

SERVICE MANUAL

POWER AMPLIFIER

**SANYO****JA 760** BLACK
(EUROPE)

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SPECIFICATIONS

NOTE:

The below mentioned specifications are mainly based on the IHF measurements standard. They can therefore not directly be compared with specifications based on the DIN standard or other standards.

Continuous output power: 100 W x 2 (at 8 ohms, 0.3% distortion)

Input sensitivity and impedance: PHONO; 2.5 mV/47 kohms
AUX/TV/VIDEO/CD; 150 mV/47 kohms

Frequency response: 20 Hz – 35 kHz (TV/VIDEO)
Graphic equalizer: ±10 dB (63/250/1000/4000/16000 Hz)

Loudness control response (Vol. –30 dB): +8 dB/+4 dB (100 Hz/10kHz)

Signal to noise ratio: 95 dB (TV/VIDEO)

Power requirements: AC: 220 V, 50 Hz

Power consumption: 520 W

AC outlets (SWITCHED): 100 W max.

Dimensions (W x D x H): Approx. 420 x 270 x 130 mm (16-1/2" x 10-5/8" x 5-1/8")

Weight: Approx. 9 kg (20 lbs.)

RB 760 REMOTE CONTROLLER

Power requirements: DC: 3 V, "R6/AA/SUM-3" battery x 2

Dimensions (W x D x H): Approx. 55 x 20 x 167 mm (2-3/16" x 13/16" x 6-5/8")

Weight: Approx. 110 g (4 ozs.) (including batteries)

Specifications subject to change without ontice.

NOTE:

The power switch is mounted on the secondary side and does not disconnected the unit from AC-power, even when switched off.

PARTS LIST (REMOTE CONTROLLER)

NOTE:

* Materials of Capacitors and Resistors are abbreviated as follows;

AL ELECTAluminum Electrolytic
BC CONSemiconductor Ceramic
CHIP BCChip Semiconductor Ceramic
CHIP TANChip Tantal
ELECTElectrolytic
PP CONPolypropylene
MT GLAZEMetal Glaze
FP CARBONFlameproof Carbon

* Tolerance of Capacitors and Resistors are noted with follow symboles;

J±5% P+ 100 – 0%
K±10% Q+ 30 – 10%
M±20% Z+ 80 – 20%
N±30%

PACKING & ACCESSORIES

Ref. No.	Part No.	Description
	141-6-231T-13400	INNER POLYE COVER

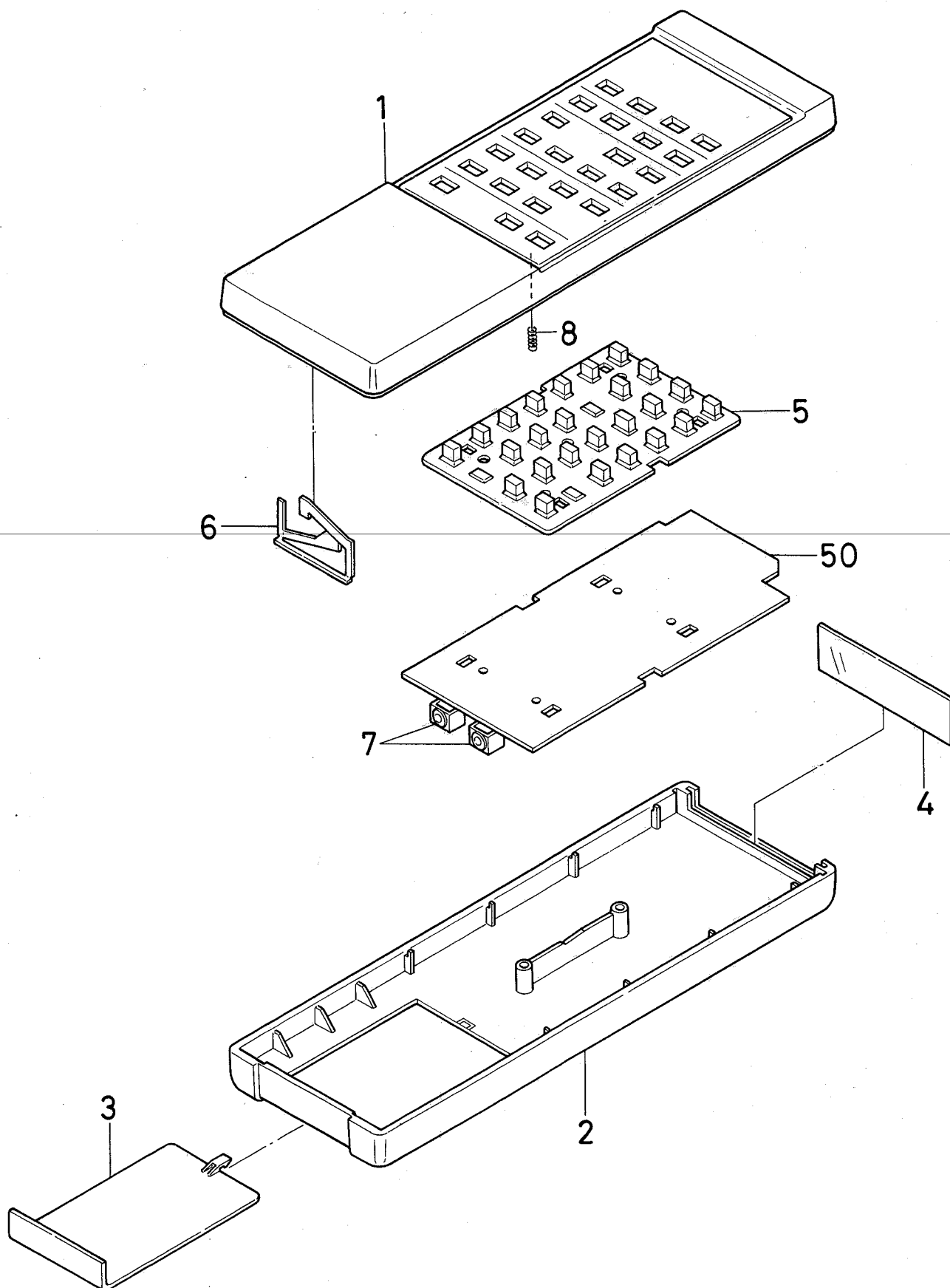
CABINET & CHASSIS

Ref. No.	Part No.	Description
1	141-0-124T-50101	TOP LID ASSY
2	141-2-125T-41000	BOTTOM LID
3	141-2-128T-25200	BATTERY LID
4	141-2-132T-27400	SIGN WINDOW
5	141-2-160T-67701	PUSH BUTTON
6	141-2-382T-23400	TERMINAL
7	141-2-382T-23500	TERMINAL
8	141-2-856T-60900	SPRING COIL

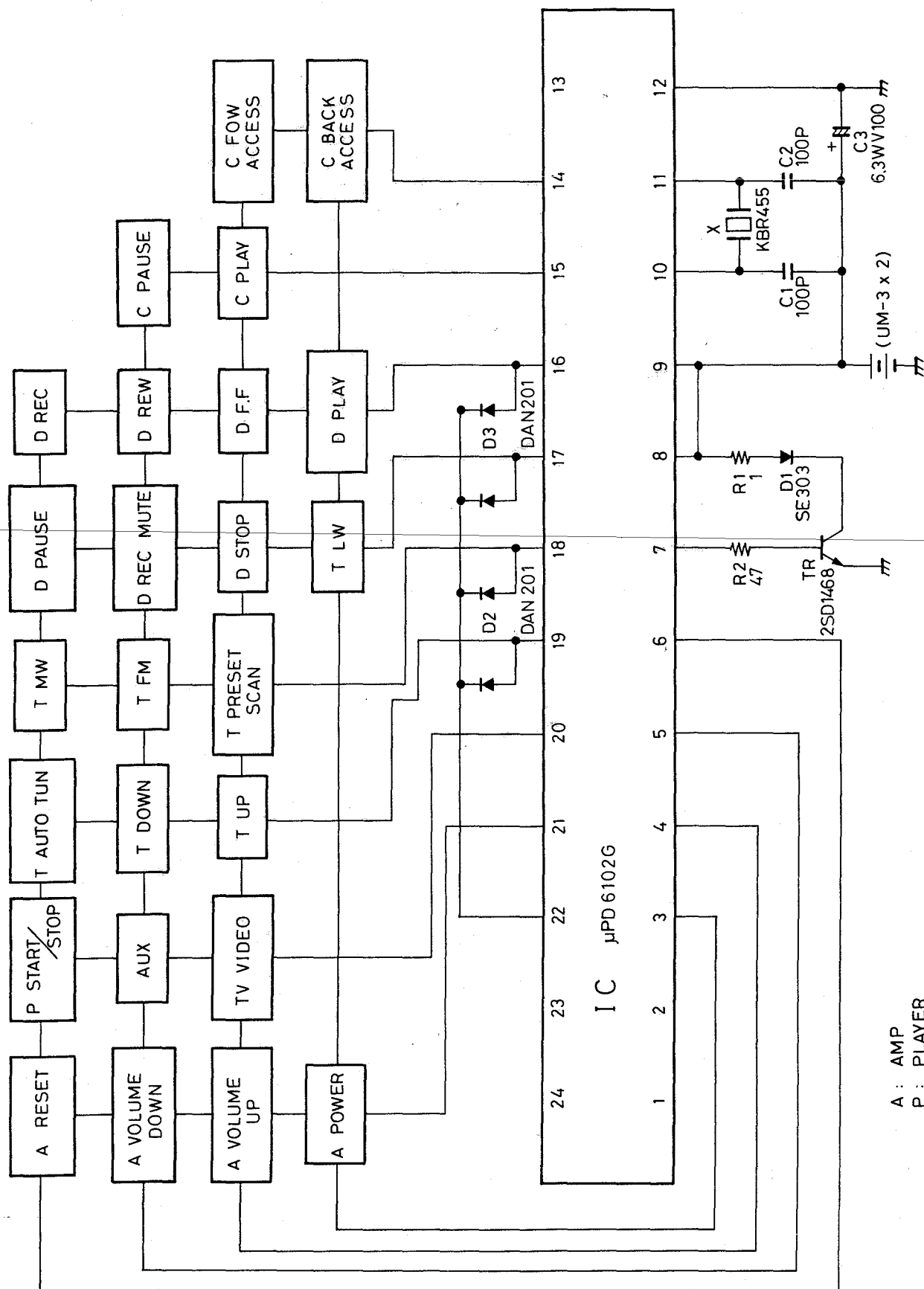
REMOTE CONTROL PCB ASSY

Ref. No.	Part No.	Description
50	141-4-285T-50500	P.C BOARD ASSY, REMOTE CONTROL
X	4-266T-01800	CERAMIC RESONATOR
IC	SIUPD6102G+++	IC UPD6102G MF20
TR	STD1468R++++	TR 2SD1468 R
D1	SLSE303A++++	LED SE303A
D2	SDDAN201++++	DIODE DAN201
D3	SDDAN201++++	DIODE DAN201
C1	CC+50101KDYBS	CERAMIC 100PF 50V K D YB
C2	CC+50101KDYBS	CERAMIC 100PF 50V K D YB
C3	CE6R3107MVAKS	ELECT 100MF 6.3V M V AK
R1	RC +4010JP++R	CARBON P 1 OHM J 1/4W R25
R2	RC +4470JP++R	CARBON P 47 OHM J1/4WR25

CABINET & CHASSIS EXPLODED VIEW (REMOTE CONTROLLER)

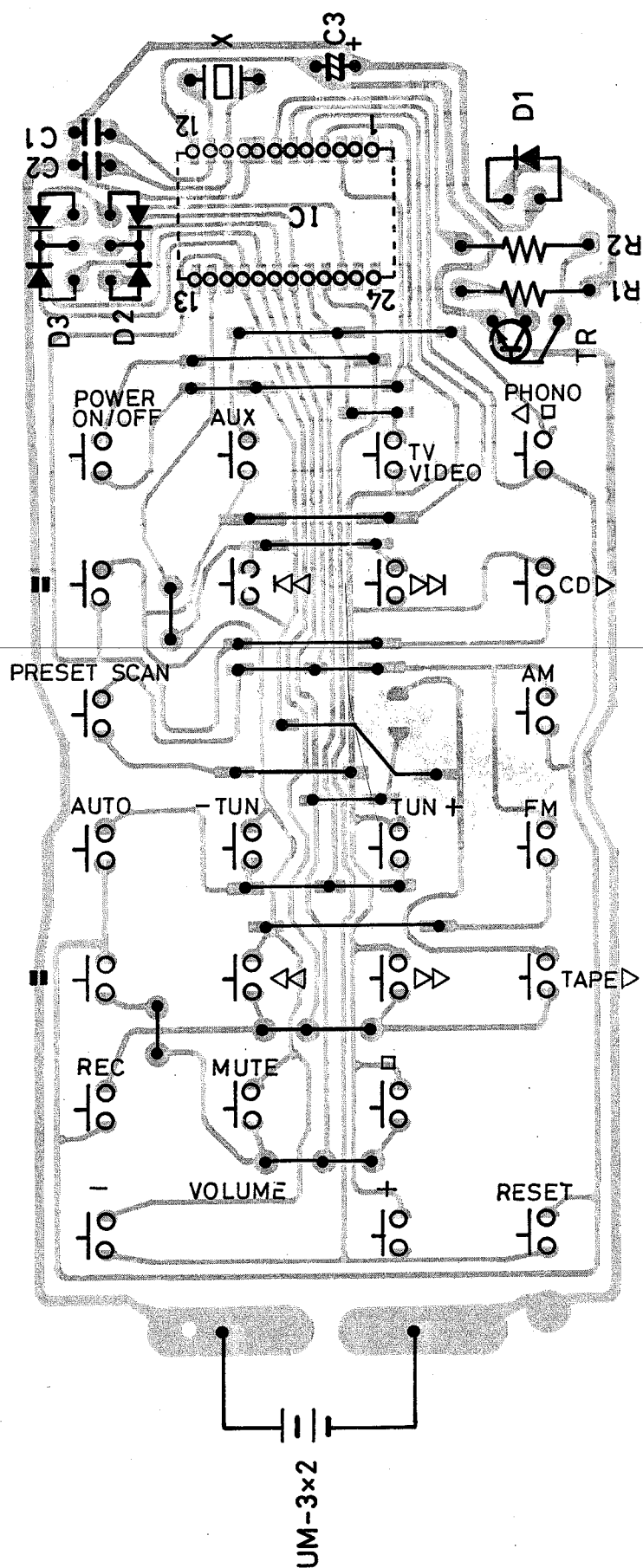


SCHEMATIC DIAGRAM (REMOTE CONTROLLER)



A : AMP
P : PLAYER
T : TUNER
D : DECK
C : CD

WIRING DIAGRAM (REMOTE CONTROLLER)



