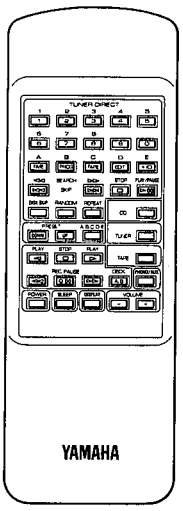
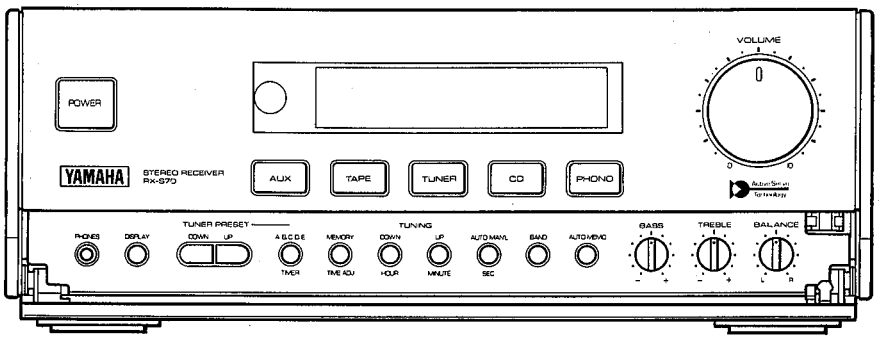
STEREO RECEIVER

RX-S70

SERVICE MANUAL

RX-S70 is a receiver designed for COMPACT SYSTEM CC-70S/W.





- System CC-70W is composed of RX-S70, CDC-S90, KXW-S70 and NX-S70.
- System CC-70S is composed of RX-S70, CDC-S90, KX-S90 and NX-S70.

Model	Manual No.
RX-S70	100465
CDC-S90	100466
KXW-S70	100467
KX-S90	100468
NX-S70	100469

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 reseach, 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.

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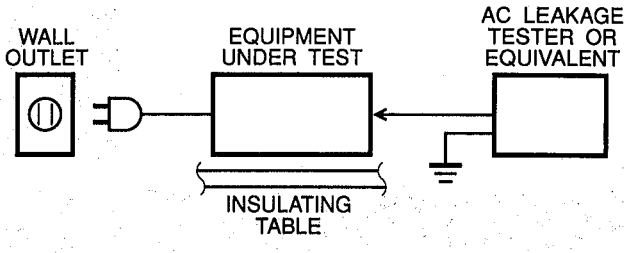
100465

YAMAHA
YAMAHA CORPORATION
P.O.Box1.Hamamatsu.Japan
3.2K-843 Printed in Japan '93.8

■ 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.

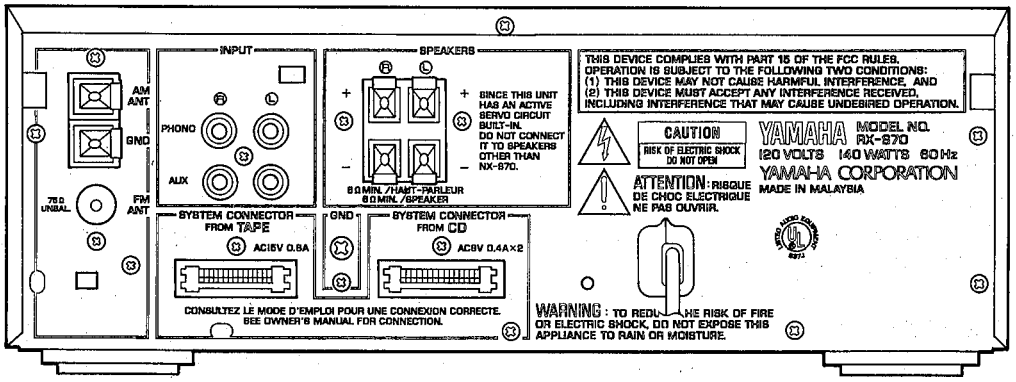
DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!

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

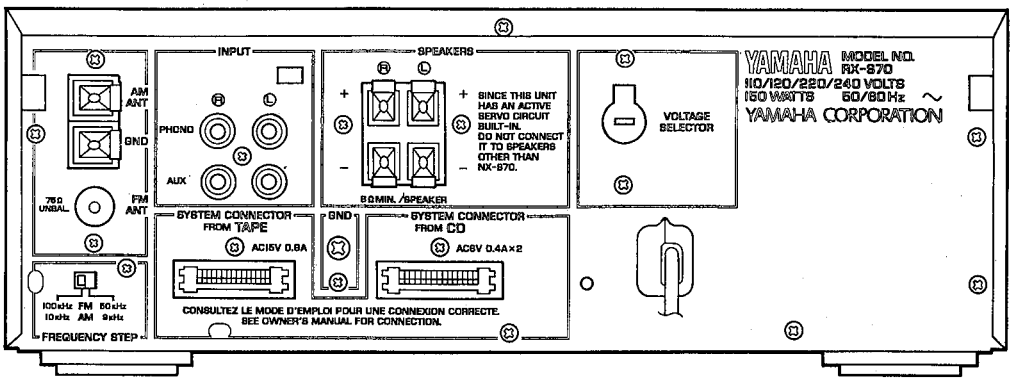
If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

■ REAR PANELS

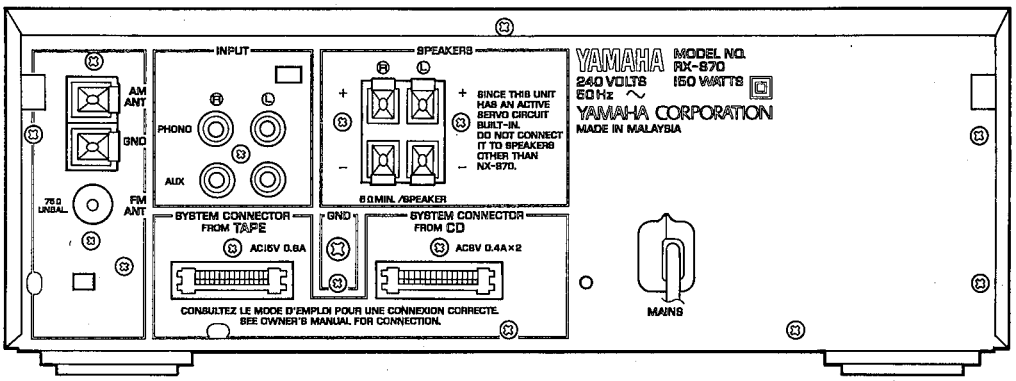
▼ U, C models



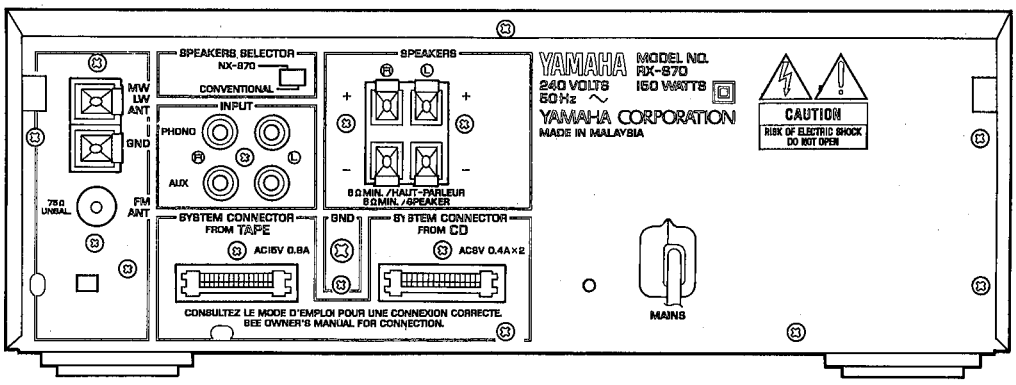
▼ R model



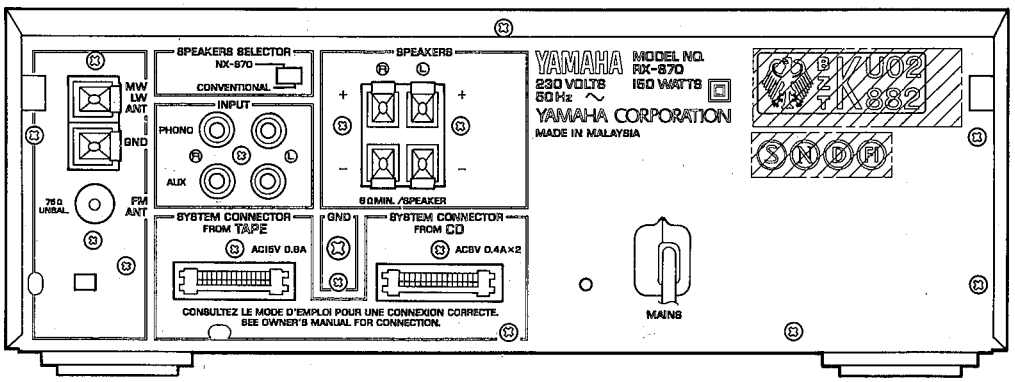
▼ A model



▼ B model



▼ G model



■ SPECIFICATIONS

■ AUDIO SECTION

Minimum RMS Output Power per Channel
6Ω, 20Hz to 20kHz, 0.04% THD 50W
6Ω, 1kHz, 10% THD
U, C, R models 75W
DIN Standard Output Power per Channel
1kHz, 1% THD, 4Ω/6Ω
G model only 65W/60W
IEC Power (1kHz, 0.1% THD, 6Ω)
G model only 60W
Input Sensitivity/Impedance
PHONO MM 2.5mV/47kΩ
AUX 150mV/25kΩ
Headphone Output Impedance 68Ω
Total Harmonic Distortion (20Hz to 20kHz)
AUX to SP OUT (25W/6Ω) 0.04%
Signal-to-Noise Ratio (IHF-A Network)
AUX (Shorted) 102dB
Tone Control Characteristics
BASS : Boost/cut .....0±10dB (50Hz)
TREBLE : Boost/cut .....0±10dB (20kHz)

■ FM SECTION

Tuning Range
U, C models .....87.5 to 107.9MHz
A, B, G, R models .....87.50 to 108.00MHz
R model .....87.5 to 108.0MHz
Usable Sensitivity (75Ω)
(30dB S/N Quieting, MONO, 1kHz, 100% mod.)
Except G model 1.2μV (12.8dBf)
DIN, Mono (S/N 26dB) G model 1.5μV

■ AM SECTION

Tuning Range
U, C, R models .....530 to 1,710kHz
A, B, G, R models .....531 to 1,611kHz
Usable Sensitivity 280μV/m

■ LW SECTION (B, G only)

Tuning Range .....153 to 288kHz
Usable Sensitivity 560μV/m

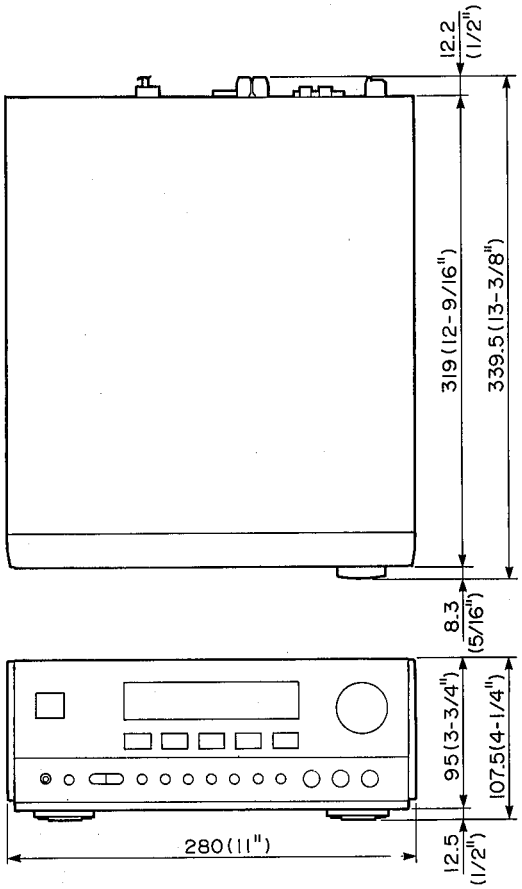
■ GENERAL

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
U, C models 140W
A, B, G, R models 150W
Dimensions (W x H x D) .....280 x 107.5 x 339.5mm
(11" x 4-1/4" x 13-3/8")
Weight .....6 kg (13 lbs. 3 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.*

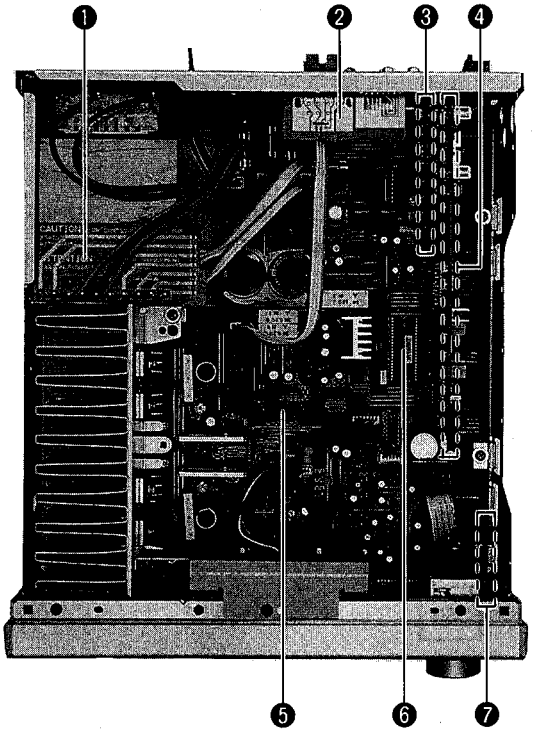
***U** .....USA model*
***C** .....Canadian model*
***A** .....Australian model*
***B** .....British model*
***G** .....European model*
***R** .....General model*

● DIMENSIONS



Units : mm (inch)

■ INTERNAL VIEW



❶ MAIN P.C.B. ASS'Y (3)
❷ MAIN P.C.B. ASS'Y (4)
❸ MAIN P.C.B. ASS'Y (2)
❹ SUB P.C.B. ASS'Y (1)
❺ MAIN P.C.B. ASS'Y (1)
❻ 8-bit μ-COM (IC210 : M37471M8)
❼ SUB P.C.B. ASS'Y (4)

■ DISASSEMBLY PROCEDURES

(Remove parts in the order as numbered.)

1. Removal of Top Cover

Remove 4 screws (①) and 1 screw (②) in Fig. 1.

2. Removal of Front Panel Unit

a. Remove the VOLUME knob.
b. Remove 1 nut (③) in Fig. 1.
c. Remove 4 screws (④) and 2 screws (⑤) in Fig. 1.
d. Remove 2 hooks and pull the Front Panel Unit in Fig. 1.

3. Main P.C.B. Check and Part Replacement

a. Remove 5 screws fixing the Rear Panel.
b. Remove 4 screws fixing the Main P.C.B..
c. With the Main P.C.B. placed on its side as shown in Fig. 2, install the Front Panel unit.

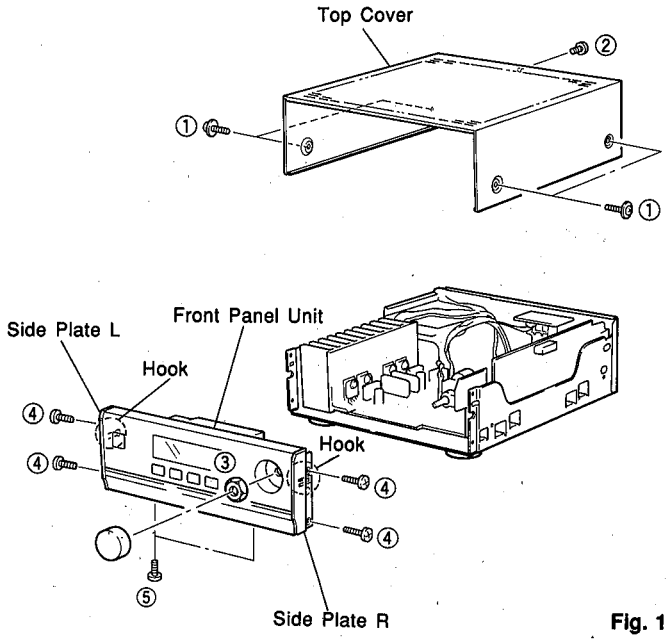


Fig. 1

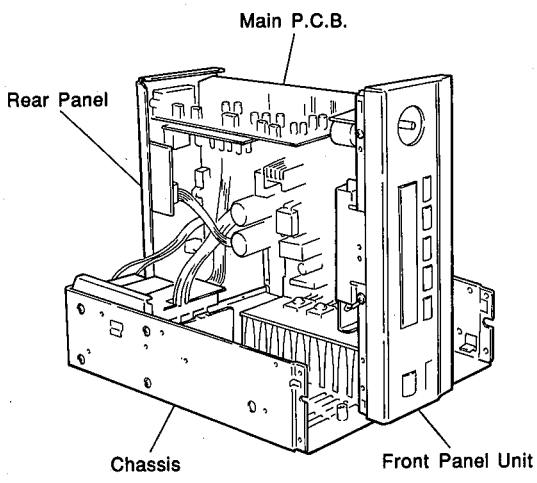


Fig. 2

■ ADJUSTMENT IN POWER AMPLIFIER SECTION

● Before Adjustment

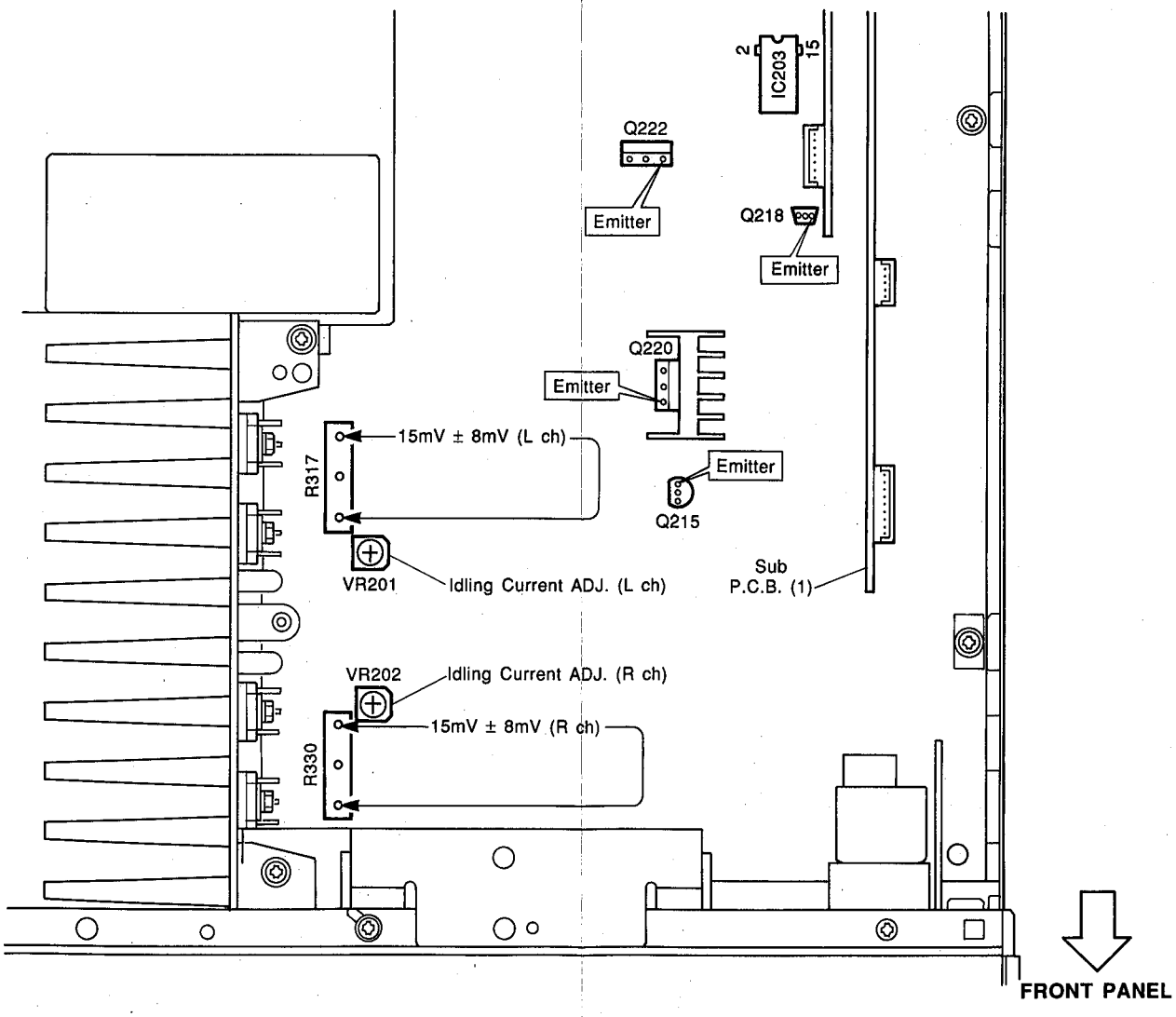
Check the power voltage according to the table below.

