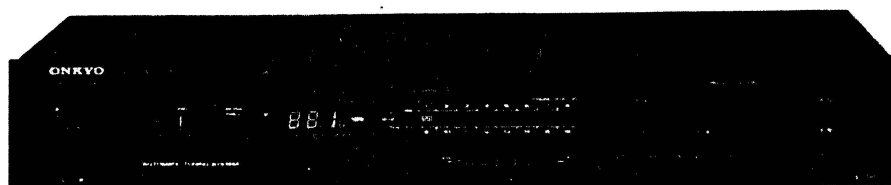


ONKYO SERVICE MANUAL

SYNTHESIZED FM STEREO/MW/LW TUNER MODEL T-4038L



Silver and black models

UG.BUG	220V AC, 50Hz
UW.BUW	120 or 220V AC, 50-60Hz
BUQA	240V AC, 50Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

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ONKYO
AUDIO COMPONENTS

SPECIFICATIONS

FM:

Tuning Range:	87.5-108.0MHz (50kHz steps)
Usable Sensitivity:	Mono: 11.2dBf, 2.0μV.IHF 0.9 μV 75ohms DIN
	Stereo: 2.0 μV 75ohms
50dB Quieting Sensitivity:	Mono: 1.7 μV 75ohms
	Stereo: 17μV 75ohms
Capture Ratio:	1.5dB
Image Rejection Ratio:	80dB
IF Rejection Ratio:	90dB
Signal-to-Noise Ratio:	Mono: 73dB
	Stereo: 66dB
Selectivity:	55dB DIN (±300kHz,40kHz devi.)
AM Suppression Ratio:	50dB
Harmonic Distortion:	Mono: 0.1%
	Stereo: 0.2%
Frequency Response:	30-15,000Hz ±1.5dB
Stereo Separation:	40dB at 1kHz
	30dB at 70-10,000Hz

Output voltage: 750mV

Muting level: 2 μV

AM

MW

Tuning Range:	522-1,611kHz (9kHz steps)
Usable Sensitivity:	25μV
Image Rejection Ratio:	40dB
IF Rejection Ratio:	30dB
Signal-to-Noise Ratio:	40dB
Harmonic Distortion:	0.8%
Output voltage:	150mV

GENERAL

Dimensions(W×H ×D):	435 ×73×265mm
	17-1/8" ×2-7/8"×10-7/16"

Weight: 3.0kg., 6.6lbs.

Specifications and features are subject to change without notice.

LW

Tuning Range:	146-353kHz (9kHz steps)
Usable Sensitivity:	40μV
Image Rejection Ratio:	30dB
IF Rejection Ratio:	30dB
Signal-to-Noise Ratio:	40dB
Harmonic Distortion:	0.8%
Output voltage:	150mV

SERVICE PROCEDURES

1.Step band selector switch

Worldwide models are equipped with a step band selector switch. This switch is located on the back panel. This switch is set to 50kHz (FM) and 9kHz (AM) at the factory, but may have to be reset to 100kHz and 10kHz depending on the area where the unit is used.

	De-emphasis	FM step	AM step
Europe:	50μsec	50kHz	9kHz
U.S.A.:	75μsec	100kHz	10kHz

2.Change of voltage

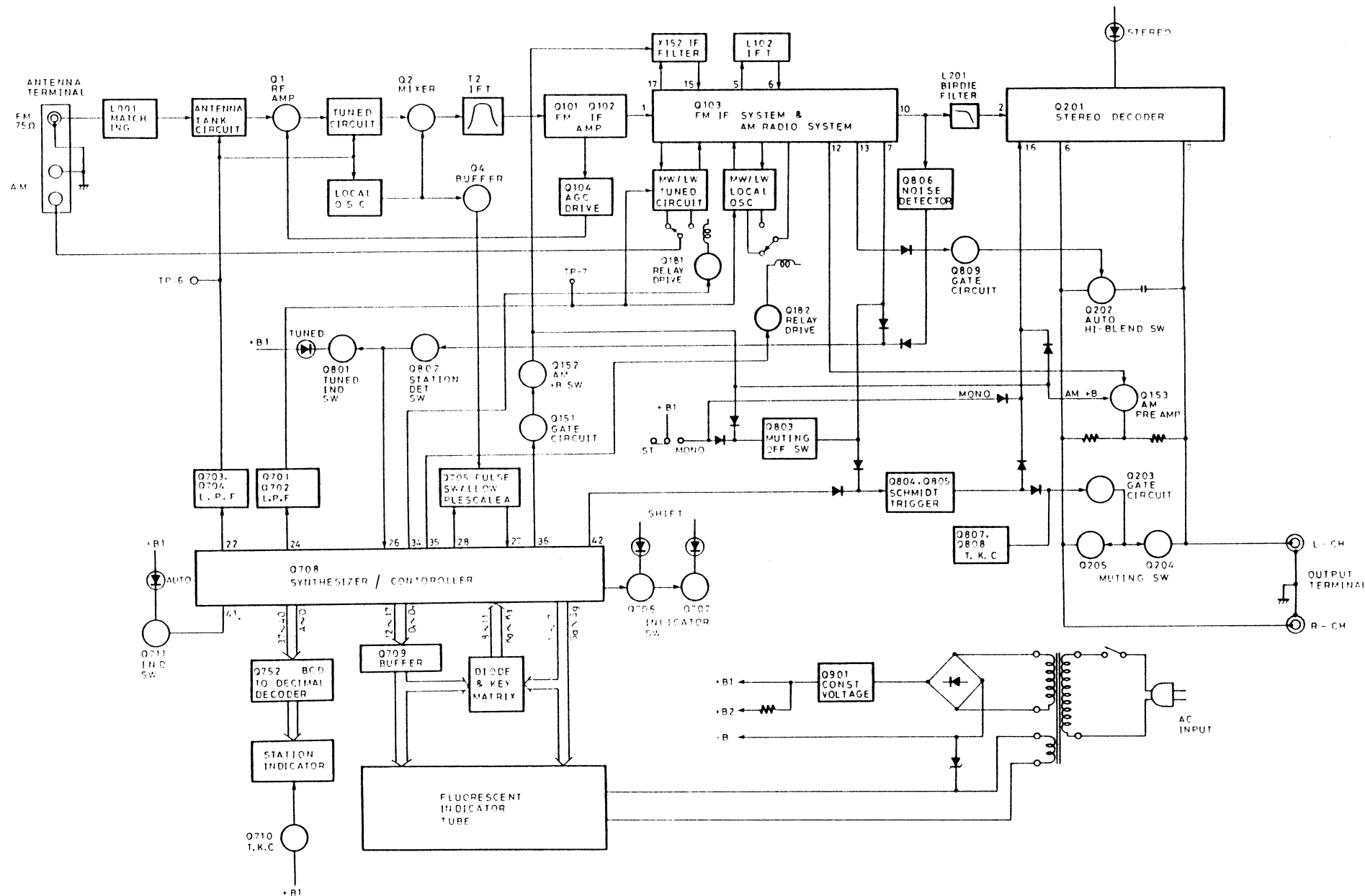
Worldwide models are equipped with a voltage selector to conform with local power supplies. This switch is located on the back panel. Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on.

