

ONKYO® SERVICE MANUAL

STEREO CASSETTE TAPE DECK MODEL TA-2015

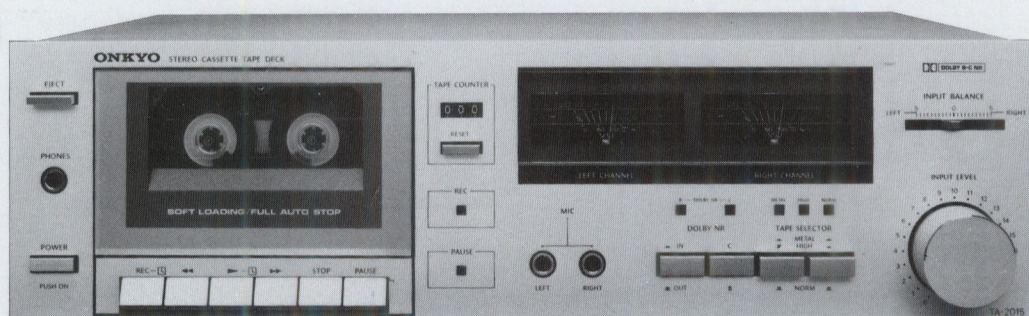


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ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

D model

Track Format:	4-track, 2-channel stereo
Recording System:	AC bias
Erasing System:	AC erase
Tape Speed:	4.8 cm/sec. (1-7/8 i.p.s.)
Wow & Flutter:	0.06% (WRMS)
Frequency Response:	20 – 15,000 Hz (30 – 14,000 Hz $\pm$ 3 dB) (normal position tape) 20 – 16,000 Hz (30 – 15,000 Hz $\pm$ 3 dB) (high position tape) 20 – 17,000 Hz (30 – 16,000 Hz $\pm$ 3 dB) (metal position tape)
Signal-to-Noise Ratio:	58 dB (Metal tape, Dolby NR Out) A noise reduction of 10 dB above 5 kHz and 5 dB at 1 kHz is possible with Dolby B NR. A noise reduction of 20 dB at 5 kHz is possible with Dolby C NR.
Input Jacks:	Microphone Jacks: 2 Minimum input level: 0.4 mV/600 Ω Input impedance: 5 k Ω Line In Jacks: 2 Minimum input level: 50 mV Input impedance: 50 k Ω
Output Jacks:	Line Out Jacks: 2 Standard output level: 350 mV (0 VU) Optimum load impedance: more than 50 k Ω Headphone Jack: 1 Optimum impedance: 8 – 200 Ω
Motor:	DC servo: 1
Heads:	Rec/PB head: Hard Permalloy Erase head: Ferrite
Semiconductors:	22 transistors, 13 diodes, 3 ICs, 7 LEDs
Power Supply:	AC 120 V/60 Hz
Power Consumption:	18 watts
Dimensions:	418(W) $\times$ 122(H) $\times$ 270(D) mm (16-1/2" $\times$ 4-13/16" $\times$ 10-5/8")
Weight:	4.8 kg. (10.6 lbs.)

* Specifications and external appearance are subject to change without prior notice due to product improvements.

G/W model

Track Format:	4-track, 2-channel stereo
Recording System:	AC bias
Erasing System:	AC erase
Tape Speed:	4.8 cm/sec. (1-7/8 i.p.s.)
Wow & Flutter:	0.06% (WRMS)
Frequency Response:	20 – 15,000 Hz (30 – 14,000 Hz $\pm$ 3 dB) (normal position tape) 20 – 16,000 Hz (30 – 15,000 Hz $\pm$ 3 dB) (high position tape) 20 – 17,000 Hz (30 – 16,000 Hz $\pm$ 3 dB) (metal position tape)
Signal-to-Noise Ratio:	58 dB (Metal tape, Dolby NR Out) A noise reduction of 10 dB above 5 kHz and 5 dB at 1 kHz is possible with Dolby B NR. A noise reduction of 20 dB at 5 kHz is possible with Dolby C NR.
Input Jacks:	Microphone Jacks: 2 Minimum input level: 0.4 mV/600 Ω Input impedance: 5 k Ω Line In Jacks: 2 Minimum input level: 50 mV Input impedance: 50 k Ω DIN In Jack: 1 Minimum input level: 0.1 mV/1 k Ω Input impedance: 2.7 k Ω
Output Jacks:	Line Out Jacks: 2 Standard output level: 350 mV (0 VU) Optimum load impedance: more than 50 k Ω DIN Out Jack: 1 Standard output level: 350 mV (0 VU) Optimum load impedance: more than 50 k Ω Headphone Jack: 1 Optimum impedance: 8 – 200 Ω
Motor:	DC servo: 1
Heads:	Rec/PB head: Hard Permalloy Erase head: Ferrite
Semiconductors:	24 transistors, 13 diodes, 3 ICs, 7 LEDs
Power Supply:	AC 220 V/50 Hz, 120 V/220 V 50/60 Hz or 240 V/50 Hz
Power Consumption:	18 watts
Dimensions:	418(W) $\times$ 122(H) $\times$ 270(D) mm (16-1/2" $\times$ 4-13/16" $\times$ 10-5/8")
Weight:	4.8 kg. (10.6 lbs.)

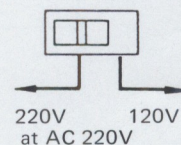
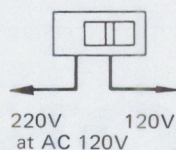
* Specifications and external appearance are subject to change without prior notice due to product improvements.

CAUTION

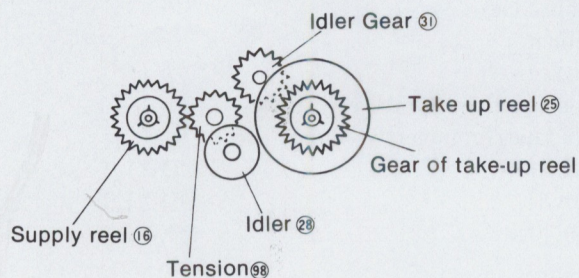
Voltage Selector (on back Panel)

W model is equipped with a voltage selector. If the unit you own has a voltage selector, be sure it is set to the proper voltage before the power is turned on. To change the selector to conform to the power supply in your area, insert the tip of a screwdriver in the groove of the switch and slide it all the way to the left or right.

Note: Units not equipped with a voltage selector can only be used in areas where the power supply agrees with the voltage specified on the back panel.



MECHANISM OPERATION



PLAY

When the play button is pressed, the button lever 52 applies pressure to the select cam 92. At the same time, the cam plate 50 slides to move the start lever 108 which releases the lock of the operating gear 107 so the flywheel gear 89 rotates the operating gear. At the cam section of the operating gear, the slide panel assembly 74 slides so that the select cam 92 pushes the play panel 81 up to lock the play panel with the lock panel assembly 70. Along with the play panel 81, movement is transmitted to the brake panel 94, then sensor arm A 119, sensor arm B 118, sensor arm C 104 and finally to the sensor 101. At the same time, the play panel 81 operates the head base 13, which then operates the idler assembly 98 causing the take-up reel to begin rotating.

