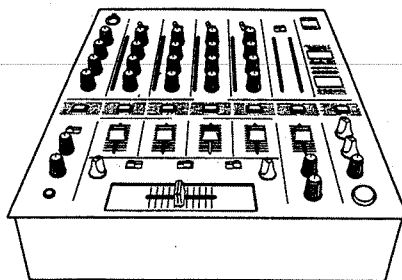


Service Manual

PIONEER®
The Art of Entertainment



ORDER NO.
RRV1405

DJ MIXER

DJM-500

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.
	DJM-500		
KUC	○	AC120V	_____
RELM	○	AC110-120V/220-240V	With the voltage selector

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SE-VS1063-G +
SE-VS1082-G

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T-DFY NOV. 1995 Printed in Japan

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5). When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols  (fast operating fuse) and/or  (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible  (fusible de type rapide) et/ou  (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

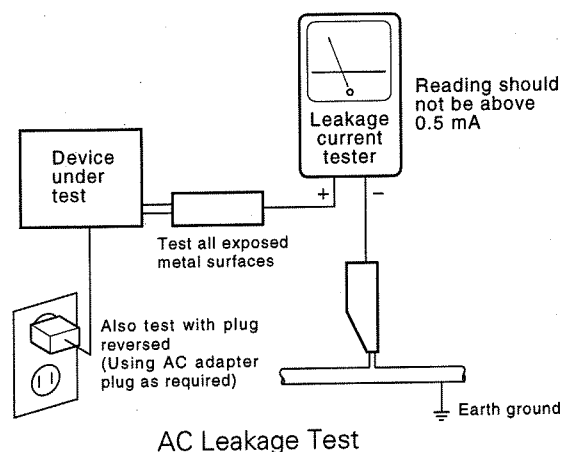
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a  on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

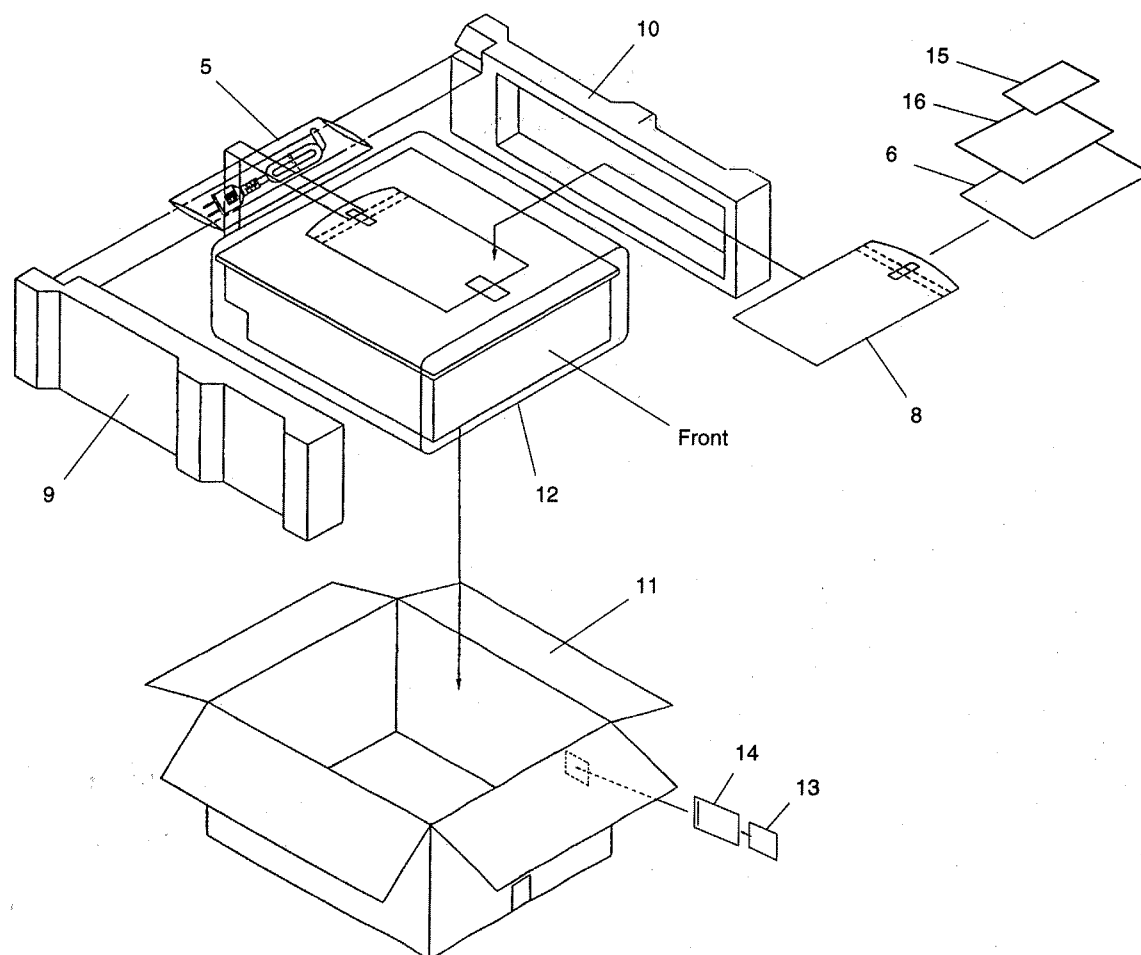
2. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES :

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The $\triangle$ 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.

2.1 PACKING

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1				11	PACKING CASE (KUC type)	DHG1683
	2				11	PACKING CASE (RELM type)	DHG1682
	3				12	SHEET	RHX1006
	4			NSP	13	FOLLOW UP CARD (KUC type only)	DRY1032
	5	AC POWER CORD (KUC type)	DDG1071	NSP	14	VINYL BAG (KUC type only)	DHL1011
	5	AC POWER CORD (RELM type)	ADG1127	NSP	15	CAUTION CARD (220V) (RELM type only)	ARR7003
	6	OPERATING INSTRUCTIONS (English) (KUC type)	DRB1192		16	INSTRUCTION MANUAL	DRM1187
	6	OPERATING INSTRUCTIONS (English/French/German/Italian/Dutch/Swedish /Spanish/Chinese) (RELM type)	DRB1191				
	7						
	8	POLYETHYLENE BAG (0.03X230X340)	Z21-038				
	9	PAD L	DHA1350				
	10	PAD R	DHA1354				



DJM-500

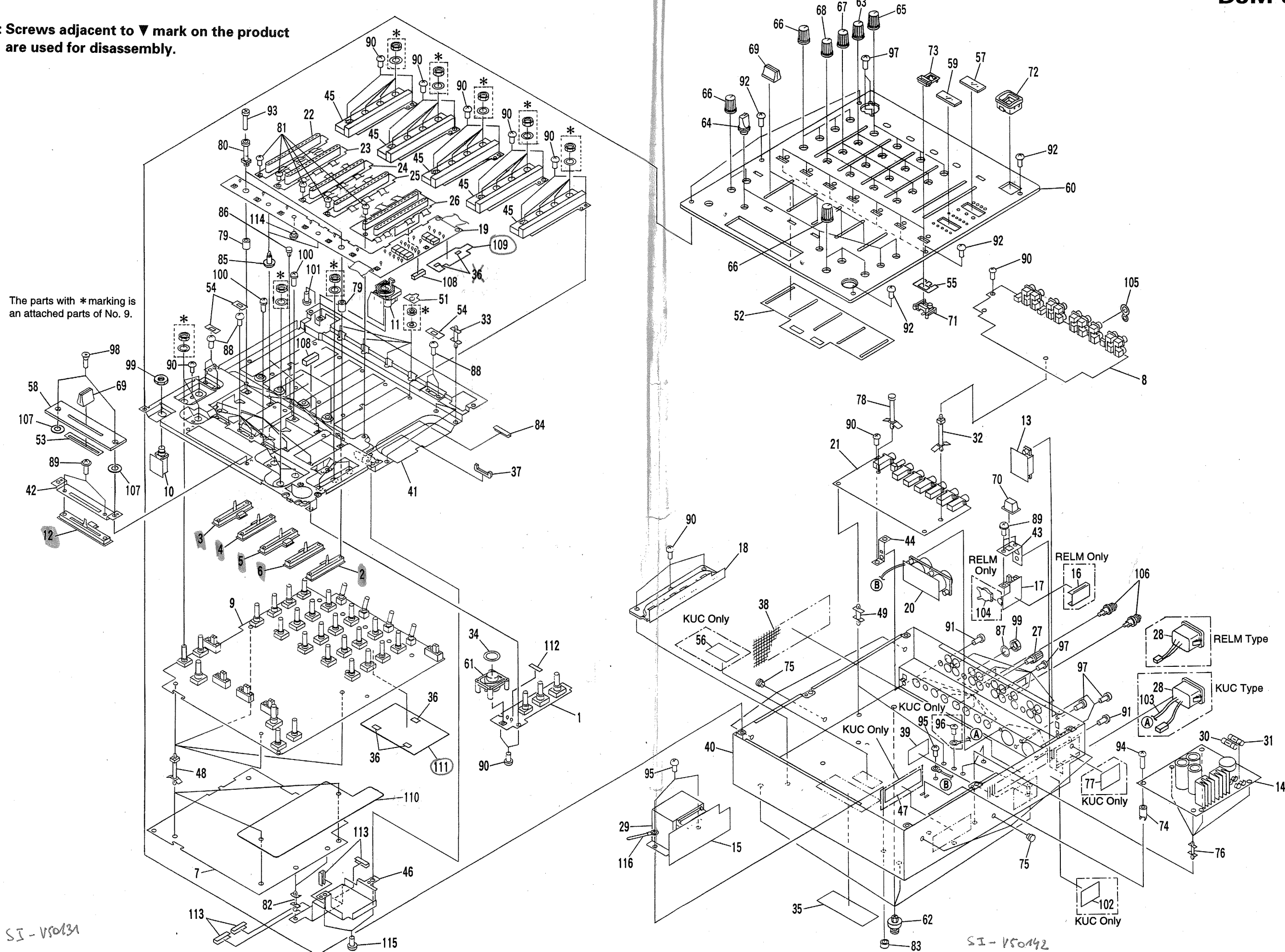
* New parts: f-DNH 2275 Shield case
(SI-V51085A-f) f-DKP 3336 Connector with plug
+
(SI-V51085-f)

2.2 EXTERIOR

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.	
NSP	1	EFFECT VR ASSY	DWG1472	59	DISPLAY PANEL B	DAH1796		
NSP	2	FADER VR ASSY (MAIN)	DWG1474	60	CONTROL PANEL	DNB1066		
NSP	3	FADER VR ASSY (CH1)	DWG1475		SI-V50130			
NSP	4	FADER VR ASSY (CH2)	DWG1476	61	LOOP KNOB	DNK2943		
NSP	5	FADER VR ASSY (CH2)	DWG1477	62	FOOT ASSY	REC-434		
				63	ROTARY VR KNOB G	DAA1133		
				64	ROTARY SW KNOB	DAA1134		
NSP	6	FADER VR ASSY (CH2)	DWG1478	65	ROTARY VR KNOB DG	DAA1135		
	7	DSP ASSY	DWZ1055					
	8	TERMINAL ASSY	DWZ1056					
	9	VR ASSY	DWG1473	66	ROTARY VR KNOB B	DAA1136		
NSP	10	PHONE JACK ASSY	DWZ1057	67	ROTARY VR KNOB GY	DAA1139		
				68	ROTARY VR KNOB GG	DAA1140		
				69	FADER KNOB	DAC1846		
NSP	11	MIC JACK ASSY	DWZ1066	70	POWER KNOB	DAC1847		
NSP	12	C. F. ASSY	DWG1473					
NSP	13	VOLTAGE SELECT ASSY	DWR1241					
	14	POWER SUP. ASSY	DWR1242	71	TACT KNOB	DAC1848		
NSP	15	POWER TRANS ASSY	DWR1243	72	POWER KNOB GUIDE	DNK3207		
				73	TACT KNOB GUIDE	DNK3208		
	16	SW COVER (RELM type only)	DEC1984	74	EFFECT SW PACKING	DED1110		
NSP	17	POWER SW ASSY	DWR1245	NSP	75	CLIP	AEC-036	
NSP	18	REG. ASSY	DWR1246					
	19	7SEG. ASSY	DWZ1058	76	PC SUPPORT	DEC1773		
NSP	20	BAL. OUT ASSY	DWZ1059	77	SHEET (KUC type only)	DEC1939		
				NSP	78	SPACER	DEC1649	
	21	PHONE ASSY	DWZ1060	79	COLLAR	DEC1953		
NSP	22	CH1 METER ASSY	DWZ1061	80	BUSH	DEC1957		
NSP	23	CH2 METER ASSY	DWZ1062					
NSP	24	CH3 METER ASSY	DWZ1063	81	SCREW	DBA1044		
NSP	25	CH4 METER ASSY	DWZ1064	NSP	82	PC SUPPORT	VEC1235	
				83	GUARD	DEC1964		
	26	MASTER METER ASSY	DWZ1065	84	GUARD TAPE	DED1113		
	27	TERMINAL SCREW	AKE-031	NSP	85	PCB HOLDER	PNW1706	
	28	AC INLET ASSY (3P) (KUC type)	DKP3238					
	28	AC INLET ASSY (3P) (RELM type)	DKP3237	NSP	86	PC SUPPORT	VEC1749	
	29	POWER TRANSFORMER	DTT1130	87	WASHER	DBE1010		
	30	FUSE (T800mA, FU2)	REK-099	88	SCREW	AMZ26P040FMC		
				89	SCREW	AMZ30P040FMC		
				90	SCREW	BBZ30P060FMC		
	31	FUSE (1.25A, FU1)	VEK1016					
NSP	32	PCB SPACER (30)	DEC1389	91	SCREW	BBZ30P060FZK		
	33	BOARD SPACER	DEC1955	92	SCREW	BBZ30P100FZK		
NSP	34	PCB MOULD	AMR1525	93	SCREW	BBZ30P140FZK		
	35	LABEL	DRW1739	94	SCREW	BBZ30P180FZK		
				95	SCREW	BBZ40P060FMC		
	36	FL SPACER	AEB7047					
	37	EDGE GUARD	DEC1944	96	SCREW	BMZ40P060FMC		
	38	NET A	DED1108	97	SCREW	BPZ30P080FZK		
NSP	39	CAUTION LABEL (G)	VRW-548	98	SCREW	CBZ30P080FZK		
NSP	40	CHASSIS (KUC type)	DNA1198	99	NUT	NKX2FUC		
NSP	40	CHASSIS (RELM type)	DNA1196	100	SCREW	PMH26P040FMC		
NSP	41	PANEL STAY	DND1192	101	SCREW	PPZ30P050FMC		
	42	SLIDER PLATE	DNF1518					
	43	SW PLATE	DNF1519	NSP	102	CAUTION LABEL (KUC type only)	AAX-361	
	44	EARTH PLATE	DNF1520	103	EARTH LEAD (KUC type only)	DDX1157		
	45	SHIELD PLATE	DNH2117	104	CAPACITOR COVER	REC-150		
					(RELM type only)			
	46	CABLE COVER	DNH2139	105	GROUND PLATE	ANK1074		
	47	65 LABEL (KUC type only)	ORW1069					
NSP	48	PCB SUPPORT	REC1248	106	SHORT PIN PLUG	AKM-050		
NSP	49	PCB SUPPORT	VEC1508	107	SPACER (WASHER)	DEC1982		
	50	SNAP PLATE	VNE1102	108	SPACER	DEB1327		
				109	PVC SHEET A	DEC1979		
	51	LEVER SW PACKING	DED1098	110	PVC SHEET B	DEC1980		
	52	FADER PACKING A	DED1099					
	53	FADER PACKING B	DED1100	111	PVC SHEET C	DEC1981		
	54	SLIDE SW PACKING	DED1106	112	PCB TAPE	DED1115		
	55	TACT SW PACKING	DED1114	113	ACETATE TAPE(G)	REH1010		
				NSP	114	PC SUPPORT	VEC1749	
				115	SCREW	BBZ30P040FMC		
	56	CAUTION LABEL (KUC type only)	DRW1728					
	57	DISPLAY PANEL A	DAH1793	NSP	116	CORD CLAMPER	RNE-513	
	58	SLIDER PANEL	DAH1794					

NOTE : Screws adjacent to ▼ mark on the product are used for disassembly.

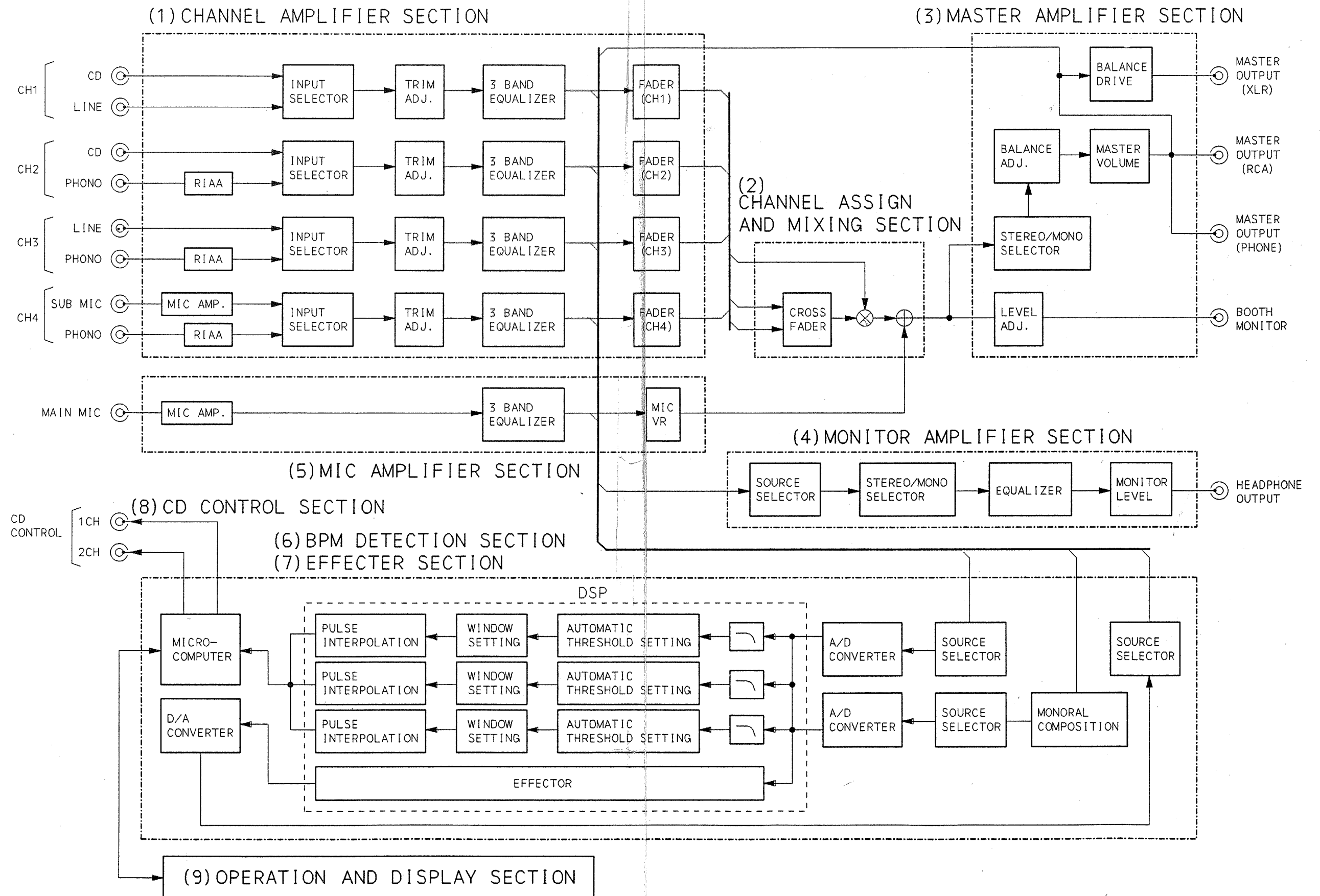
The parts with * marking is an attached parts of No. 9.