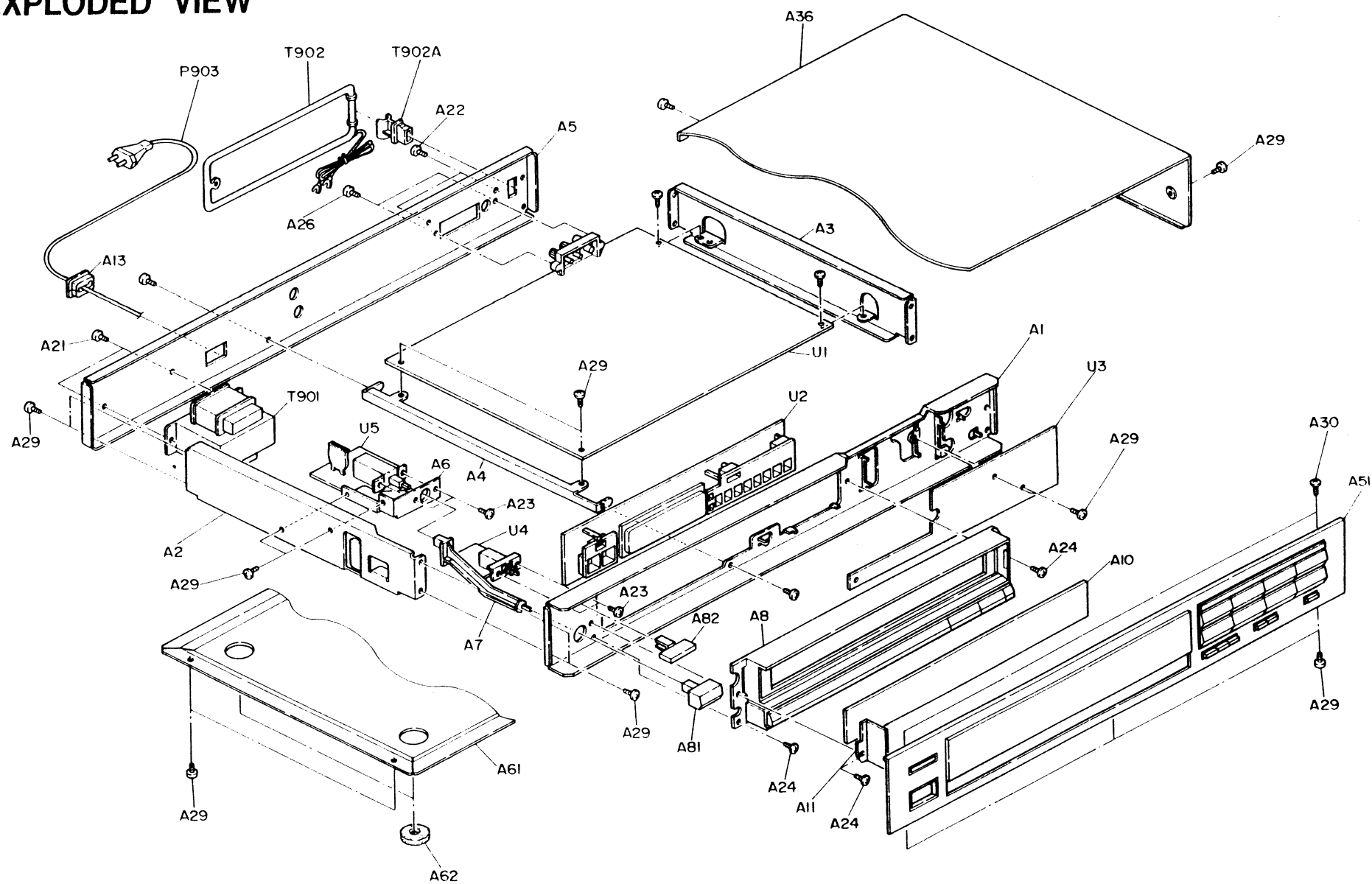
This switch is set to 220V at the factory. Voltage is changed by sliding the groove in the switch with the screwdriver to the right or left. Confirm that the switch has been moved all the way to the right or left before turning the power switch on.

3.Memory preservation

This unit does not require memory preservation batteries. A built-in memory power back-up system preserves contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in and the power switch turned on and off once in order to charge the back-up system. Note that since this is not a permanent memory, the power switch must be turned on and off a few times each month to keep the back-up system operative. The period of time during which memory contents are preserved after power has last been turned off varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of 3 to 4 weeks (a minimum of 2 weeks) after the last time power has been turned off. This period is shorter when the unit is exposed to very high humidity or used in an area with an extremely humid climate.

BLOCK DIAGRAM





PARTS LIST

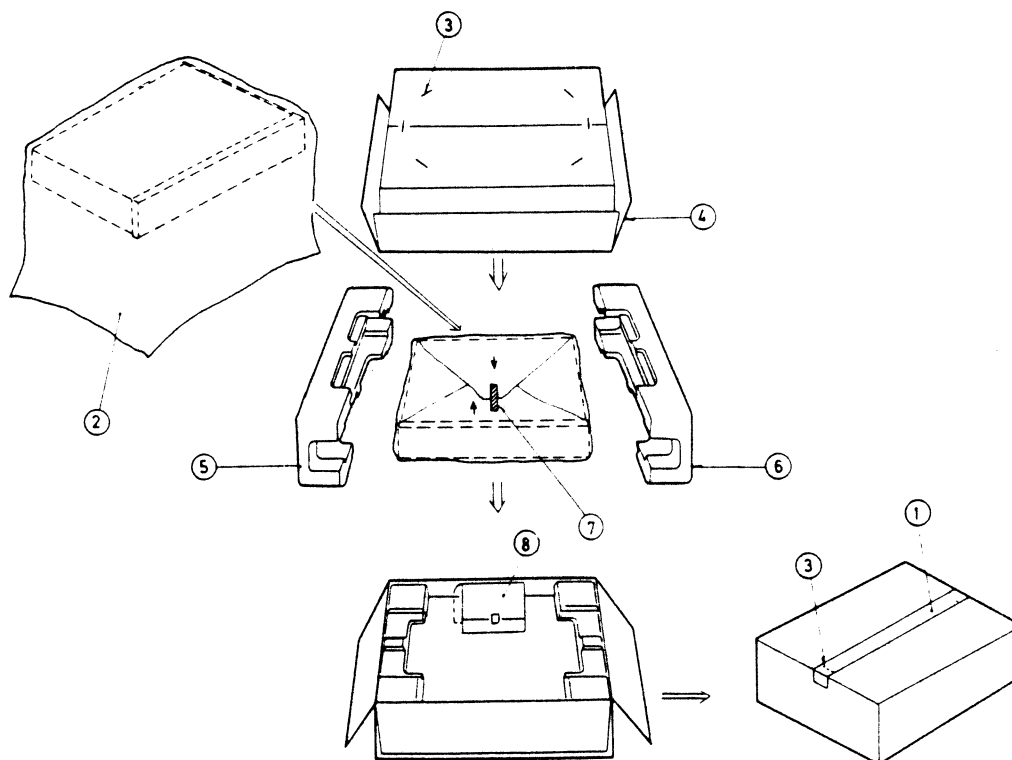
REF.NO.	PART NO.	DESCRIPTION
A1	27110247B	Front bracket
A2	27115130E	Side bracket L
A3	27115169	Side bracket R
A4	27130395	Bracket,pc board
A5	27120829	Back panel <G>
	27120830	Back panel <W>
	27120842	Back panel <Q>
A6	27140990A	Bracket,power switch
A7	27273030C	Joint L
A8	28322046-1A	Holder ass'y
A10	28133162A	Back plate
A11	28160110	Holder
A13	27300750	△Strainrelief
A21	838440089	4TTB+8C(BC).Tapping screw
A22	834230108	3TTS+10B(Ni).Tapping screw
A23	82143006	3P+6FN(BC).Pan head screw
A24	831430088	3TTW+8B(BC).Tapping screw
A26	834430108	3TTS+10B(BC).Tapping screw
A27	82143006	3P+6FN(BC).Pan head screw <W>
A28	82142604	2.6P+4F(BC).Pan head screw <W>
A29	834430068	3TTS+6B(BC).Tapping screw
A30	838430068	3TTB+6B(BC).Tapping screw
A36	28184282A	Top cover
	28184281	Top cover <S>
A51	18654121	Front panel ass'y
	18644121	Front panel ass'y <S>
A61	27170224	Bottom board
A62	27175011C	Leg
A81	28321905B	Knob.Power
	28321928-1	Knob.Power <S>
A82	28322094A	Knob.Mode
	28322093A 1	Knob.Mode <S>
S902	25065123	NSS-1258P.Voltage selector switch <W>
P903	253129 or	△AS-CEE.Power supply
	253127	cord <G/W>
	253118	△AS SAA.Power supply cord <Q>