Check Item	Test Point	Rating
+12	Emitter of Q220	+12V ± 1V
−12	Emitter of Q222	−12V ± 1V
+5.6	Emitter of Q215	+5.6V ± 1V
+5.6	Emitter of Q218	+5.6V ± 1V

Idling Current Adjustment

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

Item	Test Point	Adjusted points	Rating (DC)
L ch	Between both terminals of R317	VR201	15mV ± 8mV
R ch	Between both terminals of R330	VR202	

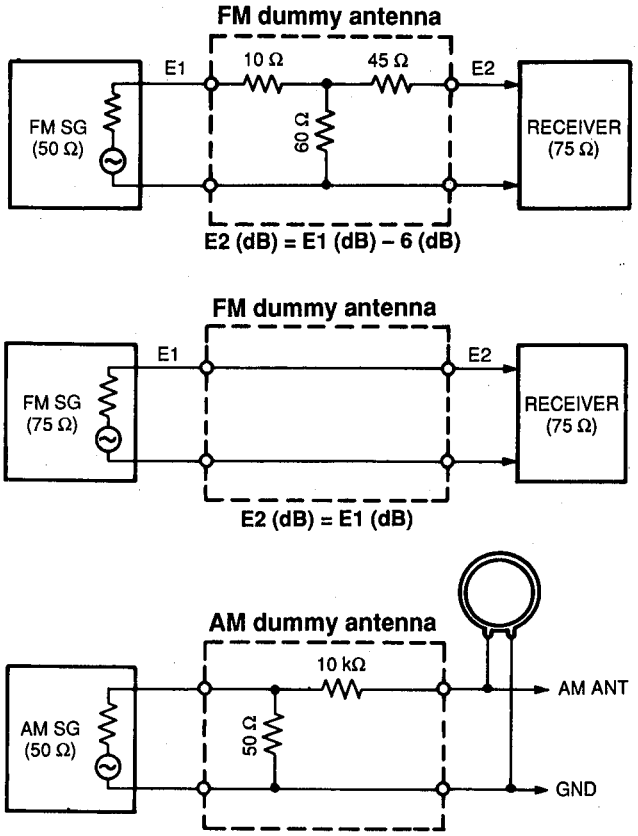


■ ADJUSTMENT IN TUNER SECTION

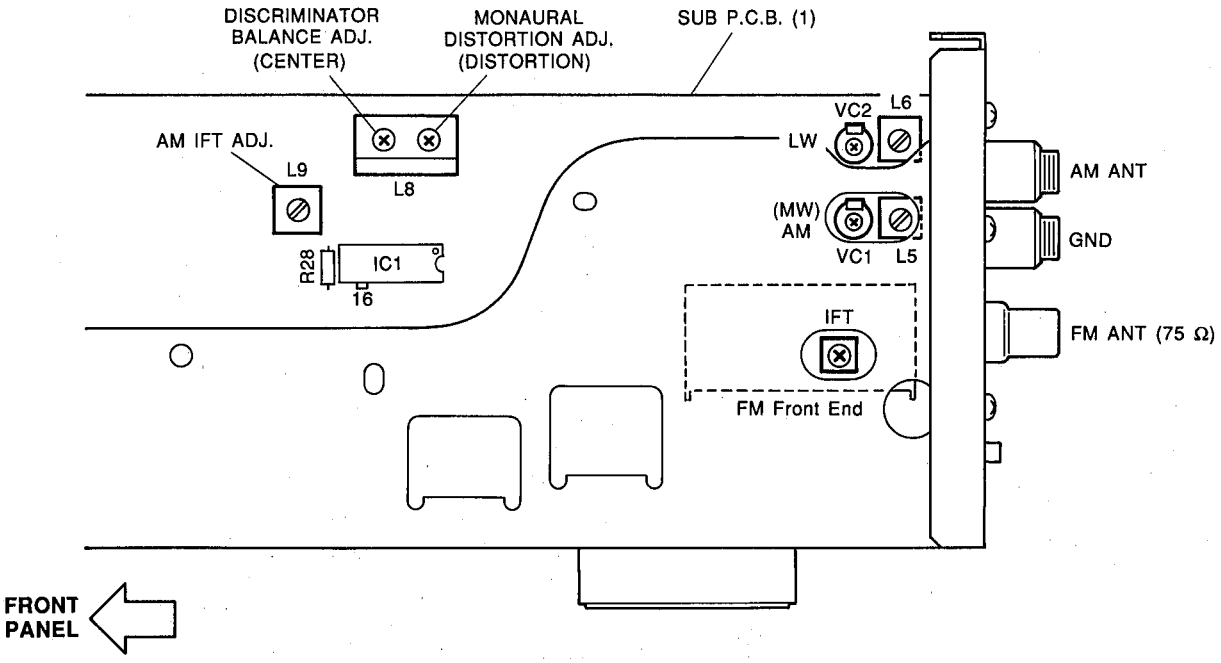
● Measuring Instruments

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, fc=15kHz)
Low frequency oscillator

● Dummy antenna



● Adjustment points



FM Adjustment

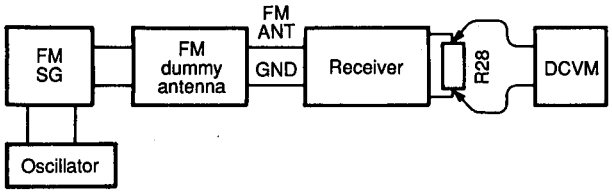
● Before Adjustment

1) For dB, 1μV=0dBμ applies.
   Example : 60dBμ=1mV
2) 100% modulation means that the frequency deviation is 75kHz.
3) Install the Matching Transformer and connect FM SG.
4) Set each switch at the following position unless otherwise specified.

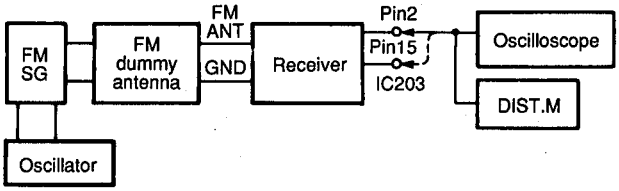
   INPUT SELECTOR ..... TUNER
   TUNING MODE ..... AUTO

● Connection diagram (Measuring instruments)

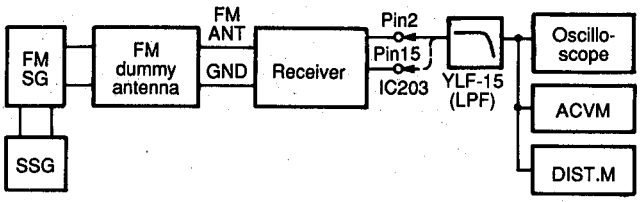
1) Discriminator balance adjustment



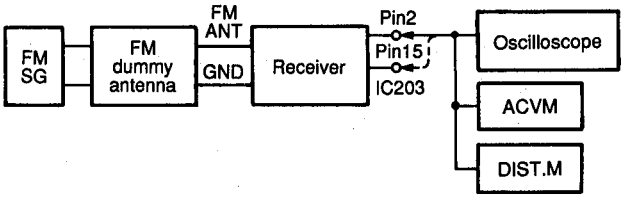
2) Monaural distortion adjustment



3) Stereo distortion verification/separation verification



4) Sensitivity Verification



Step	Adjustment Item	Signal (ANT IN)	Reception frequency	Adjusted point	Test point	Rating
1	Rough adjustment of discriminator balance	FM ANT (75Ω) 98.1MHz 70dBμ MONO 100Hz 100% modulation	98.1MHz * (A-1)	L8 (CENTER)	Both ends of R28	DC 0V±100mV
2	Rough adjustment of monaural distortion	Same as Step 1.	98.1MHz * (A-1)	L8 (DISTOR-TION)	Lch : Pin2 of IC203 Rch : Pin15 of IC203	Minimize the distortion.
3	Fine adjustment of discriminator balance	Same as Step 1.	98.1MHz * (A-1)	L8 (CENTER)	Both ends of R28	DC 0V±50mV
4	Fine adjustment of monaural distortion	Same as Step 1.	98.1MHz * (A-1)	L8 (DISTOR-TION)	Lch : Pin2 of IC203 Rch : Pin15 of IC203	Minimize the distortion (to 0.25% or less).
5	Verification of discriminator balance	Same as Step 1.	98.1MHz * (A-1)	L8 (CENTER)	Both ends of R28	DC 0V±50mV
6	Adjustment of frontend IFT	FM ANT (75Ω) 98.1MHz 30dBμ MONO 1kHz 100% modulation	98.1MHz * (A-1)	Frontend IFT	Pin 16 of IC1	Adjust so that the DC voltage is maximum. **CAUTION :** If over-adjustment IFT core the sensitivity is reduce. Maximum ±90°

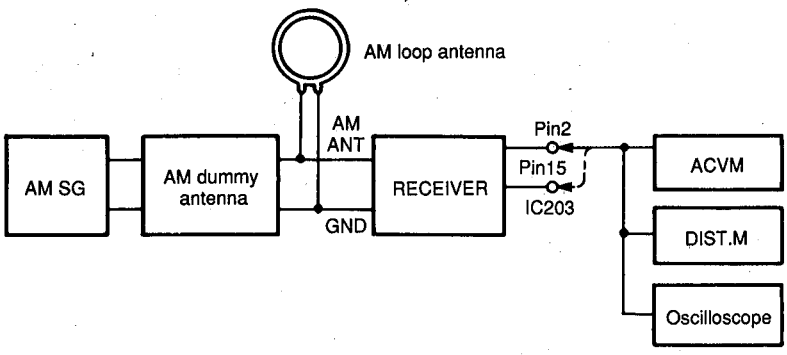
Step	Adjustment Item	Signal (ANT IN)	Reception frequency	Adjusted point	Test point	Rating
7	Verification of monaural distortion	FM ANT (75Ω) 98.1MHz 70dBμ MONO 1kHz, 100% modulation	98.1MHz * (A-1)		Lch : Pin2 of IC203 Rch : Pin15 of IC203	0.4% or less
8	Verification of stereo distortion	FM ANT (75Ω) 98.1MHz 70dBμ Stereo (L or R) 1kHz, 100% modulation	98.1MHz * (A-1) * Tuning mode should be AUTO.		Lch : Pin2 of IC203 Rch : Pin15 of IC203	Distortion should be minimized (1% or less) * STEREO indicator should light.
9	Verification of sensitivity	FM ANT (75Ω) 88.1MHz 98.1MHz 106.1MHz Less than 3dBμ (14.25dBf) MONO Modulation off	88.1MHz * (A-6) 98.1MHz * (A-1) 106.1MHz * (A-7)		ANT (75Ω)	Set the tuning mode to MAN'L MONO. S/N should be 30dB at each frequency of 88.1MHz, 98.1MHz, and 106.1MHz. Confirm that the voltage of ANT-terminal for S/N 30dB is within specification. 3dBμ (14.25dBf) or less (G only : 6dBμ or less)
10	Verification of separation	FM ANT (75Ω) 98.1MHz 70dBμ Stereo (L or R) 1kHz, 100% modulation	98.1MHz * (A-1)		Lch : Pin2 of IC203 Rch : Pin15 of IC203	With SSG output at L or R, the signal leakage level at the other channel should be minimized. 30dB or more
11	Verification of auto tuning	FM ANT (75Ω) 98.1MHz 23dBμ Stereo (L or R) 1kHz, 30% modulation	98.1MHz			• Automatic reception should be available when the tuning key is pressed UP and DOWN. • The stereo indicator should light. • Audio muting should be applied during tuning.

* : Execution of MAKER PRESET (Refer to TEST PROGRAM MODE on page 11.) will facilitate setting reception frequency for adjustment.

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

● Connection Diagram (Measuring instruments)

1) Adjustment of sensitivity



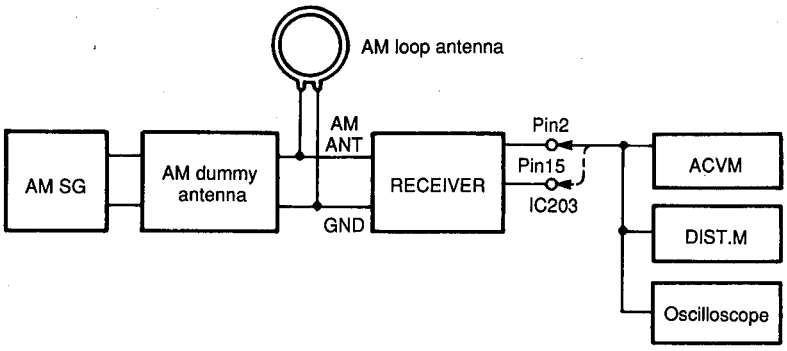
Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjusted point	Test point	Rating
1	Adjustment of sensitivity (1440kHz)	AM ANT 1440kHz 50dBμ 400Hz, 30% modulation	1440kHz * (B-8)	VC1	Lch : Pin2 of IC203 Rch : Pin15 of IC203	Audio output should be maximized.
2	Adjustment of sensitivity (630kHz)	AM ANT 630kHz 50dBμ 400Hz, 30% modulation	630kHz * (B-1)	L5 L9	Lch : Pin2 of IC203 Rch : Pin15 of IC203	Audio output should be maximized. Repeat the Step 1 and 2
3	Verification of sensitivity	AM ANT 630kHz 1080kHz 1440kHz 400Hz, 30% modulation	630kHz * (B1) 1080kHz * (B-2) 1440kHz * (B-8)		AM ANT	Distortion should be 10% or less at each frequency. Check to ensure that the voltage at the ANT terminal is 54dBμ or less.
4	Verification of auto tuning	AM ANT 60dBμ				Auto reception should be available when the tuning key is pressed UP and DOWN.

* : Execution of MAKER PRESET (Refer to TEST PROGRAM MODE on page 11.) will facilitate setting reception frequency for adjustment.

LW Adjustment (B, G only) (This should be done after MW adjustment.)

● Connection Diagram (Measuring instruments)

1) Adjustment of sensitivity



Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjusted point	Test point	Rating
1	Adjustment of sensitivity (270kHz)	AM ANT 270kHz 50dBμ 400Hz, 30% modulation	270kHz * (C-1)	VC2	Lch : Pin2 of IC203 Rch : Pin15 of IC203	Audio output should be maximized.
2	Adjustment of sensitivity (171kHz)	AM ANT 171kHz 50dBμ 400Hz, 30% modulation	171kHz * (C-2)	L6	Lch : Pin2 of IC203 Rch : Pin15 of IC203	Audio output should be maximized. Repeat the Step 1 and 2
3	Verification of sensitivity	AM ANT 171kHz 225kHz 270kHz 400Hz, 30% modulation	171kHz * (C-2) 225kHz * (C-3) 270kHz * (C-1)		AM ANT	Distortion should be 10% or less at each frequency. Check to ensure that the voltage at the ANT terminal is 54dBμ or less.
4	Verification of auto tuning	AM ANT 60dBμ				Auto reception should be available when the tuning key is pressed UP and DOWN.

* : Execution of MAKER PRESET (Refer to TEST PROGRAM MODE on page 11.) will facilitate setting reception frequency for adjustment.

■ CLOCK SECTION

MARKETS	METHOD	MONTHLY ERROR
U, C, R (100k/10k)	12 hours	±90 seconds
A, B, G, R (50k/9k)	24 hours	

■ DEMO MODE (for demonstration)

- DEMO MODE starts when the RAM on the CPU has been kept under the following conditions for more than 8 minutes with the power-off.
  * initialized state
  * the state that the clock is not set up
- LCD display unit alone is switched on and repeats display demonstration DEMO 1-5.
- DEMO MODE stops by pushing POWER switch (POWER ON) and the receiver starts normal operation. Without setting up the clock, DEMO MODE starts after 8 min. power-off.
- Once the clock is set up, DEMO MODE never starts as long as the RAM on the CPU is holding memory.

■ TEST PROGRAM MODE

TEST PROGRAM MODE is brought about when POWER switch is pushed while pressing and holding both AUTO/MAN'L and AUTO/MEMO switches during power-on.

IN TEST PROGRAM MODE program (function) No. can be selected by TUNER PRESET ► (up) and ◄ (down) switches, and operated by POWER switch.

PROG. No.	DISPLAY	FUNCTION
1	1- Lcd : CL	LCD display full lighting RAM CLEAR
2	2- Lcd	LCD display full lighting
3	3- : CL	RAM CLEAR
4	4- DEMO1	start from DEMO 1 (FUNCTION)
5	5- DEMO2	start from DEMO 2 (TIMER)
6	6- DEMO3	start from DEMO 3 (SLEEP)
7	7- DEMO4	start from DEMO 4 (TUNER)
8	8- DEMO5	start from DEMO 5 (CD)

NOTE 1) POWER switch should be pushed to cancel full lighting of LCD display.
NOTE 2) When RAM CLEAR is operated, MEMORY and "CLEAR" light for 2 seconds and the RAM on the CPU is initialized. Tuner's preset becomes maker's preset.

● MAKER'S PRESET

BAND	MARKETS	PRESET No.							
		1	2	3	4	5	6	7	8
FM (MHz)	U, C, R (100k/10k)	98.1	95.1	87.5	101.5	107.9	88.1	106.1	107.9
	A, B, G, R (50k/9k)	98.10	95.10	87.50	101.50	108.00	88.10	106.10	107.90
AM MW (kHz)	U, C, R (100k/10k)	630	1080	1400	530	1710	900	1350	1440
	A, B, G, R (50k/9k)	630	1080	1404	531	1611	900	1350	1440
LW (kHz)	B, G	270	171	225	153	288	180	207	252

NOTE 1) PRESET PAGE { B, G (with LW) .....A : FM B : MW C : LW D : FM E : MW
OTHERS (w.o. LW).....A : FM B : AM C : FM D : AM E : FM

CAUTION : Before setting to the TEST PROGRAM mode, write down the existing preset memory content of the Tuner in a table as shown below. (This is because setting to the TEST PROGRAM 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								

■ SYSTEM CONNECTOR CHECK (SYSTEM CONTROL, LCD)

● CHECK ROUTINE FOR CD, DECK CONNECTORS

① TAPE PLAY KEY ON (remote control transmitter)

↓

② FUNCTION → TAPE ?
► lights ?

no → in case that DECK does't play : [RX → DECK] (COT1) NG
in case that DECK plays. : [DECK → RX] (COT3) NG

↓ yes

③ CD PLAY KEY ON (remote control transmitter)

↓

④ FUNCTION → CD ?
CDC's mark lights
(1sec after CD is selected) ?

no → in case that CD does't play : [RX → CD] (COT0) NG
in case that CD plays. : [CD → RX] (COT2) NG
in case that DISPLAY does't change : [CD DATA, CD CLK, CD CE] NG

↓ yes

⑤ CD STOP KEY ON
DECK REC/PAUSE KEY ON
CD PLAY KEY ON

↓

⑥ TAPE REC PLAY start ?
(play LED lights ?)

no → [CD → DECK] (COT2) NG

↓ yes

⑦ CD start playing 3 sec
after ⑥ ?