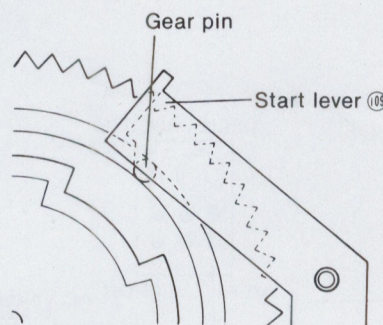
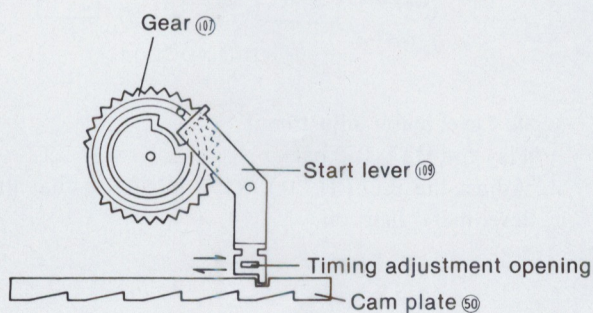
The order of operation for FF, REW, PAUSE and STOP is basically the same.

ADJUSTMENT PROCEDURES

Mechanism adjustment

1. Timing adjustment

As shown in the diagrams below, adjust the start lever timing so that the tip of the start lever clasp is slightly below the center of the gear pin when one of the tape transport buttons is held down until the gear is activated.



PLAY torque 35 ~ 70g/cm
FF torque 70 ~ 140g/cm
REW torque 70 ~ 140g/cm

ADJUSTMENT PROCEDURES

PRECAUTIONS

- Before adjustment, clean the following parts with an alcohol moistened swab.
 - * record/playback head
 - * pinch roller
 - * rubber belt
 - * erase head
 - * capstan
- Do not use magnetized screwdriver for adjustments.
- Demagnetize record/playback head with a head demagnetizer.
- The switches and controls should be set as follows unless otherwise specified.

TAPE SEL NORM
 DOLBY NR OUT
 INPUT LEVEL 0
 TIMER OFF

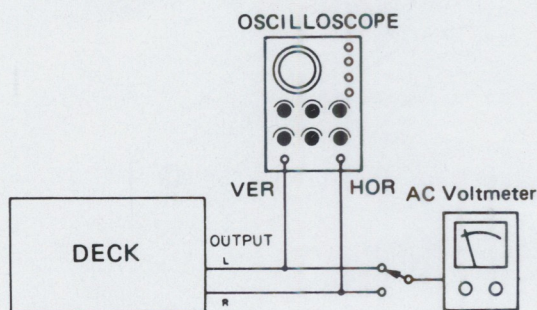
1. Tape speed adjustment

Connect the frequency counter to the line output terminal. Play the MTT-111 back.

Adjust the semi-fixed resistor on the motor control pc board so that the counter indication becomes 3,000 Hz.

2. Head azimuth adjustment

- Play the test tape VTT-658 back.
- Adjust the head azimuth screw so that the phase relationship between L and R-channels approximates 0 degrees as indicated on the oscilloscope.
- At this time confirm that playback output level is approximately the maximum value on the AV voltmeter.
- Then confirm that the phase difference of the respective frequency is within the rated value 90 degrees or less in the range of 40 Hz to 10 kHz is required.
- Secure the screw with the locking paint.



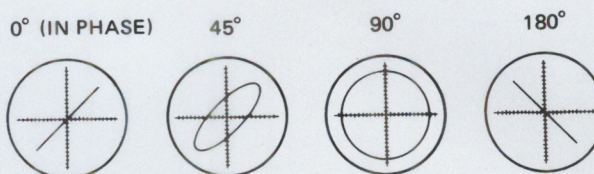
TEST EQUIPMENT/TOOLS REQUIRED:

Audio oscillator
 Digital frequency counter
 Oscilloscope
 Attenuator
 AC voltmeter
 Non-magnetic screw driver
 Blank tapes (completely erased)

NORMAL	UD-XL/I
HIGH	UD-XL/II
METAL	MX

Test tapes

VTT-658	: 10 kHz, - 15 dB
MTT-111	: 3 kHz, - 10 dB
MTT-150	: Dolby level calibration 400 Hz tone 200 nWb/m
TW-2111	: Torque meter



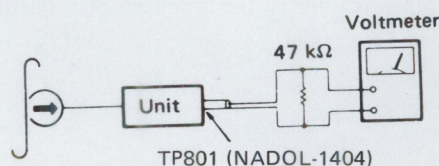
Confirming phase relationship

3. Playback output level adjustment

Connect the AC voltmeter to the TP801 terminals.

Play the MTT-150 back.

Adjust the R127 and R128 so that the indication of AC voltmeter becomes 580 mV.



4. Level meter adjustment

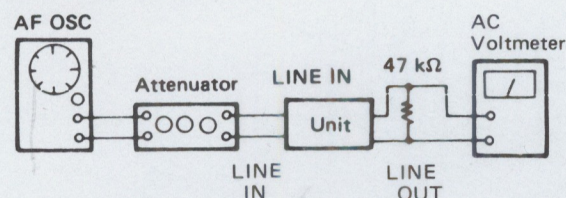
Play the MTT-150 back.

Adjust the R177 (LCH), R178 (RCH) so that the +3VU of level meter light on.

5. Bias current adjustment

Insert the normal blank tape into the cassette holder. Apply the 400 Hz signal to the line input terminal. Press the rec and pause button together and set the tape deck to the recording mode. Adjust the input level volume or AF oscillator so that the 0 dB of level meter light on. Reduce the input level by 20 dB with the attenuator. Record the 400 Hz and 10 kHz signals on the tape. Adjust the R181 and R182 so that the 400 Hz and 10 kHz playback signal become the same level.

