STEREO RECEIVER

RX-830/AVR-75

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 inherant 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 all 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, 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.

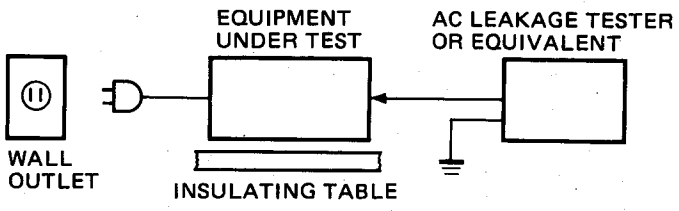
WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

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

■ 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 Model Only).
   When service has been completed, it is imperative that you 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.



- **POLARIZATION (U model only)**
  This receiver product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way This is a safety feature.

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RX-830/AVR-75

100238

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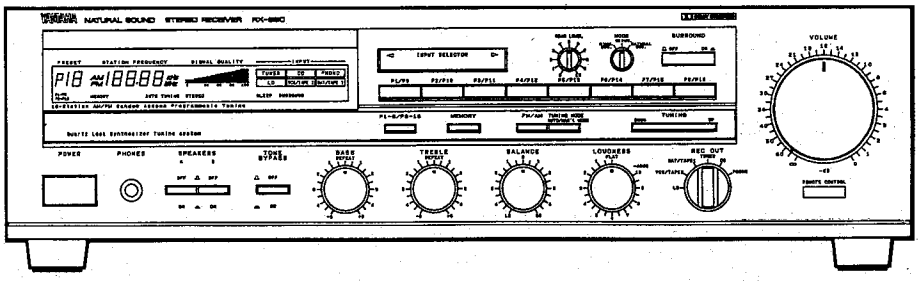
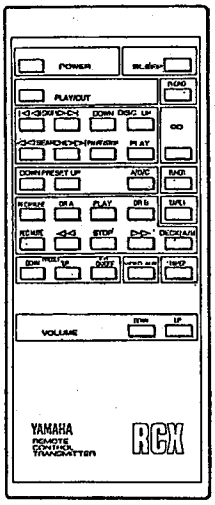
■ FRONT PANEL

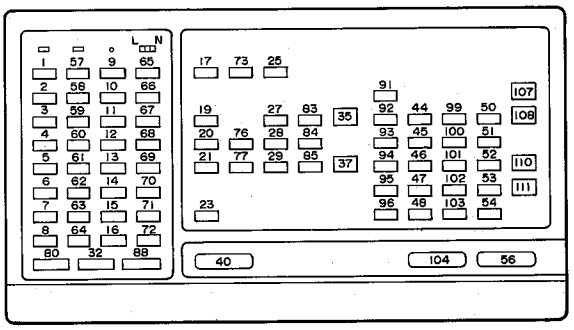
RX-830



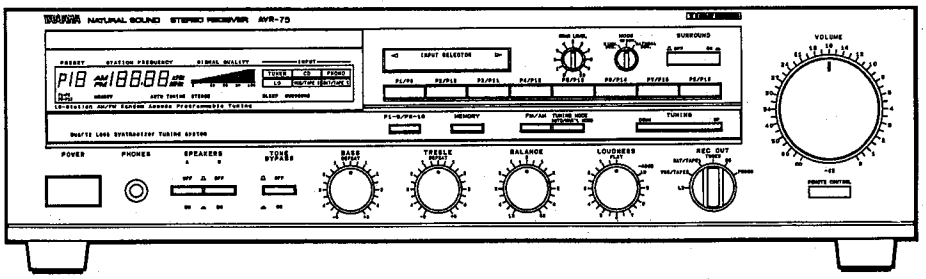
AVR-75
Remote Control
Transmitter



RX-830
Remote Control
Transmitter

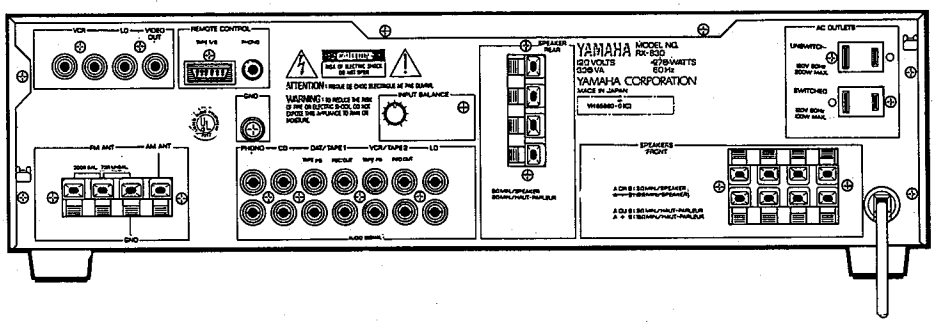


AVR-75

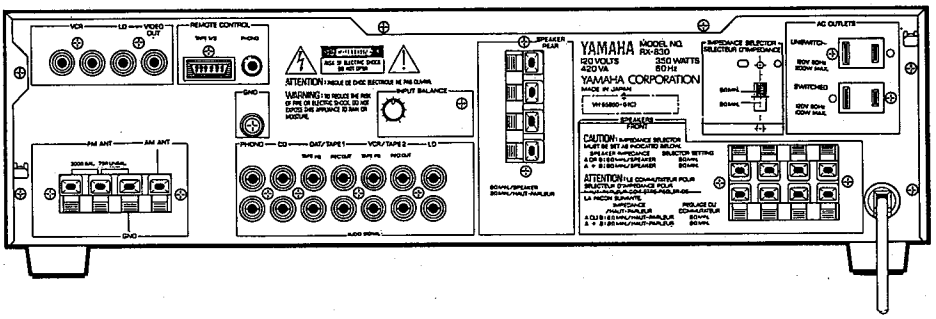


■ REAR PANELS

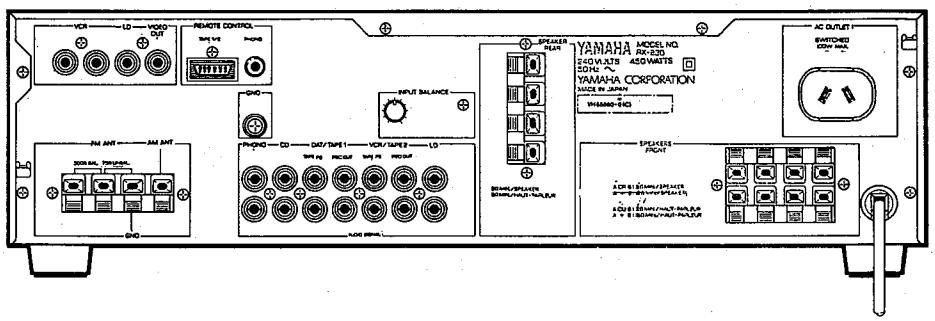
RX-830 U model



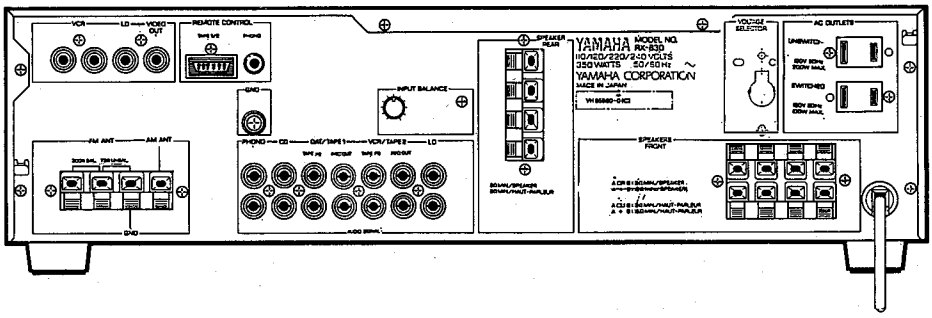
RX-830 C model



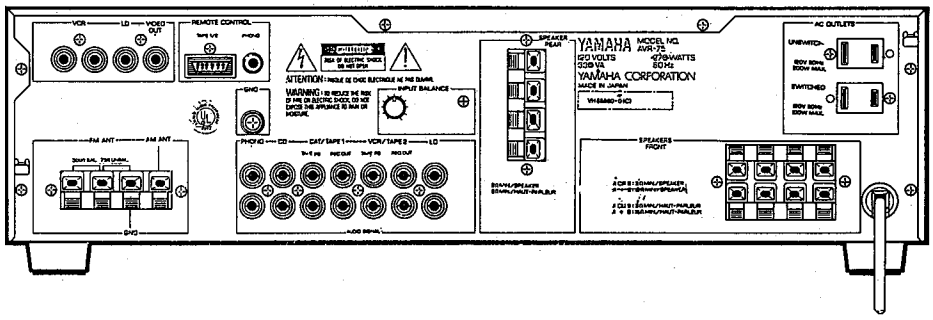
RX-830 A model



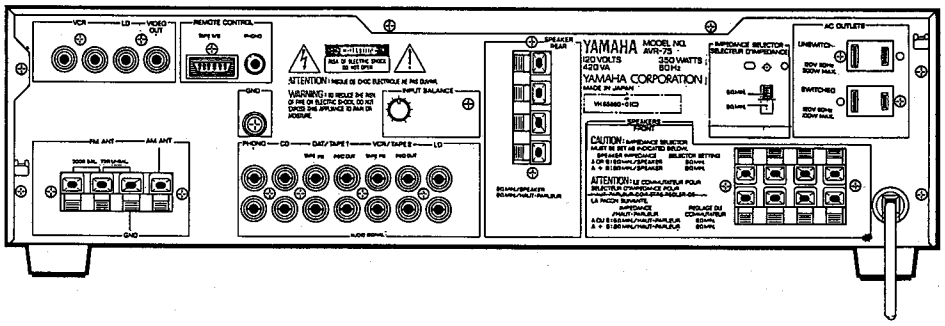
RX-830 P model



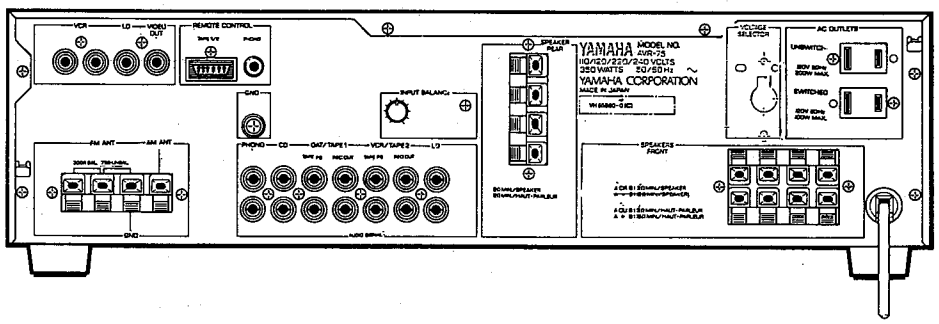
AVR-75 U model



AVR-75 C model



AVR-75 R,P model



■ SPECIFICATIONS

AUDIO SECTION

Minimum RMS Output Power per Channel (Front)
8 ohms, 20 Hz to 20 kHz, 0.015% THD ..... 70 W
6 ohms, 20 Hz to 20 kHz, 0.03% THD ..... 75 W

Output Power per Channel (Rear)
8 ohms, 1 kHz, 0.1% THD, rear amp direct measurement ..... 15 W

Dynamic Power per Channel (IHF)
8/6/4/2 ohms .....115/140/156/180 W

Power Band Width
8 ohms, 35 W, 0.1% THD .....10 Hz to 50 kHz

Damping Factor
8 ohms, 1 kHz 50

Input Sensitivity/Impedance
PHONO ..... 2.5 mV/47 k-ohms
CD/TAPE/VCR/LD .....150 mV/47 k-ohms

Input Sensitivity (New IHF)
PHONO ..... 0.3 mV
CD/TAPE/VCR/LD .....17.9 mV

Maximum Input Signal Level (1 kHz, 0.01% THD)
PHONO ..... 110 mV

Output Level/Impedance
REC OUT ..... 150 mV/1 k-ohms

Headphone Jack Rated Output/Impedance
8 ohms, 0.02 % THD ..... 0.8 V/220 ohms

Frequency Response (20 Hz to 20 kHz)
CD/TAPE/VCR/LD ..... ±0.5 dB

RIAA Equalization Deviation
PHONO ..... ±0.5 dB

Total Harmonic Distortion (20 Hz to 20 kHz)
PHONO to REC OUT (3 V) 0.007%
CD/TAPE/VCR/LD to SP OUT
(35 W/8 ohms) 0.009%

Intermodulation Distortion
CD/TAPE/VCR/LD (Rated Output/8 ohms) 0.01%

Signal-to-Noise Ratio (IHF-A Network)
PHONO (5 mV Input Shorted) ..... 92 dB
CD/TAPE/VCR/LD (Shorted) ..... 98 dB

Residual Noise (IHF-A Network) .....200 μV

Channel Separation (1 kHz/10 kHz, Vol. –30 dB)
PHONO (Input Shorted) ..... 59 dB
CD/TAPE/VCR/LD
(Input 5.1 k-ohms Terminated) ..... 57 dB

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

Continuous Loudness Control .....–40 dB (1 kHz)
(Level related equalization)

VIDEO SECTION

Input Sensitivity/Impedance ..... 1 V/75 ohms

Output Level/Impedance ..... 1 V/75 ohms

Maximum Input Level/Impedance
..... More than 1.5 V/75 ohms

FM SECTION

Tuning Range .....87.5 to 107.9 MHz

50 dB Quieting Sensitivity
Mono .....1.55 μV (15.1 dBf)
Stereo .....21 μV (37.7 dBf)

Usable Sensitivity
IHF Mono, 1 kHz, 100% mod., 75 ohms
.....0.8 μV (9.3 dBf)

Limitting Sensitivity ..... 0.94 μV

Image Response Ratio ..... 45 dB

IF Response Ratio ..... 80 dB

Spurious Response Ratio ..... 70 dB

AM Suppression Ratio ..... 55 dB

Capture Ratio ..... 1.5 dB

Alternate Channel Selectivity ..... 55 dB

Signal-to-Noise Ratio
(IHF) Mono/Stereo .....81/76 dB

Harmonic Distortion (1 kHz)
Mono/Stereo 0.07%

Stereo Separation (1 kHz) ..... 52 dB

Frequency Response
30 Hz to 15 kHz ..... 0 ±0.5 dB

AM SECTION

Tuning Range ..... 530 to 1,610 kHz

Usable Sensitivity .....100 μV/m

Selectivity ..... 32 dB

Signal-to-Noise Ratio ..... 50 dB

Image Response Ratio ..... 40 dB

Spurious Response Ratio ..... 50 dB

Harmonic Distortion (400 Hz) 0.3%

AUDIO SECTION

Output Level/Impedance
FM (100% mod., 1 kHz) ..... 500 mV/3.3 k-ohms
AM (30% mod., 400 Hz) ..... 150 mV/3.3 k-ohms

GENERAL

Power Supply
[U.S.A. and Canada models] .... AC 120 V, 60 Hz
[General model **PX model**]
..... AC 110–120/220–240 V, 60/50 Hz
[Australian model] **AC 240V 50Hz**
Power Consumption ..... 350 W

AC Outlets
Switched ..... 100 W max.
Unswitched ..... 200 W max.

Dimensions (W x H x D) ..... 435 x 126 x 291 mm
(17-1/8" x 4-15/16" x 11-7/16")

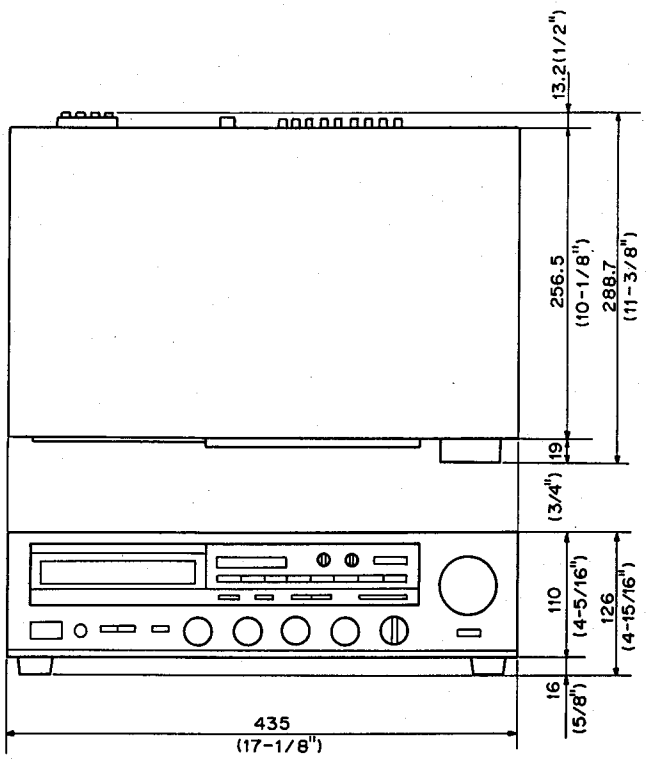
Weight ..... 7.5 kg (16 lbs. 8 oz.)

Accessories .....AM loop antenna x 1
Indoor FM antenna x 1
Remote control cable (mini-plug) x 1
Remote control cable (6-pin) x 1
Remote control transmitter x 1
Battery x 2

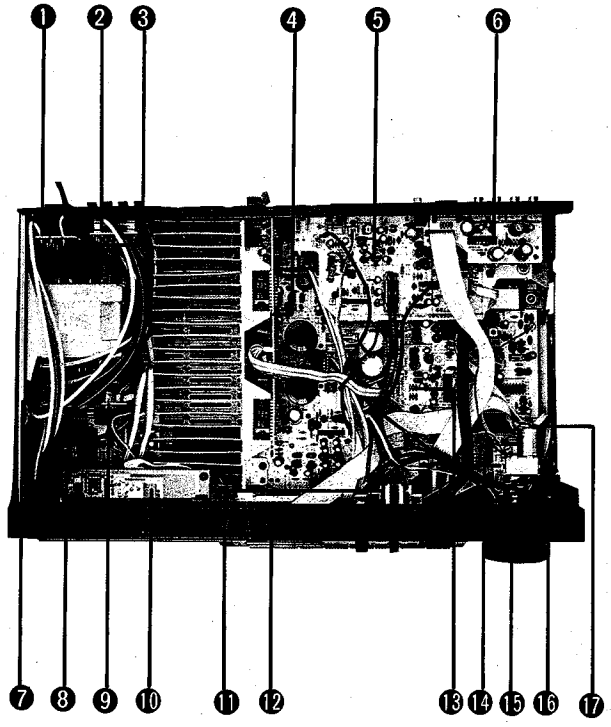
Specifications subject to change without notice.

U ....U.S.A model **R ....General model**
C ....Canadian model **P ....PX model**
A ....Austlalian model

■ DIMENSIONS



■ INTERNAL VIEW



❶ Main Circuit Board (11)
(U, C, R, P models)
Main Circuit Board (13)
(A, model only)
❷ Main Circuit Board (12)
(R, P models)
❸ Main Circuit Board (4)
❹ Surround Circuit Board (2)
❺ Surround Circuit Board (1)
❻ Main Circuit Board (6)
❼ Main Circuit Board (9)
❽ Main Circuit Board (3)
❾ Main Circuit Board (5)
❿ LCD Circuit
⓫ Surround Circuit Board (3)
⓬ Surround Circuit Board (4)
⓭ Main Circuit Board (1)
⓮ Main Circuit Board (2)
⓯ Main Circuit Board (10)
⓰ Main Circuit Board (8)
⓱ Main Circuit Board (7)

■ DISASSEMBLY PROCEDURES (Remove parts in disassembly 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
   Remove 4 screws (②) and 4 hooks in Fig.1. and pull the Front Panel forward.
3. Removal of Rear Panel
   Remove 16 screws (③) in Fig.1.
4. Removal of Radiater
   a. Remove 3 screws (④) in Fig.1.
   b. Remove 1 plastic rivet (⑥) in Fig.2.
   c. Remove 4 screws (⑦) in Fig.2.
5. Check of Main Circuit Board (1) and replacement of parts.
   a. Remove 3 screws (⑤) in Fig.1.
   b. Remove the Main Chassis as shown in Fig.2. In this condition it is possible for you check the Main circuit Board (1),and replace the parts.

