

Service Manual

ORDER NO.
RRV 1596

STEREO AMPLIFIER

A-305R

● Refer to the service manual ARP2852 for A-203/HEXJ.

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	A-305R		
HYXJ/EW	O	AC220 - 230V	AC240V, *
HYXJ/GR	O	AC220 - 230V	AC240V, *

* : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the "Line Voltage Selection" described in Service Manual.

A-305R

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

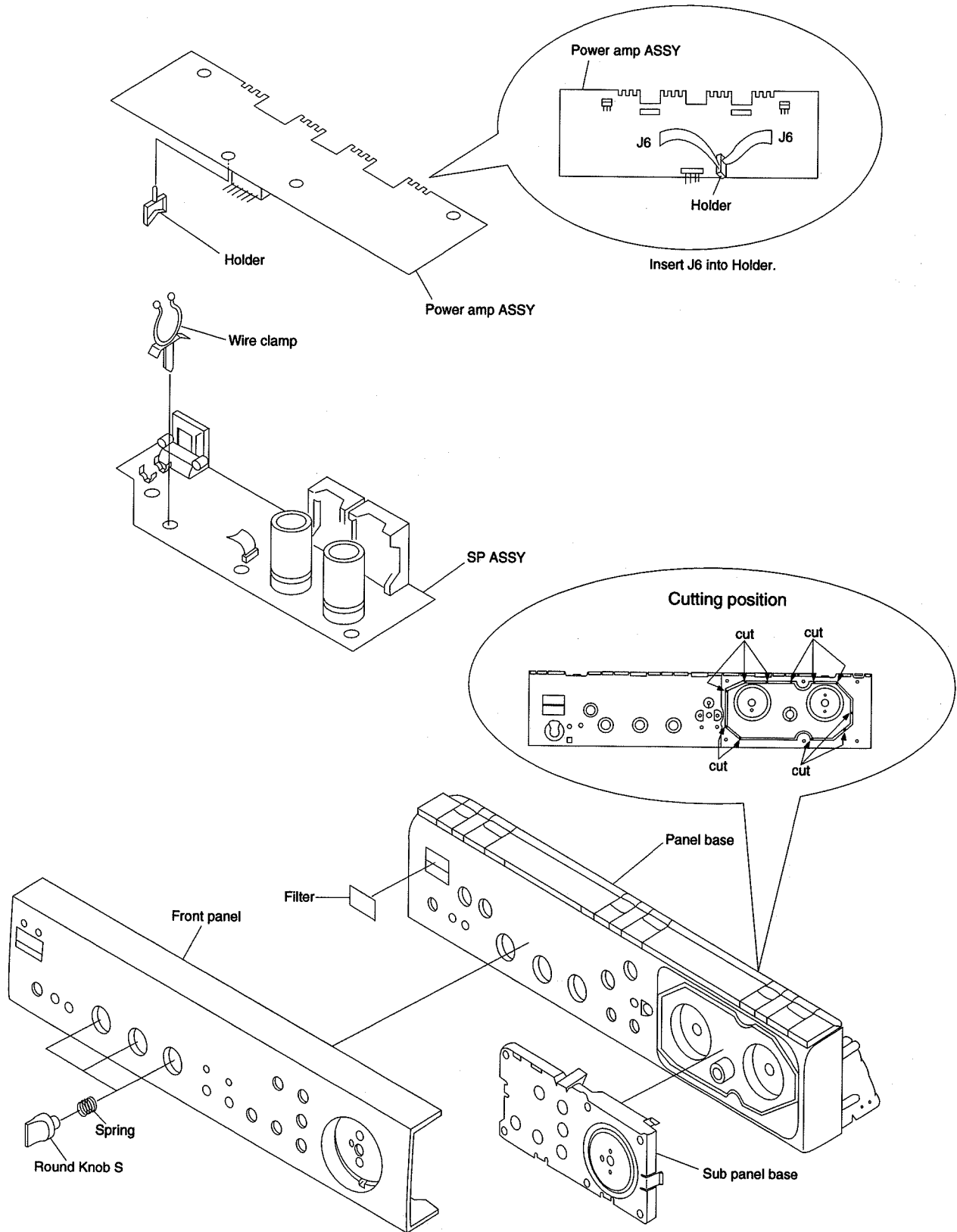
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

A-305R/HYXJ/EW, HYXJ/GR and A-203/HEXJ have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		A-203/HEXJ	A-305R/HYXJ/EW	A-305R/HYXJ/GR	
NSP	AF assy	AWK1787	AWK7302	AWK7302	
	FUNCTION assy	AWZ5492	AWZ8337	AWZ8337	
	CONTROL assy	AWZ5493	AWZ8338	AWZ8338	
NSP	HEADPHONE assy	AWZ5494	AWZ8339	AWZ8339	
	SP assy	AWZ5495	AWZ8340	AWZ8340	
NSP	POWER SW assy	AWZ5496	AWZ8341	AWZ8341	
	TRANS assy	AWZ5497	AWZ8342	AWZ8342	
	POWER AMP assy	AWZ5500	AWZ8343	AWZ8343	
	Power transformer	ATS1538	ATS7119	ATS7119	
Δ	Transistor (Q3, Q4)	2SA1264N	2SA1940(P)	2SA1940(P)	
	Transistor (Q1, Q2)	2SC3181N	2SC5197(P)	2SC5197(P)	
	Name plate	PAM1608	AAM1058	AAM1058	
	Filter	Not used	AAK7141	AAK7141	*
	LED lens	AAK2552	AAK2459	AAK2459	
	Wire clamp	Not used	AEC7022	AEC7022	*
	Front panel (PLS)	AMB2231	Not used	Not used	
	Front panel	Not used	ANB7045	ANB7045	*
	Panel base	Not used	AMB7347	AMB7347	*
	Sub panel base	Not used	AMB7348	AMB7348	*
NSP	Rear panel (MET)	ANC2173	ANC7367	ANC7367	
	Spring	Not used	ABH7055	ABH7055	*
	Holder	Not used	VEC1355	VEC1355	*
	Sheet	AEE1014	AEE7010	AEE7010	
	Operating instructions (English/French/German/ Italian/Swedish/Spanish/ Dutch/Portuguese)	ARE1302	ARE7065	Not used	
	Operating instructions (German)	Not used	Not used	ARC7113	
	Packing case	AHD2672	AHD7281	AHD7281	
	Paper protector A	AHA1660	AHA7061	AHA7061	
	Paper protector B	AHA1661	AHA7062	AHA7062	
	Paper protector C	AHA1662	AHA7063	AHA7063	
NSP	Paper protector D	Not used	AHA7064	AHA7064	For packing
	Paper support	Not used	AHA7136	AHA7136	For packing
	Polyethylene bag	Not used	AHG1217	AHG1217	For packing
	Remote control unit (CU - A014)	Not used	AXD7049	AXD7049	
	Battery cover	Not used	AZN2249	AZN2249	
NSP	Battery (R6P, AA)	Not used	VEM - 013	VEM - 013	

