

Service Manual

ORDER NO.
ARP2639

STEREO TUNER CONTROL AMPLIFIER

CX-J510

 WEWZI

CX-J410

 WEWZI

CX-J310

 WEWZI

- Refer to the service manual ARP2637 for CX – J510 and CX – J410.
- This manual is applicable to WEWZI type.
- These products are systems components.

Each of these products does not function properly when independent ; to avoid malfunctions, be sure to connect it to the prescribed system component(s), otherwise damage may result.

These products' instructions are contained within the instruction manual of the related system component(s).

The manual is packed with those component(s).

These products' accessories etc. are packed with their related component(s).

CONTENTS

1. CONTRAST OF MISCELLANEOUS PARTS	2
------------------------------------	-------	---

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan

PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.

PIONEER ELECTRONICS OF CANADA, INC. 300 Allstate Parkway Markham, Ontario L3R 0P2 Canada

PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium

PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911

© **PIONEER ELECTRONIC CORPORATION 1993**

FO JAN. 1993 Printed in Japan

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.

1.1 CONTRAST OF MISCELLANEOUS PARTS FOR CX – J510/WEWZI

CX – J510/WEWZI and WE have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		CX – J510/WE	CX – J510/WEWZI	
●	REGULATOR assembly	AWZ4438	.....
	REGULATOR assembly	.....	AWZ4439	
●	SUB TRANS assembly	AWZ4443	.....
	SUB TRANS assembly	.....	AWZ4444	
●	VOLUME assembly	AWZ4447	.....
	VOLUME assembly	.....	AWZ4448	
NSP	CONNECT assembly	AWZ4547	AWZ5047	
●	MAIN assembly	AWZ4429	.....
	MAIN assembly	.....	AWZ4430	
●	U.COM assembly	AWZ4460	.....
	U.COM assembly	.....	AWZ4461	
	TUNER assembly	AWE1261	AWE1225	
	Screw(STEEL)	.....	ABA – 115	
	Rear panel(MTL)	ANC1963	ANC1964	
NSP	Earth plate	.....	ANK1120	
	Screw	.....	BBT30P080FZK	

REGULATOR ASSEMBLY

AWZ4439 and AWZ4438 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ4438	AWZ4439	
	C160	.....	CKDYB103K50	

SUB TRANS ASSEMBLY

Although AWZ4444 and AWZ4443 are different in part number, they have the same service parts.

VOLUME ASSEMBLY

AWZ4448 and AWZ4447 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ4447	AWZ4448	
	C819, C820, C823, C824 C829, C830 C833, C834	.....	CCSQCH470J50 CCSQCH471J50 CKSQYF473Z50	
	R835, R836	RS1/10S470J	RS1/10S102J	

CONNECT ASSEMBLY

AWZ5047 and AWZ4547 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ4547	AWZ5047	
	C621	.....	CKSQYB103K50	

MAIN ASSEMBLY

AWZ4430 and AWZ4429 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ4429	AWZ4430	
	C201, C202, C215, C216, C531, C532 C213, C214, C235, C236 C217 - C228, C243 - C246 C229 - C232 C237, C238, C455, C456, C533, C534, C657, C658	.....	CCSQCH471J50 CCSQCH101J50 CCSQCH391J50 CKSQYB681K50 CCSQCH470J50	
	C247, C248, C253, C254 C255 - C257 C258 C259 C260 - C262	CCSQSL391J50	CCSQCH391J50 CKDYB103K50 CCDSL101J50 CKDYB102K50 CKSQYB102K50	
	C263 - C267 C491 C655, C656	..... ..... .....	CCSQSL101J50 CKDYB682K50 CCSQCH820J50	
	R217, R218 R491	..... .....	RS1/10S512J RD1/8PM100J	

U.COM ASSEMBLY

AWZ4461 and AWZ4460 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ4460	AWZ4461	
	C1113	.....	CCMSL101J50	

TUNER ASSEMBLY

AWE1225 and AWE1261 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWE1261	AWE1225	
	Q905, Q907 Q910	RN2203 2SC1740S	RN2201 2SC2458	
	C908	.....	CKDYF223Z50	
	C909	.....	CKDYF103Z50	
	C915	CKDYF223Z50	.....
	C919	CKDYF223Z50	CKDYF473Z50	
	C922	CKDYF223Z50	CKPUYF223Z25	
	C952, C953	CKDYB122K50	CKDYB102K50	
	C961, C962	CKDYB272K50	CKDYB392K50	
	C968	CCDSL101J50	CCDCH101J50	
	C969	.....	CCDCH270J50	
	L901, L903, L905, L908 L904 L906	LAU2R2K LAU010K	LAU2R2M LAU010M LAU330K	
	R920	RD1/8PM103J	RD1/8PM472J	
	R922	.....	RD1/8PM680J	
	R924	RD1/8PM331J	RD1/8PM561J	
	R925	.....	RD1/8PM221J	
	R943	RD1/8PM433J	RD1/8PM473J	
	R955	RD1/8PM152J	RD1/8PM122J	
	R959, R960	RD1/8PM392J	RD1/8PM682J	
	TC901	.....	ACM - 018	
	ANTENNA TERMINAL(PAL 4P)	AKA1010	.....
	ANTENNA TERMINAL(PAL 2P)	.....	AKA1012	
	2 SERIAL FE MODULE ASSY	AXQ1002	.....
	4 SERIAL FE MODULE ASSY	.....	AXQ1004	
	AM RF TUNING BLOCK(MW)	AXX1011	AXX1014	

1.2 CONTRAST OF MISCELLANEOUS PARTS FOR CX – J410/WEWZI AND CX – J310/WEWZI

CX – J410/WEWZI, CX – J310/WEWZI and CX – J410/WE have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		CX – J410/WE	CX – J410/WEWZI	CX – J310/WEWZI	
●	REGULATOR assembly	AWZ4438	.....	.....
	REGULATOR assembly	.....	AWZ4439	AWZ4439	*
●	SUB TRANS assembly	AWZ4443	.....	.....
	SUB TRANS assembly	.....	AWZ4444	AWZ4444	*
●	VOLUME assembly	AWZ4449	.....	.....
	VOLUME assembly	.....	AWZ4450	AWZ4450	
NSP	CONNECT assembly	AWZ4547	AWZ5047	AWZ5047	*
●	MAIN assembly	AWZ4431	.....	.....
	MAIN assembly	.....	AWZ4433	AWZ4435	
●	FL assembly	AWZ4746	AWZ4746	.....
	FL assembly	.....	.....	AWZ4454	
NSP	KEY assembly	AWZ4456	AWZ4456	AWZ4457	
●	U.COM assembly	AWZ4462	.....	.....
	U.COM assembly	.....	AWZ4463	AWZ4463	
	TUNER assembly	AWE1261	AWE1225	AWE1225	*
	AUDITION button(PLS)	AAD2342	AAD2342	.....
	Screw (STEEL)	.....	ABA – 115	ABA – 115	
	Packing case(PAP)	AHD2482	AHD2482	AHD2480	
	Front panel(PLS)	AMB2051	AMB2051	AMB2053	
	Sub panel assembly	AMR2476	AMR2476	AMR2475	
	Rear panel(MTL)	ANC1967	ANC1968	ANC1972	
NSP	Earth plate	.....	ANK1120	ANK1120	
	Screw	.....	BBT30P080FZK	BBT30P080FZK	

* : For AWZ4439, AWZ4444, AWZ5047 and AWE1225, refer to pages 2 – 4.

VOLUME ASSEMBLY

AWZ4450 and AWZ4449 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ4449	AWZ4450	
	C819, C820	.....	CCSQCH470J50	
	C829, C830	.....	CCSQCH471J50	
	C833, C834	.....	CKSQYF473Z50	
	R835, R836	RS1/10S470J	RS1/10S102J	

MAIN ASSEMBLY

AWZ4433, AWZ4435 and AWZ4431 have the same construction except for the following :

	Symbol & Description	Part No.			Remarks
		AWZ4431	AWZ4433	AWZ4435	
	C201, C202, C215, C216, C531, C532	.....	CCSQCH471J50	CCSQCH471J50	
	C213, C214, C235, C236	.....	CCSQCH101J50	CCSQCH101J50	
	C217 - C228, C243 - C246	.....	CCSQCH391J50	CCSQCH391J50	
	C229 - C232	.....	CKSQYB681K50	CKSQYB681K50	
	C237, C238, C455, C456, C533, C534	.....	CCSQCH470J50	CCSQCH470J50	
	C247, C248, C253, C254	CCSQSL391J50	CCSQCH391J50	CCSQCH391J50	
	C255 - C257	.....	CKDYB103K50	CKDYB103K50	
	C258	.....	CCDSL101J50	CCDSL101J50	
	C259	.....	CKDYB102K50	CKDYB102K50	
	C260 - C262	.....	CKSQYB102K50	CKSQYB102K50	
	C263 - C267	.....	CCSQSL101J50	CCSQSL101J50	
	C491	.....	CKDYB682K50	CKDYB682K50	
	C535, C536	.....	CCSQCH220J50	CCSQCH220J50	
	R217, R218	.....	RS1/10S512J	RS1/10S512J	
	R356	RS1/10S102J	RS1/10S102J	.....
	R491	.....	RD1/8PM100J	RD1/8PM100J	
	JACK (MULTI-ROOM)	AKN1020	AKN1020	.....

U.COM ASSEMBLY

AWZ4463 and AWZ4462 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ4462	AWZ4463	
	C1113	.....	CCMSL101J50	

FL ASSEMBLY

AWZ4454 is the same as that of CX - J310/WE which is shown with CX - J510 and CX - J410 in the service manual ARP2637.

KEY ASSEMBLY

AWZ4457 is the same as that of CX - J310/WE which is shown with CX - J510 and CX - J410 in the service manual ARP2637.

