

STEREO RECEIVER

RX-460/360/R-85

SERVICE MANUAL

IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components, and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and part replacement. Recheck all work before you apply power to the unit.

■ CONTENTS

TO SERVICE PERSONNEL	1
FRONT PANELS	1~2
REAR PANELS	2~3
SPECIFICATIONS	4~5
INTERNAL VIEW	5
BLOCK DIAGRAM	6~7
DISASSEMBLY PROCEDURES	8
ADJUSTMENTS	8~13
PRINTED CIRCUIT BOARD	14~31
IC DATA	32~33
DISPLAY DATA	34~35
WAVEFORM OF TEST POINT	36
FRONT END PACK	37
RX-460 SCHEMATIC DIAGRAM	38
RX-360/R-85 SCHEMATIC DIAGRAM	39
PARTS LIST	40~52
REMOTE CONTROL TRANSMITTER	53~54

100429

YAMAHA

YAMAHA CORPORATION
P.O.Box 1, Hamamatsu, Japan

0.30K-554 Printed in Japan '92.4

RX-460/360/R-85

■ PRINTED CIRCUIT BOARD (Foil side)

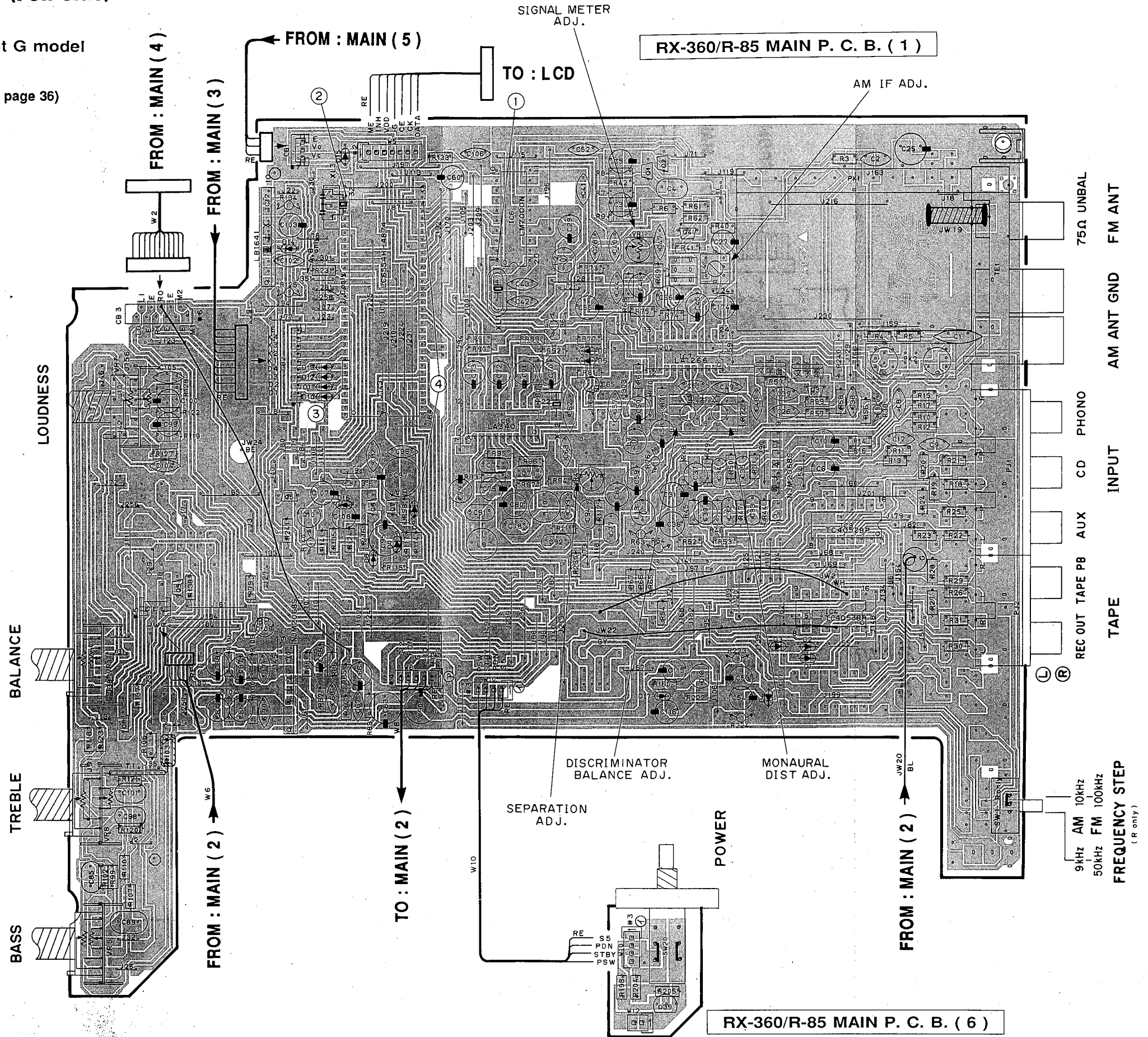
● Except G model

① to ④ : WAVEFORM OF TEST POINT (See page 36)

● Semiconductor Locations

Ref. No.	Location
IC 1	F3
IC 3	F3
IC 4	F4
IC 6	E2
IC 7	E3
IC 8	E3
IC 9	D2
IC 10	D4
IC 12	C2

Ref. No.	Location
Q 1	E2
Q 2	E2
Q 3	F3
Q 4	E2
Q 5	D3
Q 6	D3
Q 7	D3
Q 8	C4
Q 9	C4
Q 10	C3
Q 13	F4



9kHz AM 10kHz
50kHz FM 100kHz
FREQUENCY STEP
(R only)

PRINTED CIRCUIT BOARD (Foil side)

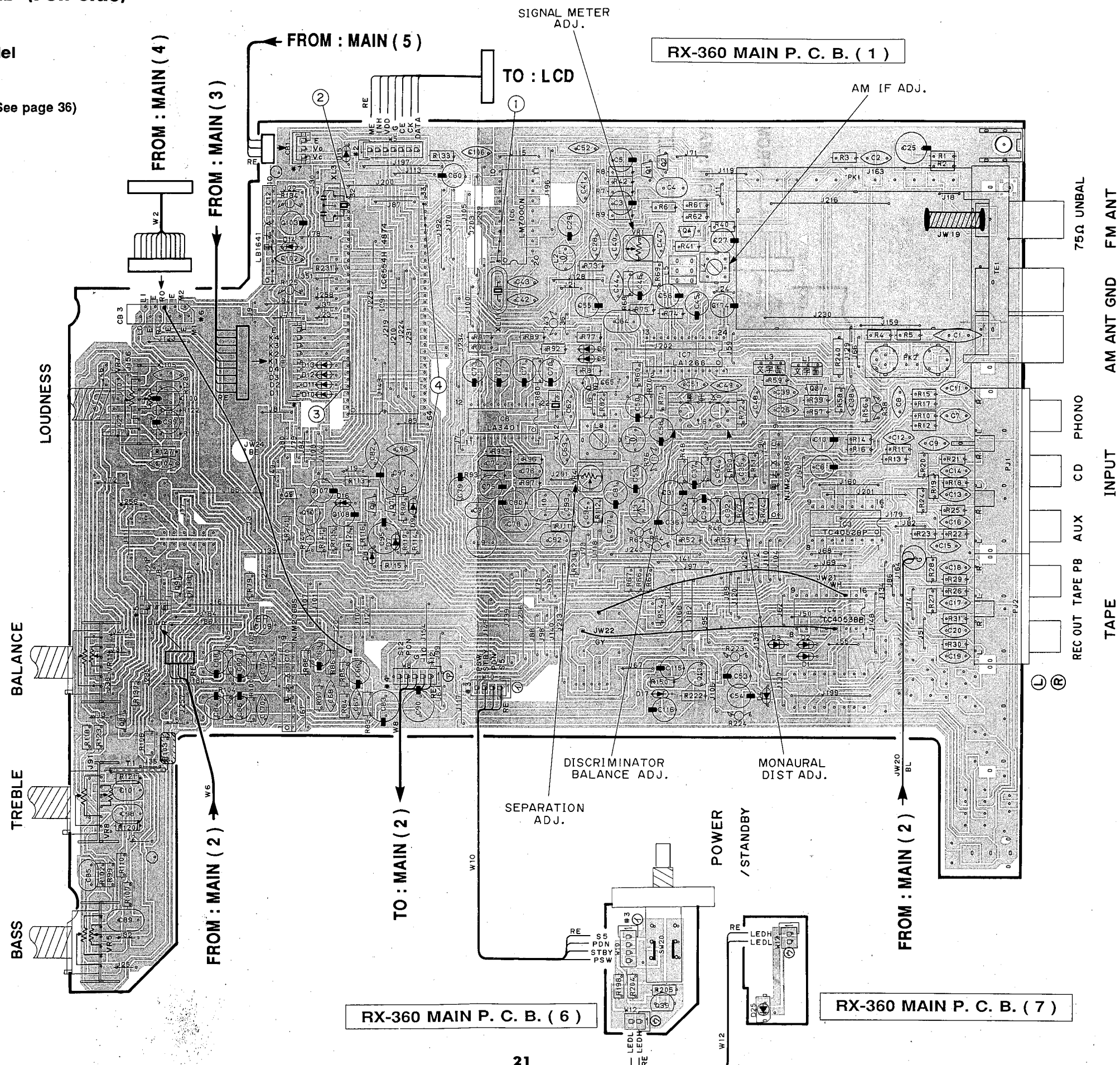
● G model

① to ④ : WAVEFORM OF TEST POINT (See page 36)

● Semiconductor Locations

Ref. No.	Location
IC 1	F3
IC 3	F3
IC 4	F4
IC 6	E2
IC 7	E3
IC 8	E3
IC 9	D2
IC 10	D4
IC 12	C2

Ref. No.	Location
Q 1	E2
Q 2	E2
Q 3	F3
Q 4	E2
Q 5	D3
Q 6	D3
Q 7	D3
Q 8	C4
Q 9	C4
Q 10	C3
Q 13	F4
Q 39	E6



RX-360 MAIN P. C. B. (6)

RX-360 MAIN P. C. B. (1)

RX-360 MAIN P. C. B. (7)

REC OUT TAPE PB AUX CD PHONO
 TAPE INPUT
 AM ANT GND FM ANT
 75Ω UNBAL

1
2
3
4
5
6

PARTS LIST

■ ELECTRICAL PARTS

■ WARNING

Components having special characteristics are marked \triangle and must be replaced with parts having specifications equal to those originally installed.

● Carbon resistors (1/6W or 1/4W) are not included in the ELECTRICAL PARTS List. For the parts No. of the carbon resistors, refer to P. 55.

Schm Ref.	PART NO.	Description	Remarks	Markets
*	VN144400	MAIN UNIT-P.C.B	RX-460	UC
*	VN144500	MAIN UNIT-P.C.B	RX-460	R
*	VN144600	MAIN UNIT-P.C.B	RX-460	AB
*	VN144700	MAIN UNIT-P.C.B	RX-460	G
*	VN148200	MAIN UNIT-P.C.B	RX-360, R-85	U
*	VN148300	MAIN UNIT-P.C.B	RX-360	R
*	VN148400	MAIN UNIT-P.C.B	RX-360	AB
*	VN148500	MAIN UNIT-P.C.B	RX-360	G
*	VN743500	MAIN UNIT-P.C.B	RX-360, R-85	C
C1	FG244470	CERAMIC DISC CAPACITOR	0.047uF 50V	
C2	UG444220	CERAMIC CAP	0.0220uF 50V	
C3	UJ766100	ELECTROLYTIC CAP	1uF 50V	
C4	UA655100	MYLAR FILM CAP	0.1uF 50V	
C5	UJ738100	ELECTROLYTIC CAP	100uF 16V	
C6	UJ738100	ELECTROLYTIC CAP	100uF 16V	
C7	UG412220	CERAMIC CAP	220pF 50V (SL)	G
C8	UG412220	CERAMIC CAP	220pF 50V (SL)	
C9	UG444100	CERAMIC CAP	0.01uF 50V	
C10	UJ738100	ELECTROLYTIC CAP	100uF 16V	
C11	UG412220	CERAMIC CAP	220pF 50V (SL)	G
C12	UG412220	CERAMIC CAP	220pF 50V (SL)	
C13	UG412220	CERAMIC CAP	220pF 50V (SL)	G
C14	UG412220	CERAMIC CAP	220pF 50V (SL)	G
C15	UG412220	CERAMIC CAP	220pF 50V (SL)	G
C16	UG412220	CERAMIC CAP	220pF 50V (SL)	G
C17	UG412220	CERAMIC CAP	220pF 50V (SL)	G
C18	UG412220	CERAMIC CAP	220pF 50V (SL)	G
C19	UG412220	CERAMIC CAP	220pF 50V (SL)	G
C20	UG412220	CERAMIC CAP	220pF 50V (SL)	G
C21	UG412220	CERAMIC CAP	220pF 50V (SL) RX-460	G
C22	UG412220	CERAMIC CAP	220pF 50V (SL) RX-460	G
C23	UG412220	CERAMIC CAP	220pF 50V (SL) RX-460	G
C24	UG412220	CERAMIC CAP	220pF 50V (SL) RX-460	G
C25	UJ838330	ELECTROLYTIC CAP	330uF 16V	
C26	UG444100	CERAMIC CAP	0.01uF 50V	
C27	UJ867100	ELECTROLYTIC CAP	10uF 50V	
C28	UG444100	CERAMIC CAP	0.01uF 50V	
C29	UJ738100	ELECTROLYTIC CAP	100uF 16V	
C30	UJ766220	ELECTROLYTIC CAP	2.2uF 50V	
C31	UJ738100	ELECTROLYTIC CAP	100uF 16V	
C32	UA653910	MYLAR FILM CAP	9100pF 50V	
C33	UA654330	MYLAR FILM CAP	0.033uF 50V	
C34	UA653910	MYLAR FILM CAP	9100pF 50V	
C35	UA654330	MYLAR FILM CAP	0.033uF 50V	
C36	UJ738100	ELECTROLYTIC CAP	100uF 16V	
C37	UJ766220	ELECTROLYTIC CAP	2.2uF 50V	
C38	UG444100	CERAMIC CAP	0.01uF 50V	
C39	UG444100	CERAMIC CAP	0.01uF 50V	
C40	UG444100	CERAMIC CAP	0.01uF 50V	
C41	VE551500	CERAMIC CAP	47pF 50V (SL)	

*New Parts (新規部品)

MAIN P. C. B.

Schm Ref.	PART NO.	Description	Remarks	Markets
C42	VA761200	CERAMIC CAP	33pF 50V (CH)	
C43	VA761200	CERAMIC CAP	33pF 50V (CH)	
C44	UG444100	CERAMIC CAP	0.01uF 50V	
C45	UJ866470	ELECTROLYTIC CAP	4.7uF 50V	
C46	UJ737100	ELECTROLYTIC CAP	10uF 16V	
C47	UG444100	CERAMIC CAP	0.01uF 50V	
C48	UG444100	CERAMIC CAP	0.01uF 50V	
C49	UG444100	CERAMIC CAP	0.01uF 50V	
C50	UJ766220	ELECTROLYTIC CAP	2.2uF 50V	
C51	UG444100	CERAMIC CAP	0.01uF 50V	
C52	FG213100	CERAMIC CAP	1000pF 50V	
C53	UJ737100	ELECTROLYTIC CAP	10uF 16V	
C54	UJ737100	ELECTROLYTIC CAP	10uF 16V	
C55	VJ839000	ELECTROLYTIC CAP	0.47uF 50V	
C56	UJ766330	ELECTROLYTIC CAP	3.3uF 50V	
C57	VE551900	CERAMIC CAP	100pF 50V (SL)	UCRAB
C58	UJ867100	ELECTROLYTIC CAP	10uF 50V	
C59	UJ867100	ELECTROLYTIC CAP	10uF 50V	
C60	UJ737100	ELECTROLYTIC CAP	10uF 16V	
* C61	VN510700	ELECTROLYTIC CAP	1uF 50V	
C62	FG244470	CERAMIC DISC CAPACITOR	0.047uF 50V	
C63	FG212470	CERAMIC CAP	470pF 50V	
C64	UA654470	MYLAR FILM CAP	0.047uF 50V	
C65	VD916400	BIPOLAR CAPACITOR	2.2uF 50V	
C66	UJ766220	ELECTROLYTIC CAP	2.2uF 50V	
* C67	VE551500	CERAMIC CAP	47pF 50V (SL)	
C68	VE551500	CERAMIC CAP	47pF 50V (SL)	
C69	UJ766220	ELECTROLYTIC CAP	2.2uF 50V	
C70	UJ766100	ELECTROLYTIC CAP	1uF 50V	
C71	UJ865470	ELECTROLYTIC CAP	0.47uF 50V	
C72	UJ766100	ELECTROLYTIC CAP	1uF 50V	
C73	UJ766100	ELECTROLYTIC CAP	1uF 50V	
C74	UT452680	POLYPROPYLENE FILM CAP	680pF 100V	AB
C74	UT452390	POLYPROPYLENE FILM CAP	390pF 100V	G
C74	UA653110	MYLAR FILM CAP	1100pF 50V	UCR
C75	UJ766100	ELECTROLYTIC CAP	1uF 50V	
C76	UT452680	POLYPROPYLENE FILM CAP	680pF 100V	AB
C76	UT452390	POLYPROPYLENE FILM CAP	390pF 100V	G
C76	UA653110	MYLAR FILM CAP	1100pF 50V	UCR
C77	UA653270	MYLAR FILM CAP	2700pF 50V	
C78	UA653270	MYLAR FILM CAP	2700pF 50V	
C79	UJ737100	ELECTROLYTIC CAP	10uF 16V	
C80	UJ766100	ELECTROLYTIC CAP	1uF 50V	
C81	UJ737100	ELECTROLYTIC CAP	10uF 16V	
C82	VJ394800	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF 25V	
C83	UJ838330	ELECTROLYTIC CAP	330uF 16V	
C84	UJ828100	ELECTROLYTIC CAP	100uF 10V	
C85	UA655120	MYLAR FILM CAP	0.12uF 50V	
C86	UJ766100	ELECTROLYTIC CAP	1uF 50V	
C87	UJ766100	ELECTROLYTIC CAP	1uF 50V	

*New Parts (新規部品)

RX-460/360/R-85

MAIN P. C. B.

Schm Ref.	PART NO.	Description		Remarks	Markets
C88	UJ828100	ELECTROLYTIC CAP	100uF	10V	
C89	UA655120	MYLAR FILM CAP	0.12uF	50V	
C90	UJ838330	ELECTROLYTIC CAP	330uF	16V	
C91	UA653100	MYLAR FILM CAP	1000pF	50V	
C92	UA653390	MYLAR FILM CAP	3900pF	50V	
C93	UA653100	MYLAR FILM CAP	1000pF	50V	
C94	UA653390	MYLAR FILM CAP	3900pF	50V	
C95	UJ766100	ELECTROLYTIC CAP	1uF	50V	
C96	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V	
C97	VF992600	CAPACITOR	4700uF	5.5V	
C98	UA654330	MYLAR FILM CAP	0.033uF	50V	
C99	UJ865470	ELECTROLYTIC CAP	0.47uF	50V	
C100	UJ865470	ELECTROLYTIC CAP	0.47uF	50V	
C101	UA654330	MYLAR FILM CAP	0.033uF	50V	
C102	UG444100	CERAMIC CAP	0.01uF	50V	
C103	UJ738100	ELECTROLYTIC CAP	100uF	16V	
C104	UG413680	CERAMIC DISC CAPACITOR	6800pF	50V	
C105	UG413680	CERAMIC DISC CAPACITOR	6800pF	50V	
C106	FG213100	CERAMIC CAP	1000pF	50V	
C107	UJ737100	ELECTROLYTIC CAP	10uF	16V	
C108	UJ766100	ELECTROLYTIC CAP	1uF	50V	
* C109	VN510600	ELECTROLYTIC CAP	0.47uF	50V	
C110	UJ766220	ELECTROLYTIC CAP	2.2uF	50V	
C111	FG212470	CERAMIC CAP	470pF	50V	
C112	UJ867220	ELECTROLYTIC CAP	22uF	50V	
C113	FG212470	CERAMIC CAP	470pF	50V	
C114	UJ766220	ELECTROLYTIC CAP	2.2uF	50V	
C115	UJ737100	ELECTROLYTIC CAP	10uF	16V	
C116	UJ737100	ELECTROLYTIC CAP	10uF	16V	
C117	FG212470	CERAMIC CAP	470pF	50V	RX-460
C118	UA653330	MYLAR FILM CAP	3300pF	50V	
C119	UG412220	CERAMIC CAP	220pF	50V (SL)	
C120	FU451100	MICA CAP	10pF	500V	
C121	UJ837470	ELECTROLYTIC CAP	47uF	16V	
C122	UJ837470	ELECTROLYTIC CAP	47uF	16V	
C123	FU451100	MICA CAP	10pF	500V	
C124	UG412220	CERAMIC CAP	220pF	50V (SL)	
C125	UA653330	MYLAR FILM CAP	3300pF	50V	
C126	FH611680	CERAMIC DISC CAPACITOR	68pF	500V	
C127	VK699400	ELECTROLYTIC CAP	330uF	63V	RX-460
C127	UJ868100	ELECTROLYTIC CAP	100uF	50V	RX-360, R-85
C128	UA655100	MYLAR FILM CAP	0.1uF	50V	
C129	UJ867470	ELECTROLYTIC CAP	47uF	50V	
C130	FH611680	CERAMIC DISC CAPACITOR	68pF	500V	
C131	FH611680	CERAMIC DISC CAPACITOR	68pF	500V	
C132	UJ867470	ELECTROLYTIC CAP	47uF	50V	
C133	UA655100	MYLAR FILM CAP	0.1uF	50V	
C134	FH611680	CERAMIC DISC CAPACITOR	68pF	500V	
C135	UG413390	CERAMIC DISC CAPACITOR	3900pF	50V	RX-460
C136	UJ867100	ELECTROLYTIC CAP	10uF	50V	R

*New Parts (新規部品)

MAIN P. C. B.