Connection diagram

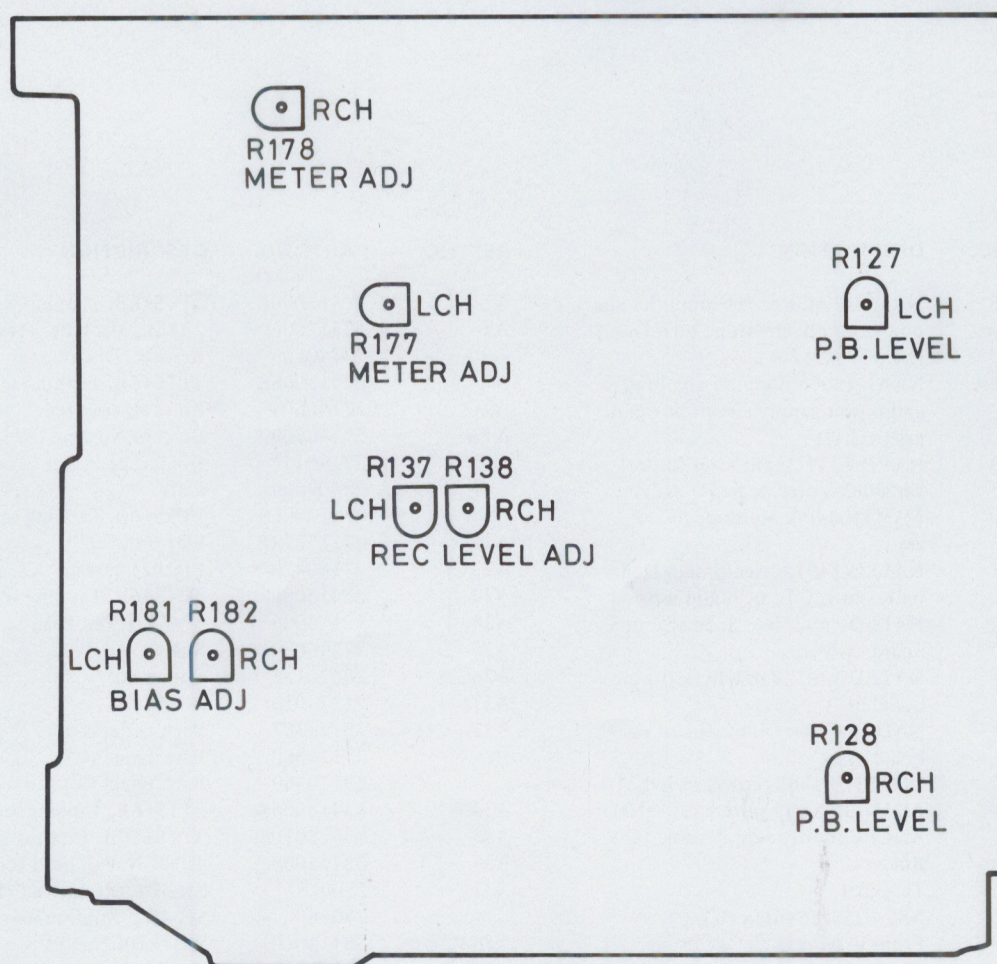
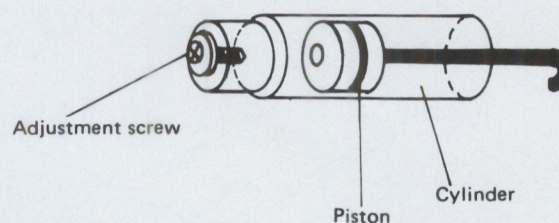


6. Recording level adjustment

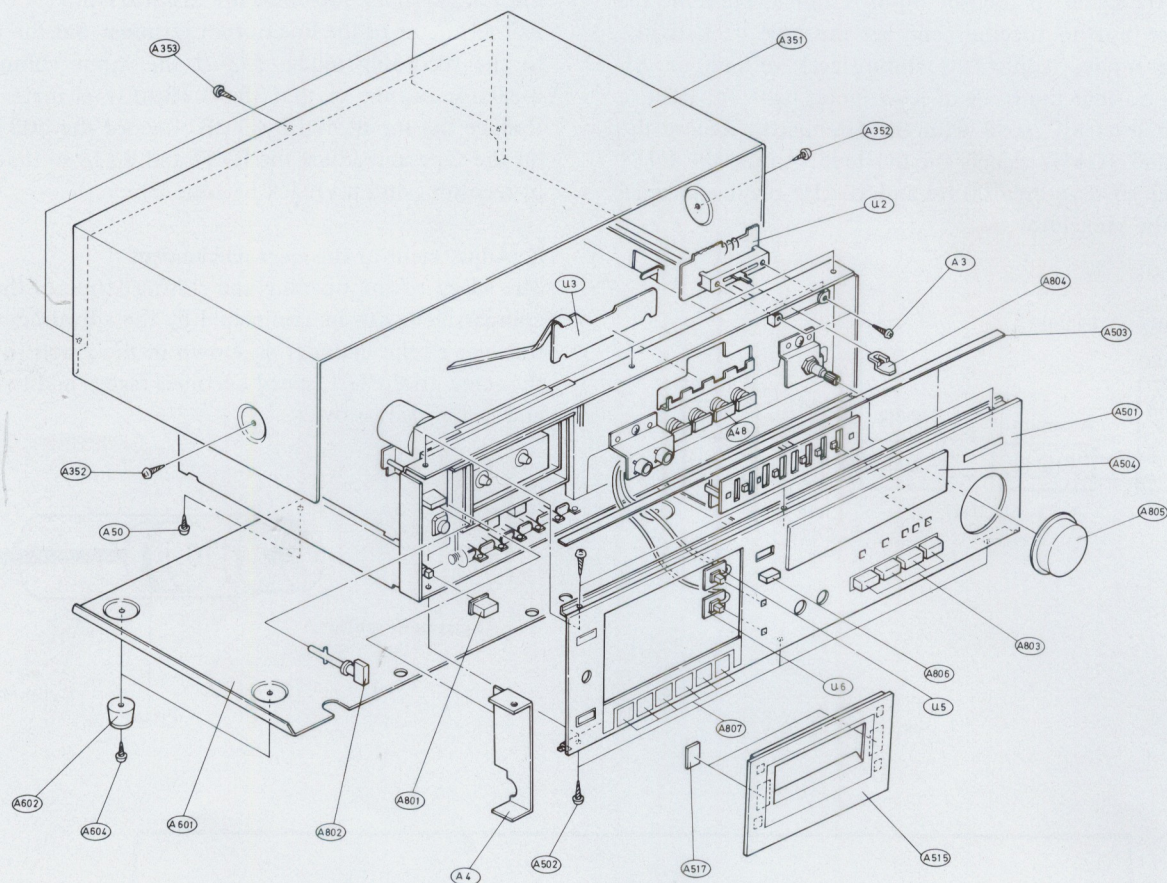
Apply the 700 Hz signal to the line input terminal. Insert the normal blank tape into the cassette holder. Connect the AC voltmeter to the line output terminal. Set the tape deck to the recording mode. Adjust the input volume or AF oscillator output so that the 0 dB of level meter light on. Reduce the input level by 3 dB. Record the 700 Hz signal on the tape and adjust the R137 and R138 so that the level of recording and playback become same.

8. Adjustment of the eject mechanism

The speed of the opening and closing action of the cassette compartment can be controlled by the adjustment screw at the rear of the cylinder as shown in the graph. By turning the screw to the left, speed becomes faster, and to the right, and to the right, slower.