Note*: Refer to page3.

● EXPLODED VIEW



2. PCB PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- 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.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- 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 ¹	→	561	RD1/4PU561J
47kΩ	→	47 × 10 ³	→	473	RD1/4PU473J
0.5Ω	→	0R5			RN2H0R5K
1Ω	→	1R0			RS1P7R0K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

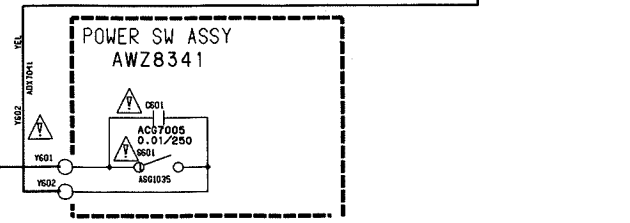
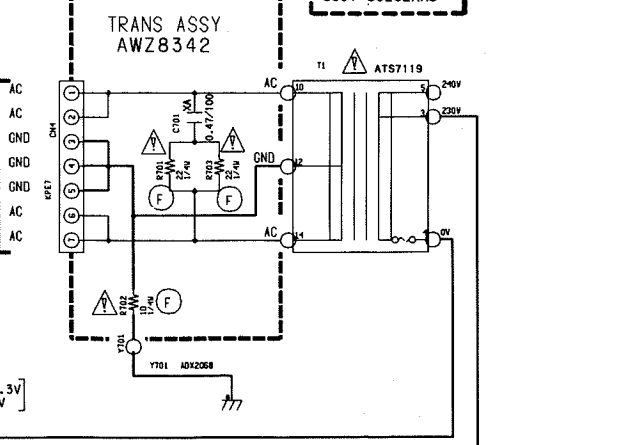
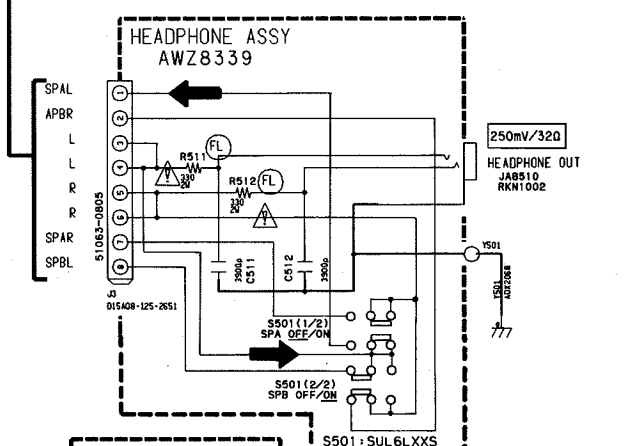
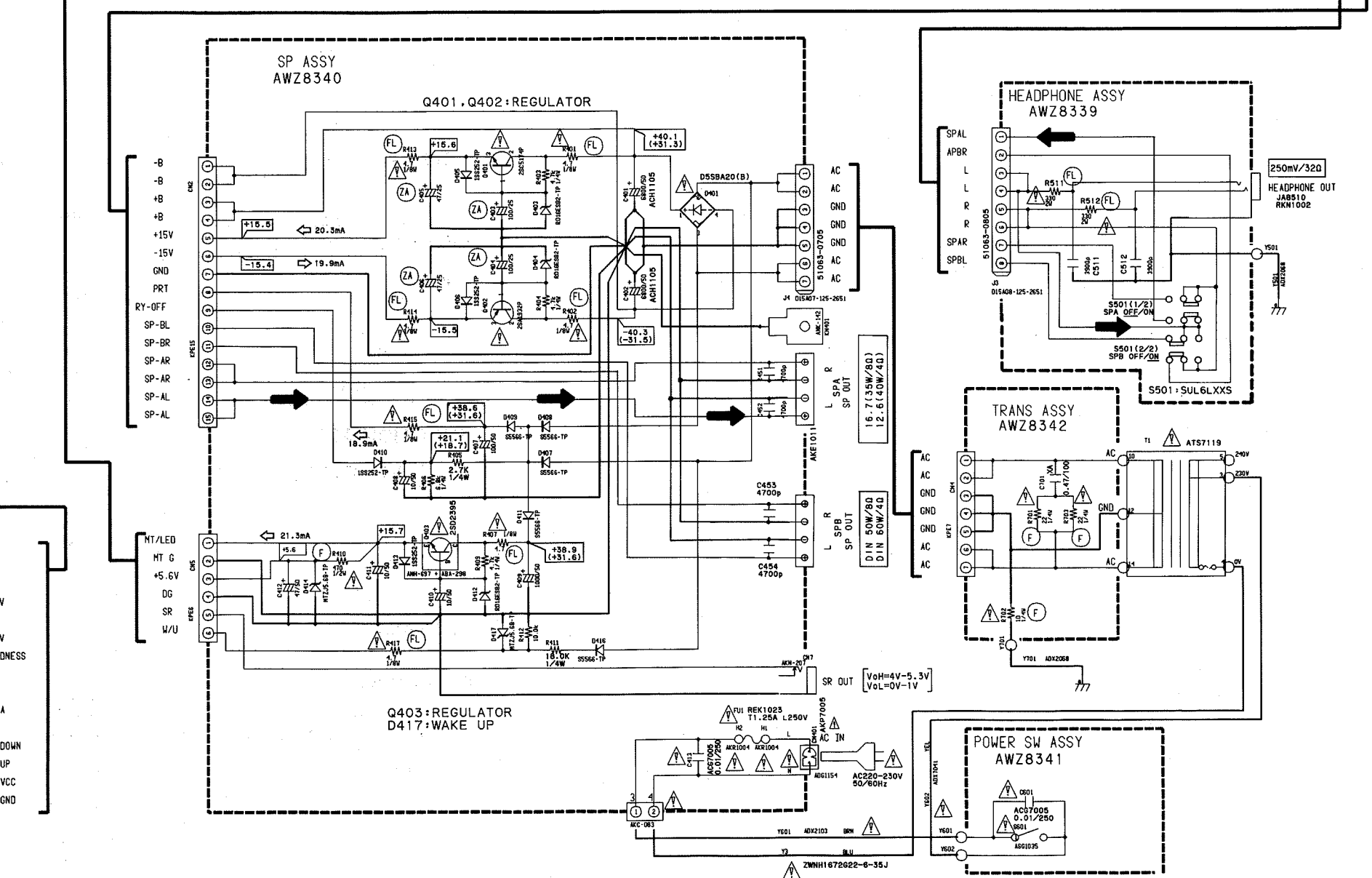
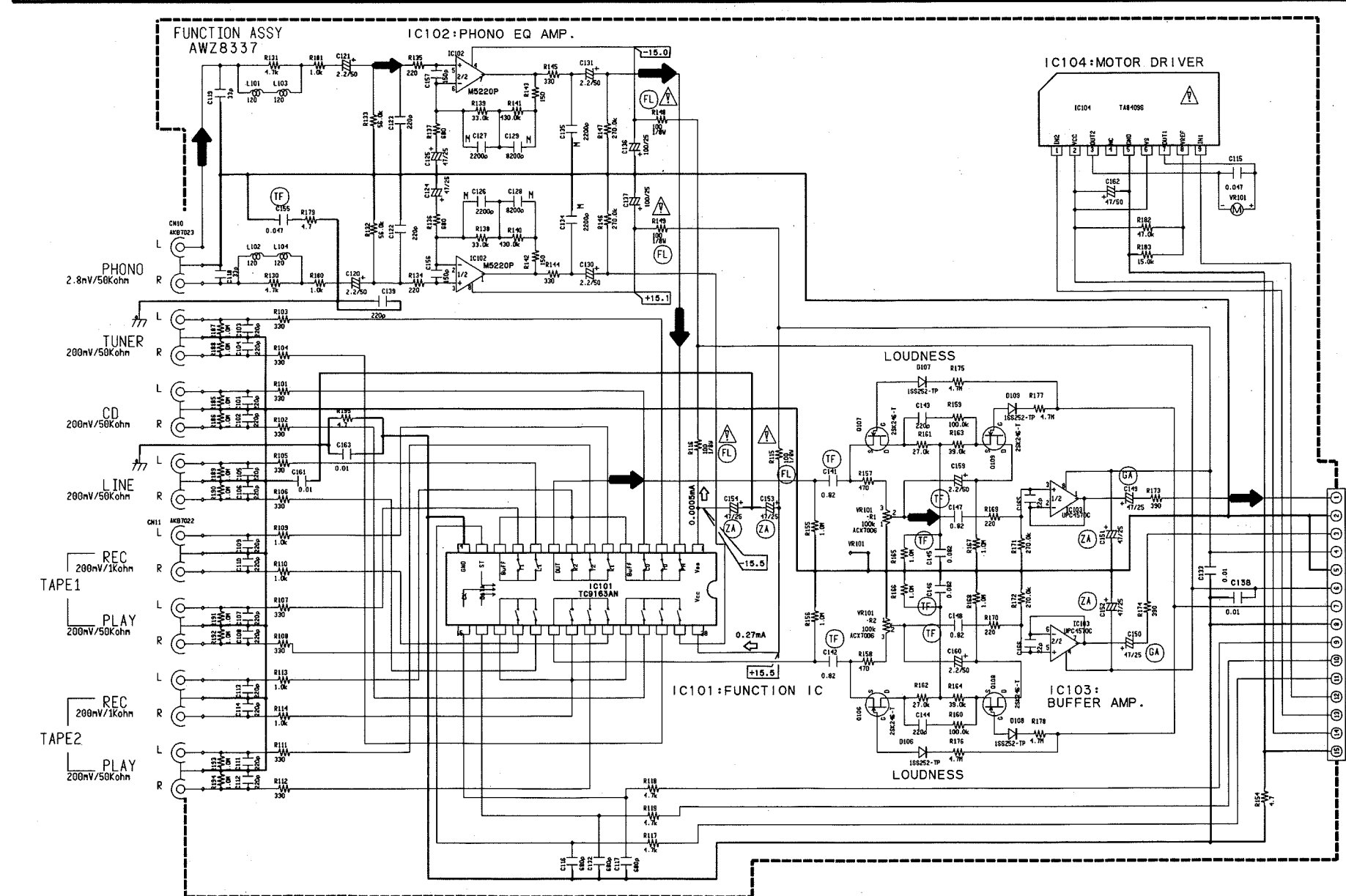
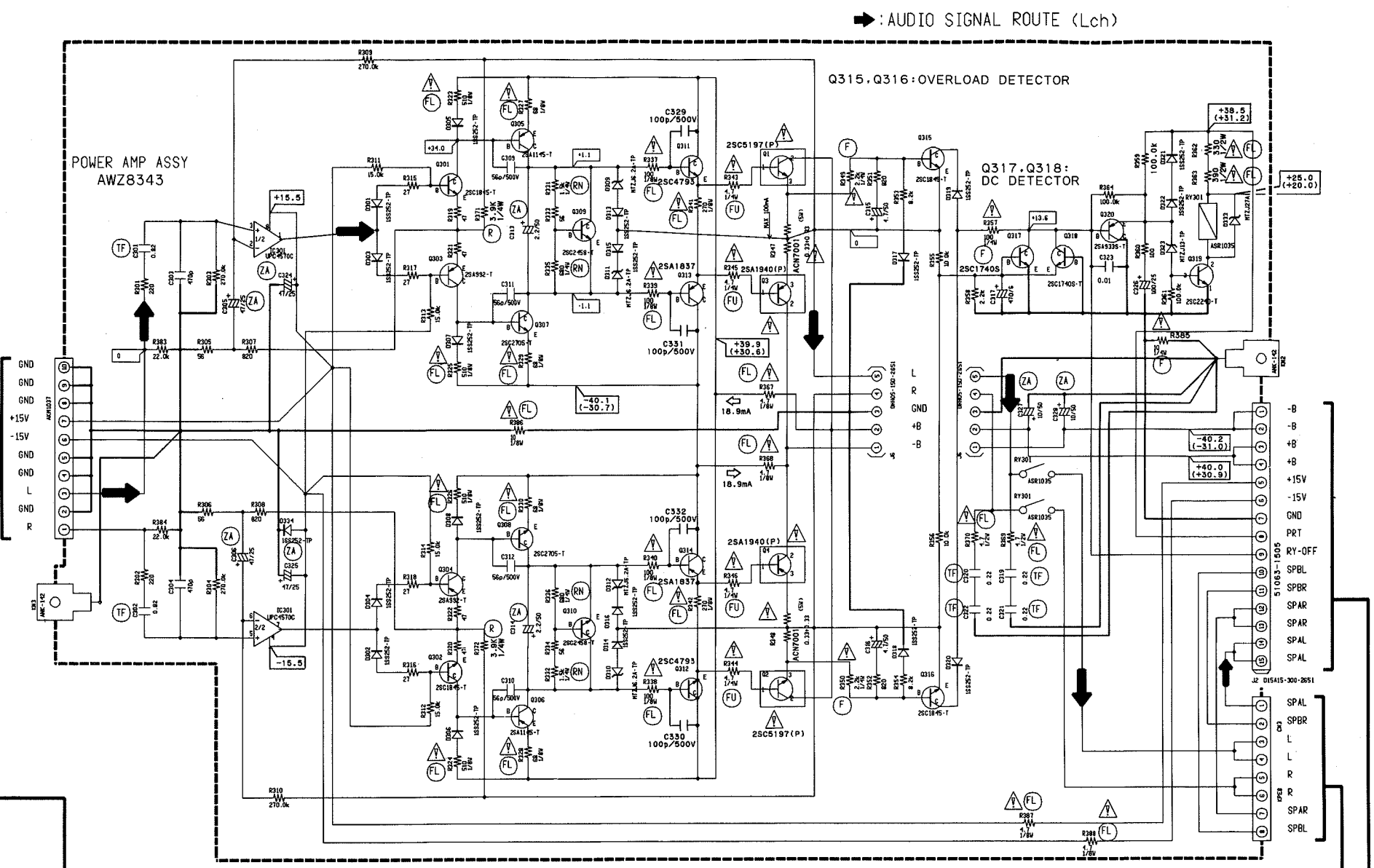
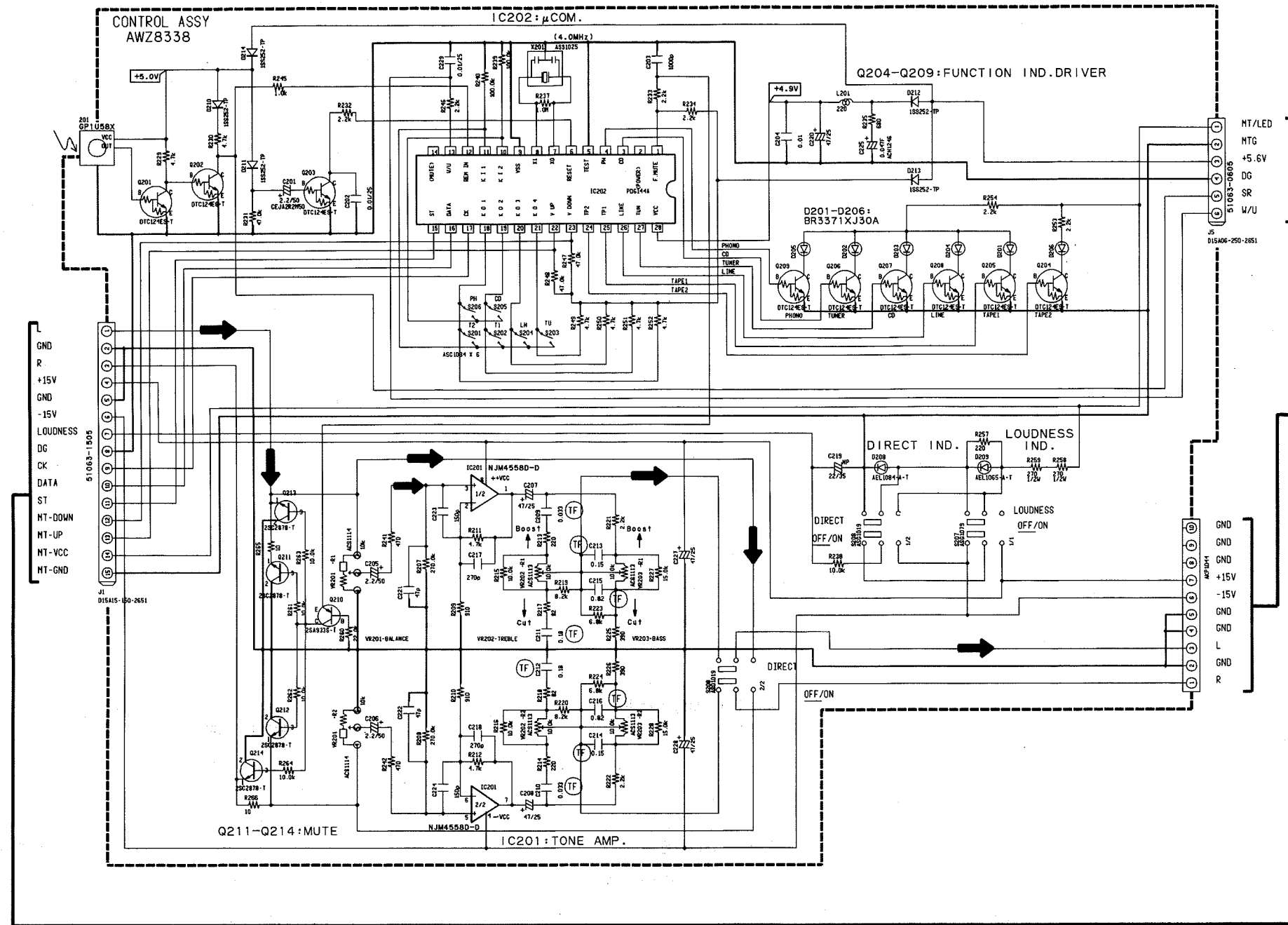
5.62kΩ	→	562 × 10 ¹	→	5621	RN1/4PC5621F
--------	---	-----------------------	---	------	-------	--------------