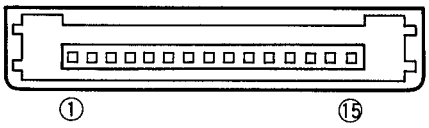
no (no time counting) → [DECK → CD] (COT3) NG

↓ yes

CONNECTORS OK

● SYSTEM CONNECTOR CD

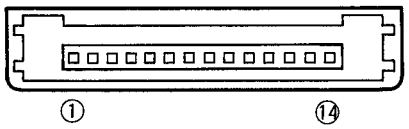
(Viewed from the rear)



No.	NAME	FUNCTION
1	E	GND
2	CDR	CD IN (Rch)
3	E	GND
4	CDL	CD IN (Lch)
5	E	GND
6	E	GND
7	COT3	SYSTEM CONTROL 3
8	COT2	SYSTEM CONTROL 2
9	COT0	SYSTEM CONTROL 0
10	CDDATA	CD SERIAL DATA
11	CDCLK	CD SERIAL CLOCK
12	CDCE	CD CHIP ENABLE
13	CAC1	AC OUT
14	CACE	
15	CAC2	

● SYSTEM CONNECTOR TAPE

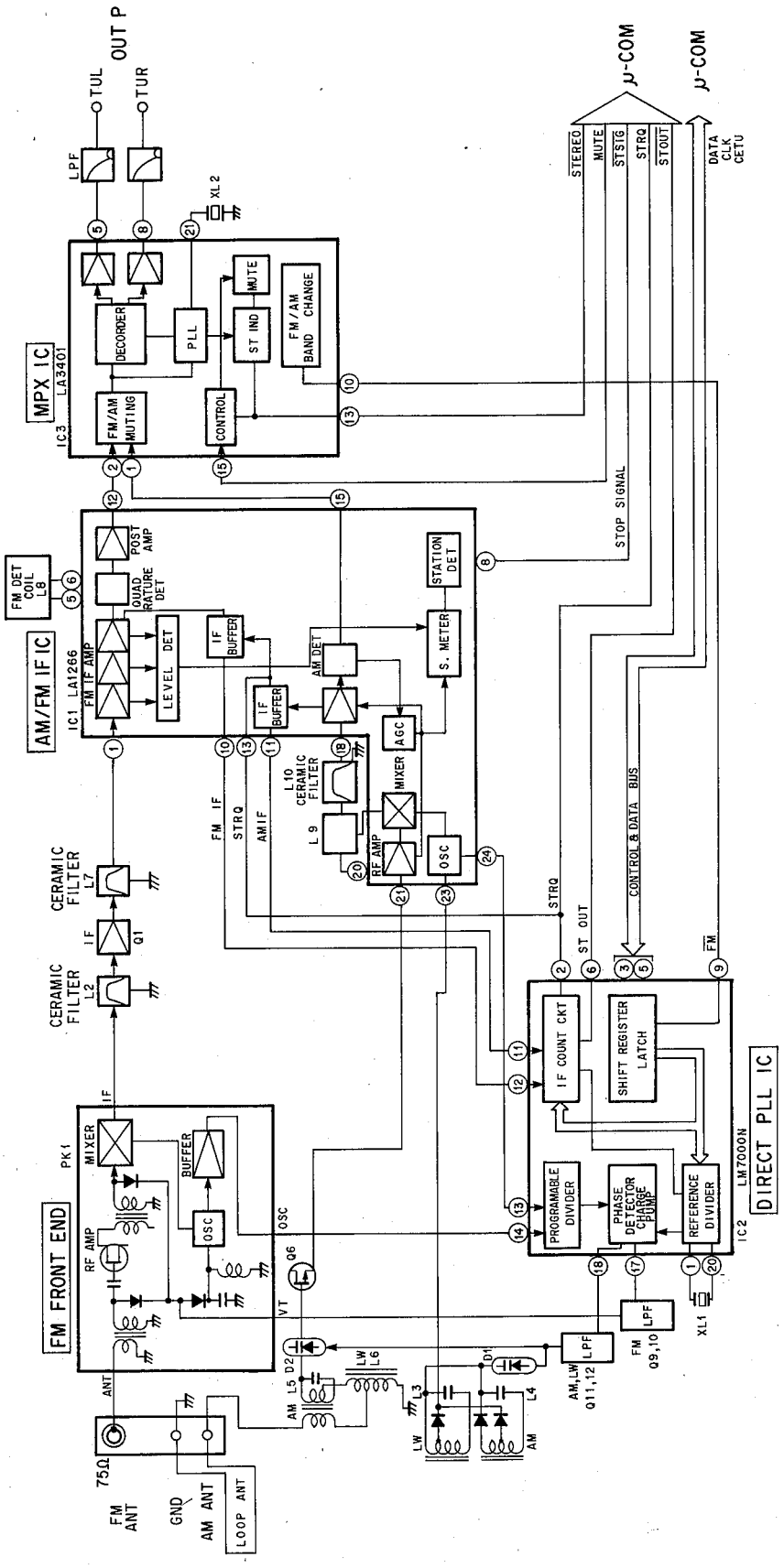
(Viewed from the rear)



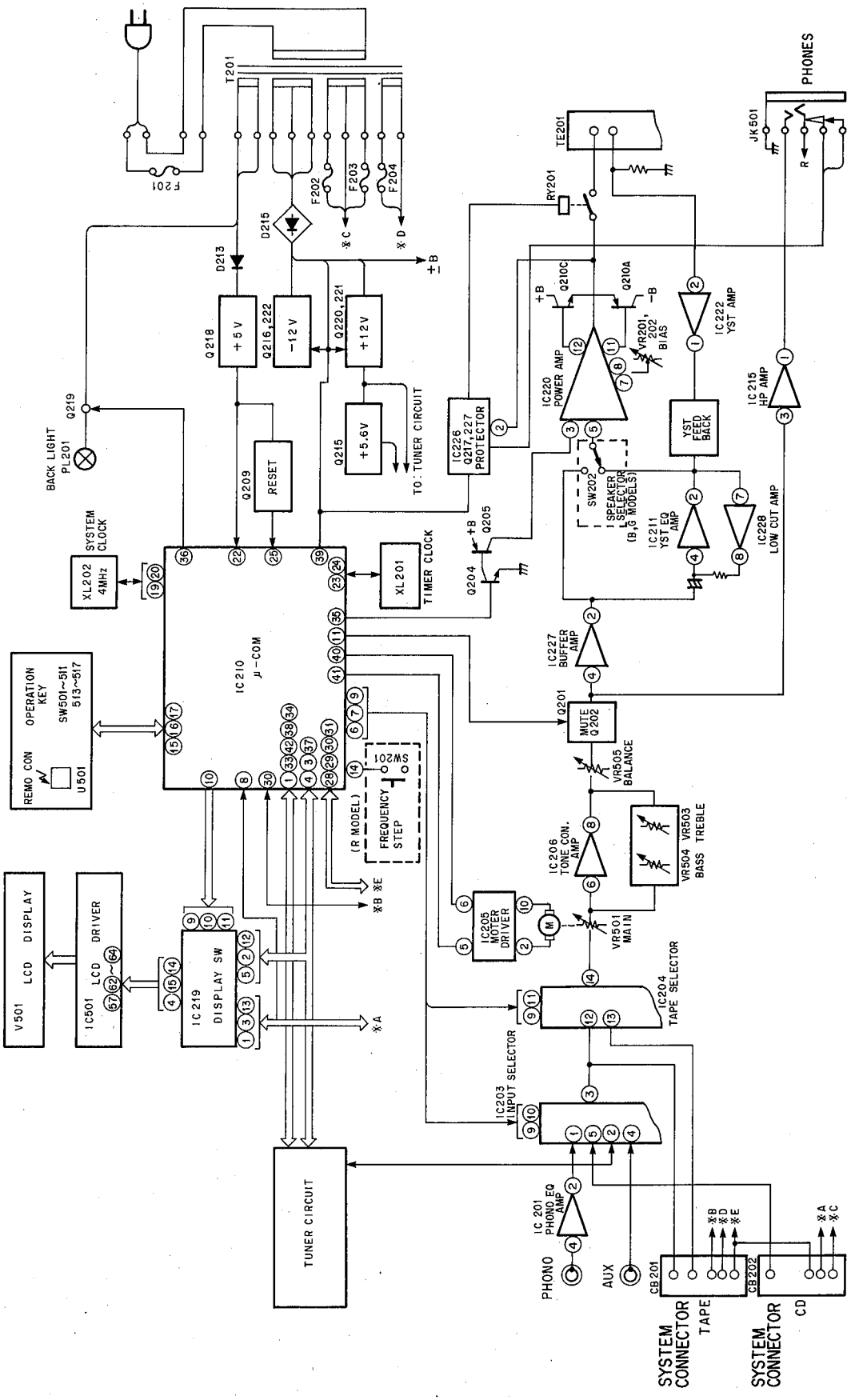
No.	NAME	FUNCTION
1	E	GND
2	REC L	REC OUT (Lch)
3	E	GND
4	REC R	REC OUT (Rch)
5	E	GND
6	PBL	TAPE IN (Lch)
7	E	GND
8	PBR	TAPE IN (Rch)
9	E	GND
10	COT3	SYSTEM CONTROL 3
11	COT2	SYSTEM CONTROL 2
12	COT1	SYSTEM CONTROL 1
13	TAC2	AC OUT
14	TAC1	

■ BLOCK DIAGRAM

TUNER SECTION

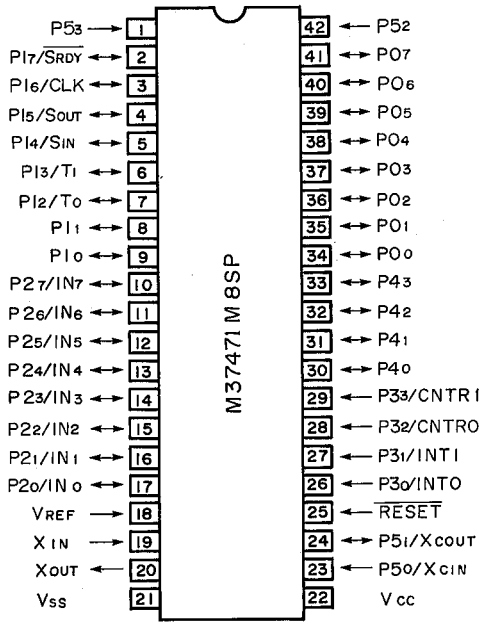


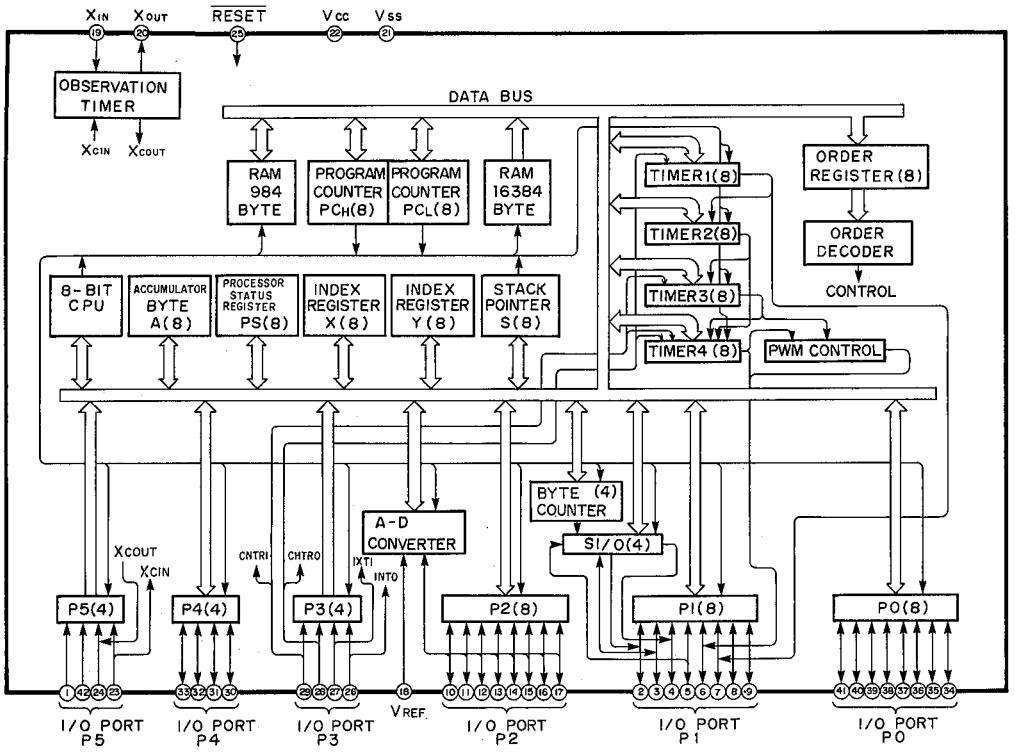
CONTROL & AMP SECTION



■ μ-COM DATA

IC210 : M37471M8SP
8bit μ-COM





Pin		OD • CMOS	Function		
No.	Name				
1	P53	OD	STEREO IN	(TUNER)	[0 : STEREO 1 : MONO]
2	P17	CMOS	LCD CE OUT		[1 : TRANSFER]
3	P16	CMOS	LCD/LM7000N CLK OUT	(SERIAL I/O)	
4	P15	CMOS	LCD/LM7000N DATA OUT	(SERIAL I/O)	
5	P14	CMOS	LCD INH OUT		[0 : LCD OFF]
6	P13	CMOS	INPUT SELECT OUT (B)		
7	P12	CMOS	INPUT SELECT OUT (A)		

	PHONO	TUNER	CD	AUX
B :	1	0	1	0
A :	1	1	0	0

Pin No.	Pin Name	OD • CMOS	Function
8	P11	OD	CD LCD CE IN [1 : BEING TRANSFERRED]
9	P10	CMOS	TAPE MONITOR SELECT, INH ON OUT [0 : TAPE ON]
10	P27	CMOS	DISPLAY SELECT OUT [0 : RECEIVER 1 : CD]
11	P26	CMOS	AMP MUTE OUT [0 : MUTE ON]
12	P25		Not used (GND)
13	P24		Not used (GND)
14	P23	A-D	MARKET SELECT [A (R) : R : A : B, G : U, C : J]
15	P22	A-D	KEY2 [MEMORY : Auto MEMORY : DISPLAY]
16	P21	A-D	KEY1 [P-DOWN : P-UP : A/B/C/D/E : FM/AM : Tun-DOWN : Tun-UP : AUTO/MAN'L]
17	P20	A-D	KEY0 [POWER : AUX : TAPE : TUNER : CD : PHONO]
18	VREF	/	A-D REFERENCE VOLTAGE INPUT
19	XIN	/	4MHz) SYSTEM CLOCK
20	XOUT	/	4MHz)
21	VSS	/	GND
22	VCC	/	+2.7 ~ +5.5V
23	P50	/	XCIN 32.768kHz) TIMER CLOCK
24	P51	/	XCOUT 32.768kHz)
25	$\overline{RES}$	/	RESET
26	P30	OD	POWER DOWN AC PULSE IN (& INT0)
27	P31	OD	REMOTE CONTROL IN (& INT1)
28	P32	OD	CASSETTE DATA IN (SYSTEM COMMUNICATION COT3)
29	P33	OD	CD DATA IN (SYSTEM COMMUNICATION COT2)
30	P40	CMOS	CASSETTE DATA OUT (SYSTEM COMMUNICATION COT1)
31	P41	CMOS	CD DATA OUT (SYSTEM COMMUNICATION COT0)
32	P42	CMOS	FORCED MONO OUT (TUNER) [0 : MONO ON]
33	P43	CMOS	TUNER MUTE OUT (TUNER) [1 : MUTE ON]
34	P00	INTERNAL P-UP	STOP OUT IN (TUNER) [0 : CORRECT STATION AVAILABLE]
35	P01	CMOS	POWER MUTE OUT [0 : OFF 1 : ON]
36	P02	CMOS	LAMP OUT [0 : HALF ON 1 : ALL ON]
37	P03	CMOS	LM7000N CE OUT [1 : TRANSFER]
38	P04	CMOS	STOP REQUEST OUT (TUNER) [1 : REQUEST ON]
39	P05	CMOS	POWER ON OUT [0 : ON 1 : OFF]
40	P06	CMOS	VOLUME UP OUT
41	P07	CMOS	VOLUME DOWN OUT
42	P52	OD	STEREO SIGNAL IN (TUNER) [0 : STATION AVAILABLE]

● A/D INPUT PORT

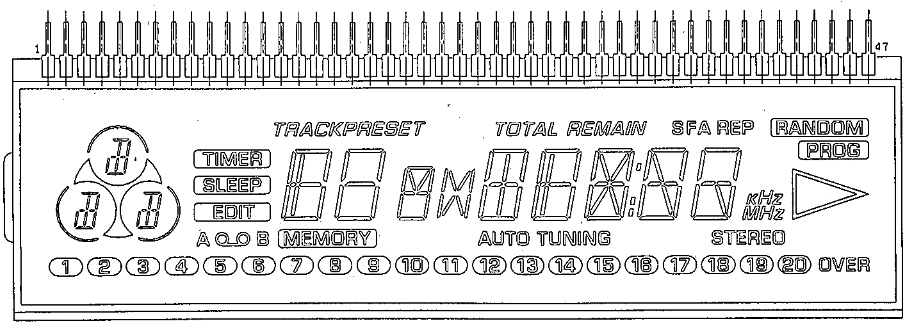
For Pin14, Pin15, Pin16 and Pin17, the indicated voltage, which is the divisional voltage of the standard 5V with resistance, is detected when the corresponding key is pressed.

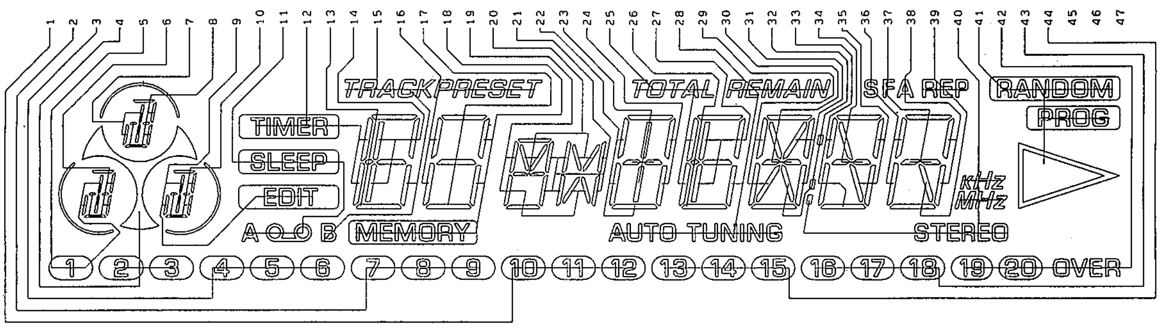
VOLTAGE AREA *1	STANDARD VOLTAGE *2	VS (Pin14)	KEY2 (Pin15)	KEY1 (Pin16)	KEY0 (Pin17)
Less than 0.556	0	A (R)	MEMORY	PRESET DOWN	POWER
0.556 — 1.111	0.834	R	AUTO MEMO	PRESET UP	AUX
1.111 — 1.667	1.39	A	DISPLAY	A/B/C/D/E	TAPE
1.667 — 2.222	1.94	B, G	—	BAND	TUNER
2.222 — 2.778	2.50	U, C	—	TUNING DOWN	CD
2.778 — 3.333	3.06	J	—	TUNING UP	PHONO
3.333 — 3.889	3.61	—	—	AUTO/MAN'L	—
3.889 — 4.444	4.17	—	—	—	—

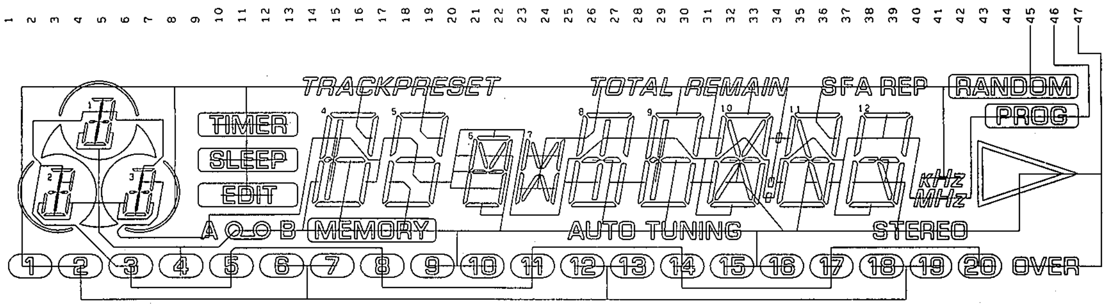
*1 The Voltage Area is when the Power Source is 5V, and it changes in proportion to the voltage.
*2 Standard Voltage is the value when the Power Source is 5V under the present resistance value.