● EXPLODED VIEWS

A

B

C

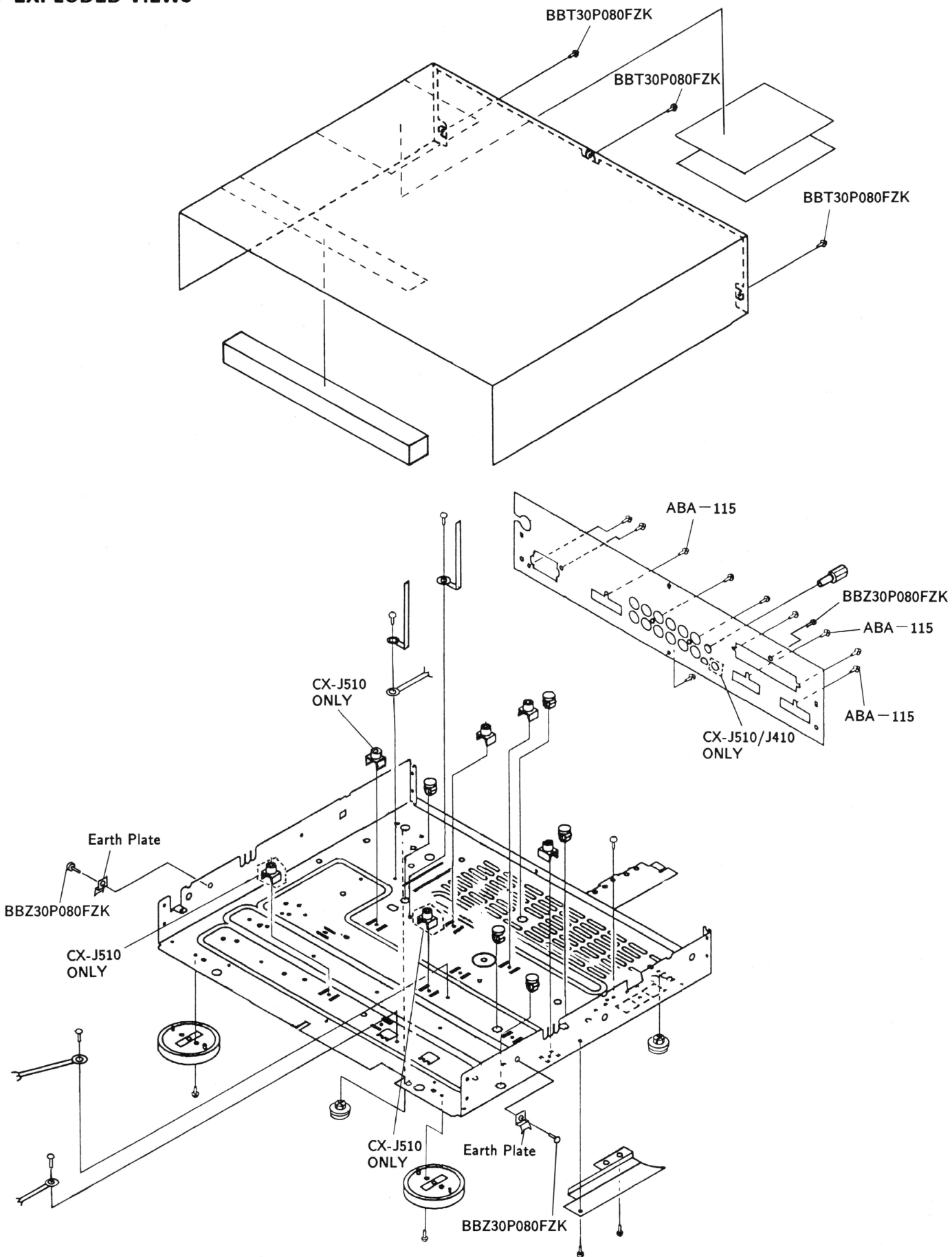
D

A

B

C

D



● **SCHEMATIC DIAGRAM AND PCB PATTERNS**

Note: Type 3





1. When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".

2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.

3. RESISTORS:
 Unit: k:Ω, M:MΩ, or Ω unless otherwise noted.
 Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
 Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.

4. CAPACITORS:
 Unit: p:pF or μF unless otherwise noted.
 Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
 Rated voltage: 50V except for electrolytic capacitors.

5. COILS:
 Unit: m:mH or μH unless otherwise noted.

6. VOLTAGE AND CURRENT:
 : Signal voltage at FM 1kHz, 100% MOD.
 : 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.

7. OTHERS:

- → : Signal route.
- ⊗ : 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.

8. SWITCHES (Underline indicates switch position):

FL ASSY


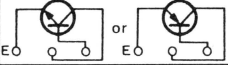
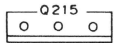
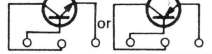
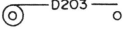







- S1101 : FUNCTION
- S1102 : POWER STANDBY/ON
- S1103 : EFFECT ON/OFF

KEY ASSY

- S1111 : SET
- S1112 : WAKE UP
- S1113 : REC
- S1114 : CLOCK ADJ
- S1115 : LOCAL/DX
- S1116 : MEMORY SCAN
- S1117 : STATION MEMORY
- S1118 : TUNING +
- S1119 : TUNING -
- S1120 : FREQ/ST
- S1121 : BAND
- S1132 : GEQ ON/OFF
- S1133 : SFC MODE
- S1134 : GEQ FREQ ←
- S1135 : GEQ FREQ →
- S1136 : DOLBY MODE
- S1137 : CENTER MODE
- S1138 : VOCAL CANCEL
- S1141 : SOUND JOG.

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)