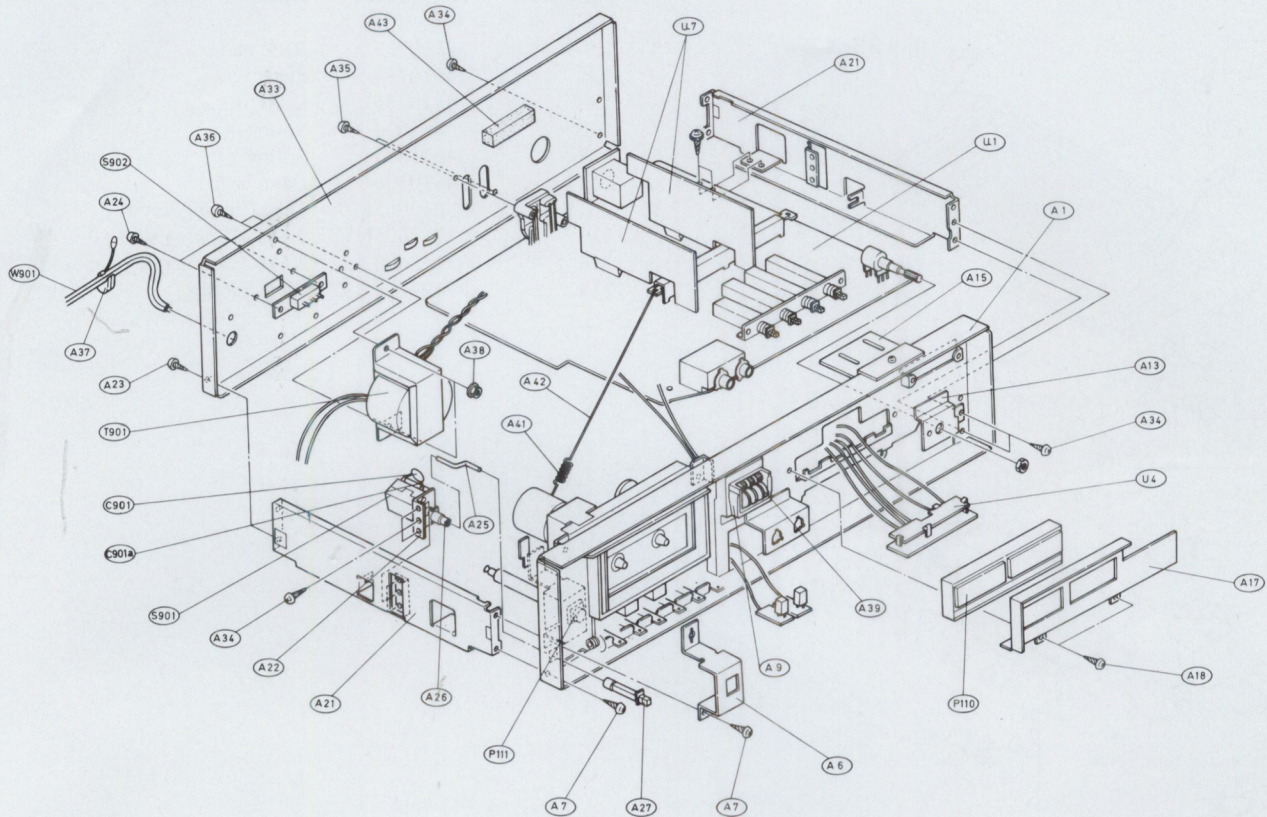


EXPLODED VIEW



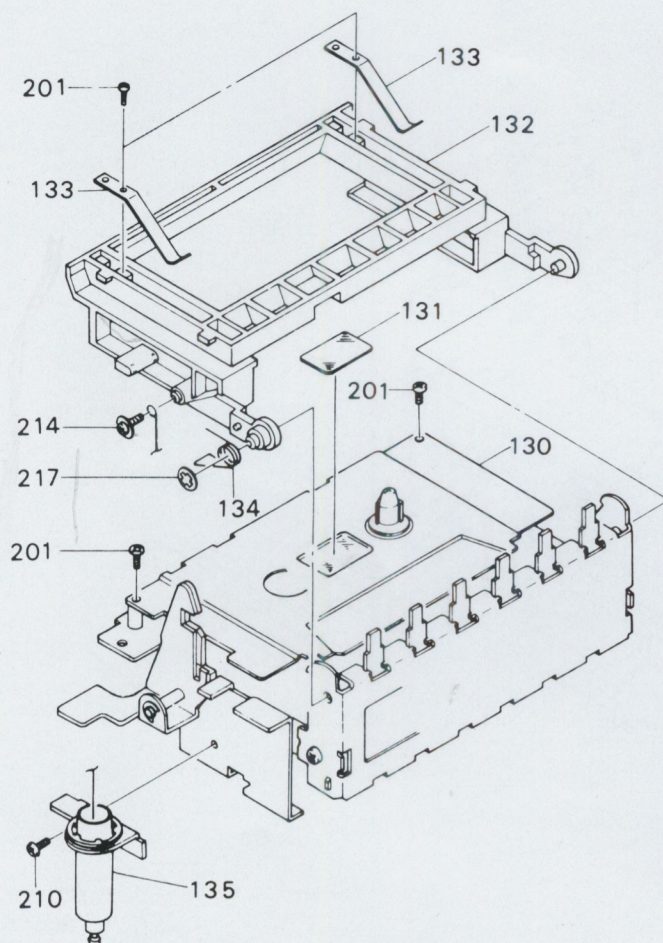
PARTS LIST

REF. NO.	PARTS NO.	DESCRIPTION	REF. NO.	PARTS NO.	DESCRIPTION
U1	16138598	NAAF-1398, Rec./pb amplifier and power supply circuit pc board ass'y (D)	A2	834130068	3TTS+6B, Tapping screw
	16144598A	NAAF-1398a, Rec./pb amplifier and power supply circuit pc board ass'y (G/W)	A3	82512006	2B+6F, Machine screw
U2	16138599	NAVR-1399, Input level control variable resistor pc board ass'y	A6	27140605	Bracket, headphone
U3	16138500	NAMTR-1400, Meter pc board ass'y	A7	834130068	3TTS+6B, Tapping screw
U4	16138501	NALED-1401, Selector and Dolby indicator L.E.D. pc board ass'y	A9	27140604	Bracket, counter
U5	16138502	NALED-1402, Rec. indicator pc board ass'y	A13	27140603	Bracket, volume
U6	16138503	NALED-1403, Pause indicator pc board ass'y	A15	27190155	Holder, pc board
U7	16138504	NADOL-1404, Dolby circuit pc board ass'y	A17	28400069	Plate
S901	25035224	NPS-121-L188P, Power switch (D)	A18	834130068	3TTS+6B, Tapping screw
W901	253099A	AS-UC-3, Power supply cable (D)	A21	27115079B	Side bracket
	253083	AS-CEE, Power supply cable (G/W)	A22	27140478	Bracket, power
	260208	Binder	A23	834130068	3TTS+6B, Tapping screw
	27300352	Terminal	A24	82113006	3P+6FN, Pan head screw
S902	25065123	NSS-1258P, Switch (W)	A25	27260080	Shaft
A1	27110157-1	Front bracket	A26	28320135	Connector
A4	29095211	Sheet	A27	27273016	Joint
			A33	27120387	Back panel (D)
				27120388	Back panel (G)
				27120389-1	Back panel (W)
			A34	834130068	3TTS+6B, Tapping screw
			A35	834130108	3TTS+10B, Tapping screw
			A36	82114008	4P+8FN, Pan head screw
			A37	270025	SR-3P4, Strainrelief (D)
				270280	SR-4K4, Strainrelief (G/W)
			A38	86414010	WN4x10FN, Nut
			A39	24601101	Counter