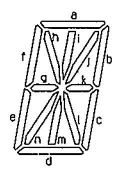
■ DISPLAY DATA (VQ062900)

● V501 : LCD8255B1JP









No.	COM1	COM2	COM3
1	12	11	10
2	7	8	9
3	6	5	4
4	2	3	⚲
5	1	2im	2e
6	(	2abdgk	2c
7	—	1im	1e
8	⌒	1abdgk	1c
9	EDIT	3im	3e
10	)	3abdgk	3c
11	SLEEP	A	○_○
12	TIMER	4f	4e
13	4a	4g	4d
14	4b	4im	4k
15	TRACK	4c	8
16	PRESET	5f	5e

No.	COM1	COM2	COM3
17	5a	5g	5d
18	5b	5c	MEMORY
19	7ln	6ef	6d
20	7hj	6agk	6hj
21	7bcef	6c	6b
22	8f	8e	8d
23	8a	8im	8gk
24	—	8b	8c
25	TOTAL	9f	9e
26	9a	9g	9d
27	9b	9im	9k
28	REMAIN	9c	AUTO TUNING
29	10f	10e	10l
30	10a	10h	10gk
31	10b	10j	10c
32	COL	10d	10l

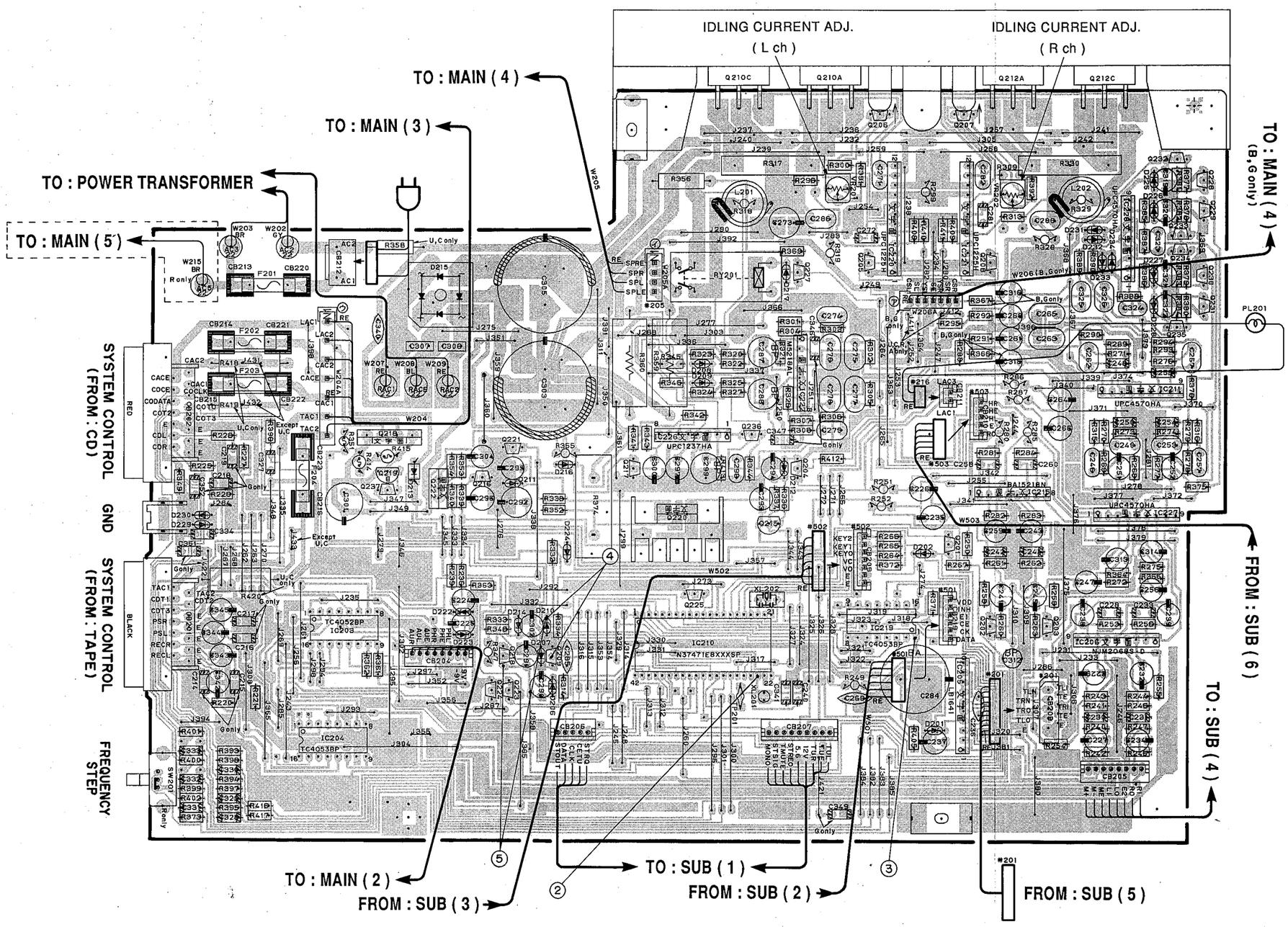
No.	COM1	COM2	COM3
33	11f	11e	11d
34	11a	11h	11gk
35	11b	11c	11l
36	S	12f	12e
37	F	12a	12gk
38	A	12b	12c
39	REP	12d	12l
40	kHz	MHz DP	STEREO
41	RANDOM	PROG	▷
42	19	20	OVER
43	18	17	16
44	13	14	15
45	COM	—	—
46	—	COM	—
47	—	—	COM

■ PRINTED CIRCUIT BOARD (Foil side)

② to ⑤ : TEST POINT WAVEFORMS (See page 27)

● Semiconductor Location

Ref. No.	Location
IC 203	C4
IC 204	C5
IC 205	F4
IC 206	G4
IC 210	E4
IC 211	G3
IC 215	F3
IC 219	F4
IC 220	F2
IC 221	F2
IC 222	E3
IC 226	E3
IC 227	G4
IC 228	G2
Q 201	F4
Q 202	F4
Q 203	F4
Q 204	E3
Q 205	F2
Q 206	F2
Q 207	F2
Q 208	F2
Q 209	D4
Q210A	E2
Q210C	E2
Q212A	F2
Q212C	G2
Q 215	E4
Q 216	D3
Q 217	E3
Q 218	D4
Q 219	C3
Q 220	E4
Q 221	D3
Q 222	D3
Q 223	D4
Q 224	D4
Q 225	E4
Q 227	E3
Q 228	G2
Q 229	G2
Q 230	G3
Q 231	G3
Q 232	G2
Q 233	G2
Q 234	G2
Q 235	G3
Q 236	E3
Q 237	C3

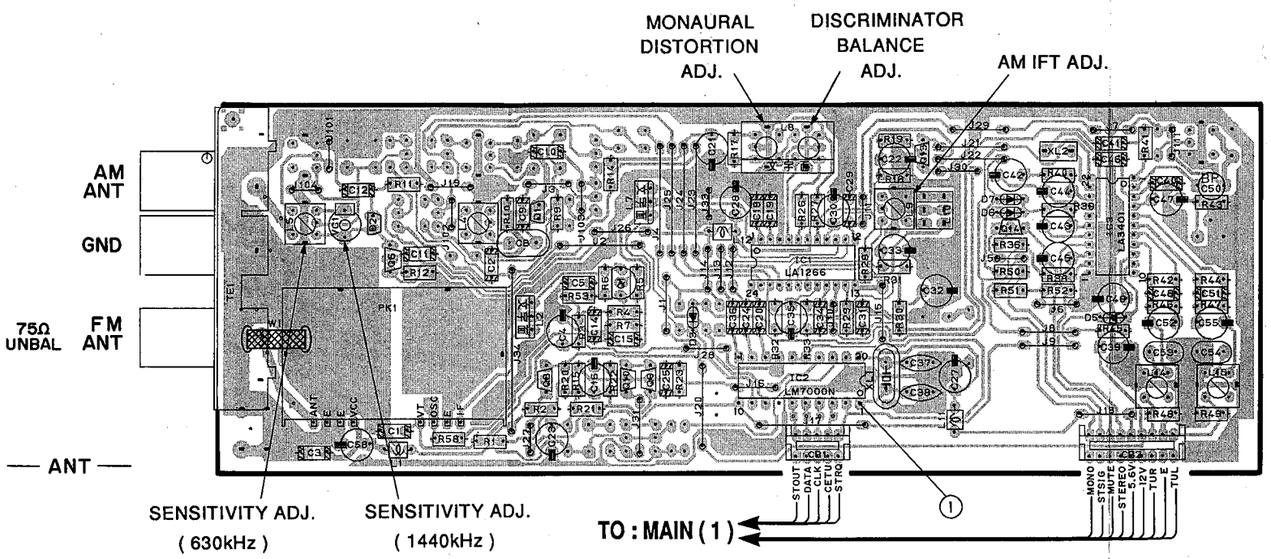


■ PRINTED CIRCUIT BOARD (Foil side)

① : TEST POINT WAVEFORMS (See page 27)

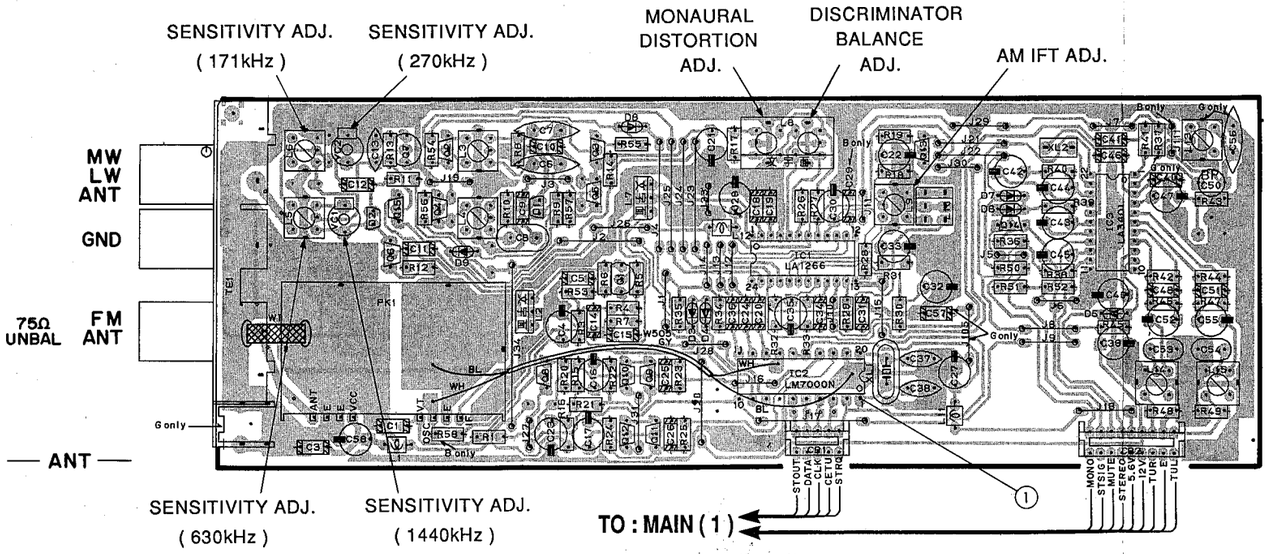
● U, C, R, A models

SUB P. C. B. (1)

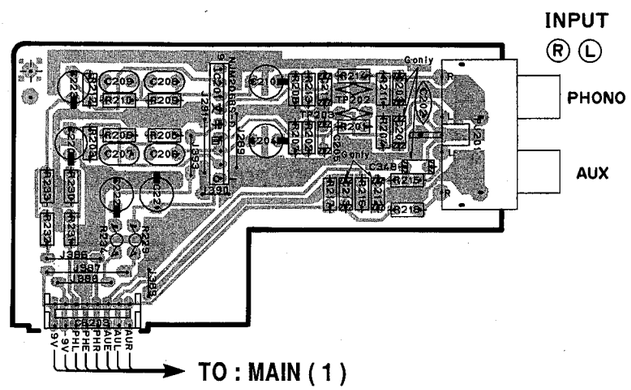


● B, G models

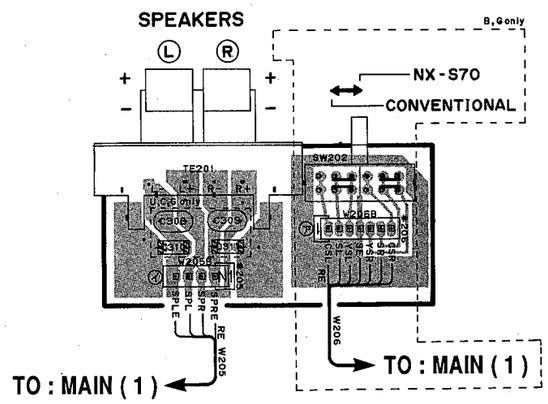
SUB P. C. B. (1)



MAIN P. C. B. (2)



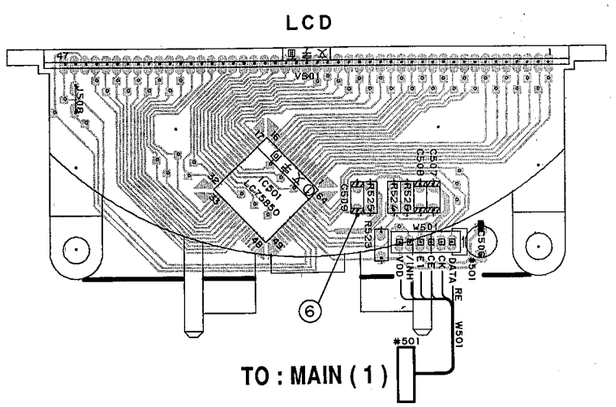
MAIN P. C. B. (4)



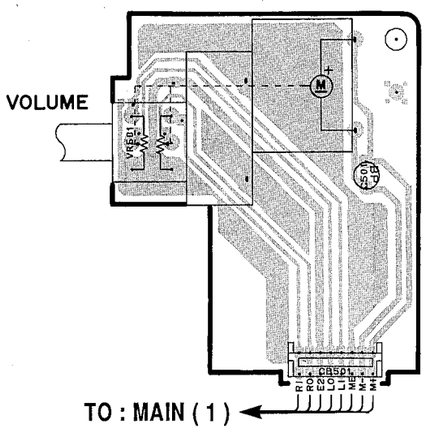
■ PRINTED CIRCUIT BOARD (Foil side)

⑥ : TEST POINT WAVEFORMS (See page 27)

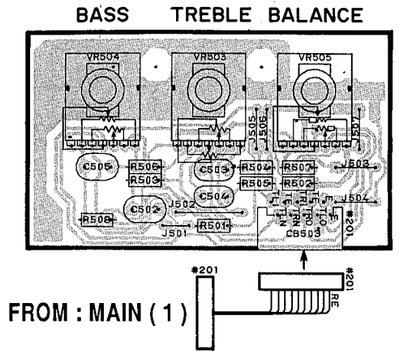
SUB P. C. B. (2)



SUB P. C. B. (4)

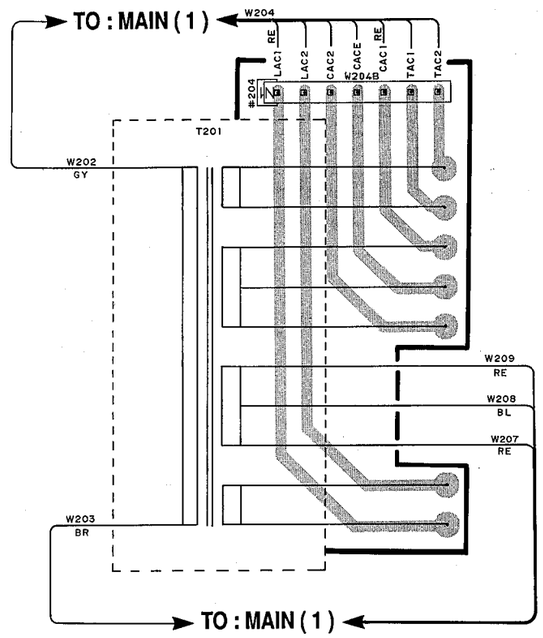


SUB P. C. B. (5)

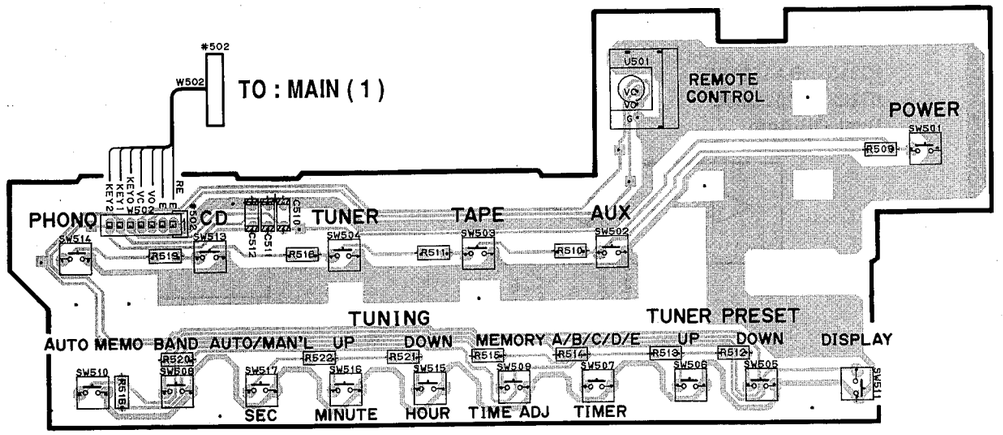


● U, C, A, B, G models

MAIN P. C. B. (3)

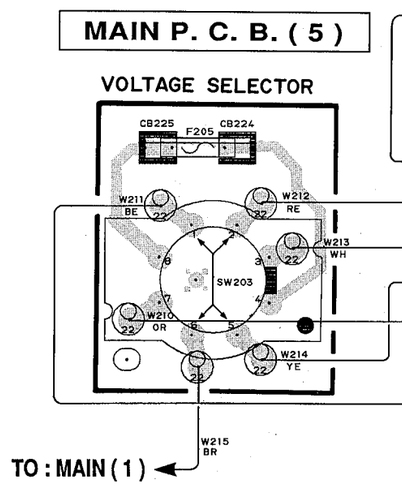


SUB P. C. B. (3)

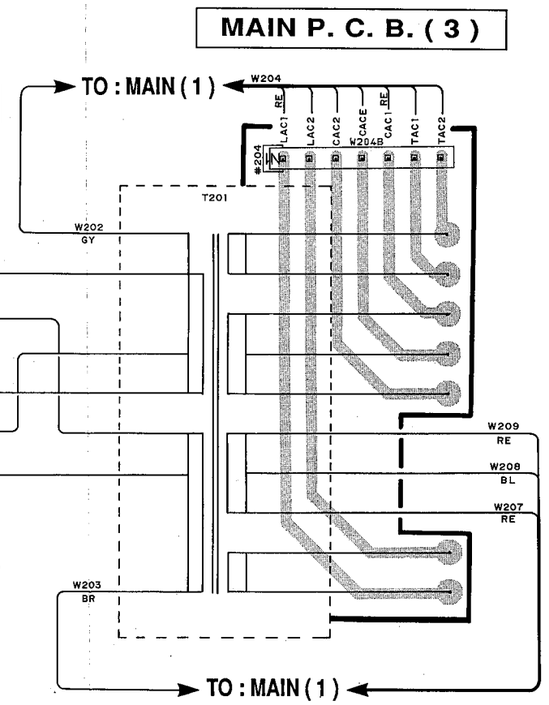


● R model

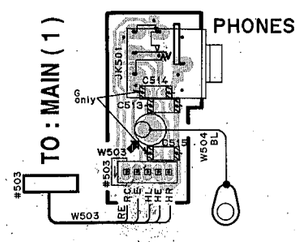
MAIN P. C. B. (5)



MAIN P. C. B. (3)

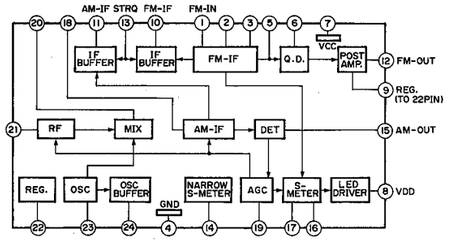


SUB P. C. B. (6)