Mark No.	Description	Parts No.	Mark No.	Description	Parts No.
LIST OF ASSEMBLIES			OTHERS		
NSP	AF ASSY	AWK7302	CN11	PIN JACK(8P)	AKB7022
	— FUNCTION ASSY	AWZ8337	CN10	PIN JACK(8P)	AKB7023
	— CONTROL ASSY	AWZ8338	CN1	CONNECTOR (15P)	KPE15
NSP	— HEADPHONE ASSY	AWZ8339	CONTROL ASSY		
	— SP ASSY	AWZ8340	SEMICONDUCTORS		
	— POWER SW ASSY	AWZ8341	IC201		NJM4558D - D
NSP	— TRANS ASSY	AWZ8342	IC202		PD6144A
	— POWER AMP ASSY	AWZ8343	Q210		2SA933S
			Q211 - Q214		2SC2878
			Q201 - Q209		DTC124ES
			D210 - D214		1SS252
			D209		AEL1065
			D208		AEL1084
			D201 - D206		BR3371XJ30A
			COILS AND FILTERS		
			L201		LAU221J
			SWITCHES AND RELAYS		
			S208		ASG1019
			S201 - S206		ASG1034
			S207		ASG1079
			CAPACITORS		
			C225	(0.047F)	ACH1246
			C223, C224		CCCSL151J50
			C217, C218		CCCSL271J50
			C221, C222		CCCSL470J50
			C219		CEANP220M35
			C205, C206		CEAS2R2M50
			C207, C208, C220, C227, C228		CEAS470M25
			C201		CEJA2R2M50
			C213, C214		CFTXA154J50
			C211, C212		CFTXA184J50
			C209, C210		CFTXA333J50
			C215, C216		CFTXA824J50
			C204		CKCYF103Z50
			C203		CKPUYB102K50
			C202, C229		CKPUYF103Z25
			RESISTORS		
			R258, R259		RD1/2PM271J
			VR202, VR203 (10kΩ - 20A×2)		ACS1113
			VR201	(250kΩ)	ACS1114
			Other Resistors		
					RD1/6PM□□□J
			RESISTORS		
Δ	R115, R116, R148, R149	RD1/8MMF101J			
	VR101 (100kΩ)	ACX7006			
	Other Resistors	RD1/6PM□□□J			