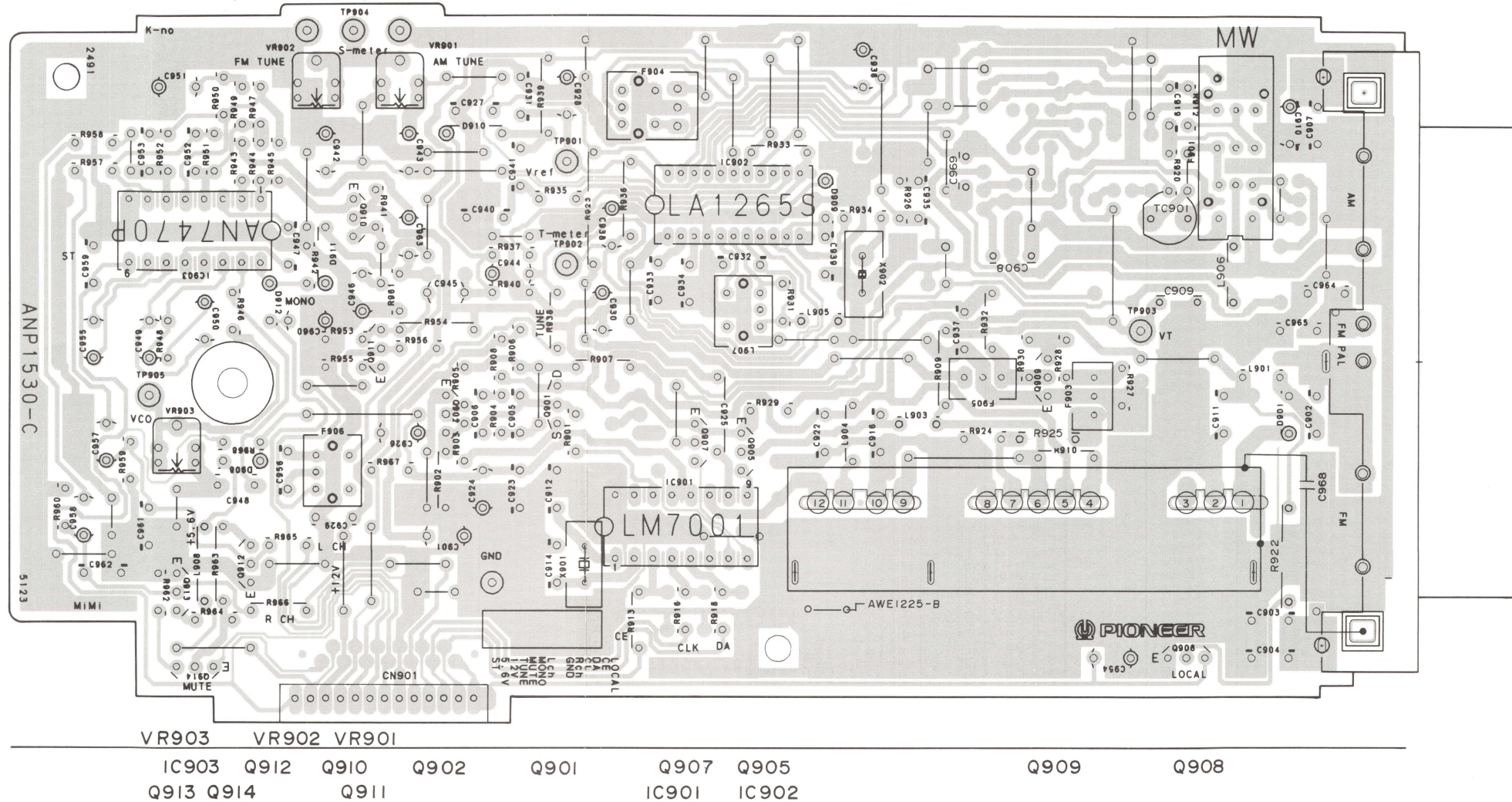
Others

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

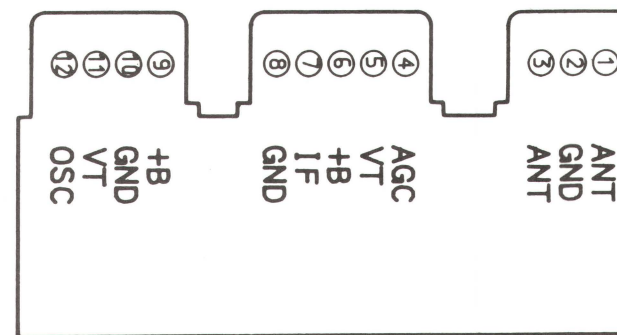
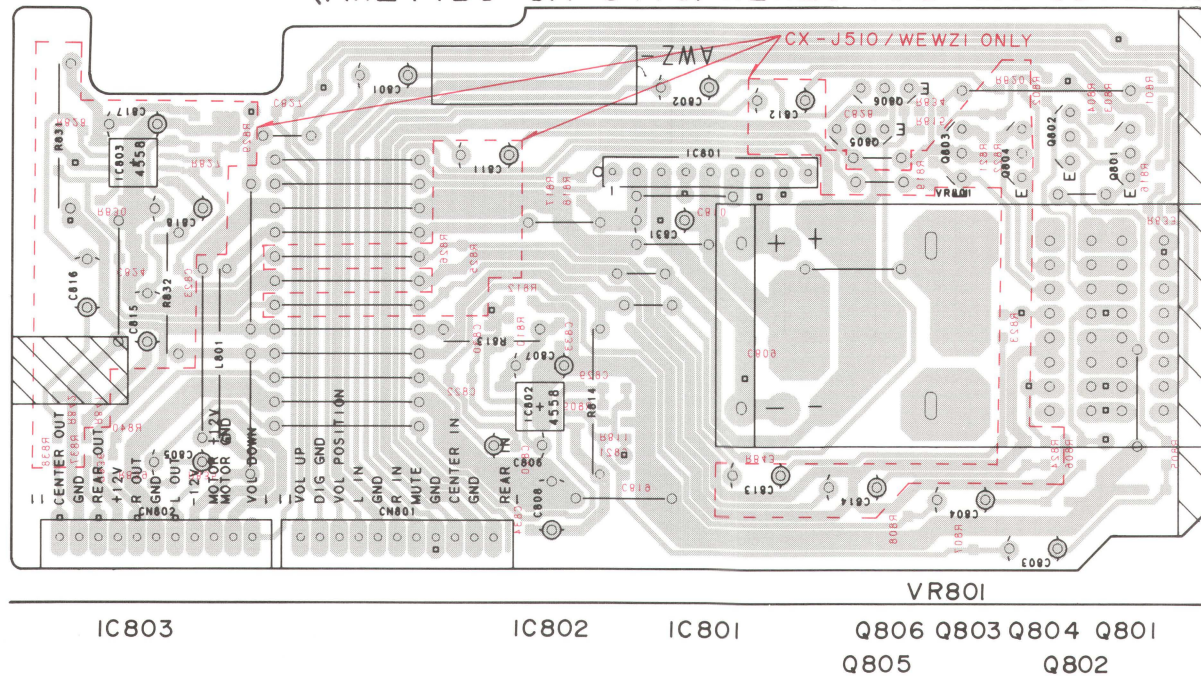
3. The capacitor terminal marked with ⊙ (double circles) shows negative terminal.
4. The diode terminal marked with ⊙ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

● TUNER ASSY, VOLUME ASSY

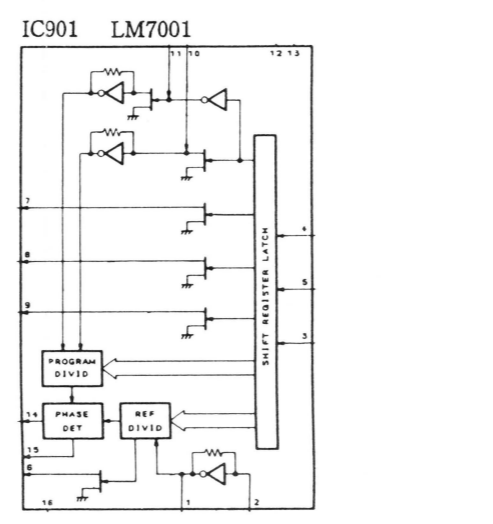
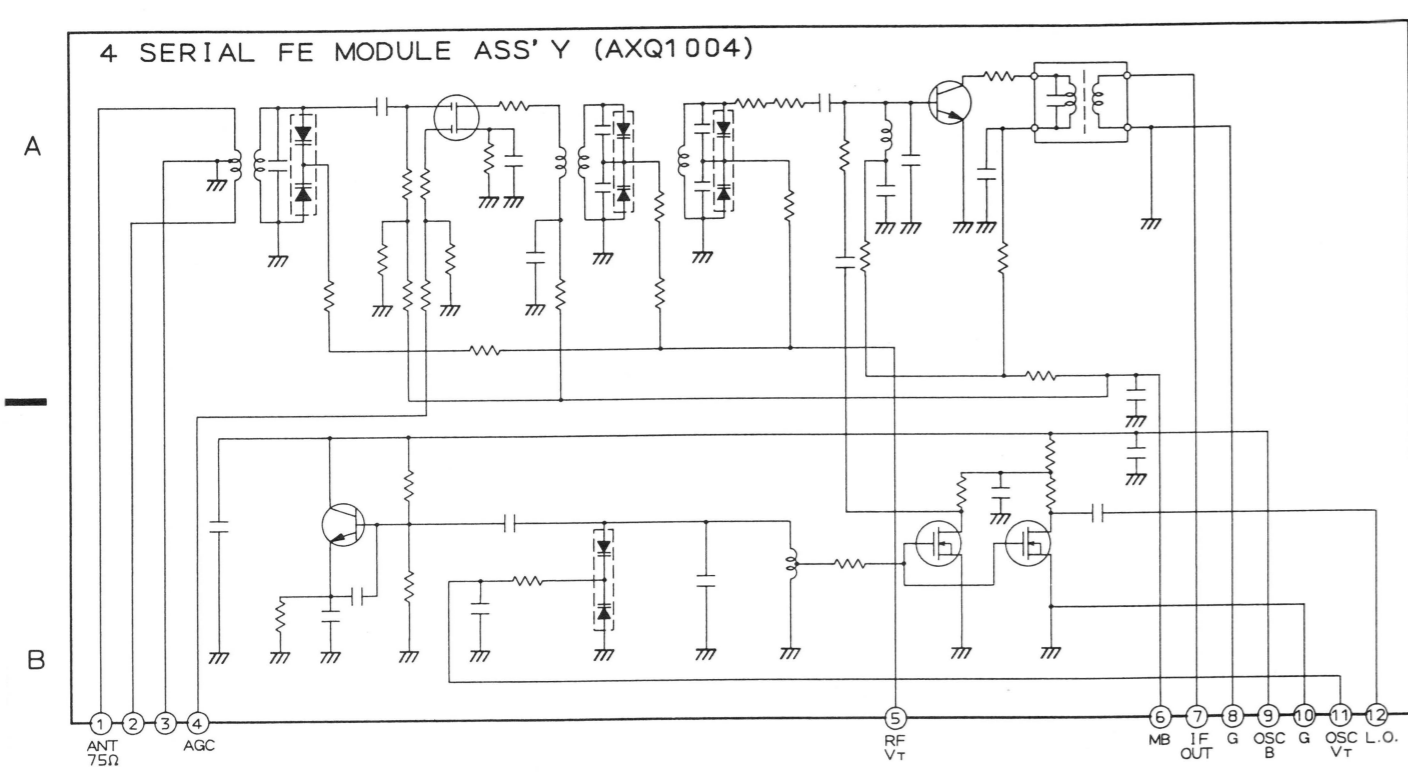
TUNER ASSY (AWE1225)



VOLUME ASSY (AWZ448: CX-J510/WEWZ1)
(AWZ450: CX-J410/WEWZ1 AND CX-J310/WEWZ1)

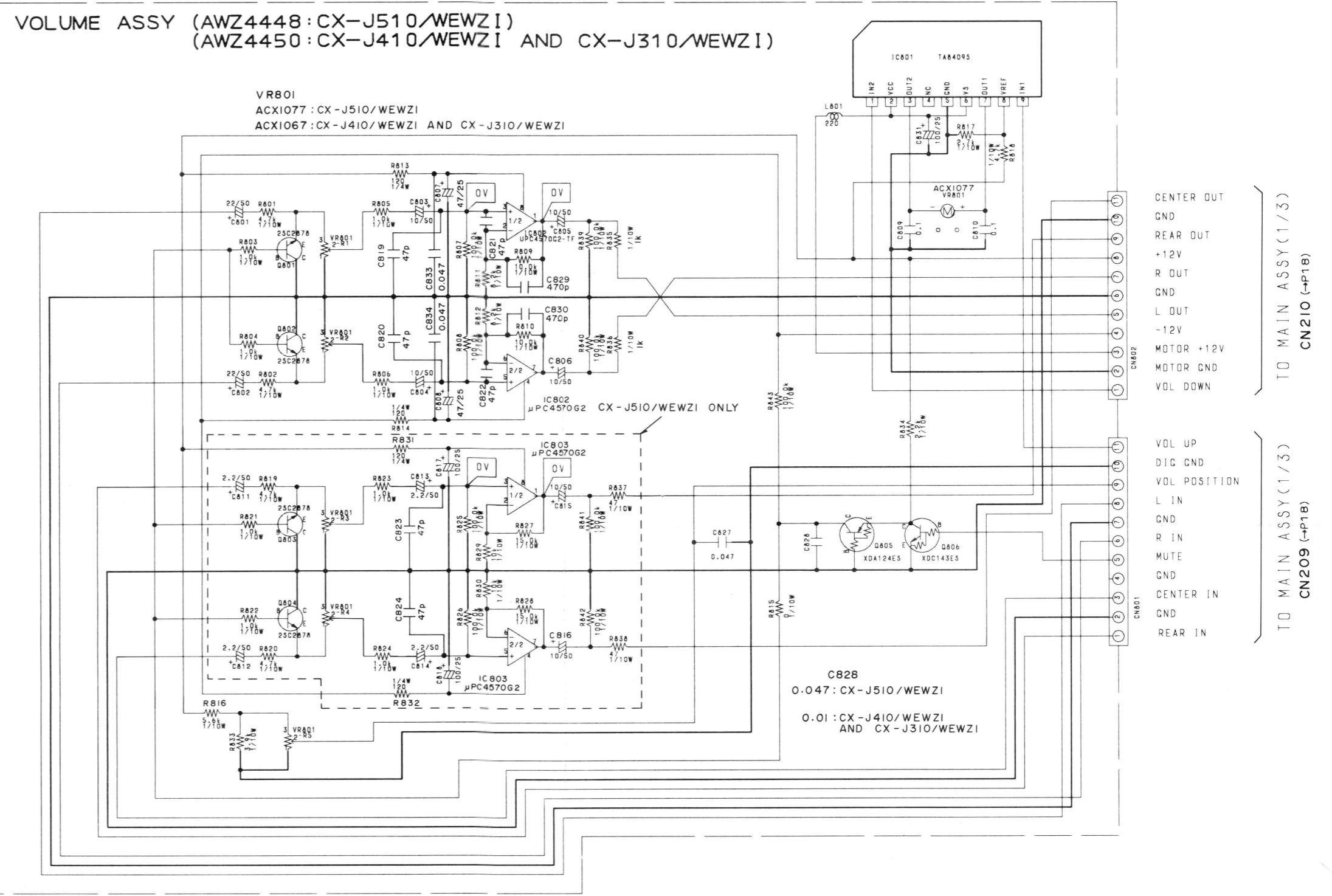


FE MODULE ASSEMBLY (AXQ1004)