REF.NO.	PART NO.	DESCRIPTION
T901	2300089	△NPT-915G.Power transformer <G>
	2300090	△NPT-915DG. Power transformer <W>
	2300091	△NPT-915Q.Power transformer <Q>
T902	232085	NMA 3034.AM loop antenna
T902A	27190105	Holder.antenna
U1	18644500-1A	NARF-2600-1A.Main pc board ass'y <G/Q>
	18640500 1A	NARF-2600-1B.Main pc board ass'y <W>
U2	18658501-1	NADIS-2601-1.Display pc board ass'y
U3	18644502 1A	NASW-2602-1A.Function switch pc board ass'y
U4	18658503-1	NASW-2603-1.Muting switch pc board ass'y
U5	18644504-1A	NASW-2604-1A.Power switch pc board ass'y
U6	18640505-1	NASW-2605-1.Band selector switch pc board ass'y <W>

NOTE: <G>:Only 220V model
<W>:Only Worldwide model
<Q>:Only 240V model
<S>:Only Silver model
:Only Black model

NOTE THE COMPONENTS IDENTIFIED BY MARK △ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBERS SPECIFIED.

PACKING VIEW

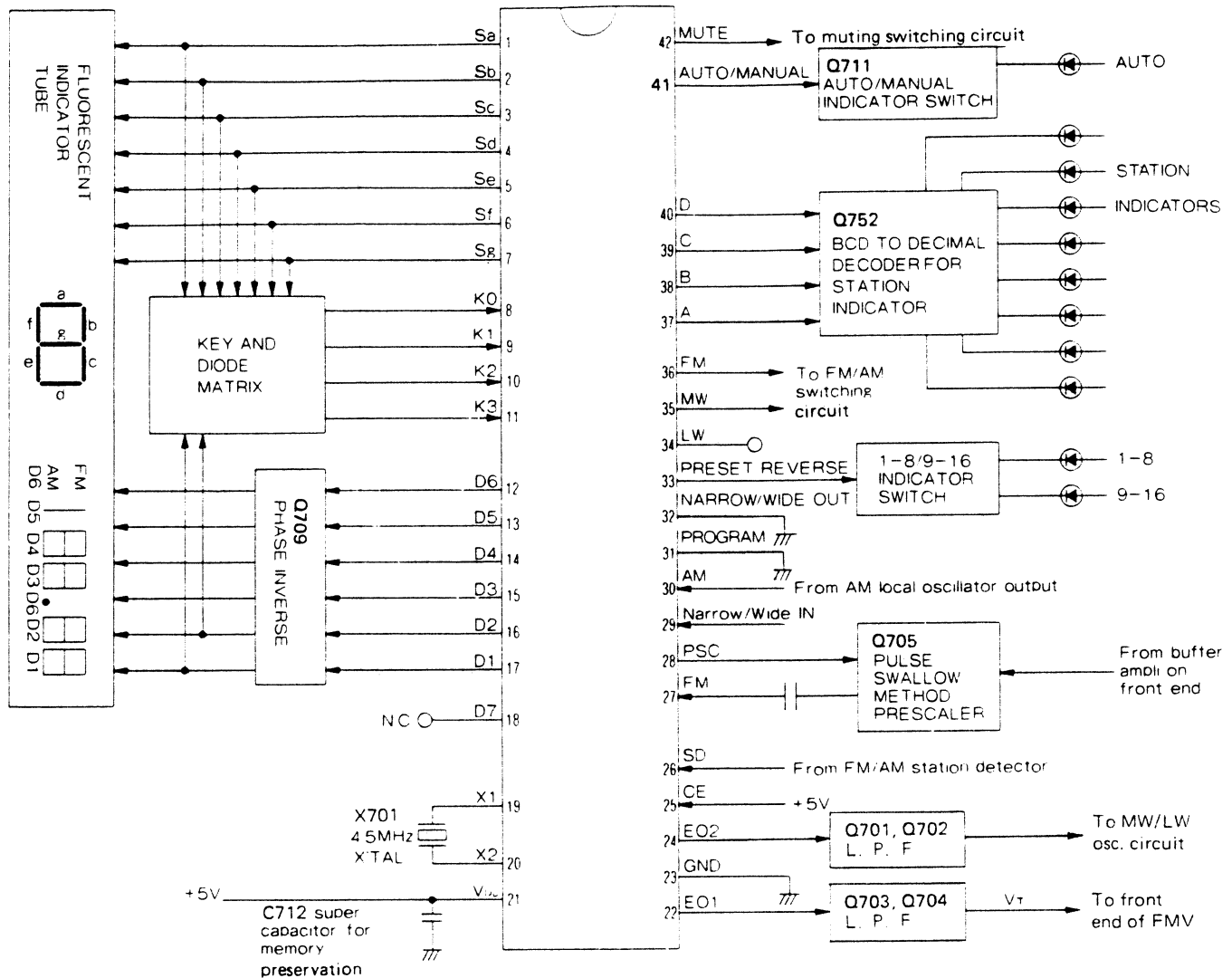


REF.NO.	PART NO.	DESCRIPTION
1	260012	50×700mm.Damplon tape
2	29100051	420 ×750mm.Poly-vinyl bag
3	282301	Sealing hook
4	29051283	Master carton box <S>
	29051284	Master carton box
5	29090532B	Pad R
6	29090533E	Pad L
7	29110032	W=15mm.Adhesive tape
8	Accessory bag ass'y	
	220V model	
	29340984	Instruction manual
	292092	FM antenna
	232085	NMA-3034.AM loop antenna
	2010095	Connection cord
	29100006A	250 ×350mm.Poly-vinly bag

REF.NO.	PART NO.	DESCRIPTION
	Worldwide model	
	29340984	Instruction manual
	292064A	FM antenna
	232085	NMA-3034.AM loop antenna
	2010095	Connection cord
	25055040	CV-K-2.Conversion plug
	29100006A	250 ×350mm.Poly-vinly bag
	240V model	
	29340984	Instruction manual
	292092	FM antenna
	232085	NMA-3034.AM loop antenna
	2010095	Connection cord
	25060083	Antenna adaptor
	29100006A	250 ×350mm.Poly-vinly bag

NOTE: <S>:Only Black model
:Only Black model

CIRCUIT DESCRIPTIONS



Pin No.	Symbol	Terminal	Description
1 - 7	Sa - Sg	Segment outputs	Display tube signal terminal output and key return signal source terminals; active high. Since these terminals can handle 30V, they are connected directly to the segment terminals of the fluorescent display tube.
8 - 11	K0 - K3	Key return signal inputs	Terminals for input of the key return signals from external matrix circuit.
12 - 18	D1 - D7	Digit outputs	Display tube digit output signal terminals; active low. D1 and D2 are used the key return signal source.
19, 20	X1, X2	X'tal	Connect to the 4.5MHz crystal oscillator.
21	V _{DD}	Power source input	Device power source terminal; supplies 5V during normal operation and 2.5V from the super capacitor C712 for memory preservation.