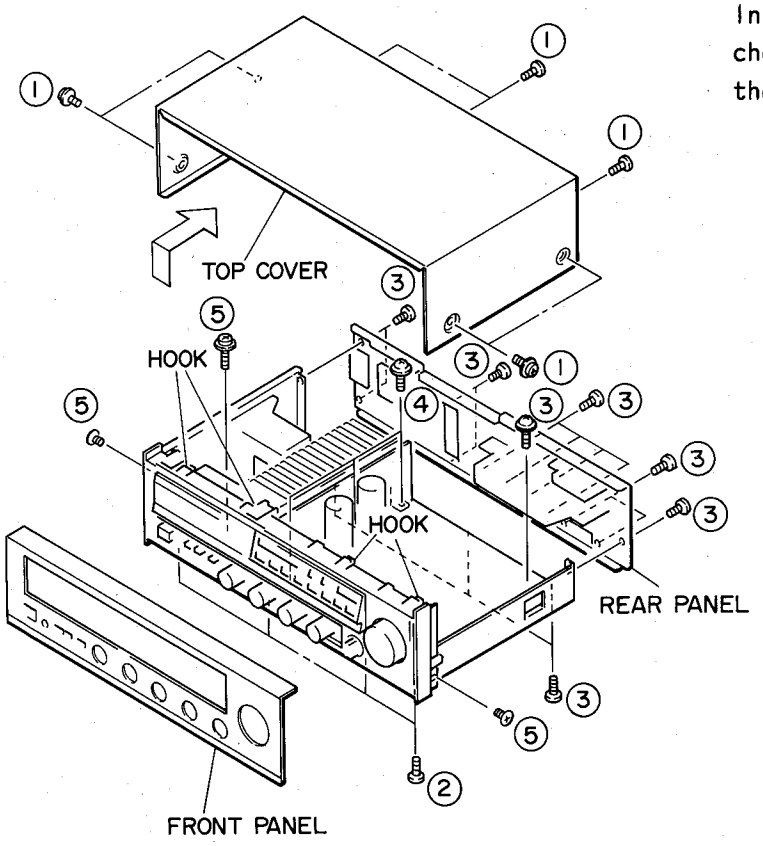


Fig.1.

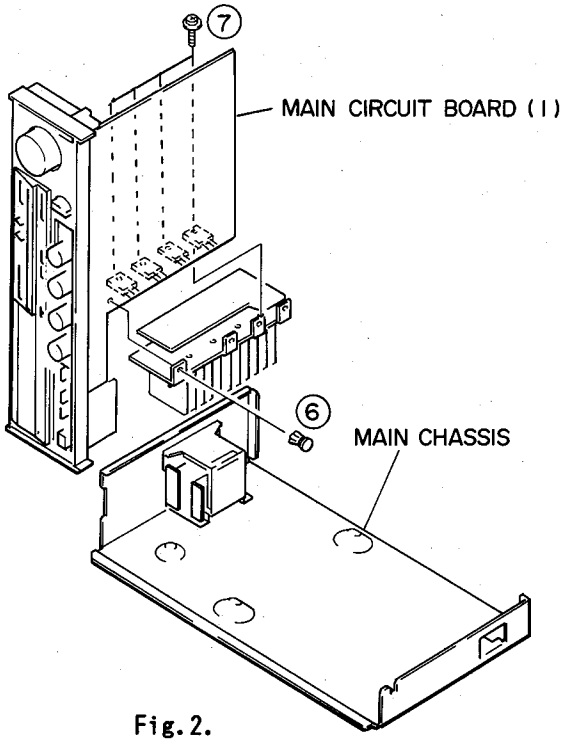


Fig.2.

■ ADJUSTMENTS

1. Before adjustment
   1) After the power switch is pushed on,wait for 5 minutes before measuring,to be sure of the most stable operation.
   2) Adjust the OSC coil and IFT with a nonferrous screw driver.
   3) Set the switches to the following positions.
      TUNING MODE.....AUTO
   4) Proceed with the AM section adjustments after having finished the FM section adjustment.
   5) 0dBμ= 1 μV Ex.: 60dBμ=1mV

2. Measuring instruments abbreviation
   FM SG : FM signal generator
   SSG : Stereo signal generator
   AM SG : AM signal generator
   DIST.M : Distortion meter
   FC : Frequency counter
   A.C.V.M : AC voltmeter
   D.C.V.M : DC voltmeter
   OSC : Oscilloscope

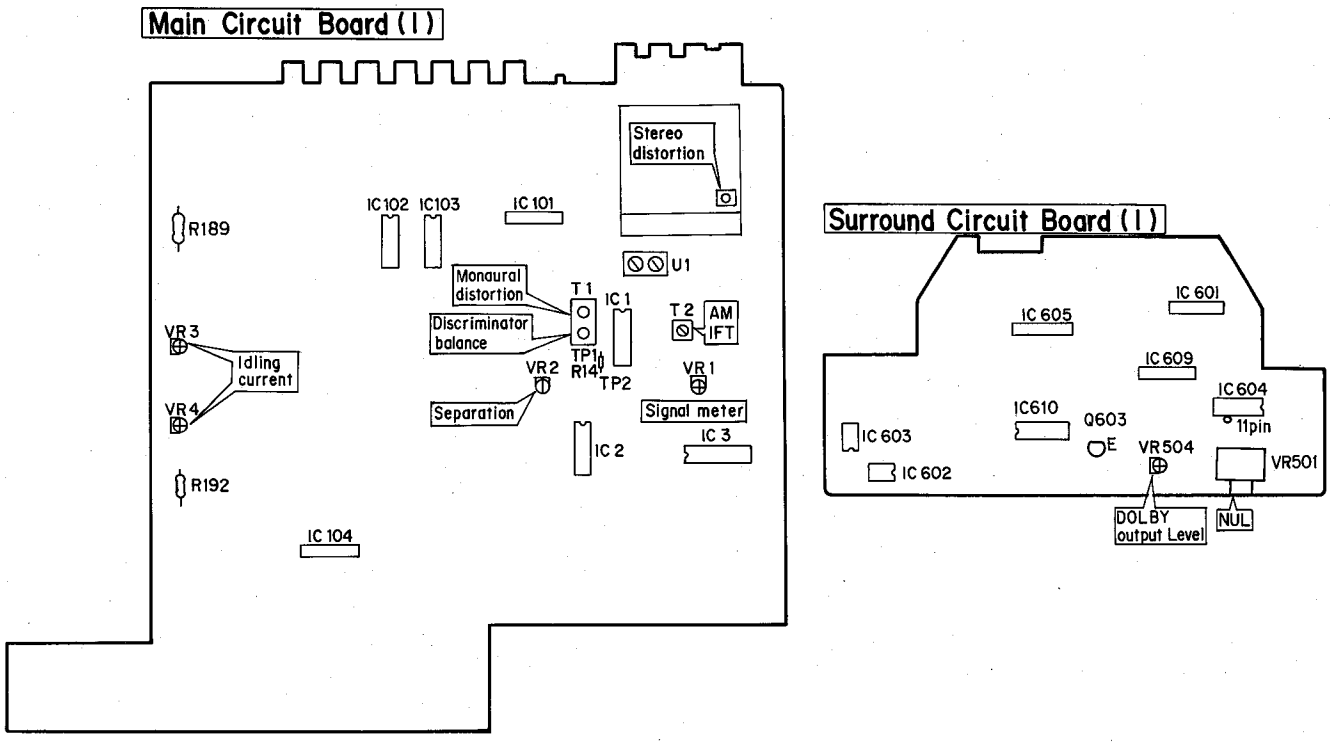
<POWER SUPPLY CHECK>

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

Test point	Rating or standard		C model	Remark
C199(+)	+B	+50V±5V	+40V±5V	Make sure that AC line voltage comes within
C200(-)	-B	-50V±5V	-40V±5V	
C215(+)	+C	+28V±3V	+28V±3V	
C216(-)	-C	-28V±3+	-28V±3V	
D106 Anode	+40V	+40V±5V	+34V±5V	
Q123 EMITTER	+12V	+12.6V±0.5V	+12.6V±0.5V	
Q124 EMITTER	-12V	-12.6V±0.5V	-12.6V±0.5V	
D107 Anode	+9V	+9.5V±0.5V	+9.5V±0.5V	
D108 Cathode	-9V	-9.5V±0.5V	-9.5V±0.5V	
IC4 64pin	5V	+5.0V±0.3V	+5.0V±0.3V	

Models	AC line voltage
U,C	120V± 10%
A	240V± 10%

TEST POINT



<AUDIO SECTION >

Step	Item to be adjusted	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard	Remarks
1	IDLING CURRENT	Across the terminal of R189	DCVM	VR3 (L ch)	After the POWER switch is turned on, wait about 5 minutes in nonloaded condition.	2.5mV ~3.5mV DC	non signal
		Across the terminal of R192		VR4 (R ch)			
2	DOLBY DISTORTION	REAR CH. SP OUTPUT	DIST-M ACVM	VR504	Make distortion minimum.	111V±0.5V 1.5% or less	CD INPUT terminal 400Hz 150mV

<FM TUNER SECTION>

- Use 19kHz L.P.F. to measeure the output.
- 100% modulation means that the Frequency Deviation is 75kHz.
- Shorting IC4(49pin) and GND makes it possible to preset as given in the under-mentioned table, but if the shortening is conducted, the memory that user preset puts out. Therefore, use the method only when the preset has to be done by all means.

	SW107 ※ (R, P models)	P1/P9	P2/P10	P3/P11	P4/P12	P5/P13	P6/P14	P7/P15	P8/P16
U.C	AM 10kHz FM 100kHz	AM 630kHz	AM 1080kHz	AM 1440kHz	FM 87.5MHz	FM 95.1MHz	FM 98.1MHz	FM 101.5MHz	FM 107.9MHz
A	AM 9kHz FM 50kHz	AM 630kHz	AM 1080Khz	AM 1440kHz	FM 87.5MHz	FM 95.1MHz	FM 98.1MHz	FM 101.5MHz	FM 108.0MHz

Note :※ Marked.
U, C models change by step of AM10kHz, FM200kHz.
A model change by step of AM9kHz, FM50kHz.

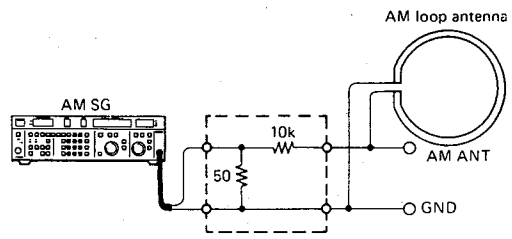
Step	Item to be adjusted	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard	Remarks
1	Discriminator balance	FM ANT 300Ω	FM SG 98.1MHz 70dB μ MONO 100Hz 100% MOD	T1 (Discriminator balance)	Receive 98.1MHz and adjust so that digital voltmeter reading is 0 ±50mV.	0±50mV DCVM	Tuned point.
		TP1 and TP2	DCVM				
2	Monaural distortion	FM ANT 300Ω	FM SG 98.1MHz 70dB μ MONO 100Hz 100% MOD	T1 (Monaural distortion)	Reduce distortion to minimum		
		REC OUT	DIST-M LPF, OSC				
3	Stereo distortion	FM ANT 300Ω	FM SG, SSG 98.1MHz 70dB μ STEREO L, R 1kHz 100% MOD	FRONT-END IFT	Same as step 2.	-46dB or less (1kHz)	Confirm that STEREO indicator lights up.
		REC OUT	DIST-M LPF, OSC				
4	Confirmation of Monaural distortion	FM ANT 300Ω	FM SG 98.1MHz 70dB μ MONO 1kHz 100% MOD		Confirm that the monaural distortion is satisfied the specifications.	-56dB or less (1kHz)	If not, return to step 2 and re-adjust.
		REC OUT	DIST-M LPF, OSC				

Step	Item to be adjusted	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard	Remarks
5	Sensitivity	FM ANT 300Ω	FM SG 98.1MHz MONO 1kHz 100% MOD		Lower the output level of FM SG from 15dBμ so that ACVM reading (S/N) is 30dB. (Ratio between the moduration (S) and non-moduration (N) is 30dB). And confirm that the SG level satisfied the specifications.	10dBμ or less	
		REC OUT	ACVM OSC				
6	Separation adjustment	FM ANT 300Ω	FM SG SSG 98.1MHz 70dB μ STEREO L,R 1kHz 100% MOD	VR2 (SEPARATION)	Set SSG output to L or R and make signal leakage for opposite channel minimum.	More than 36dB	
		REC OUT	ACVM L.P.F				
7	Confirmation of discriminator balance	FM ANT 300Ω	FM SG 98.1MHz 70dB μ MONO 1kHz 100% MOD		Receive 98.1MHz and adjust so that digital voltmeter reading is 0 ±50mV.	0±50mV DCVM	Tuned point
		TP1 and TP2	DCVM				
8	Signal meter	FM ANT 300Ω	FM SG 98.1MHz 45dB μ MONO 1kHz 30% MOD	VR1	Adjust that all signal quality indicators light up.		Confirm that all signal quality indicators go off at detuned point.
		TP3 and GND	DCVM				
9	Confirmation of auto search reception	FM ANT 300Ω	FM SG 98.1MHz 32dB μ/300Ω MONO 1kHz 30% MOD		Check that auto search reception is possible with UP/DOWN key.		Confirm that muting is performed at auto reception.

<AM TUNER SECTION>

- Connect the AM loop antenna to the AM ANT terminal.
- Connect the AM dummy antenna for adjustment to AM AG.
- Check that the AM SG precision is within ±0.1kHz.

AM-DUMMY ANTENNA CONNECTION



Step	Item to be adjusted	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard
1	IFT adjustment	AM ANT	AM dummy antenna AM SG 1080kHz 50dB μ 400Hz, 30% MOD	T2	Adjust so that the detector output is maximum.	
		REC OUT	ACVM OSC			
2	Confirmation of sensitivity	AM ANT	AM dummy antenna AM SG 630kHz 1080kHz 1440kHz 400Hz, 30% MOD		Lower the output level of AM SG from 80dBμ so that ACVM reading (S/N) is 20dB (Ratio between the moduration (S) and non-moduration (N) is 20dB). And confirm that the SG level is satisfied the specifications.	60dB μ or less
		REC OUT	ACVM			
3	Signal meter full scale	AM ANT	AM dummy antenna AM SG 1080kHz 100dBμ 400Hz, 30% MOD		All signal quality indicators light up.	When not adjusted none light.
4	Confirmation of auto-search	AM ANT	AM dummy antenna Am SG 1080kHz 65dB μ 400Hz, 30% MOD		Check that auto search reception is possible with the UP/DOWN key.	Sound is muted during search operation.

〈DIGITAL CONTROL SECTION 〉

Step	Cofirmation item	Connection terminal	Instrument required	Operation key	Confirmation method
1	Preset memory	300Ω FM ANT	FM SG.SSG 98.1MHz 70dBμ STEREO.L.R 1kHz.100% MOD	·FM.AM ·TUNING MODE (AUTO) ·TUNING (UP or DOWN) ·MEMORY ·PRESET STATION ·P1-P8/P9-P16	1.Receive FM 98.1MHz by means of auto search. 2.Press MEMORY key→MEMORY indicator flashes about 5 seconds. 3.Press P1→MEMORY indicator goes off and P1 is displayed.
		AM ANT	AM SG AM dummy antenna 1080kHz ±0.1kHz 65dBμ 400Hz.30% MOD		4.Receive AM 1080kHz. 5.Press TUNING MODE key →AUTO indicator goes off. 6.Press P1-8/P9-16 key→P9-16 indicator flashes. 7.Press MEMORY key→MEMORY indicator flashes about 5 seconds. 8.Press P15 →MEMORY indicator goes off and P15 is displayed. 9.Press P1 and P15 and check that content is read out properly.
2	Tuning mode	Same as step 1	Same as step 1	·FM.AM ·TUNING MODE (MAN'L) ·TUNING (UP or DOWN)	1.Tune to FM 98.1MHz. 2.Press TUNING MODE key →AUTO,STEREO indicators go off. 3.Tune to AM 1080kHz →AUTO indicator goes off. 4.Check that Manual Search reception is possible with the UP/DOWN key.
3	Last station memory			PRESET STATION P1 POWER	1.Press P1. →FM 98.1MHz is displayed. 2.Turn POWER key off. 3.After 5 seconds,turn POWER key on. 4.Check that P1 content →P1 and FM 98.1MHz is displayed.