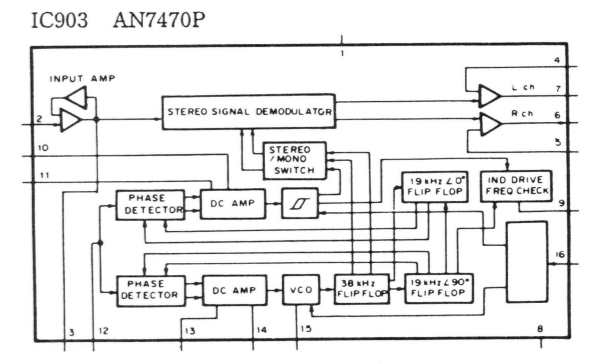
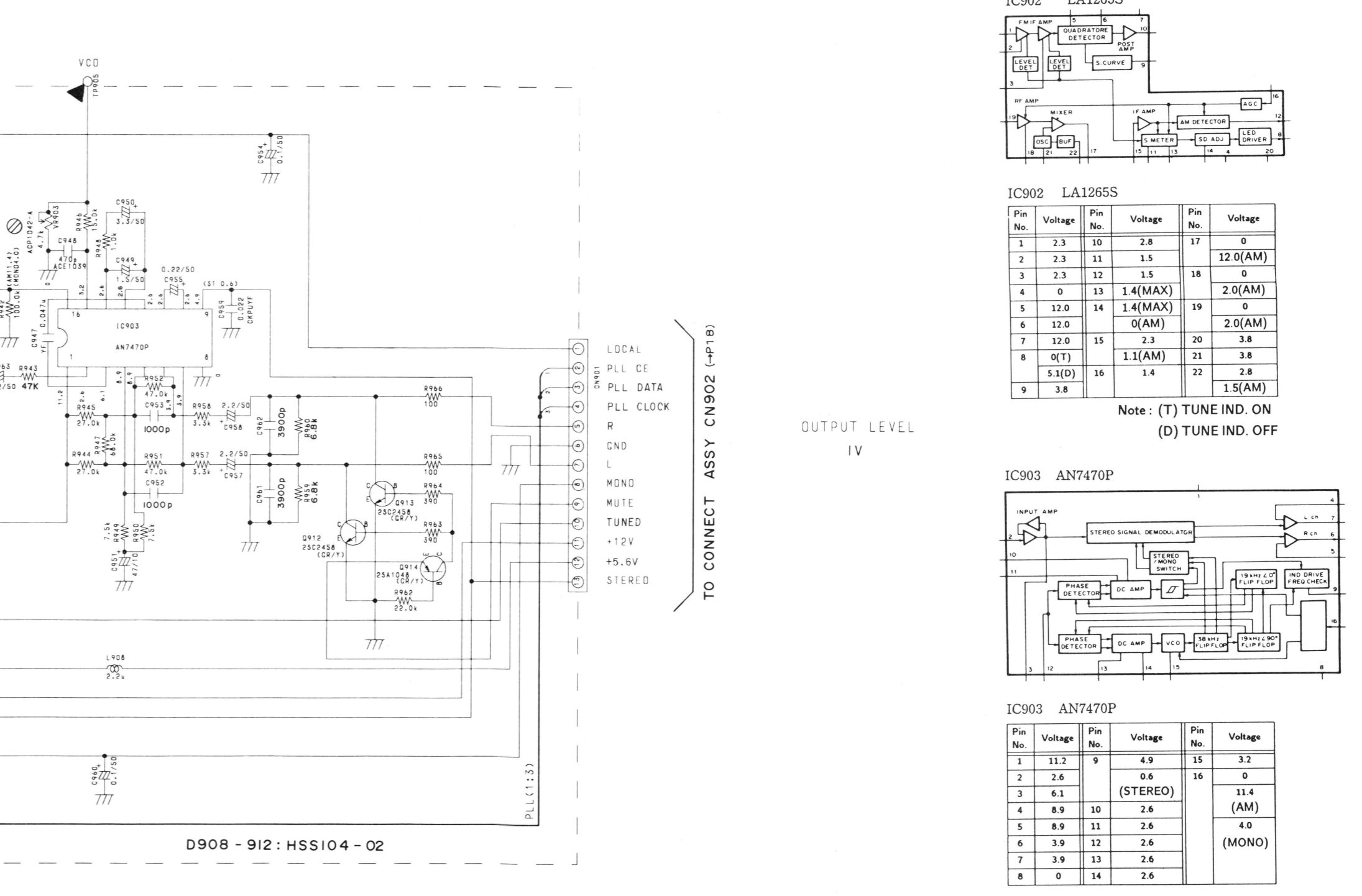
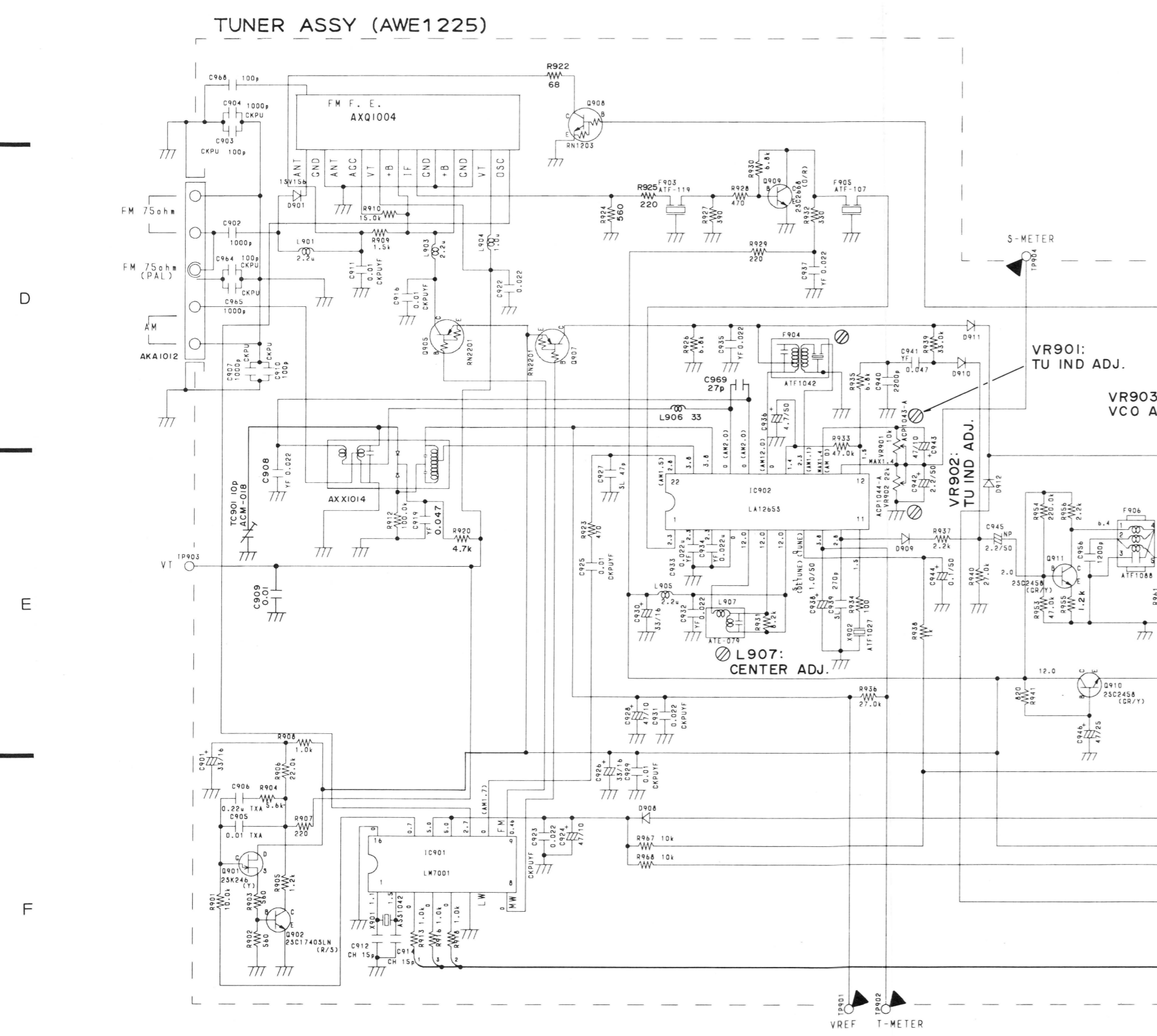


IC901 LM7001

Pin No.	Voltage	Pin No.	Voltage
1	1.1	9	0.46
2	1.5	10	0 (AM: 1.7)
3	0	11	2.7
4	0	12	5.0
5	0	13	5.0
6		14	0.7
7		15	
8	0	16	0