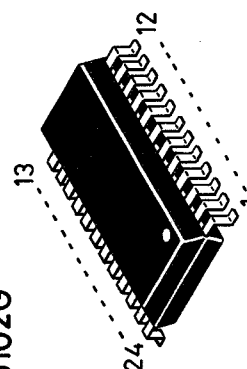
TRANSISTOR CONNECTION

2SD1468



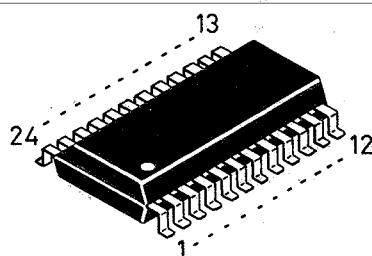
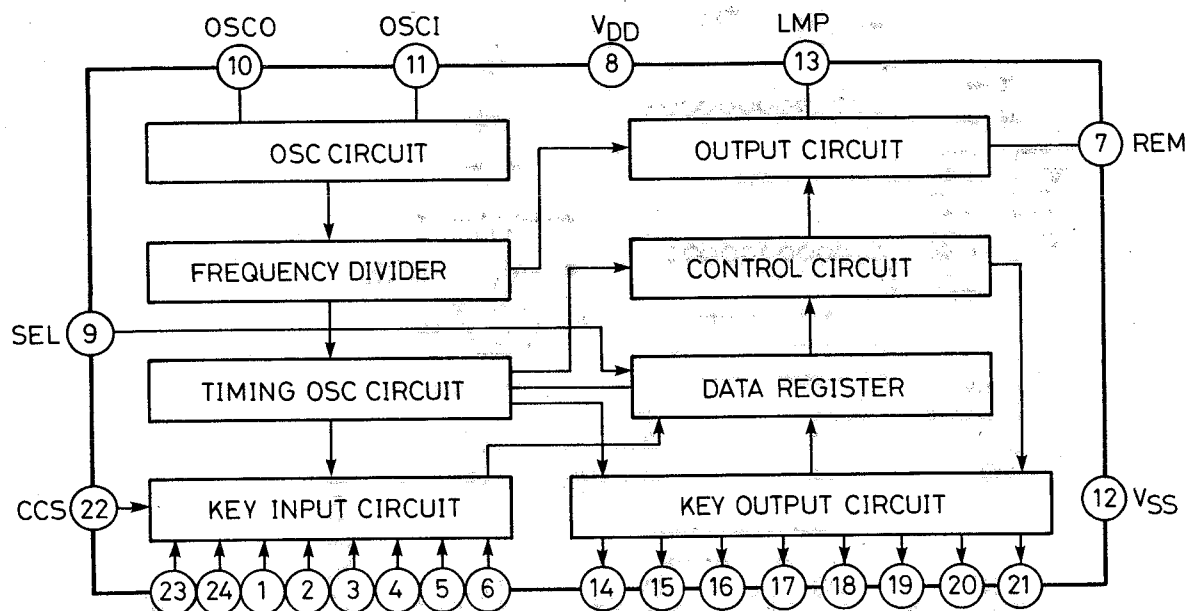
IC CONNECTION

μPD6102G



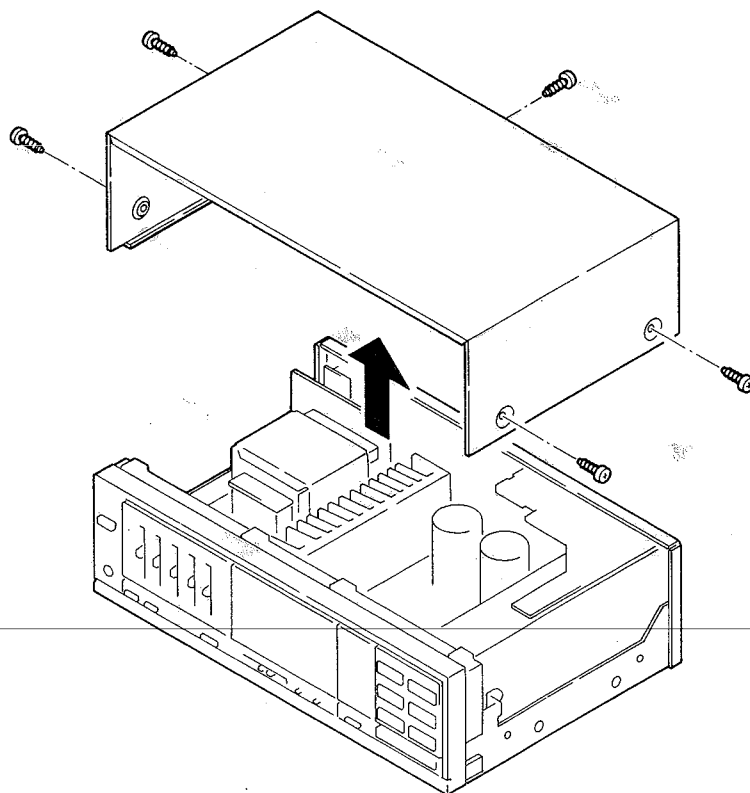
IC BLOCK DIAGRAM (REMOTE CONTROLLER)