Schm Ref.	PART NO.	Description	Remarks	Markets
C137	UJ766100	ELECTROLYTIC CAP	1uF 50V	
C138	UG444100	CERAMIC CAP	0.01uF 50V	
C139	VK347900	ELECTROLYTIC CAP	470uF 63V	R
C139	UJ848470	ELECTROLYTIC CAPACITOR	470uF 25V	UCABG
C140	UJ737100	ELECTROLYTIC CAP	10uF 16V	R
C143	UJ828220	ELECTROLYTIC CAP	220uF 10V	
C144	FG213150	CERAMIC DISC CAPACITOR	1500pF 50V	G
C145	UG444220	CERAMIC CAP	0.022uF 50V	G
C146	FG213150	CERAMIC DISC CAPACITOR	1500pF 50V	G
C147	UJ867100	ELECTROLYTIC CAP	10uF 50V	
C148	UJ827470	ELECTROLYTIC CAPACITOR	47uF 10V	
C149	UJ867100	ELECTROLYTIC CAP	10uF 50V	R-460
C149	UJ867220	ELECTROLYTIC CAP	22uF 50V	R-360, R-85
C150	UA653220	MYLAR FILM CAP	2200pF 50V	G
C151	UG444100	CERAMIC CAP	0.01uF 50V	G
C152	UA653220	MYLAR FILM CAP	2200pF 50V	G
C153	UG444100	CERAMIC CAP	0.01uF 50V	G
C154	UA653220	MYLAR FILM CAP	2200pF 50V	G
C155	UA653220	MYLAR FILM CAP	2200pF 50V	G
C156	F1514100	RECOGNIZED CERAMIC CAP	0.01uF VA-1	
C157	UJ866470	ELECTROLYTIC CAP	4.7uF 50V	
C158	UG444220	CERAMIC CAP	0.022uF 50V	
C159	UJ867100	ELECTROLYTIC CAP	10uF 50V	
C160	UJ867100	ELECTROLYTIC CAP	10uF 50V	
C161	UA654100	MYLAR FILM CAP	0.01uF 50V	G
C162	UA654100	MYLAR FILM CAP	0.01uF 50V	G
C163	UA654100	MYLAR FILM CAP	0.01uF 50V	G
C164	UA654100	MYLAR FILM CAP	0.01uF 50V	G
C165	VK043200	ELECTROLYTIC CAP	5600uF 56V	R-460
C165	VN126700	ELECTROLYTIC CAPACITOR	3300uF 50V	R-360, R-85
C166	V1862100	METALLIZED POLYESTER F. CAP	0.047uF 100V	
C167	V1862100	METALLIZED POLYESTER F. CAP	0.047uF 100V	
C168	UG444220	CERAMIC CAP	0.022uF 50V	G
C169	VK043200	ELECTROLYTIC CAP	5600uF 56V	R-460
C169	VN126700	ELECTROLYTIC CAPACITOR	3300uF 50V	R-360, R-85
C170	VE551900	CERAMIC CAP	100pF 50V (SL)	
C171	VE551900	CERAMIC CAP	100pF 50V (SL)	
C172	UA654470	MYLAR FILM CAP	0.047uF 50V	
C173	UA654470	MYLAR FILM CAP	0.047uF 50V	
C174	UJ737100	ELECTROLYTIC CAP	10uF 16V	
C175	UA653100	MYLAR FILM CAP	1000pF 50V	R-460
C176	UA653100	MYLAR FILM CAP	1000pF 50V	R-460
CB1	VD004600	CONNECTOR	PH i-TYPE 3P TE	
CB2	VD005200	CONNECTOR	PH i-TYPE 9P TE	
CB3	VM859500	CONNECTOR	52045 11P TE	
CB4	VM859500	CONNECTOR	52045 11P TE	
CB9	LB201880	FUSE HOLDER PIN	PC-FH1	R
CB10	LB201880	FUSE HOLDER PIN	PC-FH1	R
CB11	LB201880	FUSE HOLDER PIN	PC-FH1	
CB12	LB201880	FUSE HOLDER PIN	PC-FH1	

*New Parts (新規部品)

RX-460/360/R-85

MAIN P. C. B.

Schm Ref.	PART NO.	Description	Remarks	Markets
CB13	VG879900	CONNECTOR	VH 2P TE	
CB15	VD004600	CONNECTOR	PH i-TYPE 3P TE	
CB17	LB201880	FUSE HOLDER PIN	PC-FH1	G
CB18	LB201880	FUSE HOLDER PIN	PC-FH1	G
D1	IF004600	DIODE	1SS133	
D2	IF004600	DIODE	1SS133	
D3	IF004600	DIODE	1SS133	
D4	IF004600	DIODE	1SS133	
D5	IF004600	DIODE	1SS133	
D6	IF004600	DIODE	1SS133	
D7	IF004600	DIODE	1SS133	
D8	VG436800	ZENER DIODE	MTZJ4.3B	
D9	IF004600	DIODE	1SS133	
D10	IF004600	DIODE	1SS133	
D11	IF004600	DIODE	1SS133	
D12	IF004600	DIODE	1SS133	
D13	IF004600	DIODE	1SS133	
D14	VG437500	ZENER DIODE	MTZJ5.1C	
D15	IF004600	DIODE	1SS133	
D16	VG438000	ZENER DIODE	MTZJ6.2B	
D17	VG438100	ZENER DIODE	MTZJ6.2C	
D18	IF004600	DIODE	1SS133	
D19	VN008700	DIODE	1SS270A	△
D20	VN008700	DIODE	1SS270A	△
D21	VH801600	DIODE	1SR139-100	△
D22	VG440400	ZENER DIODE	MTZJ13A	R
D24	VG442600	ZENER DIODE	MTZJ24C	
D25	VI013600	LED	SLR-34VC3H3 (RE)	G
D26	VG439400	ZENER DIODE	MTZJ10A	
D27	VN008700	DIODE	1SS270A	
D28	VN011400	DIODE BRIDGE	D5SB20 5A 200V	RX-460 △
D28	VN011400	DIODE BRIDGE	D5SB20 5A 200V	RX-360 △ ABG
D28	VN011300	DIODE BRIDGE	D3SBA20 4A 200V	RX-360,R-85 △ UCR
D29	VG440300	ZENER DIODE	MTZJ12C	
D30	IF004600	DIODE	1SS133	
D31	IF004600	DIODE	1SS133	
IC1	XE322A00	IC	NJM2068S-D	
IC3	XA053A00	IC	TC4052BP	
IC4	IG055100	IC	TC4053BP	
IC5	IG055100	IC	TC4053BP	RX-460
IC6	XB818A00	IC	LM7000N	
IC7	XB760A00	IC	LA1266	
IC8	IG158100	IC	LA3401	
IC9	XK783B00	IC ,DIGITAL	LC6554H-4958	
IC10	XE322A00	IC	NJM2068S-D	
IC12	XF494A00	IC	LB1641	
IC13	XF663A00	IC	uPC1237HA	△
JK1	VJ726800	MINITURE JACK, MONAURAL		RX-460
JK2	LB301720	PHONES JACK	M1669-A	
L1	GG000560	CERAMIC FILTER	SFE10.7MS3GHY-A	

*New Parts (新規部品)

MAIN P. C. B.

Schm Ref.	PART NO.	Description	Remarks	Markets
Q32	IA097000	TRANSISTOR 2SA970 GR,BL	RX-460	R
Q32	IA131000	TRANSISTOR 2SA1310 R,S,T	RX-460	UCABG
Q33	IC174020	TRANSISTOR 2SC1740S R,S		
Q34	IA097000	TRANSISTOR 2SA970 GR,BL		
Q35	IC224030	TRANSISTOR 2SC2240 GR,BL		
Q36	IC224030	TRANSISTOR 2SC2240 GR,BL		
Q37	IC257700	TRANSISTOR 2SC2577 O,P,Y		R
Q38	IC331200	TRANSISTOR 2SC3312 R,S,T		R
Q39	IC174020	TRANSISTOR 2SC1740S R,S		G
Q40	VC938500	TRANSISTOR 2SC3852		△
Q41	IC174020	TRANSISTOR 2SC1740S R,S		
Q42	VC614000	TRANSISTOR 2SB1274 Q,R,S		△
R38	HV454330	FLAME PROOF CARBON RESISTOR 33Ω 1/4W		
R43	HV454150	FLAME PROOF CARBON RESISTOR 15Ω 1/4W		
R63	HV454220	FLAME PROOF CARBON RESISTOR 22Ω 1/4W		
R64	HV454220	FLAME PROOF CARBON RESISTOR 22Ω 1/4W		
R76	HV454100	FLAME PROOF CARBON RESISTOR 10Ω 1/4W		
R125	HV454330	FLAME PROOF CARBON RESISTOR 33Ω 1/4W		
R134	HV454100	FLAME PROOF CARBON RESISTOR 10Ω 1/4W		
R140	HV454330	FLAME PROOF CARBON RESISTOR 33Ω 1/4W		
R151	HV454100	FLAME PROOF CARBON RESISTOR 10Ω 1/4W		△
R152	HV455470	FLAME PROOF CARBON RESISTOR 470Ω 1/4W		UCRAB
R152	HV455330	FLAME PROOF CARBON RESISTOR 330Ω 1/4W		G
R155	HV456560	FLAME PROOF CARBON RESISTOR 5.6KΩ 1/4W		△
R157	HV456560	FLAME PROOF CARBON RESISTOR 5.6KΩ 1/4W		△
R159	HV456560	FLAME PROOF CARBON RESISTOR 5.6KΩ 1/4W		△
R160	HV456560	FLAME PROOF CARBON RESISTOR 5.6KΩ 1/4W		△
R164	HV455470	FLAME PROOF CARBON RESISTOR 470Ω 1/4W		UCRAB
R164	HV455330	FLAME PROOF CARBON RESISTOR 330Ω 1/4W		G
R165	HV454100	FLAME PROOF CARBON RESISTOR 10Ω 1/4W		△
R169	HV454220	FLAME PROOF CARBON RESISTOR 22Ω 1/4W		△
R171	VK188600	FUSABLE RESISTOR 470Ω 1/4W		△
R173	HV456270	FLAME PROOF CARBON RESISTOR 2.7KΩ 1/4W		△
R174	VJ787600	METAL PLATE RESISTOR MPC725 0.22+0.22		△
R175	VK188900	FUSE RESISTOR 820Ω 1/4W		△
R176	VK188900	FUSE RESISTOR 820Ω 1/4W		△
R178	HV456270	FLAME PROOF CARBON RESISTOR 2.7KΩ 1/4W		△
R179	VJ787600	METAL PLATE RESISTOR MPC725 0.22+0.22		△
R180	VK188600	FUSABLE RESISTOR 470Ω 1/4W		△
R183	VN010400	METAL OXIDE FILM RESISTOR 68Ω 2W	RX-460	△
R189	HV457100	FLAME PROOF CARBON RESISTOR 10KΩ 1/4W		△
R191	HV454100	FLAME PROOF CARBON RESISTOR 10Ω 1/4W		△
R195	HV454100	FLAME PROOF CARBON RESISTOR 10Ω 1/4W		△
R197	HV457100	FLAME PROOF CARBON RESISTOR 10KΩ 1/4W		△
R201	VN010600	METAL OXIDE FILM RESISTOR 390Ω 2W	RX-460	△
R201	VN010500	METAL OXIDE FILM RESISTOR 330Ω 2W	RX-360,R-85	△
R202	HV453220	FLAME PROOF CARBON RESISTOR 2.2Ω 1/4W		
R203	VN010600	METAL OXIDE FILM RESISTOR 390Ω 2W	RX-460	△
R203	VN010500	METAL OXIDE FILM RESISTOR 330Ω 2W	RX-360,R-85	△
R206	HL326100	METAL OXIDE RESISTOR 1KΩ 2W	RX-460	△

*New Parts (新規部品)

MAIN P. C. B.

Schm Ref.	PART NO.	Description	Remarks	Markets
R206	Vi661100	METAL FILM RESISTOR 820Ω 2W	RX-360,R-85	
R210	HV453220	FLAME PROOF CARBON RESISTOR 2.2Ω 1/4W		G
R211	HV453220	FLAME PROOF CARBON RESISTOR 2.2Ω 1/4W		G
R213	HV456560	FLAME PROOF CARBON RESISTOR 5.6KΩ 1/4W		
R214	VK187800	FUSABLE RESISTOR 100Ω 1/4W		
R216	HV456560	FLAME PROOF CARBON RESISTOR 5.6KΩ 1/4W		
R218	HV453100	FLAME PROOF CARBON RESISTOR 1Ω 1/4W		
R219	HV453100	FLAME PROOF CARBON RESISTOR 1Ω 1/4W		
R220	HV453220	FLAME PROOF CARBON RESISTOR 2.2Ω 1/4W		G
R223	HV454100	FLAME PROOF CARBON RESISTOR 10Ω 1/4W		
R224	HV454100	FLAME PROOF CARBON RESISTOR 10Ω 1/4W		
R226	HV454100	FLAME PROOF CARBON RESISTOR 10Ω 1/4W		
R226	HV454100	FLAME PROOF CARBON RESISTOR 10Ω 1/4W		
R227	HV454100	FLAME PROOF CARBON RESISTOR 10Ω 1/4W		
R236	HV453470	FLAME PROOF CARBON RESISTOR 4.7Ω 1/4W		
R237	HV453470	FLAME PROOF CARBON RESISTOR 4.7Ω 1/4W		
R238	HV453470	FLAME PROOF CARBON RESISTOR 4.7Ω 1/4W		
R239	HV453470	FLAME PROOF CARBON RESISTOR 4.7Ω 1/4W		
RY1	VD506000	RELAY AC DG12D1-0(M)		
RY2	VK438300	RELAY DH24D2-OT(M)-II		
SW1	VF541200	SLIDE SWITCH SSSF11		R
* SW2	VN010700	SWITCH (PUSH) PSE4/2 S	RX-460	
SW4	VJ827400	PUSH SWITCH EVQ-214 04M		
SW5	VJ827400	PUSH SWITCH EVQ-214 04M		
SW6	VJ827400	PUSH SWITCH EVQ-214 04M		
SW7	VJ827400	PUSH SWITCH EVQ-214 04M		
SW10	VJ827400	PUSH SWITCH EVQ-214 04M		
SW11	VJ827400	PUSH SWITCH EVQ-214 04M		
SW12	VJ827400	PUSH SWITCH EVQ-214 04M	RX-460	
SW13	VJ827400	PUSH SWITCH EVQ-214 04M		
SW14	VJ827400	PUSH SWITCH EVQ-214 04M		
SW15	VJ827400	PUSH SWITCH EVQ-214 04M		
SW16	VJ827400	PUSH SWITCH EVQ-214 04M		
SW17	VJ827400	PUSH SWITCH EVQ-214 04M		
SW18	VJ827400	PUSH SWITCH EVQ-214 04M		
SW19	VJ827400	PUSH SWITCH EVQ-214 04M		
SW20	KA804550	PUSH SWITCH		
SW22	VJ850200	PUSH SWITCH PSE021A2KP 2		
SW23	VA961800	VOLTAGE SELECTOR ESE-37247-F		R
T1	XC083A00	POWER TRANSFORMER		UC
T1	XC082A00	POWER TRANSFORMER		R
T1	XC084A00	POWER TRANSFORMER		ABG
TE1	LA005800	ANTENNA TERMINAL YKD31-0215		
TE2	VK480700	AC OUTLET		G
TE2	VK480600	AC OUTLET		UCR
TE3	VN286300	SPEAKER TERMINAL 8P YKD21-0229		
U1	VF926500	LIGHT DETECTING MODULE GP1U501X		
VR1	VJ694000	PRE-SET POTENTIOMETER B47KΩ		
* VR2	VN011200	VARIABLE RESISTOR (OTHER) A100KΩ		
VR4	VJ694000	PRE-SET POTENTIOMETER B47KΩ		

*New Parts (新規部品)

RX-460/360/R-85

MAIN P. C. B. & LCD P. C. B.

Schm Ref.	PART NO.	Description	Remarks	Markets
**	VR5	VN010900 VARIABLE RESISTOR(2 ROTARY)	B10KΩ	
**	VR7	VN011100 VARIABLE RESISTOR(2 ROTARY)	B10KΩ	
**	VR8	VN011000 VARIABLE RESISTOR(2 ROTARY)	B10KΩ	
**	VR11	VN010800 VARIABLE RESISTOR(2 ROTARY)	MN5KΩ	
	VR12	VJ692800 PRE-SET POTENTIOMETER	B470Ω	
	VR13	VJ692800 PRE-SET POTENTIOMETER	B470Ω	
	XL1	QU003800 QUARTZ CRYSTAL UNIT	7.2MHz	
	XL2	GG000750 CERAMIC RESONATOR	18.95MHz CSB456F11	
	XL3	VD827600 CERAMIC RESONATOR	4MHz	
		BB071360 SCREW TERMINAL	8.3x13	
		BB069510 GROUND METAL	No.6951	
		VB966900 CONNECTOR	IMS-A-6024	
**		VN130700 SPACER		
		CB068880 PLASTIC RIVET	No.1027	
**	Q25	IX630860 TRANSISTOR	2SC4468 O,P,Y	RX-460
**	Q25	IX615760 TRANSISTOR	2SC4467 O,P,Y	RX-360,R-85
**	Q26	IX630850 TRANSISTOR	2SA1695 O,P,Y	RX-460
**	Q26	IX615750 TRANSISTOR	2SA1694 O,P,Y	RX-360,R-85
**	Q29	IX630860 TRANSISTOR	2SC4468 O,P,Y	RX-460
**	Q29	IX615760 TRANSISTOR	2SC4467 O,P,Y	RX-360,R-85
**	Q30	IX630850 TRANSISTOR	2SA1695 O,P,Y	RX-460
**	Q30	IX615750 TRANSISTOR	2SA1694 O,P,Y	RX-360,R-85
	Q40	VC938500 TRANSISTOR	2SC3852	
**		VH788000 HEAT SINK		RX-460
**		VH788100 HEAT SINK		RX-360
		VK195900 SHEET	19x24	
		VK173200 SCREW, TRANSISTOR	3x15 SP FCM3	
		EK930010 BW HEAD TAPPING SCREW	3x8-8 FCRM3-BL	
**		VN144200 LCD UNIT-P.C.B		RX-460
**		VN160100 LCD UNIT-P.C.B		RX-360,R-85
	C501	FG212680 CERAMIC CAP	680pF 50V	
	C502	Fi553100 CERAMIC CAP	1000pF 50V	
	C503	UJ737100 ELECTROLYTIC CAP	10uF 16V	
	CB501	VB858600 CONNECTOR	PH L-TYPE 7P SE	
	IC501	XB417A00 IC	LC7582	
	V501	VH750800 LIQUID CRYSTAL DISPLAY	LCD-8220B1JP	RX-460
	V501	VH750900 LIQUID CRYSTAL DISPLAY	LCD-8221B1JP	RX-360,R-85
		VN160300 LAMP	14.5V 115mA	
		VG433100 REFLECTOR	LCD	
		VH787900 DIFFUSION SHEET		
		VF444500 LAMP CAP	AG-4015	
		CB068880 PLASTIC RIVET	No.1027	
		VG650400 RING		

*New Parts (新規部品)

A

B

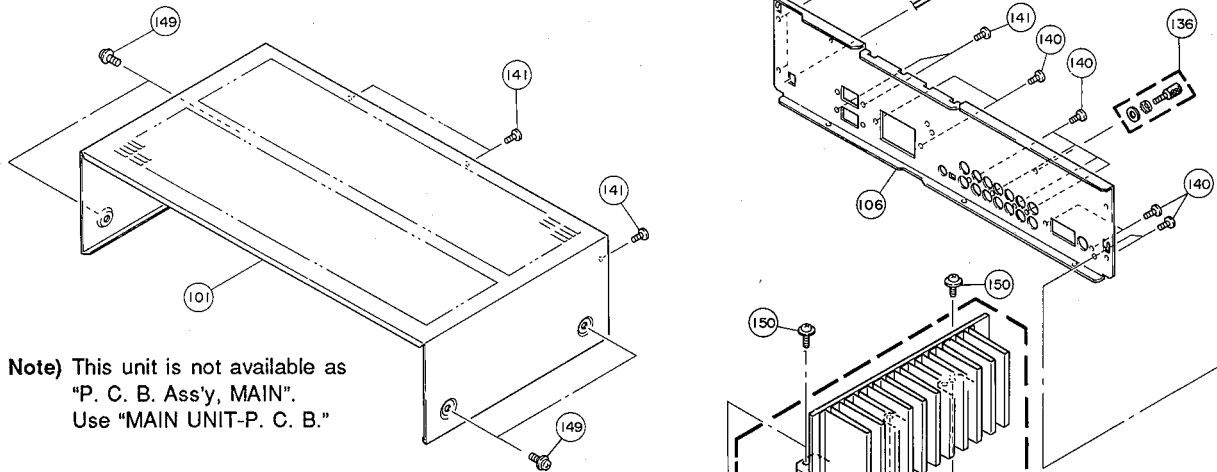
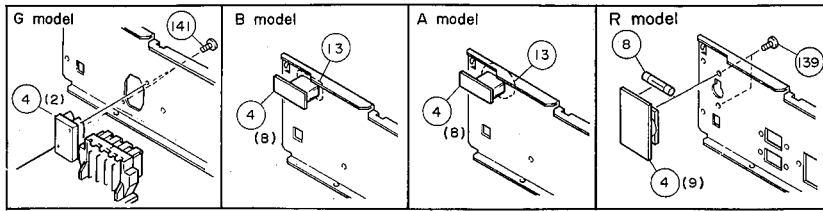
C

D

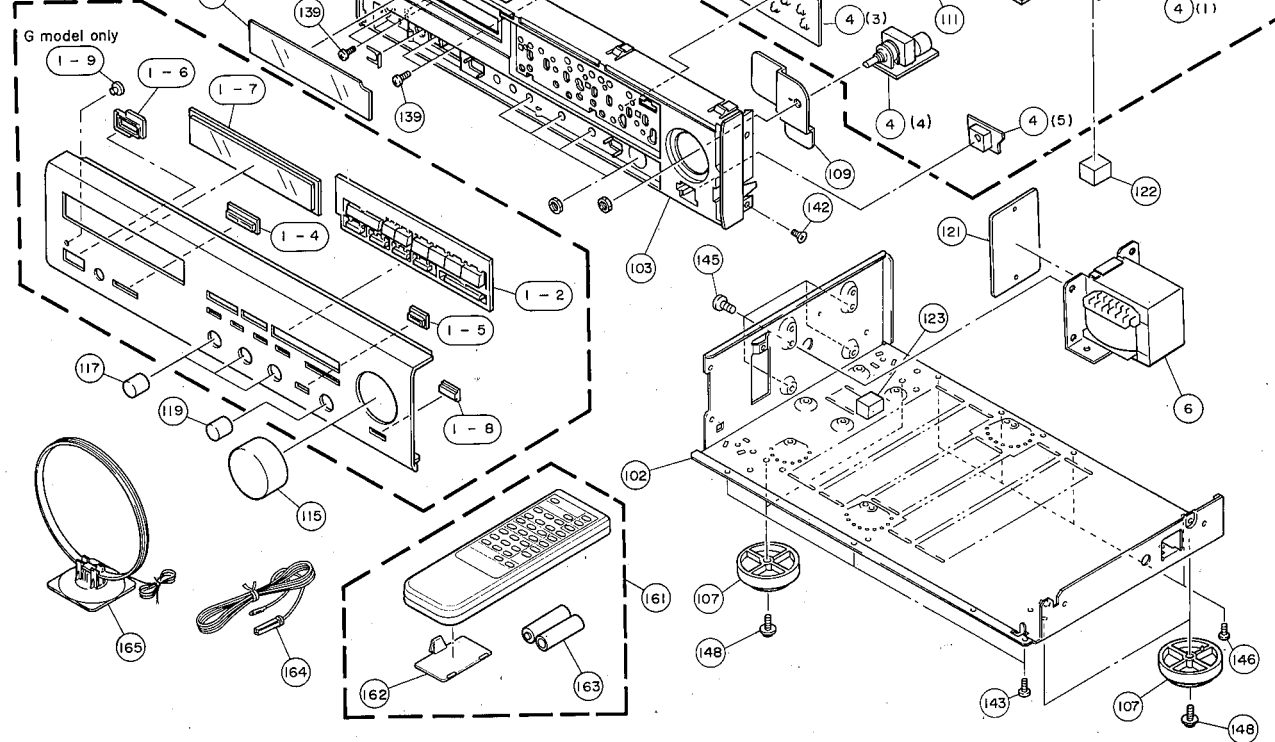
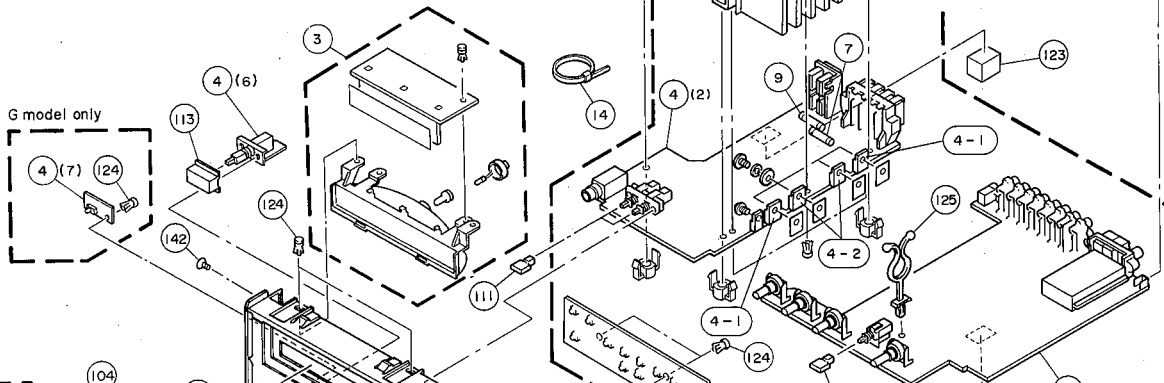
E

RX-460/360/R-85

EXPLODED VIEW



Note) This unit is not available as
"P. C. B. Ass'y, MAIN".
Use "MAIN UNIT-P. C. B."