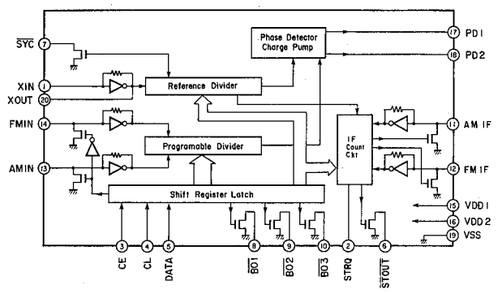


■ IC BLOCK

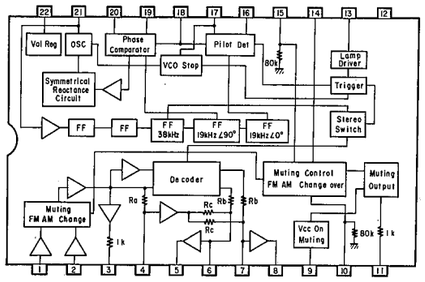
IC1 : LA1266
AM/FM IF



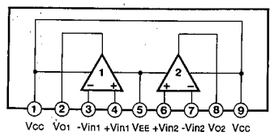
IC2 : LM7000N
PLL Controller



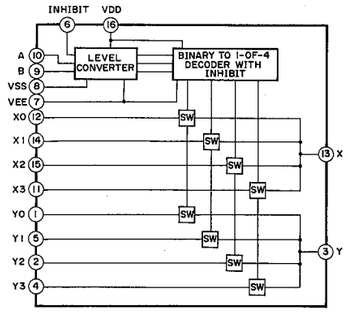
IC3 : LA3401
MPX



IC201, 206 : NJM2068S-D
IC211, 227, 228 : μPC4570HA
Dual OP-Amp

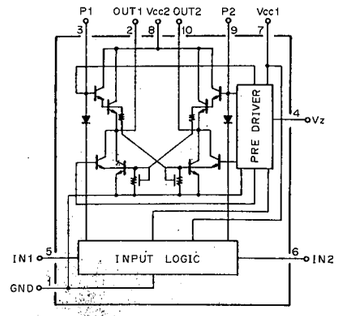


IC203 : TC4052BP
Dual 4 Channel Analog Multiplexers/Demultiplexers

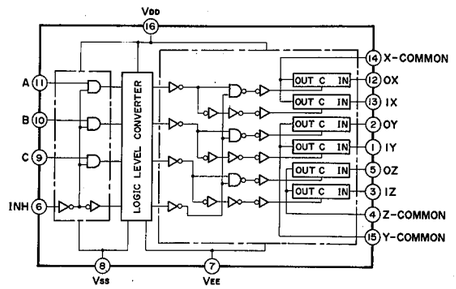


INHIBIT	B	A	
0	0	0	0x, 0y
0	0	1	1x, 1y
0	1	0	2x, 2y
0	1	1	3x, 3y
1	X	X	NONE

IC205 : LB1641
Motor Driver



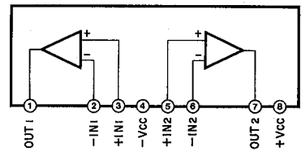
IC204, 219 : TC4053BP
Triple 2 Channel Analog Multiplexers/Demultiplexers



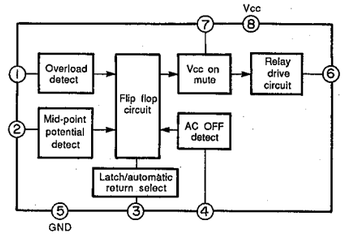
CONTROL INPUTS				"ON" CHANNEL
INHIBIT	C	B	A	0X (Pin 12), 0Y (Pin 2), OZ (Pin 5)
(Pin 6)	(Pin 9)	(Pin10)	(Pin11)	1X (Pin 13), 1Y (Pin 1), 1Z (Pin 3)
L	L	L	L	0X, 0Y, 0Z
L	L	L	H	1X, 0Y, 0Z
L	L	H	L	0X, 1Y, 0Z
L	L	H	H	1X, 1Y, 0Z
L	H	L	L	0X, 0Y, 1Z
L	H	L	H	1X, 0Y, 1Z
L	H	H	L	0X, 1Y, 1Z
L	H	H	H	1X, 1Y, 1Z
H	*	*	*	NONE

* Don't Care

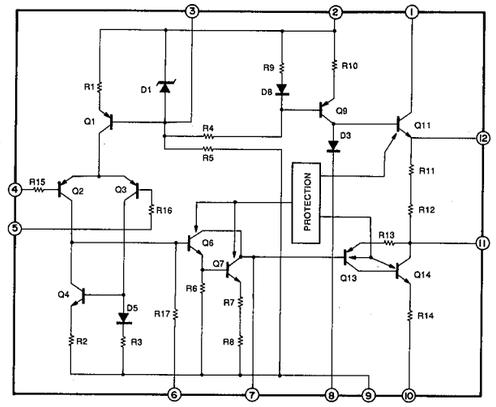
IC215 : BA15218N
IC222 : M5218AL
Dual OP-Amp



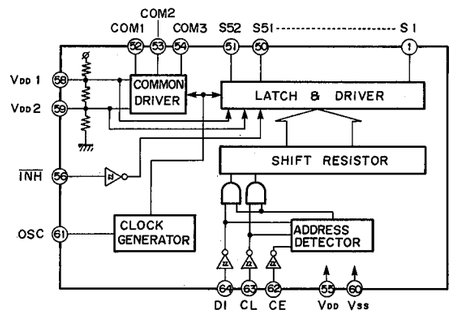
IC226 : μPC1237HA
Protector IC for Power Amplifier



IC220, 221 : μPC1225H
Power Amp

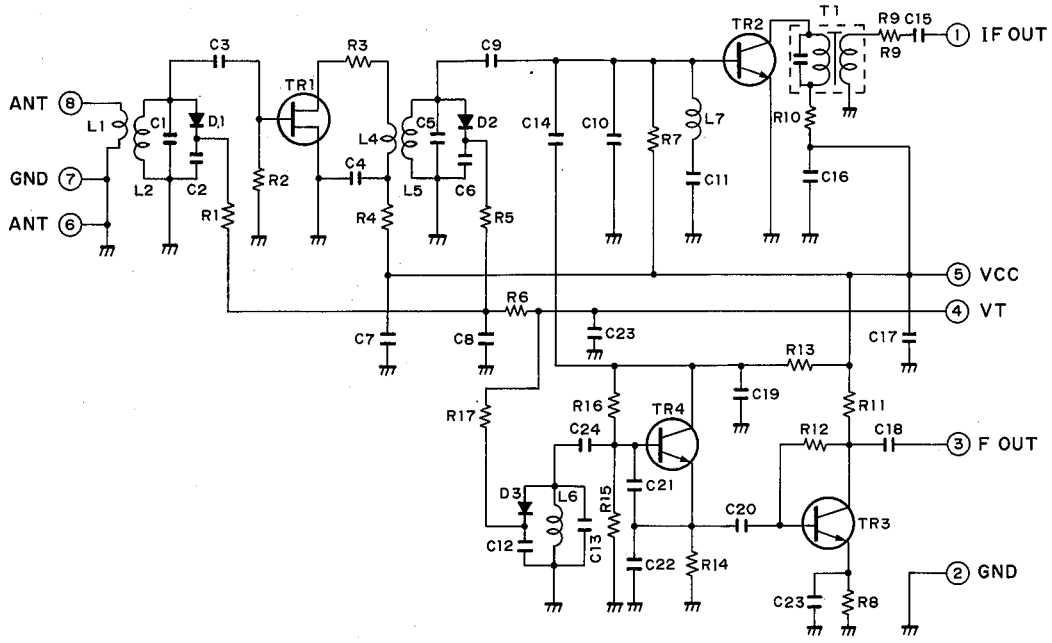


IC501 : LC75850
LCD Driver

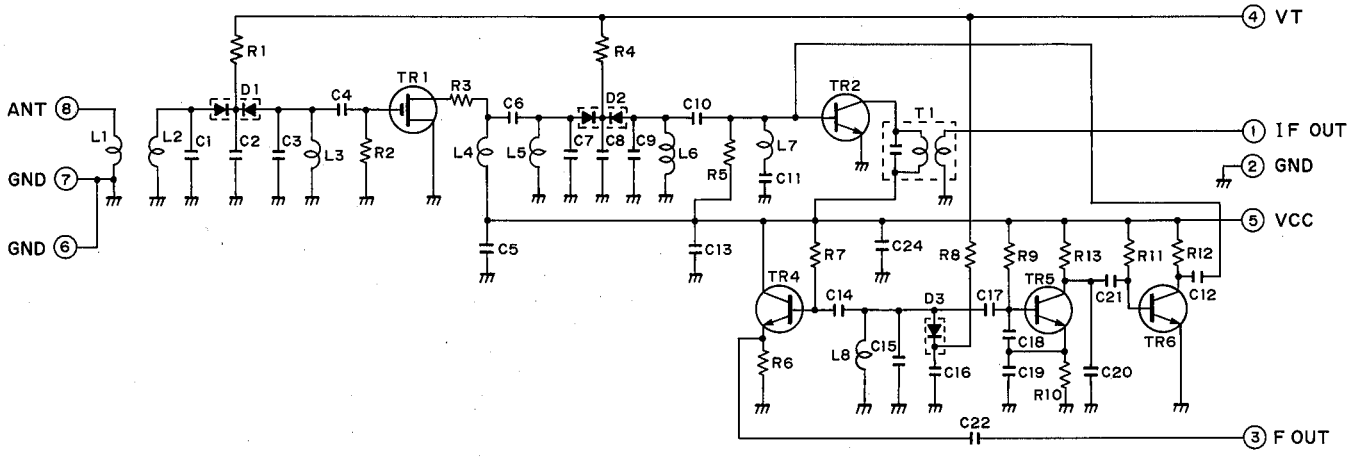


■ FRONT END PACK

● PK1 : TFFJ2U312A (VP458800)
Except G model

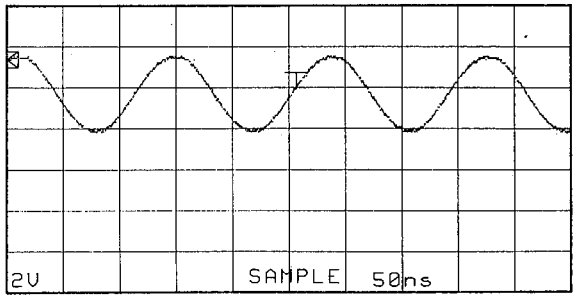


● PK1 : TFFJ3E312A (VP458900)
G model

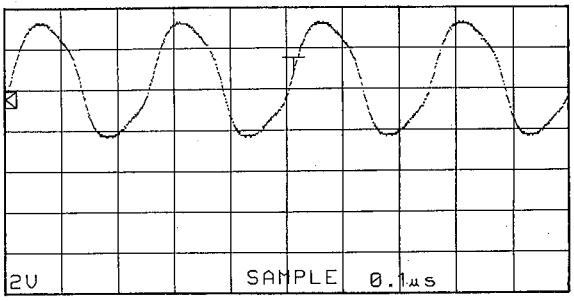


■ TEST POINT WAVEFORMS

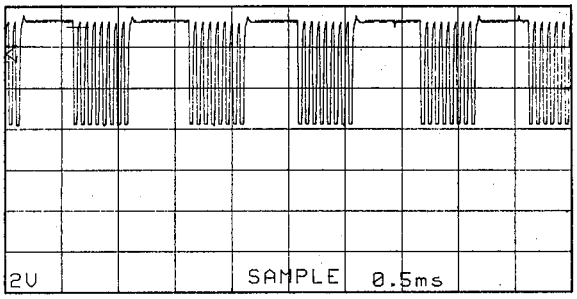
Point ①
(Pin 1 of IC2)
V : 2V/div H : 50nsec/div
DC range 1 : 1 probe



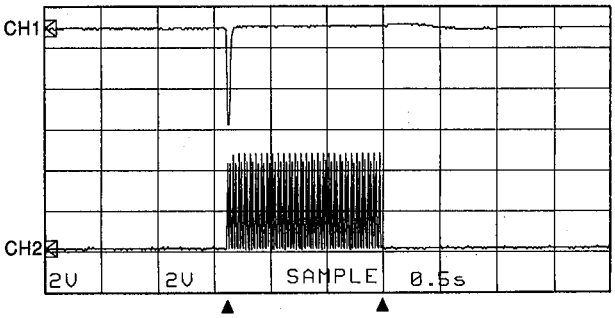
Point ②
(Pin 20 of IC210)
V : 2V/div H : 0.1µsec/div
DC range 1 : 1 probe



Point ③
(Pin 1 of IC219)
V : 2V/div H : 0.5msec/div
DC range 1 : 1 probe



Point ④
(CH1 : Collector of Q209
CH2 : Cathode of D210)
V : 2V/div H : 0.5sec/div
DC range 1 : 1 probe

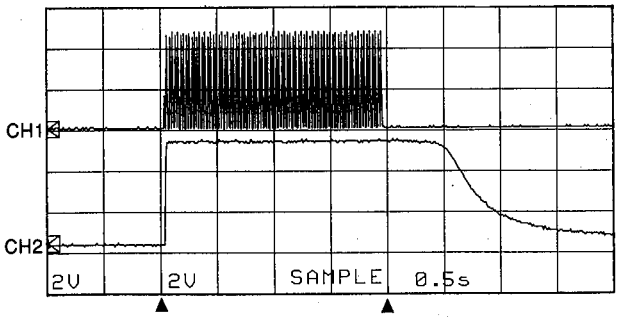


With the POWER switch turned ON, connect the power cord to the AC outlet.

Disconnect the power cord from the AC outlet.

(This waveform is not available by pushing the power switch ON and OFF.)

Point ⑤
(CH1 : Cathode of D210
CH2 : Emitter of Q218)
V : 2V/div H : 0.5sec/div
DC range 1 : 1 probe

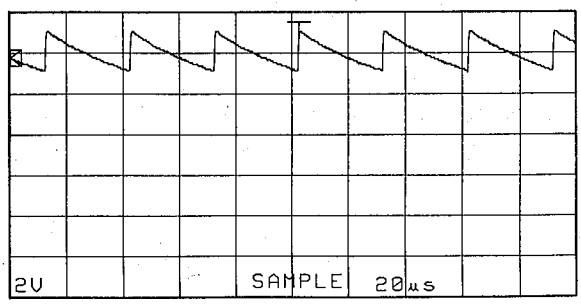


With the POWER switch turned ON, connect the power cord to the AC outlet.

Disconnect the power cord from the AC outlet.

(This waveform is not available by pushing the power switch ON and OFF.)

Point ⑥
(Pin 61 of IC501)
V : 2V/div H : 20µsec/div
DC range 1 : 1 probe

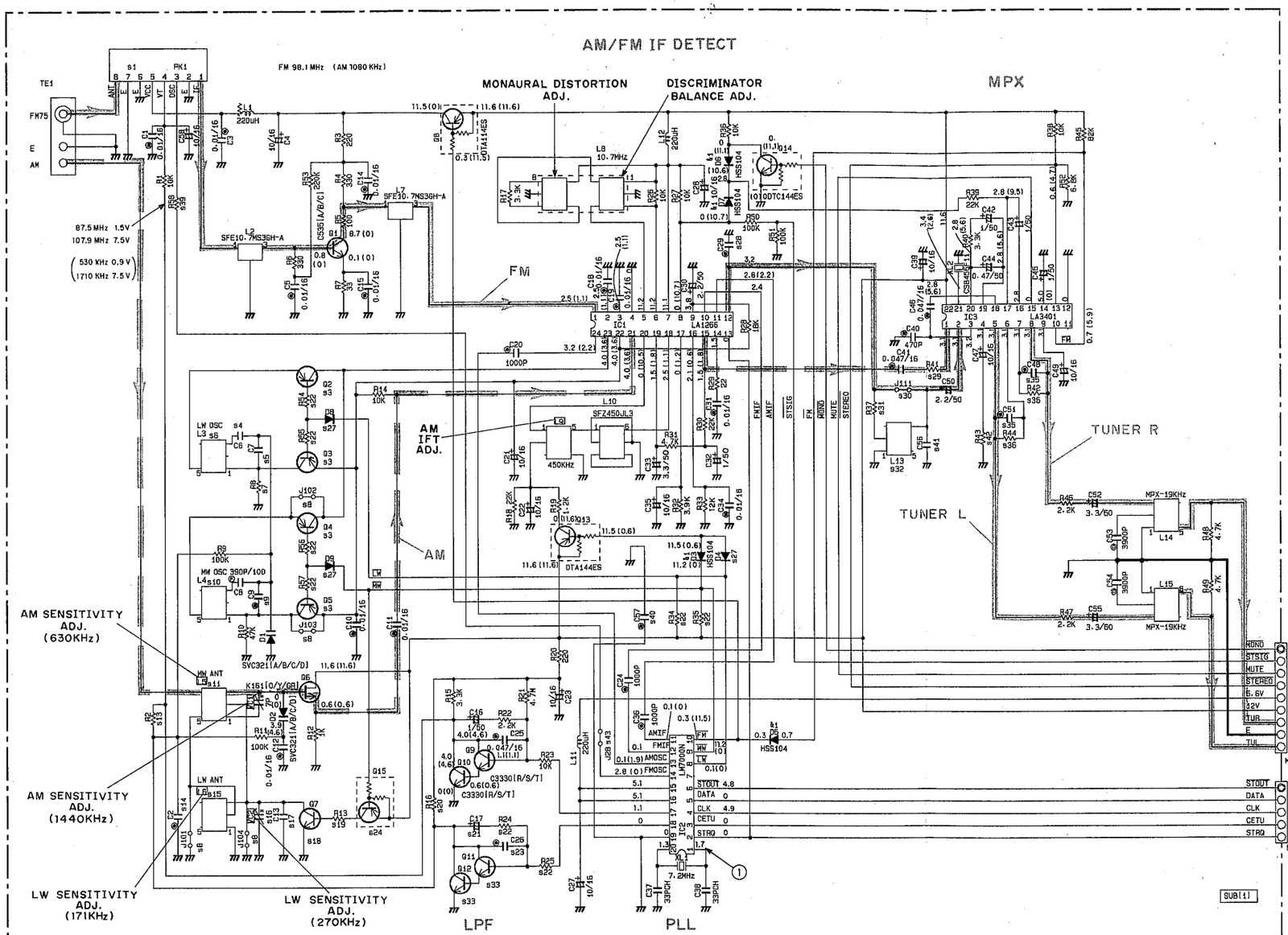


RX-S70

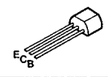
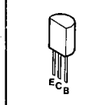
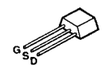
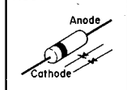
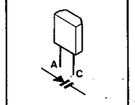
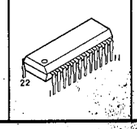
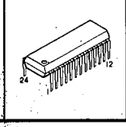
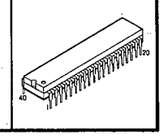
■ SCHEMATIC DIAGRAM (Tuner Section)

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 (1080kHz) reception mode.

① : TEST POINT WAVEFORMS (See page 27)



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.

2SA933S (Q, R) 2SC3330 (R, S, T) DTA144ES DTC144ES DTA114ES	2SC535 (A, B, C)	2SK161 (O, Y, GR)	1SS133 1SS176 HSS104	SVC321SPA	LA3401	LA1266	LM7000N
							

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
‡1	D3.5-7	HSS104 1SS133 1SS176

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	#
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	‡‡
◉	AXIAL LEAD CERAMIC CAPACITOR	
◎	POLYESTEL FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
Ⓘ	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
⊖	SEMICONDUCTIVE CERAMIC CAPACITOR	

RESISTOR

REMARKS	PARTS NAME	
NO MARK	CARBON FILM RESISTOR	(1/6W)
☑	CARBON FILM RESISTOR	(1/4W)
△	METAL OXIDE FILM RESISTOR	
▲	METAL FILM RESISTOR	
⊠	METAL PLATE RESISTOR	
◪	FIRE PROOF CARBON FILM RESISTOR	
□	CEMENT MOLDED RESISTOR	
⊘	SEMI VARIABLE RESISTOR	
■	CHIP RESISTOR	

NOTICE
(J)····· Japanese model
(U)····· U.S.A model
(C)····· Canadian model
(A)····· Australian model
(G)····· European model
(B)····· British model
(R)····· General model
(P)····· PP model

S		J	U.C	R	A	B	G
1	PK1	VP45870	VP45880	VP45880	VP45880	VP45880	VP45890
2							
3	Q2, 3, 4, 5	X	X	X	X	A933S[Q/R]	A933S[Q/R]
4	C6	X	X	X	X	CH 180P	CH 180P
5	C7	X	X	X	X	CH 120P	CH 120P
6	L3	X	X	X	X	VC86740	VC86740
7	R8	X	X	X	X	47K	47K
8	J101-104	0	0	0	0	X	X
9	C9	CH 15P	CH 15P	CH 15P	CH 15P	CH 4.7P	CH 4.7P
10	L4	VK64640	VK64640	VK64640	VK64640	VC86750	VC86750
11	L5	VK64650	VK64650	VK64650	VK64650	VC86770	VC86770
12							
13	R2	10K	10K	10K	10K	X	X
14	C2	0.01/16	0.01/16	0.01/16	0.01/16	X	X
15	L6	X	X	X	X	VC86760	VC86760
16	VC2	X	X	X	X	VC93730	VC93730
17	C13	X	X	X	X	CH 47P	CH 47P
18	Q7	X	X	X	X	C535[A/B/C]	C535[A/B/C]
19	R13	X	X	X	X	10K	10K
20	R16	X	X	X	X	3.3K	3.3K
21	C17	X	X	X	X	1/50	1/50
22	R24, 25, 34 R35 R54-57	X	X	X	X	10K	10K
23	C26	X	X	X	X	0.047/16	0.047/16
24	Q15	X	X	X	X	DTA144ES	DTA144ES
25							
26							
27	D4.8.9	X	X	X	X	HSS104 1SS133 1SS176	HSS104 1SS133 1SS176
28	C29	100P	100P	100P	100P	100P	X
29	R41	10K	10K	10K	10K	10K	33K
30	J111	0	0	0	0	0	X
31	R37	X	X	X	X	X	4.7K
32	L13	X	X	X	X	X	VQ36570
33	Q11.12	X	X	X	X	C3330[R/S/T]	C3330[R/S/T]
34							
35	C48.51	680P	1000P	1000P	680P	680P	390P
36	R42.44	75K	75K	75K	75K	75K	120K
37							
38							
39	R58	100	100	100	100	100	X
40	C57	X	X	X	X	X	100P
41	C56	X	X	X	X	X	CH120P
42	R43	56K	56K	56K	56K	56K	20K
43	J28	0	0	0	0	0	X

NOTE) X: NOT USED
0: USED

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

■ SCHEMATIC DIAGRAM (Control & Amp Section)

Each voltage given here represents that obtained when setting is at CD input position.

