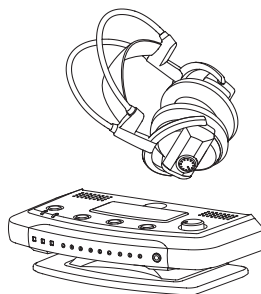


Service Manual



SE-DIR800C

ORDER NO.
TRT1133

DIGITAL CORDLESS SURROUND HEADPHONE

SE-DIR800C

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

Model	Type	Power Requirement	Remarks
SE-DIR800C	KUCXCN1	AC120V	
SE-DIR800C	NYXCN	AC220- 240V	



For details, refer to "Important symbols for good services" .

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

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

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.

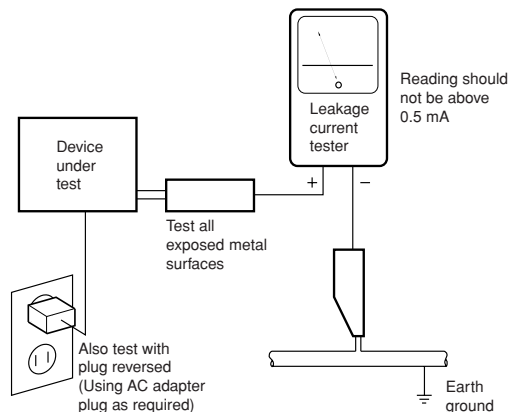
(FOR USA MODEL ONLY)

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.



AC Leakage Test

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 Δ 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.

[Important symbols for good services]

In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely. When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety



You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments



To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning



For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws



To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts



Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount. For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

Specifications

Transmitter TRE-D800

Decoder function Dolby Digital
 Dolby Pro Logic II
 DTS
 PCM (Fs=44.1kHz, 48kHz)
 Dolby Headphone (DH) mode
 DH1/DH2/DH3/OFF
 Dolby Pro Logic II mode
 AUTO/MOVIE/MUSIC/OFF
 Modulation system..... DQPSK
 Secondary carrier wave frequency... 3.75MHz
 Transmission distance
 Approx. 8m to the front
 Transmission range..... 12Hz - 22kHz
 Distortion rate..... 1% or less (1kHz)
 Audio input
 Optical digital input (rectangular type) x 1
 Coaxial digital input (RCA terminal) x 1
 Analog input (RCA terminal L/R) x 1
 Power source..... DC9V
 (from the supplied AC power adaptor)
 Dimensions..... 209 (W) x 50 (H) x 104 (D) mm
 Mass..... Approx. 520g

Headphones SE-DHP800

Playback frequency range..... 12Hz - 22kHz
 Power source..... DC 2.4V
 (supplied rechargeable battery x 2)
 DC 3V (size AA dry cell battery x 2)
 Mass..... Approx. 250g (excluding batteries)

Accessories

AC power adaptor (9V 800mA) 1
 Rechargeable nickel-metal hydride battery
 (size AA) 2
 Coaxial digital cable (1.5m) 1
 Vertical stand 1
 Operating instructions 1
 Warranty card 1

Note

- Design and specifications are subject to change without notice.

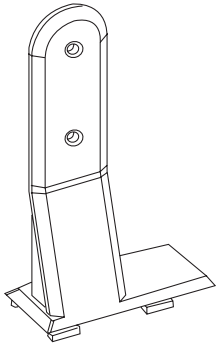
* *Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.*



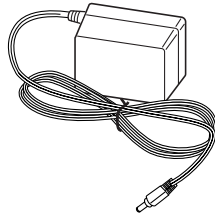
** *"DTS" and "DTS VIRTUAL" are trademarks of Digital Theater Systems, Inc.*



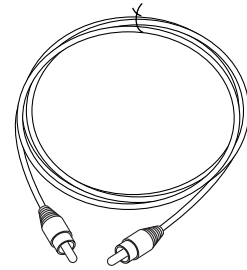
■ Accessories



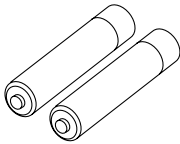
Vertical Stand
(WNK2387)



AC/DC Power Adaptor
(WWR1017 / UC)
(WWR1018 / EW)



Coaxial digital cable
(WDE1228 / UC)
(WDE1236 / EW)





Rechargeable nickel-metal
hydride batteries (2)
(WEX1012)

Operating Instructions
(WRB1055 / UC/EW)
(WRB1056 / EW)

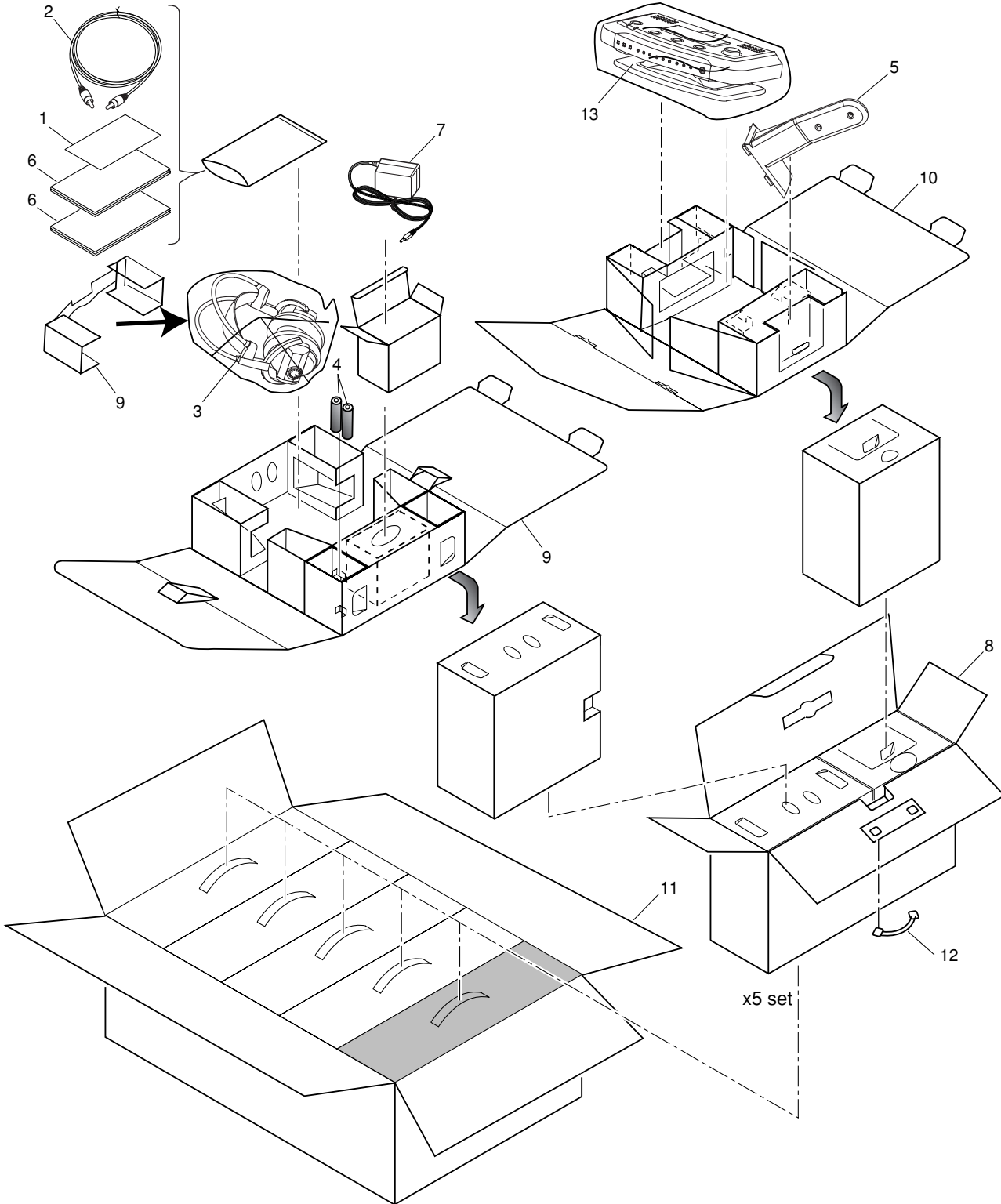
Warranty card
(WRX1003 / UC)
(WRX1004 / EW)

A
B
C
D
E
F


2. EXPLODED VIEWS AND PARTS LIST

- NOTES:
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
 - The  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.
 - Screws adjacent to  mark on product are used for disassembly.
 - For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)

2.1 PACKING



PACKING Parts List

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
NSP 1	Warranty card	See Contrast table(2)	8	Packing Case	See Contrast table(2)
2	Coaxial digital cable	See Contrast table(2)	9	Headhone case	WHG1864
NSP 3	HEADPHONE	WPH1021	10	Transmitter case	WHG1865
4	Rechargeble Battery	WEX1012			
5	Vertical stand	WNK2387	11	Outer carton	See Contrast table(2)
			12	Handle	WNK2160
6	Operating Instructions	See Contrast table(2)	NSP 13	TRANSMITTER	WPX1010
 7	AC/DC Power adaptor	See Contrast table(2)			

(2) CONTRAST TABLE

SE-DIR800C/KUCXCN1 and SE-DIR800C/NYXCN are constructed the same except for the following :

Mark	No.	Symbol and Description	SE-DIR800C/ KUCXCN1	SE-DIR800C/ NYXCN
NSP	1	Warranty card	WRX1003	WRX1004
	2	Coaxial digital cable	WDE1228	WDE1236
	6	Operating Instructions (English, French, Spanish)	WRB1055	WRB1055
	6	Operating Instructions (Garman, Duch, Italian, Portuguese, Swedish)	Not used	WRB1056
	7	AC/DC Power adaptor	WWR1017	WWR1018
	8	Packing Case	WHG1946	WHG1947
	11	Outer carton	WHP1603	WHP1610

2.2 TRANSMITTER SECTION

A

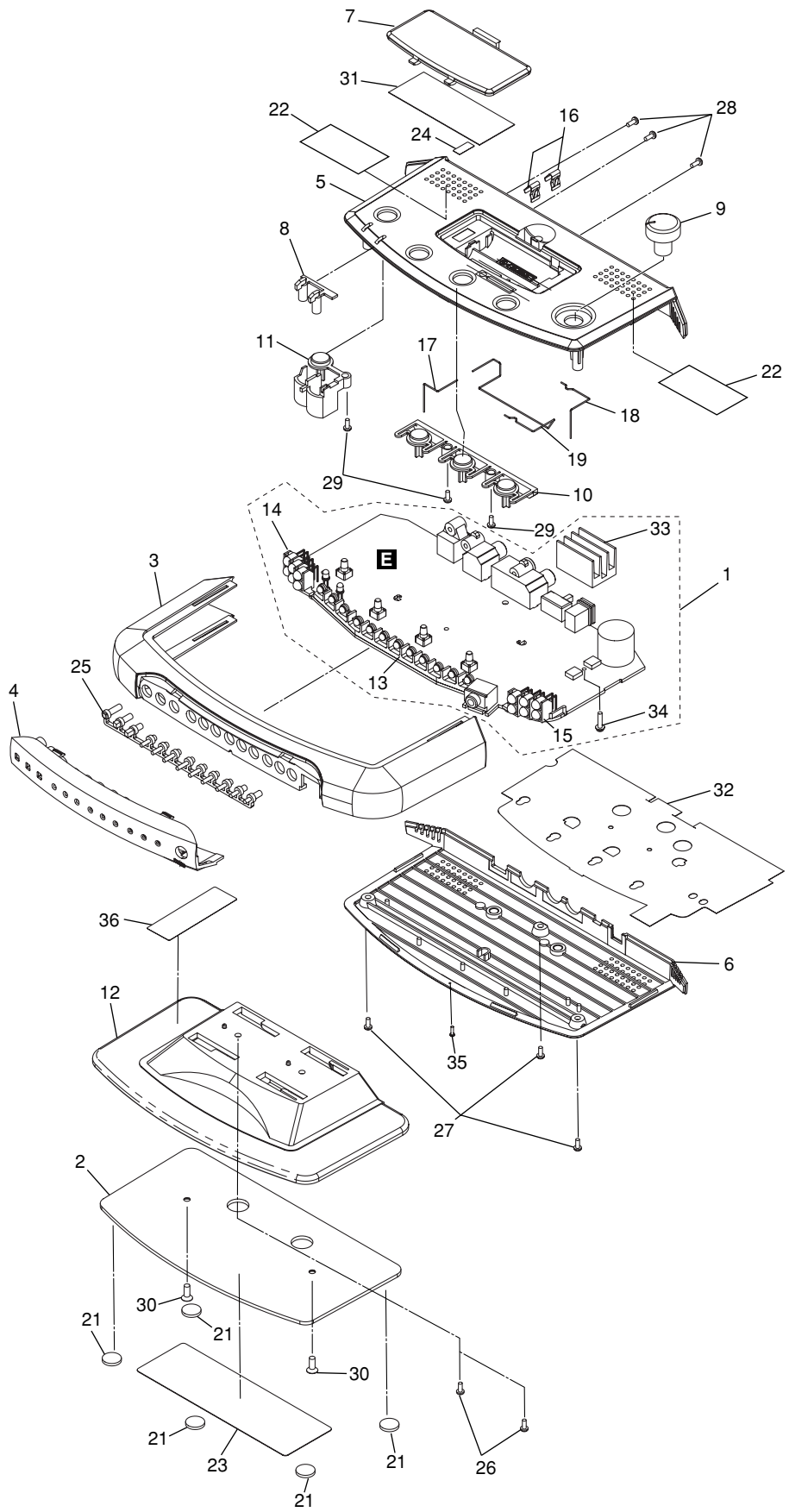
B

C

D

E

F



TRANSMITTER SECTION Parts List

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
			19	Connect terminal	WBH1030
1	PCB Assy	WWX1067	20	• • • •	
2	Weight	WNA1127			
3	Cover	WNK2291	21	Foot	WEP1061
4	Front panel	WNK2396	22	Sheet	WER1107
5	Upper case	WNK2397	23	Label	WRW1067
			24	Seal	WRW1063
6	Bottom case	WNK2422	25	Front lens	WNK2296
7	Battery lid	WNK2398			
8	Upper lens	WNK2297	26	Screw	PMZ30P060FZK
9	Volume knob	WNK2393	27	Screw	PPZ26P080FZK
10	Switching button	WNK2394	28	Screw	PPZ30P060FZK
			29	Screw	PPZ20P050FZK
11	Power button	WNK2395	30	Screw	CPZ30P080FNI
12	Stand	WNK2386			
13	LED holder_C	WNK2302	NSP 31	Caution sheet	See Contrast table(2)
14	LED holder_L	WNK2303	32	Shield sheet	WET1020
15	LED holder_R	WNK2304	33	Heat sink	WNC1002
			34	Screw	PMA30P060FZN
16	- terminal	WNA1126	35	Screw	KPZ14P050FZK
17	+ terminal	WBH1028			
18	C terminal	WBH1029	NSP 36	License label	See Contrast table(2)

(2) CONTRAST TABLE

SE-DIR800C/KUCXCN1 and SE-DIR800C/NYXCN are constructed the same except for the following :

Mark	No.	Symbol and Description	SE-DIR800C/ KUCXCN1	SE-DIR800C/ NYXCN
NSP	31	Caution sheet	WRN1002	Not used
NSP	36	License label	WRW1068	Not used

