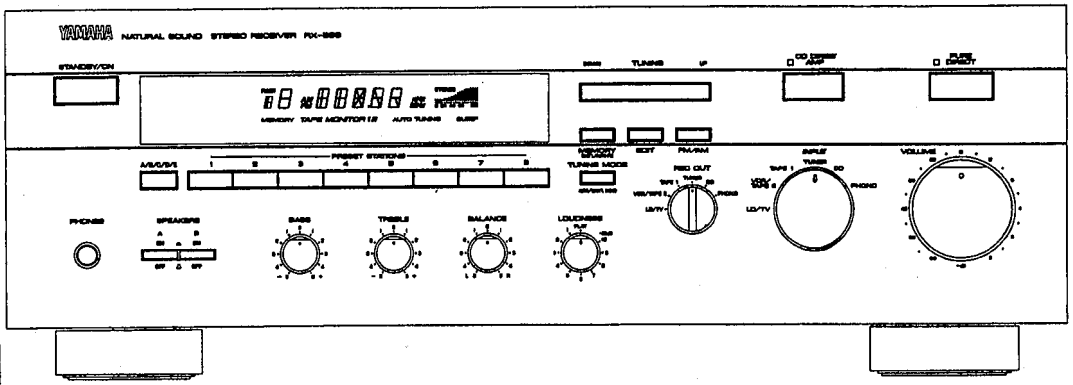
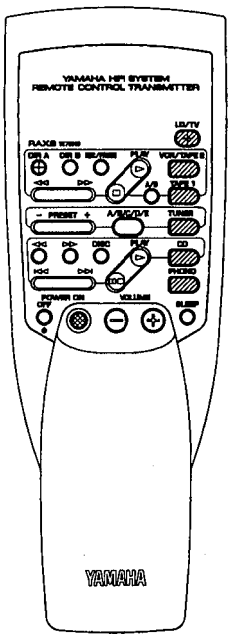
STEREO RECEIVER

RX-596

SERVICE MANUAL





IMPORTANT NOTICE

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

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

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

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

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

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

■ CONTENTS

RX-596

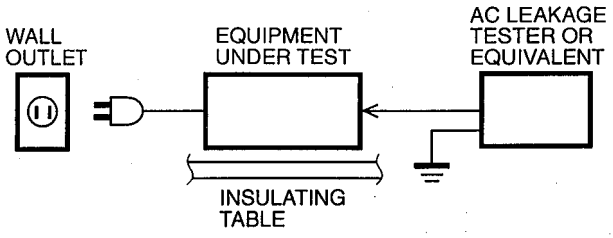
100638

YAMAHA
YAMAHA CORPORATION
P.O.Box1,Hamamatsu,Japan
1.75K-346 Printed in Japan '98.6

■ 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!

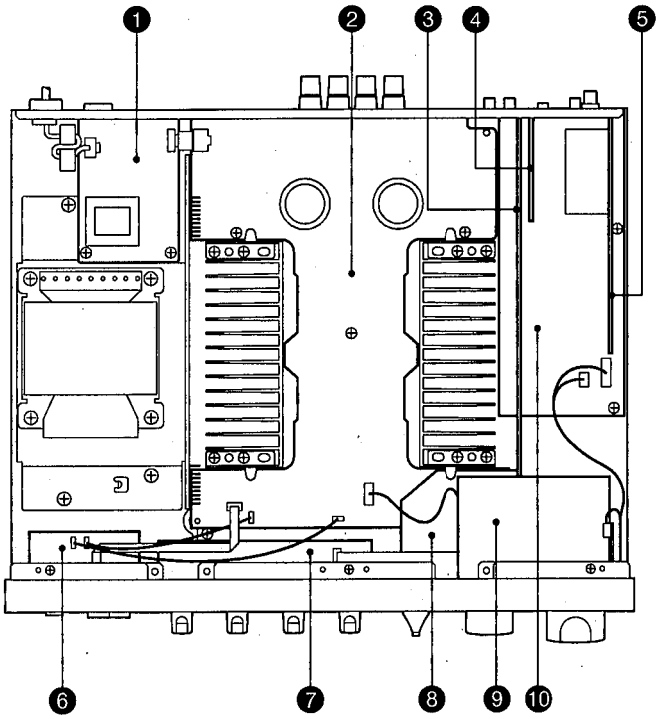
The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects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

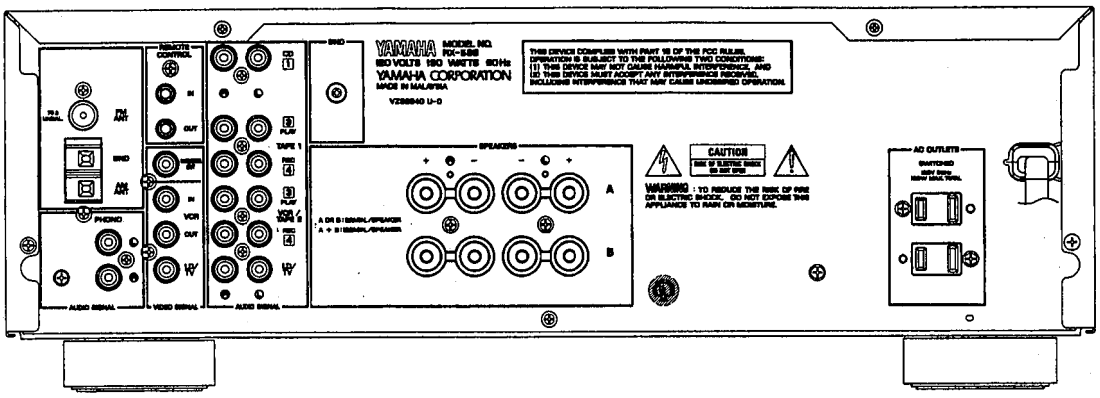
■ INTERNAL VIEW



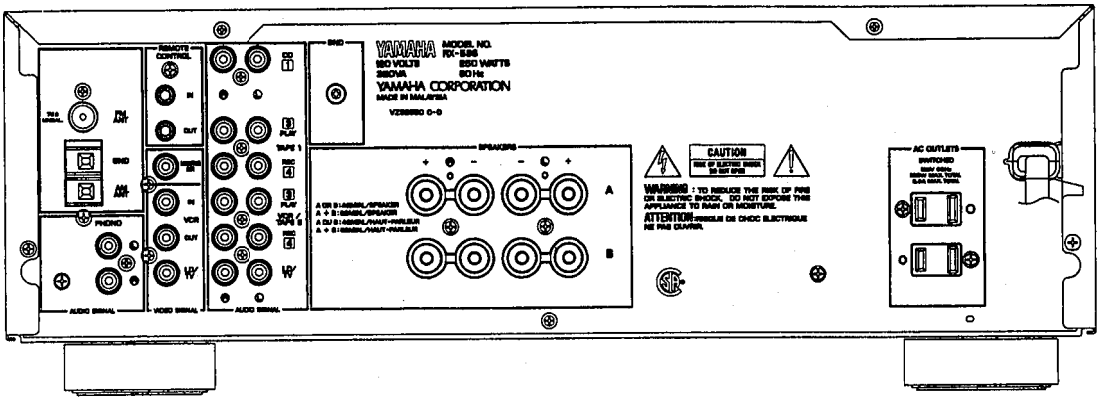
❶ P. C. B. MAIN (2)
❷ P. C. B. MAIN (1)
❸ P. C. B. FUNCTION (1)
❹ P. C. B. OPERATION (2)
❺ P. C. B. TUNER
❻ P. C. B. FUNCTION (7)
❼ P. C. B. FUNCTION (4)
❽ P. C. B. FUNCTION (2)
❾ P. C. B. FUNCTION (3)
❿ P. C. B. FUNCTION (5)

■ REAR PANELS

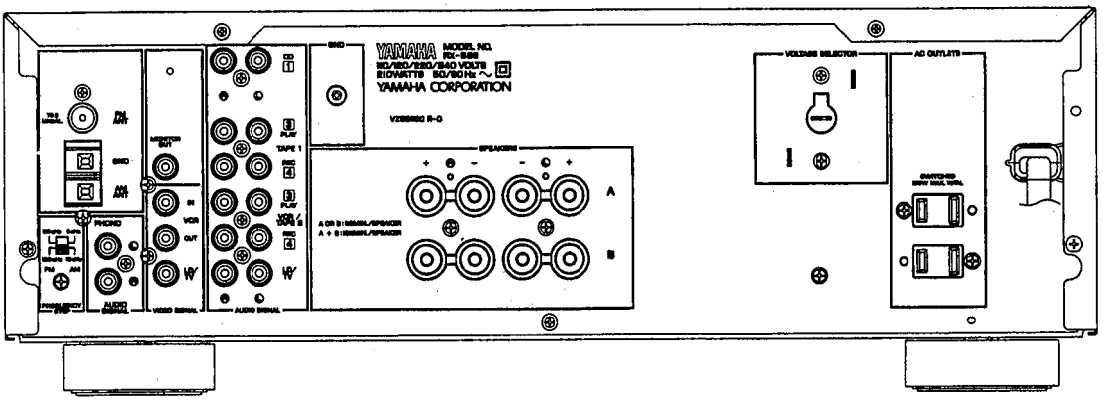
▼ U model



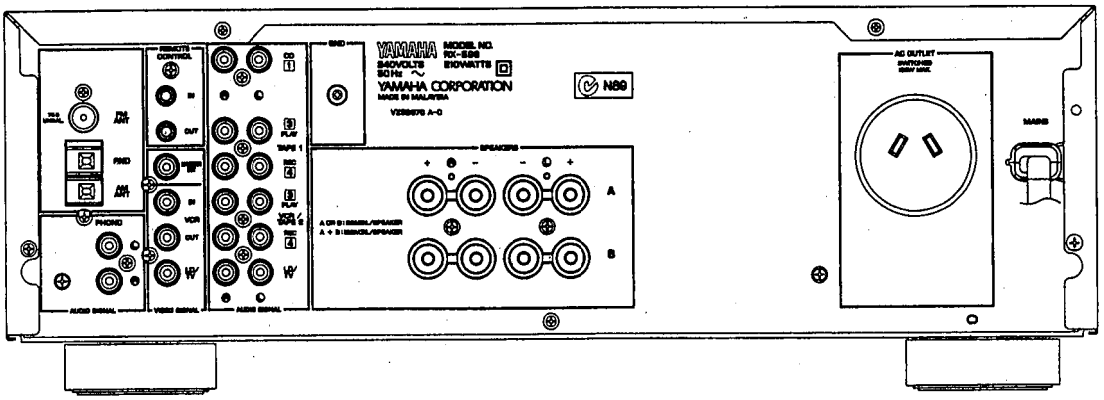
▼ C model



▼ R model



▼ A model



■ SPECIFICATIONS

■ AUDIO SECTION

Minimum RMS Output Power per Channel
8 ohms, 20Hz to 20kHz, 0.025% THD 80W
6 ohms, 20Hz to 20kHz, 0.05% THD 90W
Dynamic Power per Channel (IHF)
8/6/4/2 ohms 120/140/180/200W
Power Band Width
8 ohms, 40W, 0.05% THD ..... 10Hz to 50kHz
Damping Factor
8 ohms, 20Hz to 20kHz..... 240 or more
Maximum Power (EIAJ) (R model only)
8/6 ohms, 1kHz, 10%THD..... 130/150W
Input Sensitivity/Impedance
PHONO MM 2.5mV/47k-ohms
CD etc 150mV/47k-ohms
Maximum Input Signal Level (1kHz, 0.003% THD)
PHONO MM 115mV
Output Level/Impedance
REC OUT (PHONO) 150mV/1.5k-ohms
Headphone Jack Rated Output/Impedance
0.025% THD, RL=8 ohms ..... 0.3V/680 ohms
Frequency Response (20Hz to 20kHz)
CD etc ..... 0±0.5dB
RIAA Equalization Deviation (20Hz to 20kHz)
PHONO MM ..... 0±0.5dB
Total Harmonic Distortion (20Hz to 20kHz)
PHONO MM to REC OUT (3V)..... 0.003%
CD etc to SP OUT (40W/8 ohms) 0.01%
Signal-to-Noise Ratio (IHF-A Network)
PHONO MM (5mV Input Shorted) 88dB
CD DIRECT (Shorted)..... 110dB
Residual Noise (IHF-A Network)
CD DIRECT 35μV
PURE DIRECT 90μV
Channel Separation (1kHz,Vol. –30dB)
CD etc (input 5.1k-ohms Terminated)..... 65dB
Tone Control Characteristics
BASS : Boost/cut..... ±10dB (20Hz)
Turnover Frequency 350Hz
TREBLE: Boost/cut..... ±10dB (20kHz)
Turnover Frequency 3.5kHz
Continuous Loudness Control ..... –30dB (1kHz)
(Level related equalization)

■ FM SECTION

Tuning Range
U, C models..... 87.5 to 107.9MHz
A model ..... 87.50 to 108.00MHz
R model ..... 87.5 to 107.9/87.50 to 108.00MHz
50dB Quieting Sensitivity (IHF, 75 ohms)
Mono 1.55μV (15.1dBf)
Stereo 21μV (37.7dBf)
Usable Sensitivity (75 ohms)
30dB S/N Quieting (1kHz, 100% mod.) 0.8μV (9.3dBf)
DIN, Mono (S/N 26dB) 0.9μV
DIN, Stereo (S/N 46dB)..... 24μV
Image Response Ratio..... 45dB
IF Response Ratio 70dB
Spurious Response Ratio 70dB
AM Suppression Ratio 55dB
Capture Ratio 1.5dB
Alternate Channel Selectivity 85dB
Signal-to-Noise Ratio (IHF)
Mono/Stereo 80/75dB
Harmonic Distortion (1kHz)
Mono/Stereo 0.1/0.2%
Stereo Separation (1kHz)..... 50dB
Frequency Response
20Hz to 15kHz..... 0±1.5dB
Output Level
FM (100% mod., 1kHz)..... 500mV

■ AM SECTION

Tuning Range
U, C models..... 530 to 1,710kHz
A model ..... 531 to 1,611kHz
R model ..... 530 to 1,710/531 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%
Output Level
AM (30% mod., 400Hz)..... 150mV

■ VIDEO SECTION

Video Signal Level 1Vp-p/75Ω
Maximum Input Level 1.5Vp-p
Signal-to-Noise Ratio 50dB
Monitor Output Frequency Response .. 5Hz~10MHz, –3dB

■ 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

R, A models 210W
C model 320VA, 250W
U model 190W

AC Outlets

Switched x 2
U, C, R models ..... 100W max
Switched x 1
A model ..... 100W max

Dimensions (W x H x D) ..... 435 x 151 x 389.8mm
(17-1/8" x 5-15/16" x 15-3/8")

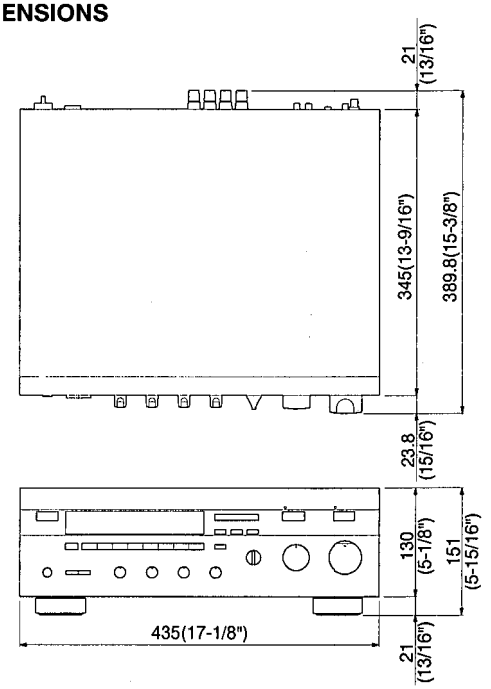
Weight ..... 9.5 kg (20 lbs 15 oz.)

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

** Specifications subject to change without notice.*

***U** ..... USA model*
***C** ..... Canadian model*
***A** ..... Australian model*
***R** ..... General model*

● DIMENSIONS



Units : mm (inch)

■ DISASSEMBLY PROCEDURES (Remove parts in the order as numbered.)

1. **Removal of Top Cover**
   Remove 4 screws (①) and 4 screws (②) in Fig. 1.
2. **Removal of Front Panel**

a. Remove 7 knobs.
b. Remove 6 screws (③) in Fig. 1.

3. **Removal of Bottom Cover**
   Remove 6 screws (④) in Fig. 1.

Precautions for Replacement of input Selector Switch
Make sure to perform initial setting of the input selector switch after its replacement.

● How to perform initial setting
Position the selector switch at the mid-point between the CD position and TUNER position and turn ON the POWER switch. Then the SELECTOR switch turns automatically till it stops at the "CD" position finally.