② to ⑥ : TEST POINT WAVEFORMS (See page 27)

RESISTOR	
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (1/6W)
○	CARBON FILM RESISTOR (1/4W)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◪	FINE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR	
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
◎	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
◉	AXIAL LEAD CERAMIC CAPACITOR
◎	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
◎	MICA CAPACITOR
◎	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR

NOTICE
(J)····· Japanese model
(U)····· U.S.A model
(C)····· Canadian model
(A)····· Australian model
(E)····· European model
(B)····· British model
(R)····· General model
(P)····· PP model

MAIN

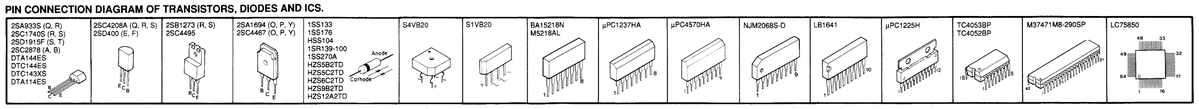
		J	U·C	R	A	B	E
1	R273	15K	10K	8K	3.9K	5.6K	5.6K
2	SW201	X	X	VF54125	X	X	X
3	CD01 203 212 - 215	X	X	X	X	X	220P
4	C310 311	X	X	C-01/16	X	X	X	0.01/16
5	C308 309	X	X	0.01	X	X	X	0.01
6							
7	IC01	XM574	XM575	XM576	XM577	XM577	XM578
8							
9							
10	R205	X	1/2W 2W	X	X	X	X
11							
12	C315 316	X	X	X	X	22/50	22/50
13	R308 R367	X	X	X	X	1.5K	1.5K
14	J411 J412	0	0	0	0	X	X
15	W205	X	X	X	X	VQ27010	VQ27010
16	SW202	X	X	X	X	VQ07350	VQ07350
17							
18	J431 432 433	0	X	0	0	0	0
19	R415 419 426	X	3P0.2	X	X	X	X
20	F201	T4AL125V	T4AL125V	T4AL250V	T1.6AL250V	T1.6AL250V	T1.6AL250V
21							
22	F202 F203 F204	T2AL250V	T2AL250V	T2AL250V	T2AL250V	T2AL250V	T2AL250V
23	F205	X	X	T1.6AL250V	X	X	X
24	SW203	X	X	VA06160	X	X	X
25	CB224 CB225	X	X	VP20050	X	X	X
26	C340~347	X	X	X	X	X	560P
27	C349	X	X	X	X	X	100P
28	J431	X	X	X	X	X	0
29	C311~352	A	A	X	X	A	2200P/16
30	C349	X	150P	X	X	X	150P
31							

NOTE) X:NOT USED
0:USED

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
k1	UB01	BPSJ820X BPSJ881X
k2	D202-206-209 217-224-234	HSS104 1SS133 1SS176
k3		

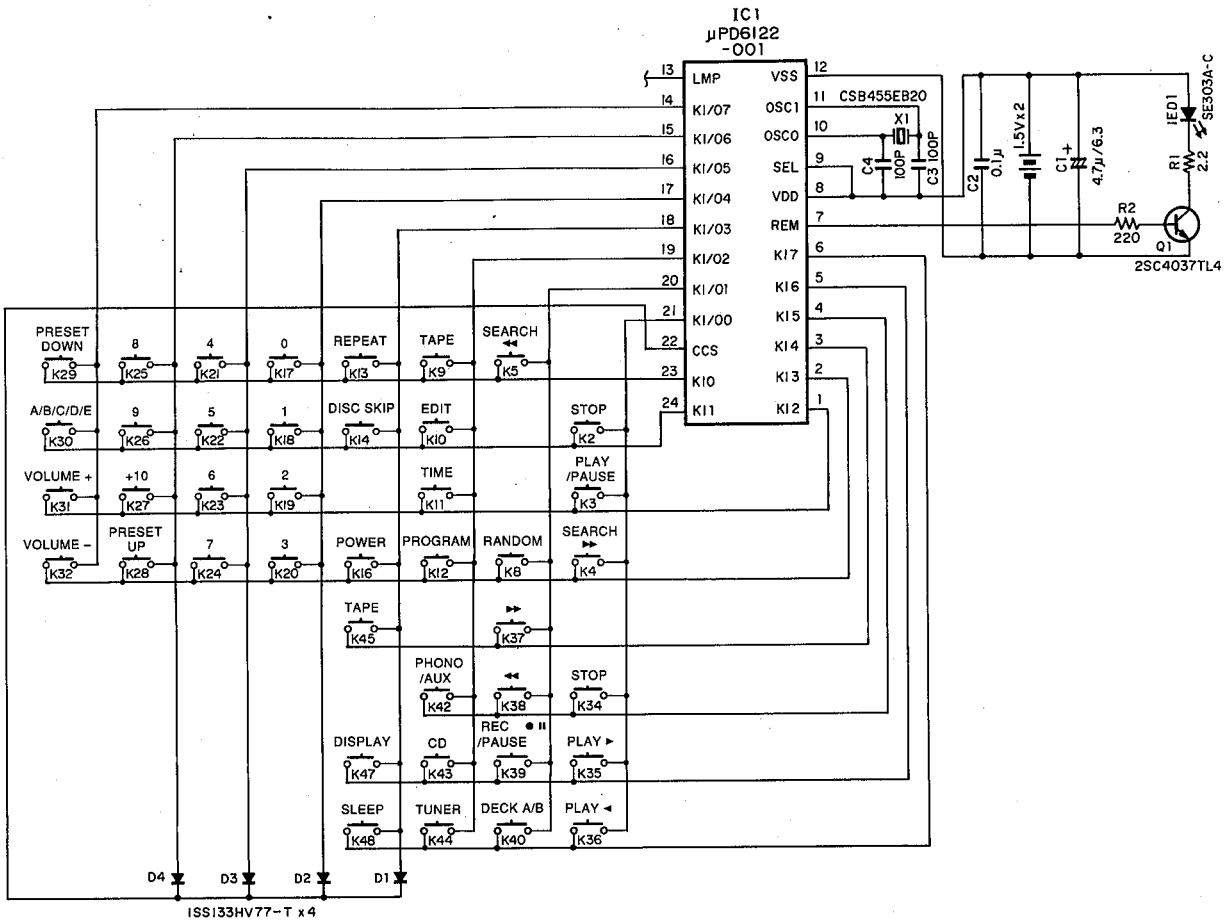
PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.

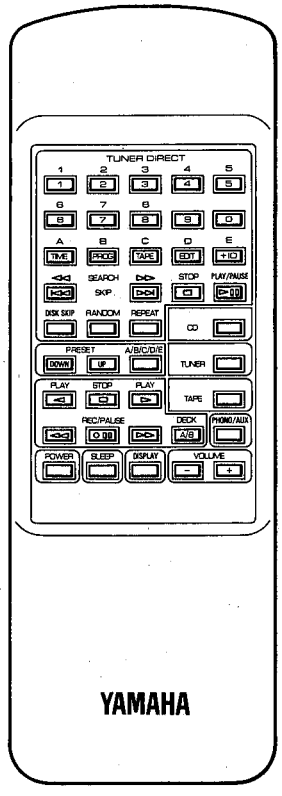


** All voltage are measured with a 10MΩ/V DC electric volt meter.*
** Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.*
** Schematic diagram is subject to change without notice.*

REMOTE CONTROL TRANSMITTER

■ SCHEMATIC DIAGRAM





Key No.	FUNCTION		DATA CODE D0	D1	D2	D3	D4	D5	D6	D7	HEX
K2	STOP	(CD)	1	0	0	0	0	0	0	0	01
K3	PLAY/PAUSE	(CD)	0	1	0	0	0	0	0	0	02
K4	SEARCH ►►	(CD)	1	1	0	0	0	0	0	0	03
K5	SEARCH ◄◄	(CD)	0	0	1	0	0	0	0	0	04
K8	RANDOM	(CD)	1	1	1	0	0	0	0	0	07
K9	TAPE	(CD)	0	0	0	1	0	0	0	0	08
K10	EDIT	(CD)	1	0	0	1	0	0	0	0	09
K11	TIME	(CD)	0	1	0	1	0	0	0	0	0A
K12	PROGRAM	(CD)	1	1	0	1	0	0	0	0	0B
K13	REPEAT	(CD)	0	0	1	1	0	0	0	0	0C
K14	DISC SKIP	(CD)	1	0	1	1	0	0	0	0	0D
K16	POWER		1	1	1	1	0	0	0	0	0F
K17	0	(CD)	0	0	0	0	1	0	0	0	10
K18	1	(CD)	1	0	0	0	1	0	0	0	11
K19	2	(CD)	0	1	0	0	1	0	0	0	12
K20	3	(CD)	1	1	0	0	1	0	0	0	13
K21	4	(CD)	0	0	1	0	1	0	0	0	14
K22	5	(CD)	1	0	1	0	1	0	0	0	15
K23	6	(CD)	0	1	1	0	1	0	0	0	16
K24	7	(CD)	1	1	1	0	1	0	0	0	17
K25	8	(CD)	0	0	0	1	1	0	0	0	18
K26	9	(CD)	1	0	0	1	1	0	0	0	19
K27	+10	(CD)	0	1	0	1	1	0	0	0	1A
K28	PRESET UP	(TUNER)	1	1	0	1	1	0	0	0	1B
K29	PRESET DOWN	(TUNER)	0	0	1	1	1	0	0	0	1C
K30	A/B/C/D/E	(TUNER)	1	0	1	1	1	0	0	0	1D
K31	VOLUME +		0	1	1	1	1	0	0	0	1E
K32	VOLUME –		1	1	1	1	1	0	0	0	1F
K34	STOP	(TAPE)	1	0	0	0	0	0	1	0	41
K35	PLAY ►	(TAPE)	0	1	0	0	0	0	1	0	42
K36	PLAY ◄	(TAPE)	1	1	0	0	0	0	1	0	43
K37	►►	(TAPE)	0	0	1	0	0	0	1	0	44
K38	◄◄	(TAPE)	1	0	1	0	0	0	1	0	45
K39	REC/PAUSE ● II	(TAPE)	0	1	1	0	0	0	1	0	46
K40	DECK A/B	(TAPE)	1	1	1	0	0	0	1	0	47
K42	PHONO/AUX		1	0	0	1	0	0	1	0	49
K43	CD		0	1	0	1	0	0	1	0	4A
K44	TUNER		1	1	0	1	0	0	1	0	4B
K45	TAPE		0	0	1	1	0	0	1	0	4C
K47	DISPLAY		0	1	1	1	0	0	1	0	4E
K48	SLEEP		1	1	1	1	0	0	1	0	4F
CUSTOM CODE			0	0	0	1	1	1	1	0	78

PARTS LIST

■ ELECTRICAL PARTS

■ WARNING

Components having special characteristics are marked ⚠ 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 last page.

ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS :

C.A.EL.CHP	: CHIP ALUMI. ELECTROLYTIC CAP
C.CE	: CERAMIC CAP
C.CE.ARRAY	: CERAMIC CAP ARRAY
C.CE.CHP	: CHIP CERAMIC CAP
C.CE.ML	: MULTILAYER CERAMIC CAP
C.CE.M.CHP	: CHIP MULTILAYER CERAMIC CAP
C.CE.SAFTY	: RECOGNIZED CERAMIC CAP
C.CE.TUBLR	: CERAMIC TUBULAR CAP
C.CE.SMI	: SEMI CONDUCTIVE CERAMIC CAP
C.EL	: ELECTROLYTIC CAP
C.MICA	: MICA CAP
C.ML.FLM	: MULTILAYER FILM CAP
C.MP	: METALLIZED PAPER CAP
C.MYLAR	: MYLAR FILM CAP
C.MYLAR.ML	: MULTILAYER MYLAR FILM CAP
C.PAPER	: PAPER CAPACITOR
C.PLS	: POLYSTYRENE FILM CAP
C.POL	: POLYESTER FILM CAP
C.POLY	: POLYETHYLENE FILM CAP
C.PP	: POLYPROPYLENE FILM CAP
C.TNTL	: TANTALUM CAP
C.TNTL.CHP	: CHIP TANTALUM CAP
C.TRIM	: TRIMMER CAP
CN	: CONNECTOR
CN.BS.PIN	: CONNECTOR, BASE PIN
CN.CANNON	: CONNECTOR, CANNON
CN.DIN	: CONNECTOR, DIN
CN.FLAT	: CONNECTOR, FLAT CABLE
CN.POST	: CONNECTOR, BASE POST
COIL.MX.AM	: COIL, AM MIX
COIL.AT.FM	: COIL, FM ANTENNA
COIL.DT.FM	: COIL, FM DETECT
COIL.MX.FM	: COIL, FM MIX
COIL.OUTPT	: OUTPUT COIL
DIOD.ARRAY	: DIODE ARRAY
DIODE.BRG	: DIODE BRIDGE
DIODE.CHP	: CHIP DIODE
DIODE.VAR	: VARACTOR DIODE
DIOD.Z.CHP	: CHIP ZENER DIODE
DIODE.ZENR	: ZENER DIODE
DSCR.CE	: CERAMIC DISCRIMINATOR
FER.BEAD	: FERRITE BEADS
FER.CORE	: FERRITE CORE
FET.CHP	: CHIP FET
FL.DSPLY	: FLUORESCENT DISPLAY
FLTR.CE	: CERAMIC FILTER
FLTR.COMB	: COMB FILTER MODULE
FLTR.LC.RF	: LC FILTER ,EMI
GND.MTL	: GROUND PLATE
GND.TERM	: GROUND TERMINAL
HOLDER.FUS	: FUSE HOLDER
IC.PRTCT	: IC PROTECTOR
JUMPER.CN	: JUMPER CONNECTOR
JUMPER.TST	: JUMPER, TEST POINT
L.DTCT	: LIGHT DETECTING MODULE
L.EMIT	: LIGHT EMITTING MODULE
LED.DSPLY	: LED DISPLAY
LED.INFRD	: LED, INFRARED
MODUL.RF	: MODULATOR, RF
PHOT.CPL	: PHOTO COUPLER
PHOT.INTR	: PHOTO INTERRUPTER
PHOT.RFLCT	: PHOTO REFLECTOR
PIN.TEST	: PIN, TEST POINT
PLST.RIVET	: PLASTIC RIVET
R.ARRAY	: RESISTOR ARRAY
R.CAR	: CARBON RESISTOR
R.CAR.CHP	: CHIP RESISTOR
R.CAR.FP	: FLAME PROOF CARBON RESISTOR
R.FUS	: FUSABLE RESISTOR
R.MTL.CHP	: CHIP METAL FILM RESISTOR
R.MTL.FLM	: METAL FILM RESISTOR
R.MTL.OXD	: METAL OXIDE FILM RESISTOR
R.MTL.PLAT	: METAL PLATE RESISTOR
RSNR.CE	: CERAMIC RESONATOR
RSNR.CRYS	: CRYSTAL RESONATOR
R.TW.CEM	: TWIN CEMENT FIXED RESISTOR
R.WW	: WIRE WOUND RESISTOR
SCR.BND.HD	: BIND HEAD B-TITE SCREW
SCR.BW.HD	: BW HEAD TAPPING SCREW
SCR.CUP	: CUP TITE SCREW
SCR.TERM	: SCREW TERMINAL
SCR.TR	: SCREW, TRANSISTOR
SUPRT.PCB	: SUPPORT, P.C.B.
SURG.PRTCT	: SURGE PROTECTOR
SW.TACT	: TACT SWITCH
SW.LEAF	: LEAF SWITCH
SW.LEVER	: LEVER SWITCH
SW.MICRO	: MICRO SWITCH
SW.PUSH	: PUSH SWITCH
SW.RT.ENC	: ROTARY ENCODER
SW.RT.MTR	: ROTARY SWITCH WITH MOTOR
SW.RT	: ROTARY SWITCH
SW.SLIDE	: SLIDE SWITCH
TERM.SP	: SPEAKER TERMINAL
TERM.WRAP	: WRAPPING TERMINAL
THRMST.CHP	: CHIP THERMISTOR
TR.CHP	: CHIP TRANSISTOR
TR.DGT	: DIGITAL TRANSISTOR
TR.DGT.CHP	: CHIP DIGITAL TRANSISTOR
TRANS	: TRANSFORMER
TRANS.PULS	: PULSE TRANSFORMER
TRANS.PWR	: POWER TRANSFORMER ASS'y
TUNER.AM	: TUNER PACK, AM
TUNER.FM	: TUNER PACK, FM
TUNER.PK	: FRONT-END TUNER PACK
VR	: ROTARY POTENTIOMETER
VR.MTR	: POTENTIOMETER WITH MOTOR
VR.SW	: POTENTIOMETER WITH ROTARY SW
VR.SLIDE	: SLIDE POTENTIOMETER
VR.TRIM	: TRIMMER POTENTIOMETER

Note) Those parts marked with "#" are not included in the P.C.B. ass'y.

MAIN P. C. B.

