

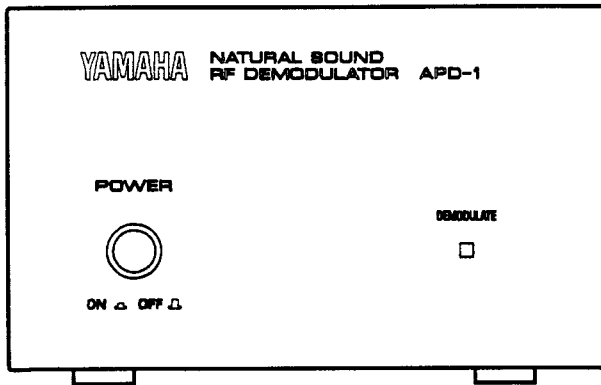
DOLBY DIGITAL RF DEMODULATOR

APD-1

SERVICE MANUAL



YAMA-01355



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.

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100590

YAMAHA

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

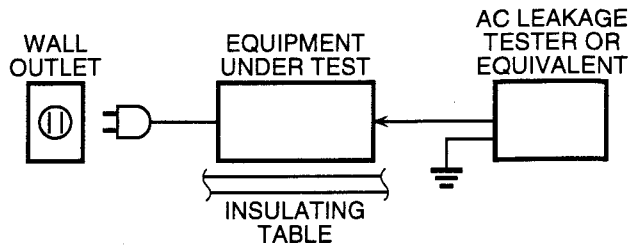
2.9K-95 Printed in Japan '97.6

1355

■ TO SERVICE PERSONNEL

Critical Components Information.

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



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.

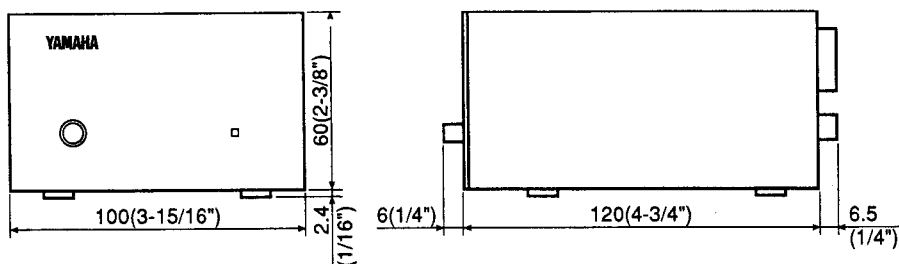
■ SPECIFICATIONS

Output Level	0.5V p-p
Output Impedance	75 ohms
Power Consumption	
U.S.A. and Canada model	8W
Australia model	8W
U.K. and Europe model	8W
General model	8W/8W
Power Supply	
U.S.A. and Canada model	AC120V, 60Hz
Australia model	AC240V, 50Hz
U.K. and Europe model	AC230V, 50Hz
General model	AC110-120/220-240V, 50/60Hz

Dimensions (W x H x D)	100 x 62.4 x 132.5 mm (3-15/16" x 2-7/16" x 5-3/16")
Weight	0.8kg (1lbs. 12oz.)

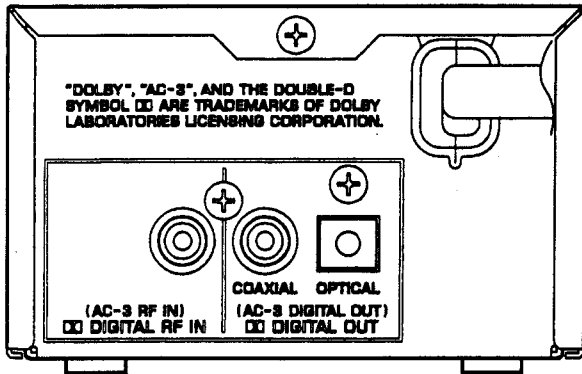
* Specifications subject to change without notice.

Dimensions Unit:mm(inch)

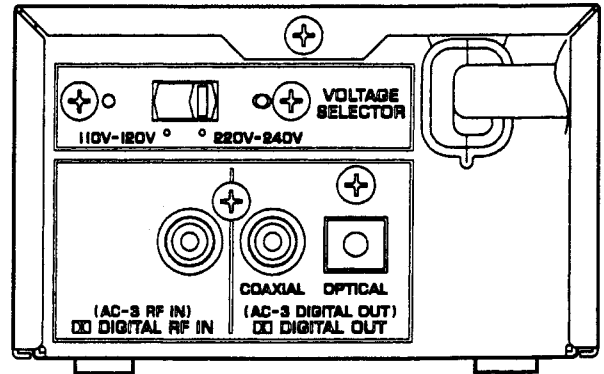


REAR PANELS

U, C, A, B, G models



R models



DISASSEMBLY PROCEDURES

(Remove parts in the order as numbered.)