MECHANICAL PARTS

Note) Ø : Diameter

Ref. NO.	PART NO.	Description	Remarks	Markets
* 1	VN143900	FRONT PANEL UNIT	RX-460 (BL)	UCRAB
* 1	VN144000	FRONT PANEL UNIT	RX-460 (BL)	G
* 1	VN146300	FRONT PANEL UNIT	RX-460 (TI)	CRA
* 1	VN146400	FRONT PANEL UNIT	RX-460 (TI)	G
* 1	VN148000	FRONT PANEL UNIT	RX-360 (BL)	UCRAB
* 1	VN148100	FRONT PANEL UNIT	RX-360 (BL)	G
* 1	VN149900	FRONT PANEL UNIT	RX-360 (TI)	CRA
* 1	VN150000	FRONT PANEL UNIT	RX-360 (TI)	G
* 1	VN411400	FRONT PANEL UNIT	R-85	UC
* 1-2	VH787100	SUB PANEL B	BL	
* 1-2	VH787200	SUB PANEL T	TI	
1-4	VG430600	ESCUTCHEON	2/3/14	BL
1-4	VG938400	ESCUTCHEON	2/3/14	TI
1-5	VE845500	ESCUTCHEON	3x14	RX-460
1-6	VE707800	BUTTON GUIDE	10x25	BL
1-6	VE933300	BUTTON GUIDE	10x25	TI
1-7	VJ832800	WINDOW		
1-8	VH897500	LENS		
1-9	VH897600	LENS	2.2S	
* 3	VN144200	LCD UNIT-P.C.B	RX-460	
* 3	VN160100	LCD UNIT-P.C.B	RX-360, R85	
* 4	VN144400	MAIN UNIT-P.C.B	RX-460	UC
* 4	VN144500	MAIN UNIT-P.C.B	RX-460	R
* 4	VN144600	MAIN UNIT-P.C.B	RX-460	AB
* 4	VN144700	MAIN UNIT-P.C.B	RX-460	G
* 4	VN148200	MAIN UNIT-P.C.B	RX-360, R-85	U
* 4	VN743500	MAIN UNIT-P.C.B	RX-360, R-85	C
* 4	VN148300	MAIN UNIT-P.C.B	RX-360	R
* 4	VN148400	MAIN UNIT-P.C.B	RX-360	AB
* 4	VN148500	MAIN UNIT-P.C.B	RX-360	G
* 4-1	IX630860	TRANSISTOR	2SC4468 O.P.Y	RX-460
* 4-1	IX615760	TRANSISTOR	2SC4467 O.P.Y	RX-360, R-85
* 4-2	IX630850	TRANSISTOR	2SA1695 O.P.Y	RX-460
* 4-2	IX615750	TRANSISTOR	2SA1694 O.P.Y	RX-360, R-85
* 6	XK637A00	POWER TRANSFORMER	RX-460	U
* 6	XK638A00	POWER TRANSFORMER	RX-460	C
* 6	XK639A00	POWER TRANSFORMER	RX-460	R
* 6	XK640A00	POWER TRANSFORMER	RX-460	AB
* 6	XK641A00	POWER TRANSFORMER	RX-460	G
* 6	XK642A00	POWER TRANSFORMER	RX-360, R-85	U
* 6	XK643A00	POWER TRANSFORMER	RX-360, R-85	C
* 6	XK644A00	POWER TRANSFORMER	RX-360	R
* 6	XK645A00	POWER TRANSFORMER	RX-360	AB
* 6	XK646A00	POWER TRANSFORMER	RX-360	G
7	KB000680	FUSE	1.25A 250V	ABG
7	KB000690	FUSE	T2.5A 250V	RX-460
7	KB000750	FUSE	T2A 250V	RX-360
7	KB003180	FUSE	T4A 125V	UC
8	KB000680	FUSE	1.25A 250V	R
9	KB002980	FUSE	T2.5A 250V	G

*New Parts (新規部品)

RX-460/360/R-85

Ref. NO.	PART NO.	Description	Remarks	Markets	
10	VL012900	POWER CORD ASS'y		UC	⚠
10	VL238100	POWER CORD ASS'y		R	⚠
10	VL238400	POWER CORD ASS'y		A	⚠
10	VN804500	POWER CORD ASS'y		B	⚠
10	VL238900	POWER CORD ASS'y		G	⚠
11	VN158600	CORD STOPPER	No.2104		
13	VC626100	AC OUTLET	S2-739T	A	⚠
013	VJ775000	AC OUTLET	2P	B	⚠
014	CB069250	BINDING TIE	BK-1		
101	VM932800	TOP COVER		BL	
101	VM932900	TOP COVER		TI	
102	VG426500	CHASSIS			
103	VJ423200	SUB CHASSIS		BL	
103	VJ423300	SUB CHASSIS		TI	
104	VM787000	DISPLAY SHEET			
* 106	VM785400	REAR PANEL		RX-460	U
* 106	VM785500	REAR PANEL		RX-460	C
* 106	VM785600	REAR PANEL		RX-460	R
* 106	VM785700	REAR PANEL		RX-460	AB
* 106	VM785800	REAR PANEL		RX-460	G
* 106	VM785900	REAR PANEL		RX-360	U
* 106	VM786000	REAR PANEL		RX-360	C
* 106	VM786100	REAR PANEL		RX-360	R
* 106	VM786200	REAR PANEL		RX-360	AB
* 106	VM786300	REAR PANEL		RX-360	G
* 106	VN398900	REAR PANEL		R-85	U
* 106	VN399000	REAR PANEL		R-85	C
107	VK016500	LEG	D60/H21	RX460, RX-360	
107	CB660950	LEG		R-85	
* 109	VN009100	SHIELD PLATE			
111	VM736600	BUTTON	3/14	BL	
111	VM736700	BUTTON	3/14	TI	
113	VH841900	BUTTON	POWER	BL	
113	VH842000	BUTTON	POWER	TI	
115	VK054300	KNOB		BL	
115	VK054400	KNOB		TI	
117	Vi211300	KNOB		BL	
117	Vi211200	KNOB		TI	
119	VK234300	KNOB		BL	
119	VK234400	KNOB		TI	
121	VJ646800	FRAME	RADIATOR		
122	VF274900	DAMPER	15x15x8		
123	VH088000	SPACER			
124	CB605620	PLASTIC RIVET	No.1781		
125	VN012600	CABLE CLIP	#1F55 NIFCO		
136	AAG27310	GROUND TERMINAL			
139	ED330066	BIND HEAD SCREW	3x6	ZMC2-BL	
140	EN335030	BIND HEAD BONDING TAP. SCREW	3x10	FCRM3-BL	
141	E1330086	BIND HEAD B-TITE SCREW	3x8	FCRM3-BL	
142	ED330066	FLAT HEAD B-TITE SCREW	3x6	FCRM3-BL	

※New Parts (新規部品)

RX-460/360/R-85

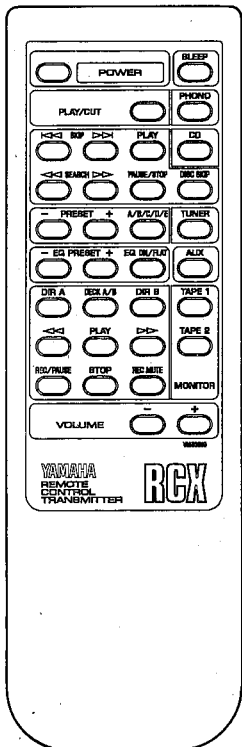
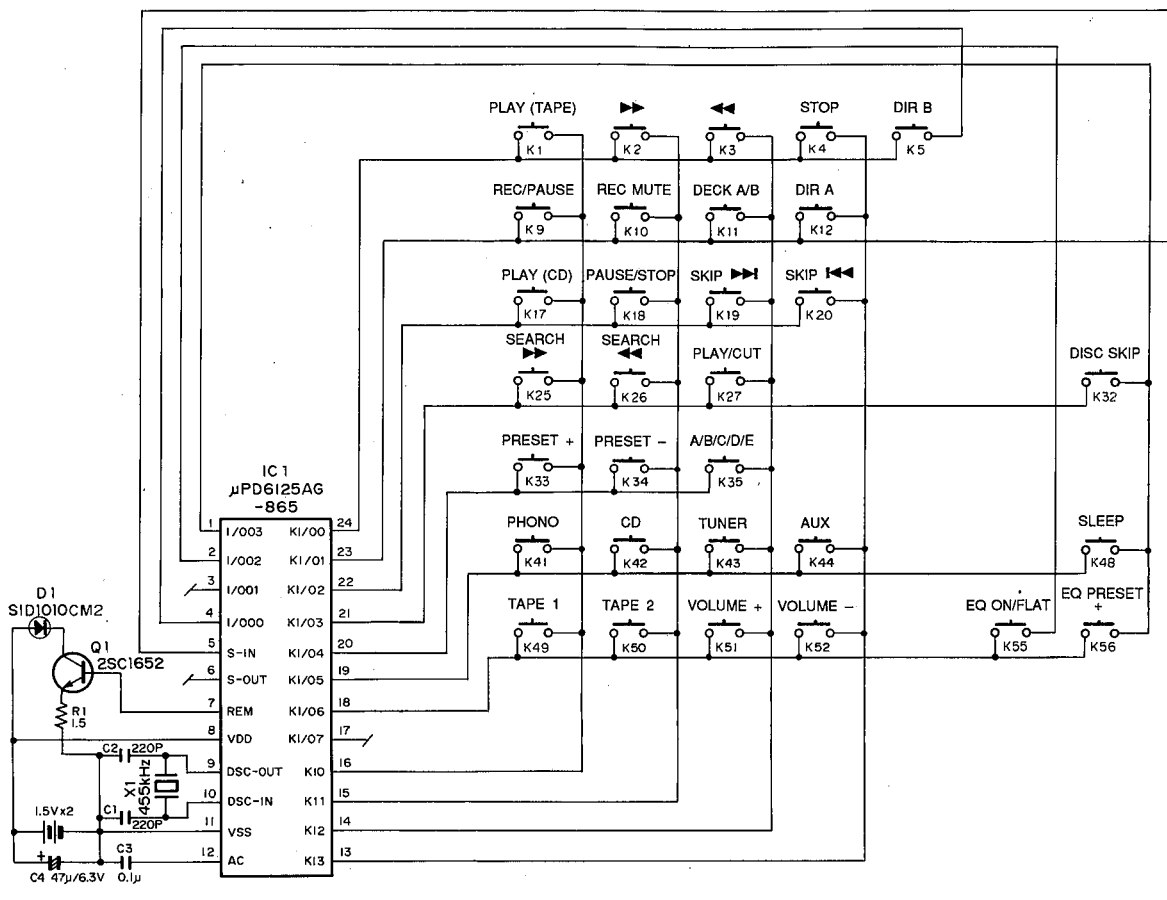
Ref. NO.	PART NO.	Description	Remarks	Markets
143	EX601360	BIND HEAD P-TITE SCREW 3x10	FCRM3-BL	
145	Ei340806	BIND HEAD B-TITE SCREW 4x8	FCRM3-BL	
146	Ei030066	BIND HEAD B-TITE SCREW 3x6	ZMC2-Y	
148	EK930010	BW HEAD TAPPING SCREW 3x8-8	FCRM3-BL	
149	EK365090	BW HEAD SCREW 4x8	ZMC2-BL	BL
149	EX601150	BW HEAD S-TITE SCREW 4x8-10	FNM3-BL	TI
150	EL300480	BRAIZER W.H.TAP. SCREW #B(+) 3x15-8	FCM3BL	
ACCESSORIES				
* 161	VM839100	REMOTE CONTROL TRANSMITTER		RX-460
* 161	VM839300	REMOTE CONTROL TRANSMITTER		RX-360,R-85
162	CX673000	LID		
163		DRY CELL	SUN-3,AA,R06	
164	VG850700	ANTENNA, FM		1.4m
165	VE366200	LOOP ANTENNA	AM	

*New Parts (新規部品)

RX-460/360/R-85

RX-460 REMOTE CONTROL TRANSMITTER

SCHEMATIC DIAGRAM



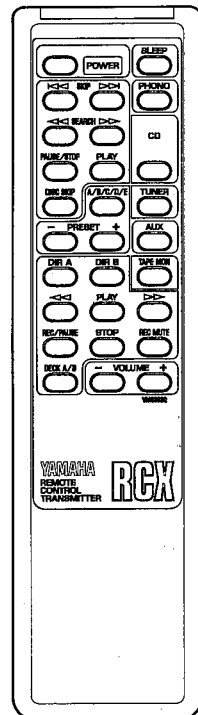
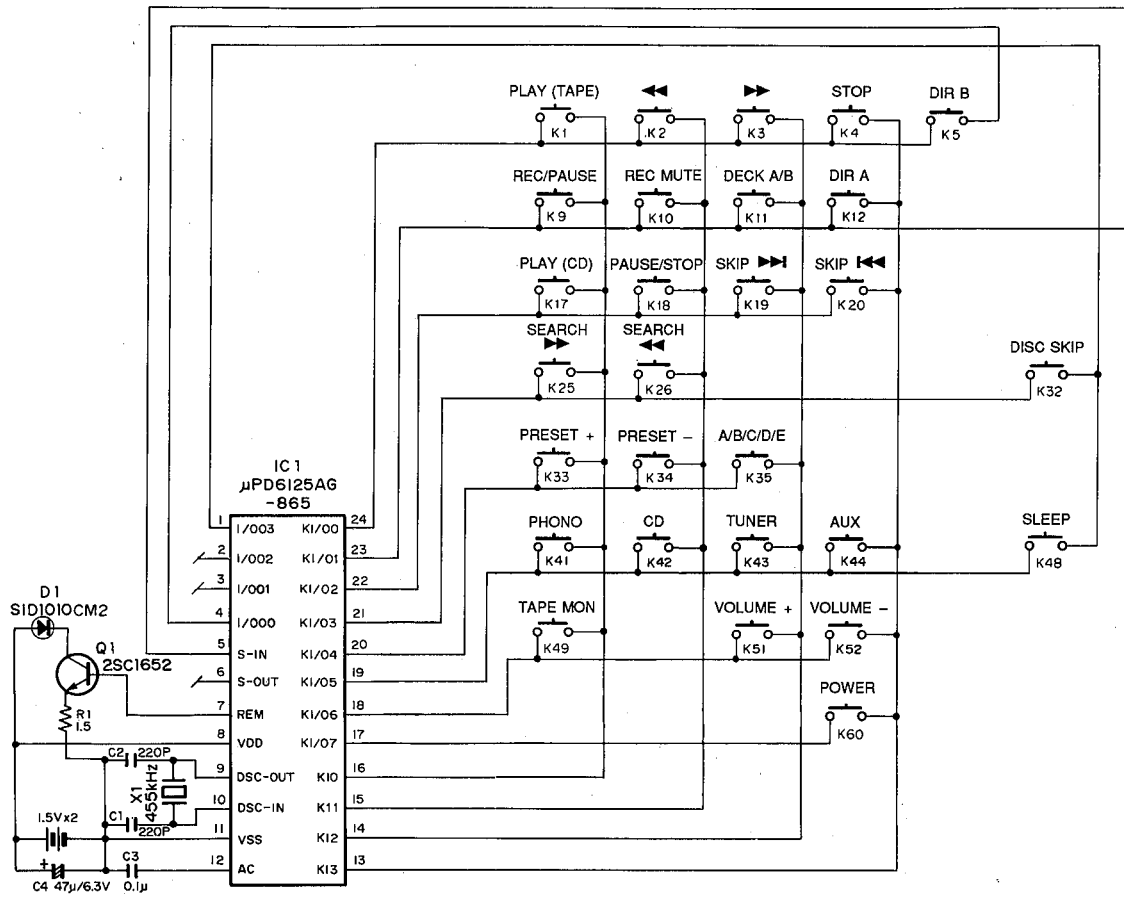
KEY No.	CUSTOM CODE (HEX)	DATA CODE (HEX)	FUNCTION
1	7A	00	PLAY (TAPE)
2	7A	01	▶▶
3	7A	02	◀◀
4	7A	03	STOP
5	7A	40	DIR B
9	7A	04	REC/PAUSE
10	7A	05	REC MUTE
11	7A	06	DECK A/B
12	7A	07	DIR A
17	7A	08	PLAY (CD)
18	7A	09	PAUSE/STOP
19	7A	0A	SKIP ▶▶
20	7A	0B	SKIP ◀◀
25	7A	0C	SEARCH ▶▶
26	7A	0D	SEARCH ◀◀
27	7A	0E	PLAY/CUT
32	7A	4F	DISC SKIP
33	7A	10	PRESET +
34	7A	11	PRESET -
35	7A	12	A/B/C/D/E
41	7A	14	PHONO
42	7A	15	CD
43	7A	16	TUNER
44	7A	17	AUX
48	7A	57	SLEEP
49	7A	18	TAPE 1
50	7A	19	TAPE 2
51	7A	1A	VOLUME +
52	7A	1B	VOLUME -
55	7A	5A	EQ ON/FLAT
56	7A	5B	EQ PRESET +

RX-360/R-85

RX-460/360/R-85

REMOTE CONTROL TRANSMITTER

SCHEMATIC DIAGRAM



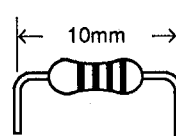
KEY No.	CUSTOM CODE (HEX)	DATA CODE (HEX)	FUNCTION
1	7A	00	PLAY (TAPE)
2	7A	01	◀◀
3	7A	02	▶▶
4	7A	03	STOP
5	7A	40	DIR B
9	7A	04	REC/PAUSE
10	7A	05	REC MUTE
11	7A	06	DECK A/B
12	7A	07	DIR A
17	7A	08	PLAY (CD)
18	7A	09	PAUSE/STOP
19	7A	0A	SKIP ▶▶▶
20	7A	0B	SKIP ◀◀◀
25	7A	0C	SEARCH ▶▶▶
26	7A	0D	SEARCH ◀◀◀
32	7A	4F	DISC SKIP
33	7A	10	PRESET +
34	7A	11	PRESET -
35	7A	12	A/B/C/D/E
41	7A	14	PHONO
42	7A	15	CD
43	7A	16	TUNER
44	7A	17	AUX
48	7A	57	SLEEP
49	7A	18	TAPE MON
51	7A	1A	VOLUME +
52	7A	1B	VOLUME -
60	7A	1F	POWER

Parts List for Carbon Resistors

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ35 3100	HF853100	12 KΩ	HJ35 7120	HF85 7120
1.8 Ω	HJ35 3180	*	15 KΩ	HJ35 7150	HF85 7150
2.2 Ω	HJ35 3220	HF853220	18 KΩ	HJ35 7180	HF85 7180
3.3 Ω	HJ35 3330	HF853330	22 KΩ	HJ35 7220	HF85 7220
4.7 Ω	HJ35 3470	HF853470	27 KΩ	HJ35 7270	HF85 7270
5.6 Ω	HJ35 3560	HF853560	33 KΩ	HJ35 7330	HF85 7330
10 Ω	HJ35 4100	HF854100	39 KΩ	HJ35 7390	HF85 7390
15 Ω	HJ35 4150	HF854150	47 KΩ	HJ35 7470	HF85 7470
22 Ω	HJ35 4220	HF854220	56 KΩ	HJ35 7560	HF85 7560
27 Ω	HJ35 4270	HF854270	68 KΩ	HJ35 7680	HF85 7680
33 Ω	HJ35 4330	HF854330	82 KΩ	HJ35 7820	HF85 7820
39 Ω	HJ35 4390	HF854390	91 KΩ	HJ35 7910	HF85 7910
47 Ω	HJ35 4470	HF854470	100 KΩ	HJ35 8100	HF85 8100
56 Ω	HJ35 4560	HF854560	120 KΩ	HJ35 8120	HF85 8120
68 Ω	HJ35 4680	HF854680	150 KΩ	HJ35 8150	HF85 8150
82 Ω	HJ35 4820	HF854820	180 KΩ	HJ35 8180	HF85 8180
100 Ω	HJ35 5100	HF855100	220 KΩ	HJ35 8220	HF85 8220
110 Ω	HJ35 5110	HF855110	270 KΩ	HJ35 8270	HF85 8270
120 Ω	HJ35 5120	HF855120	330 KΩ	HJ35 8330	HF85 8330
150 Ω	HJ35 5150	HF855150	390 KΩ	HJ35 8390	HF85 8390
160 Ω	HJ35 5160	*	470 KΩ	HJ35 8470	HF85 8470
180 Ω	HJ35 5180	HF855180	560 KΩ	HJ35 8560	HF85 8560
220 Ω	HJ35 5220	HF855220	680 KΩ	HJ35 8680	HF85 8680
270 Ω	HJ35 5270	HF855270	820 KΩ	HJ35 8820	HF85 8820
330 Ω	HJ35 5330	HF855330	1.0 MΩ	HJ35 9100	HF85 9100
390 Ω	HJ35 5390	HF855390	1.2 MΩ	HJ35 9120	*
470 Ω	HJ35 5470	HF855470	1.5 MΩ	HJ35 9150	HF85 9150
510 Ω	*	HF855510	1.8 MΩ	HJ35 9180	HF85 9180
560 Ω	HJ35 5560	HF855560	2.2 MΩ	HJ35 9220	HF85 9220
680 Ω	HJ35 5680	HF855680	3.3 MΩ	HJ35 9330	HF85 9330
820 Ω	HJ35 5820	HF855820	3.9 MΩ	HJ35 9390	*
910 Ω	HJ35 5910	HF855910	4.7 MΩ	HJ35 9470	HF85 9470
1.0 KΩ	HJ35 6100	HF85 6100			
1.2 KΩ	HJ35 6120	HF85 6120			
1.5 KΩ	HJ35 6150	HF85 6150			
1.8 KΩ	HJ35 6180	HF85 6180			
2.0 KΩ	HJ35 6200	HF85 6200			
2.2 KΩ	HJ35 6220	HF85 6220			
2.4 KΩ	HJ35 6240	HF85 6240			
2.7 KΩ	HJ35 6270	HF85 6270			
3.0 KΩ	HJ35 6300	HF85 6300			
3.3 KΩ	HJ35 6330	HF85 6330			
3.6 KΩ	HJ35 6360	HF85 6360			
3.9 KΩ	HJ35 6390	HF85 6390			
4.7 KΩ	HJ35 6470	HF85 6470			
5.1 KΩ	HJ35 6510	HF85 6510			
5.6 KΩ	HJ35 6560	HF85 6560			
6.8 KΩ	HJ35 6680	HF85 6680			
8.2 KΩ	HJ35 6820	HF85 6820			
9.1 KΩ	HJ35 6910	HF85 6910			
10 KΩ	HJ35 7100	HF85 7100			