2.3 HEADPHONE SECTION

A

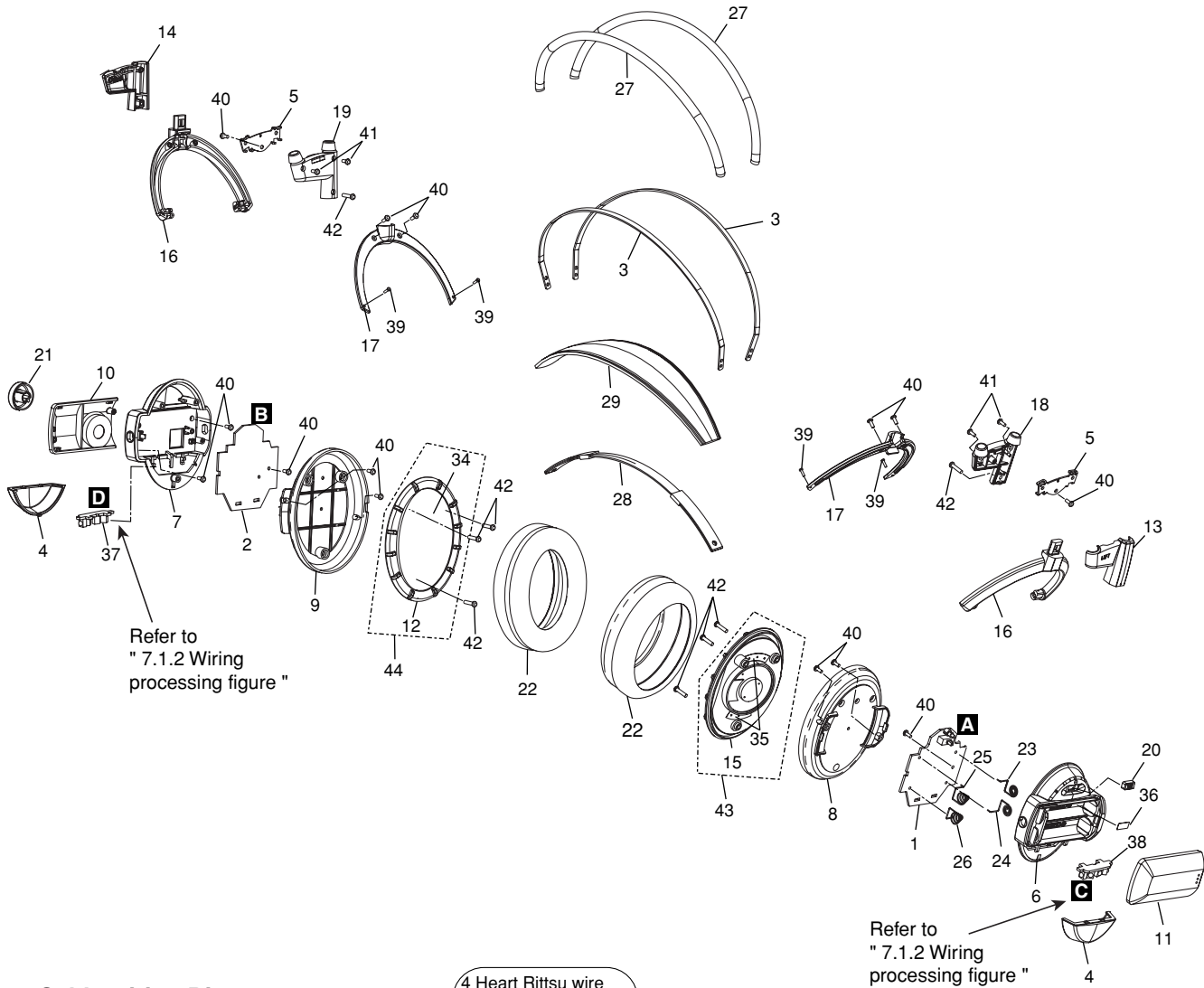
B

C

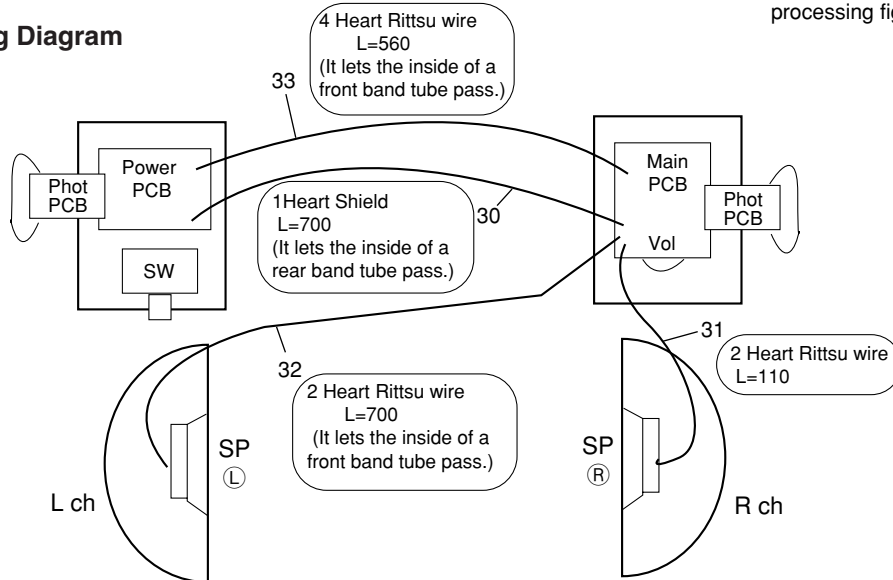
D

E

F



Cable wiring Diagram



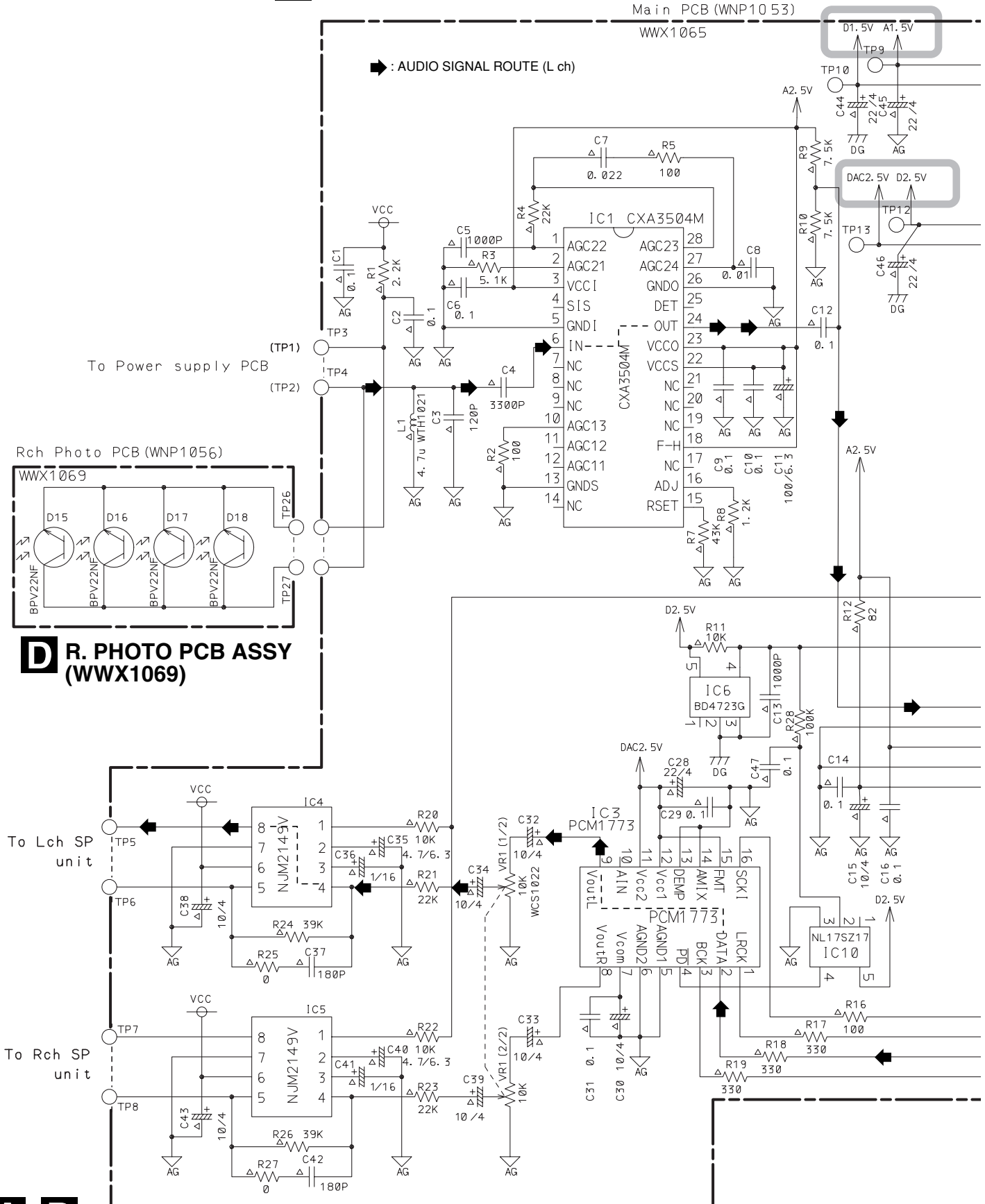
HEADPHONE SECTION Parts List

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	
1	Power PCB ASSY	WWX1066	A
2	Main PCB ASSY	WWX1065	
3	Headband	WNA1123	
4	Photo cover	WNK2282	
5	Bracket	WNA1125	
6	Case L	WNK2371	
7	Case R	WNK2372	
8	Base cover L	WNK2278	
9	Base cover R	WNK2279	
10	Volume cover	WNK2389	B
11	Battery lid	WNK2388	
NSP 12	Base R	WNK2277	
13	Holder_ L	WNK2390	
14	Holder_ R	WNK2391	
NSP 15	Base L	WNK2276	
16	Hanger	WNK2375	
17	Hanger cover	WNK2284	
18	Holder cover L	WNK2287	
19	Holder cover R	WNK2399	C
20	Switch knob	WNK2289	
21	Volume knov	WNK2392	
22	Ear pad	WNV1113	
23	+ terminal F	WBH1020	
24	+ terminal R	WBH1021	
25	- terminal F	WBH1022	
26	- terminal R	WBH1023	
27	Band tube	WBP1059	
28	Rubber band	WER1102	D
29	Band cushion	WNV1114	
NSP 30	Shield wire	WDA1031	
NSP 31	Cable	WDC1066	
NSP 32	Cable	WDC1067	
NSP 33	Cable	WDC1068	
NSP 34	Damper	WER1103	
NSP 35	Resistance	WER1104	
36	Seal	WRW1063	
NSP 37	R PHOTO PCB ASSY	WWX1069	E
NSP 38	L PHOTO PCB ASSY	WWX1068	
39	Screw	KPZ14P050FZK	
40	Screw	PPZ20P060FZK	
41	Screw	PPZ20P080FZK	
42	Screw	PPZ25P100FZK	
43	L Speaker unit Assy	WXX1338	
44	R Speaker unit Assy	WXX1339	F

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

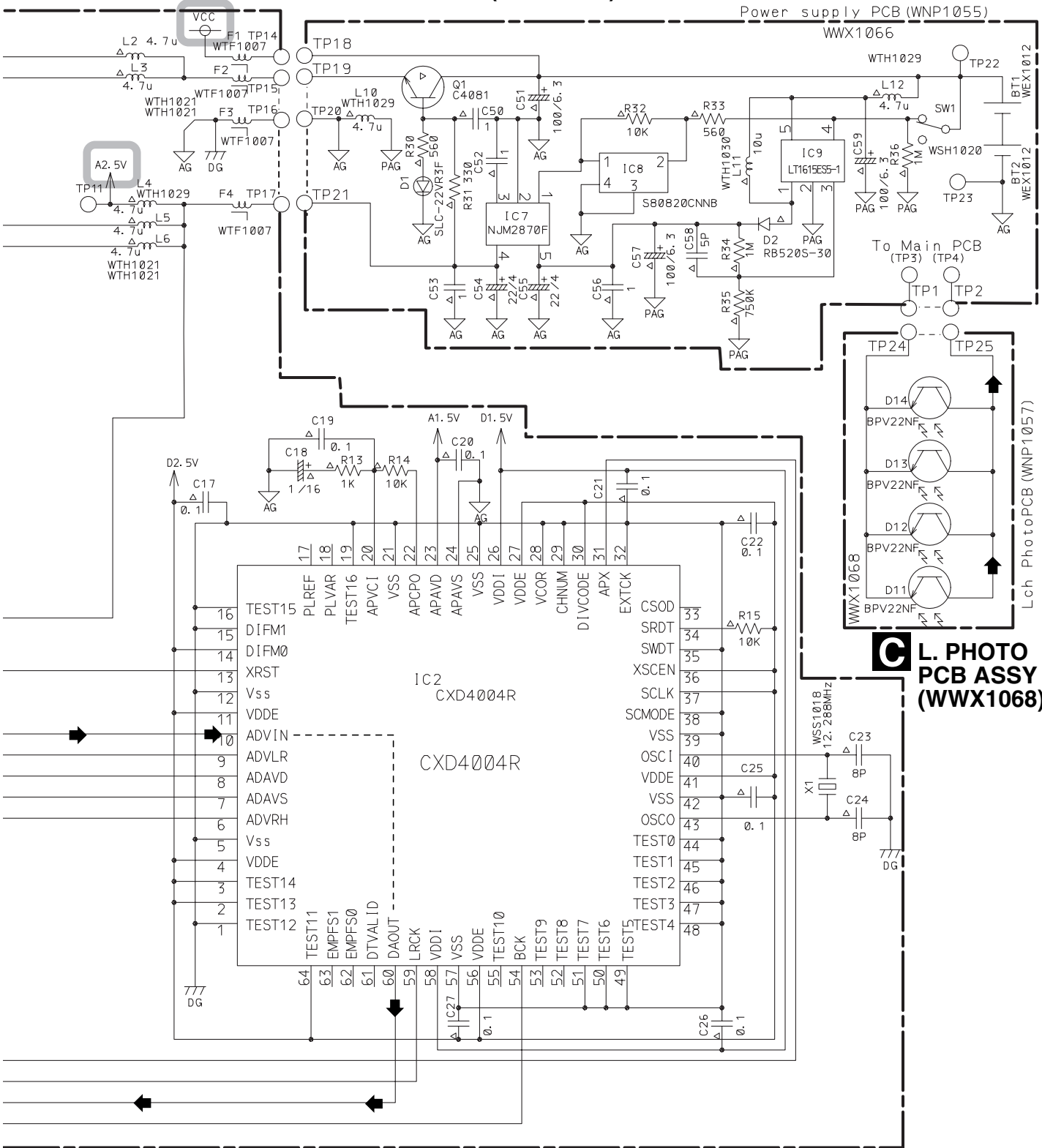
3.1 MAIN, POWER, L.PHOTO and R.PHOTO PCB ASSYS

A MAIN PCB ASSY (WWX1065)



A D

B POWER PCB ASSY (WWX1066)

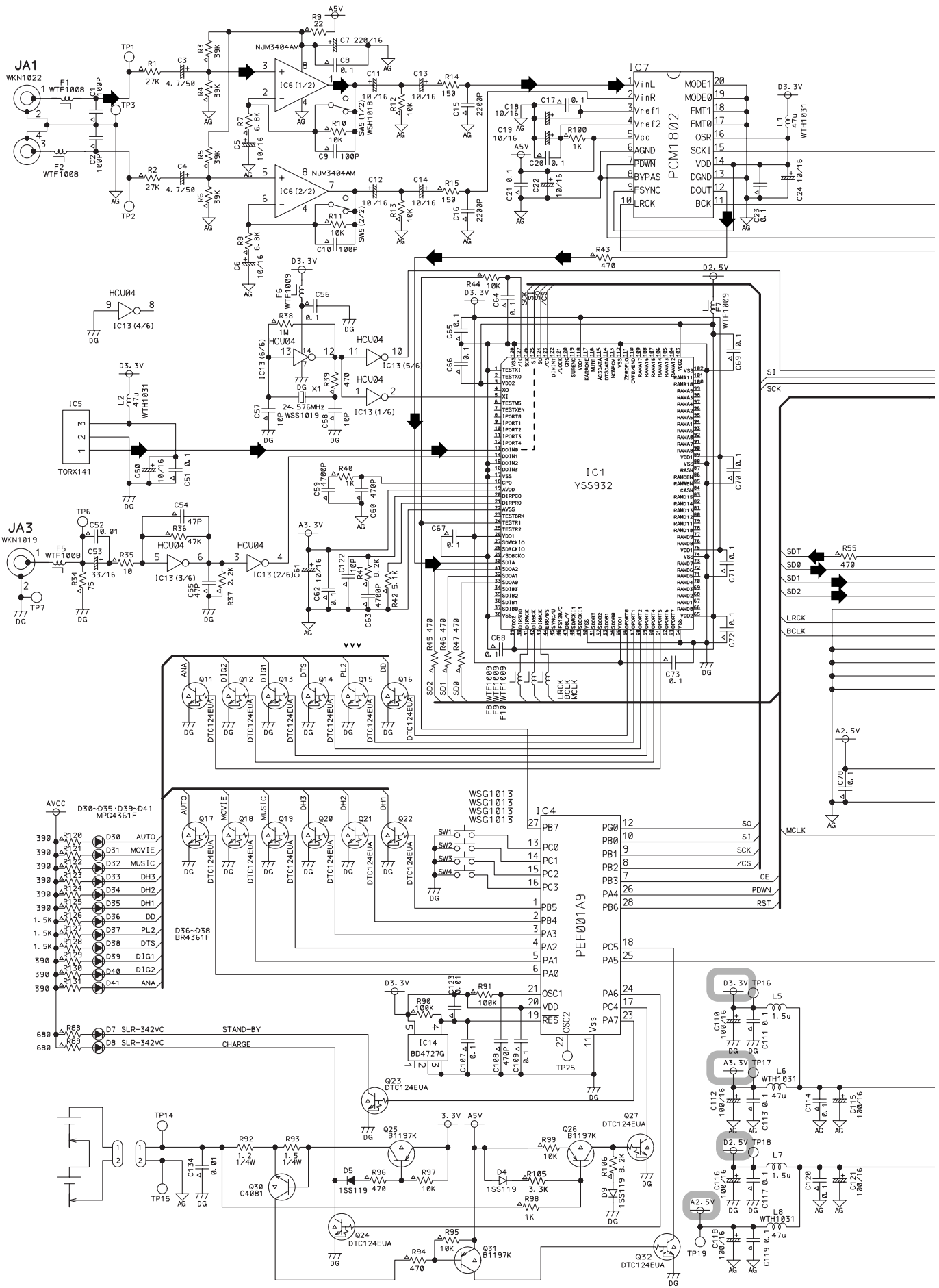


- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- : The power supply is shown with the marked box.

A B C

3.2 PCB ASSY

A
B
C
D
E
F

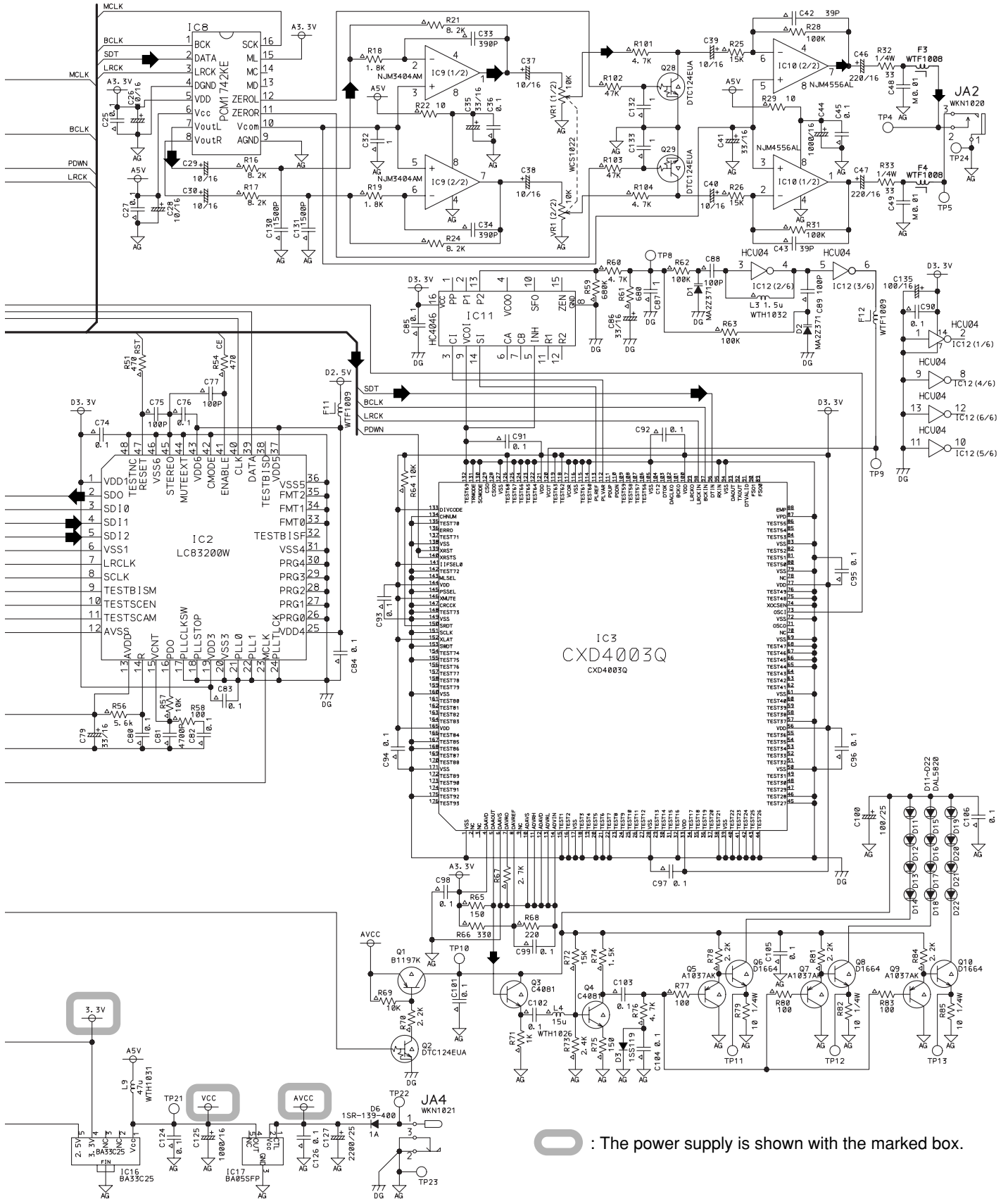


SE-DIR800C



PCB ASSY (WWX1067)

➔ : AUDIO SIGNAL ROUTE (L ch)



 : The power supply is shown with the marked box.



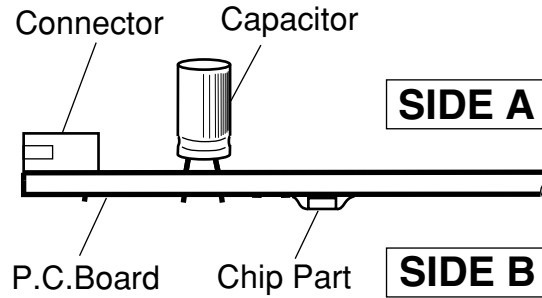
4. PCB CONNECTION DIAGRAM

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 resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

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.
4. View point of PCB diagrams.