μPD6102G

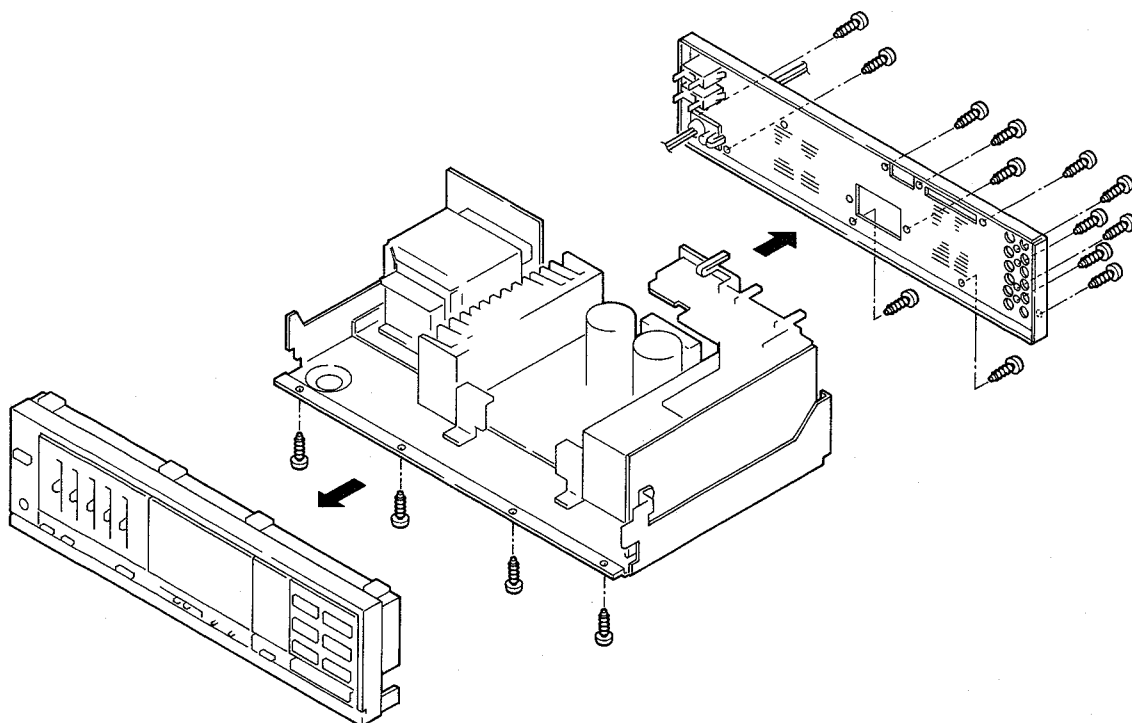


DISASSEMBLY INSTRUCTIONS

Cabinet Disassembly

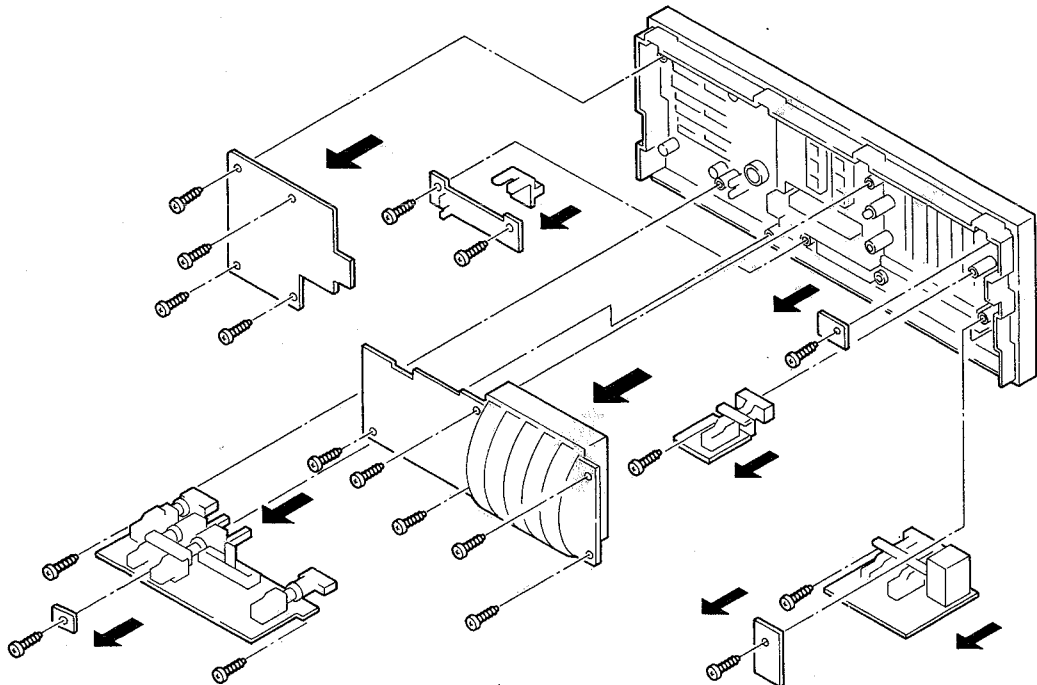


Front Panel and Back Panel Disassembly

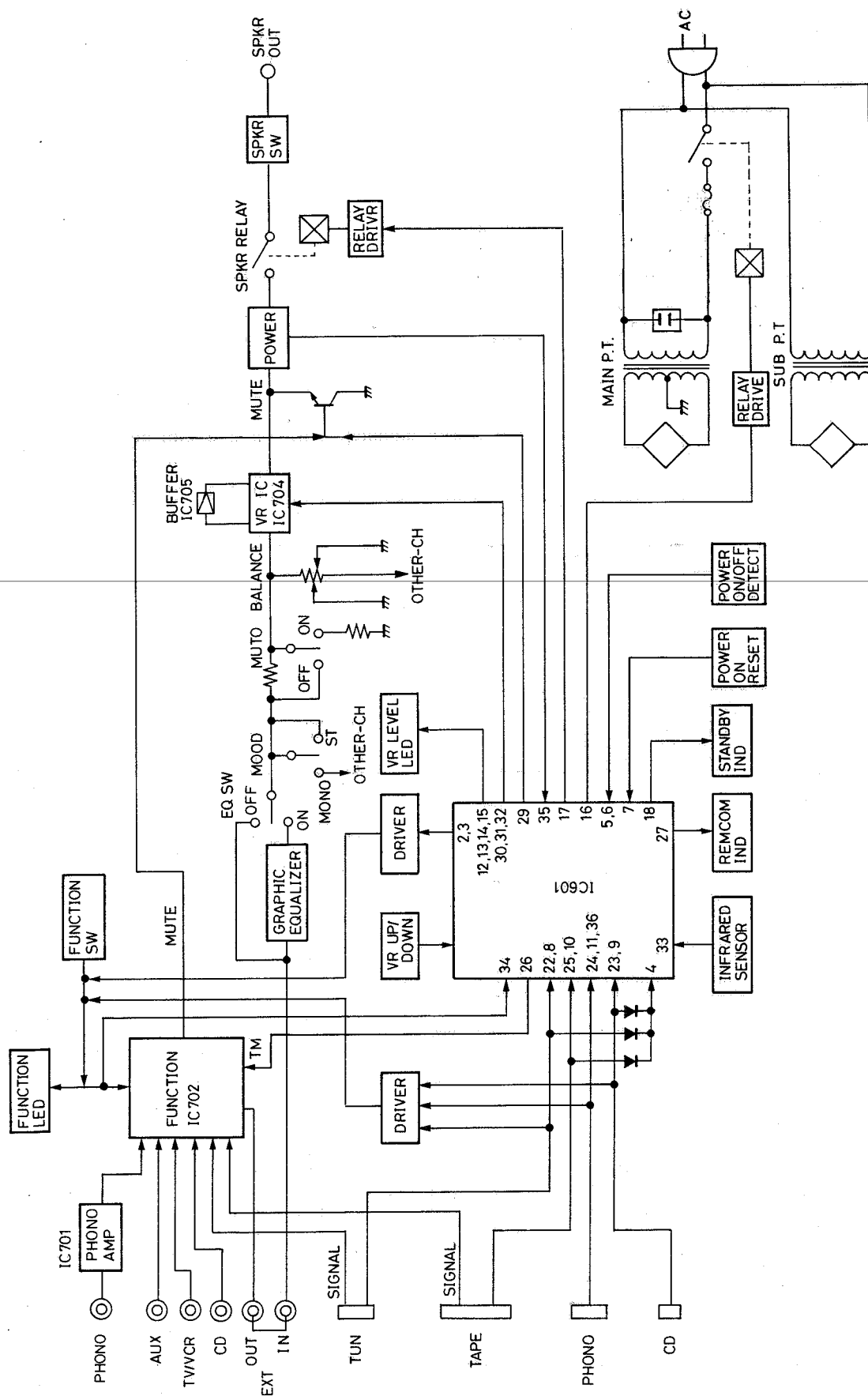


DISASSEMBLY INSTRUCTIONS

PCB Disassembly



BLOCK DIAGRAM

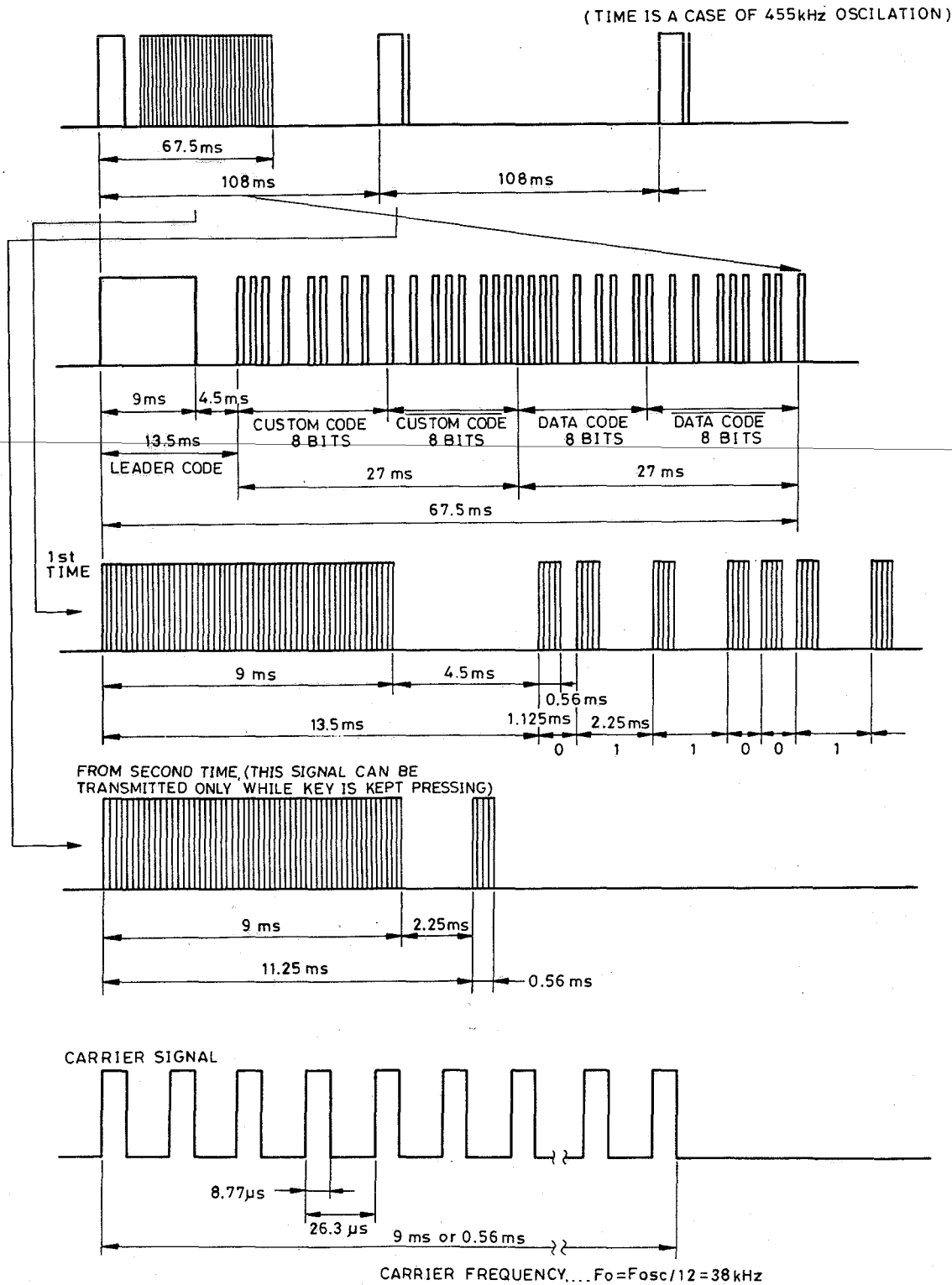


TRANSMISSION SIGNAL FROM REMOTE CONTROLLER

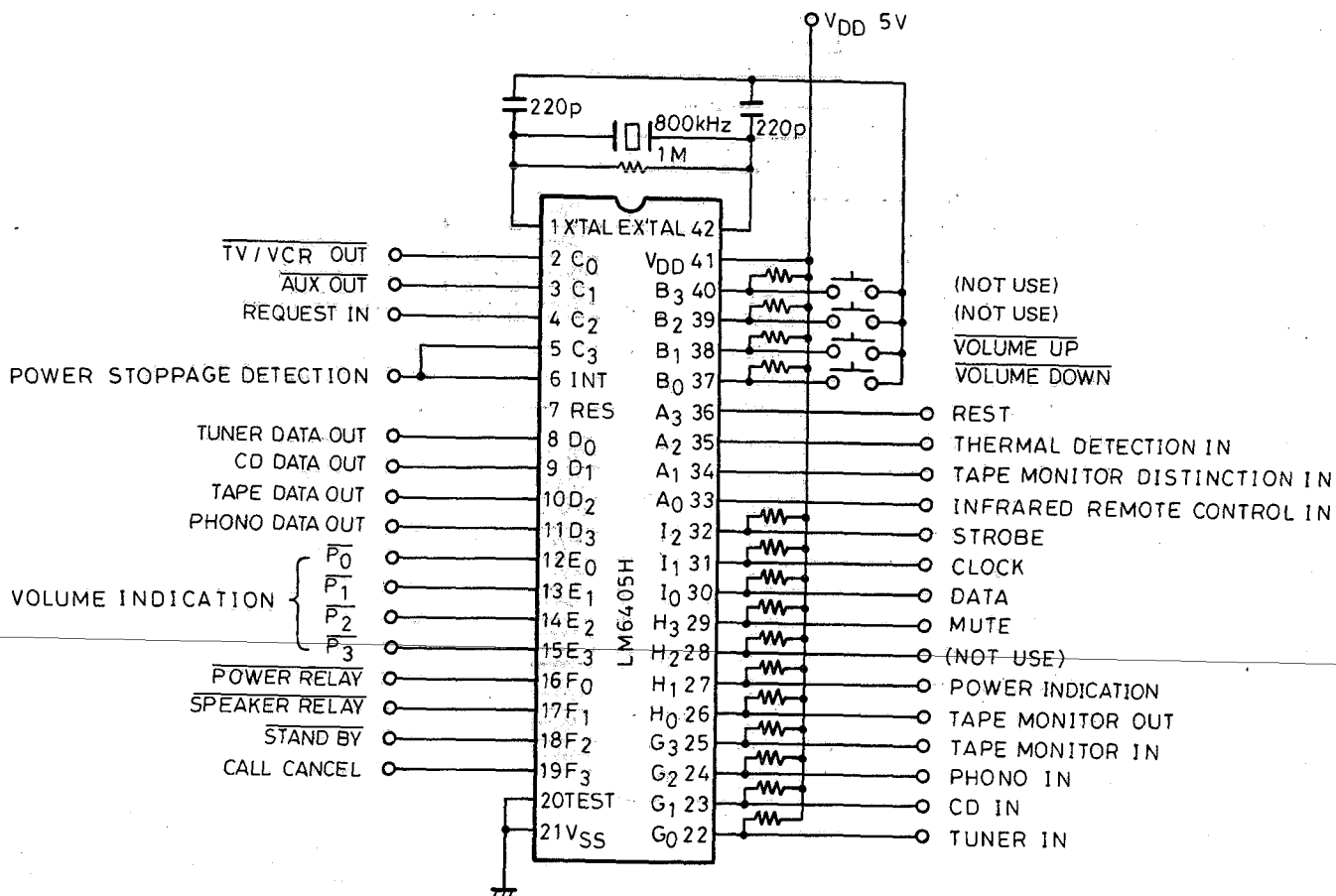
16 bits transmission signal from the remote controller is composed of the leader code, custom code and data code. This transmission signal is directly decoded at the 4 bits microprocessor in the power amplifier (JA 760).

The leader code is composed of 9m sec carrier and 4.5m sec

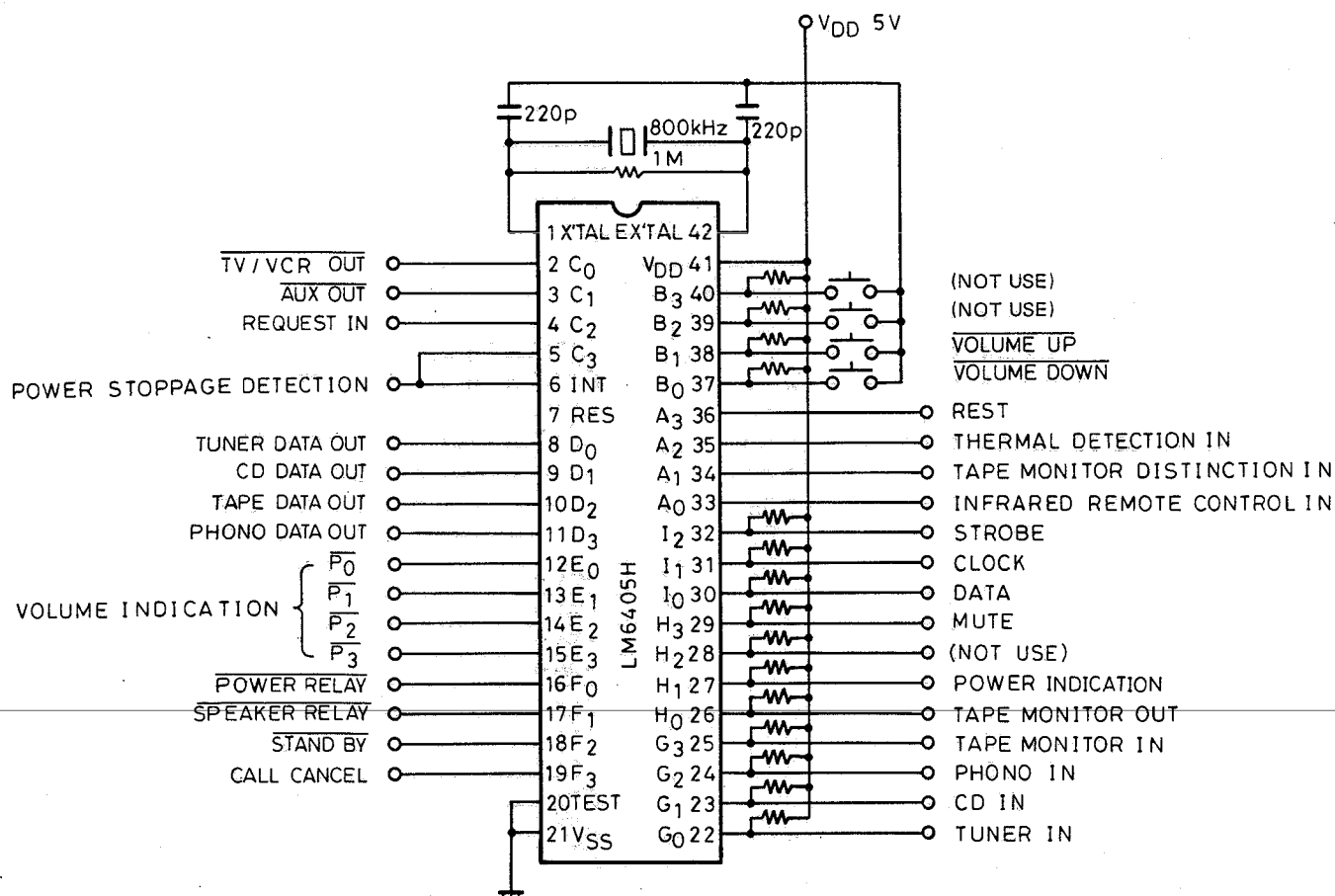
blank time. The custom code and data code are transmitted combined with their reverse codes to prevent malfunction and to obtain reliable transmitting and receiving of infrared-ray.



MICROCOMPUTOR & ITS FUNCTION



1. X'tal
2. TV/VCR OUT
Switch on TV/VCR mode of IC702 LC7818.
3. AUX OUT
Switch on AUX mode of IC702 LC7818.
4. REQUEST IN
Request signal from the tuner, CD and deck is input.
- 5-6. POWER STOPPAGE DETECTION
Level becomes low when power is in off.
When port changes from low level to high level, the microcomputer (IC602) start function.
7. RESET
Not use.
8. TUNER DATA OUT
Sends the serial data to the tuner (JT 760).
9. CD DATA OUT
Sends the serial data to the CD player (CP 760).
10. TAPE DATA OUT
Sends the serial data to cassette deck (RD W760).
11. PHONO DATA OUT
Sends the start/stop pulse to the player (TP 760).
- 12-15. VOLUME INDICATION
Indicates attenuation factor of IC704 TC9177P.
16. POWER RELAY
Commands the power relay.
17. SPEAKER RELAY
Commands the speaker relay.
18. STANDBY
Indication of the STANDBY LED.
19. CALL CANCEL
Cancels direct call signal returned from the player when the stop pulse is sent to the player.
20. TEST
Not use

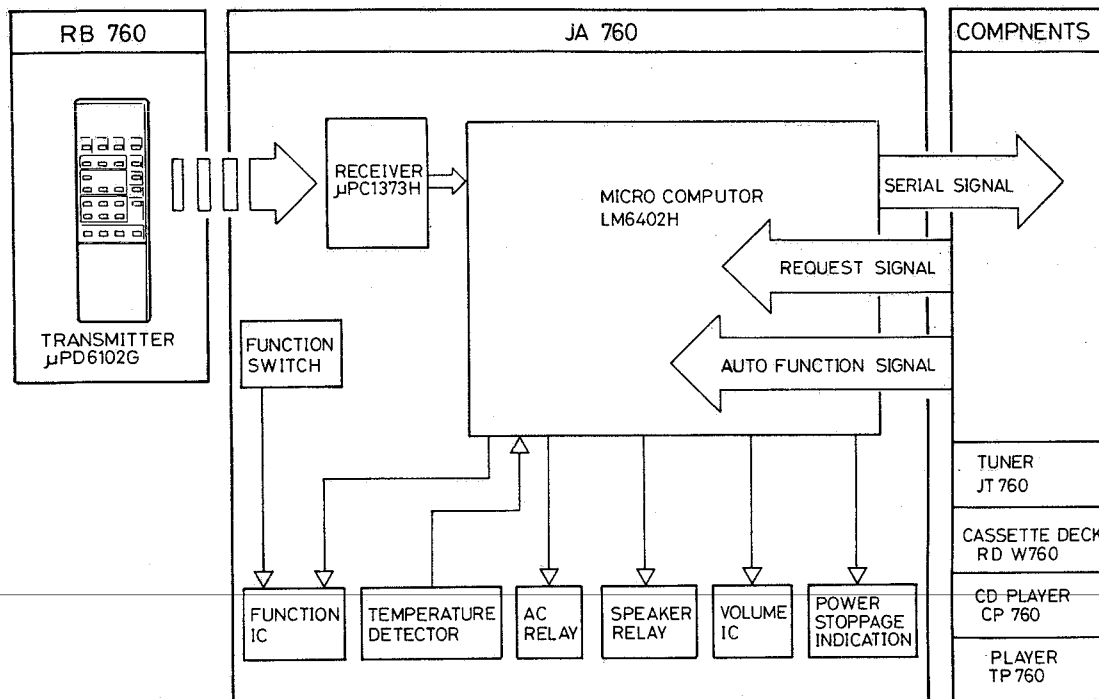


- | | |
|---|---|
| 21. Vss | 33. INFRARED REMOTE CONTROL IN |
| 22. TUNER IN | Transmission signal from the remote controller is input |
| 23. CD IN | 24. TAPE MONITOR DISTINCTION IN |
| Direct call signal from the CD player is input. | Distincts whether function IC (IC702) is in tape monitor mode or not. |
| 24. PHONO IN | 25. THERMAL DETECTION IN |
| Direct call signal from the player is input. | Thermal detected signal is input. |
| 25. TAPE MONITOR IN | 26. REST |
| Direct call signal from the cassette deck is input. | Distincts whether the tone arm of the player is on its rest or not. |
| 26. TAPE MONITOR OUT | 27. VOLUME DOWN |
| Switch on/off the tape monitor of IC702 LC7818. | Increases attenuation of IC704 TC9177P. |
| 27. INDICATION | 28. VOLUME UP |
| Indicates receiving of infrared-ray from the remote controller. | Decreases attenuation of IC704 TC9177P. |
| 28. Not use | 29. Not use. |
| 29. MUTE | 30. Not use. |
| Outputs a signal when attenuation of volume becomes ∞. | 31. Vdd |
| 30. DATA | 32. External X'tal |
| Sends the serial data to IC704 TC9177P. | |
| 31. CLOCK | |
| Sends the clock to IC704 TC9177P. | |
| 32. STROBE | |
| Sends the strobe to IC704 TC9177P. | |

SYSTEM CONTROL BY MICROCOMPUTOR

As figure shown below, whole control including audio signal and AC power supply sections, is made by the micro-computer (IC602 LM6402H) in the power amplifier JA760

(which works as a system controller), and three digital signals: serial data, request and auto function, are used to control inter-components.