1/4W Type

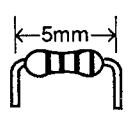
HJ35 ○○○○



← 10mm →

1/6W Type

HF85 ○○○○



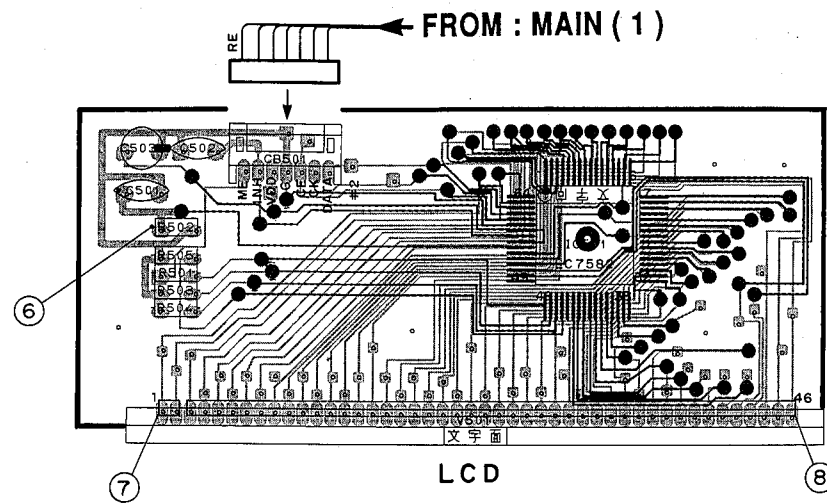
← 5mm →

RX-460/360/R-85

PRINTED CIRCUIT BOARD (Foil side) ⑤ to ⑦: WAVEFORM OF TEST POINT (See page 36)

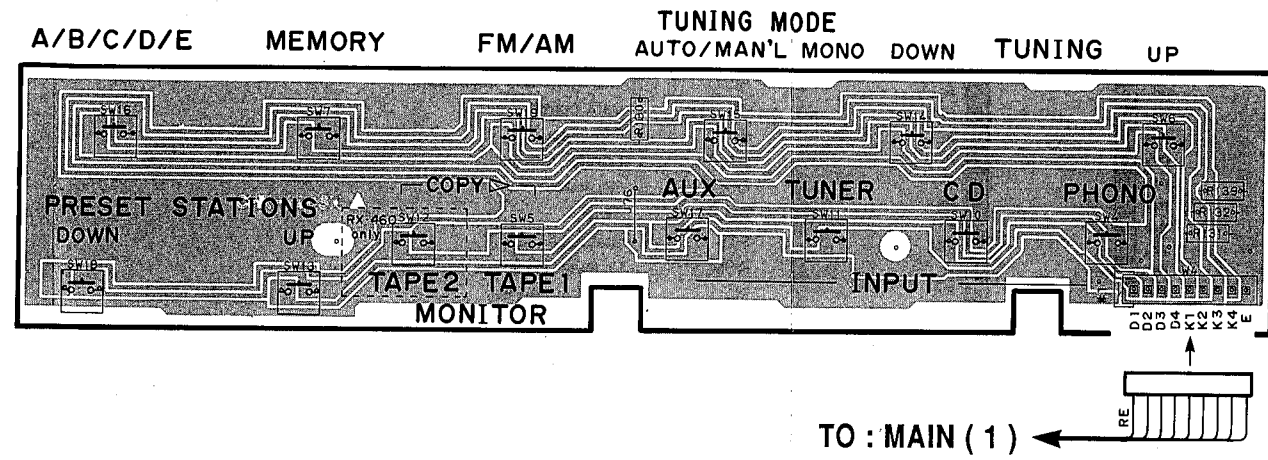
1

RX-460/360/R-85 LCD P. C. B.



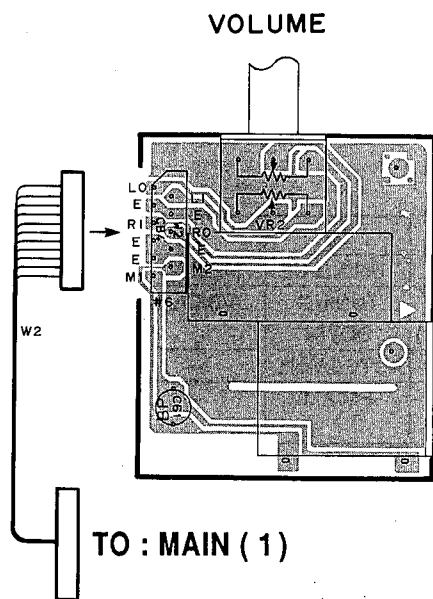
2

RX-460/360/R-85 MAIN P. C. B. (3)



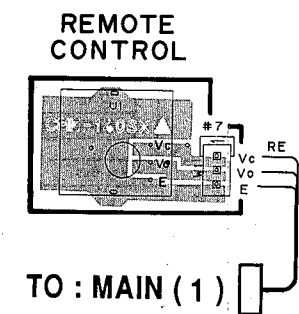
3

RX-460/360/R-85 MAIN P. C. B. (4)



4

RX-460/360/R-85 MAIN P. C. B. (5)



5

6

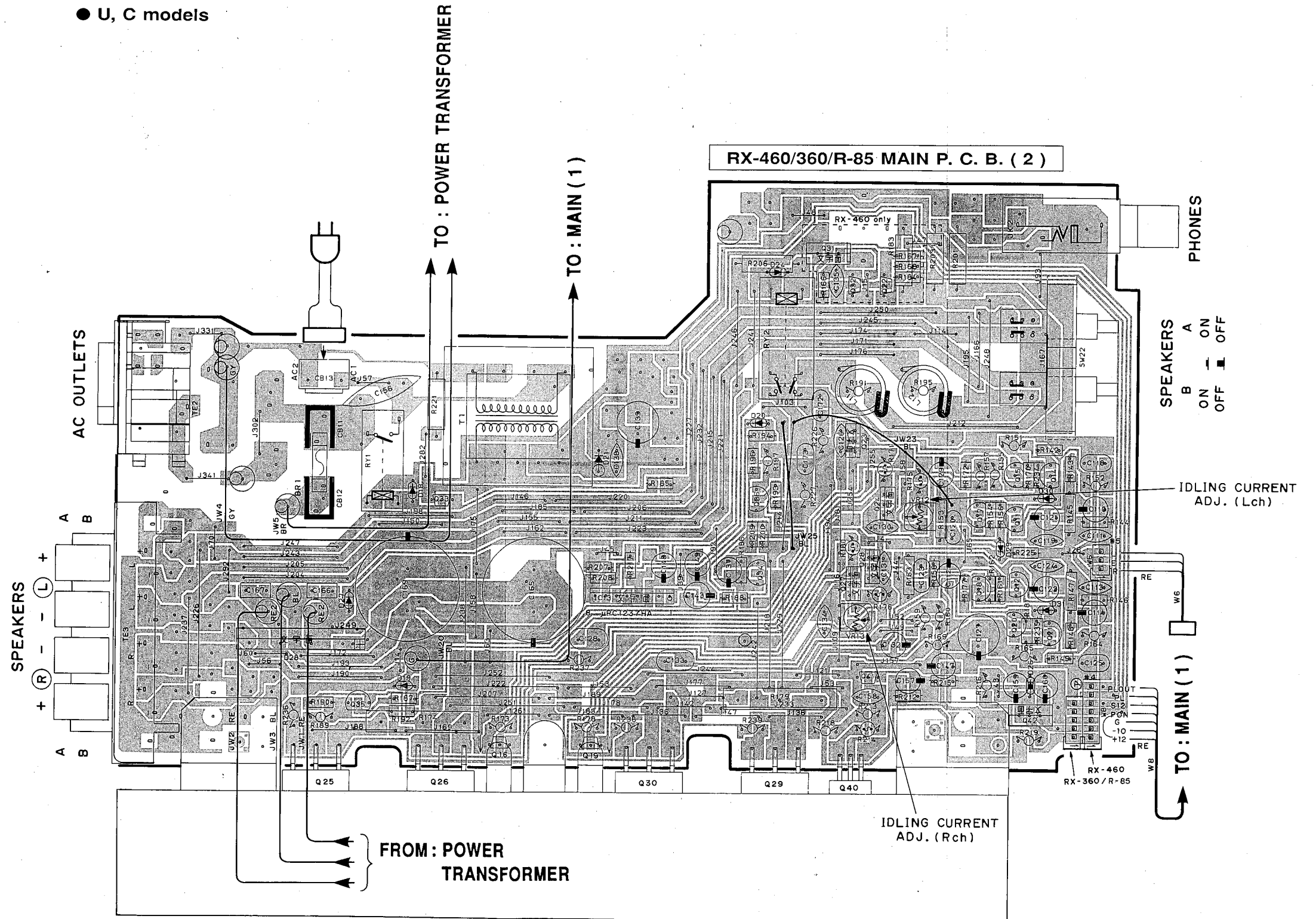
■ PRINTED CIRCUIT BOARD (Foil side)

● U, C models

● Semiconductor Locations

Ref. No.	Location
IC 13	E4

Ref. No.	Location
Q 11	G4
Q 12	G4
Q 14	G4
Q 15	G4
Q 16	D5
Q 17	F4
Q 18	F4
Q 19	E5
Q 20	G4
Q 21	G4
Q 22	F3
Q 23	F4
Q 24	F4
Q 25	C5
Q 26	D5
Q 27	F4
Q 28	F4
Q 29	E5
Q 30	E5
Q 31	F3
Q 32	F3
Q 33	D4
Q 34	E4
Q 35	D5
Q 36	E4
Q 40	F5
Q 41	F5
Q 42	G5

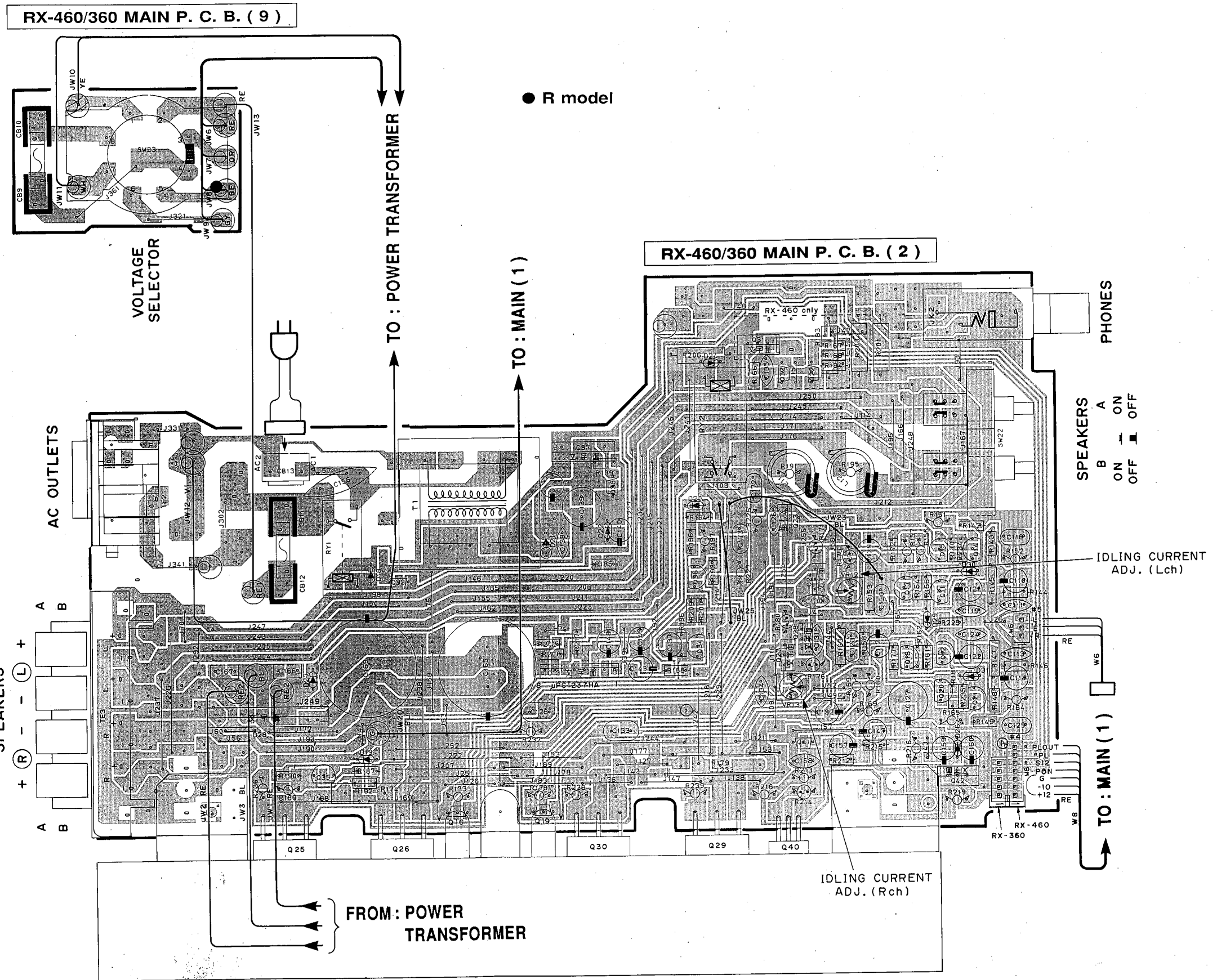


PRINTED CIRCUIT BOARD (Foil side)

● Semiconductor Locations

Ref. No.	Location
IC 13	E4

Ref. No.	Location
Q 11	G4
Q 12	G4
Q 14	G4
Q 15	G4
Q 16	D5
Q 17	F4
Q 18	F4
Q 19	E5
Q 20	G4
Q 21	G4
Q 22	F3
Q 23	F4
Q 24	F4
Q 25	C5
Q 26	D5
Q 27	F4
Q 28	F4
Q 29	E5
Q 30	E5
Q 31	F3
Q 32	F3
Q 33	D4
Q 34	E4
Q 35	D5
Q 36	E4
Q 37	E3
Q 38	E3
Q 40	F5
Q 41	F5
Q 42	G5



● R model

1
2
3
4
5
6

■ PRINTED CIRCUIT BOARD (Foil side)

● Semiconductor Locations

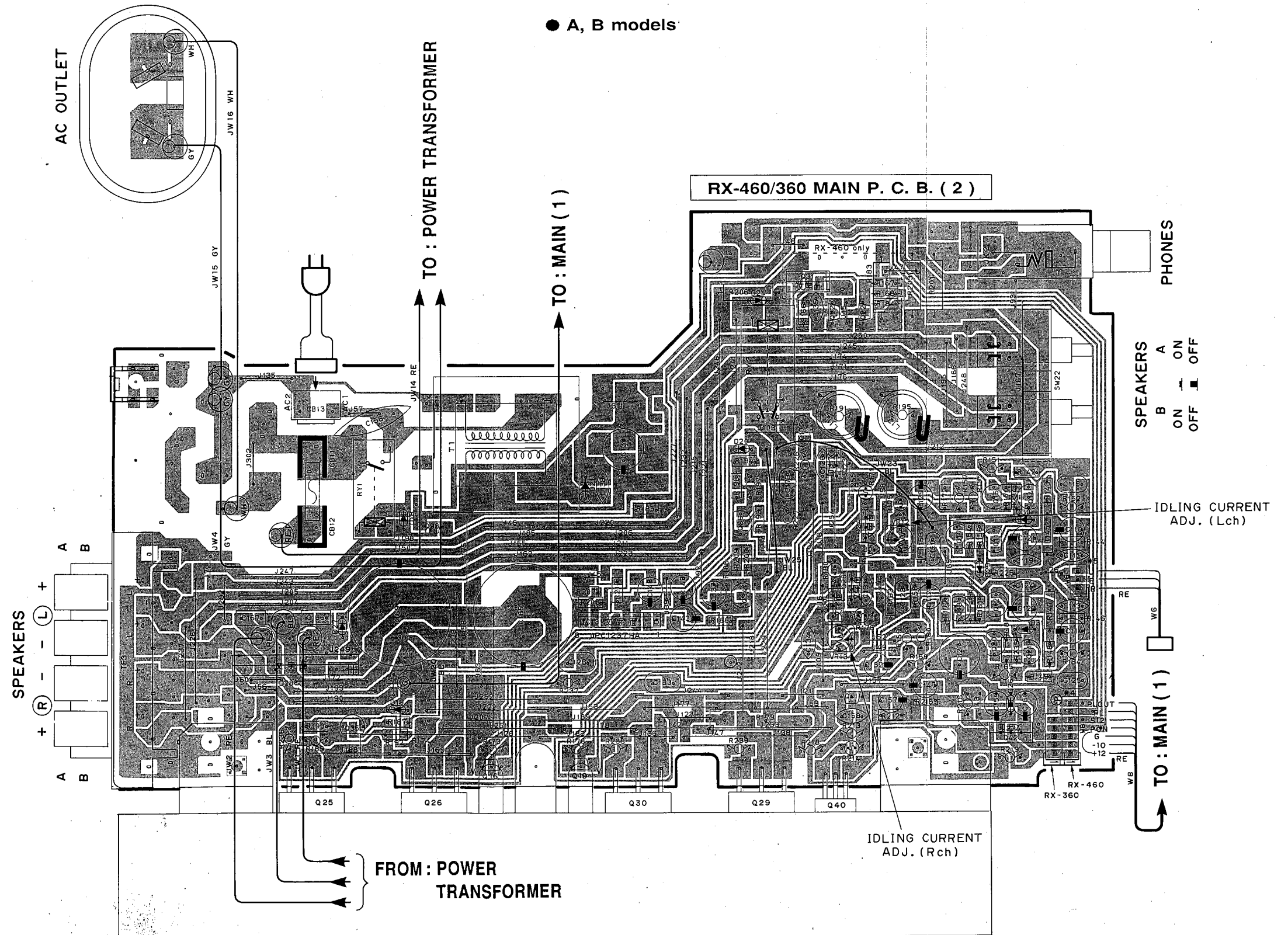
Ref. No.	Location
IC 13	E4

Ref. No.	Location
Q 11	G3
Q 12	G4
Q 14	G3
Q 15	G3
Q 16	D4
Q 17	F3
Q 18	F4
Q 19	E4
Q 20	G4
Q 21	G4
Q 22	F2
Q 23	F3
Q 24	F3
Q 25	C5
Q 26	D5
Q 27	F4
Q 28	F4
Q 29	E5
Q 30	E5
Q 31	F2
Q 32	F2
Q 33	D3
Q 34	E4
Q 35	D4
Q 36	E3
Q 40	F5
Q 41	F4
Q 42	G4

RX-460/360 MAIN P. C. B. (8)

● A, B models

RX-460/360 MAIN P. C. B. (2)



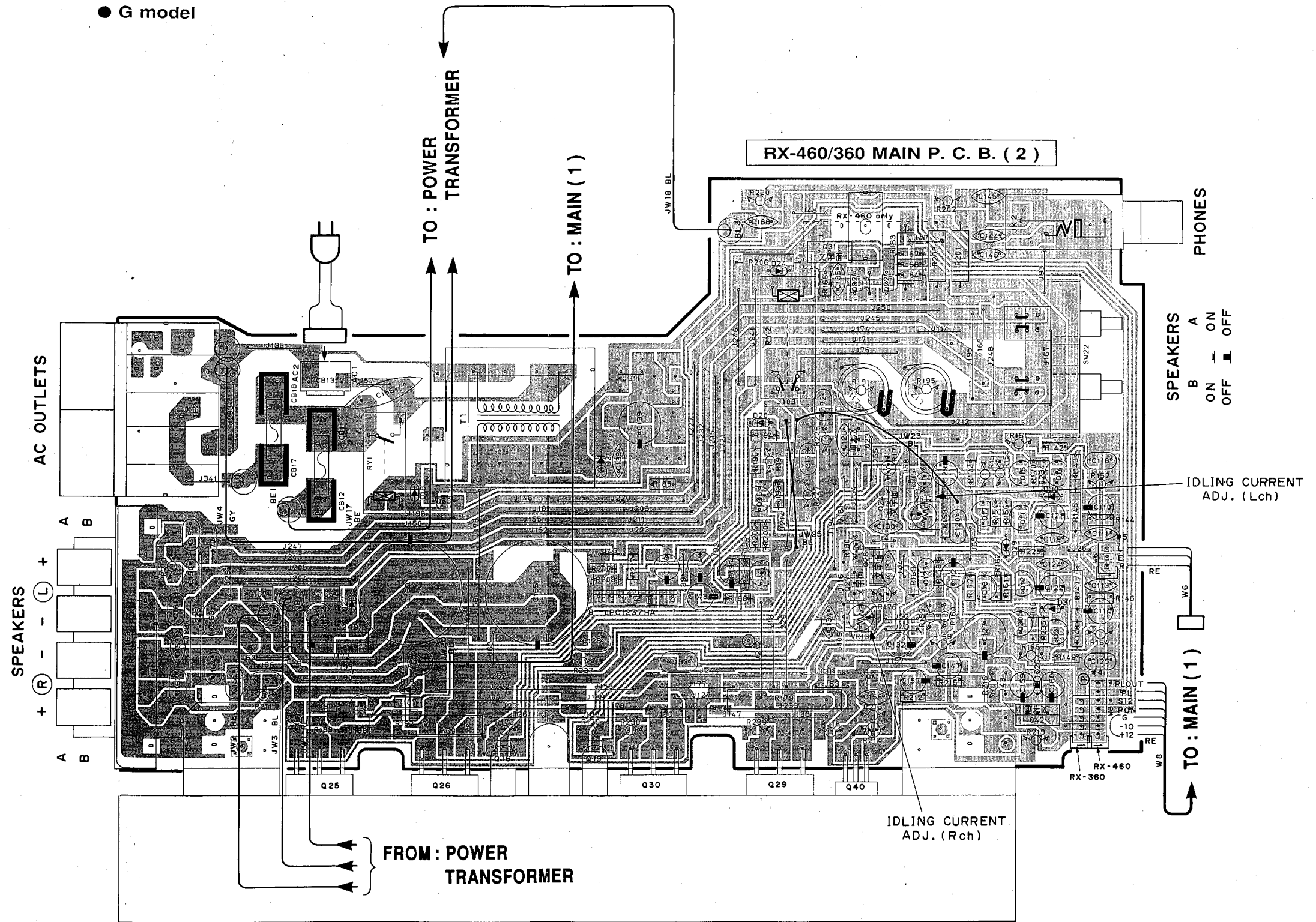
PRINTED CIRCUIT BOARD (Foil side)

● G model

● Semiconductor Locations

Ref. No.	Location
IC 13	E4

Ref. No.	Location
Q 11	G3
Q 12	G4
Q 14	G3
Q 15	G3
Q 16	D4
Q 17	F3
Q 18	F4
Q 19	E4
Q 20	G4
Q 21	G4
Q 22	F2
Q 23	F3
Q 24	F3
Q 25	C5
Q 26	D5
Q 27	F4
Q 28	F4
Q 29	E5
Q 30	E5
Q 31	F2
Q 32	F2
Q 33	D3
Q 34	E4
Q 35	D4
Q 36	E3
Q 40	F5
Q 41	F4
Q 42	G4



1

2

3

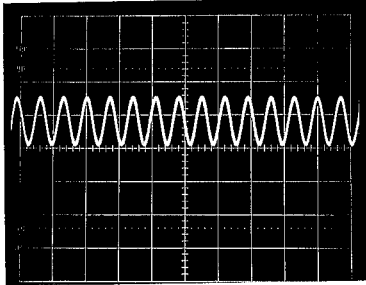
4

5

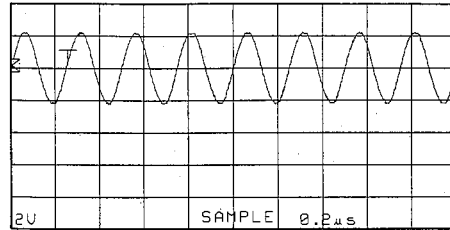
6

WAVEFORM OF TEST POINT

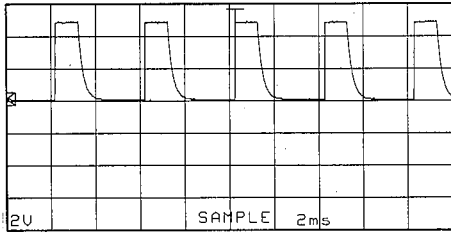
Point ①: XIN (Pin 1 of IC6)
 V : 0.2V/div H : 0.2 sec/div
 DC range 10 : 1 probe



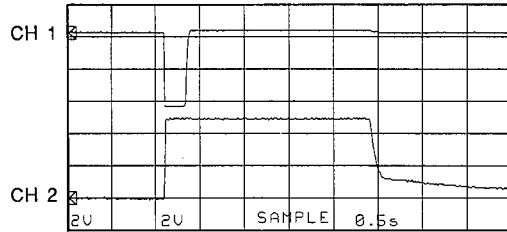
Point ②: XIN (Pin 32 of IC9)
 V : 2V/div H : 0.2 μsec/div
 DC range 1 : 1 probe



Point ③: D4 to D1 (Pin 5 to 8 of IC9)
 V : 2V/div H : 2 msec/div
 DC range 1 : 1 probe



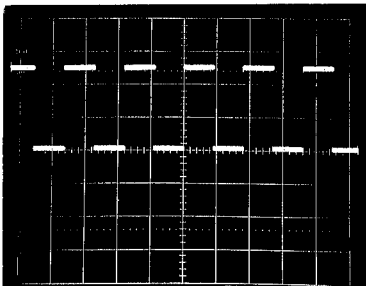
Point ④: RESET
 (CH 1 : Pin 34 of IC9, CH2 : Anode of D9)
 V : 2V/div H : 0.5 sec/div
 DC range 1 : 1 probe



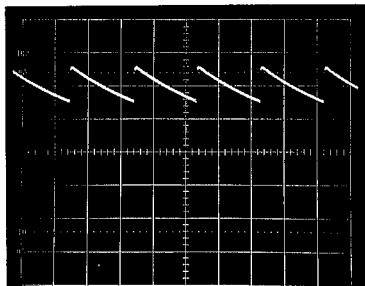
With the POWER switch turned ON, connect the power cord to the AC outlet.