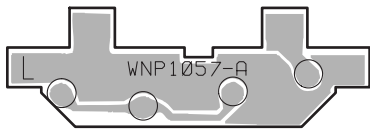


4.1 L.PHOTO and R.PHOTO PCB ASSYS

SIDE A

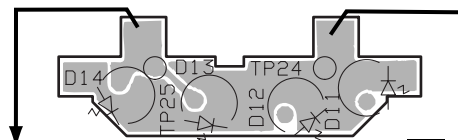
SIDE B

C L.PHOTO PCB ASSY



(WNP1057)

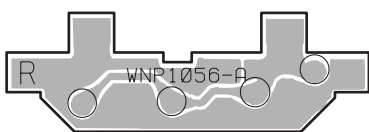
C L.PHOTO PCB ASSY



B To TP2part angle hole Direct solder

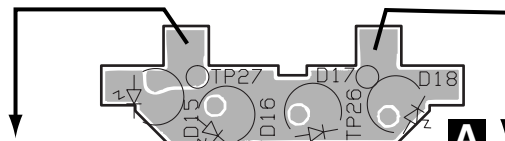
To TP1part angle hole Direct solder
(WNP1057)

D R.PHOTO PCB ASSY



(WNP1056)

D R.PHOTO PCB ASSY



A To TP4part angle hole Direct solder

To TP3part angle hole Direct solder
(WNP1056)

C D

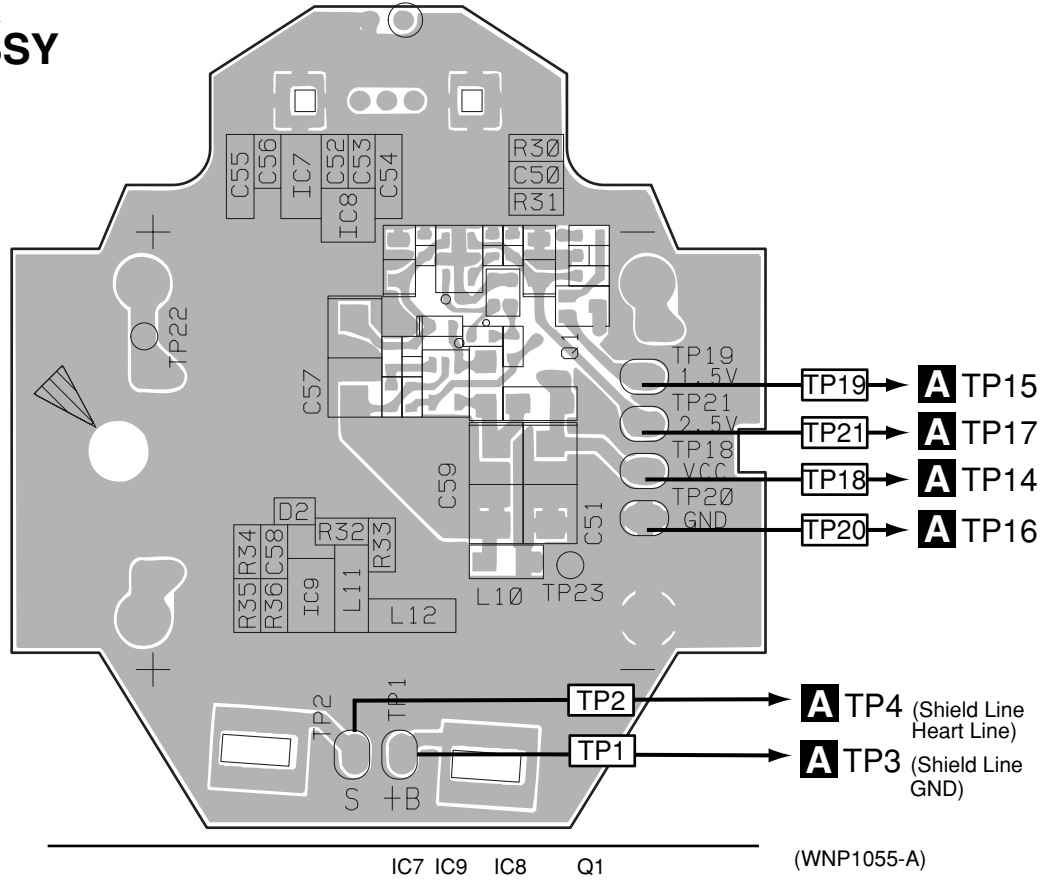
C D

4.2 POWER PCB ASSY

SIDE A

SIDE A

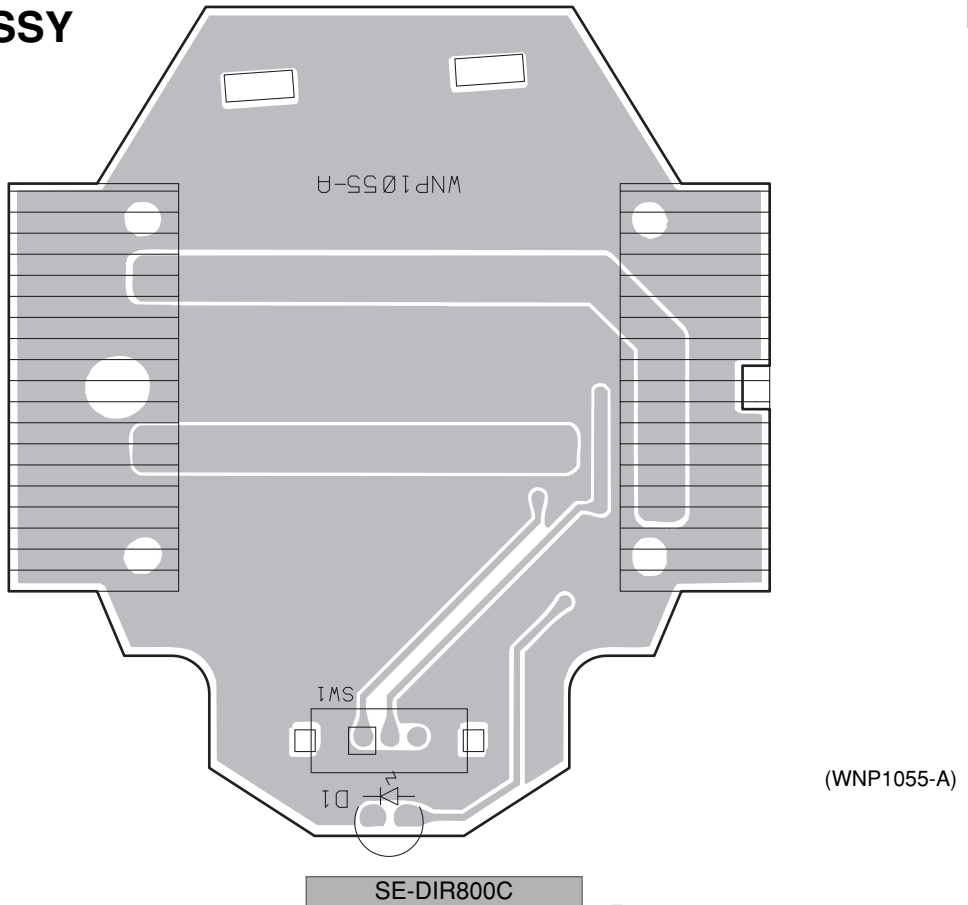
B POWER PCB ASSY



SIDE B

SIDE B

B POWER PCB ASSY



B

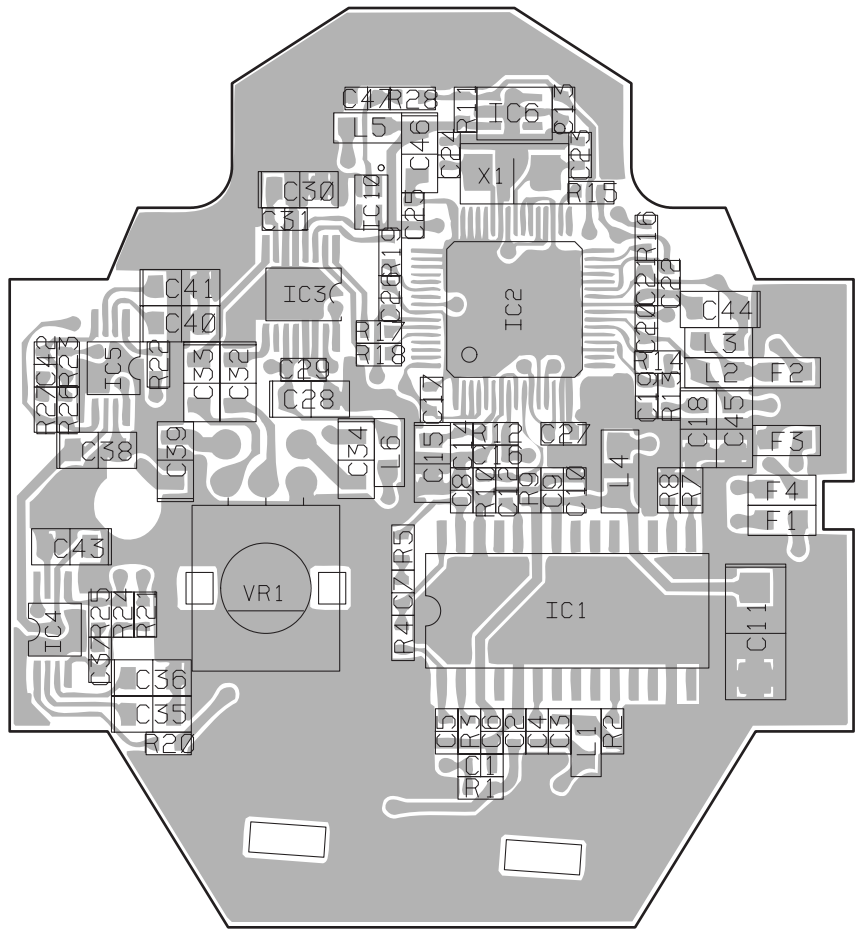
B

4.3 MAIN PCB ASSY

SIDE A

SIDE A

A MAIN PCB ASSY



- IC6
- IC3
- IC2
- IC5
- IC1
- IC4
- VR1

(WNP1053-A)

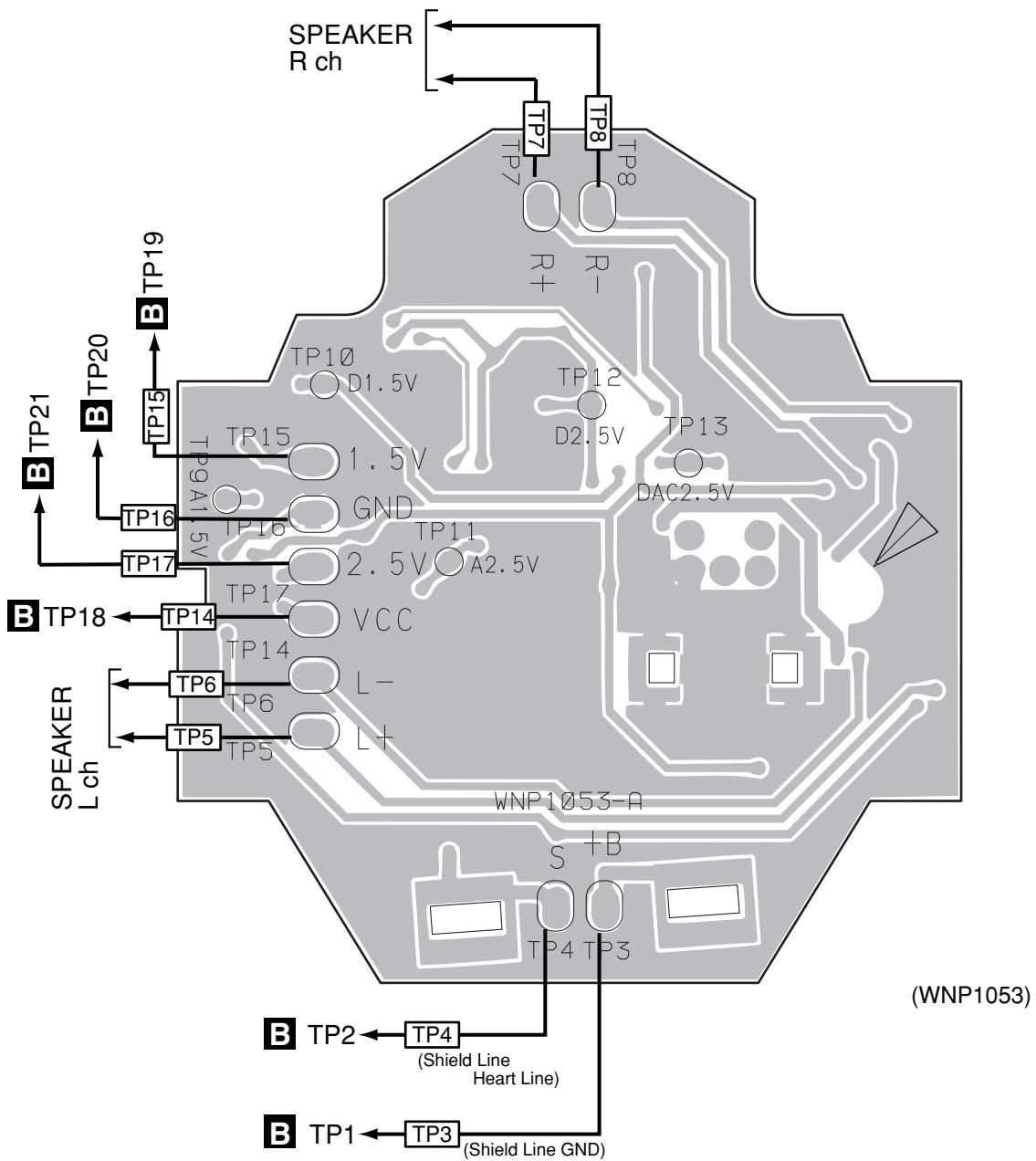
A

A

SIDE B

SIDE B

A MAIN PCB ASSY



A

A

4.4 PCB ASSY

A

SIDE A

E PCB ASSY

Q29				Q12	Q13	Q19	Q17	Q18	Q20
Q28	IC16		IC10	Q11	IC9	IC7	IC8		Q32
	IC17				IC6	IC2	IC14	IC4	Q27

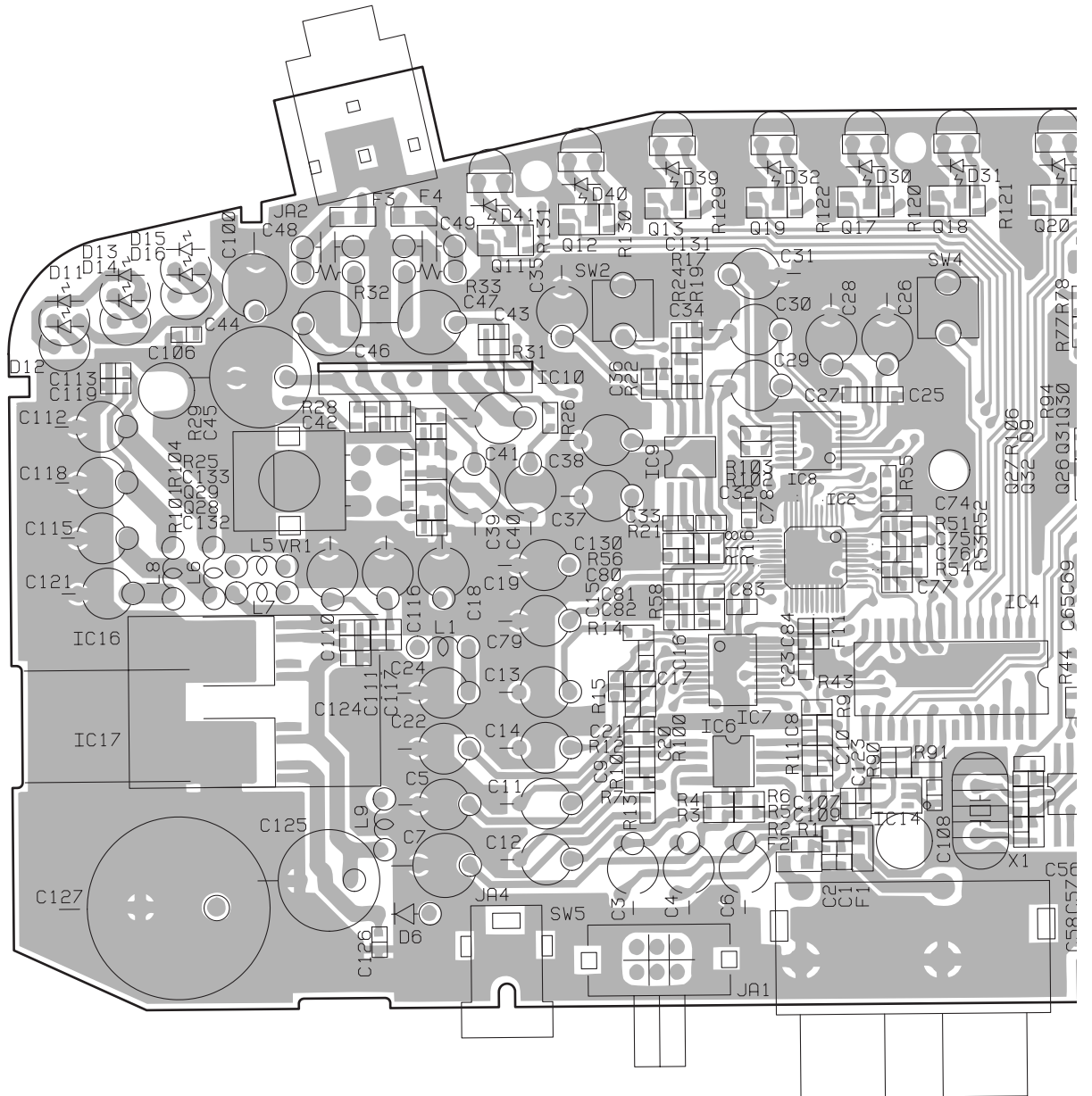
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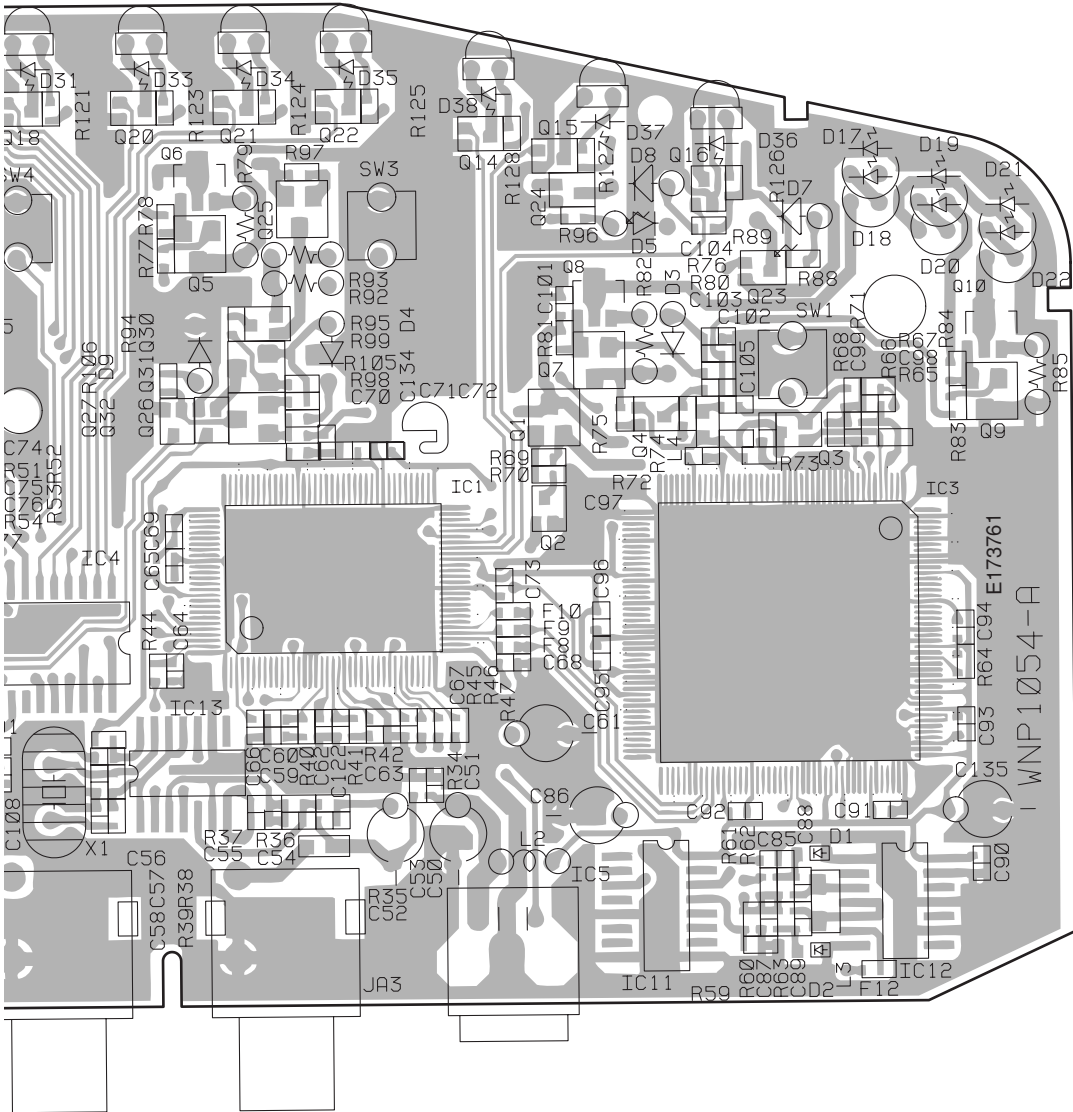
E

F



SIDE A

Q18	Q20	Q5	Q21	Q22		Q14	Q7	Q15		Q16	Q23		Q10
	Q32	Q31	Q30			Q24	Q1	Q4			Q3		
IC4	Q27	Q26			IC1	Q2	IC5	IC11	IC3	IC12			Q9
		IC13											



(WNP1054-A)