3227

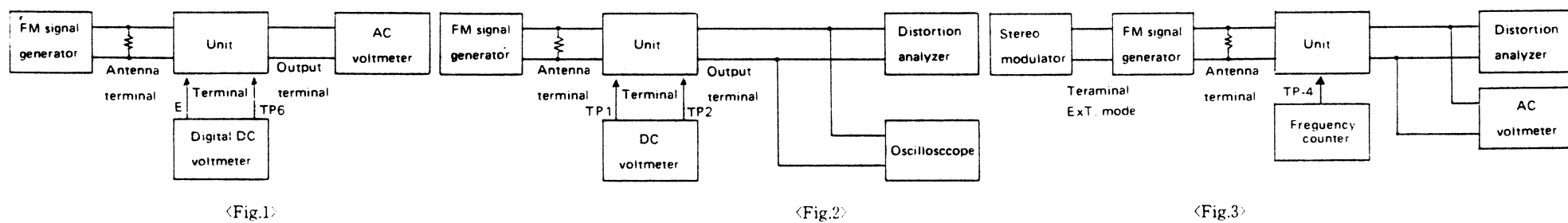
Pin No.	Symbol	Terminal	Description
22, 24	E01, E02	Error outputs	Charge pump output of the phase detector with constitutes the PLL. High level is output when the divided oscillation frequency is higher than the reference frequency. In the opposite case, low level is output. Floating occurs when the frequencies match. The output is applied to the variable capacitor diode in the front end through the low pass filters Q701, Q702, Q703 and Q704. The output from both terminals is same and E01 is used to FM and E02 is used to MW/LW
23	GND	Ground	
25	CE	Chip enable	Device selection signal input terminal. High level ... Normal operation Low level ... Memory preservation
26	SD	Station detector signal input	Input terminal for detecting whether or not a broadcast signal is being received during auto-tuning. Stopped by the high level.
27	FM	FM local oscillator signal input	Input terminal for FM local oscillator is divided by 1/16 or 1/17 by prescaler Q705.
28	PSC	Pulse swallow control output	This terminal outputs a signal that switches the prescaler division ratio of Q705 to 1/16 or 1/17 when the pulse swallow method is used for division. (FM only)
29	NARROW/ Wide out	IF band width output	Terminal for switching narrow and wide of IF band width. Not used.
30	AM	AM local oscillator signal input	Terminal for input of the AM local oscillator signal.
31	PROGRAM	Program selection signal output	Terminal for indicator output whether or not the program mode. Not used.
32	NARROW/ Wide out	IF band width switching output	Terminal for specifications output of IF band width. Not used.
33	Preset Reverse	Preset reverse indication output	Terminal for indication output whether M1 – M8 or M9 – M16 the preset key.
34	LW	Band switching signal outputs	Terminals for signal output switching of each band. High level is output from terminal of FM (pin no. 36) and low level is output from other terminals (pin no. 34 & 35) during FM reception.
35	MW		
36	FM		
37 38 39 40	A B C D	Preset station indication outputs	Terminals for BCD code output of preset station indicator.
41	AUTO/ MANUAL	Auto/Manual indication output	Terminal for indication output whether or auto the tuning mode. This terminal becomes high during auto mode and low during manual mode.
42	MUTE	Muting output	Output terminal which mutes the shock noise occurring when the PLL is released; active high. The muting signal is output as shown below. UP/DOWN of manual/auto mode, preset memory is recalled, band switching and preset scan.

ADJUSTMENT PROCEDURES

T-4038L

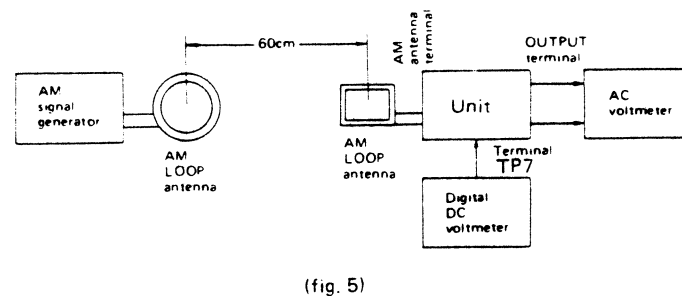
FM section

Item	Step	Connection of instrument	FM SG output	Stereo modulator output	Tuned frequency	Output indicator	Adjustment point	Adjust for	Remarks
Front end	1	Fig.1	—	—	87.50MHz	Digital DC voltmeter	T1	$1.2V \pm 0.4V$	Usually not necessary to adjust.
	2		107.9MHz 1kHz, 75kHz devi.	—	107.90MHz	AC voltmeter	TC1 TC2	Maximum output	
I F	1	Fig.2	98.0MHz 1kHz, 75kHz devi. 65dBf(60dB)	—	98.00MHz	DC voltmeter	L102 Primary	$0V \pm 20mV$	Set the mode switch to MONO. Repeat the steps 1 and 2 until no further adjustment is necessary.
	2					Distortion analyzer	L102 Secondary	Minimum	
V C O		Fig.3	98.0MHz 1kHz, 75kHz devi. 65dBf(60dB)	—	98.00MHz	Frequency counter	R214	$19kHz \pm 10Hz$	Set the mode switch to STEREO.
Stereo distortion		Fig.3	98.0MHz Ext. modulation 65dBf(60dB)	L+R 1kHz 67.5kHz devi.	98.00MHz	Distortion analyzer	T2	Minimum	
Stereo separation	1	Fig.3	98.0MHz Ext. modulation 65dBf(60dB)	Lch. 1kHz	98.00MHz	Rch. AC voltmeter	R204	Minimum	Maximum and same separation
	2			Rch. 1kHz		Lch. AC voltmeter		Minimum	
Tuned indicator level		Fig.2	98.0MHz 1kHz, 75kHz devi. 20.2dBf(15dB)	—	98.00MHz	Tuned indicator	R118	Light on	
Auto Hi-blend level		Fig.2	98.0MHz 1kHz, 75kHz devi. 29.2dBf(24dB)	—	98.00MHz	Hi-blend switch (Q202)	R825	off	