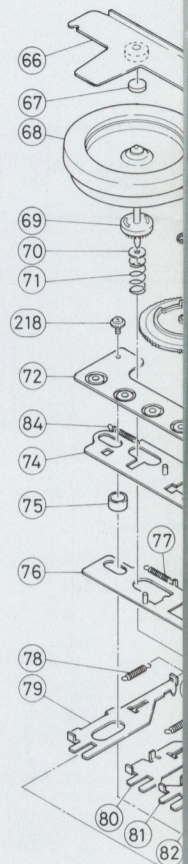
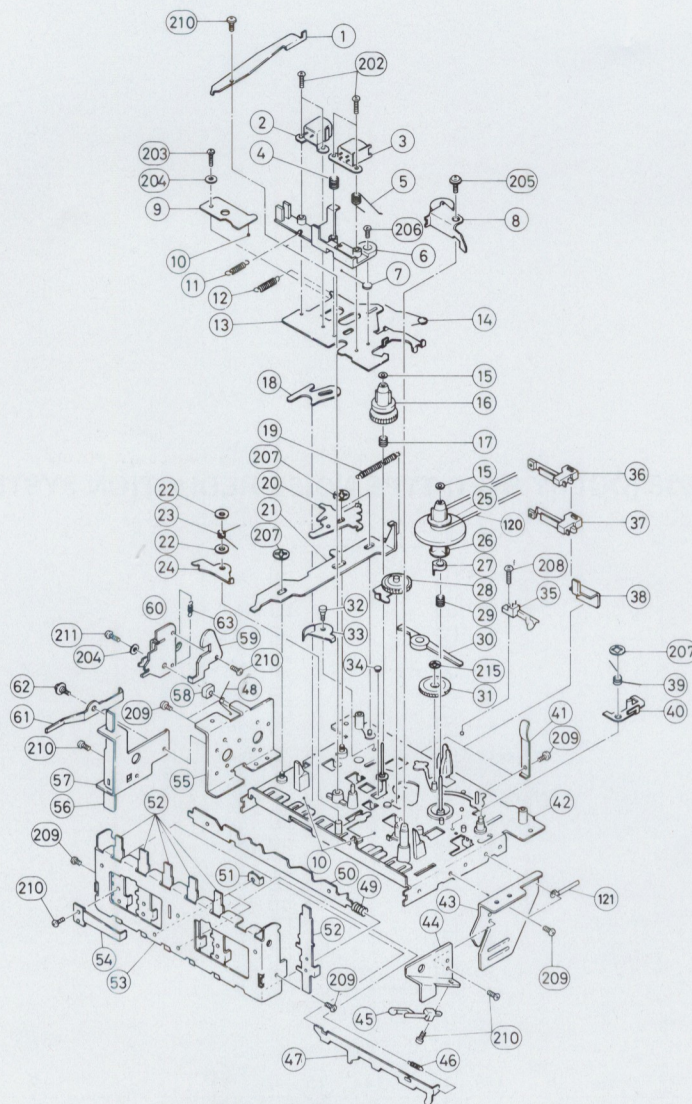
REF. NO.	PARTS NO.	DESCRIPTION
A41	27180078A	Spring
A42	27180134	Spring
A43	28140291	Cushion
A48	27190123A	Holder, switch
A50	831130068	3TTW+6B, Tapping screw
A351	28184091-1	Top cover
A352	834430068	3TTS+6B (BC), Tapping screw
A353	834130088	3TTS+8B, Tapping screw
A501	16138121	Front panel ass'y
A502	838130088	3TTB+8B, Tapping screw
A503	28140024	Cushion
A504	28191069-1	Clear plate
A515	28400057B	Lid, cassette
A517	28140203	Cushion
A601	27170115A	Bottom board
A602	27175003A	Leg
A604	831130088	3TTW+8B, Tapping screw
A606	28140330	Cushion
A801	28320573	Knob, push
A802	28320692	Knob, eject
A803	28320574	Knob, selector
A804	28320484	Knob S
A805	28320543-1	Knob, volume
A806	28320693	Knob, counter
A807	28320673-1A	Knob, operation
C901	3500065A	0.01μF, AC400V, Capacitor IS

REF. NO.	PARTS NO.	DESCRIPTION
C901a	27300080	Cover, capacitor
P110	243142	NIND-0300S-142, Level meter
	210108	12V55mASKE-B011-03, Lamp, level meter
P111	2504567	NLJ-0279-01-070, Stereo headphone jack
T901	230624	NPT-784D, Power transformer (D) or NPT-724D
	230510	NPT-724G, Power transformer (G)
	230511	NPT-724DG, Power transformer (W)