1. Removal of the Top Cover

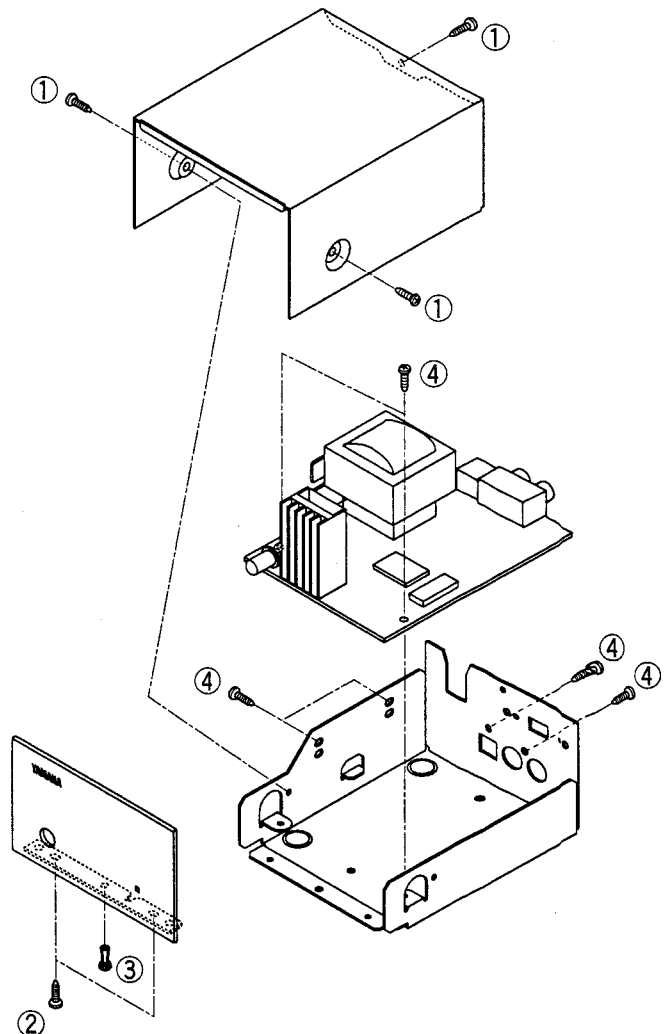
- a. Remove 3 screws (1), and remove the Top Cover.

2. Removal of the Front Panel

- a. Remove 2 screws (2) and 1 plastic rivet (3), and remove the Front Panel.

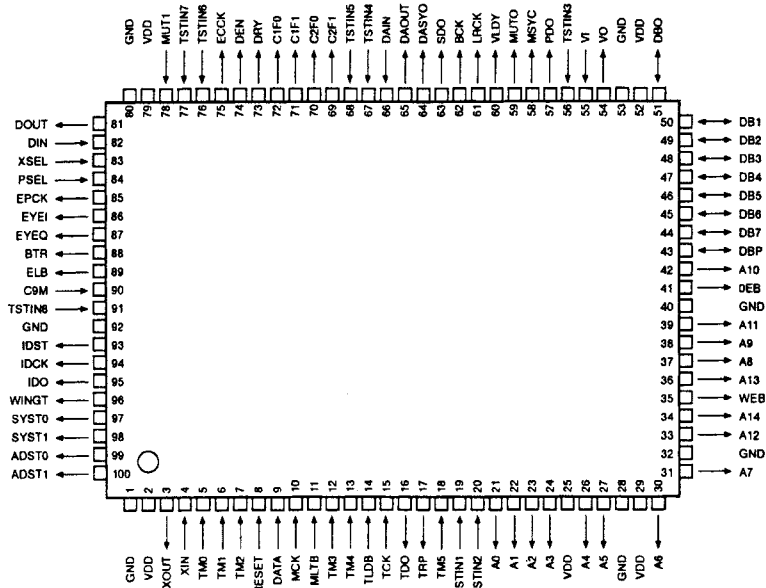
3. Removal of the Main P.C.B.(1)

- a. Remove 6 screws (4), and remove the Main P.C.B.(1).



IC DATA

IC6:PD4606A(AC-3 RF Demodulator)