Disconnect the power cord from the AC outlet.
 (This waveform is not available by the power switch ON and OFF.)

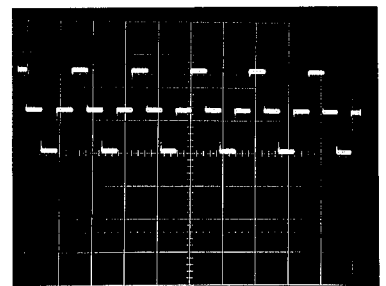
Point ⑤ (Pin 3 to 46 of V501)
 V : 2V/div H : 5 msec/div
 DC range 1 : 1 probe



Point ⑥: OSC (Pin 55 of IC501)
 V : 2V/div H : 10 μsec/div
 DC range 1 : 1 probe



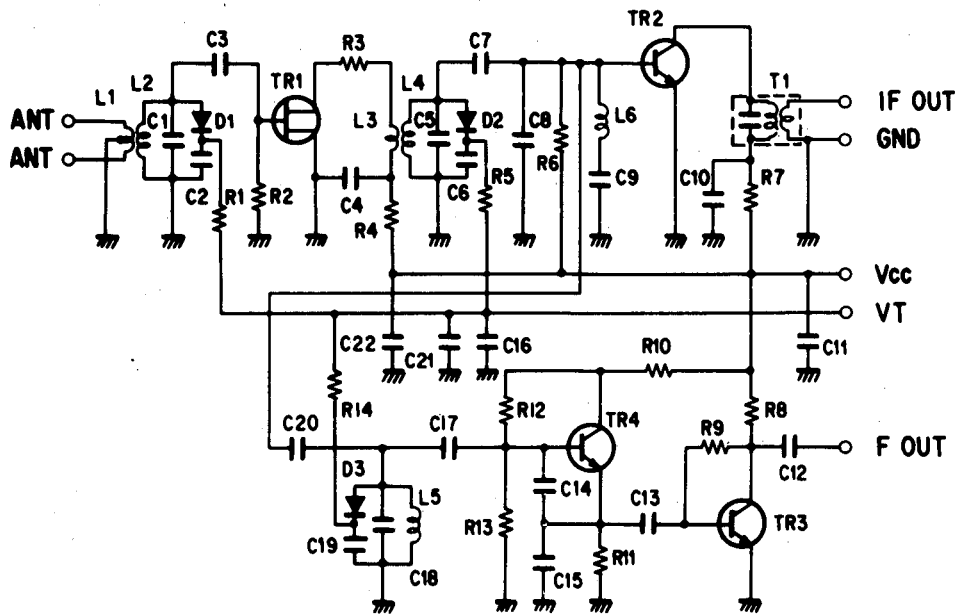
Point ⑦ (Pin 1 and 2 of V501)
 V : 2V/div H : 5 msec/div
 DC range 1 : 1 probe



FRONT END PACK

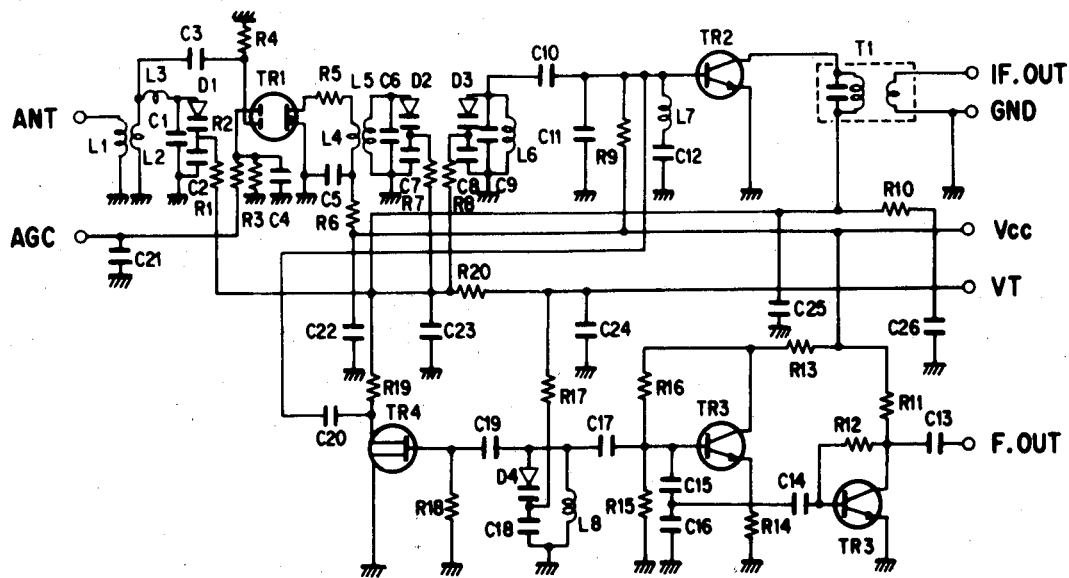
● Except G model

PK1 : TFFG1U (VK208500)



● G model only

PK1 : TFFG3E (VC219400)

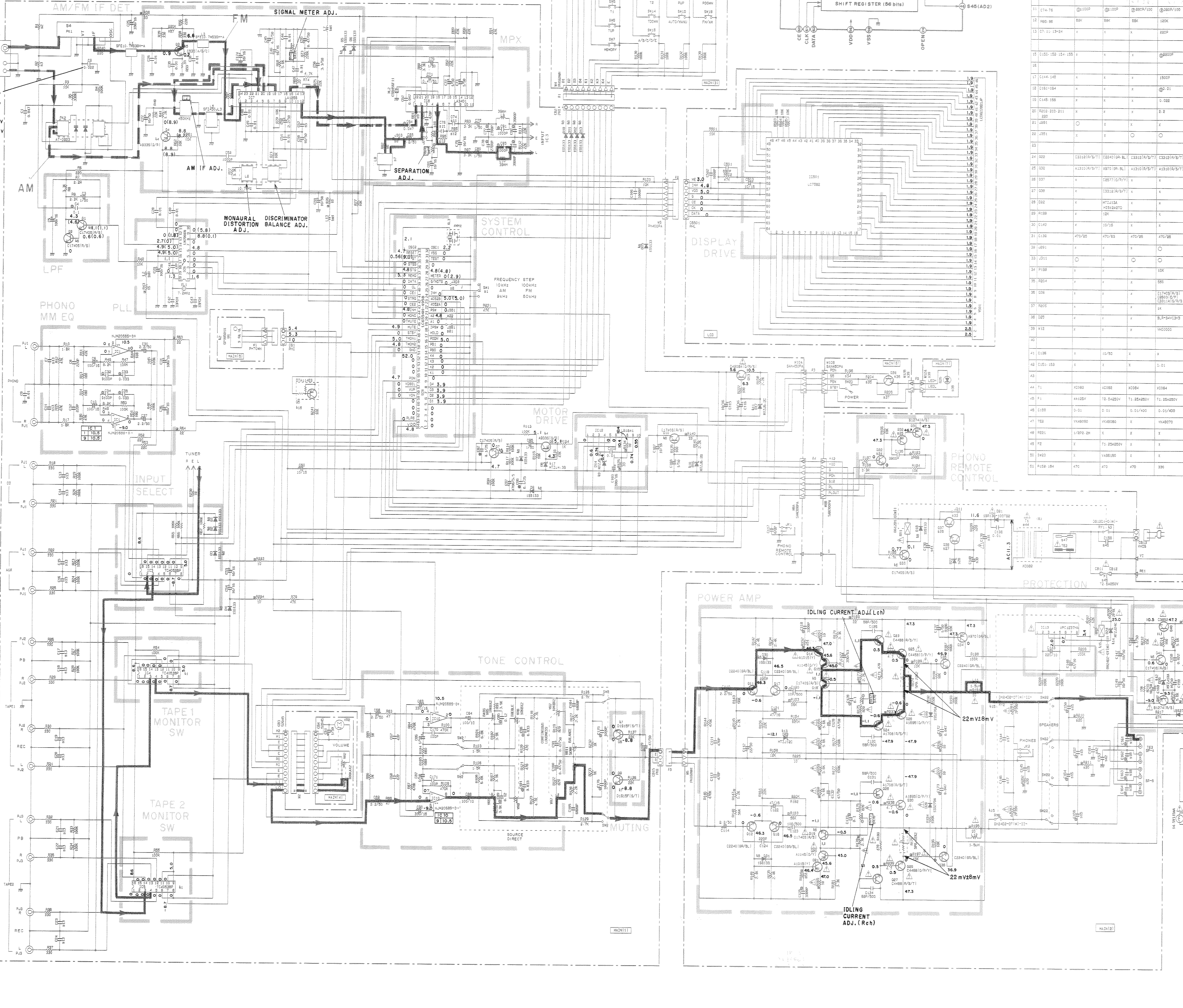


RX-460 SCHEMATIC DIAGRAM

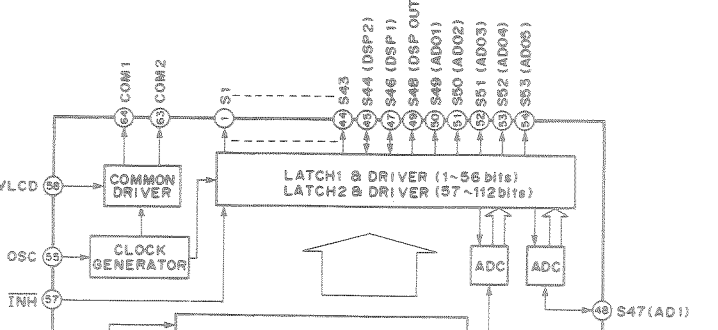
Each voltage given here represents that in the FM (98.1MHz, STEREO) reception mode but the one in the parentheses () is that in the AM (1000kHz) reception mode.
 ① to ⑦: WAVEFORM OF TEST POINT (See page 36)

RESISTOR	PARTS NAME	RESISTOR	PARTS NAME
100K	CARBON FILM RESISTOR	100K	CARBON FILM RESISTOR
10K	CARBON FILM RESISTOR	10K	CARBON FILM RESISTOR
1K	CARBON FILM RESISTOR	1K	CARBON FILM RESISTOR
100Ω	CARBON FILM RESISTOR	100Ω	CARBON FILM RESISTOR
10Ω	CARBON FILM RESISTOR	10Ω	CARBON FILM RESISTOR
1Ω	CARBON FILM RESISTOR	1Ω	CARBON FILM RESISTOR
0.1Ω	CARBON FILM RESISTOR	0.1Ω	CARBON FILM RESISTOR
0.01Ω	CARBON FILM RESISTOR	0.01Ω	CARBON FILM RESISTOR
0.001Ω	CARBON FILM RESISTOR	0.001Ω	CARBON FILM RESISTOR
0.0001Ω	CARBON FILM RESISTOR	0.0001Ω	CARBON FILM RESISTOR
0.00001Ω	CARBON FILM RESISTOR	0.00001Ω	CARBON FILM RESISTOR
100K	CARBON FILM RESISTOR	100K	CARBON FILM RESISTOR
10K	CARBON FILM RESISTOR	10K	CARBON FILM RESISTOR
1K	CARBON FILM RESISTOR	1K	CARBON FILM RESISTOR
100Ω	CARBON FILM RESISTOR	100Ω	CARBON FILM RESISTOR
10Ω	CARBON FILM RESISTOR	10Ω	CARBON FILM RESISTOR
1Ω	CARBON FILM RESISTOR	1Ω	CARBON FILM RESISTOR
0.1Ω	CARBON FILM RESISTOR	0.1Ω	CARBON FILM RESISTOR
0.01Ω	CARBON FILM RESISTOR	0.01Ω	CARBON FILM RESISTOR
0.001Ω	CARBON FILM RESISTOR	0.001Ω	CARBON FILM RESISTOR
0.0001Ω	CARBON FILM RESISTOR	0.0001Ω	CARBON FILM RESISTOR
0.00001Ω	CARBON FILM RESISTOR	0.00001Ω	CARBON FILM RESISTOR

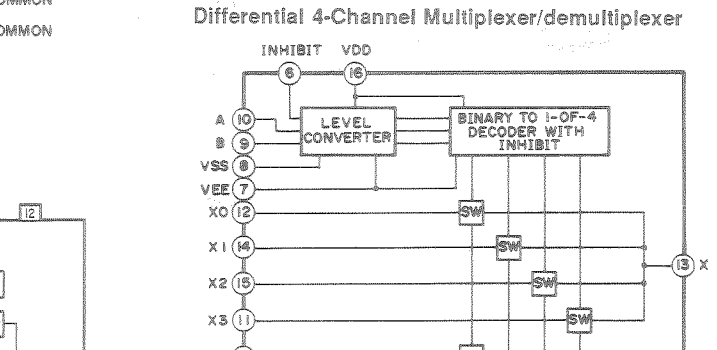
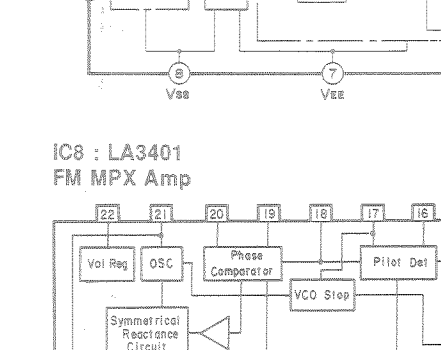
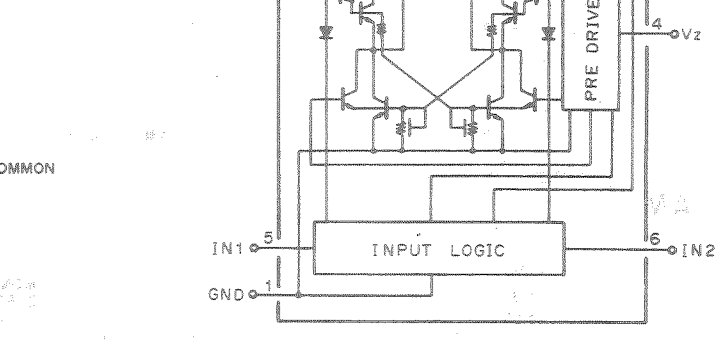
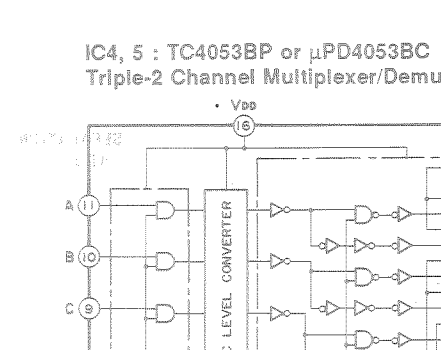
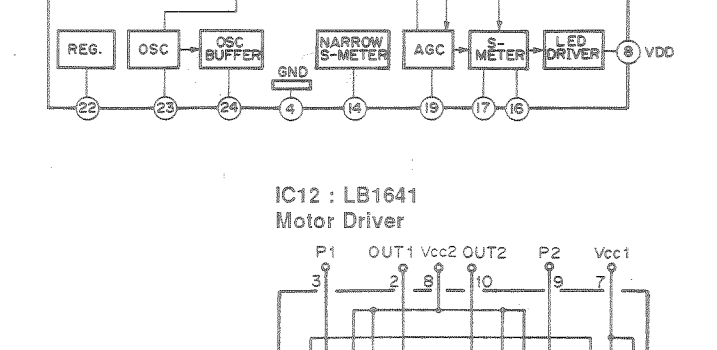
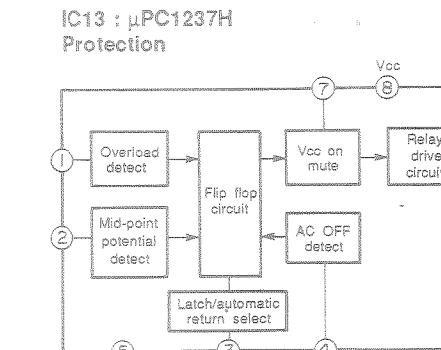
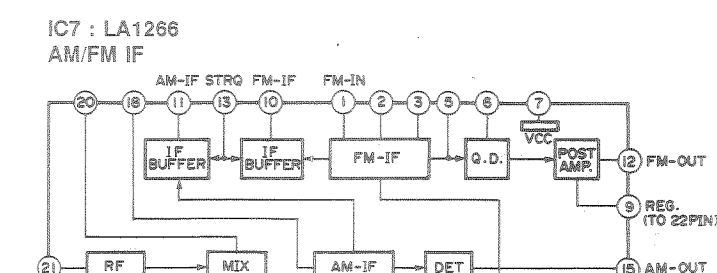
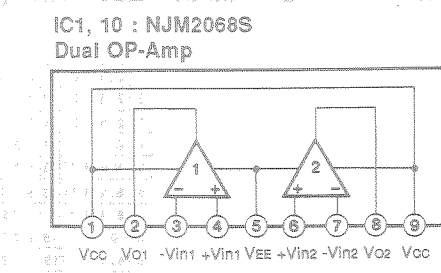
IC	IC	IC	IC	IC	IC
1	2	3	4	5	6
1.2.5(1.0)	1.2.7(2.3)	2.4.0(3.7)	2.3.2	11.0	21.3.4(2.7)
2.2.5(1.0)	3.0.0(3.1)	2.4.0(3.7)	2.3.2	12.0	22.0.0(0.0)
3.2.5(1.0)	3.0	2.4.0(3.7)	3.3.2	13.0.5(6.6)	
4.0	4.1.2(1.2)	2.4.0(3.7)	4.3.2	14.4.9(6.7)	
5.8.4(1.5)	1.1.1(1.2)	2.4.0(3.7)	5.3.2	15.0	
6.8.4(1.5)	1.3.1(3.0)	2.4.0(3.7)	6.3.2	16.2.0	
7.8.4(1.5)	1.0(3.7)	2.4.0(3.7)	7.3.2	17.2.0(7.3)	
8.0	10.2.5(1.0)	2.4.0(3.7)	8.3.2	18.2.4(4.7)	
9.4.2.5(0.0)	0(2.0)	2.4.0(3.7)	9.3.2	19.2.4(4.7)	
10.2.4(2.5)	0(1.7)	2.4.0(3.7)	10.3.2	20.2.0(5.0)	



IC501 : LC7582 LCD Driver



IC	IC	IC	IC	IC	IC
1	2	3	4	5	6
1.2.5(1.0)	1.2.7(2.3)	2.4.0(3.7)	2.3.2	11.0	21.3.4(2.7)
2.2.5(1.0)	3.0.0(3.1)	2.4.0(3.7)	2.3.2	12.0	22.0.0(0.0)
3.2.5(1.0)	3.0	2.4.0(3.7)	3.3.2	13.0.5(6.6)	
4.0	4.1.2(1.2)	2.4.0(3.7)	4.3.2	14.4.9(6.7)	
5.8.4(1.5)	1.1.1(1.2)	2.4.0(3.7)	5.3.2	15.0	
6.8.4(1.5)	1.3.1(3.0)	2.4.0(3.7)	6.3.2	16.2.0	
7.8.4(1.5)	1.0(3.7)	2.4.0(3.7)	7.3.2	17.2.0(7.3)	
8.0	10.2.5(1.0)	2.4.0(3.7)	8.3.2	18.2.4(4.7)	
9.4.2.5(0.0)	0(2.0)	2.4.0(3.7)	9.3.2	19.2.4(4.7)	
10.2.4(2.5)	0(1.7)	2.4.0(3.7)	10.3.2	20.2.0(5.0)	



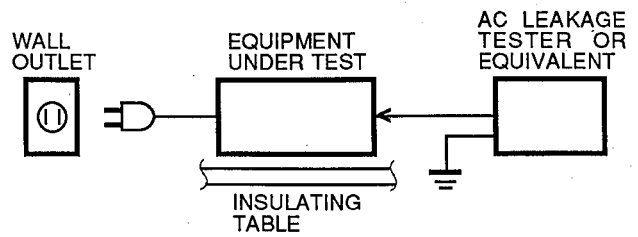
PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.

