MDR-IF8000

SERVICE MANUAL

Ver 1.1 2002.03

US Model
Canadian Model
AEP Model
UK Model

- MDR-IF8000 is the component model block one in MDR-DS8000.

COMPONENT MODEL NAME FOR MDR-DS8000

DIGITAL SURROUND PROCESSOR	DP-IF8000
CORDLESS STEREO HEADPHONES	MDR-IF8000

SPECIFICATIONS

Playback frequency range	12 – 24,000 Hz
Power requirements	Rechargeable nickel metal hydride batteries (supplied or sold separately) or R6 (size AA) alkaline batteries
Mass	Approx.350 g (10 oz)(including the supplied rechargable nickel-metal hydride batteries)

CORDLESS STEREO HEADPHONES

9-873-527-02
2002C0200-1

Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

SONY®

Notes on chip component replacement
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing
- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

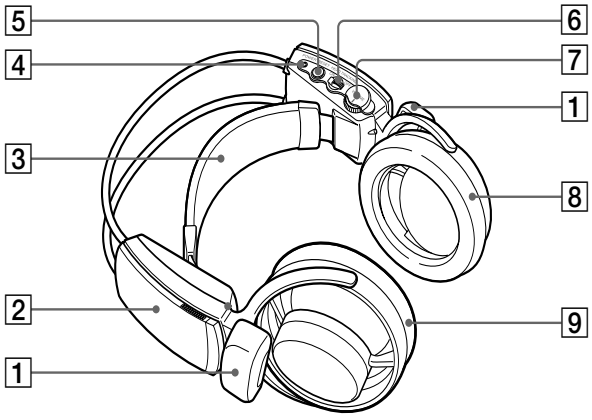
Repair MDR-IF8000 and DP-IF8000 in a pair.

TABLE OF CONTENTS

SECTION 1
GENERAL

This section is extracted from instruction manual.

LOCATING THE CONTROLS



1 **Infrared sensor**
There are infrared sensors in two locations on both sides.

2 **Battery case**
Press and lift up the lid to open it. This battery case is for the supplied rechargeable batteries and R6 (size AA) alkaline batteries only.

3 **Self-adjusting band**
The headphones automatically turn on when you put on the headphones.

4 **POWER indicator**
By pulling up the self-adjusting band, the indicator lights red when battery power is sufficient.

5 **RESET button (See page 21 for details)**
Use to reset the location information of the head tracking function.

6 **HEAD TRACKING switch (See page 21 for details)**
To activate the head tracking function, switch it to ON when the output mode of the processor is set to VIRTUAL (other than OFF).

7 **VOL (Volume) control**
Use to adjust the volume.

8 **Ear pad (right)**

9 **Ear pad (left)**

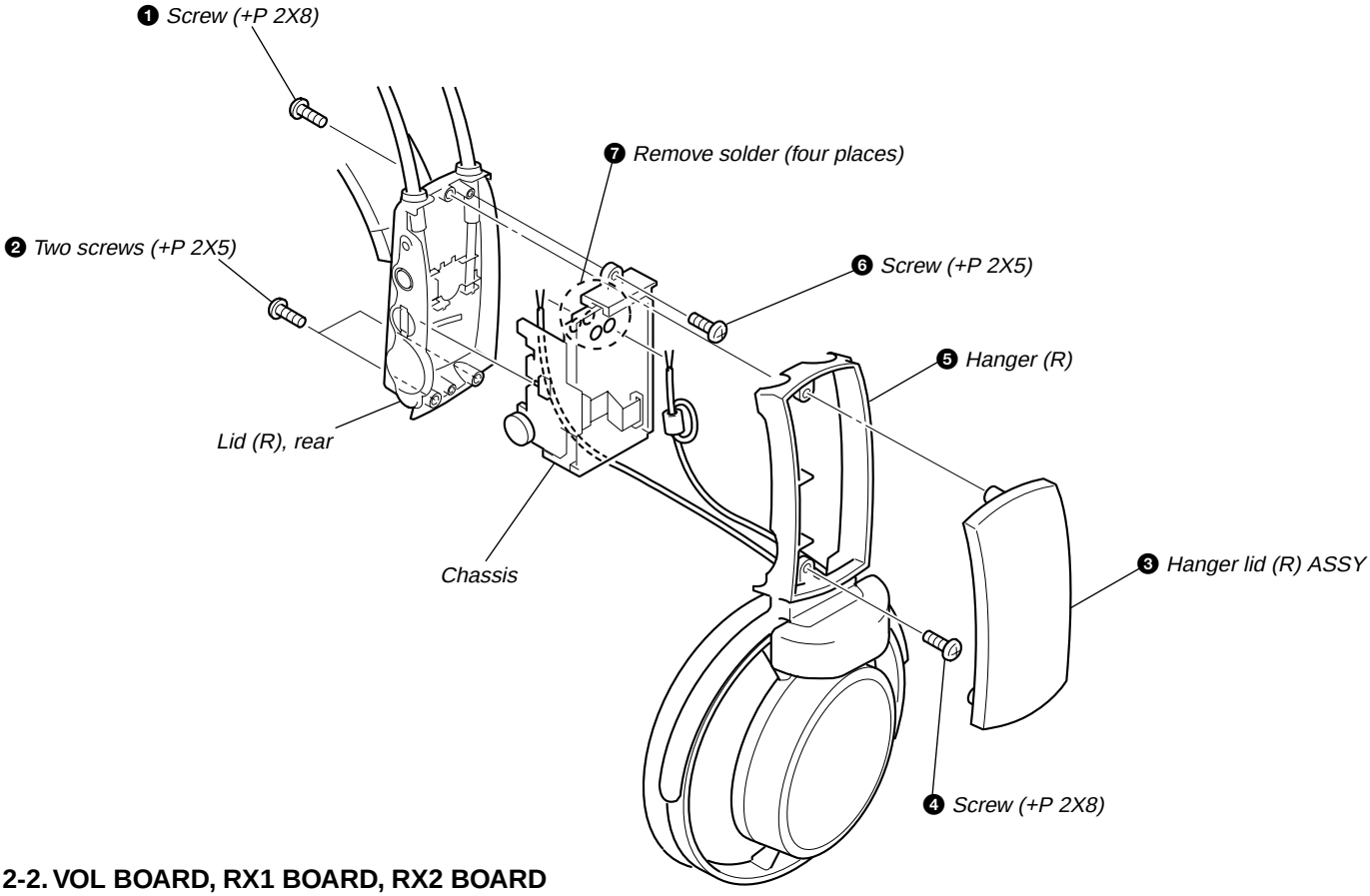
SECTION 2
DISASSEMBLY

• The equipment can be removed using the following procedure.

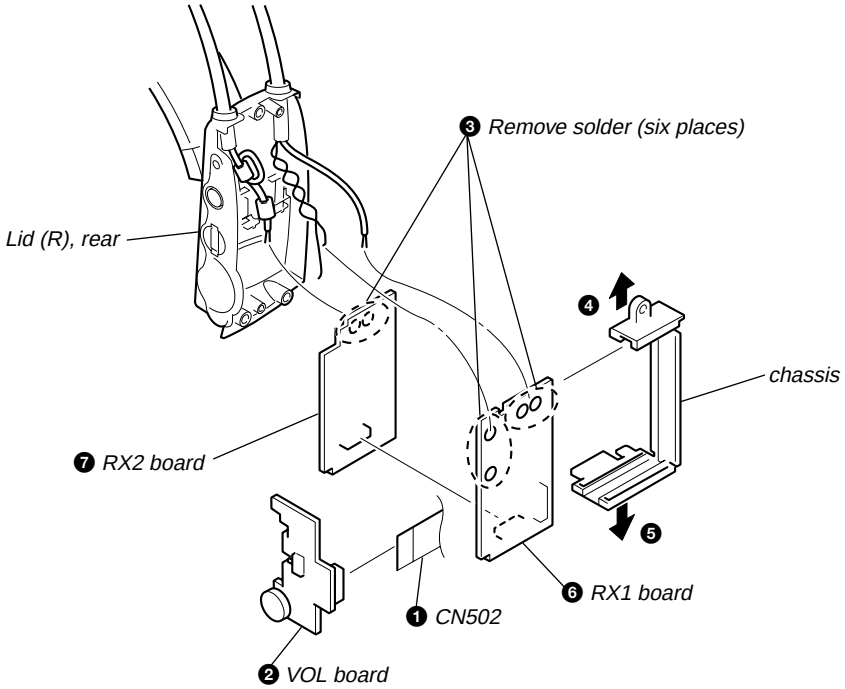
Set
- Driver ASSY (SP31) (R-CH SECTION)
- Hanger (R) → VOL board, RX1 board, RX2 board → PD1 board
- Hanger (L) → PD2 board
  - Head band (R) ASSY, Head band (F) ASSY, SW board
- Driver ASSY (SP11) (L-CH SECTION)

Note : Follow the disassembly procedure in the numerical order given.