SI-V50431

SI-V50492

3. BLOCK DIAGRAM



■ BLOCK DIAGRAM EXPLANATIONS

(1) Channel Amplifier Section

The input signal of each channel is sent to the mixing part. There are four channels, and each channel has input from two systems.

The respective channels are matched to the connected equipment, channel 1 is CD/LINE, channel 2 is CD/PHONO, channel 3 is LINE/PHONO, channel 4 is MIC (sub)/PHONO, and selection is made with the input selector switch.

Each channel is equipped with a 3-band equalizer permitting independent control of trim for control of the input signal level and fader volume for high, medium, and low range.

(2) Channel Assign and Mixing Section

The signal from the channel amplifier is selected with the C.F. assign switch and is sent to both ends of the cross-fader. The C.F./direct mixing switch is used to select mixing only with the source allotted to the cross-fader or mixing only with the cross-fader.

(3) Master Amplifier Section

The signal after mixing is processed.

The input signal passes balance adjustment and main volume adjustment and then is sent to the next stage.

(4) Monitor Amplifier Section

This is the source selection circuit for confirmation of the signal of each channel with headphones etc.

The input signal can be selected from channels 1 to 4, mike, effector, and master. For channels 1 to 4, the signal before each channel fader can be monitored, so that signal confirmation is possible in case of trim adjustment and master mixing. Also, an adjustable equalizer is installed for correspondence to cases where beat is difficult to hear with headphones.

(5) MIC Amplifier Section

There are two mike input systems, the phone type input (submike) at the rear panel and the Canon type input (main mike) at the control panel, and the main mike input is equipped with an independent equalizer for high, medium, and low range in addition to volume adjustment.

(6) BMP Detection Section

The BMP (Beats Per Minute, a factor indicating the speed of a title as the number of beats per minute) of the signal selected with the monitor select switch are detected, and the BMP value or the beat interval time is displayed.

The synchronization of the input signal by frequencies is detected, the BMP of the most stable signal are selected, and the data are processed by the microcomputer part. The detection modes are "real-time mode" with data display in real time and "average mode" with display of stable information for a certain time, and the microcomputer executes output according to the indication.

The beat timing also can be indicated to the beat monitor of the selected channel.

(7) Effector Section

Diverse effects can be realized with the built-in DSP (Digital Signal Processor).

The DSP operation can be selected with the effector function selection switch from pitch shifter, delay/flanger, pan/reverberation/echo.

The applicable channels are channels 1 to 4, mike, and master. For increased ease of use in combination with an external equalizer a SEND/RETURN terminal which can correspond to each channel is provided, and input level adjustment is possible.

(8) CD Control Section

When a CDJ-50/CDJ-500(G) is connected to channel 1 or 2, the CD player can be started from this unit.

In the same way, when CDJ-500 II is connected, stop (back cue) is possible in addition to CD player start. This is executed using the relay start function of CDJ-50/CDJ-500(G) and CDJ-500 II, and interlocked operation with channel fader and cross-fader also is possible.

(9) Operation and Display Section

The part in regard to display and operation of the built-in fader is executed by a microcomputer. BPM display and its mode switching, control of effect parameters and built-in fader, beat monitor, and level meter display, control, etc. are executed by an 8-bit microcomputer.

4. SCHEMATIC AND PCB CONNECTION DIAGRAMS

NOTE FOR SCHEMATIC DIAGRAMS

Type 2A

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: $k\Omega$, M: $M\Omega$, or Ω unless otherwise noted.

Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.

Tolerance: (F): $\pm 1\%$, (G): $\pm 2\%$, (K): $\pm 10\%$, (M): $\pm 20\%$ or $\pm 5\%$ unless otherwise noted.

4. CAPACITORS:

Unit: p: pF or μ F unless otherwise noted.

Ratings: capacitor (μ F)/ voltage (V) unless otherwise noted.

Rated voltage: 50V except for electrolytic capacitors.

5. COILS:

Unit: m: mH or μ H unless otherwise noted.

6. VOLTAGE AND CURRENT:

or - V :

The -14dBV (1kHz) signal on the CH1 (LINE) side is shown by the DC voltage (V) at the time of input.

or - mA :

DC current at no input signal unless otherwise noted.

7. OTHERS:

• or : Adjusting point.

• : Measurement point.

• The 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. SCH- ON THE SCHEMATIC DIAGRAM:

• SCH- indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

9. SWITCHES (Underline indicates switch position):

EFFECT VR ASSY

S171: CH. SELECTOR (1-2-3-4-MIC)

S174: EFFECT SELECTOR

(AUTO BPM-DELAY-ECHO-AUTO PAN

-FLANGER-REVERB-PITCH-SEND RETURN)

VR ASSY

S1: MASTER STEREO-MONO

S2: MONITOR STEREO-MONO

S281: FADER START (CH1) ON-OFF

S282: ASSIGN A 1-2-3-4

S283: ASSIGN B 1-2-3-4

S284: CROSS FADER ON-OFF

S285: FADER START (CH2) ON-OFF

S401: INPUT SELECTOR (CH1) CD1-LINE1

S402: INPUT SELECTOR (CH2) CD2-PHONO1

S403: INPUT SELECTOR (CH3) LINE3-PHONO2

S404: INPUT SELECTOR (CH4) SUBMIC-PHONO3

7SEG. ASSY

S652: MONITOR SELECTOR EFFECT

S653: MONITOR SELECTOR MASTER

S654: MONITOR SELECTOR CH4

S657: MONITOR SELECTOR MIC

S658: MONITOR SELECTOR CH1

S659: MONITOR SELECTOR CH2

S660: MONITOR SELECTOR CH3

S665: BPM REAL TIME-AVERAGE

VOLTAGE SELECT ASSY

S902: VOLTAGE SELECTOR AC110-120V/220-240V

POWER SW ASSY

S901: POWER SW ON-OFF

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
		Transistor with resist
		Field effect transistor
		Resistor array
		3- terminal regulator

10. CONDITION TO BIND OF WAVEFORMS

Bind of VR

VR131-VR134: FADER VR (CH1-CH4) MAX

VR401-VR404: TRIM VR (CH1-CH4) MAX

VR405-VR408: EQ HI VR (CH1-CH4) MIDDLE

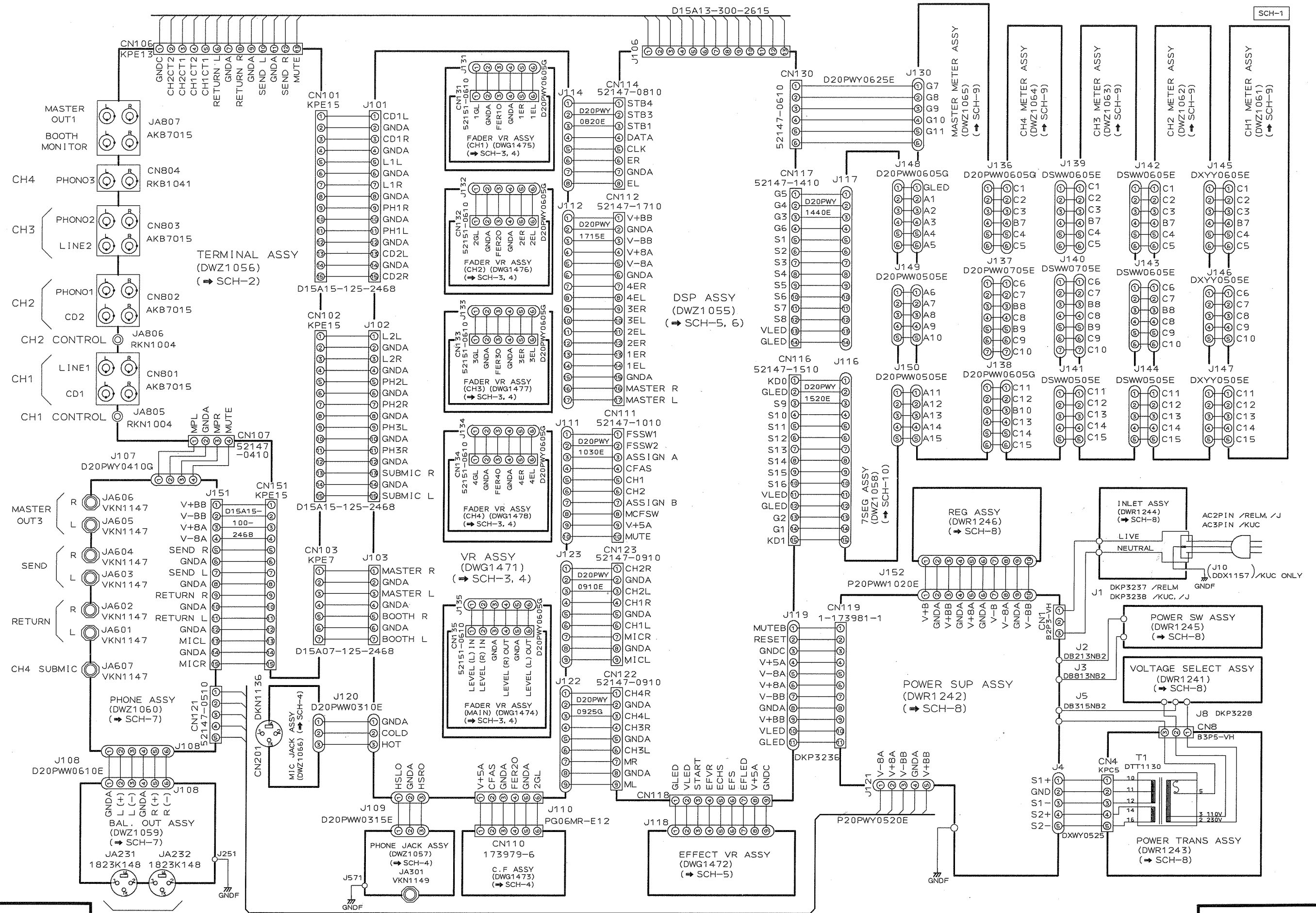
VR409-VR412: EQ MID VR (CH1-CH4) MIDDLE

VR413-VR416: EQ LOW VR (CH1-CH4) MIDDLE

VR135: CROSS FADER A SIDE

VR2: MASTER BALANCE MIDDLE

Note: All the knob position (settings) for the oscilloscope in the schematic diagrams procedures are for when 10:1 probe is used.



SCH-1

MASTER OUT2
OVERALL SCHEMATIC DIAGRAM
(総合結線図)

SCH-1

OVERALL SCHEMATIC DIAGRAM
(総合結線図)

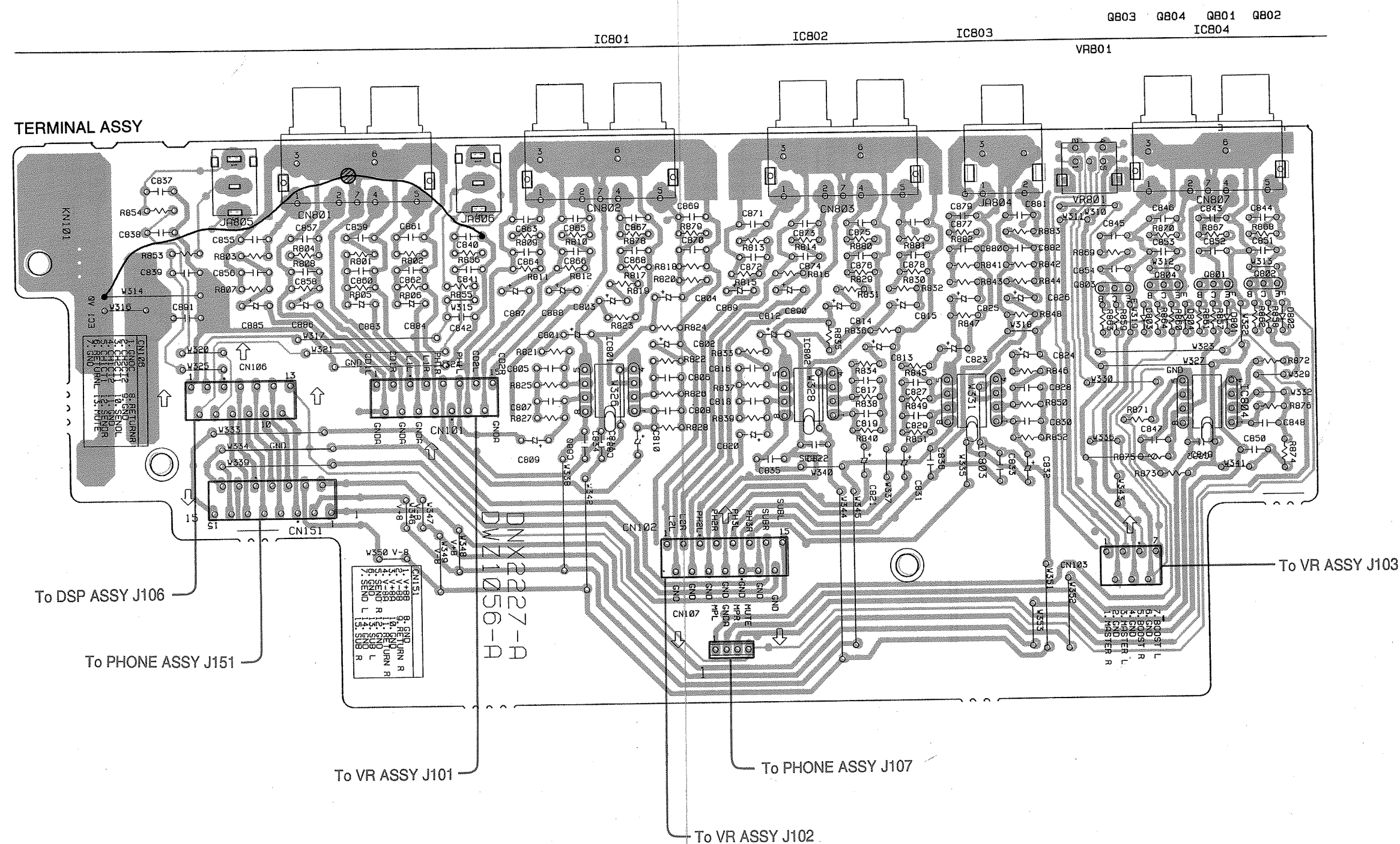
4.2 TERMINAL ASSY

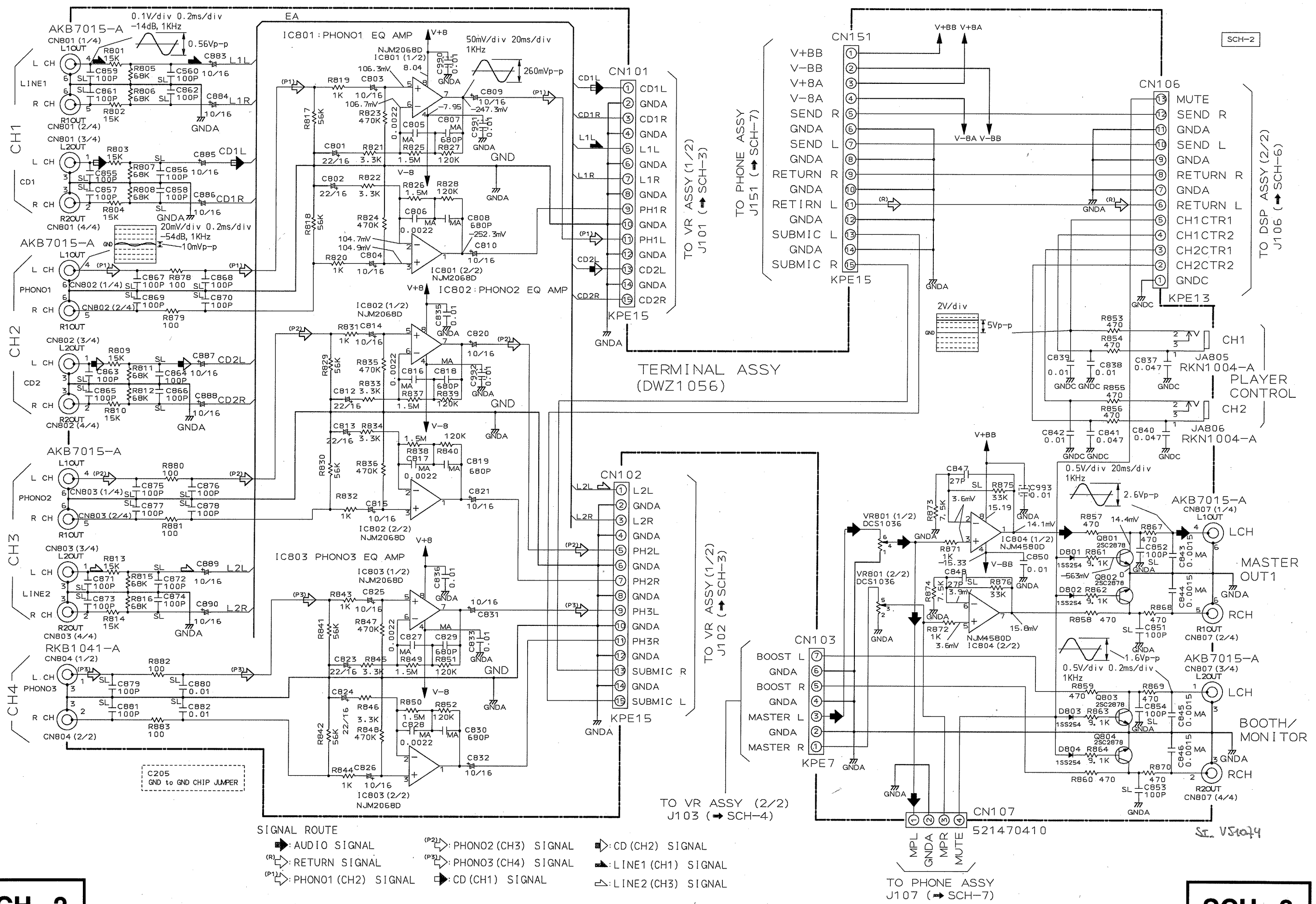
The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

このPCB図にマウントしている部品は複数の仕向地を含んでいます。
各仕向地の情報は、回路図で確認するようにしてください。

• This diagram is viewed from the mounted parts side.