- CN210 (-#P1B)
 - 1 CENTER OUT
 - 2 GND
 - 3 REAR OUT
 - 4 +12V
 - 5 R OUT
 - 6 GND
 - 7 L OUT
 - 8 -12V
 - 9 MOTOR +12V
 - 10 MOTOR GND
 - 11 VOL DOWN
- CN209 (-#P1B)
 - 1 VOL UP
 - 2 DIG GND
 - 3 VOL POSITION
 - 4 L IN
 - 5 GND
 - 6 R IN
 - 7 MUTE
 - 8 CENTER IN
 - 9 GND
 - 10 REAR IN



IC903 AN7470P

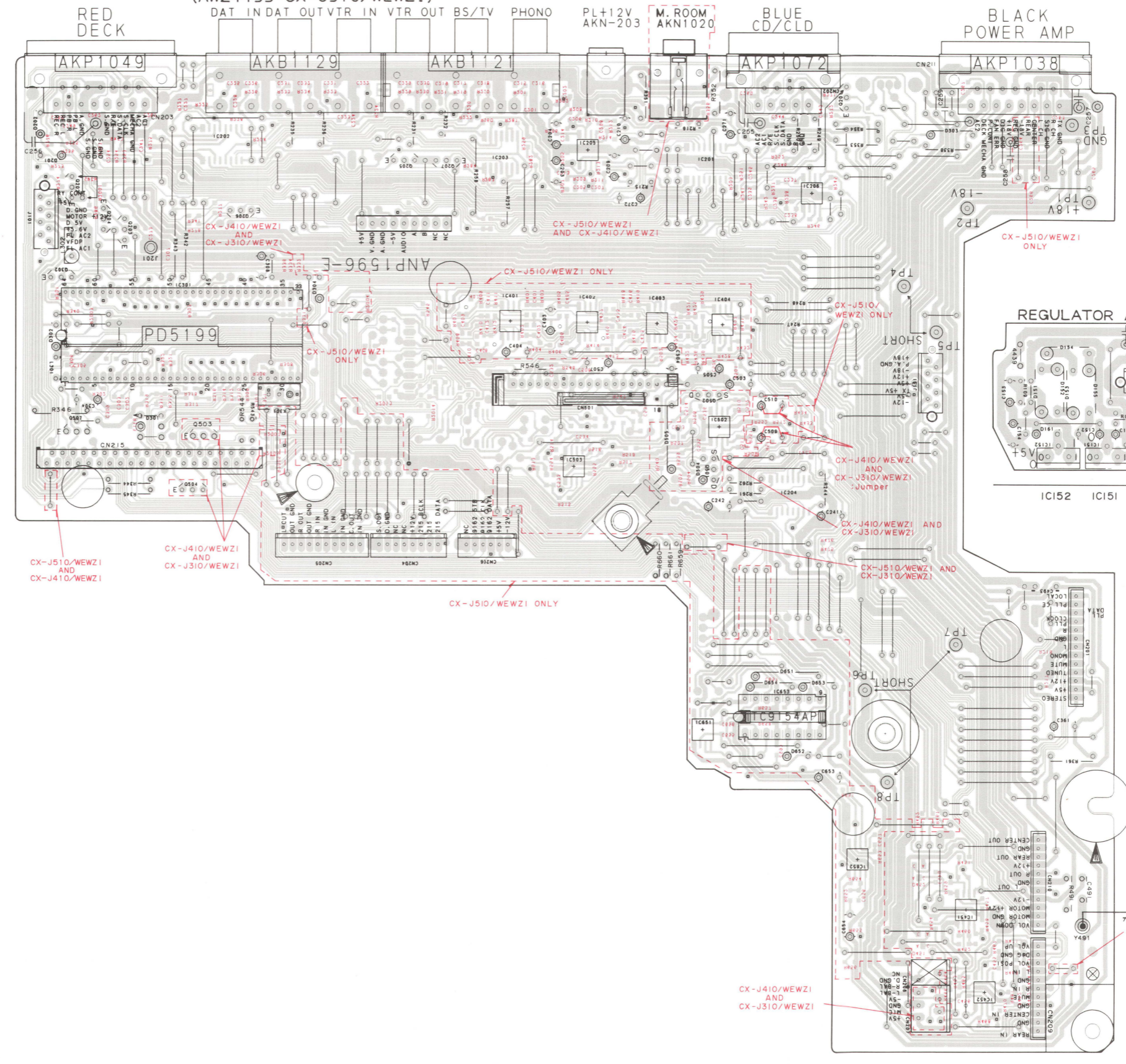
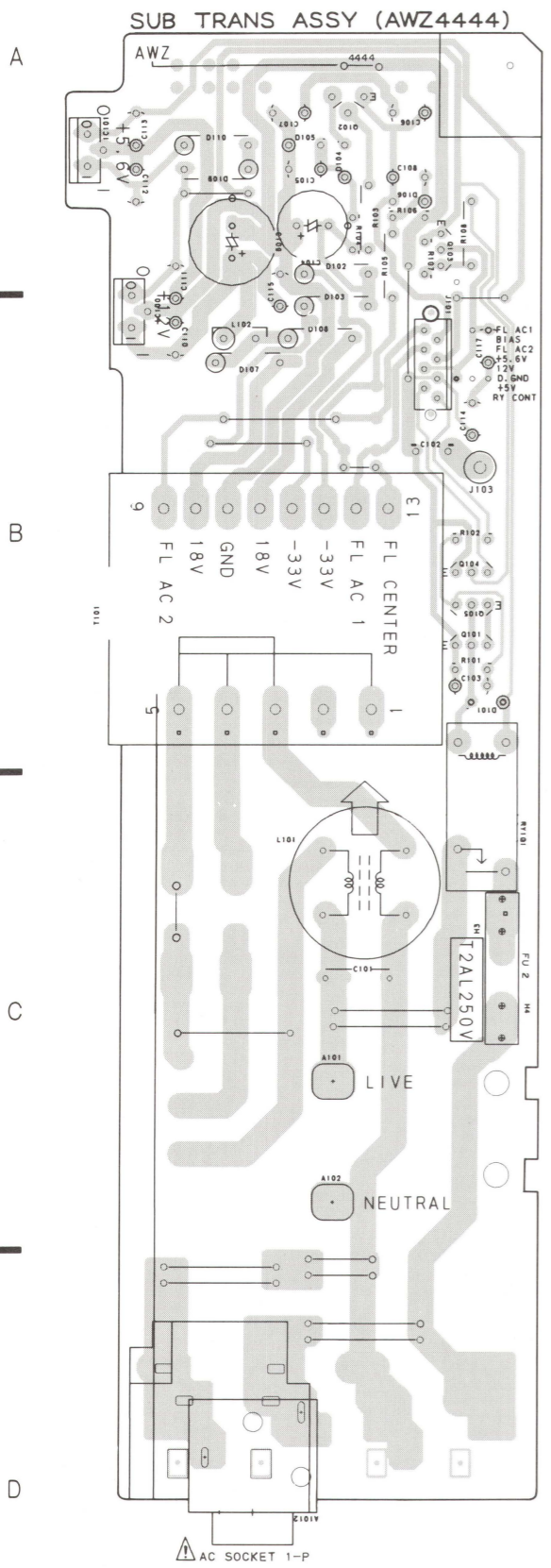
Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage
1	11.2	9	4.9	15	3.2
2	2.6		0.6	16	0
3	6.1		(STEREO)		
4	8.9	10	2.6		11.4 (AM)
5	8.9	11	2.6		4.0 (MONO)
6	3.9	12	2.6		
7	3.9	13	2.6		
8	0	14	2.6		

TO CONNECT ASSY CN902 (-#P1B)