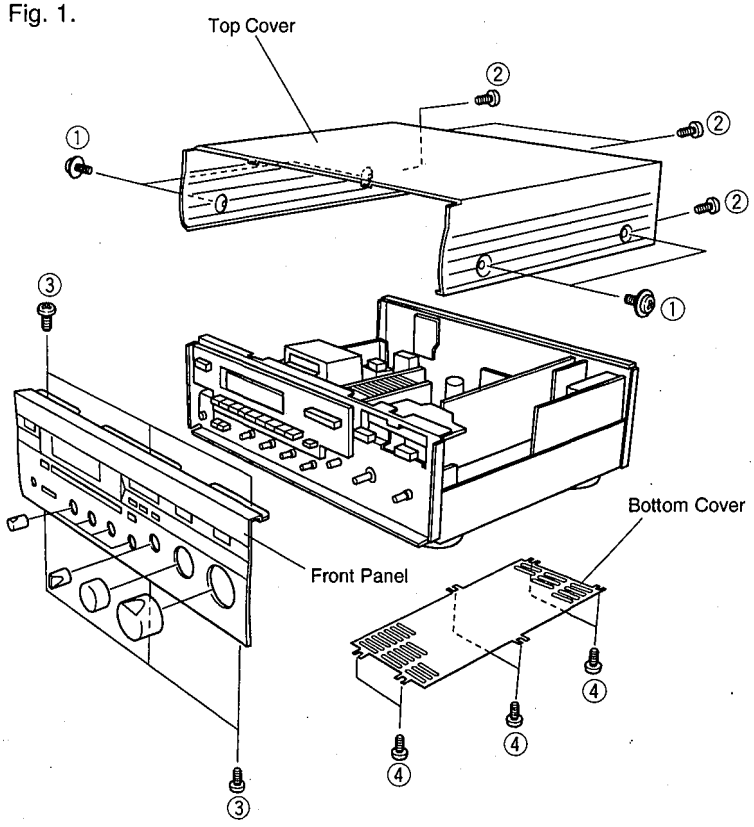
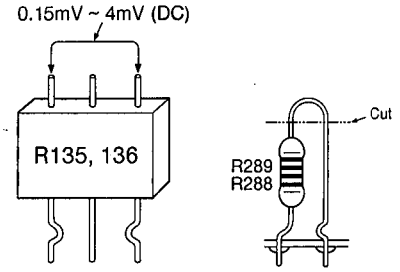


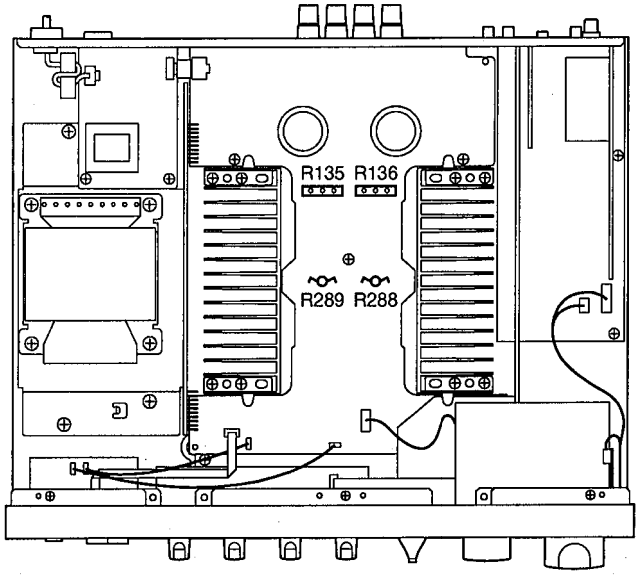
Fig. 1

■ AMP ADJUSTMENTS

● **Confirmation of idling current.**

After Power is turned on.
Confirm that the voltages across R135 (L ch), R136 (R ch) are between 0.15 ~ 4mV.
If they exceed 4.1mV, open (cut off) R289 (L ch) and R288 (R ch), and reconfirm voltage is between 0.15 ~ 4mV.





Note)

- If R289(L ch) or R288(R ch) have already been cut off and idling current does not flow, reconnect R289(1kΩ) or R288(1kΩ).
- Q117 and Q118 are transistors for temperature correction. Apply silicone grease to the contact surface with the heat sink.

■ TEST MODE

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

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

How to start

Turn the POWER switch ON while pressing the P6 and P8 keys simultaneously. The unit enters the TEST mode for the display check (All display segments light immediately).
After that, the DISPLAY mode switches by means of the PRESET STATION keys.

Content of the TEST mode key

P1 key : ALL LIGHTS ON mode
P2 key : LIGHTS OFF mode
P3 to 8 keys : The mode is switched to NORMAL and the TEST mode is cancelled.

How to cancel

Normal operation is restored when the POWER switch is turned OFF or the P3 to 8 keys pressed. At the same time, the factory preset memory is also restored.

● **Factory preset memory content**

Preset group	P1	P2	P3	P4
A/C/E	87.5MHz	90.1MHz	95.1MHz	98.1MHz
B/D	630kHz	1080kHz	1440kHz	530kHz (U, C, R) 531kHz (R, A)

Preset group	P5	P6	P7	P8
A/C/E	108MHz	88.1MHz	106.1MHz	108MHz
B/D	1710kHz (U, C, R) 1611kHz (R, A)	900kHz	1350kHz	1400kHz (U, C, R) 1404kHz (R, A)

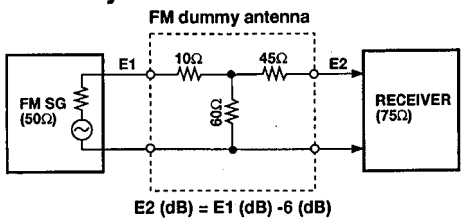
For all the above, AUTO TUNING and AUTO STEREO are selected as the TUNING mode.

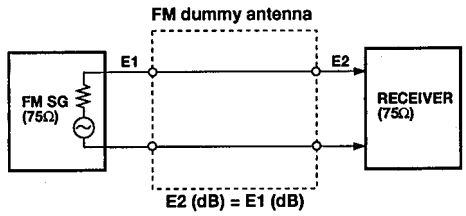
■ TUNER ADJUSTMENTS

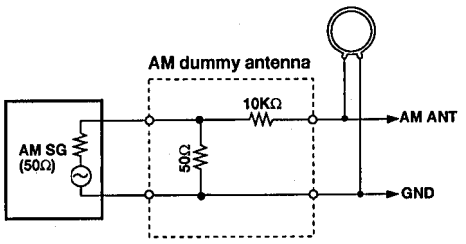
● Measuring instruments

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

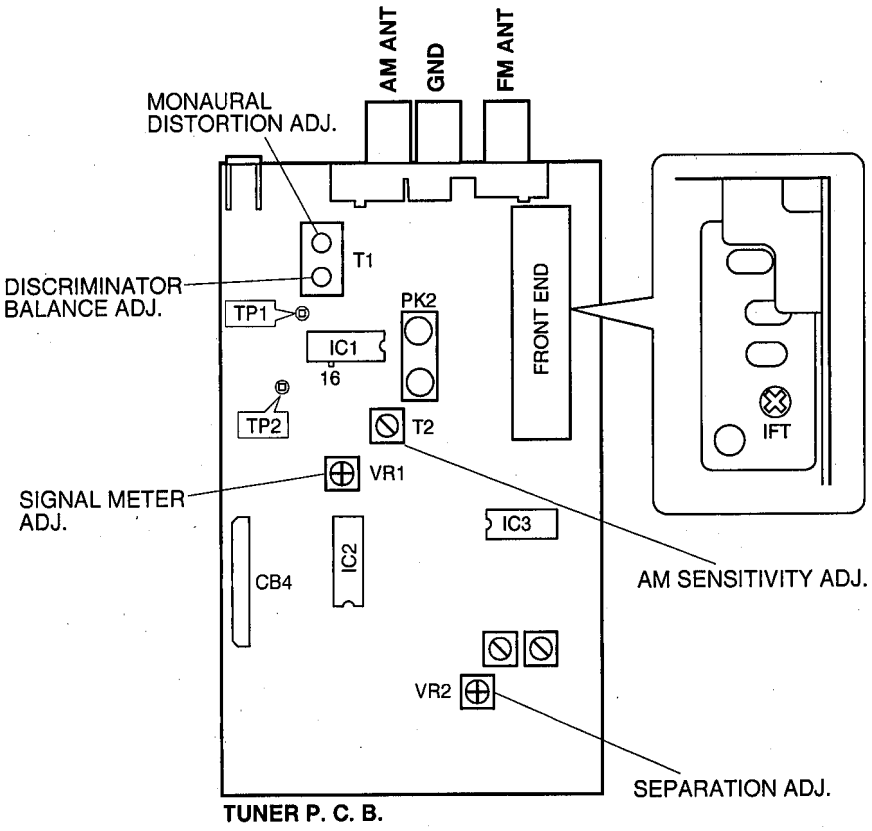
● Dummy antenna







● Test point



TUNER P. C. B.

FM Adjustment

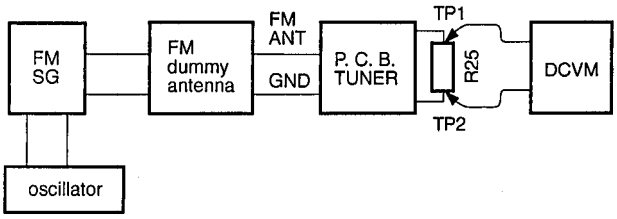
● Before Adjustment

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.

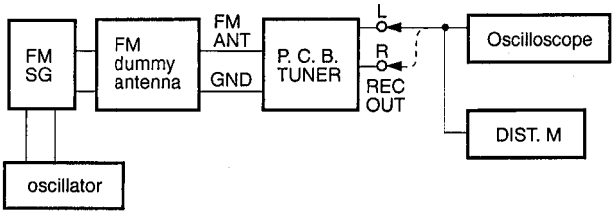
INPUT SELECTOR ..... TUNER
TUNING MODE ..... AUTO

● Connection diagram (Measuring instruments)

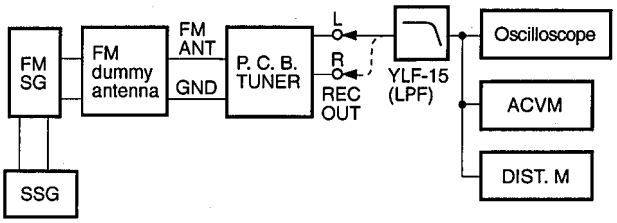
1) Discriminator balance adjustment



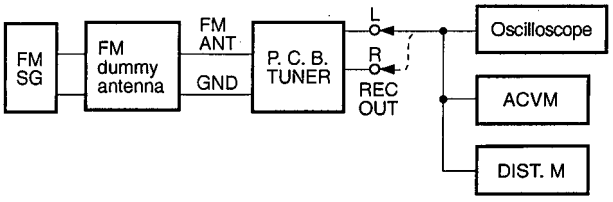
2) Monaural distortion adjustment



3) Stereo distortion adjustment/separation adjustment



4) Sensitivity Verification



See page 6 for TP locations & adjustment points.

Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjustment 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 (IC1 side core)	Both ends of R25 (Between TP1 and TP2)	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 (IC1 side core)	Both ends of R25 (Between TP1 and TP2)	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 (IC1 side core)	Both ends of R25 (Between TP1 and TP2)	DC 0V±50mV

* : Execution of FACTORY PRESET (Refer to TEST MODE on pages 5.) will facilitate setting reception frequency for adjustment.

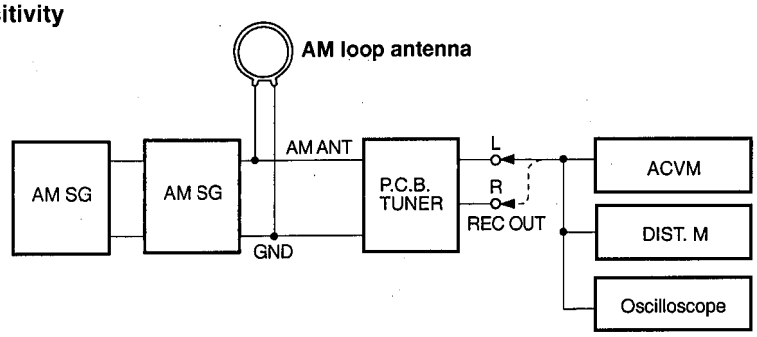
Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjustment point	Test point	Rating
6	Adjustment of front end IFT	FM ANT (75Ω) 98.1MHz 30dBμ MONO 1kHz, 100% modulation	98.1MHz * (A-4)	Front end IFT	Pin 16 of IC1	Adjust so that the DC voltage is maximum. **CAUTION :** Over-adjustment of the IFT core will reduce the sensitivity. Maximum ±90°
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 stereo distortion	FM ANT (75Ω) 98.1MHz 70dBμ Stereo L or R 1kHz, 100% modulation	98.1MHz * (A-4) *Tuning mode should be AUTO.		REC OUT L, R	1% or less • STEREO indicator should light.
9	Verification of sensitivity	FM ANT (75Ω) 88.1MHz 98.1MHz 106.1MHz MONO 1kHz Modulation off	88.1MHz * (A-6) 98.1MHz * (A-4) 106.1MHz * (A-7)		ANT (75Ω)	Set the tuning mode to MAN'L MONO. (Muting OFF) 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.
10	Adjustment of 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
11	Adjustment of 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.
12	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 FACTORY PRESET (Refer to TEST MODE on pages 5.) will facilitate setting reception frequency for adjustment.

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

● Connection Diagram (Measuring instruments)

1) Adjustment of sensitivity



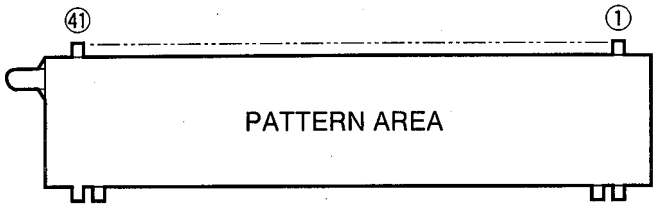
See page 6 for TP locations & adjustment points.

Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjustment point	Test point	Rating
1	Adjustment of sensitivity (1440Hz)	AM ANT 1440kHz 50dBμ 1kHz, 30% modulation	1440kHz * (B-3)	T2	REC OUT	Audio output should be maximized.
2	Verification of sensitivity (630kHz)	AM ANT 630kHz 50dBμ 1kHz 30% modulation	630kHz * (B-1)	T2	REC OUT	Audio output should be maximized. Repeat the Step 1 and 2.
3	Verification of sensitivity	AM ANT 630kHz 1080kHz 1440kHz 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.
4	Verification of auto tuning	AM ANT 60dBμ				Auto reception should be available when the tuning key is moved UP and DOWN.

* : Execution of FACTORY PRESET (Refer to TEST MODE on pages 5.) will facilitate setting reception frequency for adjustment.

■ DISPLAY DATA

● V501 : 8-MT-79GK (VQ915100)



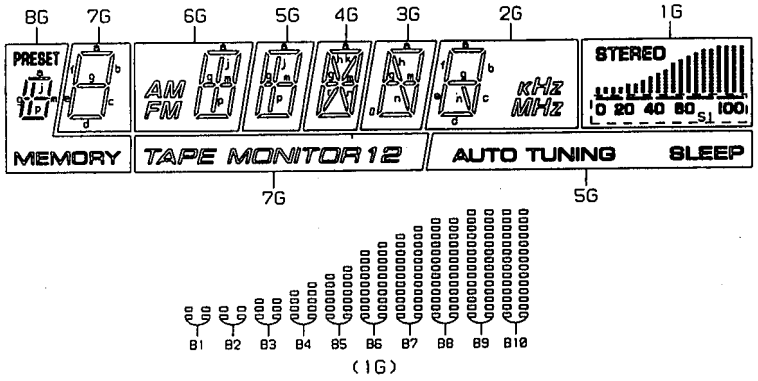
• PIN CONNECTION

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
CONNECTION	F1	F1	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	NX	NX	NX	NX	NX

PIN NO.	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
CONNECTION	NX	NX	NX	NX	NC	NC	NC	NC	1G	2G	3G	4G	5G	6G	7G	8G	NP	NP	F2	F2

NOTE 1) F1, F2 ..... Filament
2) NP ..... No pin
3) NC ..... No connection
4) NX ..... No extend pin
5) P1~P12 ... Datum Line
6) 1G~8G .... Grid

• GRID ASSIGNMENT

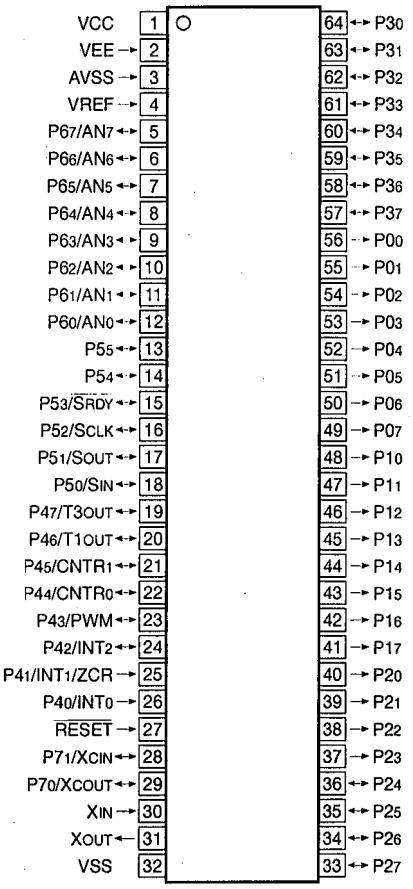


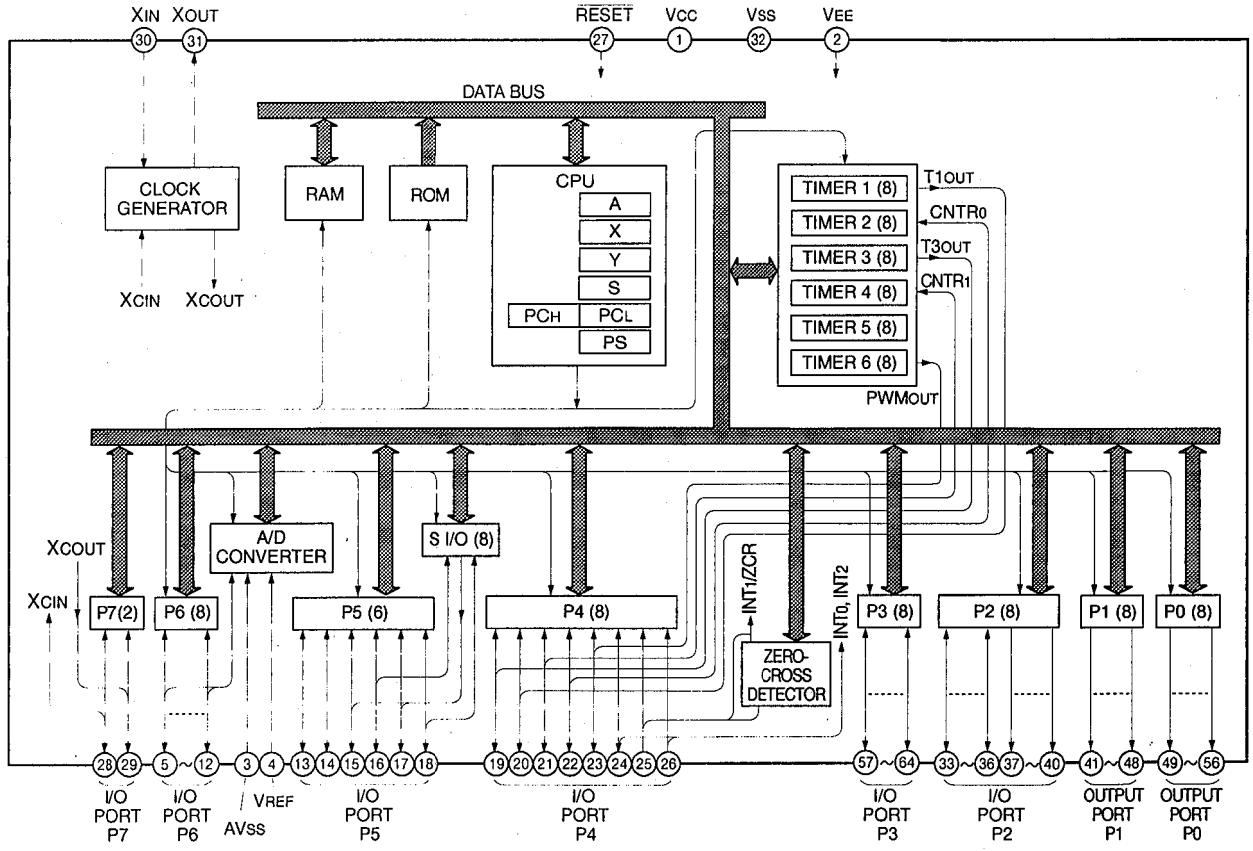
• ANODE CONNECTION

	8G	7G	6G	5G	4G	3G	2G	1G
P1	a	a	a	a	a	a	a	STEREO
P2	b	b	b	b	b	b	b	S1
P3	c	c	c	c	c	c	c	B1
P4	d	d	d	d	d	d	d	B2
P5	e	e	e	e	e	e	e	B3
P6	f	f	f	f	f	f	f	B4
P7	g	g	g	g	g	g	g	B5
P8	j	—	j	j	h	h	—	B6
P9	PRESET	TAPE MONITOR	AM	AUTO TUNING	k	o	kHz	B7
P10	m	1	M	m	m	m	—	B8
P11	p	2	P	p	n	n	n	B9
P12	MEMORY	—	FM	SLEEP	r	—	MHz	B10