2-1. HANGER (R)

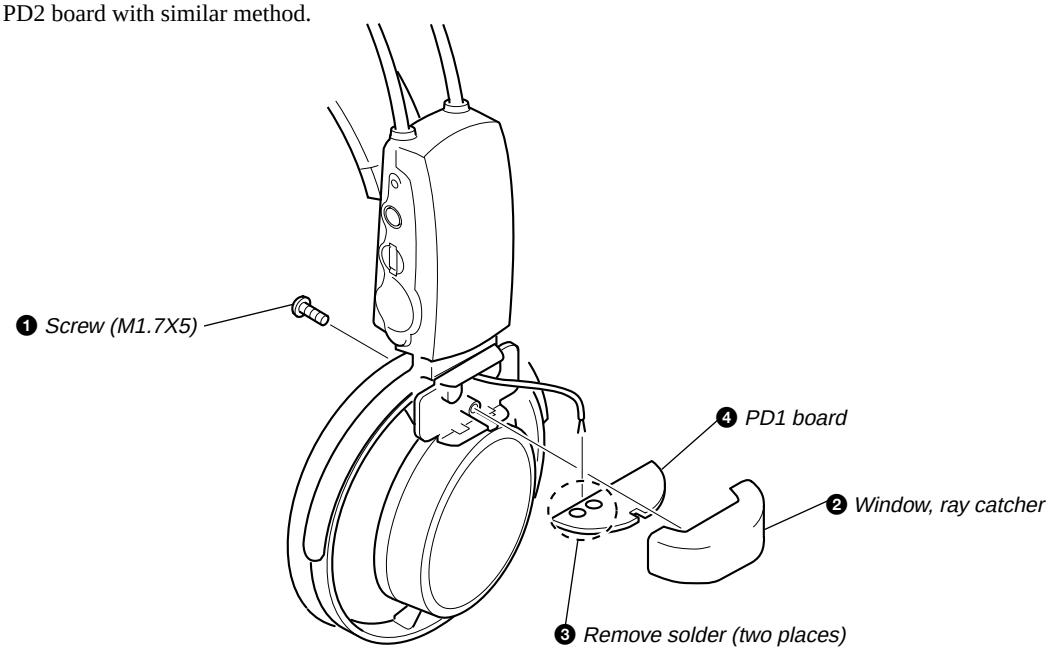


2-2. VOL BOARD, RX1 BOARD, RX2 BOARD



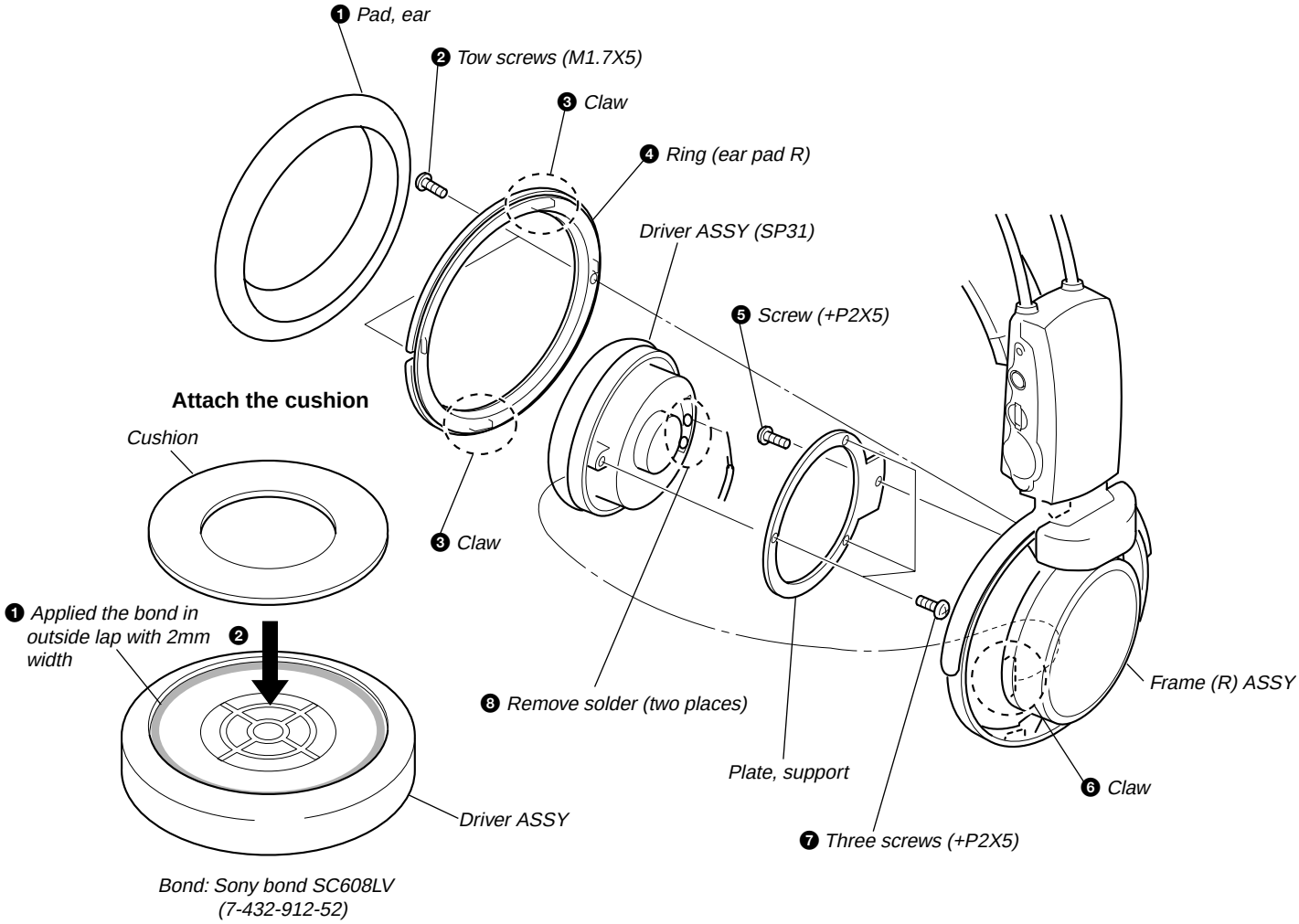
2-3. PD1 BOARD

• Can remove PD2 board with similar method.

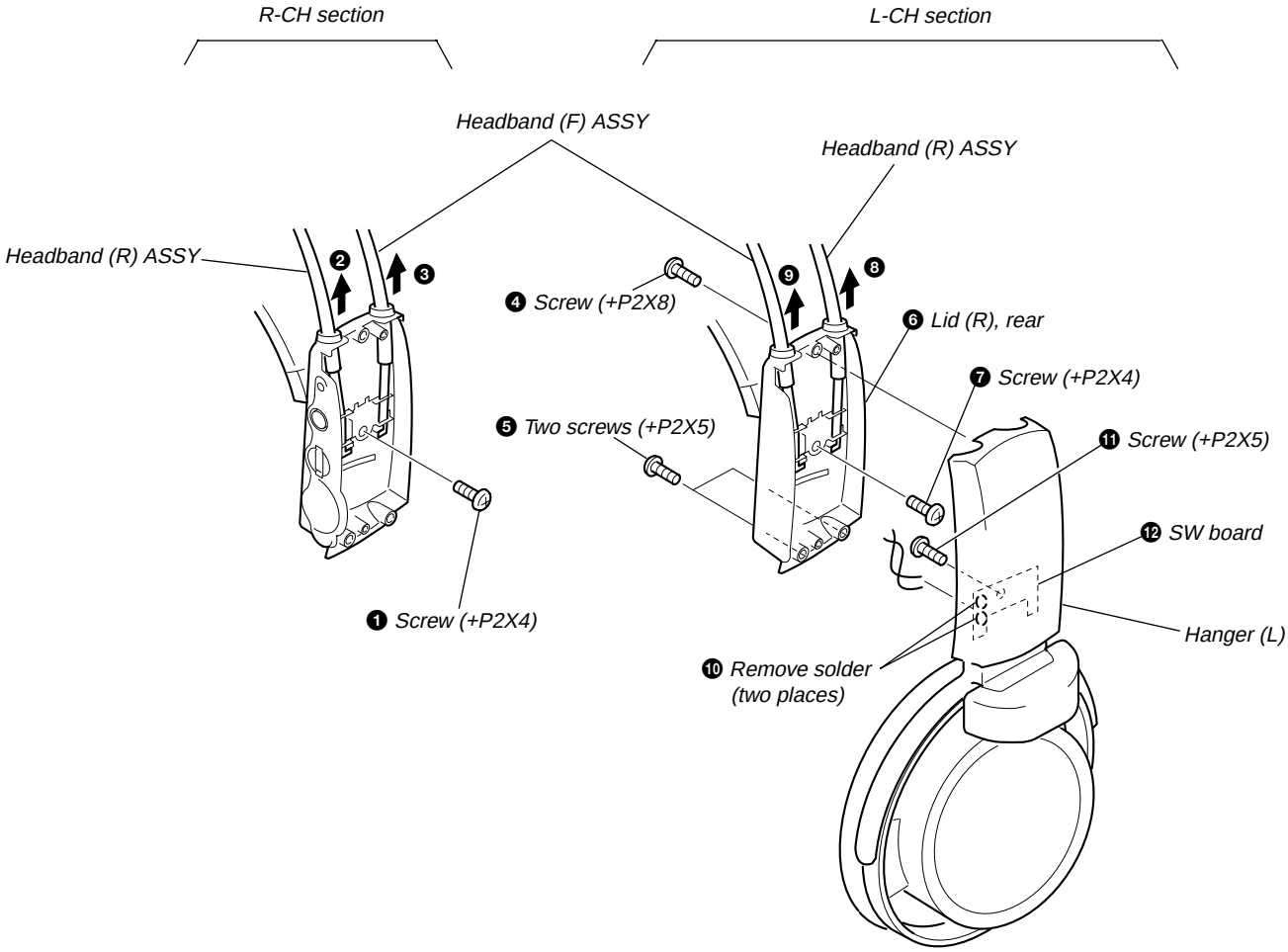


2-4. DRIVER ASSY (SP31) (R-CH SECTION), DRIVER ASSY (SP11) (L-CH SECTION)

• Can remove driver ASSY (SP11) L-CH with similar method.



