

tmr-if33

Canadian Model
AEP Model
E Model
Tourist Model



SPECIFICATIONS

General

Modulation system	Frequency modulation
Carrier frequency	Right 2.8 MHz Left 2.3 MHz
Effective range	Up to approx. 9 m (29 ft.)
Frequency response	18 – 22,000 Hz
Distortion	Less than 1% at 1 kHz

Transmitter TMR-IF33

Power source DC IN 9V jack accepts:
Supplied AC power adaptor for use on

Where purchased	Operating voltage
U.S.A./Canada	120 V AC, 60 Hz
U.K.	240 V AC, 50 Hz
European countries	220 – 230 V AC, 50 Hz
Other countries	110 – 120 V/220 – 240 V AC, 50/60 Hz

Audio input	Phono jacks/stereo mini jack
Dimensions	Approx. 90 × 203 × 90 mm (35/8 × 8 × 35/8 in.) (w/h/d)
Mass	Approx. 140 g (4.9 oz.)

Supplied accessories

- AC power adaptor (1)
- Plug adaptor
(stereo mini jack ↔ stereo phone plug) (1)
- Connecting cord
(stereo mini plug ↔ phono plug × 2) (1)
- Plastic plate with strap (1)
- Screws (2)

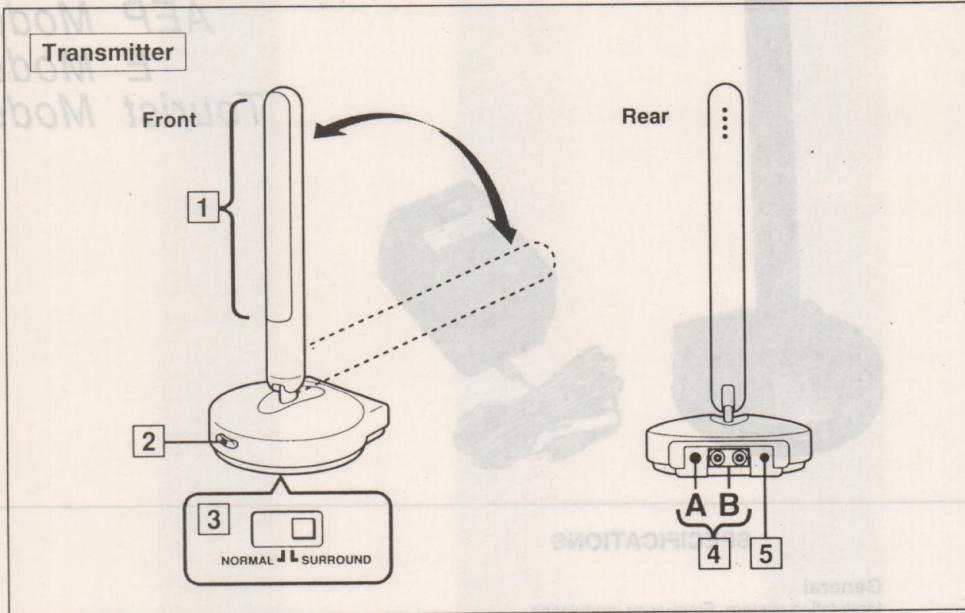
Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Design and specifications subject to change without notice.

TRANSMITTER
SONY®

Parts Identification



- 1 **Infrared emitters**
You can adjust the angle of the infrared emitter part of the transmitter.
- 2 **POWER switch**
- 3 **Mode (NORMAL/SURROUND) switch**
- 4 **AUDIO IN (audio input) terminals**
A: stereo mini jack
B: phono jacks
- 5 **DC IN 9V (DC external power input) jack**

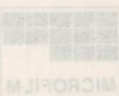
Operating voltage	Where purchased
150 V AC, 60 Hz	U.S.A./Canada
240 V AC, 50 Hz	U.K.
250 - 250 V AC, 50 Hz	European countries
110 - 120 V/250 - 240 V AC, 60/50 Hz	Other countries

Flexible Circuit Board Repairing

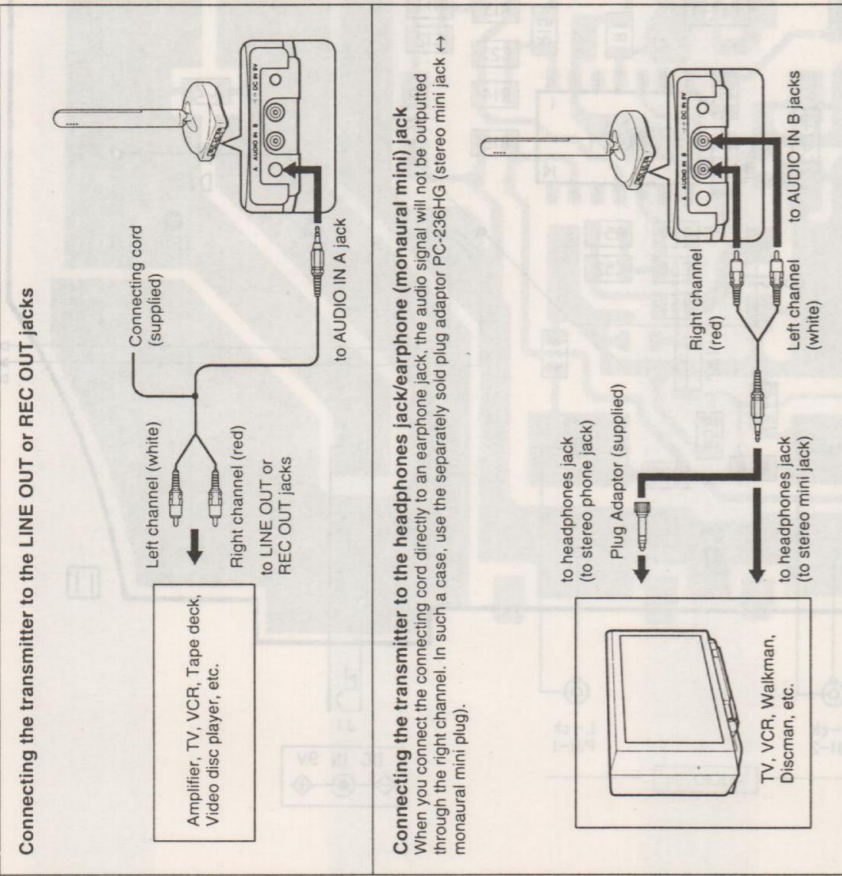
- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

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.



Connecting to Audio/Video Equipment



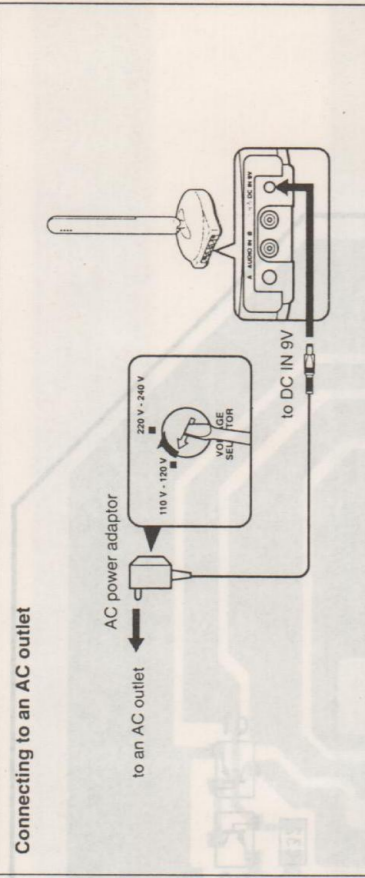
Do not use the terminals A and B at the same time. If you do so, the audio signals may be mixed. When you use the supplied connecting cord and you wish to connect it to the LINE OUT or REC OUT jacks of the source equipment, connect the other end to the AUDIO IN A jack of the transmitter. If you wish to connect the cord to the headphones jack of the source equipment, connect the other end to the AUDIO IN B jacks of the transmitter.