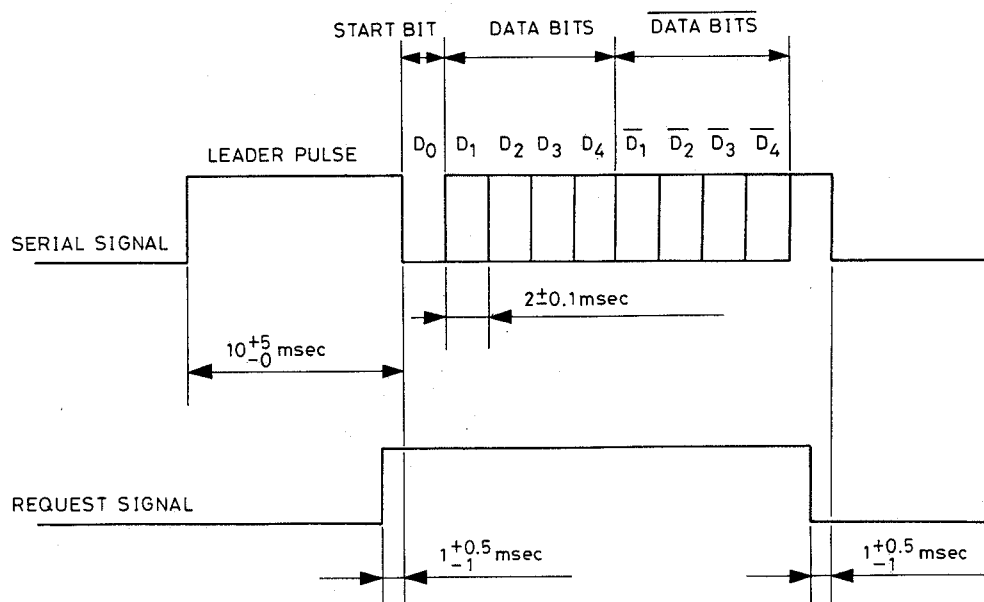
Serial Signal and Request Signal

As figure shown below, the serial signal is composed of leader pulse, start bit and data bit (8 bits).

As the leader pulse has 10m sec +5m sec -0m sec time length, a microcomputer in the other component can output a request signal in a convenient time while leader pulse

is receiving.

While the request signal is output, the microcomputer (IC 602) sends the rest of the serial data, which is composed of four bits data and four bits reverse data.

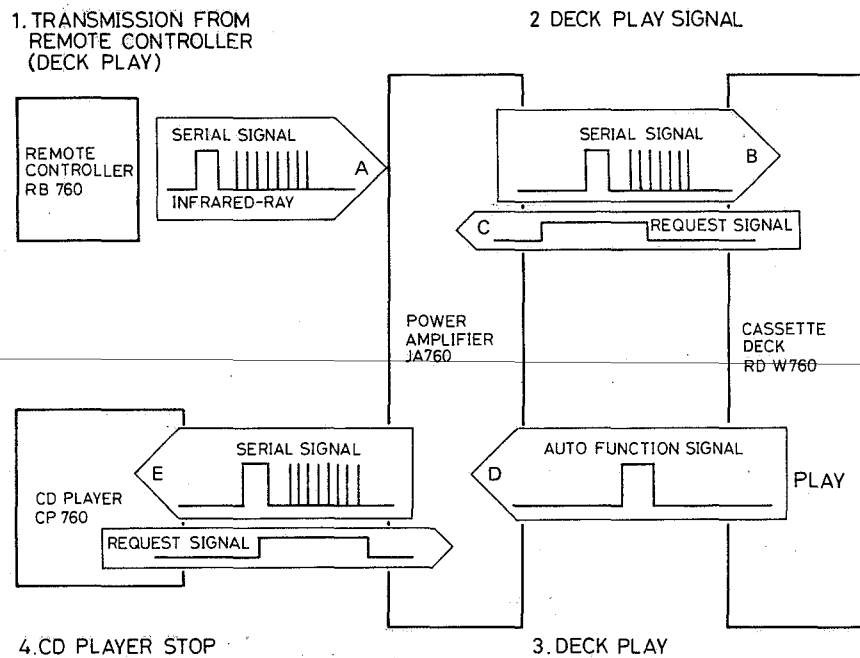


PRINCIPAL OPERATIONS

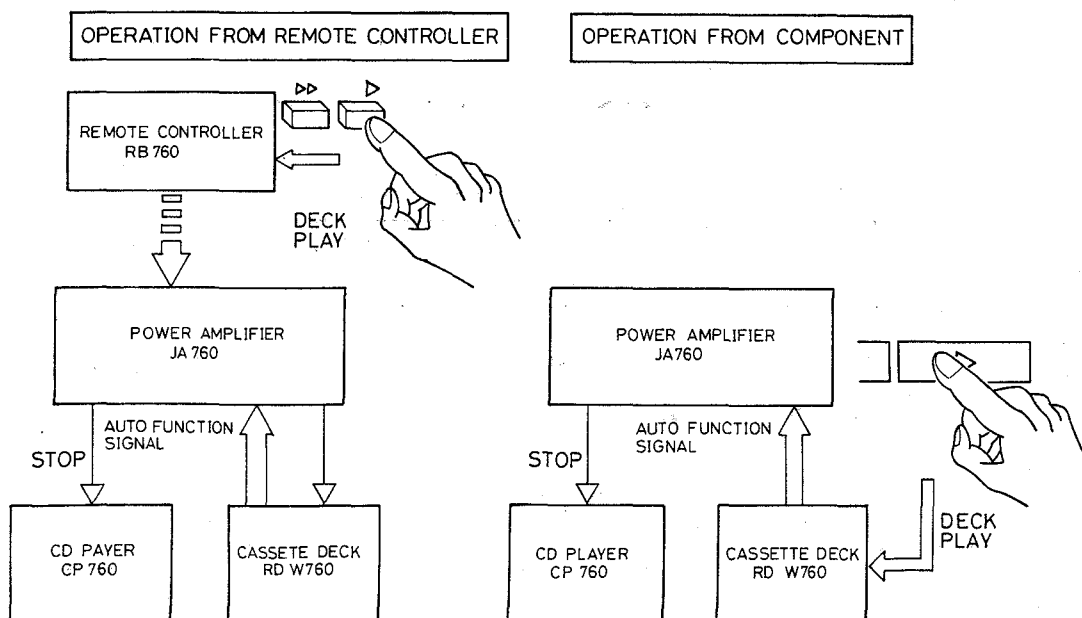
Cassette Deck → Play, CD player → Stop

1. If the TAPE button of the remote controller (RB 760) is pressed when the CD player (CP 760) is in play, a signal (A) is transmitted from the remote controller to the power amplifier (JA 760).
2. The microcomputer (IC 602) in the amplifier sends the serial signal (B) to the cassette deck (RD W760).
3. The cassette deck sends back a request signal (C) to the microcomputer soon after it receives the serial signal, and then the cassette deck will be in play condition.

4. When the cassette deck becomes in play, an auto function signal (D) is also sent to the microcomputer. The purpose of this signal is to change the function of the power amplifier to tape monitor mode and to send the serial signal (E) from the microcomputer to the CD player to stop CD operation. As described above, this signal enables mutual operation from each component and the remote controller.



MUTUAL OPERATION

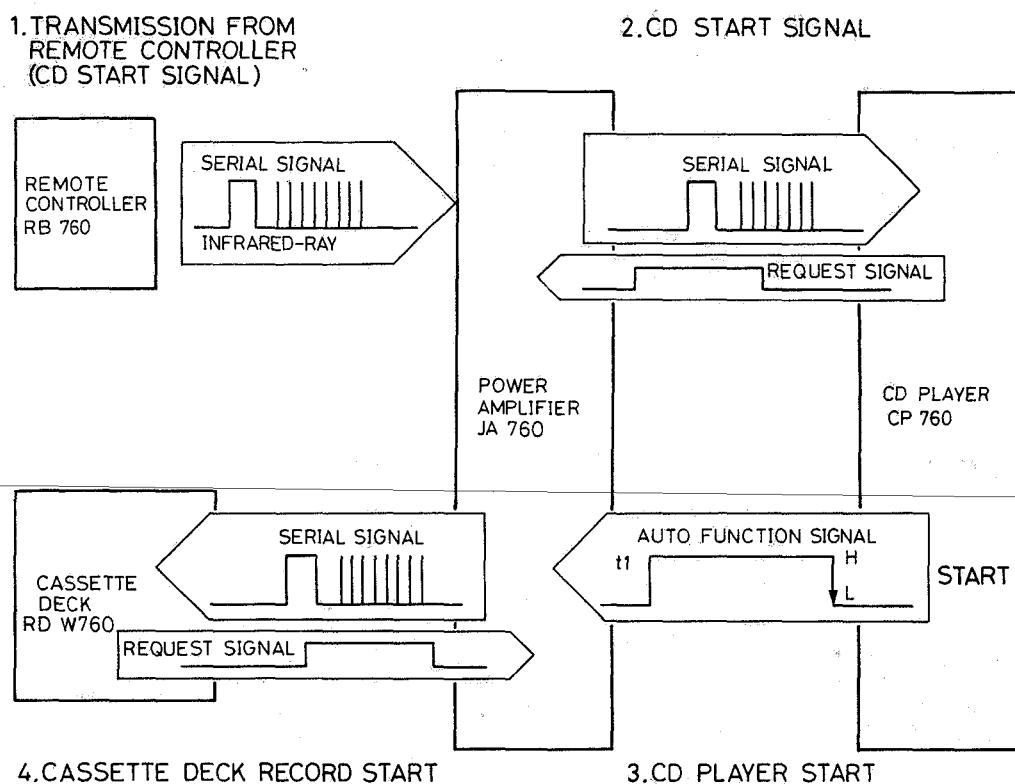


PRINCIPAL OPERATIONS

Sincronized Recording (CD Player → Play, Cassette Deck → Record)

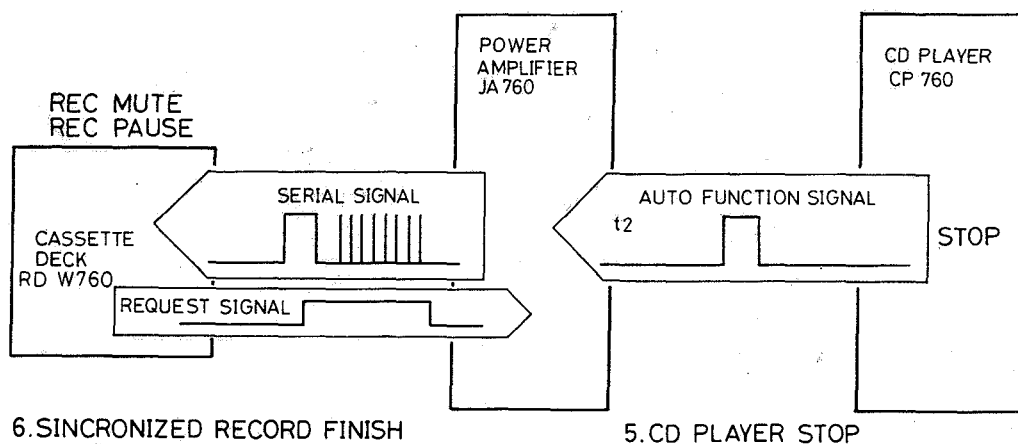
The CD player (CP 760) or player (TP 760) outputs a long pulse (t1): auto function signal, when the serial signal for start operation is received. This pulse (t1) becomes from high to low level just before playing a disk. The micro-

computer (IC602) in the power amplifier detects this low level and then send a serial signal to the cassette deck (RD W760) to start sincronized recording.

