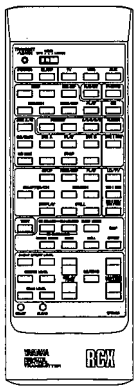
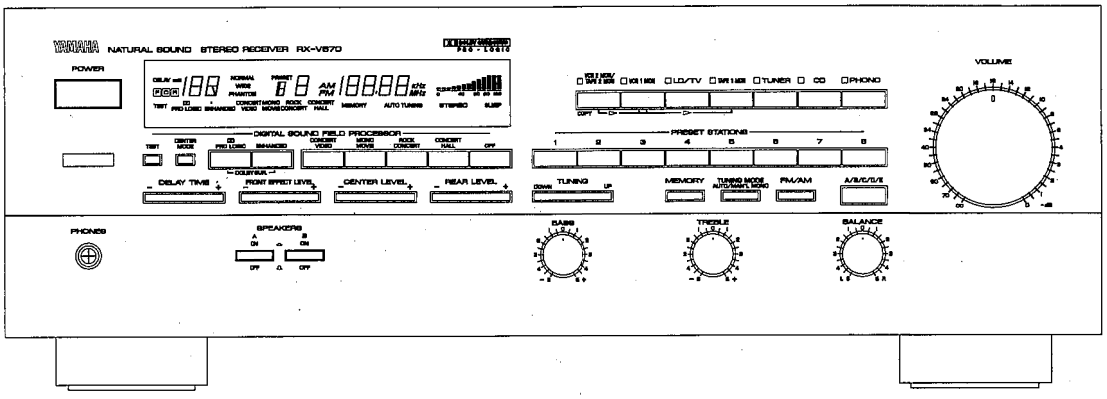
STEREO RECEIVER

RX-V670

SERVICE MANUAL





IMPORTANT NOTICE

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

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

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

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The 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.

■ CONTENTS

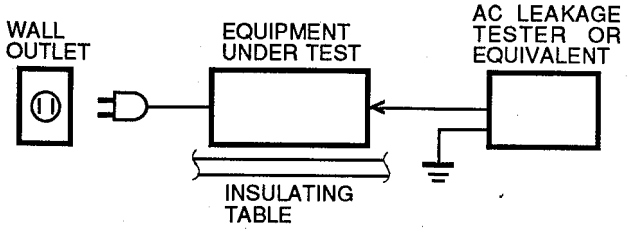
100452

YAMAHA
YAMAHA CORPORATION
P.O.Box1.Hamamatsu.Japan
1.8K-006 Printed in Japan '93.1

■ 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.

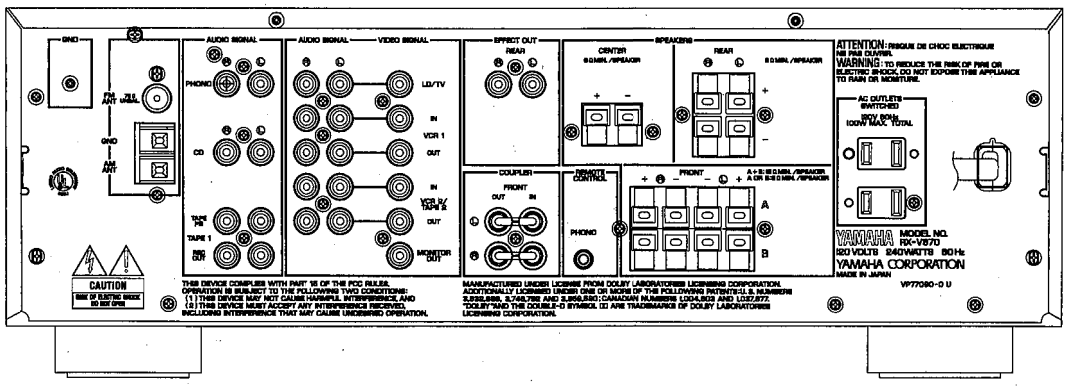
DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!

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

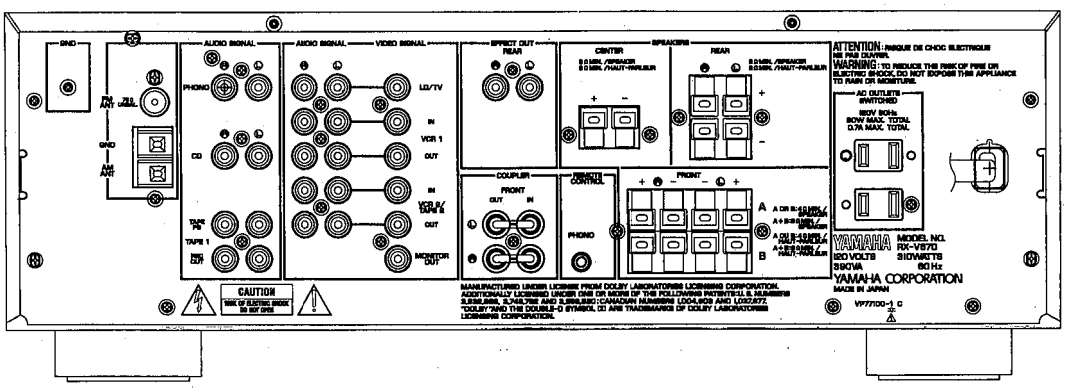
If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

■ REAR PANELS

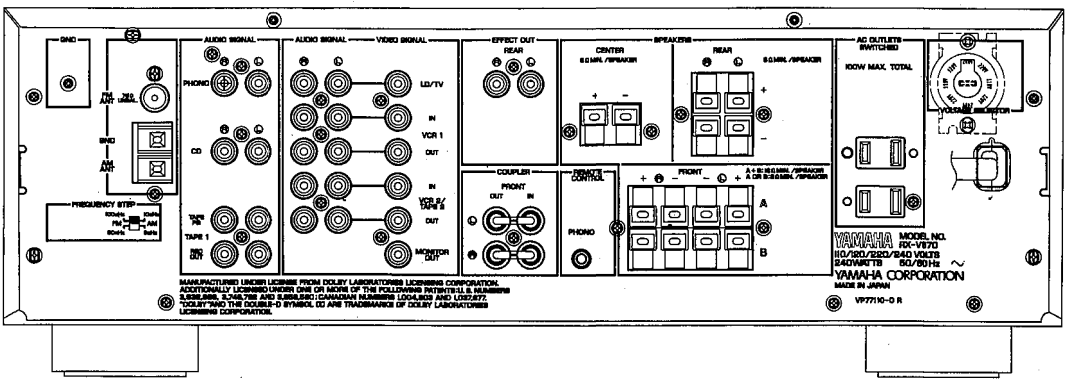
▼ U model



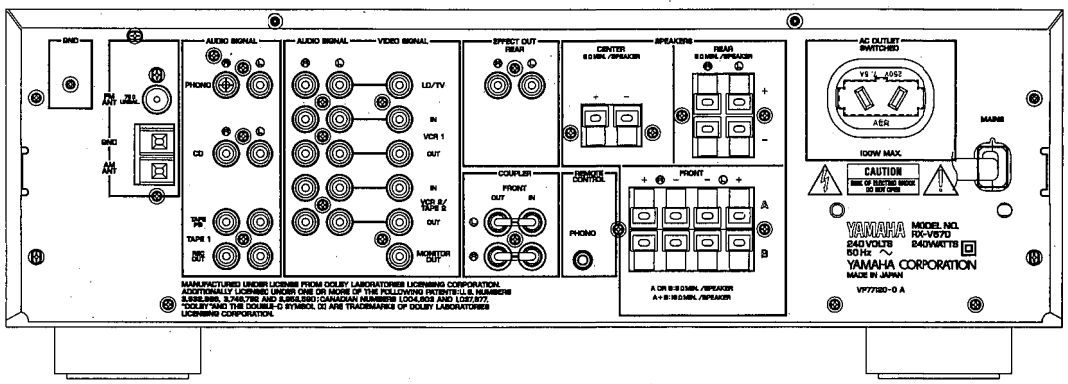
▼ C model



▼ R model



▼ A model



■ SPECIFICATIONS

■ AUDIO SECTION

Minimum RMS Output Power per Channel
- FRONT, 20Hz to 20kHz, 0.03% THD, 8Ω: 70W
- CENTER, 1kHz, 0.08% THD, 8Ω: 70W
- EFFECT, 1kHz, 0.3% THD, 8Ω: 25W

Dynamic Power per Channel (IHF)
- 8/6/4/2Ω
  - U, C, R models: 90/105/130/155W
  - A model: 85/100/125/150W

Dynamic Headroom
- R, U, C models 8Ω/6Ω: 1.09dB/1.18dB

Input Sensitivity/Impedance
- PHONO MM: 2.5mV/47kΩ
- CD etc: 150mV/47kΩ
- MAIN IN: 1V/47kΩ

Maximum Input Signal Level (1kHz, 0.02% THD)
- PHONO MM: 80mV

Output Level/Impedance
- REC OUT: 150mV/1kΩ
- PRE OUT: 1V/3.3kΩ

Headphone Jack Rated Output/Impedance
- 0.01% THD, 1kHz, RL= 8Ω: 0.5V/390Ω

Frequency Response (20Hz to 20kHz)
- CD etc: ±0.5dB
- MAIN IN: ±0.5dB

RIAA Equalization Deviation (20Hz to 20kHz)
- PHONO MM: ±0.5dB

Total Harmonic Distortion (20Hz to 20kHz)
- PHONO MM to REC OUT (1V): 0.01%
- CD etc to SP OUT (35W/8Ω): 0.015%
- MAIN IN to SP OUT (35W/8Ω): 0.015%

Signal-to-Noise Ratio (IHF-A Network)
- PHONO MM (5mV Input Shorted): 86dB
- CD etc (Shorted): 95dB

Residual Noise (IHF-A Network): 120μV

Channel Separation (Vol. –30dB)
- PHONO MM (Input Shorted) 1kHz/10kHz: 65dB/50dB
- CD etc (Input 5.1kΩ Terminated) 1kHz/10kHz: 65dB/50dB

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

■ VIDEO SECTION

Video Signal
- Input Level/Impedance: 1Vp-p/75Ω
- Output Level/Impedance: 1Vp-p/75Ω

■ FM SECTION

Tuning Range
- U, C, R models: 87.5 to 107.9MHz
- A, R models: 87.5 to 108.0MHz

50dB Quieting Sensitivity (IHF, 75Ω)
- Mono: 1.55μV (15.1dBf)
- Stereo: 21μV (37.7dBf)

Usable Sensitivity (75Ω)
- (30dB S/N Quieting, 1kHz, 100% mod.): 0.8μV (9.3dBf)

Image Response Ratio: 45dB

IF Response Ratio: 80dB

Spurious Response Ratio: 70dB

AM Suppression Ratio: 55dB

Capture Ratio: 1.5dB

Alternate Channel Selectivity: 85dB

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

Harmonic Distortion (1kHz)
- Mono/Stereo: 0.1/0.2%

Frequency Response
- 20Hz to 15kHz: 0±1.5dB

Stereo Separation (1kHz): 50dB

■ AM SECTION

Tuning Range
- U, C, R models: 530 to 1,710kHz
- A, R models: 531 to 1,611kHz

Usable Sensitivity: 100μV/m

Selectivity: 32dB

Signal-to-Noise Ratio: 50dB

Image Response Ratio: 40dB

Spurious Response Ratio: 50dB

Harmonic Distortion (400Hz): 0.3%

AUDIO SECTION

Output Level/Impedance
- FM (30% mod., 1kHz): 700mV/3.8kΩ
- AM (30% mod., 400Hz): 200mV/3.8kΩ

■ GENERAL

Power Supply
U, C models .....AC 120V, 60Hz
A model .....AC 240V, 50Hz
R model .....AC 110/120/220/240V, 60/50Hz
Power Consumption
U model 240W
C model 390VA/310W
A, R models 240W
AC Outlets
Switched x 2
U, R models .....100W max. (Total)
C model .....80W max. (Total)
Switched x 1
A model .....100W max.
Dimensions (W x H x D) .....435 x 151.3 x 296.7mm
(17-1/8" x 5-15/16" x 11-11/16")
Weight .....10.5 kg (23 lbs. 2 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 ***A .....Australian model***
C .....Canadian model ***R .....General model***

DOLBY SURROUND PRO • LOGIC

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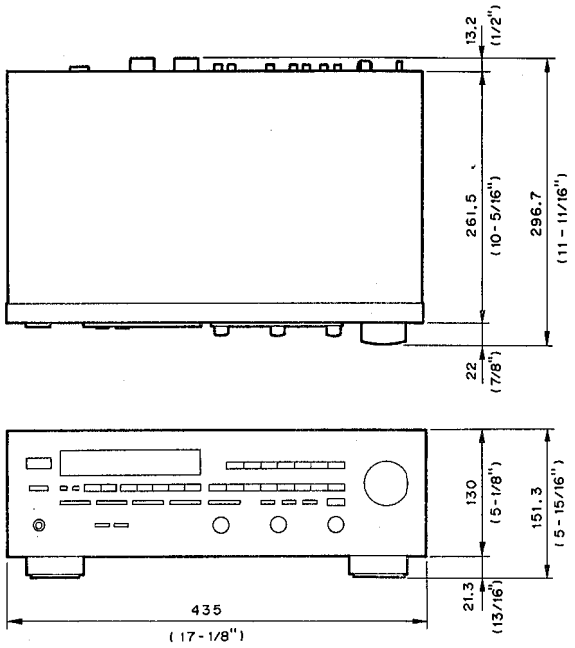
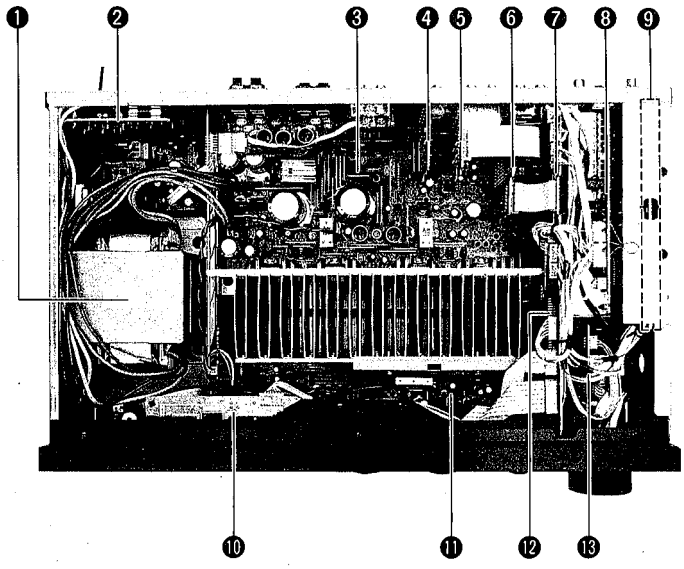
● DIMENSIONS



Units : mm (inch)

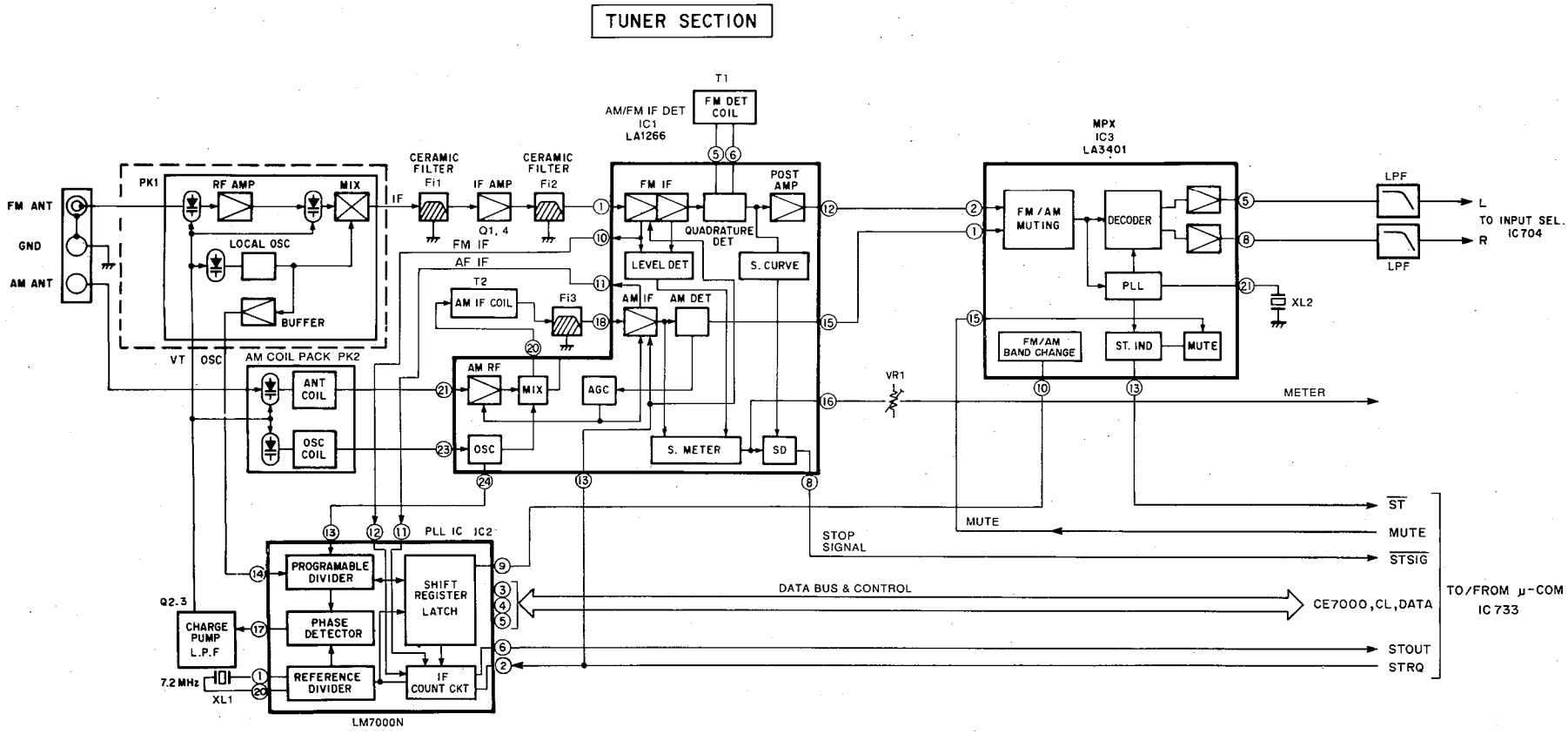
■ INTERNAL VIEW



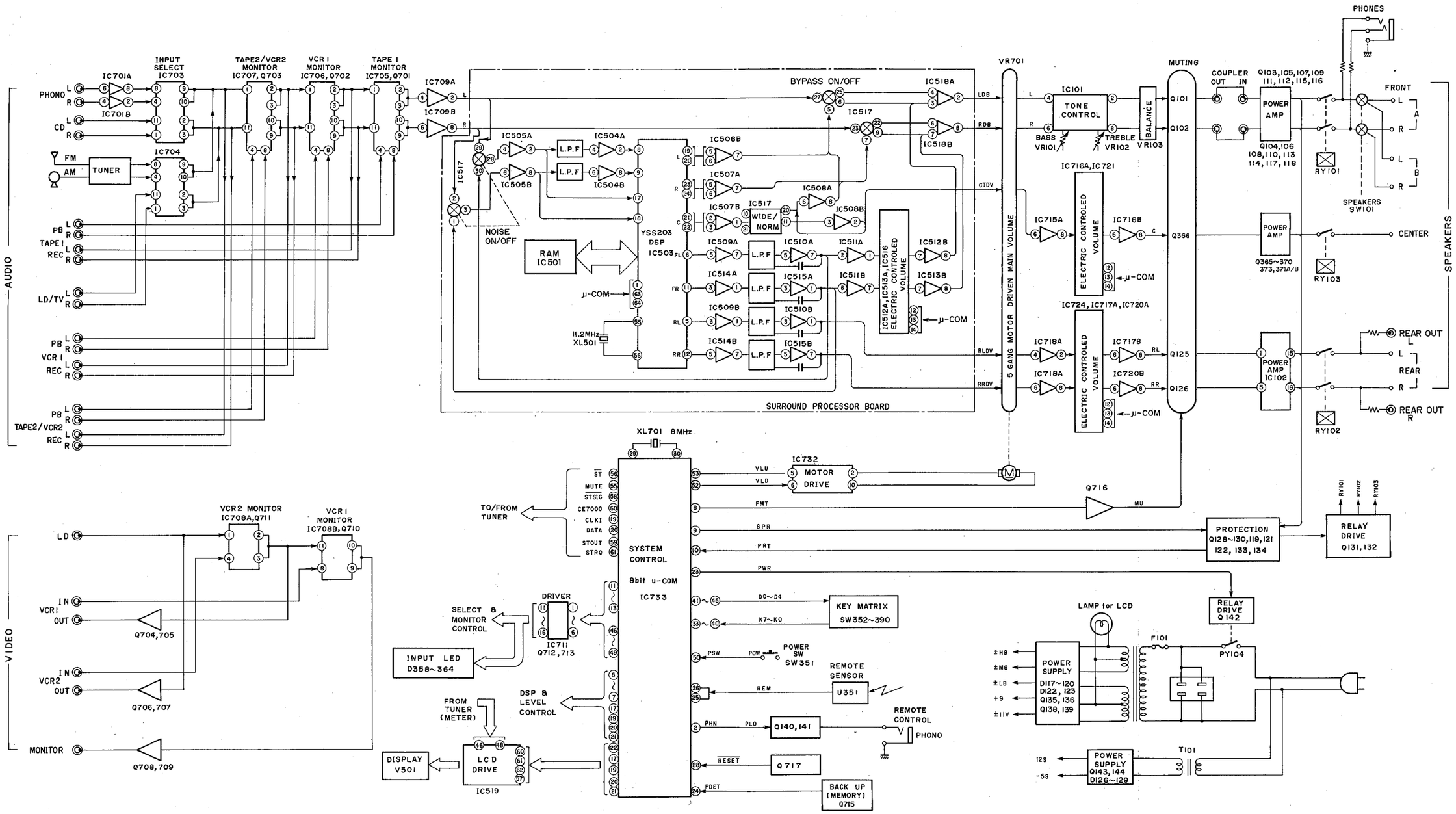
❶ POWER TRANSFORMER
❷ MAIN P.C.B. ASS'Y (2)
❸ MAIN P.C.B. ASS'Y (1)
❹ INPUT P.C.B. ASS'Y (4)
❺ INPUT P.C.B. ASS'Y (3)
❻ INPUT P.C.B. ASS'Y (2)
❼ INPUT P.C.B. ASS'Y (1)
❽ TUNER P.C.B. ASS'Y
❾ DSP P.C.B. ASS'Y (1)
❿ DSP P.C.B. ASS'Y (2)
⓫ OPERATION P.C.B. ASS'Y (2)
⓬ IC733 : 8 bit μ-COM
⓭ INPUT P.C.B. ASS'Y (5)

■ BLOCK DIAGRAM

RX-V670



■ BLOCK DIAGRAM



■ DISASSEMBLY PROCEDURES

(Remove parts in the order as numbered.)

1. **Removal of Top Cover**
   Remove 7 screws (①) in Fig. 1.

2. **Removal of Bottom Cover**
   Remove 10 screws (②) in Fig. 1.

3. **Removal of Front Panel**
   a. Remove 4 knobs (BASS, TREBLE, BALANCE, VOLUME).
   b. Remove 3 screws (③) in Fig. 1.