No.	Name	I/O	Function
1	GND		GND (0V)
2	VDD		Power supply (+5V)
3	XOUT	O	X'tal oscillation circuit output
4	XIN	I	X'tal oscillation circuit input
5	TM0	I	Terminal for setting IC test mode, normally unconnected
6	TM1	I	Terminal for setting IC test mode, normally unconnected
7	TM2	I	Terminal for setting IC test mode, normally unconnected
8	RESET	I	System reset (reset at "L"), set to "L" once after turning on the power.
9	DATA	I	Serial data input from CPU (LSB fast)
10	MCK	I	CPU serial input clock, data latched at rising edge of clock
11	MLTB	I	CPU input latch, serial data (8 bits) latched from CPU to register
12	TM3	I	Terminal for setting IC test mode, normally unconnected
13	TM4	I	Terminal for setting IC test mode, normally unconnected
14	TLDB	I	Tag code load signal, tag code loaded in 16-bit shift register at "L"
15	TCK	I	Tag code output clock, data output at rising edge of clock
16	TDO	O	Tag code serial data output (MSB fast)
17	TRP	O	Tag code revising signal, set to "H" if tag code is free from error when each 1 block has been corrected.
18	TM5	I	Terminal for setting IC test mode, normally unconnected
19	TSTIN1	I	Terminal for IC test, normally unconnected
20	TSTIN2	I	Terminal for IC test, normally unconnected
21	A0	O	External RAM address output, Address 0 (LSB)
22	A1	O	External RAM address output, Address 1
23	A2	O	External RAM address output, Address 2
24	A3	O	External RAM address output, Address 3
25	VDD		Power supply (+5V)
26	A4	O	External RAM address output, Address 4
27	A5	O	External RAM address output, Address 5
28	GND		GND (0V)
29	VDD		Power supply (+5V)
30	A6	O	External RAM address output, Address 6
31	A7	O	External RAM address output, Address 7
32	GND		GND (0V)
33	A12	O	External RAM address output, Address 12
34	A14	O	External RAM address output, Address 14 (MSB)
35	WEB	O	External RAM write enable signal, active at "L"
36	A13	O	External RAM address output, Address 13
37	A8	O	External RAM address output, Address 8
38	A9	O	External RAM address output, Address 9
39	A11	O	External RAM address output, Address 11

No.	Name	I/O	Function
40	GND		GND (0V)
41	OEB	O	External RAM output enable signal, active at "L"
42	A10	O	External RAM address output, Address 10
43	DBP	I/O	External RAM data terminal, for erasure pointer
44	DB7	I/O	External RAM data terminal, Data bus 7
45	DB6	I/O	External RAM data terminal, Data bus 6
46	DB5	I/O	External RAM data terminal, Data bus 5
47	DB4	I/O	External RAM data terminal, Data bus 4
48	DB3	I/O	External RAM data terminal, Data bus 3
49	DB2	I/O	External RAM data terminal, Data bus 2
50	DB1	I/O	External RAM data terminal, Data bus 1
51	DB0	I/O	External RAM data terminal, Data bus 0
52	VDD		Power supply (+5V)
53	GND		GND (0V)
54	VO	O	VCXO output
55	VI	I	VCXO input
56	TSTIN3	I	Terminal for IC test, normally unconnected
57	PDO	O	Phase comparator output (tri-state)
58	MSYC	O	Terminal for monitoring, set to "H" at AC-3 synchronous signal
59	MUTO	O	Muting output, muting available at "H", set to "H" when MUTI=H or when AC-3 synchronization has not been executed.
60	VLDY	O	Validity flag output, correct data at "L", possibly error at "H".
61	LRCK	O	L/R ch select clock, (48kHz), Lch selected at "H"
62	BCK	O	Bit clock, 3.072MHz
63	SDO	O	Serial data output
64	DASYO	O	Digital out preamble B identification signal
65	DAOUT	O	Digital out output
66	DAIN	I	Digital audio interface signal input, digital out signal processed in IC according to internal register setting and that from "DAIN" selected and output at "DAOUT" terminal
67	TSTIN4	I	Terminal for IC test, normally unconnected
68	TSTIN5	I	Terminal for IC test, normally unconnected
69	C2F1	O	Error state after C2 correction indicated, by outputting whether correction has been completed
70	C2F0	O	Error state after C2 correction indicated, by outputting number of errors at C2
71	C1F1	O	Error state after C1 correction indicated, by outputting whether an error exists or not at C1
72	C1F0	O	Error state after C1 correction indicated, by outputting number of errors at C1
73	DRY	O	Terminal for monitoring error corrected section
74	DEM	O	Terminal for monitoring error corrected section
75	ECKK	O	Clock for error corrected section, 576kHz
76	TSTIN6	I	Terminal for IC test, normally unconnected
77	TSTIN7	I	Terminal for IC test, normally unconnected
78	MUTI	I	Muting input, muting available at "H"
79	VDD		Power supply (+5V)
80	GND		GND (0V)
81	DOUT	O	QPSK reversed output
82	DIN	I	QPSK signal input
83	XSEL	I	X'tal select, used at "H"
84	PSEL	I	PLL select, used at "L"
85	EPCK	O	Clock for QPSK eye pattern, 288kHz
86	EYEI	O	Eye pattern output : Phase I
87	EYEQ	O	Eye pattern output : Phase Q
88	BTR	O	
89	ELB	O	
90	C9M	O	9.216MHz
91	TSTIN8	I	Terminal for IC test, normally unconnected
92	GND		GND (0V)
93	IDST	O	Signal to indicate ID start position
94	IDCK	O	ID signal sample clock, data varying at falling edge of clock
95	IDO	O	ID data output (MSB first)
96	WINGT	O	Set to "L" while synchronous signal in correction block being searched
97	SYST0	O	Lock state of synchronous signal in correction block indicated
98	SYST1	O	Lock state of synchronous signal in correction block indicated
99	ADST0	O	Continuity state of ID address in correction block indicated
100	ADST1	O	Continuity state of ID address in correction block indicated