A

SIDE B

E PCB ASSY

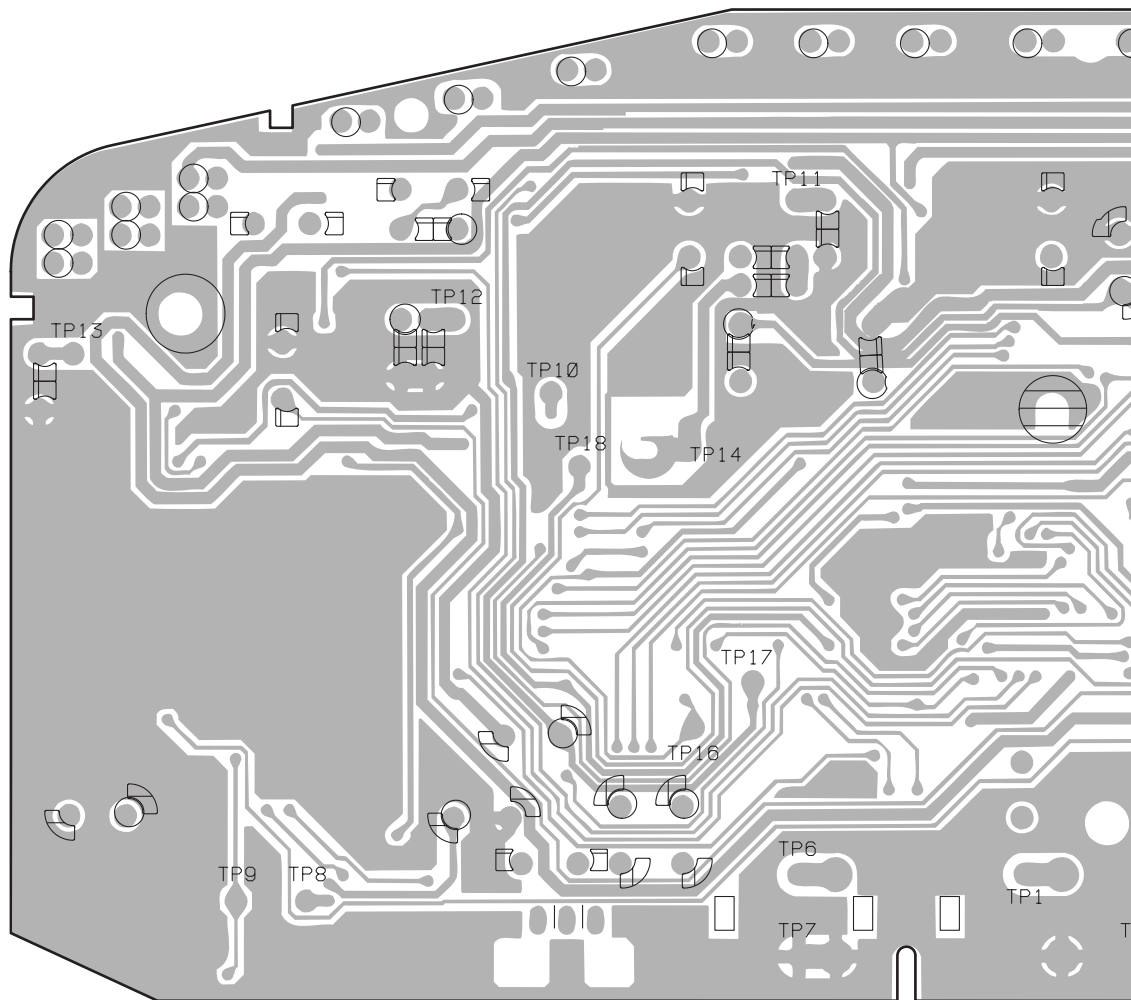
B

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E

F



SIDE B

A

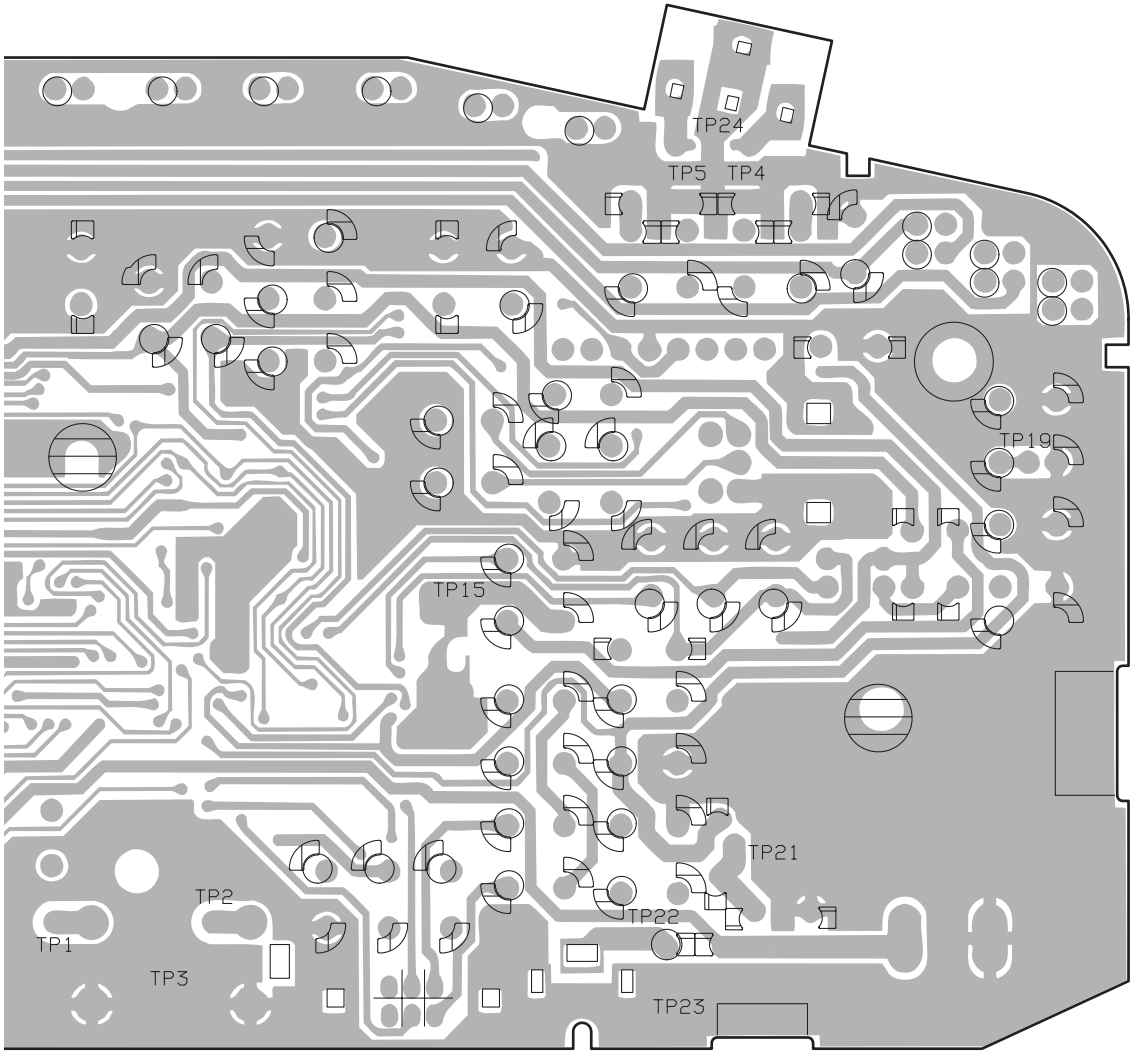
B

C

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E

F



(WNP1054-A)



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.

● 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 x 10¹ \rightarrow 561 RD1/4PU $\overline{5}$ $\overline{6}$ $\overline{7}$ J

47k Ω \rightarrow 47 x 10³ \rightarrow 473 RD1/4PU $\overline{4}$ $\overline{7}$ $\overline{3}$ J

0.5 Ω \rightarrow R50 RN2H \overline{R} $\overline{5}$ $\overline{0}$ K

1 Ω \rightarrow 1R0 RS1P $\overline{7}$ \overline{R} $\overline{0}$ K

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

5.62k Ω \rightarrow 562 x 10¹ \rightarrow 5621 RN1/4PC $\overline{5}$ $\overline{6}$ $\overline{2}$ $\overline{1}$ F

LIST OF ASSEMBLIES

Mark	Symbol and Description	SE-DIR800C	SE-DHT800C
		/KUCXCN	/NYXCN
NSP	1..DIGITAL CORDLESS HEADPHONE	WPH1021	WPH1021
NSP	1..Composite PCB ASSY	WNX1019	WNX1019
	2..MAIN PCB ASSY	WWX1065	WWX1065
	2..Power PCB ASSY	WWX1066	WWX1066
NSP	2..L.PHOTO PCB ASSY	WWX1068	WWX1068
NSP	2..R.PHOTO PCB ASSY	WWX1069	WWX1069
NSP	1..TRANSMITTER	WPX1010	WPX1010
NSP	1..Gathering PCB ASSY	WNX1020	WNX1020
	2.. PCB ASSY	WWX1067	WWX1067

Mark No. Description Part No.

A MAIN PCB ASSY SEMICONDUCTORS

IC3	PCM1773PWR
IC1	CXA3504M
IC2	CXD4004R
IC4, IC5	NJM2149V
IC6	BD4723G
IC10	NL17SZ17DFT2G

COILS AND FILTERS

F1, F2, F3, F4 EMI Filter	WTF1007
L1, L2, L3, L5, L6 Chip inductor	WTH1021
L4 Chip inductor	WTH1029

CAPACITORS

C3	CCSRCH121J50
C37, C42	CCSRCH181J50
C23, C24	CCSRCH8R0D50
C5, C13	CKSRYB102K50
C8	CKSRYB103K50
C7	CKSRYB223K50
C4	CKSRYB332K50
C1, C12, C10, C14, C16, C17	CKSRYF104Z25
C19, C2, C20, C22, C21, C26	CKSRYF104Z25
C25, C27, C29, C31, C6, C9, C47	CKSRYF104Z25

C15, C30, C32, C33, C34, C38	CSZS100M4
C39, C43	CSZS100M4
C18, C36, C41	CSZS1R0M16

Mark No. Description Part No.

C28, C44, C45, C46	CSZS220M4
C35, C40	CSZS4R7M6R3
C11	CSZSC101M6R3

RESISTORS

R25, R27	RS1/16S0R0J
R16, R2, R5	RS1/16S101J
R13	RS1/16S102J
R11, R14, R15, R20, R22	RS1/16S103J
R28	RS1/16S104J
R8	RS1/16S122J
R1	RS1/16S222J
R21, R23, R4	RS1/16S223J
R18, R19, R17	RS1/16S331J
R24, R26	RS1/16S393J

R7	RS1/16S433J
R3	RS1/16S512J
R10, R9	RS1/16S752J
R12	RS1/16S820J
VR1 Volume (10k)	WCS1022

OTHERS

X1 Ossiillator (12.28MHz)	WSS1018
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B POWER PCB ASSY SEMICONDUCTORS

IC9	LT1615ES5-1
IC7	NJM2870F25
IC8	S-80820CNNB-B8F

Mark No.	Description	Part No.
Q1		2SC4081
D1		SLC-22VR3F
D2		RB520S-30

COILS AND FILTERS

L11 Chip inductor	WTH1030
L10, L12 Chip inductor	WTH1029

CAPACITORS

C58	CCSRCH5R0C50
C50, C52, C53, C56	CKSRYF105Z10
C54, C55	CSZS220M4
C51, C57, C59	CSZSC101M6R3

RESISTORS

R32	RS1/16S103J
R34, R36	RS1/16S105J
R31	RS1/16S331J
R30, R33	RS1/16S561J
R35	RS1/16S754J

SWITCH

SW1	WSH1020
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C L.PHOTO PCB ASSY SEMICONDUCTORS

L Photo PCB	WNP1057
D11, D12, D13, D14	BPV22NF

D R.PHOTO PCB ASSY SEMICONDUCTORS

R Photo PCB	WNP1056
D15, D16, D17, D18	BPV22NF

E PCB ASSY SEMICONDUCTORS

IC17	BA05SFP
IC16	BA33C25FP
IC14	BD4727G
IC3	CXD4003Q
IC2	LC83200W
IC11	MC74HC4046AF
IC6, IC9	NJM3404AM
IC10	NJM4556AL
IC8	PCM1742KEG/2K
IC7	PCM1802DBR
IC4	PEF001A9
IC12, IC13	TC74HCU04AF
IC5	TORX141
IC1	YSS932-S
Q5, Q7, Q9	2SA1037AK
Q1, Q25, Q26, Q31	2SB1197K
Q4, Q3, Q30	2SC4081
Q10, Q6, Q8	2SD1664
Q11, Q12, Q13, Q14, Q15, Q16	DTC124EUA
Q17, Q18, Q19, Q2, Q20, Q21	DTC124EUA
Q22, Q23, Q24, Q27, Q28, Q29, Q32	DTC124EUA
D6	1SR139-400
D3, D4, D5, D9	1SS119
D1, D2	MA2Z371

Mark No.	Description	Part No.
D30, D31, D32, D33, D34, D35		MPG4361F
D39, D40, D41		MPG4361F
D36, D37, D38		BR4361F
D11, D12, D13, D14, D15, D16		DAL5820
D17, D18, D19, D20, D21, D22		DAL5820
D7, D8		SLR-342VC

COILS AND FILTERS

F1, F2, F3, F4, F5 EMI Filter	WTF1008
F10, F11, F12, F6, F7, F8, F9 Filter	WTF1009
L1, L2, L6, L8, L9 Inductor	WTH1031
L3 Chip inductor	WTH1032
L4 Chip inductor	WTH1026

L5, L7 Inductor

LAYU1R5K

CAPACITORS

C57, C58, C122	CCSRCH100D50
C1, C10, C2, C75, C77, C88, C89, C9	CCSRCH101J50
C42, C43	CCSRCH390J50
C33, C34	CCSRCH391J50
C54, C55	CCSRCH470J50

C108, C60	CCSRCH471J50
C11, C12, C13, C14, C18	CEAT100M16
C19, C22, C24, C26, C28	CEAT100M16
C29, C30, C37, C38, C39	CEAT100M16
C40, C5, C50, C6, C61	CEAT100M16

C110	CEAT101M16
C112, C115, C116, C118	CEAT101M16
C121, C135	CEAT101M16
C100	CEAT101M25
C125, C44	CEAT102M16

C46, C47, C7	CEAT221M16
C35, C41, C53, C79, C86	CEAT330M16
C3, C4	CEAT4R7M50
C123, C134, C52	CKSRYB103K50
C130, C131	CKSRYB152K50

C15, C16	CKSRYB222K50
C59, C63, C81	CKSRYB472K50
C101, C102, C103, C104, C105	CKSRYF104Z25
C106, C107, C109, C111, C113	CKSRYF104Z25
C114, C117, C119, C120, C124	CKSRYF104Z25

C126, C17, C20, C21, C23, C25	CKSRYF104Z25
C27, C36, C45, C51, C56, C62	CKSRYF104Z25
C64, C65, C66, C67, C68, C69	CKSRYF104Z25
C70, C71, C72, C73, C74, C76	CKSRYF104Z25
C78, C8, C80, C82, C83, C84, C85	CKSRYF104Z25

C90, C91, C92, C93, C94, C95, C96	CKSRYF104Z25
C97, C98, C99	CKSRYF104Z25
C132, C133, C32, C87	CKSRYF105Z10
C48, C49	CQMA103K50
C127 (2200uF/25)	WCH1011

RESISTORS

R79, R82, R85	RD1/4PS100JL
R92	RD1/4PS1R2JL
R93	RD1/4PS1R5JL
R32, R33	RD1/4PS330JL
R22, R29, R35	RS1/16S100J

R58, R77, R80, R83	RS1/16S101J
R40, R71, R98, R100	RS1/16S102J
R10, R11, R12, R13, R44, R57, R64	RS1/16S103J

Mark No.	Description	Part No.
A	R69, R95, R97, R99	RS1/16S103J
	R28, R31, R62, R63, R90, R91	RS1/16S104J
	R38	RS1/16S105J
	R14, R15, R65, R75	RS1/16S151J
	R126, R127, R128, R74	RS1/16S152J
	R25, R26, R72	RS1/16S153J
	R18, R19	RS1/16S182J
	R9	RS1/16S220J
	R68	RS1/16S221J
	R37, R70, R78, R81, R84	RS1/16S222J
B	R1, R2	RS1/16S273J
	R73	RS1/16S242J
	R67	RS1/16S272J
	R66	RS1/16S331J
	R105	RS1/16S332J
	R120, R121, R122, R123, R124	RS1/16S391J
C	R125, R129, R130, R131	RS1/16S391J
	R3, R4, R5, R6	RS1/16S393J
	R39, R43, R45, R46, R47	RS1/16S471J
	R51, R54, R55, R94, R96	RS1/16S471J
	R101, R104, R60, R76	RS1/16S472J
	R102, R103, R36	RS1/16S473J
	R42	RS1/16S512J
	R56	RS1/16S562J
	R61, R88, R89	RS1/16S681J
	R7, R8	RS1/16S682J
D	R59	RS1/16S684J
	R34	RS1/16S750J
	R16, R17, R21, R24, R41, R106	RS1/16S822J
	VR1 Volume (10k)	WCS1022
	<u>SWITCHES AND RELAYS</u>	
	SW1, SW2, SW3, SW4	WSG1013
	SW5	WSH1018
	<u>OTHERS</u>	
	JA1 JACK (2P)	WKN1022
	JA2 JACK (HP)	WKN1020
JA3 JACK (1P)	WKN1019	
Heat Sink	WNC1002	
X1 Oscillator (24.57MHz)	WSS1019	
JA4 Jack	WKN1021	

6. ADJUSTMENT

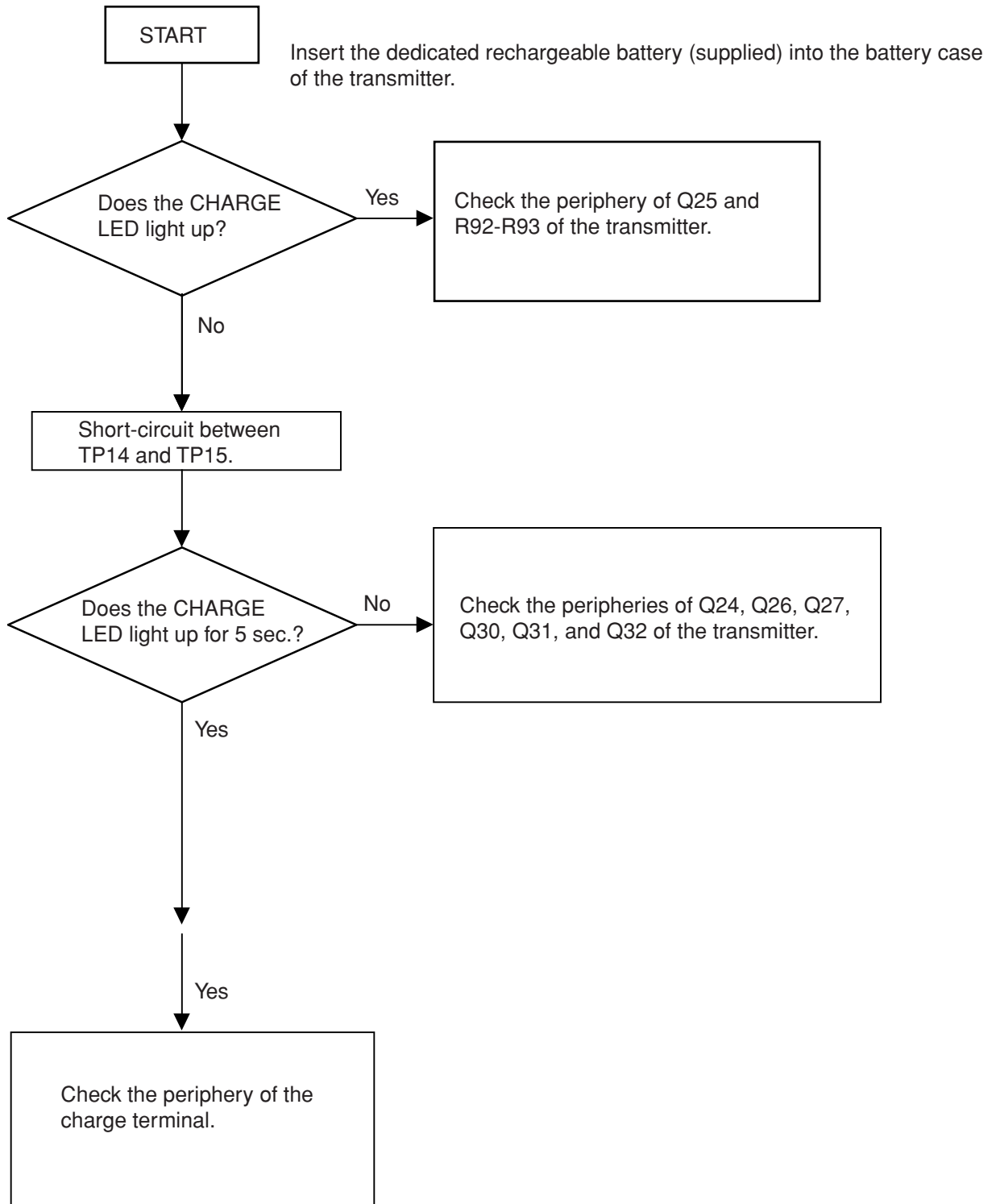
There is no information to be shown in this chapter.