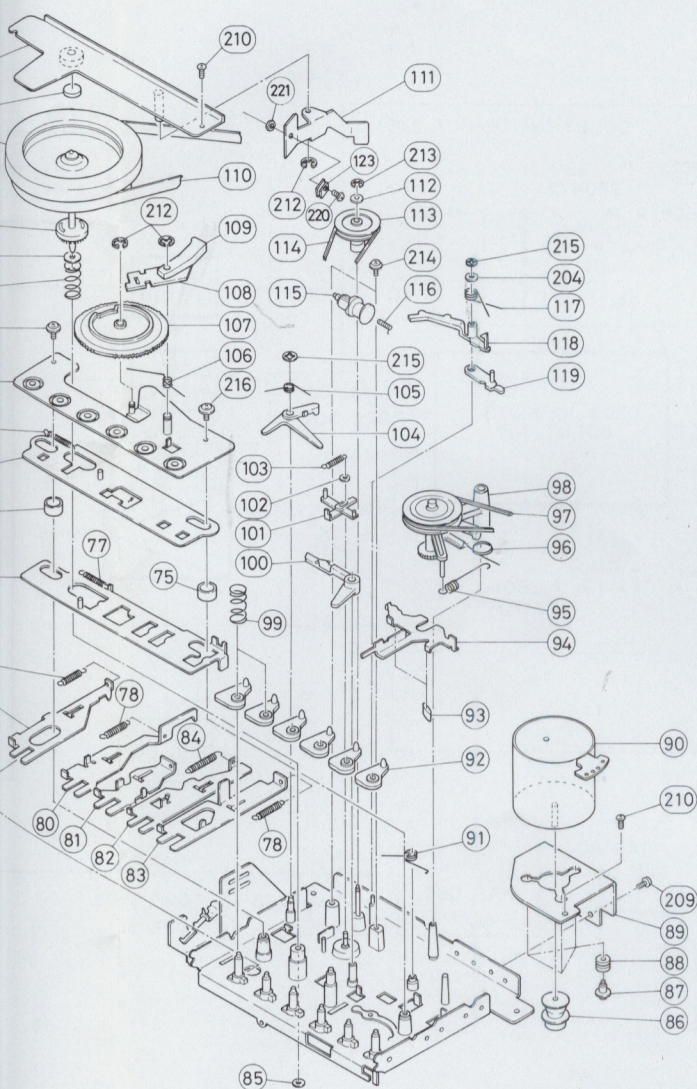


REF. NO.	PARTS NO.	DESCRIPTION
130	24610733	Back plate
131	24610734	Plate
132	24610735	Cassette case
133	24605334	Spring
134	24605335	Spring
135	24610736	Damper
201	838120055	2x5, Tapping screw
210	833126056	2.6x5, Tapping screw
214	831126062	2.6x6, Tapping screw
217	8910410	CS-4, Circlip

MECHANISM -EXPLODED VIEW



NO.	PARTS CORD	PARTS NAME	NO.	PARTS CORD	PARTS NAME
1	24603209A	Switch lever	24	24610693	Protector
2	24600027	Erase head	25	24602051	T.Reel ass'y
3	24600026	R/P head	26	24610694	Friction plate
4	24605136	C.Spring	27	24610224	Clutch plate
5	24605308	Pinch spring	28	24602139	Idler ass'y
6	24610689	Head stand	29	24605315	C.Spring
7	24605309	Spring	30	24610696	PAUSE arm
8	24610690	Pinch arm ass'y	31	24602140	Idler gear
9	24605336	Spring plate	32	801254	Screw
10	24610788	Steel ball	33	2461097	Breake sub plate
11	24605310	Spring	34	24610698	Guide roller
12	24605311	Spring	35	24603127	Leaf switch
13	24610691	Head base	39	24605316	Spring
14	24605312	Spring	40	24603088	Lock plate
15	24610782	Washer	41	24605317	Cassette holder
16	24602137	S.Reel	42	24610701	Chassis os ass'y
17	24605139	C.Spring	43	24610702	Side plate B
18	24603210	Lever	45	24603179	Leaf switch
19	24605337	Spring	46	24605318	Spring
20	24610692	STOP sub plate	47	24610704	Lock plate
21	24610740	REC inter plate	48	24605381	Spring
22	24610784	Washer	49	24605319	C.Spring
23	24605314	Spring	50	24610705	Cam plate