Optional connecting cords

For connecting the LINE OUT or REC OUT jacks to the AUDIO IN B jacks:
 RK-C510KS (1 m)/C515KS (1.5 m)/C520KS (2 m) (phono plug x 2 ↔ phono plug x 2)

For connecting the headphones jack to the AUDIO IN A jack:
 RK-G136KS (stereo mini plug ↔ stereo mini plug)

Optional connecting cord similar to the one supplied to this system:
 RK-G129KS (stereo mini plug ↔ phono plug x 2)

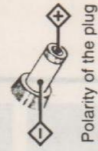


Adjusting the Operating Voltage of the AC Power Adaptor

For the customers supplied with the model equipped with the VOLTAGE SELECTOR. Before connecting the AC power adaptor to an AC outlet, check that the VOLTAGE SELECTOR is set to the correct position with the right operating voltage. If not, set it to the correct position with a screwdriver.

Notes on the AC power adaptor

- If the plug of the AC power adaptor does not fit in the AC outlet, use the supplied AC plug adaptor.
- Use only the supplied AC power adaptor. Do not use any other AC power adaptor.



* Except for Canada, U.K. and Europe models.

SECTION 2 ELECTRICAL ADJUSTMENTS

1. Adjust in the order given.
2. Adjust or measure every channels unless otherwise specified.

TX BOARD

Oscillating Frequency Adjustment

Procedure : No signal state.

1. Short-circuit between TP1 and TP3 (L-ch) or TP1 and TP2 (R-ch).
2. Connect a frequency counter to TP4 (L-ch) or TP5 (R-ch).
3. Adjust with L11 or L51 so that the reading on the frequency counter becomes to the adjusting value.

Adjusting value :

L-ch	L11	2.3MHz ± 2kHz
R-ch	L51	2.8MHz ± 2kHz

RF Level Adjustment

Procedure : No signal state.

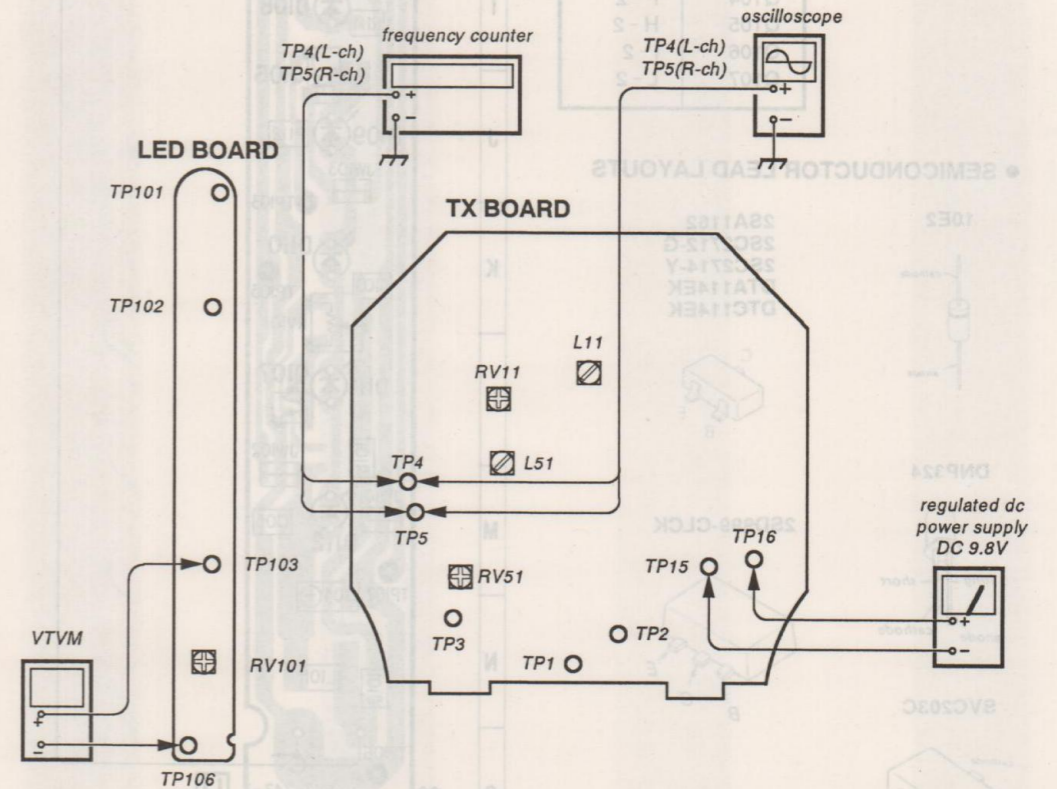
1. Connect a oscilloscope to TP4 (L-ch) or TP5 (R-ch).
2. Adjust with RV11 or RV51 so that the reading on the oscilloscope becomes to the adjusting value.

Adjusting value :

L-ch	RV11	1Vp-p - 1.1Vp-p
R-ch	RV51	1Vp-p - 1.1Vp-p

3. Remove the short-circuit position TP1 - TP3 and TP1 - TP2.

Connection and Adjustment Location :



LED BOARD

Bias Current Adjustment

Procedure :

1. Connect a digital voltmeter to TP103 and TP106.
2. Adjust with RV101 so that the reading on the digital voltmeter becomes to the adjusting value. Adjusting value : 600 - 650mV.
3. Check the voltage values on TP101 and TP102 become to within the range of the adjusting value.

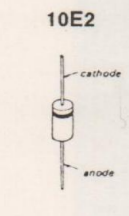
SECTION 3
DIAGRAMS

3-1. PRINTED WIRING BOARD

● SEMICONDUCTOR LOCATION

Ref. No.	Location
D1	J-15
D11	F-12
D51	G-9
D101	B-2
D102	C-2
D103	D-2
D104	E-2
D105	F-2
D106	G-2
D107	H-2
D108	I-2
D109	J-2
D110	K-2
D111	L-2
D112	M-2
IC1	J-11
IC2	F-13
Q1	G-14
Q2	G-14
Q12	G-11
Q13	H-8
Q14	G-6
Q52	H-8
Q54	I-8
Q101	C-1
Q102	B-2
Q103	E-2
Q104	F-2
Q105	H-2
Q106	I-2
Q107	L-2

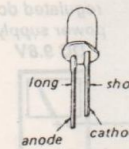
● SEMICONDUCTOR LEAD LAYOUTS



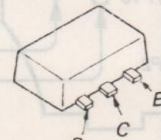
2SA1162
2SC2712-G
2SC2714-Y
DTA114EK
DTC114EK