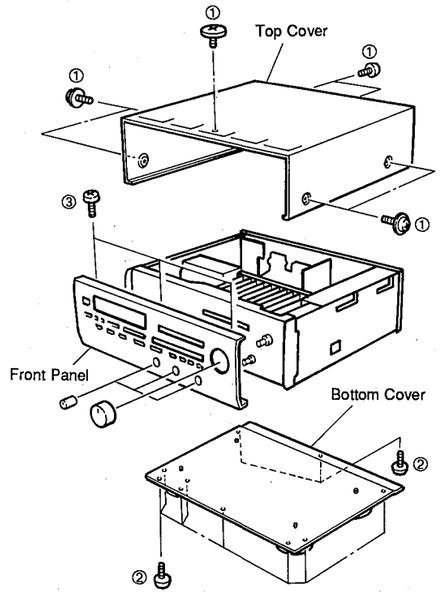
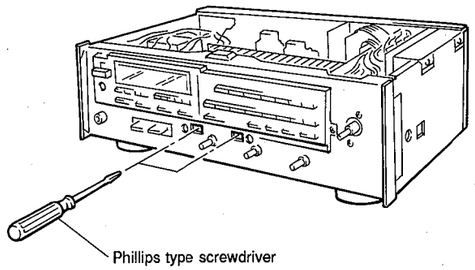


Fig. 1

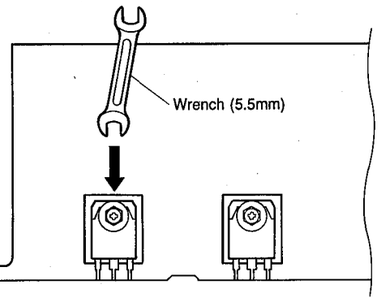
● **Removal of Power IC (IC 102)**

a. Remove the Front Panel.
b. Insert the Phillips type (+) screwdriver into a hole at the upper left of the BASS and TREBLE controls on the front frame respectively and remove the IC fixing screw.



● **Removal of Power Transistor (Q115~Q118, 371A, 371B)**

a. Use a 5.5mm wrench or small size adjustable wrench.
b. Using the above tool, remove the screw fixing the Power Transistor.

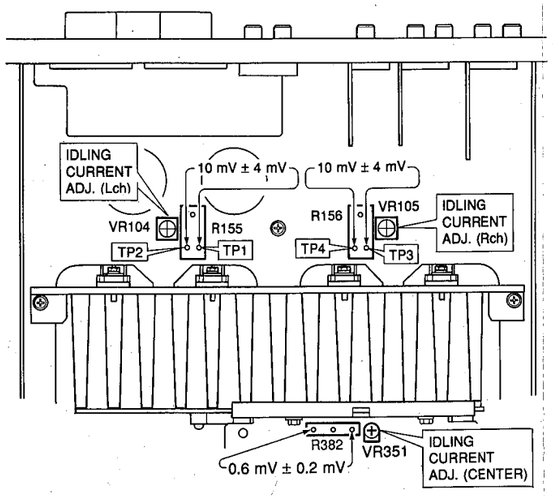


■ ADJUSTMENT IN POWER AMPLIFIER SECTION

IDLING CURRENT ADJUSTMENT

When replacing the power and drive transistors, adjust idling current. After the power has been turned on, age about 10 minutes in non loaded condition.

Test points		Adjustment point	Rating
FRONT Lch	Across the terminals of R155 (TP1—TP2)	VR104	10 mV±4 mV DC
FRONT Rch	Across the terminals of R156 (TP3—TP4)	VR105	10 mV±4 mV DC
CENTER	Between both terminals of R382	VR351	0.6 mV±0.2 mV DC

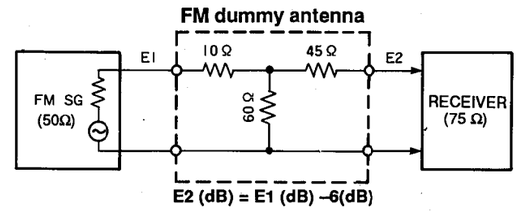


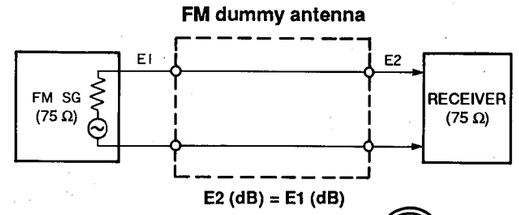
■ ADJUSTMENT IN TUNER SECTION

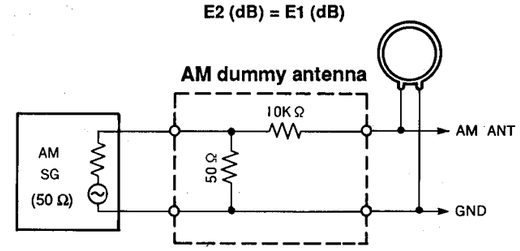
● **Measuring Instruments**

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)
Oscillator

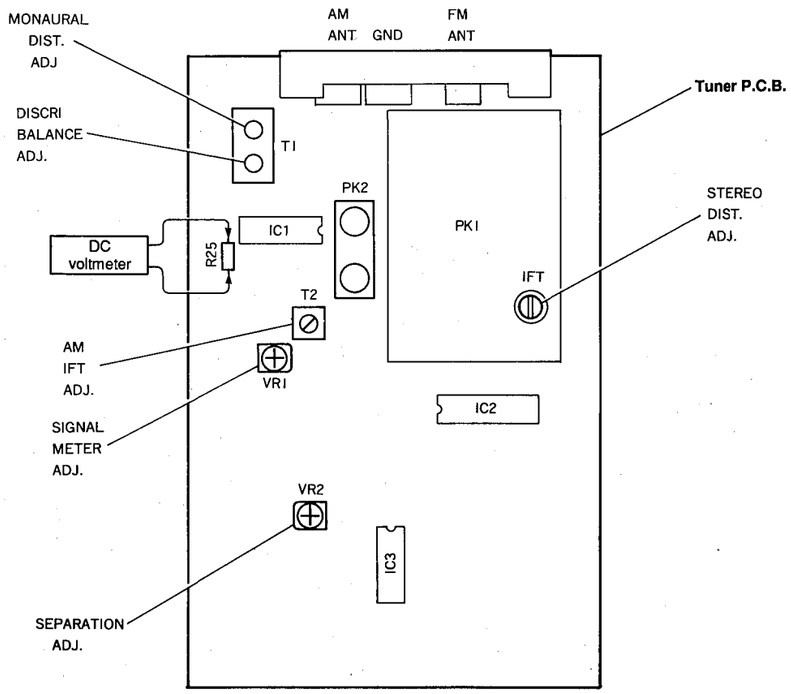
● **Dummy antenna**







● **Test point**



FM Adjustment

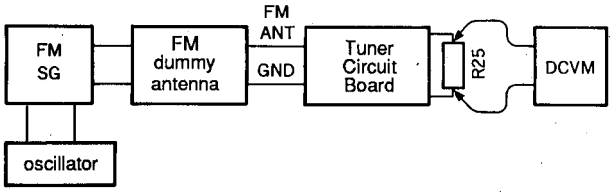
● Before Adjustment

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.

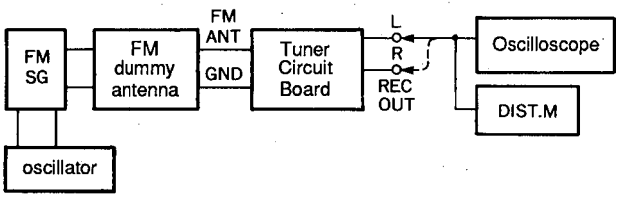
INPUT SELECTOR ..... TUNER
TUNING MODE ..... AUTO

● Connection diagram (Measuring instruments)

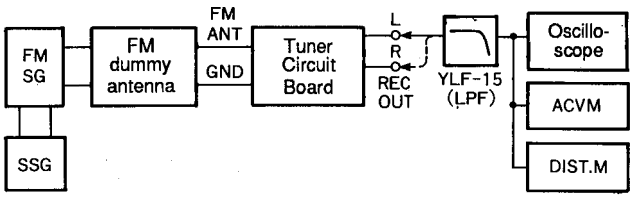
1) Discriminator balance adjustment



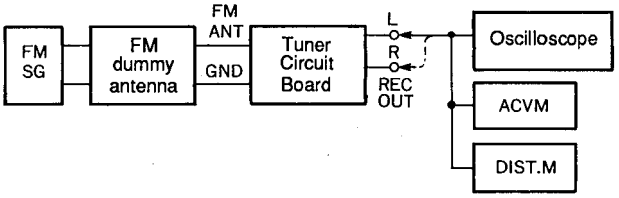
2) Monaural distortion adjustment



3) Stereo distortion adjustment/separation adjustment



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-4)	T1 (IC side core)	Both ends of R25	DC 0V±100mV
2	Rough adjustment of monaural distortion	Same as Step 1.	98.1MHz * (A-4)	T1 (Antenna side core)	REC OUT L, R	Minimize the distortion.
3	Fine adjustment of discriminator balance	Same as Step 1.	98.1MHz * (A-4)	T1 (IC side core)	Both ends of R25	DC 0V±50mV
4	Fine adjustment of monaural distortion	Same as Step 1.	98.1MHz * (A-4)	T1 (Antenna side core)	REC OUT L, R	Minimize the distortion (to 0.25% or less).
5	Verification of discriminator balance	Same as Step 1.	98.1MHz * (A-4)	T1 (IC side core)	Both ends of R25	DC 0V±50mV

* : Execution of MAKER PRESET (Refer to TEST SIGNAL PROGRAM on pages 13 and 14.) will facilitate setting reception frequency for adjustment.

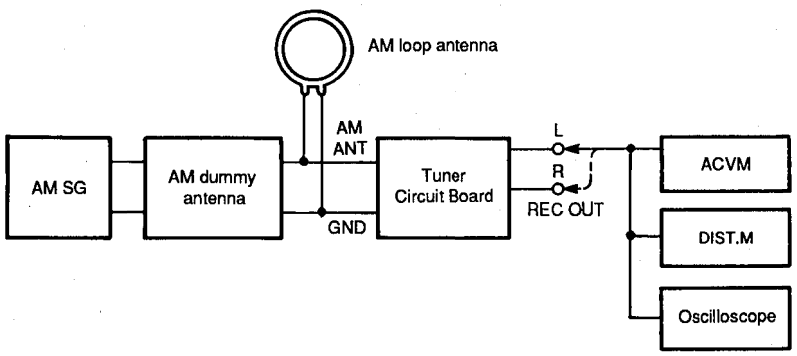
Step	Adjustment Item	Signal (ANT IN)	Reception frequency	Adjusted point	Test point	Rating
6	Stereo distortion	FM ANT (75Ω) 98.1MHz 70dBμ Stereo L or R 1kHz, 100% modulation	98.1MHz * (A-4) *Tuning mode should be AUTO.	Front end IFT	REC OUT L, R	Distortion should be minimized (1% or less) * STEREO indicator should light. * Note that over-turning IFT will reduce sensitivity.
7	Verification of monaural distortion	FM ANT (75Ω) 98.1MHz 70dBμ MONO 1kHz, 100% modulation	98.1MHz * (A-4)		REC OUT L, R	0.4% or less
8	Verification of sensitivity	FM ANT (75Ω) 88.1MHz 98.1MHz 106.1MHz	88.1MHz * (A-6) 98.1MHz * (A-4) 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. Check to ensure that the voltage at the ANT terminal is 3dBμ (14.25dBf) or less.
9	Separation	FM ANT (75Ω) 98.1MHz 70dBμ Stereo L or R 1kHz, 100% modulation	98.1MHz * (A-4)	VR2	REC OUT L, R	With SSG output at L or R, the signal leakage level at the other channel should be minimized. 36dB or more
10	Signal meter	FM ANT (75Ω) 98.1MHz 45dBμ MONO 1kHz 30% modulation	98.1MHz * (A-4)	VR1		Adjust so that all signal meters light.
		–10dBμ or less				Check to ensure that signal meters turn OFF.
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 moved UP and DOWN. • The stereo indicator should light. • Audio muting should be applied during tuning.

* : Execution of MAKER PRESET (Refer to TEST SIGNAL PROGRAM on pages 13 and 14.) will facilitate setting reception frequency for adjustment.

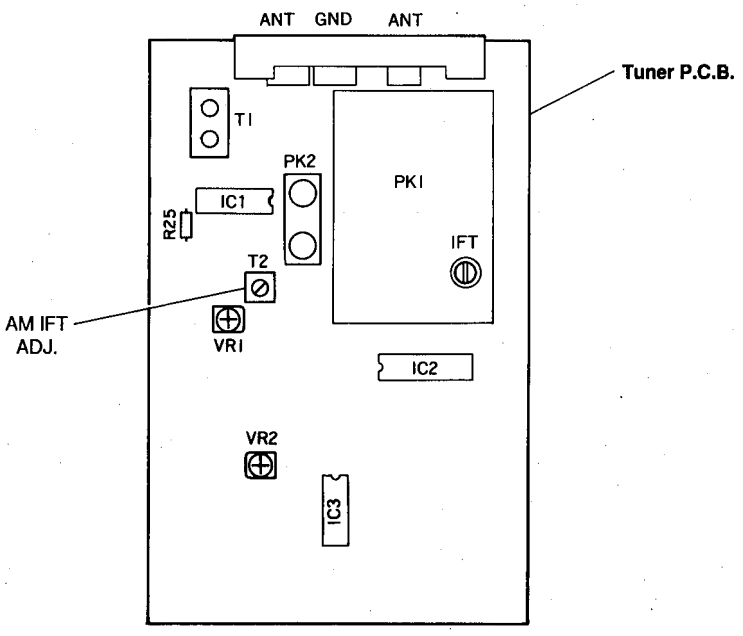
AM Adjustment (This should be done after FM adjustment.)

● 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	AM ANT 630kHz 50dBμ 400Hz, 30% modulation	630kHz * (B-1)	T2	REC OUT	Audio output should be maximized.
2	Verification of sensitivity	AM ANT 630kHz 1080kHz 1440kHz 400Hz, 30% modulation	630kHz * (B-1) 1080kHz * (B-2) 1440kHz * (B-3)		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.
3	Verification of signal meter	AM ANT 1080kHz 90dBμ	1080kHz * (B-2)			All signal meters should light.
		–10dBμ or less				All signal meters should turn OFF.
4	Verification of auto tuning	AM ANT 60dBμ	1080kHz * (B-2)			Auto reception should be available when the tuning key is moved UP and DOWN.



■ TEST SIGNAL PROGRAM

To facilitate inspection and measurement, a test signal program is programmed in this set.

CAUTION : Using a table as shown below, write down the content of the memory preset in the tuner before setting to the test signal program mode.
(This is because setting to the test signal program mode sets the tuner memory content in the state preset by the manufacturer and erases all the memory preset by the user.)
Upon completion of the test signal program, set to the tuner mode again and enter the preset memory as written in the table.

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

1. Starting Operation

While pressing 3 keys of TEST, CENTER MODE and PRO LOGIC simultaneously, turn ON the POWER switch, and the test signal program mode No.1 will start. After that, diagnosis as described below are performed according to DIGITAL SOUND FIELD PROCESSOR keys TEST to CONCERT HALL.

2. Functions available during the test signal program mode

In the test signal program mode, any operation other than those listed below is invalid.

- **DIGITAL SOUND FIELD PROCESSOR key : Selection of diagnosis mode**
- **INPUT SELECTOR key : Switching input source**
- **LEVEL +/- key : Adjustment of output level**
- **POWER ON/OFF key : Power ON/OFF**

TEST PROGRAM 1. — LCD&INITIALIZE
When the TEST program procedure is started, all LCD's turn ON, the set is initialized and the content as preset by the manufacturer is executed.
Then, when "+" or "–" of the FRONT EFFECT LEVEL switch is pressed once, "1 SELF" appears in the LCD after a few seconds.

- **INPUT : CD**
- **MONITOR OUT : LD**
- **SURROUND : □□ PRO LOGIC**

VOLUME LEVEL

- **FRONT EFFECT : "—"**
- **CENTER : "80"**
- **REAR : "80"**

Note:
"72" = –4dB
"80" = 0dB
"86" = +3dB

Note : To restore the TEST program 1 from any other TEST program, press the TEST key.

TEST PROGRAM 2. — LED & INHIBIT
The TEST program 2 checks the function to switch between the input source and TAPE MONITOR.
When the CENTER MODE key is pressed, "2 SELF" appears in the LCD and the input selector switches automatically. When the operation stops, the LCD turns OFF.

LED : After each of the LED's, PHONO, CD, TUNER, TAPE1, LD, VCR1 and TAPE 2 turns ON and after LD or TAPE1, LD, VCR1 turn ON finally, the operation stops.

TEST PROGRAM 3.
As the TEST program 3 is not intended for servicing, it needs not be performed.

Reference :
When the PRO LOGIC key is pressed, "8" appears in the center of the LCD. Then pressing "+" or "–" of the FRONT EFFECT LEVEL switch will cause the LCD to display "3 SELF" after a few seconds.

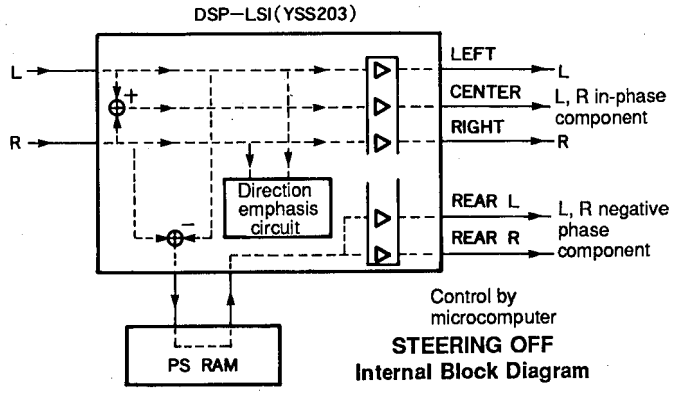
TEST PROGRAM 4. — STEERING OFF
Press the PRO LOGIC ENHANCED key
The MULTIPLYING DAC value in the DSP-LSI output step gets out of the control by the internal direction emphasis circuit and now it can be set through the microcomputer. Then the output of each channel is as listed below.

- **LEFT** : L signal
- **RIGHT** : R signal
- **CENTER** : L, R in-phase component
- **REAR** : L, R negative phase component

VOLUME LEVEL

- **FRONT EFFECT : "—"**
- **CENTER : "80"**
- **REAR : "80"**

The LCD displays "4 SELF".



STEERING OFF
Internal Block Diagram

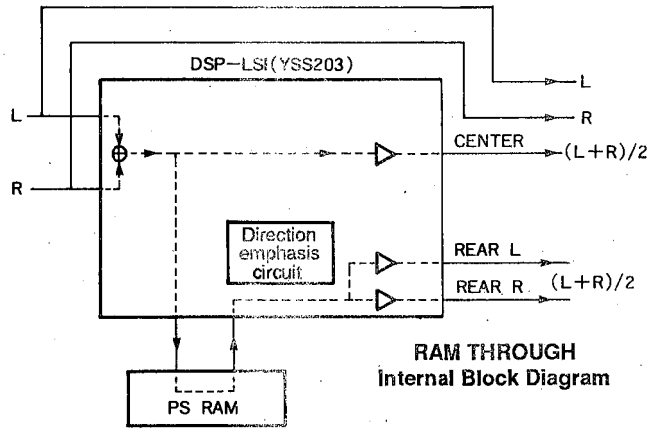
TEST PROGRAM 5. — RAM THROUGH

The TEST program 5 checks the output of each channel
Press the CONCERT VIDEO key

The L and R channels enter the through state and (L + R)/2 is output at the CENTER and REAR.

VOLUME LEVEL
- **FRONT EFFECT : "—"**
- **CENTER : "72"**
- **REAR : "72"**

The LCD displays "5 SELF".



RAM THROUGH
Internal Block Diagram

TEST PROGRAM 6. — Not performed

As the TEST program 6 is not intended for servicing, do not perform it.

Note : When the MONO MOVIE key is pressed by mistake, "6 SELF" appears in the LCD. This is meaningless for self-diagnosis function. If this has occurred by accident, do not proceed with other TEST programs. Turn OFF the power once and theb restart the TEST program procedure.

TEST PROGRAM 7. — MANUAL TEST TONE

Press the ROCK CONCERT Key

The TEST tone of the DOLBY PRO LOGIC shifts in the order of L C R S (Surround) at every pressing of the ROCK CONCERT key. Also, the LCD displays "TEST" and the TEST output position ("L", "C", "R" or "S").

Example) "TEST L SELF"

VOLUME LEVEL
- **FRONT EFFECT : "—"**
- **CENTER : "80"**
- **REAR : "86"**

TEST PROGRAM 8. — EXIT

Press the CONCERT HALL Key

The program gets out of the self diagnosis mode and reenters the normal operation mode as factory-set.

3. Cancellation

The program is reset to the normal operation mode by turning the power OFF or by pressing the CONCERT HALL key. At the same time, the "maker preset" is also executed.

● **Maker Preset**

1) TUNER section

Preset group	P1	P2	P3	P4	P5	P6	P7	P8
A, C, E	87.5MHz	90.1MHz	95.1MHz	98.1MHz	U, C : 107.9MkHz R, A : 108.0MkHz	88.1MHz	106.1MHz	U, C : 107.9MkHz R, A : 108.0MHz
B, D	630kHz	1080kHz	1440kHz	U, C : 530kHz R, A : 531kHz	U, C : 1710kHz R, A : 1611kHz	900kHz	1350kHz	U, C : 1400kHz R, A : 1404kHz

All tuning modes are AUTO TUNING and AUTO STEREO.