2-5. HANGER (L), HEADBAND (R) ASSY, HEAD BAND (F) ASSY, SW BOARD



SECTION 3
ELECTRICAL ADJUSTMENT

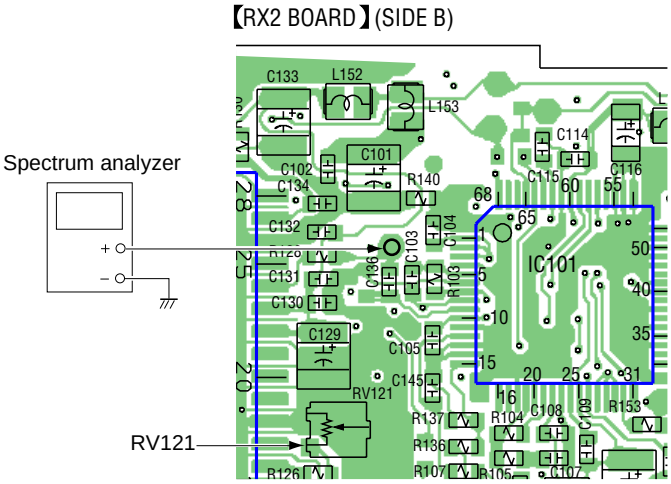
0dB=0.775V

CAUTION:
1. Apply a 2.4 volt DC supply voltage.
2. Use the processor section (DP-IF8000) as a test jig to align the headphones (MDR-IF8000).

[BPF ADJUSTMENT]

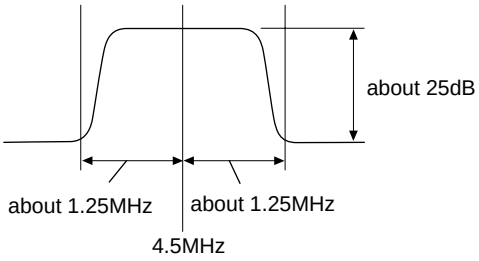
Setup:
1. Set the processor section (DP-IF8000) to test mode, and generate a -10dB signal. (Refer to the DP-IF8000 service manual.)
2. Adjust RV11 (VOLUME) on the VOL board to a minimum.

Connection and adjustment points:



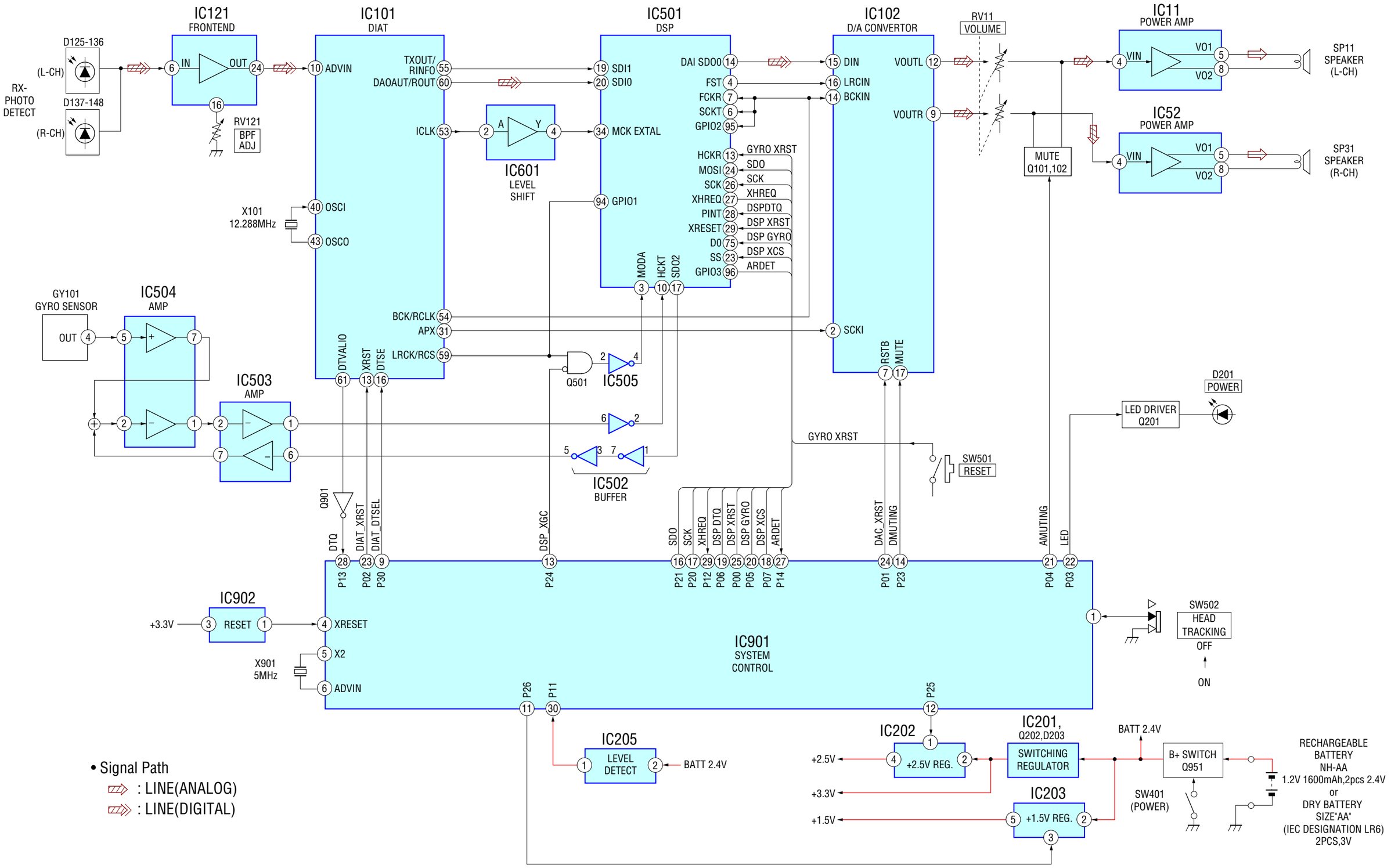
Procedure
1. Connect a spectrum analyzer to the RX2 board as shown in the above drawing.
2. Adjust the spectrum analyzer output waveform by rotating RV121 so that the center of the waveform is 4.5 MHz with a uniform balance on both sidebands.