2SA633S (Q, R)	2SC2903 (E, F)	2SA970 (QR, BL)	2SB1274 (R, S, T)	2SC2877 (O, P, Y)	2SA1708 (R, S, T)	18L135	MT2A.2C	D8320	μPC1237H	NJM2068S	LB1641	μPC4053BP	LM7000N	LA3401	LA1266	LC6554	LC7582
2SA1115 (E, F)	2SC3011A (O, R, S)	2SA1016 (Y)	2SC3362	2SC4468 (O, P, Y)	2SC4468 (O, P, Y)	18L135	MT2A.2D	D8320	μPC1237H	NJM2068S	LB1641	μPC4053BP	LM7000N	LA3401	LA1266	LC6554	LC7582
2SA1300A (O, R, S)	2SC2084 (O, R, S)	2SC2340 (QR, BL)	2SC3362	2SC4468 (O, P, Y)	2SC4468 (O, P, Y)	18L135	MT2A.2E	D8320	μPC1237H	NJM2068S	LB1641	μPC4053BP	LM7000N	LA3401	LA1266	LC6554	LC7582
2SA1310 (R, S, T)	2SC355 (A, B, C)	2SC3362	2SC3362	2SC4468 (O, P, Y)	2SC4468 (O, P, Y)	18L135	MT2A.2F	D8320	μPC1237H	NJM2068S	LB1641	μPC4053BP	LM7000N	LA3401	LA1266	LC6554	LC7582
2SC1740S (R, S)	2SC3512 (R, S, T)	2SC3362	2SC3362	2SC4468 (O, P, Y)	2SC4468 (O, P, Y)	18L135	MT2A.2G	D8320	μPC1237H	NJM2068S	LB1641	μPC4053BP	LM7000N	LA3401	LA1266	LC6554	LC7582
2SC2030 (R, S, T)	2SC1918 (R, T)	2SC3362	2SC3362	2SC4468 (O, P, Y)	2SC4468 (O, P, Y)	18L135	MT2A.2H	D8320	μPC1237H	NJM2068S	LB1641	μPC4053BP	LM7000N	LA3401	LA1266	LC6554	LC7582
2SA1148 (O, Y)	DTA114ES	2SC3362	2SC3362	2SC4468 (O, P, Y)	2SC4468 (O, P, Y)	18L135	MT2A.2I	D8320	μPC1237H	NJM2068S	LB1641	μPC4053BP	LM7000N	LA3401	LA1266	LC6554	LC7582
2SC1809 (M, N, P)	UN4111-TA	2SC3362	2SC3362	2SC4468 (O, P, Y)	2SC4468 (O, P, Y)	18L135	MT2A.2J	D8320	μPC1237H	NJM2068S	LB1641	μPC4053BP	LM7000N	LA3401	LA1266	LC6554	LC7582
2SC2878 (A, B)		2SC3362	2SC3362	2SC4468 (O, P, Y)	2SC4468 (O, P, Y)	18L135	MT2A.2K	D8320	μPC1237H	NJM2068S	LB1641	μPC4053BP	LM7000N	LA3401	LA1266	LC6554	LC7582

All voltage are measured with a 10MΩ/DC electric volt meter.
 Components having special characteristics are marked with a triangle.
 and must be replaced with parts having specifications equal to those originally installed.
 Schematic diagram is subject to change without notice.

■ TO SERVICE PERSONNEL

1. Critical Components Information.
Components having special characteristics are marked and must be replaced with parts having specifications equal to those originally installed.
2. Leakage Current Measurement (For 120V Models Only).
When service has been completed, it is imperative to verify that all exposed conductive surfaces are properly insulated from supply circuits.
 - Meter impedance should be equivalent to 1500 ohm shunted by 0.15µF.
 - Leakage current must not exceed 0.5mA.
 - Be sure to test for leakage with the AC plug in both polarities.



WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

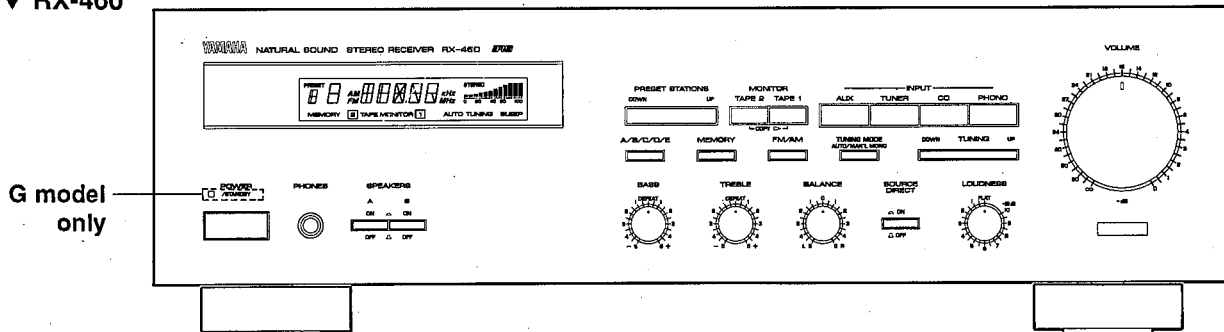
DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

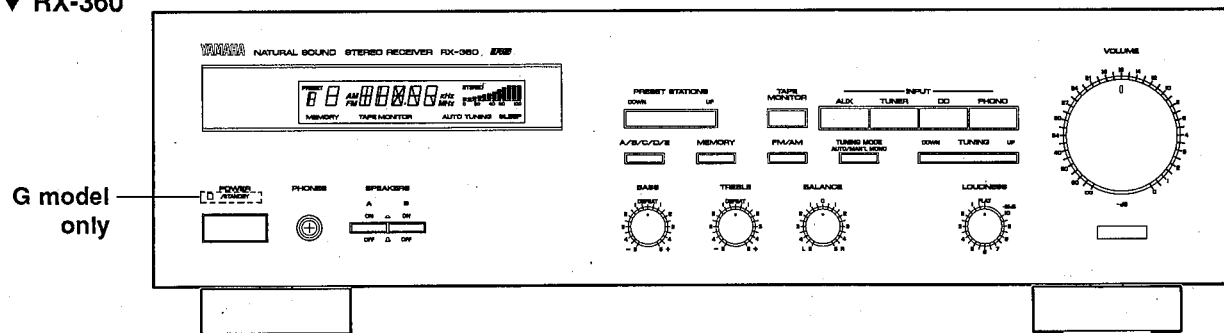
If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

■ FRONT PANELS

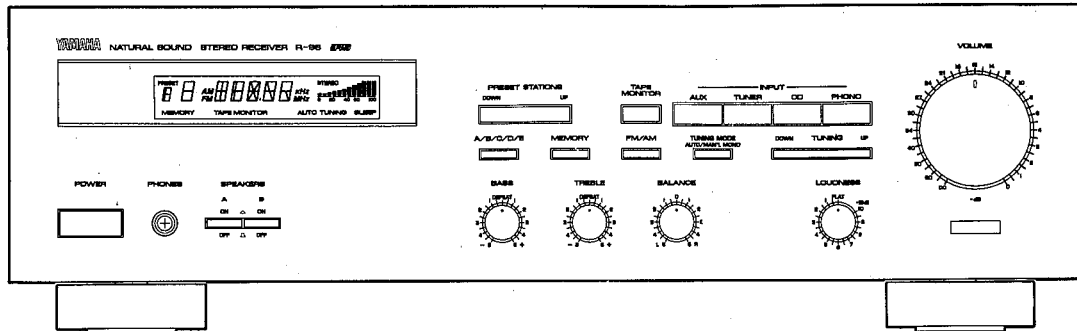
▼ RX-460



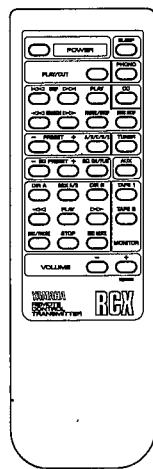
▼ RX-360



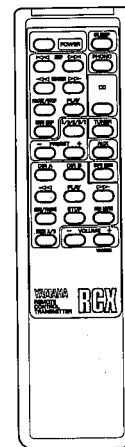
▼ R-85



▼ RX-460

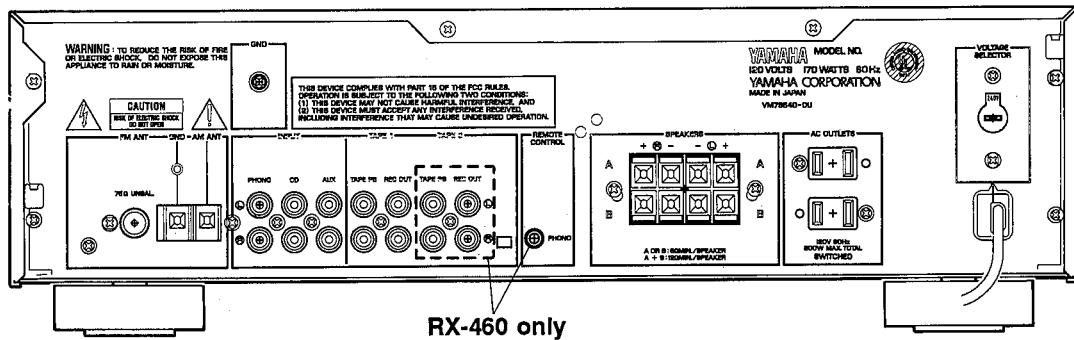


▼ RX-360

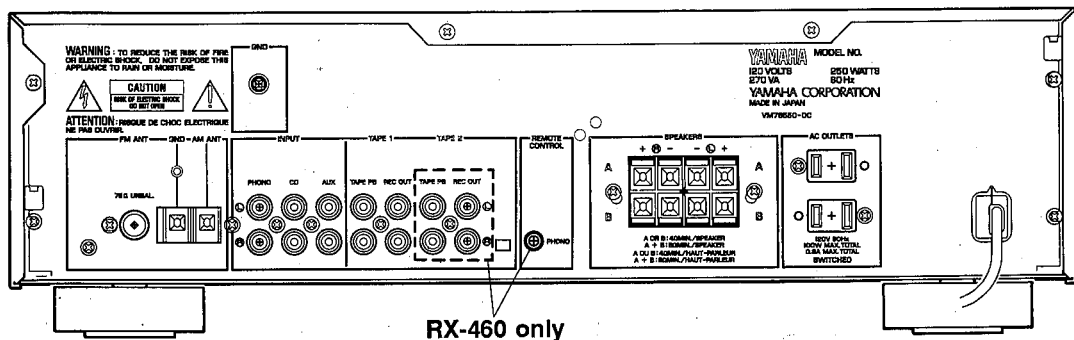


■ REAR PANELS

▼ U model

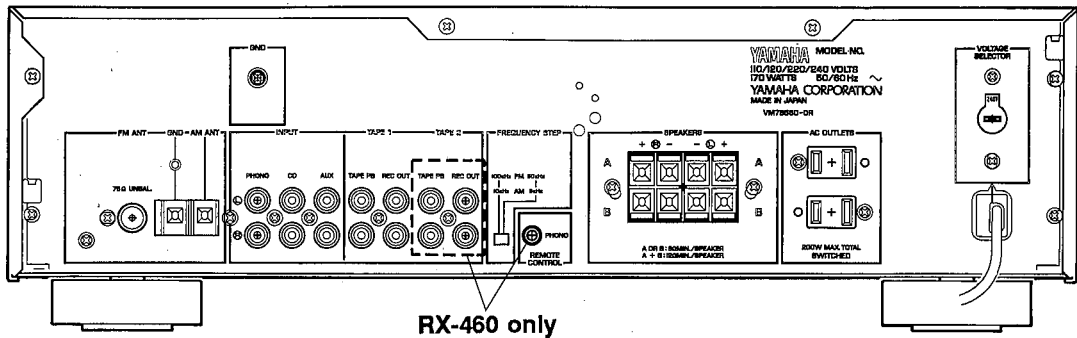


▼ C model



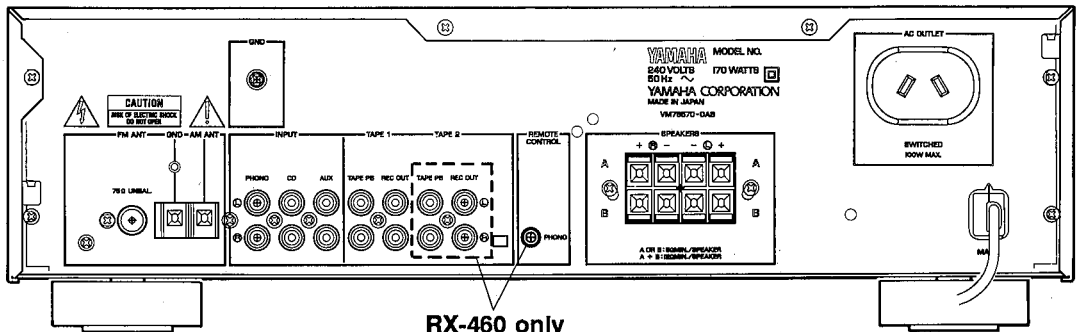
RX-460/360/R-85

▼ R model



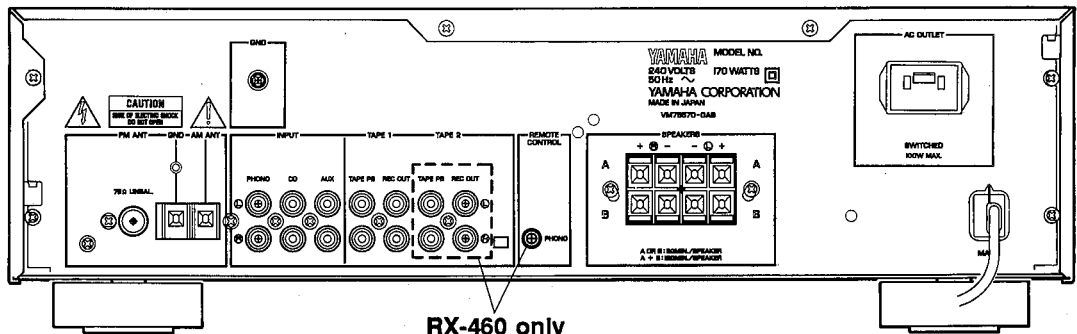
RX-460 only

▼ A model



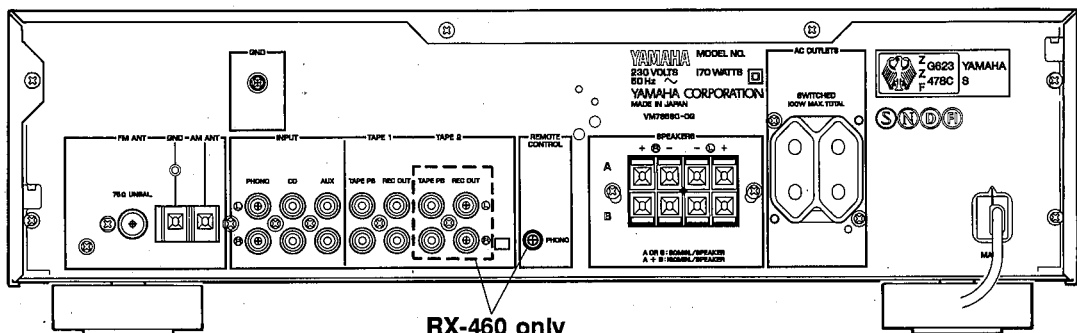
RX-460 only

▼ B model



RX-460 only

▼ G model



RX-460 only

■ SPECIFICATIONS

■ AUDIO SECTION

Minimum RMS Output Power per Channel

RX-460	
8 ohms, 20Hz to 20kHz, 0.04% THD	55W
6 ohms, 20Hz to 20kHz, 0.06% THD	
U, C, R models	60W
RX-360/R-85	
8 ohms, 50Hz to 20kHz, 0.04% THD	
R, A, B, G models	40W
U, C models	45W
6 ohms, 50Hz to 20kHz, 0.06% THD	
R model	45W
U, C models	48W

Dynamic Power per Channel (IHF)

RX-460	
8/6/4/2 ohms	
U, C, R models	85/100/120/130W
A, B, G models	90/105/125/140W
RX-360/R-85	
8/6/4/2 ohms	
U, C, R models	69/78/90/98W
A, B, G models	68/75/85/95W

DIN Standard Output Power per Channel (G model only)

RX-460	
4 ohms, 1kHz, 0.7% THD	70W
RX-360	
4 ohms, 1kHz, 0.7% THD	55W

IEC Power (G model only)

RX-460	
1kHz, 0.04% THD, 6 ohms	77W
1kHz, 0.04% THD, 8 ohms	50W

Power Bandwidth

8 ohms, 20W, 0.1% THD	10Hz to 40kHz
-----------------------	---------------

Damping Factor

8 ohms, 1kHz	50 or more
--------------	------------

Input Sensitivity/Impedance

PHONO MM	2.5mV/47k-ohms
CD etc	150mV/50k-ohms

Maximum Input Signal Level (1kHz, 0.01% THD)

PHONO MM	80mV
----------	------

Output Level/Impedance

REC OUT	150mV/550 ohms
---------	----------------

Headphone Jack Rated Output/Impedance

RX-460	
0.04% THD, RL=390 ohms	0.4V/8 ohms
RX-360/R-85	
0.04% THD, RL=330 ohms	0.4V/8 ohms

Frequency Response (20Hz to 20kHz)

CD etc	±0.5dB
--------	--------

RIAA Equalization Deviation (20Hz to 20kHz)

PHONO MM	±0.5dB
----------	--------

Total Harmonic Distortion (20Hz to 20kHz)

PHONO MM to REC OUT (3V)	0.01%
--------------------------	-------

RX-460	
CD etc to SP OUT (27.5W/8 ohms)	0.02%

RX-360/R-85	
CD etc to SP OUT (20W/8 ohms)	0.02%

Signal-to-Noise Ratio (IHF-A Network)

PHONO MM (5mV Input Shorted)	82dB
CD etc (Shorted)	103dB

Residual Noise (IHF-A Network)

	140µV
--	-------

Channel Separation (1kHz, Vol. -30dB)

PHONO MM (Input Shorted)	55dB
CD etc (input 5.1k-ohms Terminated)	55dB

Tone Control Characteristics

BASS : Boost/cut	±10dB (50Hz)
Turnover Frequency	350Hz
TREBLE : Boost/cut	±10dB (20kHz)
Turnover Frequency	3.5kHz

Continuous Loudness Control (Level related equalization)

■ FM SECTION

Tuning Range

U, C, R models	87.5 to 107.9MHz
A, B, G models	87.5 to 108.0MHz

50dB Quieting Sensitivity (IHF, 75 ohms)

Except G model	
Mono	1.55µV (15.1dBf)
Stereo	21µV (37.7dBf)

Usable Sensitivity (75 ohms)

(30dB S/N Quieting, 1kHz, 100% mod.)	
Except G model	0.8µV (9.3dBf)
DIN, Mono (S/N 26dB) G model	0.9µV
DIN, Stereo (S/N 46dB) G model	24µV

Image Response Ratio

Except G model	45dB
G model	80dB

IF Response Ratio

	80dB
--	------

Spurious Response Ratio

	70dB
--	------

AM Suppression Ratio

	55dB
--	------

Capture Ratio

	1.5dB
--	-------

Alternate Channel Selectivity

Except G model	85dB
----------------	------

Selectivity (two signals, 40kHz Dev.)

G model	70dB
---------	------

Signal-to-Noise Ratio

(IHF) Mono/Stereo	
Except G model	81/76dB

(DIN-weighted, 40kHz Dev.) Mono/Stereo	
G model	75/70dB

Harmonic Distortion (1kHz)

Mono/Stereo	
Except G model	0.1/0.2%

Stereo (40kHz Dev.)	
G model	0.2%

Frequency Response

30Hz to 13kHz	0 ± 0.5dB
---------------	-----------

20Hz to 15kHz	0 ± 1.5dB
---------------	-----------

Stereo Separation (1kHz)

Except G model	50dB
----------------	------

G model (40kHz Dev.)	50dB
----------------------	------

■ AM SECTION

Tuning Range

U, C, R models	530 to 1,710kHz
A, B, G models	531 to 1,611kHz

Usable Sensitivity

	100µV/m
--	---------

Selectivity

	32dB
--	------

Signal-to-Noise Ratio

	50dB
--	------

Image Response Ratio

	40dB
--	------

Spurious Response Ratio

	50dB
--	------

Harmonic Distortion (400Hz)

	0.3%
--	------

AUDIO SECTION

Output Level/Impedance

FM (100% mod., 1kHz)	
Except G model	500mV/3.2k-ohms
G model (40kHz Dev.)	400mV/3.2k-ohms

AM (30% mod., 400Hz)	
Except G model	150mV/3.2k-ohms
G model (40kHz Dev.)	150mV/3.2k-ohms

■ GENERAL

Power Supply

U, C models	AC 120V, 60Hz
A, B models	AC 240V, 50Hz
G model	AC 230V, 50Hz
R model	AC 110-120/220-240V, 60/50Hz

Power Consumption

RX-460

U, R, A, B models	170W
C model	270VA, 250W
G model	130W

RX-360

U, R, A, B models	160W
C model	250VA, 200W
G model	120W

R-85

U model	160W
C model	250VA, 200W

AC Outlets

U, R, G models Switched x 2	200W max
C model Switched x 2	100W max
A, B models Switched x 1	100W max

Dimensions (W x H x D) 435 x 131 x 291.7mm
 (17-1/8" x 5-3/16" x 11-1/2")

Weight

RX-460	6.1 kg (13 lbs 7 oz.)
RX-360/R-85	5.6 kg (12 lbs 5 oz.)

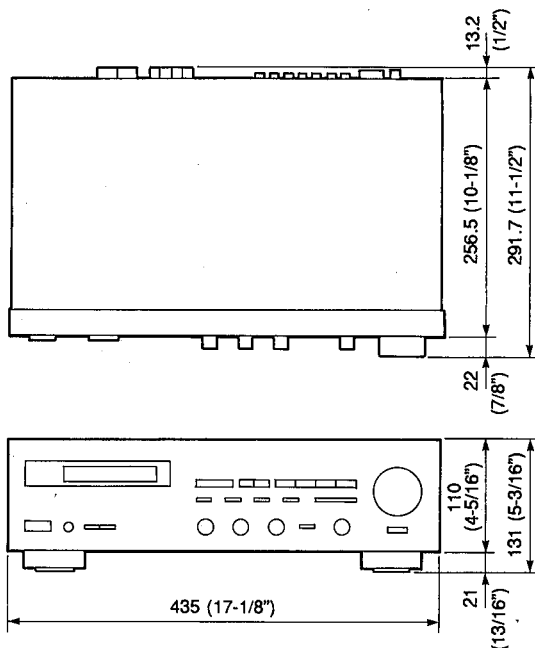
Accessories

- AM loop antenna x 1
- Indoor FM antenna x 1
- Remote Control Transmitter x 1
- Battery (size "AA", "R06") x 2

Specifications subject to change without notice.

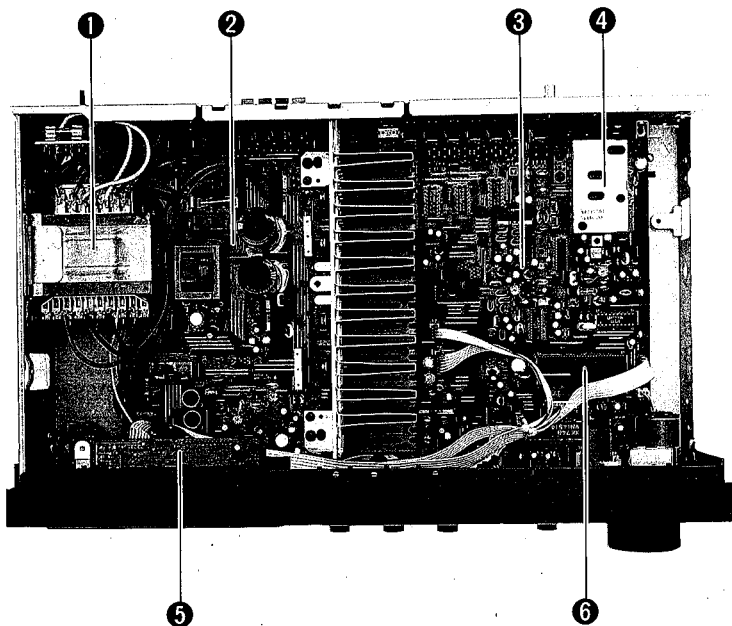
- | | |
|---------------------------------|-------------------------------|
| U USA model | B British model |
| C Canadian model | G European model |
| A Australian model | R General model |

● DIMENSIONS



Units : mm (inch)

■ INTERNAL VIEW



- ① POWER TRANSFORMER
- ② MAIN P. C. B. ASS'Y (2)
- ③ MAIN P. C. B. ASS'Y (1)
- ④ FRONT END PACK (PK 1)
- ⑤ LCD P. C. B. ASS'Y
- ⑥ IC 9 (4 bit μ-COM)

RX-460/360/R-85

■ DISASSEMBLY PROCEDURES

(Remove parts in the order as numbered.)