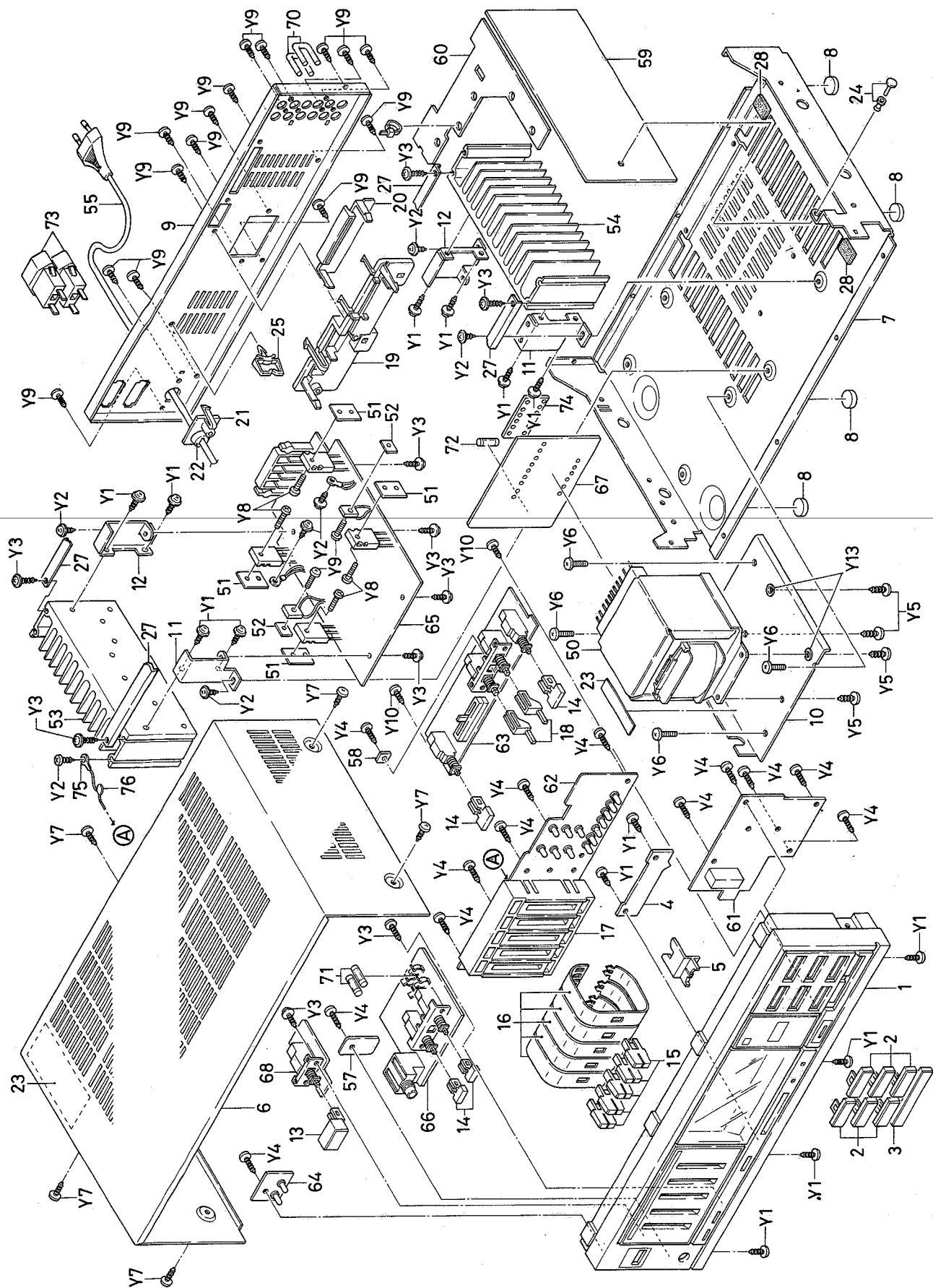


When the disk playback is finished, a short pulse (t2): auto function signal, is sent from the CD player or player. The microcomputer (IC 602) in the power amplifier receives

this auto function signal and then send the serial signal to the cassette deck to stop signcronized recording.



CABINET & CHASSIS EXPLODED VIEW



PARTS LIST

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol Δ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with Δ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.

Leakage current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

NOTE:

* Materials of Capacitors and Resistors are abbreviated as follows;

AL ELECT Aluminum Electrolytic
BC CON Semiconductor Ceramic
CHIP BC Chip Semiconductor Ceramic
CHIP TAN Chip Tantal
ELECT Electrolytic
PP CON Polypropylene
MT GLAZE Metal Glaze
FP CARBON Flameproof Carbon

* Tolerance of Capacitors and Resistors are noted with follow symbols;

J $\pm 5\%$ P $+100-0\%$
K $\pm 10\%$ Q $+30-10\%$
M $\pm 20\%$ Z $+80-20\%$
N $\pm 30\%$

PACKING & ACCESSORIES

Ref. No.	Part No.	Description
	141-6-145T-15100	FORM PLASTIC CASE, RIGHT
	141-6-145T-15101	FOAM PLASTIC CASE, LEFT
	141-6-235T-45605	INNER POLYE LAMINA COVER
	141-6-235T-45601	INNER POLYE LAMINA COVER
	141-6-409T-24702	INST MANUAL
	141-6-415T-32300	NOTICE
	141-6-133T-77401	INNER CORR CASE
	RB760(BK)/U++	REMOTE CONTROLLER
		RB760 BLACK
	141-6-231T-13400	INNER POLYE COVER

CABINET & CHASSIS

Ref. No.	Part No.	Description
1	141-0-122T-61402	FRONT PANEL ASSY
2	141-2-156T-38100	CUP KNOB, FUNCTION
3	141-2-156T-38201	CUP KNOB, VOLUME
4	141-2-210T-73100	BRACKET, BALANCE
5	141-2-164T-41800	SLIDE KNOB, BALANCE
6	141-2-111T-68001	CABINET
7	141-2-125T-40000	BOTTOM LID
8	141-2-174T-13100	STAND
9	141-2-119T-04202	BACK PANEL
10	141-2-315T-30901	REINFORCEMENT,
		POWER TRANSFORMER
11	141-2-310T-68404	BRACKET, HEAT SINK
12	141-2-310T-68504	BRACKET, HEAT SINK
13	141-2-160T-38902	PUSH BUTTON, POWER
14	141-2-160T-64100	PUSH BUTTON, SPER/EQ/MUTE
15	141-2-164T-41700	SLIDE KNOB, EQUALIZER
16	141-2-241T-28800	VEIL, EQUALIZER
17	141-2-210T-73000	BRACKET, EQUALIZER
18	141-2-160T-64000	PUSH BUTTON, MODE/LOUDNESS
19	141-2-210T-73200	BRACKET, DECK/TUNER SOCKET,
		LARGE
20	141-2-210T-73300	BRACKET, DECK/TUNER SOCKET,
		SMALL
21	141-2-210T-58100	BRACKET, AC POWER CORD
22	141-2-464T-12500	FIXER, AC POWER CORD
23	141-6-479T-81300	LABEL
24	141-2-464T-40500	FIXER, PHONO/MICOM PCB
25	141-2-464T-30300	FIXER

Ref. No.	Part No.	Description
27	141-2-315T-23400	REINFORCEMENT
28	141-2-447T-34101	CUSHION 6X10X3
Y1	BJB2S++3+8+Z1	BIND HD 2 TAPPING SCREW 3X8
Y2	BJX6S++3+6+Z1	PAN WASHER HD 2 TAPPING
		SCREW 3X6
Y3	BJX6S++3+8+Z1	PAN WASHER HD 2 TAPPING
		SCREW 3X8
Y4	BJB2S++3+10+Z1	BIND HD 2 TAPPING SCREW 3X10
Y5	BJB2S++4+8+Z1	BIND HD 2 TAPPING SCREW 4X8
Y6	BJESS++4+8+Z1	BIND HD 5 TITE SCREW 4X8
Y7	BJB2S++3+8+ZK	BIND HD 2 TAPPING SCREW 3X8
Y8	BJBYS++3+12+Z1	BIND HD SCREW 3X12
Y9	141-2-421T-43931	SPECIAL SCREW
Y10	141-2-421T-24700	BIND HD 2 TAPPING SCREW 3X8
Y13	141-2-453T-07501	WASHER

ELECTRICAL PARTS

Ref. No.	Part No.	Description
50	Δ 4-320T-01471	POWER TRANSFORMER
51	141-2-327T-26173	INSURATOR, TRANSISTOR
52	141-2-327T-26100	INSULATOR, TRANSISTOR, SMALL
53	141-2-368T-21213	HEAT SINK, LEFT-CH
54	141-2-368T-21214	HEAT SINK, RIGHT-CH
55	Δ 4-243T-84973	AC POWER CORD
57	4-285T-22171	P.C BOARD,
		HEADPHONE SOCKET FIXING
58	4-285T-22471	P.C BOARD,
		SPEAKER SWITCH FIXING
70	4-236T-32100	PLUG
71	Δ 4-234T-10591	FUSE, T4A 250V (F701/801)
72	Δ 4-234T-10292	FUSE, T2.5A 250V (F901)
73	Δ 4-267T-15200	SOCKET, AC OUTLET
74	4-285T-22271	P.C.BOARD
75	141-2-472T-00401	LUG
76	CC+50103ZD++S	CERAMIC 0.01MF 50V Z (C508)
	4-240T-47673	SOCKET, 3P
	4-240T-83572	SOCKET, 2P
	4-240T-83573	SOCKET, 3P
	4-240T-83574	SOCKET, 4P
	4-240T-83575	SOCKET, 5P
	4-240T-83576	SOCKET, 6P
	4-240T-83577	SOCKET, 7P

PARTS LIST

Ref. No.	Part No.	Description
	4-240T-83578	SOCKET, 8P

PHONO/MICOM PCB ASSY

Ref. No.	Part No.	Description
59	141-4-285T-21071	P.C BOARD ASSY, PHONO/MICOM
	4-240T-50500	SOCKET, RCA 6P, AUX/TV/CD
	4-240T-50572	SOCKET, PHONO IN/OUT
	4-266T-01700	SERAMIC RESONATOR
X601	SILM6402H1848	IC LM6402H1848 DIP42S
IC601	SILA6458DS+++	IC LA6458DS DIP08
IC701	SIM5218PR+++	IC M5218P R DIP08
or	SILC7818+++++	IC LC7818 DIP30
IC702	STC1740S+++++	TR 2SC1740 S
Q601	STC536+G+++UB	TR 2SC536 G AUD B SP
or	STC1740S+++++	TR 2SC1740 S
Q602	STC536+G+++UB	TR 2SC536 G AUD B SP
or	STC1740S+++++	TR 2SC1740 S
Q603	STC536+G+++UB	TR 2SC536 G AUD B SP
or	STC1740S+++++	TR 2SC1740 S
Q604	STC536+G+++UB	TR 2SC536 G AUD B SP
or	STC1740S+++++	TR 2SC1740 S
Q605	STC536+G+++UB	TR 2SC536 G AUD B SP
or	STC1740S+++++	TR 2SC1740 S
Q606	STC536+G+++UB	TR 2SC536 G AUD B SP
or	STC1740S+++++	TR 2SC1740 S
Q607	STC536+G+++UB	TR 2SC536 G AUD B SP
or	STC1740S+++++	TR 2SC1740 S
Q608	STC536+G+++UB	TR 2SC536 G AUD B SP
or	STC1740S+++++	TR 2SC1740 S
Q650	STC536+H+++UB	TR 2SC536 H AUD B SP
Q651	STC536+H+++UB	TR 2SC536 H AUD B SP
Q652	STC536+H+++UB	TR 2SC536 H AUD B SP
Q930	STC2655Y+++++	TR 2SC2655 Y
D601	SDDS442+X+++T	DIODE DS442 X
D602	SDGMA01+++++T	DIODE GMA01
D603	SDDS442+X+++T	DIODE DS442 X
D604	SDGMA01+++++T	DIODE GMA01
D607	SDGMA01+++++T	DIODE GMA01
D608	SDGMA01+++++T	DIODE GMA01
D609	SDDS442+X+++T	DIODE DS442 X
D610	SDGMA01+++++T	DIODE GMA01
D611	SDGMA01+++++T	DIODE GMA01
D612	SDGMA01+++++T	DIODE GMA01
D615	SDDS442+X+++T	DIODE DS442 X
D650	SDDS442+X+++T	DIODE DS442 X
D930	SDGZA091Y++++	ZENER DIODE GZA9.1Y
D931	SDDSF10+C+++T	DIODE DSF10 C T
D932	SDGZA056Y++++	ZENER DIODE GZA5.6Y
D940	SDGMA01+++++T	DIODE GMA01
D941	SDGMA01+++++T	DIODE GMA01
D942	SDGMA01+++++T	DIODE GMA01
C1	CC+50103ZRZFF	CERAMIC 0.01MF 50V Z R ZF
C2	CC+50103ZRZFF	CERAMIC 0.01MF 50V Z R ZF
C3	CC+50103ZRZFF	CERAMIC 0.01MF 50V Z R ZF
C4	CC+50103ZRZFF	CERAMIC 0.01MF 50V Z R ZF
C5	CC+50103ZRZFF	CERAMIC 0.01MF 50V Z R ZF
C6	CC+50103ZRZFF	CERAMIC 0.01MF 50V Z R ZF
C10	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C11	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C12	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C13	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C14	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C15	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C16	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C17	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C18	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C19	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C601	CE+25475MR++F	ELECT 4.7MF 25V M R
C602	CW+50105MVNPS	NONPOLAR 1MF 50V M V NP
C603	CE+16106MR++F	ELECT 10MF 16V M R
C604	CC+50221JRSLF	CERAMIC 220PF 50V J R SL

Ref. No.	Part No.	Description
C605	CC+50221JRSLF	CERAMIC 220PF 50V J R SL
C606	CE+25475MR++F	ELECT 4.7MF 25V M R
C607	CE+25475MR++F	ELECT 4.7MF 25V M R
C608	CC+50102KRYBF	CERAMIC 0.001MF 50V K R YB
C609	CC+50102KRYBF	CERAMIC 0.001MF 50V K R YB
C610	CE+50225MR++F	ELECT 2.2MF 50V M R
C650	CB+25333KRXR	BC CON 0.033MF 25V K R XR
C651	CE+25475MR++F	ELECT 4.7MF 25V M R
C701	CE+25475RVLRS	ELECT 4.7MF 25V R V LR
C702	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C703	CC+50821KRYBF	CERAMIC 820PF 50V K R YB
C704	CE+10336MR++F	ELECT 33MF 10V M R
C705	CB+25472KRXR	BC CON 0.0047MF 25V K R XR
C706	CB+25183KRXR	BC CON 0.018MF 25V K R XR
C707	CM+50392MR++F	MYLAR 0.0039MF 50V M R
C708	CW+50105RVLRS	NONPOLAR 1MF 50V R V LR
C801	CE+25475RVLRS	ELECT 4.7MF 25V R V LR
C802	CC+50101KRSLF	CERAMIC 100PF 50V K R SL
C803	CC+50821KRYBF	CERAMIC 820PF 50V K R YB
C804	CE+10336MR++F	ELECT 33MF 10V M R
C805	CB+25472KRXR	BC CON 0.0047MF 25V K R XR
C806	CB+25183KRXR	BC CON 0.018MF 25V K R XR
C807	CM+50392MR++F	MYLAR 0.0039MF 50V M R
C808	CW+50105RVLRS	NONPOLAR 1MF 50V R V LR
C930	CE+16108MY++S	ELECT 1000MF 16V M Y
C931	CE6R3107MR++F	ELECT 100MF 6.3V M R
C940	CE+16476MY++S	ELECT 47MF 16V M Y
C941	CE+16476MR++F	ELECT 47MF 16V M R
C942	CE+25475MR++F	ELECT 4.7MF 25V M R
C943	CC+50103ZRZFF	CERAMIC 0.01MF 50V Z R ZF
C944	CC+50103ZRZFF	CERAMIC 0.01MF 50V Z R ZF
R601	RC/+4103JT++R	CARBON T 10K OHM J1/4WR25
R602	RC/+6272JT+++	CARBON T 2.7K OHM J 1/6W
R603	RC/+6272JT+++	CARBON T 2.7K OHM J 1/6W
R604	RC/+6273JT+++	CARBON T 27K OHM J 1/6W
R605	RC/+6473JT+++	CARBON T 47K OHM J 1/6W
R606	RC/+6473JT+++	CARBON T 47K OHM J 1/6W
R607	RC/+6103JT+++	CARBON T 10K OHM J 1/6W
R608	RC/+6471JT+++	CARBON T 470 OHM J 1/6W
R609	RC/+4123JT++R	CARBON T 12K OHM J1/4WR25
R610	RC/+6682JT+++	CARBON T 6.8K OHM J 1/6W
R611	RC/+6153JT+++	CARBON T 15K OHM J 1/6W
R612	RC/+6103JT+++	CARBON T 10K OHM J 1/6W
R613	RC/+6473JT+++	CARBON T 47K OHM J 1/6W
R614	RC/+6473JT+++	CARBON T 47K OHM J 1/6W
R615	RC/+6473JT+++	CARBON T 47K OHM J 1/6W
R616	RC/+6473JT+++	CARBON T 47K OHM J 1/6W
R617	RC/+6333JT+++	CARBON T 33K OHM J 1/6W
R618	RC/+6333JT+++	CARBON T 33K OHM J 1/6W
R619	RC/+6103JT+++	CARBON T 10K OHM J 1/6W
R620	RC/+6472JT+++	CARBON T 4.7K OHM J 1/6W
R621	RC/+6472JT+++	CARBON T 4.7K OHM J 1/6W
R622	RC/+4103JT++R	CARBON T 10K OHM J1/4WR25
R623	RC/+4103JT++R	CARBON T 10K OHM J1/4WR25
R624	RC/+4103JT++R	CARBON T 10K OHM J1/4WR25
R625	RC/+4103JT++R	CARBON T 10K OHM J1/4WR25
R627	RC/+4104JT++R	CARBON T 100KOHM J1/4WR25
R628	RC/+6123JT+++	CARBON T 12K OHM J 1/6W
R629	RC/+6105JT+++	CARBON T 1M OHM J 1/6W
R630	RC/+6103JT+++	CARBON T 10K OHM J 1/6W
R631	RC/+6104JT+++	CARBON T 100K OHM J 1/6W
R632	RC/+4103JT++R	CARBON T 10K OHM J1/4WR25
R633	RC/+4103JT++R	CARBON T 10K OHM J1/4WR25
R634	RC/+6103JT+++	CARBON T 10K OHM J 1/6W
R635	RC/+6103JT+++	CARBON T 10K OHM J 1/6W
R636	RC/+6103JT+++	CARBON T 10K OHM J 1/6W
R638	RC/+4104JT++R	CARBON T 100KOHM J1/4WR25
R639	RC/+4103JT++R	CARBON T 10K OHM J1/4WR25
R640	RC/+4101JT++R	CARBON T 100 OHM J1/4WR25
R641	RC/+6105JT+++	CARBON T 1M OHM J 1/6W
R650	RC/+6824JT+++	CARBON T 820K OHM J 1/6W
R651	RC/+6103JT+++	CARBON T 10K OHM J 1/6W
R652	RC/+6272JT+++	CARBON T 2.7K OHM J 1/6W
R653	RC/+6104JT+++	CARBON T 100K OHM J 1/6W