< DOLBY SECTION>

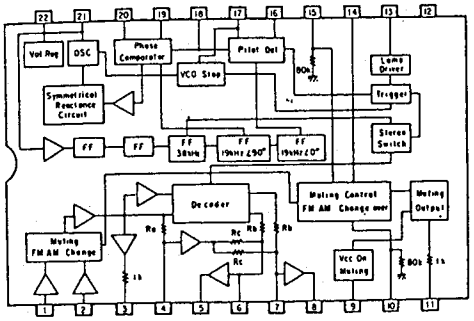
Step	Item to be adjusted	Connection Terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard
1	Confirmation of frequency response (6kHz)	Q603 Emitter	ACVM A.F.OSC		Read the numerical valus of each ACVM when 400Hz & 6kHz signal is input to either Lch or Rch.	Within 2dB based on 400Hz. (150mV RMS)
2	Dolby Output Adjustment	IC604(11pin)	ACVM A.F.OSC	VR504	Read Output Level of IC604's 11pin when signal of 400Hz & 150mV is input to either Lch or Rch	190mV±5mV
3	Confirmation of frequency characteristics	Rear SP Output	ACVM A.F.OSC	See Table 1.		
4	S/N confiramtion of surround Mode	Rear SP Output	ACVM A.F.OSC		Confirm the reading of the SP OUT according to each mode respectively when the signal of 400Hz, 150mV, is input.	DOLBY MODE : More than 55dB SIMULATED,NATURAL MODE: More than 60dB
5	Confirmation of SURROUND Amp.	Rear SP Output	ACVM A.F.OSC		Check the reading of the SP OUT when Signal of 400Hz,55mV RMS is input to input terminal.	21dBV±3dB(11V,8 Ω)

Table 1 : Confiramtion of Frequency Characteristics by each mode

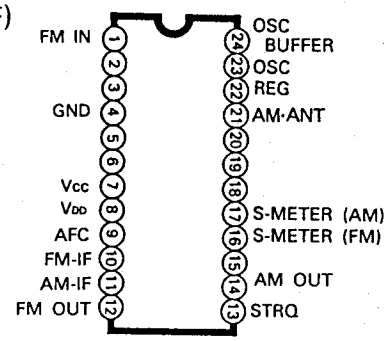
Lch or Rch Input	NATURAL MODE L	NATURAL MODE R	SIMULATE MODE Both Channel	DOLBY MODE Both Channel
200Hz	0	1 ± 1	-3.5dB ± 1dB	7kHz is -3 ±¼dB DELAY TIME 20±4mSEC making 400Hz=0dB the basis of the calculation.
1kHz	6 ± 1	Less than	2.5dB ± 1dB	
4kHz	Less than	7.0±2	Less than -6.5dB	
10kHz	5 ± 2	4.5±2	1.5dB±1dB	
400Hz	<0.7%		<0.7%	<1.5%
VR501 NUL				Read the REAR SP OUT Terminal when a 1kHz signal (the same level and inphase) is input to both Lch and Rch simultaneously. Less than -30dB(1kHz)

■ IC BLOCK

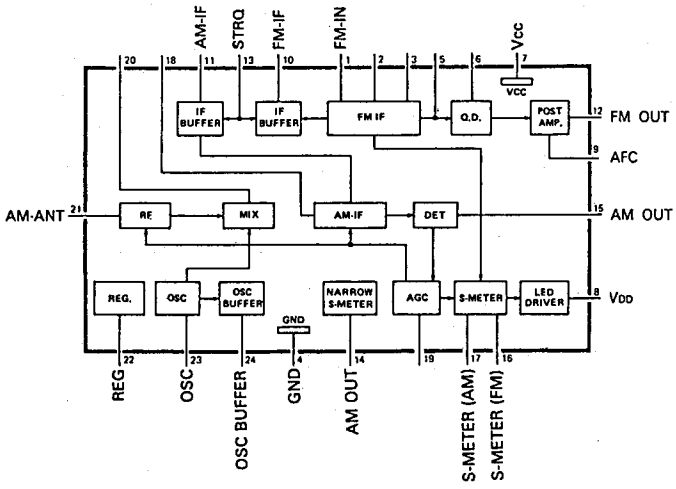
IC2 : LA3401
(MPX)



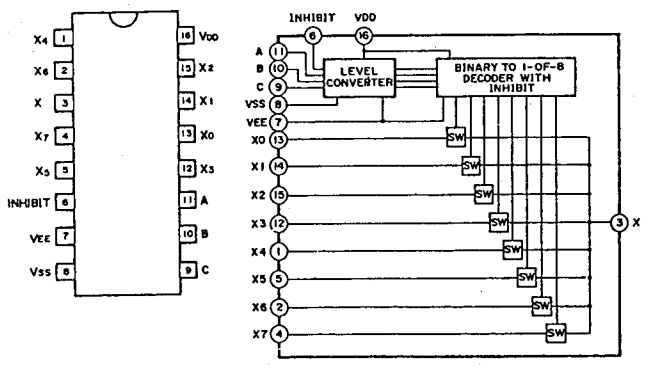
IC1 : LA1266
(AM/FM IF)



Pin No.	Function
1	Input (AM)
2	Input (FM)
3	Composite Amp Output
4	Separation Adi
5	Post Amp Output
6	Post Amp Input
7	Post Amp Input
8	Post Amp Output
9	Muting ON (Vcc)
10	AM/FM Select
11	Muting Output
12	GND
13	Stereo Indicator
14	Mute Select
15	Muting
16	Pilot Detector Filter
17	Pilot Detector Filter, VCO Stop
18	PLL Input
19	Loop Filter
20	Loop Filter
21	OSC
22	Vcc



IC102,103 : TC4051BP
(Single 8-Channel Multiplexer/Demultiplexer)

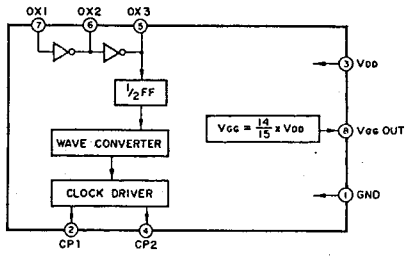


Truth Table

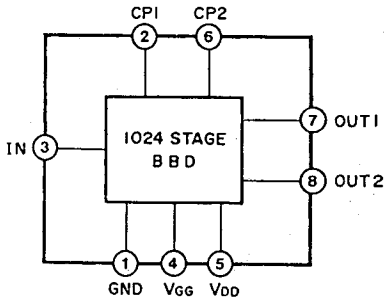
CONTROL INPUT INHIBIT	C	B	A	"ON" CHANNEL
L	L	L	L	X_0
L	L	L	H	X_1
L	L	H	L	X_2
L	L	H	H	X_3
L	H	L	L	X_4
L	H	L	H	X_5
L	H	H	L	X_6
L	H	H	H	X_7
H	X	X	X	NONE

H: HIGH LEVEL L: LOW LEVEL X: H or L

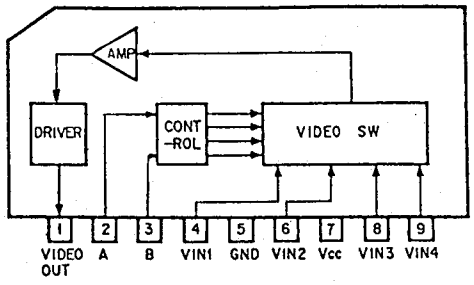
IC603 : MN3101
(Delay Time Controller)



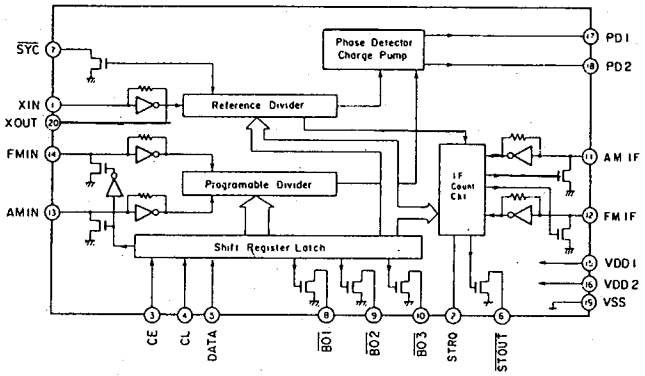
IC602 : MN3007Y
(Delay)



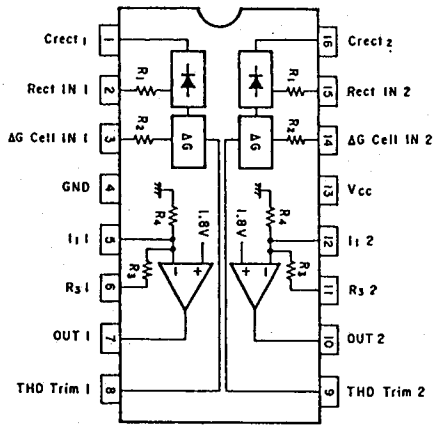
IC301 : LA7952
(Video Switch)



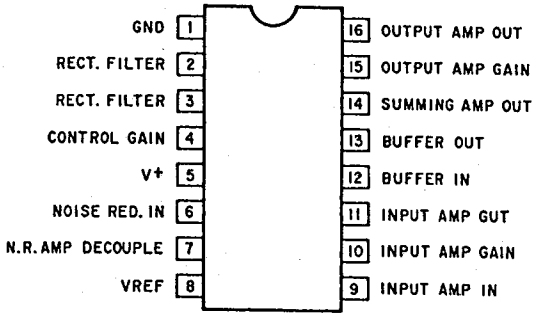
IC3 : LM7000N
(PLL)

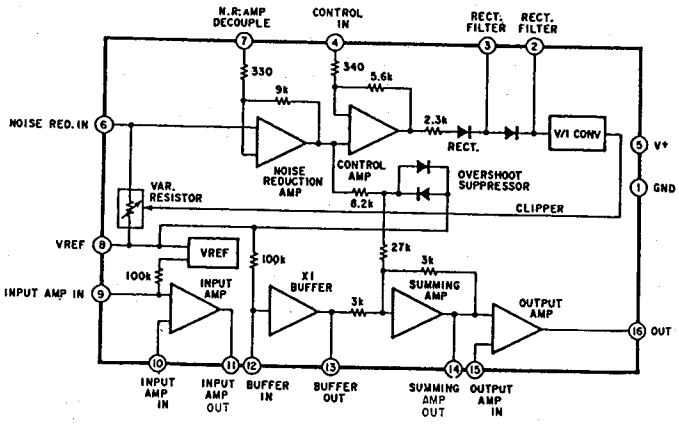


IC610 : μPC1571
(Compressor)

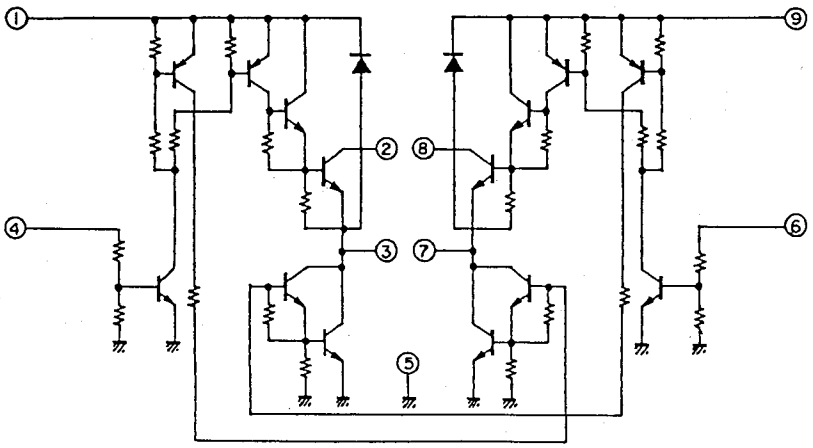


IC604 : LA2730
(Dolby Encoder/Decoder)

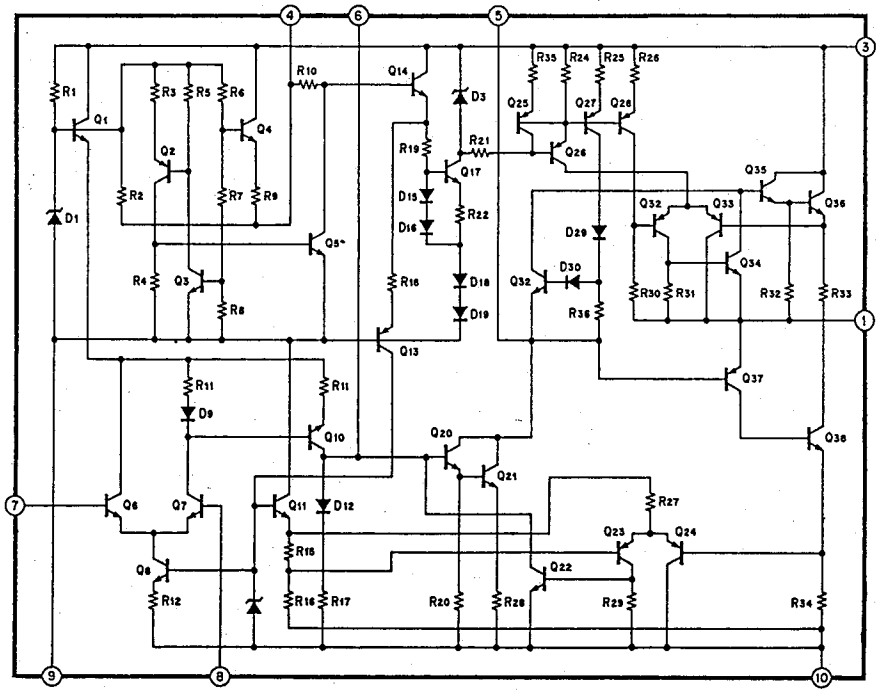




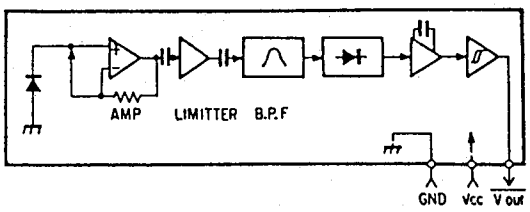
IC5 : M54542L
(MOTER DRIVE)



IC607, 608 : μPC1188H
(Power IC)

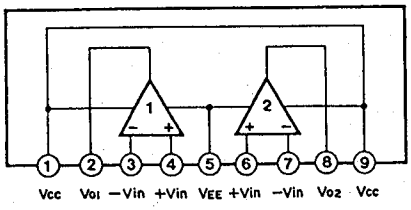


U2 : GP1U501X
(Remote Control Receptor Unit)



IC605, 606 : NJM4558S
(Ope-Amp)
IC601, 609 : μPC4570HA
(Ope-Amp)

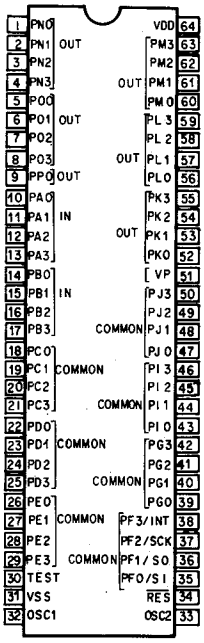
IC101, 104 : NJM2043S
(Pre-Amp)



RX-830/AVR-75

■ μ-COM DATA

IC4 : LC6554H-4084
(4-Bit μ - COM)



PIN		I/O	FUNCTION		OPTION
1	PN 0	0	TP 0		PD
2	PN 1	0	TP 1	CASSETTE RS SIGNAL	PD
3	PN 2	0	TP 2		PD
4	PN 3	0	TP 3		PD
5	PO 0	0	D1		OD
6	PO 1	0	D2		OD
7	PO 2	0	D3	KEY DIGIT	OD
8	PO 3	0	D4		OD
9	PP 0	0	D5		OD
10	PA 0	I	K1		-(EX PD)
11	PA 1	I	K2	KEY INPUT	-(EX PD)
12	PA 2	I	K3		-(EX PD)
13	PA 3	I	K4		-(EX PD)
14	PB 0	I	CDD	CD DIRECT H:CD DIRECT DISPLAY INPUT L:Normal	-
15	PB 1	I	SLEEP	SLEEP TIMER SW	-
16	PB 2	I	8-6	AUDIO INPUT 8 IN ↔ 6 IN SELECT (H:8 IN L:6 IN)	-
17	PB 3	I	HOLD	(NC) to GND	-
18	PC 0	0	PON	MAIN RELAY DRIVE H:ON L:OFF	PU
19	PC 1	I	A1	TUNER Markets Select	PU RESET
20	PC 2	I	A2		PU "L"
21	PC 3	I	PSW	LOCK SW(G model) H:ON NON LOCK SW(EXCEPT G) L:OFF	OD
22	PD 0	0	V1	VIDEO SIGNAL SELECT	PU RESET
23	PD 1	0	V2		PU
24	PD 2	0	VOLUP	VR Motor IC DRIVE SIGNAL	PU "L"
25	PD 3	0	VOLDN		PU
26	PE 0	0	SP.A	NC	PU
27	PE 1	0	SP.B		PU
28	PE 2	I	PODN	POWER DOWN DETECT H:Normal L:Power Down	OD(EX PU)
29	PE 3	0	STBY	SURROUND μ-COM POWER DOWN SIGNAL H:Normal L:Power Down	PU
30	TEST	-	TEST	to GND	-

PIN		I/O	FUNCTION		OPTION
64	V_{DD}	-	V_{DD}		
63	PM 3	0	PLRS		PD
62	PM 2	0	OUT 3		PD
61	PM 1	0	OUT 2	INPUT SELECTOR	PD
60	PM 0	0	OUT 1	CODE OUTPUT	PD
59	PL 3	0	CDV	INPUT 7	OD
58	PL 2	0	VCR 2	INPUT 6	OD
57	PL 1	0	VCR 1	INPUT 5	OD
56	PL 0	0	TAPE/VCR	INPUT 4 H:ON	OD
55	PK 3	0	DAT	INPUT 3 L:OFF	OD
54	PK 2	0	TUN	INPUT 2	OD
53	PK 1	0	CD	INPUT 1	OD
52	PK 0	0	PHONO	INPUT 0	OD
51	Vp	-	Vp	PULL DOWN SOURCE to GND	-
50	PJ 3	0	A MUT	AUDIO MUTE H:ON L:OFF	PU
49	PJ 2	0	TEST	TUNER TEST TERMINAL	PU
48	PJ 1	0	MUTE	MUTE H:ON L:OFF	OD(EX PU)
47	PJ 0	0	WIDE	FM IF RANGE SELECT	PU
46	PI 3	0	T MUT	TUNER MUTE H:MUTE L:OFF	OD(EX PU)
45	PI 2	0	MONO	MONAURAL H:MONO L:AUTO	OD(EX PU)
44	PI 1	0	INH	LC7583 INH	PU
43	PI 0	0	CE 2	LC7583 CE	PU
42	PG 3	0	STRQ	LM7000N STRQ	PU
41	PG 2	0	CE 1	LM7000N CE	PU
40	PG 1	0	CL	LC7583 LM7000N CLOCK	PU
39	PG 0	0	DATA	LC7583 LM7000N DATA	PU
38	PF 3	I	REMO	REMOTE CONTROL INPUT	OD
37	PF 2	0	STO	ST OUT	PU
36	PF 1	I	STSG	STOP SIGNAL	OD(EX PU)
35	PF 0	I	ST	STEREO	OD(EX PU)
34	RES	I	RES	RES	-
33	OSC 2	-	OSC 2		
32	OSC 1	-	OSC 1		
31	Vss	-			-

Input Selecter

Function (display) / Pin No.	LD	VCR2	VCR1	TAPE2	TAPE1	DAT/ TUNER	CD	PHONO
PM0 (60)	1	0	1	0	1	0	1	0
PM1 (61)	1	1	0	0	1	1	0	0
PM2 (62)	1	1	1	1	0	0	0	0
PD0 (22)	1	1	0	-	-	-	-	-
PD1 (23)	0	1	1	-	-	-	-	-

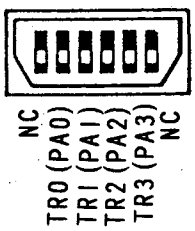
Remote Control (PHONO)

VOL / Pin No.	UP	DOWN
PD2 (24)	1	0
PD3 (25)	0	1

Remote Control (Tape)

Function (display) / Pin No.	PLAY	◁◁	▷▷	□	REC/ PAUSE	REC/ MUTE	A/B	DIR A	DIR B
PA0 (10)	0	1	0	1	1	0	1	0	1
PA1 (11)	0	1	1	0	0	1	1	0	0
PA2 (12)	1	0	0	0	1	1	1	1	1
PA3 (13)	0	0	0	0	0	0	1	1	1

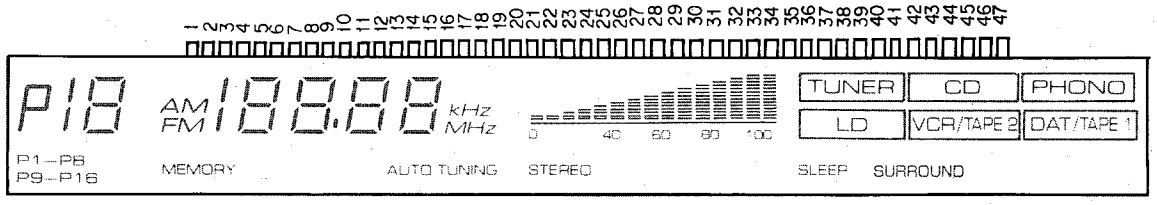
●remote Control Terminal (Tape)



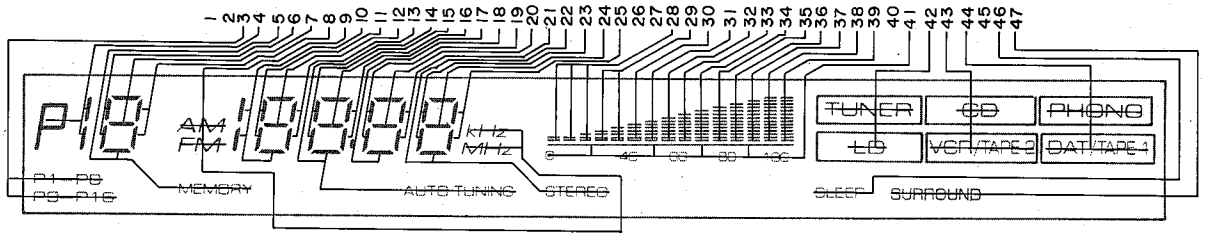
When checking the Remote Control function, connect the Remote Control Cable and Pin-plug cable securely.
(Pin-plug cable forms Remote Control GND circuit.)