Mark No.	Description	Parts No.
OTHERS		
	REMOTE RECEIVER UNIT	GPIU58X
	CABLE HOLDER(6P)	51063 - 0605
	CABLE HOLDER(15P)	51063 - 1505
	SOCKET(10P)	AKP1044
X201	(4.00MHZ)	ASS1025
HEADPHONE ASSY		
SWITCHES AND RELAYS		
S501		SUL6LXXS
CAPACITORS		
C511, C512		CKCYB392K50
RESISTORS		
△ R511, R512		RS2LMF331J
OTHERS		
JA8510	CABLE HOLDER(8P) JACK	51063 - 0805 RKN1002
SP ASSY		
SEMICONDUCTORS		
△ Q402		2SA1932P
△ Q401		2SC5174P
△ Q403		2SD2395
△ D405, D406, D410, D413		1SS252
△ D401		D5SBA20(B)
D414, D417		MTZJ5.6B
D403, D404, D412		RD16ESB2
D407 - D409, D411, D416		S5566
CAPACITORS		
△ C413 (0.01μF, 250V)		ACG7005
C401, C402 (6800μF, 50V)		ACH1105
C408, C410, C411		CEAS100M50
C407		CEAS101M50
C409		CEAS102M50
C412		CEAS470M50
C403, C404		CEZA101M25
C405, C406		CEZA470M25
C451 - C454		CKCYB472K50
RESISTORS		
△ R410		RD1/2PMF471J
R412		RD1/6PM103J
△ R401, R402, R407, R413 - R415		RD1/8MMF4R7J
△ R417		RD1/8MMF4R7J
	Other Resistors	RD1/4PM□□□J
OTHERS		
	CABLE HOLDER(7P)	51063 - 0705
	SCREW	ABA - 298
	SPEAKER TERMINAL 8 - P	AKE1011
	JACK	AKN - 207
△ CN7	AC INLET	AKP7005
CN401		
	HEAT SINK	ANH - 880
KN401	GROUND PLATE	ANK - 142
CN2	CONNECTOR(15P)	KPE15
CN5	CONNECTOR(6P)	KPE6
POWER SW ASSY		
SWITCHES AND RELAYS		
△ S601		ASG1035
CAPACITORS		
△ C601 (0.01μF, 250V)		ACG7005
TRANS ASSY		
CAPACITORS		
C701		CQMXA474J100