• この図は部品取付面側から見た図です。





SCH-2
TERMINAL ASSY

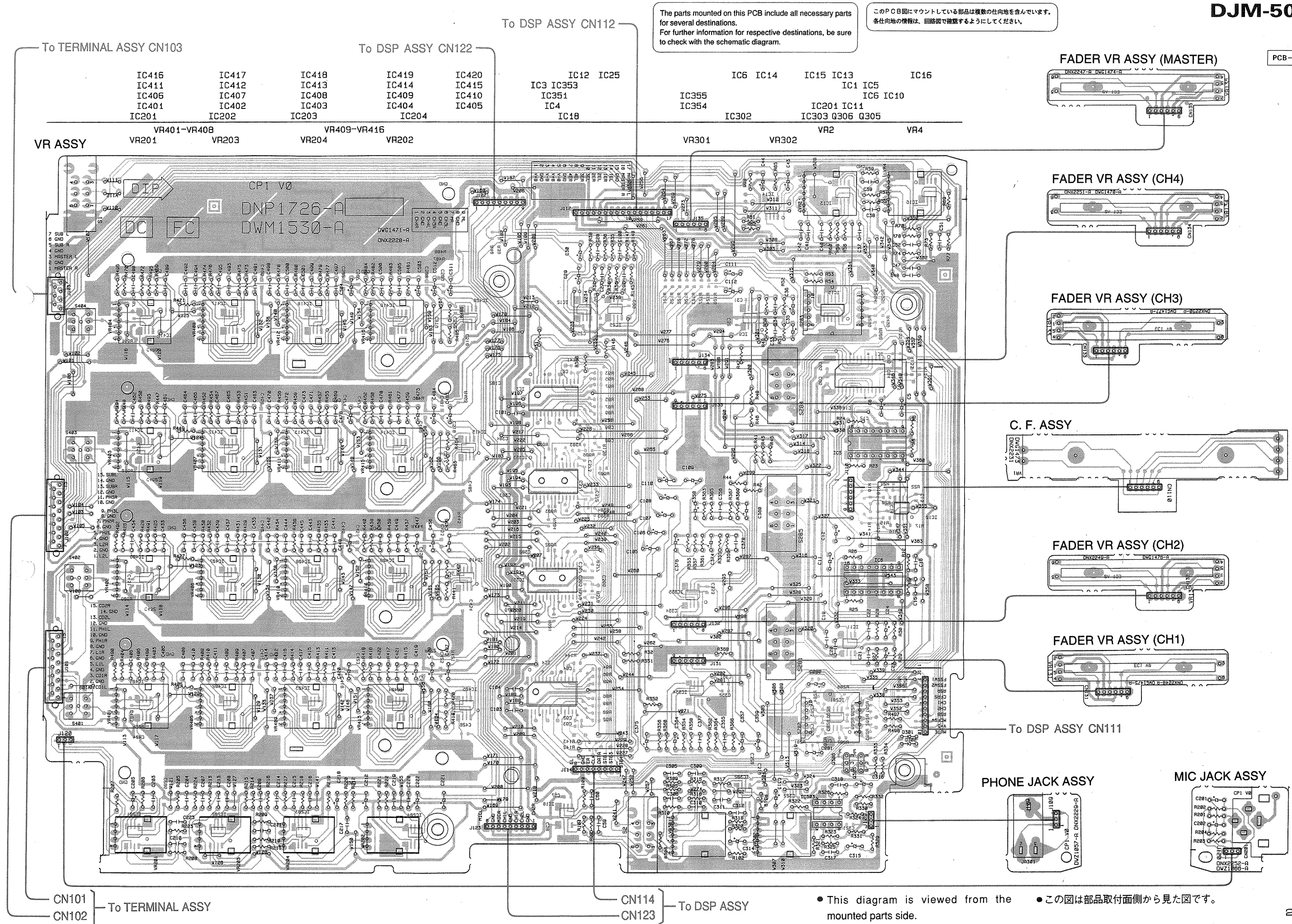
SCH-2
TERMINAL ASSY

4.3 VR ASSY, FADER VR ASSY (CH1), FADER VR ASSY (CH2), FADER VR ASSY (CH3), FADER VR ASSY (CH4), C. F. ASSY, PHONE JACK ASSY AND MIC JACK ASSY



SI-V50117
SE-V51064

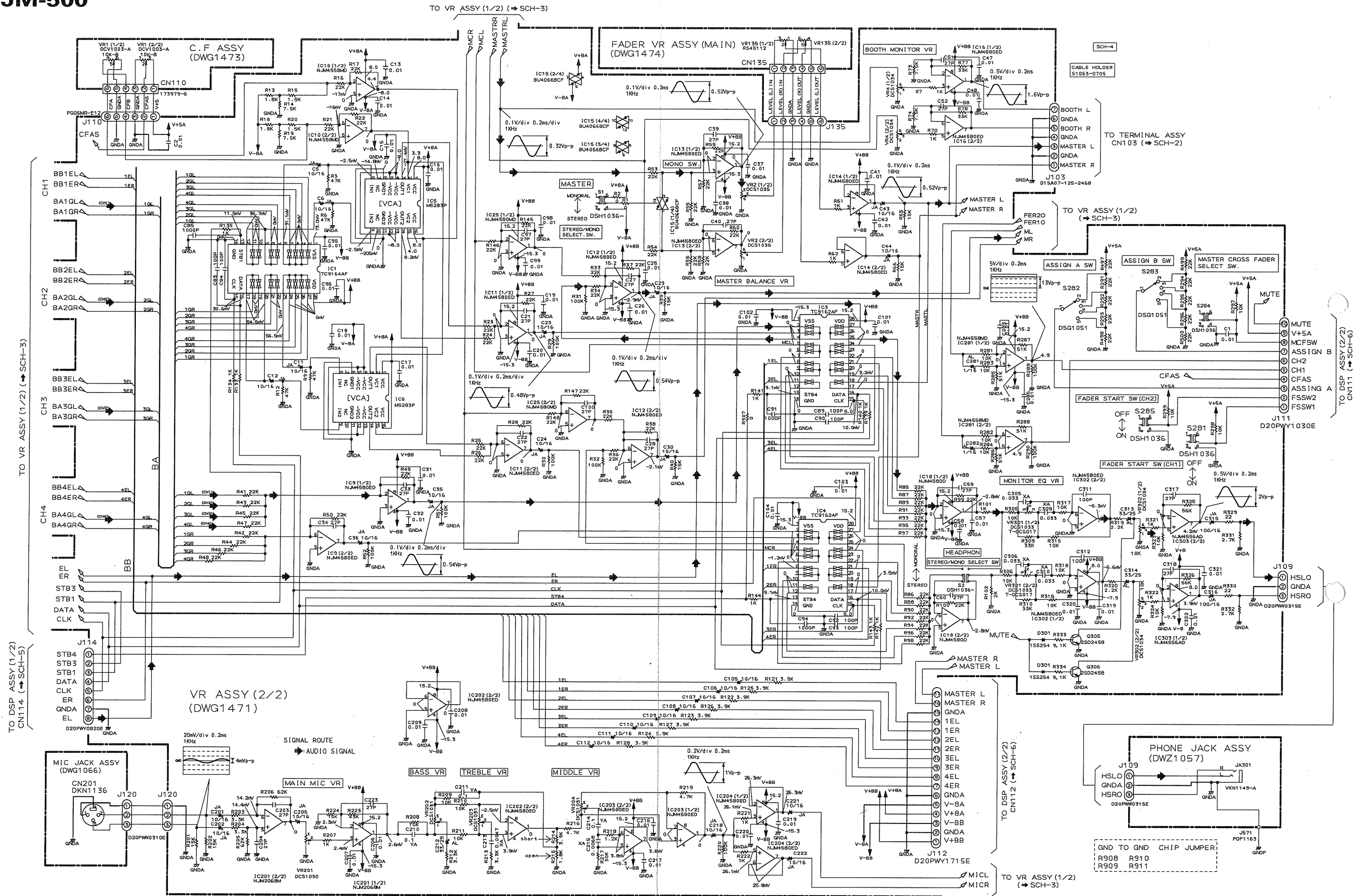
SCH-3



The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

このPCB図にマウントしている部品は複数の仕向けを含んでいます。各仕向けの情報は、回路図で確認するようにしてください。

● This diagram is viewed from the mounted parts side. ● この図は部品取付面側から見た図です。



SCH-4

VR ASSY (2/2), C.F. ASSY,
PHONE JACK ASSY,
MIC JACK ASSY

SI-VS1075-G

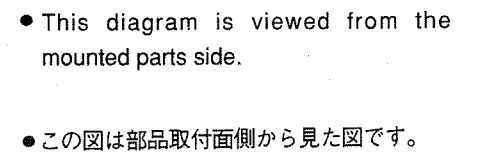
VR ASSY (2/2), C.F. ASSY,
PHONE JACK ASSY,
MIC JACK ASSY

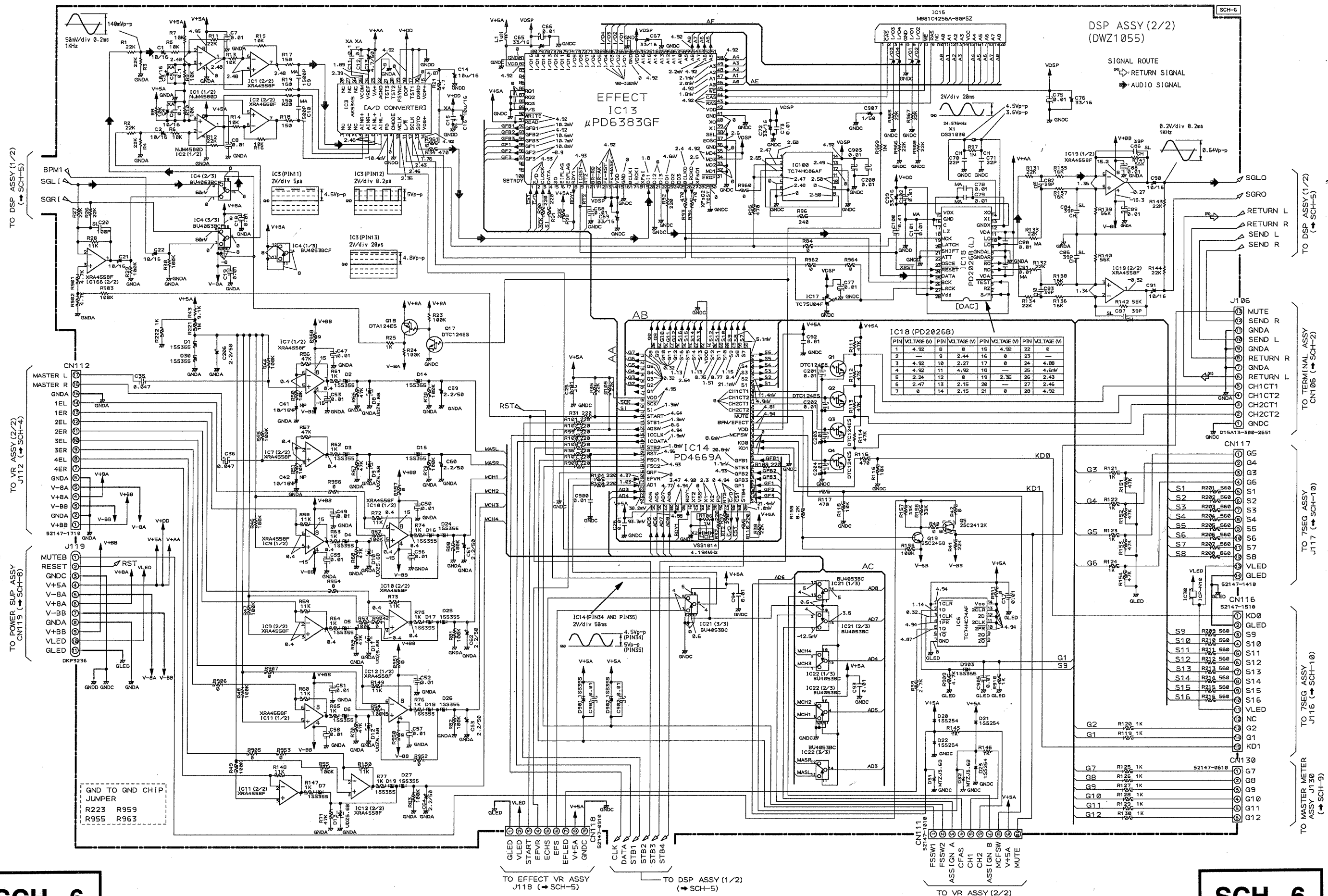
SCH-4



DSP ASSY (1/2), EFFECT VR ASSY

SCH-5





SCH-6

DSP ASSY (2/2)

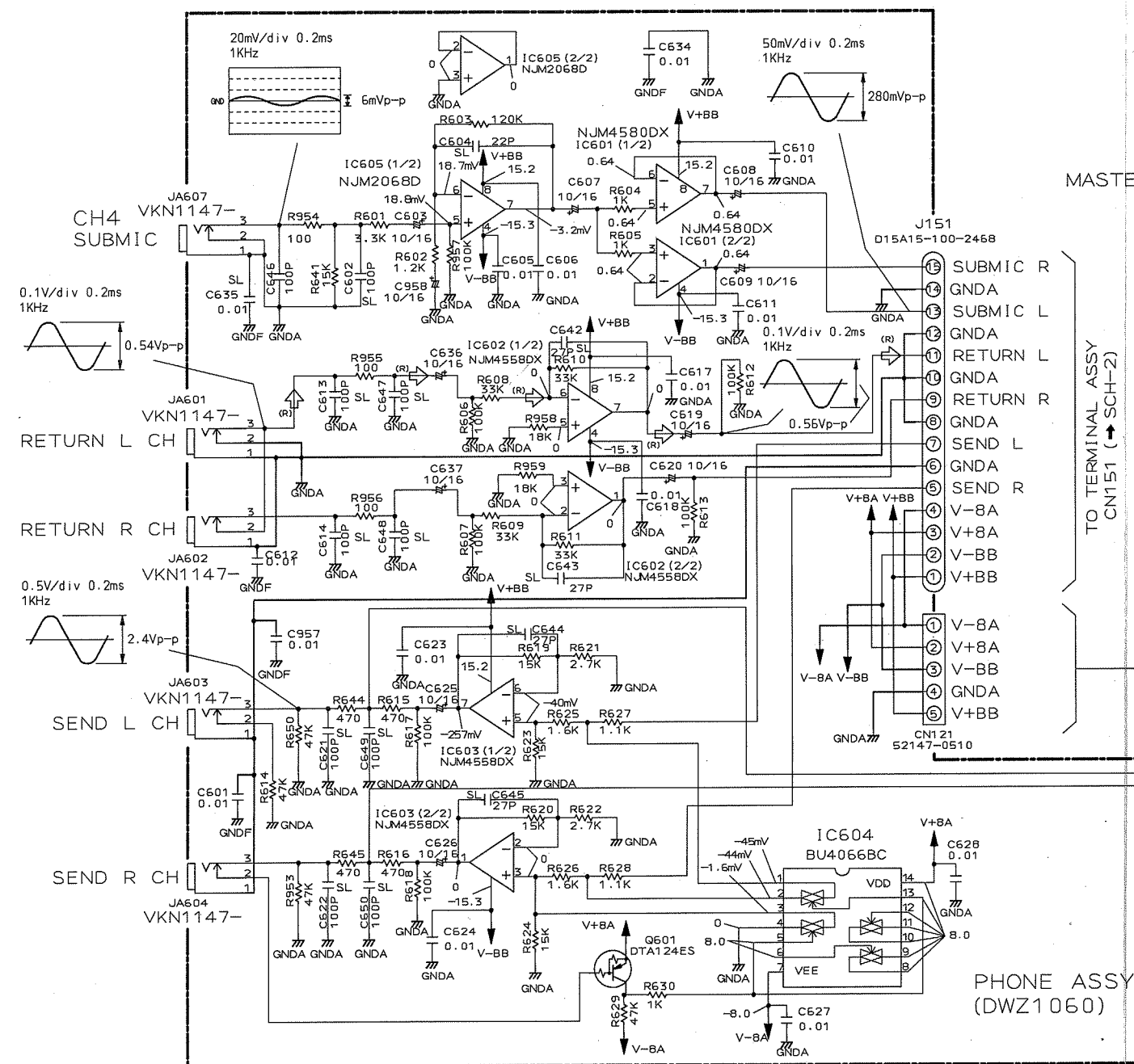
SI-V5045

DSP ASSY (2/2)

SCH-6

28

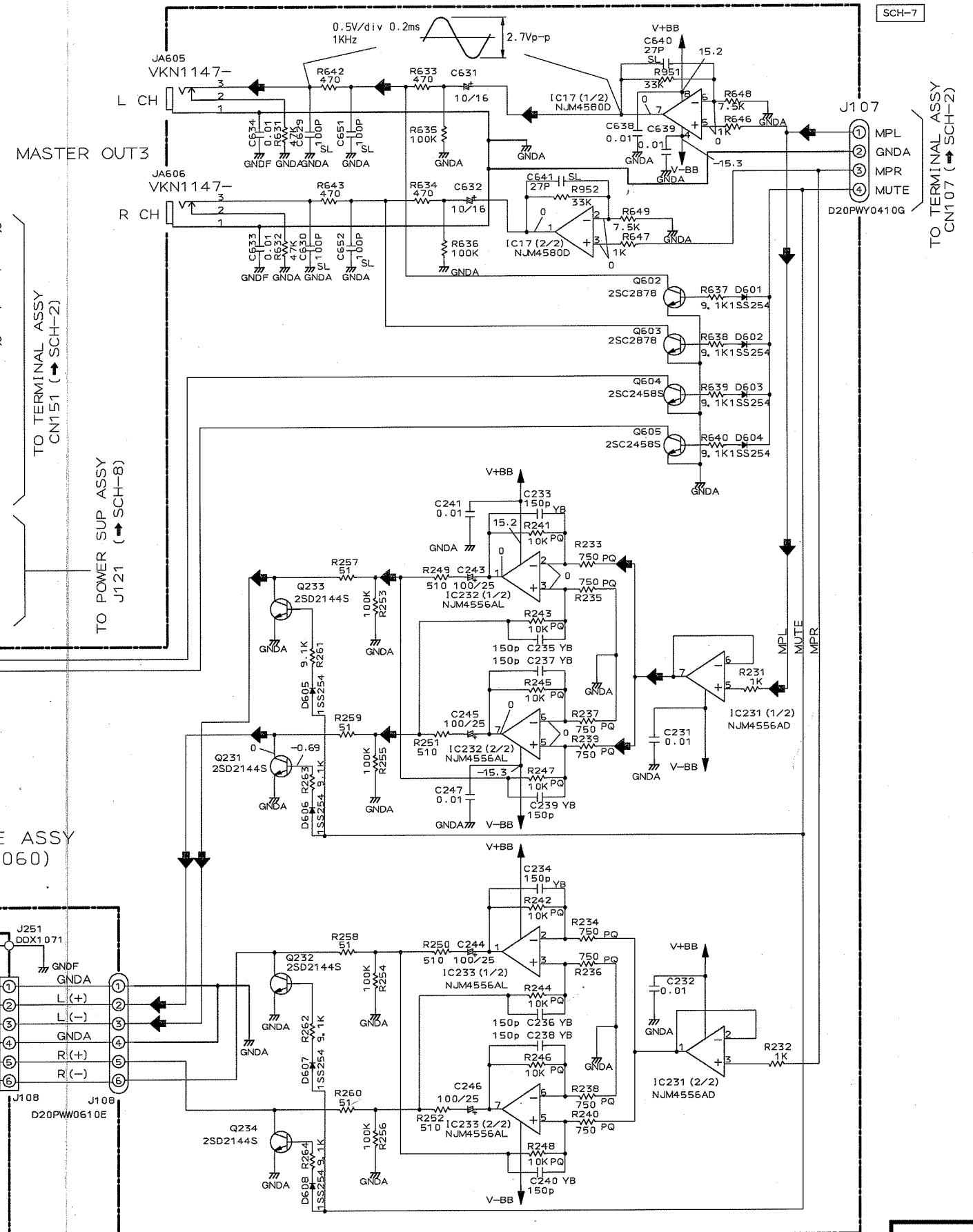
4.5 PHONE ASSY AND BAL. OUT ASSY



SIGNAL ROUTE
 (R) RETURN SIGNAL
 (A) AUDIO SIGNAL

MASTER OUT2

BAL. OUT ASSY (DWZ1059)