■ DISPLAY Pin Connection

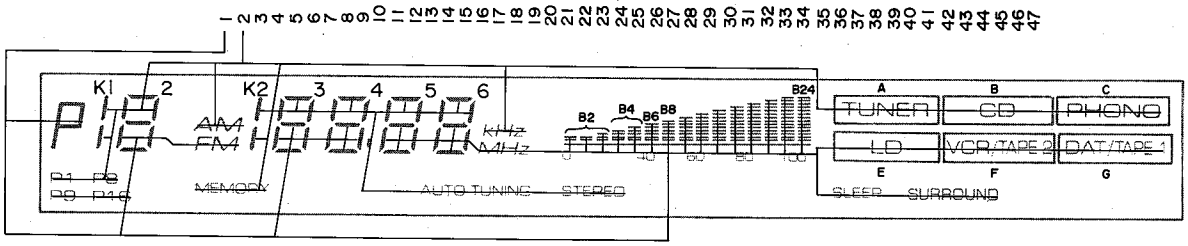
LCD : LCD8049MJP (AVR-75)
LCD8049BJP (RX-830)



SEGMENT



COMMON



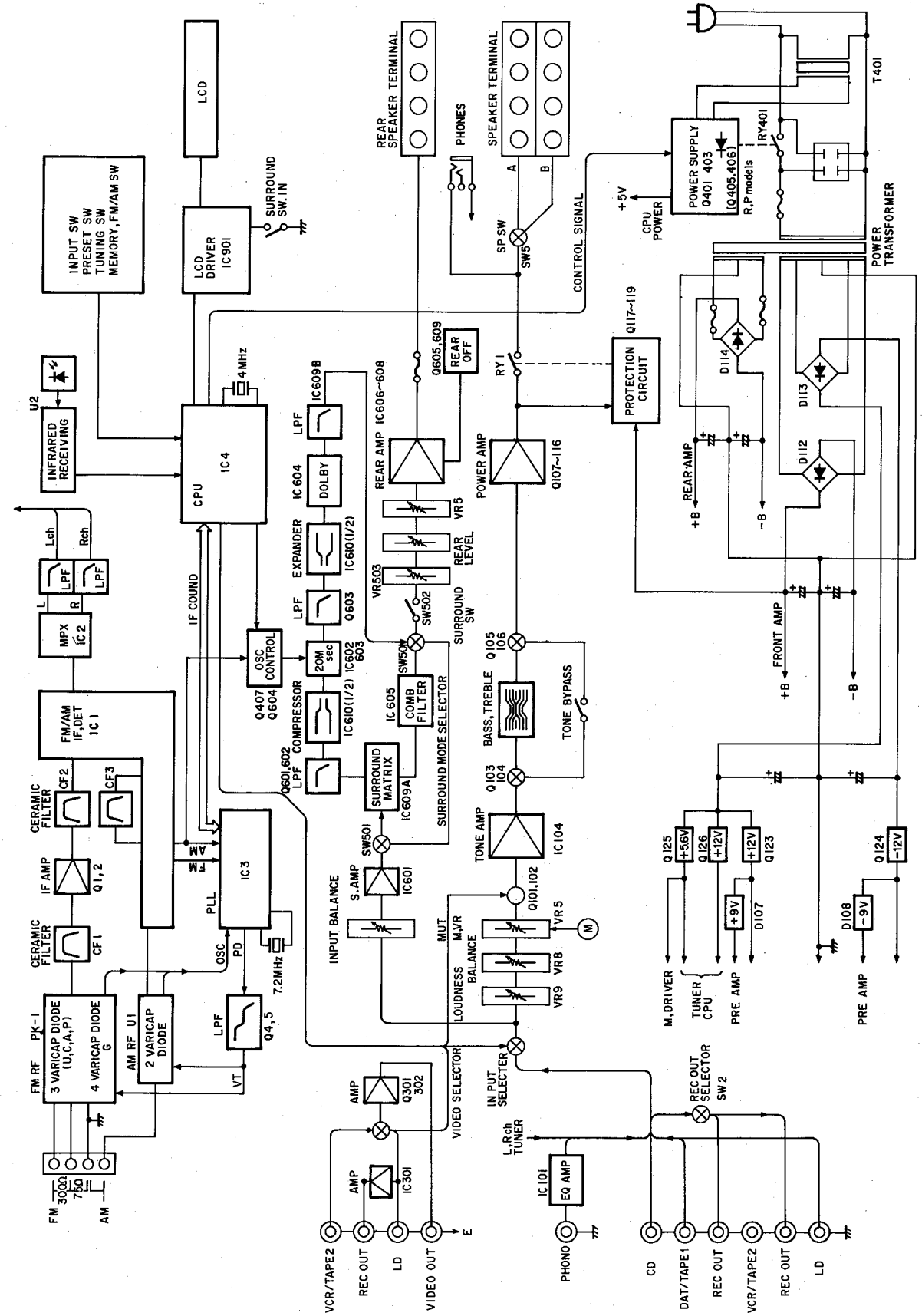
NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
COM1	-	COM	P1-P8	K1	MEMORY	2f	2a	2b	AM kHz	K2	3f	3a	3b	1)	4f	4a	4b	COL
COM2	COM	-	P9-P18	P	2d	2e	2g	2c	FM MHz	3d	3e	3g	3c	4d	4e	4g	4c	5d

NO	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
COM1	5f	5a	5b	STEREO	6f	6a	6b	-	-	-	-	-	-	-	-	-	-	-
COM2	5e	5g	5c	6d	6e	6g	6c	-	-	B2	B4	B6	B8	B10	B12	B14	B16	B18

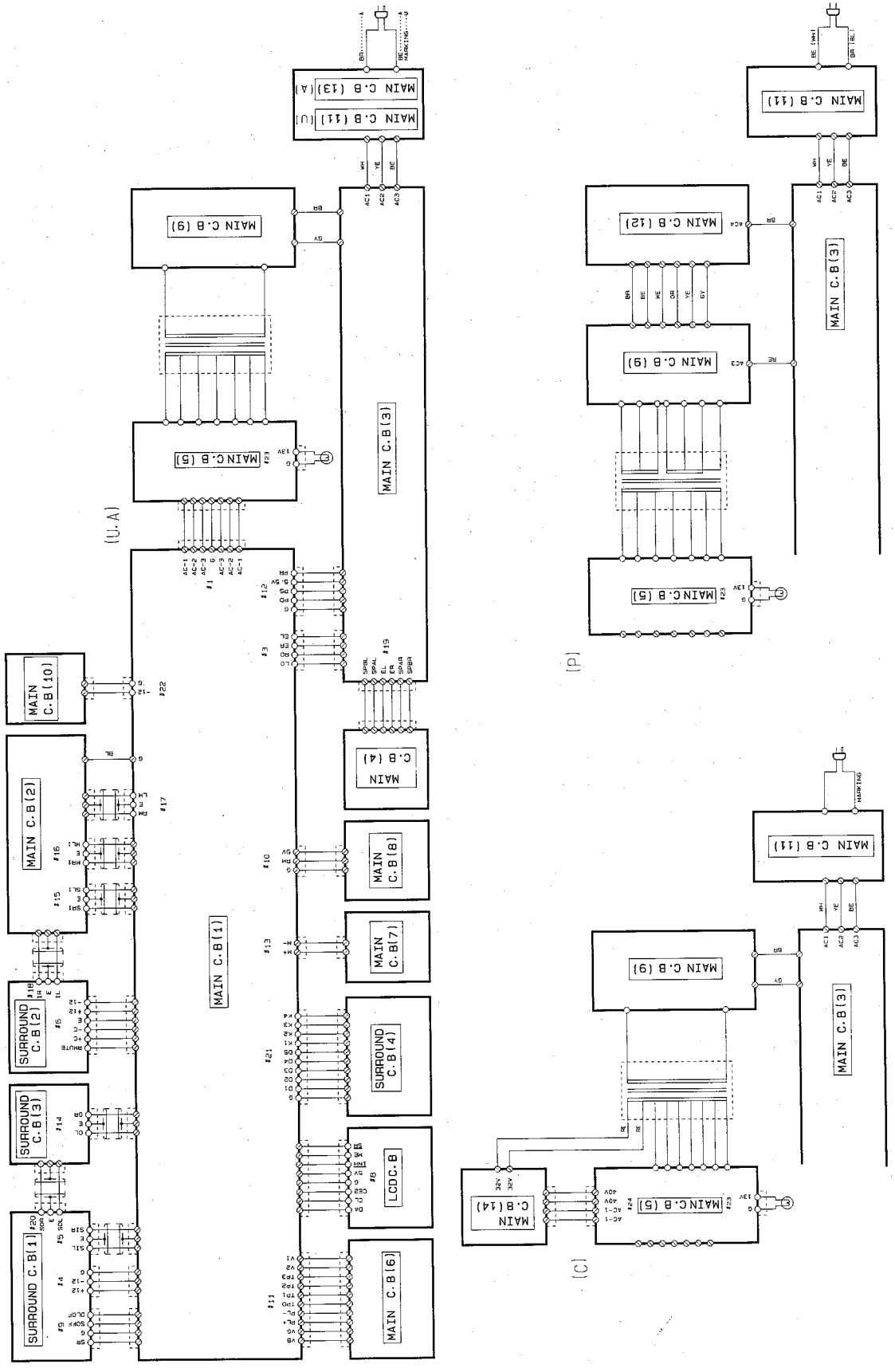
NO	37	38	39	40	41	42	43	44	45	46	47
COM1	-	-	-	-	-	A	B	C	-	-	-
COM2	B20	B22	B24	-	2)	E	F	G	-	SLEEP	3)

1) AUTO TUNING
2) 0 40 60 80 100
3) SURROUND

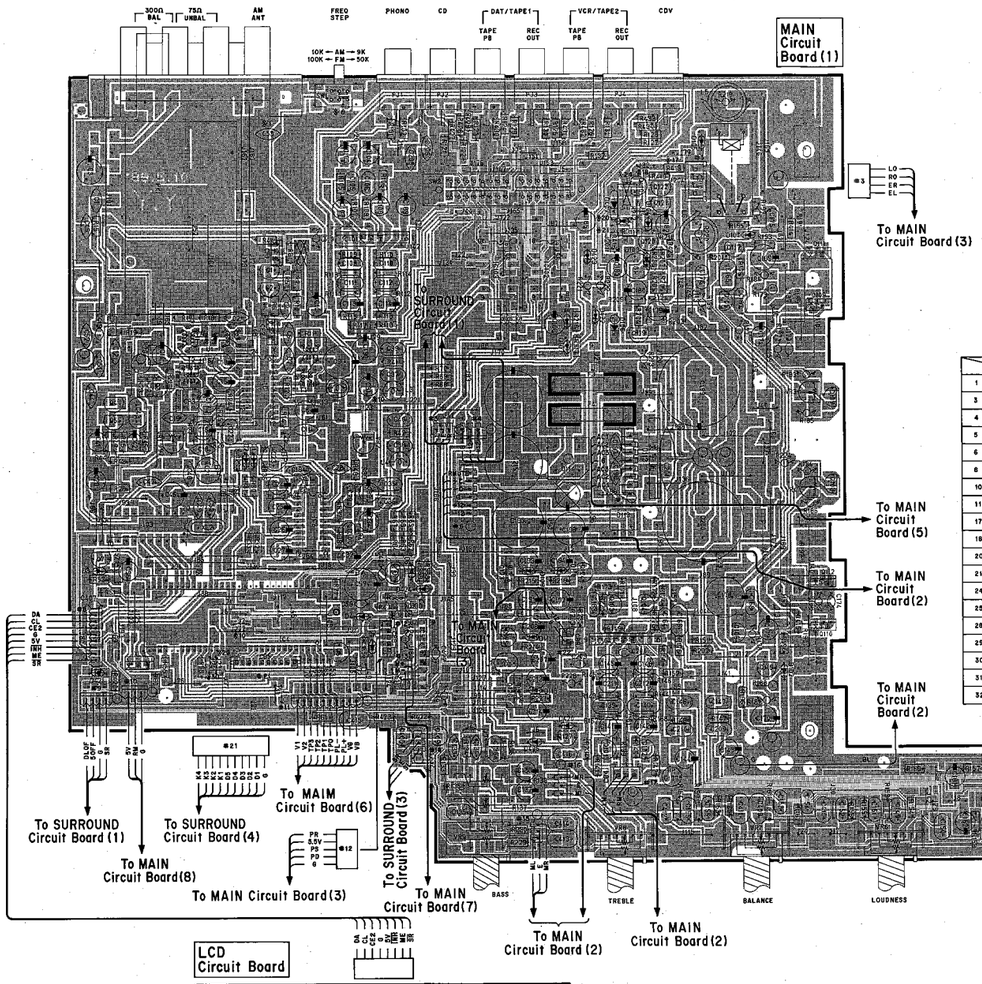
■ BLOCK DIAGRAM

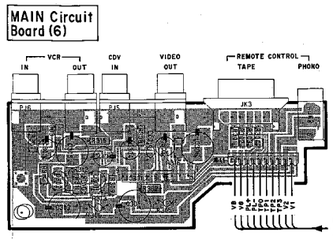


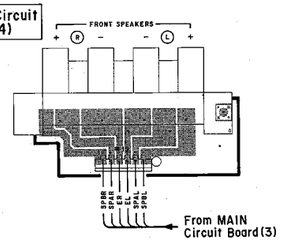
■ WIRING

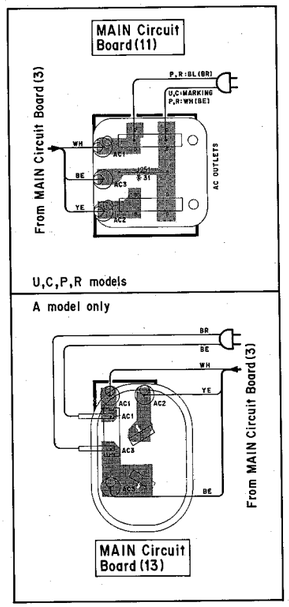

(U.A)
MAIN C.B (1)
MAIN C.B (3)
MAIN C.B (5)
MAIN C.B (9)
MAIN C.B (11)
MAIN C.B (13)
MAIN C.B (2)
MAIN C.B (10)
MAIN C.B (4)
MAIN C.B (8)
MAIN C.B (7)
SURROUND C.B (4)
LCDC.B
MAIN C.B (6)
SURROUND C.B (2)
SURROUND C.B (3)
SURROUND C.B (1)
(P)
MAIN C.B (12)
(C)
MAIN C.B (14)

■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

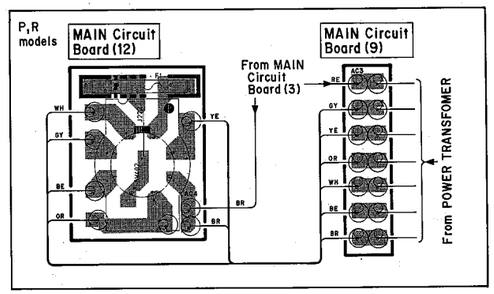


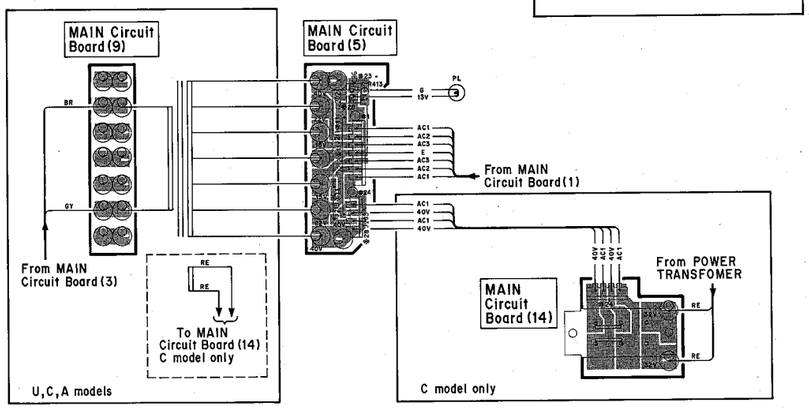


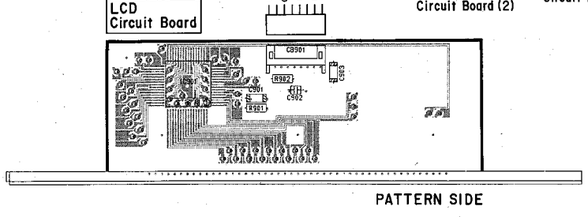


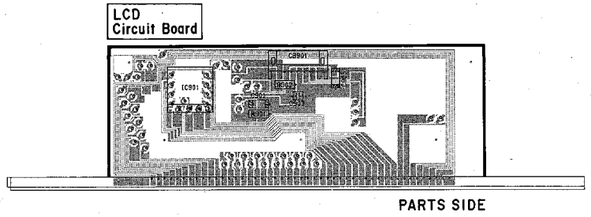


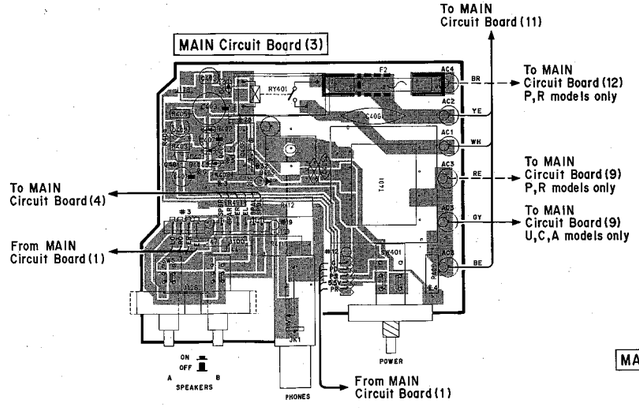
	U	C	R,P	A
1. C53	OPEN	→	0.01	OPEN
3. R409	OPEN	→	10K	OPEN
4. R409	1/2P 2.2M	→	OPEN	→
5. Q405	X	→	○	X
6. Q404	OPEN	→	MTZJ15C	OPEN
8. SW1	X	→	○	X
10. J221,222	X	→	○	X
11. J211~213	X	○	X	→
17. R418	OPEN	1K	OPEN	→
18. R419	SHORT	22	SHORT	→
20. Q407	OPEN	HZ16-3L	OPEN	→
21. R416	SHORT	82K	SHORT	→
24. Q410	X	○	X	→
25. Q406	X	→	○	X
28. J202,203	○	X	○	→
29. J231	○	→	X	→
30. J241	X	→	→	○
31. J251	○	→	→	X
32. J261	○	→	X	○

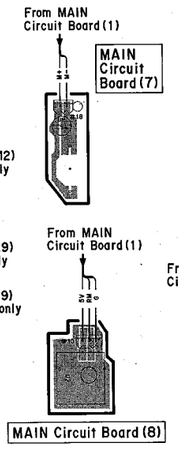


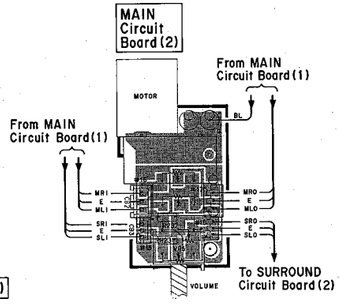


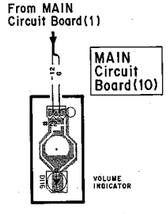












■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

SURROUND Circuit Board (1)