Mark No.	Description	Parts No.
RESISTORS		
△ R702		RD1/4PMF100J
△ R701, R703		RD1/4PMF220J
	Other Resistors	RD1/4PM□□□J
OTHERS		
CN4	CONNECTOR(7P)	KPE7
POWER AMP ASSY		
SEMICONDUCTORS		
IC301		UPC4570C
Q305, Q306		2SA1145
Q313, Q314		2SA1837
Q320		2SA933S
Q303, Q304		2SA992
Q317, Q318		2SC1740S
Q301, Q302, Q315, Q316		2SC1845
Q319		2SC2240
Q309, Q310		2SC2458
Q307, Q308		2SC2705
Q311, Q312		2SC4793
D301 - D308, D313 - D322, D334		1SS252
D323		MTZJ13
D333		MTZJ27A
D309 - D312		MTZJ6.2A
SWITCHES AND RELAYS		
RY301		ASR1035
CAPACITORS		
C329 - C332		CCCSL101K500
C309 - C312		CCCSL560K500
C326		CEAS101M25
C317		CEAS471M6
C315, C316		CEAS4R7M50
C327, C328		CEZA100M50
C313, C314		CEZA2R2M50
C305, C306, C324, C325		CEZA470M25
C319 - C322		CFTXA224J50
C301, C302		CFTXA824J50
C303, C304		CKCYB471K50
C323		CKCYF103Z50
RESISTORS		
△ R347, R348 (0.33Ω, 5W)		ACN7001
△ R362		RD1/2LMF331J
△ R363		RD1/2LMF391J
△ R369, R370		RD1/2LMF4R7J
△ R385		RD1/4PMF100J
△ R357		RD1/4PMF101J
△ R349, R350		RD1/4PMF222J
△ R386		RD1/8MMF100J
△ R337 - R340		RD1/8MMF101J
△ R341, R342		RD1/8MMF271J
△ R367, R368, R387, R388		RD1/8MMF4R7J
△ R323 - R326		RD1/8MMF511J
△ R327 - R330		RD1/8MMF680J
△ R371, R372		RDR1/4PM392J
△ R343 - R346		RFA1/4PS4R7J
R331, R332		RN1/4PC1501F
R335, R336		RN1/4PC6800F
	Other Resistors	RD1/6PM□□□J
OTHERS		
	CABLE HOLDER(15P)	51063 - 1505
	PLUG(10P)	AKM1037
	GROUND PLATE	ANK - 142
KN2, KN3	CONNECTOR(8P)	KPE8
CN3		

3. SCHEMATIC AND PCB CONNECTION DIAGRAMS

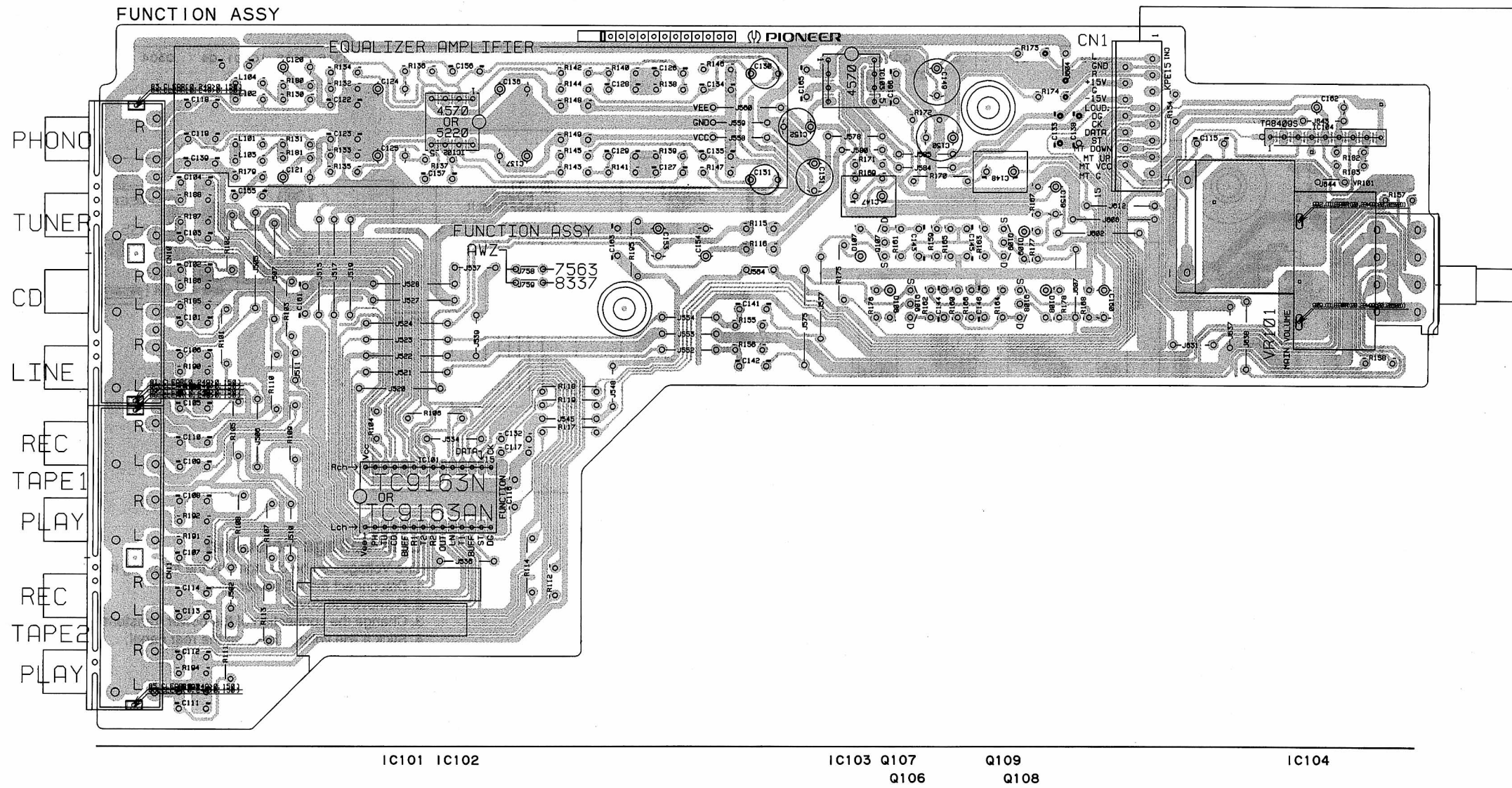
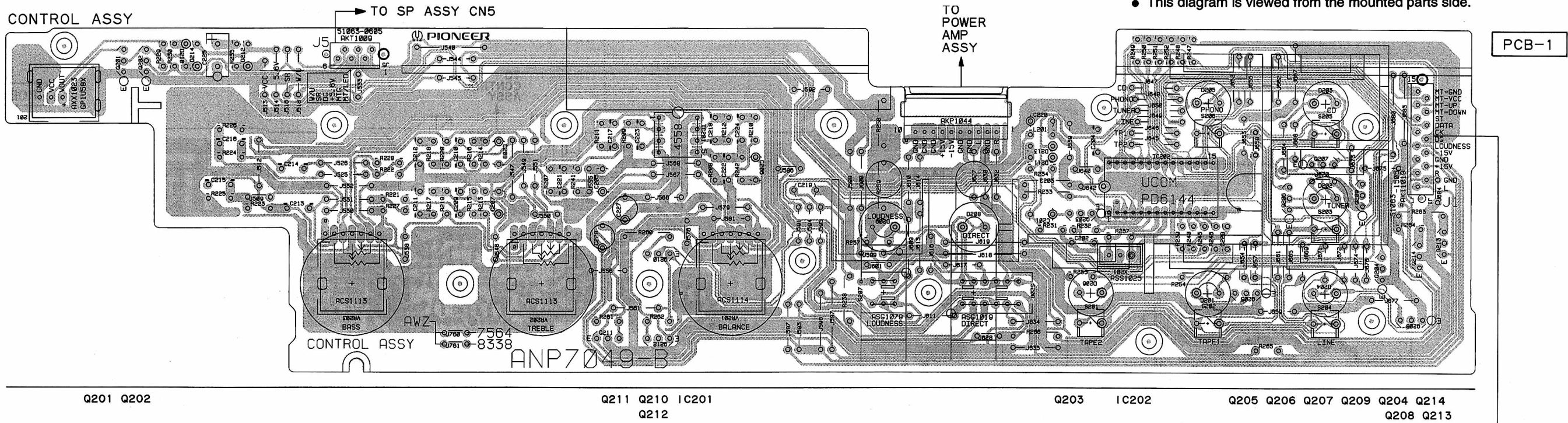