PARTS LIST

Ref. No.	Part No.	Description
R754	RC/+4222JT++R	CARBON T 2.2KOHM J1/4WR25
R755	RC/+6222JT+++	CARBON T 2.2K OHM J 1/6W
R756	RC/+4153JT++R	CARBON T 15K OHM J1/4WR25
R757	RC/+6105JT+++	CARBON T 1M OHM J 1/6W
R758	RC/+6393JT+++	CARBON T 39K OHM J 1/6W
R759	RC/+6224JT+++	CARBON T 220K OHM J 1/6W
R760	RC/+6562JT+++	CARBON T 5.6K OHM J 1/6W
R761	RC/+6473JT+++	CARBON T 47K OHM J 1/6W
R854	RC/+4222JT++R	CARBON T 2.2KOHM J1/4WR25
R855	RC/+6222JT+++	CARBON T 2.2K OHM J 1/6W
R856	RC/+4153JT++R	CARBON T 15K OHM J1/4WR25
R857	RC/+6105JT+++	CARBON T 1M OHM J 1/6W
R858	RC/+6393JT+++	CARBON T 39K OHM J 1/6W
R859	RC/+6224JT+++	CARBON T 220K OHM J 1/6W
R860	RC/+6562JT+++	CARBON T 5.6K OHM J 1/6W
R861	RC/+6473JT+++	CARBON T 47K OHM J 1/6W

STANDBY INDICATOR PCB ASSY

Ref. No.	Part No.	Description
64	141-4-285T-21571	P.C BOARD ASSY, STANDBY INDICATOR
D913	SLSLP138CB50R	LED SLP138C-50 B RED
D914	SLSLP138CB50R	LED SLP138C-50 B RED

MAIN PCB ASSY

Ref. No.	Part No.	Description
65	141-4-285T-21671	P.C BOARD ASSY, MAIN
	4-237T-11483	TERMINAL BOARD, 8P
	4-209T-01174	POZISTOR, 110° C
	4-232T-06300	RELAY
	4-232T-08000	RELAY
	4-236T-32273	PLUG, 3P
	4-240T-11200	SOCKET, 3P
	4-240T-11273	SOCKET, 6P
L701	4-265T-05800	V.H.F COIL
L801	4-265T-05800	V.H.F COIL
SVR701	4-222T-62077	SEMI-FIXED RESISTOR, 1KB
SVR801	4-222T-62077	SEMI-FIXED RESISTOR, 1KB
Q706	STD1468S++++	TR 2SD1468 S
Q707	STA1016G++++	TR 2SA1016 G
Q708	STA1016G++++	TR 2SA1016 G
Q709	STA1016G++++	TR 2SA1016 G
Q710	STA1209S++++	TR 2SA1209 S
Q711	STD612+F++++	TR 2SD612 F
Q712	STC2911S++++	TR 2SC2911 S
Q713	STC2911S++++	TR 2SC2911 S
Q714	STC2238O++++	TR 2SC2238 O
or	STC2344E++++	TR 2SC2344 E
Q715	STA1011E++++	TR 2SA1011 E
or	STA968+O++++	TR 2SA968 O
Q716	△ STC3281O++++	TR 2SC3281 O
Q717	△ STA1302O++++	TR 2SA1302 O
Q806	STD1468S++++	TR 2SD1468 S
Q807	STA1016G++++	TR 2SA1016 G
Q808	STA1016G++++	TR 2SA1016 G
Q809	STA1016G++++	TR 2SA1016 G
Q810	STA1209S++++	TR 2SA1209 S
Q811	STD612+F++++	TR 2SD612 F
Q812	STC2911S++++	TR 2SC2911 S
Q813	STC2911S++++	TR 2SC2911 S
Q814	STC2238O++++	TR 2SC2238 O
or	STC2344E++++	TR 2SC2344 E
Q815	STA1011E++++	TR 2SA1011 E
or	STA968+O++++	TR 2SA968 O
Q816	△ STC3281O++++	TR 2SC3281 O
Q817	△ STA1302O++++	TR 2SA1302 O
Q901	△ STD325+E++++	TR 2SD325 E

Ref. No.	Part No.	Description
Q902	△ STB511+E++++	TR 2SB511 E
Q904	STC1740S++++	TR 2SC1740 S
or	STC536+G+++U1	TR 2SC536 G AUD SP
Q905	STA608+G++++	TR 2SA608 G
Q906	STC536+G+K+U+	TR 2SC536K G AUD
D701	SDDS442+X+++T	DIODE DS442 X
D702	SDDS442+X+++T	DIODE DS442 X
D703	SDDS442+X+++T	DIODE DS442 X
D801	SDDS442+X+++T	DIODE DS442 X
D802	SDDS442+X+++T	DIODE DS442 X
D803	SDDS442+X+++T	DIODE DS442 X
D901	△ SDDBA60+C+++	DIODE DBA60 C
D902	△ SDDSF10+C+++T	DIODE DSF10 C T
D903	△ SDDSF10+C+++T	DIODE DSF10 C T
D904	△ SDDSF10+C+++T	DIODE DSF10 C T
D905	△ SDDSF10+C+++T	DIODE DSF10 C T
D906	SDGZA150Y++++	ZENER DIODE GZA15Y
D907	SDGZA150Y++++	ZENER DIODE GZA15Y
D912	SDDS442+X+++T	DIODE DS442 X
C30	CM+50562MR++F	MYLAR 0.0056MF 50V M R
C31	CM+50562MR++F	MYLAR 0.0056MF 50V M R
C32	CM+50562MR++F	MYLAR 0.0056MF 50V M R
C33	CM+50562MR++F	MYLAR 0.0056MF 50V M R
C34	CM+50562MR++F	MYLAR 0.0056MF 50V M R
C35	CM+50562MR++F	MYLAR 0.0056MF 50V M R
C501	CN100103JM++S	P P CON 0.01MF 100V J M
C502	CN100103JM++S	P P CON 0.01MF 100V J M
C503	CN100103JM++S	P P CON 0.01MF 100V J M
C504	CN100103JM++S	P P CON 0.01MF 100V J M
C731	CE+50105MR++F	ELECT 1MF 50V M R
C732	CC+50471KRYBF	CERAMIC 470PF 50V K R YB
C733	CM+50471MR++F	MYLAR 470PF 50V M R
C734	CC+50080KRSLF	CERAMIC 8PF 50V K R SL
C735	CC500330KDSLS	CERAMIC 33PF 500V K D SL
C736	CC500101KDSLS	CERAMIC 100PF 500V K D SL
C737	CC500101KDSLS	CERAMIC 100PF 500V K D SL
C738	CM+50473MR++F	MYLAR 0.047MF 50V M R
C739	CE+10107MR++F	ELECT 100MF 10V M R
C831	CE+50105MR++F	ELECT 1MF 50V M R
C832	CC+50471KRYBF	CERAMIC 470PF 50V K R YB
C833	CM+50471MR++F	MYLAR 470PF 50V M R
C834	CC+50080KRSLF	CERAMIC 8PF 50V K R SL
C835	CC500330KDSLS	CERAMIC 33PF 500V K D SL
C836	CC500101KDSLS	CERAMIC 100PF 500V K D SL
C837	CC500101KDSLS	CERAMIC 100PF 500V K D SL
C838	CM+50473MR++F	MYLAR 0.047MF 50V M R
C839	CE+10107MR++F	ELECT 100MF 10V M R
C901	4-223T-13771	CAPACITOR 0.022MF 200V
C902	4-223T-13771	CAPACITOR 0.022MF 200V
C903	4-163T-11600	ELECT 8200MF 80V
C904	4-163T-11600	ELECT 8200MF 80V
C905	CF+50104JR++F	METAL POLY 0.1MF 50V J R
C906	CF+50104JR++F	METAL POLY 0.1MF 50V J R
C907	CE+35477MY++S	ELECT 470MF 35V M Y
C908	CE+35477MY++S	ELECT 470MF 35V M Y
C909	CE+16476MR++F	ELECT 47MF 16V M R
C910	CE+16476MR++F	ELECT 47MF 16V M R
C911	4-163T-11779	ELECT 100MF 100V
C912	4-163T-11779	ELECT 100MF 100V
C980	CC+50103ZRZFF	CERAMIC 0.01MF 50V Z R ZF
C981	CC+50102KRYBF	CERAMIC 0.001MF 50V K R YB
R500	RC/+4100JT++R	CARBON T 10 OHM J1/4WR25
R501	RC/+4100JT++R	CARBON T 10 OHM J1/4WR25
R762	RC/+4102JT++R	CARBON T 1K OHM J1/4WR25
R763	RC/+4683JT++R	CARBON T 68K OHM J1/4WR25
R764	RC/+4473JT++R	CARBON T 47K OHM J1/4WR25
R765	RC/+4471JT++R	CARBON T 470 OHM J1/4WR25
R766	RC/+4472JT++R	CARBON T 4.7KOHM J1/4WR25
R767	RC/+4472JT++R	CARBON T 4.7KOHM J1/4WR25
R768	RC/+4221JT++R	CARBON T 220 OHM J1/4WR25
R769	RC/+4333JT++R	CARBON T 33K OHM J1/4WR25
R770	RC/+4273JT++R	CARBON T 27K OHM J1/4WR25
R771	RC/+4270JT++R	CARBON T 27 OHM J1/4WR25
R772	RC/+4270JT++R	CARBON T 27 OHM J1/4WR25

PARTS LIST

Ref. No.	Part No.	Description
R773	RC/+4682JT++R	CARBON T 6.8KOHM J1/4WR25
R774	RC/+4682JT++R	CARBON T 6.8KOHM J1/4WR25
R775	RC/+4332JT++R	CARBON T 3.3KOHM J1/4WR25
R776	RC/+4152JT++R	CARBON T 1.5KOHM J1/4WR25
R777	△ RF/+2391JSFPR	FP-CARBON S 390 J 1/2W
R778	4-221T-03600	RESISTOR 0.47 OHM 5WX2
R779	RM++1100JS+++	METAL S 10 OHM J 1W
R780	RM++15R6JS+++	METAL S 5.6 OHM J 1W
R783	RC/+4331JT++R	CARBON T 330 OHM J1/4WR25
R784	△ RF/+4221JSFPR	FP-CARBON S 220 J 1/4WR25
R785	RC/+4104JT++R	CARBON T 100KOHM J1/4WR25
R862	RC/+4102JT++R	CARBON T 1K OHM J1/4WR25
R863	RC/+4683JT++R	CARBON T 68K OHM J1/4WR25
R864	RC/+4473JT++R	CARBON T 47K OHM J1/4WR25
R865	RC/+4471JT++R	CARBON T 470 OHM J1/4WR25
R866	RC/+4472JT++R	CARBON T 4.7KOHM J1/4WR25
R867	RC/+4472JT++R	CARBON T 4.7KOHM J1/4WR25
R868	RC/+4221JT++R	CARBON T 220 OHM J1/4WR25
R869	RC/+4333JT++R	CARBON T 33K OHM J1/4WR25
R870	RC/+4273JT++R	CARBON T 27K OHM J1/4WR25
R871	RC/+4270JT++R	CARBON T 27 OHM J1/4WR25
R872	RC/+4270JT++R	CARBON T 27 OHM J1/4WR25
R873	RC/+4682JT++R	CARBON T 6.8KOHM J1/4WR25
R874	RC/+4682JT++R	CARBON T 6.8KOHM J1/4WR25
R875	RC/+4332JT++R	CARBON T 3.3KOHM J1/4WR25
R876	RC/+4152JT++R	CARBON T 1.5KOHM J1/4WR25
R877	△ RF/+2391JSFPR	FP-CARBON S 390 J 1/2W
R878	4-221T-03600	RESISTOR 0.47 OHM/5WX2
R879	RM++1100JS+++	METAL S 10 OHM J 1W
R880	RM++15R6JS+++	METAL S 5.6 OHM J 1W
R883	RC/+4331JT++R	CARBON T 330 OHM J1/4WR25
R884	△ RF/+4221JSFPR	FP-CARBON S 220 J 1/4WR25
R885	RC/+4104JT++R	CARBON T 100KOHM J1/4WR25
R902	△ RF/+4220JSFPR	FP-CARBON S 22 J 1/4W R25
R903	△ RF/+4220JSFPR	FP-CARBON S 22 J 1/4W R25
R904	RC/+4332JT++R	CARBON T 3.3KOHM J1/4WR25
R905	RC/+4332JT++R	CARBON T 3.3KOHM J1/4WR25
R906	△ RF/+4330JSFPR	FP-CARBON S 33 J 1/4W R25
R907	△ RF/+4330JSFPR	FP-CARBON S 33 J 1/4W R25
R914	RC/+4473JT++R	CARBON T 47K OHM J1/4WR25
R915	RC/+4473JT++R	CARBON T 47K OHM J1/4WR25
R916	RC/+4332JT++R	CARBON T 3.3KOHM J1/4WR25
R917	RC/+4103JT++R	CARBON T 10K OHM J1/4WR25
R918	RC/+4103JT++R	CARBON T 10K OHM J1/4WR25
R919	RC/+4103JT++R	CARBON T 10K OHM J1/4WR25
R920	RC/+4473JT++R	CARBON T 47K OHM J1/4WR25
R980	RC/+4683JT++R	CARBON T 68K OHM J1/4WR25
R981	RF/+4101JSFPR	FP-CARBON S 100 J 1/4WR25