OUTPUT LEVEL
IV

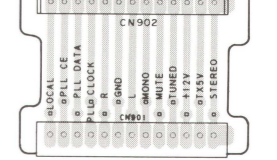
D908 - 912: HSS104 - 02

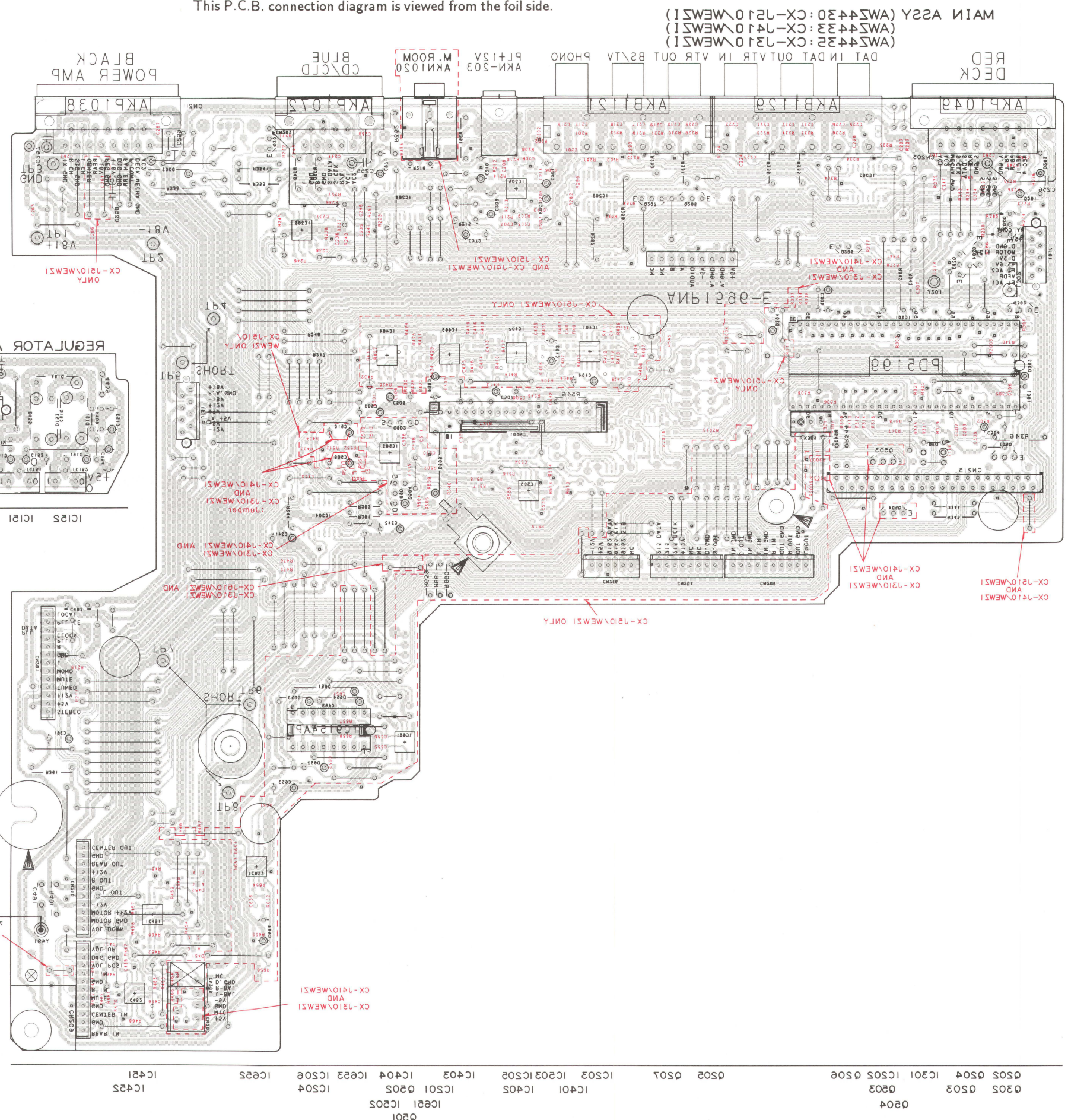
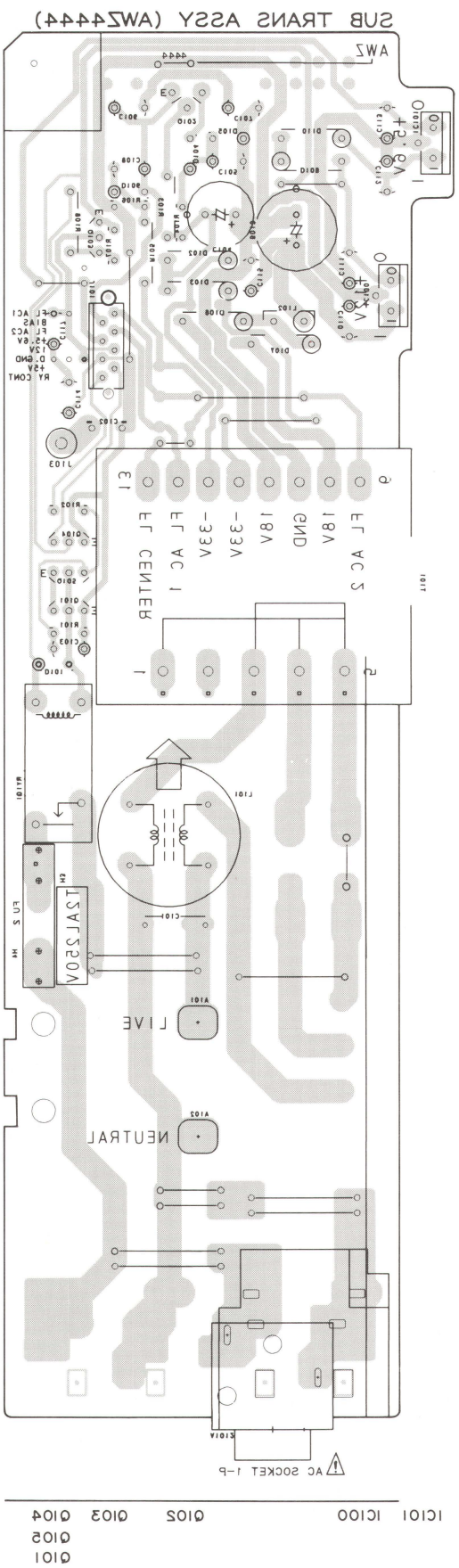
MAIN ASSY (AWZ4430: CX-J510/WEWZ I)
 (AWZ4433: CX-J410/WEWZ I)
 (AWZ4435: CX-J310/WEWZ I)



- IC101
- IC100
- Q102
- Q103
- Q104
- Q105
- Q101

- Q202
- Q204
- IC301
- IC202
- Q206
- Q302
- Q203
- Q503
- Q504
- Q205
- Q207
- IC203
- IC503
- IC205
- IC401
- IC402
- IC201
- Q502
- IC651
- IC502
- Q501
- IC403
- IC404
- IC653
- IC206
- IC204
- IC652
- IC451
- IC452