From MAIN Circuit Board (1)

INPUT BALANCE

+12 -12 G

SIR E SIL

From MAIN Circuit Board (1)

MODE

ON OFF SURROUND

DLOF SOFF G SR SOL E SOR

From MAIN Circuit Board (1)

	U,C,R,P	A
※1 F601,602	2.5A 250V	T2.0A 250V

REAR SPEAKER

L + − R − +

SURROUND Circuit Board (2)

From MAIN Circuit Board (1)

RMUTE +C -C E +12 -12

From MAIN Circuit Board (2)

IL IE IR

From MAIN Circuit Board (1)

SVR SVL E SO E OR

SURROUND Circuit Board (3)

REAR LEVEL

From MAIN Circuit Board (1)

K4 K3 K2 K1 D6 D4 D3 D2 D1 G

SURROUND Circuit Board (4)

INPUT SELECTOR

INPUT SELECTOR

RIGHT

LEFT

P8/16 P7/15 P6/14 P5/13 P4/12 P3/11 P2/10 P1/9

TUNING

DOWN

TUNING MODE

FM-AM

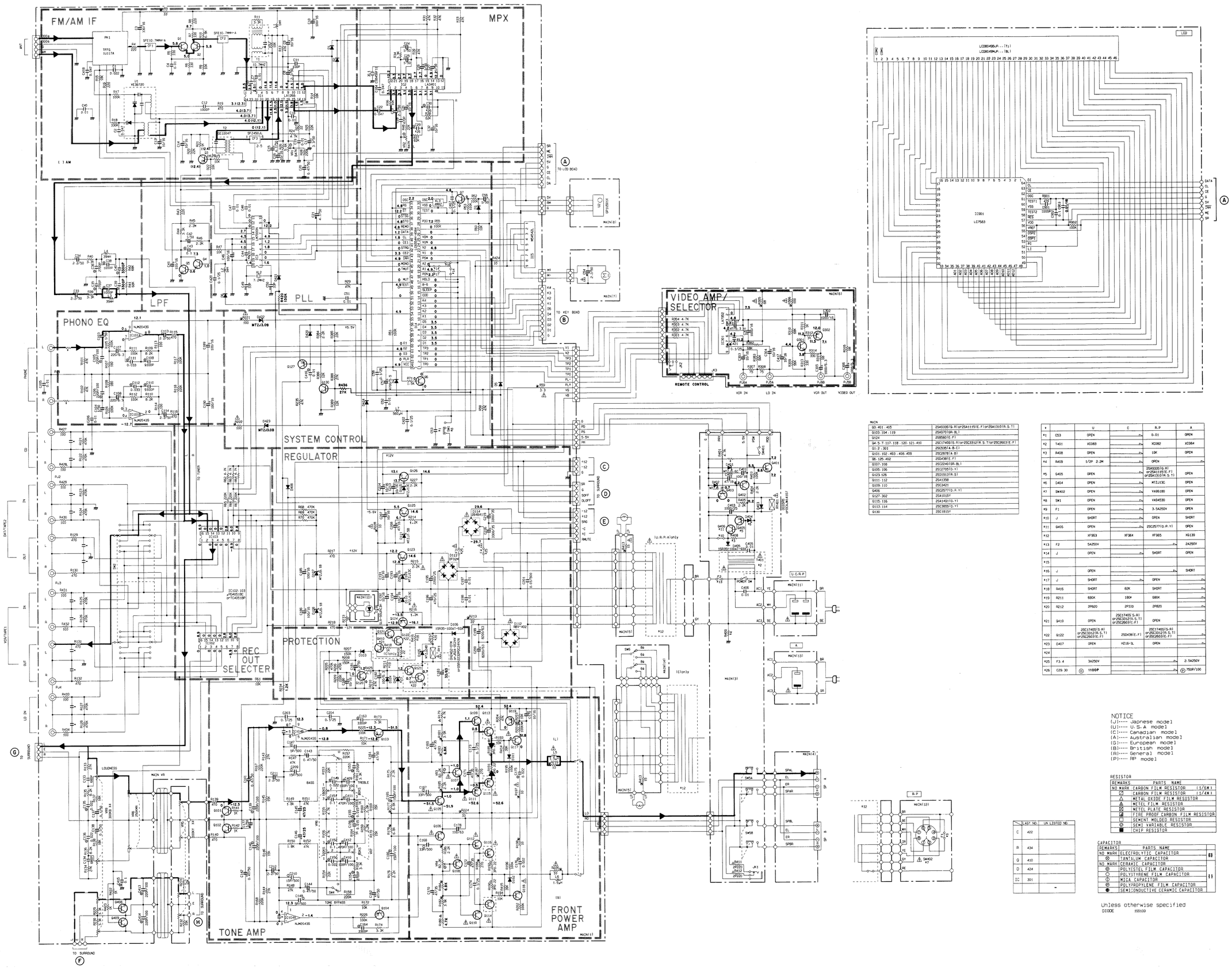
MEMORY

P1-8/P9-16

AUTO/MAN'L MONO.

■ SCHEMATIC DIAGRAM

• FRONT END PACK (PK1)



MAIN				
Q3.401 : 405	2SA933S(S.R)or2SA1115(E.F)or2SA1310(A.S.T)			
Q103.104 : 119	2SA970(R.BL)			
Q124	2SB560(E.F)			
Q4.5.7.117.118.120.121.410	2SC1740S(S.R)or2SC3312(A.S.T)or2SC2603(E.F)			
Q1.2.301	2SC535(A.B.C)			
Q101.102.403.406.409	2SC2878(A.B)			
Q6.125.402	2SD438(E.F)			
Q107.108	2SC2240(R.BL)			
Q105.106	2SC2705(O.Y)			
Q123.126	2SD1913(R.S)			
Q111.112	2SA1358			
Q109.110	2SC3421			
Q406	2SC2577(O.P.Y)			
Q127.302	2SA1015Y			
Q115.116	2SA1431(O.Y)			
Q113.114	2SC3655(O.Y)			
Q130	2SC1815Y			

★		U	C	R.P	A
★1	C53	OPEN		0.01	OPEN
★2	T401	XC083		XC082	XC084
★3	R408	OPEN		10K	OPEN
★4	R409	1/2P 2.2M		OPEN	
★5	Q405	OPEN		2SA933S(Q.R) or2SA1115(E.F) or2SA1310(A.S.T)	OPEN
★6	D404	OPEN		MTZJ13C	OPEN
★7	SW402	OPEN		YA98190	OPEN
★8	SW1	OPEN		YA94530	OPEN
★9	F1	OPEN		3.5A250V	OPEN
★10	J	SHORT		OPEN	SHORT
★11	Q405	OPEN		2SC2577(O.P.Y)	OPEN
★12		XF963	XF964	XF965	XG139
★13	F2	5A250V			2A250V
★14	J	OPEN		SHORT	OPEN
★15					
★16	J	OPEN			SHORT
★17	J	SHORT		OPEN	
★18	R416	SHORT	82K	SHORT	
★19	R211	680K	180K	680K	
★20	R212	2P820	2P330	2P820	
★21	Q410	OPEN	2SC1740S(S.R) or2SC3312(A.S.T) or2SC2603(E.F)	OPEN	
★22	Q122	2SC1740S(S.R) or2SC3312(A.S.T) or2SC2603(E.F)	2SD438(E.F)	2SC1740S(S.R) or2SC3312(A.S.T) or2SC2603(E.F)	
★23	D407	OPEN	HZ16-3L	OPEN	
★24					
★25	F3.4	3A250V			2.5A250V
★26	C29.30	◎ 1100P			Ⓟ 750P/100

	LAST NO.	UN LISTED NO.
C	422	
R	434	
Q	410	
D	424	
IC	301	
		-

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)····· RP model

RESISTOR

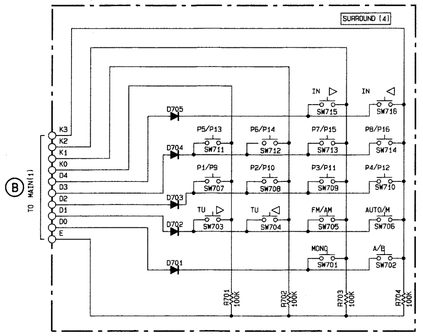
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (1/6W)
☑	CARBON FILM RESISTOR (1/4W)
△	METAL OXIDE FILM RESISTOR
▲	METEL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	SEMENT MOLDED RESISTOR
⊗	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

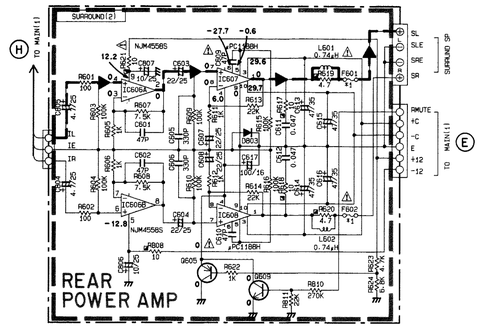
CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	B
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	F
Ⓜ	POLYESTEL FILM CAPACITOR	
Ⓒ	POLYSTYRENE FILM CAPACITOR	
Ⓜ	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

Unless otherwise specified
DIODE 1SS133

■ SCHEMATIC DIAGRAM





Unless otherwise specified
DIODE 1SS133

	LAST NO.	UN LISTED NO.
C	808	
R	811	
Q	609	
D	803	
IC	610	

9601-603-607-609	2SC1815Y	
9604-608	2SC2878(A,B)	
9605-606	2SA1015Y	

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

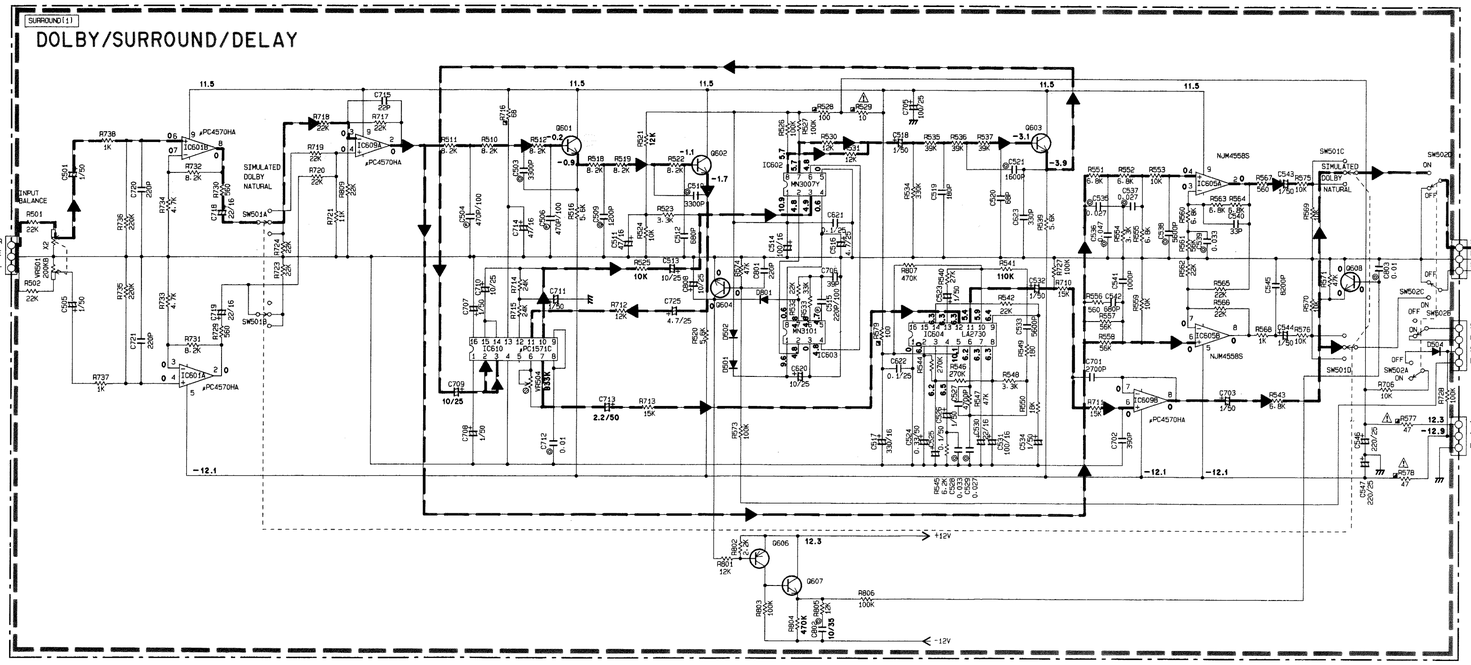
		U,C,R,P	A
※1	F601,602	2.5A250V	T2.0A250V

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	#
⊗	TANTALUM CAPACITOR	#
NO MARK	CERAMIC CAPACITOR	##
◎	POLYESTEL FILM CAPACITOR	##
○	POLYSTYRENE FILM CAPACITOR	##
①	MICA CAPACITOR	##
②	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	
▲	METEL FILM RESISTOR	
⊠	METEL PLATE RESISTOR	
◪	FIRE PROOF CARBON FILM RESISTOR	
□	SEMENT MOLDED RESISTOR	
⊘	SEMI VARIABLE RESISTOR	
■	CHIP RESISTOR	



■ PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODE AND ICS.

2SA1491 2SC3855 2SC2577	2SA933S 2SC1740S	2SA970 2SA1015 2SC1815 2SC2878 2SC2240	2SA1115 2SA1310 2SC2603 2SC3312 2SC535	2SC2705 2SB560 2SD438	2SD1913	DIODES	DF02M	RBV-402LF-4	2B4B41	μPC4570H/. NJM2043S	LA3401	MN3101 MN3007Y	A1266	LM7000N	LA7952 NJM4558S	LC6554H	TC40518P LA2730 μPC1571C	2SA1358 2SC3421	M54542L	μPC1188H

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 1/6 W are not included in the ELECTRICAL PARTS list. For the parts No. of the carbon resistor, refer to the last Page.

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
	VG 56 30 00	***Main Circuit Board***		メインシート			U	
	VG 56 31 00	//		//			R,P	
	VH 28 15 00	//		//			A	
	VH 66 15 00	//		//			C	
	VA 76 12 00	Ceramic Cap.	33pF 50V	セラコン	C49,50			
	VA 30 26 00	//	0.01μF 500V	//	C201			
	Fi 41 41 00	//	0.01μF VA-I	フォーミングセラコン	C406 Inter-changeable			
	Fi 51 41 00	//	0.01μF DNS	//	// Inter-changeable			
	FG 21 14 70	//	47pF 50V	セラコン	C44			
	FG 21 21 00	//	100pF 50V	//	C11			
	FG 21 24 70	//	470pF 50V	//	C28			
	FG 21 26 80	//	680pF 50V	//	C133,134			
	FG 21 31 00	//	1000pF 50V	//	C12			
	FG 24 41 00	//	0.01μF 50V	//	C4,6,7,18,19,45,47,48,51,52 197,198,205,206,405			
	FG 24 41 00	//	0.01μF 50V	//	C53		R,P	
	FG 24 42 20	//	0.022μF 50V	//	C1			
	FG 24 44 70	//	0.047μF 50V	//	C2,184,419			
	FZ 00 58 80	//	0.1μF 25V	積層セラコン	C58,173,174,203,204, 407,420～422			
	FU 35 05 00	Mica Cap.	5pF 500V	マイカコン	C147,148			
	FU 35 11 50	//	15pF 500V	//	C209,210			
	FU 35 13 30	//	33pF 500V	//	C167,168			
	UA 25 31 00	Mylar Cap.	1000pF 50V	マイラーコン	C37,38			
	FA 15 31 10	//	1100pF 50V	//	C29,30		U,C,R,P	
	UT 45 27 50	Polypropylene Film Cap.	750pF 100V	ポリプロコン	C29,30		A	
	UA 25 32 70	Mylar Cap.	2700pF 50V	マイラーコン	C35,36,153,154			
	UA 25 33 30	//	3300pF 50V	//	C39,40,163,164			
	UA 25 39 10	//	9100pF 50V	//	C109,110			
	UA 25 41 00	//	0.01μF 50V	//	C416			
	UA 25 41 50	//	0.015μF 50V	//	C155,156			
	UA 25 42 20	//	0.022μF 50V	//	C135,136,149,150,175,176			
	UA 25 43 30	//	0.033μF 50V	//	C111,112			
	UA 25 44 70	//	0.047μF 50V	//	C22			
	UA 25 51 00	//	0.1μF 50V	//	C43,151,152,415			
	UT 45 21 50	Polypropylene Film Cap.	150pF 100V	ポリプロコン	C165,166			
	UT 45 21 00	//	100pF 100V	//	C409,410			
	UT 45 22 20	//	220pF 100V	//	C105,106,139,140,413,414			
	UT 45 24 70	//	470pF 100V	//	C411,412			
※	Ui 85 74 70	Electrolytic Cap.	47μF 35V	ケミコン	C171,172			
	UJ 11 74 70	//	47μF 6.3V	//	C307			
	UJ 11 81 00	//	100μF 6.3V	//	C182			
	UJ 11 82 20	//	220μF 6.3V	//	C107,108			
	UJ 11 91 00	//	1000μF 6.3V	//	C305,306			
	UJ 13 71 00	//	10μF 16V	//	C9,13,14,16,31,32,179,180,191,192, 207,213,214,303,304,417			
	UJ 13 74 70	//	47μF 16V	//	C208,402			
	UJ 13 81 00	//	100μF 16V	//	C10,41,46,185,186, 189,190,194,401			
	UJ 13 82 20	//	220μF 16V	//	C193			
	UJ 13 83 30	//	330μF 16V	//	C3			
	UJ 14 74 70	//	47μF 25V	//	C145,146			
	UJ 15 74 70	//	47μF 35V	//	C169,170			
	UJ 16 54 70	//	0.47μF 50V	//	C20,141～144			
	UJ 16 61 00	//	1μF 50V	//	C24～27,56,103,104			