■ IC DATA

IC501 : M38122M2-172SP
8 bit μ-COM





No.	Port	Name	I/O	Function	No.	Port	Name	I/O	Function
1	VCC	VDD	—	+ 5V	33	P27	V2	O	VIDEO SELECT (LD)
2	VEE	VEE	—	- 24V for FL	34	P26	V1	O	VIDEO SELECT (VCR)
3	AVSS		—	GND for AD	35	P25	—	—	N.C.
4	VREF	VRvdd	—	A-D REFERENCE VOLTAGE (+ 5V)	36	P24	M.RLY	O	POWER ON/OFF
5	P67	SEL R	O	INPUT SELECTOR (CLOCKWISE)	37	P23	S1	O	FL segment 1
6	P66	SEL L	O	INPUT SELECTOR (COUNTER-CLOCKWISE)	38	P22	S2	O	FL segment 2
7	P65	KEY2	I	KEY INPUT 2 (A/D)	39	P21	S3	O	FL segment 3
8	P64	KEY1	I	KEY INPUT 1 (A/D)	40	P20	S4	O	FL segment 4
9	P63	CAM	I	INPUT SELECTOR CAM	41	P17	S5	I	FL segment 5
10	P62	COMM	I	INPUT SELECTOR COMMON (A/D)	42	P16	S6	I	FL segment 6
11	P61	VER	I	MARKET DETECT (A/D)	43	P15	S7	O	FL segment 7
12	P60	METER	I	METER INPUT	44	P14	S8	O	FL segment 8
13	P55	MONO	O	FORCED MONO OUT	45	P13	S9	O	FL segment 9
14	P54	CE70	O	CE for LM7000	46	P12	S10	O	FL segment 10
15	P53	SIGIN	I	STOP SIGNAL	47	P11	S11	O	FL segment 11
16	P52	CLK70	O	CLOCK for LM7000	48	P10	S12	O	FL segment 12
17	P51	DAT70	O	DATA for LM7000	49	P07	G1	O	FL grid 1
18	P50	STPOT	I	IF COUNT OK	50	P06	G2	O	FL grid 2
19	P47	STPREQ	I	IF COUNT REQUEST	51	P05	G3	O	FL grid 3
20	P46	TMUTE	O	TUNER MUTE	52	P04	G4	O	FL grid 4
21	P45	STEREO	I	STEREO	53	P03	G5	O	FL grid 5
22	P44	—	—	N.C.	54	P02	G6	O	FL grid 6
23	P43	—	—	N.C.	55	P01	G7	O	FL grid 7
24	P42	PRT	I	PROTECTION INPUT	56	P00	G8	O	FL grid 8
25	P41	PD	I	POWER DOWN	57	P37	M.MUTE	O	MAIN MUTE
26	P40	REM	I	REMOCON INPUT	58	P36	—		N. C.
27	RES	/RES	I	RESET	59	P35	—		N. C.
28	P71	VOLUP	O	VOLUME UP	60	P34	—		N. C.
29	P70	VOLDN	O	VOLUME DOWN	61	P33	PWSW	I	POWER SW INPUT
30	XIN	CF1	—	MAIN CLOCK (4MHz)	62	P32	—	—	N.C.
31	XOUT	CF2	—	MAIN CLOCK (4MHz)	63	P31	—	—	N.C.
32	VSS	VSS	—	GND	64	P30	CDD	I	CD DIRECT SW INPUT

• INPUT SELECTOR AD VALUE (10 pin)

Input Position	Voltage
PHONO	0 ~ 0.74 V
CD	1.19 ~ 1.50 V
TUNER	1.95 ~ 2.34 V
TAPE 1	2.77 ~ 3.14 V
TAPE 2/VCR	3.61 ~ 3.98 V
LD/TV	4.45 V ~

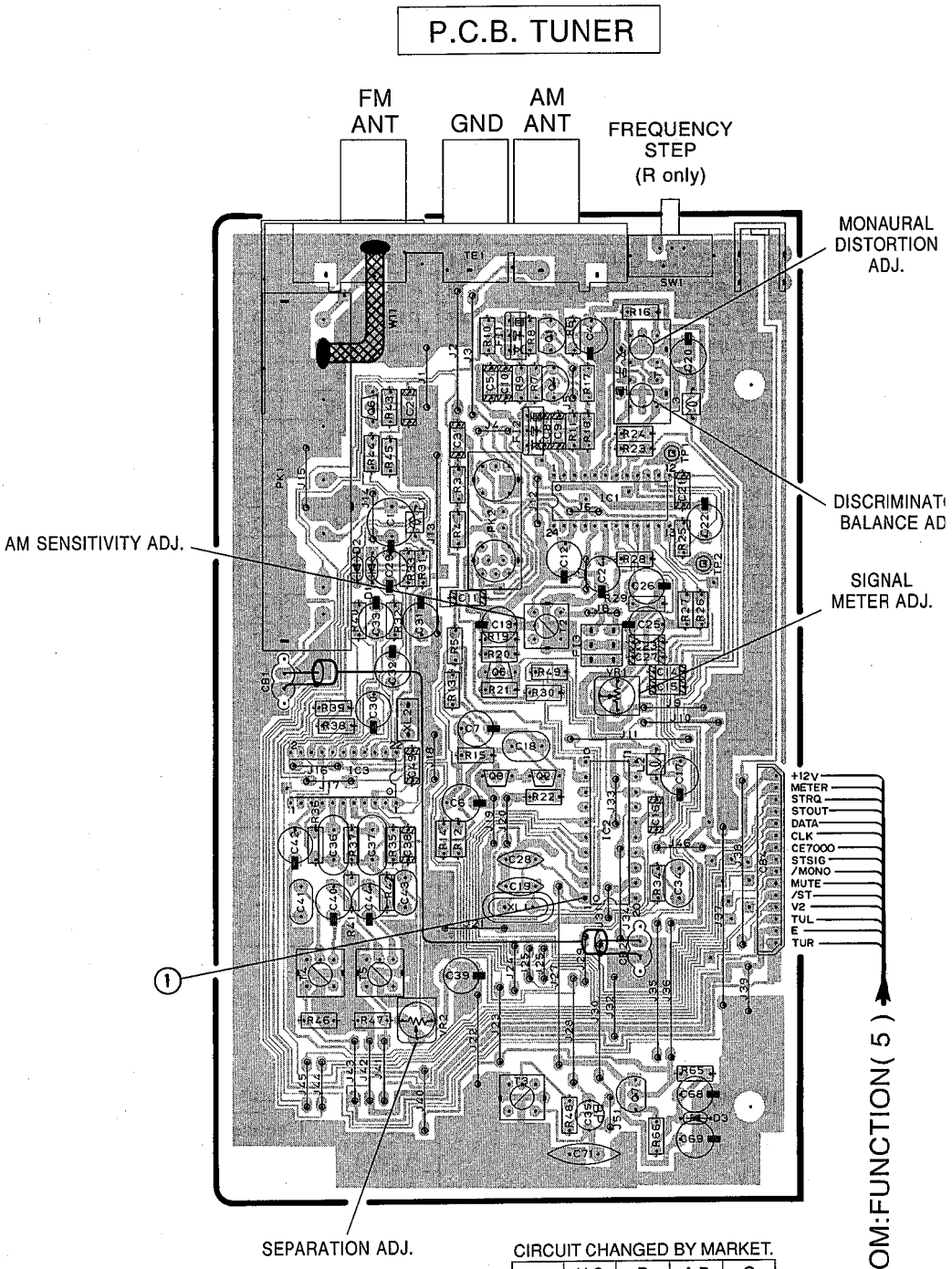
• MARKET AD VALUE (11 pin)

Market	Voltage
R (50k)	0 ~ 0.625 V
A	0.94 ~ 1.50 V
J	1.95 ~ 2.34 V
U	1.99 ~ 2.5 V
R (100k)	2.5 V ~

• KEY INPUT

No.	Name	Key Name							
		1	2	3	4	5	6	7	8
8	KEY 1	P7	P8	TUNING MODE	MEMORY	EDIT	FM/AM	TUNING UP	TUNING DOWN
7	KEY 2	P6	P5	P4	P3	P2	P1	PAGE	—

■ PRINTED CIRCUIT BOARD (Foil side)

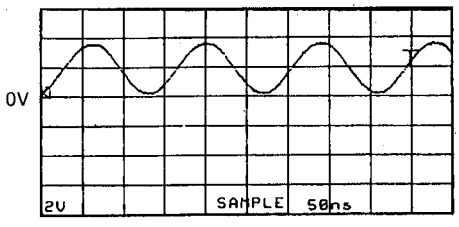


CIRCUIT CHANGED BY MARKET.

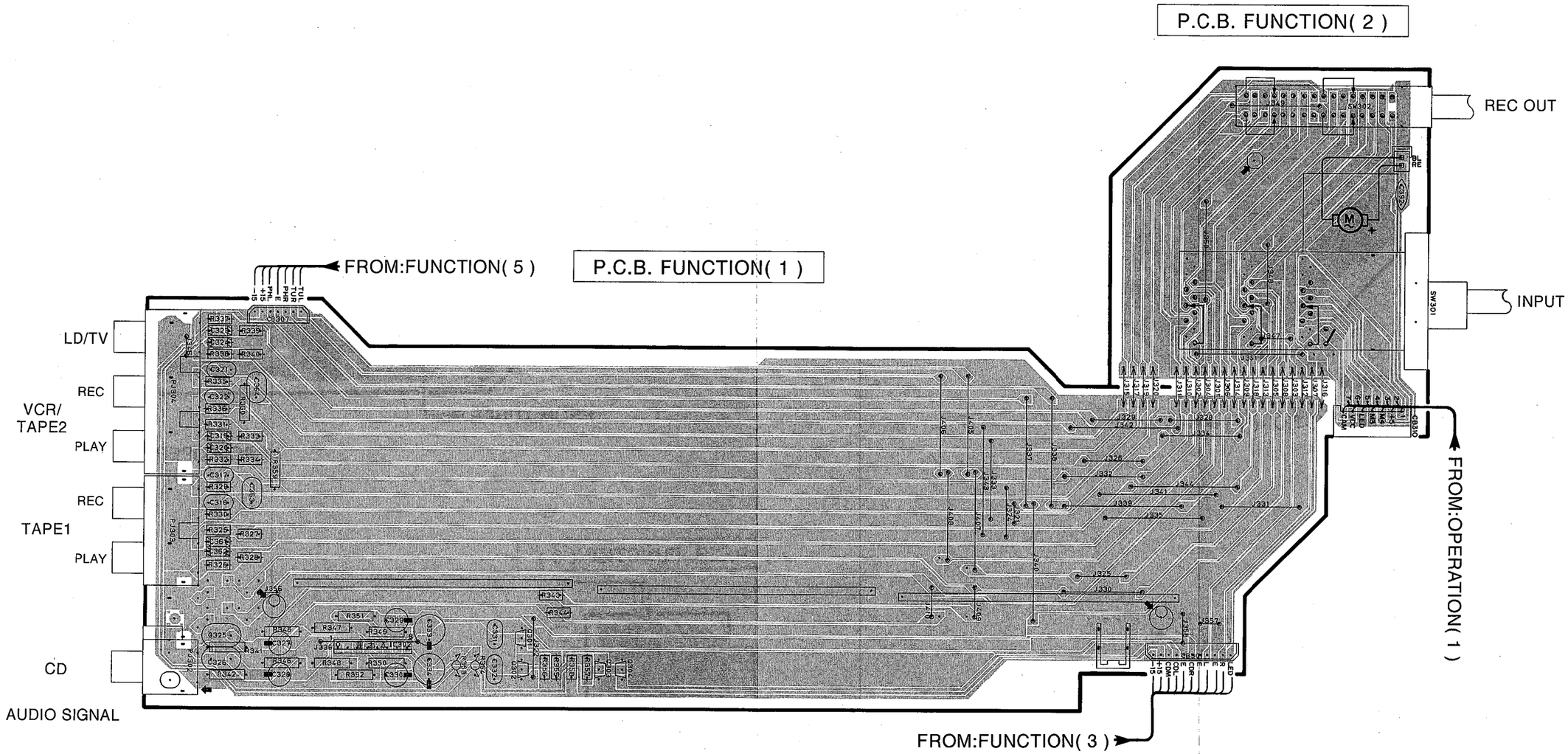
	U,C	R	A,B	G
C21	O	O	O	×
J51	O	O	O	×
R48	×	×	×	O
T3	×	×	×	O
R35	O	O	O	×
SW1	×	O	×	×
J61	×	×	×	O
C71	×	×	×	O

O : USED
× : NOT USED

Point ① (Pin1 of IC2)
V : 2V/div H : 50 nsec/div
DC range 1 : 1 probe

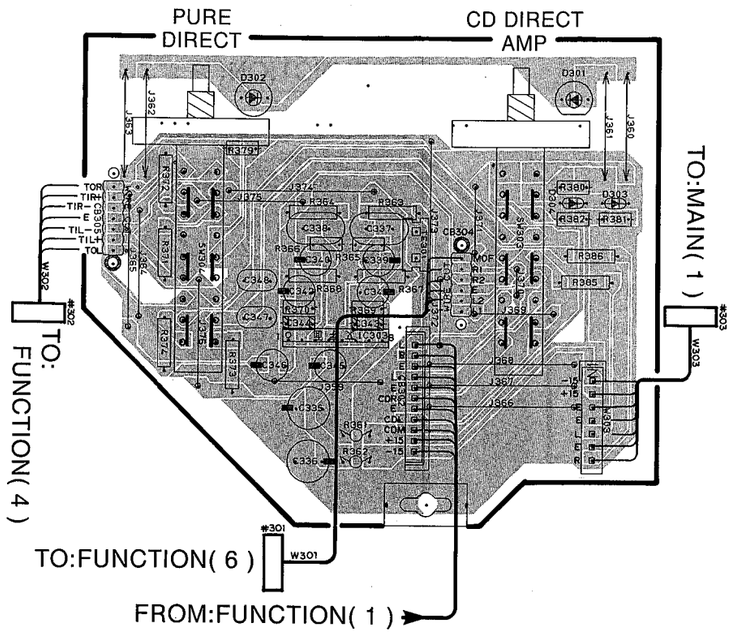


■ PRINTED CIRCUIT BOARD (Foil side)

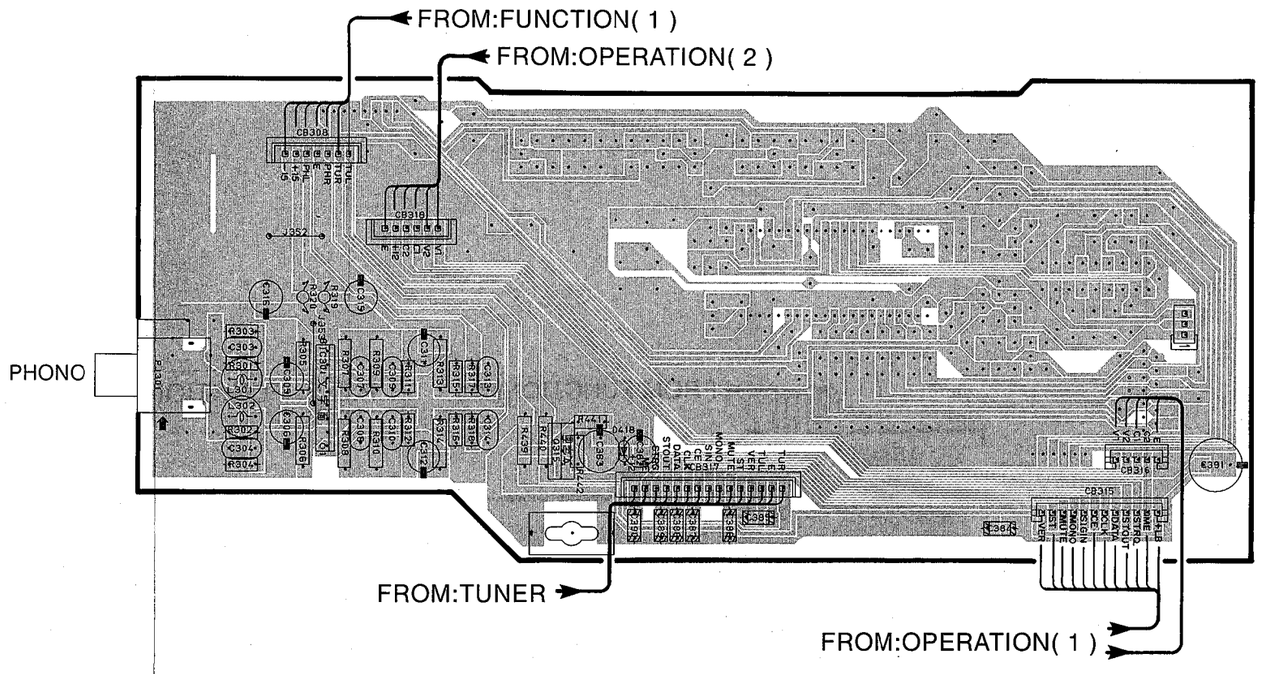


■ PRINTED CIRCUIT BOARD (Foil side)