	Schm Ref.	PART NO.	Description		
*		VQ347200	P.C.B.	MAIN(UC)	
*		VQ347300	P.C.B.	MAIN(R)	
*		VQ347400	P.C.B.	MAIN(A)	
*		VQ347500	P.C.B.	MAIN(B)	
*		VQ347600	P.C.B.	MAIN(G)	
*	CB201	VP694000	CN	14P	
*	CB202	VP694100	CN	15P	
	CB204	Vi377800	CN.BS.PIN	8P	
	CB205	Vi377800	CN.BS.PIN	8P	
	CB206	VA252300	CN	5P	
	CB207	VB994900	CN	9P	
	CB208	VM688900	CN.BS.PIN	10P	
	CB209	VD005000	CN.BS.PIN	7P	
	CB210	VD004800	CN.BS.PIN	5P	
	CB211	VD004500	CN.BS.PIN	2P	
	CB212	VG879900	CN.BS.PIN	2P	
	CB213	VP206500	HOLDER.FUS	EYF-52BC	
	CB214	VP206500	HOLDER.FUS	EYF-52BC	
	CB215	VP206500	HOLDER.FUS	EYF-52BC	
	CB216	VP206500	HOLDER.FUS	EYF-52BC	
	CB219	VD004900	CN.BS.PIN	6P	
	CB220	VP206500	HOLDER.FUS	EYF-52BC	
	CB221	VP206500	HOLDER.FUS	EYF-52BC	
	CB222	VP206500	HOLDER.FUS	EYF-52BC	
	CB223	VP206500	HOLDER.FUS	EYF-52BC	
	CB224	VP206500	HOLDER.FUS	EYF-52BC(R)	
	CB225	VP206500	HOLDER.FUS	EYF-52BC(R)	
	C201	VG278400	C.CE.TUBLR	220pF	50V(G)
	C202	UG444100	C.CE	0.01uF	50V
	C203	VG278400	C.CE.TUBLR	220pF	50V(G)
	C204	VF964800	C.EL	100uF	16V
	C205	VG278400	C.CE.TUBLR	220pF	50V
	C206	UA653910	C.MYLAR	9100pF	50V
	C207	UA654330	C.MYLAR	0.033uF	50V
	C208	UA653910	C.MYLAR	9100pF	50V
	C209	UA654330	C.MYLAR	0.033uF	50V
	C210	VF964800	C.EL	100uF	16V
	C211	VG278400	C.CE.TUBLR	220pF	50V
	C212	VG278400	C.CE.TUBLR	220pF	50V(G)
	C213	VG278400	C.CE.TUBLR	220pF	50V(G)
	C214	VG278400	C.CE.TUBLR	220pF	50V(G)
	C215	VG278400	C.CE.TUBLR	220pF	50V(G)
	C216	VG278400	C.CE.TUBLR	220pF	50V(G)
	C217	VG278400	C.CE.TUBLR	220pF	50V(G)
	C218	VG278400	C.CE.TUBLR	220pF	50V(G)
	C219	VG278400	C.CE.TUBLR	220pF	50V(G)
	C220	VJ839200	C.EL	2.2uF	50V
	C221	VF964800	C.EL	100uF	16V
	C222	VF964800	C.EL	100uF	16V
	C223	VJ839200	C.EL	2.2uF	50V
	C224	VJ836900	C.EL	10uF	16V
	C225	VJ836900	C.EL	10uF	16V
	C226	VF964800	C.EL	100uF	16V

* New Parts

	Schm Ref.	PART NO.	Description		
	C227	VJ839200	C.EL	2.2uF	50V
	C228	VF466800	C.CE.TUBLR	100pF	50V
	C229	VJ839100	C.EL	1uF	50V
	C230	VF466700	C.CE.TUBLR	47pF	50V
	C231	VF466700	C.CE.TUBLR	47pF	50V
	C232	VJ839100	C.EL	1uF	50V
	C233	VF466800	C.CE.TUBLR	100pF	50V
	C234	VJ839200	C.EL	2.2uF	50V
	C235	VF964800	C.EL	100uF	16V
	C236	UG444100	C.CE	0.01uF	50V
	C237	VF964800	C.EL	100uF	16V
	C238	VF760000	C.EL	100uF	10V
	C239	VF760000	C.EL	100uF	10V
*	C240	VG273600	C.CE.TUBLR	15pF	50V
	C241	UM416470	C.EL	4.7uF	50V
	C242	VG278400	C.CE.TUBLR	220pF	50V
	C243	UJ667470	C.EL	47uF	50V
	C244	VG278400	C.CE.TUBLR	220pF	50V
	C245	UM416470	C.EL	4.7uF	50V
	C246	UA653330	C.MYLAR	3300pF	50V
	C247	VJ838800	C.EL	0.22uF	50V
	C248	VG278400	C.CE.TUBLR	220pF	50V
	C249	UA654560	C.MYLAR	0.056uF	50V
	C250	VF466800	C.CE.TUBLR	100pF	50V
	C251	VJ839000	C.EL	0.47uF	50V
	C252	VJ839000	C.EL	0.47uF	50V
	C253	UA654560	C.MYLAR	0.056uF	50V
	C254	VF466800	C.CE.TUBLR	100pF	50V
	C255	VG278400	C.CE.TUBLR	220pF	50V
	C256	VJ838800	C.EL	0.22uF	50V
	C257	UA653330	C.MYLAR	3300pF	50V
	C258	VF466800	C.CE.TUBLR	100pF	50V
	C259	UJ667470	C.EL	47uF	50V
	C260	VF466800	C.CE.TUBLR	100pF	50V
	C261	Ui367220	C.EL	22uF	50V
	C262	UA655100	C.MYLAR	0.1uF	50V
	C263	UA655150	C.MYLAR	0.15uF	50V
	C264	VF964800	C.EL	100uF	16V
	C265	UA655150	C.MYLAR	0.15uF	50V
	C266	VF964800	C.EL	100uF	16V
	C267	UA655100	C.MYLAR	0.1uF	50V
	C268	Ui367220	C.EL	22uF	50V
	C269	VD930900	C.CE.SMI	0.1uF	25V
	C271	UA654330	C.MYLAR	0.033uF	50V
	C272	VG276200	C.CE.TUBLR	15pF	50V
	C273	UJ668100	C.EL	100uF	50V
	C274	UA655100	C.MYLAR	0.1uF	50V
	C275	UA655220	C.MYLAR	0.22uF	50V
	C276	UA655330	C.MYLAR	0.33uF	50V
	C277	UA655220	C.MYLAR	0.22uF	50V
	C278	UA655330	C.MYLAR	0.33uF	50V
	C279	UA655100	C.MYLAR	0.1uF	50V
	C281	VG276200	C.CE.TUBLR	15pF	50V

* New Parts

MAIN P. C. B.

	Schm Ref.	PART NO.	Description		
	C282	UA654330	C.MYLAR	0.033uF	50V
*	C284	VQ353000	C.EL	22000uF	5.5V
	C285	VD930900	C.CE.SMI	0.1uF	25V
	C286	UA654470	C.MYLAR	0.047uF	50V
*	C287	VN511200	C.EL	22uF	50V
*	C288	VN511200	C.EL	22uF	50V
	C289	UA654470	C.MYLAR	0.047uF	50V
	C290	VJ839100	C.EL	1uF	50V
	C291	VJ836900	C.EL	10uF	16V
	C292	UJ638330	C.EL	330uF	16V
	C293	VJ836900	C.EL	10uF	16V
	C294	VJ836900	C.EL	10uF	16V
	C295	Ui367220	C.EL	22uF	50V
	C296	UJ667470	C.EL	47uF	50V
	C297	UM416470	C.EL	4.7uF	50V
	C298	UA654330	C.MYLAR	0.033uF	50V
*	C299	VQ528400	C.EL	220uF	10V
	C300	Ui367220	C.EL	22uF	50V
	C301	UJ648470	C.EL	470uF	25V
	C302	VJ839100	C.EL	1uF	50V
⚠	C303	VG632700	C.EL	8200uF	50V
	C304	Ui367220	C.EL	22uF	50V
⚠	C305	VG632700	C.EL	8200uF	50V
	C306	Vi862100	C.POL.MTL	0.047uF	100V
	C307	Vi862100	C.POL.MTL	0.047uF	100V
	C308	UA654100	C.MYLAR	0.01uF	50V(UCG)
	C309	UA654100	C.MYLAR	0.01uF	50V(UCG)
	C310	VF467300	C.CE.TUBLR	0.01uF	16V(UCG)
	C311	VF467300	C.CE.TUBLR	0.01uF	16V(UCG)
*	C312	VG722100	C.EL	1uF	50V
	C313	VJ839000	C.EL	0.47uF	50V
	C314	VJ839000	C.EL	0.47uF	50V
	C315	Ui367220	C.EL	22uF	50V(BG)
	C316	Ui367220	C.EL	22uF	50V(BG)
	C319	VJ836900	C.EL	10uF	16V
	C320	VJ836900	C.EL	10uF	16V
	C321	VJ836900	C.EL	10uF	16V
	C322	VJ836900	C.EL	10uF	16V
	C323	UA654150	C.MYLAR	0.015uF	50V
	C324	UA654150	C.MYLAR	0.015uF	50V
	C325	UA655120	C.MYLAR	0.12uF	50V
	C326	UA655120	C.MYLAR	0.12uF	50V
	C327	VF466800	C.CE.TUBLR	100pF	50V
	C328	VF466800	C.CE.TUBLR	100pF	50V
	C329	VF466800	C.CE.TUBLR	100pF	50V
	C330	VF466800	C.CE.TUBLR	100pF	50V
	C331	VF466800	C.CE.TUBLR	100pF	50V
	C332	VF466800	C.CE.TUBLR	100pF	50V
	C333	VF466800	C.CE.TUBLR	100pF	50V
	C334	VF467000	C.CE.TUBLR	1000pF	50V
	C340	UG444100	C.CE	0.01uF	50V
*	C341	VG273800	C.CE.TUBLR	18pF	50V
	C342	VJ839100	C.EL	1uF	50V

* New Parts

	Schm Ref.	PART NO.	Description		
	C343	VJ839100	C.EL	1uF	50V
	C344	VJ839100	C.EL	1uF	50V
	C345	VJ839100	C.EL	1uF	50V
	C346	VG278800	C.CE.TUBLR	560pF	50V(G)
	C347	VG278800	C.CE.TUBLR	560pF	50V(G)
	C348	VF466800	C.CE.TUBLR	100pF	50V(UCG)
	C349	VF466800	C.CE.TUBLR	100pF	50V(G)
	C351	VG279400	C.CE.TUBLR	2200pF	16V(G)
	C352	VG279400	C.CE.TUBLR	2200pF	16V(G)
*	D201	VM974200	DIODE.ZENR	HZS5C2TD	5.0V
	D202	VD631600	DIODE	1SS133,176,HSS104	
	D206	VD631600	DIODE	1SS133,176,HSS104	
	D207	VD631600	DIODE	1SS133,176,HSS104	
	D208	VD631600	DIODE	1SS133,176,HSS104	
	D209	VD631600	DIODE	1SS133,176,HSS104	
	D210	VG437400	DIODE.ZENR	MTZJ5.1B	5.1V
*	D211	VM975500	DIODE.ZENR	HZS12A2TD	12V
*	D212	VM974500	DIODE.ZENR	HZS6C2TD	6.0V
	D213	VH801600	DIODE	1SR139-100	
*	D214	VM974500	DIODE.ZENR	HZS6C2TD	6.0V
⚠	D215	iH001090	DIODE.BRG	S4VB20	2.6A 200V
	D216	VN008700	DIODE	1SS270A	
	D217	VD631600	DIODE	1SS133,176,HSS104	
⚠ *	D218	VQ379300	DIODE.BRG	S1VB20	1.0A 200V
	D222	VM975000	DIODE.ZENR	HZS9B2TD	9.0V
	D223	VM975000	DIODE.ZENR	HZS9B2TD	9.0V
	D224	VD631600	DIODE	1SS133,176,HSS104	
	D225	VD631600	DIODE	1SS133,176,HSS104	
	D226	VD631600	DIODE	1SS133,176,HSS104	
	D227	VD631600	DIODE	1SS133,176,HSS104	
	D228	VD631600	DIODE	1SS133,176,HSS104	
	D229	VD631600	DIODE	1SS133,176,HSS104	
	D230	VD631600	DIODE	1SS133,176,HSS104	
	D231	VD631600	DIODE	1SS133,176,HSS104	
	D232	VD631600	DIODE	1SS133,176,HSS104	
	D233	VD631600	DIODE	1SS133,176,HSS104	
	D234	VD631600	DIODE	1SS133,176,HSS104	
⚠	F201	KB003060	FUSE	TL1.6A 250V(ABG)	
⚠	F201	KB003100	FUSE	T4.0A 250V(R)	
⚠ *	F201	KB003620	FUSE	T4.0A 125V(UC)	
⚠	F202	KB003070	FUSE	TL2.0A S(RABG)	
⚠	F202	KB003570	FUSE	T2.0A 250V(UC)	
⚠	F203	KB003070	FUSE	TL2.0A S(RABG)	
⚠	F203	KB003570	FUSE	T2.0A 250V(UC)	
⚠	F204	KB003070	FUSE	TL2.0A S(RABG)	
⚠	F204	KB003570	FUSE	T2.0A 250V(UC)	
⚠	F205	KB003060	FUSE	TL1.6A 250V(R)	
	IC201	XE322001	IC	NJM2068S-D	
	IC203	XA053A00	IC	TC4052BP	
	IC204	iG055100	IC	TC4053BP	
	IC205	XF494A00	IC	LB1641	
	IC206	XE322001	IC	NJM2068S-D	
	IC210	XM288A00	IC	M37471M8-290SP	

* New Parts

MAIN P. C. B.

Schm Ref.	PART NO.	Description	
IC211	XB247301	IC	uPC4570HA
IC215	XG938A00	IC	BA15218N
IC219	iG055100	IC	TC4053BP
⚠ IC220	iG067100	IC	uPC1225H
⚠ IC221	iG067100	IC	uPC1225H
IC222	XH471A00	IC	M5218AL
IC226	XF663A00	IC	uPC1237HA
IC227	XB247301	IC	uPC4570HA
IC228	XB247301	IC	uPC4570HA
* L201	VP575600	COIL	1.5uH
* L202	VP575600	COIL	1.5uH
* PJ201	VQ260900	JACK.PIN	4P
Q201	VD678500	TR.DGT	DTA114ES
Q202	iC287820	TR	2SC2878 A,B
Q203	iC287820	TR	2SC2878 A,B
Q204	VG722000	TR.DGT	DTC144ES
Q205	VG721700	TR.DGT	DTA144ES
Q206	iC174020	TR	2SC1740S R,S
Q207	iC174020	TR	2SC1740S R,S
Q208	VG721700	TR.DGT	DTA144ES
Q209	VD488500	TR.DGT	DTC143XS
⚠ Q210A	iX615750	TR	2SA1694 O,P,Y
⚠ Q210C	iX615760	TR	2SC4467 O,P,Y
⚠ Q212A	iX615750	TR	2SA1694 O,P,Y
⚠ Q212C	iX615760	TR	2SC4467 O,P,Y
⚠ Q215	VK407600	TR	2SC4208A Q,R,S
Q216	iA093320	TR	2SA933S Q,R
Q217	VG722000	TR.DGT	DTC144ES
⚠ Q218	iC174020	TR	2SC1740S R,S
⚠ Q219	iD040040	TR	2SD400
⚠ * Q220	VN996900	TR	2SC4495
Q221	VG722000	TR.DGT	DTC144ES
⚠ * Q222	VQ734700	TR	2SB1273 R,S
Q223	VG722000	TR.DGT	DTC144ES
Q224	VG722000	TR.DGT	DTC144ES
Q225	VG722000	TR.DGT	DTC144ES
Q227	iC174020	TR	2SC1740S R,S
Q228	iC174020	TR	2SC1740S R,S
Q229	iA093320	TR	2SA933S Q,R
Q230	iA093320	TR	2SA933S Q,R
Q231	iC174020	TR	2SC1740S R,S
Q232	iC174020	TR	2SC1740S R,S
Q233	iA093320	TR	2SA933S Q,R
Q234	iA093320	TR	2SA933S Q,R
Q235	iC174020	TR	2SC1740S R,S
Q236	iC174020	TR	2SC1740S R,S
Q237	VD488500	TR.DGT	DTC143XS
R229	HV454220	R.CAR.FP	22Ω 1/4W
R234	HV454220	R.CAR.FP	22Ω 1/4W
R249	HV454330	R.CAR.FP	33Ω 1/4W
R251	HV454220	R.CAR.FP	22Ω 1/4W
R252	HV454220	R.CAR.FP	22Ω 1/4W
R280	HV454680	R.CAR.FP	68Ω 1/4W

* New Parts

Schm Ref.	PART NO.	Description	
R285	HV454680	R.CAR.FP	68Ω 1/4W
R286	HV454220	R.CAR.FP	22Ω 1/4W
R287	HV454220	R.CAR.FP	22Ω 1/4W
R299	HV453470	R.CAR.FP	4.7Ω 1/4W
⚠ * R317	HZ003780	R.MTL.PLAT	0.22Ω+0.22 5W
R318	HV454100	R.CAR.FP	10Ω 1/4W
R319	HV454100	R.CAR.FP	10Ω 1/4W
R328	HV454100	R.CAR.FP	10Ω 1/4W
R329	HV454100	R.CAR.FP	10Ω 1/4W
⚠ * R330	HZ003780	R.MTL.PLAT	0.22Ω+0.22 5W
⚠ R347	HV454330	R.CAR.FP	33Ω 1/4W
⚠ R351	VL380500	R.FUS	1Ω 1/4W
R355	HV453100	R.CAR.FP	1Ω 1/4W
* R356	HL315820	R.MTL.OXD	820Ω 1W
* R359	VN014000	R.WW	0.2Ω 3W
* R360	VN014000	R.WW	0.2Ω 3W
⚠ * R374	VQ357200	R.WW	68Ω 5W
⚠ R414	VK186700	R.FUS	12Ω 1/4W
⚠ R415	VK186700	R.FUS	12Ω 1/4W
R418	VR046900	R.MTL.FLM	2.2Ω 3W(UC)
R419	VR046900	R.MTL.FLM	2.2Ω 3W(UC)
R420	VR046900	R.MTL.FLM	2.2Ω 3W(UC)
RY201	VC278600	RELAY	G5R-2232P DC24V
SW201	VF541200	SW.SLIDE	SSSF11(R)
* SW202	VQ073500	SW.SLIDE	SSSU142-S06S-1(BG)
⚠ SW203	VA961800	VOLT.SELCT	ESE-37247-F(R)
* TE201	VP692600	TERM.SP	4P
TP201	VL448600	JUMPER.TST	
TP202	VL448600	JUMPER.TST	
TP203	VL448600	JUMPER.TST	
VR201	VJ693200	VR.TRIM	B2.2KΩ
VR202	VJ693200	VR.TRIM	B2.2KΩ
* XL201	VQ328900	RSNR.CRYS	32.768KHz
XL202	VD827600	RSNR.CE	4MHz
	VA119100	HEAT.SINK	
	BB069510	GND.MTL	No.6951
	BB071360	SCR.TERM	8.3x13
*	VQ366200	HEAT.SINK	
	EP600130	SCR.BND.HD	3x6 ZMC2-Y
	EK930010	SCR.BW.HD	3x8-8 FCRM3-BL
*	VQ368600	PUSH.RIVET	P3555-B
	VL391100	RADIATOR	OSH-2440-SPL
*	VP983300	HEAT.SINK	
	VK195900	SHEET	19x24
	VK173200	SCR.TR	3x15 SP FCM3

* New Parts

SUB P. C. B.

	Schm Ref.	PART NO.	Description		
*		VQ347800	P.C.B.	SUB(UC)	
*		VQ347900	P.C.B.	SUB(R)	
*		VQ348000	P.C.B.	SUB(A)	
*		VQ348100	P.C.B.	SUB(B)	
*		VQ348200	P.C.B.	SUB(G)	
	CB503	VP113500	CN.BS.PIN	10P	
	C1	VF467300	C.CE.TUBLR	0.01uF	16V
	C2	VF467300	C.CE.TUBLR	0.01uF	16V(UCRA)
	C3	VF467300	C.CE.TUBLR	0.01uF	16V
	C4	VG290900	C.EL	10uF	50V
	C5	VF467300	C.CE.TUBLR	0.01uF	16V
	C6	VA777600	C.CE	180pF	50V(BG)
	C7	VA777400	C.CE	120pF	50V(BG)
	C8	UT452390	C.PP	390pF	100V
	C9	VG272900	C.CE.TUBLR	4.7pF	50V(BG)
*	C9	VG273600	C.CE.TUBLR	15pF	50V(UCRA)
	C10	VF467300	C.CE.TUBLR	0.01uF	16V
	C11	VF467300	C.CE.TUBLR	0.01uF	16V
	C12	VF467300	C.CE.TUBLR	0.01uF	16V
	C13	VA761400	C.CE	47pF	50V(BG)
	C14	VF467300	C.CE.TUBLR	0.01uF	16V
	C15	VF467300	C.CE.TUBLR	0.01uF	16V
	C16	VG290500	C.EL	1uF	50V
	C17	VJ839100	C.EL	1uF	50V(BG)
	C18	VF467300	C.CE.TUBLR	0.01uF	16V
	C19	VF467300	C.CE.TUBLR	0.01uF	16V
	C20	VF467000	C.CE.TUBLR	1000pF	50V
	C21	VG290900	C.EL	10uF	50V
	C22	VG290900	C.EL	10uF	50V
	C23	VG290900	C.EL	10uF	50V
	C24	VF467000	C.CE.TUBLR	1000pF	50V
	C25	VJ599000	C.CE.TUBLR	0.047uF	16V
	C26	VJ599000	C.CE.TUBLR	0.047uF	16V(BG)
	C27	VG290900	C.EL	10uF	50V
	C28	VG290900	C.EL	10uF	50V
	C29	VF466800	C.CE.TUBLR	100pF	50V(UCRAB)
	C30	VG290600	C.EL	2.2uF	50V
	C31	VF467300	C.CE.TUBLR	0.01uF	16V
	C32	VG290500	C.EL	1uF	50V
	C33	VG290700	C.EL	3.3uF	50V
	C34	VF467300	C.CE.TUBLR	0.01uF	16V
	C35	VG290900	C.EL	10uF	50V
	C36	VF467000	C.CE.TUBLR	1000pF	50V
	C37	VA761200	C.CE	33pF	50V
	C38	VA761200	C.CE	33pF	50V
	C39	VG290900	C.EL	10uF	50V
	C40	VF466900	C.CE.TUBLR	470pF	50V
	C41	VJ599000	C.CE.TUBLR	0.047uF	16V
	C42	VG290500	C.EL	1uF	50V
	C43	VG290500	C.EL	1uF	50V
	C44	VG290300	C.EL	0.47uF	50V
	C45	VG290500	C.EL	1uF	50V
	C46	VJ599000	C.CE.TUBLR	0.047uF	16V

* New Parts

	Schm Ref.	PART NO.	Description		
	C47	VG290900	C.EL	10uF	50V
	C48	VF467000	C.CE.TUBLR	1000pF	50V(UCR)
	C48	VG278700	C.CE.TUBLR	390pF	50V(G)
	C48	VG278900	C.CE.TUBLR	680pF	50V(AB)
	C49	VG290900	C.EL	10uF	50V
*	C50	VQ535800	C.EL	2.2uF	50V
	C51	VF467000	C.CE.TUBLR	1000pF	50V(UCR)
	C51	VG278700	C.CE.TUBLR	390pF	50V(G)
	C51	VG278900	C.CE.TUBLR	680pF	50V(AB)
	C52	VG290700	C.EL	3.3uF	50V
	C53	UA653390	C.MYLAR	3900pF	50V
	C54	UA653390	C.MYLAR	3900pF	50V
	C55	VG290700	C.EL	3.3uF	50V
	C56	VA777400	C.CE	120pF	50V(G)
	C57	VF466800	C.CE.TUBLR	100pF	50V(G)
	C58	VG290900	C.EL	10uF	50V
*	C501	VG722100	C.EL	1uF	50V
	C502	UA655120	C.MYLAR	0.12uF	50V
	C503	UA654330	C.MYLAR	0.033uF	50V
	C504	UA654330	C.MYLAR	0.033uF	50V
	C505	UA655120	C.MYLAR	0.12uF	50V
	C506	VJ836900	C.EL	10uF	16V
	C507	VJ599000	C.CE.TUBLR	0.047uF	16V
	C508	VJ599000	C.CE.TUBLR	0.047uF	16V
	C509	VF466900	C.CE.TUBLR	470pF	50V
	C510	VF466900	C.CE.TUBLR	470pF	50V
	C511	VF466900	C.CE.TUBLR	470pF	50V
	C512	VF466900	C.CE.TUBLR	470pF	50V
	C513	VF467000	C.CE.TUBLR	1000pF	50V(UCRAB)
	C513	VJ599100	C.CE.TUBLR	0.1uF	50V(G)
	C514	VJ599000	C.CE.TUBLR	0.047uF	16V(G)
	C515	VJ599000	C.CE.TUBLR	0.047uF	16V(G)
	D1	iF002200	DIODE.VAR	SVC321	
	D2	iF002200	DIODE.VAR	SVC321	
	D3	VD631600	DIODE	1SS133,176,HSS104	
	D4	VD631600	DIODE	1SS133,176,HSS(BG)	
	D5	VD631600	DIODE	1SS133,176,HSS104	
	D6	VD631600	DIODE	1SS133,176,HSS104	
	D7	VD631600	DIODE	1SS133,176,HSS104	
	D8	VD631600	DIODE	1SS133,176,HSS(BG)	
	D9	VD631600	DIODE	1SS133,176,HSS(BG)	
	IC1	XB760001	IC	LA1266	
	IC2	XB818A00	IC	LM7000N	
	IC3	iG158100	IC	LA3401	
*	IC501	XM289A00	IC	LC75850	
*	JK501	VP609800	JACK.MNI	1P YKB21-5151	
	L1	Vi546100	COIL	220uH	
	L2	GG000560	FLTR.CE	SFE10.7MS3GHY-A	
	L3	VC867400	COIL.OS	LW, 520uH(BG)	
	L4	VC867500	COIL.OS	MW, 132uH(BG)	
	L4	VK646400	COIL.OS	MW, 118uH(UCRA)	
	L5	VC867700	COIL.AT	MW, 3.5MHz(BG)	
	L5	VK646500	COIL.AT	MW, 340uH(UCRA)	

* New Parts

SUB P. C. B.