<Reference view of spectrum analyzer waveform after adjustment>

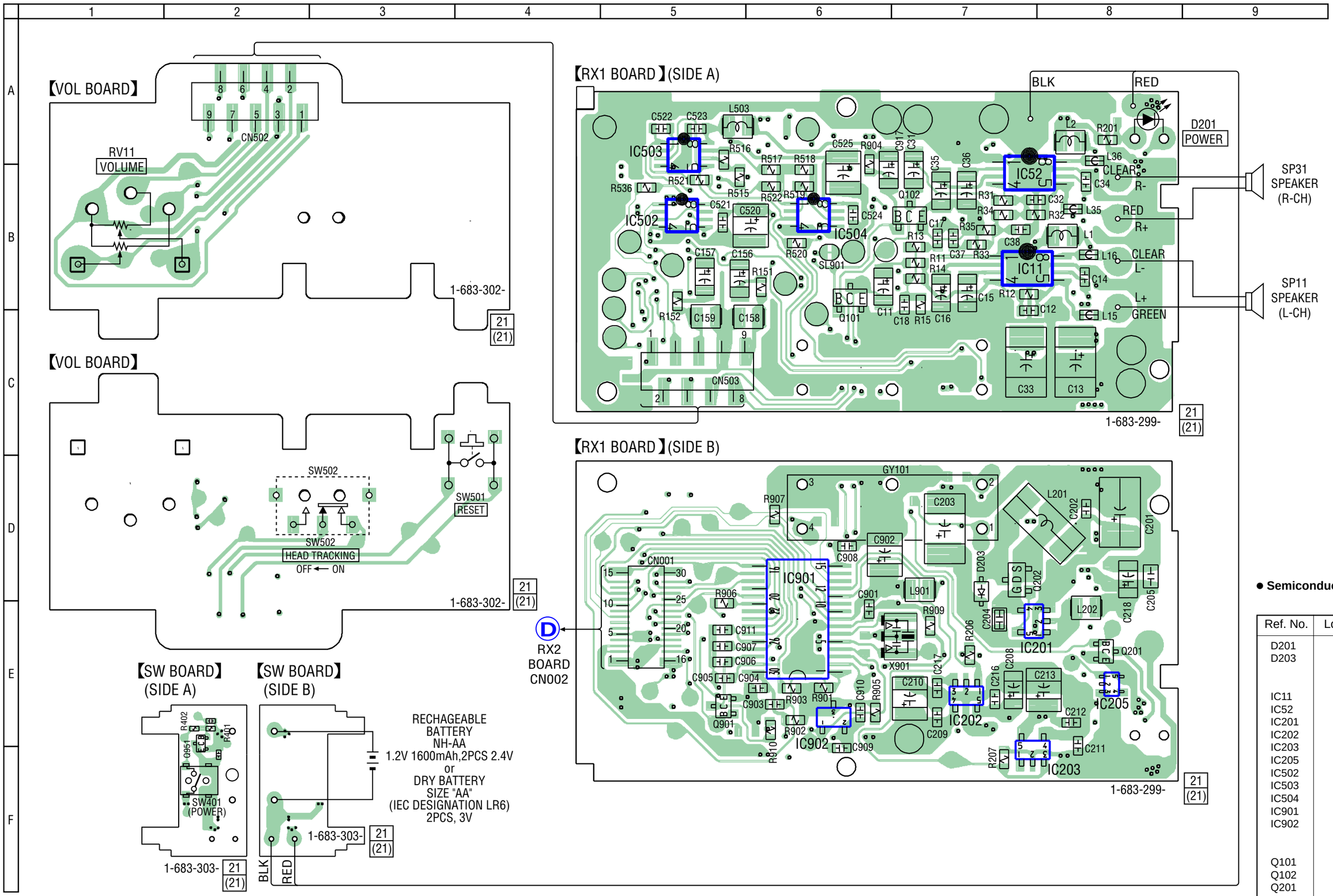


SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAMS



4-2. PRINTED WIRING BOARDS – RX1 SECTION –

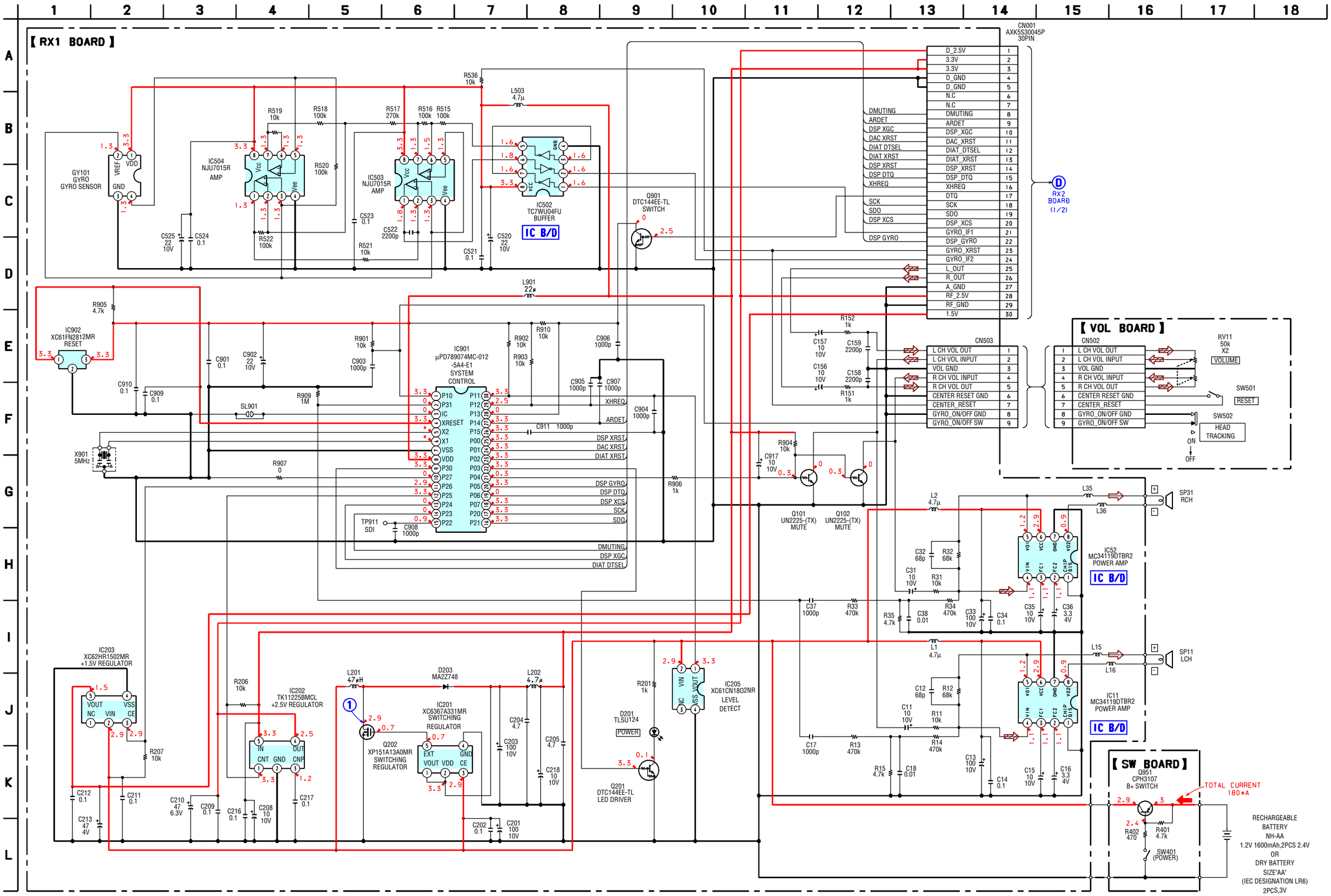


● **Semiconductor**

Ref. No.	Location
D201	E-8
D203	D-7
IC11	B-7
IC52	B-7
IC201	E-7
IC202	E-7
IC203	F-8
IC205	E-8
IC502	B-5
IC503	A-5
IC504	B-6
IC901	D-6
IC902	E-6
Q101	B-6
Q102	B-7
Q201	E-8
Q202	D-7
Q901	E-5
Q951	E-2

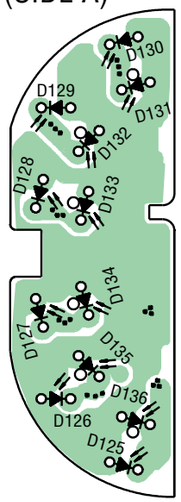
4-3. SCHEMATIC DIAGRAM – RX1 SECTION –

● Refer to page 13 for Notes. ● Refer to page 13 for IC Block Diagrams. ● Refer to page 13 for Waveforms.



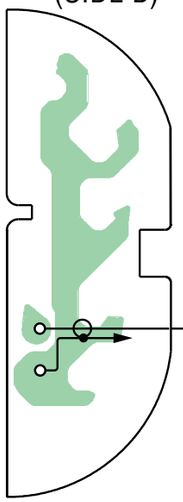
4-4. PRINTED WIRING BOARDS – RX2 SECTION –

【PD1 BOARD】 (SIDE A)



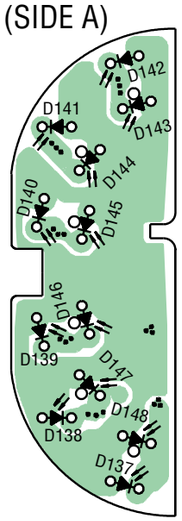
1-683-304- 21 (21)

【PD1 BOARD】 (SIDE B)



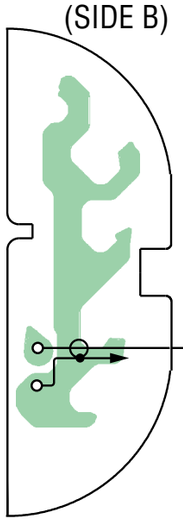
1-683-304- 21 (21)

【PD2 BOARD】 (SIDE A)



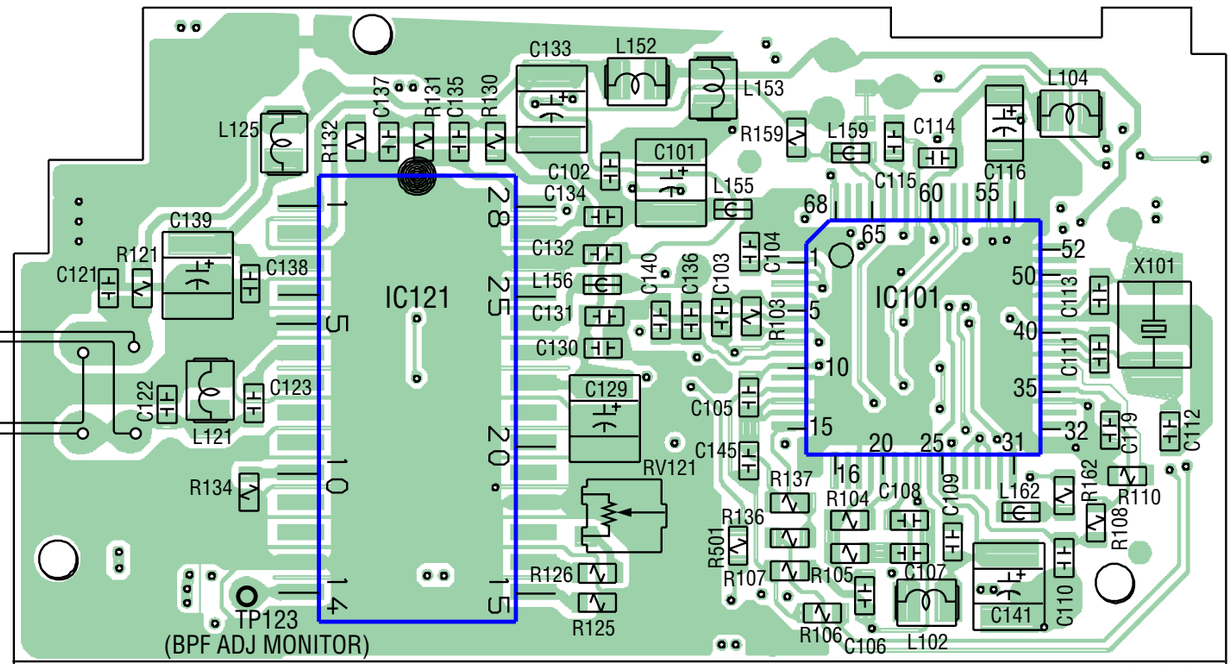
1-683-305- 21 (21)