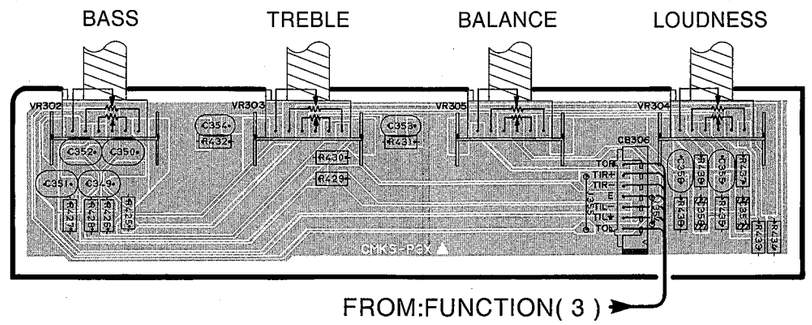
P.C.B. FUNCTION(3)



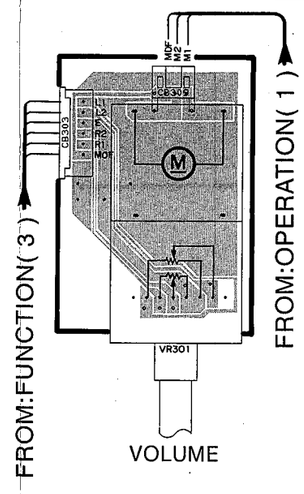
P.C.B. FUNCTION(5)



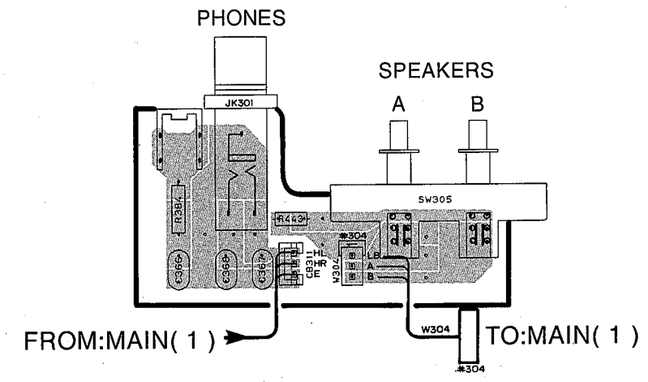
P.C.B. FUNCTION(4)



P.C.B. FUNCTION(6)

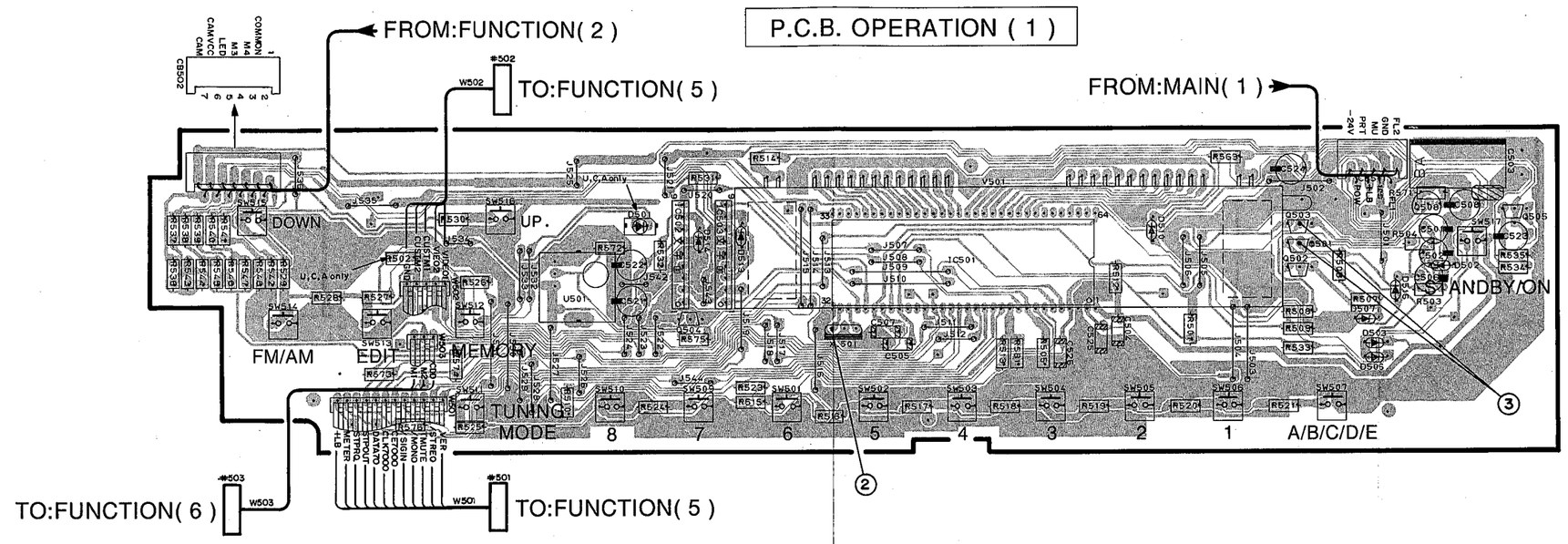


P.C.B. FUNCTION(7)

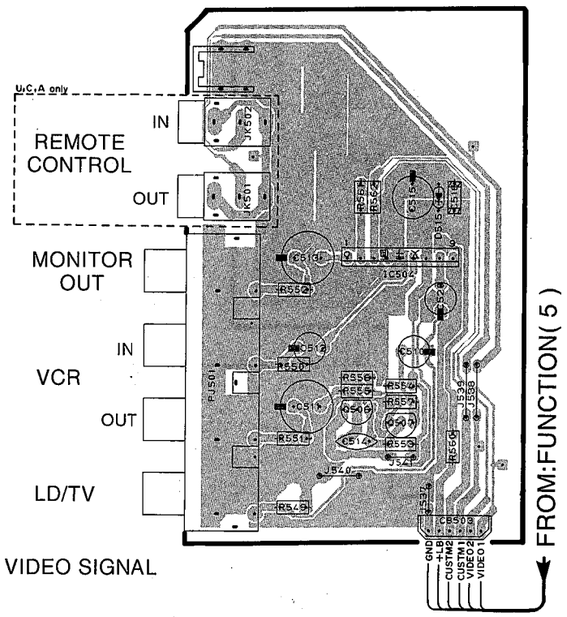


■ PRINTED CIRCUIT BOARD (Foil side)

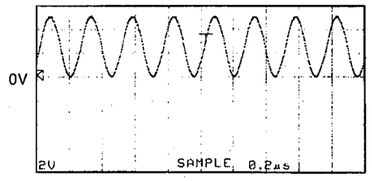
P.C.B. OPERATION (1)



P.C.B. OPERATION (2)



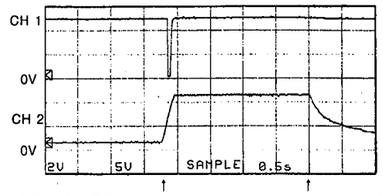
Point ② (Pin31 of IC501)
V : 2V/div H : 0.2 µsec/div
DC range 1 : 1 probe



Point ③

CH1 : Collector of Q503 V : 2V/div (CH1)
CH2 : Collector of Q501 V : 5V/div (CH2)

H : 0.5 sec/div DC range 1 : 1 probe
(This waveform is not available by pushing the power switch ON and OFF.)



With the POWER ON, disconnect the A/C power cord. Reconnect the A/C power cord and the above waveforms will start.

Disconnect the power cord from the AC outlet.

■ PRINTED CIRCUIT BOARD (Foil side)

P.C.B. MAIN (1)

FROM:FUNCTION(3)

FROM:FUNCTION(7)

TO:FUNCTION(7)

TO:POWER TRANSFORMER

FROM:OPERATION(1)

TO:POWER TRANSFORMER

FROM:MAIN(2)

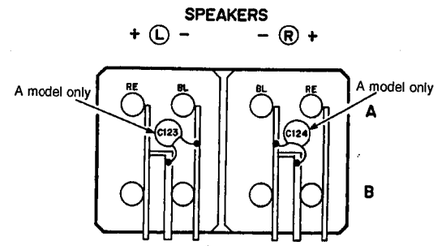
SPEAKERS

+ Ⓡ −　　− Ⓛ +

CIRCUIT CHANGED BY MARKET.

	U,C,R	A
C164,165	×	○
C119,120,123,124 162,163	×	○
C121,122	×	○
C214,215	×	○

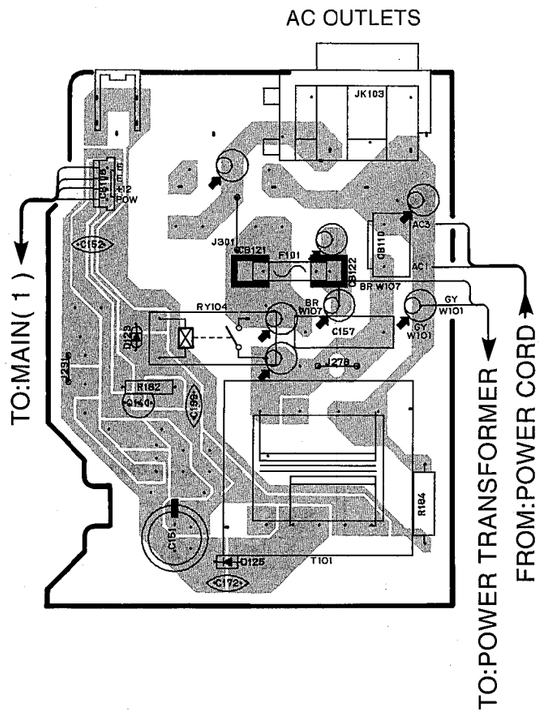
○ : USED
× : NOT USED



■ PRINTED CIRCUIT BOARD (Foil side)

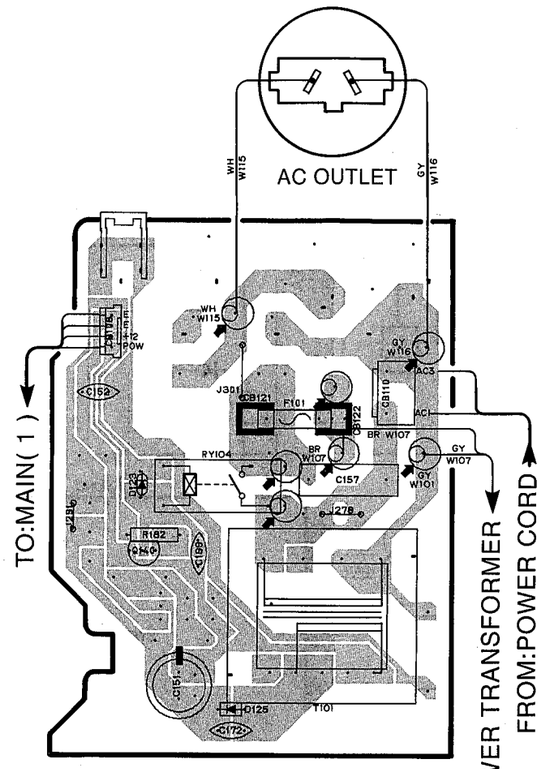
● U,C models

P.C.B. MAIN (2)



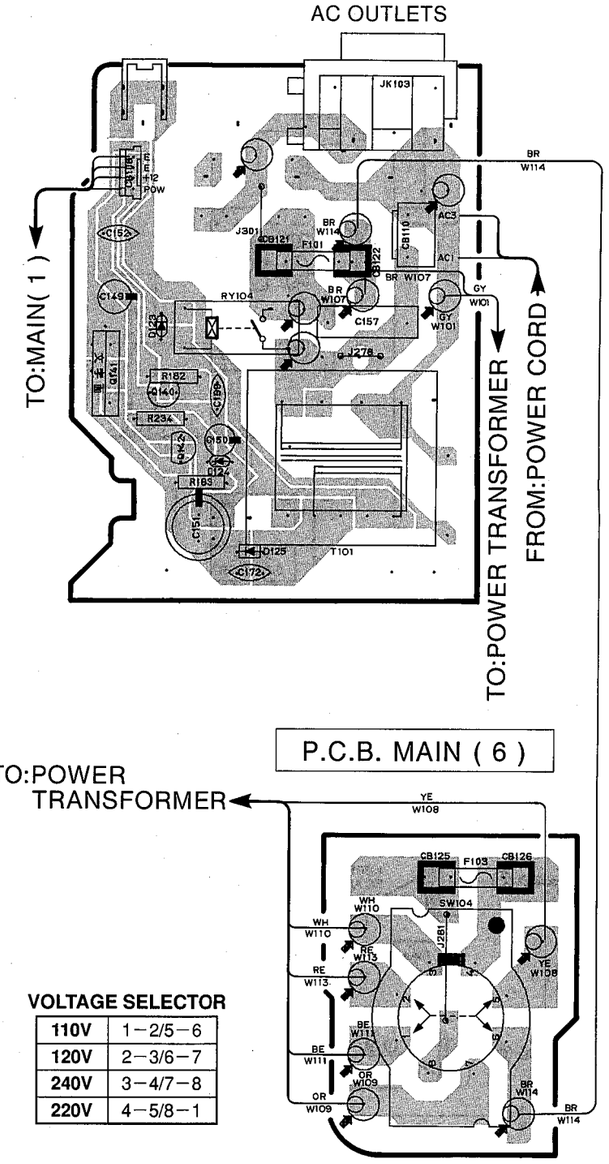
● A model

P.C.B. MAIN (2)



● R model

P.C.B. MAIN (2)

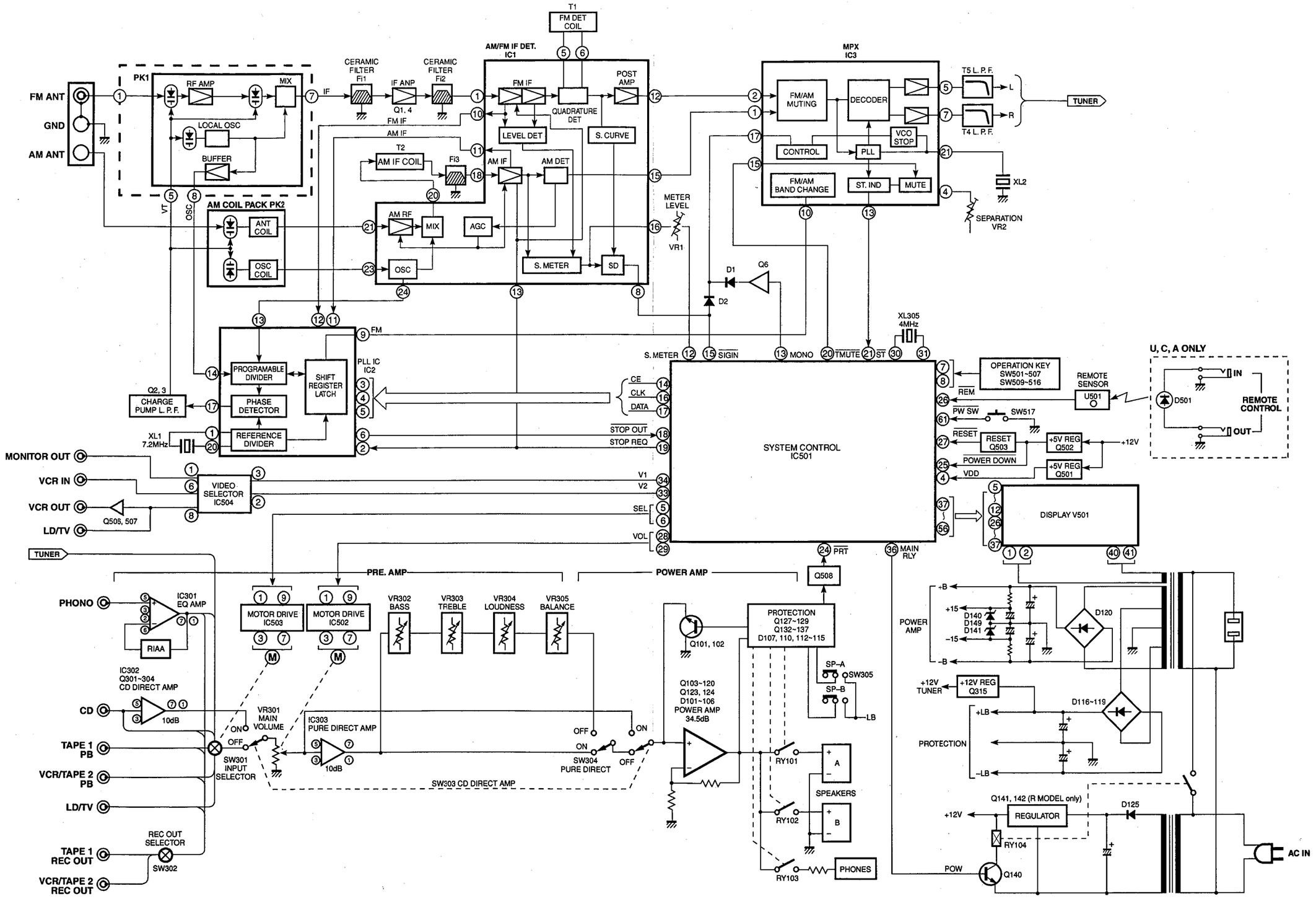


P.C.B. MAIN (6)

