Z570).

② DIGITAL OUT (DAT) jack

Outputs digital signal taken from CD player optical input. A digital audio tape deck's digital input jack (coaxial cable input) can be connected here. Consult with your dealer to see if it's possible to connect your digital audio tape deck.

③ DIGITAL IN jacks

[DAT] A digital audio tape deck's digital output jack (coaxial cable output) can be connected here. Consult with your dealer to see if it's possible to connect your digital audio tape deck.  
[CD] Connect a CD player's OPTICAL OUT jack.

④ SURROUND SPEAKERS jacks

Connect the Surround speaker systems.

**NOTE:**

Connect a speaker system having a nominal impedance of 16  $\Omega$  or more.

⑤ SPEAKERS terminals and SPEAKER MODE selector switch

A: Connect to a first set of speakers  
B: Connect to a second set of speakers  
Set the selector switch to the A/B (left), and use the SPEAKERS button on the front panel to switch between sound from speakers A only, and sound from speakers B only.  
If you set the selector switch to the A/A + B (right), use the SPEAKERS button on the front panel to switch between sound from speakers A only, and sound from both speakers A and B.

**NOTE:**

Connect a speaker system having a nominal impedance ranging from 8  $\Omega$  to 16  $\Omega$ .

⑥ AC OUTLET (SWITCHED 50 W MAX)

Power supplied through this outlet is turned on and off by the amplifier's POWER switch. Total electrical power consumption of connected equipment should not exceed 50 W. PD-Z570T or PD-Z970M CD player power cord can be connected.

**NOTE:**

Do not connect appliances with high power consumption such as heaters, irons, or television sets to the AC OUTLET in order to avoid overheating or fire risk. This can cause the amplifier to malfunction.

⑦ TURNTABLE (DC 12 V OUTPUT) jack

This jack supplies power to the turntable. (PL-Z470/PL-Z570)

⑧ PHONO input jacks

Connect the output cord of the turntable to these jacks.

⑨ DAT REC OUT jacks

Connect to audio input jacks of the digital audio tape deck.

⑩ VCR jacks

IN: Connect to the audio output jacks of VCR.  
OUT: Connect to audio input jacks of VCR.

⑪ LD input jacks

Connect to audio output jacks of the LD player.

⑫ TUNER jack

Connect the tuner cord here.

⑬ CD jack

Connect the compact disc player (PD-Z570T/PD-Z970M) cord here.

⑭ CASSETTE TAPE DECK jack

Connect the cassette deck cord here.

⑮ GRAPHIC EQUALIZER jack

Connect the graphic equalizer cord here.

⑯ Power cord

Connect this to the AC wall socket.