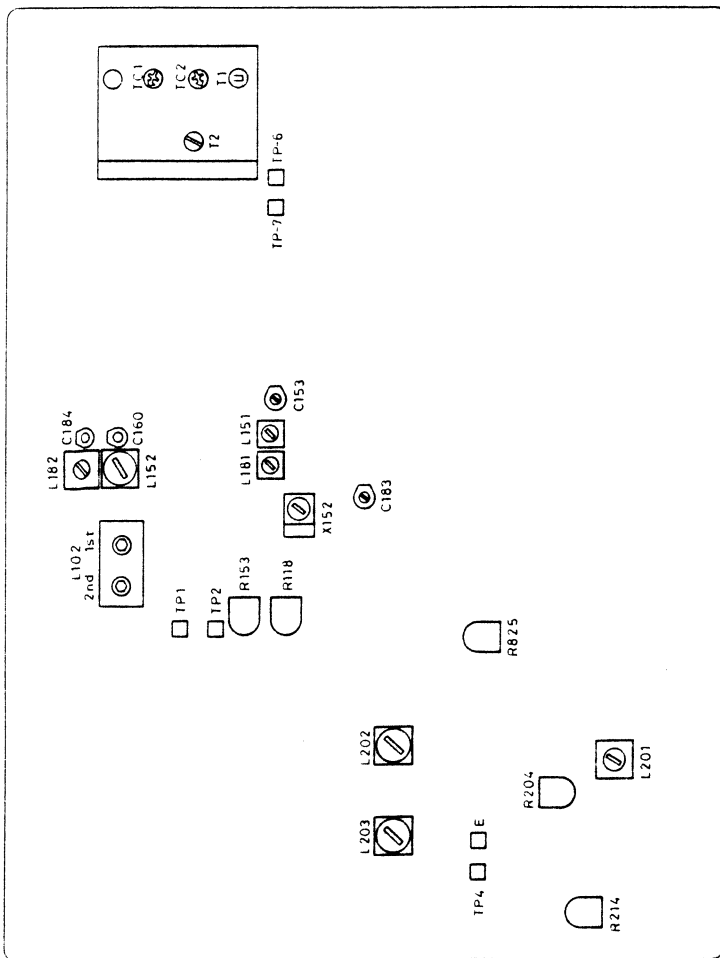
MW section

Step	AM SG output	Tuned Frequency	Output indicator	Adjustment point	Adjust for	Remarks
1	—	522kHz	Digital D C voltmeter	L151	$1.3V \pm 0.1V$	Repeat the steps 1 and 2 until no further adjustment is necessary.
2	—	1611kHz		C153	$9.5V \pm 0.1V$	
3	603kHz, 60dB/m 400Hz 30% mod.	603kHz	A C voltmeter	L152	Maximum	Repeat the steps 3 and 4 until no further adjustment is necessary.
4	1404kHz, 60dB/m 400Hz 30% mod.	1404kHz		C160	Maximum	
5	999kHz, 60dB/m 400Hz 30% mod.	999kHz	A C voltmeter	X152	Maximum	
6	999kHz, 64dB/m 400Hz 30% mod.	999kHz	TUNED indicator	R153	Light on	



LW section

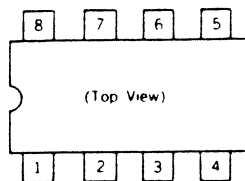
Step	AM SG output	Tuned Frequency	Output indicator	Adjustment point	Adjust for	Remarks
1	—	146kHz	Digital D C voltmeter	L181	$1.3V \pm 0.1V$	Repeat the steps 1 and 2 until no further adjustment is necessary.
2	—	353kHz		C183	$6.0V \pm 0.1V$	
3	164kHz, 60dB/m 400Hz 30% mod.	164kHz	A C voltmeter	L182	Maximum	Repeat the steps 3 and 4 until no further adjustment is necessary.
4	353kHz, 60dB/m 400Hz 30% mod.	353kHz		C184	Maximum	



BLOCK DIAGRAM OF IC

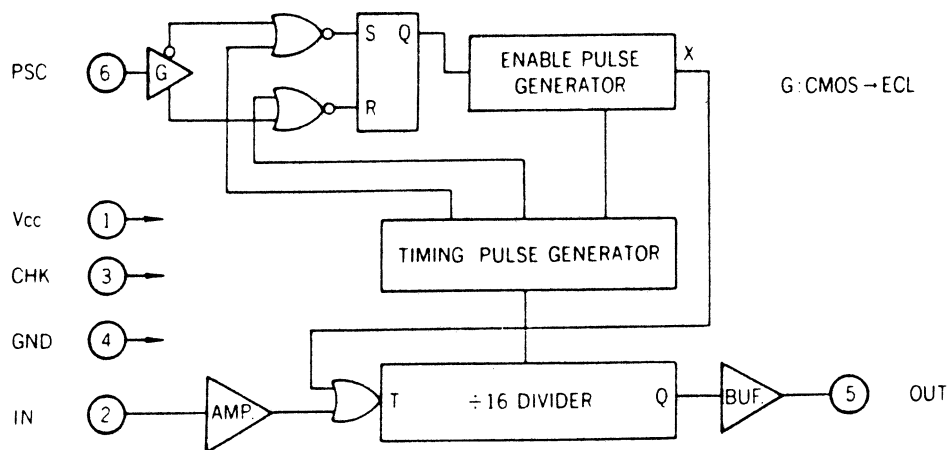
μ PB553AC(Prescaler)

Pin Connection

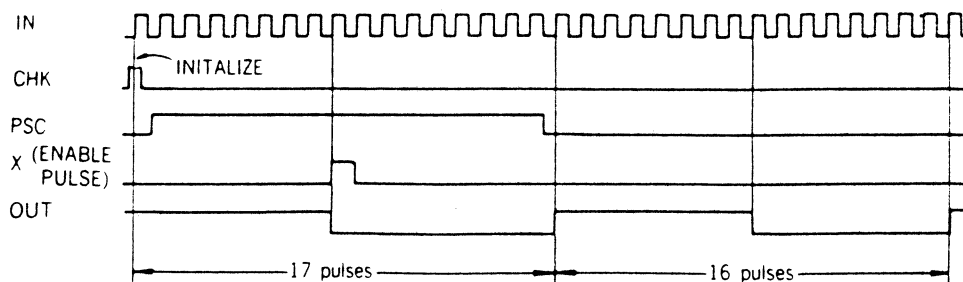


1. Pin 1 (Vcc)..... + 5 volts Supply
2. Pin 2 (IN)..... FM local oscillator signal input
3. Pin 3 (CHK)..... Check terminal
4. Pin 4 (GND)..... Ground terminal
5. Pin 5 (OUT)..... Prescaler terminal
6. Pin 6 (PSC)..... Prescaler control terminal
7. Pin 7,8..... Not connected

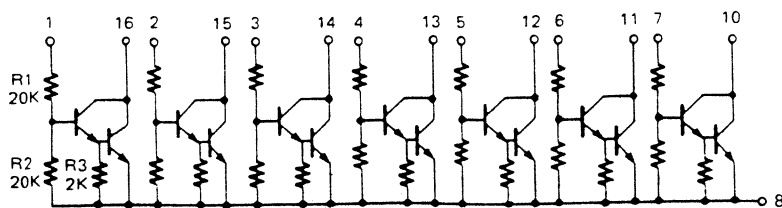
Block Diagram



Timing Chart

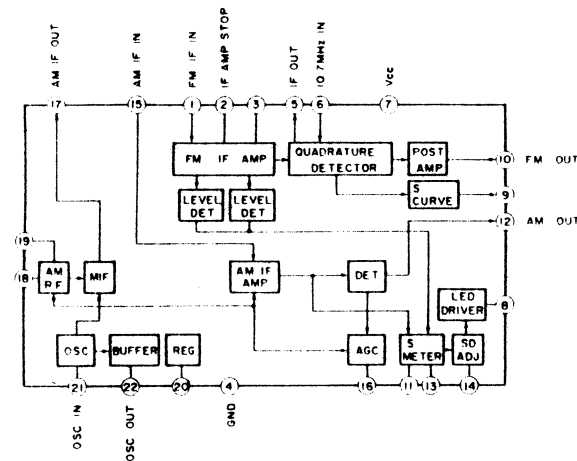


μ PA80C(Buffer amplifier)