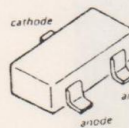
DNP324



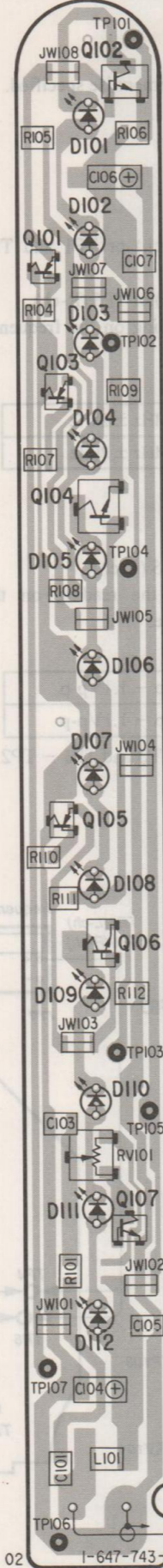
2SD999-CLCK



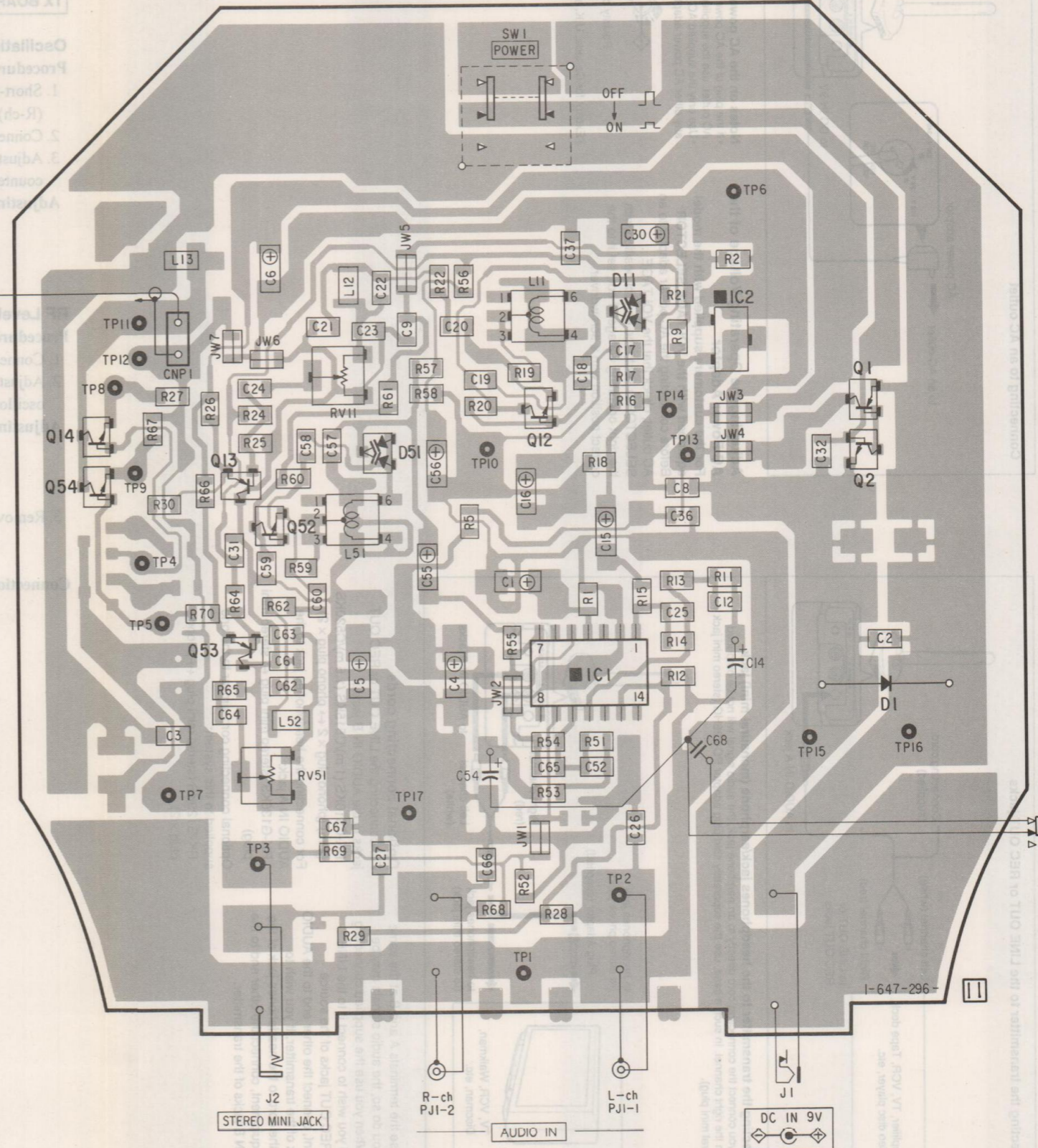
SVC203C



[LED BOARD]



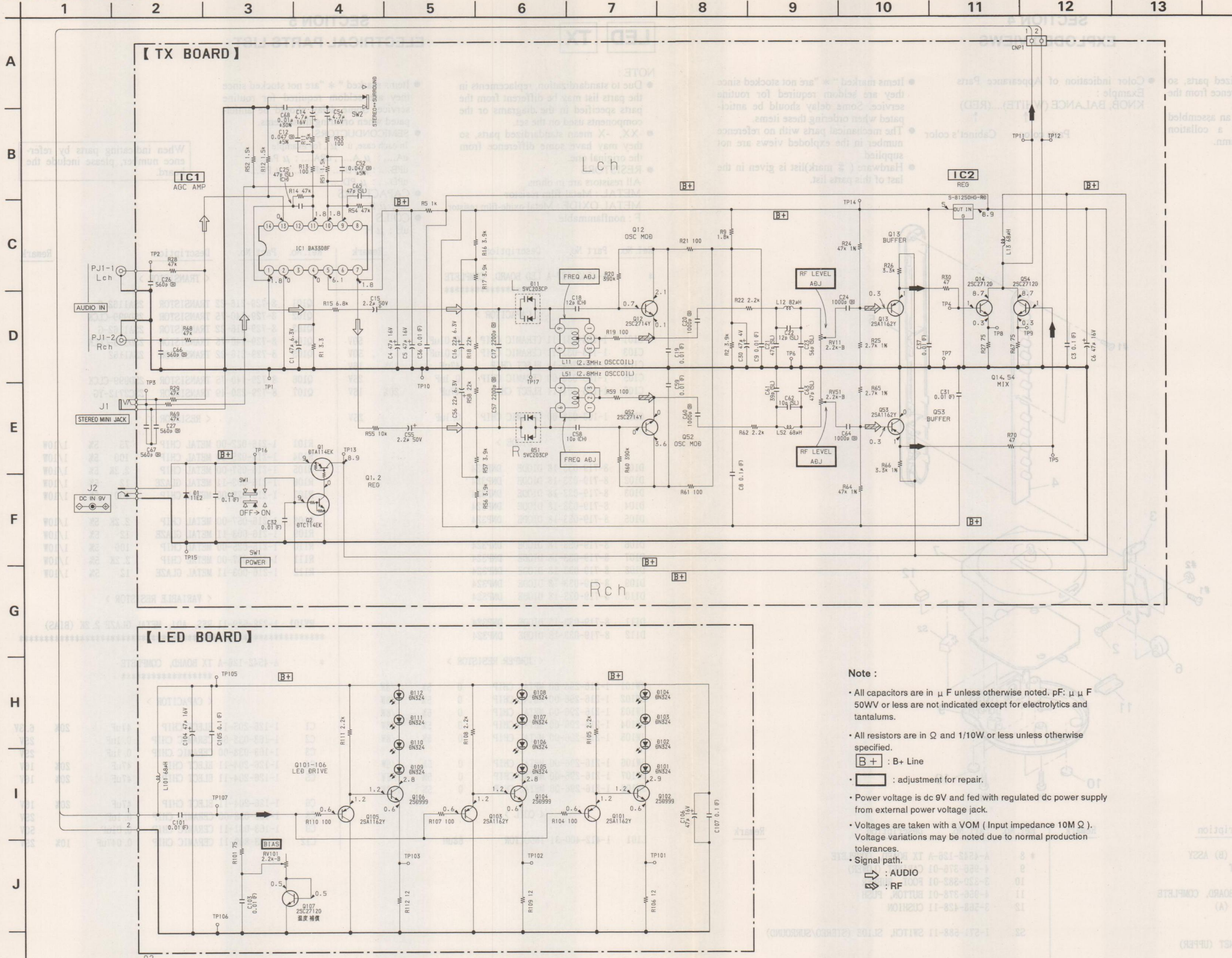
[TX BOARD]