1

■ PRINTED CIRCUIT BOARD (Foil side)

2

MAIN P.C.B. (1)

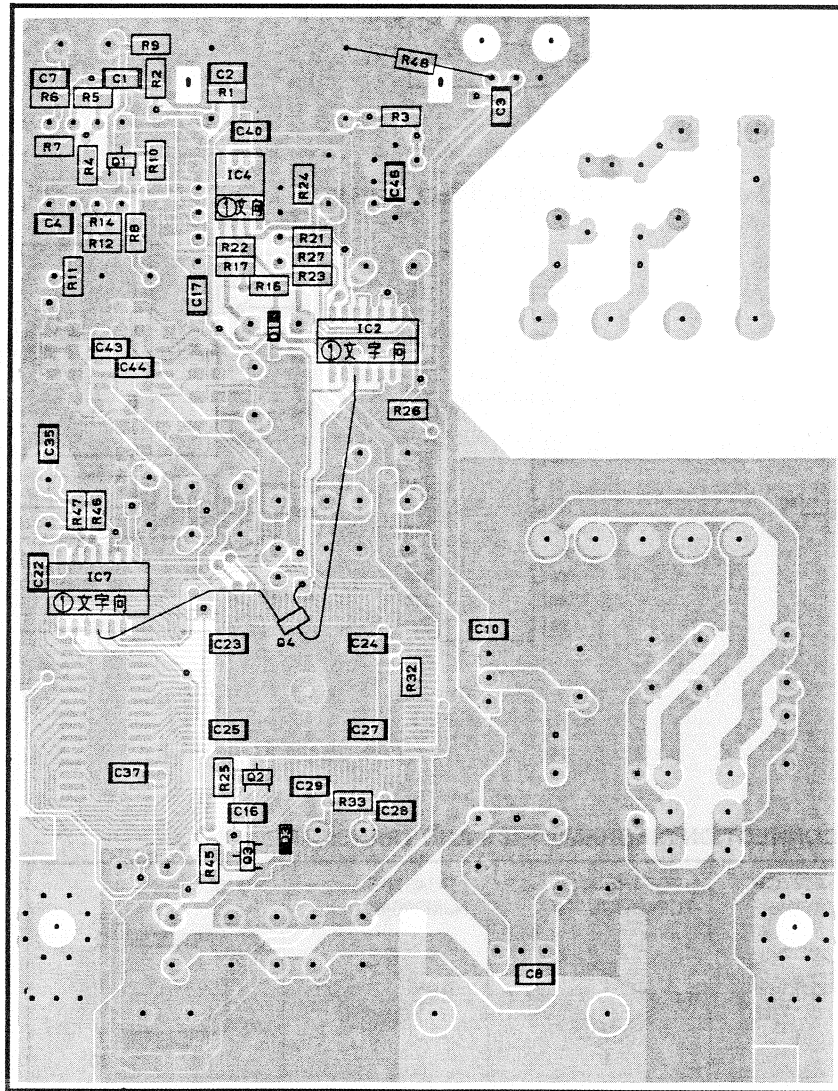
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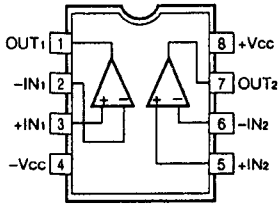
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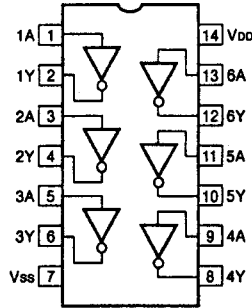


IC DATA

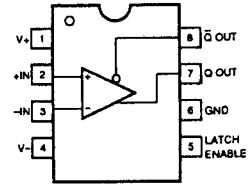
IC1 : MC14577CP (Dual VCR)
 IC5 : NJM2904G (OP Amp.)