【PD2 BOARD】 (SIDE B)



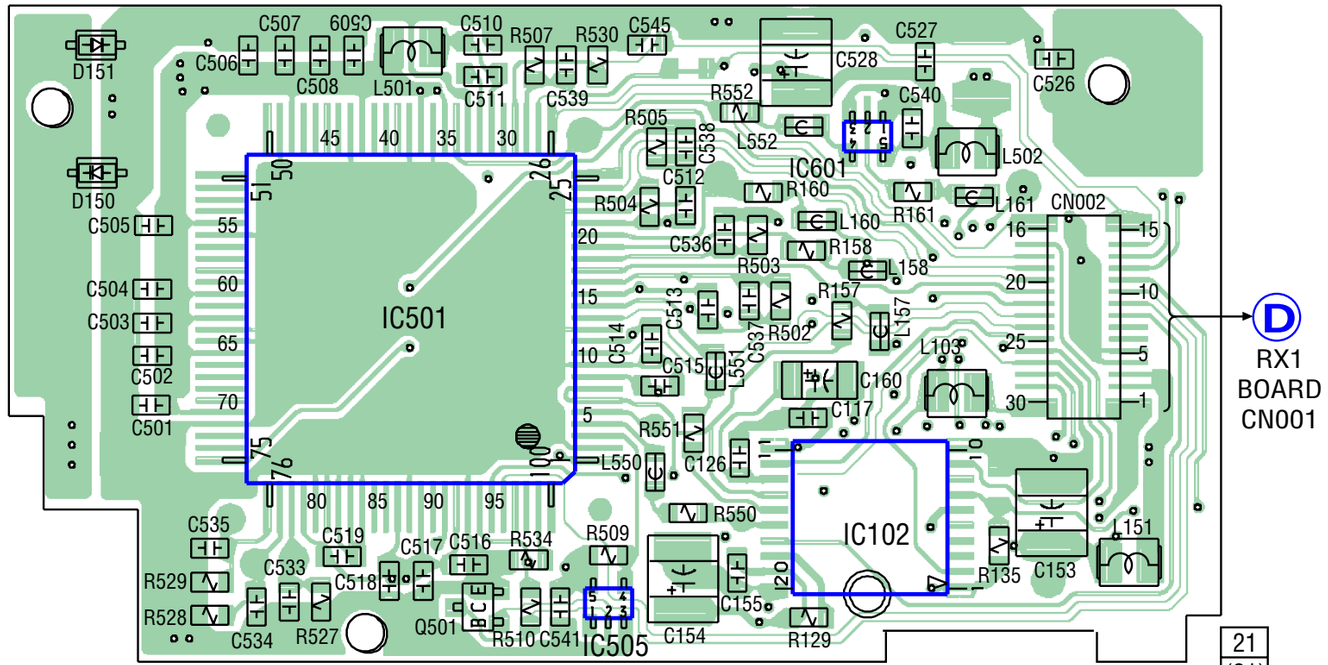
1-683-305- 21 (21)

【RX2 BOARD】(SIDE B)



1-683-300- 21 (21)

【RX2 BOARD】(SIDE A)



1-683-300- 21 (21)

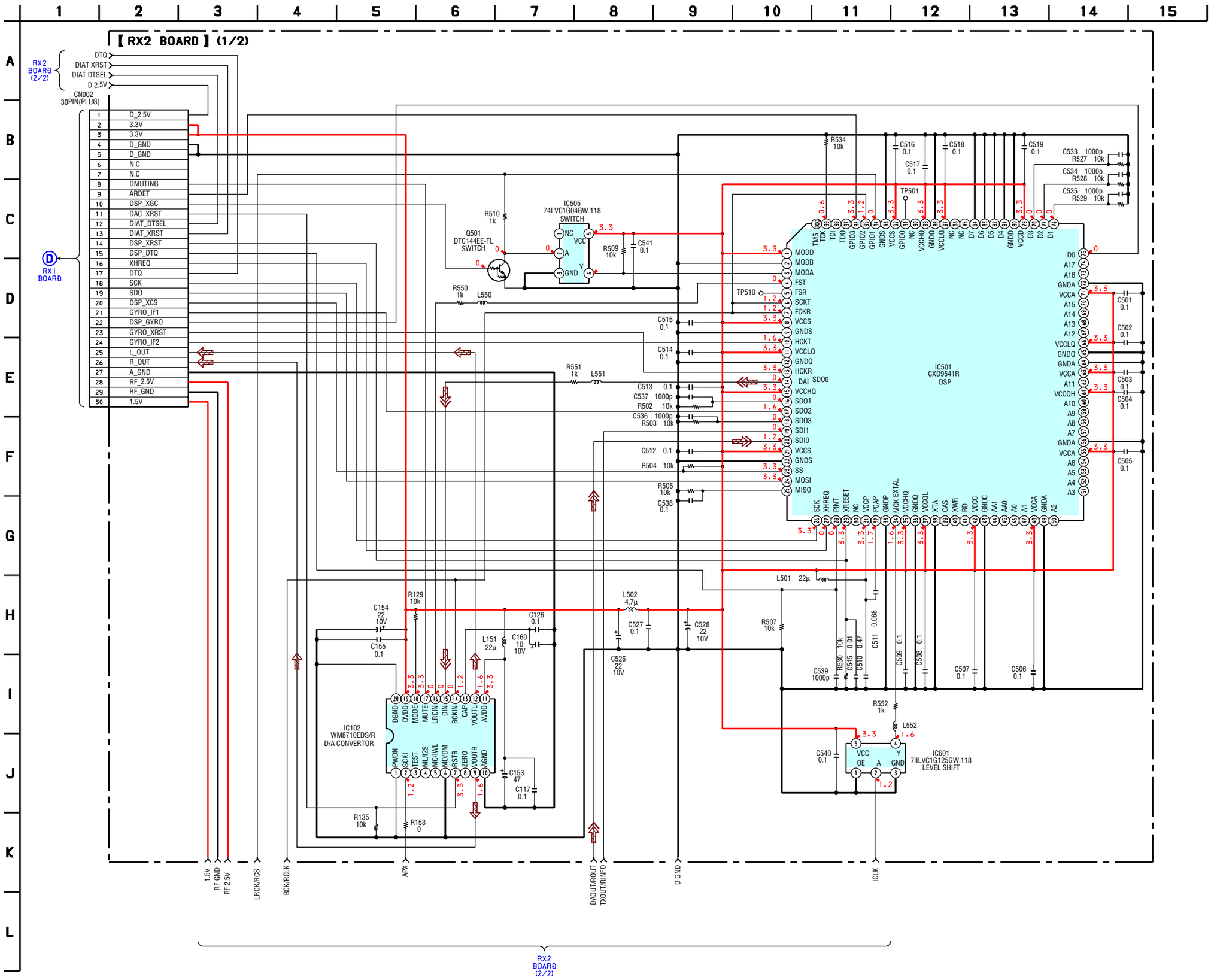
D RX1 BOARD CN001

● Semiconductor

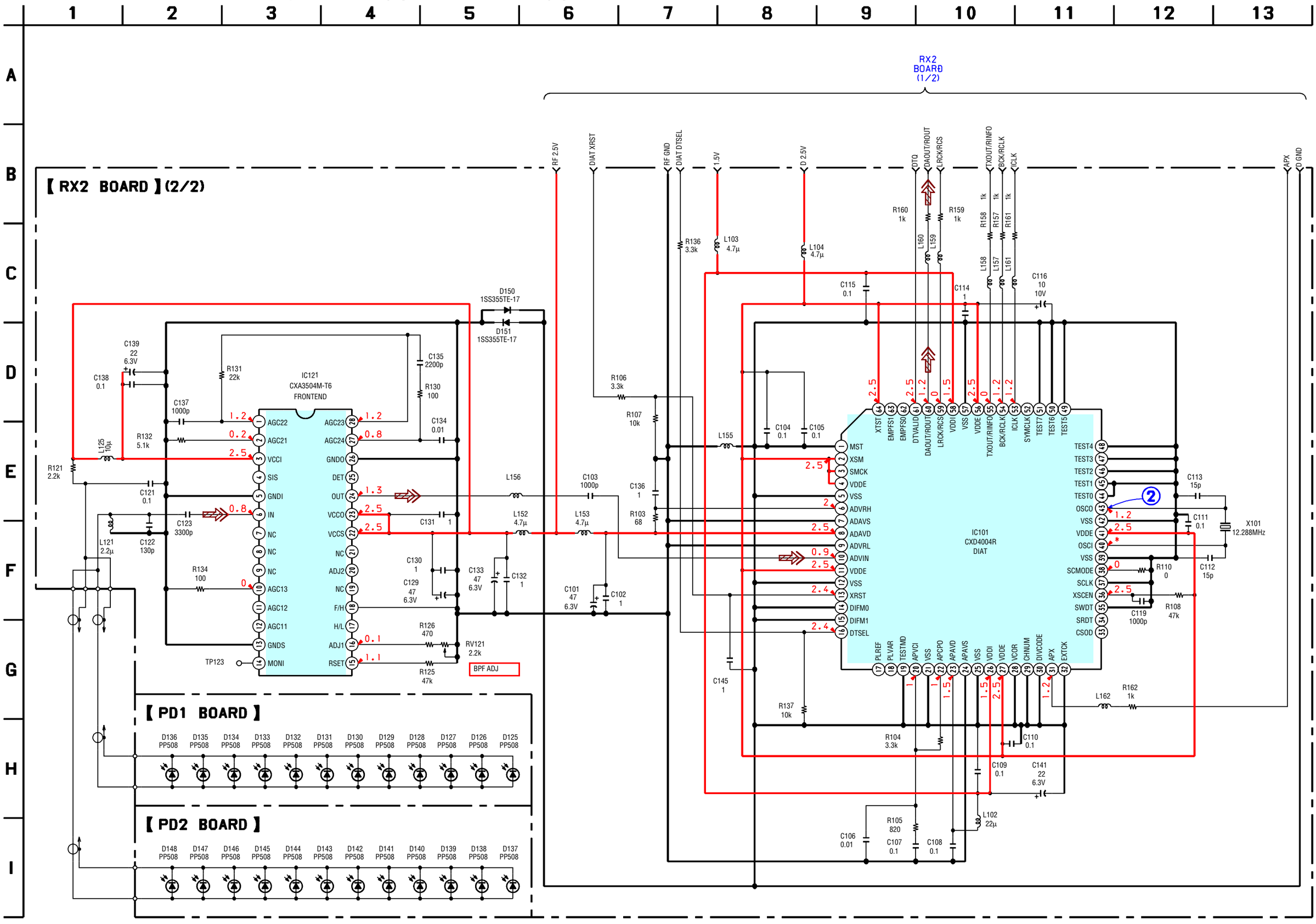
Ref. No.	Location
D125	B-1
D126	B-1
D127	B-1
D128	A-1
D129	A-1
D130	A-1
D131	A-1
D132	A-1
D133	A-1
D134	B-1
D135	B-1
D136	B-1
D137	E-1
D138	E-1
D139	D-1
D140	D-1
D141	D-1
D142	D-1
D143	D-1
D144	D-1
D145	D-1
D146	D-1
D147	E-1
D148	E-1
D150	D-4
D151	D-4
IC101	B-6
IC102	E-6
IC121	B-5
IC501	D-5
IC505	E-5
IC601	D-6
Q501	E-5