※New Parts（新規部品）

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク	
		UJ 16 62 20	Electrolytic Cap.	2.2μF 50V	ケミコン	C8,33,34,113,114,211,212				
		UJ 46 63 30	//	3.3μF 50V	//	C17				
		UJ 16 64 70	//	4.7μF 50V	//	C15				
		UW 67 73 30	//	33μF 63V	//	C183				
		UJ 16 74 70	//	47μF 50V	//	C161,162				
		UJ 13 91 00	//	1000μF 16V	//	C301,302				
		UJ 14 91 00	//	1000μF 25V	//	C196,403				
		UH 14 93 30	//	3300μF 25V	//	C195				
※		UH 15 93 30	//	3300μF 35V	//	C215,216				
		UH 17 81 00	//	100μF 63V	//	C178				
		UL 46 61 00	//	1μF 50V	ローノイズケミコン	C42				
		FM 11 61 00	//	1μF 50V	BPコン	C177				
		FM 11 62 20	//	2.2μF 50V	//	C23,54,181				⚠
		UK 16 64 70	//	4.7μF 50V	//	C21				
		UJ 16 51 00	//	0.1μF 50V	ケミコン	C137,138				
		VB 17 01 00	//	4700μF 5.5V	バックアップケミコン	C57 } Inter-changeable				
		VC 61 37 00	//	4700μF 5.5V	//	// }				
※		VG 91 75 00	//	8200μF 63V	ブロックケミコン	C199,200				
		VC 36 20 00	Coil	1mH	固定コイル	L1,2				
		VE 35 47 00	//	560μH	//	L7				
		VC 79 37 00	//	1.5μH	空心コイル	L5,6				⚠
		GE 90 18 50	Inductor	39mH	固定インダクター	L3,4				
		GE 10 04 70	AM IFT Coil	450kHz	AM IFT コイル	T2				
		VC 21 86 00	Discri Coil, FM	10.7MHz	FM 検波コイル	T1				
		XC 08 20 01	Power Transformer		電源トランス	T401		R,P		⚠
		XC 08 30 01	//		//	//		U,C		⚠
		XC 08 40 01	//		//	//		A		⚠
		VC 21 90 00	AM Ceramic Filter	SFZ450JL	AMセラミックフィルター	CF3				
		GG 00 06 70	FM Ceramic Filter	SFE10.7MMH-A	FMセラミックフィルター	CF1,2				
		GG 00 07 50	Ceramic Resonator	CSB456F11	セラミック振動子	XL1				
		VD 82 76 00	//	4MHz	//	XL3				
		VC 21 91 00	Quartz Crystal	7.2MHz	水晶振動子	XL2 } Inter-changeable				
		QU 00 38 00	//	7.2MHz	//	// }				
		HG 30 92 20	Carbon Film Resistor	2.2MΩ 1/2W	カーボン抵抗	R409		U,C		
※		VH 78 97 00	Metal Oxide Film Resistor	4.7kΩ 1/2W	酸金抵抗	R179,180				
		HL 32 52 20	//	220Ω 2W	//	R411,412				
		HL 42 58 20	//	820Ω 2W	//	R212		U,R,A,P		
		HL 32 53 30	//	330Ω 2W	//	R212		C		
		HL 93 22 20	//	0.22Ω 3W	//	R189～192				
		HV 45 33 30	Flame Proof Carbon Resistor	3.3Ω 1/4W	不燃化カーボン抵抗	R59				⚠
		HV 45 41 00	//	10Ω 1/4W	//	R197,198,219,220,228,424				⚠
		HV 45 41 50	//	15Ω 1/4W	//	R413				
		HV 45 42 20	//	22Ω 1/4W	//	R213				
		HV 45 43 30	//	33Ω 1/4W	//	R3,224				
		HV 45 46 80	//	68Ω 1/4W	//	R305				⚠
		HV 45 51 00	//	100Ω 1/4W	//	R221,222,306				⚠
		HV 45 52 70	//	270Ω 1/4W	//	R187,188				

※New Parts（新規部品）

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク	
		HV 45 62 20	Flame Proof Carbon Resistor	2.2kΩ 1/4W	不燃化カーボン抵抗	R185,186				
		HV 45 63 90	//	3.9kΩ 1/4W	//	R181,182				
		HV 45 66 80	//	6.8kΩ 1/4W	//	R177,178,183,184				
		VB 86 12 00	Pre-set Potentiometer	B2.2kΩ	半固定抵抗	VR3,4				
		VB 86 18 00	//	B47kΩ	//	VR1,2				
※		VG 80 61 00	Potentiometer	特80kΩ	可変抵抗器	VR7				
※		VG 80 62 00	//	特100kΩ	//	VR6				
※		VG 80 63 00	//	MN250kΩ	//	VR8				
※		VG 80 64 00	//	B300kΩ×4	//	VR9				
※		VG 80 65 00	Potentiometer with Motor	Y100kΩ×4	モーター付可変抵抗器	VR5				
		iA 09 33 70	Transistor	2SA933S(Q,R)	トランジスター	Q3,401				
		iA 11 15 10	//	2SA1115(E,F)	//	// Inter-changeable				
		iA 13 10 00	//	2SA1310(R,S,T)	//	//				
		iA 09 33 70	//	2SA933S(Q,R)	//	Q405		R,P		
		iA 11 15 10	//	2SA1115(E,F)	//	// Inter-changeable		R,P		
		iA 13 10 00	//	2SA1310(R,S,T)	//	//		R,P		
		iA 10 15 21	//	2SA1015(Y)	//	Q127,302				
		iB 05 60 20	//	2SB560(E,F)	//	Q124				
		iC 05 35 40	//	2SC535(A,B,C)	//	Q1,2,301				
		iC 18 15 C0	//	2SC1815(Y)	//	Q130				
		iA 09 70 00	//	2SA970(GR,BL)	//	Q103,104,119				
		iC 17 40 70	//	2SC1740S(S,R)	//	Q410		C		
		iC 33 12 00	//	2SC3312(R,S,T)	//	// Inter-changeable		C		
		iC 26 03 20	//	2SC2603(E,F)	//	//		C		
		iC 17 40 70	//	2SC1740S(S,R)	//	Q122		U,R,A,P		
		iC 33 12 00	//	2SC3312(R,S,T)	//	// Inter-changeable		U,R,A,P		
		iC 26 03 20	//	2SC2603(E,F)	//	//		U,R,A,P		
		iD 04 38 10	//	2SD438(E,F)	//	Q122		C		
		iC 17 40 70	//	2SC1740S(S,R)	//	Q4,5,7,117,118,120,121				⚠
		iC 33 12 00	//	2SC3312(R,S,T)	//	// Inter-changeable				
		iC 26 03 20	//	2SC2603(E,F)	//	//				
		iC 22 40 00	//	2SC2240(GR,BL)	//	Q107,108				⚠
		iC 25 77 00	//	2SC2577(O,P,Y)	//	Q406		R,P		
		iC 27 05 00	//	2SC2705(O,Y)	//	Q105,106				⚠
		iC 28 78 20	//	2SC2878(A,B)	//	Q101,102,403,408,409				
		iD 04 38 10	//	2SD438(E,F)	//	Q6,125,402				
		VC 40 80 00	//	2SD1913(R,S)	//	Q123,126				
		iX 60 85 10	//	2SA1358	//	Q111,112				⚠
		iX 60 85 20	//	2SC3421	//	Q109,110				⚠
		iF 00 34 50	Diode	1SS133	ダイオード	D1～6,101～104,403,406,420,421,424				
		iF 00 84 80	//	1SR35-100A	//	D106,405				
		VG 43 86 00	Zener Diode	MTZJ7.5B	ツェナーダイオード	D111				
※		VG 43 81 00	//	MTZJ6.2C	//	D402				
		VG 43 92 00	//	MTZJ9.1B	//	D107,108				
		VG 43 78 00	//	MTZJ5.6C	//	D401				
※		VG 44 06 00	//	MTZJ13C	//	D109,110,115				
※		VG 44 06 00	//	MTZJ13C	//	D404		R,P		
※		VG 44 25 00	//	MTZJ24B	//	D105				
		iF 00 20 80	//	HZ16-3L	//	D407		C		
※		VG 43 59 00	//	MTZJ3.0B	//	D422,423				

※New Parts（新規部品）

	Ref. No	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク	
		iH 00 09 90	Diode, Bridge	2B4B41	ダイオードブリッジ	D114			⚠
		VC 97 15 00	//	RBV-402	//	D112			⚠
		VE 36 79 00	//	DF02M	//	D113			⚠
		iF 00 42 70	LED	SLR-55URC3H	L E D	D116			
		iG 00 17 70	IC	TC4051BP	I G	IC102,103			
		iG 15 81 00	//	LA3401	//	IC2			
		iG 08 02 00	//	NJM2043S	//	IC101,104			
		XB 76 00 01	//	LA1266	//	IC1			
		XD 52 40 01	//	LA7952	//	IC301			
※		XF 36 9C 00	//	LC6554H-4084	//	IC4			
		XB 81 80 01	//	LM7000N	//	IC3			
		iG 05 49 00	//	M54542L	//	IC5			
		KA 80 45 50	Switch, Push	2-2	プッシュスイッチ	SW401			
		KA 90 69 10	Switch, Rotary	4-6 NS	リモートロータリースイッチ	SW2			
		VA 96 18 00	Voltage Selector		電圧切換器	SW402		R,P	
		VA 94 53 00	Switch, Slide	2-2 NS	スライドスイッチ	SW1		R,P	
※		VG 60 42 00	Switch, Push	2-2S	プッシュスイッチ	SW4			
※		VG 60 40 00	//	2-2 2連	//	SW5			
※		VH 58 39 00	Switch, Slide	S-J0950-5	スライドスイッチ	SW6		C	
		KB 00 03 70	Fuse	3.5A 250V	ヒューズ	F1		R,P	
		KB 00 07 50	//	2A 250V	ヒューズタイムラグ	F2		A	⚠
		KB 00 25 90	//	UL ST-4 5A 250V	ヒューズ	F2		U,C,R,P	⚠
※		VG 80 60 00	//	MT-4 3A 250V	//	F3,4		U,C,R,P	
※		KB 00 22 10	//	2.5A 250V	ヒューズタイムラグ	F3,4		A	
		KC 00 19 40	Relay	DH24D2-OTM	リレー	RY1			⚠
		KC 00 20 00	//	JR2A-DC24V	//	// } Inter-changeable			⚠
		VC 27 86 00	//	G5R-2232P DC24V 2A	//	//			⚠
		VE 99 92 00	//	DCAJW14117	//	RY401			⚠
		VC 36 44 00	Pin Jack	2P	ピンジャック	PJ5,6			
		LB 20 22 90	//	2P	//	PJ1			
		LB 40 10 30	//	4P	//	PJ2～4			
		LB 30 17 20	Phone Jack		ホーンジャック	JK1			
		LB 10 07 30	Mini Jack		ミニジャック	JK2			
		VF 92 65 00	Remote Control Receptor Unit	GP1U501X	リモコン受光ユニット	U2			
		VC 21 93 00	FM Front-end Pack	TFFG1U117A	FMフロントエンドパック	PK1			
		VE 36 72 00	AM Coil Pack		AM コイルパック	U1			
		LB 60 83 90	ST Connector Socket	6P	STコネクターソケット	JK3			
		LB 91 80 40	Base Pin, XH	i-Type 4P	XH ベースピン	CB10			
		LB 91 80 30	//	i-Type 3P	//	CB2,4			
		VD 00 45 00	Base Pin, PH	i-Type 2P	PH ベースピン	CB9,6			

※New Parts（新規部品）

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
	VD 00 46 00	Base Pin, PH	i-Type 3P	PH ベースピン	CB3		
	VD 00 48 00	//	i-Type 5P	//	CB8		
	VD 00 53 00	//	i-Type 10P	//	CB5		
	LB 20 18 80	Fuse Holder Pin	PC-FH1	ヒューズホルダーピン			
	LB 40 14 60	AC Outlet	M7031-C	ACアウトレット		U,C,R,P	
	VG 74 17 00	Speaker Terminal	8P	スピーカーターミナル			
	VE 36 52 00	Antenna Terminal	4P	アンテナターミナル			
	LA 00 24 10	Wrapping Terminal	I-Type P=10 2P	ラッピング端子板		A	
	BB 06 95 10	Ground Metal		ランド金具			
	VG 56 36 00	***Surround Circuit Board***		サラウンドシート		U,C,R,P	
	VH 54 44 00	//		//		A	
	FG 21 12 20	Ceramic Cap.	22pF 50V	セラコン	C715		
	FG 21 13 30	//	33pF 50V	//	C540		
	FG 21 13 90	//	39pF 50V	//	C706		
	FG 21 14 70	//	47pF 50V	//	C601,602,609,610		
	FG 21 16 80	//	68pF 50V	//	C520		
	FG 21 21 80	//	180pF 50V	//	C519		
	FG 21 22 20	//	220pF 50V	//	C720,721,801		
	FG 21 23 30	//	330pF 50V	//	C605,606,623		
	FG 21 23 90	//	390pF 50V	//	C702		
	FG 21 26 80	//	680pF 50V	//	C512,542		
	FG 21 31 00	//	1000pF 50V	//	C541		
	FG 71 32 70	//	2700pF 50V	//	C701		
	FG 21 34 70	//	4700pF 50V	//	C527		
	FG 21 35 60	//	5600pF 50V	//	C533		
	FG 21 38 20	//	8200pF 50V	//	C545		
	FG 24 44 70	//	0.047μF 50V	//	C611,612		
	FZ 00 58 80	//	0.1μF 25V	積層セラコン	C621,622		
	FA 15 31 20	Mylar Cap.	1200pF 50V	マイラーコン	C509		
	FA 15 31 60	//	1600pF 50V	//	C521		
	UA 25 33 30	//	3300pF 50V	//	C503,510		
	UA 25 35 60	//	5600pF 50V	//	C538		
	UA 25 41 00	//	0.01μF 50V	//	C712,803		
	UA 25 42 70	//	0.027μF 50V	//	C529,535,537		
	UA 25 43 30	//	0.033μF 50V	//	C528,539		
	UA 25 44 70	//	0.047μF 50V	//	C536		
	UT 45 22 20	Polypropylene Film Cap.	220pF 100V	ポリプロコン	C515		
	UT 45 24 70	//	470pF 100V	//	C504,506		
	UJ 13 72 20	Electrolytic Cap.	22μF 16V	ケミコン	C718,719,530		
	UJ 13 74 70	//	47μF 16V	//	C511,714		
	UJ 13 81 00	//	100μF 16V	//	C514,531,617		
	UJ 13 83 30	//	330μF 16V	//	C517		
	UJ 14 64 70	//	4.7μF 25V	//	C516,725,804,805		
	UJ 14 71 00	//	10μF 25V	//	C513,620,709,710,806~808		
	UJ 14 72 20	//	22μF 25V	//	C603,604,607,608		
	UJ 14 81 00	//	100μF 25V	//	C705		

※New Parts（新規部品）

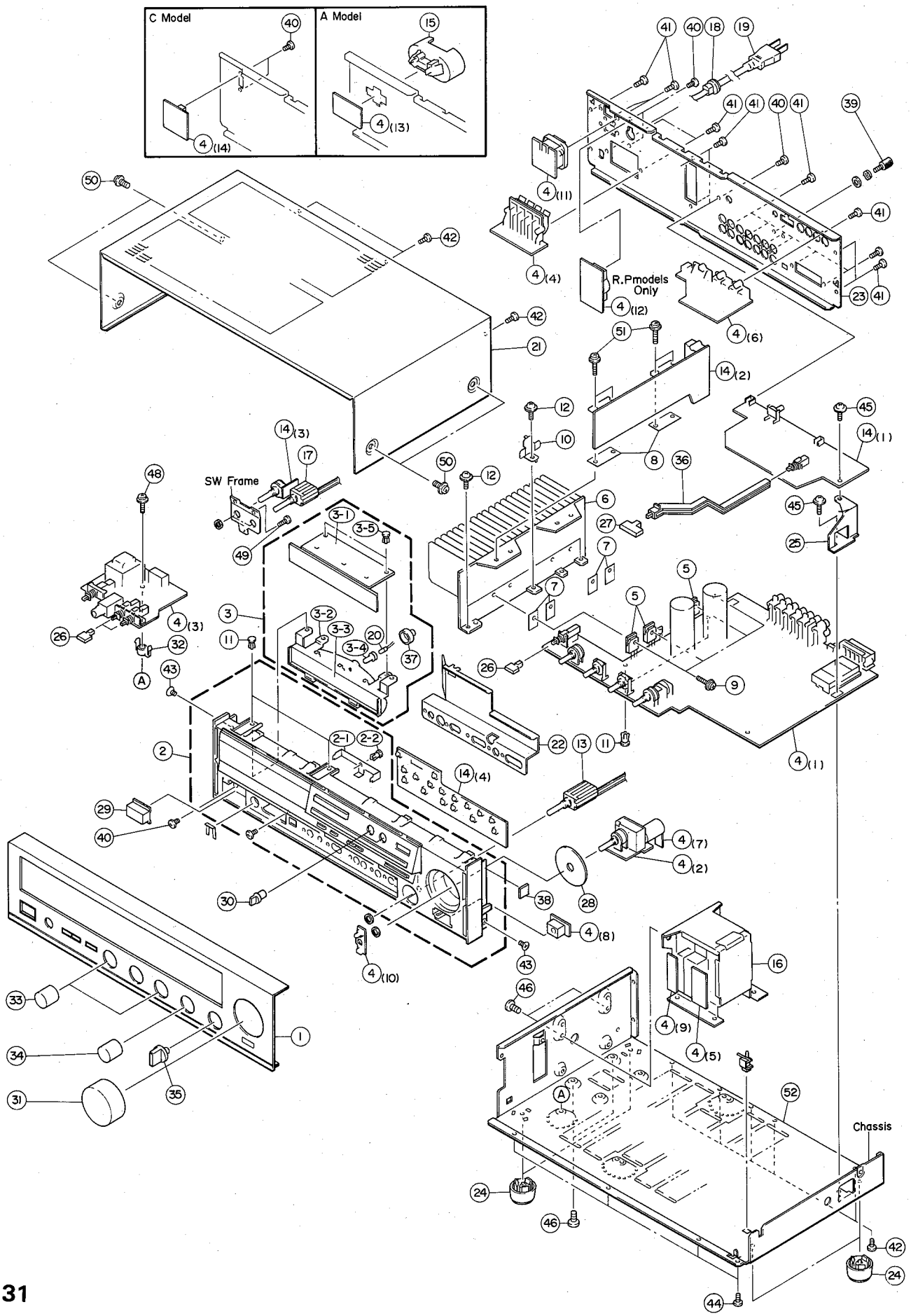
	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
		UJ 14 82 20	Electrolytic Cap.	220μF 25V ケミコン	C546,547			
		UJ 15 71 00	//	10μF 35V //	C802			
		UJ 15 74 70	//	47μF 35V //	C613～616			
		UJ 16 51 00	//	0.1μF 50V //	C525			
		UJ 16 53 30	//	0.33μF 50V //	C524			
		UJ 16 61 00	//	1μF 50V //	C501,505,518,523,526,532,534 543,544,703,707,708,711			
		UJ 16 62 20	//	2.2μF 50V //	C713			
		GD 90 06 80	Coil	0.74μH 空心コイル	L601,602			
		HV 45 34 70	Flame Proof Carbon Resistor	4.7Ω 1/4W 不燃化カーボン抵抗	R619,620			
		HV 45 41 00	//	10Ω 1/4W //	R529,617,618,621,808			
		HV 45 44 70	//	47Ω 1/4W //	R577,578			
		HV 45 46 80	//	68Ω 1/4W //	R716			
		HV 45 51 00	//	100Ω 1/4W //	R528,579			
※		VB 86 17 00	Pre-set Potentiometer	B33kΩ 半固定抵抗	VR504			
		VH 08 10 00	Potentiometer, Rotaly	B200kΩ×2 ロータリーVR	VR501			
※		VH 49 27 00	//	Y50kΩ×2 φ16 //	VR503			
		iA 10 15 21	Transistor	2SA1015(Y) トランジスター	Q605,606			
		iC 18 15 20	//	2SC1815(Y) //	Q601～603,607,609			
		iC 28 78 20	//	2SC2878(A,B) //	Q603,608			
		iF 00 34 50	Diode	1SS133 ダイオード	D501,502,504,701～705, 801,803			
		iG 03 75 00	IC	MN3101 IC	IC603			
		iG 07 68 00	//	NJM4558S //	IC605,606			
		iG 10 27 00	//	μPC1188H //	IC607,608			
		XB 24 70 01	//	μPC4570HA //	IC601,609			
		XD 38 60 01	//	LA2730 //	IC604			
		XE 38 70 01	//	μPC1571C //	IC610			
		XC 10 30 01	//	MN3007Y //	IC602			
		VE 32 73 00	Switch	ライトタッチスイッチ	SW701～716			
		VG 19 88 00	//	4/3 リモートスイッチ	SW501			
		VG 60 46 00	Switch, Push	4/2 プッシュスイッチ	SW502			
		VG 80 59 00	Fuse	2.5A 250V ヒューズタイラッシュ	F601,602		U,C,R,P	
		KB 00 13 30	//	T2.0A 250V ヒューズタイムラグ	F601,602		A	
		LB 91 80 30	Base Pin, XH	i-Type 3P XH ベースピン	CB501			
		LB 91 90 60	//	I-Type 6P //	CB503			
		VD 00 46 00	Base Pin, PH	i-Type 3P PH ベースピン	CB504～506			
		VD 00 47 00	//	i-Type 4P //	CB507			
		VB 85 82 00	//	I-Type 3P //	CB510			
		LB 20 18 80	Fuse Holder Pin	PC-FH1 ヒューズホルダーピン				
		VG 74 10 00	Speaker Terminal	4P スピーカーターミナル				
		BB 07 13 60	Screw Terminal	ネジ端子				