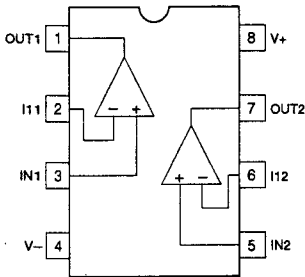
IC2 : μ PD74HC04G (Inverter)
 IC7 : TC74HCU04AF



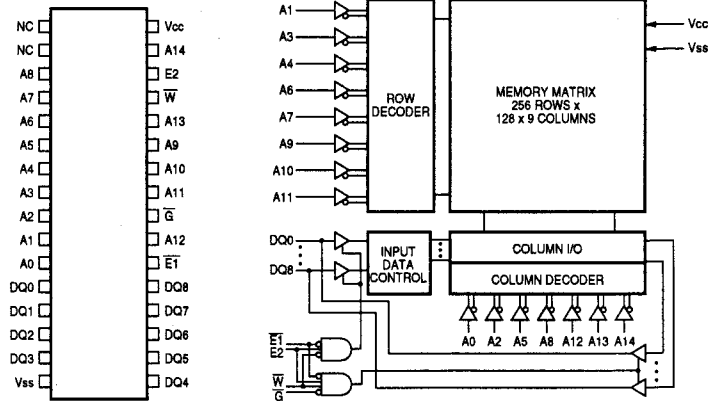
IC3 : LT1016IN8 (Comparator)



IC4 : μ PC4570G2 (OP Amp.)



IC8 : MCM6205D (SRAM)



PIN CONNECTION DIAGRAM OF ICs AND TRANSISTOR

<p>MC14577CP LT1016IN8</p>	<p>μPD74HC04G TC74HCU04AF</p>	<p>μPC4570G2 NJM2904G</p>	<p>PD4606A</p>
<p>MCM6205D</p>	<p>NJM78M05FA</p>	<p>2SC2412K DTC144EK DTA143ES</p>	

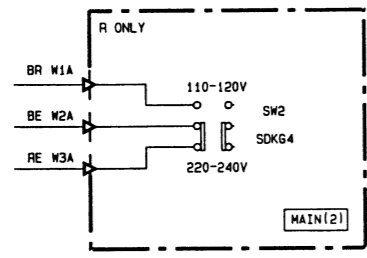
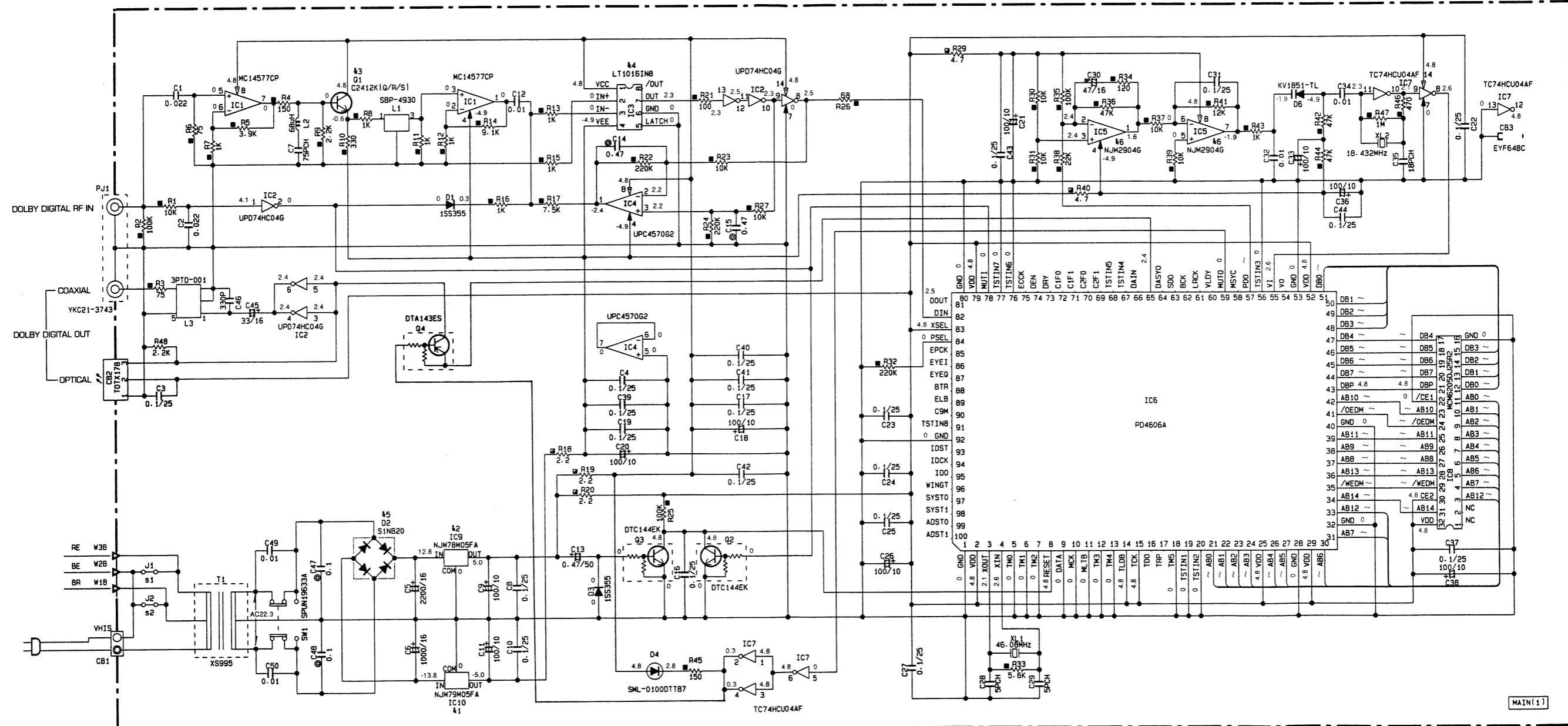
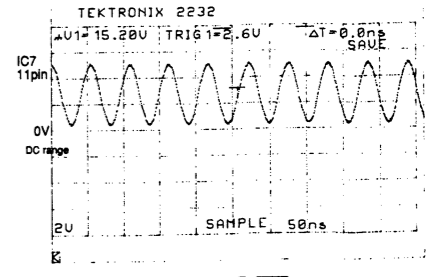
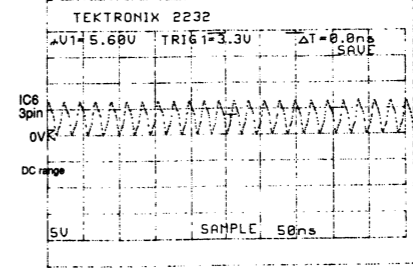
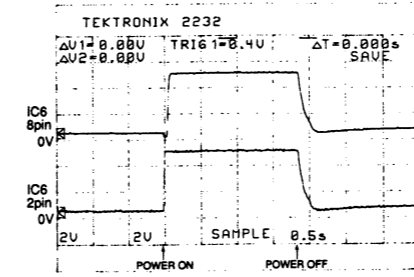
SCHEMATIC DIAGRAM