2) SURROUND section

DELAY TIME : □□ PRO LOGIC ..... 20ms (Factory-set surround mode)
ENHANCED 20ms
CONCERT VIDEO 25ms
MONO MOVIE 25ms
ROCK CONCERT 15ms
CONCERT HALL 30ms

CENTER MODE : NORMAL

VOLUME LEVEL : FRONT EFFECT ..... "80" ("—" for PRO LOGIC)
CENTER ..... "80" (PRO LOGIC and ENHANCED only)
REAR ..... "80"

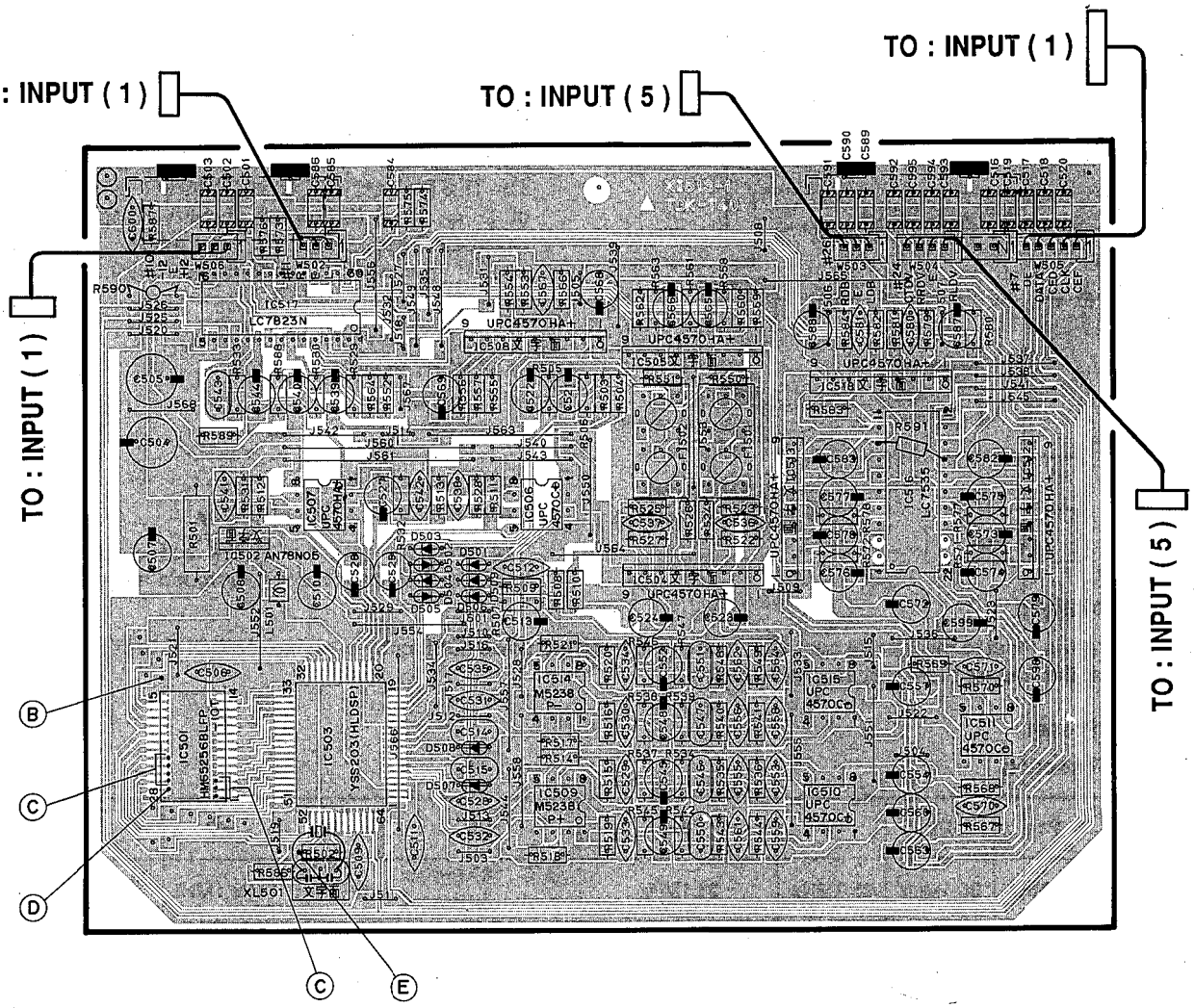
3) SELECTOR section

INPUT : CD
MONITOR OUT : LD

■ PRINTED CIRCUIT BOARD (Foil side)

Ⓑ to Ⓔ : WAVEFORM OF TEST POINT (See page 31)

DSP P. C. B. (1)



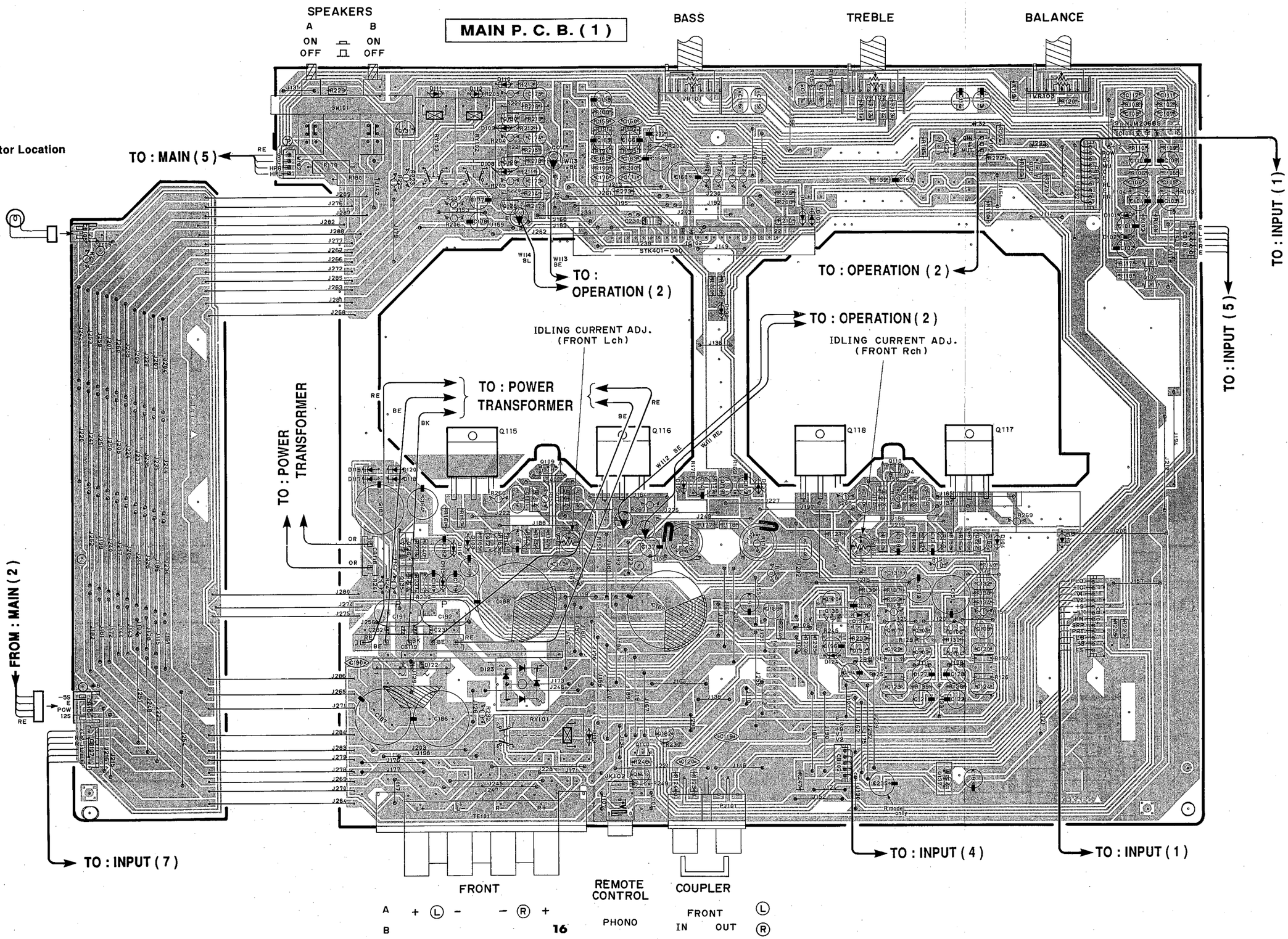
● **Semiconductor Location**

Ref. No.	Location
IC 501	B4
IC 502	B4
IC 503	B4
IC 504	C4
IC 505	C3
IC 506	C3
IC 507	B3
IC 508	C3
IC 509	C5
IC 510	D4
IC 511	D4
IC 512	E3
IC 513	D3
IC 514	C4
IC 515	D4
IC 516	D3
IC 517	B3
IC 518	D3

■ PRINTED CIRCUIT BOARD (Foil side)

● Semiconductor Location

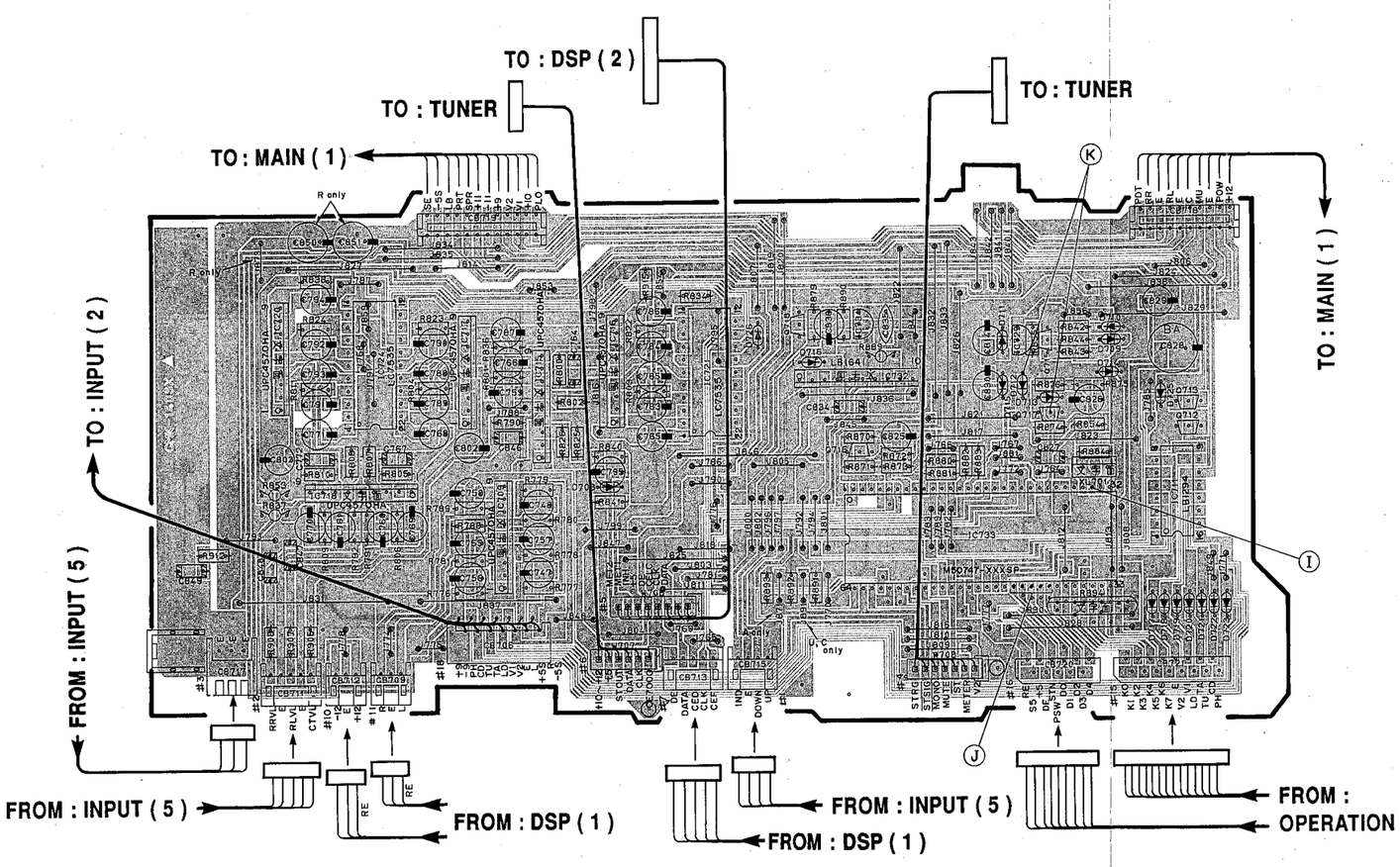
Ref. No.	Location
IC 101	G2
IC 102	E2
Q 101	G2
Q 102	G2
Q 103	F4
Q 104	F4
Q 105	F4
Q 106	F4
Q 107	F4
Q 108	F4
Q 109	D3
Q 110	F3
Q 111	D4
Q 112	D5
Q 113	F4
Q 114	F4
Q 115	D3
Q 116	D3
Q 117	F3
Q 118	E3
Q 119	E3
Q 120	F4
Q 121	D4
Q 122	F4
Q 125	F2
Q 126	G2
Q 128	D2
Q 129	D2
Q 130	D2
Q 131	C2
Q 132	E5
Q 133	F4
Q 134	F4
Q 135	C4
Q 136	C4
Q 137	F5
Q 138	F4
Q 139	E4
Q 140	E5
Q 141	E5



■ PRINTED CIRCUIT BOARD (Foil side)

Ⓕ to Ⓚ : WAVEFORM OF TEST POINT (See page 31)

INPUT P. C. B. (1)

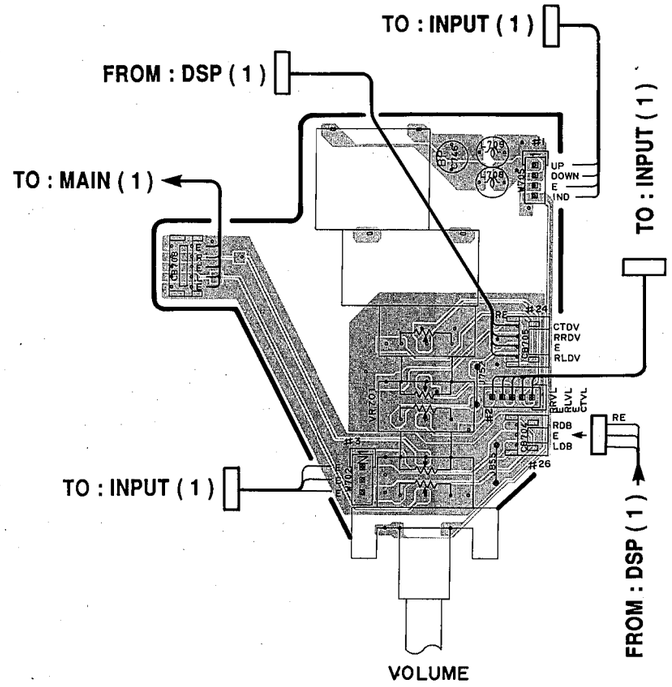


● **Semiconductor Location**

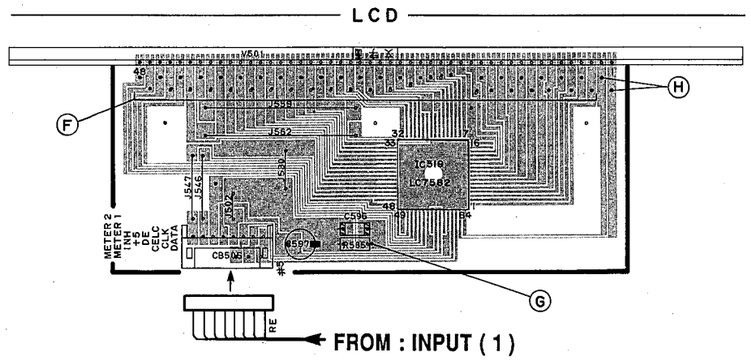
Ref. No.	Location
IC 709	B3
IC 711	E3
IC 715	C3
IC 716	C3
IC 717	B3
IC 718	B3
IC 720	B3
IC 721	C3
IC 724	B3
IC 729	D3
IC 732	D3
IC 733	D3
IC 734	D3
IC 519	G5

Ref. No.	Location
Q 712	E3
Q 713	E3
Q 715	D3
Q 716	D3
Q 717	D3
Q 718	C3

INPUT P. C. B. (5)

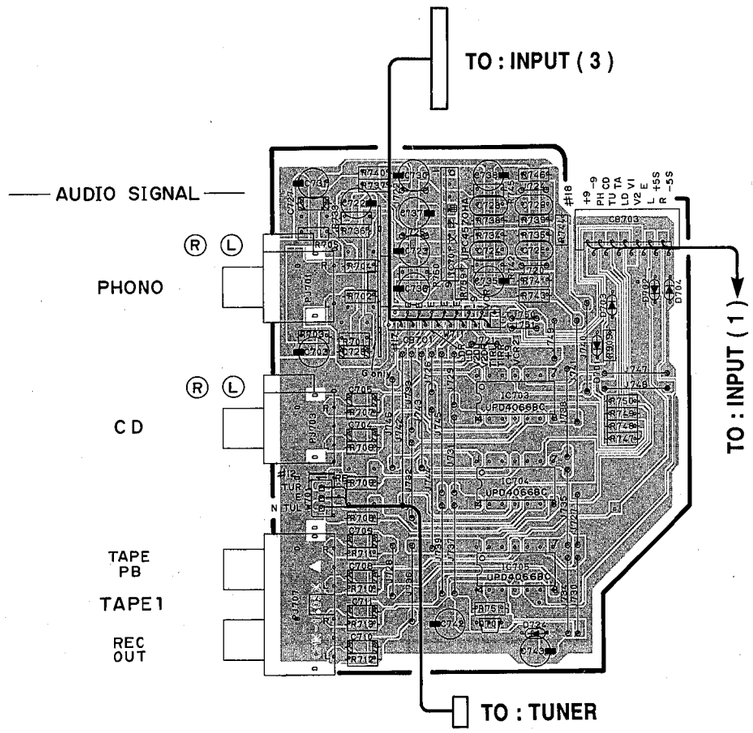


DSP P. C. B. (2)

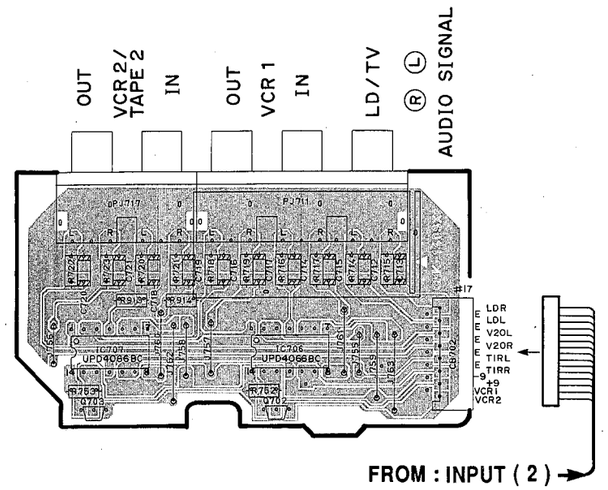


■ PRINTED CIRCUIT BOARD (Foil side)

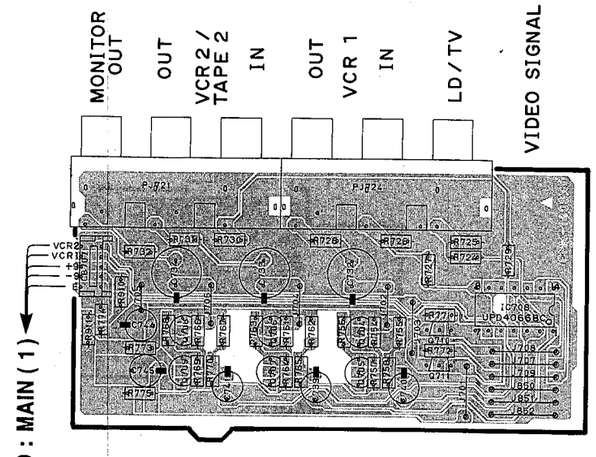
INPUT P. C. B. (2)



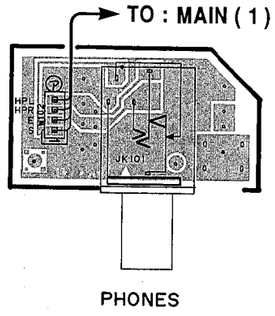
INPUT P. C. B. (3)



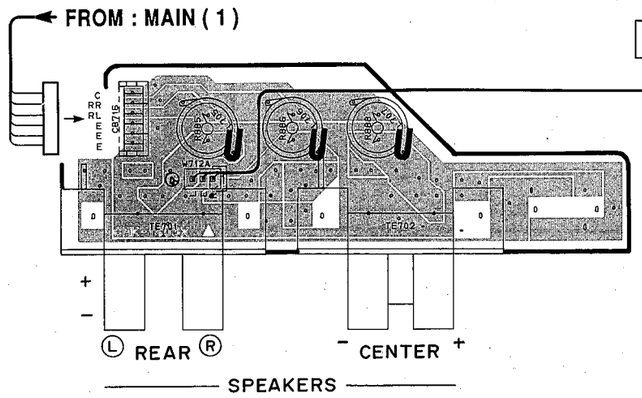
INPUT P. C. B. (4)



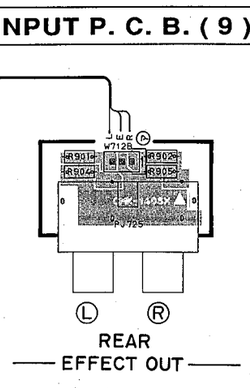
MAIN P. C. B. (5)



INPUT P. C. B. (7)



INPUT P. C. B. (9)



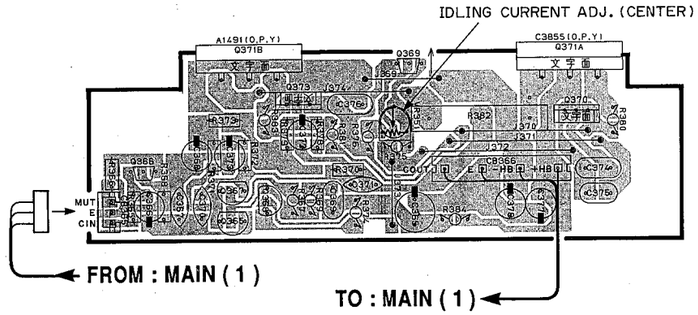
● **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
IC 701	B2	Q 701	B3
IC 703	B3	Q 702	E3
IC 704	B3	Q 703	D3
IC 705	B3	Q 704	G3
IC 706	E3	Q 705	G3
IC 707	D3	Q 706	G3
IC 708	H2	Q 707	G3
		Q 708	G3
		Q 709	G3
		Q 710	G3
		Q 711	G3

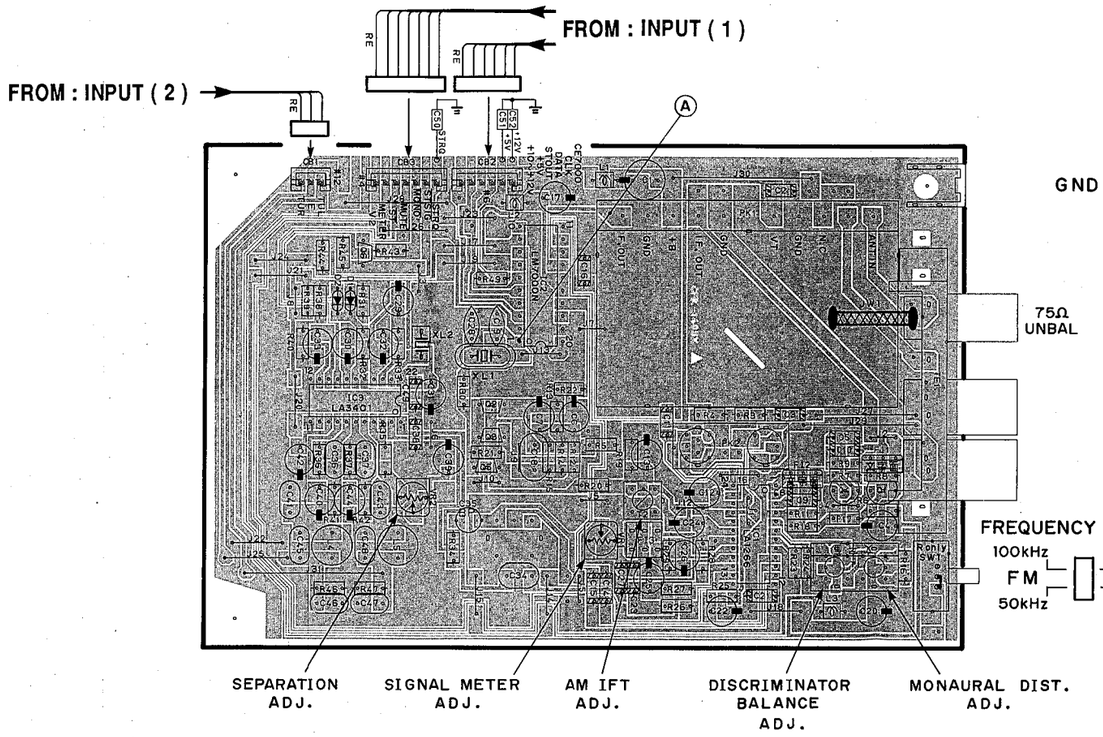
■ PRINTED CIRCUIT BOARD (Foil side)

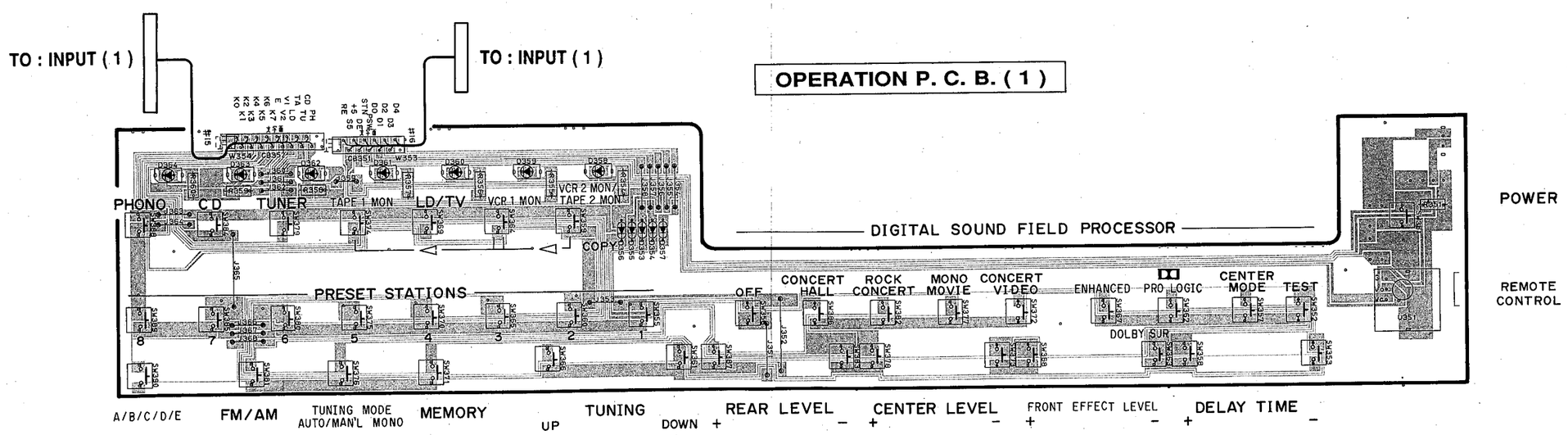
Ⓐ: WAVEFORM OF TEST POINT (See page 31)

OPERATION P. C. B. (2)



TUNER P. C. B.