7. GENERAL INFORMATION

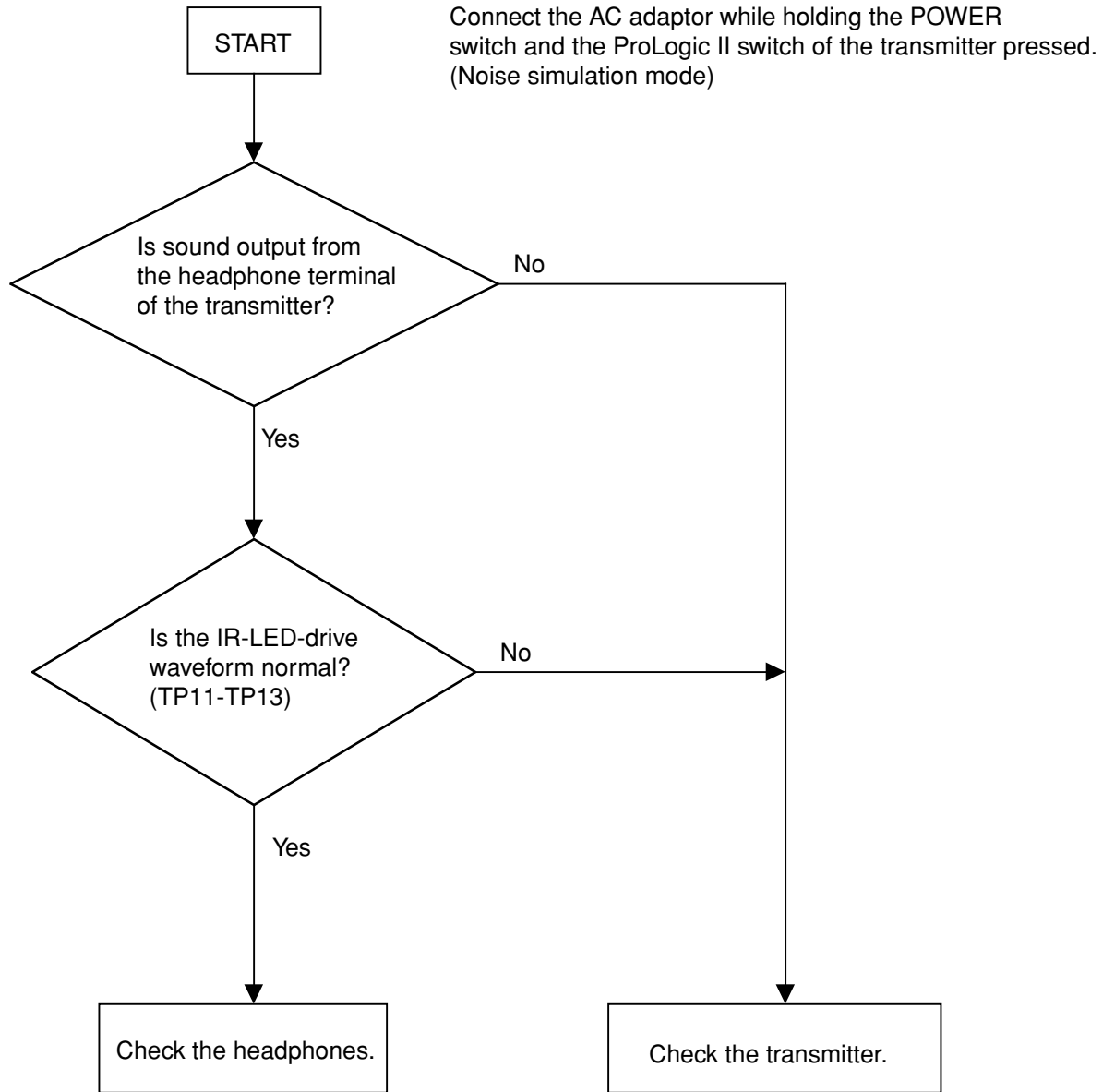
7.1 DIAGNOSIS

7.1.1 TROUBLE SHOOTING

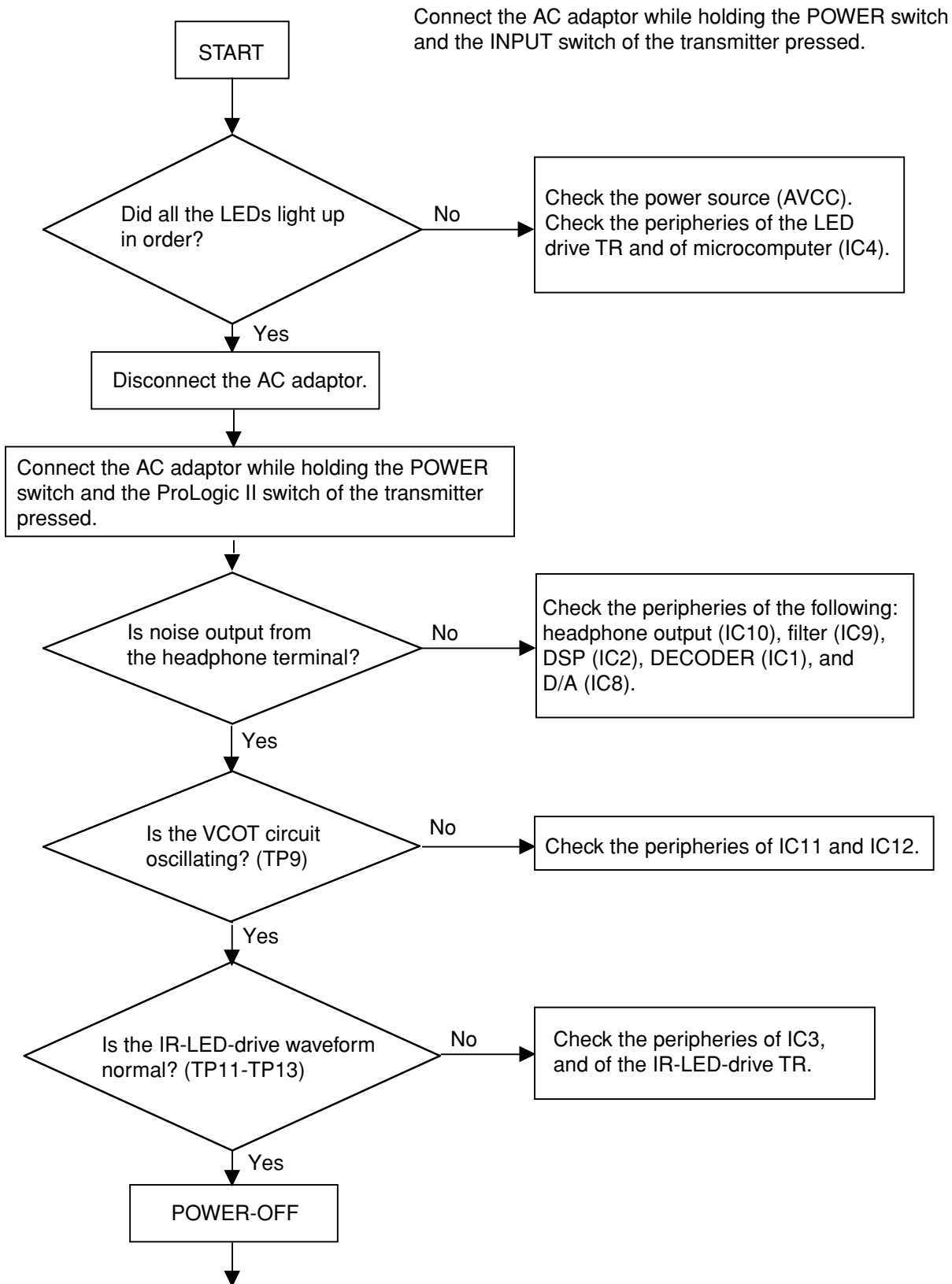
Symptom: No recharging possible



Symptom: No sound from the cordless headphones



Symptoms: Failure in sound and indication of the transmitter (Checking the transmitter)



A

Connect a player (DIGITAL 1, DIGITAL 2, and analog).

POWER ON

B

Is sound output?

No

Check the peripheries of IC5 and IC1.

Switch to DIGITAL 2.

C

Is sound output?

No

Check the peripheries of IC13 and JA3.

Yes

Switch to analog input.

D

Is sound output?

No

Check the peripheries of A/D (IC7), IC6 and JA1.

Yes

E

After three minutes or more of continuous playback, does the IR LED remain lit?

No

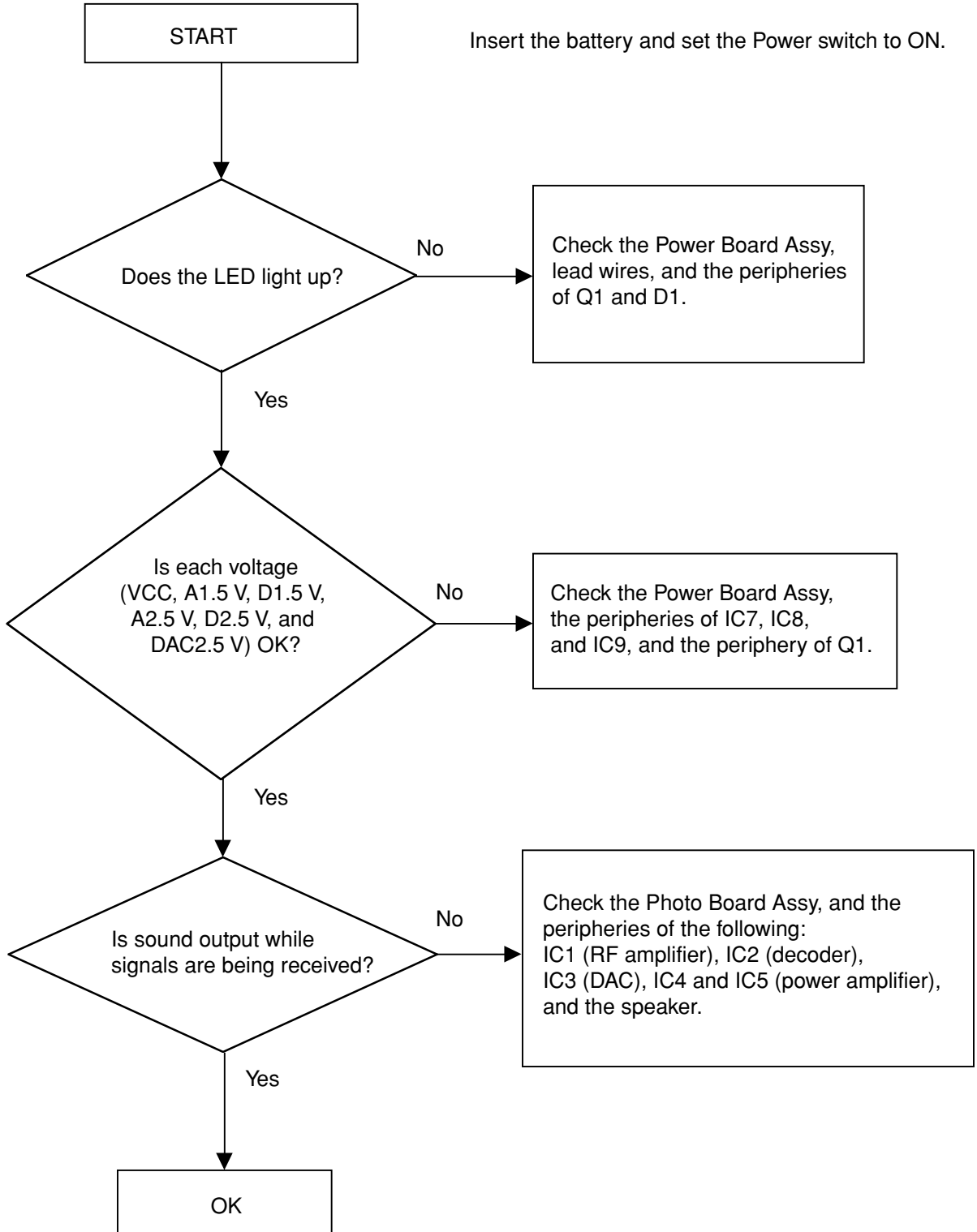
Checking audio detection
Check the peripheries of IC9 and Q1.

Yes

OK

F

Symptoms: Failure in sound and indication of the cordless headphones (Checking the headphones)

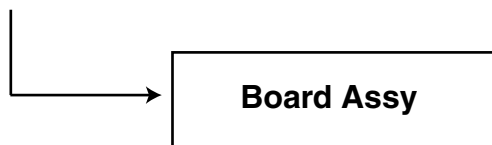


A
B
C
D
E
F

7.1.2 Disassembly

■ Transmitter

1. Remove the two screws of the stand.
2. Remove the four screws of the lower case.
3. Slide the cover of the upper and lower cases.
4. Remove the lower case.
5. Remove the soldering from the charge terminal.
6. Remove the three fixing screws of the phono jack.
7. Remove the Board Assy from the upper case with the VR control attached.



■ Headphones

<L side>

1. Remove the ear pad.
2. Remove the three screws of the base and remove the base.
3. Remove the two screws of the base cover and remove the base cover.
4. Remove the soldering from the lead wire on the photo board.
5. Remove the screw of the board.



6. Remove the photo cover.



<R side>

1. Remove the ear pad.
2. Remove the three screws of the base and remove the base.
3. Remove the two screws of the base cover and remove the base cover.
4. Remove the soldering from the lead wire on the photo board.
5. Remove the screw of the board.

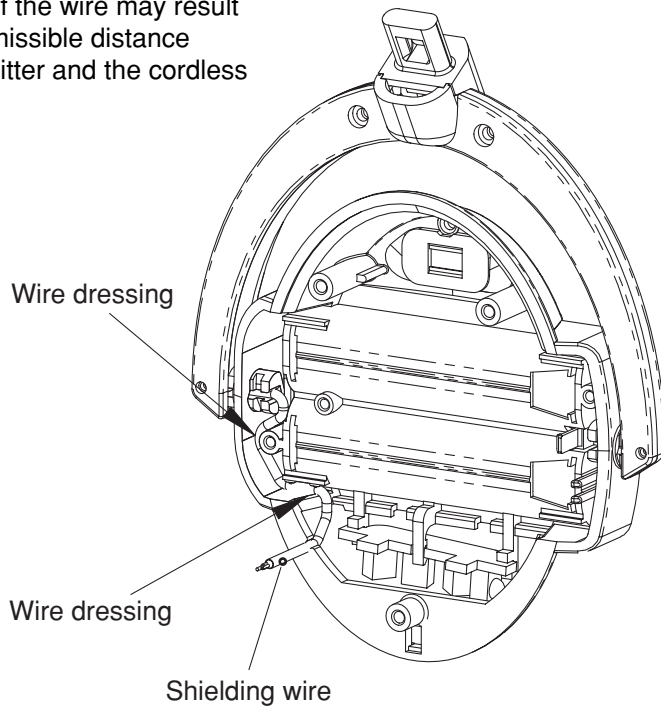


6. Remove the photo cover.



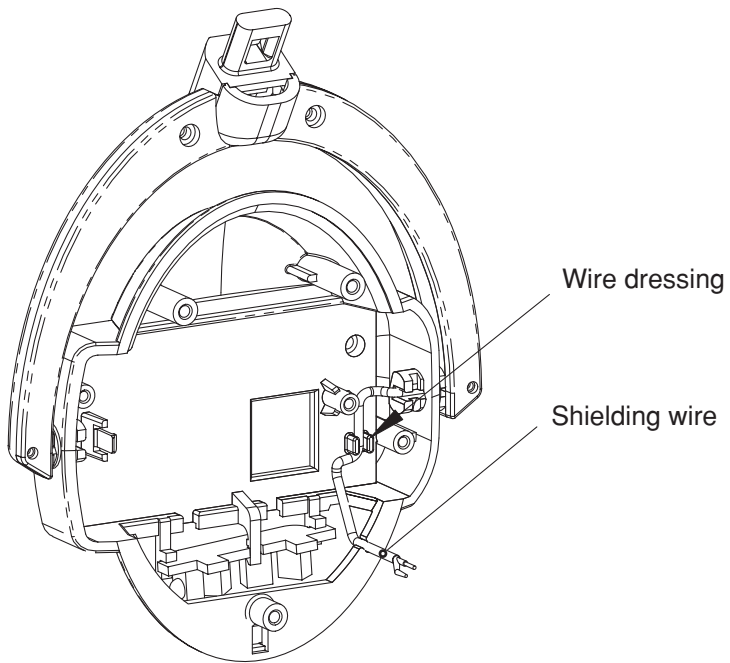
■ Lead dressing on the L-ch side

Incorrect dressing of the wire may result in insufficient transmissible distance between the transmitter and the cordless headphones.



■ Lead dressing on the R-ch side

Incorrect dressing of the wire may result in insufficient transmissible distance between the transmitter and the cordless headphones.



7.2 IC

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

List of IC

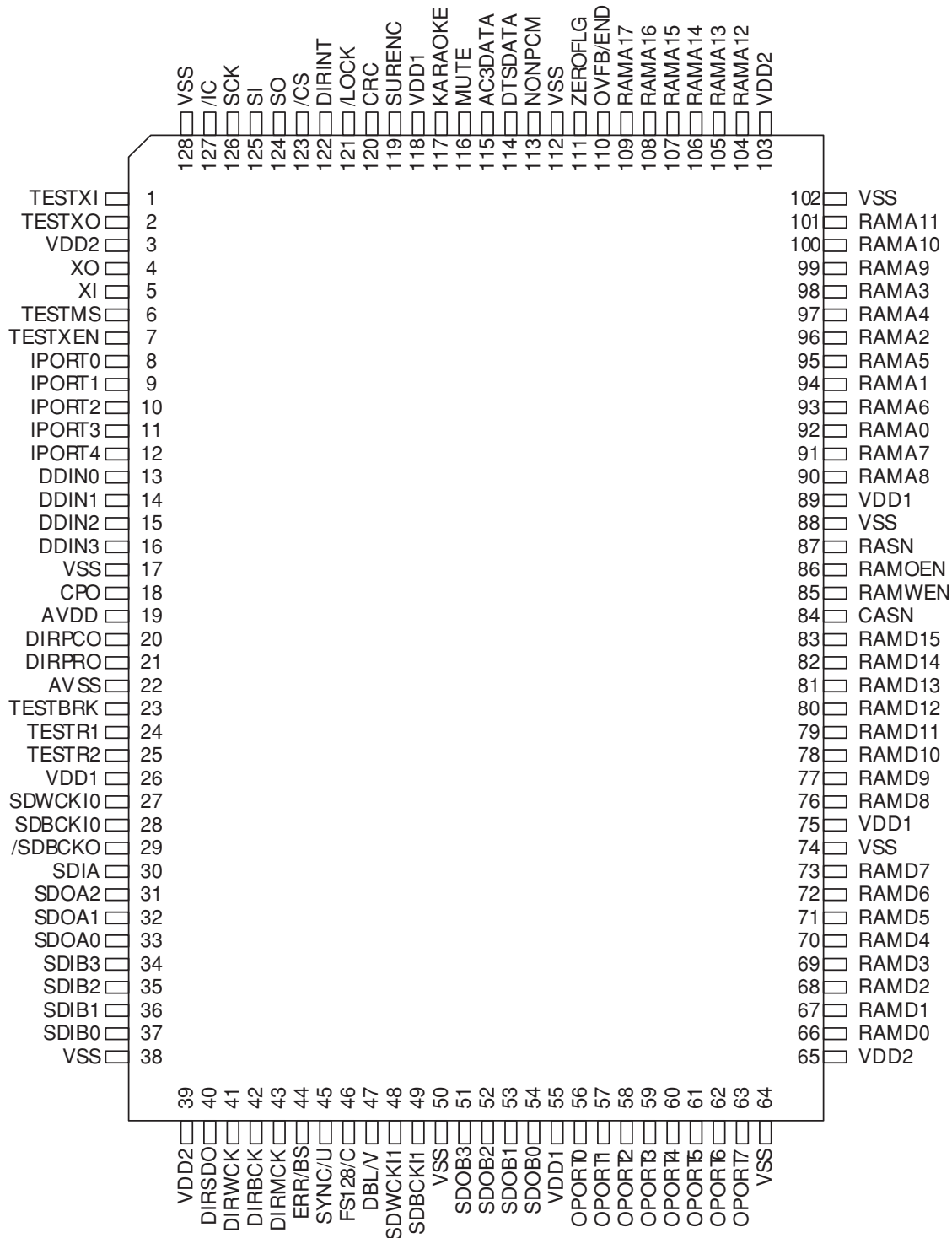
YSS932, LC83200W, CXD4003Q, PEF001A9, CXA3504M, CXD4004R