VOLTAGE SELECTOR

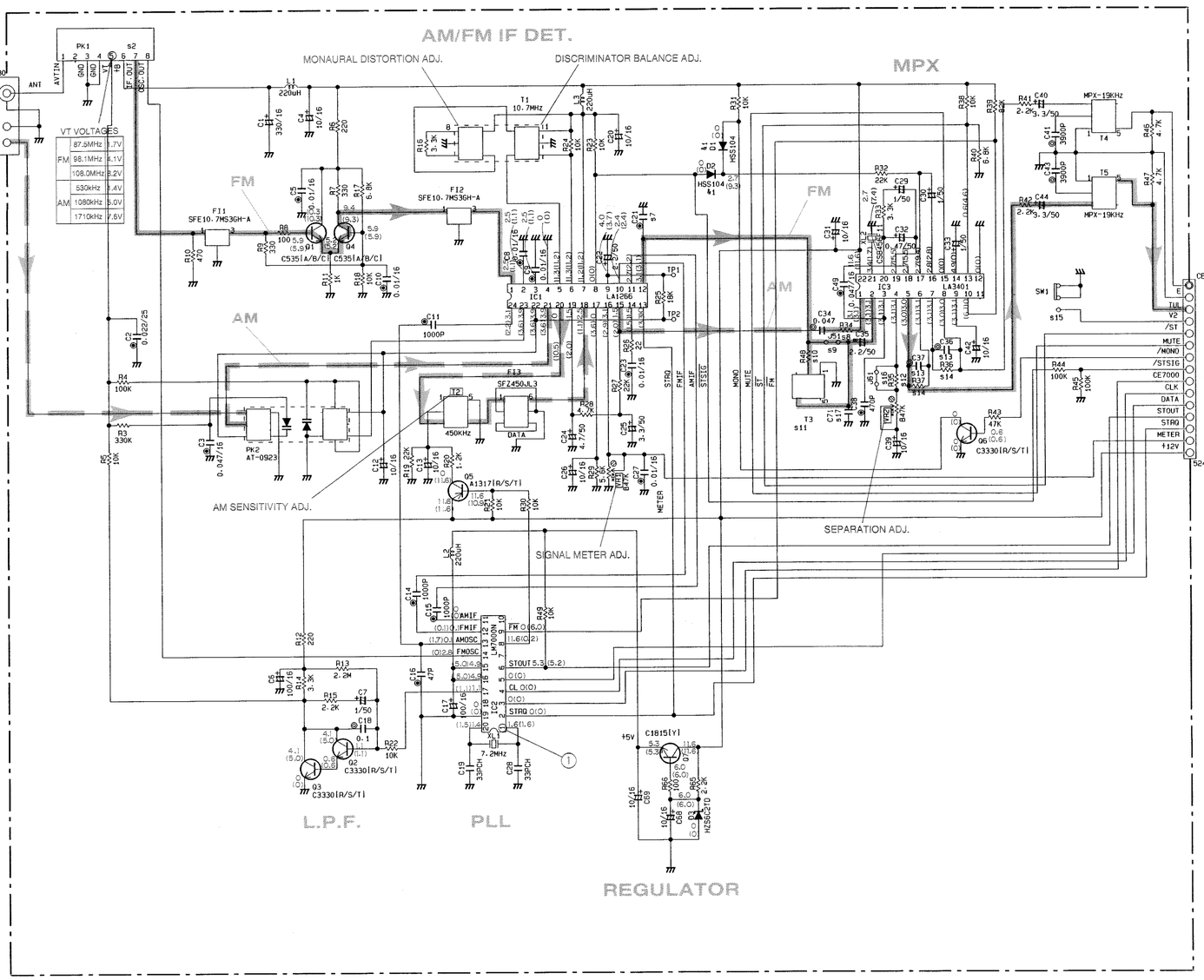
110V	1−2/5−6
120V	2−3/6−7
240V	3−4/7−8
220V	4−5/8−1

■ BLOCK DIAGRAM



■ SCHEMATIC DIAGRAM (TUNER)

Each voltage given here represents that in the FM (98. 1MHz, STEREO) reception mode but the one in the parentheses ( ) is that in the AM (1080kHz, MAN'L) reception mode.



CIRCUIT CHANGES BY MARKET.

S		U-C	R	A-B	G
1					
2	PK1	VR24220	VR24220	VR24220	VQ98760
3					
4					
5					
6					
7	C21	100P	100P	100P	×
8	R34	10K	10K	10K	27K
9	J51	○	○	○	×
10	R48	×	×	×	4.7K
11	T3	×	×	×	VQ36570
12	R35	22K	22K	22K	×
13	C36.37	680P	680P	470P	390P
14	R36.37	100K	100K	100K	120K
15	SW1	×	VF54120	×	×
16	J61	×	×	×	○
17	C71	×	×	×	120PCH

X : NOT USED
○ : USED

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
◭1	D1.2	HSS104 1SS133 1SS176

CAPACITOR

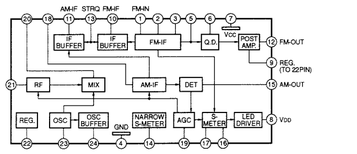
REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	‖
◇	TANTALUM CAPACITOR	‖
NO MARK	CERAMIC CAPACITOR	‖
◉	CERAMIC TUBULAR CAPACITOR	‖
ⓞ	POLYESTER FILM CAPACITOR	‖
○	POLYSTYRENE FILM CAPACITOR	‖
Ⓜ	MICA CAPACITOR	‖
Ⓟ	POLYPROPYLENE FILM CAPACITOR	‖
◉	SEMICONDUCTIVE CERAMIC CAPACITOR	‖

RESISTOR

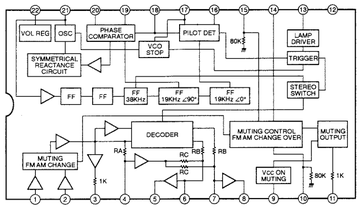
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
⊠	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
⚠	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
⊠	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

NOTICE (model)
(J)····· JAPANESE
(U)····· U.S.A
(C)····· CANADIAN
(R)····· GENERAL
(A)····· AUSTRALIAN
(B)····· BRITISH
(G)····· EUROPEAN
(T)····· CHINA
(L)····· SINGAPORE

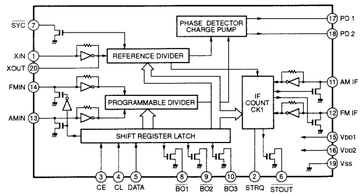
IC1 : LA1266
AM/FM IF



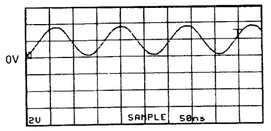
IC3 : LA3401
MPX



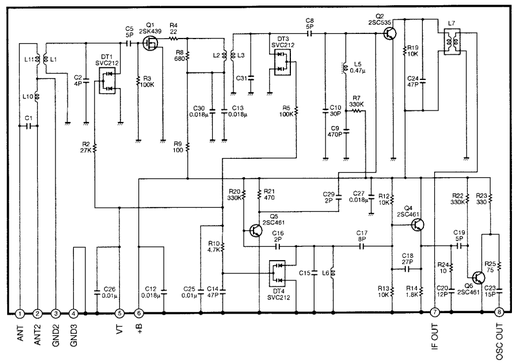
IC2 : LM7000N
PLL Controller



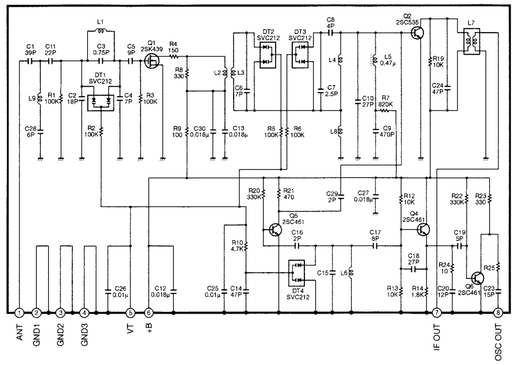
Point ① (Pin1 of IC2)
V : 2V/div H : 50 nsec/div
DC range 1 : 1 probe

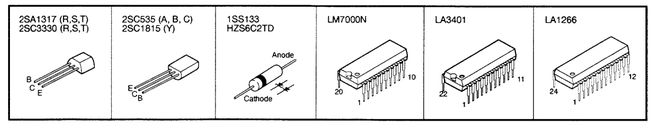


● **PK1 : ENV-17298G1 (VR242200) U, C, R, A, B models**



● **PK1 : ENV-17297G1 (VQ987600) G model**





** All voltage are measured with a 10MΩ/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 (FUNCTION)

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
☑	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

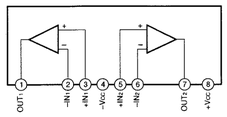
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
⊛	CERAMIC TUBULAR CAPACITOR
◎	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
Ⓘ	MICA CAPACITOR
⊕	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR

NOTICE (model)
(J)..... JAPANESE
(U)..... U. S. A
(C)..... CANADIAN
(R)..... GENERAL
(A)..... AUSTRALIAN
(B)..... BRITISH
(G)..... EUROPEAN
(T)..... CHINA
(L)..... SINGAPORE

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
⚠1	D303-304	1SS104 1SS133 1SS176

IC301 ~ 303 : NJM2068L-D
Dual OP-Amp

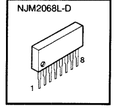


2SD1915F (S, T)
DTA144ES
DTC114ES

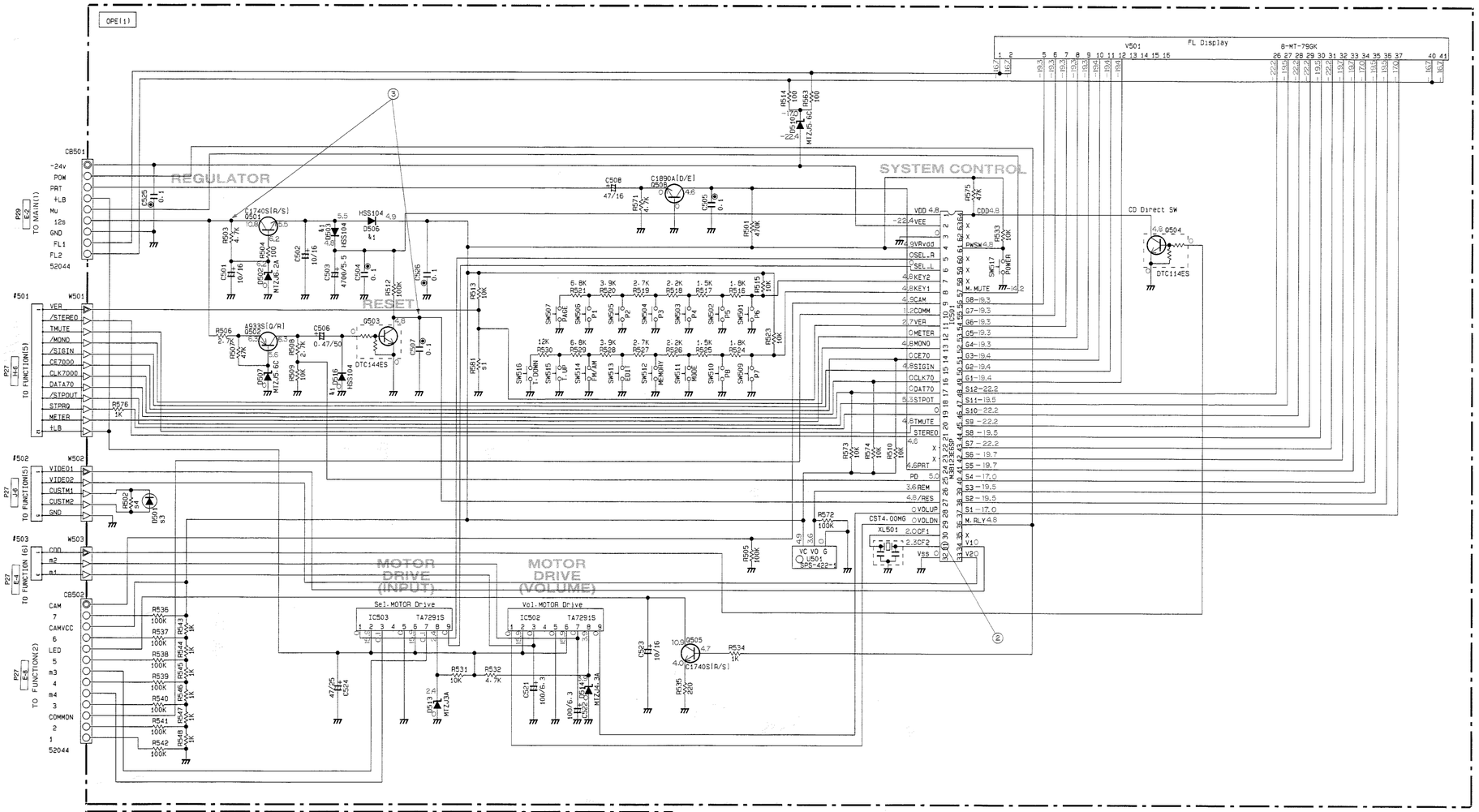
2SD2375 (Q,P)

1SS133
MTZJ12.0C

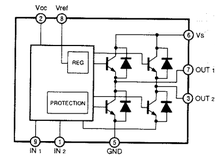
NJM2068L-D



■ SCHEMATIC DIAGRAM (OPERATION)

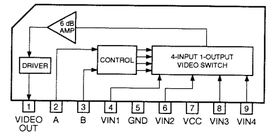


IC502 ~ 503 : TA7291S
Motor Driver

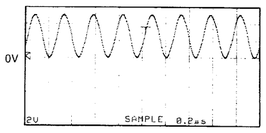


INPUT IN1	INPUT IN2	INPUT IN1	INPUT IN2	MODE
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

IC504 : LA7956
Video Switch



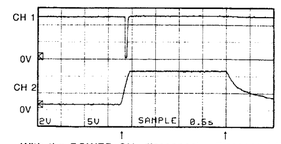
Point ② (Pin31 of IC501)
V : 2V/div H : 0.2 µsec/div
DC range 1 : 1 probe



Point ③

CH1 : Collector of Q503 V : 2V/div (CH1)
CH2 : Collector of Q501 V : 5V/div (CH2)

H : 0.5 sec/div DC range 1 : 1 probe
(This waveform is not available by pushing the power switch ON and OFF.)



With the POWER ON, disconnect the A/C power cord. Reconnect the A/C power cord and the above waveforms will start.

Disconnect the power cord from the AC outlet.

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
&1	D503.506.516	HSS104 1SS133 1SS176

CIRCUIT CHANGES BY MARKET.

S		UC	R	A
1	R581	8.2K	12K	3.3K
2	JK501-502	VJ72680	X	VJ72680
3	D501	SIR-481ST3F VP4B910	X	SIR-481ST3F VP4B910
4	R502	10K	X	10K

X : NOT USED

CAPACITOR

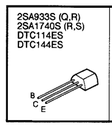
REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⇵
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	⇈
◉	CERAMIC TUBULAR CAPACITOR	
◎	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	⇊
ⓘ	MICA CAPACITOR	
ⓟ	POLYPROPYLENE FILM CAPACITOR	
◉	SEMICONDUCTIVE CERAMIC CAPACITOR	

RESISTOR

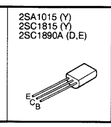
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
⊘	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
⚠	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
▩	CHIP RESISTOR

NOTICE (model)
(J)····· JAPANESE
(U)····· U.S.A
(C)····· CANADIAN
(R)····· GENERAL
(A)····· AUSTRALIAN
(B)····· BRITISH
(G)····· EUROPEAN
(T)····· CHINA
(L)····· SINGAPORE

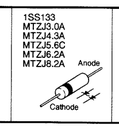
2SA933S (Q,R)
2SA1740S (R,S)
DTC114ES
DTC144ES



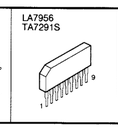
2SA1015 (Y)
2SC1815 (Y)
2SC1890A (D,E)



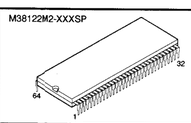
1SS133
MTZJ3.0A
MTZJ4.3A
MTZJ5.6C
MTZJ6.2A
MTZJ8.2A



LA7956
TA7291S



M38122M2-XXXSP



* *All voltage are measured with a 10MΩ/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)

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	#
⊗	TANTALUM CAPACITOR	#
NO MARK	CERAMIC CAPACITOR	‡
◉	CERAMIC TUBULAR CAPACITOR	‡
◎	POLYESTER FILM CAPACITOR	‡
○	POLYSTYRENE FILM CAPACITOR	‡
Ⓘ	MICA CAPACITOR	‡
⊛	POLYPROPYLENE FILM CAPACITOR	‡
●	SEMICONDUCTIVE CERAMIC CAPACITOR	‡