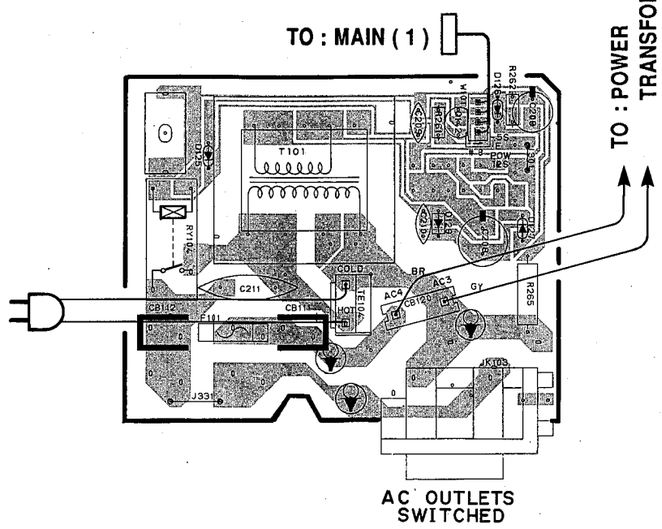




■ PRINTED CIRCUIT BOARD (Foil side)

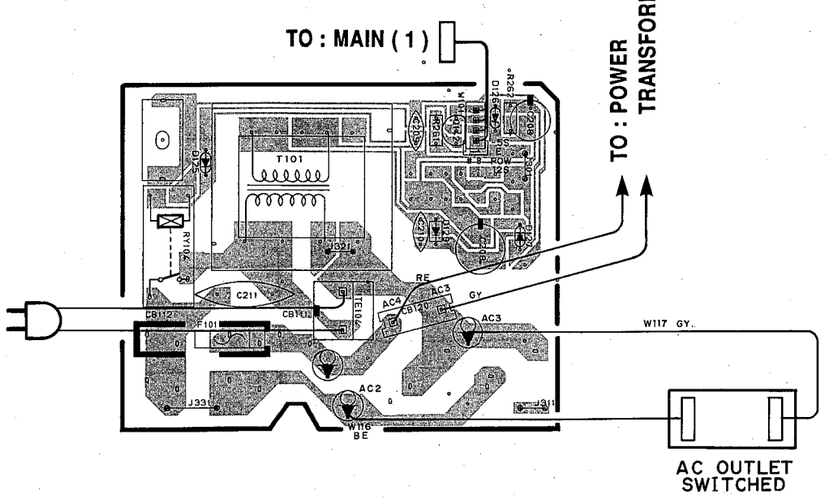
• U, C models

MAIN P. C. B. (2)



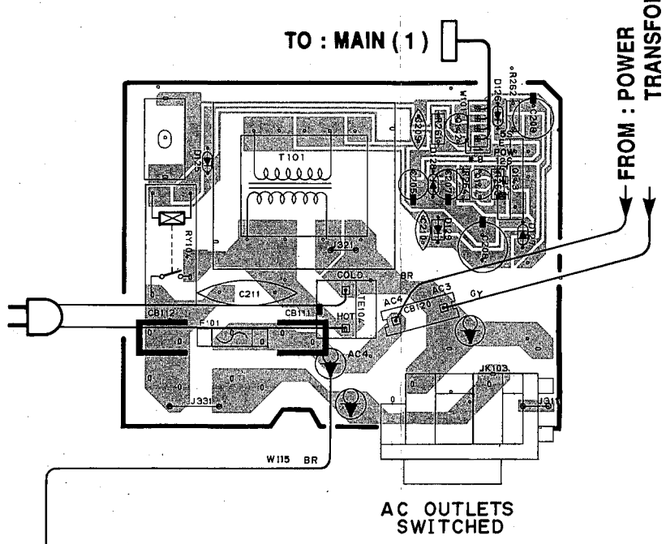
• A models

MAIN P. C. B. (2)

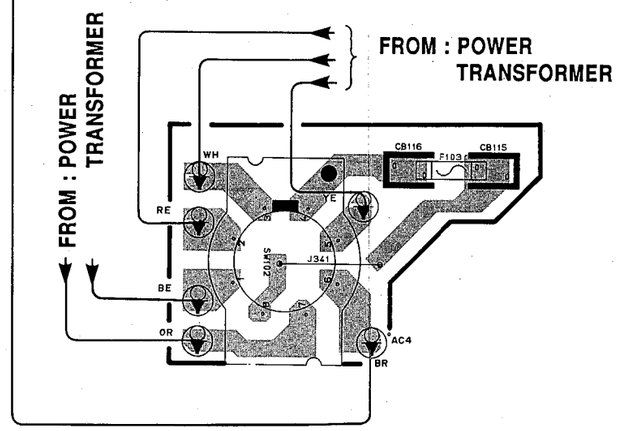


• R model

MAIN P. C. B. (2)

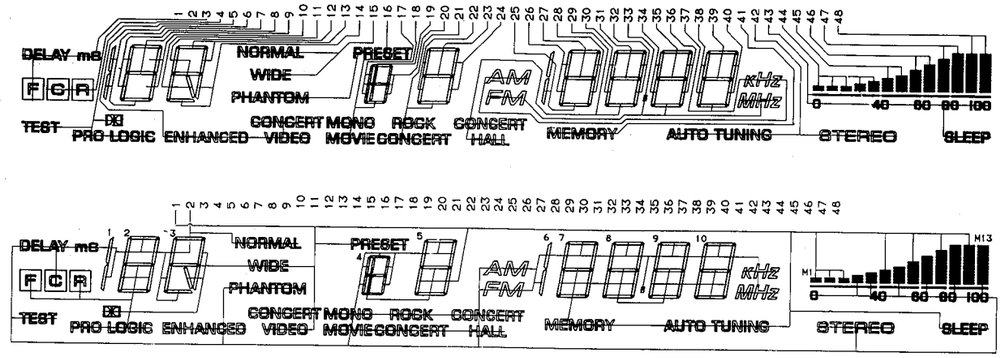


MAIN P. C. B. (4)



■ DISPLAY DATA (VJ805700)

● V501 : LCD8160BIJP

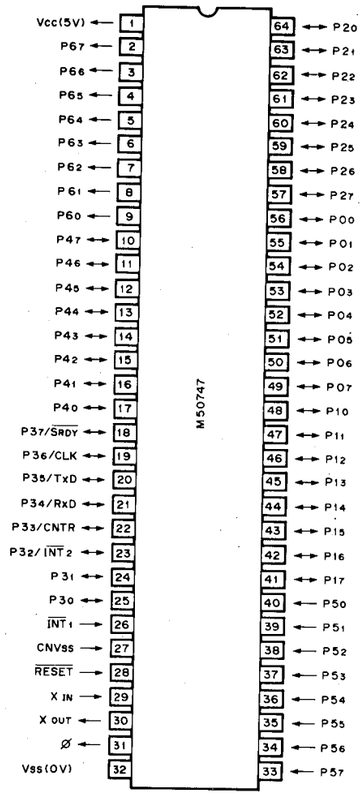


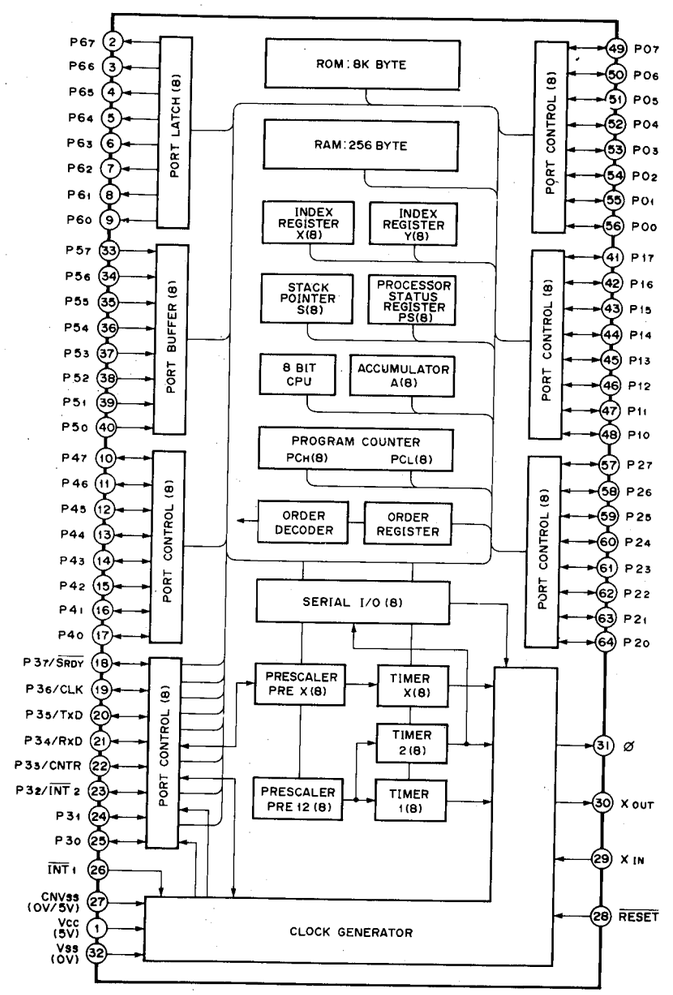
No.	COM 1	COM 2	No.	COM 1	COM 2	No.	COM 1	COM 2
1	—	COM	17	MONO MOVIE	4 d	33	FM, DP MHz	9 d
2	COM	—	18	4 ef	4 g	34	9 f	9 e
3	DELAY ms	F	19	4 a	4 ij	35	9 a	9 g
4	C	R	20	4 bc	4 h	36	9 b	9 c
5	TEST	1)	21	3)	5 d	37	AM kHz	10 d
6	ENHANCED	2)	22	5 f	5 e	38	10 f	10 e
7	1bc	2 d	23	5 a	5 g	39	10 a	10 g
8	2 f	2 e	24	5 b	5 c	40	10 b	10 c
9	2 a	2 g	25	6 bc	7 d	41	—	MEMORY
10	2 b	2 c	26	7 f	7 e	42	STEREO	AUTO TUNING
11	3 e	3 h	27	7 a	7 g	43	5)	SLEEP
12	3 f	3 g	28	7 b	7 c	44	M4, M5	M1, M2, M3
13	3 a	3 b	29	4)	8 d	45	M7	M6
14	3 d	3 c	30	8 f	8 e	46	M9	M8
15	NORMAL	WIDE	31	8 a	8 g	47	M11	M10
16	PHANTOM	PRESET	32	8b	8 c	48	M13	M12

1) □□ PRO LOGIC
2) CONCERT VIDEO
3) ROCK CONCERT
4) CONCERT HALL
5) 0 40 60 80 100

■ IC DATA

IC733 : M50747-XXXSP
8bit μ-COM





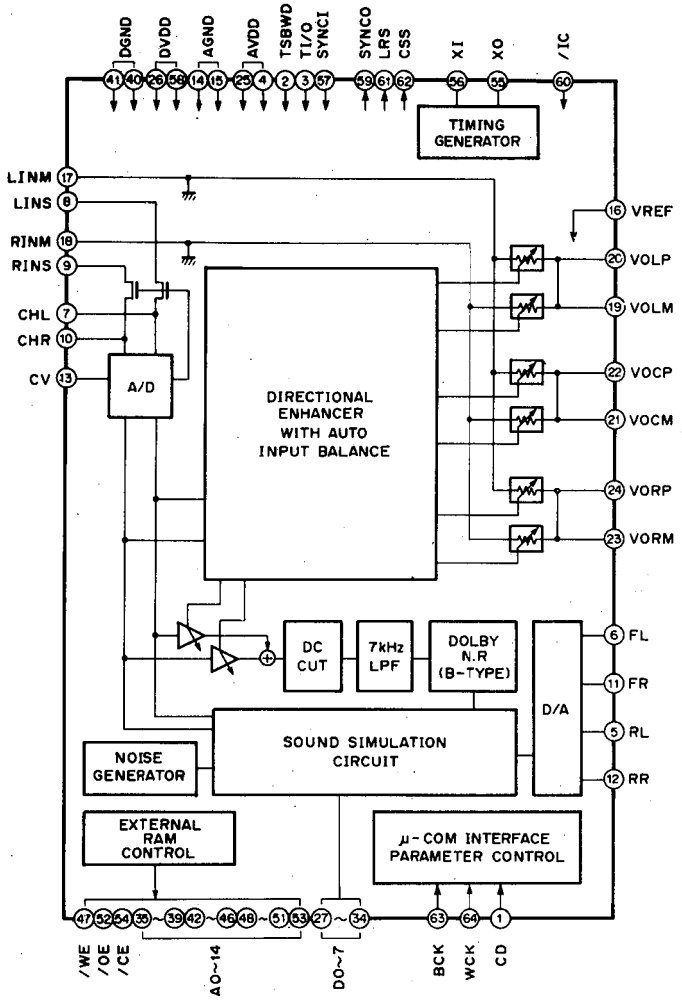
Market select (Table B)

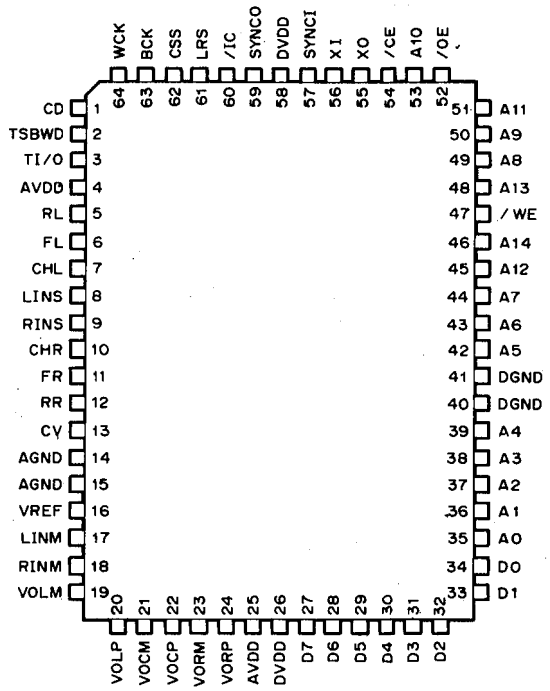
V1 (63)	V2 (62)	Market
1	0	A
0	1	U
1	1	R

Pin No.	Pin Name	Function Name	I/O	Active	Description
1	VCC	VCC	—		+5V
2	P67	PHN	O	H	Phono PLAY/CUT
3	P66		O	H/L	N.C
4	P65		O	H/L	
5	P64	CEVL	O	H	Chip select: For center/rear volume
6	P63	CEF	O	H	For front volume/function
7	P62	CED	O	H	For DSP
8	P61	FMT	O	H	Audio mute

Pin No.	Pin Name	Function Name	I/O	Active	Description
9	P60	SPR	O	H	Speaker relay
10	P47	$\overline{RRT}$	I	L	Protection detect
11	P46	TA	O	H	TAPE MONITOR ON/OFF & LED ON/OFF
12	P45	VC1	O	H	
13	P44	VC2	O	H	
14	P43	E200	O	H	Mode select (H : E200)
15	P42	G	O	H	STAND BY select (H : G)
16	P41		O	L	N. C
17	P40	CELC	O	H	Chip select of LC7582
18	P37/$\overline{SRDY}$		O	—	N. C
19	P36/CLK	CLKI	I	H/L	Clock data for serial transmission
20	P35/TXD	DATA	O	H/L	
21	P34/RXD	CLKO	O	H/L	
22	P33/CNTR	$\overline{INH}$	O	L	LCD INHIBIT
23	P32/$\overline{INT2}$	PWR	O	H	Power relay
24	P31	PDET	I	H	Power detect
25	P30	REM	I	H/L	Remote control signal input
26	$\overline{INT1}$	$\overline{INT}$	I	L	External interrupt
27	CNVSS	CN VSS	—		GND
28	$\overline{RESET}$	$\overline{RES}$	—	L	Reset
29	XIN	XIN	—		Clock(8MHz)
30	XOUT	XOUT	—		
31	Ø	—	—		N. C
32	VSS	VSS	—		GND
33	P57	K7	I	H	Key input
34	P56	K6	I	H	
35	P55	K5	I	H	
36	P54	K4	I	H	
37	P53	K3	I	H	
38	P52	K2	I	H	
39	P51	K1	I	H	
40	P50	K0	I	H	
41	P17	D4	O	H	Digit output
42	P16	D3	O	H	
43	P15	D2	O	H	
44	P14	D1	O	H	
45	P13	D0	O	H	
46	P12	LD	O	H	INPUT SELECTOR & LED
47	P11	TU	O	H	
48	P10	CD	O	H	
49	P07	PH	O	H	
50	P06	PSW	I	H	Power switch detect
51	P05	STN	O	L	Unused
52	P04	VLD	O	H	Motor volume down
53	P03	VLU	O	H	Motor volume up
54	P02	IND	O	H	Volume LED
55	P01	$\overline{MUTE}$	O	L	Tuner mute
56	P00	$\overline{ST}$	I	L	Stereo detect
57	P27	$\overline{MONO}$	O	L	Forced MONO
58	P26	$\overline{STSIG}$	I	L	Synchronous signal
59	P25	$\overline{STOUT}$	I	L	Auto tuning stop command
60	P24	CE7000	O	H	Chip select for LM7000
61	P23	STRQ	O	H	STRQ for LM7000
62	P22	V2	I	H/L	Market select (Table B)
63	P21	V1	I	H/L	
64	P20	$\overline{V660}$	I	L	Product (RX-V660) TUNER & SLEEP ON/OFF

IC503 : YSS203
Digital Dolby Pro Logic Decoder with Auto Input Balance





Pin No.	Pin Name	I/O	Function
1	CD	Its	Serial data of parameter data input
2	TSBWD	Ic	LSI test terminal Normally connected to DVDD
3	TI/O	Ic	LSI test terminal Normally connected to /CSS terminal
4	AVDD	A—	+5V power supply (D/A, A/D section)
5	RL	AO	RL channel D/A output
6	FL	AO	FL channel D/A output
7	CHL	A—	LINS input Sample/hold Capacitor external terminal
8	LINS	AI	L channel A/D input
9	RINS	AI	R channel A/D input
10	CHR	A—	RINS input Sample/hold Capacitor external terminal
11	FR	AO	FR channel D/A input
12	RR	AO	RR channel D/A input
13	CV	AO	A/D, multiplaying DAC center voltage
14	AGND	A—	Ground (D/A, A/D section)
15	AGND	A—	Ground (Multiplying DAC section)
16	VREF	AI	Multiplying DAC reference voltage input
17	LINM	AI	L channel Multiplying DAC input
18	RINM	AI	R channel Multiplying DAC input
19	VOLM	AO	L channel operation amplifier, connected to (–) terminal
20	VOLP	AO	L channel operation amplifier, connected to (+) terminal

Pin No.	Pin Name	I/O	Function
21	VOCM	AO	C channel operation amplifier, connected to (–) terminal
22	VOCP	AO	C channel operation amplifier, connected to (+) terminal
23	VORM	AO	R channel operation amplifier, connected to (–) terminal
24	VORP	AO	R channel operation amplifier, connected to (+) terminal
25	AVDD	A—	+5V power supply (multiplying DAC section)
26	DVDD	—	+5V power supply (digital section)
27	D7	I/Ot	External delay RAM data terminal
28	D6	I/Ot	External delay RAM data terminal
29	D5	I/Ot	External delay RAM data terminal
30	D4	I/Ot	External delay RAM data terminal
31	D3	I/Ot	External delay RAM data terminal
32	D2	I/Ot	External delay RAM data terminal
33	D1	I/Ot	External delay RAM data terminal
34	D0	I/Ot	External delay RAM data terminal
35	A0	O	External data RAM address terminal
36	A1	O	External data RAM address terminal
37	A2	O	External data RAM address terminal
38	A3	O	External data RAM address terminal
39	A4	O	External data RAM address terminal
40	DGND	—	Ground (digital section)
41	DGND	—	Ground (digital section)
42	A5	O	External data RAM address terminal
43	A6	O	External data RAM address terminal
44	A7	O	External data RAM address terminal
45	A12	O	External data RAM address terminal
46	A14	O	External data RAM address terminal
47	/WE	O	External delay RAM write enable terminal
48	A13	O	External dalay RAM address terminal
49	A8	O	External dalay RAM address terminal
50	A9	O	External dalay RAM address terminal
51	A11	O	External dalay RAM address terminal
52	/OE	O	External dalay RAM output enable terminal
53	A10	O	External dalay RAM address terminal
54	/CE	O	External delay RAM chip enable terminal
55	XO	O	Crystal oscillator connecting terminal
56	XI	I	Crystal oscillator connecting terminal
57	SYNCI	It	Test terminal for system synchronization, normally connected to DVDD
58	DVDD	—	+5V power supply (digital section)
59	SYNCO	O	Test terminal for system synchronization, normally unconnected
60	/IC	Ics	Initial clear terminal (Power ON resetting is necessary)
61	LRS	O	External automatic input balance terminal, normally left open
62	/CSS	O	External automatic input balance terminal, connected to TI/O terminal
63	BCK	Its	Bit clock for parameter data input
64	WCK	Its	Word clock for parameter data input

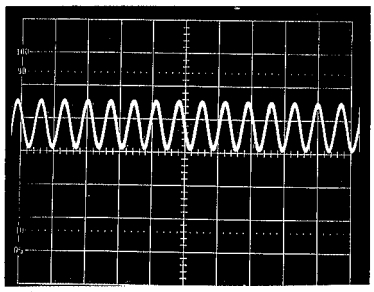
Note : Alphabets used in the above I/O column represent as follows.