4-5. SCHEMATIC DIAGRAM – RX2 SECTION (1/2) –

● Refer to page 13 for Notes.



4-6. SCHEMATIC DIAGRAM – RX2 SECTION (2/2) – ● Refer to page 13 for Notes. ● Refer to page 13 for Waveforms.



Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : B+ Line.
- : adjustment for repair.
- Power voltage is dc 3V and fed with regulated dc power supply from battery terminal.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : LINE
- Voltages are taken with a VOM (Input impedance 10 MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

- Signal path.
  : LINE (ANALOG)
  : LINE (DIGITAL)

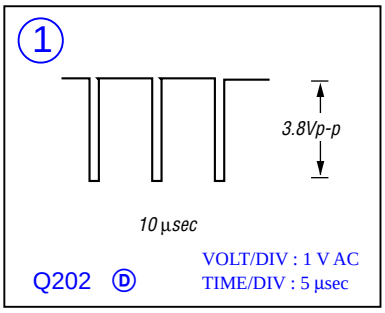
Note:

- : parts extracted from the component side.
- ○ : Through hole.
- : Pattern from the side which enables seeing.
  (The other layers'patterns are not indicated)

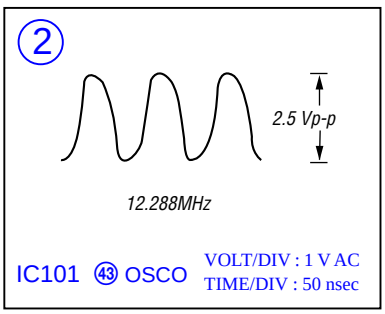
Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

● Waveforms

– RX1 SECTION –

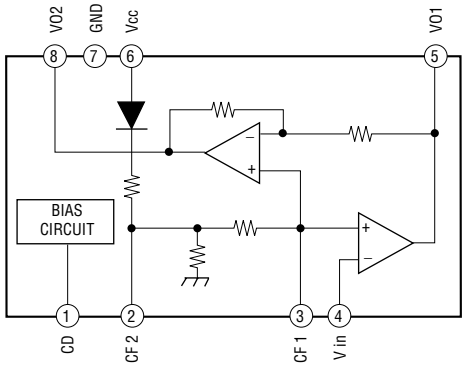


– RX2 SECTION –

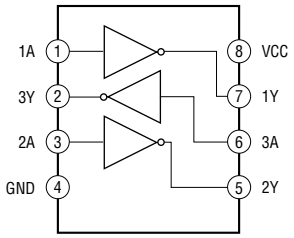


● IC Block Diagrams

IC11, 52 MC34119DTBR2



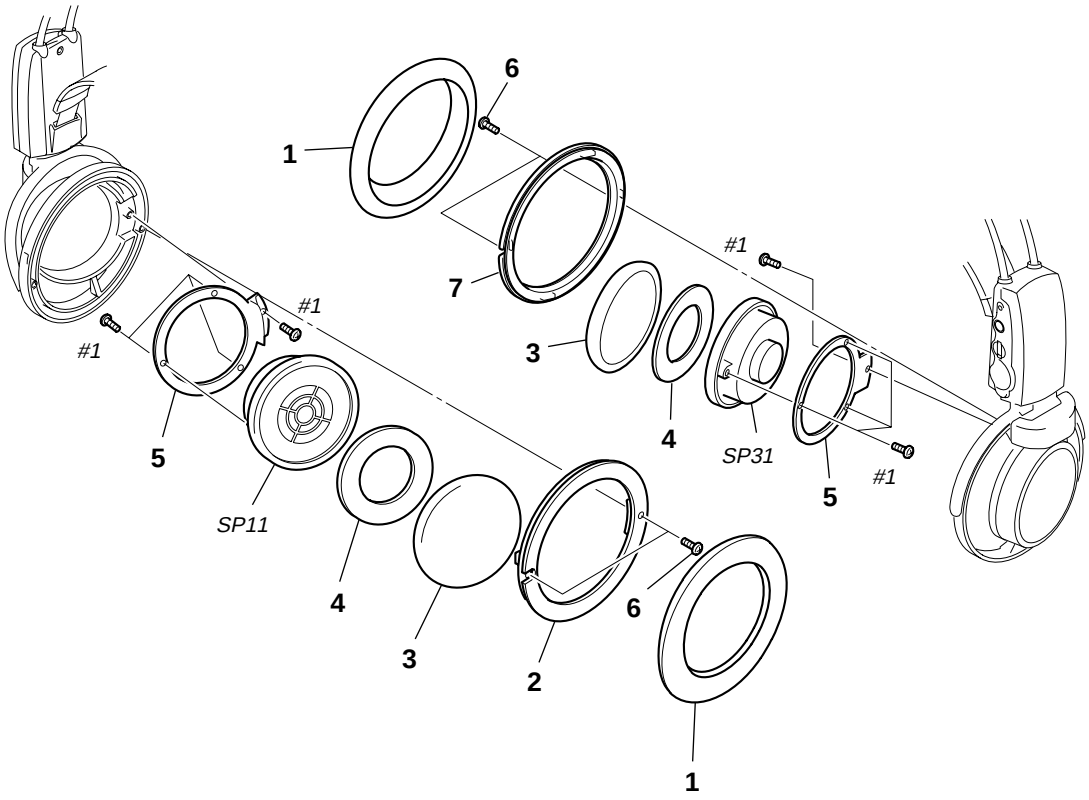
IC502 TC7WU04FU (TE12R)



SECTION 5
EXPLODED VIEWS

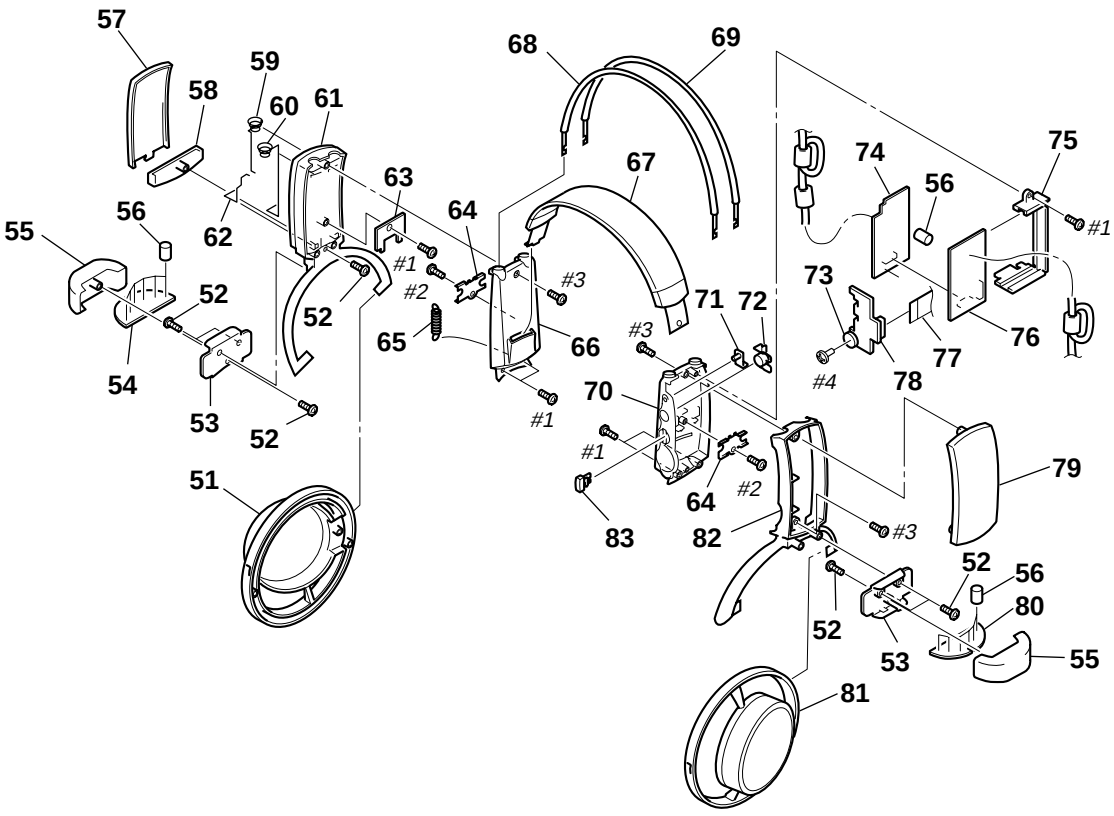
NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories are given in the last of this parts list.