Note:

- : parts extracted from the component side.
- : parts mounted on the conductor side.
- ⋯ : Pattern on the side which is seen.

3-2. SCHEMATIC DIAGRAM



Ref. No.	Part No.	Description
1	7-18-127-01 CASE (B) ASSY	
2	3-138-389-01 SHAFT	
3	3-138-394-13 W/M	
4	A-151-127-A LED BOARD COMPLETE	
5	3-142-103-11 CASE (A)	
6	1-328-377-01 HUB	
7	1-328-375-01 CABINET (UPPER)	

SECTION 4 EXPLODED VIEWS

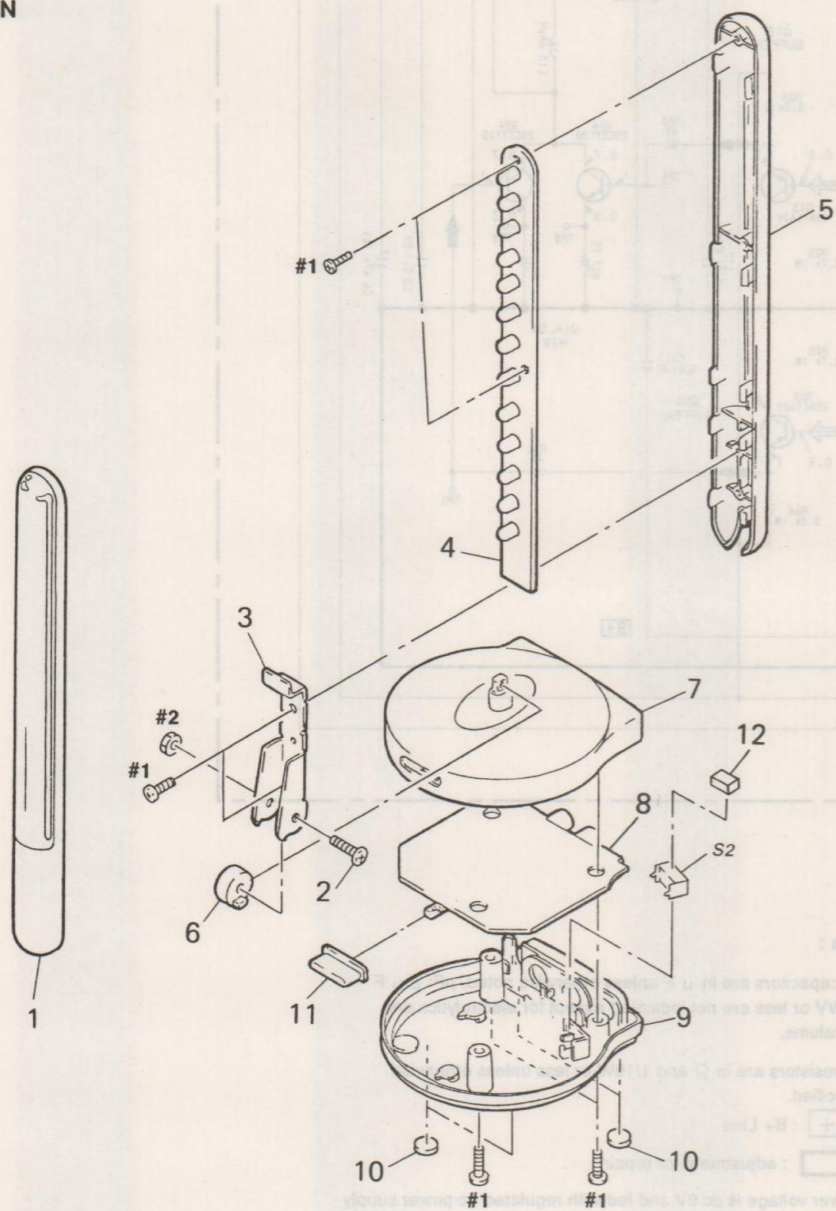
NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

• Color indication of Appearance Parts
Example :
KNOB, BALANCE (WHITE)....(RED)
↑ ↑
Parts color Cabinet's color

- 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 is given in the last of this parts list.

4-1.MAIN SECTION



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
1	X-4943-620-1	CASE (B) ASSY		* 8	A-4542-126-A	TX BOARD, COMPLETE	
2	2-136-289-01	SHAFT		9	4-956-376-01	CABINET (LOWER)	
* 3	2-136-294-11	ARM		10	3-320-382-01	FOOT, RUBBER	
* 4	A-4542-127-A	LED BOARD, COMPLETE		11	4-956-378-01	BUTTON, PUSH	
5	2-145-103-11	CASE (A)		12	3-568-428-11	CUSHION	
6	4-956-377-01	HUB		S2	1-571-588-11	SWITCH, SLIDE (STEREO/SURROUND)	
7	4-956-375-01	CABINET (UPPER)					

LED TX

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

Ref.No.	Part No.	Description	Remark
*	A-4542-127-A	LED BOARD, COMPLETE *****	
< CAPACITOR >			
C101	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C103	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C104	1-126-204-11	ELECT CHIP 47uF	20% 16V
C105	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C106	1-126-204-11	ELECT CHIP 47uF	20% 16V
C107	1-163-038-00	CERAMIC CHIP 0.1uF	25V
< DIODE >			
D101	8-719-033-18	DIODE DNP324	
D102	8-719-033-18	DIODE DNP324	
D103	8-719-033-18	DIODE DNP324	
D104	8-719-033-18	DIODE DNP324	
D105	8-719-033-18	DIODE DNP324	
D106	8-719-033-18	DIODE DNP324	
D107	8-719-033-18	DIODE DNP324	
D108	8-719-033-18	DIODE DNP324	
D109	8-719-033-18	DIODE DNP324	
D110	8-719-033-18	DIODE DNP324	
D111	8-719-033-18	DIODE DNP324	
D112	8-719-033-18	DIODE DNP324	
< JUMPER RESISTOR >			
JW101	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW102	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW103	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW104	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW105	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW106	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW107	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW108	1-216-296-00	METAL CHIP 0 5% 1/8W	
< COIL >			
L101	1-412-400-31	INDUCTOR 68uH	

SECTION 5 ELECTRICAL PARTS LIST

- 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

When indicating parts by reference number, please include the board.