NOTE FOR SCHEMATIC DIAGRAMS (Type 1A)

- When ordering service parts, be sure to refer to "PARTS LIST OF EXPLODED VIEWS" or "PCB PARTS LIST".
- Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.
- RESISTORS:**
Unit: kΩ, MΩ, or Ω unless otherwise noted.
Rated power: 1/4W, 1/2W, 1/8W, 1/10W unless otherwise noted.
Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
- CAPACITORS:**
Unit: pF or µF unless otherwise noted.
Ratings: capacitor (µF)/voltage(V) unless otherwise noted.
Rated voltage: 50V except for electrolytic capacitors.

- COILS:**
Unit: mH or µH unless otherwise noted.
- VOLTAGE AND CURRENT:**
V : Signal voltage at rated output.
or ← V : DC voltage (V) at no input signal unless otherwise noted. Value in () is DC voltage at rated power.
← mA or ← mA : DC current at no input signal unless otherwise noted.
- OTHERS:**
• ⊕ or ⊙ : Adjusting point.
• ⊕ : Measurement point.
• The Δ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

- SCH-□ ON THE SCHEMATIC DIAGRAM:**
• SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
- SWITCHES (Underline indicates switch position):**
CONTROL ASSY
S201 : TAPE 2
S202 : TAPE 1
S203 : TUNER
S204 : LINE
S205 : CD
S206 : PHONO
S207 : LOUDNESS OFF/ON
S208 : DIRECT OFF/ON
POWER SW ASSY
S601 : POWER
HEADPHONE ASSY
S501 : SPA OFF/ON
SPB OFF/ON



NOTE FOR PCB DIAGRAMS
 1. Part numbers in PCB diagrams match those in the schematic diagrams.
 2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Diode
		Capacitor (Polarized)

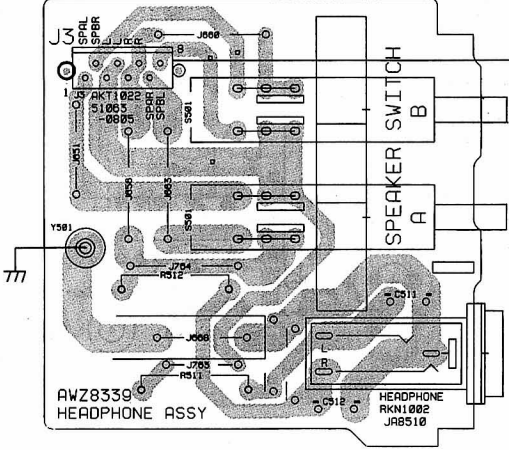
3. The transistor terminal marked with E or \square shows the emitter.
 4. The diode terminal marked with \oplus or \ominus shows cathode side.
 5. The capacitor terminal marked with \oplus or \ominus shows negative terminal.
 6. The parts mounted on each PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

● This diagram is viewed from the mounted parts side.