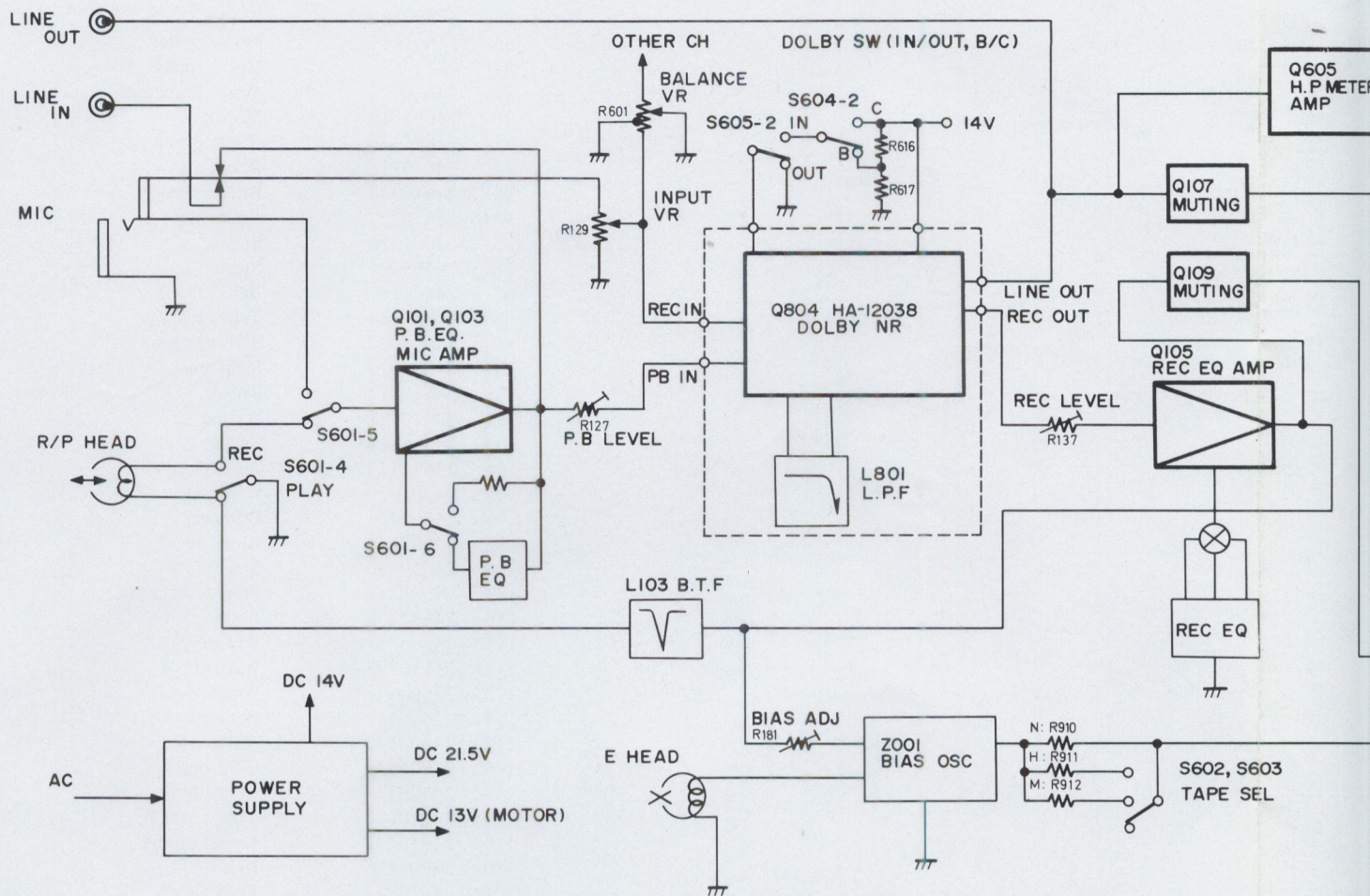


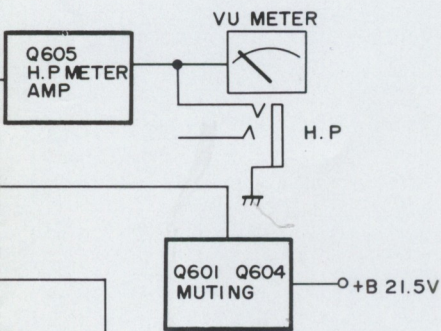
NO.	PARTS CORD	PARTS NAME
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51	24610706	Inter plate
52	24603214	Button lever
53	24610707	Button holder
54	24610741	Sub plate
55	24610798	Side plate A ass'y
59	24610710	EJECT plate
60	24610711	EJECT lock ass'y
63	24605368	Spring
66	24610743	Holder ass'y
67	24610715	Capstan support
68	24602141	Flywheel
69	24602142	FW gear
70	24610785	Washer
71	24605135	C.Spring
72	24610716	Sub plate ass'y
74	24610717	Slide plate ass'y
75	24610739	Collar
76	24610718	Lock plate ass'y
77	24605322	Spring
78	24605162	Spring
79	24610719	PAUSE plate
80	24610720	FF plate
81	24610721	PLAY plate

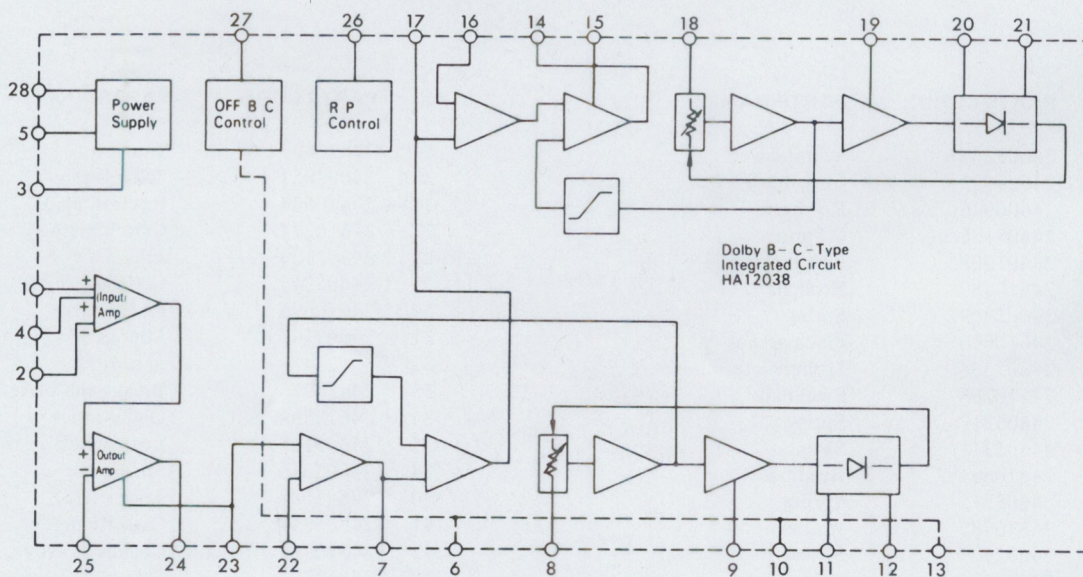
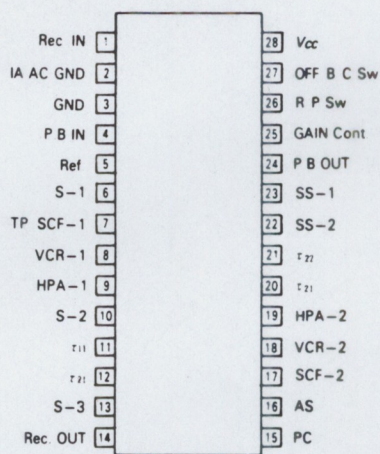
NO.	PARTS CORD	PARTS NAME
82	24610722	REW plate
83	24610744	REC plate
84	24605324	Spring
85	24610786	Washer
86	24601115	Motor pulley
87	801176	Motor screw
89	24610724	Motor bracket
90	24601116	Motor
91	24605325	Brake spring
92	24610725	Select arm
93	24610336	Brake cushion
94	24610727	Brake plate
95	24605326	Spring
96	24605327	Spring
97	24602167	Belt
98	24602144	Tension ass'y
99	24605328	Select arm spring
100	24603212	Stop lever
101	24610212	Sensor
102	24610787	Washer
103	24605329	Spring
104	24610729	Sensor arm C
105	24605330	C.Spring
106	24605331	C.Spring
107	24602145	Assist gear
108	24610730	Start plate
109	24603213	Start lever
110	24602168	Belt
111	24603217	REC lever
112	24610783	Washer
113	24602146	Worm
114	24602147	Belt
115	24602148	AS cam ass'y
116	24605332	C.Spring
117	24605333	C.Spring
118	24610731	Senser arm B
119	24610732	Senser arm A
120	24602176	Belt
121	24610810	Lead clamp
123	27140633	Plate
201	838120055	Tapping screw, M2x5
202	801253	Head screw, M2x11
203	833126106	DT.Screw, M2.6x10
204	8761280705	Washer
205	831126062	F.Tapping screw, M2.6x8
206	835126066	DT.Screw, M2.6x6
207	8910301	CS ring, CS-3
208	833120056	DT.Screw, M2x5
209	833130056	DT.Screw, M3x5
210	833126056	DT.Screw, M2.6x5
212	8930301	E ring, E-3
213	8930201	E ring, E-2
214	831126062	F.Tapping, M2.6x6
215	8910201	CS ring, CS-2
216	831130062	F.Tapping screw, M3x6
217	8910401	CS ring, CS-4
218	838120080	PLX.Screw, M2x8
220	82113008	Screw, M3x8
221	863130	Nuts, M3