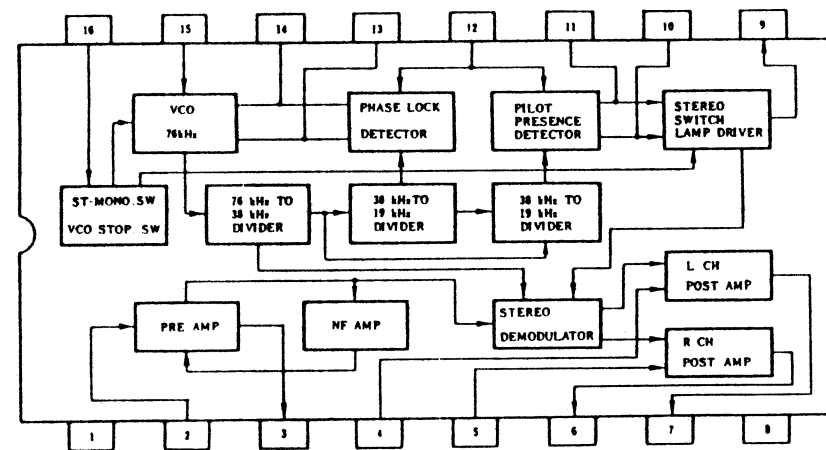


BLOCK DIAGRAM

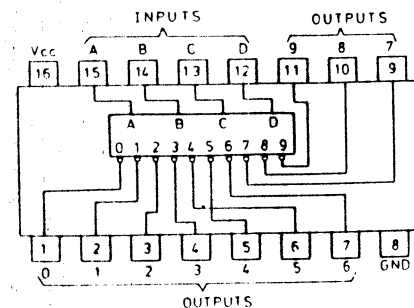
LA1265(AM radio/FM IF system)



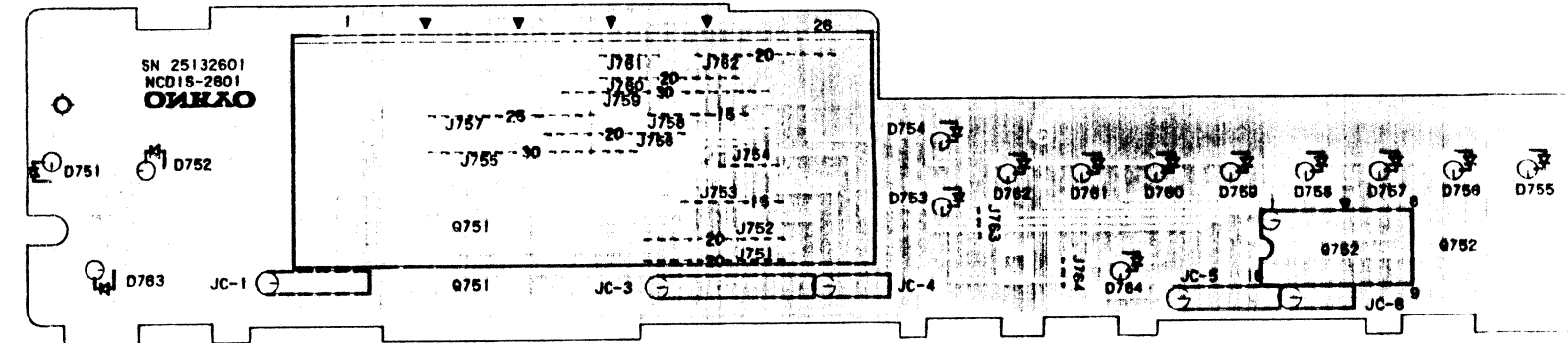
μPC1161C3(Stereo decoder)



74LS145(BCD to decimal decoder)



PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE



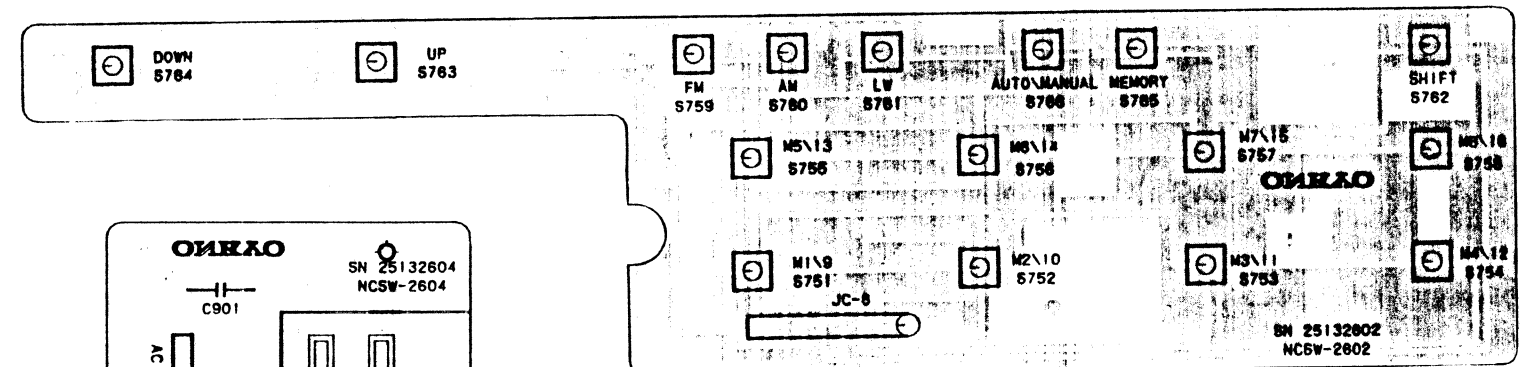
DISPLAY PC BOARD

DISPLAY PC BOARD(NADIS-2601-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
		Fluorescent tube
Q751	212031	FIP-7G8D
		IC
Q752	222741451	74LS145
		L.E.Ds
D751 D753	225137CG	SEL2413CG
D755-D762	225137DG or	SEL2413DG or
D764	225137DY	SEL2413DY
D754	225148	SEL2913K
D763	225141	SEL2213C
		Holders
	27190370-1	LED-3
	27190441	LED-11

FUNCTION SWITCH PC BOARD(NASW-2602-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION
S751 S766	25035389	NPS-111-S353.Push switches



FUNCTION SWITCH PC BOARD

MUTING SWITCH PC BOARD(NASW-2603-1)

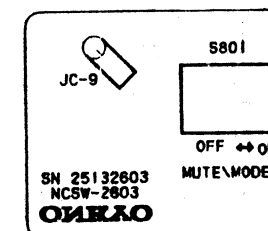
CIRCUIT NO.	PART NO.	DESCRIPTION
S801	25035372	NPS-122-L336.Push switch

POWER SWITCH PC BOARD(NASW-2604-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION
C901	3500065A	ΔDE7150FZ103PAC400V/125V, Capacitor IS
C901a	27300601	ΔSB-1925.Cover.capacitor
S901	25035295	ΔNPS-111-L261P.Power switch
	25060092	NTM-1S33.Terminal GND

NOTE:THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBERS SPECIFIED.