※New Parts（新規部品）

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
※		VG 78 64 00	LCD Circuit Board	LCD表示シート	AVR-75			
※		VH 23 74 00	//	//	RX-830			
		VF 46 70 00	Ceramic Cap	1000pF 50V 円筒型セラコン	C901			
		VH 05 31 00	//	0.1μF 50V //	C902			
		VF 46 73 00	//	0.01μF 16V //	C903			
		XB 76 40 01	IC	LC7583 IC	IC901			
		VB 85 87 00	Base Pin, PH	1-Type 8P PHベースピン	CB901			
※		VF 94 89 00	LCD Indicator	LCD8049MJP LCD表示器	AVR-75			
※		VH 20 85 00	//	LCD8049BJP	RX-830			

※New Parts（新規部品）

■ EXPLODED VIEW



■ EXPLODED VIEW PARTS

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※	1	VH 28 10 00	Front Panel Unit		フロントパネルユニット	Black RX-830		U,C,A,P	
※	//	VH 28 11 00	//		//	Titan RX-830		U,C,A,P	
※	//	VG 56 22 00	//		//	Black AVR-75		U,C,R,P	
※	2	VH 28 12 00	Sub Chassis Unit		サブシャーシユニット	Black RX-83			
※	//	VH 28 13 00	//		//	Titan RX-830			
※	//	VG 56 24 00	//		//	Black AVR-75			
	2-1	VH 08 37 00	Ground Plate		アースプレート				
	2-2	CB 60 56 20	Plastic Rivet		プラスチックリベット				
※	3	VG 56 25 00	LCD Unit		LCDユニット	Black RX-830/AVR-75			
※	//	VH 23 81 00	//		//	Titan RX-830			
※	3-1	VG 78 64 00	LCD Indicator Circuit Board		LCD表示シート	Black			
※	//	VH 23 74 00	//		//	Titan			
	3-2	VG 43 31 00	Reflector, LCD		リフレクターLCD				
	3-3	VG 43 33 00	Sheet, LCD		シートLCD				
	3-4	VF 44 45 00	Lamp Cap		ランプキャップ				
	3-5	CB 60 56 20	Plastic Rivet		プラスチックリベット				
※	4	VG 56 30 00	Main Circuit Board		メインシート			U	
※	//	VG 56 31 00	//		//			R,P	
※	//	VH 28 15 00	//		//			A	
※	//	VH 66 15 00	//		//			C	
※	5	iX 60 95 20	Transistor	2SA1491	トランジスター	Q115,116			
※	//	iX 60 95 50	//	2SC3855	//	Q113,114			
※	6	VG 43 30 00	Radiator		ラジエター				
	7	VG 42 89 00	Sheet	19×21	放熱シート				
※	8	VG 42 91 00	//	32×15	//				
	9	EZ 00 13 50	Cup Tight Screw	3×14 FCRM3-BI	カップタイトネジ				
	10	BB 07 09 60	Pusher, TR		トランジスタ押え				
	11	CB 60 56 20	Plastic Rivet		プラスチックリベット				
	12	EK 33 60 10	BW Head Tapping Screw	3×8 FCM3-BI	BW ヘッドタッピングネジ	2種ミゾ			
※	13	VG 84 09 00	Remote Rotary Switch, Operate		リモートロータリーSW操作部				
※	14	VG 56 36 00	Surround Circuit Board		サラウンドシート			U,C,R,P	
※	//	VH 54 44 00	//		//			A	
※	15	VC 62 61 00	AC Outlet		ACアウトレット			A	
※	16	XF 96 3A 00	Power Transformer		電源トランス			U	
※	//	XF 96 4B 00	//		//			C	
※	//	XF 96 5A 00	//		//			R,P	
※	//	XG 13 9A 00	//		//			A	
※	17	VG 80 74 00	Remote Rotary Switch, Operate		リモートロータリーSW操作部				
	18	CB 62 01 90	Cord Stopper		コードストッパー			R,A,P	
	//	CB 62 02 00	//		//			U,C	
	19	MG 00 22 20	AC Power Cord	10A 125V	AC電源コード			U,C	
	//	MG 00 16 30	//	6A 250V	//	Inter-changeable		R,P	
	//	VE 37 10 00	//	6A 250V	//	Inter-changeable		R,P	
	//	MG 00 23 10	//	7.5A 250V	//			A	
	20	VH 47 16 00	Lamp	115mA 14.5V	ランプ				
	21	AA 62 55 20	Top Cover		トップカバー	Black RX-830/AVR-75	R-3		
※	//	VH 24 94 00	//		//	Titan RX-830			
	22	VG 64 66 00	Frame, Shield		シールドフレーム		RX-330		
※	23	VH 24 95 00	Rear Panel		リヤパネル	RX-830		P	
※	//	VH 24 96 00	//		//	//		U	
※	//	VH 24 97 00	//		//	//		A	
※	//	VH 65 85 00	//		//	//		C	

※New Parts（新規部品）

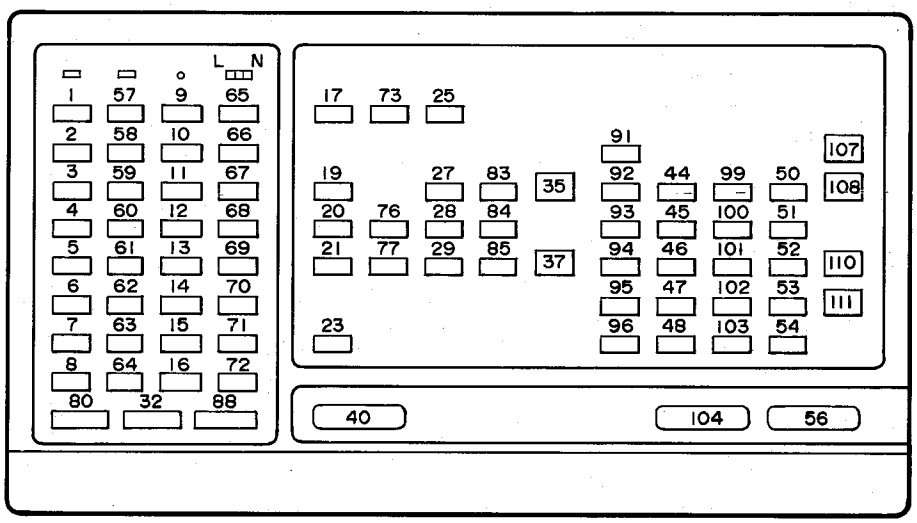
	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※	23	VG 42 80 00	Rear Panel		リヤパネル	AVR-75		R,P	
※	//	VG 42 81 00	//		//	//		U	
※	//	VH 65 86 00	//		//	//		C	
	24	CB 62 07 30	Leg		脚		A-750		
	25	VA 77 29 00	Support, P.C.B		基板サポート				
	26	VG 42 93 00	Button	1/6/25	ボタン	Black	RX-330		
	//	VG 42 96 00	//	1/6/25	//	Titan	RX-1130		
	27	CB 66 07 90	//	3×14	//	Black	AX-900		
※	//	VH 64 90 00	//	3×14	//	Titan			
	28	VH 08 78 00	Shield Plate		シールドプレート		RX-330		
	29	CB 66 08 10	Button		ボタン	Black POWER	AX-900		
	//	VE 54 43 00	//		//	//	AX-700D		
	30	VC 40 57 00	Knob		ノブ	Black	RX-700		
	//	VE 94 10 00	//		//	Titan	KX-R700		
	31	VG 42 86 00	//	φ48 LED	//	Black VOLUME	RX-730		
	//	VG 42 88 00	//	φ48 LED	//	Titan //	RX-1130		
	32	VG 42 85 00	Spacer		スペーサー		RX-530		
	33	CB 63 82 40	Knob	φ20	ノブ	Black BASS, TREBLE BALANCE	A-520		
※	//	VG 93 85 00	//	φ20	//	Titan //			
	34	CB 63 82 60	//	φ20	//	Black LOUDNESS	R-3		
※	//	VG 93 86 00	//	φ20	//	Titan //			
	35	CB 63 82 80	//	φ20	//	Black REC OUT	A-520		
※	//	VH 21 56 00	//	φ20	//	Titan //			
※	36	VG 42 99 00	Rod		ロッド				
	37	VG 65 04 00	Ring		リング		RX-330		
	38	VH 62 55 00	Damper		ダンパー				
	39	AA 62 73 10	Ground Terminal	STG-3×13	GNDターミナル				
	40	ED 33 00 66	Binding Head Screw	3×6 FCRM3-BI	バインド小ネジ	PACK			
	41	EZ 00 04 60	Tapping Head Screw	3×8 FCM3-BI	ボンディングタッピングネジ				
	42	Ei 33 00 86	Binding Head Tapping Screw	3×8 FCRM3-BI	バインドタッピングネジ	PACK			
	43	EO 33 00 66	Flat Head Tapping Screw	3×6 ZMC2-BI	皿タッピングネジ	PACK			
	44	Ei 33 01 06	Binding Head Tapping Screw	3×10 ZMC2-BI	バインドタッピングネジ	PACK			
	45	EK 33 60 10	BW Head Tapping Screw	3×8 FCM3-BI	BW ヘッドタッピングネジ				
	46	Ei 34 00 86	Binding Head Tapping Screw	4×8 FCRM3-BI	バインドタッピングネジ	PACK			
	47	Ei 03 00 66	//	3×6 ZMC2-Y	//	PACK			
	48	EZ 00 13 50	Cup Tight Screw	3×14 FCRM3-BI	カップBタイトネジ				
	49	EN 32 00 10	Pan Head Tapping Screw	2.6×8 FCM3-BI	ナベタッピングネジ				
	50	EK 36 50 40	BW Head Screw	4×8 FCM3-BI	BWヘッド小ネジ				
※	//	EX 60 11 50	BW Head S-Tyte Screw	4×8 FNM3-BI	BWヘッドSタイトネジ	RX-830(Ti)			
	51	VG 42 65 00	Chassis		シャーシ		RX-330		
		CB 06 92 51	Binding Tie	BK-1	インシュロックタイ	PACK			

※New Parts（新規部品）

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
			Accessories		付属品				
		VG 80 49 00	75Ω FM Antenna		FMアンテナ				
		VA 94 59 00	ST Connector	6P	STコネクター				
		Mi 08 17 80	Mini Plug Cord	1.2m	ミニプラグコード				
※		VG 80 79 00	Remote Control Transmitter		リモコントランスミッター	RX-830			
			Dry Cell	AA, SUM-3	単3乾電池	〃			
※		VG 91 77 00	Remote Control Transmitter	RS	リモコントランスミッター	AVR-75			
			Dry Cell	AAA, R03	単4乾電池	〃			
		VE 36 62 00	Loop Antenna		ループアンテナスタンド付				
		VH 44 79 00	Accessories Ass'y	Label	付属品 Ass'y	RX-830			

※New Parts（新規部品）

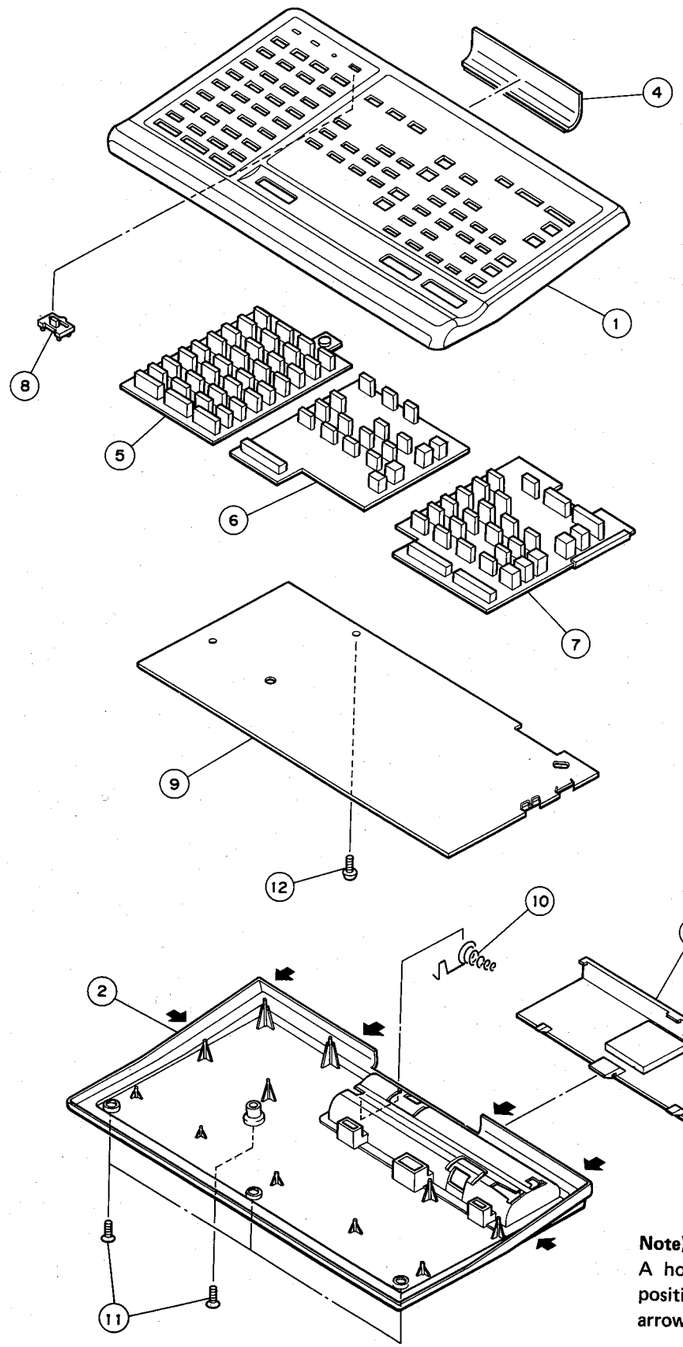
■ REMOTE CONTROL TRANSMITTER



Key No.	CONTROL CODE	FUNCTION	RX-1130	RX-930	RX-830	AVC-70	AV-55	MRX-90M EX	MRX-90M J
1~16		LEARNING	○	○	○	○	○	○	○
17	7A-5C	EQ PRESET DOWN	○	○	○	○	×	○	○
18	7A-1E	—	—	—	—	—	—	—	—
19	7C-01	LD OPEN/CLOSE	○	○	○	○	○	○	○
20	7C-02	LD CHAPTER"−"	○	○	○	○	○	○	○
21	7C-0A	LD STILL ⏮	○	○	○	○	○	○	○
22	—	—	—	—	—	—	—	—	—
23	7A-57	SLEEP	○	○	○	×	×	×	○
24	—	—	—	—	—	—	—	—	—
25	7A-5A	EQ ON/FLAT	○	○	○	○	×	○	○
26	—	—	—	—	—	—	—	—	—
27	7C-04	LD PAUSE/STOP	○	○	○	○	○	○	○
28	7C-06	LD SEARCH ◀◀	○	○	○	○	○	○	○
29	7C-12	LD SOUND	○	○	○	○	○	○	○
30	—	—	—	—	—	—	—	—	—
31	7A-1C	MUTING	○	○	×	○	×	×	×
32		LEARNING	○	○	○	○	○	○	○
33	—	—	—	—	—	—	—	—	—
34	7A-55	—	—	—	—	TV	—	TV	BS
35	7A-17	LD	○	○	○	LD/CDV	○	○	○
36	7A-54	—	—	—	—	AUX	—	—	—
37	7A-0F	VCR 1	○	○	VCR	○	○	○	○
38	7A-13	VCR 2	○	○	×	○	TAPE 1/VCR 2	○	○
39	—	—	—	—	—	—	—	—	—
40	7A-1F	POWER	○	○	○	○	○	○	○
41	7A-52	DELAY TIME UP	○	×	×	○	×	×	×
42	7A-58	MODE UP	○	×	×	○	×	MODE	MODE
43	—	—	—	—	—	—	—	—	—
44	7A-0A	CD SKIP ⏭	○	○	○	○	○	○	○
45	7A-0C	CD SEARCH ▶▶	○	○	○	○	○	○	○
46	7A-1:	TUNER PRESET DOWN	○	○	○	○	○	○	○
47	7A-07	TAPE DIR A	○	○	○	○	○	PLAY ◀	PLAY ◀
48	7A-01	TAPE ◀◀	○	○	○	○	○	○	○
49	—	—	—	—	—	—	—	—	—
50	7A-4F	CD DISC UP	○	○	○	○	×	×	×
51	7A-08	CD PLAY	○	○	○	○	○	○	○
52	7A-12	P1-8/P9-18	○	○	○	A/B/C	○	○	TV/FM AM
53	7A-40	TAPE DIR B	○	○	○	○	○	PLAY ▶	PLAY ▶
54	7A-02	TAPE ▶▶	○	○	○	○	○	○	○
55	—	—	—	—	—	—	—	—	—
56	(7A-1A)	(VOLUME UP)	○	○	○	○	○	○	○

Key No.	CONTROL CODE	FUNCTION	RX-1130	RX-930	RX-830	AVC-70	AV-55	MRX-90M EX	MRX-90M J
57~72		LEARNING	○	○	○	○	○	○	○
73	7A-5B	EQ PRESET UP	○	○	○	○	×	○	○
74	7A-1D	—	—	—	—	—	—	—	—
75	—	—	—	—	—	—	—	—	—
76	7C-03	LD CHAPTER"+"	○	○	○	○	○	○	○
77	7C-0B	LD STILL ⏭	○	○	○	○	○	○	○
78	—	—	—	—	—	—	—	—	—
79	—	—	—	—	—	—	—	—	—
80		LEARNING	○	○	○	○	○	○	○
81	—	—	—	—	—	—	—	—	—
82	—	—	—	—	—	—	—	—	—
83	7C-05	LD PLAY	○	○	○	○	○	○	○
84	7C-07	LD SEARCH ▶▶	○	○	○	○	○	○	○
85	7C-13	LD DISPLAY	○	○	○	○	○	○	○
86	—	—	—	—	—	—	—	—	—
87	—	—	—	—	—	—	—	—	—
88		LEARNING	○	○	○	○	○	○	○
89	7A-53	DELAY TIME DOWN	○	×	×	○	×	×	×
90	7A-59	MODE DOWN	○	×	×	○	×	×	×
91	7A-0E	PHONO PLAY/CUT	○	○	○	○	○	○	○
92	7A-0B	CD SKIP ⏮	○	○	○	○	○	○	○
93	7A-0D	CD SEARCH ◀◀	○	○	○	○	○	○	○
94	7A-06	TAPE DECK A/B	○	○	○	○	○	○	○
95	7A-04	TAPE REC/PAUSE	○	○	○	○	○	○	○
96	7A-05	TAPE REC MUTE	○	○	○	○	○	○	○
97	7A-5F	REAR LEVEL DOWN	○	×	×	○	×	○	○
98	—	—	—	—	—	—	—	—	—
99	7A-50	CD DISC DOWN	○	○	○	○	○	×	×
100	7A-09	CD PAUSE/STOP	○	○	○	○	○	○	○
101	7A-10	TUNER PRESET UP	○	○	○	○	○	○	○
102	7A-00	TAPE PLAY	○	○	○	○	○	×	×
103	7A-03	TAPE STOP	○	○	○	○	○	○	○
104	(7A-1B)	(VOLUME DOWN)	○	○	○	○	○	○	○
105	7A-56	SURROUND ON/OFF	○	×	×	×	×	×	×
106	7A-5E	REAR LEVEL UP	○	×	×	○	×	○	○
107	7A-14	PHONO	○	○	○	○	○	○	○
108	7A-15	CD	○	○	○	○	○	CD/CDV	CD/CDV
109	—	—	—	—	—	—	—	—	—
110	7A-16	TUNER	○	○	○	○	○	○	○
111	7A-18	TAPE 1	○	○	TAPE	TAPE DAT	○	TAPE AUX	TAPE DAT
112	7A-19	TAPE 2	○	○	×	○	○	○	○