TRANSMITTER TRE-D800

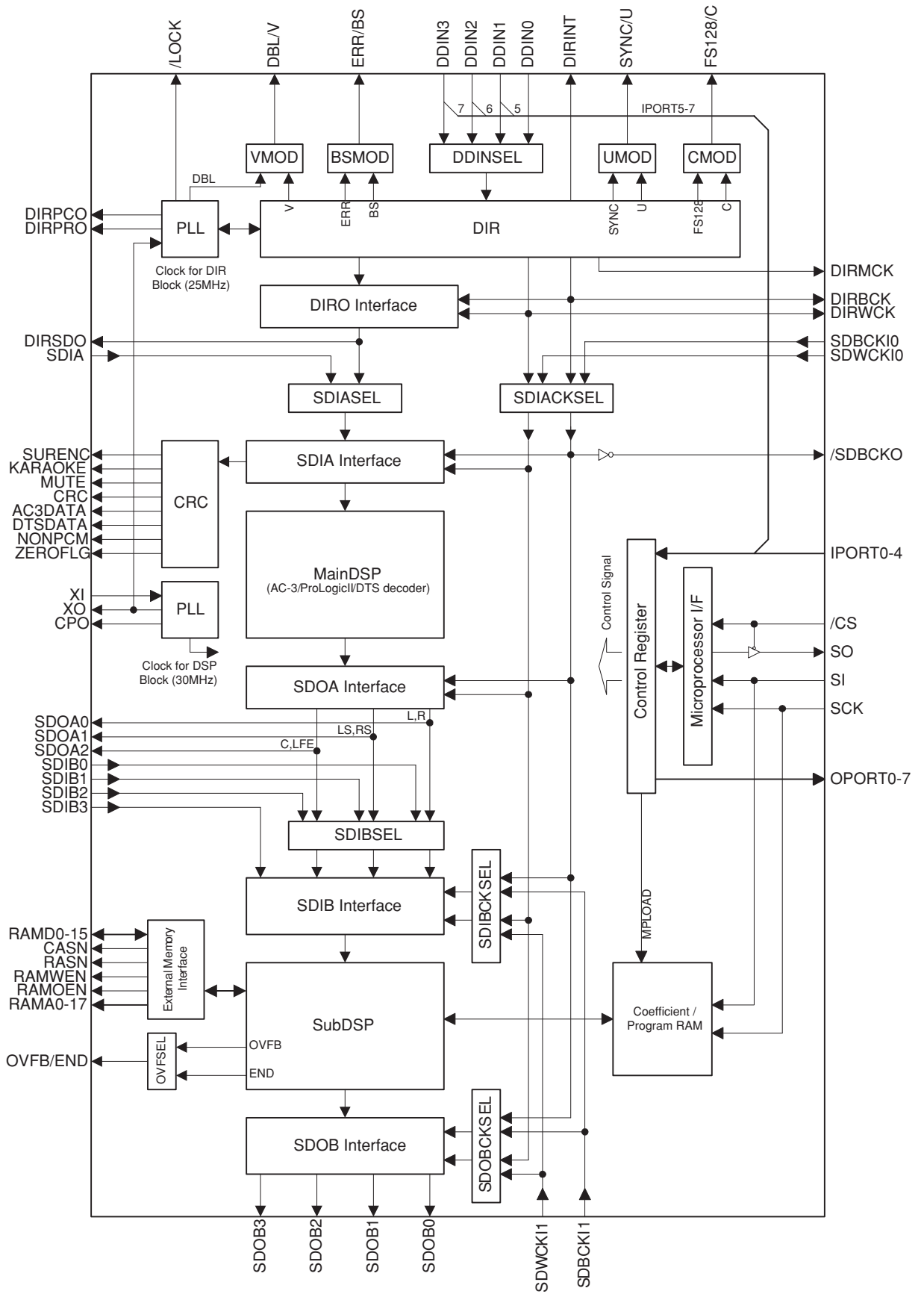
YSS932 (PCB ASSY : IC1)

96kHz DIR + Dolby Digital / Pro Logic II / DTS Decoder + SubDSP

Pin Arrangement (Top view)



● Block Diagram



A
B
C
D
E
F

● Pin Function

No.	Pin Name	I/O	Function
1	TESTXI	I	LSI Test pin (must be connected to VSS)
2	TESTXO	O	LSI Test pin (to be open)
3	VDD2	–	+2.5V power supply (for internal core logic)
4	XO	O	Crystal oscillator connection
5	XI	I	Crystal oscillator connection (24.576MHz)
6	TESTMS	I+	LSI Test pin (to be open)
7	TESTXEN	I+	LSI Test pin (to be open)
8	IPORT0	I+	General purpose input port
9	IPORT1	I+	General purpose input port
10	IPORT2	I+	General purpose input port
11	IPORT3	I+	General purpose input port
12	IPORT4	I+	General purpose input port
13	DDIN0	Is	DIR: Digital audio interface data input 0
14	DDIN1	Is	DIR: Digital audio interface data input 1 / General purpose input port
15	DDIN2	Is	DIR: Digital audio interface data input 2 / General purpose input port
16	DDIN3	Is	DIR: Digital audio interface data input 3 / General purpose input port
17	VSS	–	Ground
18	CPO	A	PLL filter connection
19	AVDD	–	+3.3V power supply (for DIR block)
20	DIRPCO	A	DIR: PLL filter connection
21	DIRPRO	A	DIR: PLL filter connection
22	AVSS	–	Ground (for DIR block)
23	TESTBRK	I+	LSI Test pin (to be open)
24	TESTR1	I+	Initial Clear input for PLL in DSP block
25	TESTR2	I+	LSI Test pin (to be open)
26	VDD1	–	+3.3V power supply (for I/O)
27	SDWCKI0	I+	Word clock input for SDIA, SDOA, SDIB, SDOB
28	SDBCKI0	I+	Bit clock input for SDIA, SDOA, SDIB, SDOB
29	/SDBCKO	O	Reverse clock output of DIRBCK or SDBCKI0
30	SDIA	I	Input of bitstream or PCM data to Main DSP
31	SDOA2	O	PCM data output from Main DSP (C, LFE)
32	SDOA1	O	PCM data output from Main DSP (LS, RS)
33	SDOA0	O	PCM data output from Main DSP (L, R)
34	SDIB3	I+	PCM data input 3 to Sub DSP
35	SDIB2	I+	PCM data input 2 to Sub DSP
36	SDIB1	I+	PCM data input 1 to Sub DSP
37	SDIB0	I+	PCM data input 0 to Sub DSP
38	VSS	–	Ground
39	VDD2	–	+2.5V power supply (for internal core logic)
40	DIRSDO	O	Output of bitstream or PCM data from DIR
41	DIRWCK	O	DIR: Serial data word clock (fs) output
42	DIRBCK	O	DIR: Serial data bit clock (64fs) output
43	DIRMCK	O	DIR: Serial data master clock (256fs or 128fs) output
44	ERR/BS	O	DIR: Data error detect / Block start output
45	SYNC/U	O	DIR: Serial data synchronized timing / User data output
46	FS128/C	O	DIR: Serial data master clock 128fs / Channel status output
47	DBL/V	O	DIR: Double rate lock detect / Validity flag output
48	SDWCKI1	I+	Word clock input for SDIB, SDOB
49	SDBCKI1	I+	Bit clock input for SDIB, SDOB
50	VSS	–	Ground

No.	Pin Name	I/O	Function
51	SDOB3	O	PCM data output from Sub DSP
52	SDOB2	O	PCM data output from Sub DSP
53	SDOB1	O	PCM data output from Sub DSP
54	SDOB0	O	PCM data output from Sub DSP
55	VDD1	-	+3.3v power supply (for I/O)
56	OPORT0	O	General purpose output port (LED control : DD)
57	OPORT1	O	General purpose output port (LED control : PL2)
58	OPORT2	O	General purpose output port (LED control : DTS)
59	OPORT3	O	General purpose output port (LED control : DIG1)
60	OPORT4	O	General purpose output port (LED control : DIG2)
61	OPORT5	O	General purpose output port (LED control : ANA)
62	OPORT6	O	General purpose output port
63	OPORT7	O	General purpose output port
64	VSS	-	Ground
65	VDD2	-	+2.5V power supply (for internal core logic)
66	RAMD0	I+/O	Sub DSP: External memory interface Data 0
67	RAMD1	I+/O	Sub DSP: External memory interface Data 1
68	RAMD2	I+/O	Sub DSP: External memory interface Data 2
69	RAMD3	I+/O	Sub DSP: External memory interface Data 3
70	RAMD4	I+/O	Sub DSP: External memory interface Data 4
71	RAMD5	I+/O	Sub DSP: External memory interface Data 5
72	RAMD6	I+/O	Sub DSP: External memory interface Data 6
73	RAMD7	I+/O	Sub DSP: External memory interface Data 7
74	VSS	-	Ground
75	VDD1	-	+3.3V power supply (for I/O)
76	RAMD8	I+/O	Sub DSP: External memory interface Data 8
77	RAMD9	I+/O	Sub DSP: External memory interface Data 9
78	RAMD10	I+/O	Sub DSP: External memory interface Data 10
79	RAMD11	I+/O	Sub DSP: External memory interface Data 11
80	RAMD12	I+/O	Sub DSP: External memory interface Data 12
81	RAMD13	I+/O	Sub DSP: External memory interface Data 13
82	RAMD14	I+/O	Sub DSP: External memory interface Data 14
83	RAMD15	I+/O	Sub DSP: External memory interface Data 15
84	CASN	O	Sub DSP: External DRAM interface Column address strobe output
85	RAMWEN	O	Sub DSP: External memory interface Write enable output
86	RAMOEN	O	Sub DSP: External memory interface Output enable output
87	RASN	O	Sub DSP: External DRAM interface Row address strobe output
88	VSS	-	Ground
89	VDD1	-	+3.3V power supply (for I/O)
90	RAMA8	O	Sub DSP: External memory interface Address 8
91	RAMA7	O	Sub DSP: External memory interface Address 7
92	RAMA0	O	Sub DSP: External memory interface Address 0
93	RAMA6	O	Sub DSP: External memory interface Address 6
94	RAMA1	O	Sub DSP: External memory interface Address 1
95	RAMA5	O	Sub DSP: External memory interface Address 5
96	RAMA2	O	Sub DSP: External memory interface Address 2
97	RAMA4	O	Sub DSP: External memory interface Address 4
98	RAMA3	O	Sub DSP: External memory interface Address 3
99	RAMA9	O	Sub DSP: External memory interface Address 9
100	RAMA10	O	Sub DSP: External memory interface Address 10

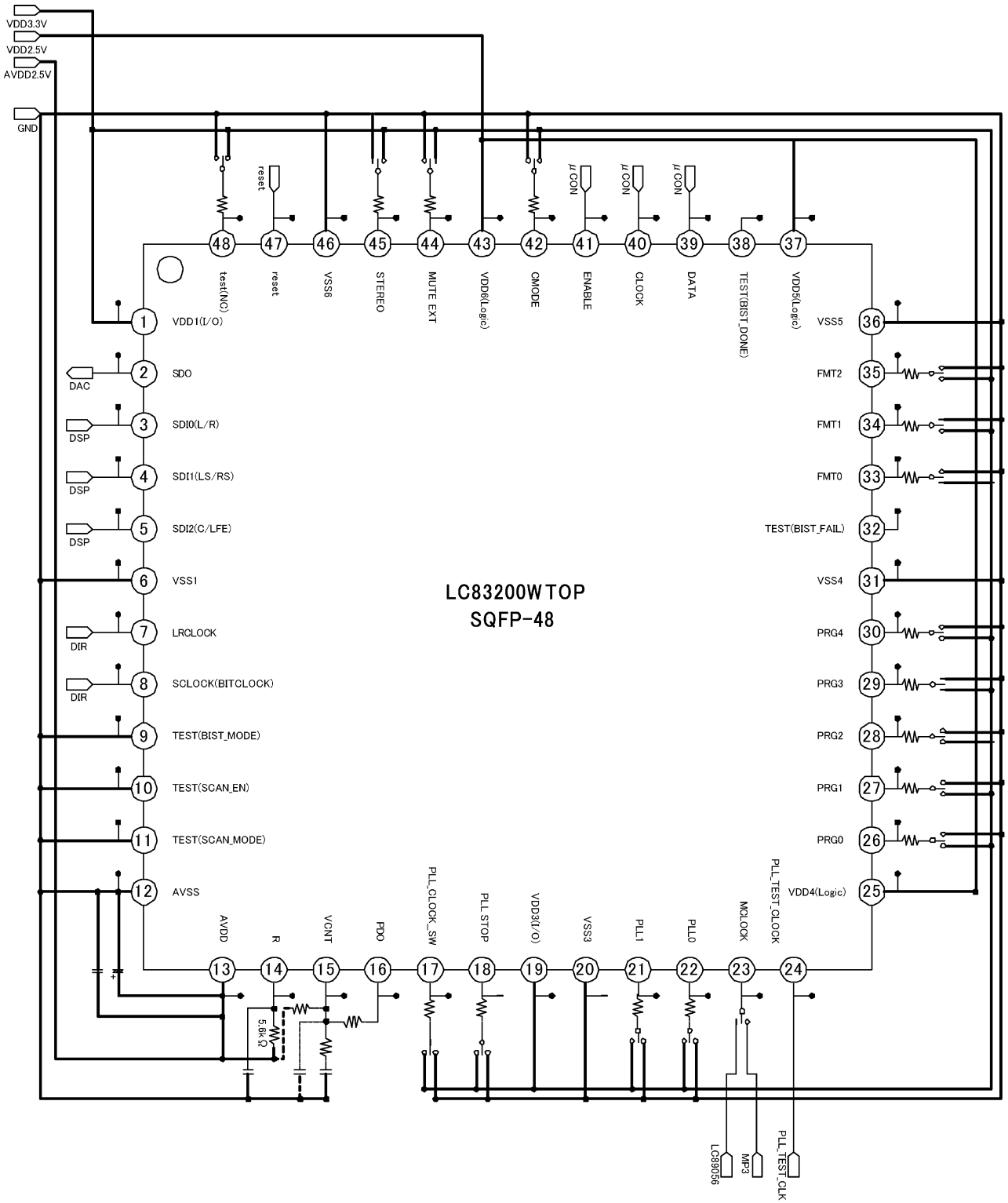
No.	Pin Name	I/O	Function
101	RAMA11	O	Sub DSP: External memory interface Address 11
102	VSS	–	Ground
103	VDD2	–	+2.5V power supply (for internal core logic)
104	RAMA12	O	Sub DSP: External memory interface Address 12
105	RAMA13	O	Sub DSP: External memory interface Address 13
106	RAMA14	O	Sub DSP: External memory interface Address 14
107	RAMA15	O	Sub DSP: External memory interface Address 15
108	RAMA16	O	Sub DSP: External memory interface Address 16
109	RAMA17	O	Sub DSP: External memory interface Address 17
110	OVFB/END	O	Sub DSP: Overflow / Program end detect
111	ZEROFLG	O	Main DSP: Zero flag output
112	VSS	–	Ground
113	NONPCM	O	Main DSP: non-PCM data detect
114	DTSDATA	O	Main DSP: DTS data detect
115	AC3DATA	O	Main DSP: AC-3 data detect
116	MUTE	O	Main DSP: Auto mute detect
117	KARAOKE	O	Main DSP: AC-3 Karaoke data detect
118	VDD1	–	+3.3V power supply (for I/O)
119	SURENC	O	Main DSP: AC-3 2/0 mode Dolby Surround Encode input detect
120	CRC	O	Main DSP: AC-3 CRC error detect
121	/LOCK	O	DIR: PLL lock detect
122	DIRINT	O	DIR: interrupt output
123	/CS	Is	Microprocessor interface Chip select input
124	SO	Ot	Microprocessor interface Data output
125	SI	Is	Microprocessor interface Data input
126	SCK	Is	Microprocessor interface Clock input
127	/IC	Is	Initial clear input
128	VSS	–	Ground

I : Input pin
 Is : Schmitt trigger input pin
 I+ : Input pin with a pull-up resistor
 O : Output pin
 Ot : Tri-state output pin
 A : Analog pin

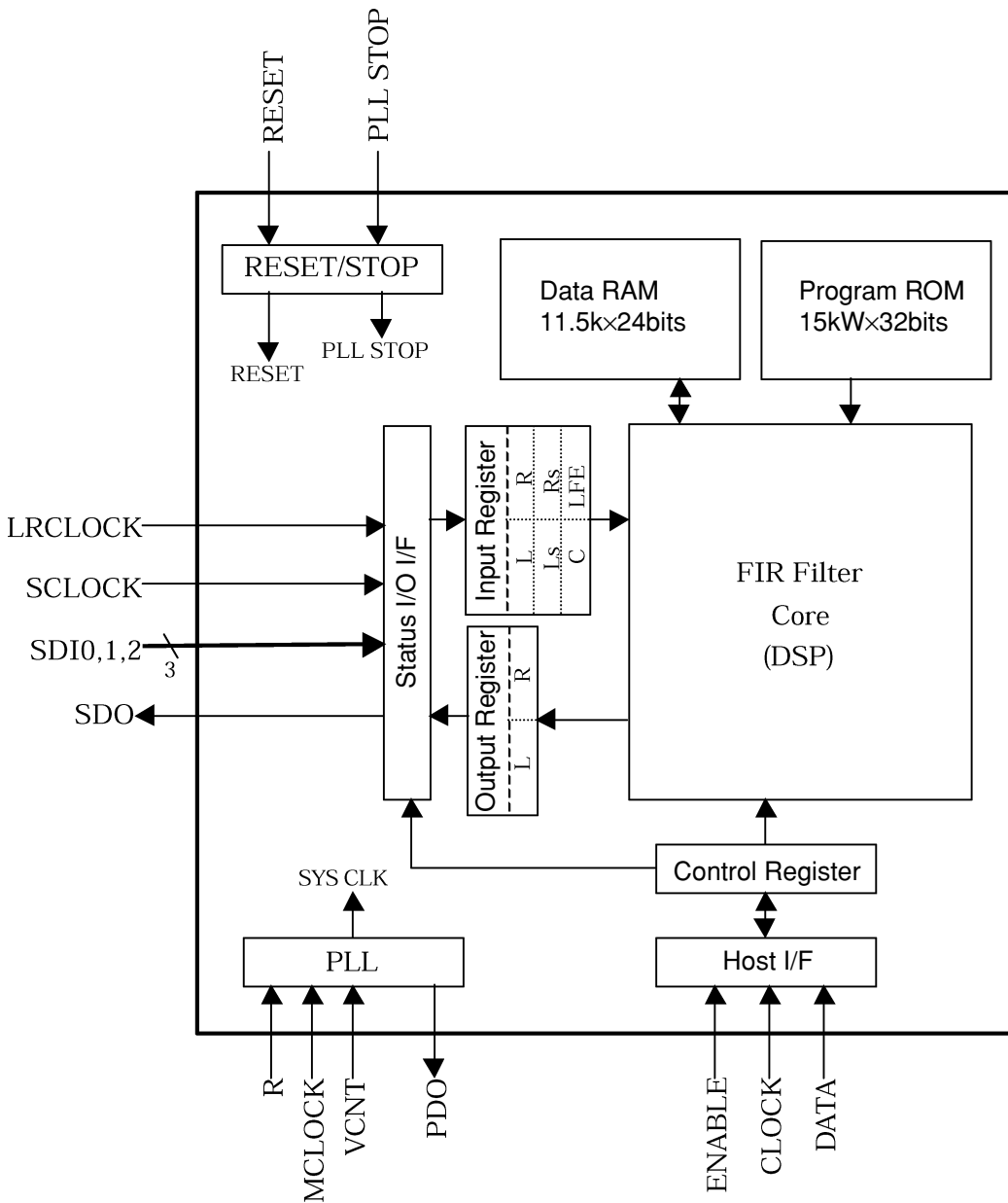
LC83200W (PCB ASSY : IC2)

• Dolby Headphone LSI

• Pin Arrangement (Top view)