I : Input terminal **O** : Output terminal **t** : TTL level

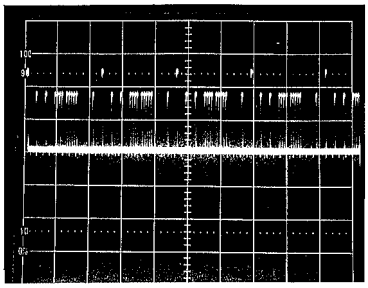
C : CMOS level **S** : Schmidt input **A** : Analog terminal

■ WAVEFORM OF TEST POINT

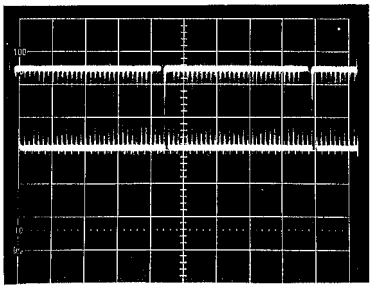
Point Ⓐ: XIN (Pin 1 of IC2)
V : 0.2V/div H : 0.2 sec/div
DC range 10 : 1 probe



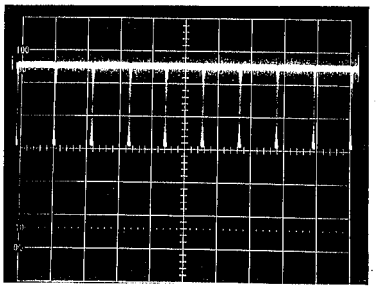
Point Ⓑ: D3 (Pin 15 of IC501)
V : 2V/div H : 10µsec/div
DC range 1 : 1 probe



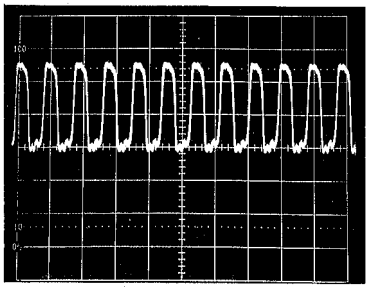
Point Ⓒ: A7~9, A11~14
(Pin 1 of 3 of IC501, Pin23 to 26 of IC501)
V : 2V/div H : 5µsec/div
DC range 1 : 1 probe



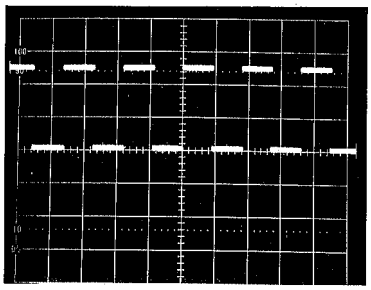
Point Ⓓ: WE (Pin 27 of IC501)
V : 2V/div H : 10µsec/div
DC range 1 : 1 probe



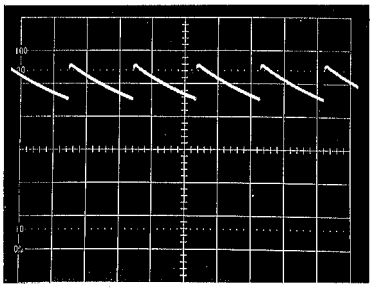
Point Ⓔ: XO (Pin 55 of IC503)
V : 0.2V/div H : 0.1µsec/div
DC range 10 : 1 probe



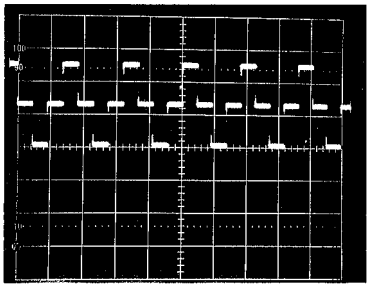
Point Ⓕ (Pin 3 to 48 of V501)
V : 2V/div H : 5msec/div
DC range 1 : 1 probe



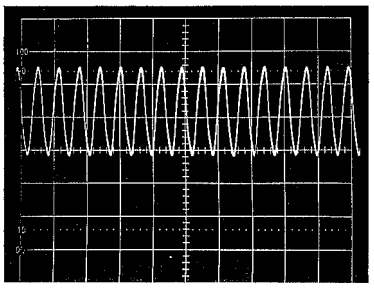
Point Ⓖ: OSC (Pin 55 of IC519)
V : 2V/div H : 10µsec/div
DC range 1 : 1 probe



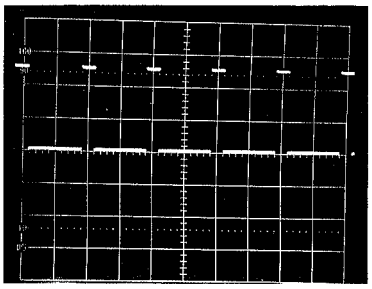
Point Ⓗ (Pin 1 and 2 of V501)
V : 2V/div H : 5msec/div
DC range 1 : 1 probe



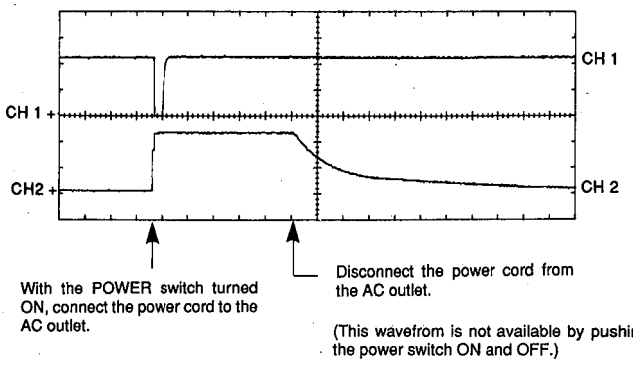
Point Ⓘ : XIN (Pin 29 of IC733)
V : 0.2V/div H : 0.2µsec/div
DC range 10 : 1 probe



Point Ⓙ: D4 to D0 (Pin 41 to 45 of IC733)
V : 0.2V/div H : 5msec/div
DC range 10 : 1 probe



Point Ⓚ: $\overline{\text{RESET}}$, S+5V
(CH1 : Pin 28 to IC733, CH2 : Anode of D712)
V : 2V/div H : 200msec/div
DC range 1 : 1 probe



■ SCHEMATIC DIAGRAM (TUNER & OPERATION)

Each voltage given here represents that in the FM (88.1MHz, STEREO) reception mode but the one in the parentheses ( ) is that in the AM (1404kHz) reception mode.

Ⓐ: **WAVEFORM OF TEST POINT (See page 31)**

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

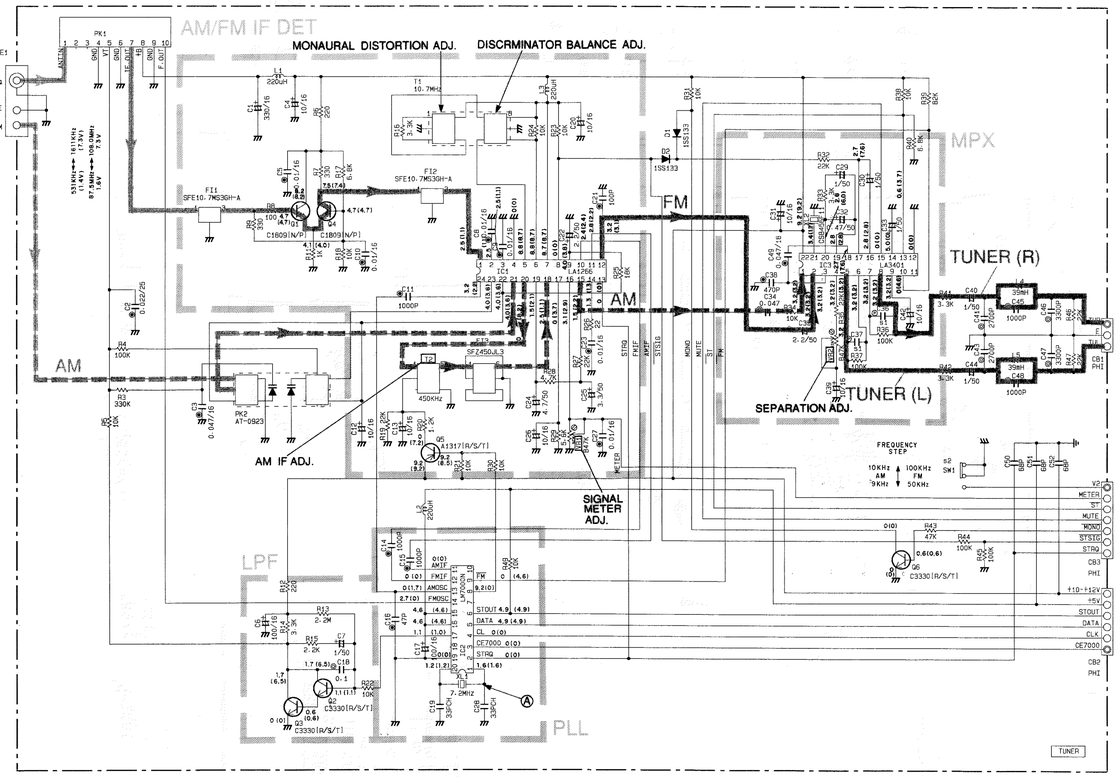
RESISTOR

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

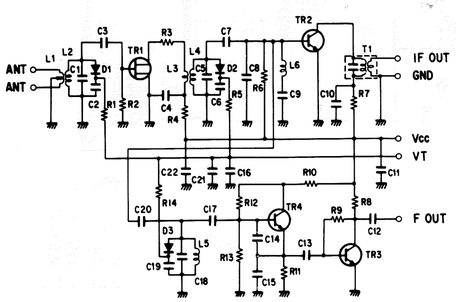
NOTICE
(J)····· Japanese model
(U)····· U.S.A model
(C)····· Canadian model
(A)····· Australian model
(G)····· European model
(B)····· British model
(R)····· General model
(P)····· RP model

KIND	START	LAST	UNLISTED NO.
R	1	49	10-
C	1	52	
D	1	2	
Q	1	6	
IC	1	3	
CB	1	3	

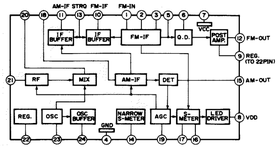
	U.C	R	A
s1	680P/100	680P/100	470P/100
s2	×	VF54120	×



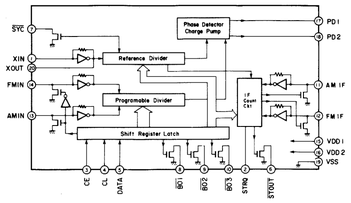
PK1 : TFFG1U (VK208500)



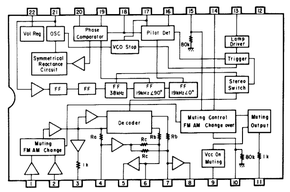
IC1 : LA1266
AM/FM IF



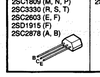
IC2 : LM7000N
PLL Controller

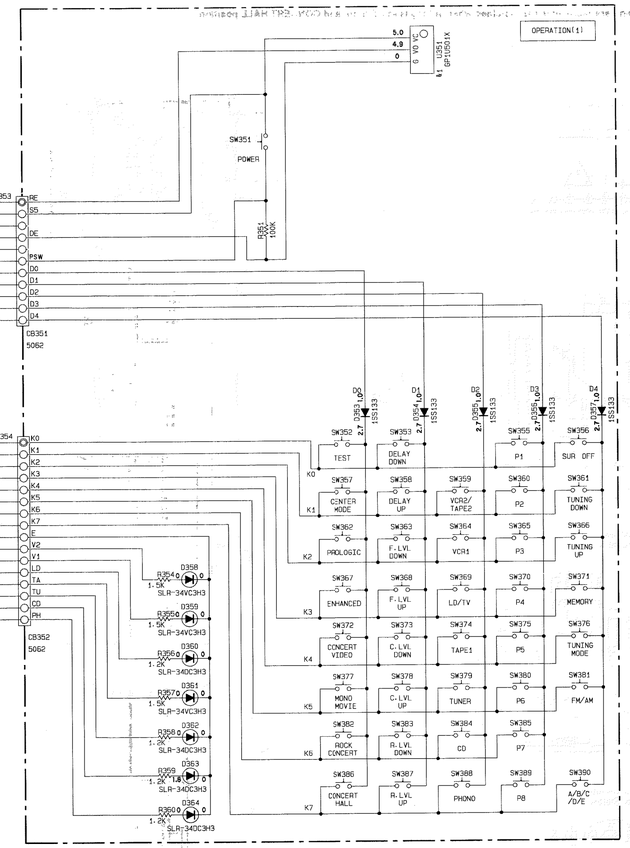


IC3 : LA3401
MPX



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.

2SA1317 (R, S, T) 2SC1909 (M, N, P) 2SC3330 (R, S, T) 2SC2603 (E, F) 2SD1915 (P) 2SC2878 (A, B)	2SA970 (GR, BL) 2SC2240 (GR, BL)	2SA1358 (O, Y) 2SC3421 (O, Y)	2SA1491 (O, P, Y) 2SC3855 (O, P, Y)	1SS133	LM7000N	LA3401	LA1266
							



Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
⚠1	U351	GP1U561X GP1U571X
⚠2	Q366	2SD1915F[S/T] 2SC2878[A/B]

KIND	START	LAST	UNLISTED NO.
R	351	384	361-364
D	353	364	
Q	365	373	352-364
CB	351	366	353-364
C	365	378	

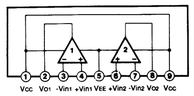
** All voltage are measured with a 10MΩ/V DC electric volt meter.*
** Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.*
** Schematic diagram is subject to change without notice.*

■ SCHEMATIC DIAGRAM (INPUT)

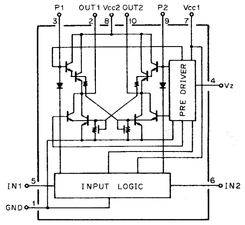
Each voltage given here represents that obtained when setting is at CD input and CONCERT HALL position.

①to Ⓚ: WAVEFORM OF TEST POINT (See page 31)

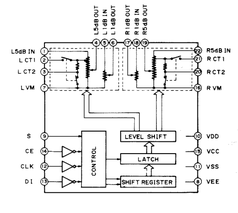
IC701, 709, 715~718, 720 : µPC4570HA
Dual OP-Amp



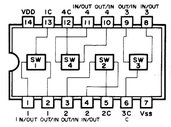
IC732 : LB1641
Motor Driver

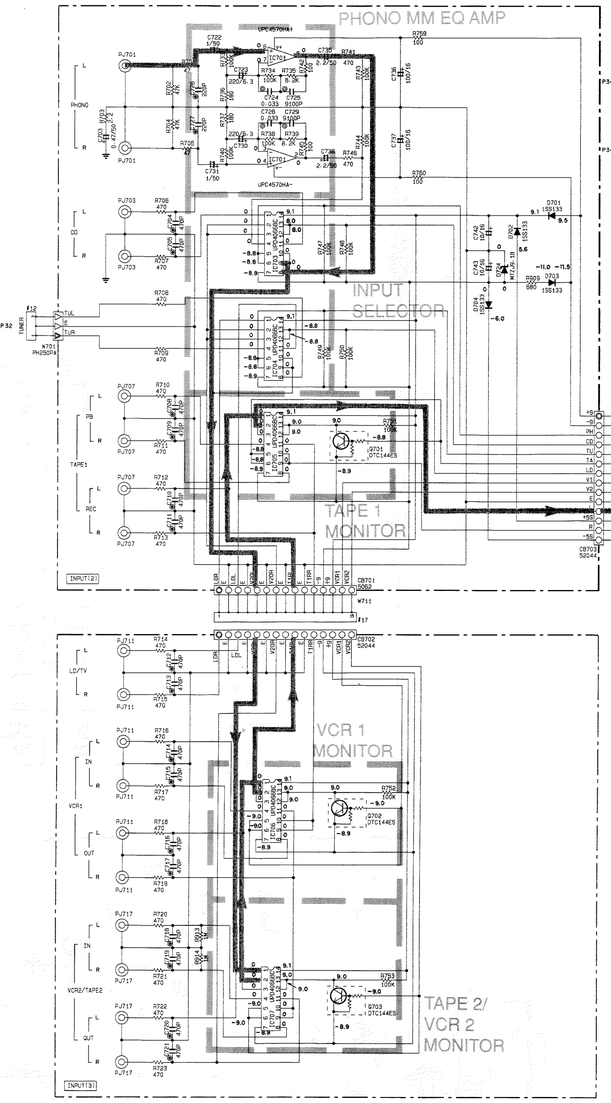


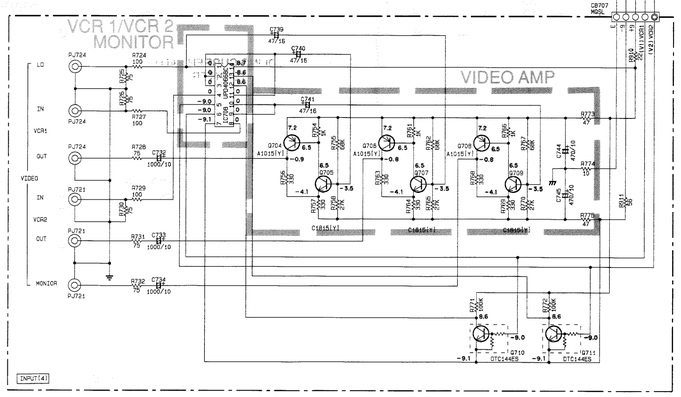
IC721, 724 : LC7535
Electric Controled Volume

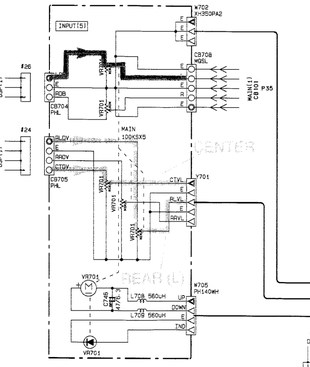


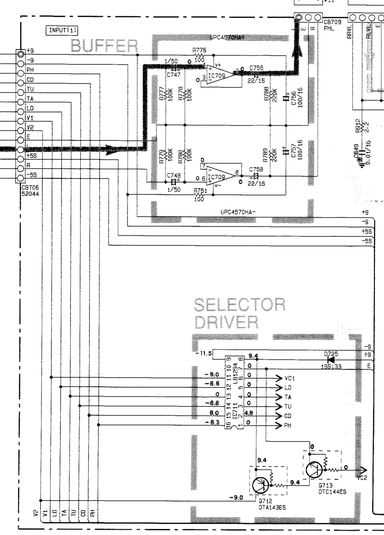
IC703~708 : µPD4066BC
Quad Bilateral Switch



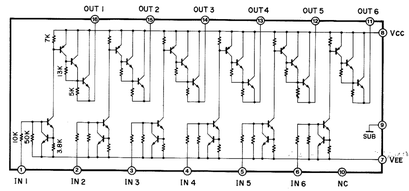


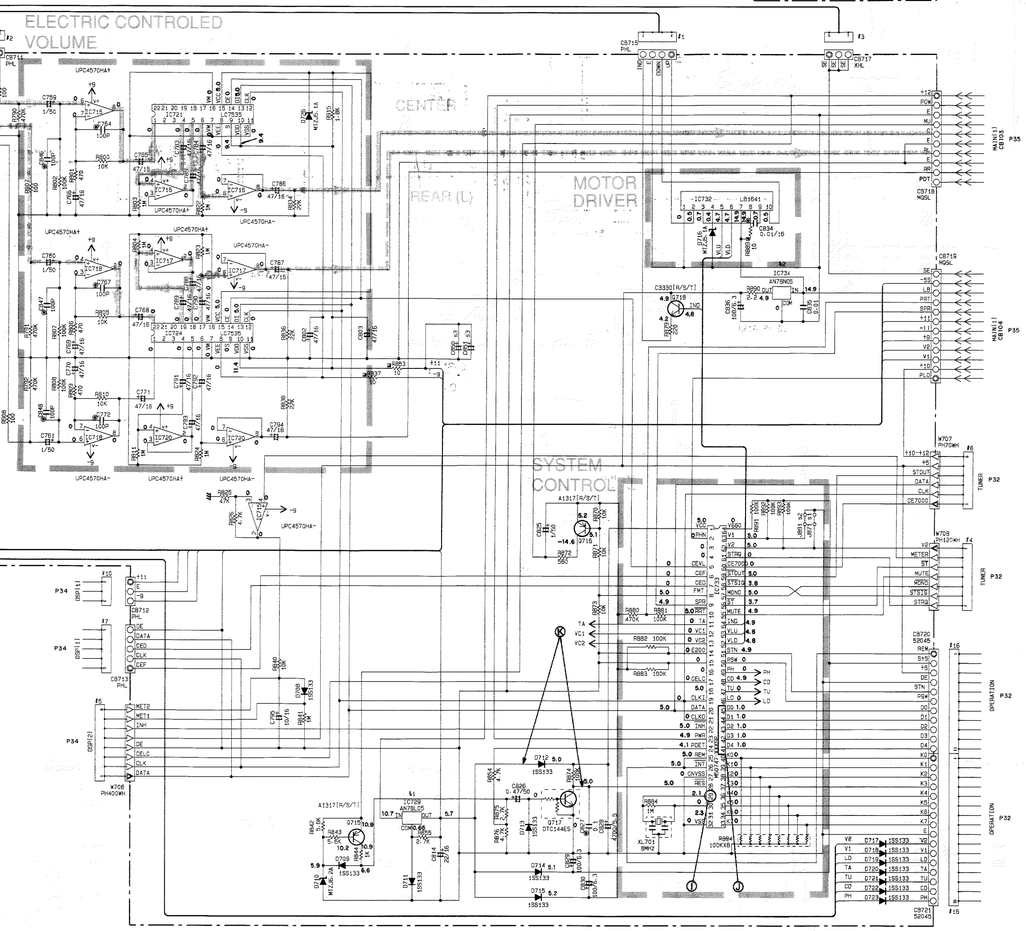


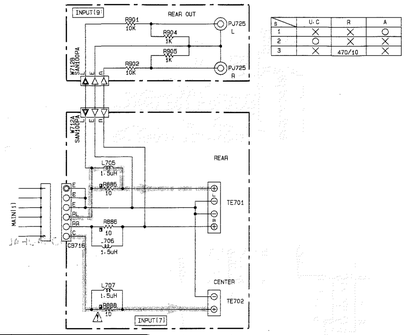




IC711 : LB1294
Driver Aray







	D-C	R	A
1	×	×	○
2	×	×	×
3	×	470/10	×

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

KIND	START	LAST	UNLISTED-NO.
B	701	915	792-797-793-799-812-821-827-833-835-839-845-852-855-859-877-878-900-905-
C	703	851	706-707-749-754-762-763-773-782-796-801-804-813-815-824-831-832-843-845-
D	701	725	705-707-
Q	701	718	714-
IC	701	734	702-710-712-714-719-722-723-725-728-730-731-
CB	701	721	710-714-

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (1/5W)
☑	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

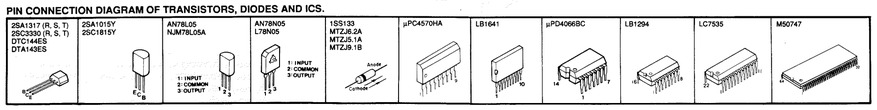
CAPACITOR

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

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
k1	IC729	AN78L05 NJM78L05A
k2	IC734	AN78M05 L78M05

PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.



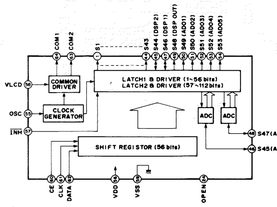
** All voltage are measured with a 10MΩ/V DC electric volt meter.*
** Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.*
** Schematic diagram is subject to change without notice.*

■ SCHEMATIC DIAGRAM (DSP)

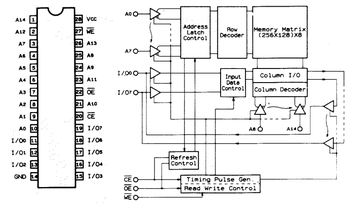
Each voltage given here represents that obtained when setting is at CD input and CONCERT HALL position.