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

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

WAVEFORMS



Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
k1	IC10	NJM79M05FA AN79M05F
k2	IC9	NJM79M05FA AN79M05F
k3	Q1	2SC242K1G/R/S1 2SD601A1G/R/S1
k4	IC3	LT1016IN8 LT1016CN8
k5	D2	SIN820 DF02M
k6	IC5	NJM2904G-T1 NJM2904M-T1

	J-U.C	R	A-B-G
s1	J1	X	0
s2	J2	0	X

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

Schm Ref.	PART NO.	Description
	VY641700	P.C.B.
	VY641800	P.C.B.
	VY641900	P.C.B.
CB1	VG879900	CN.BS.PIN
CB2	VT707200	L.EMIT
CB3	VS996100	CLIP.FUSE
C1	UB044220	C.CE.M.CHP
C2	UB044220	C.CE.M.CHP
C3	UB245100	C.CE.M.CHP
C4	UB245100	C.CE.M.CHP
C5	VF904800	C.EL
C6	VJ651100	C.EL
C7	VJ901600	C.CE.M.CHP
C8	UB245100	C.CE.M.CHP
C9	VF760000	C.EL
C10	UB245100	C.CE.M.CHP
C11	VF760000	C.EL
C12	UB044100	C.CE.M.CHP
C13	VJ839000	C.EL
C14	VR169200	C.MYLAR.ML
C15	VR169200	C.MYLAR.ML
C16	UB245100	C.CE.M.CHP
C17	UB245100	C.CE.M.CHP
C18	VF760000	C.EL
C19	UB245100	C.CE.M.CHP
C20	VF760000	C.EL
C21	VF760000	C.EL
C22	UB245100	C.CE.M.CHP
C23	UB245100	C.CE.M.CHP
C24	UB245100	C.CE.M.CHP
C25	UB245100	C.CE.M.CHP
C26	VF760000	C.EL
C27	UB245100	C.CE.M.CHP
C28	VJ899000	C.CE.M.CHP
C29	VJ899000	C.CE.M.CHP
C30	UN837470	C.EL
C31	UB245100	C.CE.M.CHP
C32	UB044100	C.CE.M.CHP
C33	VF760000	C.EL
C34	UB044100	C.CE.M.CHP
C35	VJ900100	C.CE.M.CHP
C36	VF760000	C.EL
C37	UB245100	C.CE.M.CHP
C38	VF760000	C.EL
C39	UB245100	C.CE.M.CHP
C40	UB245100	C.CE.M.CHP
C41	UB245100	C.CE.M.CHP
C42	UB245100	C.CE.M.CHP
C43	UB245100	C.CE.M.CHP
C44	UB245100	C.CE.M.CHP
C45	UM397330	C.EL
C46	UB012330	C.CE.M.CHP
C47	VR168300	C.MYLAR.ML
C48	VR168300	C.MYLAR.ML
C49	FG214100	C.CE