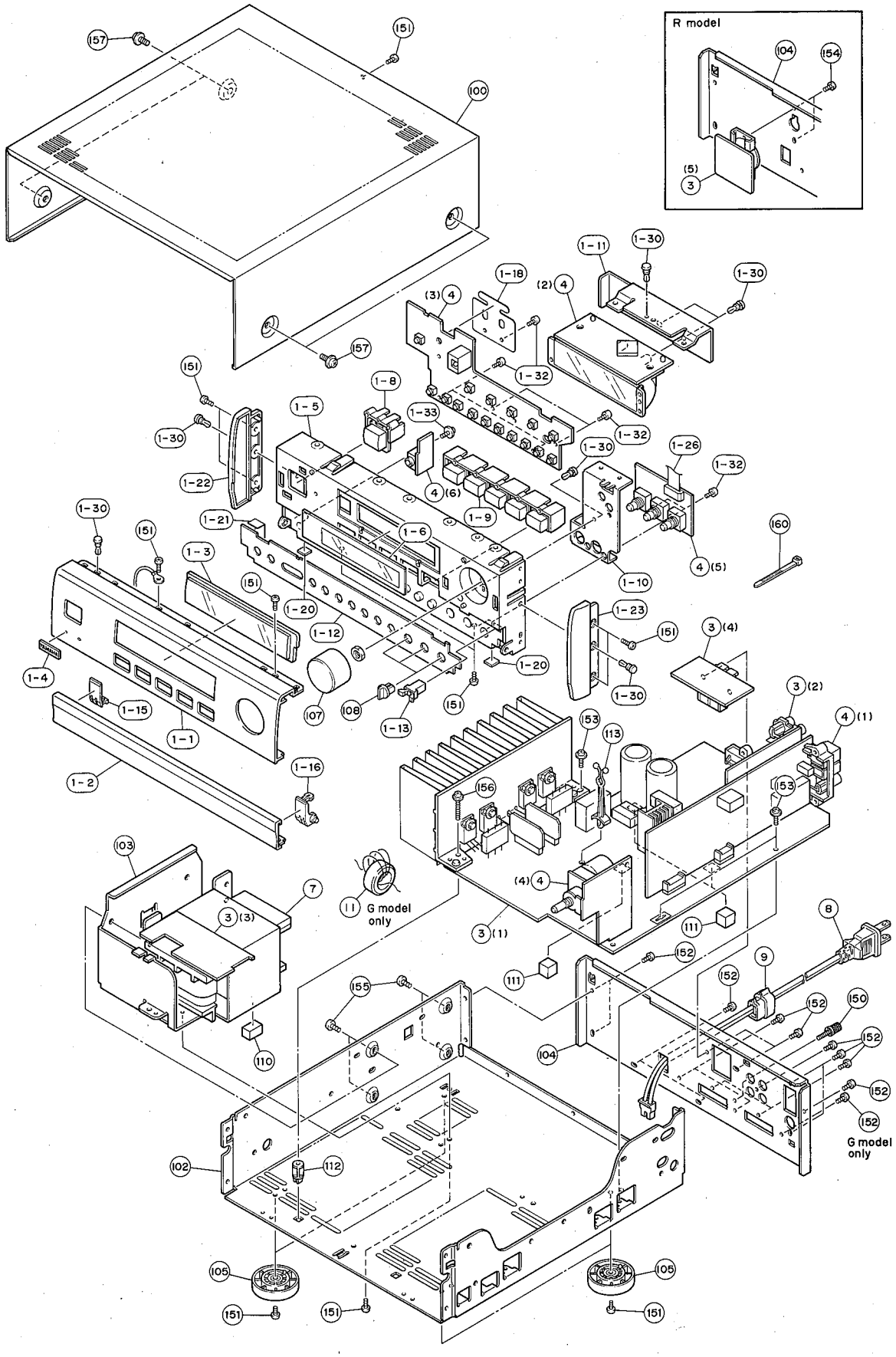
	Schm Ref.	PART NO.	Description	
	L6	VC867600	COIL.AT	LW, 3.5MHz(BG)
	L7	GG000560	FLTR.CE	SFE10.7MS3GHY-A
	L8	VC218600	COIL.DT.FM	10.7MHz
	L9	GE100470	COIL.IF.AM	450KHz
	L10	VC219000	FLTR.CE	SFZ450JL3
	L11	Vi546100	COIL	220uH
	L12	Vi546100	COIL	220uH
*	L13	VQ365700	FLTR.LP	FB-7SG(G)
*	L14	VQ138200	FLTR.LC	19KHz
*	L15	VQ138200	FLTR.LC	19KHz
*	PK1	VP458800	TUNER.PK	FJ2U312A(UCRAB)
*	PK1	VP458900	TUNER.PK	FJ3E312A(G)
	Q1	iC053540	TR	2SC535 A,B,C
	Q2	iA093320	TR	2SA933S Q,R(BG)
	Q3	iA093320	TR	2SA933S Q,R(BG)
	Q4	iA093320	TR	2SA933S Q,R(BG)
	Q5	iA093320	TR	2SA933S Q,R(BG)
	Q6	iE104100	FET	2SK161 O,Y,GR
	Q7	iC053540	TR	2SC535 A,B,C(BG)
	Q8	VD678500	TR.DGT	DTA114ES
	Q9	VC218900	TR	2SC3330 R,S,T
	Q10	VC218900	TR	2SC3330 R,S,T
	Q11	VC218900	TR	2SC3330 R,S,T(BG)
	Q12	VC218900	TR	2SC3330 R,S,T(BG)
	Q13	VG721700	TR.DGT	DTA144ES
	Q14	VG722000	TR.DGT	DTC144ES
	Q15	VG721700	TR.DGT	DTA144ES(BG)
	SW501	VG392900	SW.TACT	SKHVAA
	SW502	VG392900	SW.TACT	SKHVAA
	SW503	VG392900	SW.TACT	SKHVAA
	SW504	VG392900	SW.TACT	SKHVAA
	SW505	VG392900	SW.TACT	SKHVAA
	SW506	VG392900	SW.TACT	SKHVAA
	SW507	VG392900	SW.TACT	SKHVAA
	SW508	VG392900	SW.TACT	SKHVAA
	SW509	VG392900	SW.TACT	SKHVAA
	SW510	VG392900	SW.TACT	SKHVAA
	SW511	VG392900	SW.TACT	SKHVAA
	SW513	VG392900	SW.TACT	SKHVAA
	SW514	VG392900	SW.TACT	SKHVAA
	SW515	VG392900	SW.TACT	SKHVAA
	SW516	VG392900	SW.TACT	SKHVAA
	SW517	VG392900	SW.TACT	SKHVAA
	TE1	LA005800	TERM.ANT	YKD31-0215
	U501	VG990800	L.DTCT	GP1U521X
*	V501	VQ062900	LCD	LCD8255B1JP
	VC1	VC463300	C.TRIM	7pF ECR-HA007A11
	VC2	VC937300	C.TRIM	20pF(BG)
*	VR501	VQ063300	VR	A100KΩ
*	VR503	VQ063100	VR	B10KΩ
*	VR504	VQ063200	VR	B10KΩ
*	VR505	VQ063000	VR	MN5KΩ
	XL1	QU003800	RSNR.CRYS	7.2MHz

* New Parts

	Schm Ref.	PART NO.	Description	
	XL2	GG000750	RSNR.CE	18.95MHz
		BB071360	SCR.TERM	8.3x13(G)
*		VQ368600	PUSH.RIVET	P3555-B
*		VP984400	RFLCT	
*		VP985300	SHEET.D	
		VF444500	CAP.LAMP	AG-4015
		VH471600	LAMP	115mA 14.5V

* New Parts

■ EXPLODED VIEW



■ MECHANICAL PARTS Note) Ø : Diameter

	Ref. No.	PART NO.	Description	Remarks	Markets
*	1- 1	VP983100	FRONT PANEL		
*	1- 2	VP983200	LID PANEL		
*	1- 3	VP984500	WINDOW PANEL		
*	1- 4	VQ058200	EMBLEM	22x6.5	
*	1- 5	VP983900	SUB PANEL		
*	1- 6	VP985200	SHEET, LCD		
*	1- 8	VP984000	BUTTON	16/18	
*	1- 9	VP984100	BUTTON, OP	OP	
*	1-10	VP982500	FRAME, VOL		
*	1-11	VP982300	FRAME, LCD		
*	1-12	VP983500	PLATE, SP		
*	1-13	VQ518800	LATCH	No.4U44	
*	1-15	VP984600	HINGE L		
*	1-16	VP984700	HINGE R		
*	1-18	VQ365800	SHEET, PROTECTOR		
*	1-20	VQ597200	CUSHION, LID		
*	1-21	VQ597700	TAPE, GROUND	FM8100	
*	1-22	VP984200	PLATE, SIDE L		
*	1-23	VP984300	PLATE, SIDE R		
*	1-26	VQ357300	CONNECTOR, FLAT CABLE	10P 100mm	
*	1-30	VQ368600	PUSH RIVET	P3555-B	
	1-32	VF617600	PAN HEAD P-TITE SCREW	2.6x8 FCRM3-BL	
	1-33	VA775100	BW HEAD P-TITE SCREW	3x8-10 FCRM3-BL	
*	3	VQ347200	P.C.B. ASS'y, MAIN		(UC)
*	3	VQ347300	P.C.B. ASS'y, MAIN		(R)
*	3	VQ347400	P.C.B. ASS'y, MAIN		(A)
*	3	VQ347500	P.C.B. ASS'y, MAIN		(B)
*	3	VQ347600	P.C.B. ASS'y, MAIN		(G)
*	4	VQ347800	P.C.B. ASS'y, SUB		(UC)
*	4	VQ347900	P.C.B. ASS'y, SUB		(R)
*	4	VQ348000	P.C.B. ASS'y, SUB		(A)
*	4	VQ348100	P.C.B. ASS'y, SUB		(B)
*	4	VQ348200	P.C.B. ASS'y, SUB		(G)
⚠ *	7	XM575A00	POWER TRANSFORMER		(UC)
⚠ *	7	XM576A00	POWER TRANSFORMER		(R)
⚠ *	7	XM577A00	POWER TRANSFORMER		(AB)
⚠ *	7	XM578A00	POWER TRANSFORMER		(G)
⚠	8	VL012900	POWER CORD ASS'y		(UC)
⚠	8	VL238100	POWER CORD ASS'y		(R)
⚠ *	8	VL238400	POWER CORD ASS'y		(A)
⚠	8	VL238900	POWER CORD ASS'y		(G)
⚠ *	8	VN804500	POWER CORD ASS'y		(B)
	9	VN158600	CORD STOPPER	No.2104	
	11	VB933800	FERRITE CORE	BP53RB310190NOA	
*	100	VP982100	TOP COVER		
*	102	VP982800	CHASSIS		
*	103	VP982200	FRAME, TRANSFORMER		
*	104	VP982900	REAR PANEL		(UC)
*	104	VP983000	REAR PANEL		(R)
*	104	VQ190600	REAR PANEL		(A)
*	104	VQ190800	REAR PANEL		(G)
*	104	VQ387000	REAR PANEL		(B)
*	105	VP984800	LEG	Ø41xH12.5	

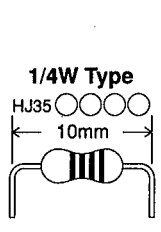
* New Parts

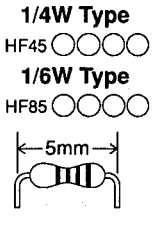
	Ref. No.	PART NO.	Description		Remarks	Markets
*	107	VQ362300	KNOB, V	Ø32		
*	108	VP985100	KNOB	Ø11		
*	110	VQ390100	DAMPER	8x8x15		
*	111	VQ366100	DAMPER, PCB			
	112	Vi048500	SUPPORT, P.C.B.			
*	113	VQ406700	WIRE CRAMP	PCW-505		
	150	AA627310	GROUND TERMINAL			
	151	Ei330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL		
	152	EN301010	BIND HEAD BONDING TAP. SCREW	3x8 FCRM3-BL		
	153	EX600700	BW HEAD TAPPING SCREW	3x8 FCM3-CU		
	154	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL		
	155	Ei340806	BIND HEAD B-TITE SCREW	4x8 FCRM3-BL		
	156	EX602560	BW HEAD P-TITE SCREW	3x20-8 FCRM3-BL		
	157	EX601150	BW HEAD S-TITE SCREW	4x8-10 FNM3-BL	TI	
	160	CB069250	BINDING TIE	BK-1		
			ACCESSORIES			
*	200	VQ361700	REMOTE CONTROL TRANSMITTER	SBAU 41KEY		
	200-1	CX674370	LID	54x32.9N3ALPS		
*		VQ147100	ANTENNA, FM	1P 1.4m		
*		VQ307400	AM LOOP ANTENNA	81-653-645-110		
			BATTERY, MANGANESE	SUM-3,AA,R06		

* New Parts

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	HF85 3100	10 kΩ	HF45 7100	HF45 7100
1.8 Ω	HJ35 3180	※	11 kΩ	HF45 7110	HF45 7110
2.2 Ω	HJ35 3220	HF85 3220	12 kΩ	HJ35 7120	HF85 7120
3.3 Ω	HJ35 3330	HF85 3330	13 kΩ	HF45 7130	HF45 7130
4.7 Ω	HJ35 3470	HF85 3470	15 kΩ	HF45 7150	HF45 7150
5.6 Ω	HJ35 3560	HF85 3560	18 kΩ	HF45 7180	HF45 7180
10 Ω	HF45 4100	HF45 4100	22 kΩ	HF45 7220	HF45 7220
15 Ω	HJ35 4150	HF85 4150	24 kΩ	HF45 7240	HF45 7240
22 Ω	HF45 4220	HF45 4220	27 kΩ	HJ35 7270	HF85 7270
27 Ω	HJ35 4270	HF85 4270	30 kΩ	HF45 7300	HF45 7300
33 Ω	HF45 4330	HF45 4330	33 kΩ	HF45 7330	HF45 7330
39 Ω	HJ35 4470	HF85 4390	36 kΩ	HF45 7360	HF45 7360
47 Ω	HF45 4470	HF45 4470	39 kΩ	HF45 7390	HF45 7390
56 Ω	HF45 4560	HF45 4560	47 kΩ	HF45 7470	HF45 7470
68 Ω	HF45 4680	HF45 4680	51 kΩ	HF45 7510	HF45 7510
75 Ω	HF45 4750	HF45 4750	56 kΩ	HF45 7560	HF45 7560
82 Ω	HF45 4820	HF45 4820	62 kΩ	HF45 7620	HF45 7620
91 Ω	HF45 4910	HF45 4910	68 kΩ	HF45 7680	HF45 7680
100 Ω	HF45 5100	HF45 5100	82 kΩ	HF45 7820	HF45 7820
110 Ω	HJ35 5110	HF85 5110	91 kΩ	HF45 7910	HF45 7910
120 Ω	HF45 5120	HF45 5120	100 kΩ	HF45 8100	HF45 8100
150 Ω	HF45 5150	HF45 5150	110 kΩ	HF45 8110	HF45 8110
160 Ω	HJ35 5160	※	120 kΩ	HF45 8120	HF45 8120
180 Ω	HF45 5180	HF45 5180	150 kΩ	HF45 8150	HF45 8150
200 Ω	HF45 5200	HF45 5200	180 kΩ	HF45 8180	HF45 8180
220 Ω	HF45 5220	HF45 5220	220 kΩ	HJ35 8220	HF85 8220
270 Ω	HF45 5270	HF45 5270	270 kΩ	HF45 8270	HF45 8270
330 Ω	HF45 5330	HF45 5330	300 kΩ	HF45 8300	HF45 8300
390 Ω	HF45 5390	HF45 5390	330 kΩ	HF45 8330	HF45 8330
430 Ω	HF45 5430	HF45 5430	390 kΩ	HJ35 8390	HF85 8390
470 Ω	HF45 5470	HF45 5470	470 kΩ	HF45 8470	HF45 8470
510 Ω	HF45 5510	HF45 5510	560 kΩ	HJ35 8560	HF85 8560
560 Ω	HF45 5560	HF45 5560	680 kΩ	HJ35 8680	HF85 8680
680 Ω	HF45 5680	HF45 5680	820 kΩ	HJ35 8820	HF85 8820
820 Ω	HF45 5820	HF45 5820	1.0 MΩ	HF45 9100	HF45 9100
910 Ω	HF45 5910	HF45 5910	1.2 MΩ	HJ35 9120	※
1.0 kΩ	HF45 6100	HF45 6100	1.5 MΩ	HJ35 9150	HF85 9150
1.2 kΩ	HF45 6120	HF45 6120	1.8 MΩ	HJ35 9180	HF85 9180
1.5 kΩ	HF45 6150	HF45 6150	2.2 MΩ	HJ35 9220	HF85 9220
1.8 kΩ	HF45 6180	HF45 6180	3.3 MΩ	HJ35 9330	HF85 9330
2.0 kΩ	HJ35 6200	HF85 6200	3.9 MΩ	HJ35 9390	※
2.2 kΩ	HF45 6220	HF45 6220	4.7 MΩ	HJ35 9470	HF85 9470
2.4 kΩ	HJ35 6240	HF85 6240			
2.7 kΩ	HF45 6270	HF45 6270			
3.0 kΩ	HF45 6300	HF45 6300			
3.3 kΩ	HF45 6330	HF45 6330			
3.6 kΩ	HJ35 6360	HF85 6360			
3.9 kΩ	HF45 6390	HF45 6390			
4.7 kΩ	HF45 6470	HF45 6470			
5.1 kΩ	HF45 6510	HF45 6510			
5.6 kΩ	HF45 6560	HF45 6560			
6.8 kΩ	HF45 6680	HF45 6680			
8.2 kΩ	HF45 6820	HF45 6820			
9.1 kΩ	HF45 6910	HF45 6910			





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RX-S70

YAMAHA