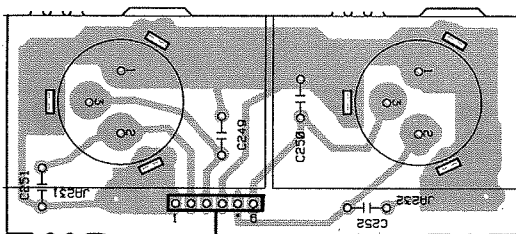
SCH-7

PHONE ASSY, BAL. OUT ASSY

SCH-7

PHONE ASSY, BAL. OUT ASSY

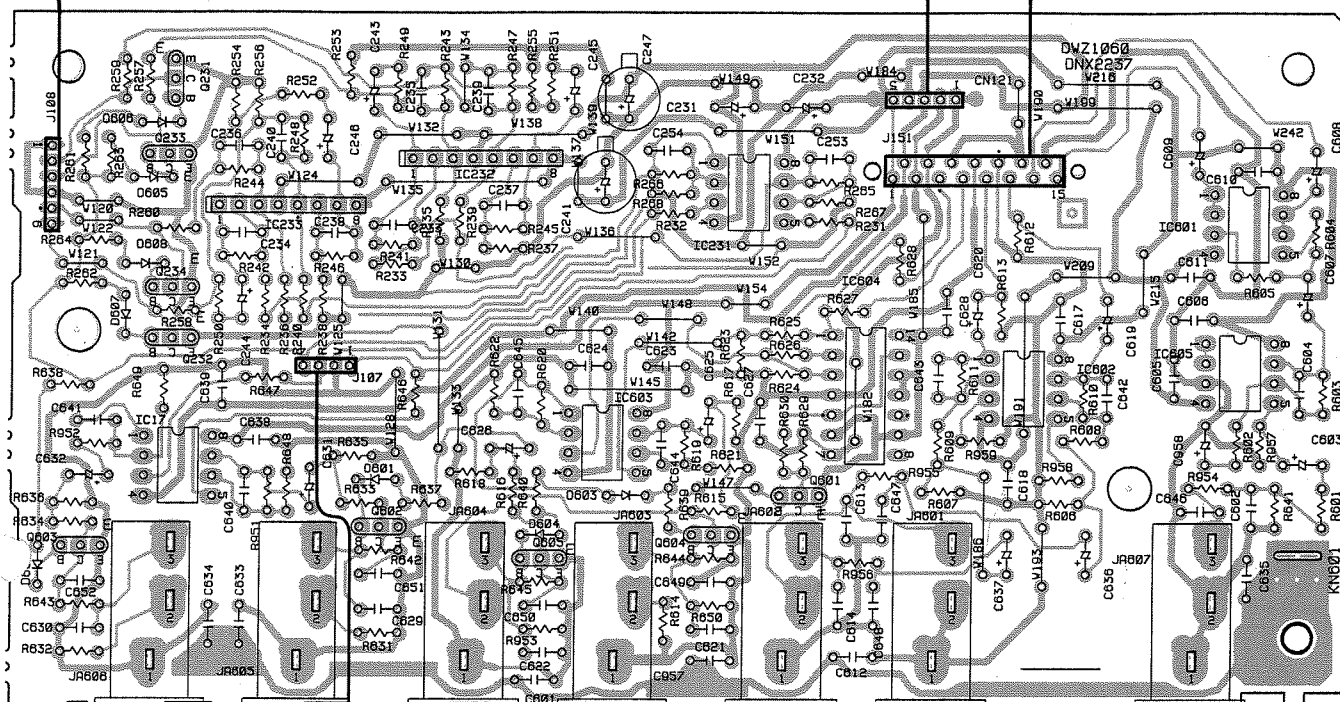
BAL. OUT ASSY



To TERMINAL ASSY CN151

To POWER SUP. ASSY J121

PHONE ASSY



Q231-Q234 IC233
Q603 IC17

IC232 Q602 Q605 IC603 Q604 Q601 IC604

IC602 IC601 IC605

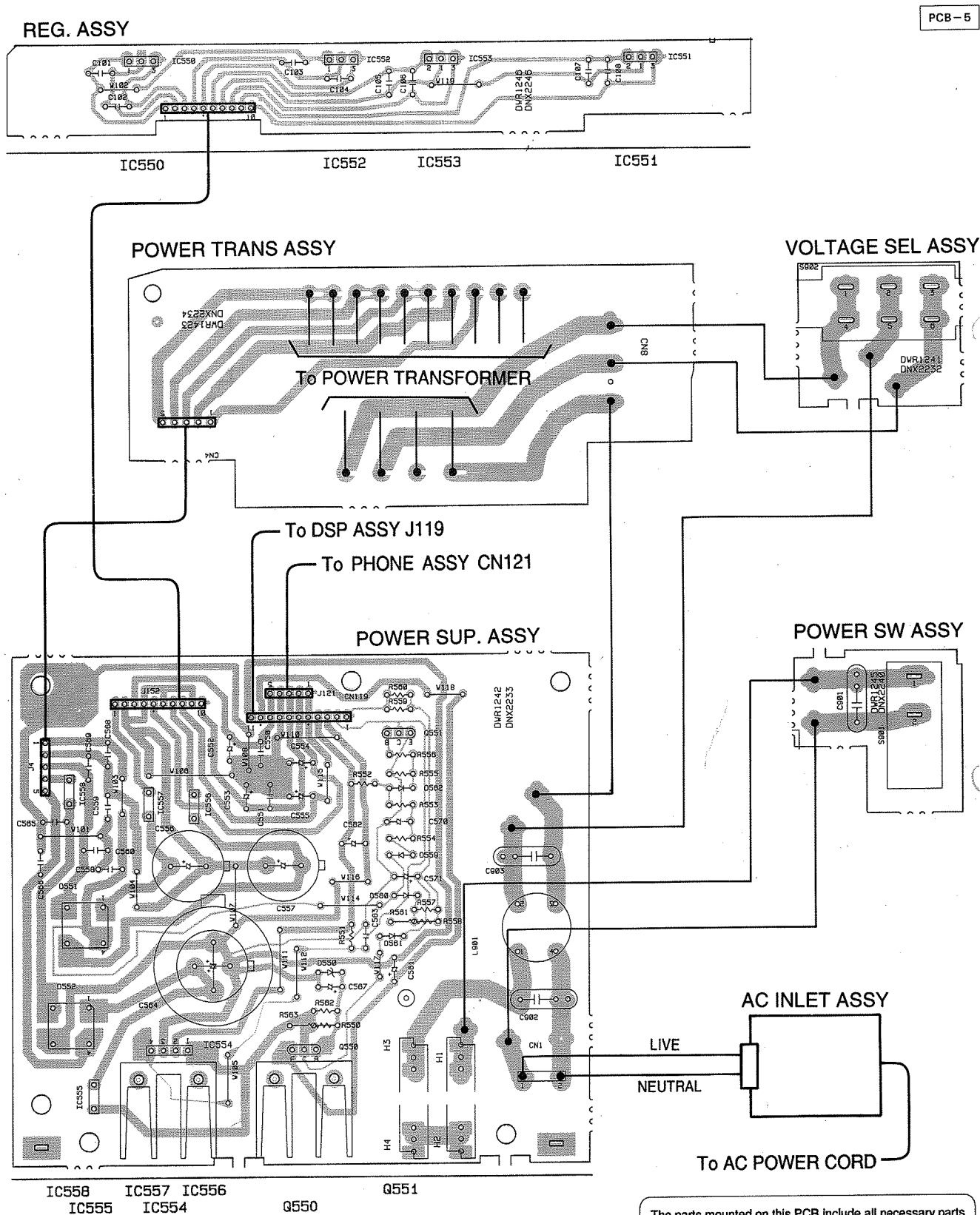
To TERMINAL ASSY CN107

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

このPCB図にマウントしている部品は複数の仕向地を含んでいます。
各仕向地の情報は、回路図で確認するようにしてください。

- This diagram is viewed from the mounted parts side.
- この図は部品取付面側から見た図です。

4.6 POWER SUP. ASSY, POWER TRANS ASSY, INLET ASSY, VOLTAGE SEL ASSY, POWER SW ASSY AND REG. ASSY

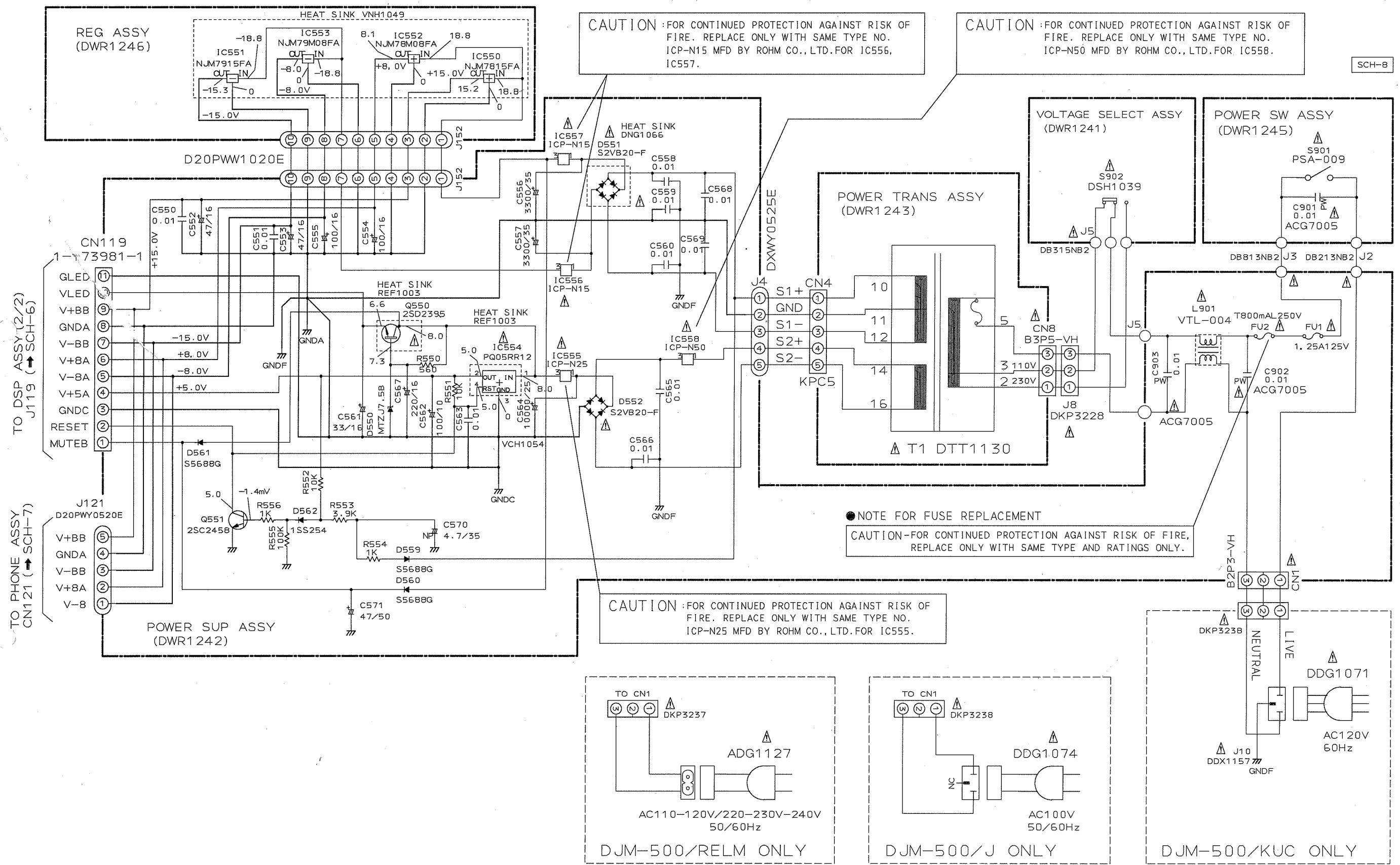


• This diagram is viewed from the mounted parts side.

• この図は部品取付面側から見た図です。

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

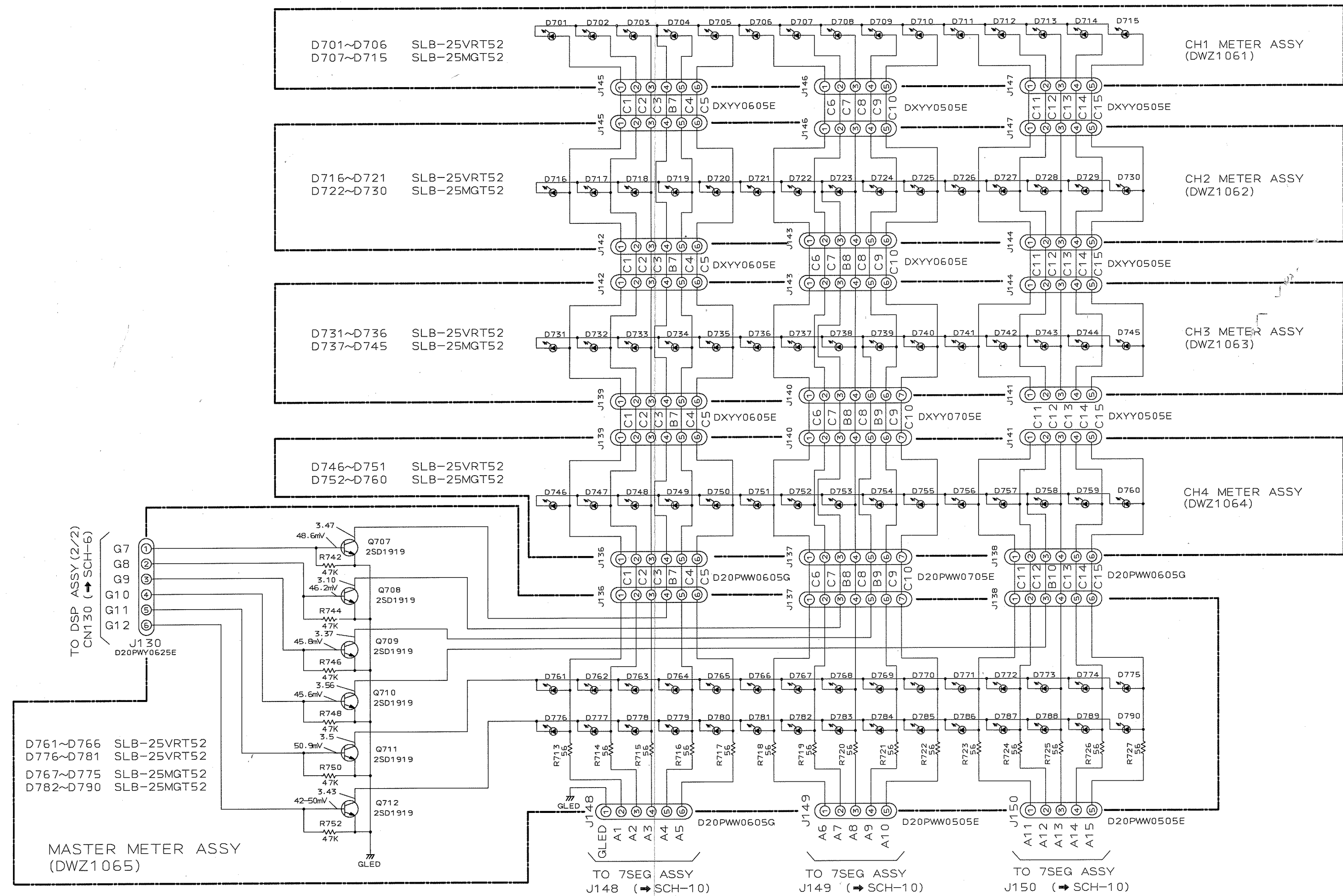
このPCB図にマウントしている部品は複数の仕向地を含んでいます。
各仕向地の情報は、回路図で確認するようにしてください。



DJM-500

4.7 CH1 METER ASSY, CH2 METER ASSY, CH3 METER ASSY, CH4 METER ASSY,
MASTER METER ASSY AND 7SEG. ASSY

SCH-9

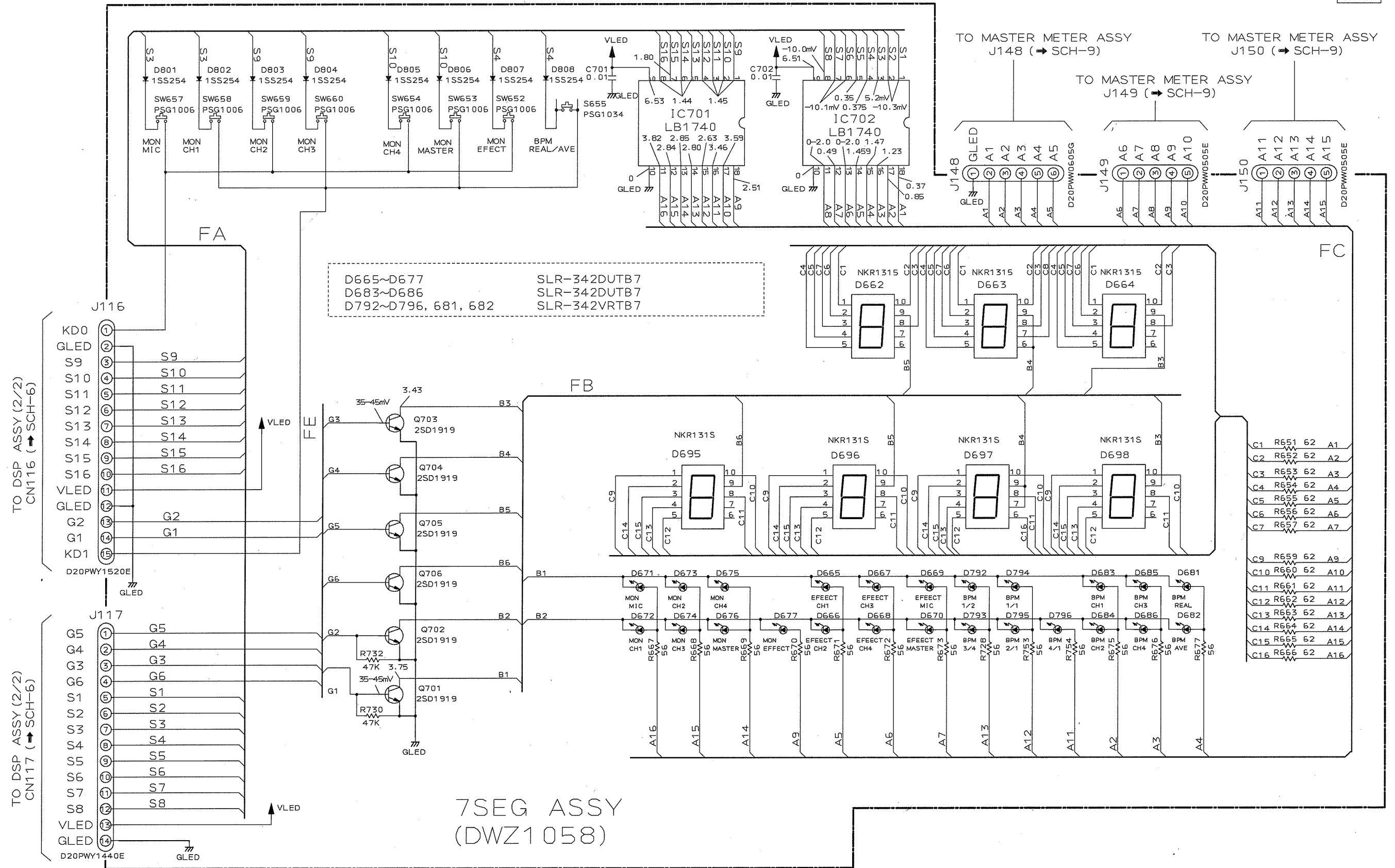


SCH-9

CH1 METER ASSY, CH2 METER ASSY,
CH3 METER ASSY, CH4 METER ASSY,
MASTER METER ASSY

CH1 METER ASSY, CH2 METER ASSY,
CH3 METER ASSY, CH4 METER ASSY,
MASTER METER ASSY

SCH-9



5. 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%).