Ref.No.	Part No.	Description	Remark
< TRANSISTOR >			
Q101	8-729-216-22	TRANSISTOR 2SA1162-G	
Q102	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q103	8-729-216-22	TRANSISTOR 2SA1162-G	
Q104	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q105	8-729-216-22	TRANSISTOR 2SA1162	
Q106	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q107	8-729-230-49	TRANSISTOR 2SC2712-YG	
< RESISTOR >			
R101	1-216-022-00	METAL CHIP 75 5% 1/10W	
R104	1-216-025-00	METAL CHIP 100 5% 1/10W	
R105	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R106	1-216-003-11	METAL GLAZE 12 5% 1/10W	
R107	1-216-025-00	METAL CHIP 100 5% 1/10W	
R108	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R109	1-216-003-11	METAL GLAZE 12 5% 1/10W	
R110	1-216-025-00	METAL CHIP 100 5% 1/10W	
R111	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R112	1-216-003-11	METAL GLAZE 12 5% 1/10W	
< VARIABLE RESISTOR >			
RV101	1-238-989-11	RES, ADJ, METAL GLAZE 2.2K (BIAS)	

*	A-4542-126-A	TX BOARD, COMPLETE *****	
< CAPACITOR >			
C1	1-126-205-11	ELECT CHIP 47uF	20% 6.3V
C2	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C3	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C4	1-126-204-11	ELECT CHIP 47uF	20% 16V
C5	1-126-204-11	ELECT CHIP 47uF	20% 16V
C6	1-126-204-11	ELECT CHIP 47uF	20% 16V
C8	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C9	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C12	1-163-809-11	CERAMIC CHIP 0.047uF	10% 25V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C14	1-126-163-11	ELECT	4.7uF 20% 50V			< JACK >	
C15	1-126-601-11	ELECT CHIP	2.2uF 20% 50V				
C16	1-124-778-00	ELECT CHIP	22uF 20% 6.3V	J1	1-573-667-11	JACK, DC (POLAR UNITY TYPE)	
C17	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V	J2	1-573-798-11	JACK, MINIATURE (DIA. 3.5)	
C18	1-163-229-11	CERAMIC CHIP	12PF 5% 50V			< JUMPER RESISTOR >	
C19	1-163-031-11	CERAMIC CHIP	0.01uF 50V	JW1	1-216-296-00	METAL CHIP 0 5% 1/8W	
C20	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	JW2	1-216-296-00	METAL CHIP 0 5% 1/8W	
C21	1-163-109-00	CERAMIC CHIP	47PF 5% 50V	JW3	1-216-296-00	METAL CHIP 0 5% 1/8W	
C22	1-163-095-00	CERAMIC CHIP	12PF 5% 50V	JW4	1-216-296-00	METAL CHIP 0 5% 1/8W	
C23	1-163-111-00	CERAMIC CHIP	56PF 5% 50V	JW5	1-216-296-00	METAL CHIP 0 5% 1/8W	
C24	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	JW6	1-216-295-00	METAL CHIP 0 5% 1/10W	
C25	1-163-109-00	CERAMIC CHIP	47PF 5% 50V	JW7	1-216-295-00	METAL CHIP 0 5% 1/10W	
C26	1-163-006-11	CERAMIC CHIP	560PF 10% 50V			< COIL >	
C27	1-163-006-11	CERAMIC CHIP	560PF 10% 50V	L11	1-406-333-11	COIL (OSC)	
C30	1-126-607-11	ELECT CHIP	47uF 20% 4V	L12	1-410-392-11	INDUCTOR CHIP 82uH	
C31	1-163-031-11	CERAMIC CHIP	0.01uF 50V	L13	1-412-400-31	INDUCTOR 68uH	
C32	1-163-031-11	CERAMIC CHIP	0.01uF 50V	L51	1-406-334-11	COIL (OSC)	
C36	1-163-031-11	CERAMIC CHIP	0.01uF 50V	L52	1-410-391-11	INDUCTOR CHIP 68uH	
C37	1-163-031-11	CERAMIC CHIP	0.01uF 50V			< JACK >	
C52	1-163-809-11	CERAMIC CHIP	0.047uF 10% 25V	PJ1-1	1-563-866-21	JACK, PIN 1P	
C54	1-126-163-11	ELECT	4.7uF 20% 50V	PJ1-2	1-563-866-41	JACK, PIN 1P	
C55	1-126-601-11	ELECT CHIP	2.2uF 20% 50V			< TRANSISTOR >	
C56	1-124-778-00	ELECT CHIP	22uF 20% 6.3V	Q1	8-729-901-04	TRANSISTOR DTA114EK	
C57	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V	Q2	8-729-900-53	TRANSISTOR DTC114EK	
C58	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V	Q12	8-729-200-87	TRANSISTOR 2SC2714-Y	
C59	1-163-031-11	CERAMIC CHIP	0.01uF 50V	Q13	8-729-216-22	TRANSISTOR 2SA1162-G	
C60	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	Q14	8-729-230-49	TRANSISTOR 2SC2712-YG	
C61	1-163-107-00	CERAMIC CHIP	39PF 5% 50V	Q52	8-729-200-87	TRANSISTOR 2SC2714-Y	
C62	1-163-093-00	CERAMIC CHIP	10PF 5% 50V	Q53	8-729-216-22	TRANSISTOR 2SA1162-G	
C63	1-163-109-00	CERAMIC CHIP	47PF 5% 50V	Q54	8-729-230-49	TRANSISTOR 2SC2712-YG	
C64	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V			< RESISTOR >	
C65	1-163-109-00	CERAMIC CHIP	47PF 5% 50V	R1	1-216-133-00	METAL CHIP 3.3M 5% 1/10W	
C66	1-163-006-11	CERAMIC CHIP	560PF 10% 50V	R2	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
C67	1-163-006-11	CERAMIC CHIP	560PF 10% 50V	R5	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C68	1-161-379-00	CERAMIC	0.01uF 20% 25V	R9	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
		< CONNECTOR >		R11	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
* CNP1	1-564-517-11	PLUG, CONNECTOR 2P		R12	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
		< DIODE >		R13	1-216-025-00	METAL CHIP 100 5% 1/10W	
D1	8-719-200-02	DIODE 10E2		R14	1-216-089-00	METAL CHIP 47K 5% 1/10W	
D11	8-719-939-02	DIODE SVC203CP		R15	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
D51	8-719-939-02	DIODE SVC203CP		R16	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
		< IC >		R17	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
IC1	8-759-998-71	IC BA3308F		R18	1-216-081-00	METAL CHIP 22K 5% 1/10W	
IC2	8-759-937-54	IC S-81250HG-RD-S		R19	1-216-025-00	METAL CHIP 100 5% 1/10W	