POWER SWITCH PC BOARD



MUTING SWITCH PC BOARD

SCHEMATIC DIAGRAM

—Worldwide model—

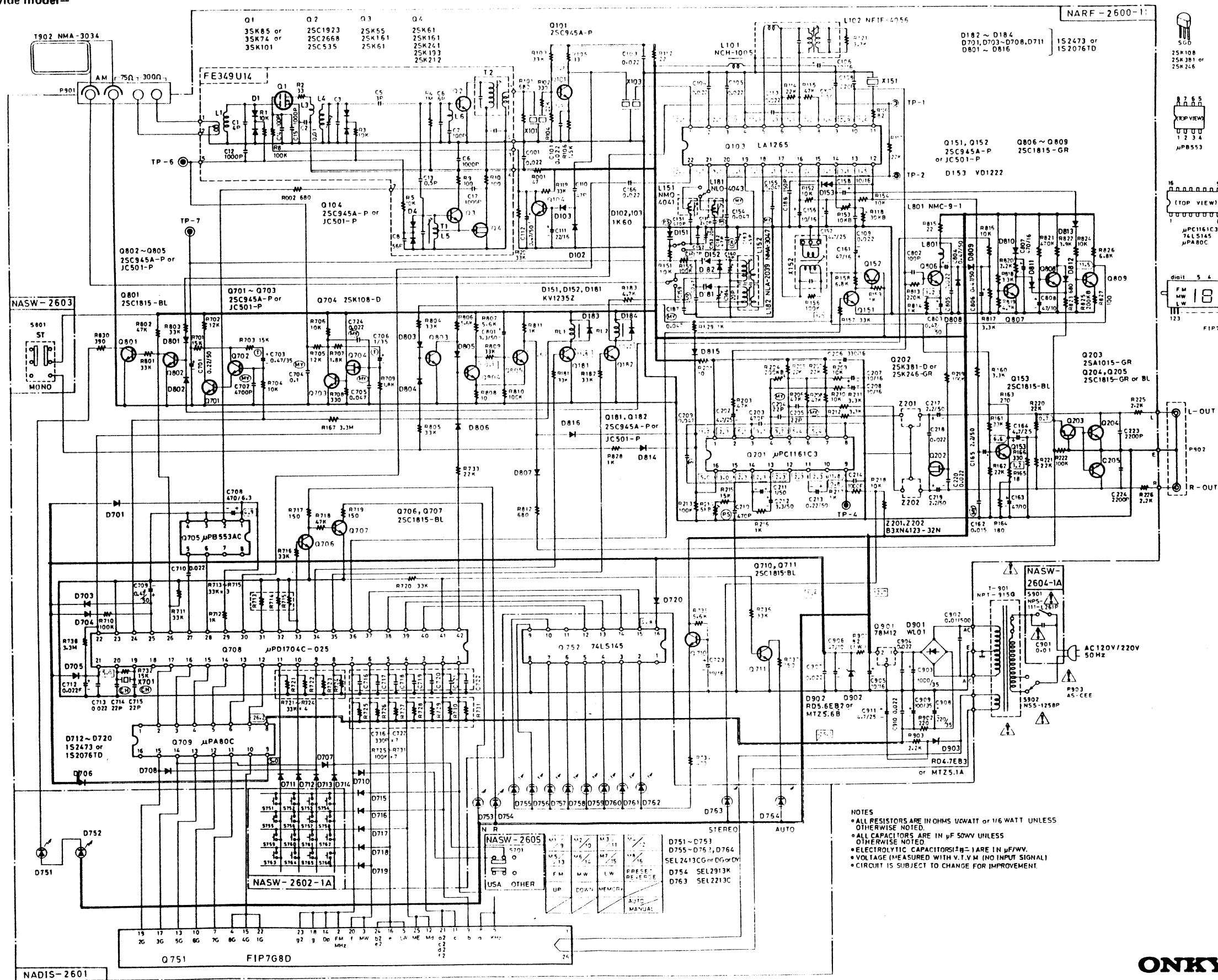
A

B

C

D

E



- NOTES
- ALL RESISTORS ARE IN OHMS UNLESS OTHERWISE NOTED.
 - ALL CAPACITORS ARE IN μF UNLESS OTHERWISE NOTED.
 - ELECTROLYTIC CAPACITORS ARE IN $\mu F/VV$.
 - VOLTAGE (MEASURED WITH V.T.V.M. (NO INPUT SIGNAL))
 - CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

ONKYO CORPORATION

PRINTED CIRCUIT BOARD-PARTS LIST

MAIN PC BOARD(NARF-2600-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
Front end		
TU001	240061	FE349U14 <W>
	240059	FE416U33 <G>
ICs		
Q103	222912	LA1265
Q201	222678	μ PC1161C3
Q705	222619	μ PB553AC
Q708	222763	μ PD1704C-025
Q709	222801	μ PA80C
Q901	222780122	78M12
Transistors		
Q101	2210746	2SC945A(P) <W>
Q101	2211723	2SC1923(O) <G>
Q102	2210746	2SC945A(P) <G>
Q104,Q151	2210746 or	2SC945A(P) or
Q152	2212484	JC501(P)
Q153	2211256	2SC1815(BL)
Q181,Q182	2211256	2SC1815(BL)
Q202	2212304 or	2SK381(D) or
	2211945	2SK246(GR)
Q203	2211455	2SA1015(GR)
Q204,Q205	2211255 or	2SC1815(GR) or
	2211256	2SC1815(BL)
Q701,Q702	2210746 or	2SC945A(P) or
	2212484	JC501(P)
Q703	2210746 or	2SC945A(P) or
	2212484	JC501(P)
Q704	2212294	2SK108(D)
Q706,Q707	2211256	2SC1815(BL)
Q710,Q711	2211256	2SC1815(BL)
Q801	2211256	2SC1815(BL)
Q802-Q805	2210746 or	2SC945A(P) or
	2212484	JC501(P)
Q806-Q809	2211255	2SC1815(GR)
Diodes		
D102,D103	223132	1K60
D151,D152	223158	KV1235Z
D181		
D153	4000068	VD1222
D182-D184	223150,	US1040,
D701	223124 or	1S2473 or
D703-D708	223145	1S2076TD
D711-D720	223150,	US1040,
D801-D816	223124 or	1S2473 or
	223145	1S2076TD
D710	223150,	US1040,
	223124 or	1S2473 or
	223145	1S2076TD <W>
D901	223862	WL01
D902	2243152 or	MTZ5.6B or
	2239472	RD5.6EB2
D903	2239433	RD4.7EB3
Coils		
L001	233312	NFA-3051 <G>
L101	233105	NCH-1005
L151	232126	NMO-4041
L152	232111	NMA-3047
L181	231095	NLO-4043
L182	232092	NLA-2039
L201	233236	NMC-6027 <G>
L202,L203	233294	NMC-5040 <G>
L801	233031	NMC-9-1