560 Ω $\rightarrow$ $56 \times 10^1 = 561$ RD1/4PU $\boxed{5} \boxed{6} \boxed{1} J$

47k Ω $\rightarrow$ $47 \times 10^3 = 473$ RD1/4PU $\boxed{4} \boxed{7} \boxed{3} J$

0.5 Ω $\rightarrow$ 0R5 RN2H $\boxed{0} \boxed{R} \boxed{5} K$

1 Ω $\rightarrow$ 1R0 RS1P $\boxed{1} \boxed{R} \boxed{0} K$

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

5.62k Ω $\rightarrow$ $562 \times 10^1 = 5621$ RM1/4PC $\boxed{5} \boxed{6} \boxed{2} \boxed{1} F$

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
LIST OF PCB ASSEMBLIES				FADER VR ASSY (MAIN)			
NSP	DSP ASSY		DWX1655	RESISTORS			
NSP	— EFFECT VR ASSY		DWG1472	VR135 (10k Ω -B) (SE-V51082-G)			
NSP	— FADER VR ASSY (MAIN)		DWG1474	DCV1004 $\rightarrow$ DCV1005			
NSP	— FADER VR ASSY (CH1)		DWG1475	OTHERS			
NSP	— FADER VR ASSY (CH2)		DWG1476	CN135 6P JUMPER CONNECTOR			
NSP	— FADER VR ASSY (CH3)		DWG1477	52151-0610			
NSP	— FADER VR ASSY (CH4)		DWG1478	FADER VR ASSY (CH1)			
NSP	— DSP ASSY (SI-V51085A-G)		DWZ1055 $\rightarrow$ DWZ1075	RESISTORS			
	— TERMINAL ASSY ("")		DWZ1056 $\rightarrow$ DWZ1076	VR131 (10k Ω -B)			
NSP	VR ASSY		DWM1530	DCV1004			
NSP	— VR ASSY		DWG1471	OTHERS			
NSP	— PHONE JACK ASSY		DWZ1057	CN131 6P JUMPER CONNECTOR			
NSP	— MIC JACK ASSY		DWZ1066	52151-0610			
NSP	SUB ASSY		DWM1531	FADER VR ASSY (CH2)			
NSP	— C.F ASSY		DWG1473	RESISTORS			
NSP	— VOLTAGE SELECT ASSY		DWR1241	VR132 (10k Ω -B)			
NSP	— POWER SUP. ASSY		DWR1242	DCV1004			
NSP	— POWER TRANS ASSY		DWR1243	OTHERS			
NSP	— INLET ASSY		DWR1244	CN132 6P JUMPER CONNECTOR			
NSP	— POWER SW ASSY		DWR1245	52151-0610			
NSP	— REG. ASSY		DWR1246	FADER VR ASSY (CH3)			
NSP	— 7SEG. ASSY		DWZ1058	RESISTORS			
NSP	— BAL. OUT ASSY		DWZ1059	VR133 (10k Ω -B)			
NSP	— PHONE ASSY (SI-V51085A-G)		DWZ1060 $\rightarrow$ DWZ1077	DCV1004			
NSP	— CH1 METER ASSY		DWZ1061	OTHERS			
NSP	— CH2 METER ASSY		DWZ1062	CN133 6P JUMPER CONNECTOR			
NSP	— CH3 METER ASSY		DWZ1063	52151-0610			
NSP	— CH4 METER ASSY		DWZ1064	FADER VR ASSY (CH4)			
NSP	— MASTER METER ASSY		DWZ1065	RESISTORS			
EFFECT VR ASSY				VR134 (10k Ω -B)			
SEMICONDUCTORS				DCV1004			
Q173				OTHERS			
D171, D172				CN134 6P JUMPER CONNECTOR			
2SC2458				52151-0610			
GL3HY43				FADER VR ASSY (CH4)			
SWITCHES AND RELAYS				RESISTORS			
S174				VR134 (10k Ω -B)			
S171				DCV1004			
S173				OTHERS			
DSG1052				CN134 6P JUMPER CONNECTOR			
DSG1053				52151-0610			
DSG1056				RESISTORS			
RESISTORS				VR701 (10k Ω -B)			
Other Resistors				DCS1030			
				RD1/6PM $\square \square \square J$			

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Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
DSP ASSY (SI-V50M-6)				RESISTORS			
SEMICONDUCTORS				R145, R146, R25			
IC3		AK5345		R10, R13-R16, R187-R190			RD1/6PM102J
IC21, IC22		BU4053BC		R5-R9			RD1/6PM103J
IC4		BU4053BCF		R185, R186, R195, R196			RD1/6PM103J
IC30		ICP-N10		R23, R24, R29, R30			RD1/6PM104J
IC15		MB81C4256A-80PSZ					
IC5 (SI-V50M5)		TC7W14F-TRB					
IC18		PD2026B (L)		R106, R969			RD1/6PM105J
IC14		PD4669A		R28			RD1/6PM113J
IC6		TC74HC74AF		R17-R20			RD1/6PM151J
IC100		TC74HC86AF		R135-R138			RD1/6PM163J
IC17		TC7SU04F		R109, R92			RD1/6PM221J
				R112, R113 (SI-V50M5)			RD1/4PM101J
IC165		TC9162AF		R1, R11, R12, R131-R134			RD1/6PM223J
IC167		TC9163AF		R143, R144, R165-R174			RD1/6PM223J
IC13		UPD6383GF		R181-R184, R191-R194, R2			RD1/6PM223J
IC1, IC10-IC12, IC166		XRA4558F-P		R26, R27, R3, R4			RD1/6PM223J
IC168-IC170, IC19, IC2, IC7		XRA4558F-P		R965-R968 (SI-V50M5)-R51/105133			RD1/6PM223J
				R111-R114			RD1/6PM473J
IC9		XRA4558F-P					
Q5		2SC2412K		R139-R142			RD1/6PM563J
Q19		2SC2458		R43			RN1/6PQ9101F
Q18		DTA124ES		Other Resistors			RS1/10S□□□J
Q1, Q17, Q2-Q4		DTC124ES		R917 (SI-V50M5)			RS1/10S000J
				Others (SI-V50M5-6)			RD1/4PM101J
D20-D23		1SS254		CABLE HOLDER (13P)			51063-1305
D1, D14-D19, D2		1SS355		CN130		6P JUMPER CONNECTOR	52147-0610
D24-D27, D3, D30		1SS355		CN114		8P JUMPER CONNECTOR	52147-0810
D4-D7, D901-D903		1SS355		CN118, CN122, CN123		9P JUMPER CONNECTOR	52147-0910
D31, D32 (SI-V50M5)		MTZJ3.6B-UDZ2.6B-TRB		CN111		10P JUMPER CONNECTOR	52147-1010
D10-D13, D8, D9		UDZ5.6B					
COILS AND FILTERS				CN116		15P JUMPER CONNECTOR	52147-1510
L1		LFA010K		CN112		17P JUMPER CONNECTOR	52147-1710
CAPACITORS				J119		CONNECTOR ASSY	DKP3236
C20		CCCSL101J50		X1 (F=12.288)			DSS1030
C70, C71		CCSQCH220J50		X2 (4.19MHz)			VSS1014
C168-C170, C174-C177		CCSQSL101J50					
C186, C187		CCSQSL101J50		PCB BINDER			VEF1008
C82-C87		CCSQSL390J50		TERMINAL ASSY (SI-V50M-6)			
C210 (SI-V50M5)		CKSQYF103Z50		SEMICONDUCTORS			
C182, C183		CCSQSL470J50		IC801-IC803			NJM2068D
C41, C42		CEANP100M16		IC804			NJM4580D
C907		CEAS010M50		Q801-Q804 Q803 (SI-V50M5)			2SC2878
C1, C16, C180, C181 (SI-V50M5)		CEAS100M16 → CEAL100M16		D801-D804, D803 (SI-V50M5)			1SS254 → DELETED
C190, C191, C2, C21, C22		CEAS100M16		CAPACITORS			
C3, C4, C90, C91 (SI-V50M5) → CEAL100M16		CEAS100M16		C851-C882			CCCSL101J50
C14 (SI-V50M5)		CEAS100M50 → CEAL100M16		C847, C848			CCCSL270J50
C206, C59-C64		CEAS2R2M50		C803, C804, C809, C810			CEAS100M16
C65, C67, C69, C76, C99		CEAS330M16		C814, C815, C820, C821			CEAS100M16
C13 (SI-V50M5) → CEAL330M16		CEAS4R7M50 → CEAL4R7M35		C825, C826, C831, C832			CEAS100M16
C11, C12, C15, C5, C6		CFTXA104J50					
C26, C900, C92-C94		CKCYF103Z50		C883-C890			CEAS100M16
C167, C173		CKSQYB102K50		C801, C802, C812, C813			CEAS220M16
C100, C102, C165, C166, C17		CKSQYF103Z50		C823, C824			CEAS220M16
C171, C172, C178, C179, C18		CKSQYF103Z50		C842, C850			CKCYF103Z50
				C833, C835, C836, C838, C839			CKCYF103Z50
C184, C185, C188, C189, C19		CKSQYF103Z50					
C192, C193, C200-C204		CKSQYF103Z50		C205, C990-C993			CKSQYF103Z50
C25, C47		CKSQYF103Z50		C843-C846			CQMA152J50
C49-C53, C55-C58, C66		CKSQYF103Z50		C805, C806, C816, C817			CQMA222J50
C68, C7, C75, C77, C8		CKSQYF103Z50		C827, C828			CQMA222J50
				C807, C808, C818, C819			CQMA681J50
C88, C89, C901-C903, C905		CKSQYF103Z50					
C35, C36		CKSQYF473Z50		C829, C830			CQMA681J50
C101, C78-C81		CQMA103J50		C837, C840, C841			CGCYX473M25
C10, C9		CQMA152J50		SI-V50M5 → CKCYF103Z50			
C207, C208 (SI-V50M5)		CKSQYF103Z50		RESISTORS			
(SI-V50M5)		CKSQYF103Z50		VR801 (10kΩ-B)			DCS1036
				Other Resistors			RD1/6PM□□□J

Mark No.	Description	Parts No.
OTHERS		
CN107	4P JUMPER CONNECTOR	52147-0410
CN801-CN803, CN807	PIN JACK (4P)	AKB7015
CN106	13P JUMPER CONNECTOR	KPE13
CN101, CN102, CN151	15P JUMPER CONNECTOR	KPE15
CN103	7P JUMPER CONNECTOR	KPE15
JA804	PIN JACK (2P)	RKB1041
JA805, JA806	REMOTE CONTROL JACK	RKN1004
KN101	EARTH METAL FITTING	VNF1084

VR ASSY (SI-V51036-G)

SEMICONDUCTORS

IC15	BU4066BCF
IC5, IC6	M5283P
IC201	NJM2068M
IC303	NJM4556AD
IC10, IC25, IC281	NJM4558MD
IC11-IC14, IC16, IC18	NJM4580ED
IC202-IC204, IC302, IC354, IC355	NJM4580ED
IC401-IC420, IC9	NJM4580ED
IC3, IC351, IC353, IC4	TC9162AF
IC1	TC9164AF
Q305, Q306	2SC2458
D301, D302	1SS254

SWITCHES AND RELAYS

S282, S283	DSG1051
S1, S2, S281, S284, S285	DSH1036
S401-S404 (SI-V50117)	DSK1005 → DSK1006
Warten (SI-V50117)	WBSO FMC

CAPACITORS

C317, C318	CCCCH270J50
C409, C410, C437, C438	CCCSL221J50
C465, C466, C493, C494	CCCSL221J50
C203, C204, C21, C22, C223	CCCSL270J50
C33, C34, C355, C356	CCCSL270J50
C377, C378, C39, C40	CCCSL270J50
C405, C406, C433, C434	CCCSL270J50
C461, C462, C489, C490	CCCSL270J50
C51, C52	CCCSL270J50
C100, C27, C28, C59, C60	CCPUSL270J50
C97	CCPUSL270J50
C365, C366, C371, C372	CCSQCH101J50
C83, C84, C89, C90	CCSQCH101J50
C92, C93	CCSQCH101J50
C367, C373, C85, C91, C94	CCSQCH102J50
C513-C520	CCSQCH270J50
C311, C312	CCSQSL101J50
C281, C282	CEAL010M50
C212, C313, C314	CEAL330M25
C105-C109, C11, C110-C112	CEJA100M16
C12, C201, C202, C205, C218	CEJA100M16
C221, C222, C23, C24	CEJA100M16
C29, C30, C35, C359, C36	CEJA100M16
C360, C43, C44	CEJA101M10
C375, C376	CEJA101M10
C315, C316	CEJA101M16
C419, C420, C447, C448	CEJA330M16
C475, C476, C503, C504	CEJA330M16
C5, C6	CEJA330M25
C427, C428, C455, C456	CEJA470M16

C413, C414 (SI-V51075-G)	CEANPORA1M50
C483, C484, C511, C512	CEJA470M16
C357, C358, C364, C374	CEJA470M35
C305, C306, C309, C310	CFTXA333J50
C213	CFTXA472J50
C215	CFTXA682J50
C210, C211, C214	CFTYA104J50
C415, C416, C443, C444	CFTYA123J50
C471, C472, C499, C500	CFTYA123J50
C413, C414, C441, C442	CFTYA154J50
C469, C470, C497, C498	CFTYA154J50
C407, C408, C435, C436	CFTYA333J50
C463, C464, C491, C492	CFTYA333J50
C421, C422, C449, C450	CFTYA683J50
C477, C478, C505, C506	CFTYA683J50
C101, C103, C104, C15, C16	CKPUYF103Z25
C19, C20, C207-C209	CKPUYF103Z25
C216, C217, C219, C220	CKPUYF103Z25
C37, C38, C41, C411, C417	CKPUYF103Z25
C42, C439, C445, C467, C47	CKPUYF103Z25
C473, C48, C495, C501	CKPUYF103Z25
C1, C102, C13, C14, C2, C17, C18	CKSQYF103Z50
C206, C25, C26, C283, C285	CKSQYF103Z50
C31, C319, C32, C320-C322	CKSQYF103Z50
C351-C354, C379, C380	CKSQYF103Z50
C383, C384, C403, C404, C412	CKSQYF103Z50
C418, C423-C426, C431, C432	CKSQYF103Z50
C440, C446, C451-C454	CKSQYF103Z50
C459, C460, C468, C474	CKSQYF103Z50
C479-C482, C487, C488, C496	CKSQYF103Z50
C502, C507-C510, C57, C58	CKSQYF103Z50
C95, C96, C98, C99	CKSQYF103Z50

RESISTORS

VR201 (10kΩ-B)	DCS1030
VR202-VR204 (10kΩ-B)	DCS1031
VR405-VR416 (10kΩ-B)	DCS1032
VR301 (100kΩ-B)	DCS1033
VR302, VR4 (10kΩ-B)	DCS1034
VR401-VR404 (20kΩ-B)	DCS1038
VR2 (10kΩ-M+N)	DCS1035
R101, R207, R221, R222	RD1/6PM102J
R321, R322, R61, R62, R70	RD1/6PM102J
R208-R211, R224, R305, R306	RD1/6PM103J
R103, R104 (SI-V51075-G)	RD1/4PU393J
R315-R318, R323, R324	RD1/6PM103J
R220, R29-R32, R351-R353	RD1/6PM104J
R362, R363, R368, R369, R386	RD1/6PM104J
R51, R52	RD1/6PM104J
R218	RD1/6PM122J
R356, 357, 360, 361 (SI-V51036-G)	RD1/6PM153J
R201, R202, R65, R66	RD1/6PM202J
R102	RD1/6PM203J
R413, R414, R435, R436	RD1/6PM203J
R457, R458, R479, R480	RD1/6PM203J
R329, R330	RD1/6PM220J
R319, R320	RD1/6PM222J
R100, R145-R148, R23-R28	RD1/6PM223J
R33-R35, R354, R355	RD1/6PM223J
R358, R359, R36, R364-R367	RD1/6PM223J
R37, R38, R403, R404, R409	RD1/6PM223J
R41, R410, R42, R425, R426	RD1/6PM223J
R43, R431, R432, R44	RD1/6PM223J
R447, R448, R45, R453, R454	RD1/6PM223J
R46, R469, R47, R470	RD1/6PM223J
R475, R476, R48, R489, R49	RD1/6PM223J
R287, 288 add	RD51/109514J
(SI-V51036-G)	
SI-V50140-G	R621, R622 RD1/4PU153J
	R625, R626 RD1/4PU622J