1. Removal of Top Cover

Remove 7 screws (①) in Fig. 1 and slide the Top Cover back and up.

2. Removal of Front Panel

- a. Remove 5 knobs (VOLUME, TONE CONTROL).
- b. Remove 3 screws (②) and 4 hooks in Fig. 1, and pull the Front Panel forward.

3. Check of Main P. C. B. Ass'y and replacement of parts.

- a. Remove 13 screws (③) in Fig. 1.
- b. Remove the Main Chassis as shown in Fig. 2. In this condition it is possible for you check the Main P. C. B. Ass'y, and replace the parts.

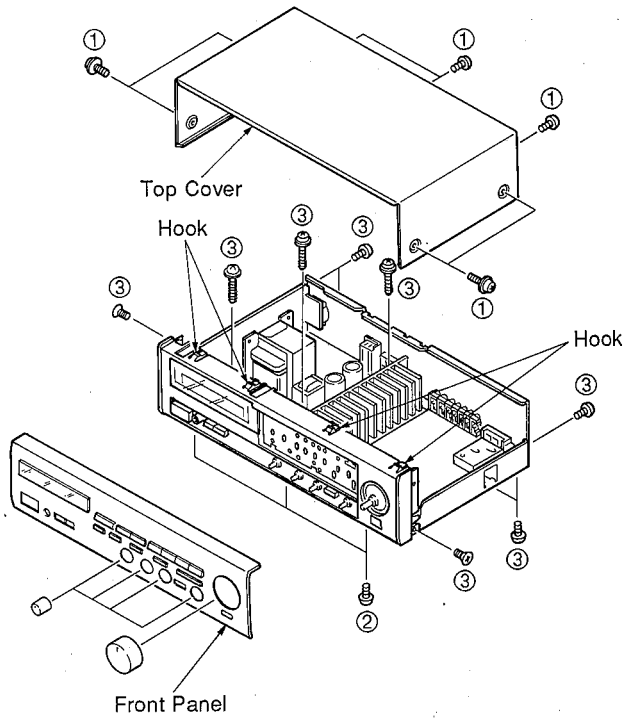


Fig. 1

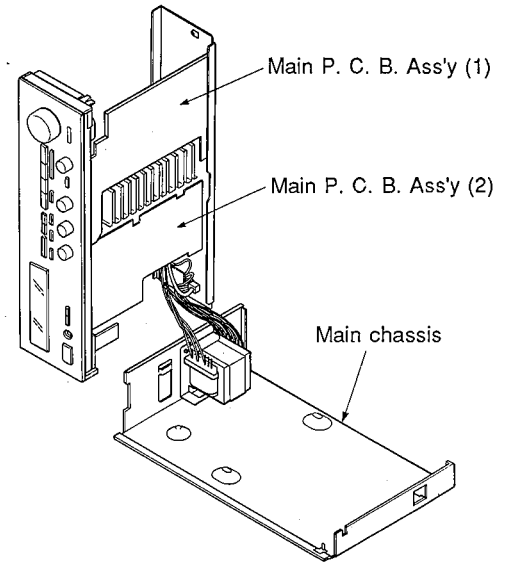


Fig. 2

■ ADJUSTMENTS

<POWER SUPPLY CHECK>

Check that the following voltages are obtained respectively across each test point and ground on main circuit.

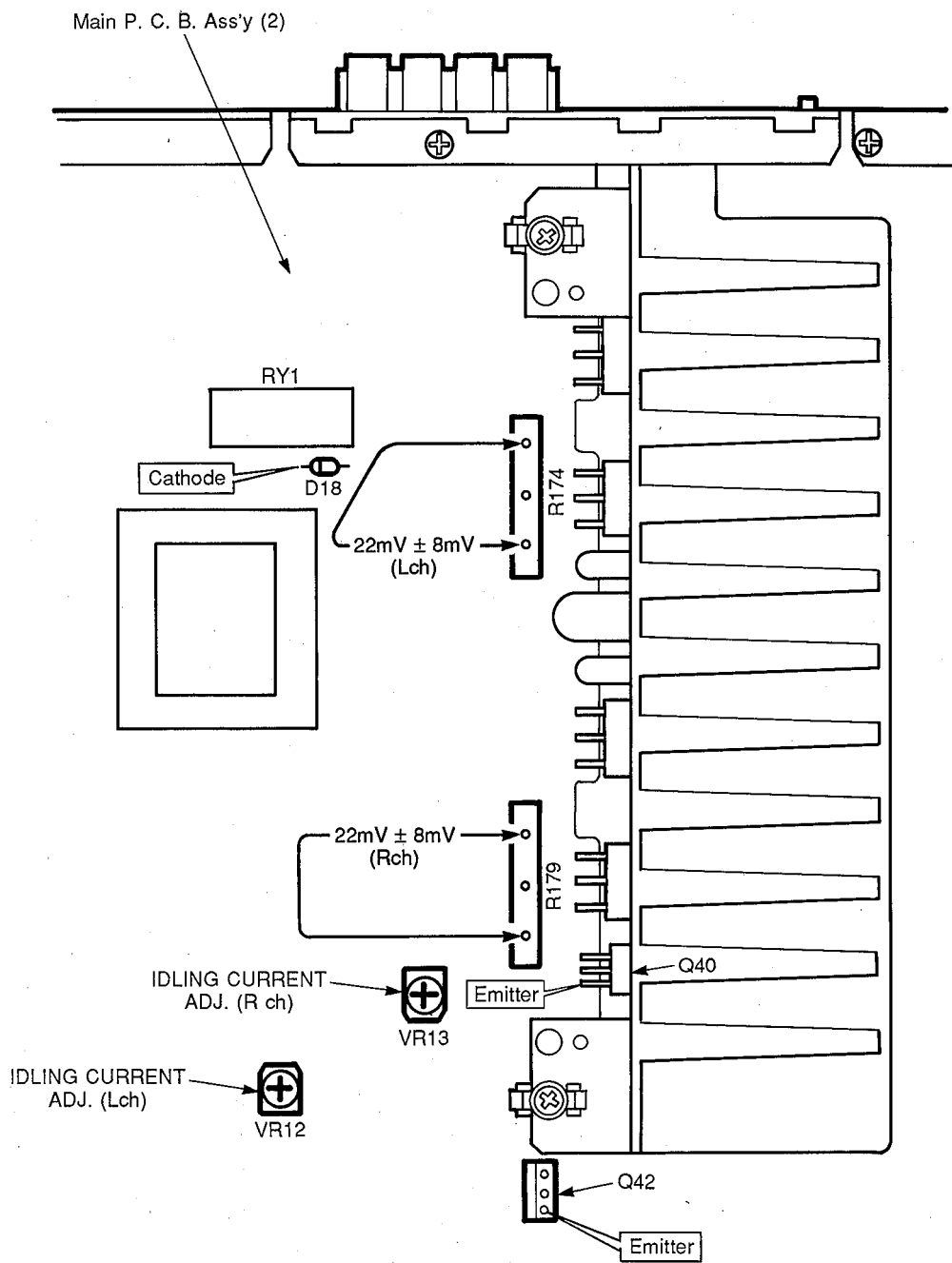
Test point	Rating or standard
Q40 Emitter	+10V ± 1V
Q42 Emitter	-9V ± 1V
D18 Cathode	+12V ± 1V

<AUDIO SECTION>

● Idling Current Adjustment

For this adjustment, wait for 10 minutes with no signal applied after the power was turned ON.

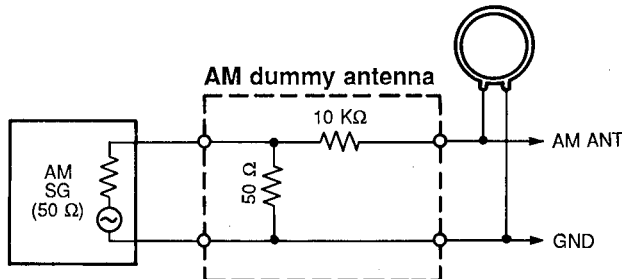
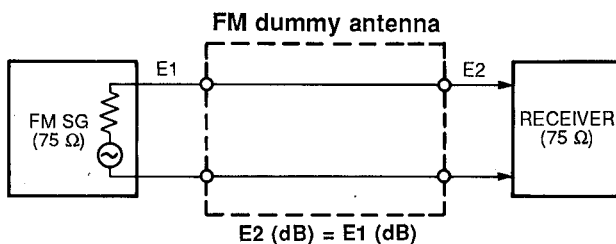
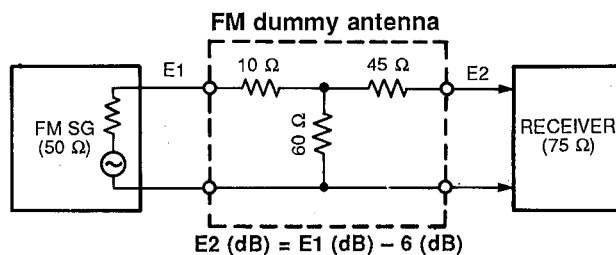
Item	Test Point	Adjusted points	Rating (DC)
L ch	Between both terminals of R174	VR 12	22mV ± 8mV
R ch	Between both terminals of R179	VR 13	



<TUNER SECTION>

- Measuring Instruments
 - FM signal generator (FM SG)
 - Stereo signal generator (SSG)
 - AM signal generator (AM SG)
 - Distortion meter (DIST. M)
 - AC voltmeter (ACVM)
 - DC voltmeter (DCVM)
 - Oscilloscope
 - Low pass filter (YLF-15, $f_c=15\text{kHz}$)
 - Oscillator

● Dummy antenna



● TEST MODE

CAUTION : Before setting to the TEST mode, write down the existing preset memory content of the Tuner in a table as shown below. (This is because setting to the TEST mode will cause the memory content to be as factory set, i.e., all the preset memory by the user will be erased.)

Preset group	P1	P2	P3	P4	P5	P6	P7	P8
A								
B								
C								
D								
E								

How to start

Turn the POWER switch ON while pressing the PHONO, CD, TUNER keys simultaneously, and the unit enters the TEST mode for the display check. (ALL LIGHTS mode becomes effective immediately after starting.) After that, the DISPLAY mode switches by means of PHONO, CD, TUNER, AUX key.

Content of the TEST mode key

- PHONO key : ALL LIGHTS ON mode
- CD key : LIGHTS OFF mode
- TUNER key : 7-segment (figure) display mode
(A number "8" appears in the center of the LCD indicator. Other remain OFF.)
- AUX key : The mode is switched to the NORMAL mode when the TEST mode is cancelled.

How to cancel

The normal operation is restored when the POWER switch is turned OFF or the AUX key pressed. At the same time, the factory preset memory is also restored.

● Factory preset memory content

Preset group	P1	P2	P3	P4	P5	P6	P7	P8
A / C / E	87.5MHz	90.1MHz	95.1MHz	98.1MHz	107.9MHz (U, C) 108MHz (R, A, B, G)	88.1MHz	106.1MHz	107.9MHz (U, C) 108MHz (R, A, B, G)
B / D	630kHz	1080kHz	1440kHz	530kHz (U, C) 531kHz (R, A, B, G)	1710kHz (U, C) 1611kHz (R, A, B, G)	900kHz	1350kHz	1400kHz (U, C) 1404kHz (R, A, B, G)

For all the above, AUTO TUNING and AUTO STEREO are selected as the TUNING mode.

RX-460/360/R-85

FM Adjustment

● **Before Adjustment**

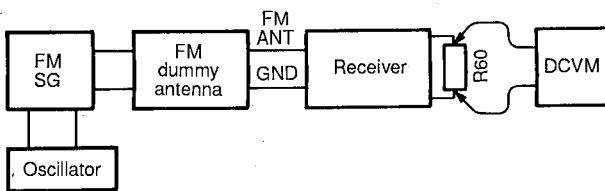
- 1) For dB, $1\mu V=0dB\mu$ applies.
Example : $60dB\mu=1mV$
- 2) 100% modulation means that the frequency deviation is 75kHz. (R, U, C, A, B)
- 3) For the G model, Frequency Deviation is 40kHz.
- 4) Install the Matching Transformer and connect FM SG.

- 5) Set each switch at the following position unless otherwise specified.

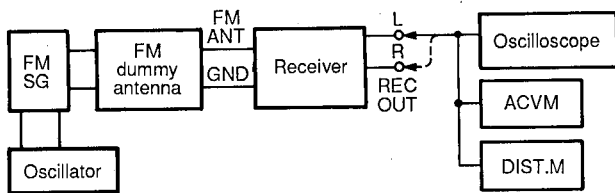
INPUT SELECTOR TUNER
TUNING MODE AUTO

● **Connection diagram (Measuring instruments)**

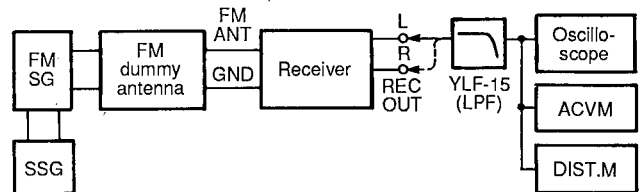
1) Discriminator balance adjustment



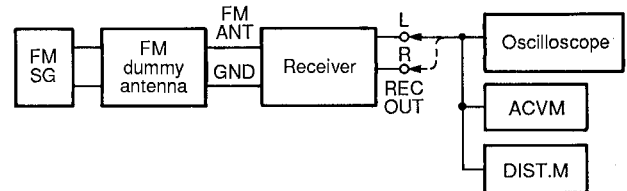
2) Monaural distortion adjustment



3) Stereo distortion adjustment/separation adjustment

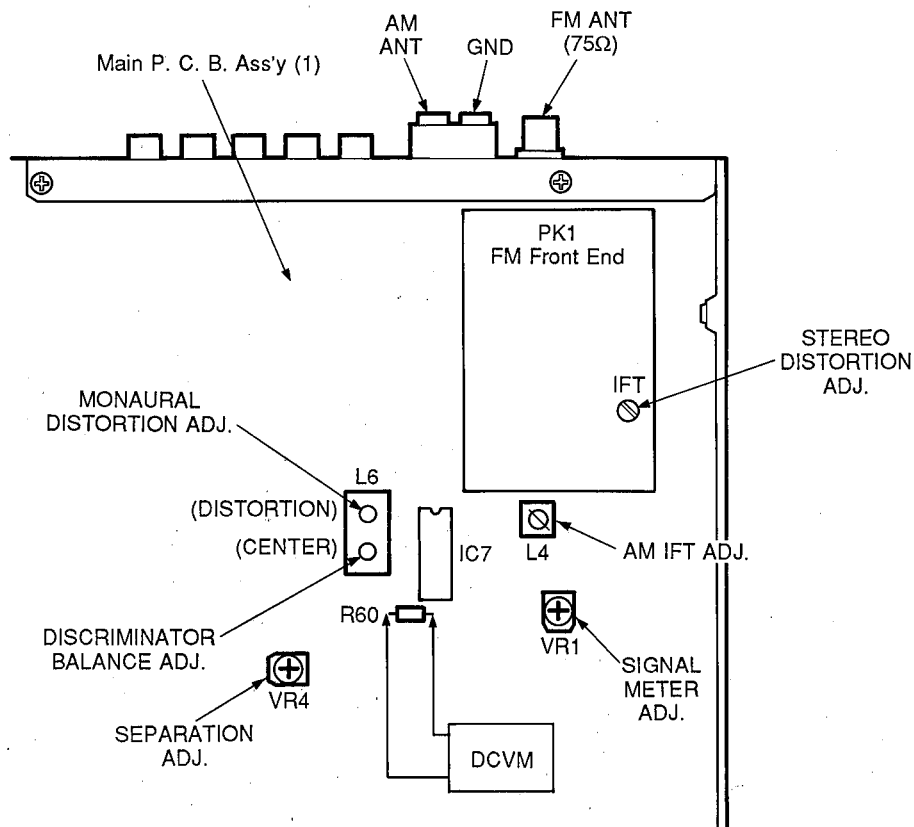


4) Sensitivity Verification



Step	Adjustment Item	Signal (ANT IN)	Frequency Setting	Adjustment Locations	Test Points	Adjustment Method (Rating)
1	Discriminator balance	FM ANT (75Ω) 98.1 MHz 70dBμ MONO 100Hz 100% MOD	98.1 MHz	L6 (CENTER)	Both ends of R60	0V ± 50mV (DC) Tuned point
2	Monaural distortion	Same as step 1	98.1 MHz	L6 (DISTORTION)	REC OUT L, R	Minimize the distortion
3	Stereo distortion	FM ANT (75Ω) 98.1 MHz 70dBμ STEREO (L or R) 1kHz 100% MOD	98.1 MHz	Front end IFT	REC OUT L, R	<ul style="list-style-type: none"> • Make distortion minimum • -46dB or less (G model only -40dB or less) • Check that STEREO indicator lights. • Don't turn IFT too much, for it will cause its sensitivity to deteriorate.
4	Confirmation of Monaural distortion	FM ANT (75Ω) 98.1 MHz 70dBμ MONO 1kHz 100% MOD	98.1 MHz			<ul style="list-style-type: none"> • Confirm that the monaural distortion satisfies the specifications. • -56dB or less (G model only -46dB or less)

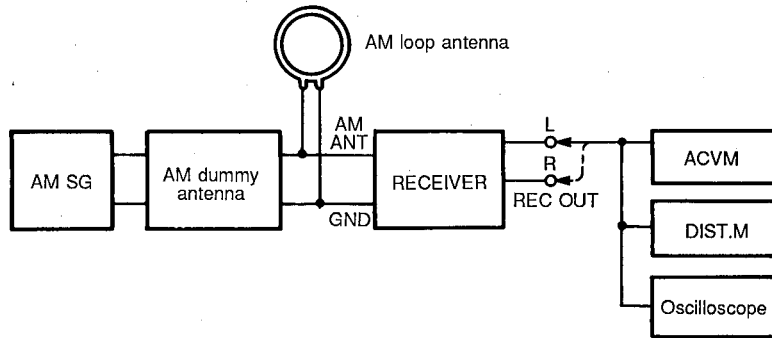
Step	Adjustment Item	Signal (ANT IN)	Frequency Setting	Adjustment Locations	Test Points	Adjustment Method (Rating)
5	Confirmation of Sensitivity	Same as step 4	98.1 MHz		FM ANT (75Ω)	<ul style="list-style-type: none"> • Read antenna terminal voltage with an S/N ratio of 30dB using an FM SG. • 10dBμ or less (Except G model) • 6dBμ or less (G model only)
6	Separation	FM ANT (75Ω) 98.1 MHz 70dBμ STEREO (L or R) 1kHz 100% MOD	98.1 MHz	VR4	REC OUT L, R	With SSG output at L or R, the signal leakage level at the other channel should be minimized. 36dB or more
7	Confirmation of Discriminator balance	FM ANT (75Ω) 98.1 MHz 70dBμ MONO 1kHz 100% MOD	98.1 MHz		Both ends of R60	0V ± 50mV (DC) Tuned point
8	Signal meter	FM ANT (75Ω) 45dBμ MONO 1kHz 30% MOD	98.1 MHz	VR1		<ul style="list-style-type: none"> • Adjust so that all signal meters light. • Confirm that all signal meters goes out at detuned point.
9	Confirmation of auto search reception	FM ANT (75Ω) 98.1 MHz 26dBμ MONO 1kHz 30% MOD	98.1 MHz			<ul style="list-style-type: none"> • Automatic reception should be available when the tuning key is moved UP and DOWN. • Audio muting should be applied during tuning.



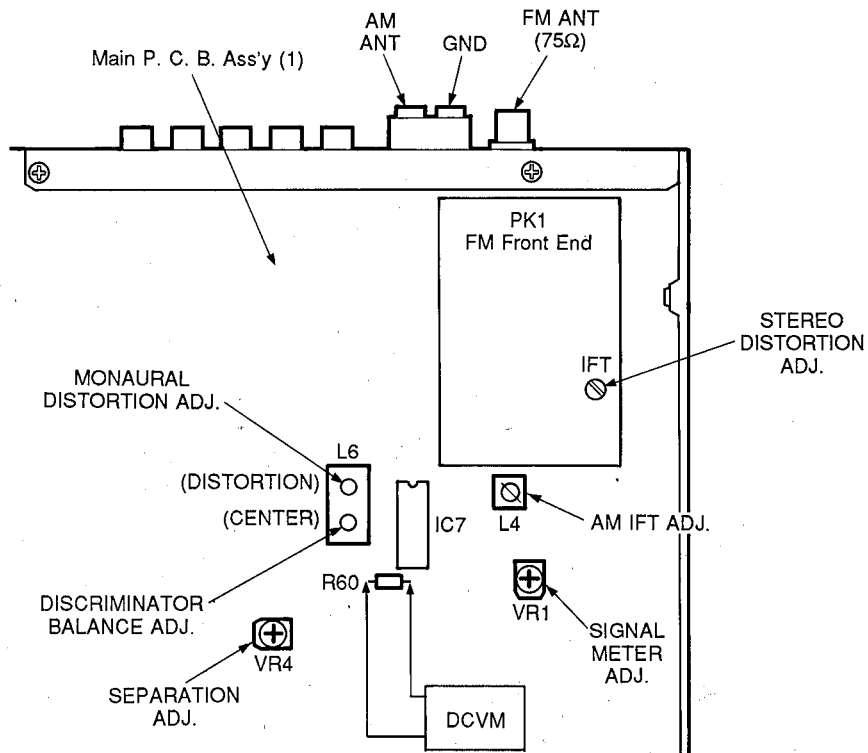
AM Adjustment (This should be done after FM adjustment.)

● **Connection Diagram (Measuring Instruments)**

1) Adjustment of sensitivity

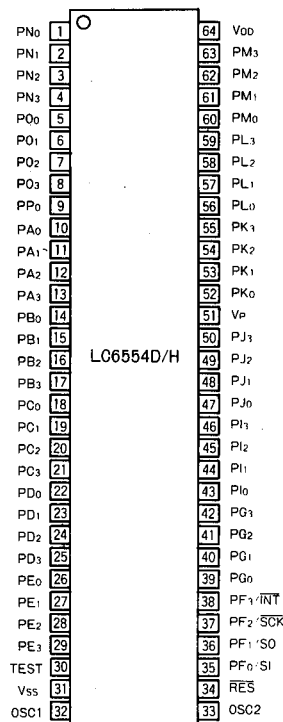


Step	Adjustment Item	Signal (ANT IN)	Frequency Setting	Adjustment Locations	Test Points	Adjustment Method (Rating)
1	AM IFT	AM ANT 1080kHz 400Hz, 30% MOD	1080kHz	L4	REC OUT L, R	<ul style="list-style-type: none"> Adjust so that the audio output is at maximum. Non AGC
2	Confirmation of sensitivity	Same as step 1	1080kHz		REC OUT L, R	<ul style="list-style-type: none"> Obtain AM SG output level where distortion become 10% 60dBμ or less
3	Confirmation of signal meter	AM ANT 1080kHz 100dB μ 400Hz, 30% MOD	1080kHz			<ul style="list-style-type: none"> All signal meters should light. Confirm that all signal meters goes out at returned point.
4	Confirmation of auto-search reception	AM ANT 1080kHz 65dB μ 400Hz, 30% MOD				Auto reception should be available when the tuning key is moved UP and DOWN.