5-1.DRIVER SECTION



Ref. No.	Part No.	Description	Remark
1	3-234-815-01	PAD, EAR	
2	3-234-807-01	RING (EAR PAD:L)	
3	3-234-816-01	SCREEN	
4	3-234-817-01	CUSHION	
5	3-234-805-01	PLATE, SUPPORT	
6	3-713-791-11	SCREW (M1.7X5), TAPPING, P2	
7	3-239-171-01	RING (EAR PAD :R)	
SP11	X-3381-891-1	DRIVER ASSY (L-CH)	
SP31	X-3381-891-1	DRIVER ASSY (R-CH)	
#1	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT	

5-2. HANGER SECTION



Ref. No.	Part No.	Description	Remark
51	X-3381-234-1	FRAME (L) ASSY	
52	3-713-791-11	SCREW (M1.7X5), TAPPING, P2	
53	3-234-800-01	LID (RAY CATCHER)	
54	1-683-305-11	PD2 BOARD	
55	3-234-799-01	WINDOW, RAY CATCHER	
56	3-236-005-01	HOLDER, LED (MDR)	
57	X-3381-889-1	BATTERY LID ASSY	
58	3-236-012-01	LID (L), HANGER	
59	3-234-814-01	TERMINAL (-), BATTERY	
60	3-234-813-01	TERMINAL (RELAY), BATTERY	
61	3-234-791-01	HANGER (L)	
62	3-234-812-01	TERMINAL (+), BATTERY	
63	1-683-303-11	SW BOARD	
* 64	3-234-798-01	REINFORCEMENT	
65	4-213-918-01	SPRING	
66	3-234-793-01	LID (L), REAR	
67	X-3381-236-1	SUSPENDER ASSY	
68	X-3381-887-1	HEADBAND (F) ASSY	
69	X-3381-888-1	HEADBAND (R) ASSY	

Ref. No.	Part No.	Description	Remark
70	3-234-794-01	LID (R), REAR	
71	3-234-808-01	LIGHT, GUIDE	
72	3-234-809-01	BUTTON (RESET)	
73	3-234-810-01	KNOB (VOL)	
* 74	A-3062-871-A	RX2 BOARD, COMPLETE	
75	3-234-797-01	CHASSIS	
* 76	A-3062-867-A	RX1 BOARD, COMPLETE	
77	1-926-061-60	FLAT CABLE	
78	1-683-302-11	VOL BOARD	
79	X-3381-890-1	HUNGER LID (R) ASSY	
80	1-683-304-11	PD1 BOARD	
81	X-3381-235-1	FRAME (R) ASSY	
82	3-234-792-01	HANGER (R)	
83	3-234-811-01	KNOB (GYRO)	
#1	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT	
#2	7-685-102-19	SCREW +P 2X4 TYPE2 NON-SLIT	
#3	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	
#4	7-627-551-78	SCREW,PRECISION +P 1.4X4	

PD1 PD2 RX1

SECTION 5
ELECTRICAL PARTS LIST

NOTE :
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE :Metal oxide-film resistor
  F : nonflammable
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ , for example :
  uA.... : µ A.... , uPA.... : µ PA....
  uPB.... : µ PB.... , uPC.... : µ PC....
  uPD.... : µ PD....
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H

Ref. No.	Part No.	Description	Remark
*	1-683-304-11	PD1 BOARD *********	
	3-236-005-01	HOLDER, LED (MDR)	
		< DIODE >	
D125	8-719-058-49	DIODE PP508	
D126	8-719-058-49	DIODE PP508	
D127	8-719-058-49	DIODE PP508	
D128	8-719-058-49	DIODE PP508	
D129	8-719-058-49	DIODE PP508	
D130	8-719-058-49	DIODE PP508	
D131	8-719-058-49	DIODE PP508	
D132	8-719-058-49	DIODE PP508	
D133	8-719-058-49	DIODE PP508	
D134	8-719-058-49	DIODE PP508	
D135	8-719-058-49	DIODE PP508	
D136	8-719-058-49	DIODE PP508	
**********			
*	1-683-305-11	PD2 BOARD *********	
	3-236-005-01	HOLDER, LED (MDR)	
		< DIODE >	
D137	8-719-058-49	DIODE PP508	
D138	8-719-058-49	DIODE PP508	
D139	8-719-058-49	DIODE PP508	
D140	8-719-058-49	DIODE PP508	
D141	8-719-058-49	DIODE PP508	
D142	8-719-058-49	DIODE PP508	
D143	8-719-058-49	DIODE PP508	
D144	8-719-058-49	DIODE PP508	
D145	8-719-058-49	DIODE PP508	
D146	8-719-058-49	DIODE PP508	
D147	8-719-058-49	DIODE PP508	
D148	8-719-058-49	DIODE PP508	
**********			
*	A-3062-867-A	RX1 BOARD, COMPLETE **********	
	3-236-005-01	HOLDER, LED (MDR)	

Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C11	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C12	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C13	1-135-856-11	TANTAL. CHIP	100uF	20%	10V
C14	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C15	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C16	1-104-912-11	TANTAL. CHIP	3.3uF	20%	4V
C17	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C18	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C31	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C32	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C33	1-135-856-11	TANTAL. CHIP	100uF	20%	10V
C34	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C35	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C36	1-104-912-11	TANTAL. CHIP	3.3uF	20%	4V
C37	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C38	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C156	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C157	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C158	1-104-543-11	FILM CHIP	0.0022uF	5%	50V
C159	1-104-543-11	FILM CHIP	0.0022uF	5%	50V
C201	1-135-856-11	TANTAL. CHIP	100uF	20%	10V
C202	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C203	1-135-856-11	TANTAL. CHIP	100uF	20%	10V
C204	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C205	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C208	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C209	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C210	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C211	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C212	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C213	1-110-569-21	TANTAL. CHIP	47uF	20%	4V
C216	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C217	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C218	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C520	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C521	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C522	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C523	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C524	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C525	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C901	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

Ref. No.	Part No.	Description			Remark
C902	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C903	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C904	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C905	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C906	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C907	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C908	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C909	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C910	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C911	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C917	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
		< CONNECTOR >			
* CN001	1-815-151-11	CONNECTOR, B TO B (SOCKET) 30P			
CN503	1-784-368-31	CONNECTOR, FFC/FPC 9P			
		< DIODE >			
D201	8-719-069-94	DIODE TLSU124			
D203	8-719-072-27	DIODE MA2Z748001S0			
		< SENSOR >			
GY101	1-803-042-41	SENSOR, ANGULAR VELOCITY			
		< IC >			
IC11	8-759-648-66	IC MC34119DTBR2			
IC52	8-759-648-66	IC MC34119DTBR2			
IC201	8-759-569-80	IC XC6367A331MR			
IC202	8-759-462-30	IC TK11225BMCL			
IC203	6-701-851-01	IC XC62HR1502MR			
IC205	6-701-578-01	IC XC61CN1802NR			
IC502	8-759-096-87	IC TC7WU04FU(TE12R)			
IC503	8-759-559-89	IC NJU7015R-TE2			
IC504	8-759-559-89	IC NJU7015R-TE2			
IC901	6-800-938-01	IC uPD789074MC-014-5A4-E1			
IC902	8-759-825-97	IC XC61FN2812MR			
		< COIL >			
L1	1-469-524-11	INDUCTOR	4.7uH		
L2	1-469-524-11	INDUCTOR	4.7uH		
L15	1-414-760-21	FERRITE	0uH		
L16	1-414-760-21	FERRITE	0uH		
L35	1-414-760-21	FERRITE	0uH		
L36	1-414-760-21	FERRITE	0uH		
L201	1-419-384-21	INDUCTOR	47uH		
L202	1-469-524-11	INDUCTOR	4.7uH		
L503	1-469-524-11	INDUCTOR	4.7uH		
L901	1-469-526-11	INDUCTOR	22uH		
		< TRANSISTOR >			
Q101	8-729-043-69	TRANSISTOR UN2225-(TX).S0			
Q102	8-729-043-69	TRANSISTOR UN2225-(TX).S0			
Q201	8-729-928-81	TRANSISTOR DTC144EE			
Q202	8-729-052-37	TRANSISTOR XP151A13A0MR			
Q901	8-729-928-81	TRANSISTOR DTC144EE			
		< RESISTOR >			
R11	1-216-833-11	METAL CHIP	10K	5%	1/16W
R12	1-216-843-11	METAL CHIP	68K	5%	1/16W
R13	1-216-853-11	METAL CHIP	470K	5%	1/16W
R14	1-216-853-11	METAL CHIP	470K	5%	1/16W
R15	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R31	1-216-833-11	METAL CHIP	10K	5%	1/16W
R32	1-216-843-11	METAL CHIP	68K	5%	1/16W
R33	1-216-853-11	METAL CHIP	470K	5%	1/16W
R34	1-216-853-11	METAL CHIP	470K	5%	1/16W
R35	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R151	1-216-821-11	METAL CHIP	1K	5%	1/16W
R152	1-216-821-11	METAL CHIP	1K	5%	1/16W
R201	1-216-821-11	METAL CHIP	1K	5%	1/16W
R206	1-216-833-11	METAL CHIP	10K	5%	1/16W
R207	1-216-833-11	METAL CHIP	10K	5%	1/16W
R515	1-216-845-11	METAL CHIP	100K	5%	1/16W
R516	1-216-845-11	METAL CHIP	100K	5%	1/16W
R517	1-216-850-11	METAL CHIP	270K	5%	1/16W
R518	1-216-845-11	METAL CHIP	100K	5%	1/16W
R519	1-216-833-11	METAL CHIP	10K	5%	1/16W
R520	1-216-845-11	METAL CHIP	100K	5%	1/16W
R521	1-216-833-11	METAL CHIP	10K	5%	1/16W
R522	1-216-845-11	METAL CHIP	100K	5%	1/16W
R536	1-216-833-11	METAL CHIP	10K	5%	1/16W
R901	1-216-833-11	METAL CHIP	10K	5%	1/16W
R902	1-216-833-11	METAL CHIP	10K	5%	1/16W
R903	1-216-833-11	METAL CHIP	10K	5%	1/16W
R904	1-216-833-11	METAL CHIP	10K	5%	1/16W
R905	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R906	1-216-821-11	METAL CHIP	1K	5%	1/16W
R907	1-216-864-11	METAL CHIP	0	5%	1/16W
R909	1-216-857-11	METAL CHIP	1M	5%	1/16W
R910	1-216-833-11	METAL CHIP	10K	5%	1/16W
		< VIBRATOR >			
X901	1-795-121-21	VIBRATOR, CERAMIC (5MHz)			
**********					
*	A-3062-871-A	RX2 BOARD, COMPLETE			
		**********			
C101	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C102	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C103	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C104	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C105	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C106	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C107	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C108	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C109	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C110	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C111	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C112	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C113	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C114	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C115	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C116	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C117	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C119	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C121	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