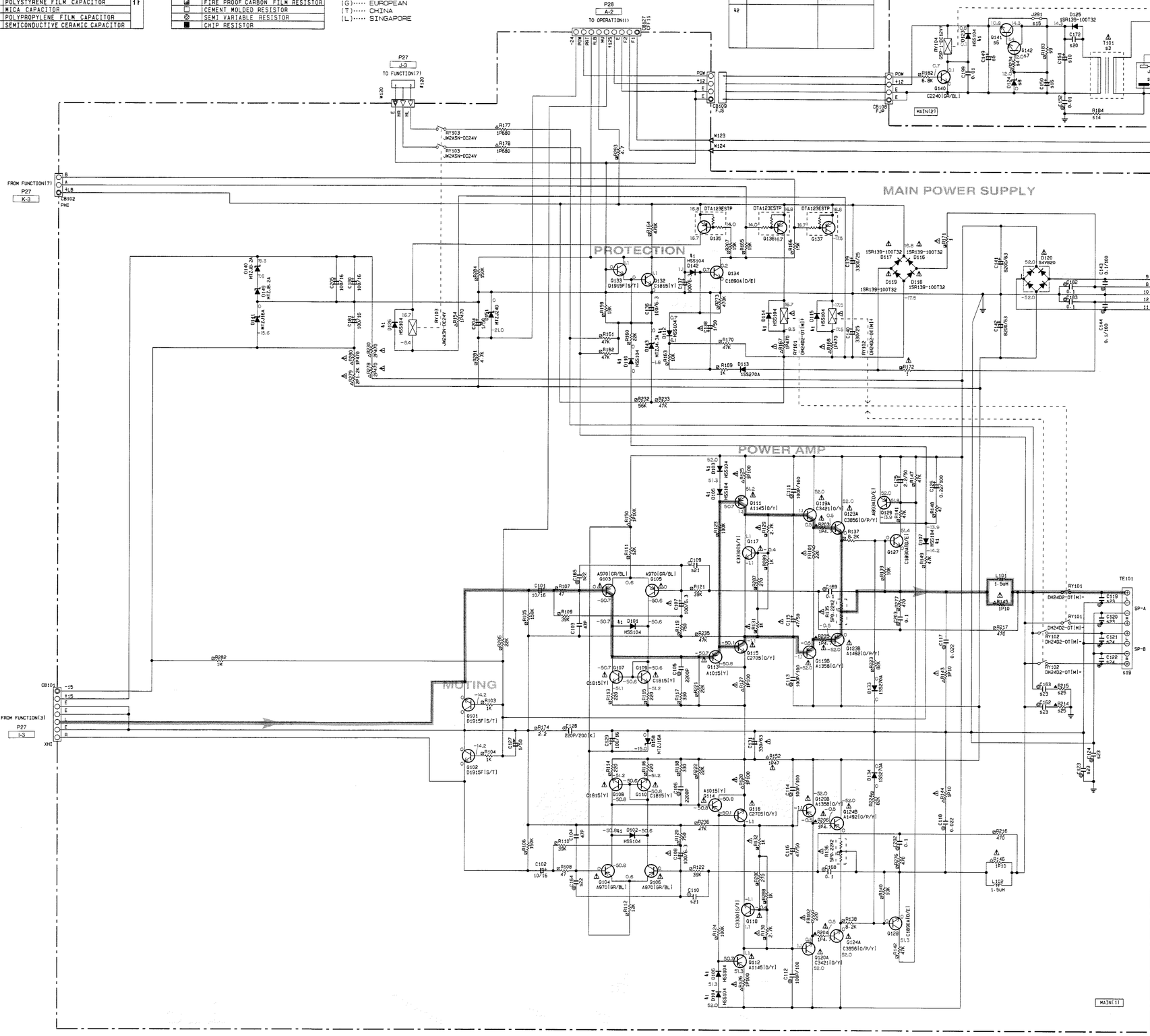
RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
☑	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
▣	METAL PLATE RESISTOR
□	FIRE PROOF CARBON FILM RESISTOR
⊘	CEMENT MOLDED RESISTOR
▽	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

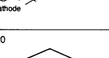
NOTICE (model)
(J)····· JAPANESE
(U)····· U. S. A
(C)····· CANADIAN
(E)····· GENERAL
(A)····· AUSTRALIAN
(B)····· BRITISH
(G)····· EUROPEAN
(T)····· CHINA
(L)····· SINGAPORE

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
41	D101-107.110-112.114 115.123.126.142	HSS104 1SS133 1SS176
42		



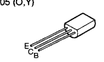
1SS133 1SS270A 1SR139-100	MTZJ4.3A MTZJ8.2A MTZJ12.0C MTZJ16.0A MTZJ24.0D



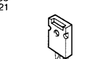
S4VB20

2SC3330 (R,S,T)
2SD1915F (S,T)
DTA123ES

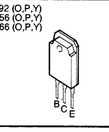
2SA893A (D,E)
2SA970 (GR,BL)
2SA1015 (Y)
2SA1145 (O,Y)
2SC1815 (Y)
2SC1890A (D,E)
2SC2240 (GR,BL)
2SC2705 (O,Y)



2SA1358
2SC3421



2SA1492 (O,P,Y)
2SC3856 (O,P,Y)
2SC4466 (O,P,Y)



CIRCUIT CHANGES BY MARKET.

S		U-C	R	A
1	F101	6A125V	6A125V	T5.0A250V
2	F103	X	T5.0A250V	X
3	T101	XC083	X5569 XC082	XQ486 XC084
4	R234	X	47	X
5	C148	X	100/16	X
6	Q141	X	C4466[O/P/Y]	X
7	Q142	X	C1815[Y]	X
8	D124	X	MTZJ12C	X
9	R183	X	18K	X
10	C151	330/25	330/63	330/25
11	JK103	VK48060	VK48060	X
12	SW104	X	VA95180	X
13	CB125-126	X	VP20650	X
14	R184	1/2P2.2M	X	X
15	J291	○	X	○
16	C150	X	10/16	X
17	W115-116	X	X	○
18	W108-110 W113-114	X	○	X
19	TE101	VC31370	VC31370	VK50620
20	C172	1000P	1000P/100	1000P
21	C109-110	22P/500	15P/500	22P/500
22	C154-155			100P
23	C119-120 123-124.152-163			0.01
24	C121-122			0.01/25
25	R214-215			4.7

X : NOT USED
O : USED

** All voltage are measured with a 10MΩ/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.

P.C.B. TUNER

Schm Ref.	PART NO.	Description		
	VR341800	P.C.B.	TUNER(UC)	
	VR341900	P.C.B.	TUNER(R)	
	VR342100	P.C.B.	TUNER(A)	
CB1	VR428700	CN.BS.PIN	2P	
CB2	VR428700	CN.BS.PIN	2P	
CB4	VQ961800	CN.BS.PIN	15P	
C1	UJ638330	C.EL	330uF	16V
C2	VG280100	C.CE.TUBLR	0.022uF	25V
C3	VJ599000	C.CE.TUBLR	0.047uF	16V
C4	VJ836900	C.EL	10uF	16V
C5	VF467300	C.CE.TUBLR	0.01uF	16V
C6	VF964800	C.EL	100uF	16V
C7	VJ839100	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	VJ836900	C.EL	10uF	16V
C13	VJ836900	C.EL	10uF	16V
C14	VF467000	C.CE.TUBLR	1000pF	50V
C15	VF467000	C.CE.TUBLR	1000pF	50V
C16	VF466700	C.CE.TUBLR	47pF	50V
C17	VF964800	C.EL	100uF	16V
C18	UA655100	C.MYLAR	0.1uF	50V
C19	VA761200	C.CE	33pF	50V
C20	VJ836900	C.EL	10uF	16V
C21	VF466800	C.CE.TUBLR	100pF	50V(UCR)
C22	VJ839200	C.EL	2.2uF	50V
C23	VF467300	C.CE.TUBLR	0.01uF	16V
C24	UM416470	C.EL	4.7uF	50V
C25	UM216330	C.EL	3.3uF	50V
C26	VJ836900	C.EL	10uF	16V
C27	VF467300	C.CE.TUBLR	0.01uF	16V
C28	VA761200	C.CE	33pF	50V
C29	VJ839100	C.EL	1uF	50V
C30	VJ839100	C.EL	1uF	50V
C31	VJ836900	C.EL	10uF	16V
C32	VJ839000	C.EL	0.47uF	50V
C33	VJ839100	C.EL	1uF	50V
C34	UA654470	C.MYLAR	0.047uF	50V
C35	VD916400	C.EL	2.2uF	50V
C36	UA652390	C.MYLAR	390pF	50V(A)
C36	UA652680	C.MYLAR	680pF	50V(UCR)
C37	UA652390	C.MYLAR	390pF	50V(A)
C37	UA652680	C.MYLAR	680pF	50V(UCR)
C38	VF466900	C.CE.TUBLR	470pF	50V
C39	VJ836900	C.EL	10uF	16V
C40	UM216330	C.EL	3.3uF	50V
C41	UA653390	C.MYLAR	3900pF	50V
C42	VJ836900	C.EL	10uF	16V
C43	UA653390	C.MYLAR	3900pF	50V
C44	UM216330	C.EL	3.3uF	50V
C49	VJ599000	C.CE.TUBLR	0.047uF	16V

* New Parts

Schm Ref.	PART NO.	Description	
C68	VJ836900	C.EL	10uF 16V
C69	VJ836900	C.EL	10uF 16V
C71	VA777400	C.CE	120pF 50V(A)
D1	VD631600	DIODE	1SS133,176,HSS104
D2	VD631600	DIODE	1SS133,176,HSS104
D3	VM974500	DIODE.ZENR	HZS6C2TD 6.0V
Fi1	GG000560	FLTR.CE	SFE10.7MS3GHY-A
Fi2	GG000560	FLTR.CE	SFE10.7MS3GHY-A
Fi3	VC219000	FLTR.CE	SFZ450JL3
IC1	XB760A00	IC	LA1266
IC2	XB818A00	IC	LM7000N
IC3	iG158100	IC	LA3401
L1	Vi546100	COIL	220uH
L2	Vi546100	COIL	220uH
L3	Vi546100	COIL	220uH
PK1	VQ987600	TUNER.PK	ENV-17297G1(A)
PK1	VR242200	TUNER.PK	ENV-17298G1(UCR)
PK2	Vi027300	COILPAK.AM	
Q1	iC053540	TR	2SC535 A,B,C
Q2	VC218900	TR	2SC3330 R,S,T
Q3	VC218900	TR	2SC3330 R,S,T
Q4	iC053540	TR	2SC535 A,B,C
Q5	VC218700	TR	2SA1317 R,S,T
Q6	VC218900	TR	2SC3330 R,S,T
Q7	iC1815C0	TR	2SC1815 Y
SW1	VF541200	SW.SLIDE	SSSF11(R)
T1	VC218600	COIL.DT.FM	10.7MHz
T2	GE100470	COIL.IF.AM	450KHz
T3	VQ365700	FLTR.LP	FB-7SG(A)
T4	VQ138200	FLTR.LC	19KHz
T5	VQ138200	FLTR.LC	19KHz
TE1	LA005800	TERM.ANT	YKD31-0215
TP1	VT969000	PIN.TEST	IRS-2049
TP2	VT969000	PIN.TEST	IRS-2049
VR1	VJ694000	VR.TRIM	B47KΩ
VR2	VJ694000	VR.TRIM	B47KΩ
XL1	QU003800	RSNR.CRYS	7.2MHz
XL2	GG000750	RSNR.CE	18.95KHz
	BB071360	SCR.TERM	8.3x13
	VR282500	PLATE	ANT.

* New Parts

P.C.B. MAIN

Schm Ref.	PART NO.	Description		
	VS981400	P.C.B.	MAIN(UC)	
	VS981500	P.C.B.	MAIN(R)	
	VS981600	P.C.B.	MAIN(A)	
CB101	VL845100	CN.BS.PIN	7P	
CB102	VD004600	CN.BS.PIN	3P	
CB108	VS839400	CN.BS.PIN	4P	
CB109	VS839500	CN	4P	
CB110	VG879900	CN.BS.PIN	2P	
CB121	VP206500	HOLDER.FUS	EYF-52BC	
CB122	VP206500	HOLDER.FUS	EYF-52BC	
CB125	VP206500	HOLDER.FUS	EYF-52BC(R)	
CB126	VP206500	HOLDER.FUS	EYF-52BC(R)	
CB127	VR358000	CN.BS.PIN	9P	
C101	VQ082700	C.EL	10uF	16V
C102	VQ082700	C.EL	10uF	16V
C103	FG211470	C.CE	47pF	50V
C104	FG211470	C.CE	47pF	50V
C105	Vi715900	C.MYLAR	2200pF	50V
C106	Vi715900	C.MYLAR	2200pF	50V
⚠ C107	VF760000	C.EL	100uF	10V
⚠ C108	VF760000	C.EL	100uF	10V
C109	FU351220	C.MICA	22pF	500V(UCR)
C109	FU451150	C.MICA	15pF	500V(A)
C110	FU351220	C.MICA	22pF	500V(UCR)
C110	FU451150	C.MICA	15pF	500V(A)
C111	VR325000	C.MYLAR	100pF	100V
C112	VR325000	C.MYLAR	100pF	100V
C113	VR325000	C.MYLAR	100pF	100V
C114	VR325000	C.MYLAR	100pF	100V
⚠ C115	VG291200	C.EL	47uF	50V
C116	VG291200	C.EL	47uF	50V
C117	UA654220	C.MYLAR	0.022uF	50V
C118	UA654220	C.MYLAR	0.022uF	50V
C119	UA654100	C.MYLAR	0.01uF	50V(A)
C120	UA654100	C.MYLAR	0.01uF	50V(A)
C121	VJ311800	C.CE.TUBLR	0.01uF	25V(A)
C122	VJ311800	C.CE.TUBLR	0.01uF	25V(A)
C123	UA654100	C.MYLAR	0.01uF	50V(A)
C124	UA654100	C.MYLAR	0.01uF	50V(A)
C125	UR866220	C.EL	2.2uF	50V
C126	UJ895220	C.EL	0.22uF	100V
C127	VN283200	C.EL	1uF	50V
C128	VK534000	C.PP	220pF	200V
C129	VG288900	C.EL	100uF	25V
⚠ C131	VK699400	C.EL	330uF	63V
C136	VK679700	C.EL	100uF	6.3V
C137	VQ568900	C.EL	100uF	6.3V
⚠ C138	VJ839100	C.EL	1uF	50V
C139	VG289400	C.EL	3300uF	25V
C140	VG289100	C.EL	330uF	25V
C141	VK574500	C.EL	8200uF	63V
C142	VK574500	C.EL	8200uF	63V
C143	VR325400	C.MYLAR	0.1uF	100V

*New Parts

Schm Ref.	PART NO.	Description		
C144	VR325400	C.MYLAR	0.1uF	100V
C149	VG288900	C.EL	100uF	25V(R)
C150	VG290900	C.EL	10uF	50V(R)
C151	VG289100	C.EL	330uF	25V(UCA)
C151	VK699400	C.EL	330uF	63V(R)
C152	UA654100	C.MYLAR	0.01uF	50V
C157	VS741700	C.CE.SAFTY	0.01uF	275V
C162	UA654100	C.MYLAR	0.01uF	50V(A)
C163	UA654100	C.MYLAR	0.01uF	50V(A)
C164	UA652100	C.MYLAR	100pF	50V(A)
C165	UA652100	C.MYLAR	100pF	50V(A)
C168	VE326000	C.MYLAR.ML	0.1uF	50V
C169	VE326000	C.MYLAR.ML	0.1uF	50V
C172	UA653100	C.MYLAR	1000pF	50V(UCA)
C172	VU019500	C.MYLAR	1000pF	100V(R)
C180	VF964800	C.EL	100uF	16V
C181	VF964800	C.EL	100uF	16V
C182	VE326000	C.MYLAR.ML	0.1uF	50V
C183	VE326000	C.MYLAR.ML	0.1uF	50V
C199	FG214100	C.CE	0.01uF	50V
C202	VE326000	C.MYLAR.ML	0.1uF	50V
C203	VE326000	C.MYLAR.ML	0.1uF	50V
C204	VJ839100	C.EL	1uF	50V
C205	VF964800	C.EL	100uF	16V
D101	VD631600	DIODE	1SS133,176,HSS104	
D102	VD631600	DIODE	1SS133,176,HSS104	
D103	VD631600	DIODE	1SS133,176,HSS104	
D104	VD631600	DIODE	1SS133,176,HSS104	
D105	VD631600	DIODE	1SS133,176,HSS104	
D106	VD631600	DIODE	1SS133,176,HSS104	
D107	VD631600	DIODE	1SS133,176,HSS104	
D110	VD631600	DIODE	1SS133,176,HSS104	
D112	VD631600	DIODE	1SS133,176,HSS104	
D113	VN008700	DIODE	1SS270A	
D114	VD631600	DIODE	1SS133,176,HSS104	
D115	VD631600	DIODE	1SS133,176,HSS104	
⚠ D116	VH770800	DIODE	1SR139-100	
⚠ D117	VH770800	DIODE	1SR139-100	
⚠ D118	VH770800	DIODE	1SR139-100	
⚠ D119	VH770800	DIODE	1SR139-100	
⚠ D120	iH001090	DIODE.BRG	S4VB20	2.6A 200V
D123	VD631600	DIODE	1SS133,176,HSS104	
D124	VG440300	DIODE.ZENR	MTZJ12C	12V(R)
D125	VH770800	DIODE	1SR139-100	
D126	VD631600	DIODE	1SS133,176,HSS104	
D133	VN008700	DIODE	1SS270A	
D134	VN008700	DIODE	1SS270A	
D140	VG438800	DIODE.ZENR	MTZJ8.2A	8.2V
D141	VG441000	DIODE.ZENR	MTZJ16A	16V
D142	VD631600	DIODE	1SS133,176,HSS104	
D143	VG436700	DIODE.ZENR	MTZJ4.3A	4.3V
D149	VG438800	DIODE.ZENR	MTZJ8.2A	8.2V
D151	VG442700	DIODE.ZENR	MTZJ24D	24V