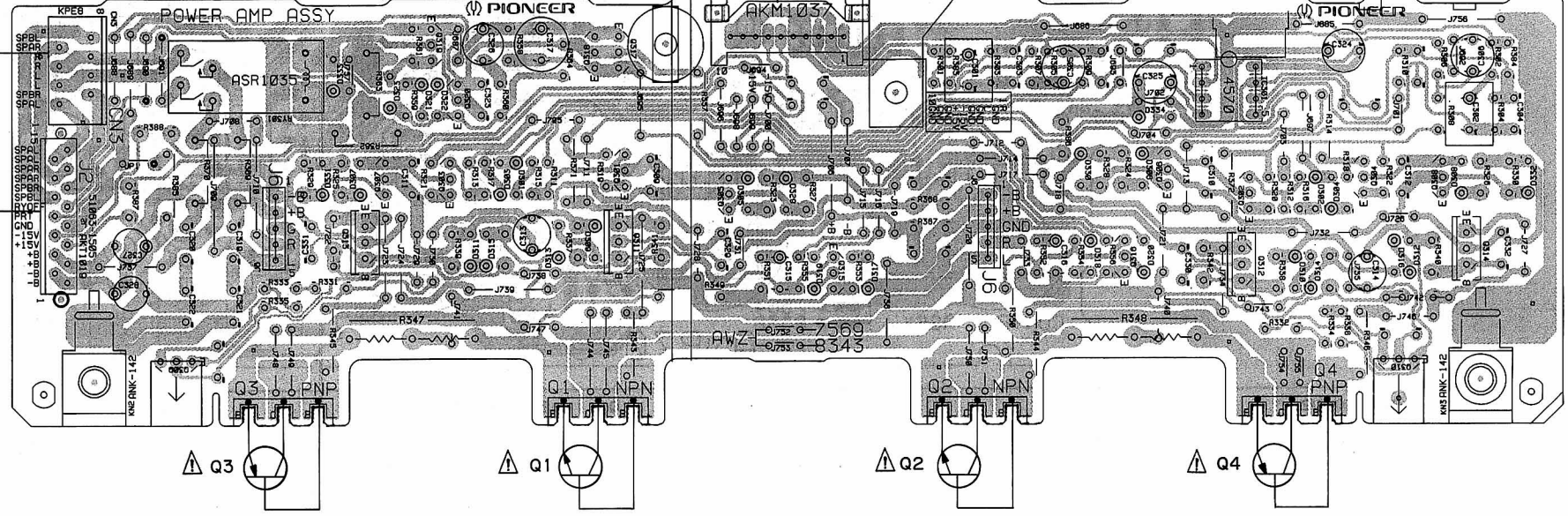
A

A

HEADPHONE ASSY



POWER AMP ASSY



B

B

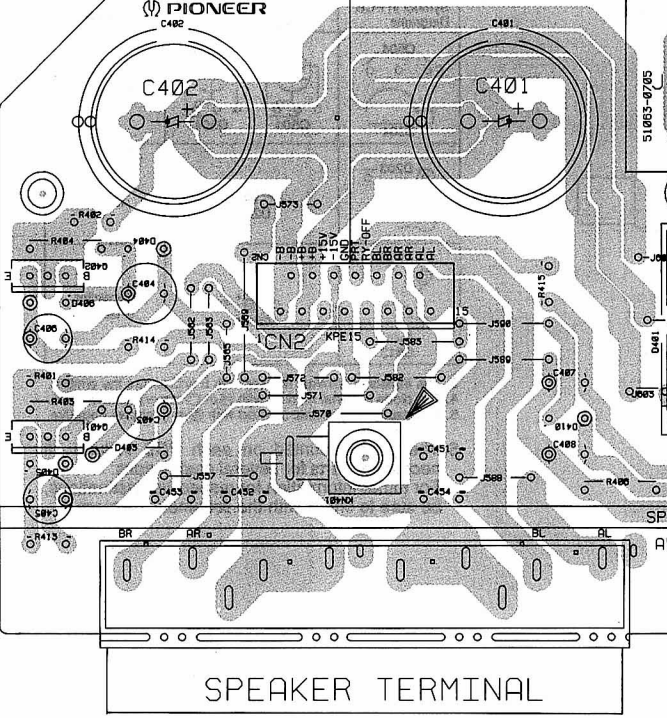
TO CONTROL ASSY J5

Q309 Q3 Q313 Q319 Q318 Q317 Q305 Q315 Q2 Q316 Q306 IC301 Q4 Q304 Q310 Q308 Q307 Q320 Q303 Q1 Q301 Q311 Q302 Q312

C

C

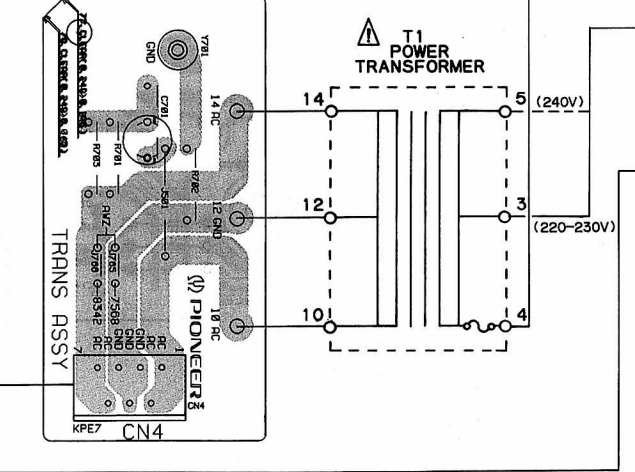
SP ASSY



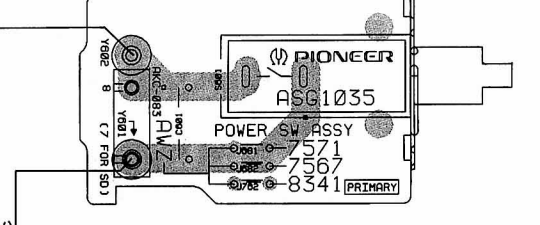
D

D

TRANS ASSY



POWER SW ASSY



AC INLET AC IN

ANP7049-B

Line Voltage Selection

- Line Voltage can be changed by the following modification:
1. Disconnect the AC power cord.
 2. Remove the cover.
 3. Change the connection of the power transformer primary taps.
 4. Stick a line voltage label on the rear panel.

Part No.	Description
AAX-193	220V label
AAX-192	240V label

Q402
Q401

Q403