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Mark	No.	Description	Parts No.
		R490-R498, R50, R53-R60 R99 R331, R332 R217 R203, R204, R212, R213	RD1/6PM223J RD1/6PM223J RD1/6PM272J RD1/6PM303J RD1/6PM332J
		R309, R310, R360, R361 R77, R78 R417, R418, R439, R440 R461, R462, R483, R484 R223	RD1/6PM333J RD1/6PM333J RD1/6PM393J RD1/6PM393J RD1/6PM433J
		R407, R408, R411, R412 R415, R416, R429, R430 R433, R434, R437, R438 R451, R452, R455, R456 R459, R460, R473, R474	RD1/6PM471J RD1/6PM471J RD1/6PM471J RD1/6PM471J RD1/6PM471J
		R477, R478, R481, R482 R216, R219, R356, R357 R12, R3, R6, R9 R405, R406 R419, R420, R427, R428	RD1/6PM471J RD1/6PM472J RD1/6PM473J RD1/6PM562J RD1/6PM562J
		R441, R442, R449, R450 R463, R464, R471, R472 R485, R486 R325, R326 R205, R206	RD1/6PM562J RD1/6PM562J RD1/6PM562J RD1/6PM563J RD1/6PM623J
		R73, R74 R333, R334 Other Resistors	RD1/6PM752J RD1/6PM912J RS1/10S□□□J
OTHERS		CABLE HOLDER (7P) CABLE HOLDER (15P) CONNECTOR	51063-0705 51063-1505 PG06MR-E12
J110			

PHONE JACK ASSY

OTHERS

J109	3P JUMPER WIRE	D20PWW0315E
JA301	HEADPHONE JACK	VKN1149

MIC JACK ASSY

OTHERS

J120	3P JUMPER WIRE	D20PWW0310E
CN201	CONNECTOR	DKN1136

C.F ASSY

RESISTORS

VR1 (10kΩ-B)	DCV1003
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OTHERS

CN110	MT CONNECTOR (6P)	173979-6
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VOLTAGE SELECT ASSY

SWITCHES AND RELAYS

△ S902	DSH1039
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OTHERS

△ J8	CONNECTOR ASSY	DKP3228
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Mark	No.	Description	Parts No.
		POWER SUP. ASSY	
		SEMICONDUCTORS	
		IC556, IC557 IC555 IC558 IC554 Q551	ICP-N15 ICP-N25 ICP-N50 PQ05RR12 2SC2458
△		Q550	2SD2395
△		D562	1SS254
△		D550	MTZJ7.5B
△		D551, D552	S2VB20
△		D559-D561	S5688G
		COILS AND FILTERS	
△		L901	VTL-004
		CAPACITORS	
△		C902, C903 (0.01 μ F/250V) C570 C562 C554, C555 C567	ACG7005 CEANP4R7M35 CEAS101M10 CEAS101M16 CEAS221M16
		C561 C556, C557 C552, C553 C571 C550, C551, C558-C560, C563	CEAS330M16 CEAS332M35 CEAS470M16 CEAS4R7M50 CKCYF103Z50
		C565, C566, C568, C569 C564 (10000 μ F/16V)	CKCYF103Z50 VCH1054
		RESISTORS	
		All Resistors	RD1/6PM□□□J
		OTHERS	
		CN119 MT CONNECTOR (11P) CN1 2P-VH CONNECTOR HEAT SINK HEAT SINK B H1-H4 FUSE HOLDER	1-173981-1 B2P3-VH DNG1066 REF1003 RKR1003
△			
△			

POWER TRANS ASSY

OTHERS

CN8	3P-VH CONNECTOR	B3P5-VH
CN4	5P JUMPER CONNECTOR	KPC5

INLET ASSY

INLET UNIT assy has no service part.

POWER SW ASSY

SWITCHES AND RELAYS

△ S901	PSA-009
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CAPACITORS

△ C901 (0.01 μ F/250V)	ACG7005
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REG. ASSY

SEMICONDUCTORS

△ IC550	NJM7815FA
△ IC552	NJM78M08FA
△ IC551	NJM7915FA
△ IC553	NJM79M08FA

Mark No.	Description	Parts No.
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OTHERS

J152	JUMPER WIRE (10P) HEAT SINK VR	D20PWW1020E VNH1049
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7SEG. ASSY

SEMICONDUCTORS

IC701, IC702	LB1740
Q701-Q706	2SD1919
D801-D808	1SS254
D662-D664, D695-D698	NKR131S
D665-D677, D683-D686	SLR-342DUTB7
D681, D682, D792-D796	SLR-342VRTB7

SWITCHES AND RELAYS

S652-S654, S657-S660	PSG1006
S655	RSG1034

CAPACITORS

C701, C702	CKPUYF103Z25
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RESISTORS

All Resistors	RD1/6PM□□□J
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OTHERS

CUSHION (RUBBER)	REB1105
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BAL. OUT ASSY

CAPACITORS

C249-C252	CKCYF103Z50
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OTHERS

J108	JUMPER WIRE (6P)	D20PWW0610E
JA231, JA232	3P CANNON CONNECTOR	DKN1135

PHONE ASSY

SEMICONDUCTORS

IC604	BU4066BC
IC605	NJM2068D
IC231	NJM4556AD
IC232, IC233	NJM4556AL
IC601-IC603	NJM4558DX

IC17	NJM4580D
Q604, Q605	2SC2458
Q231-Q234	2SD2144S
Q601	DTA124ES
Q602, Q603	2SC2878

D601-D608	1SS254
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CAPACITORS

C602, C613, C614, C621, C622	CCCSL101J50
C629, C630, C646-C652	CCCSL101J50
C604	CCCSL220J50
C640-C645	CCCSL270J50
C603, C607-C609, C619, C620	CEAS100M16

C625, C626, C631, C632	CEAS100M16
C636, C637, C958	CEAS100M16
C243-C246	CEAS101M25
C231, C232, C241, C247, C601	CKCYF103Z50
C605, C606, C610-C612	CKCYF103Z50

C617, C618, C623, C624	CKCYF103Z50
C627, C628, C633-C635	CKCYF103Z50
C638, C639, C957	CKCYF103Z50
C233-C240	CKPUYB151K50

Mark No.	Description	Parts No.
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RESISTORS

R241-R248	RN1/6PQ1002F
R233-R240	RN1/6PQ7500F
Other Resistors	RD1/6PM□□□J

OTHERS

CN121	CABLE HOLDER (15P)	51063-1505
JA601-JA607	5P JUMPER CONNECTOR	52147-0510
KN601	MIC JACK	VKN1147
	EARTH METAL FITTING	VNF1084

CH1 METER ASSY

SEMICONDUCTORS

D701-D706	SLB-25VRT52
D707-D715	SLB-25MGT52

OTHERS

J146, J147	METER HOLDER	DNK3206
J145	JUMPER WIRE	DXYY0505E
	JUMPER WIRE	DXYY0605E

CH2 METER ASSY

SEMICONDUCTORS

D716-D721	SLB-25VRT52
D722-D730	SLB-25MGT52

OTHERS

J144	METER HOLDER	DNK3206
J142, J143	JUMPER WIRE	DXYY0505E
	JUMPER WIRE	DXYY0605E

CH3 METER ASSY

SEMICONDUCTORS

D731-D736	SLB-25VRT52
D737-D745	SLB-25MGT52

OTHERS

J141	METER HOLDER	DNK3206
J139	JUMPER WIRE	DXYY0505E
J140	JUMPER WIRE	DXYY0605E
	JUMPER WIRE	DXYY0705E

CH4 METER ASSY

SEMICONDUCTORS

D746-D751	SLB-25VRT52
D752-D760	SLB-25MGT52

OTHERS

J136, J138	JUMPER WIRE (6P)	D20PWW0605G
	METER HOLDER	DNK3206

MASTER METER ASSY

SEMICONDUCTORS

Q707-Q712	2SD1919
D761-D766, D776-D781	SLB-25VRT52
D767-D775, D782-D790	SLB-25MGT52

RESISTORS

All Resistors	RD1/6PM□□□J
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OTHERS

J148	JUMPER WIRE (6P)	D20PWW0605G
	METER HOLDER	DNK3206

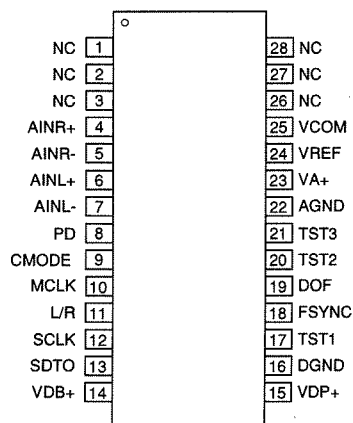
6. IC INFORMATION

● The Information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagram.

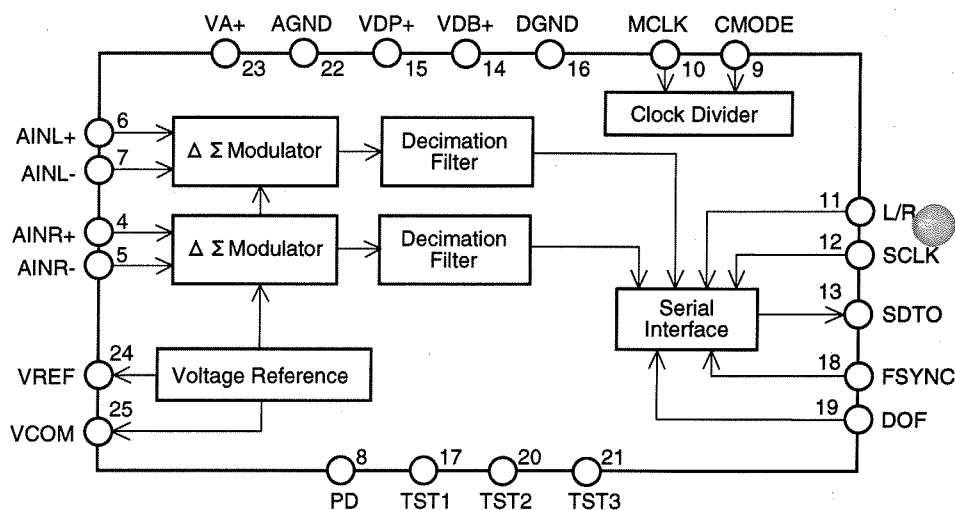
■ AK5345 (IC3: DSP ASSY)

● 16 bit 2ch A/D Converter

● Pin Assignment (Top view)



● Block Diagram



● Pin Function

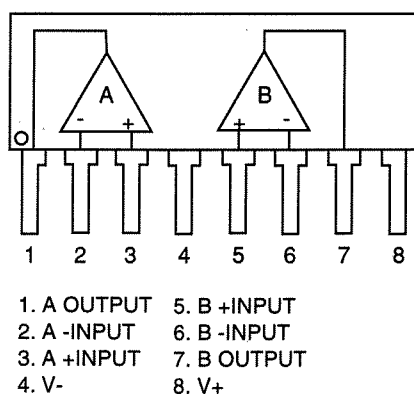
NO.	Pin Name	I/O	Function
1	NC	—	Not used
2	NC	—	
3	NC	—	
4	AINR+	I	Rch analog positive input pin
5	AINR-	I	Rch analog negative input pin
6	AINL+	I	Lch analog positive input pin
7	AINL-	I	Lch analog negative input pin
8	PD	I	Power-down pin Power-down mode is reached at the time of "H". Offset calibration starts from "↓". Calibration must be executed once at the time of power ON and when the clock frequency has been changed.
9	CMODE	I	Master clock selection pin "L": CLK = 256fs (12.288MHz @ fs = 48kHz) "H": CLK = 384fs (18.432MHz @ fs = 48kHz)
10	MCLK	I	Master clock input pin CMODE = "H": 384fs CMODE = "L": 256fs
11	L/R	I	Input channel selection pin fs clock is entered. At the time of DOF = "L", Lch is put out with "H" and Rch is put out with "L". At the time of DOF = "H", the polarity is reversed.
12	SCLK	I	Serial data clock pin 1 bit of the output data is put out with "↓" of this pin. A clock of 32fs to 64 fs is given as input.

NO.	Pin Name	I/O	Function
13	SDTO	O	Serial data output pin The data are put out as 2's complement, MSB first, 16 bit front justified data. "L" is put out after 16 bit output. "L" at the time of power-down (PD = "H").
14	VDB+	—	Digital part power supply pin, +5 V (silicon substrate potential)
15	VDP+	—	Digital part power supply pin, +5 V
16	DGND	—	Digital part ground pin
17	TST1	I	Test pin Set to open or "L".
18	FSYNC	I	Frame sync clock pin At the time of "H", SDATA is shifted according to SCLK.
19	DOF	I	Digital output format pin "L": Front justified "H": I ² S compatible format
20	TST2	O	Test pin Set to open for use.
21	TST3	O	
22	AGND	—	Analog ground pin
23	VA+	—	Analog power supply pin, +5 V
24	VREF	O	Reference voltage output pin, (VA +) -3.0 V Connect an electrolytic capacitor of 10 μ F or less and a ceramic capacitor of 0.1 μ F between VA + and VREF.
25	VCOM	O	Common voltage output pin, (VA +) -2.5 V Connect a ceramic capacitor of 0.1 μ F between VA + and VCOM.
26	NC	—	Not used
27	NC	—	
28	NC	—	

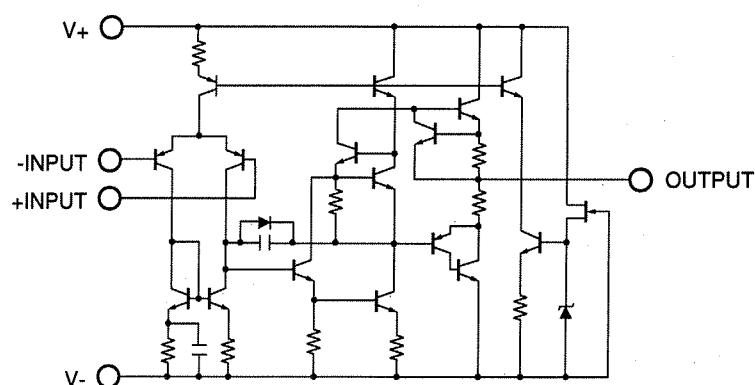
■ NJM4556AL (IC232, IC233: PHONE ASSY)

● OP-AMP IC

● Pin Assignment



● Block Diagram



DJM-500

■ PD4669A (IC14: DSP ASSY)

● System Control Micro-computer

● Pin Function

No.	PORT	Pin Name	I/O	Function
1	P94/FIP6	GRID	O	7 Segment display output
5	P90/FIP2			
6	P81/FIP1			
7	P82/FIP0			
8	VDD	—	—	Power supply
9	P27/SCK0	XSCK	O	DSP serial communication clock output
10	P26/SO0/SB1	SI	O	DSP serial data output
11	P25/SI0/SB0	XSTART	I	Effect ON/OFF ON: L, OFF: H
12	P24/BUSY	STB1	O	Analog switch IC selection signal 1
13	P23/STB	ADSW	O	Switching analog switch
14	P22/SCK1	ICCLK	O	Analog switch IC serial communication clock output
15	P21/SO1	ICDATA	O	Analog switch IC serial data output
16	P20/SI1	STB2	O	Analog switch IC selection signal 2
17	XRESET	XRST	I	Micro-computer reset H: Reset
18	P74	FSC2	I	CH2 Fader control ON/OFF ON: L
19	P73	FSC1	I	CH1 Fader control ON/OFF ON: L
20	AVSS	GRF	—	GND for A/D converter
21	P17/ANI7	EFVR	I	EFFECT VR
22	P16/ANI6	A/D1	I	EFS: H / ECHS: L
23	P15/ANI5	A/D3	I	MASL: H / MASR: L
24	P14/ANI4	A/D4	I	MCH3: H / MCH4: L
25	P13/ANI3	A/D5	I	MCH1: H / MCH2: L
26	P12/ANI2	A/D6	I	CH1
27	P11/ANI1	A/D7	I	Assign B: H / CH2: L
28	P10/ANI0	A/D8	I	CFAS: H / Assign A: L
29	AVDD	—	—	Power supply for A/D converter
30	AVREF	—	—	A/D converter reference voltage input
31	P04/XT1	RDY1	I	DSP serial communication RDY signal
32	XT2	—	—	Connected to crystal for sub system clock oscillation
33	VSS	—	—	GND
34	X1	—	—	Connected to crystal for main system clock oscillation
35	X2			
36	P37	PD	O	A/D converter (DSP) PD
37	P36/BUZ	XRT2	O	XRST2 (DSP)
38	P35/PCL	XC/D	O	XC/D (DSP)

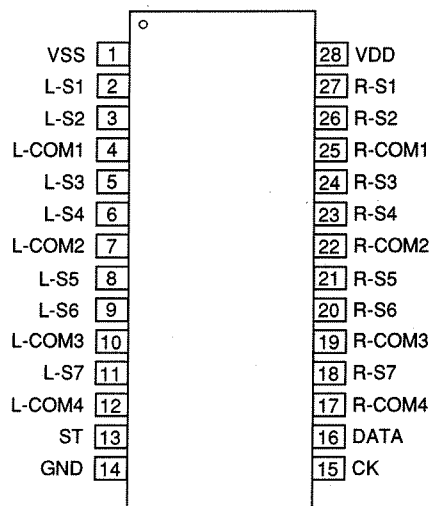
No.	PORT	Pin Name	I/O	Function	
39	P34/TI2	CS1	O	CS1 (DSP)	
40	P33/TI1	STB4	O	Analog switch IC selection signal 4	
41	P32/TO2	GF3	I	BPM monitor channel selection	" H " level signal
42	P31/TO1	GF2	I		" M " level signal
43	P30/TO0	GF1	I		" L " level signal
44	P03/INTP3/CI0	GFB3	I	BPM effect channel selection	" H " level signal
45	P02/INTP2	GFB2	I		" M " level signal
46	P01/INTP1	STB3	O	Analog switch IC selection signal 3	
47	P00/INTP0/TI0	GFB1	I	BPM effect channel selection	" L " level signal
48	IC (VPP)	—	—	Internal connection	
49	P72	KD1	I	Key read	
50	P71	KD0	I		
51	P70	MCFSW	I	Switching fader Closs: L CH:H	
52	—	VDD	—	Power supply +5V	
53	P127/FIP33	BPM/EFEC	O	BPM mode: H Effect mode: L	
54	P126/FIP32	MUTE	O	Mute control Mute: L	
55	P125/FIP31	CH2CT2	O	Player control signal	CH2 STOP:H
56	P124/FIP30	CH2CT1	O		CH2 START:H
57	P123/FIP29	CH1CT2	O		CH1 STOP:H
58	P122/FIP28	CH1CT1	O		CH1 START:H
59	P121/FIP27	SEG	—	7 Segment display output	
60	P120/FIP26				
61	P117/FIP25				
62	P116/FIP23				
68	P110/FIP17				
69	P107/FIP17				
70	P106/FIP16				
71	VLOAD	—	—	Connected to FIP driver pull-down resistor.	
72	P105/FIP15	SEG	—	7 Segment display output	
75	P102/FIP12				
76	P101/FIP11	GRID	—	7 Segment display output	
77	P100/FIP10				
78	P97/FIP9				
80	P95/FIP7				