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

A

B

C

D

E

A

B

C

D

E

● MAIN ASSY (2/3)(3/3), REGULATOR ASSY, SUB TRANS ASSY

A

B

C

D

E

F

A

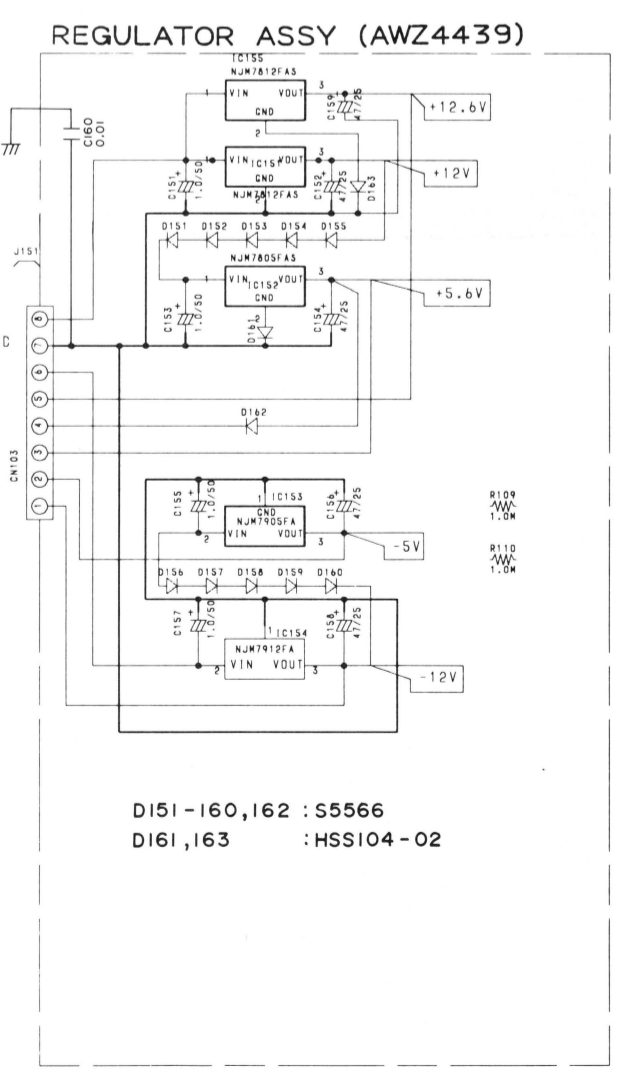
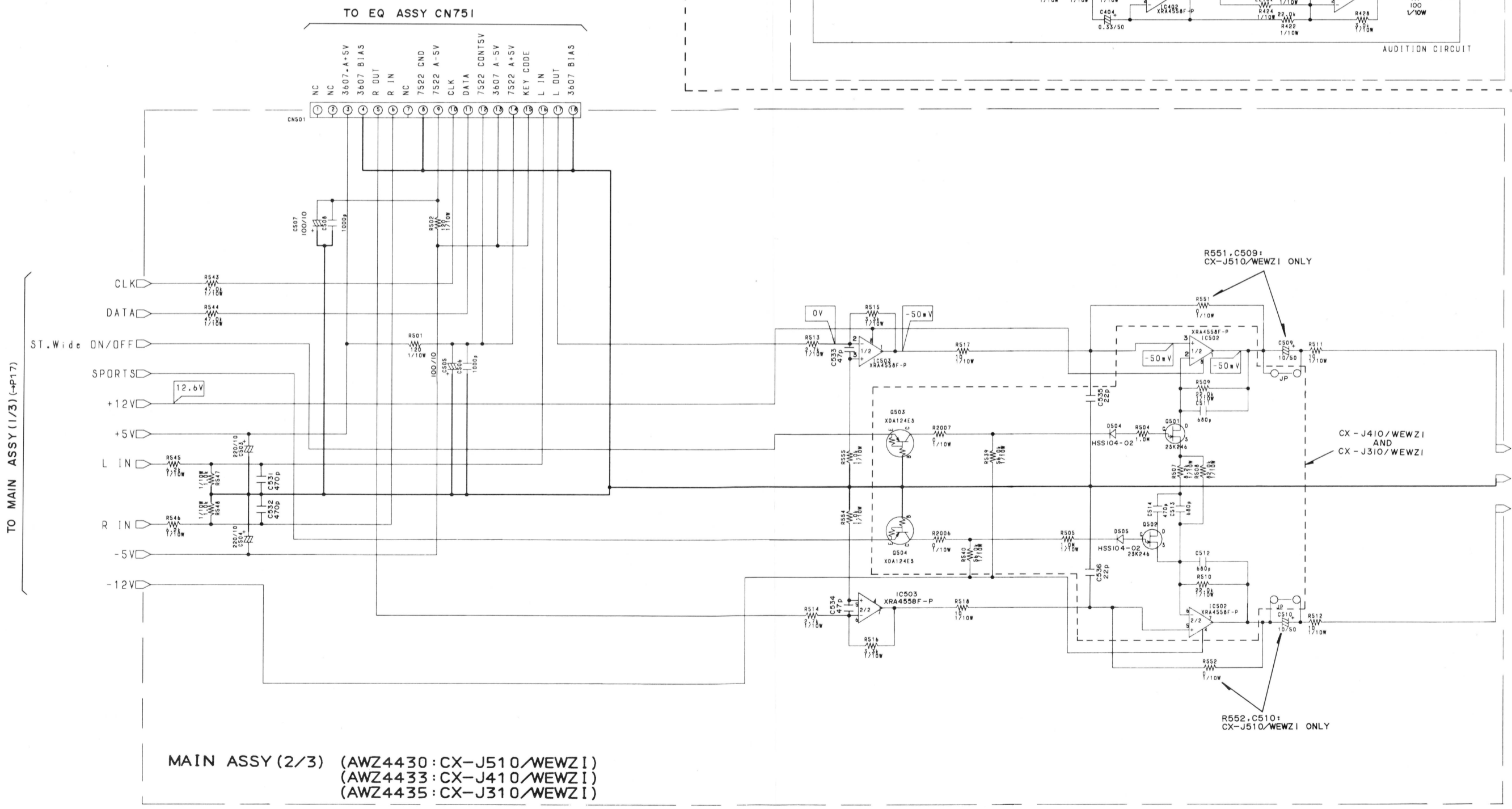
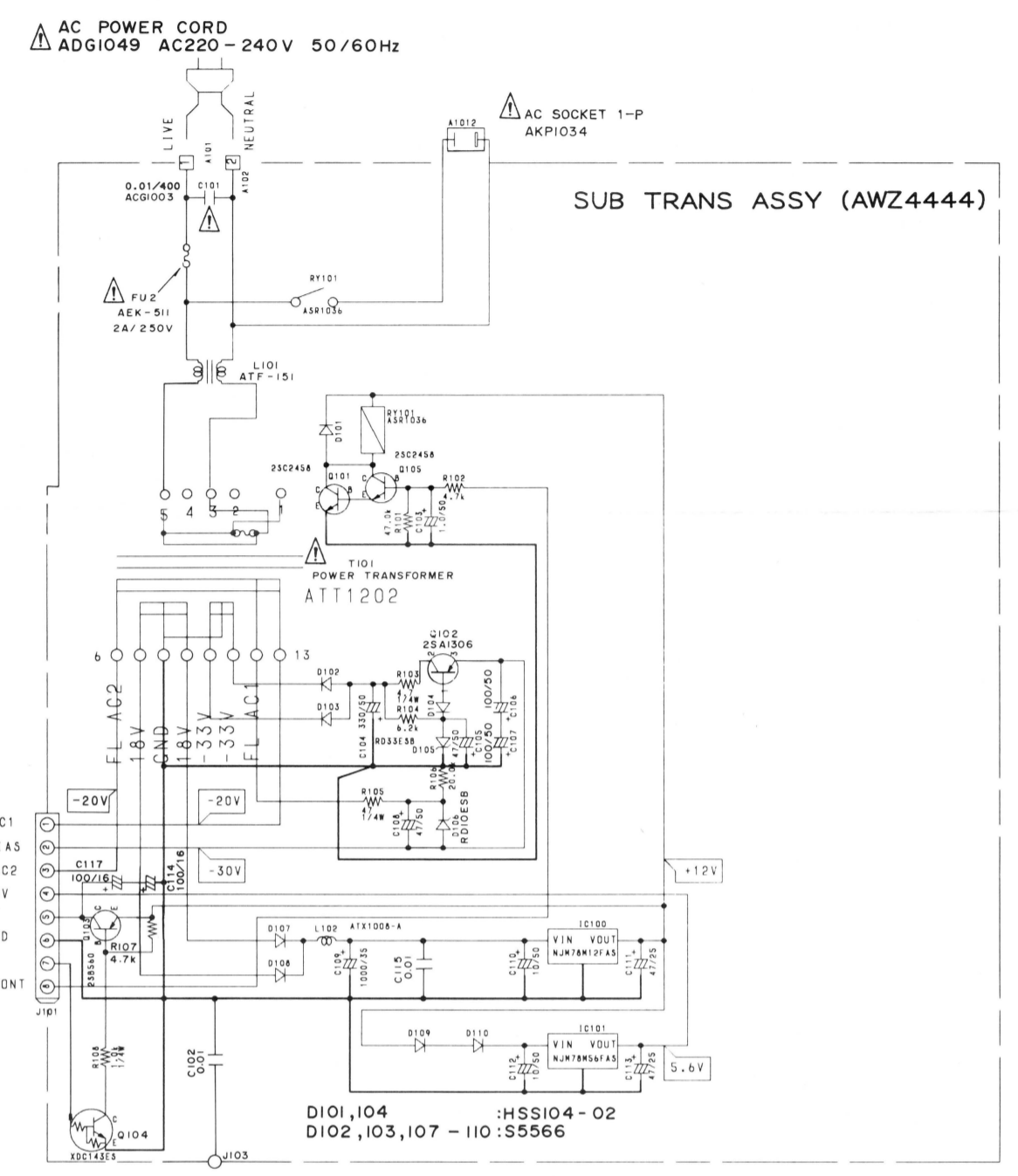
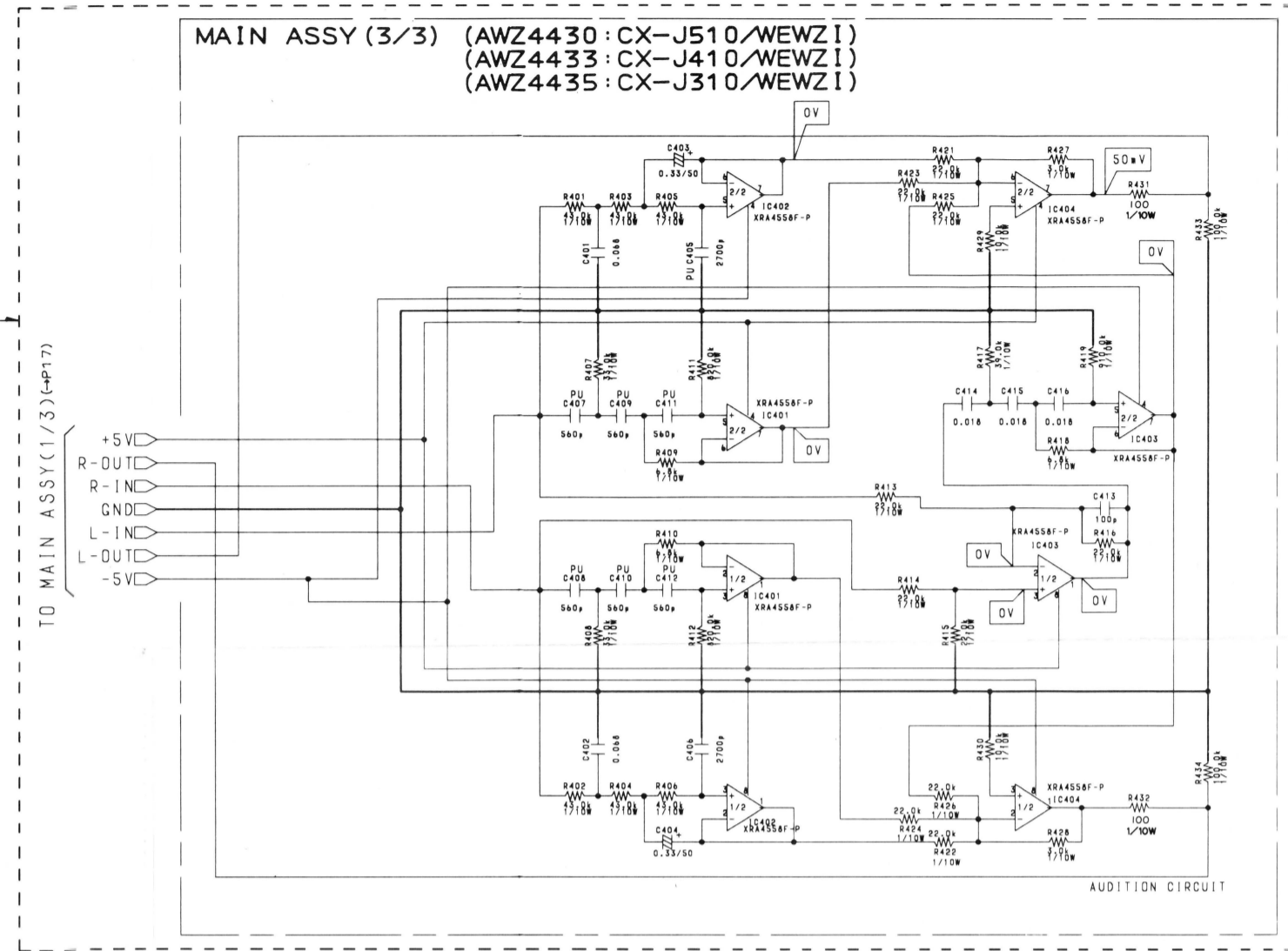
B