Ⓑ to Ⓗ: WAVEFORM OF TEST POINT (See page 31)

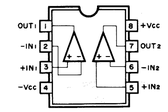
IC519 : LC7582
LCD Driver



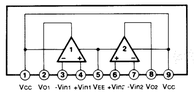
IC501 : HM65256BLFP-10T or TC51832FL-10
32768-word x 8-bit High Speed Pseudo Static RAM



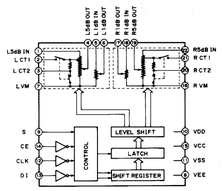
IC509, 514 : M5238P
IC506, 507, 510, 511, 515 : µPC4570C
Dual OP-Amp



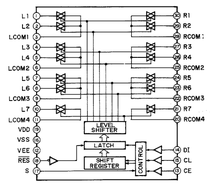
IC504, 505 , 508, 512,
513, 518 : µPC4570HA
Dual OP-Amp



IC516 : LC7535
Electric Controled Volume



IC517 : LC7823N
Analog Function Switch



DIGITAL SOUND FIELD PROCESSOR

DSP & DOLBY PRO LOGIC
DECODER WITH AUTO INPUT BALANCE

RAM

DISPLAY
DRIVE

MAIN (L)

EFFECT OFF

	BYPASS ON (PRO LOGIC OFF)	BYPASS OFF (PRO LOGIC ON)
SW3	ON	OFF
SW4	OFF	ON
SW5	OFF	ON
SW6	ON	OFF

	NOISE ON	NOISE OFF
SW1	1	0
SW2	0	1

	WIDE	NORM
SW7	ON	OFF

MAIN (L)
[FRONT (L)]

ELECTRIC
CONTROLED
VOLUME

CENTER

FRONT (L)

REAR (L)

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
&1	IC502	AN78N05 L78N05
&2	IC501	HM65256BLFP-10T TC51832FL-10
&3	IC503	YSS203H-LDSP YSS203B-F

KIND	START	LAST	UNLISTED_NO.
R	501	591	585-
C	501	600	
D	501	509	
IC	501	519	
CB	506	506	

CAPACITOR

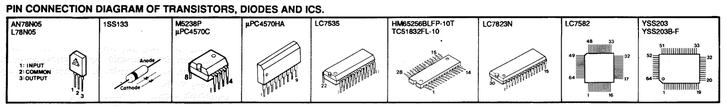
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
◉	AXIAL LEAD CERAMIC CAPACITOR
◎	POLYESTEL FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
Ⓣ	MICA CAPACITOR
ⓒ	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR

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

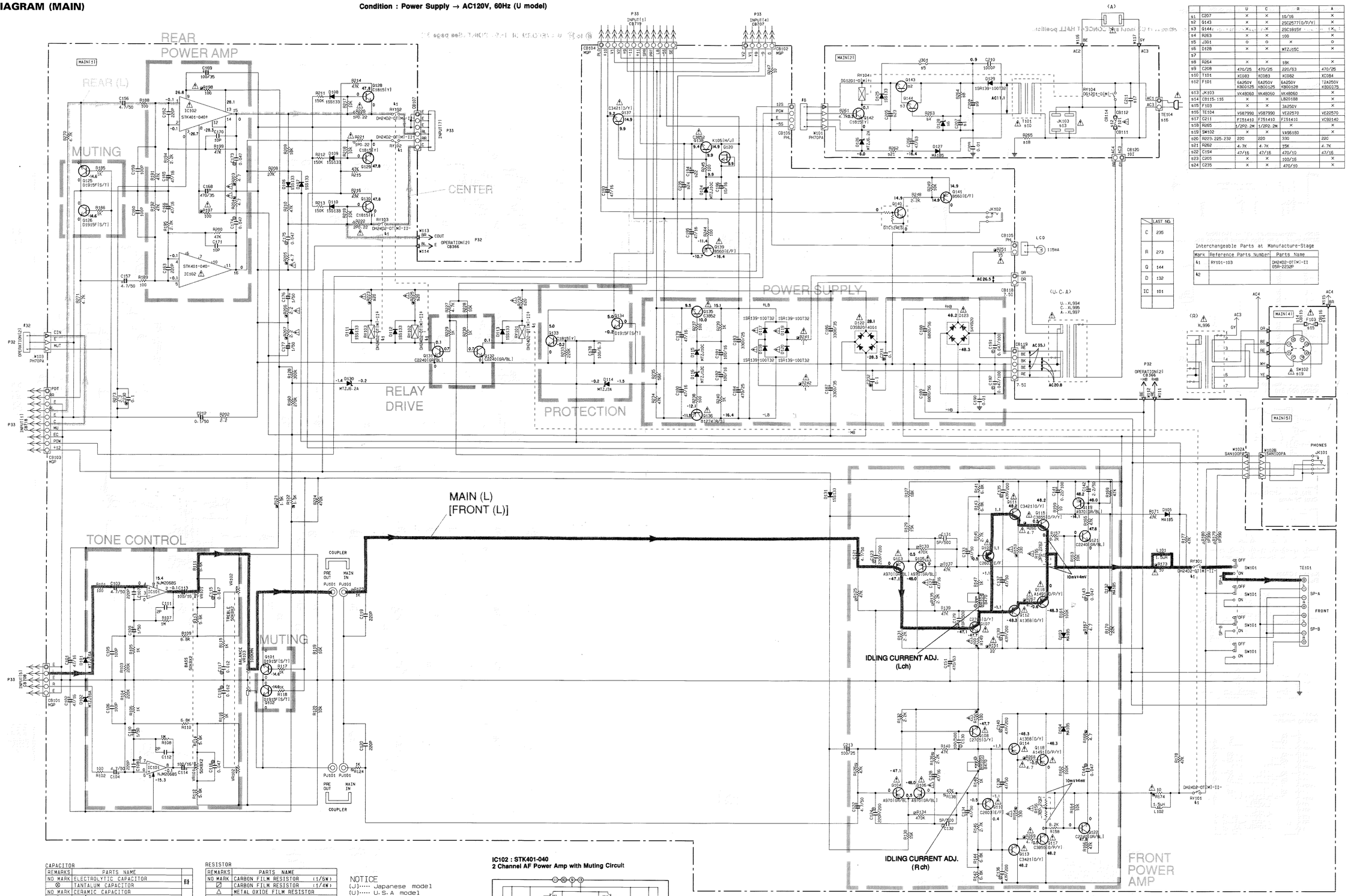
PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.



* 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.

■ SCHEMATIC DIAGRAM (MAIN)

Condition : Power Supply → AC120V, 60Hz (U model)



		U	C	R	A
s1	C207	×	×	10/16	×
s2	Q143	×	×	2SC2577(O/P/Y)	×
s3	Q144	×	×	2SC1815Y	×
s4	R263	×	×	100	×
s5	J301	o	o	×	o
s6	D128	×	×	MTZJ15C	×
s7					
s8	R264	×	×	18K	×
s9	C208	470/25	470/25	220/63	470/25
s10	T101	XC083	XC083	XC082	XC084
s12	F101	6A250V K80125	6A250V K80125	6A250V K80125	12A250V K80175
s13	JK103	VK48060	VK48060	VK48060	×
s14	CB115, 116	×	×	LB20188	×
s15	F103	×	×	3A250V	×
s16	TE104	VG87990	VG87990	VE22570	VE22570
s17	C211	F151410	F151410	F151410	VC92140
s18	R265	1/2P2.2M	1/2P2.2M	×	×
s19	SW102	×	×	VA96180	×
s20	R223-225-232	220	220	330	220
s21	R262	4.7K	4.7K	15K	4.7K
s22	C194	47/16	47/16	470/10	47/16
s23	C205	×	×	100/16	×
s24	C235	×	×	470/10	×

LAST NO.
C 235
R 273
Q 144
D 132
IC 101

CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
◉	AXIAL LEAD CERAMIC CAPACITOR
◎	POLYESTEL FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
①	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
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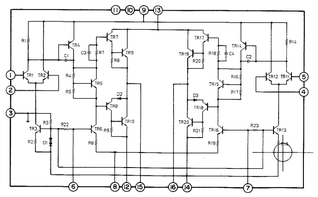
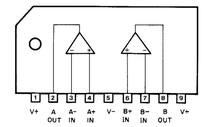
(G)..... European model
(B)..... British model
(R)..... General model
(P)..... RP model

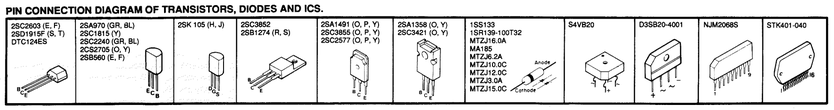
IC102 : STK401-040
2 Channel AF Power Amp with Muting Circuit



IC101 : NJM2068S
Dual OP-Amp



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.

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			
*	VP833000	P.C.B.	MAIN(U)		
*	VP833100	P.C.B.	MAIN(C)		
*	VP833200	P.C.B.	MAIN(R)		
*	VP833300	P.C.B.	MAIN(A)		
CB101	VA252300	CN	MQ	5P	
CB102	VA252300	CN	MQ	5P	
CB103	Vi378000	CN.BS.PIN	MQ	10P	TE
CB104	VA252400	CN	MQ	12P	
CB105	VB858100	CN.POST	PH	2P	SE
CB106	VB858300	CN.POST	PH	4P	SE
CB111	LB201880	HOLDER.FUS	PC-FH1		
CB112	LB201880	HOLDER.FUS	PC-FH1		
CB115	LB201880	HOLDER.FUS	PC-FH1		
CB116	LB201880	HOLDER.FUS	PC-FH1		
CB118	LA002000	TERM.WRAP	2P	i-TYPE	P=7.5
CB119	LA002340	TERM.WRAP	5P	i-TYPE	P=7.5
CB120	LA002140	TERM.WRAP	2P	i-TYPE	P=10
C101	VG291200	C.EL	47uF	50V	
C102	VG291200	C.EL	47uF	50V	
C103	Vi377400	C.EL	4.7uF	63V	
C104	Vi377400	C.EL	4.7uF	63V	
C105	VE551900	C.CE	100pF	50V	
C106	VE551900	C.CE	100pF	50V	
C107	FG212220	C.CE	220pF	50V	
C108	FG212220	C.CE	220pF	50V	
C109	VG290500	C.EL	1uF	50V	
C110	VG290500	C.EL	1uF	50V	
C111	Fi550200	C.CE	2pF	50V	
C112	Fi550200	C.CE	2pF	50V	
C113	VG288900	C.EL	100uF	25V	
C114	VG288900	C.EL	100uF	25V	
C115	UA654470	C.MYLAR	0.047uF	50V	
C116	UA654470	C.MYLAR	0.047uF	50V	
C117	UA654120	C.MYLAR	0.012uF	50V	
C118	UA654120	C.MYLAR	0.012uF	50V	
C119	FG212220	C.CE	220pF	50V	
C120	FG212220	C.CE	220pF	50V	
C121	Vi377400	C.EL	4.7uF	63V	
C122	Vi377400	C.EL	4.7uF	63V	
C123	VK534000	C.PP	220pF	200V	
C124	VK534000	C.PP	220pF	200V	
C127	VG291200	C.EL	47uF	50V	⚠
C128	VG291200	C.EL	47uF	50V	⚠
C129	FU451100	C.MICA	10pF	500V	
C130	FU451100	C.MICA	10pF	500V	
C131	FU450500	C.MICA	5pF	500V	
C132	FU450500	C.MICA	5pF	500V	
C133	VG291200	C.EL	47uF	50V	
C134	VG291200	C.EL	47uF	50V	
C135	VK533800	C.PP	47pF	200V	
C136	VK533800	C.PP	47pF	200V	
C137	VG291200	C.EL	47uF	50V	
C138	VG291200	C.EL	47uF	50V	

Schm Ref.	PART NO.	Description		
C139	VK533800	C.PP	47pF	200V
C140	VK533800	C.PP	47pF	200V
C141	UJ895220	C.EL	0.22uF	100V
C142	VG290600	C.EL	2.2uF	50V
C143	UA654470	C.MYLAR	0.047uF	50V
C144	UA654470	C.MYLAR	0.047uF	50V
C151	VK347900	C.EL	470uF	63V
C156	Vi377400	C.EL	4.7uF	63V
C157	Vi377400	C.EL	4.7uF	63V
C159	VE551900	C.CE	100pF	50V
C160	VE551900	C.CE	100pF	50V
C162	FG212220	C.CE	220pF	50V
C163	FG212220	C.CE	220pF	50V
C165	VG291200	C.EL	47uF	50V
C166	VG291200	C.EL	47uF	50V
C168	VG289700	C.EL	470uF	35V
C169	VN011900	C.EL	100uF	35V
C170	Fi551100	C.CE	10pF	50V
C171	Fi551100	C.CE	10pF	50V
C173	UA654470	C.MYLAR	0.047uF	50V
C174	UA654470	C.MYLAR	0.047uF	50V
C175	UA654470	C.MYLAR	0.047uF	50V
C176	VG290500	C.EL	1uF	50V
C177	VG290500	C.EL	1uF	50V
C178	VF760000	C.EL	100uF	10V
C179	VG291200	C.EL	47uF	50V
C180	VG291200	C.EL	47uF	50V
C181	VG288900	C.EL	100uF	25V
C182	VG288900	C.EL	100uF	25V
C183	VG289400	C.EL	3300uF	25V
C184	VG289200	C.EL	470uF	25V
C186	VL544800	C.EL	3300uF	35V
C187	VL544800	C.EL	3300uF	35V
C188	VK574700	C.EL	6800uF	56V
C189	VK574700	C.EL	6800uF	56V
C190	UG444100	C.CE	0.01uF	50V
C191	VK534400	C.PP	0.047uF	100V
C192	VK534400	C.PP	0.047uF	100V
C193	VG291200	C.EL	47uF	50V
C194	VG287100	C.EL	470uF	10V
C194	VG291200	C.EL	47uF	50V
C195	VG291200	C.EL	47uF	50V
C196	VG290900	C.EL	10uF	50V
C205	VG288900	C.EL	100uF	25V
C206	Ui377470	C.EL	47uF	63V
C207	VG290900	C.EL	10uF	50V
C208	VG289200	C.EL	470uF	25V
C208	V0030500	C.EL	220uF	63V
C209	UG444100	C.CE	0.01uF	50V
C210	Fi553100	C.CE	1000pF	50V
C211	Fi514100	C.CE.SAFTY	0.01uF	VA-1
C211	VC921400	C.CE.SAFTY	0.01uF	400V
C212	VG290000	C.EL	0.1uF	50V

※New Parts (新規部品)

※New Parts (新規部品)

MAIN P. C. B.

Schm Ref.	PART NO.	Description		
C213	VG288900	C. EL	100uF	25V
C230	VJ599100	C. CE. TUBLR	0. 1uF	50V
C231	VJ599100	C. CE. TUBLR	0. 1uF	50V
C232	VJ599100	C. CE. TUBLR	0. 1uF	50V
C235	VG287100	C. EL	470uF	10V
D101	VG441000	DIODE. ZENR	MTZJ16A	16V
D102	VG441000	DIODE. ZENR	MTZJ16A	16V
D103	VC398400	DIODE	MA185	
D104	VC398400	DIODE	MA185	
D105	VC398400	DIODE	MA185	
D106	iF004600	DIODE	1SS133	
D107	iF004600	DIODE	1SS133	
D108	iF004600	DIODE	1SS133	
D109	iF004600	DIODE	1SS133	
D110	iF004600	DIODE	1SS133	
D111	iF004600	DIODE	1SS133	
D112	iF004600	DIODE	1SS133	
D113	iF004600	DIODE	1SS133	
D114	VG435800	DIODE. ZENR	MTZJ3. 0A	3. 0V
D115	VG439600	DIODE. ZENR	MTZJ10C	10V
D116	VG440300	DIODE. ZENR	MTZJ12C	12V
D117	VH770800	DIODE	1SR139-100 T-32	⚠
D118	VH770800	DIODE	1SR139-100 T-32	⚠
D119	VH770800	DIODE	1SR139-100 T-32	⚠
D120	VH770800	DIODE	1SR139-100 T-32	⚠
D122	VM559200	DIODE. BRG	D3SB20-4001 2. 3A	⚠
D123	iH001090	DIODE. BRG	S4VB20 2. 6A 200V	⚠
D124	VG439600	DIODE. ZENR	MTZJ10C 10V	
D125	iF004600	DIODE	1SS133	
D126	VG437900	DIODE. ZENR	MTZJ6. 2A 6. 2V	
D127	VC398400	DIODE	MA185	
D128	VG440900	DIODE. ZENR	MTZJ15C 15V	
D129	VH770800	DIODE	1SR139-100 T-32	
D130	VG437900	DIODE. ZENR	MTZJ6. 2A 6. 2V	
D131	iF004600	DIODE	1SS133	
D132	VC398400	DIODE	MA185	
F101	KB000750	FUSE. MNI	T2A 250V	⚠
F101	KB001250	FUSE	6A 250V	⚠
F101	KB001280	FUSE	6A 250V	⚠
F103	KB003160	FUSE	3A 250V	⚠
IC101	XA956A00	IC	NJM2068S	
* IC102	XL972A00	IC	STK401-040	⚠
JK101	VM929600	JACK. PHONE	M1658-A0AA	
JK102	VJ726800	JACK. MNI		
JK103	VK480600	AC OUTLET		⚠
L101	VC401100	COIL. OUTPT	1. 5uH	
L102	VC401100	COIL. OUTPT	1. 5uH	
PJ101	LB401090	JACK. PIN	4P	
Q101	VK432900	TR	2SD1915(F) S,T	
Q102	VK432900	TR	2SD1915(F) S,T	
Q103	iA097000	TR	2SA970 GR,BL	⚠
Q104	iA097000	TR	2SA970 GR,BL	⚠
Q105	iA097000	TR	2SA970 GR,BL	⚠

*New Parts (新規部品)

Schm Ref.	PART NO.	Description		
Q106	iA097000	TR	2SA970 GR,BL	⚠
Q107	VE198800	TR	2SC2705 O,Y	⚠
Q108	VE198800	TR	2SC2705 O,Y	⚠
Q109	iC260320	TR	2SC2603 E,F	⚠
Q110	iC260320	TR	2SC2603 E,F	⚠
Q111	iC342100	TR	2SC3421 O,Y	⚠
Q112	iA135800	TR	2SA1358 O,Y	⚠
Q113	iC342100	TR	2SC3421 O,Y	⚠
Q114	iA135800	TR	2SA1358 O,Y	⚠
# Q115	iX620980	TR	2SC3855 O,P,Y	⚠
# Q116	iX620970	TR	2SA1491 O,P,Y	⚠
# Q117	iX620980	TR	2SC3855 O,P,Y	⚠
# Q118	iX620970	TR	2SA1491 O,P,Y	⚠
Q119	iA097000	TR	2SA970 GR,BL	
Q120	iE101290	FET	2SK105 H,J	
Q121	iC224030	TR	2SC2240 GR,BL	
Q122	iC224030	TR	2SC2240 GR,BL	
Q125	VK432900	TR	2SD1915(F) S,T	
Q126	VK432900	TR	2SD1915(F) S,T	
Q128	iC1815C0	TR	2SC1815 Y	
Q129	iC1815C0	TR	2SC1815 Y	
Q130	iC1815C0	TR	2SC1815 Y	
Q131	iC224030	TR	2SC2240 GR,BL	
Q132	iC224030	TR	2SC2240 GR,BL	
Q133	iC1815C0	TR	2SC1815 Y	
Q134	VK432900	TR	2SD1915(F) S,T	
Q135	VC938500	TR	2SC3852	⚠
Q136	VC614000	TR	2SB1274 Q,R,S	⚠
Q137	iC342100	TR	2SC3421 O,Y	⚠
Q138	VC938500	TR	2SC3852	⚠
Q139	iB056020	TR	2SB560 E,F	⚠
Q140	VF331200	TR. DGT	DTC124ES	
Q141	iB056020	TR	2SB560 E,F	
Q142	iC1815C0	TR	2SC1815 Y	
Q143	iC257700	TR	2SC2577 O,P,Y	
Q144	iC1815C0	TR	2SC1815 Y	
R121	HV456150	R. CAR. FP	1. 5KΩ 1/4W	
R122	HV456150	R. CAR. FP	1. 5KΩ 1/4W	
R149	HV455100	R. CAR. FP	100Ω 1/4W	⚠
R150	HV455100	R. CAR. FP	100Ω 1/4W	⚠
R151	HV454220	R. CAR. FP	22Ω 1/4W	⚠
R153	HV455330	R. CAR. FP	330Ω 1/4W	⚠
R154	HV455330	R. CAR. FP	330Ω 1/4W	⚠
R155	VJ695400	R. WW	0. 22Ω x2 3W	⚠
R156	VJ695400	R. WW	0. 22Ω x2 3W	⚠
R167	HV453470	R. CAR. FP	4. 7Ω 1/4W	
R168	HV453470	R. CAR. FP	4. 7Ω 1/4W	
R173	HV454100	R. CAR. FP	10Ω 1/4W	⚠
R174	HV454100	R. CAR. FP	10Ω 1/4W	⚠
R179	HL215390	R. MTL. OXD	390Ω 1W	
R180	HL215390	R. MTL. OXD	390Ω 1W	
R197	HV455100	R. CAR. FP	100Ω 1/4W	⚠
R198	HV455100	R. CAR. FP	100Ω 1/4W	⚠

*New Parts (新規部品)

MAIN & INPUT P. C. B.