SPEAKER SWITCH PCB ASSY

Ref. No.	Part No.	Description
66	141-4-285T-21771	P.C BOARD ASSY, SPEAKER SWITCH
	141-2-381T-04202	BRACKET FUSE
	4-267T-06971	SOCKET, HEADPHONE
S13/14	4-248T-07700	SWITCH, SPEAKER
C505	CC+50103ZD++S	CERAMIC 0.01MF 50V Z
C506	CC+50103ZD++S	CERAMIC 0.01MF 50V Z
R781	RM++2331JS+++	METAL S 330 OHM J 2W
R881	RM++2331JS+++	METAL S 330 OHM J 2W

POWER TRANSFORMER PCB ASSY

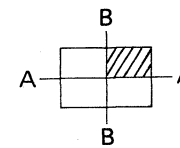
Ref. No.	Part No.	Description
67	141-4-285T-21871	P.C BOARD ASSY, POWER TRANSFORMER
	△ 4-320T-09300	SUB POWER TRANSFORMER
	△ 4-232T-09000	RELAY

Ref. No.	Part No.	Description
	141-2-381T-04202	BRACKET, FUSE
	4-240T-11272	SOCKET, 5P
	4-237T-00100	TERMINAL BOARD
	141-2-382T-18900	TERMINAL, AC CORD
	141-2-472T-00401	LUG
Q903	STA608+G++++	TR 2SA608 G
D909	SDGZA056Y++++	ZENER DIODE GZA5.6Y
D910	SDDS442+X+++T	DIODE DS442 X
D915	△ SDDSF10+C+++T	DIODE DSF10 C T
D916	△ SDDSF10+C+++T	DIODE DSF10 C T
D917	△ SDDSF10+C+++T	DIODE DSF10 C T
D918	△ SDDSF10+C+++T	DIODE DSF10 C T
C507	CC+50103ZD++S	CERAMIC 0.01MF 50V Z
C900	△ 4-223T-12280	CAPACITOR 0.01MF 125V
C914	CC+50103ZRZFF	CERAMIC 0.01MF 50V Z R ZF
C915	CE+16106MR++F	ELECT 10MF 16V M R
C916	CE+16227MY++R	ELECT 220MF 16V M Y
R903	RC/+4822JT++R	CARBON T 8.2KOHM J1/4WR25
R908	△ RF/+4010JSFPR	FP-CARBON S 1 J 1/4W R25
R909	△ RF/+4010JSFPR	FP-CARBON S 1 J 1/4W R25
R910	RC/+4104JT++R	CARBON T 100KOHM J1/4WR25
R911	RC/+4104JT++R	CARBON T 100KOHM J1/4WR25
R912	RC/+4473JT++R	CARBON T 47K OHM J1/4WR25
R913	RC/+4332JT++R	CARBON T 3.3KOHM J1/4WR25
R922	RC/+4470JT++R	CARBON T 47 OHM J1/4WR25
R923	△ RF/+4010JSFPR	FP-CARBON S 1 J 1/4W R25
R924	△ RF/+4010JSFPR	FP-CARBON S 1 J 1/4W R25

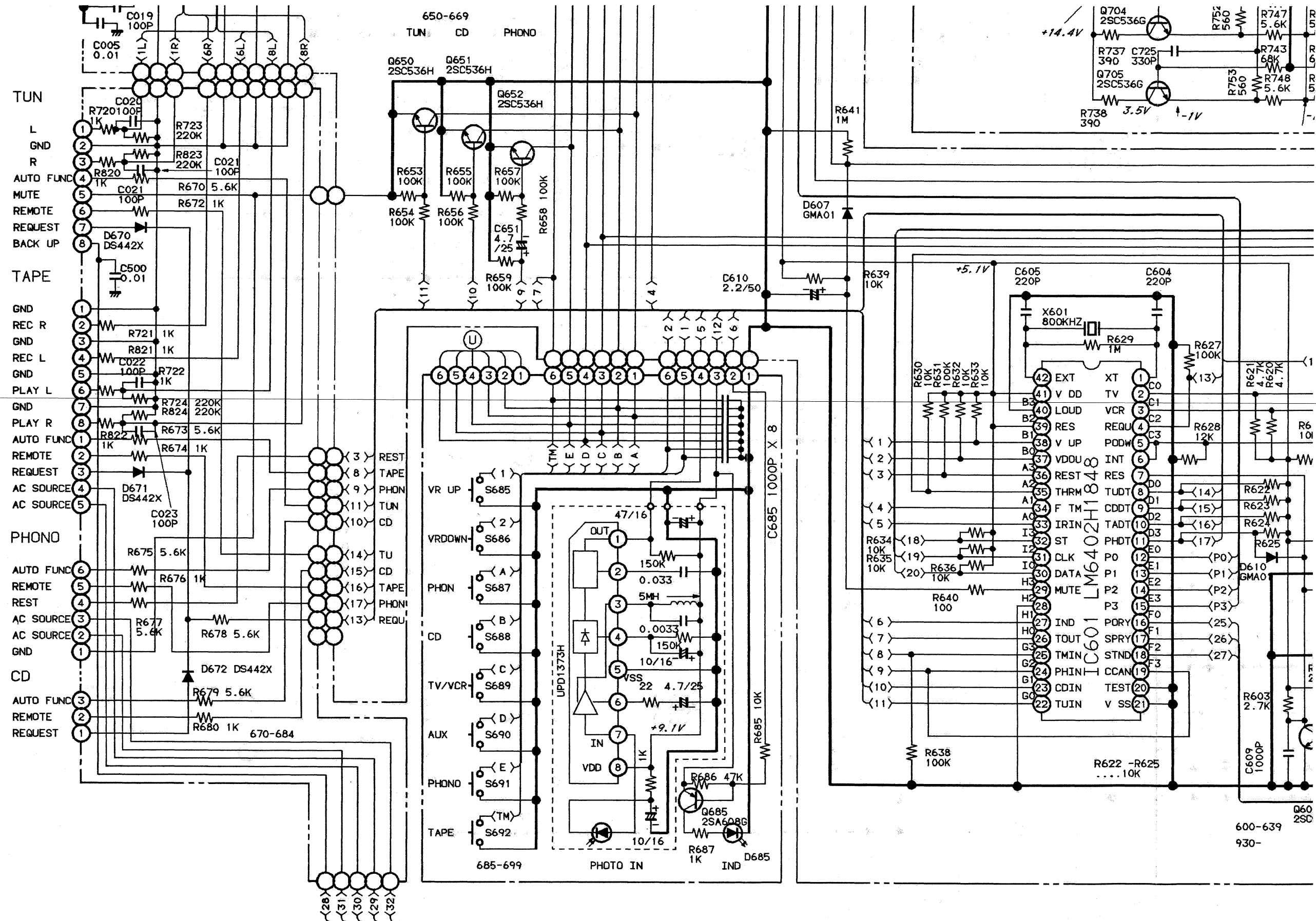
POWER SWITCH PCB ASSY

Ref. No.	Part No.	Description
68	141-4-285T-21971	P.C BOARD ASSY, POWER SWITCH
S15	△ 4-238T-83100	SWITCH, POWER
C917	CC+50103ZRZFF	CERAMIC 0.01MF 50V Z R ZF

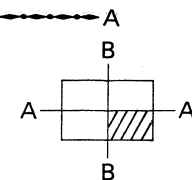
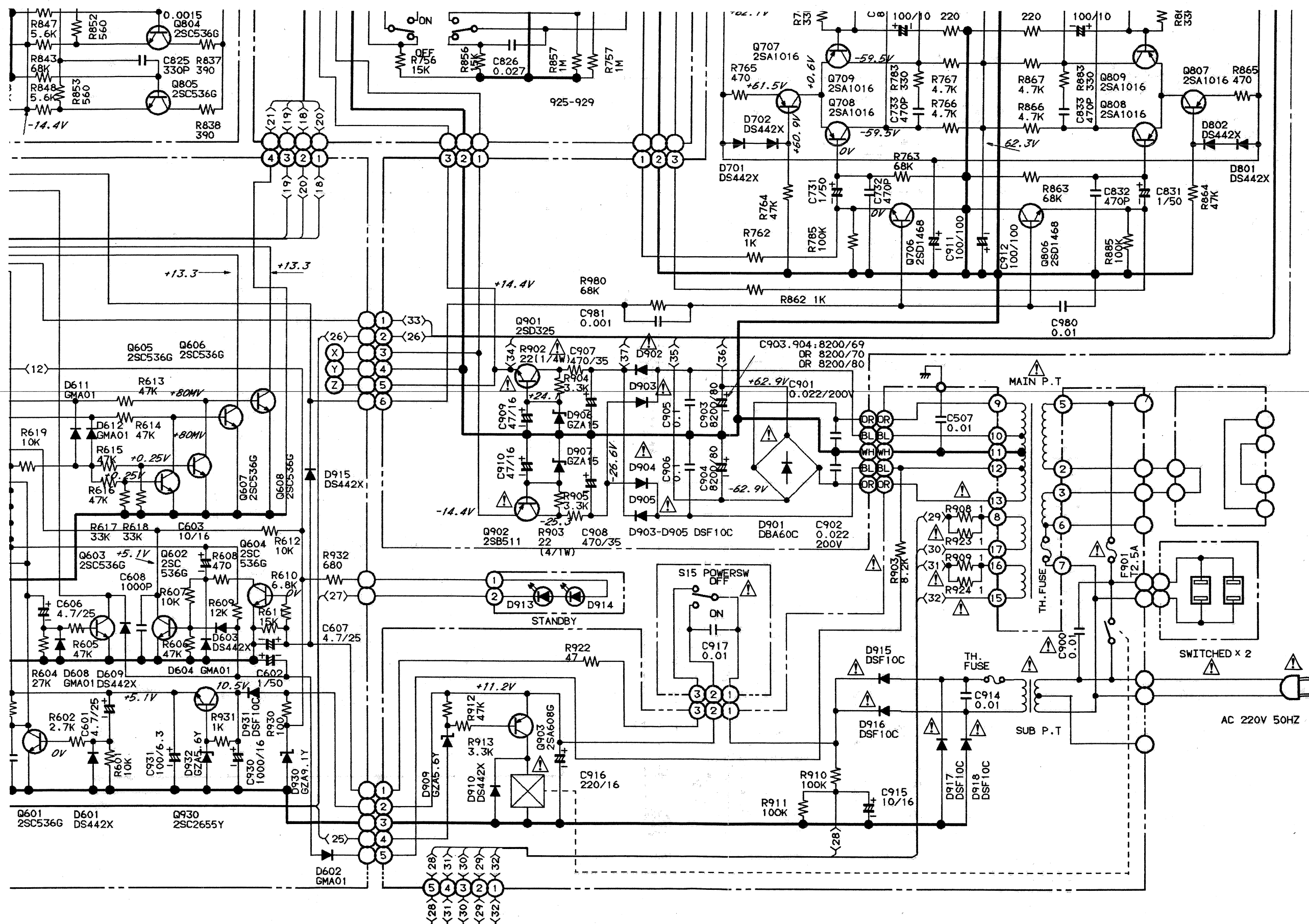


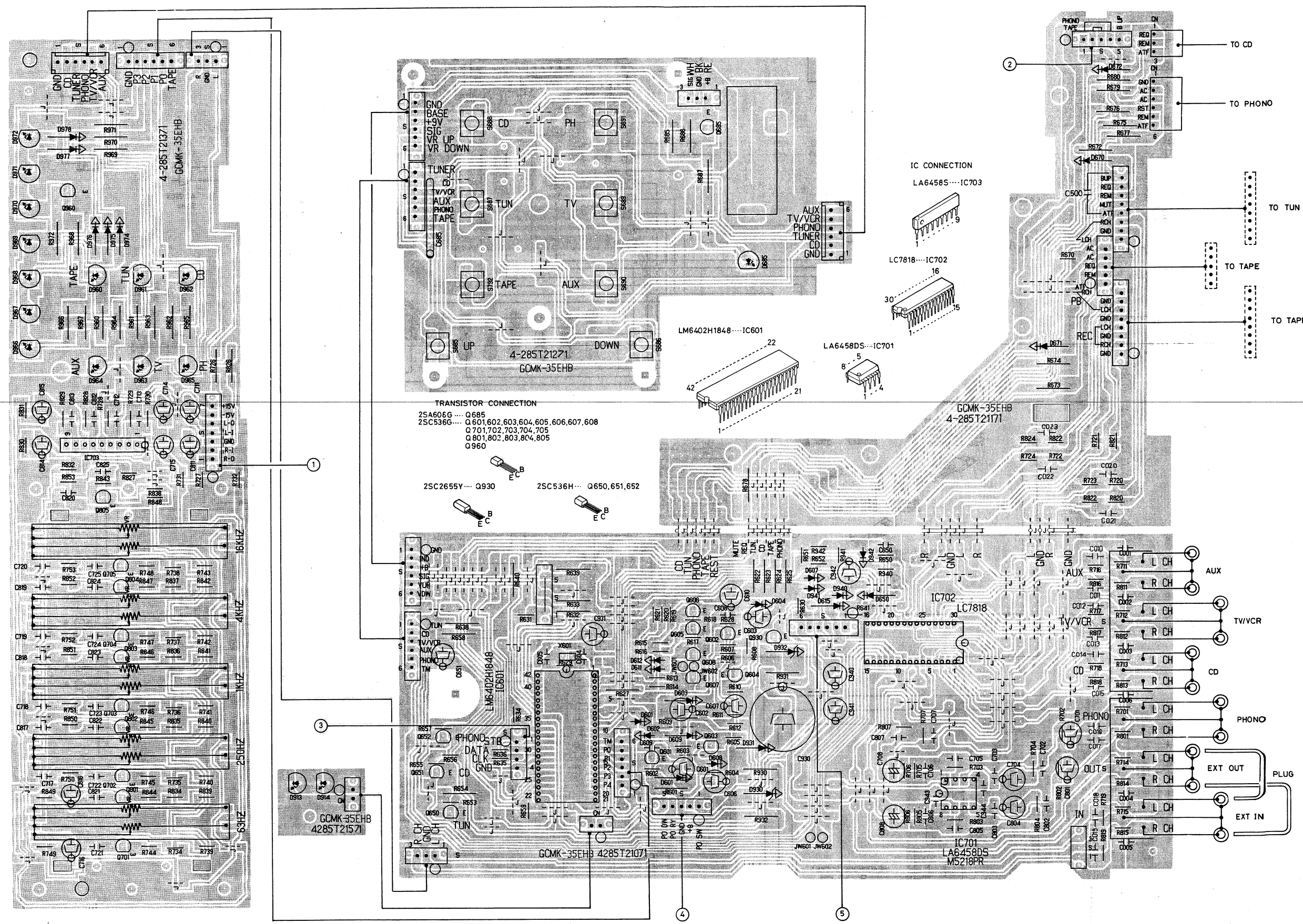


SCHEMATIC DIAGRAM (3)