■EXPLODEO VIEW



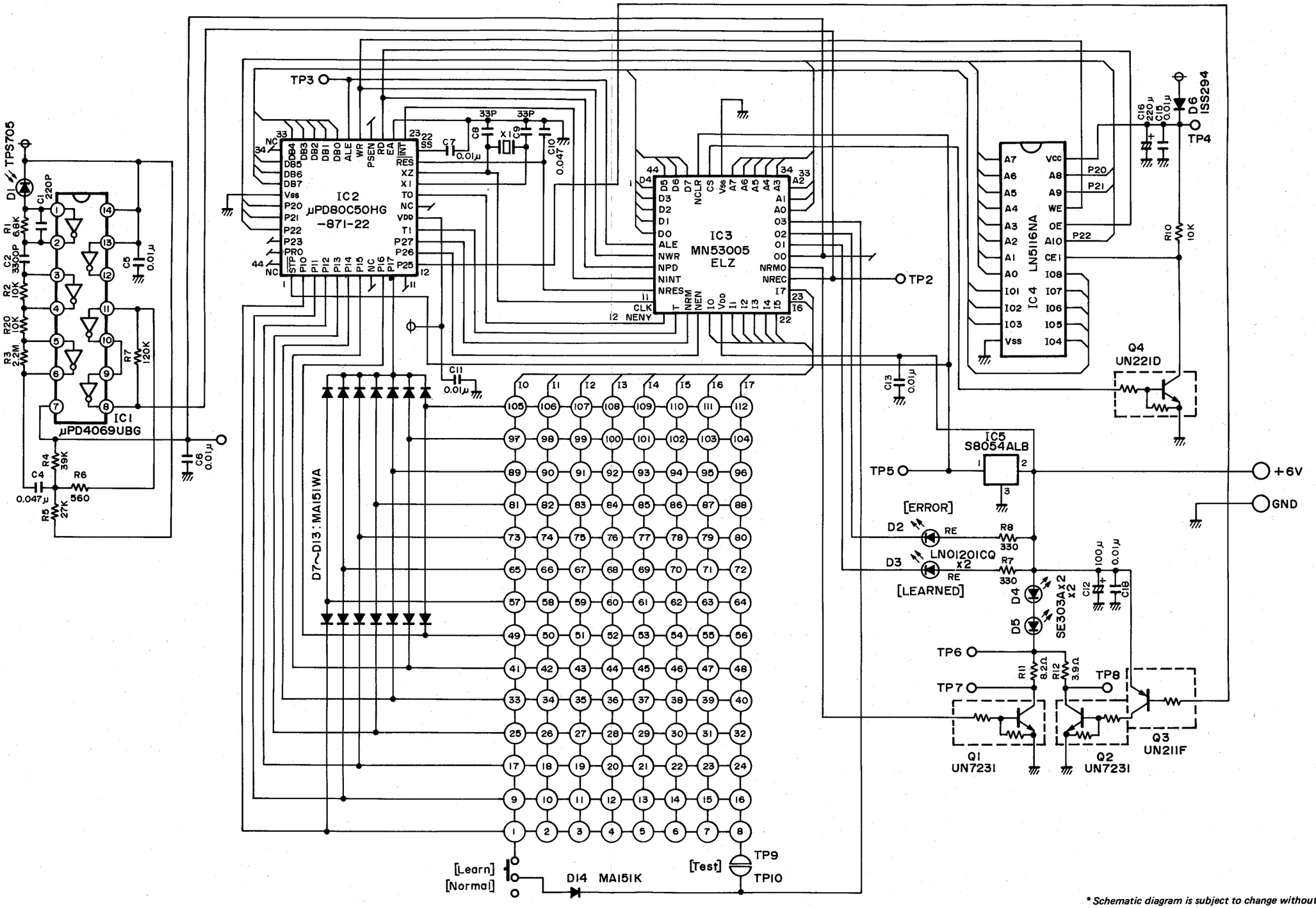
Note)
A hook is provided at each position marked with an arrow (⬅).

RX-830 (E)

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※	VG 80 79 00	**Remote Control Transmitter**		リモートコントロールトランスミッター				
※ 1	CX 60 79 00	Case (A) Ass'y		上ケース Ass'y				
2	CX 60 79 10	Case (B)		下ケース		UR66CS200		
3	CX 60 79 30	Lid		電池蓋		UR66EC201		
4	CX 60 79 50	Filter, Smoke		スモーク板		UR66SB257		
5	CX 60 79 60	Rubber, Contact (A)		ゴム接点 (A)		UR66CT202		
※ 6	CX 60 80 20	〃 (B)		〃 (B)		UR66CT203H		
※ 7	CX 60 80 80	〃		〃		UR66CT204H		
8	CX 60 80 90	Knob		ツマミ		UR66VTM83		
9	NX 60 39 20	P.C.Board Ass'y		プリント基板 Ass'y		UR66VPB77		
10	LX 60 25 20	Terminal, Battery		共通電極板		UR66TD239		
11	EO 32 00 66	Flat Head Tapping Screw	2×6 FCRM3-BI	皿タッピングネジ	PACK	XTS2+6GFZ		
12	EJ 02 00 56	Pan Head Tapping Screw	2×5 ZMC2-Y	ナベタッピングネジ	PACK	XTB+5GFZ		
	NX 60 39 20	**P.C.Board Ass'y**		プリント基板 Ass'y		UR66VPB77		
	iX 61 22 80	Photo Diode	TPS705	フォトダイオード	D1			
	iX 61 42 80	LED (Red)	LN0120ICQ	LED	D2,3			
	iX 61 22 90	LED	SE303AS	赤外線 LED	D4,5			
	QX 60 02 70	Ceramic Resonator	CSA737MTTF	セラミック発振子	X1			
	UJ 11 81 00	Electrolytic Cap	100μF 6.3V	ケミコン	C12	ECEA1AU1011		
	UJ 11 82 20	〃	220μF 6.3V	〃	C16	ECEA1AU2211		
	LX 60 25 30	Terminal, Battey		電極板	−	UR66TD209		
	LX 60 25 40	〃		〃	+	UR66TD208		

※New Parts (新規部品) NR

●SCHEMATIC DIAGRAM



* *Schematic diagram is subject to change without notice.*

■IC DATA

IC2 : μPD80C50HG-871-22
MICRO COMPUTER

Pin No.	Pin Name	Function
1	$\overline{STOP}$	Microcomputer hard stop
2	P10	KEY SCAN OUTPUT
3	P11	
4	P12	
5	P13	
6	P14	
7	P15	
8	NC	N.C.
9	P16	
10	P17	
11	P24	SRAM OUTPUT (A12)
12	P25	Base band waveform output
13	P26	Data bus opened to GATE ARRAY at LOW and to SRAM at High
14	P27	Modulated waveform envelope output
15	T1	ALE of clock input
16	V_{DD}	+6V
17	NC	N.C.
18	TO	Light receiving waveform envelope input
19	X1	Main clock (7.36MHz)
20	X2	
21	$\overline{RES}$	RESET INPUT
22	SS	Single step
23	$\overline{INT}$	Both edges of light receiving envelope or key scan interrupt
24	EA	Internal ROM at Low and external ROM at High
25	$\overline{RD}$	Read timing output to GATE ARRAY and SRAM
26	PSEN	N.C.
27	$\overline{WR}$	Write timing output to GATE ARRAY and SRAM
28	ALE	Address fetch timing output
29	DB0	Data exchange with GATE ARRAY, SRAM
30	DB1	
31	DB2	
32	DB3	
33	DB4	
34	NC	
35	DB5	
36	DB6	
37	DB7	
38	Vss	GND
39	P20	SRAM OUTPUT (A8)
40	P21	(A9)
41	P22	(A10)
42	P23	(A11)
43	PRO	N.C.
44	NC	

IC3 : MN53005ELZ
GATE ARRAY (Learning Disital Processing)

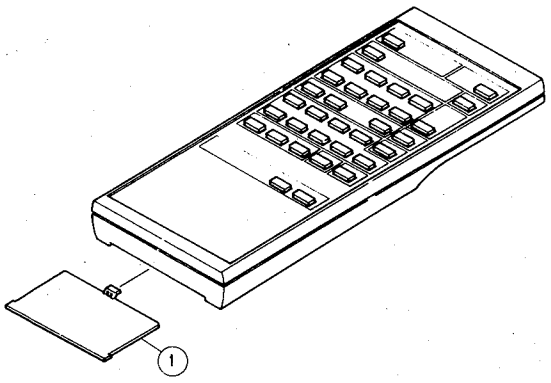
Pin No.	Pin Name	Function
1	D4	Data exchange with microcomputer
2	D3	
3	D2	
4	D1	
5	D0	
6	ALE	Address latch timing input from microcomputer
7	NWR	Data input timing input from microcomputer
8	NRD	Data output timing input from microcomputer
9	NINT	Interrupt output to microcomputer
10	NRES	Reset output to microcomputer
11	CLK	Main clock (7.36MHz)
12	NENV	Light receiving waveform envelope output
13	T	ALE of clock output
14	NRM	Modulated waveform envelope input
15	NEN	Data bus opened to GATE ARRAY at Low and to SRAM at High
16	IO	KEY SCAN INPUT
17	V_{DD}	+6V
18	I1	KEY SCAN INPUT
19	I2	
20	I3	
21	I4	
22	I5	
23	I6	
24	I7	
25	NREC	Receiving waveform input
26	NRMO	Modulated waveform output
27	O0	Pre-amplifier control
28	O1	"LEARNED" Control
29	O2	"ERROR" Control
30	O3	Slide sw SCAN OUTPUT
31	A0	SRAM address
32	A1	
33	A2	
34	A3	
35	A4	
36	A5	
37	A6	
38	A7	
39	V_{SS}	GND
40	CS	SRAM $\overline{CS}$ control output
41	NCLR	RESET INPUT
42	D7	Data exchange with microcomputer
43	D6	
44	D5	

■ Trouble-shooting

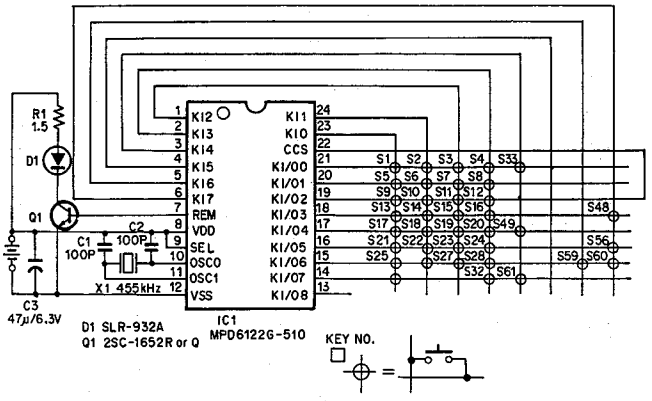
Symptom	Possible cause
Nothing operates even when power is turned "ON".	No.1 pin of IC5 (Reset IC) is left at "L". X1 (Oscillator) is open.
When signal is transmitted in NORM mode, "LEARNED" indicator lights only for a moment and goes OFF immediately.	C12 (100μF bypass capacitor) is open. R11, R12 is shorted.
Indicator lights but signal is not transmitted.	D4, D5 (Infrared LED) is open. Q1, Q2, Q3 is open or shorted. R11, R12 is open.
Indicator lights when power is turned "ON" and nothing more is done.	Carbon contact point is shorted.
Learned data is erased immediately when battery is removed.	C16 (220μF) is open. D6 is open or shorted. Q4 is shorted.
Learning error occurs.	Each terminal of SRAM is shorted. Q4 is open or shorted.
Learning transmitting code is faulty.	Q4 is open or shorted. Each terminal of SRAM is shorted.

- < power is turned "ON" > in above table actually means that battery is inserted.
- Where said as "that is open or shorted", it is possible that part is damaged.

■ EXPLODED VIEW



■ SCHEMATIC DIAGRAM



KEY NO.	DATA CODE								FUNCTION
	D_0	D_1	D_2	D_3	D_4	D_5	D_6	D_7	
1	0	0	0	0	0	0	0	0	DECK PLAY
2	1	0	0	0	0	0	0	0	DECK REW
3	0	1	0	0	0	0	0	0	DECK FF
4	1	1	0	0	0	0	0	0	DECK STOP
5	0	0	1	0	0	0	0	0	DECK REC PAUSE
6	1	0	1	0	0	0	0	0	DECK REC MUTE
7	0	1	1	0	0	0	0	0	DECK DECK A/B
8	1	1	1	0	0	0	0	0	DECK DIR.A
9	0	0	0	1	0	0	0	0	CD PLAY
10	1	0	0	1	0	0	0	0	CD PAUSE/STOP
11	0	1	0	1	0	0	0	0	CD SKIP ▷▷|
12	1	1	0	1	0	0	0	0	CD SKIP |◁◁
13	0	0	1	1	0	0	0	0	CD SEARCH ▷▷
14	1	0	1	1	0	0	0	0	CD SEARCH ◁◁
15	0	1	1	1	0	0	0	0	PHONO PLAY/CUT
16	1	1	1	1	0	0	0	0	AMP TAPE 2
17	0	0	0	0	1	0	0	0	TUNER PRESET UP
18	1	0	0	0	1	0	0	0	TUNER PRESET DOWN

KEY NO.	DATA CODE								FUNCTION
	D_0	D_1	D_2	D_3	D_4	D_5	D_6	D_7	
19	0	1	0	0	1	0	0	0	TUNER P1-8/P9-16
21	0	0	1	0	1	0	0	0	AMP PHOHO
22	1	0	1	0	1	0	0	0	AMP CD
23	0	1	1	0	1	0	0	0	AMP TUNER
24	1	1	1	0	1	0	0	0	AMP LD
25	0	0	0	1	1	0	0	0	AMP TAPE 1
27	0	1	0	1	1	0	0	0	VOL. UP
28	1	1	0	1	1	0	0	0	VOL. DOWN
32	1	1	1	1	1	0	0	0	POWER ON/OFF
33	0	0	0	0	0	0	1	0	DECK DIR.B
48	1	1	1	1	0	0	1	0	CD DISC No. UP
49	0	0	0	0	1	0	1	0	CD DISC No. DOWN
56	1	1	1	0	1	0	1	0	SLEEP
59	0	1	0	1	1	0	1	0	EQ ON/FLAT
60	1	1	0	1	1	0	1	0	EQ PRESET UP
61	0	0	1	1	1	0	1	0	EQ PRESET DOWN
	C_0	C_1	C_2	C_3	C_4	C_5	C_6	C_7	
	0	1	0	1	1	1	1	0	CUSTOM CODE

■ PARTS LIST

	Ref. No.	Part No.	Description		部品名	Remarks／Markets	Common Model		ランク
※		VG 91 77 00	Remote Control Transmitter		リモコントランスミッター				
	1	CX 60 72 00	Lid		電池ケース			K-PM1-562-01	
			Dry Cell	AAA,R03	単4乾電池				

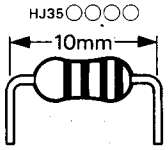
※New Parts（新規部品）

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	HJ353100	HF853100	12KΩ	HJ357120	HF857120
1.8 〃	HJ353180	※	15 〃	HJ357150	HF857150
2.2 〃	HJ353220	HF853220	18 〃	HJ357180	HF857180
3.3 〃	HJ353330	HF853330	22 〃	HJ357220	HF857220
4.7 〃	HJ353470	HF853470	27 〃	HJ357270	HF857270
5.6 〃	HJ353560	HF853560	33 〃	HJ357330	HF857330
10 〃	HJ354100	HF854100	39 〃	HJ357390	HF857390
15 〃	HJ354150	HF854150	47 〃	HJ357470	HF857470
22 〃	HJ354220	HF854220	56 〃	HJ357560	HF857560
27 〃	HJ354270	HF854270	68 〃	HJ357680	HF857680
33 〃	HJ354330	HF854330	82 〃	HJ357820	HF857820
39 〃	HJ354390	HF854390	91 〃	HJ357910	HF857910
47 〃	HJ354470	HF854470	100 〃	HJ358100	HF858100
56 〃	HJ354560	HF854560	120 〃	HJ358120	HF858120
68 〃	HJ354680	HF854680	150 〃	HJ358150	HF858150
82 〃	HJ354820	HF854820	180 〃	HJ358180	HF858180
100 〃	HJ355100	HF855100	220 〃	HJ358220	HF858220
110 〃	HJ355110	HF855110	270 〃	HJ358270	HF858270
120 〃	HJ355120	HF855120	330 〃	HJ358330	HF858330
150 〃	HJ355150	HF855150	390 〃	HJ358390	HF858390
160 〃	HJ355160	※	470 〃	HJ358470	HF858470
180 〃	HJ355180	HF855180	560 〃	HJ358560	HF858560
220 〃	HJ355220	HF855220	680 〃	HJ358680	HF858680
270 〃	HJ355270	HF855270	820 〃	HJ358820	HF858820
330 〃	HJ355330	HF855330	1.0MΩ	HJ359100	HF859100
390 〃	HJ355390	HF855390	1.2 〃	HJ359120	※
470 〃	HJ355470	HF855470	1.5 〃	HJ359150	HF859150
510 〃	※	HF855510	1.8 〃	HJ359180	HF859180
560 〃	HJ355560	HF855560	2.2 〃	HJ359220	HF859220
680 〃	HJ355680	HF855680	3.3 〃	HJ359330	HF859330
820 〃	HJ355820	HF855820	3.9 〃	HJ359390	※
910 〃	HJ355910	HF855910	4.7 〃	HJ359470	HF859470
1.0KΩ	HJ356100	HF856100			
1.2 〃	HJ356120	HF856120			
1.5 〃	HJ356150	HF856150			
1.8 〃	HJ356180	HF856180			
2.0 〃	HJ356200	HF856200			
2.2 〃	HJ356220	HF856220			
2.4 〃	HJ356240	HF856240			
2.7 〃	HJ356270	HF856270			
3.0 〃	HJ356300	HF856300			
3.3 〃	HJ356330	HF856330			
3.6 〃	HJ356360	HF856360			
3.9 〃	HJ356390	HF856390			
4.7 〃	HJ356470	HF856470			
5.1 〃	HJ356510	HF856510			
5.6 〃	HJ356560	HF856560			
6.8 〃	HJ356680	HF856680			
8.2 〃	HJ356820	HF856820			
9.1 〃	HJ356910	HF856910			
10 〃	HJ357100	HF857100			

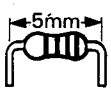
1/4W Type

HJ35○○○○



1/6W Type

HF85○○○○



RX-830/AVR-75

YAMAHA