Ref. No.	Part No.	Description	Remark
R20	1-216-111-00	METAL CHIP	390K 5% 1/10W
R21	1-216-025-00	METAL CHIP	100 5% 1/10W
R22	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R24	1-216-336-11	METAL CHIP	47K 1% 1/10W
R25	1-216-596-11	METAL GLAZE	2.7K 1% 1/10W
R26	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R27	1-216-022-00	METAL CHIP	75 5% 1/10W
R28	1-216-089-00	METAL CHIP	47K 5% 1/10W
R29	1-216-089-00	METAL CHIP	47K 5% 1/10W
R30	1-216-017-00	METAL CHIP	47 5% 1/10W
R51	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
R52	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
R53	1-216-025-00	METAL CHIP	100 5% 1/10W
R54	1-216-089-00	METAL CHIP	47K 5% 1/10W
R55	1-216-073-00	METAL CHIP	10K 5% 1/10W
R56	1-216-063-00	METAL CHIP	3.9K 5% 1/10W
R57	1-216-063-00	METAL CHIP	3.9K 5% 1/10W
R58	1-216-081-00	METAL CHIP	22K 5% 1/10W
R59	1-216-025-00	METAL CHIP	100 5% 1/10W
R60	1-216-111-00	METAL CHIP	390K 5% 1/10W
R61	1-216-025-00	METAL CHIP	100 5% 1/10W
R62	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R64	1-216-336-11	METAL CHIP	47K 1% 1/10W
R65	1-216-596-11	METAL GLAZE	2.7K 1% 1/10W
R66	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R67	1-216-022-00	METAL CHIP	75 5% 1/10W
R68	1-216-089-00	METAL CHIP	47K 5% 1/10W
R69	1-216-089-00	METAL CHIP	47K 5% 1/10W
R70	1-216-017-00	METAL CHIP	47 5% 1/10W
< VARIABLE RESISTOR >			
RV11	1-238-989-11	RES, ADJ, METAL GLAZE	2.2K(RF LEVEL(L))
RV51	1-238-989-11	RES, ADJ, METAL GLAZE	2.2K(RF LEVEL(R))
< SWITCH >			
S1	1-571-599-11	SWITCH, PUSH (POWER)	
S2	1-571-588-11	SWITCH, SLIDE (STEREO/SURROUND)	

***** HARDWARE LIST *****			
#1	7-685-133-19	SCREW +P 2.6X6	TYPE2 NON-SLIT
#2	7-684-023-04	N 3, TYPE 2	

TMR-IF33

SONY[®] SERVICE MANUAL

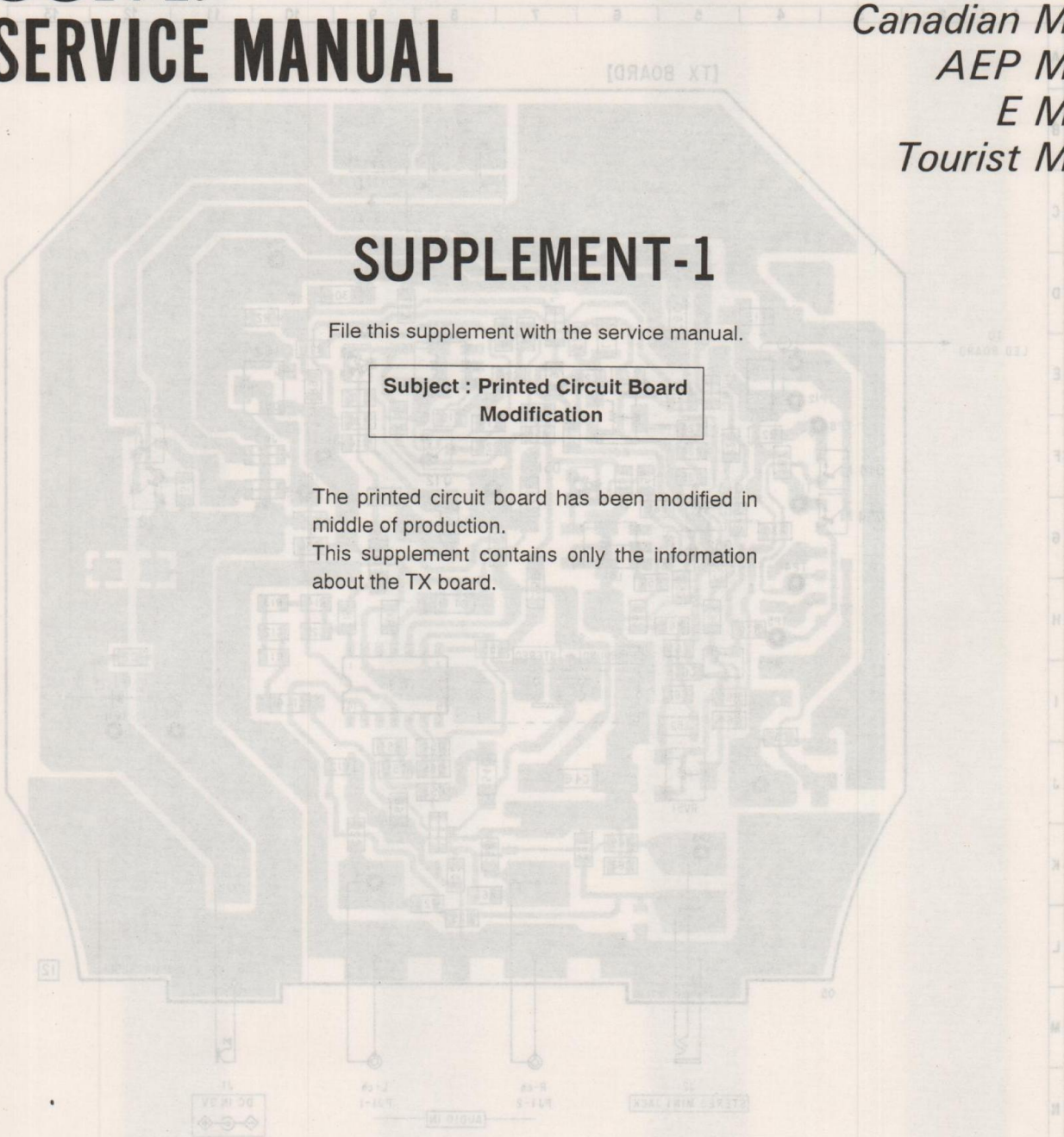
Canadian Model
AEP Model
E Model
Tourist Model

SUPPLEMENT-1

File this supplement with the service manual.