* New Parts

Schm Ref.	PART NO.	Description
C50	FG214100	C.CE
D1	VT332900	DIODE
D2	VR253700	DIODE.BRG
D3	VT332900	DIODE
D4	VT914900	LED(or)
D6	VT707700	C.TRIM
IC1	Xi110D00	IC
IC2	XE819A00	IC
IC3	XR323A00	IC
IC4	XF291A00	IC
IC5	XR318A00	IC
IC6	XR043A00	IC
IC7	XD660A00	IC
IC8	XS801A00	IC
IC9	XJ604A00	IC
IC10	XE436A00	IC
L1	VT623200	FLTR.LC
L2	GE901970	COIL
L3	Vi530800	TRANS.PULS
PJ1	VU144300	JACK.PIN
Q1	IC241200	TR.CHP
Q2	VB504200	TR.DGT
Q3	VB504200	TR.DGT
Q4	VH964100	TR.DGT
R1	RD257100	R.CAR.CHP
R2	RD258100	R.CAR.CHP
R3	RD254750	R.CAR.CHP
R4	RD255150	R.CAR.CHP
R5	RD256390	R.CAR.CHP
R6	RD254750	R.CAR.CHP
R7	RD256100	R.CAR.CHP
R8	RD256100	R.CAR.CHP
R9	RD256220	R.CAR.CHP
R10	RD255330	R.CAR.CHP
R11	RD256100	R.CAR.CHP
R12	RD256100	R.CAR.CHP
R13	RD256100	R.CAR.CHP
R14	RD256910	R.CAR.CHP
R15	RD256100	R.CAR.CHP
R16	RD256100	R.CAR.CHP
R17	RD256750	R.CAR.CHP
R18	HV453220	R.CAR.FP
R19	HV453220	R.CAR.FP
R20	HV453220	R.CAR.FP
R21	RD255100	R.CAR.CHP
R22	RD258220	R.CAR.CHP
R23	RD257100	R.CAR.CHP
R24	RD258220	R.CAR.CHP
R25	RD258100	R.CAR.CHP
R26	RD254680	R.CAR.CHP
R27	RD257100	R.CAR.CHP
R29	HV453470	R.CAR.FP
R30	RD257100	R.CAR.CHP
R31	RD257100	R.CAR.CHP
R32	RD258220	R.CAR.CHP