C

D

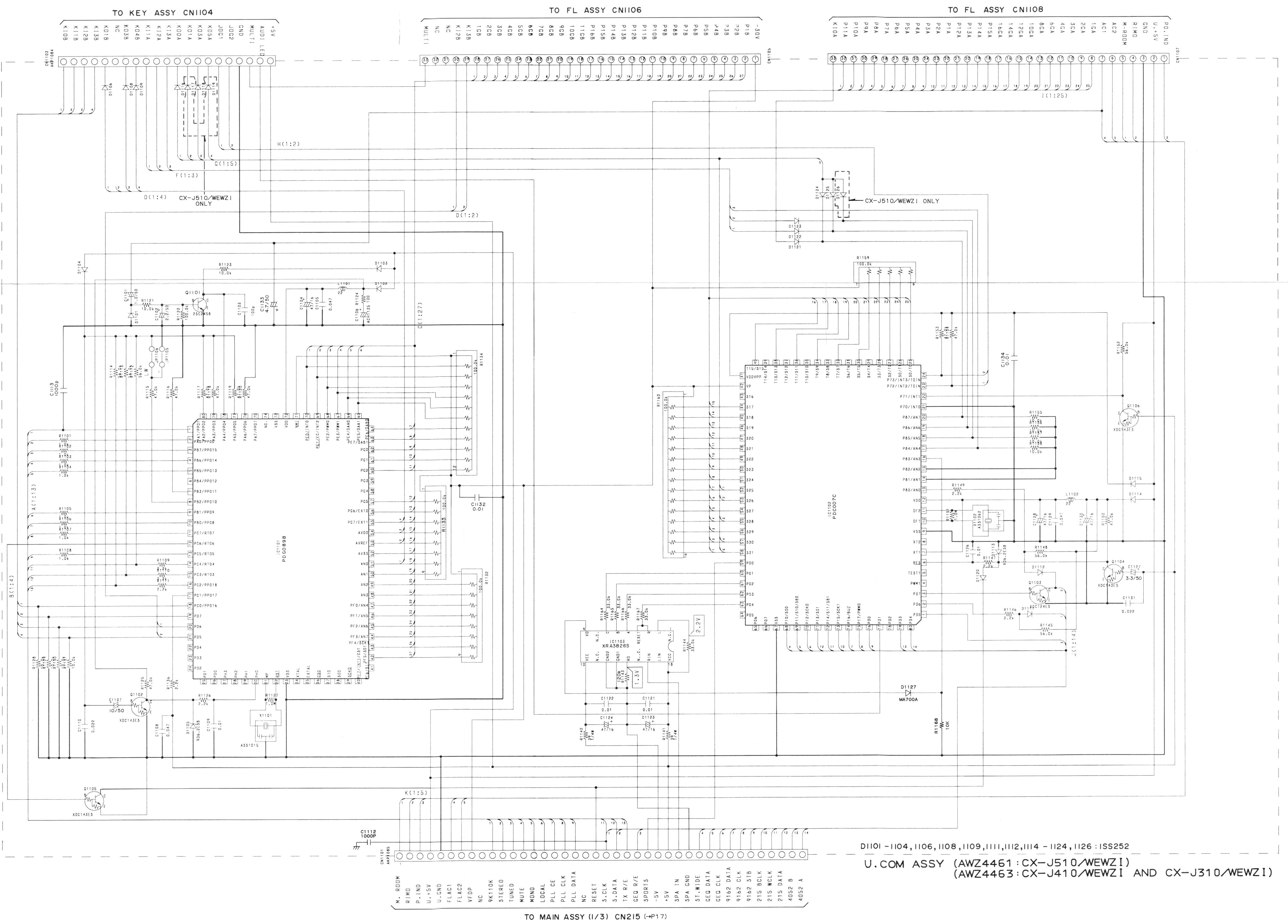
E

F



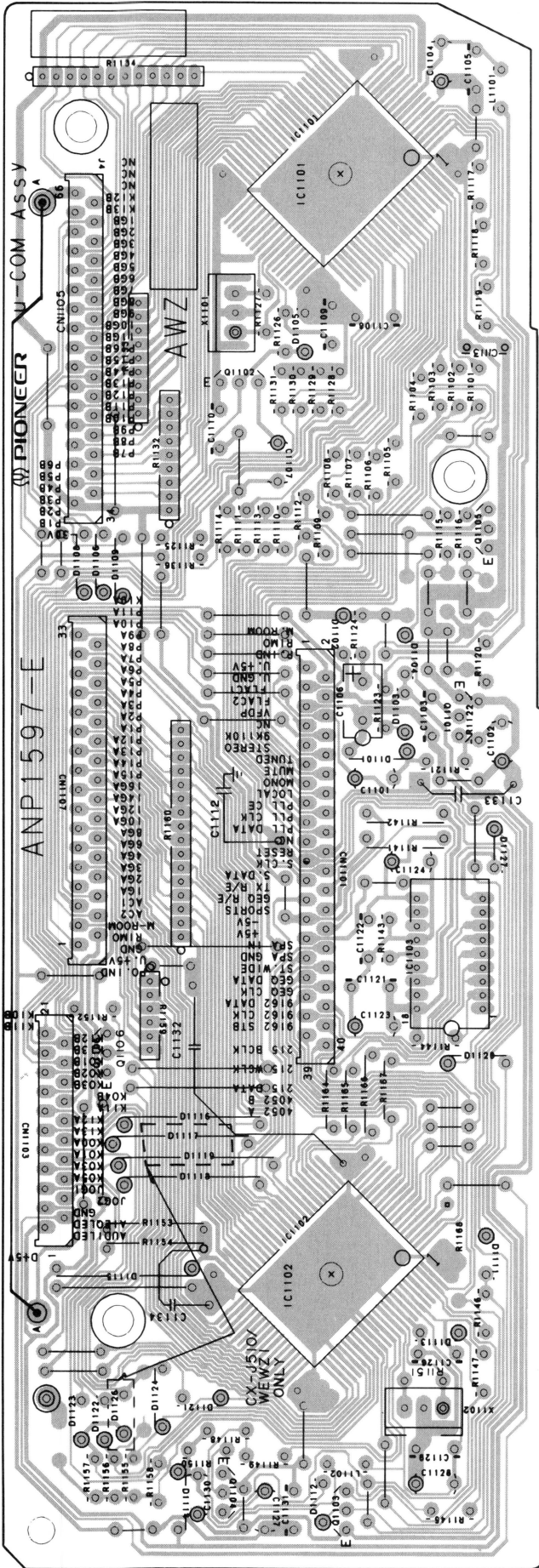
A B C D E F

A B C D E F



D1101 - I1104, I1106, I1108, I1109, I1111, I1112, I1114 - I1124, I1126 : ISS252
 U.COM ASSY (AWZ4461 : CX-J510/WEWZI)
 (AWZ4463 : CX-J410/WEWZI AND CX-J310/WEWZI)

U.COM ASSY (AWZ4461: CX-J510/WEWZ I)
(AWZ4463: CX-J410/WEWZ I AND CX-J310/WEWZ I)



- Q1104
- Q1103
- IC1102
- Q1106
- IC1103
- Q1101
- Q1105
- Q1102
- IC1101

A

B

C

D

A

B

C

D

● ADJUSTMENTS

AM TUNER ADJUSTMENT

- Set the BAND selector to "AM".

Step No.	Adjustment Title	AM SG(400Hz, 30% modulation)		Reception Frequency Display	Adjustment	
		Frequency(kHz)	Level(dB μ V/m)		Adjustment Location	Specifications
1	Tracking adjustment	603	Low level	603kHz	AM RF Tuning block antenna coil	Adjust so that the DC Voltage between the TP904 (S-meter) and GND becomes at maximum level.
		1395		1395kHz	TC901	
2	IFT adjustment	603		603kHz	F904	
3	TUNED indicator sensitivity adjustment	999	55 (± 5 dB)	999kHz	VR901	Adjust so that the indicator lights up.

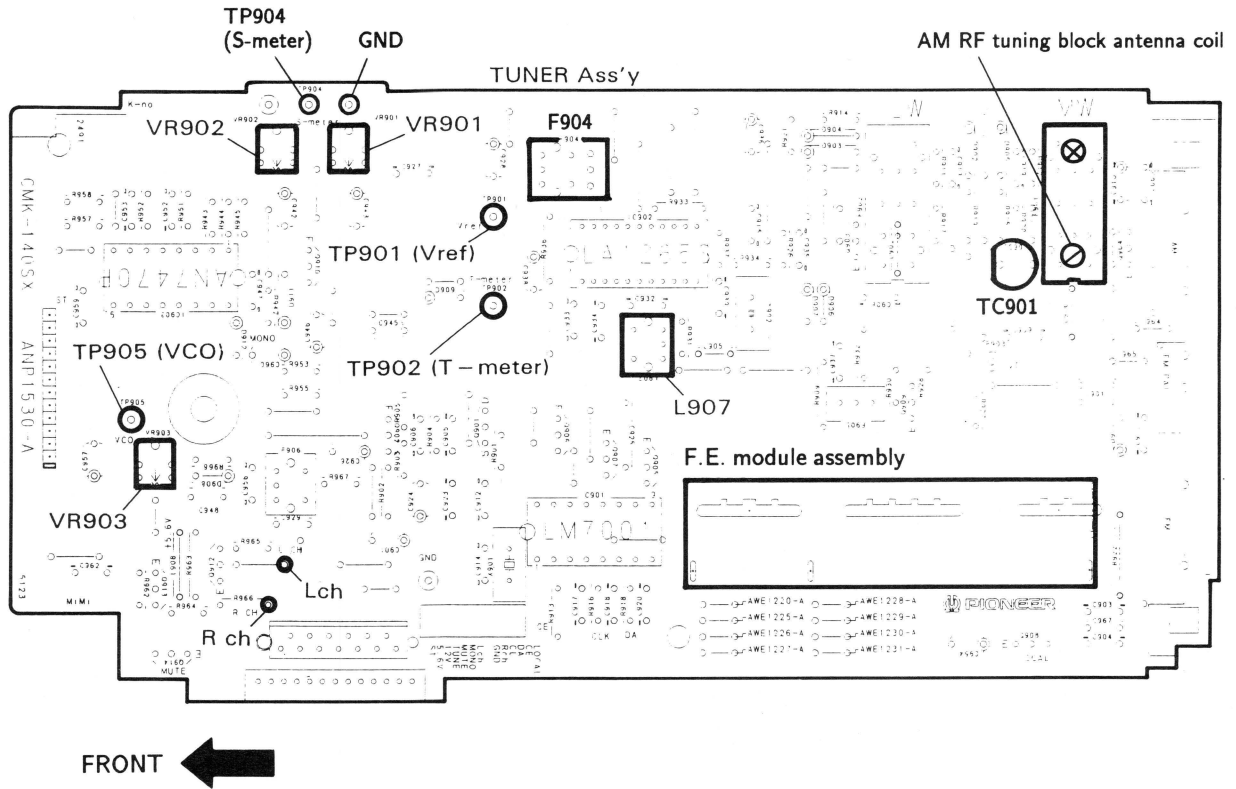


Fig. 1 Adjustment Points