Schm Ref.	PART NO.	Description			
R203	HV453470	R.CAR.FP	4.7Ω	1/4W	⚠
R204	HV453470	R.CAR.FP	4.7Ω	1/4W	⚠
R205	HV453470	R.CAR.FP	4.7Ω	1/4W	⚠
R206	HV453220	R.CAR.FP	2.2Ω	1/4W	⚠
R207	HV453220	R.CAR.FP	2.2Ω	1/4W	⚠
R220	HL312220	R.MTL.OXD	0.22Ω	1W	⚠
R221	HL312220	R.MTL.OXD	0.22Ω	1W	⚠
R222	HL322220	R.MTL.OXD	0.22Ω	2W	⚠
R223	HV455220	R.CAR.FP	220Ω	1/4W	⚠
R223	HV455330	R.CAR.FP	330Ω	1/4W	
R225	HV455220	R.CAR.FP	220Ω	1/4W	⚠
R225	HV455330	R.CAR.FP	330Ω	1/4W	
R232	HV455220	R.CAR.FP	220Ω	1/4W	⚠
R232	HV455330	R.CAR.FP	330Ω	1/4W	
R241	HV453100	R.CAR.FP	1Ω	1/4W	⚠
R242	HV453100	R.CAR.FP	1Ω	1/4W	⚠
R251	HV454150	R.CAR.FP	15Ω	1/4W	⚠
R266	HV453470	R.CAR.FP	4.7Ω	1/4W	⚠
R267	HV453470	R.CAR.FP	4.7Ω	1/4W	⚠
R268	HV453470	R.CAR.FP	4.7Ω	1/4W	⚠
R269	HV453470	R.CAR.FP	4.7Ω	1/4W	⚠
RY101	VK438300	RELAY	DH24D2-OTM-Ⅱ		
RY102	VK438300	RELAY	DH24D2-OTM-Ⅱ		
RY103	VK438300	RELAY	DH24D2-OTM-Ⅱ		
RY104	VD506000	RELAY	AC DG12D1-0(M)		
SW101	VM807500	SW.PUSH	PSK023CF2KP 2		
SW102	VA961800	VOLT.SELCT	ESE-37247-F(R)		⚠
T101	XC082A00	TRANS.PWR			⚠
T101	XC083A00	TRANS.PWR			⚠
T101	XC084A00	TRANS.PWR			⚠
TE101	VG741600	TERM.SP	8P		
TE104	VE225700	CN.BS.PIN	2P	P=7.5	
TE104	VG879900	CN.BS.PIN	VH	2P TE	
VR101	VM929800	VR	B50KΩ		
VR102	VM929800	VR	B50KΩ		
VR103	VK314700	VR	MN100KΩ		
VR104	VJ692800	VR.TRIM	B470Ω		
VR105	VJ692800	VR.TRIM	B470Ω		
	VB966900	CN	IMSA-6024		
	VJ828000	PIN	IMSA-6024-03E		
	CB091290	SUPRT.PCB	No.1645		
	BB069510	GND.MTL	No.6951		
*	VP753100	HEAT.SINK	IC-1625-MML		
	EX602250	SCR.BND.HD	3x12	ZMC2-BL	
*	VP832700	P.C.B.	INPUT(UC)		
*	VP832800	P.C.B.	INPUT(R)		
*	VP832900	P.C.B.	INPUT(A)		
CB701	VM689400	CN	5062	15P TE	
CB702	VM929900	CN.BS.PIN	52044	15P TE	
CB703	VF982200	CN.BS.PIN	FPC	14P SE	
CB704	VB858200	CN.BS.PIN	PH L-TYPE	3P SE	

Schm Ref.	PART NO.	Description			
CB705	VB858300	CN.POST	PH	4P SE	
CB706	VF982200	CN.BS.PIN	FPC	14P SE	
CB709	VB858200	CN.BS.PIN	PH L-TYPE	3P SE	
CB711	VB858400	CN.BS.PIN	PH L-TYPE	5P SE	
CB712	VB858200	CN.BS.PIN	PH L-TYPE	3P SE	
CB713	VB858400	CN.BS.PIN	PH L-TYPE	5P SE	
CB715	VB858300	CN.POST	PH	4P SE	
CB717	LB919030	CN.BS.PIN	XH L-TYPE	3P SE	
CB720	VM859500	CN.BS.PIN	52045	11P TE	
CB721	VM859700	CN.BS.PIN	52045	16P TE	
C703	VG290300	C.EL	0.47uF	50V	
C704	VF466900	C.CE.TUBLR	470pF	50V	
C705	VF466900	C.CE.TUBLR	470pF	50V	
C708	VF466900	C.CE.TUBLR	470pF	50V	
C709	VF466900	C.CE.TUBLR	470pF	50V	
C710	VF466900	C.CE.TUBLR	470pF	50V	
C711	VF466900	C.CE.TUBLR	470pF	50V	
C712	VF466900	C.CE.TUBLR	470pF	50V	
C713	VF466900	C.CE.TUBLR	470pF	50V	
C714	VF466900	C.CE.TUBLR	470pF	50V	
C715	VF466900	C.CE.TUBLR	470pF	50V	
C716	VF466900	C.CE.TUBLR	470pF	50V	
C717	VF466900	C.CE.TUBLR	470pF	50V	
C718	VF466900	C.CE.TUBLR	470pF	50V	
C719	VF466900	C.CE.TUBLR	470pF	50V	
C720	VF466900	C.CE.TUBLR	470pF	50V	
C721	VF466900	C.CE.TUBLR	470pF	50V	
C722	VG290500	C.EL	1uF	50V	
C723	VG286900	C.EL	220uF	10V	
C724	UA654330	C.MYLAR	0.033uF	50V	
C725	UA653910	C.MYLAR	9100pF	50V	
C726	VG278400	C.CE.TUBLR	220pF	50V	
C727	VG278400	C.CE.TUBLR	220pF	50V	
C728	UA654330	C.MYLAR	0.033uF	50V	
C729	UA653910	C.MYLAR	9100pF	50V	
C730	VG286900	C.EL	220uF	10V	
C731	VG290500	C.EL	1uF	50V	
C732	Vi309200	C.EL	1000uF	10V	
C733	Vi309200	C.EL	1000uF	10V	
C734	Vi309200	C.EL	1000uF	10V	
C735	VG290600	C.EL	2.2uF	50V	
C736	VG288900	C.EL	100uF	25V	
C737	VG288900	C.EL	100uF	25V	
C738	VG290600	C.EL	2.2uF	50V	
C739	VG291200	C.EL	47uF	50V	
C740	VG291200	C.EL	47uF	50V	
C741	VG291200	C.EL	47uF	50V	
C742	VG290900	C.EL	10uF	50V	
C743	VG290900	C.EL	10uF	50V	
C744	VG287100	C.EL	470uF	10V	
C745	VG287100	C.EL	470uF	10V	
* C746	VN508100	C.EL	47uF	6.3V	
C747	VG290500	C.EL	1uF	50V	

*New Parts (新規部品)

*New Parts (新規部品)

INPUT P. C. B.

Schm Ref.	PART NO.	Description		
C748	VG290500	C. EL	1uF	50V
C755	VG291000	C. EL	22uF	50V
C756	VG288900	C. EL	100uF	25V
C757	VG288900	C. EL	100uF	25V
C758	VG291000	C. EL	22uF	50V
C759	VG290500	C. EL	1uF	50V
C760	VG290500	C. EL	1uF	50V
C761	VG290500	C. EL	1uF	50V
C764	VF466800	C. CE. TUBLR	100pF	50V
C765	VG291200	C. EL	47uF	50V
C766	VG291200	C. EL	47uF	50V
C767	VF466800	C. CE. TUBLR	100pF	50V
C768	VG291200	C. EL	47uF	50V
C769	VG291200	C. EL	47uF	50V
C770	VG291200	C. EL	47uF	50V
C771	VG291200	C. EL	47uF	50V
C772	VF466800	C. CE. TUBLR	100pF	50V
C783	VG291200	C. EL	47uF	50V
C784	VG291200	C. EL	47uF	50V
C785	VG291200	C. EL	47uF	50V
C786	VG291200	C. EL	47uF	50V
C787	VG291200	C. EL	47uF	50V
C788	VG291200	C. EL	47uF	50V
C789	VG291200	C. EL	47uF	50V
C790	VG291200	C. EL	47uF	50V
C791	VG291200	C. EL	47uF	50V
C792	VG291200	C. EL	47uF	50V
C793	VG291200	C. EL	47uF	50V
C794	VG291200	C. EL	47uF	50V
C795	VG290900	C. EL	10uF	50V
C802	VG291200	C. EL	47uF	50V
C803	VG291200	C. EL	47uF	50V
C814	VG291000	C. EL	22uF	50V
C825	VG290500	C. EL	1uF	50V
C826	VG290300	C. EL	0. 47uF	50V
C827	VJ599100	C. CE. TUBLR	0. 1uF	50V
C828	VC613700	C. EL	4700uF	5. 5V
C829	VF760000	C. EL	100uF	10V
C830	VF760000	C. EL	100uF	10V
C834	VF467300	C. CE. TUBLR	0. 01uF	16V
C835	UG444100	C. CE	0. 01uF	50V
C836	VF760000	C. EL	100uF	10V
C846	VF466800	C. CE. TUBLR	100pF	50V
C847	VF466800	C. CE. TUBLR	100pF	50V
C848	VF466800	C. CE. TUBLR	100pF	50V
C849	VF467300	C. CE. TUBLR	0. 01uF	16V
C850	VG287100	C. EL	470uF	10V
C851	VG287100	C. EL	470uF	10V
D701	iF004600	DIODE	1SS133	
D702	iF004600	DIODE	1SS133	
D703	iF004600	DIODE	1SS133	
D704	iF004600	DIODE	1SS133	
D708	iF004600	DIODE	1SS133	

※New Parts (新規部品)

Schm Ref.	PART NO.	Description		
D709	iF004600	DIODE	1SS133	
D710	VG437900	DIODE. ZENR	MTZJ6. 2A	6. 2V
D711	iF004600	DIODE	1SS133	
D712	iF004600	DIODE	1SS133	
D713	iF004600	DIODE	1SS133	
D714	iF004600	DIODE	1SS133	
D715	iF004600	DIODE	1SS133	
D716	VG437300	DIODE. ZENR	MTZJ5. 1A	5. 1V
D717	iF004600	DIODE	1SS133	
D718	iF004600	DIODE	1SS133	
D719	iF004600	DIODE	1SS133	
D720	iF004600	DIODE	1SS133	
D721	iF004600	DIODE	1SS133	
D722	iF004600	DIODE	1SS133	
D723	iF004600	DIODE	1SS133	
D724	VG439200	DIODE. ZENR	MTZJ9. 1B	9. 1V
D725	iF004600	DIODE	1SS133	
D726	VG437300	DIODE. ZENR	MTZJ5. 1A	5. 1V
IC701	XB247301	IC	uPC4570HA	
IC703	iG037400	IC	uPD4066BC	
IC704	iG037400	IC	uPD4066BC	
IC705	iG037400	IC	uPD4066BC	
IC706	iG037400	IC	uPD4066BC	
IC707	iG037400	IC	uPD4066BC	
IC708	iG037400	IC	uPD4066BC	
IC709	XB247301	IC	uPC4570HA	
IC711	XA549A00	IC	LB1294	
IC715	XB247301	IC	uPC4570HA	
IC716	XB247301	IC	uPC4570HA	
IC717	XB247301	IC	uPC4570HA	
IC718	XB247301	IC	uPC4570HA	
IC720	XB247301	IC	uPC4570HA	
IC721	XE536001	IC	LC7535	
IC724	XE536001	IC	LC7535	
IC729	iG157200	IC	AN78L05	
IC732	XF494A00	IC	LB1641	
IC733	XK656B00	IC	M50747-2E8SP	
IC734	XA507A00	IC	AN78N05	
L705	VC793700	COIL	1. 5uH	
L706	VC793700	COIL	1. 5uH	
L707	VC793700	COIL	1. 5uH	
L708	VE354700	COIL	560uH	EL0606RA
L709	VE354700	COIL	560uH	EL0606RA
PJ701	VM725700	JACK. PIN	2P	
PJ703	VM725700	JACK. PIN	2P	
PJ707	VM725800	JACK. PIN	4P	
PJ711	VM726000	JACK. PIN	6P	
PJ717	VM725800	JACK. PIN	4P	
PJ721	VJ695800	JACK. PIN	3P	
PJ724	VJ695900	JACK. PIN	3P	
PJ725	VN134700	JACK. PIN	YKC21-3040	
Q701	VG722000	TR. DGT	DTC144ES	
Q702	VG722000	TR. DGT	DTC144ES	

※New Parts (新規部品)

INPUT & DSP P. C. B.

Schm Ref.	PART NO.	Description		
Q703	VG722000	TR. DGT	DTC144ES	
Q704	iA101521	TR	2SA1015 Y	
Q705	iC1815C0	TR	2SC1815 Y	
Q706	iA101521	TR	2SA1015 Y	
Q707	iC1815C0	TR	2SC1815 Y	
Q708	iA101521	TR	2SA1015 Y	
Q709	iC1815C0	TR	2SC1815 Y	
Q710	VG722000	TR. DGT	DTC144ES	
Q711	VG722000	TR. DGT	DTC144ES	
Q712	VH964100	TR. DGT	DTA143ES	
Q713	VG722000	TR. DGT	DTC144ES	
Q715	VC218700	TR	2SA1317 R,S,T	
Q716	VC218700	TR	2SA1317 R,S,T	
Q717	VG722000	TR. DGT	DTC144ES	
Q718	VC218900	TR	2SC3330 R,S,T	
R837	HV454100	R. CAR. FP	10Ω	1/4W
R853	HV454100	R. CAR. FP	10Ω	1/4W
R885	HV454100	R. CAR. FP	10Ω	1/4W
R886	HV454100	R. CAR. FP	10Ω	1/4W
R888	HV454100	R. CAR. FP	10Ω	1/4W ⚠
R889	HV454100	R. CAR. FP	10Ω	1/4W
R894	VF824300	R. ARRAY	100KΩx8	
TE701	Vi072500	TERM	4P	
TE702	Vi072400	TERM. SP	2P	
VR701	VM929700	VR. MTR	100KYΩx5	
W711	VN023700	CN. FLAT	15P	90mm
XL701	VE222400	RSNR. CE	8MHz	
	BB071360	SCR. TERM	8. 3x13	
	AA615100	PLATE	20x30	
	VN571800	PLATE		
	VB966900	CN	IMSA-6024	
	VM675700	P. C. B.	DSP	
CB506	VB858700	CN. BS. PIN	PH	8P SE
C501	VG278100	C. CE. TUBLR	120pF	50V
C502	VG278100	C. CE. TUBLR	120pF	50V
C503	VG278100	C. CE. TUBLR	120pF	50V
C504	VG287100	C. EL	470uF	10V
C505	VG289000	C. EL	220uF	25V
C506	VD930900	C. CE. SMI	0. 1uF	25V
C507	VG287800	C. EL	330uF	16V
C508	VG291200	C. EL	47uF	50V
C509	VD930900	C. CE. SMI	0. 1uF	25V
C510	VG291200	C. EL	47uF	50V
C511	VD930900	C. CE. SMI	0. 1uF	25V
C512	VD930900	C. CE. SMI	0. 1uF	25V
C513	VG291200	C. EL	47uF	50V
C514	UT653330	C. PP	3300pF	100V
C515	UT653330	C. PP	3300pF	100V
C516	VG278100	C. CE. TUBLR	120pF	50V
C517	VG278100	C. CE. TUBLR	120pF	50V
C518	VG278100	C. CE. TUBLR	120pF	50V
C519	VG278100	C. CE. TUBLR	120pF	50V
C520	VG278100	C. CE. TUBLR	120pF	50V
C521	VG291200	C. EL	47uF	50V
C522	VG291200	C. EL	47uF	50V
C523	VG290600	C. EL	2. 2uF	50V
C524	VG290600	C. EL	2. 2uF	50V
C525	VG291200	C. EL	47uF	50V
C526	VG291200	C. EL	47uF	50V
C527	VG291200	C. EL	47uF	50V
C528	FG211330	C. CE	33pF	50V
C529	VE551900	C. CE	100pF	50V
C530	VE551900	C. CE	100pF	50V
C531	FG211330	C. CE	33pF	50V
C532	FG211330	C. CE	33pF	50V
C533	VE551900	C. CE	100pF	50V
C534	VE551900	C. CE	100pF	50V
C535	FG211330	C. CE	33pF	50V
C536	VE551900	C. CE	100pF	50V
C537	VE551900	C. CE	100pF	50V
C538	FG212330	C. CE	330pF	50V
C539	VG291200	C. EL	47uF	50V
C540	VG291200	C. EL	47uF	50V
C541	FG212330	C. CE	330pF	50V
C542	FG212330	C. CE	330pF	50V
C543	UA655180	C. MYLAR	0. 18uF	50V
C544	VG291200	C. EL	47uF	50V
C545	VG291200	C. EL	47uF	50V
C546	UA653240	C. MYLAR	2400pF	50V
C547	UA653240	C. MYLAR	2400pF	50V
C548	VG291200	C. EL	47uF	50V
C549	VG291200	C. EL	47uF	50V
C550	UA653270	C. MYLAR	2700pF	50V
C551	UA653270	C. MYLAR	2700pF	50V
C552	VG291200	C. EL	47uF	50V
C553	Fi553330	C. CE	3300pF	50V
C554	VG291200	C. EL	47uF	50V
C555	UG412180	C. CE	180pF	50V
C556	UG412180	C. CE	180pF	50V
C557	VG291200	C. EL	47uF	50V
C558	Fi553330	C. CE	3300pF	50V
C559	FG213680	C. CE	6800pF	50V
C560	VG290600	C. EL	2. 2uF	50V
C561	FG212390	C. CE	390pF	50V
C562	FG212390	C. CE	390pF	50V
C563	VG290600	C. EL	2. 2uF	50V
C564	FG213680	C. CE	6800pF	50V
C565	VG291200	C. EL	47uF	50V
C566	VG291200	C. EL	47uF	50V
C567	FG212330	C. CE	330pF	50V
C568	VG291200	C. EL	47uF	50V
C569	VG291200	C. EL	47uF	50V
C570	VE551900	C. CE	100pF	50V
C571	VE551900	C. CE	100pF	50V

 ※New Parts (新規部品)

※New Parts (新規部品)

DSP & TUNER P. C. B.

Schm Ref.	PART NO.	Description		
C572	VG291200	C. EL	47uF	50V
C573	VG291200	C. EL	47uF	50V
C574	VG291200	C. EL	47uF	50V
C575	VG291200	C. EL	47uF	50V
C576	VG291200	C. EL	47uF	50V
C577	VG291200	C. EL	47uF	50V
C578	VG291200	C. EL	47uF	50V
C579	VG287100	C. EL	470uF	10V
C580	UG412150	C. CE	150pF	50V
C581	UG412150	C. CE	150pF	50V
C582	VG291200	C. EL	47uF	50V
C583	VG291200	C. EL	47uF	50V
C584	VG278100	C. CE. TUBLR	120pF	50V
C585	VG278100	C. CE. TUBLR	120pF	50V
C586	VG278100	C. CE. TUBLR	120pF	50V
C587	VG291200	C. EL	47uF	50V
C588	VG291200	C. EL	47uF	50V
C589	VG278100	C. CE. TUBLR	120pF	50V
C590	VG278100	C. CE. TUBLR	120pF	50V
C591	VG278100	C. CE. TUBLR	120pF	50V
C592	VG278100	C. CE. TUBLR	120pF	50V
C593	VG278100	C. CE. TUBLR	120pF	50V
C594	VG278100	C. CE. TUBLR	120pF	50V
C595	VG278100	C. CE. TUBLR	120pF	50V
C596	VG278900	C. CE. TUBLR	680pF	50V
C597	VG290900	C. EL	10uF	50V
C598	VG291200	C. EL	47uF	50V
C599	VG291200	C. EL	47uF	50V
C600	VD930900	C. CE. SMI	0. 1uF	25V
D501	iF004600	DIODE	1SS133	
D502	iF004600	DIODE	1SS133	
D503	iF004600	DIODE	1SS133	
D504	iF004600	DIODE	1SS133	
D505	iF004600	DIODE	1SS133	
D506	iF004600	DIODE	1SS133	
D507	iF004600	DIODE	1SS133	
D508	iF004600	DIODE	1SS133	
D509	iF004600	DIODE	1SS133	
Fi501	VK175000	FLTR. LC	18KHz	TFB-2D
Fi502	VK175000	FLTR. LC	18KHz	TFB-2D
IC501	Xi020A00	IC	HM65256BLFP-10T	
IC502	XA507A00	IC	AN78N05	
IC503	Xi022A00	IC	YSS203(HLDSP)	
IC504	XB247301	IC	uPC4570HA	
IC505	XB247301	IC	uPC4570HA	
IC506	XC520A01	IC	uPC4570C	
IC507	XC520A01	IC	uPC4570C	
IC508	XB247301	IC	uPC4570HA	
IC509	XB979A00	IC	M5238P	
IC510	XC520A01	IC	uPC4570C	
IC511	XC520A01	IC	uPC4570C	
IC512	XB247301	IC	uPC4570HA	
IC513	XB247301	IC	uPC4570HA	

※New Parts (新規部品)

Schm Ref.	PART NO.	Description		
IC514	XB979A00	IC	M5238P	
IC515	XC520A01	IC	uPC4570C	
IC516	XE536001	IC	LC7535	
IC517	XG758A00	IC	LC7823N	
IC518	XB247301	IC	uPC4570HA	
IC519	XB417A00	IC	LC7582	
L501	Vi546100	COIL	220uH	
R590	HV454220	R. CAR. FP	22Ω	1/4W
V501	VJ805700	LCD	LCD-8160B1JP	
XL501	VK175200	RSNR. CE	11. 28MHz	
	VJ835300	LAMP	115mA	14. 5V
	VB966900	CN	IMSA-6024	
	VG433100	REFLC	LCD	
	VG433300	SHEET	LCD	
	VF444500	CAP. LAMP	AG-4015	
	CB605620	PLST. RIVET	No. 1781	
	Vi435400	GND. MTL		
	VG650400	RING		
	VM675300	P. C. B.	TUNER(UC)	
	VM675400	P. C. B.	TUNER(R)	
	VM675500	P. C. B.	TUNER(AB)	
C1	VG287800	C. EL	330uF	16V
C2	VG280100	C. CE. TUBLR	0. 022uF	25V
C3	VJ599000	C. CE. TUBLR	0. 047uF	16V
C4	VG290900	C. EL	10uF	50V
C5	VF467300	C. CE. TUBLR	0. 01uF	16V
C6	VG288900	C. EL	100uF	25V
C7	VG290500	C. EL	1uF	50V
C8	VF467300	C. CE. TUBLR	0. 01uF	16V
C9	VF467300	C. CE. TUBLR	0. 01uF	16V
C10	VF467300	C. CE. TUBLR	0. 01uF	16V
C11	VF467000	C. CE. TUBLR	1000pF	50V
C12	VG290900	C. EL	10uF	50V
C13	VG290900	C. EL	10uF	50V
C14	VF467000	C. CE. TUBLR	1000pF	50V
C15	VF467000	C. CE. TUBLR	1000pF	50V
C16	VF466700	C. CE. TUBLR	47pF	50V
C17	VG288900	C. EL	100uF	25V
C18	UA655100	C. MYLAR	0. 1uF	50V
C19	VA761200	C. CE	33pF	50V
C20	VG290900	C. EL	10uF	50V
C21	VF466800	C. CE. TUBLR	100pF	50V
C22	VG290600	C. EL	2. 2uF	50V
C23	VF467300	C. CE. TUBLR	0. 01uF	16V
C24	Vi377400	C. EL	4. 7uF	63V
C25	VG290700	C. EL	3. 3uF	50V
C26	VG290900	C. EL	10uF	50V
C27	VF467300	C. CE. TUBLR	0. 01uF	16V
C28	VA761200	C. CE	33pF	50V
C29	VG290500	C. EL	1uF	50V
C30	VG290500	C. EL	1uF	50V

※New Parts (新規部品)

TUNER & OPERATION P. C. B.