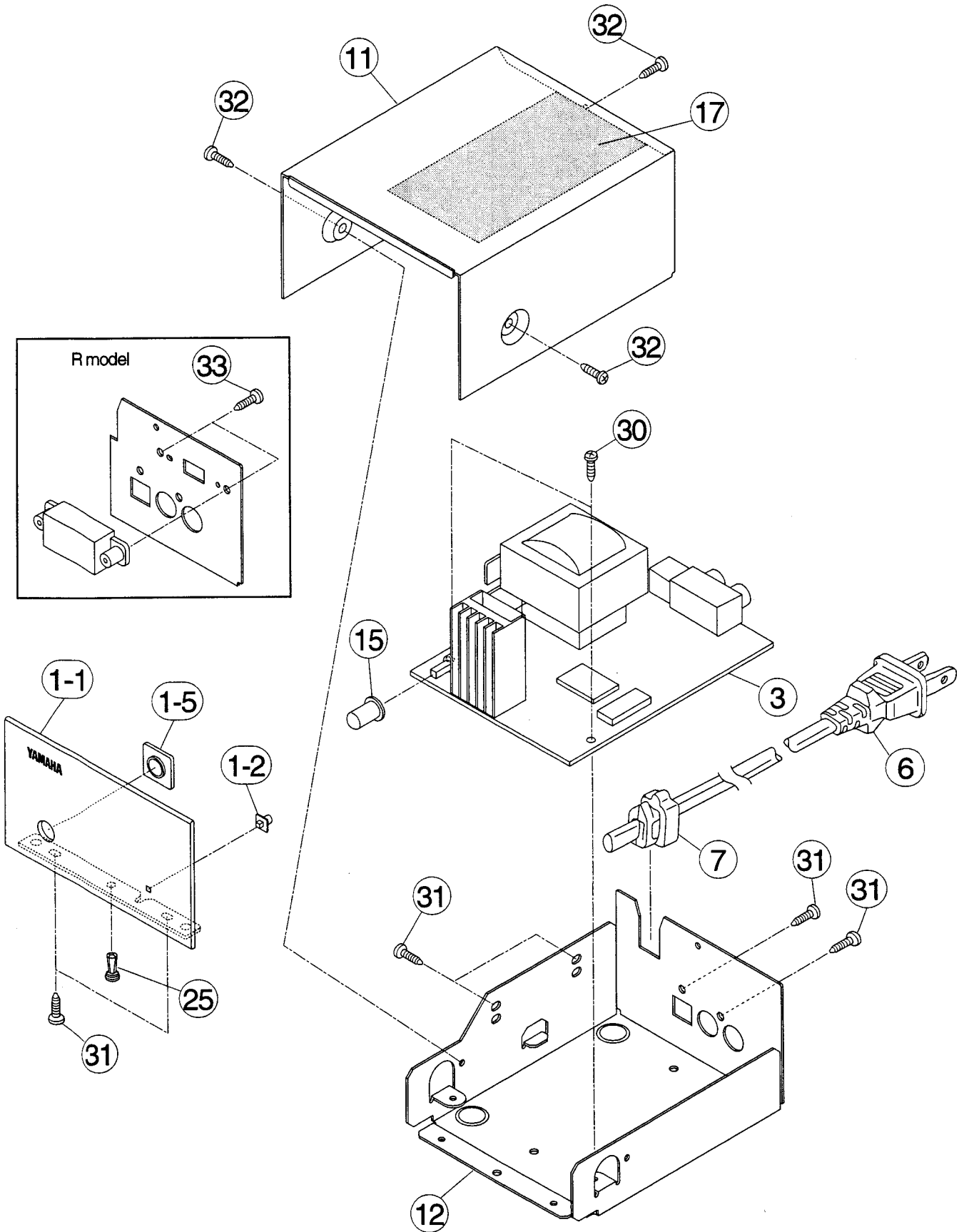
* New Parts

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

Schm Ref.	PART NO.	Description		
R33	RD256560	R.CAR.CHP	5.6KΩ	1/10W
R34	RD255120	R.CAR.CHP	120Ω	1/10W
R35	RD258100	R.CAR.CHP	100KΩ	1/10W
R36	RD257470	R.CAR.CHP	47KΩ	1/10W
R37	RD257100	R.CAR.CHP	10KΩ	1/10W
R38	RD257220	R.CAR.CHP	22KΩ	1/10W
R39	RD257100	R.CAR.CHP	10KΩ	1/10W
R40	HV453470	R.CAR.FP	4.7Ω	1/4W
R41	RD257120	R.CAR.CHP	12KΩ	1/10W
R42	RD257470	R.CAR.CHP	47KΩ	1/10W
R43	RD256100	R.CAR.CHP	1KΩ	1/10W
R44	RD257470	R.CAR.CHP	47KΩ	1/10W
R45	RD255150	R.CAR.CHP	150Ω	1/10W
R46	RD255470	R.CAR.CHP	470Ω	1/10W
R47	RD259100	R.CAR.CHP	1MΩ	1/10W
SW1	VN121000	SW.PUSH	SPUN19-2N-W	
SW2	VE962600	SW.SLIDE	SDKGA4(R)	
T1	XS995A00	TRANS.PWR		
XL1	VT707500	RSNR.CRYS	46.08MHz	
XL2	VT928600	RSNR.CRYS	18.432MHz	
	VL391100	RADIATOR	OSH-2440-SPL	
	ED330086	SCR.BND.HD	3x8	FCRM3-BL

* New Parts

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■ EXPLODED VIEW



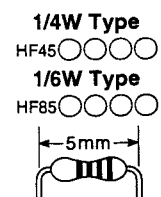
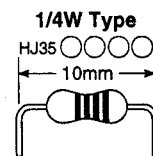
MECHANICAL PARTS

Ref. NO.	PART NO.	Description				
* 1-1	VV598200	FRONT PANEL				
1-2	VH897700	LENS	2.2Lx2.2			
1-5	VY848300	ESCUTCHEON	D7			
* 3	VY641700	P.C.B. ASS'Y	FUNCTION		(UC)	
* 3	VY641800	P.C.B. ASS'Y	FUNCTION		(R)	
* 3	VY641900	P.C.B. ASS'Y	FUNCTION		(ABG)	
6	VL238900	POWER CORD ASS'Y			(G)	
6	VP418300	POWER CORD ASS'Y			(A)	
6	VQ458400	POWER CORD ASS'Y			(R)	
6	VS168300	POWER CORD ASS'Y			(UC)	
6	VS680700	POWER CORD ASS'Y			(B)	
7	VN158600	CORD STOPPER	No.2104			
* 11	VV597800	TOP COVER				
* 12	VV945600	CHASSIS ASS'Y			(UCABG)	
* 12	VV945700	CHASSIS ASS'Y			(R)	
15	VS048300	BUTTON	D7			
17	VZ056500	DAMPER				
25	CB099600	PLASTIC RIVET	No.920			
30	VT669300	PW HEAD B-TITE SCREW	3x8-8	MFC2		
31	VN413300	BIND HEAD BONDING B-T. SCREW	3x8	MFZN2-BL		
32	EP600190	BIND HEAD B-TITE SCREW	3x8	ZMC2-BL		
33	VF617600	PAN HEAD P-TITE SCREW	2.6x8	FCRM3-BL	(R)	
	VT970000	ACCESSORIES AV CABLE	1P 1.0m			

* New Parts

Parts List for Carbon Resistors

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



* : Not available