DJM-500

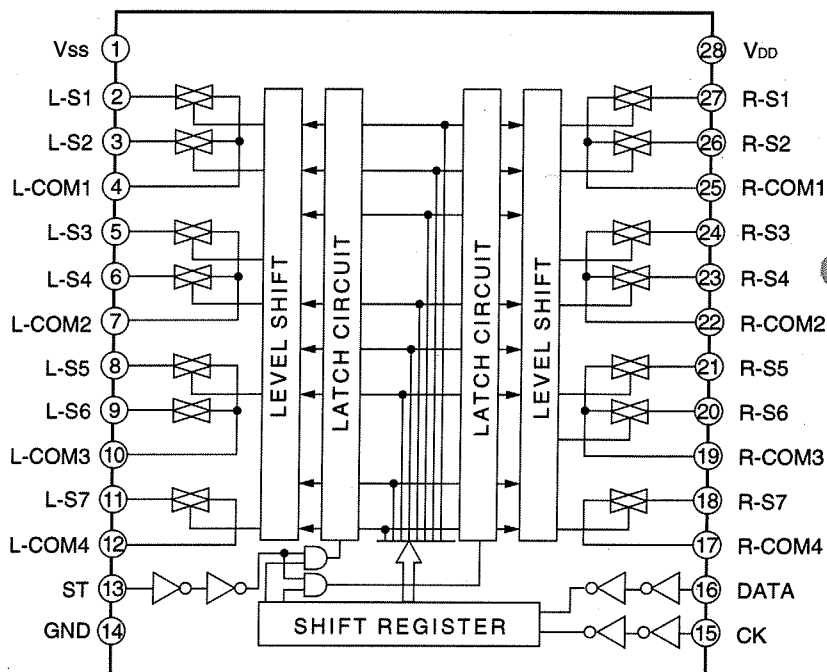
■ TC9162AF (IC3, IC4, IC351, IC353: VR ASSY) (IC165: DSP ASSY)

● Analog Switch Array

● Pin Assignment (Top view)



● Block Diagram



● Pin Function

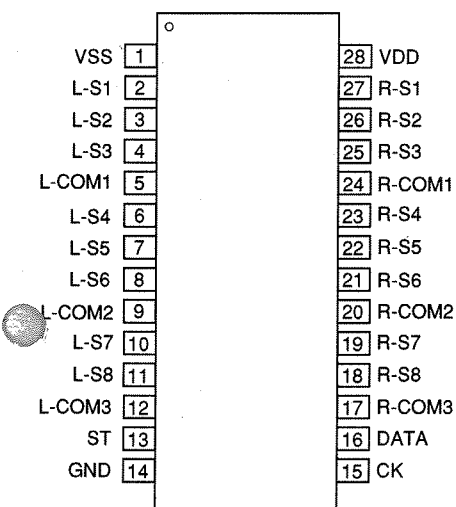
NO.	Pin Name	Description
1	VSS	Power supply (-)
2, 27	S1	Switch input
3, 26	S2	
4, 25	COM1	Switch output
5, 24	S3	Switch input
6, 23	S4	
7, 22	COM2	Switch output
8, 21	S5	Switch input
9, 20	S6	

NO.	Pin Name	Description
10, 19	COM3	Switch output
11, 18	S7	Switch input
12, 17	COM4	Switch output
13	ST	Strobe input
14	GND	Ground
15	CK	Clock input
16	DATA	Data input
28	VDD	Power supply (+)

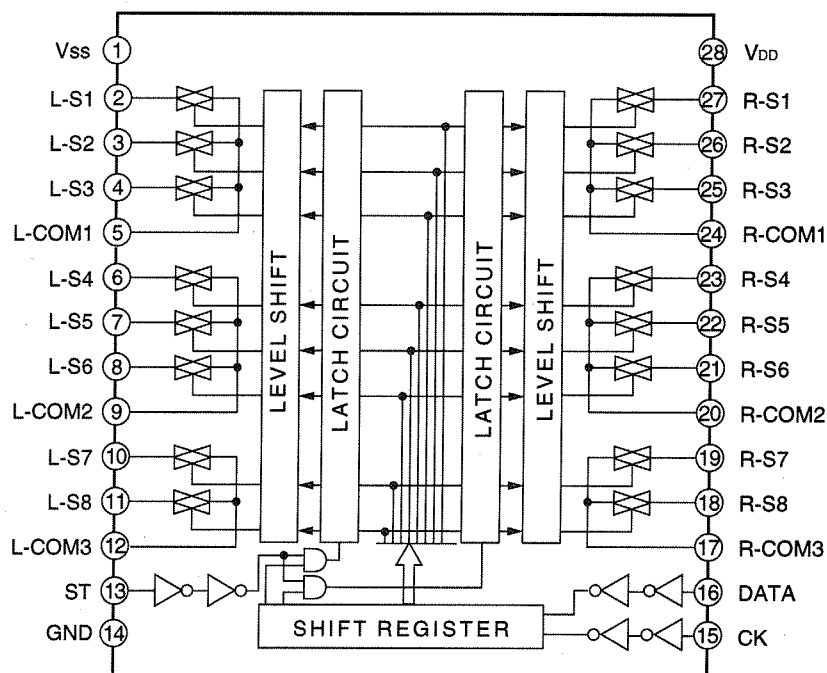
■ TC9163AF (IC167: DSP ASSY)

● Analog Switch Array

● Pin Assignment (Top view)



● Block Diagram



● Pin Function

NO.	Pin Name	Description
1	VSS	Power supply (-)
2, 27	S1	Switch input
3, 26	S2	
4, 25	S3	
5, 24	COM1	Switch output
6, 23	S4	Switch input
7, 22	S5	
8, 21	S6	
9, 20	COM2	Switch output

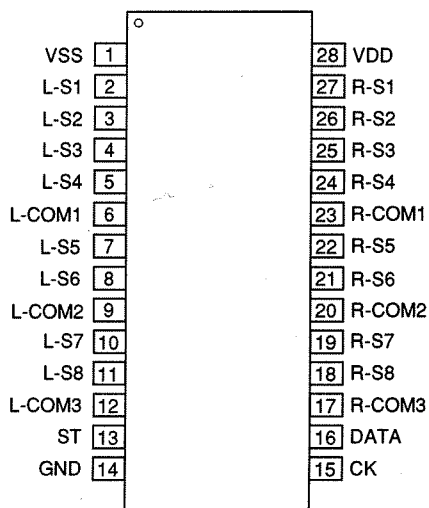
NO.	Pin Name	Description
10, 19	S7	Switch input
11, 18	S8	
12, 17	COM3	Switch output
13	ST	Strobe input
14	GND	Ground
15	CK	Clock input
16	DATA	Data input
28	VDD	Power supply (+)

DJM-500

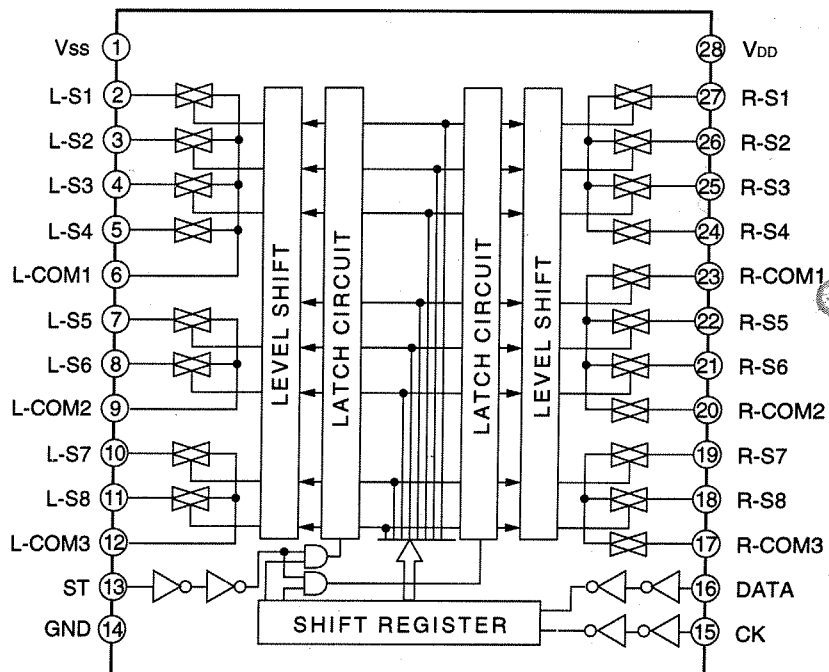
TC9164AF (IC1: VR ASSY)

● Analog Switch Array

● Pin Assignment (Top view)



● Block Diagram



● Pin Function

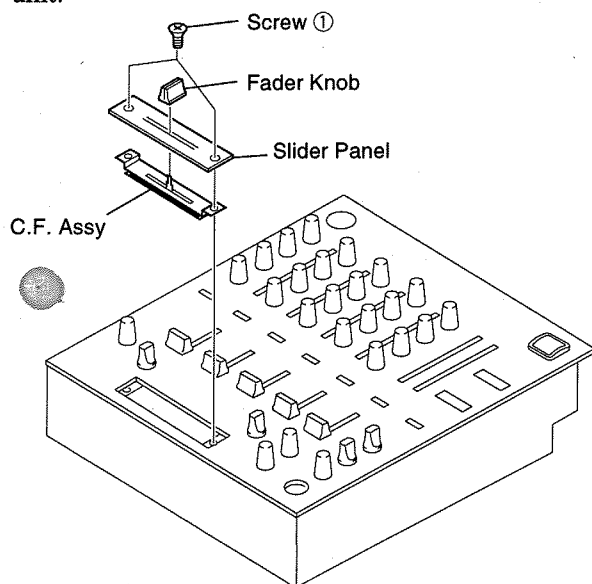
NO.	Pin Name	Description
1	VSS	Power supply (-)
2, 27	S1	Switch input
3, 26	S2	
4, 25	S3	
5, 24	S4	
6, 23	COM1	Switch output
7, 22	S5	Switch input
8, 21	S6	
9, 20	COM2	Switch output

NO.	Pin Name	Description
10, 19	S7	Switch input
11, 18	S8	
12, 17	COM3	Switch output
13	ST	Strobe input
14	GND	Ground
15	CK	Clock input
16	DATA	Data input
28	VDD	Power supply (+)

7. DISASSEMBLY

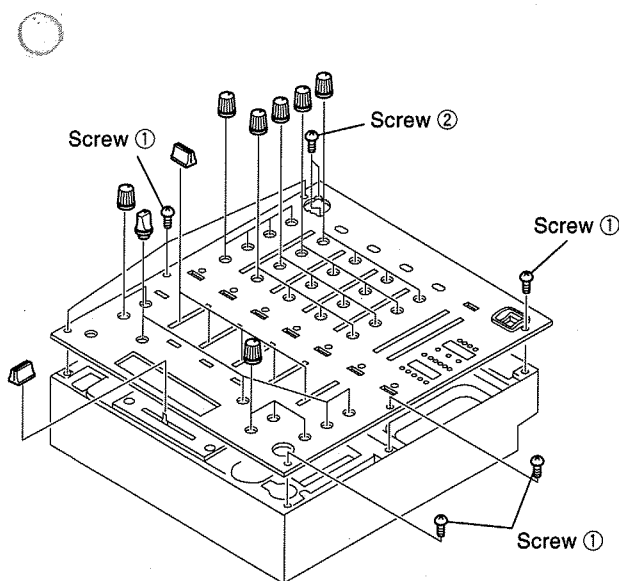
■ CROSS-FADER SECTION (Fig. 1)

1. Remove the fader knob.
2. Remove the two screws ① fixing the slider panel.
3. Raise the C.F. assy at the front and then raise the entire unit.



■ CONTROL PANEL SECTION (Fig. 2)

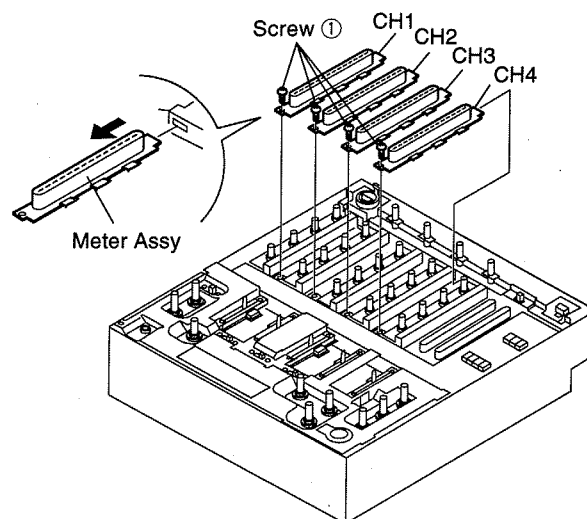
1. Remove all knobs from the control panel surface.
2. Remove the six screws ①.
3. Remove the two screws ② fixing the microphone jack.



■ EQUALIZER SECTION

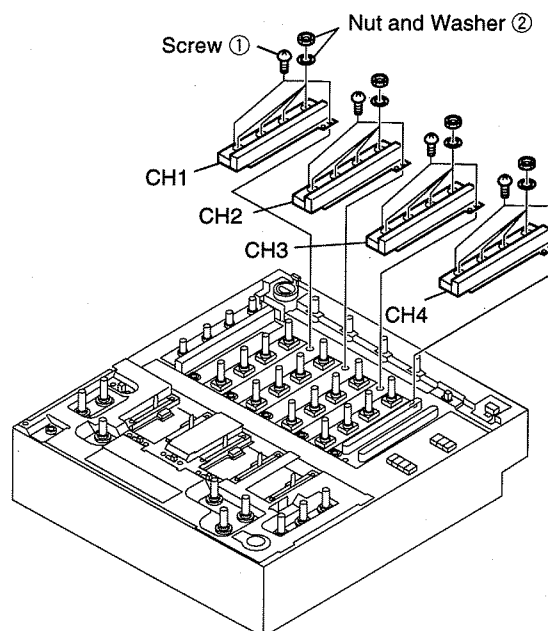
● Removal of the CH1 to CH4 Meter Unit (Fig. 3)

1. Remove the control panel. (Refer to the preceding item.)
2. Remove the four screws ① fixing each meter assy.
3. Slide the meter assy to the front and raise it.
4. Proceed in the same way for CH2 to CH4.



● Removal of Shield Plate (Fig. 4)

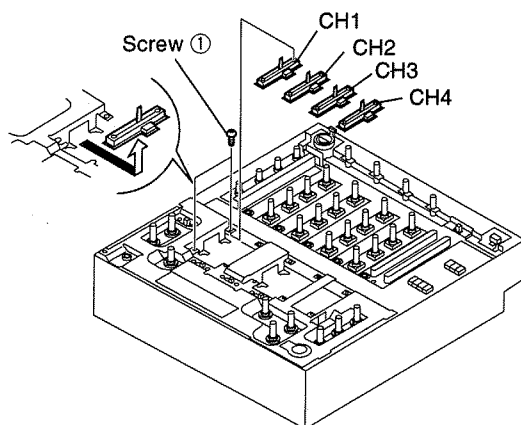
1. Remove the control panel. (Refer to the preceding item.)
2. Remove the meter assy. (Refer to the preceding item.)
3. Remove the two screws ① fixing the shield plate.
4. Remove the nut and washer ② fixing the VR, and then remove the shield plate.
5. Proceed in the same way for CH2 to CH4.



AUTO BMP COUNTER SELECTOR SECTION

● Removal of the Fader VR Assy (Fig. 5)

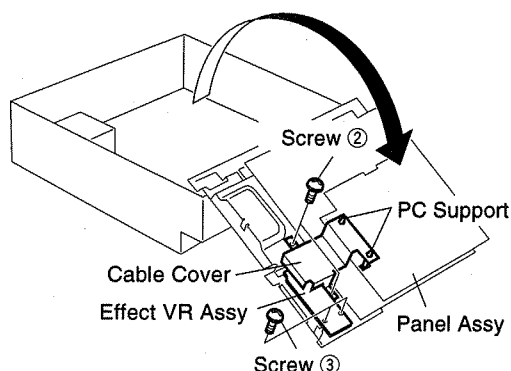
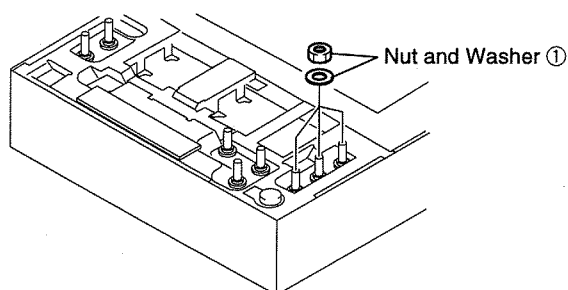
1. Remove the control panel. (Refer to the preceding item.)
2. Remove the two screws ① fixing the Fader VR assy.
3. Slide the Fader VR assy to the side and then raise it.
4. Proceed in the same way for CH2 to CH4.



EFFECT SELECTOR SECTION

● Removal of the Effect VR Assy (Fig. 6, 7)

1. Remove the control panel. (Refer to the preceding item.)
2. Remove the nut and washer ①.
3. Place the panel assy as shown in the figure.
4. Remove the two screws ② fixing the cable cover and the PC support.
5. Remove the two screws ③ fixing the Effect VR assy.

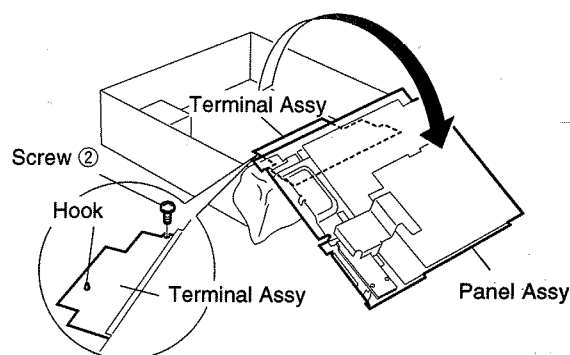
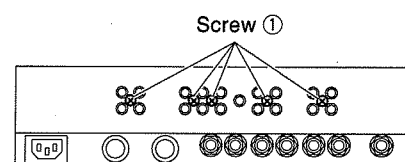


REMOVAL OF THE TERMINAL ASSY

1. Remove the control panel. (Refer to the preceding item.) (The knobs don't have to be removed.)
2. Remove the five screws ① fixing the Terminal assy (at the rear panel).
3. Place the panel assy as shown in the figure.

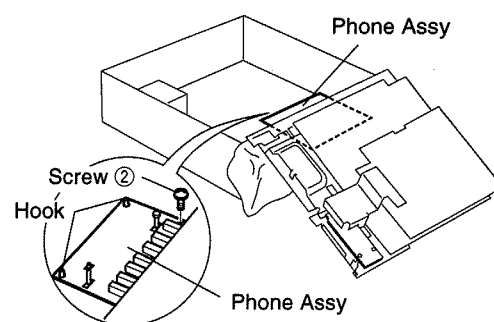
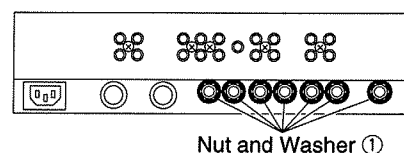
Note: Place a cloth etc. between the panel and the chassis to prevent damaging the panel surface.