Schm Ref.	PART NO.	Description		
C31	VG290900	C. EL	10uF	50V
C32	VG290300	C. EL	0. 47uF	50V
C33	VG290500	C. EL	1uF	50V
C34	UA654470	C. MYLAR	0. 047uF	50V
C35	VD916400	C. EL	2. 2uF	50V
C36	UT452470	C. PP	470pF	100V
C36	UT452680	C. PP	680pF	100V
C37	UT452470	C. PP	470pF	100V
C37	UT452680	C. PP	680pF	100V
C38	VF466900	C. CE. TUBLR	470pF	50V
C39	VG290900	C. EL	10uF	50V
C40	VG290500	C. EL	1uF	50V
C41	UA653270	C. MYLAR	2700pF	50V
C42	VG290900	C. EL	10uF	50V
C43	UA653270	C. MYLAR	2700pF	50V
C44	VG290500	C. EL	1uF	50V
C45	UA653100	C. MYLAR	1000pF	50V
C46	UA653330	C. MYLAR	3300pF	50V
C47	UA653330	C. MYLAR	3300pF	50V
C48	UA653100	C. MYLAR	1000pF	50V
C49	VJ599000	C. CE. TUBLR	0. 047uF	16V
C50	FG211680	C. CE	68pF	50V
C51	FG211680	C. CE	68pF	50V
C52	FG211680	C. CE	68pF	50V
CB1	VD004600	CN. BS. PIN	PH i-TYPE 3P TE	
CB2	VD004900	CN. BS. PIN	PH i-TYPE 6P TE	
CB3	VD005000	CN. BS. PIN	PH i-TYPE 7P TE	
D1	iF004600	DIODE	1SS133	
D2	iF004600	DIODE	1SS133	
Fi1	GG000560	FLTR. CE	SFE10. 7MS3GHY-A	
Fi2	GG000560	FLTR. CE	SFE10. 7MS3GHY-A	
Fi3	VC219000	FLTR. CE	SFZ450JL3	
IC1	XB760001	IC	LA1266	
IC2	XB818A00	IC	LM7000N	
IC3	iG158100	IC	LA3401	
L1	Vi546100	COIL	220uH	
L2	Vi546100	COIL	220uH	
L3	Vi546100	COIL	220uH	
L4	GE901850	COIL	39mH	
L5	GE901850	COIL	39mH	
PK1	VK208500	TUNER. PK	TFFG1U145A	
PK2	Vi027300	COIL. AM		
Q1	VB433300	TR	2SC1809 M,N,P	
Q2	VC218900	TR	2SC3330 R,S,T	
Q3	VC218900	TR	2SC3330 R,S,T	
Q4	VB433300	TR	2SC1809 M,N,P	
Q5	VC218700	TR	2SA1317 R,S,T	
Q6	VC218900	TR	2SC3330 R,S,T	
SW1	VF541200	SW. SLIDE	SSSF11	
T1	VC218600	COIL. DT. FM	10. 7MHz	
T2	GE100470	COIL. IF. AM	450KHz	
TE1	LA005800	TERM. ANT	YKD31-0215	
VR1	VJ694000	VR. TRIM	B47KΩ	
VR2	VJ694000	VR. TRIM	B47KΩ	
XL1	QU003800	RSNR. CRYS	7. 2MHz	
XL2	GG000750	RSNR. CE	18. 95MHz	
	BB071360	SCR. TERM	8. 3x13	
*	VP834100	P. C. B.	OPERATION	
CB351	VM689200	CN	5062	11P TE
CB352	VM689500	CN	5062	16P TE
CB365	VD004600	CN. BS. PIN	PH i-TYPE 3P TE	
CB366	LA002330	TERM. WRAP	4P i-754NA	
C365	VG291300	C. EL	100uF	50V
C366	Vi377400	C. EL	4. 7uF	63V
C367	VE551900	C. CE	100pF	50V
C368	VG291000	C. EL	22uF	50V
C369	UA653330	C. MYLAR	3300pF	50V
C370	FG212220	C. CE	220pF	50V
C371	Fi551100	C. CE	10pF	50V
C372	VG291000	C. EL	22uF	50V
C373	VG288900	C. EL	100uF	25V ⚠
C374	VK533800	C. PP	47pF	200V
C375	UA655100	C. MYLAR	0. 1uF	50V
C376	VK533800	C. PP	47pF	200V
C377	VG290900	C. EL	10uF	50V
C378	VG290900	C. EL	10uF	50V
D353	iF004600	DIODE	1SS133	
D354	iF004600	DIODE	1SS133	
D355	iF004600	DIODE	1SS133	
D356	iF004600	DIODE	1SS133	
D357	iF004600	DIODE	1SS133	
D358	Vi013600	LED	SLR-34VC3H3 (re)	
D359	Vi013600	LED	SLR-34VC3H3 (re)	
D360	VF402500	LED	SLR-34DC3H3 (or)	
D361	Vi013600	LED	SLR-34VC3H3 (re)	
D362	VF402500	LED	SLR-34DC3H3 (or)	
D363	VF402500	LED	SLR-34DC3H3 (or)	
D364	VF402500	LED	SLR-34DC3H3 (or)	
Q365	iC224030	TR	2SC2240 GR,BL	⚠
Q366	VK432900	TR	2SD1915(F) S,T	
Q367	iC224030	TR	2SC2240 GR,BL	⚠
Q368	iA097000	TR	2SA970 GR,BL	⚠
Q369	iC260310	TR	2SC2603 E,F	⚠
Q370	iC342100	TR	2SC3421 O,Y	⚠
Q371A	iX620970	TR	2SA1491 O,P,Y	⚠
Q371B	iX620980	TR	2SC3855 O,P,Y	⚠
Q373	iA135800	TR	2SA1358 O,Y	⚠
R367	HV456150	R. CAR. FP	1. 5KΩ 1/4W	
R369	HV456100	R. CAR. FP	1KΩ 1/4W	
R374	HV454100	R. CAR. FP	10Ω 1/4W	⚠
R375	HV456270	R. CAR. FP	2. 7KΩ 1/4W	
R376	HV455820	R. CAR. FP	820Ω 1/4W	
R380	HV453470	R. CAR. FP	4. 7Ω 1/4W	⚠

 ✱New Parts (新規部品)

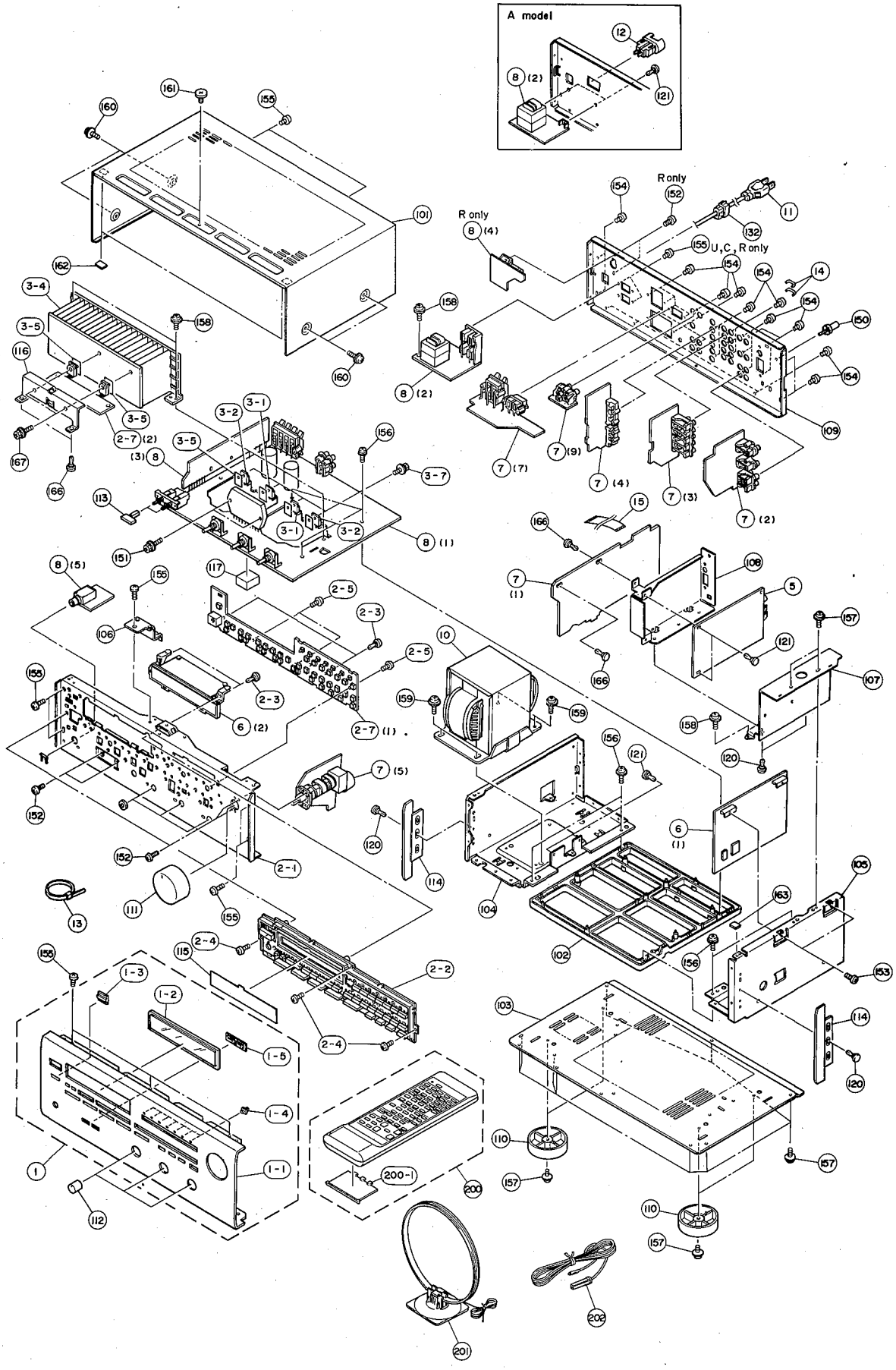
✱New Parts (新規部品)

OPERATION P. C. B.

Schm Ref.	PART NO.	Description			
R381	HV455470	R.CAR.FP	470Ω	1/4W	⚠
R382	VJ787600	R.MTL.PLAT	0.22Ω+0.22	5W	⚠
R383	HV453470	R.CAR.FP	4.7Ω	1/4W	⚠
R384	HV455100	R.CAR.FP	100Ω	1/4W	⚠
SW351	VG392900	SW	SKHVAA		
SW352	VG392900	SW	SKHVAA		
SW353	VG392900	SW	SKHVAA		
SW355	VG392900	SW	SKHVAA		
SW356	VG392900	SW	SKHVAA		
SW357	VG392900	SW	SKHVAA		
SW358	VG392900	SW	SKHVAA		
SW359	VG392900	SW	SKHVAA		
SW360	VG392900	SW	SKHVAA		
SW361	VG392900	SW	SKHVAA		
SW362	VG392900	SW	SKHVAA		
SW363	VG392900	SW	SKHVAA		
SW364	VG392900	SW	SKHVAA		
SW365	VG392900	SW	SKHVAA		
SW366	VG392900	SW	SKHVAA		
SW367	VG392900	SW	SKHVAA		
SW368	VG392900	SW	SKHVAA		
SW369	VG392900	SW	SKHVAA		
SW370	VG392900	SW	SKHVAA		
SW371	VG392900	SW	SKHVAA		
SW372	VG392900	SW	SKHVAA		
SW373	VG392900	SW	SKHVAA		
SW374	VG392900	SW	SKHVAA		
SW375	VG392900	SW	SKHVAA		
SW376	VG392900	SW	SKHVAA		
SW377	VG392900	SW	SKHVAA		
SW378	VG392900	SW	SKHVAA		
SW379	VG392900	SW	SKHVAA		
SW380	VG392900	SW	SKHVAA		
SW381	VG392900	SW	SKHVAA		
SW382	VG392900	SW	SKHVAA		
SW383	VG392900	SW	SKHVAA		
SW384	VG392900	SW	SKHVAA		
SW385	VG392900	SW	SKHVAA		
SW386	VG392900	SW	SKHVAA		
SW387	VG392900	SW	SKHVAA		
SW388	VG392900	SW	SKHVAA		
SW389	VG392900	SW	SKHVAA		
SW390	VG392900	SW	SKHVAA		
U351	VF926500	L.DTCT	GP1U501X		
VR351	VA787500	VR.TRIM	B470Ω		
W353	VN023600	CN.FLAT	11P	120mm	
W354	VN023800	CN.FLAT	16P	80mm	

※New Parts (新規部品)

■ EXPLODED VIEW



■ MECHANICAL PARTS Note) Ø : Diameter

	Ref. No.	PART NO.	Description	Remarks	Markets	
*	1	VP833600	FRONT PANEL UNIT			
*	1-1	VP770800	FRONT PANEL			
	1-2	VJ832800	WINDOW PANEL			
	1-3	VH897500	LENS			
	1-4	VH897700	LENS			
	1-5	VJ833300	BUTTON GUIDE	2P		
	2-1	VM738600	FRONT FRAME			
	2-2	VK054200	BUTTON CASE			
	2-3	CB605620	PLASTIC RIVET	No.1781		
	2-4	Ei330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL PACK		
	2-5	VF617600	PAN HEAD P-TITE SCREW	2.6x8 FCRM3-BL		
*	2-7	VP834100	P.C.B. ASS'y, OPERATION	OPERATION		
	3-1	iX620970	TRANSISTOR	2SA1491 O,P,Y Q116,118	⚠	
	3-2	iX620980	TRANSISTOR	2SC3855 O,P,Y Q115,117	⚠	
*	3-4	VP820900	HEAT SINK			
	3-5	VK195900	SHEET	19x24		
	3-7	VK173200	SCREW, TRANSISTOR	3x15 SP FCM3		
	5	VM675300	P.C.B. ASS'y, TUNER	TUNER(UC)		
	5	VM675400	P.C.B. ASS'y, TUNER	TUNER(R)		
	5	VM675500	P.C.B. ASS'y, TUNER	TUNER(AB)		
	6	VM675700	P.C.B. ASS'y, DSP	DSP		
*	7	VP832700	P.C.B. ASS'y, INPUT	INPUT(UC)		
*	7	VP832800	P.C.B. ASS'y, INPUT	INPUT(R)		
*	7	VP832900	P.C.B. ASS'y, INPUT	INPUT(A)		
*	8	VP833000	P.C.B. ASS'y, MAIN	MAIN(U)		
*	8	VP833100	P.C.B. ASS'y, MAIN	MAIN(C)		
*	8	VP833200	P.C.B. ASS'y, MAIN	MAIN(R)		
*	8	VP833300	P.C.B. ASS'y, MAIN	MAIN(A)		
*	10	XL994A00	POWER TRANSFORMER	(U)	⚠	
*	10	XL995A00	POWER TRANSFORMER	(C)	⚠	
*	10	XL996A00	POWER TRANSFORMER	(R)	⚠	
*	10	XL997A00	POWER TRANSFORMER	(A)	⚠	
	11	VE222900	POWER CORD ASS'y	(R)	⚠	
	11	VL012900	POWER CORD ASS'y	(UC)	⚠	
	11	VP418100	POWER CORD ASS'y	(A)	⚠	
	12	VP418700	AC OUTLET	2P	⚠	
	13	CB069250	BINDING TIE	BK-1		
	14	LB101110	SHORT PLUG			
	15	VN024000	CONNECTOR, FLAT CABLE	14P 60mm		
	101	VM733500	TOP COVER			
	102	VM733700	CHASSIS			
	103	VM733800	BOTTOM COVER			
	104	VM733900	FRAME SIDE L			
	105	VM734000	FRAME SIDE R			
	106	VQ060200	FRAME, HEAT SINK			
	107	VM734200	SHIELD PLATE 1			
	108	VM734300	SHIELD PLATE 2			
*	109	VP770900	REAR PANEL	(U)		
*	109	VP771000	REAR PANEL	(C)		
*	109	VP771100	REAR PANEL	(R)		
*	109	VP771200	REAR PANEL	(A)		
	110	VK016500	LEG	φ60/H21		
	111	VK015100	KNOB, LED	φ45		

※New Parts (新規部品)

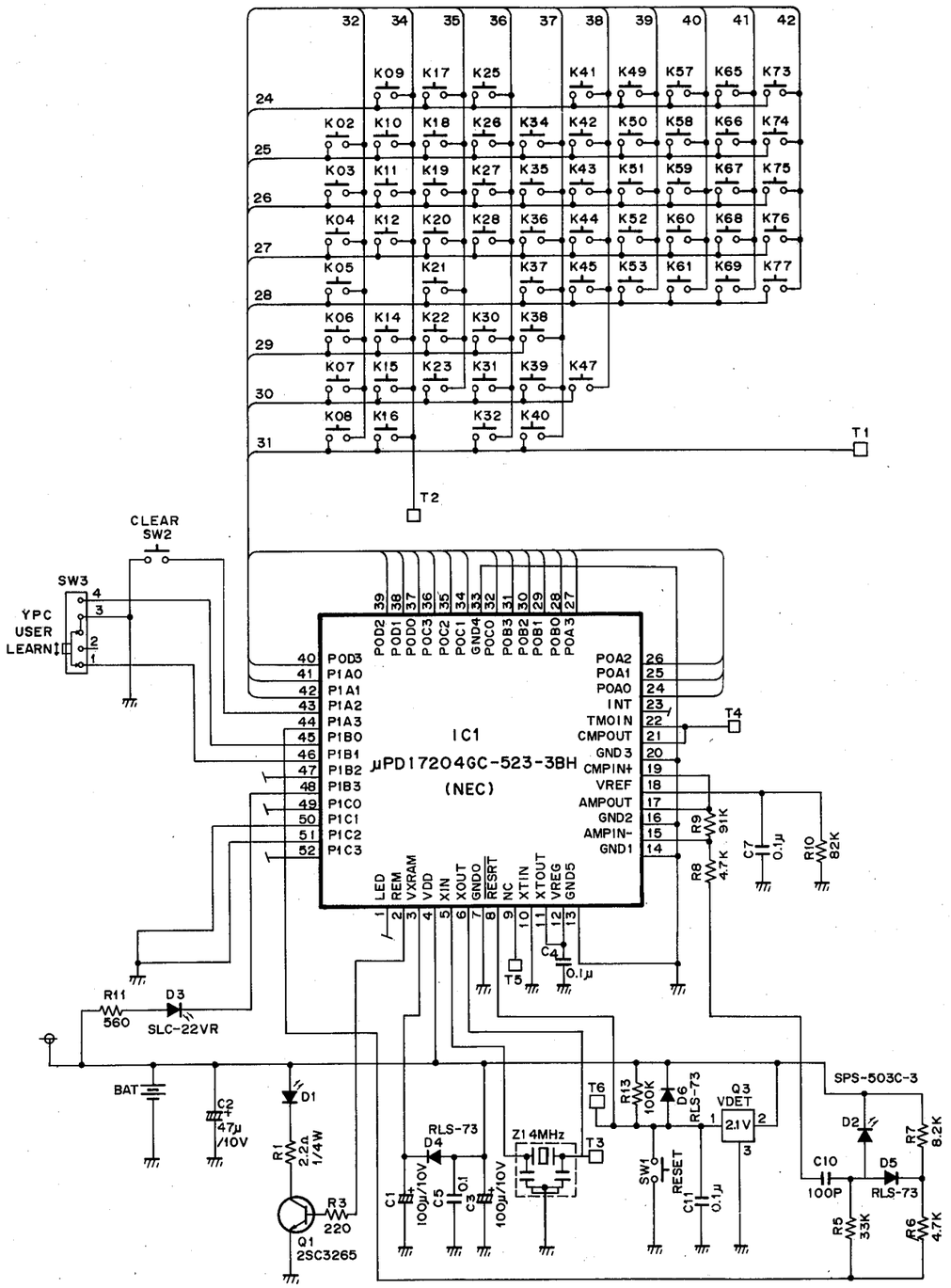
	Ref. No.	PART NO.	Description	Remarks	Markets
	112	VP511900	KNOB	φ16	
	113	VM736600	BUTTON	3x14	
	114	VK234600	PLATE SIDE		
	115	VJ832900	SHEET		
*	116	VP771300	FRAME, TR		
*	117	VQ240800	DAMPER	8x13x20	
	120	CB099600	PLASTIC RIVET	No.920	
	121	CB068880	PLASTIC RIVET	No.1027	
	132	VN158600	CORD STOPPER	No.2104	
	150	AA627310	GROUND TERMINAL		
	151	VK865300	HEX. HEAD TAP. SCREW WITH WS	3x18 FCRM3-BL	
	152	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL PACK	
	153	EX601890	BIND HEAD BONDING SCREW	3x6 FCRM3-BL	
	154	EN301010	BIND HEAD BONDING TAP. SCREW	3x8 FCRM3-BL	
	155	Ei330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL PACK	
	156	EX600470	BW HEAD TAPPING SCREW	3x8-10 FNM3-3G	
	157	EX602240	BW HEAD TAPPING SCREW	3x10	
	158	Vi924800	BW HEAD TAPPING SCREW	3x10-8 FCM3	
	160	EK365090	BW HEAD SCREW	4x8 ZMC2-BL	
	161	EX601850	SPECIAL SCREW S-TITE	4x8-10 FCRM3-BL	
	162	VG869500	DAMPER		
	163	VH088000	SPACER		
	166	CB605620	PLASTIC RIVET	No.1781	
	167	VK173200	SCREW, TRANSISTOR	3x15 SP FCM3	
			ACCESSORIES		
*	200	VP794300	REMOTE CONTROL TRANSMITTER		
	200-1	CX674400	LID	56x40.5 103RRC-031-02R	
	201	VQ042800	LOOP ANTENNA	1P 3.0m	
	202	VG850700	ANTENNA, FM	1.4m	
			BATTERY, MANGANESE	SUM-3,AA,R06	

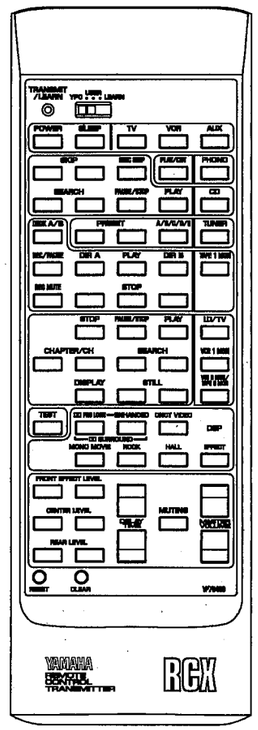
※New Parts (新規部品)

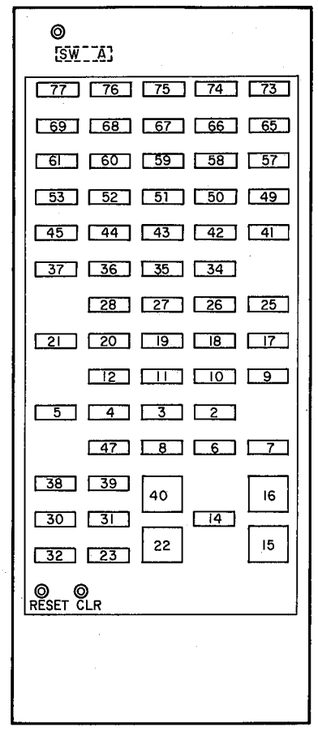
RX-V670

REMOTE CONTROL TRANSMITTER

■ SCHEMATIC DIAGRAM







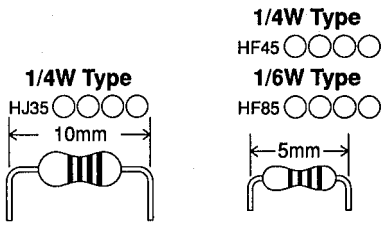
KEY No.	CONTROL CODE	FUNCTION
77	7A-1F	POWER
76	7A-57	SLEEP
75	—	No initial value (TV)
74	—	No initial value (VCR)
73	—	No initial value (AUX)
69	7A-0B	CD SKIP ⏮
68	7A-0A	SKIP ⏭
67	7A-4F	DISK SKIP
66	7A-0E	PHONO PLAY/CUT
65	7A-14	INPUT PHONO
61	7A-0D	SEARCH ◀◀
60	7A-0C	SEARCH ▶▶
59	7A-09	PAUSE/STOP
58	7A-08	PLAY
57	7A-15	INPUT CD
53	7A-06	TAPE A/B
52	7A-11	TUNER PRESET –
51	7A-10	PRESET +
50	7A-12	A/B/C/D/E
49	7A-16	INPUT TUNER
45	7A-04	TAPE REC/PAUSE
44	7A-07	DIR A
43	7A-00	PLAY
42	7A-40	DIR B

KEY No.	CONTROL CODE	FUNCTION
41	7A-19	INPUT TAPE1
37	7A-05	TAPE REC MUTE
36	7A-01	◀◀
35	7A-03	STOP
34	7A-02	▶▶
28	7C-5B	LD STOP
27	7C-04	PAUSE/STOP
26	7C-05	PLAY
25	7A-17	INPUT LD/TV
21	7C-02	LD CHAPTER –
20	7C-03	CHAPTER +
19	7C-06	SEARCH ◀◀
18	7C-07	SEARCH ▶▶
17	7A-0F	INPUT VCR1
12	7C-13	LD DISPLAY
11	7C-0A	STILL ⏮
10	7C-0B	STILL ⏭
9	7A-13	INPUT VCR2/TAPE2
5	7A-85	TEST/PROGRAM1
4	7A-88	PROGRAM1/PROGRAM2
3	7A-89	PROGRAM2/PROGRAM3
2	7A-8A	PROGRAM3/PROGRAM4
47	7A-8B	PROGRAM4/PROGRAM6
8	7A-8C	PROGRAM5/PROGRAM7

KEY No.	CONTROL CODE	FUNCTION
6	7A-8D	PROGRAM6/PROGRAM8
7	7A-56	EFFECT ON/OFF
38	7A-81	FRONT EFFECT –
39	7A-80	FRONT EFFECT +
40	7A-52	DELAY TIME +
16	7A-1A	MASTER VOLUME +
30	7A-83	CENTER LEVEL –
31	7A-82	CENTER LEVEL +
14	7A-1C	MUTING
32	7A-5F	REAR LEVEL –
23	7A-5E	REAR LEVEL +
22	7A-53	DELAY TIME –
15	7A-1B	MASTER VOLUME –

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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