● Block Diagram



A

B

C

D

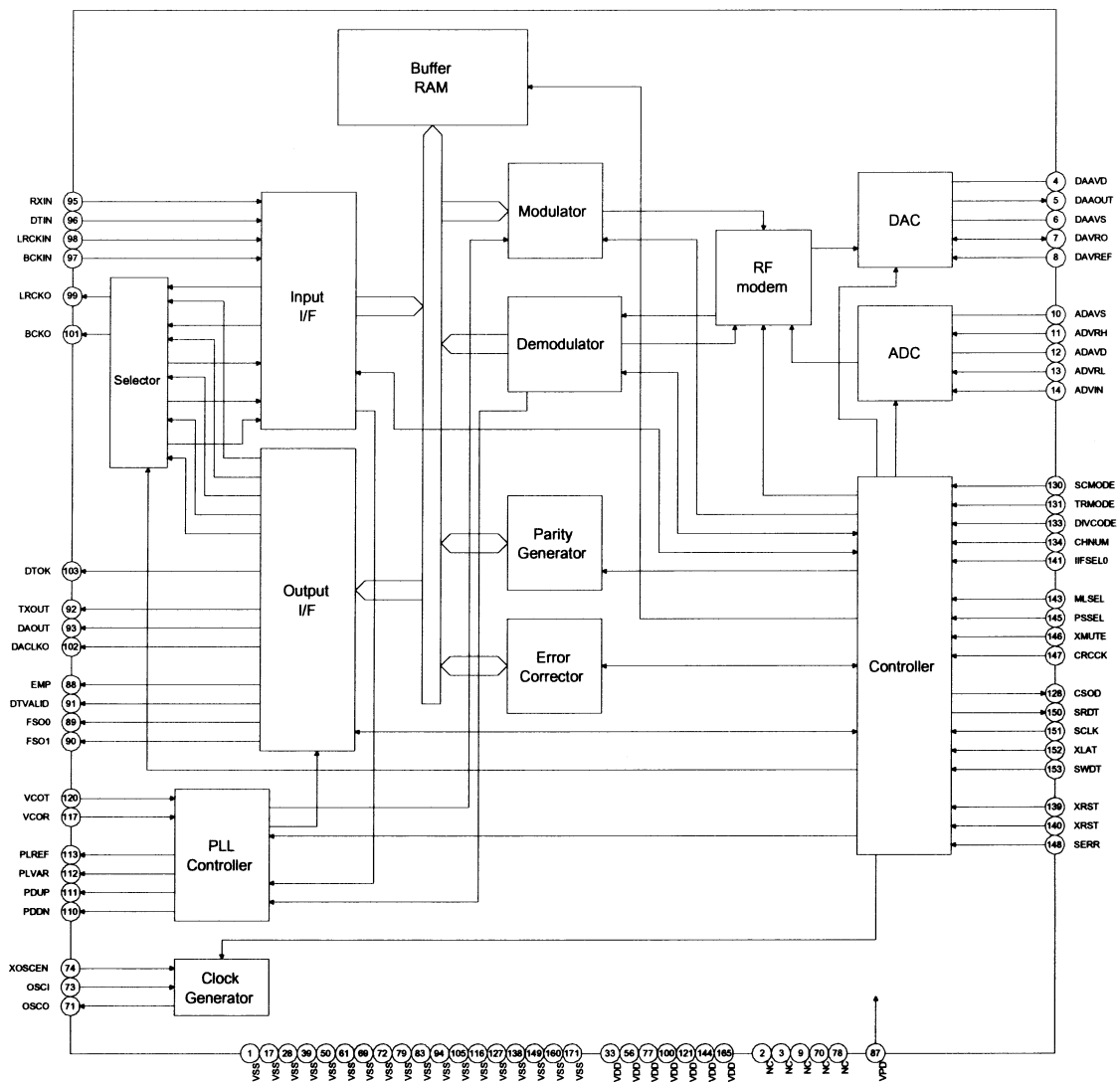
E

F

● Pin Function

Block	No.	Pin Name	I/O	Function
Audio IN	7	LRCLOCK	I	LR clock for audio data input
	8	SCLOCK	I	Bit clock for audio data input
	3	SDI0	I	Audio data serial input (L, R)
	4	SDI1	I	Audio data serial input (Ls, Rs)
	5	SDI2	I	Audio data serial input (C, LFE)
Audio OUT	2	SDO	O	Audio data serial output (L, R)
Host I/F	41	ENABLE	I	Command enable input
	40	CLOCK	I	Serial data input clock
	39	DATA	I	Address and data input
Reset	47	RESET	I	System reset input (Low: reset on)
PLL	14	R	I	VCO bias resistor pin
	15	VCNT	I	VCO control input pin
	23	MCLOCK	I	Moving clock input pin
	16	PDO	O	Output pin for VCO charge pump
Power supply	1,19	VDD1	-	I/O power supply
	25,37,43	VDD2	-	Digital power supply
	13	AVDD	-	Power supply for PLL
	6,20	VSS1	-	I/O GND
	31,36,46	VSS2	-	Digital GND
	12	AVSS	-	GND for PLL
Test	9,10,11,17,24		I	Test pin
	32,38		O	Test pin
Parallel control port	42	CMODE	I	Parallel (High) / Serial (Low) selection pin
	30	PRG4	I	Dolby headphone mode selection pin
	29	PRG3	I	
	28	PRG2	I	
	27	PRG1	I	
	26	PRG0	I	
	35	FMT2	I	
	34	FMT1	I	Audio I/O selection pin
	33	FMT0	I	
	44	MUTE	I	Mute pin (High: Mute on)
	45	STEREO	I	Bypass setting pin of LR signal (High: Stereo bypass)
	18	PLL STOP	I	Power save pin (Low: PLL circuit OFF)
	21	PLL1	I	PLL clock selection pin
	22	PLL0	I	

● Block Diagram



A

B

C

D

E

F

● Pin Function

No.	Pin Name	I/O	Function
1	VSS	–	Digital GND
2	NC	–	Non connection
3	NC	–	Non connection
4	DAAVD	–	Analog power supply for RF DAC
5	DAAOUT	O	RF DAC output
6	DAAVS	–	Analog GND for RF DAC
7	DAVRO	I/O	Internal current setting for RF DAC
8	DAVREF	I	Reference voltage input for RF DAC
9	NC	–	Non connection
10	ADAVS	–	Analog GND for RF ADC
11	ADVRH	I	Reference voltage input for RF DAC (high)
12	ADAVD	–	Analog power supply for RF DAC
13	ADVRL	I	Reference voltage input for RF DAC (low)
14	ADVIN	I	RF ADC input
15	TEST1	I	Test pin, normally fixed to L
16	TEST2	I	Test pin, normally fixed to L
17	VSS	–	Digital GND
18	TEST3	I	Test pin, normally fixed to L
19	TEST4	O	Test pin, normally open-circuit
20	TEST5	I	Test pin, normally fixed to L
21	TEST6	I	Test pin, normally fixed to L
22	TEST7	I	Test pin, normally fixed to L
23	TEST8	I/O	Test pin, normally open-circuit
24	TEST9	I/O	Test pin, normally open-circuit
25	TEST10	I/O	Test pin, normally open-circuit
26	TEST11	I/O	Test pin, normally open-circuit
27	TEST12	I/O	Test pin, normally open-circuit
28	VSS	–	Digital GND
29	TEST13	I/O	Test pin, normally open-circuit
30	TEST14	I/O	Test pin, normally open-circuit
31	TEST15	I/O	Test pin, normally open-circuit
32	TEST16	I	Test pin, normally fixed to L
33	VDD	–	Digital power supply
34	TEST17	O	Test pin, normally open-circuit
35	TEST18	O	Test pin, normally open-circuit
36	TEST19	O	Test pin, normally open-circuit
37	TEST20	O	Test pin, normally open-circuit
38	TEST21	I	Test pin, normally fixed to L
39	VSS	–	Digital GND
40	TEST22	I	Test pin, normally fixed to L
41	TEST23	I	Test pin, normally fixed to L
42	TEST24	I	Test pin, normally fixed to L
43	TEST25	I	Test pin, normally fixed to L
44	TEST26	I	Test pin, normally fixed to L
45	TEST27	I	Test pin, normally fixed to L
46	TEST28	I	Test pin, normally fixed to L
47	TEST29	O	Test pin, normally open-circuit
48	TEST30	O	Test pin, normally open-circuit
49	TEST31	O	Test pin, normally open-circuit
50	VSS	–	Digital GND

No.	Pin Name	I/O	Function	
51	TEST32	O	Test pin, normally open-circuit	
52	TEST33	O	Test pin, normally open-circuit	
53	TEST34	O	Test pin, normally open-circuit	
54	TEST35	O	Test pin, normally open-circuit	
55	TEST36	O	Test pin, normally open-circuit	
56	VDD	–	Digital power supply	
57	TEST37	I	Test pin, normally fixed to L	
58	TEST38	O	Test pin, normally open-circuit	
59	TEST39	O	Test pin, normally open-circuit	
60	TEST40	O	Test pin, normally open-circuit	
61	VSS	–	Digital GND	
62	TEST41	O	Test pin, normally open-circuit	
63	TEST42	O	Test pin, normally open-circuit	
64	TEST43	O	Test pin, normally open-circuit	
65	TEST44	I	Test pin, normally fixed to L	
66	TEST45	I	Test pin, normally fixed to L	
67	TEST46	I	Test pin, normally fixed to L	
68	TEST47	I	Test pin, normally fixed to L	
69	VSS	–	Digital GND	
70	NC	–	Non connection	
71	OSCO	O	X'tal resonator circuit output (24.576MHz)	
72	VSS	–	Digital GND	
73	OSCI	I	X'tal resonator circuit input (24.576MHz)	
74	XOSCEN	I	Stop function control of X'tal resonator circuit	
75	TEST48	I	Test pin, normally fixed to L	
76	TEST49	I	Test pin, normally fixed to L	
77	VDD	–	Digital power supply	
78	NC	–	Non connection	
79	VSS	–	Digital GND	
80	TEST50	O	Test pin, normally open-circuit	
81	TEST51	O	Test pin, normally open-circuit	
82	TEST52	O	Test pin, normally open-circuit	
83	VSS	–	Digital GND	
84	TEST53	O	Test pin, normally open-circuit	
85	TEST54	O	Test pin, normally open-circuit	
86	TEST55	O	Test pin, normally open-circuit	
87	VPD	I	Penetration current prevention pin, normally fixed to L	
88	EMP	O	Emphasis output (Off/On=L/H)	
89	FSO0	O	Sampling frequency detecting output 0	(FSO1, FSO0) = 00 (44.1kHz), 01 (48kHz), 11 (32kHz)
90	FSO1	O	Sampling frequency detecting output 1	
91	DTVALID	O	Data valid flag (Valid/Invalidity = H/L)	
92	TXOUT	O	Digital audio interface format output	
93	DAOUT	O	Data output for audio DA converter	
94	VSS	–	Digital GND	
95	RXIN	I	Digital audio interface format input	
96	DTIN	I	Data input	
97	BCKIN	I	Bit clock input	
98	LRCKIN	I	LR clock input (L ch/R ch = H/L)	
99	LRCKO	O	LR clock output (L ch/R ch = H/L)	
100	VDD	–	Digital power supply	

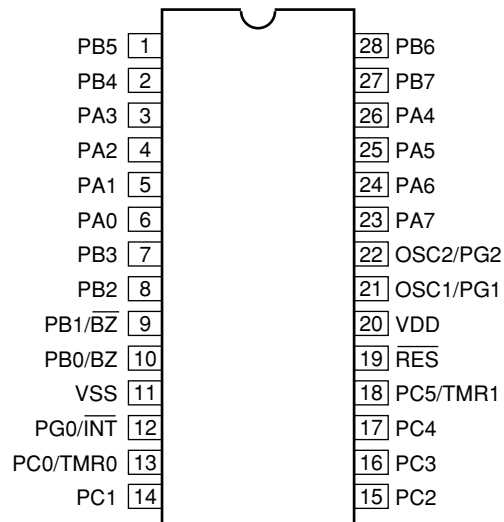
No.	Pin Name	I/O	Function
A 101	BCKO	O	Bit clock output
102	DACLKO	O	Clock output for audio DA converter, 256fs (VCOR/2)
103	DTOK	O	Receive data condition (Good/poor = H/L)
104	C12	O	12.288MHz clock output (OSCI/2)
105	VSS	–	Digital GND
106	TEST56	I/O	Test pin, normally open-circuit
107	TEST57	I/O	Test pin, normally open-circuit
108	TEST58	O	Test pin, normally open-circuit
109	TEST59	I/O	Test pin, normally open-circuit
110	PDDN	O	Phase comparison output down
B 111	PDUP	O	Phase comparison output up
112	PLVAR	O	PLL comparator output (VCOT/640 or VCOR/512)
113	PLREF	O	PLL reference output (fs)
114	TEST60	I	Test pin, normally fixed to L
115	TEST61	I	Test pin, normally fixed to L
116	VSS	–	Digital GND
117	VCOR	I	Reception VCO input
118	TEST62	I	Test pin, normally fixed to H
119	TEST63	I	Test pin, normally fixed to H
120	VCOT	I	Transmission VCO input
C 121	VDD	–	Digital power supply
122	TEST64	I	Test pin, normally fixed to L
123	TEST65	I	Test pin, normally fixed to L
124	TEST66	I	Test pin, normally fixed to L
125	TEST67	I	Test pin, normally fixed to L
126	TEST68	I	Test pin, normally fixed to H
127	VSS	–	Digital GND
128	CSOD	O	Chapter start delay output
129	CSO	O	Chapter start output
130	SCMODE	I	Serial control mode selection (Pin/Serial = L/H)
D 131	TRMODE	I	Transmission/Reception mode selection (Transmission/Reception = L/H)
132	TEST69	I	Test pin, normally fixed to L
133	DIVCODE	I	Full/Half band mode selection (Full/Half = L/H)
134	CHNUM	I	Channel number selection (0 ch/1 ch = L/H)
135	TEST70	I	Test pin, normally fixed to L
136	ERRO	O	Error output (No error/Error = L/H)
137	TEST71	O	Test pin, normally open-circuit
138	VSS	–	Digital GND
139	XRST	I	Hardware reset (Reset=L)
140	XRSTS	I	Software reset (Reset=L)
E 141	IIFSEL0	I	Input selection 0
142	TEST72	I	Test pin, normally fixed to L
143	MLSEL	I	MSB/LSB selection of digital-audio AD/DA converter data
144	VDD	–	Digital power supply
145	PSSSEL	I	Front/back squeeze selection of digital-audio AD/DA converter data
146	XMUTE	I	Mute input (Mute/Through = L/H)
147	CRCK	I	CRC check request (Off/On = L/H)
148	TEST73	I	Test pin, normally fixed to L
149	VSS	–	Digital GND
F 150	SRDT	O	Read-out output of CPU interface data

No.	Pin Name	I/O	Function
151	SCLK	I	Clock input of CPU interface data
152	XLAT	I	Latch input of CPU interface data
153	SWDT	I	Writing input of CPU interface data
154	TEST74	O	Test pin, normally open-circuit
155	TEST75	I	Test pin, normally fixed to L
156	TEST76	O	Test pin, normally open-circuit
157	TEST77	O	Test pin, normally open-circuit
158	TEST78	O	Test pin, normally open-circuit
159	TEST79	O	Test pin, normally open-circuit
160	VSS	–	Digital GND
161	TEST80	O	Test pin, normally open-circuit
162	TEST81	O	Test pin, normally open-circuit
163	TEST82	O	Test pin, normally open-circuit
164	TEST83	O	Test pin, normally open-circuit
165	VDD	–	Digital power supply
166	TEST84	O	Test pin, normally open-circuit
167	TEST85	I	Test pin, normally fixed to L
168	TEST86	I	Test pin, normally fixed to L
169	TEST87	O	Test pin, normally open-circuit
170	TEST88	O	Test pin, normally open-circuit
171	VSS	–	Digital GND
172	TEST89	O	Test pin, normally open-circuit
173	TEST90	O	Test pin, normally open-circuit
174	TEST91	O	Test pin, normally open-circuit
175	TEST92	I	Test pin, normally fixed to L
176	TEST93	O	Test pin, normally open-circuit

PEF001A9 (PCB ASSY : IC4)

• 8-bit 1-chip microcomputer

● Pin Arrangement (Top view)



● Pin Function

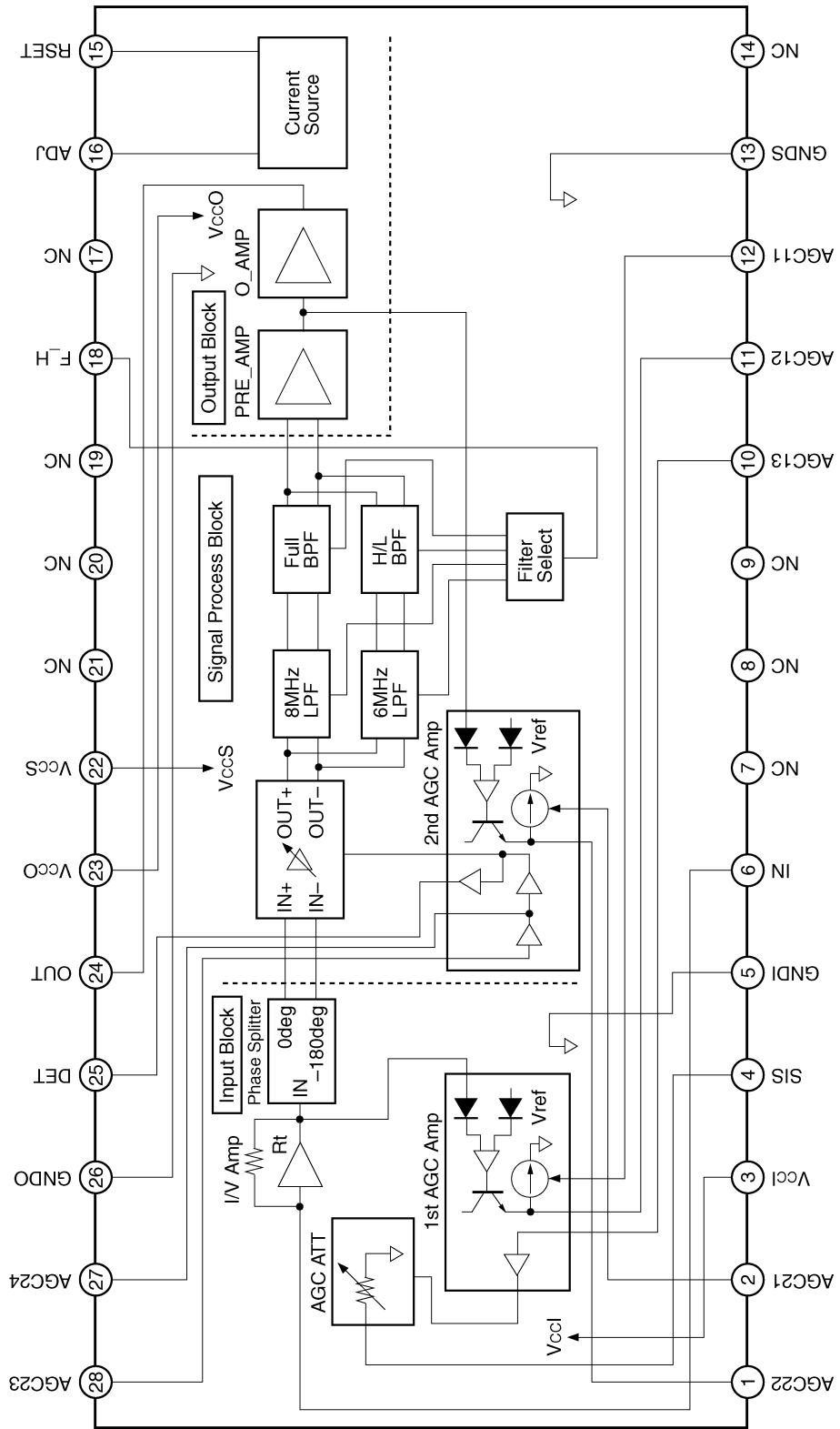
No.	Pin Name	I/O	Pin Function
1	PB5	O	LED control
2	PB4	O	LED control
3	PA3	O	LED control
4	PA2	O	LED control
5	PA1	O	LED control
6	PA0	O	LED control
7	PB3	O	Chip enable output for DSP
8	PB2	O	Chip select output for DSP
9	PB1	O	Serial clock output
10	PB0	O	Serial data output
11	VSS	-	Ground
12	PG0	I	Serial data input
13	PC0	I	Key input 1
14	PC1	I	Key input 2
15	PC2	I	Key input 3
16	PC3	I	Key input 4
17	PC4	I	Battery detection input
18	PC5	I	Battery voltage abnormality detection
19	RES	-	External reset input
20	VDD	-	Power supply
21	OSC1	I	CR oscillation input
22	OSC2	O	Oscillation output
23	PA7	O	LED control
24	PA6	O	Charge control
25	PA5	O	IR LED control
26	PA4	O	A/D reset output
27	PB7	O	DSP reset output 1
28	PB6	O	DSP reset output 2

HEADPHONE SE-DHP800

CXA3504M (MAIN PCB ASSY : IC1)