CIRCUIT NO.	PART NO.	DESCRIPTION
Transformer		
L102	233351	NFIF-4056
Ceramic filters		
X101,X103	3010071	SFE10.7MA5 <W>
X101-X103	3010043	SFE10.7MM <G>
X151	3010076	BFU450C
X152	3010075	SFL450B3 <W>
X152	3010058	BCFLZ450A <G>
X'tal		
X701	3010091	XTL4.5M
Filters		
Z201,Z202	3020016	B3 $\times$ N4123-32N <W>
Capacitors		
C106	352741009	10 μ F,16V,Elect.
C107	352780109	1 μ F,50V,Elect.
C111	352742209	22 μ F,16V,Elect.
C112	352784799	0.47 μ F,50V,Elect.
C151	370134714	470pF $\pm$ 5%,100V,APS
C153,C160	3060010	NTC-20P09,Trimmer
C154	352780109	1 μ F,50V,Elect.
C156	352741009	10 μ F,16V,Elect.
C157	352750479	4.7 μ F,25V,Elect.
C158	352741009	10 μ F,16V,Elect.
C161	352744709	47 μ F,16V,Elect.
C163	352734709	47 μ F,10V,Elect. <W>
C163	352721019	100 μ F, 6.3V,Elect. <G>
C164	352750479	4.7 μ F,25V,Elect.
C165	352780229	2.2 μ F,50V,Elect.
C181	370132414	240pF $\pm$ 5%,100V,APS
C183	3060011	NTC45P10,Trimmer
C184	3060010	NTC20P09,Trimmer
C202	352750479	4.7 μ F,25V,Elect.
C206	352743319	330 μ F,16V,Elect.
C207,C208	352741009	10 μ F,16V,Elect.
C210	370134714	470pF $\pm$ 5%,100V,APS
C211	352780109	1 μ F,50V,Elect.
C212	352780339	3.3 μ F,50V,Elect.
C213	352782299	0.22 μ F,50V,Elect.
C217,C219	352780229	2.2 μ F,50V,Elect.
C701	352782299	0.22 μ F,50V,Elect.
C703	395164797	0.47 μ F,35V,Tantalum
C706	395160107	1 μ F,35V,Tantalum
C708	352724719	470 μ F, 6.3V,Elect.
C709	352784799	0.47 μ F,50V,Elect.
C712	3020017	0.022F,5V,Super
C716-C722	3020024	B8 $\times$ C0116-32N,Block
C723	352741009	10 μ F,16V,Elect.
C801	352780339	3.3 μ F,50V,Elect.
C803,C804	352784799	0.47 μ F,50V,Elect.
C806	352784799	0.47 μ F,50V,Elect.
C807	352744719	470 μ F,16V,Elect.
C808	352734709	47 μ F,10V,Elect.
C903	352761029	1,000 μ F,35V,Elect.
C905	352741009	10 μ F,16V,Elect.
C906	352734709	47 μ F,10V,Elect.
C908	352762219	220 μ F,35V,Elect.
C909	352761019	100 μ F,35V,Elect.
C911	352750479	4.7 μ F,25V,Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
Resistors		
R118	5215062	N08HR30KBC,Semi-fixed
R153	5215045	N08HR10KBC,Semi-fixed
R204	5215048	N08HR200KBC,Semi-fixed
R214	5215044	N08HR5KBC,Semi-fixed
R713-R715	49121333403	33kohm $\times$ 3,1/8W,Network
R721-R724	49121333404	33kohm $\times$ 4,1/8W,Network
R725-R731	49121104407	100kohm $\times$ 7,1/8W,Network
R825	5215048	N08HR200KBC,Semi-fixed
R901	441628204	82ohm,1W,Metal oxide film
Relaies		
RL1	25065174	NRL-2P1A-DC12-09
RL2	25065092	NRL-1P1A-DC12-04

NOTE:<G>:Only 220V and 240V models
<W>:Only Worldwide model

-MEMO-

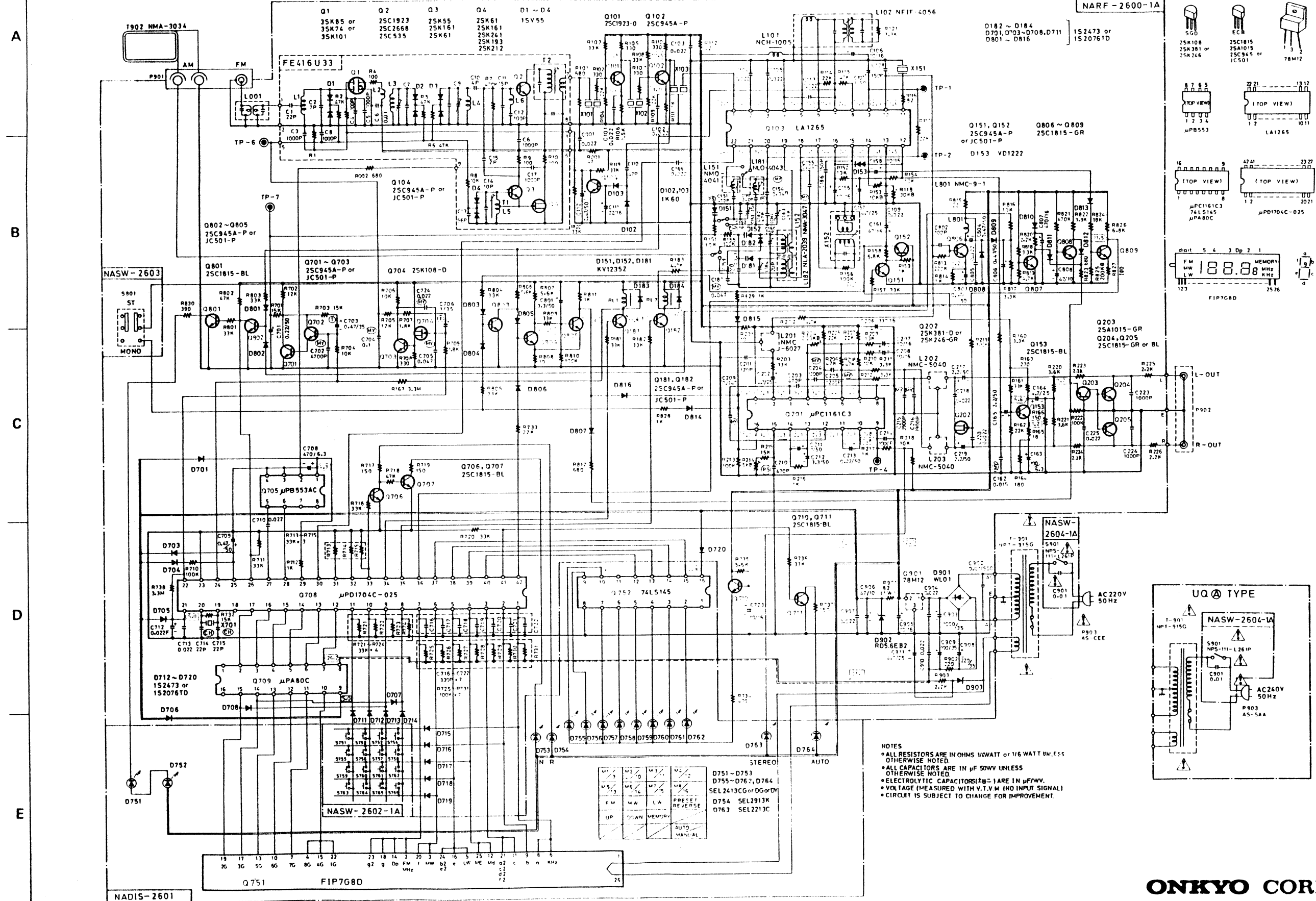
CIRCUIT NO.	PART NO.	DESCRIPTION
Radiator		
	27160179	RAD-57
Screw		
	834430068	3TTS+6B(BC),Tapping,Radiator
Terminals		
P901	25060085	NTM-4PDMN29,Antenna <W>
P901	25060087	NTM-2PDMN31,Antenna <G>
P902	25045141	NPJ-2PDBL54,Output

BAND SELECTOR SWITCH PC BOARD(NASW-2605-1)
(Only Worldwide model)

CIRCUIT NO.	PART NO.	DESCRIPTION
S701	25065267	NSS-22109,Slide switch

SCHEMATIC DIAGRAM

-220V MODEL-



ONKYO CORPORATION