**Subject : Printed Circuit Board
Modification**

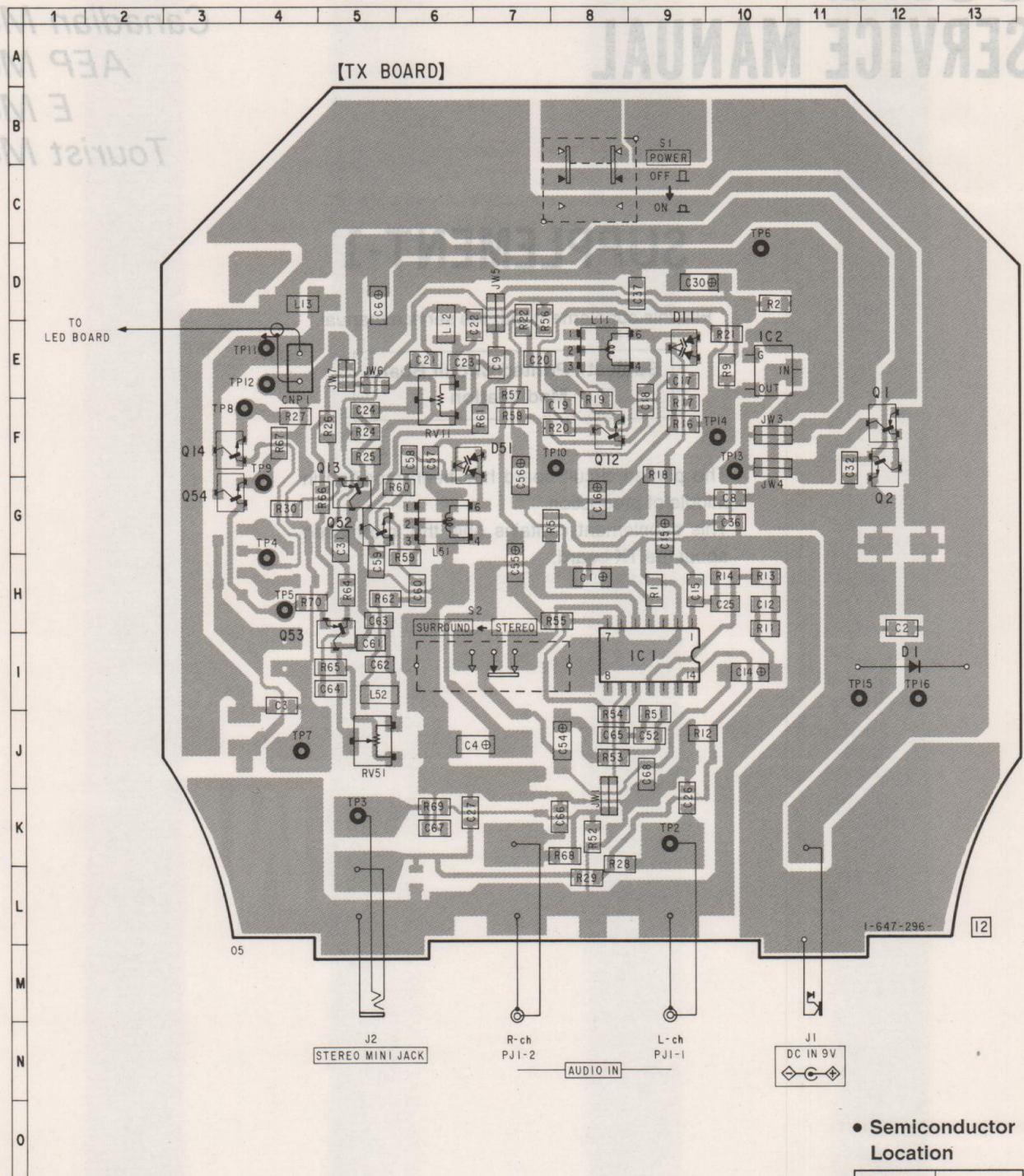
The printed circuit board has been modified in middle of production.
This supplement contains only the information about the TX board.



• Semiconductor
Location

Ref. No.	Location
D1	F-12
D17	E-8
D81	F-8
IC1	F-8
IC5	E-10
IC1	F-12
IC2	F-12
IC12	F-8
IC13	G-8
IC14	F-8
IC15	G-8
IC16	F-8
IC17	F-8
IC18	F-8
IC19	F-8
IC20	F-8
IC21	F-8
IC22	F-8
IC23	F-8
IC24	F-8
IC25	F-8
IC26	F-8
IC27	F-8
IC28	F-8
IC29	F-8
IC30	F-8
IC31	F-8
IC32	F-8
IC33	F-8
IC34	F-8
IC35	F-8
IC36	F-8
IC37	F-8
IC38	F-8
IC39	F-8
IC40	F-8
IC41	F-8
IC42	F-8
IC43	F-8
IC44	F-8
IC45	F-8
IC46	F-8
IC47	F-8
IC48	F-8
IC49	F-8
IC50	F-8
IC51	F-8
IC52	F-8
IC53	F-8
IC54	F-8
IC55	F-8
IC56	F-8
IC57	F-8
IC58	F-8
IC59	F-8
IC60	F-8
IC61	F-8
IC62	F-8
IC63	F-8
IC64	F-8
IC65	F-8
IC66	F-8
IC67	F-8
IC68	F-8
IC69	F-8
IC70	F-8
IC71	F-8
IC72	F-8
IC73	F-8
IC74	F-8
IC75	F-8
IC76	F-8
IC77	F-8
IC78	F-8
IC79	F-8
IC80	F-8
IC81	F-8
IC82	F-8
IC83	F-8
IC84	F-8
IC85	F-8
IC86	F-8
IC87	F-8
IC88	F-8
IC89	F-8
IC90	F-8
IC91	F-8
IC92	F-8
IC93	F-8
IC94	F-8
IC95	F-8
IC96	F-8
IC97	F-8
IC98	F-8
IC99	F-8
IC100	F-8