RX2

Ref. No.	Part No.	Description			Remark
C122	1-164-384-11	CERAMIC CHIP	130PF	5%	50V
C123	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C126	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C129	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C130	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C131	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C132	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C133	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C134	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C135	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C136	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C137	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C138	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C139	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V
C141	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V
C145	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C153	1-137-934-11	TANTAL. CHIP	47uF	20%	10V
C154	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C155	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C160	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C501	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C502	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C503	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C504	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C505	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C506	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C507	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C508	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C509	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C510	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C511	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C512	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C513	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C514	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C515	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C516	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C517	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C518	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C519	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C526	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C527	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C528	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C533	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C534	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C535	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C536	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C537	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C538	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C539	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C540	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C541	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C545	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< CONNECTOR >			
CN002	1-816-181-21	CONNECTOR, BOARD TO BOARD 30P			

Ref. No.	Part No.	Description				Remark
		< DIODE >				
D150	8-719-988-61	DIODE 1SS355TE-17				
D151	8-719-988-61	DIODE 1SS355TE-17				
		< IC >				
IC101	6-701-579-01	IC CXD4004R				
IC102	6-701-586-01	IC WM8710EDS/R				
IC121	8-752-096-17	IC CXA3504M-T6				
IC501	8-759-827-10	IC CXD9541R				
IC505	6-701-581-01	IC 74LVC1G04GW.115				
IC601	6-701-580-01	IC 74LVC1G125GW.115				
		< COIL >				
L102	1-469-526-11	INDUCTOR	22uH			
L103	1-469-524-11	INDUCTOR	4.7uH			
L104	1-469-524-11	INDUCTOR	4.7uH			
L121	1-410-196-11	INDUCTOR	2.2uH			
L125	1-469-525-91	INDUCTOR	10uH			
L151	1-469-526-11	INDUCTOR	22uH			
L152	1-469-524-11	INDUCTOR	4.7uH			
L153	1-469-524-11	INDUCTOR	4.7uH			
L155	1-414-594-11	FERRITE	0uH			
L156	1-414-760-21	FERRITE	0uH			
L157	1-414-760-21	FERRITE	0uH			
L158	1-414-760-21	FERRITE	0uH			
L159	1-414-760-21	FERRITE	0uH			
L160	1-414-760-21	FERRITE	0uH			
L161	1-414-760-21	FERRITE	0uH			
L162	1-414-760-21	FERRITE	0uH			
L501	1-469-526-11	INDUCTOR	22uH			
L502	1-469-524-11	INDUCTOR	4.7uH			
L550	1-414-760-21	FERRITE	0uH			
L551	1-414-760-21	FERRITE	0uH			
L552	1-414-760-21	FERRITE	0uH			
		< TRANSISTOR >				
Q501	8-729-928-81	TRANSISTOR DTC144EE				
		< RESISTOR >				
R103	1-218-664-11	METAL CHIP	68	0.5%	1/16W	
R104	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R105	1-216-820-11	METAL CHIP	820	5%	1/16W	
R106	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R107	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R108	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R110	1-216-864-11	METAL CHIP	0	5%	1/16W	
R121	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R125	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R126	1-216-817-11	METAL CHIP	470	5%	1/16W	
R129	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R130	1-216-809-11	METAL CHIP	100	5%	1/16W	
R131	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R132	1-218-272-11	RES-CHIP	5.1K	5%	1/10W	
R134	1-216-809-11	METAL CHIP	100	5%	1/16W	
R135	1-216-833-11	METAL CHIP	10K	5%	1/16W	

Ref. No.	Part No.	Description			Remark
R136	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R137	1-216-833-11	METAL CHIP	10K	5%	1/16W
R157	1-216-821-11	METAL CHIP	1K	5%	1/16W
R158	1-216-821-11	METAL CHIP	1K	5%	1/16W
R159	1-216-821-11	METAL CHIP	1K	5%	1/16W
R160	1-216-821-11	METAL CHIP	1K	5%	1/16W
R161	1-216-821-11	METAL CHIP	1K	5%	1/16W
R162	1-216-821-11	METAL CHIP	1K	5%	1/16W
R502	1-216-833-11	METAL CHIP	10K	5%	1/16W
R503	1-216-833-11	METAL CHIP	10K	5%	1/16W
R504	1-216-833-11	METAL CHIP	10K	5%	1/16W
R505	1-216-833-11	METAL CHIP	10K	5%	1/16W
R507	1-216-833-11	METAL CHIP	10K	5%	1/16W
R509	1-216-833-11	METAL CHIP	10K	5%	1/16W
R510	1-216-821-11	METAL CHIP	1K	5%	1/16W
R527	1-216-833-11	METAL CHIP	10K	5%	1/16W
R528	1-216-833-11	METAL CHIP	10K	5%	1/16W
R529	1-216-833-11	METAL CHIP	10K	5%	1/16W
R530	1-216-833-11	METAL CHIP	10K	5%	1/16W
R534	1-216-833-11	METAL CHIP	10K	5%	1/16W
R535	1-216-864-11	METAL CHIP	0	5%	1/16W
R550	1-216-821-11	METAL CHIP	1K	5%	1/16W
R551	1-216-821-11	METAL CHIP	1K	5%	1/16W
R552	1-216-821-11	METAL CHIP	1K	5%	1/16W
		< VARIABLE RESISTOR >			
RV121	1-238-854-11	RES, ADJ, CERMET 2.2K (BPF)			
		< VIBRATOR >			
X101	1-795-485-21	VIBRATOR, CRYSTAL (SMD) (12.288MHz)			
**********					
*	1-683-303-11	SW BOARD ********			
		< TRANSISTOR >			
Q951	8-729-053-67	TRANSISTOR CPH3107-TL			
		< RESISTOR >			
R401	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R402	1-216-817-11	METAL CHIP	470	5%	1/16W
		< SWITCH >			
SW401	1-572-467-61	SWITCH, PUSH (1 KEY) (POWER)			
**********					
*	1-683-302-11	VOL BOARD *********			
	3-234-810-01	KNOB (VOL)			
	7-627-551-78	SCREW,PRECISION +P 1.4X4			
		< CONNECTOR >			
CN502	1-784-368-31	CONNECTOR, FFC/FPC 9P			
		< VARIABLE RESISTOR >			
RV11	1-227-448-11	RES, VAR, CARBON 50K/50K (VOL) (VOLUME)			

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
SW501	1-786-015-21	SWITCH, TACTILE (RESET)	
SW502	1-692-397-21	SWITCH, SLIDE (HEAD TRACKING)	
**********			
		MISCELLANEOUS **********	
77	1-926-061-60	FLAT CABLE	
SP11	X-3381-891-1	DRIVER ASSY (L-CH)	
SP31	X-3381-891-1	DRIVER ASSY (R-CH)	
**********			
		ACCESSORIES **********	
	1-756-272-11	BATTERY, NICKEL HYDROGEN	
	3-238-078-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH,SPANISH)	
	3-238-078-21	MANUAL, INSTRUCTION (GERMAN,DUTCH, ITARIAN,PORTUGUESE)(AEP)	
	3-238-080-01	LABEL, ITF BAR CODE	

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2002. 02	New
1.1	2002. 03	Addition of UK model. (ENG-02010)