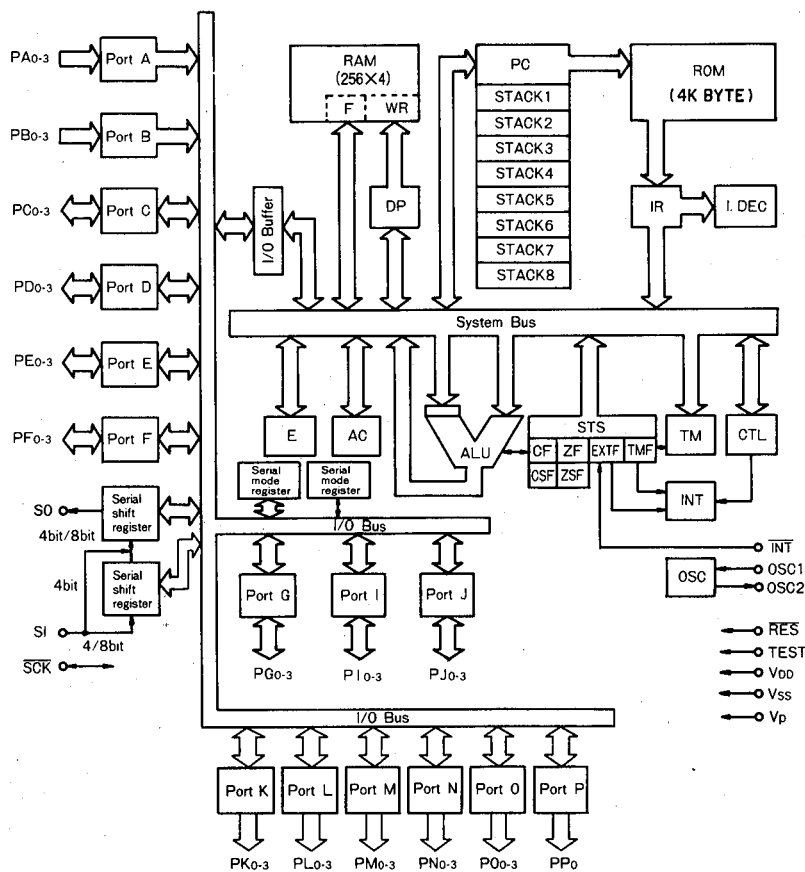


■ IC DATA

IC9 : LC6554
(4-bit μ -COM)



- RAM : Data memory
- F : Flag
- WR : Working register
- AC : Accumulator
- ALU : Arithmetic and logic unit
- DP : Data pointer
- E : E register
- CTL : Control register
- OSC : Oscillator
- TM : Timer
- STS : Status register
- ROM : Program memory
- PC : Program counter
- INT : Interrupt control
- IR : Instruction register
- I. DEC : Instruction decoder
- CF, CSF : Carry flag, carry save flag
- ZF, ZSF : Zero flag, zero save flag
- EXTF : External interrupt request
- TMF : Internal interrupt request



Pin No.	Pin Name	I/O	Description	Function	Pin No.	Pin Name	I/O	Description	Function
1	PN0	O		NC	64	VDD	—	VDD	+5V
2	PN1	O		NC	63	PM3	O	PLRS	Player Control Signal
3	PN2	O		NC	62	PM2	O		NC
4	PN3	O		NC	61	PM1	O		NC
5	PO0	O	D1	KEY DIGIT	60	PM0	O		NC
6	PO1	O	D2		59	PL3	O	V DN	Volume Down
7	PO2	O	D3		58	PL2	O	V UP	Volume Up
8	PO3	O	D4		57	PL1	O	VDSEL	NC
9	PP0	O		NC	56	PL0	O	P ON	Main Drive
10	PA0	I	K1	KEY IN	55	PK3	O		NC
11	PA1	I	K2		54	PK2	O		NC
12	PA2	I	K3		53	PK1	O		NC
13	PA3	I	K4		52	PK0	O		NC
14	PB0	I	PB0	GND	51	VP	—	GND	GND
15	PB1	I	PB1	GND	50	RJ3	O	T MONI 2	TAPE MONITOR2
16	PB2	I	PODN	POWER DOWN DET	49	PJ2	O	T MONI 1	TAPE MONITOR1
17	PB3	I	HOLD	GND	48	PJ1	O	STBY	LED for Stand By
18	PC0	I	IPSW	GND	47	PJ0	O	MUTE	FULL MUTE L : ON
19	PC1	I	A1	TUNER MARKET SELECT	46	PI3	O	T MUTE	Tuner Mute
20	PC2	I	A2	TUNER MARKET SELECT	45	PI2	O	MONO	Monoral
21	PC3	I	PSW	POWER SW	44	PI1	O	INH	LC75821, INH
22	PD0	O	4052 A	INPUT SELECTOR	43	PI0	O	CE2	LC75821, CE
23	PD1	O	4052 B		42	PG3	O	STRQ	LM7000, STRQ
24	PD2	O	INH		41	PG2	O	CEI	LM7000, CE
25	PD3	O			NC	40	PG1	O	CL
26	PE0	O	G/NOTG	POWER LED Except G : L G : H	39	PG0	O	DATA	Serial Data
27	PE1	O	MTER	METER MUTE	38	PF3/INT	I	REMQ	Remote Control Input
28	PE2	O		NC	37	PF2/SCK	I	STQ	ST OUT
29	PE3	O		NC	36	PF1/SO	I	STSG	STOP SIGNAL
30	TEST	—	TEST	GND	35	PF0/SI	I	ST	STEREO
31	VSS	—	VSS	GND	34	RES	I	RESET	Reset
32	OSCI	—	OSCI		33	OSC2	—	OSC2	

KEY MATRIX

KEY IN \ DIGIT	D1	D2	D3	D4
K1	PHONO	TAPE 1	TUNING UP	MEMORY
K2	CD	TAPE 2 (RX-460 only)	TUNING DOWN	A/B/C/D/E
K3	TUNER	PRESET UP	AUTO/MAN'L	—
K4	AUX	PRESET DOWN	FM/AM	—

INPUT SELECT

PORT \ INPUT	PHONO	CD	TUNER	AUX
4052 A	0	1	0	1
4052 B	0	0	1	1
INH	0	0	0	0

VOLUME CONTROL

VOLUME \ PORT	UP	DOWN	KEY OFF
V DN	0	1	0
V UP	1	0	0

TAPE MONITOR CONTROL (RX-460 only)

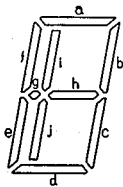
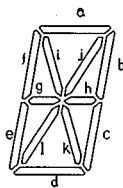
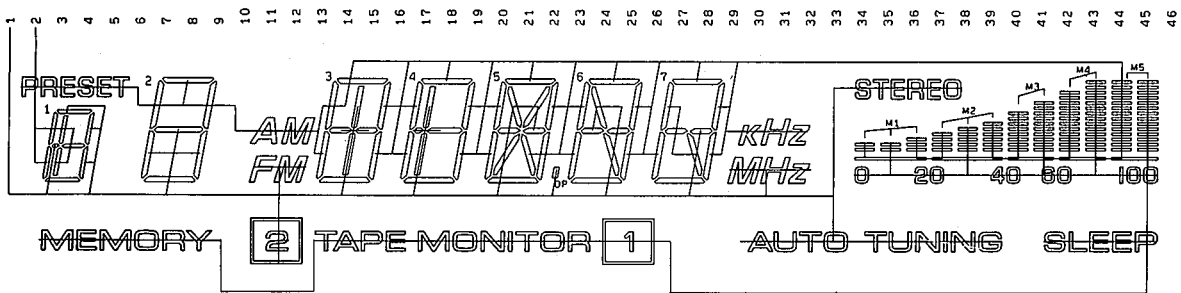
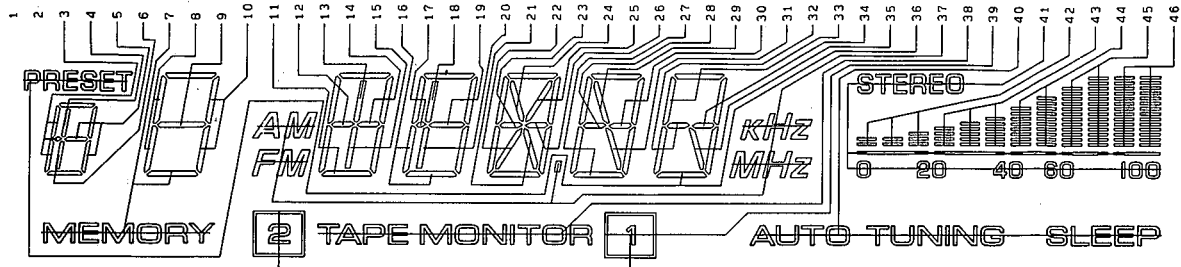
PORT \ TAPE	TAPE 1	TAPE 2	COPY
T MONI 1	0	1	0
T MONI 2	1	0	0

TUNER MARKET SELECT

PORT \ MARKET	A, B, G	U, C	R
A1	1	0	1
A2	0	1	1 or 0

■ DISPLAY DATA

RX-460 V501 : LCD-8220B1JP (VM750800)



NO	1	2	3	4	5	6	7	8	9	10	11	12
COM1	—	COM	1 ef	1 i	1 h	1 j	MEMORY	2 f	2 a	2 b	3 e	3 f
COM2	COM	—	1 g	1 a	1 bc	1 d	2 d	2 e	2 g	2 c	3 d	3 g

NO	13	14	15	16	17	18	19	20	21	22	23	24
COM1	3 a	3 b	3 c	4 e	4 f	4 a	4 b	4 c	5 k	5 e	5 f	5 a
COM2	3 i	3 h	3 j	4 d	4 g	4 i	4 h	4 j	5 d	5 l	5 g	5 i

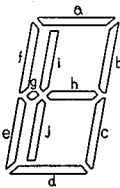
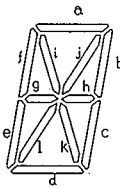
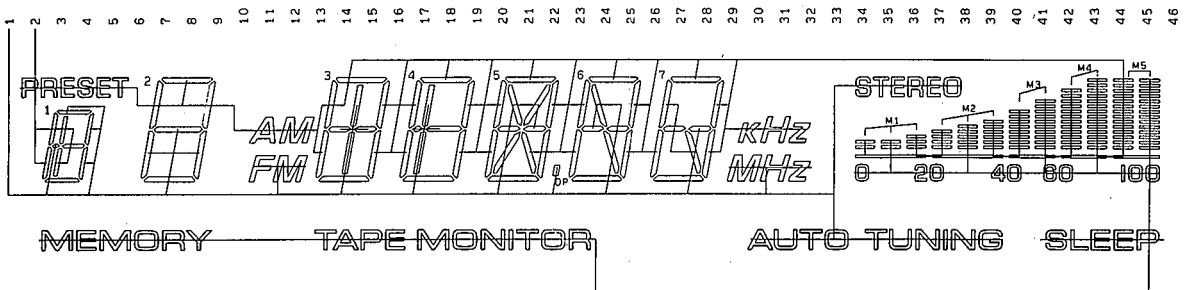
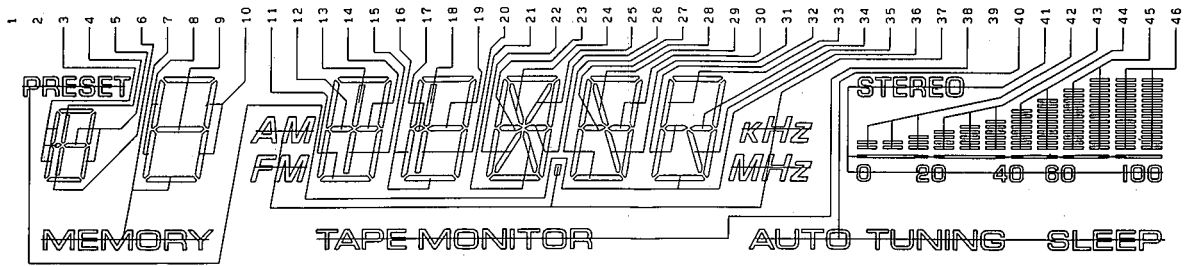
NO	25	26	27	28	29	30	31	32	33	34	35	36
COM1	5 b	5 c	6 e	6 f	6 a	6 b	6 c	7 e	7 a	7 b	7 c	PRESET
COM2	5 j	5 h	6 d	6 g	6 i	6 h	6 k	7 g	7 f	7 h	7 k	7 d

NO	37	38	39	40	41	42	43	44	45	46
COM1	AM KHZ	* 1)	1	SLEEP	* 2)	M1	M2	M3	M4	M5
COM2	FM. DP MHZ	—	2	AUTO TUNING	STEREO	—	—	—	—	—

* 1) TAPE MONITOR

2) 0 20 40 60 100

RX-360/R-85 V501 : LCD-8221B1JP (VM750900)



NO	1	2	3	4	5	6	7	8	9	10	11	12
COM1	—	COM	1 ef	1 i	1 h	1 j	MEMORY	2 f	2 a	2 b	3 e	3 f
COM2	COM	—	1 g	1 a	1 bc	1 d	2 d	2 e	2 g	2 c	3 d	3 g
NO	13	14	15	16	17	18	19	20	21	22	23	24
COM1	3 a	3 b	3 c	4 e	4 f	4 a	4 b	4 c	5 k	5 e	5 f	5 a
COM2	3 i	3 h	3 j	4 d	4 g	4 i	4 h	4 j	5 d	5 l	5 g	5 i
NO	25	26	27	28	29	30	31	32	33	34	35	36
COM1	5 b	5 c	6 e	6 f	6 a	6 b	6 c	7 e	7 a	7 b	7 c	PRESET
COM2	5 j	5 h	6 d	6 g	6 i	6 h	6 k	7 g	7 f	7 h	7 k	7 d
NO	37	38	39	40	41	42	43	44	45	46		
COM1	AM KHZ	* 1)	—	SLEEP	* 2)	M1	M2	M3	M4	M5		
COM2	FM. DP MHZ	—	—	AUTO TUNING	STEREO	—	—	—	—	—		

* 1) TAPE MONITOR

2) 0 20 40 60 100

■ PRINTED CIRCUIT BOARD (Foil side)

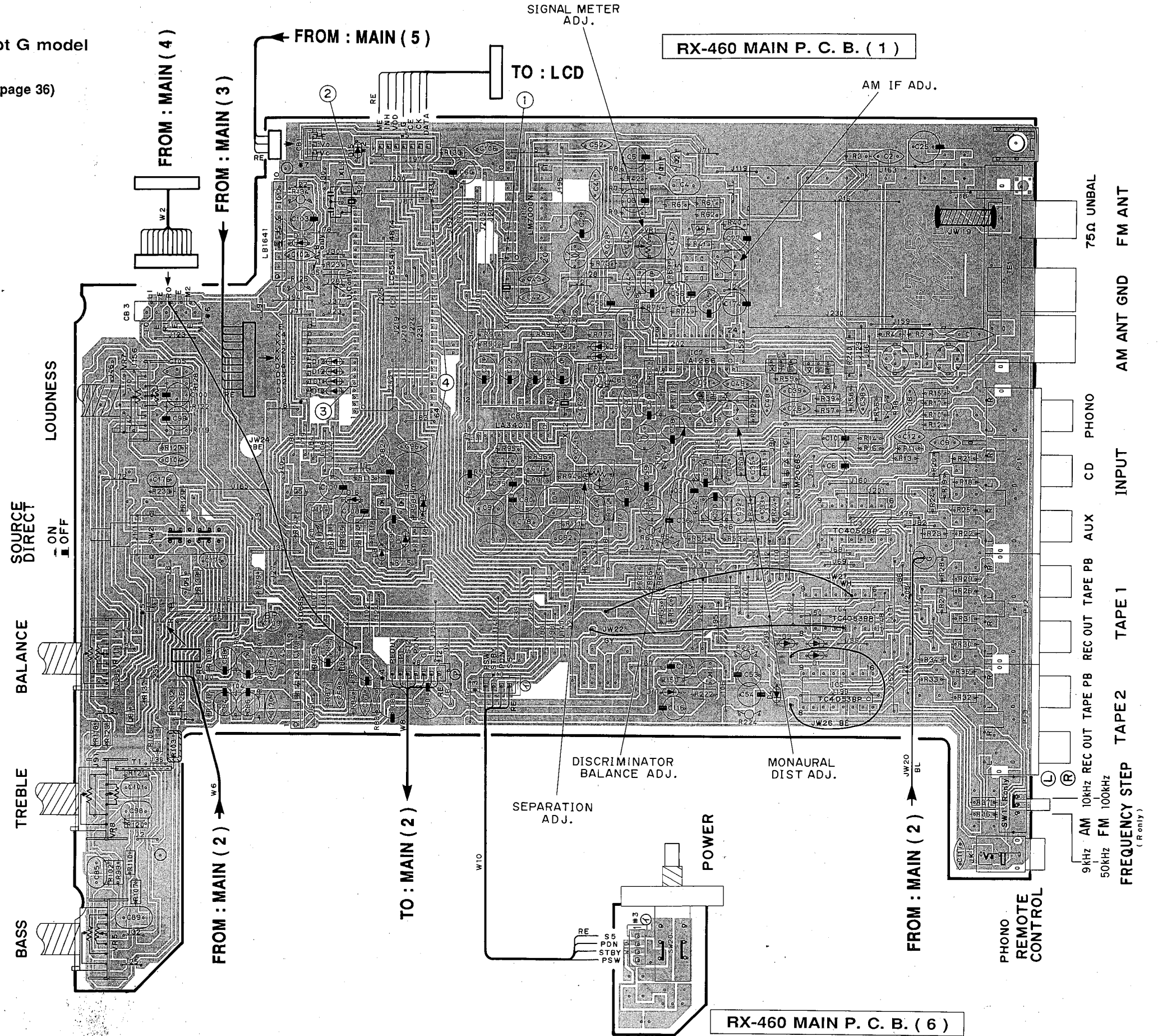
● Except G model

① to ④: WAVEFORM OF TEST POINT (See page 36)

● Semiconductor Locations

Ref. No.	Location
IC 1	F3
IC 3	F3
IC 4	F4
IC 5	F4
IC 6	E2
IC 7	E3
IC 8	E3
IC 9	D2
IC10	D4
IC12	C2

Ref. No.	Location
Q 1	E2
Q 2	E2
Q 3	F3
Q 4	E2
Q 5	D3
Q 6	D3
Q 7	D3
Q 8	C4
Q 9	C4
Q10	C3
Q13	F4



RX-460 MAIN P. C. B. (1)

RX-460 MAIN P. C. B. (6)

1
2
3
4
5
6

■ PRINTED CIRCUIT BOARD (Foil side)

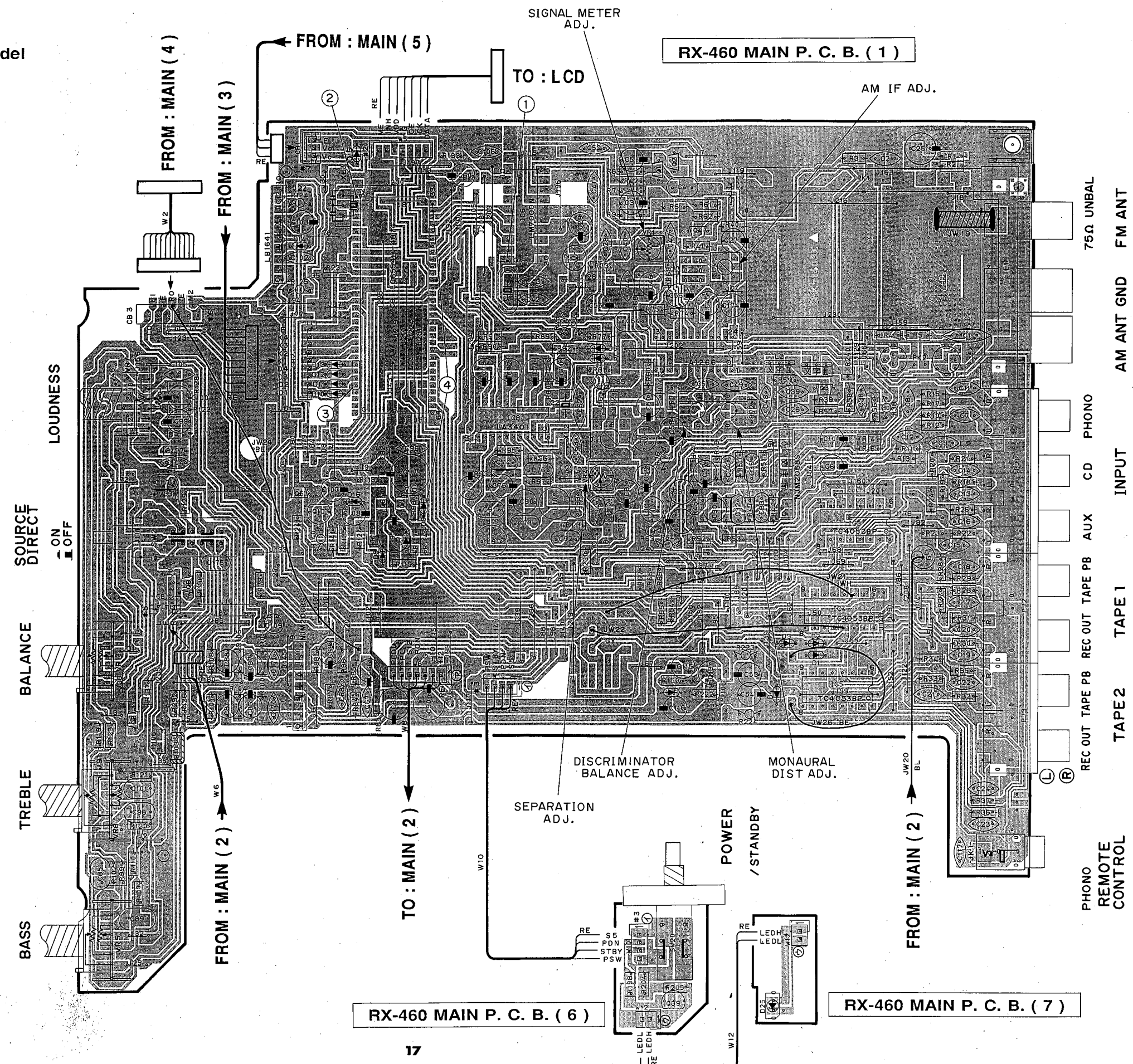
● G model

① to ④ : WAVEFORM OF TEST POINT (See page 36)

● Semiconductor Locations

Ref. No.	Location
IC 1	F3
IC 3	F3
IC 4	F4
IC 5	F4
IC 6	E2
IC 7	E3
IC 8	E3
IC 9	D2
IC 10	D4
IC 12	C2

Ref. No.	Location
Q 1	E2
Q 2	E2
Q 3	F3
Q 4	E2
Q 5	D3
Q 6	D3
Q 7	D3
Q 8	C4
Q 9	C4
Q 10	C3
Q 13	F4
Q 39	E6



RX-460 MAIN P. C. B. (6)

RX-460 MAIN P. C. B. (7)

■ BLOCK DIAGRAM