TX BOARD PRINTED WIRING BOARD



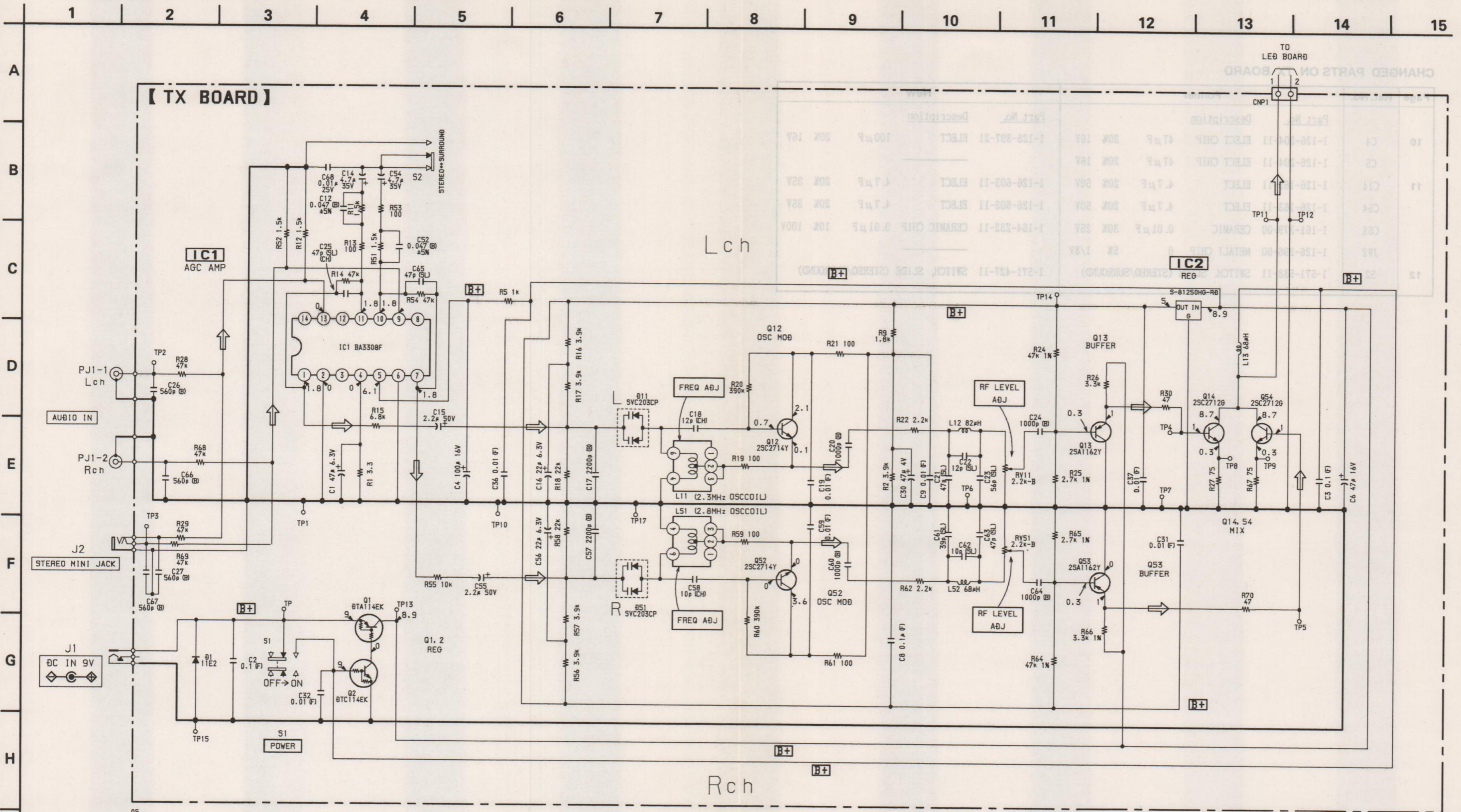
• Semiconductor Location

Ref. No.	Location
D1	I-12
D11	E-9
D51	F-6
IC1	I-9
IC2	E-10
Q1	F-12
Q2	F-12
Q12	F-8
Q13	G-5
Q14	F-3
Q52	G-5
Q53	I-5
Q54	G-3

Note:

- : parts extracted from the component side.
- ▨ : Pattern on the side which is seen.

TX BOARD SCHEMATIC DIAGRAM



- Note:**
- All capacitors are in μF unless otherwise noted. pF: μpF
 - 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and 1/10 W or less unless otherwise specified.
 - **B+** : B + Line.
 - **□** : adjustment for repair.
 - Power voltage is dc 9 V and fed with regulated dc power supply from external power voltage jack.
 - Voltages are taken with a VOM (10 M Ω /V). Voltage variations may be noted due to normal production tolerances.
 - Signal path.
 - **⇨** : Audio

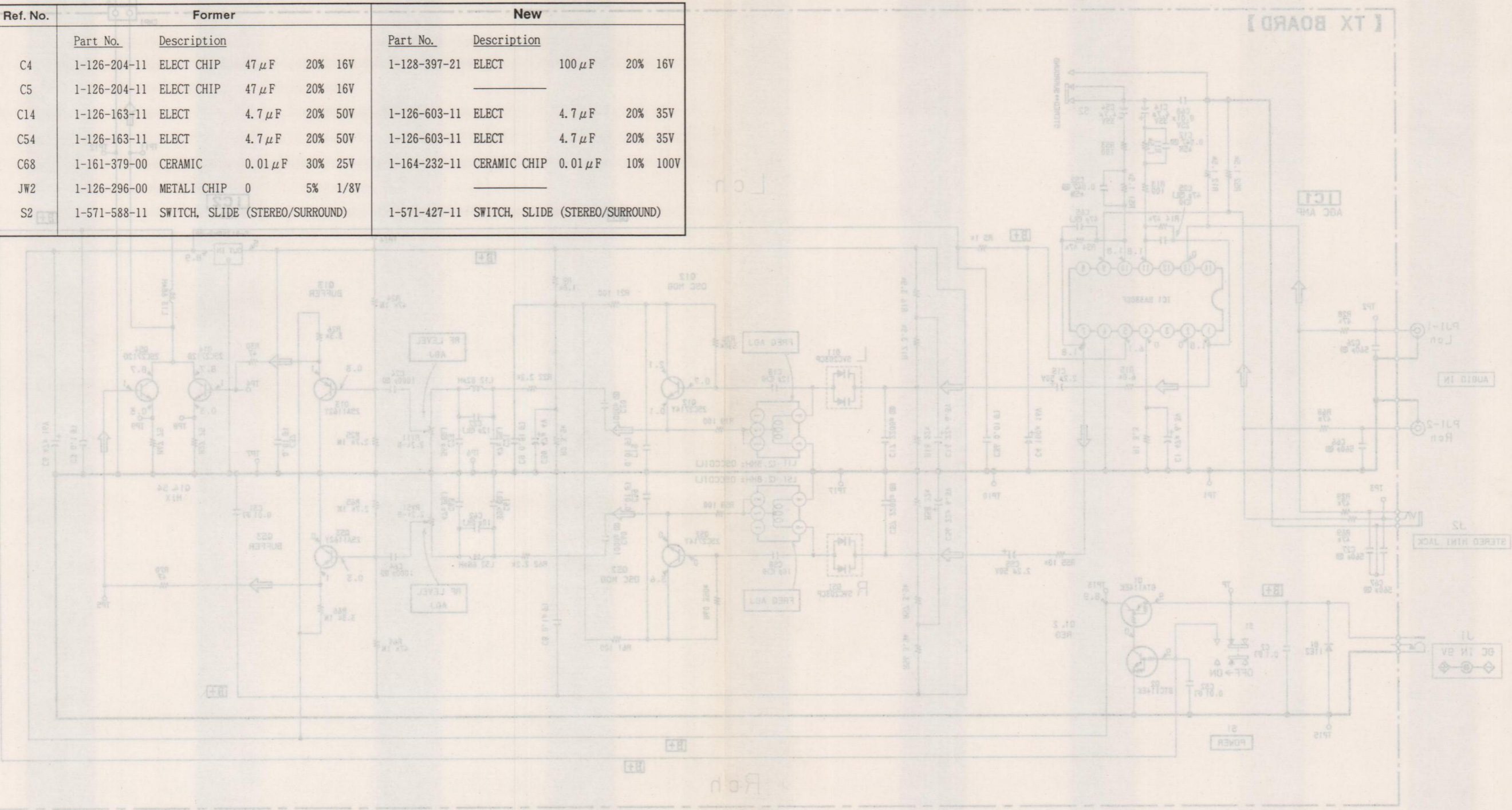
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 General Audio Group

9-87-279-82

CHANGED PARTS ON TX BOARD

Page	Ref. No.	Former				New			
		Part No.	Description	Value	Tolerance	Part No.	Description	Value	Tolerance
10	C4	1-126-204-11	ELECT CHIP	47 μ F	20% 16V	1-128-397-21	ELECT	100 μ F	20% 16V
	C5	1-126-204-11	ELECT CHIP	47 μ F	20% 16V				
11	C14	1-126-163-11	ELECT	4.7 μ F	20% 50V	1-126-603-11	ELECT	4.7 μ F	20% 35V
	C54	1-126-163-11	ELECT	4.7 μ F	20% 50V	1-126-603-11	ELECT	4.7 μ F	20% 35V
C68	1-161-379-00	CERAMIC	0.01 μ F	30% 25V	1-164-232-11	CERAMIC CHIP	0.01 μ F	10% 100V	
	JW2	1-126-296-00	METALI CHIP	0	5% 1/8V				
12	S2	1-571-588-11	SWITCH, SLIDE (STEREO/SURROUND)			1-571-427-11	SWITCH, SLIDE (STEREO/SURROUND)		



Note:

- All capacitors are in μ F unless otherwise noted. pF: pF.
- 50 W or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/10 W or less unless otherwise specified.
- : B + Line.
- : adjustment for repair.
- Power voltage is dc 5 V and led with regulated dc power supply from external power voltage jack.
- Voltages are taken with a VOM (10 M Ω).
- Voltage variations may be noted due to normal production tolerance.
- Signal path.
- Audio.