*New Parts

P.C.B. MAIN

	Schm Ref.	PART NO.	Description	
	D158	VG441000	DIODE. ZENR	MTZJ16A 16V
⚠	F101	KB001660	FUSE	T1.60A 250V(A)
⚠	F101	VS823100	FUSE	6.0A 125V(UCR)
⚠	F103	KB001660	FUSE	T1.60A 250V(R)
⚠	FR101	VK188200	R. FUS	220Ω 1/4W
⚠	FR102	VK188200	R. FUS	220Ω 1/4W
	JK103	VK480600	OUTLET. AC	(UCR)
	L101	VU038100	COIL	1.5uH
	L102	VU038100	COIL	1.5uH
	Q101	VK432900	TR	2SD1915F S,T
	Q102	VK432900	TR	2SD1915F S,T
⚠	Q103	iA097000	TR	2SA970 GR,BL
⚠	Q104	iA097000	TR	2SA970 GR,BL
⚠	Q105	iA097000	TR	2SA970 GR,BL
⚠	Q106	iA097000	TR	2SA970 GR,BL
⚠	Q107	iC1815C0	TR	2SC1815 Y
⚠	Q108	iC1815C0	TR	2SC1815 Y
⚠	Q109	iC1815C0	TR	2SC1815 Y
⚠	Q110	iC1815C0	TR	2SC1815 Y
⚠	Q111	VE198700	TR	2SA1145 O,Y
⚠	Q112	VE198700	TR	2SA1145 O,Y
⚠	Q113	iA101521	TR	2SA1015 Y
⚠	Q114	iA101521	TR	2SA1015 Y
⚠	Q115	VE198800	TR	2SC2705 O,Y
⚠	Q116	VE198800	TR	2SC2705 O,Y
⚠	Q117	VC218900	TR	2SC3330 R,S,T
	Q118	VC218900	TR	2SC3330 R,S,T
⚠	Q119A	iX603580	TR	2SA1358
⚠	Q119B	iX603590	TR	2SC3421
⚠	Q120A	iX603580	TR	2SA1358
⚠	Q120B	iX603590	TR	2SC3421
⚠#	Q123A	iX606460	TR	2SA1492 O,P,Y
⚠#	Q123B	iX606470	TR	2SC3856 O,P,Y
⚠#	Q124A	iX606460	TR	2SA1492 O,P,Y
⚠#	Q124B	iX606470	TR	2SC3856 O,P,Y
	Q127	VP883100	TR	2SC1890A D,E
	Q128	VP883100	TR	2SC1890A D,E
	Q129	VP883000	TR	2SA893A D,E
	Q132	iC1815C0	TR	2SC1815 Y
	Q133	VK432900	TR	2SD1915F S,T
	Q134	VP883100	TR	2SC1890A D,E
	Q135	VF325300	TR. DGT	DTA123ESTP
	Q136	VF325300	TR. DGT	DTA123ESTP
	Q137	VF325300	TR. DGT	DTA123ESTP
	Q140	iC224030	TR	2SC2240 GR,BL
	Q141	VP768300	TR	2SC4466 O,P,Y(R)
	Q142	iC1815C0	TR	2SC1815 Y(R)
⚠	R125	HL315100	R. MTL. OXD	100Ω 1W
⚠	R126	HL315100	R. MTL. OXD	100Ω 1W
⚠	R127	HL315100	R. MTL. OXD	100Ω 1W
⚠	R128	HL315100	R. MTL. OXD	100Ω 1W
⚠	R129	HV456270	R. CAR. FP	2.7KΩ 1/4W
⚠	R130	HV456270	R. CAR. FP	2.7KΩ 1/4W

* New Parts

	Schm Ref.	PART NO.	Description	
⚠	R131	HV456100	R. CAR. FP	1KΩ 1/4W
⚠	R132	HV456100	R. CAR. FP	1KΩ 1/4W
⚠	R135	HZ003780	R. MTL. PLAT	0.22Ω+0.22 5W
⚠	R136	HZ003780	R. MTL. PLAT	0.22Ω+0.22 5W
⚠	R143	HL314100	R. MTL. OXD	10Ω 1W
⚠	R144	HL314100	R. MTL. OXD	10Ω 1W
⚠	R145	HL314100	R. MTL. OXD	10Ω 1W
⚠	R146	HL314100	R. MTL. OXD	10Ω 1W
	R150	VP941800	R. MTL. OXD	10KΩ 1W
⚠	R152	HL314470	R. MTL. OXD	47Ω 1W
	R154	HL315470	R. MTL. OXD	470Ω 1W
⚠	R167	HL315470	R. MTL. OXD	470Ω 1W
⚠	R168	HL315470	R. MTL. OXD	470Ω 1W
	R171	HV453100	R. CAR. FP	1Ω 1/4W
⚠	R172	HV453100	R. CAR. FP	1Ω 1/4W
	R177	HL315680	R. MTL. OXD	680Ω 1W
	R178	HL315680	R. MTL. OXD	680Ω 1W
⚠	R203	VP939700	R. MTL. FLM	4.7Ω 1W
⚠	R204	VP939700	R. MTL. FLM	4.7Ω 1W
⚠	R205	VP939700	R. MTL. FLM	4.7Ω 1W
⚠	R206	VP939700	R. MTL. FLM	4.7Ω 1W
	R214	VP939700	R. MTL. FLM	4.7Ω 1W(A)
	R215	VP939700	R. MTL. FLM	4.7Ω 1W(A)
⚠	R230	HL325470	R. MTL. OXD	470Ω 2W
⚠	R278	HL325470	R. MTL. OXD	470Ω 2W
⚠	R279	HL326120	R. MTL. OXD	1.2KΩ 2W
⚠	R280	HL315470	R. MTL. OXD	470Ω 1W
	R283	HV453470	R. CAR. FP	4.7Ω 1/4W
	R286	HV455270	R. CAR. FP	270Ω 1/4W
	R287	HV455270	R. CAR. FP	270Ω 1/4W
	R288	HV456100	R. CAR. FP	1KΩ 1/4W
	R289	HV456100	R. CAR. FP	1KΩ 1/4W
⚠	RY101	VK438300	RELAY	DH24D2-0T/M2
⚠	RY102	VK438300	RELAY	DH24D2-0T/M2
	RY103	VT561500	RELAY	DC JW2ASN-DC24V
	RY104	VH230800	RELAY	G5P-1-DC12V
⚠	SW104	VA961800	VOLT. SELCT	ESE-37247-F(R)
⚠	T101	XC083A00	TRANS. PWR	(UC)
⚠	T101	XQ486B00	TRANS. PWR	(A)
⚠	T101	XS589A00	TRANS. PWR	(R)
	TE101	VC313700	TERM. SP	8P(UCR)
	TE101	VK506200	TERM. SP	8P(A)
		VJ828000	PIN	IMSA-6024-03E
		BB071360	SCR. TERM	8.3x13
		BB070700	GND. MTL	

* New Parts

P.C.B. FUNCTION

	Schm Ref.	PART NO.	Description		
*		VZ853000	P.C.B.	FUNCTION	
	CB301	VQ961400	CN.BS.PIN	11P	
	CB302	VQ963200	CN.BS.PIN	11P	
	CB303	VK026500	CN.BS.PIN	6P	
	CB304	Vi878400	CN.BS.PIN	6P	
	CB305	Vi878500	CN.BS.PIN	7P	
	CB306	VK025100	CN.BS.PIN	7P	
	CB307	VQ961000	CN.BS.PIN	7P	
	CB308	VQ962800	CN.BS.PIN	7P	
	CB309	VB858200	CN.BS.PIN	3P	
	CB310	VQ044600	CN.BS.PIN	13P	
	CB311	VD004600	CN.BS.PIN	3P	
	CB315	VB390800	CN.BS.PIN	12P	
	CB316	VD004800	CN.BS.PIN	5P	
	CB317	VQ963600	CN.BS.PIN	15P	
	CB318	VQ962700	CN.BS.PIN	6P	
	C303	VQ462600	C.MYLAR	220pF	50V
	C304	VQ462600	C.MYLAR	220pF	50V
	C305	VG286900	C.EL	220uF	10V
	C306	VG286900	C.EL	220uF	10V
	C307	UA654330	C.MYLAR	0.033uF	50V
	C308	UA654330	C.MYLAR	0.033uF	50V
	C309	UA653910	C.MYLAR	9100pF	50V
	C310	UA653910	C.MYLAR	9100pF	50V
	C311	VG290900	C.EL	10uF	50V
	C312	VG290900	C.EL	10uF	50V
	C313	Vi715900	C.MYLAR	2200pF	50V
	C314	Vi715900	C.MYLAR	2200pF	50V
	C315	VG288900	C.EL	100uF	25V
	C316	VG288900	C.EL	100uF	25V
	C317	UA652100	C.MYLAR	100pF	50V
	C318	UA652100	C.MYLAR	100pF	50V
	C319	VF466800	C.CE.TUBLR	100pF	50V
	C320	VF466800	C.CE.TUBLR	100pF	50V
	C321	UA652100	C.MYLAR	100pF	50V
	C322	UA652100	C.MYLAR	100pF	50V
	C323	VF466800	C.CE.TUBLR	100pF	50V
	C324	VF466800	C.CE.TUBLR	100pF	50V
	C325	VQ645600	C.MYLAR	100pF	50V
	C326	VQ645600	C.MYLAR	100pF	50V
	C327	VE021900	C.EL	4.7uF	100V
	C328	VE021900	C.EL	4.7uF	100V
	C329	VQ082700	C.EL	10uF	16V
	C330	VQ082700	C.EL	10uF	16V
	C331	Vi715900	C.MYLAR	2200pF	50V
	C332	Vi715900	C.MYLAR	2200pF	50V
	C333	VG287800	C.EL	330uF	16V
	C334	VG287800	C.EL	330uF	16V
	C335	VG287800	C.EL	330uF	16V
	C336	VG287800	C.EL	330uF	16V
	C337	FG211470	C.CE	47pF	50V
	C338	FG211470	C.CE	47pF	50V
	C339	VG290300	C.EL	0.47uF	50V

*New Parts

Schm Ref.	PART NO.	Description		
C340	VG290300	C.EL	0.47uF	50V
C341	Vi377400	C.EL	4.7uF	63V
C342	Vi377400	C.EL	4.7uF	63V
C343	VF466700	C.CE.TUBLR	47pF	50V
C344	VF466700	C.CE.TUBLR	47pF	50V
C345	VG290900	C.EL	10uF	50V
C346	VG290900	C.EL	10uF	50V
C347	Vi715900	C.MYLAR	2200pF	50V
C348	Vi715900	C.MYLAR	2200pF	50V
C349	UA655120	C.MYLAR	0.12uF	50V
C350	UA655120	C.MYLAR	0.12uF	50V
C351	UA655120	C.MYLAR	0.12uF	50V
C352	UA655120	C.MYLAR	0.12uF	50V
C353	UA654330	C.MYLAR	0.033uF	50V
C354	UA654330	C.MYLAR	0.033uF	50V
C355	UA654560	C.MYLAR	0.056uF	50V
C356	UA654560	C.MYLAR	0.056uF	50V
C357	VG278900	C.CE.TUBLR	680pF	50V
C358	VG278900	C.CE.TUBLR	680pF	50V
C361	VF466800	C.CE.TUBLR	100pF	50V
C362	VF466800	C.CE.TUBLR	100pF	50V
C363	VE326000	C.MYLAR.ML	0.1uF	50V
C364	VE326000	C.MYLAR.ML	0.1uF	50V
C366	Vi716700	C.MYLAR	0.01uF	50V
C367	UA654100	C.MYLAR	0.01uF	50V
C368	UA654100	C.MYLAR	0.01uF	50V
C382	VJ836900	C.EL	10uF	16V
C383	UJ638330	C.EL	330uF	16V
C384	VH053100	C.CE.TUBLR	0.1uF	50V
C385	VH053100	C.CE.TUBLR	0.1uF	50V
C386	VF466700	C.CE.TUBLR	47pF	50V
C387	VF466700	C.CE.TUBLR	47pF	50V
C388	VF466700	C.CE.TUBLR	47pF	50V
C389	VF466700	C.CE.TUBLR	47pF	50V
C390	VF466700	C.CE.TUBLR	47pF	50V
C391	UR848470	C.EL	470uF	25V
C392	FG214100	C.CE	0.01uF	50V
D301	VR711500	LED(or)	SLR-325DC	
D302	VR711500	LED(or)	SLR-325DC	
D303	VD631600	DIODE	1SS133,176,HSS104	
D304	VD631600	DIODE	1SS133,176,HSS104	
D418	VG440300	DIODE.ZENR	MTZJ12C	12V
IC301	XM356A00	IC	NJM2068LD	
IC302	XM356A00	IC	NJM2068LD	
IC303	XM356A00	IC	NJM2068LD	
JK301	VS899700	JACK.PHONE	JY-6317-02-030	
L301	VB056900	COIL	220uH	
L302	VB056900	COIL	220uH	
PJ301	VV377000	JACK.PIN	2P	
PJ302	VV377000	JACK.PIN	2P	
PJ303	VT029000	JACK.PIN	4P	
PJ304	VJ794600	JACK.PIN	6P	
Q301	VK432900	TR	2SD1915F S,T	

*New Parts

P.C.B. FUNCTION & OPERATION

Schm Ref.	PART NO.	Description		
Q302	VK432900	TR	2SD1915F S,T	
Q303	VG721700	TR.DGT	DTA144ES	
Q304	VD678700	TR.DGT	DTC114ES	
Q315	VS826900	TR	2SD2375 Q,P	
R319	HL315470	R.MTL.OXD	470Ω	1W
R320	HL315470	R.MTL.OXD	470Ω	1W
R353	HL315100	R.MTL.OXD	100Ω	1W
R354	HL315100	R.MTL.OXD	100Ω	1W
R361	HL315470	R.MTL.OXD	470Ω	1W
R362	HL315470	R.MTL.OXD	470Ω	1W
SW301	VT146000	SW.RT	SRBAA46	
SW302	VT021100	SW.RT	RS003-A046BHN20F13	
SW303	VP870800	SW.PUSH	SPUL12	
SW304	VP870800	SW.PUSH	SPUL12	
SW305	V2190100	SW.PUSH	SPUP22 2	
TE301	LA002110	TERM.WRAP	2P	
VR301	V2342500	VR.MTR	A100KΩ	
VR302	VP741800	VR	B20KΩ	
VR303	VP741900	VR	G25KΩ	
VR304	VP700700	VR	A100KΩ	
VR305	VP742000	VR	MN100KΩ	
	VJ828000	PIN	IMSA-6024-03E	
	BB071360	SCR.TERM	8.3x13	
	VR264300	PLATE.GND		
*	VZ928400	P.C.B.	OPERATION(UC)	
*	VZ928500	P.C.B.	OPERATION(R)	
*	VZ928600	P.C.B.	OPERATION(A)	
CB501	VQ044400	CN.BS.PIN	9P	
CB502	VQ044600	CN.BS.PIN	13P	
CB503	VQ960900	CN.BS.PIN	6P	
C501	VJ836900	C.EL	10uF	16V
C502	VJ836900	C.EL	10uF	16V
C503	VS672200	C.EL	4700uF	5.5V
C504	VH053100	C.CE.TUBLR	0.1uF	50V
C505	VH053100	C.CE.TUBLR	0.1uF	50V
C506	VJ839000	C.EL	0.47uF	50V
C507	VH053100	C.CE.TUBLR	0.1uF	50V
C508	VJ837200	C.EL	47uF	16V
C510	VJ836900	C.EL	10uF	16V
C511	UJ619100	C.EL	1000uF	6.3V
C512	VJ836900	C.EL	10uF	16V
C513	UJ619100	C.EL	1000uF	6.3V
C514	FG251220	C.CE	22pF	50V
* C515	UR828470	C.EL	470uF	10V
C516	VH053100	C.CE.TUBLR	0.1uF	50V
C520	VJ836900	C.EL	10uF	16V
C521	VF760000	C.EL	100uF	10V
C522	VF760000	C.EL	100uF	10V
C523	VJ836900	C.EL	10uF	16V
C524	UJ667470	C.EL	47uF	50V

*New Parts

Schm Ref.	PART NO.	Description		
C525	VH053100	C.CE.TUBLR	0.1uF	50V
C526	VH053100	C.CE.TUBLR	0.1uF	50V
C527	VF467000	C.CE.TUBLR	1000pF	50V(A)
C528	VF467000	C.CE.TUBLR	1000pF	50V(A)
D501	VP489100	LED	SIR-481ST3F(UCA)	
D502	VG437900	DIODE.ZENR	MTZJ6.2A	6.2V
D503	VD631600	DIODE	1SS133,176,HSS104	
D506	VD631600	DIODE	1SS133,176,HSS104	
D507	VG437800	DIODE.ZENR	MTZJ5.6C	5.6V
D510	VG437800	DIODE.ZENR	MTZJ5.6C	5.6V
D513	VG435800	DIODE.ZENR	MTZJ3.0A	3.0V
D514	VG436700	DIODE.ZENR	MTZJ4.3A	4.3V
D515	VG438800	DIODE.ZENR	MTZJ8.2A	8.2V
D516	VD631600	DIODE	1SS133,176,HSS104	
IC501	XU475A00	IC	M38122M2-172SP	
IC502	XF557A00	IC	TA7291S	
IC503	XF557A00	IC	TA7291S	
IC504	XH436A00	IC	LA7956	
JK501	VJ726800	JACK.MNI	(UCA)	
JK502	VJ726800	JACK.MNI	(UCA)	
PJ501	VM750500	JACK.PIN	4P	
Q501	iC174020	TR	2SC1740S R,S	
Q502	iA093320	TR	2SA933S Q,R	
Q503	VG722000	TR.DGT	DTC144ES	
Q504	VD678700	TR.DGT	DTC114ES	
Q505	iC174020	TR	2SC1740S R,S	
Q506	iA101521	TR	2SA1015 Y	
Q507	iC1815C0	TR	2SC1815 Y	
Q508	VP883100	TR	2SC1890A D,E	
SW501	VG392900	SW.TACT	SKHVAA	
SW502	VG392900	SW.TACT	SKHVAA	
SW503	VG392900	SW.TACT	SKHVAA	
SW504	VG392900	SW.TACT	SKHVAA	
SW505	VG392900	SW.TACT	SKHVAA	
SW506	VG392900	SW.TACT	SKHVAA	
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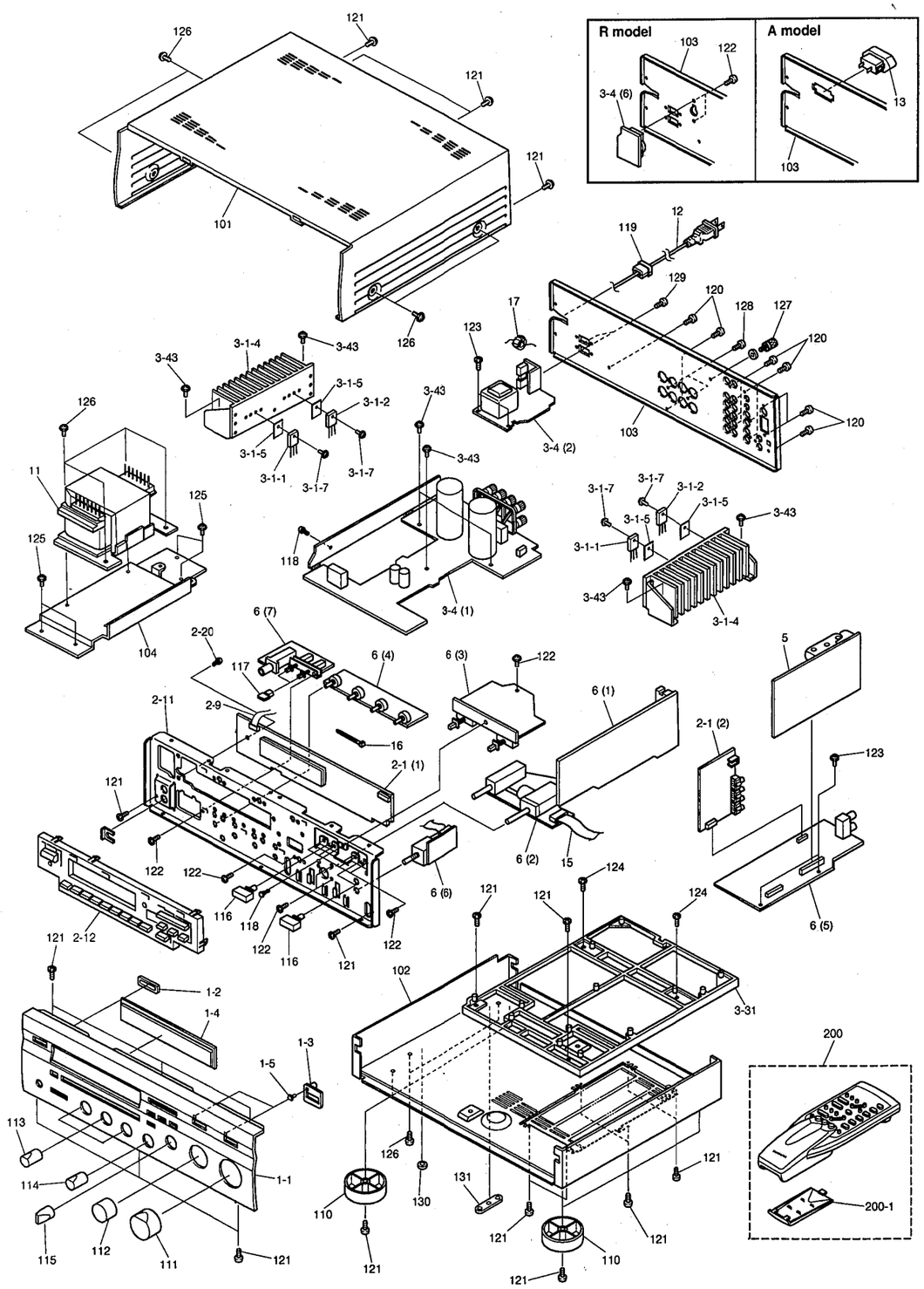
SW514	VG392900	SW.TACT	SKHVAA	
SW515	VG392900	SW.TACT	SKHVAA	
SW516	VG392900	SW.TACT	SKHVAA	
SW517	VG392900	SW.TACT	SKHVAA	
U501	VR860700	L.DTCT	SPS-422-1	
V501	VQ915100	FL.DSPLY	8-MT-79GK	
XL501	VE906000	RSNR.CE	4MHz	
	BB071360	SCR.TERM	8.3x13	
	VR519500	SHEET		
	VR380100	SPACER	FL-T6	