4. Remove the screw ② (PCB) and the hook of the PCB spacer.



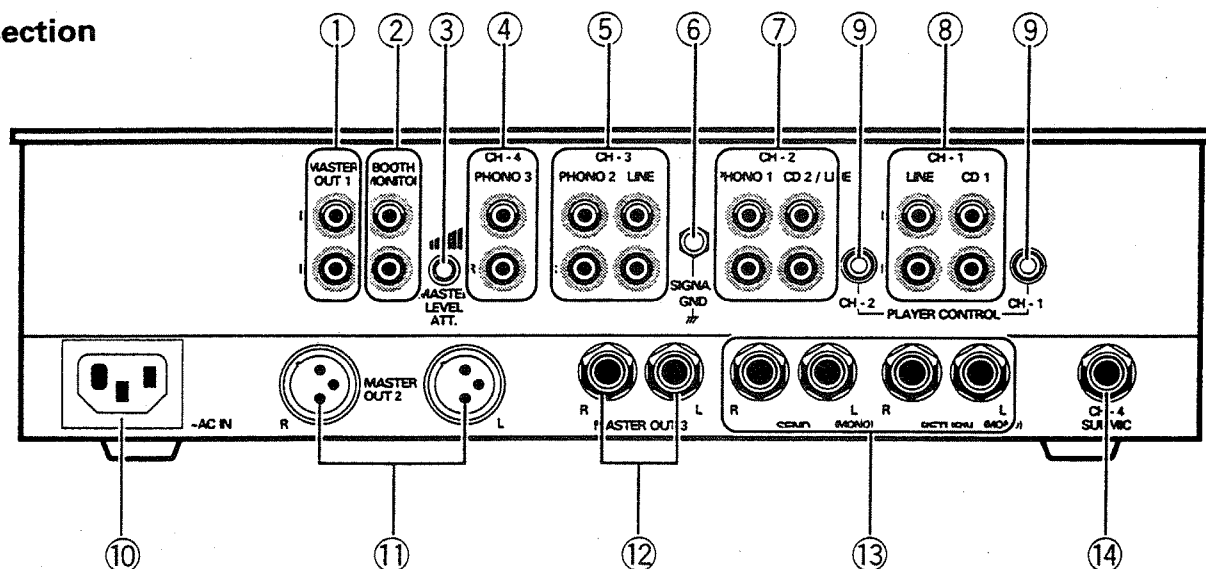
REMOVAL OF THE PHONE ASSY

1. Remove the control panel. (Refer to the preceding item.) (The knobs don't have to be removed.)
2. Remove the seven nuts and washers ① fixing the Phone assy (at the rear panel).
3. Remove the Terminal assy. (Refer to the preceding item.)
4. Remove the screw ② (PCB) and the two PC support hooks.



8. PANEL FACILITIES

Rear section



① Master Output 1 Terminal (MASTER OUT 1)

Connects the power amplifier using a cord with RCA plug.

② Booth Monitor Output Terminal (BOOTH MONITOR)

Connects the power amplifier which connects the speaker for monitoring audio.

③ Master Output Level Adjustment Knob (MASTER LEVEL ATT.)

④ CH-4 Phono Input Terminal (PHONO 3)

PHONO 3 : Connects the analog player. (for MM only)

⑤ CH-3 Input Terminal

PHONO 2 : Connects the analog player. (for MM only)

LINE : Connects audio equipment such as DAT.

⑥ Ground Terminal (SIGNAL GND)

Connects to the GND cord of the analog player.

This terminal is for only an analog player, not for a safety ground.

⑦ CH-2 Input Terminal

PHONO 1 : Connects to the analog player. (for MM only)

CD/LINE : Connects optional CD players such as CDJ-500II.

⑧ CH-1 Input Terminal

LINE : Connects audio equipment such as a cassette deck, etc.

CD : Connects optional CD players such as the CDJ-500II.

⑨ CH-1, 2 Player Control Terminal

When connecting the optional CDJ-500II or CDJ-500G to the CD terminals of CH-1 or CH-2, the fader start function can be used by connecting this terminal to the control terminal of the player.

⑩ Power Cord Connection Terminal

Connects the power cord provided.

⑪ Master Output 2 Terminal (MASTER OUT 2)

Connects the XLR input supporting power amplifier.

⑫ Master Output 3 Terminal (MASTER OUT 3)

Connects the PHONE input supporting power amplifier.

⑬ External Effector Connecting Terminal (SEND, RETURN)

Used to connect other equipment for adjusting sound.

SEND (Output) : Connects the input terminal of the external effector.

Uses L channel output for using the effector of monaural input.

The sound that L and R are mixed will be sent to the effector.

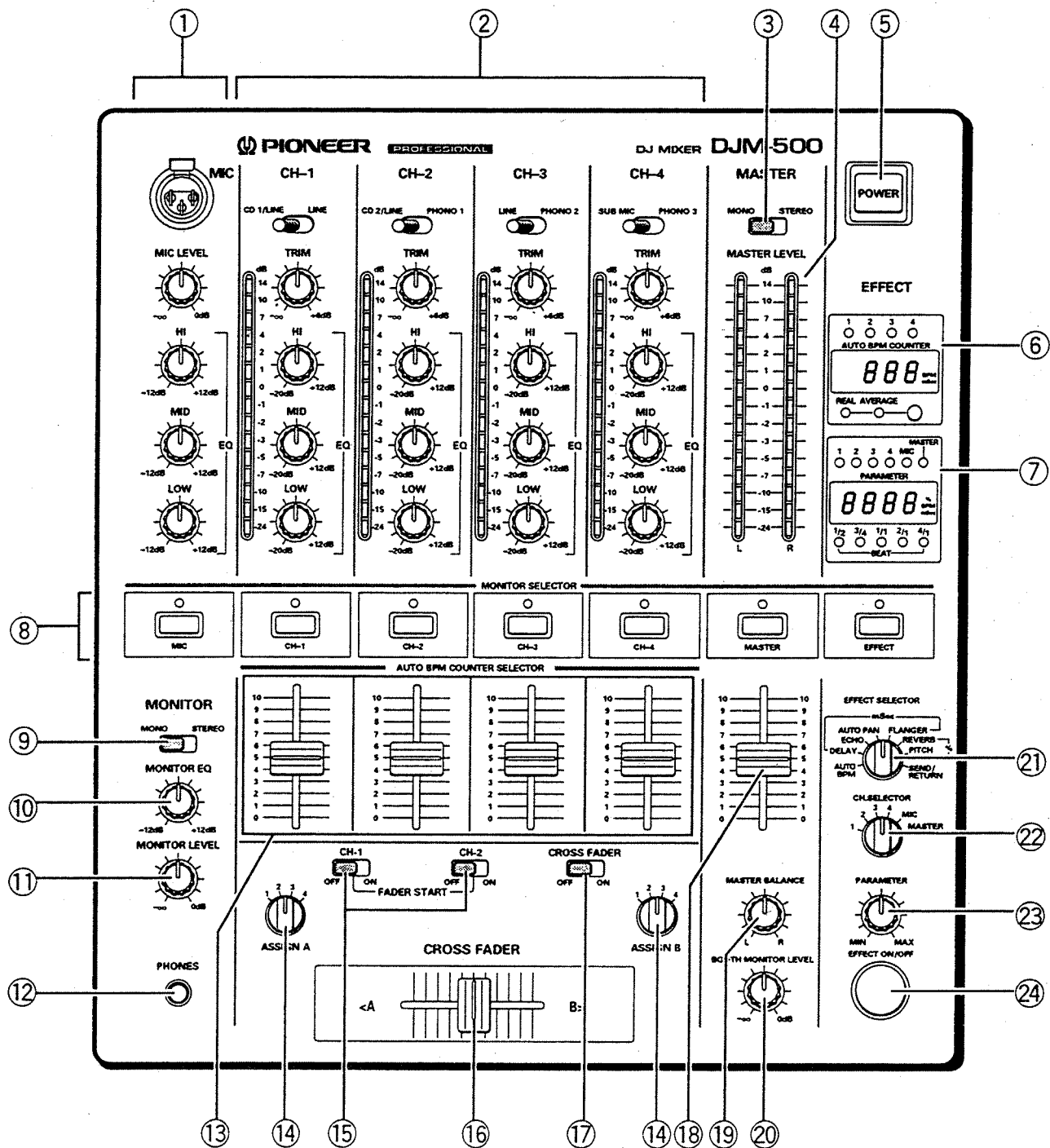
RETURN (Input) : Connects the output terminal of the external effector.

Uses L channel input for using the effector of monaural input. It will be input to both channels L and R.

⑭ CH-4 Sub Microphone Input Terminal (SUB MIC)

DJM-500

Front section



① Main Microphone Terminal and Microphone Control Knob

MIC Level:

Used for adjusting the volume of the main microphone.
(Attenuated level $-\infty$ to 0 dB)

HI:

Used for adjusting the high tone of the microphone sound.

Flat at center click.

Increases when rotated to the right. (To +12 dB at 10 kHz)

Decreases when rotated to the left. (To -12 dB at 10 kHz)

MID:

Used for adjusting the middle tone of the microphone sound.

Flat at center click.

Increases when rotated to the right. (To +12 dB at 1 kHz)

Decreases when rotated to the left. (To -12 dB at 1 kHz)

LOW:

Used for adjusting the low tone of the microphone sound.

Flat at center click.

Increases when rotated to the right. (To +12 dB at 100 Hz)

Decreases when rotated to the left. (To -12 dB at 100 Hz)

② CH1 to CH4 Input Selection Switch and Control Knob/Peak level meter

Input selection switch:

Selects which sound of the two units connected to each CH to use.

CH1 : Switches between CD1/LINE and LINE

CH2 : Switches between CD2/LINE and PHONO 1

CH3 : Switches between LINE and PHONO 2

CH4 : Switches between SUB MIC and PHONO 3

TRIM:

Used for adjusting the level of the input signal.

The level increases when rotated to the right. (To +6 dB)

The level decreases when rotated to the left. (To $-\infty$)

HI:

Used for adjusting the high tone.

Flat at center click.

Increases when rotated to the right. (To +12 dB at 10 kHz)

Decreases when rotated to the left. (To -20 dB at 10 kHz)

MID:

Used for adjusting the middle tone.

Flat at center click.

Increases when rotated to the right. (To +12 dB at 1 kHz)

Decreases when rotated to the left. (To -20 dB at 1 kHz)

LOW:

Used for adjusting the low tone.

Flat at center click.

Increases when rotated to the right. (To +12 dB at 100 Hz)

Decreases when rotated to the left. (To -20 dB at 100 Hz)

Peak level meter:

Displays the peak level holding it for two seconds.

Displays the level before channel fader.

The display range is -24 dB to +14 dB.

When BPM is selected using the effect selector and the effect switch is turned on, the beat monitor function will be turned on.

③ Master Output Monaural/Stereo Selection Switch (MONO/STEREO)

④ Master level meter (MASTER LEVEL)

Displays the output level after master volume adjustment while holding it for 2 seconds.

The display range is -24 dB to +14 dB.

⑤ Power Supply Switch (POWER)

⑥ BPM Display

- When BPM is selected using the effect selector, the BPM of the source selected with the monitor selector (CH1 to CH4) will be displayed.

1 to 4:

Displays the channel measuring the BPM.

Counter:

Displays the BPM value.

Real-time/average selection button and indicator:

(When REAL is selected.)

The counter displays the measured BPM value.

It will be displayed blinking. If it could not be measured for more than 5 seconds, "—" is displayed.

(When AVERAGE is selected.)

The display changes when it could be measured.

While measuring, the previous value will remain displayed.

- When other than BPM is selected using the effect selector (DELAY, ECHO, AUTO PAN, FLANGER), the source BPM selected using the effect channel selector (②) is converted to hours and displayed on the counter.

⑦ Effector Parameter/BPM Display

1 to 4 MIC MASTER:

Displays the effect source.

Counter:

Displays the effect source BPM and effect parameter, etc. (Refer to ③ for details of the parameter.)

BPM...375 to 857 mSec (1 mSec step)

70.0 to 160.0 BPM (0.1 BPM step)

BEAT:

When the effect is set to delay, echo, auto pan, or flanger, displays to which beat the parameter is set. (1/2 to 4 beats)

⑧ Monitor Selector/Auto BPM Counter Selector button (MONITOR SELECTOR/AUTO BPM COUNTER SELECTOR)

- Selects the source which is monitored using the headphone (CH1 to 4, MIC, MASTER, EFFECT). When several buttons are pressed, sounds can be mixed. When the button is pressed another time, the selection is canceled.
- When BPM is selected using the effect selector, the channel displaying the BPM (CH1 to CH4) is selected. When more than two are selected together, BPM will not be displayed properly.

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⑨ Monitor Monaural/Stereo Selector Switch (MONO/STEREO)

⑩ Monitor Equalizer Knob (MONITOR EQ)

Used to obtain the beat easily with the headphone monitor sound.

Increases/decreases low tone.

Flat at center click.

Increases when rotated to the right. (To +12 dB at 100 Hz)

Decreases when rotated to the left. (To -12 dB at 100 Hz)

⑪ Monitor Level Knob (MONITOR LEVEL)

Used for adjusting the headphone monitor volume.

Not affected by the master volume and master balance.

⑫ Headphone Terminal (PHONES)

⑬ Channel Fader Volume

Used for adjusting the volume of CH1 to CH4.

⑭ Assign Switch (ASSIGN A, B)

When performing cross fader using two sources (A, B), select the channels (CH1 to CH4) to be assigned to A and B.

Effective when the cross fader switch (⑰) is on (cross fader mix).

⑮ Fader Start Switch (FADER START) (Refer to Page 17.)

When the optional CD player (CDJ-500G or CDJ-500II) is connected to the unit using the control cord, this ON/OFF switch is used to start automatic playing of the CD player using the channel fader or cross fader.

⑯ Cross Fader Volume (CROSS FADER)

Adjusts the mix volume of the sources set to A and B using the assign switch (⑭).

⑰ Cross Fader Switch (CROSS FADER ON/OFF)

OFF:

Select when mixing sounds using the channel fader volume. (Direct mix.)

ON:

Select when mixing sounds using the cross fader. (Cross fader mix.)

⑱ Master Volume Level Adjustment

Used to adjust the level of the master output volume.

When the cross fader is ON, the sounds of assigns A, B and main microphone will be output.

When the cross fader is OFF, the sounds of each channel and main microphone will be output.

⑲ Master Balance Knob (MASTER BALANCE)

Used to adjust the left and right balance of the master output.

⑳ Booth Monitor Level Knob (BOOTH MONITOR LEVEL)

Used to adjust the output level of the BOOTH MONITOR terminal.

Not affected by the master volume and master balance.

㉑ Effect Selector Switch (EFFECT SELECTOR)

AUTO BPM (Beat/minute):

Select when performing BPM detection.

DELAY:

Delays the time and repeats once.

ECHO:

Delays the time and repeats several times to produce echo effects.

AUTO PAN:

Shifts the left and right channels periodically.

FLANGER:

Produces periodic sound change effects by mixing the short delay sound and original sound.

REVERB:

Produces the reverb effects.

PITCH SHIFTER:

Changes the pitch of the song.

SEND/RETURN:

Select when connecting and using the external effector.

㉒ Effect Channel Selector (CH. SELECTOR)

Use to select the source to be effected.

㉓ Parameter Knob (PARAMETER)

Used to adjust the parameter of the effector selected with the effect selector switch.

DELAY:

0 to 680 mSec (2 mSec step to 100, 5 mSec step from 100 to 680)

ECHO:

0 to 680 mSec (2 mSec step to 100, 5 mSec step from 100 to 680)

AUTO PAN:

0 to 3500 mSec (5 mSec to 100, 10 mSec from 100 to 900, 20 mSec step from 900 to 3500)

FLANGER:

100 to 9000 mSec (10 mSec to 900, 50 mSec from 900 to 9000)

REVERB:

0 to 100% (1% step)

PITCH SHIFTER:

0 to $\pm 100\%$ (1% from 0 to 10, 2% step from 10 to 100)

㉔ Effect Switch (EFFECT ON/OFF)

Use to switch the effect on/off.

When turned on according to the beat, the effects will also correspond to the beat.

When the effect is on, it goes on and off.

9. SPECIFICATIONS (for KUC type)

Audio Section

Input terminal (Input level/impedance)

CD/LINE	-14 dBV (200 mV) / 22 k Ω
PHONO	-54 dBV (2 mV) / 47 k Ω
MAIN MIC	-54 dBV (2 mV) / 3 k Ω
SUB MIC	-60 dBV (1 mV) / 3 k Ω
RETURN	-14 dBV (200 mV) / 22 k Ω

Output terminal (Output level/impedance)

MASTER OUT 1 (RCA)	0 dBV (1 V) / 1 k Ω
MASTER OUT 2 (XLR)	4 dBm (1.23 V) / 600 Ω
MASTER OUT 3 (1/4"PHONE)	0 dBV (1 V) / 1 k Ω
BOOTH MONITOR	0 dBV (1 V) / 1 k Ω
SEND	0 dBV (1 V) / 1 k Ω
PHONES	-4 dBV (0.63 V) / 22 Ω

Frequency characteristics

CD/LINE	20 Hz to 20 kHz (± 0.5 dB)
PHONO	20 Hz to 20 kHz (± 1.5 dB/RIAA)
MIC	20 Hz to 20 kHz (± 2 dB)

SN ratio

CD/LINE	85 dB
PHONO	77 dB
MIC	69 dB

Total harmonic distortion rate

CD/LINE, PHONO, MIC	Below 0.02 %
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Cross talk 70 dB

Channel equalizer

LOW	+12 dB, -20 dB (100 Hz)
MID	+12 dB, -20 dB (1 kHz)
HI	+12 dB, -20 dB (10 kHz)

Microphone equalizer

LOW	± 12 dB (100 Hz)
MID	± 12 dB (1 kHz)
HI	± 12 dB (10 kHz)

Monitor equalizer ± 12 dB (100 Hz)

Effector

Delay, echo	0 to 680 mSec
Auto pan	0 to 3500 mSec
Flanger	100 to 9000 mSec
Reverb	0 to 100 %
Pitch shifter	0 to ± 100 %

Electrical Section, Others

Power supply voltage	AC 120 V, 60 Hz
Power consumption	41 W
Operating temperature	+5 $^{\circ}$ C to +35 $^{\circ}$ C
Operating humidity	5 % to 85 %
External dimensions	320 (W) $\times$ 357.4 (D) $\times$ 107 (H) mm
	12-5/8 (W) $\times$ 14-1/16 (D) $\times$ 4-3/16 (H) in
Weight	5.9 kg (13 lb)

Accessories

• Power cord	1
• Operating instructions	1

NOTE:

Specifications and the design are subject to possible modifications without notice, due to improvements.