A
B

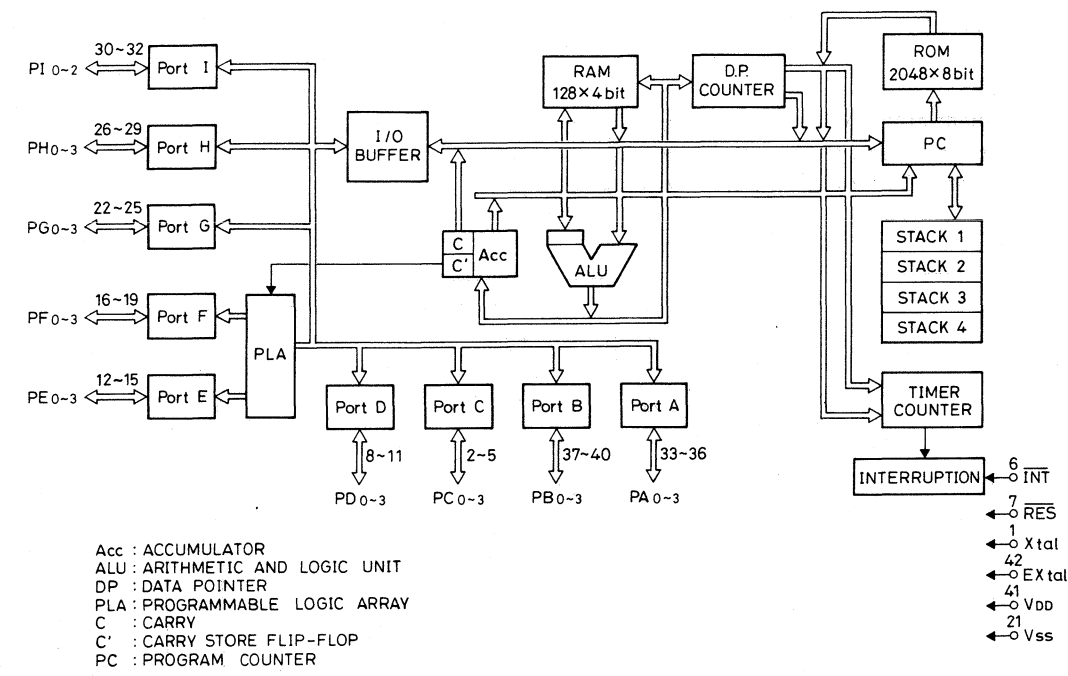




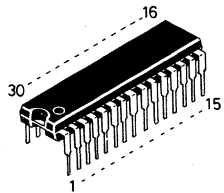
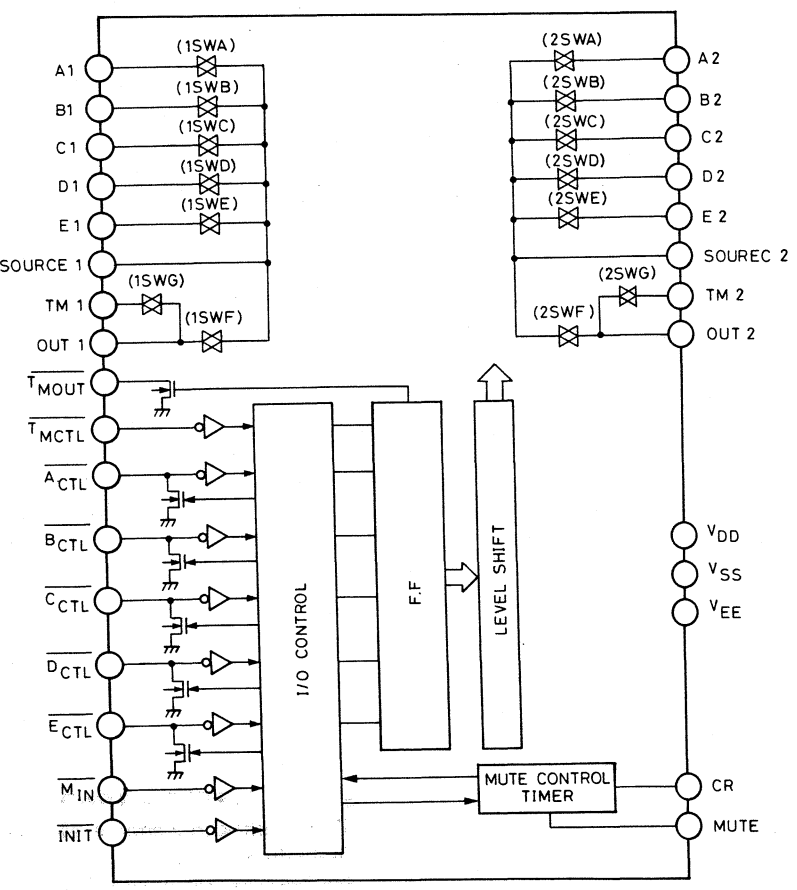


IC BLOCK DIAGRAM(1)

IC601 LM6402H

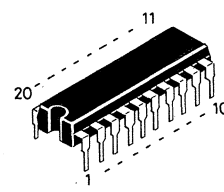
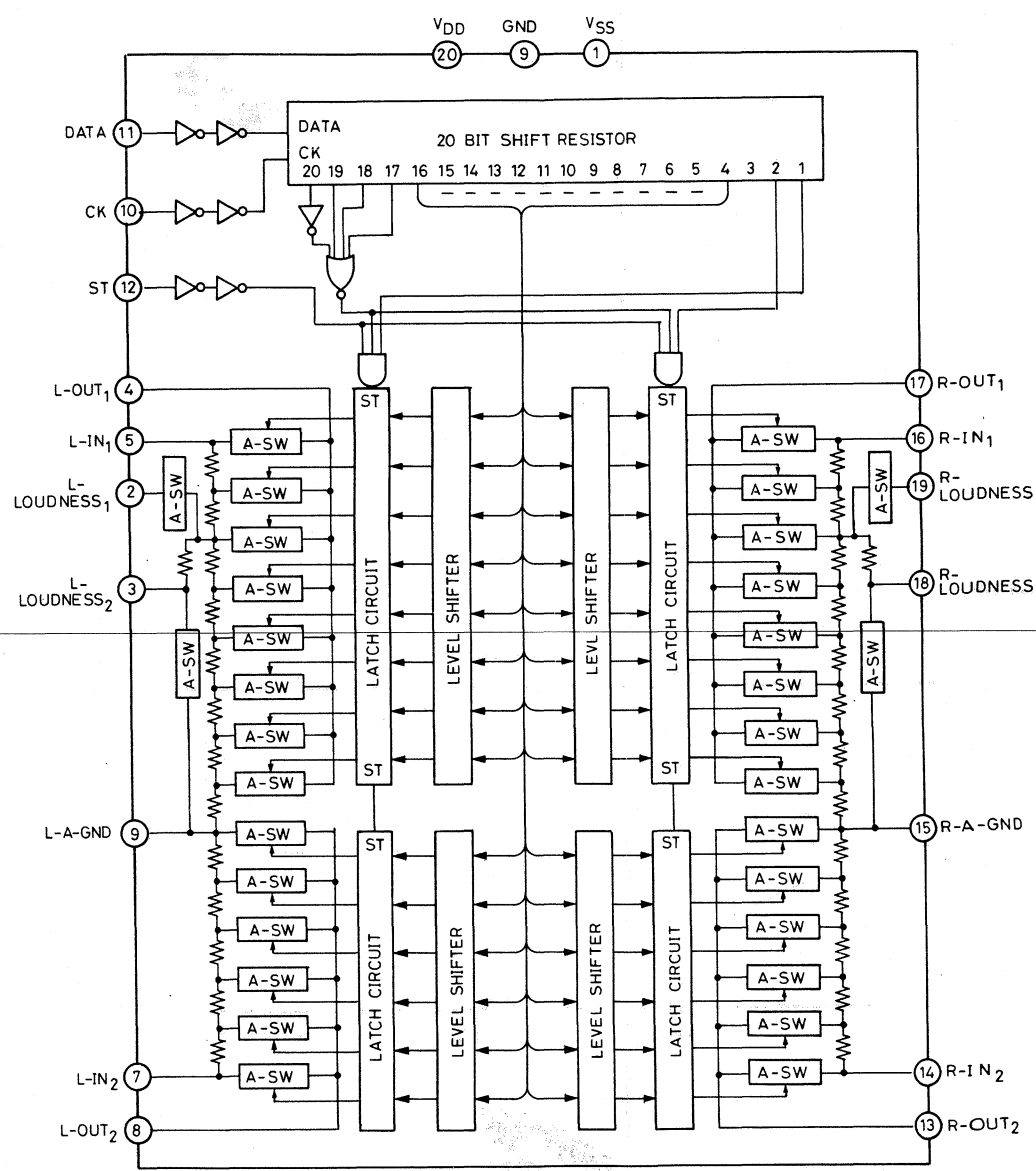


IC702 LC7818



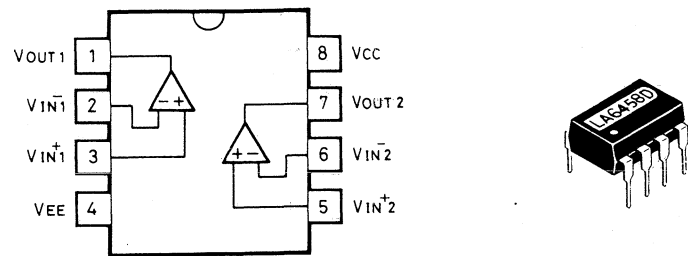
IC BLOCK DIAGRAM(2)

IC704 TC9177P

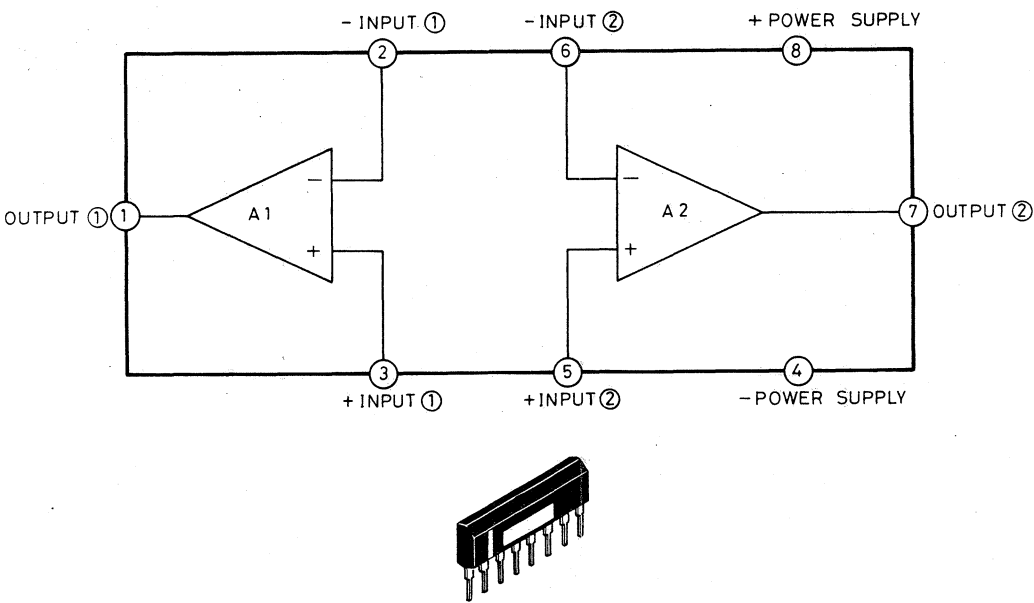


IC BLOCK DIAGRAM(3)

IC701 LA6458DS/M5218P



IC703/IC705 LA6458S

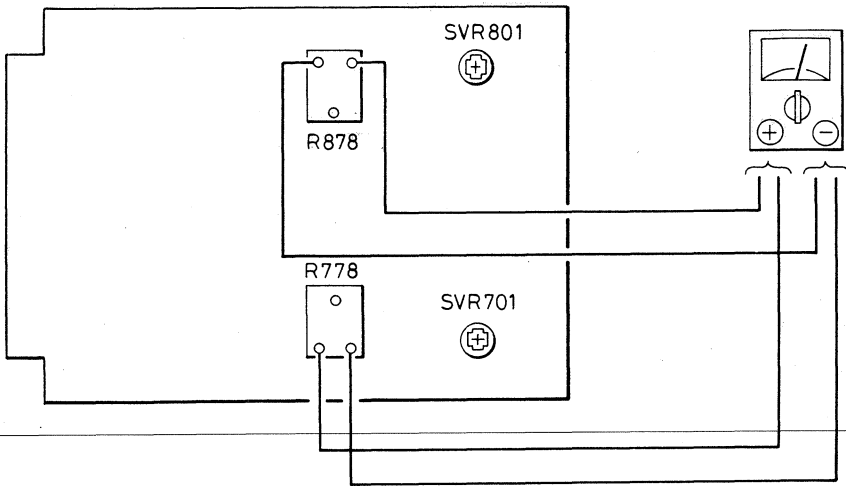


BIAS CURRENT ADJUSTMENT

CONDITIONS

- VOLUME : Minimum
- BALANCE : Center
- EQUALIZER : Center
- FUNCTION : TV/VCR
- SPEAKER : OFF

- Adjustment should be made after 3 minutes that the power switch is turned on.
1. Adjust SVR 701 to obtain 0.5~1.0 mV between terminals of R778.
 2. Adjust SVR 801 to obtain 0.5~1.0 mV between terminals of R878.



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