*New Parts

■ EXPLODED VIEW



■ MECHANICAL PARTS

	Ref. No.	PART NO.	Description		Remarks	Markets
*	1- 1	VZ529800	FRONT PANEL			
	1- 2	VQ793400	BUTTON GUIDE	2P		
	1- 3	VH816700	BUTTON GUIDE	10x25		
	1- 4	VR010400	WINDOW PANEL			
	1- 5	VH897700	LENS	2.2Lx2.2		
*	2- 1	VZ928400	P.C.B. ASS'Y	OPERATION		(UC)
*	2- 1	VZ928500	P.C.B. ASS'Y	OPERATION		(R)
*	2- 1	VZ928600	P.C.B. ASS'Y	OPERATION		(A)
	2- 9	VR417200	CONNECTOR, FLAT CABLE	9P 250mm		
	2-11	VS586400	SUB CHASSIS			
	2-12	VS586200	CASE, BUTTON			
	2-20	VQ368600	PUSH RIVET	P3555-B		
⚠#	3-1-1	iX606460	TRANSISTOR	2SA1492 O,P,Y	Q123A, 124A	
⚠#	3-1-1	iX606470	TRANSISTOR	2SC3856 O,P,Y	Q123B, 124B	
	3-1-4	VP493100	HEAT SINK ASS'Y			
	3-1-5	VK195900	SHEET	19x24		
	3-1-7	VK173200	SCREW, TRANSISTOR	3x15 SP FCM3		
	3- 4	VS981400	P.C.B. ASS'Y	MAIN		(UC)
	3- 4	VS981500	P.C.B. ASS'Y	MAIN		(R)
	3- 4	VS981600	P.C.B. ASS'Y	MAIN		(A)
	3-31	VS586500	CHASSIS			
	3-43	VB770200	PW HEAD P-TITE SCREW	3x10-8 FCM3		
	5	VR341800	P.C.B. ASS'Y	TUNER		(UC)
	5	VR341900	P.C.B. ASS'Y	TUNER		(R)
	5	VR342100	P.C.B. ASS'Y	TUNER		(A)
*	6	VZ853000	P.C.B. ASS'Y	FUNCTION		
⚠	11	XQ213A00	POWER TRANSFORMER			(U)
⚠	11	XQ214A00	POWER TRANSFORMER			(C)
⚠	11	XQ215A00	POWER TRANSFORMER			(R)
⚠	11	XQ216A00	POWER TRANSFORMER			(A)
⚠	12	V2296800	POWER CORD ASS'Y			(A)
⚠	12	VL238100	POWER CORD ASS'Y			(R)
⚠	12	VV437200	POWER CORD ASS'Y			(UC)
⚠	13	VT915100	AC OUTLET	2P		(A)
*	15	MF113180	FLEXIBLE FLAT CABLE	13P 180mm		
	16	VU590000	BINDING TIE	CBTD001B		
	17	VB933800	FERRITE CORE	BP53RB310190NOA		(UC)
	101	VS001200	TOP COVER			
	102	VS001400	CHASSIS			
*	103	VZ529400	REAR PANEL			(U)
*	103	VZ529500	REAR PANEL			(C)
*	103	VZ529600	REAR PANEL			(R)
*	103	VZ529700	REAR PANEL			(A)
	104	VS586600	FRAME, PCB			
	110	VS025000	LEG	D60xH21		
	111	VV148800	KNOB	D40		
	112	VS742200	KNOB	D32		
	113	VV311000	KNOB	D14		
*	114	VZ529900	KNOB	D14L		
	115	VS587200	KNOB, SEL	D18		
	116	VQ780000	BUTTON	10x25		
	117	VQ779000	BUTTON	3x14		
	118	VQ368600	PUSH RIVET	P3555-B		

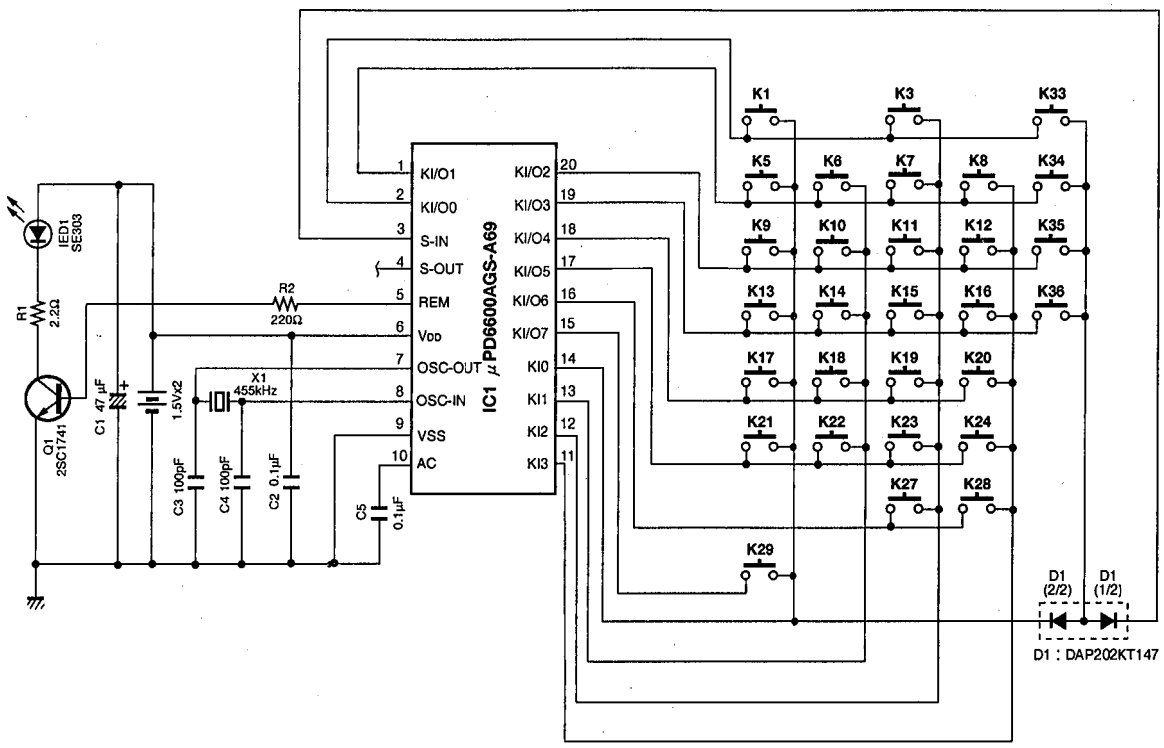
* New Parts

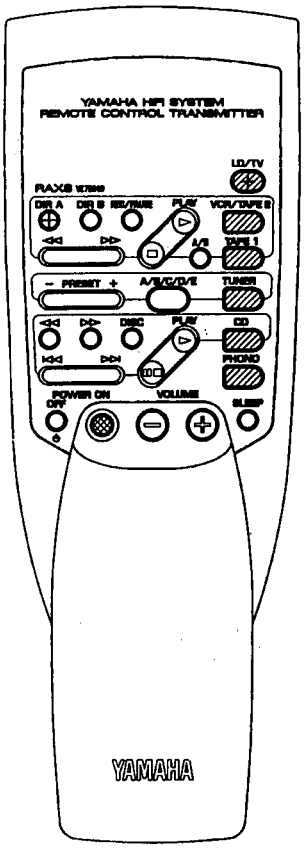
Ref. No.	PART NO.	Description		Remarks	Markets
119	VN158600	CORD STOPPER	No.2104		
120	VN413300	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2-BL		
121	Ei330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL		
122	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL		
123	EX602240	BW HEAD TAPPING SCREW	3x10		
124	EL300480	PW HEAD B-TITE SCREW	3x15-8 FCRM3-BL		
125	VU081700	PAN W.HEAD TAPPING SCREW	4x6-10 MFZN2-BL		
126	EK365090	PW HEAD S-TITE SCREW	4x8-10 FCRM3-BL		
127	AA627310	GROUND TERMINAL			
128	VY731200	BONDING HEAD TAPPING SCREW	3x10 MFNI33		
129	Ei030086	BIND HEAD B-TITE SCREW	3x8 ZMC2-Y		(UCR)
130	VU984400	RING	D14		
131	V2064200	DAMPER			
		ACCESSORIES			
* 200	VZ733400	REMOTE CONTROL TRANSMITTER	SBGH20031A RAX8		
200-1	CX679050	LID	74x34BLALPS		
	VQ147100	ANTENNA, FM	1P 1.4m		
	VR248500	ANTENNA, AM LOOP	1P 1.0m		
	VT948000	ANTENNA ADAPTER			
		BATTERY, MANGANESE	SUM-3, AA, R06		

* New Parts

REMOTE CONTROL TRANSMITTER

■ SCHEMATIC DIAGRAM

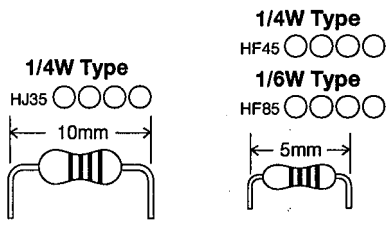




Key No.	Function	HEX	
		CUSTOM	DATA
1	INPUT PHONO	7A	14
3	SLEEP	7A	57
5	INPUT CD	7A	15
6	CD PLAY	7A	08
7	CD SKIP ▶▶|	7A	0A
8	CD SKIP |◀◀	7A	0B
9	CD DISC SKIP	7A	4F
10	CD PAUSE/STOP	7A	09
11	CD SEARCH ▶▶	7A	0C
12	CD SEARCH ◀◀	7A	0D
13	INPUT TUNER	7A	16
14	TUNER A/B/C/D/E	7A	12
15	TUNER PRESET +	7A	10
16	TUNER PRESET –	7A	11
17	INPUT TAPE 1	7A	18
18	TAPE DIR B	7A	40
19	TAPE DECK A/B	7A	06
20	TAPE DIR A	7A	07
21	INPUT TAPE 2	7A	19
22	TAPE ▶▶	7A	02
23	TAPE PLAY	7A	00
24	TAPE ◀◀	7A	01
27	TAPE STOP	7A	03
28	TAPE REC/PAUSE	7A	04
29	INPUT LD/TV	7A	17
33	VOLUME +	7A	1A
34	VOLUME –	7A	1B
35	POWER ON	7A	1D
36	POWER OFF	7A	1E

Parts List for Carbon Resistors

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ35 3100	HF85 3100	10 kΩ	HF45 7100	HF45 7100
1.8 Ω	HJ35 3180	*	11 kΩ	HF45 7110	HF45 7110
2.2 Ω	HJ35 3220	HF85 3220	12 kΩ	HJ35 7120	HF85 7120
3.3 Ω	HJ35 3330	HF85 3330	13 kΩ	HF45 7130	HF45 7130
4.7 Ω	HJ35 3470	HF85 3470	15 kΩ	HF45 7150	HF45 7150
5.6 Ω	HJ35 3560	HF85 3560	18 kΩ	HF45 7180	HF45 7180
10 Ω	HF45 4100	HF45 4100	22 kΩ	HF45 7220	HF45 7220
15 Ω	HJ35 4150	HF85 4150	24 kΩ	HF45 7240	HF45 7240
22 Ω	HF45 4220	HF45 4220	27 kΩ	HJ35 7270	HF85 7270
27 Ω	HJ35 4270	HF85 4270	30 kΩ	HF45 7300	HF45 7300
33 Ω	HF45 4330	HF45 4330	33 kΩ	HF45 7330	HF45 7330
39 Ω	HJ35 4470	HF85 4390	36 kΩ	HF45 7360	HF45 7360
47 Ω	HF45 4470	HF45 4470	39 kΩ	HF45 7390	HF45 7390
56 Ω	HF45 4560	HF45 4560	47 kΩ	HF45 7470	HF45 7470
68 Ω	HF45 4680	HF45 4680	51 kΩ	HF45 7510	HF45 7510
75 Ω	HF45 4750	HF45 4750	56 kΩ	HF45 7560	HF45 7560
82 Ω	HF45 4820	HF45 4820	62 kΩ	HF45 7620	HF45 7620
91 Ω	HF45 4910	HF45 4910	68 kΩ	HF45 7680	HF45 7680
100 Ω	HF45 5100	HF45 5100	82 kΩ	HF45 7820	HF45 7820
110 Ω	HJ35 5110	HF85 5110	91 kΩ	HF45 7910	HF45 7910
120 Ω	HF45 5120	HF45 5120	100 kΩ	HF45 8100	HF45 8100
150 Ω	HF45 5150	HF45 5150	110 kΩ	HF45 8110	HF45 8110
160 Ω	HJ35 5160	*	120 kΩ	HF45 8120	HF45 8120
180 Ω	HF45 5180	HF45 5180	150 kΩ	HF45 8150	HF45 8150
200 Ω	HF45 5200	HF45 5200	180 kΩ	HF45 8180	HF45 8180
220 Ω	HF45 5220	HF45 5220	220 kΩ	HJ35 8220	HF85 8220
270 Ω	HF45 5270	HF45 5270	270 kΩ	HF45 8270	HF45 8270
330 Ω	HF45 5330	HF45 5330	300 kΩ	HF45 8300	HF45 8300
390 Ω	HF45 5390	HF45 5390	330 kΩ	HF45 8330	HF45 8330
430 Ω	HF45 5430	HF45 5430	390 kΩ	HJ35 8390	HF85 8390
470 Ω	HF45 5470	HF45 5470	470 kΩ	HF45 8470	HF45 8470
510 Ω	HF45 5510	HF45 5510	560 kΩ	HJ35 8560	HF85 8560
560 Ω	HF45 5560	HF45 5560	680 kΩ	HJ35 8680	HF85 8680
680 Ω	HF45 5680	HF45 5680	820 kΩ	HJ35 8820	HF85 8820
820 Ω	HF45 5820	HF45 5820	1.0 MΩ	HF45 9100	HF45 9100
910 Ω	HF45 5910	HF45 5910	1.2 MΩ	HJ35 9120	*
1.0 kΩ	HF45 6100	HF45 6100	1.5 MΩ	HJ35 9150	HF85 9150
1.2 kΩ	HF45 6120	HF45 6120	1.8 MΩ	HJ35 9180	HF85 9180
1.5 kΩ	HF45 6150	HF45 6150	2.2 MΩ	HJ35 9220	HF85 9220
1.8 kΩ	HF45 6180	HF45 6180	3.3 MΩ	HJ35 9330	HF85 9330
2.0 kΩ	HJ35 6200	HF85 6200	3.9 MΩ	HJ35 9390	*
2.2 kΩ	HF45 6220	HF45 6220	4.7 MΩ	HJ35 9470	HF85 9470
2.4 kΩ	HJ35 6240	HF85 6240			
2.7 kΩ	HF45 6270	HF45 6270			
3.0 kΩ	HF45 6300	HF45 6300			
3.3 kΩ	HF45 6330	HF45 6330			
3.6 kΩ	HJ35 6360	HF85 6360			
3.9 kΩ	HF45 6390	HF45 6390			
4.7 kΩ	HF45 6470	HF45 6470			
5.1 kΩ	HF45 6510	HF45 6510			
5.6 kΩ	HF45 6560	HF45 6560			
6.8 kΩ	HF45 6680	HF45 6680			
8.2 kΩ	HF45 6820	HF45 6820			
9.1 kΩ	HF45 6910	HF45 6910			



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RX-596

YAMAHA