• DIAT Receiver Analog Signal Processing IC

● Block Diagram



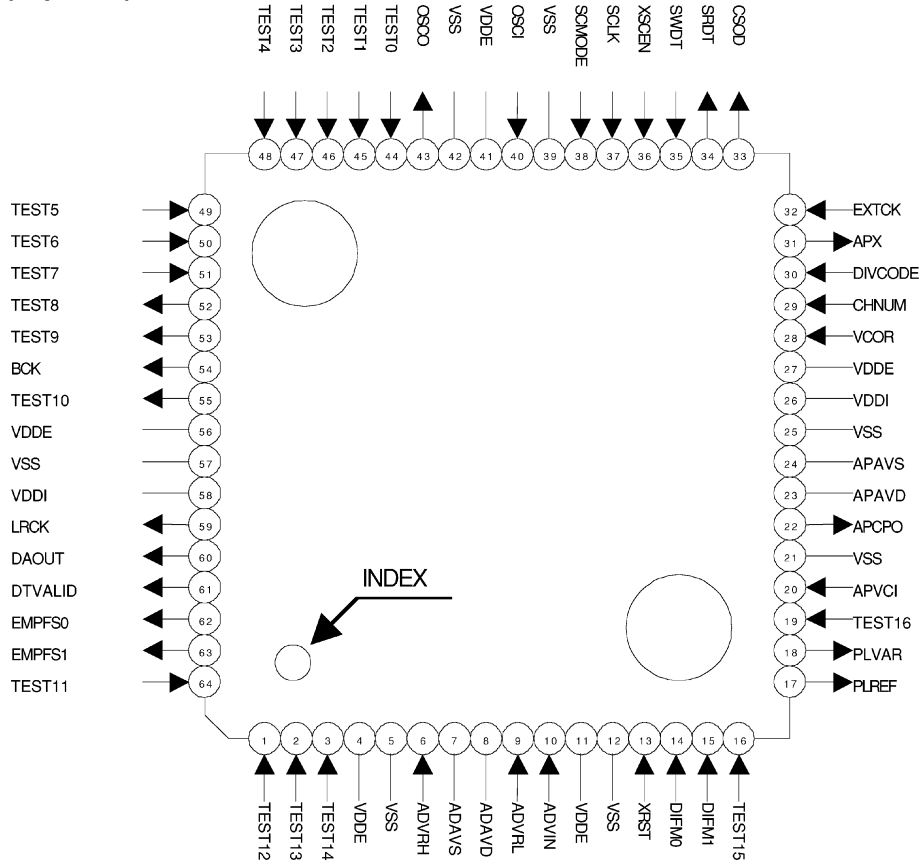
● Pin Function

No.	Pin Name	I/O	Pin Function						
1	AGC22	O	AGC response setting pin						
2	AGC21	O	Charging current control pin						
3	VCCI	–	Power supply of the input section						
4	SIS	I	Electric shunt input pin						
5	GNDI	–	GND of the input section						
6	IN	I	Photodiode input signal pin						
7	NC	–	Non connection						
8	NC	–	Non connection						
9	NC	–	Non connection						
10	AGC13	I	AGC amplifier input pin						
11	AGC12	O	Input AGC response setting pin						
12	AGC11	O	Charging current control pin						
13	GNDS	–	GND of the signal processing section						
14	NC	–	Non connection						
15	RSET	O	Resistor connection pin for power supply setting						
16	ADJ	O	Resistor connection pin for power supply setting for filter Adjust the center frequency of the BPF.						
17	NC	–	Non connection						
18	F_H	I	Filter switching pin Switch the H/L, BPF, Full BPF. H/L BPF: 3 to 4.5MHz, Full BPF: 3 to 6MHz <table border="1" data-bbox="451 800 771 890"> <thead> <tr> <th>F_H (pin 18)</th> <th>Mode</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>FULL (3 to 6MHz)</td> </tr> <tr> <td>H</td> <td>H/L (3 to 4.5MHz)</td> </tr> </tbody> </table>	F_H (pin 18)	Mode	L	FULL (3 to 6MHz)	H	H/L (3 to 4.5MHz)
F_H (pin 18)	Mode								
L	FULL (3 to 6MHz)								
H	H/L (3 to 4.5MHz)								
19	NC	–	Non connection						
20	NC	–	Non connection						
21	NC	–	Non connection						
22	VCCS	–	Power supply for signal processing section						
23	VCCO	–	Power supply for output section						
24	OUT	O	Signal output pin						
25	DET	O	Output pin for input level detection						
26	GNDO	–	GND for output section						
27	AGC24	O	AGC amplifier output pin						
28	AGC23	I	AGC amplifier input pin						

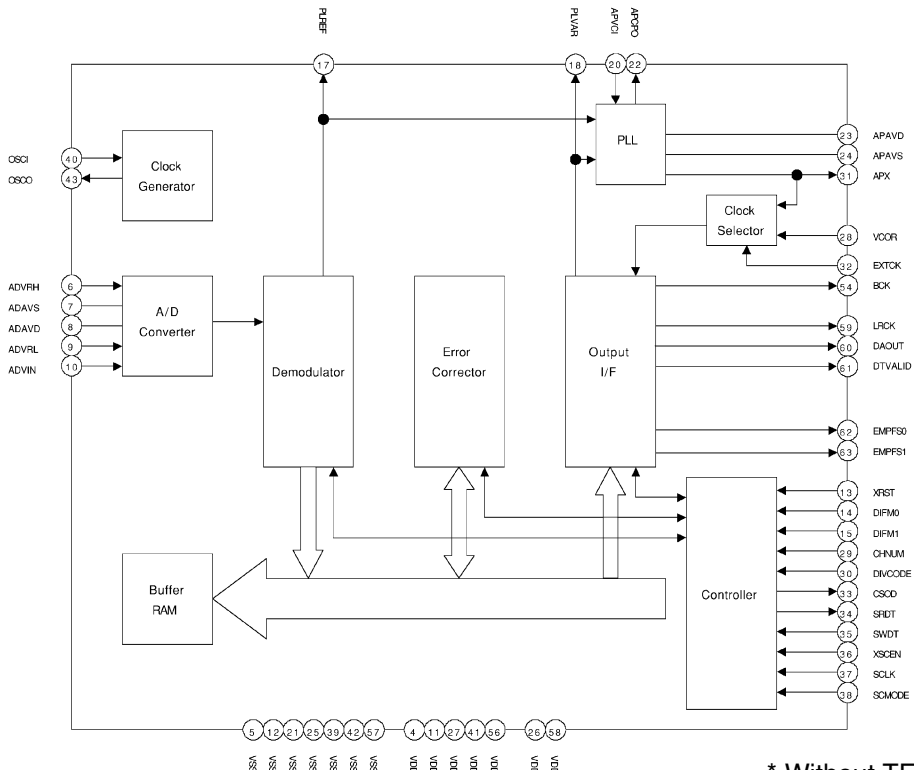
■ CX4004R (MAIN PCB ASSY : IC2)

• Digital Signal-processing IC for DIAT system reception

● Pin Arrangement (Top view)



● Block Diagram

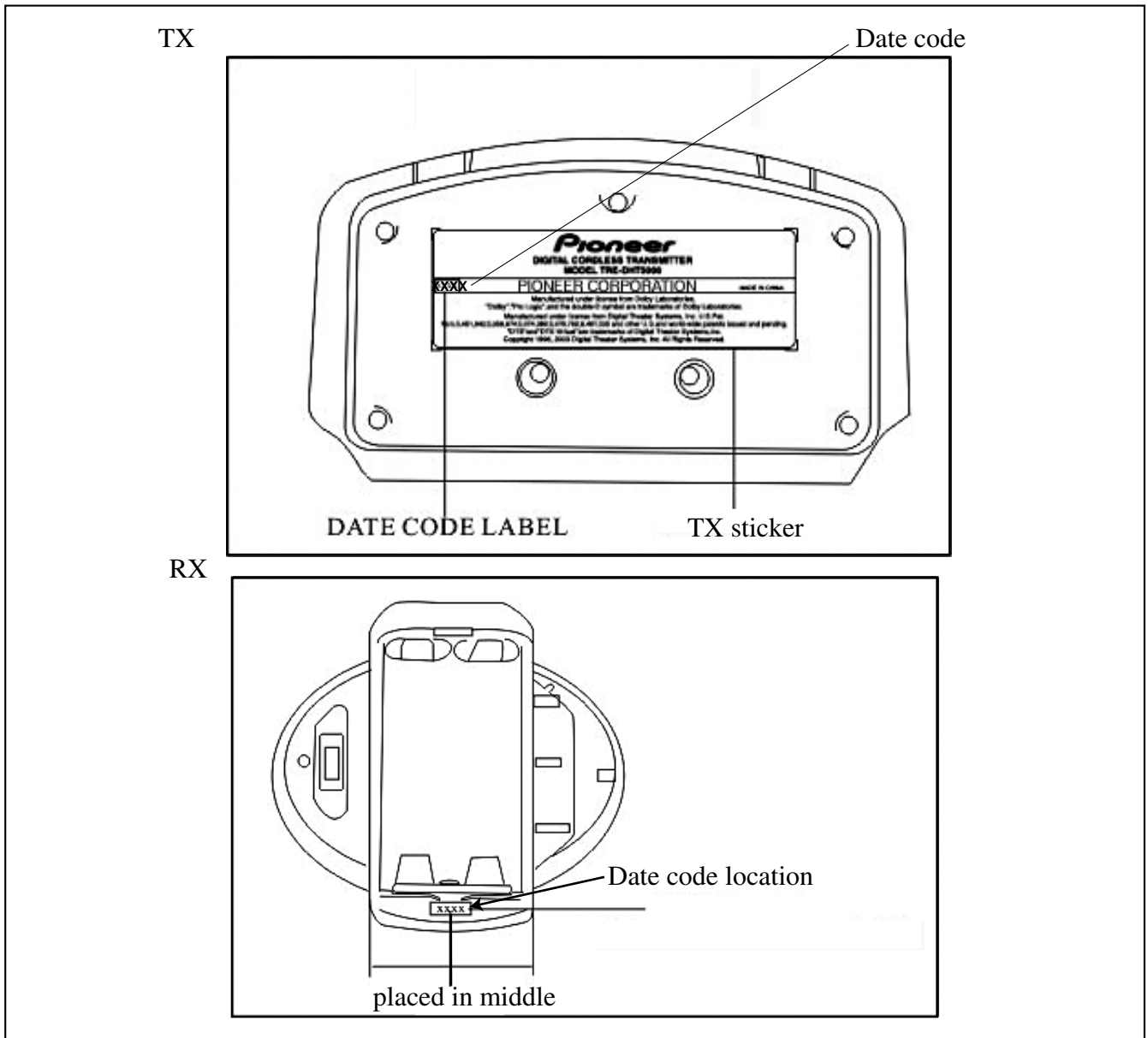


* Without TEST pin

● Pin Function

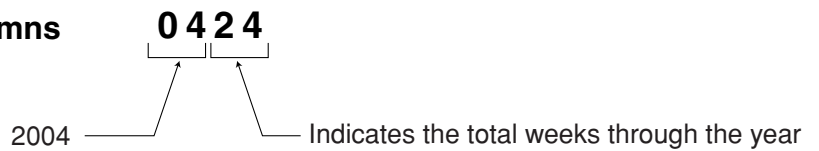
No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	TEST12	I	Test pin, normally fixed to L	33	CSOD	O	Chapter start delayed output
2	TEST13	I	Test pin, normally fixed to H	34	SRDT	O	Read-out output of serial interface data
3	TEST14	I	Test pin, normally fixed to H	35	SWDT	I	Writing input of serial interface data
4	VDDE	–	Digital I/O power supply	36	XSCEN	I	Enable input of serial interface data (negative logic)
5	VSS	–	Digital GND	37	SCLK	I	Clock input of serial interface data
6	ADVRH	I	Reference voltage input for RF A/D converter (high)	38	SCMODE	I	Control mode selection (L: Pin setting, H: Serial setting)
7	ADAVS	–	Analog GND for RF A/D converter	39	VSS	–	Digital GND
8	ADAVD	–	Analog power supply for RF A/D converter	40	OSCI	I	Crystal resonator circuit input (12.288MHz)
9	ADVRL	I	Reference voltage input for RF A/D converter (low)	41	VDDE	–	Digital I/O power supply
10	ADVIN	I	RF A/D converter input	42	VSS	–	Digital GND
11	VDDE	–	Digital I/O power supply	43	OSCO	O	Crystal resonator circuit output (12.288MHz)
12	VSS	–	Digital GND	44	TEST0	I	Test pin, normally fixed to L
13	XRST	I	Reset (negative logic)	45	TEST1	I	Test pin, normally fixed to L
14	DIFM0	I	Select the audio output type	46	TEST2	I	Test pin, normally fixed to L
15	DIFM1	I	Select the audio output type	47	TEST3	I	Test pin, normally fixed to L
16	TEST15	I	Test pin, normally fixed to L	48	TEST4	I	Test pin, normally fixed to L
17	PLREF	O	PLL reference output (fs)	49	TEST5	I	Test pin, normally fixed to L
18	PLVAR	O	PLL dividing output (256 dividing of APX output or VCOR input)	50	TEST6	I	Test pin, normally fixed to L
19	TEST16	I	Test pin, normally fixed to L	51	TEST7	I	Test pin, normally fixed to L
20	APVCI	I	PLL VCO control voltage input	52	TEST8	O	Test pin, normally open-circuit
21	VSS	–	Digital GND	53	TEST9	O	Test pin, normally open-circuit
22	APCPO	O	PLL charge pump	54	BCK	O	Bit clock output
23	APAVD	–	Power supply for PLL VCO	55	TEST10	O	Test pin, normally open-circuit
24	APAVS	–	GND for PLL VCO	56	VDDE	–	Digital I/O power supply
25	VSS	–	Digital GND	57	VSS	–	Digital GND
26	VDDI	–	Digital internal power supply	58	VDDI	–	Digital internal power supply
27	VDDE	–	Digital I/O power supply	59	LRCK	O	Audio sampling clock output
28	VCOR	I	Clock input for data output	60	DAOUT	O	Data output for audio D/A converter
29	CHNUM	I	Channel number selection (L: 0ch,H: 1ch)	61	DTVALID	O	Data valid flag output (DTVALID, L: valid, H: Invalidity)
30	DIVCODE	I	Full/Half band mode selection (L: Full-band, H: Half-band)	62	EMPFS0	O	Emphasis, fs information output
31	APX	O	PLL VCO output	63	EMPFS1	O	Emphasis, fs information output
32	EXTCK	I	Clock selection for data output (L: APX internal connection, H: VCOR pin input)	64	TEST11	I	Test pin, normally fixed to H

7.3 ABOUT LOT MARK INDICATION



■ Lot mark is sealing indication to the above part of the product.

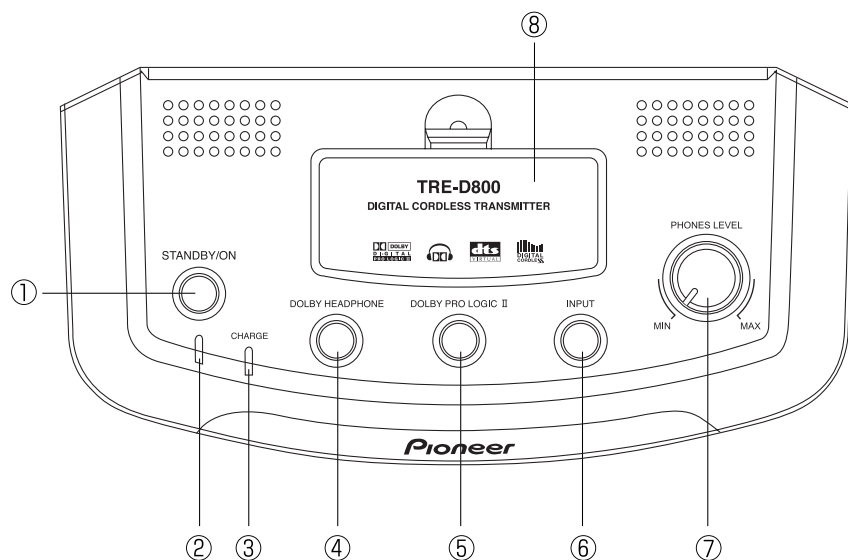
Indication of lot is four columns



8. PANEL FACILITIES

Controls and displays

Transmitter (top)



1 STANDBY/ON button

Press to turn the transmitter on / off.

2 Standby indicator

Lights when the transmitter is in standby. The indicator is unlit when the transmitter is on.

3 CHARGE indicator

Lights when the rechargeable batteries are being charged. The indicator is unlit when the batteries are fully charged.

4 DOLBY HEADPHONE button

Press to select the Dolby Headphone mode (DH1 / DH2 / DH3 / OFF).

5 DOLBY PRO LOGIC II button

Press to select the Dolby Pro Logic II mode (AUTO / MOVIE / MUSIC / OFF).

6 INPUT button

Press to select the source input (DIGITAL 1 / DIGITAL 2 / ANALOG).

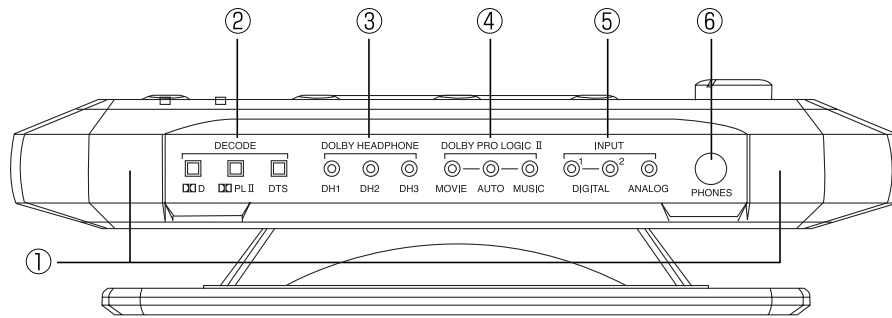
7 VOLUME control

Use to adjust volume level of headphones (sold separately) connected to the **PHONES** jack on the front panel.

8 Battery compartment

Use to recharge the supplied rechargeable batteries.

Transmitter (front)



1 Infrared transmitters

Infrared transmitters are located on either side of the unit. Make sure there is an unobstructed path from the transmitter to your listening position.

2 DECODE indicators

Light to indicate the automatic decoding mode for the current source:

D: Dolby Digital

PL II: Dolby Pro Logic II decoding of analog or digital source.

DTS: DTS

3 DOLBY HEADPHONE mode indicators

Light to show the Dolby Headphone mode (**DH1 / DH2 / DH3**).

4 DOLBY PRO LOGIC II mode indicators

Light to show the Dolby Pro Logic II mode (**AUTO / MOVIE / MUSIC**).

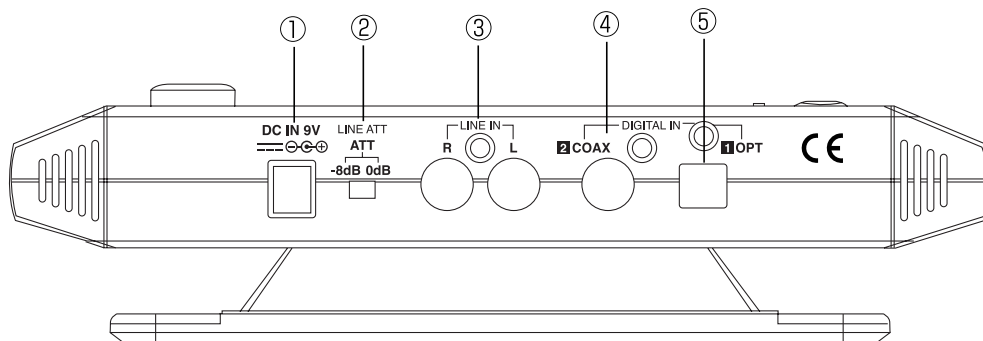
5 INPUT mode indicators

The corresponding indicator lights up to show the selected input mode (**DIGITAL 1 / DIGITAL 2 / ANALOG**).

6 PHONES jack

Use for connecting corded headphones.

Transmitter (rear)



1 DC IN jack

Connect the supplied AC power adaptor to this jack. (Use only the supplied AC power adaptor. Using adaptors with different plug polarities or other characteristics could cause malfunction.)

2 ATT switch

Switches the analog input level between -8dB and 0dB for compatibility with a wide range of analog equipment.

3 LINE IN jacks

Analog input jacks for connection to audio/video equipment such as a VCR or TV.

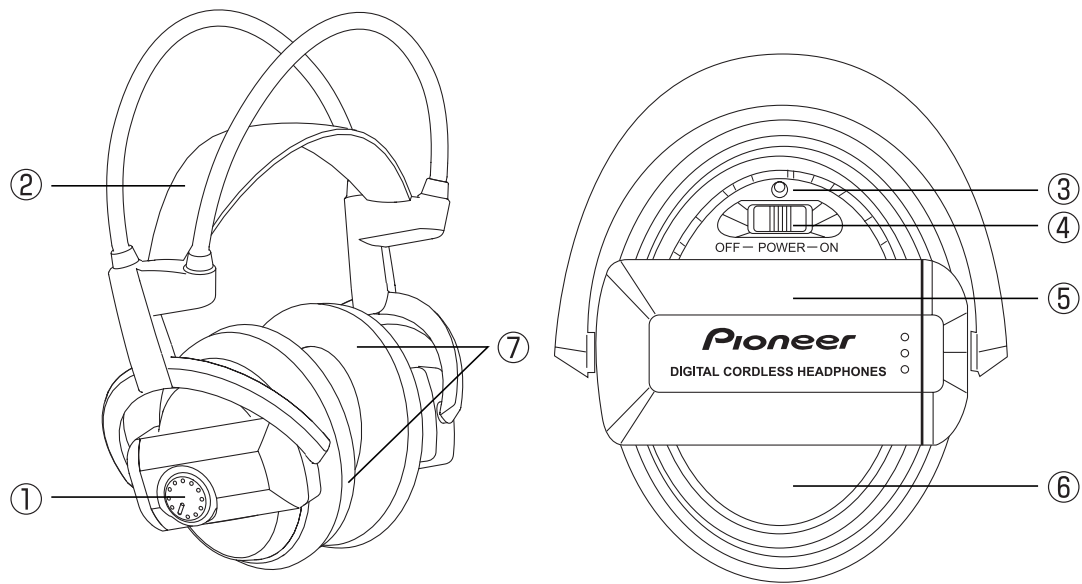
4 DIGITAL IN 2 COAX

Coaxial digital input for connection to digital audio/video equipment such as a DVD player, LD player or CD player.

5 DIGITAL IN 1 OPT

Optical digital input for connection to digital audio/video equipment such as a DVD player, LD player or CD player.

HEADPHONES



1 VOL (Volume) control

Use to adjust the volume.

2 Self-adjusting headband

The headband automatically adjusts when you put the headphones on.

3 POWER indicator

Lights when the headphones are on.

4 POWER switch

Press to turn on / off.

5 Battery compartment

Press and slide where indicated to open the cover. Use with the supplied rechargeable batteries or size AA dry-cell batteries.

6 Infrared sensor

Infrared sensors are located on either side.

7 Ear pads

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