BLOCK DIAGRAM



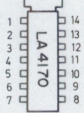
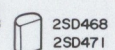
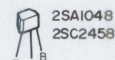
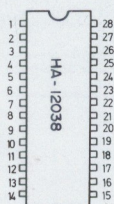
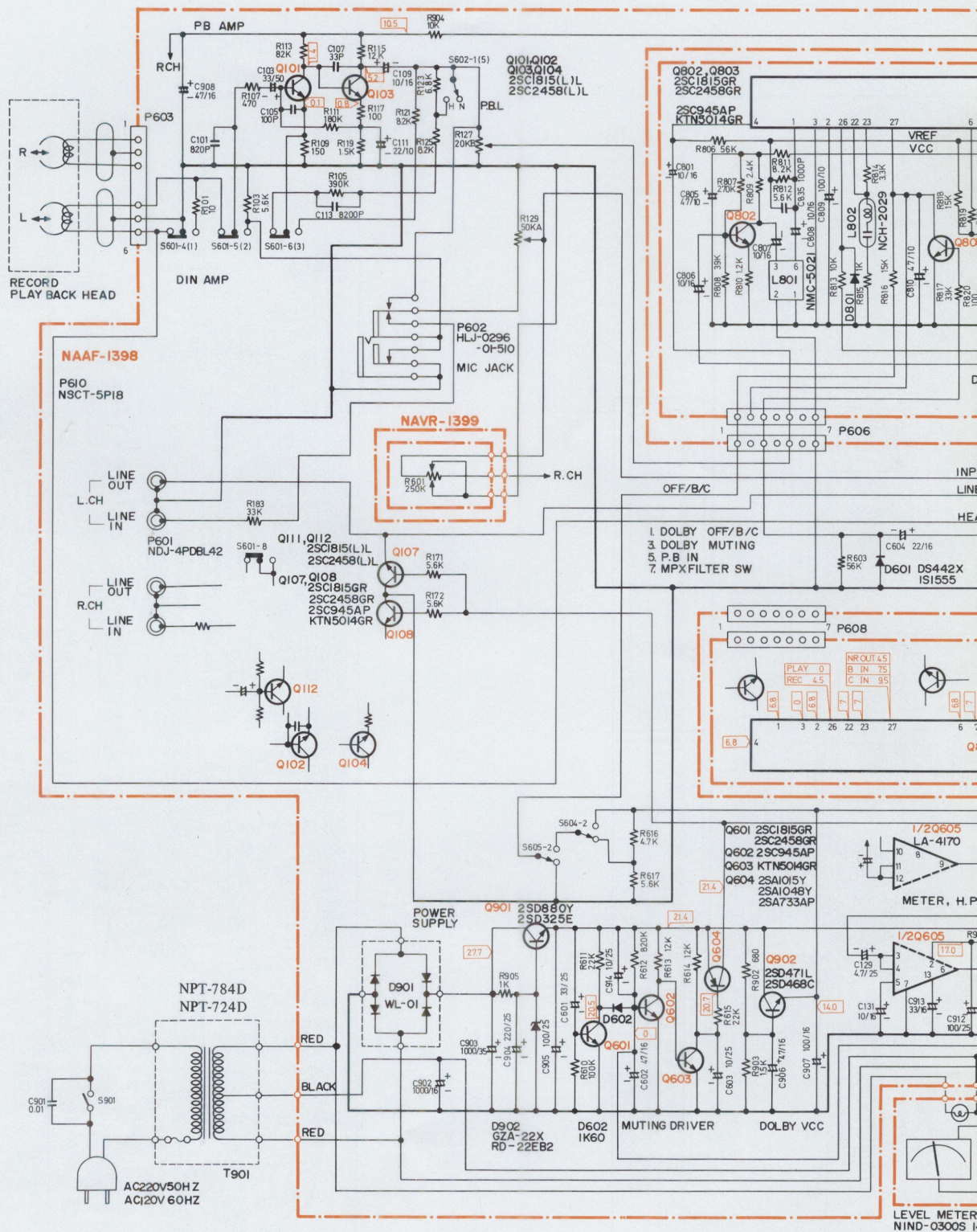


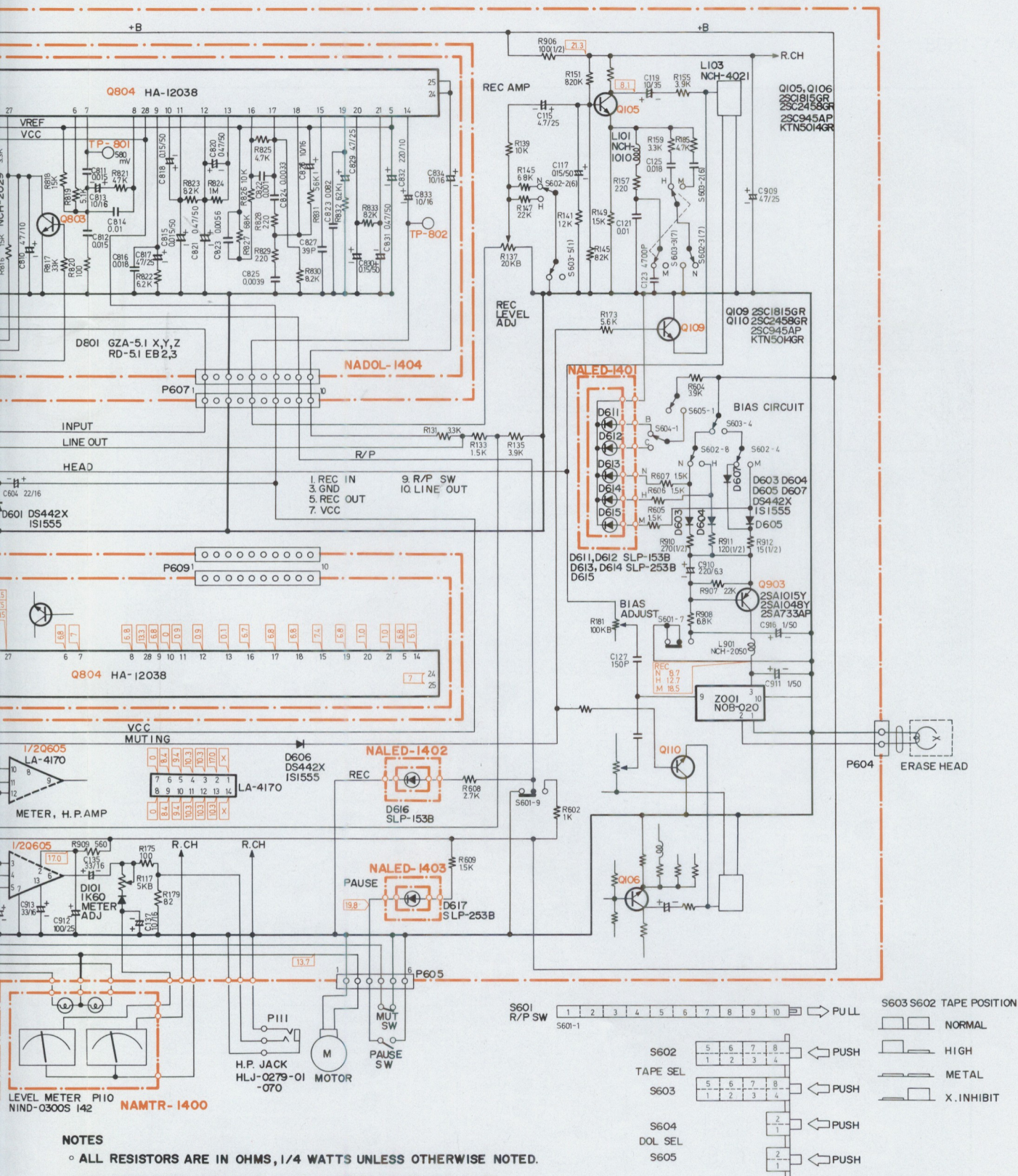
HA12038 (DOLBY B & C TYPE NOISE REDUCTION SYSTEM)



SCHEMATIC DIAGRAM

120V model



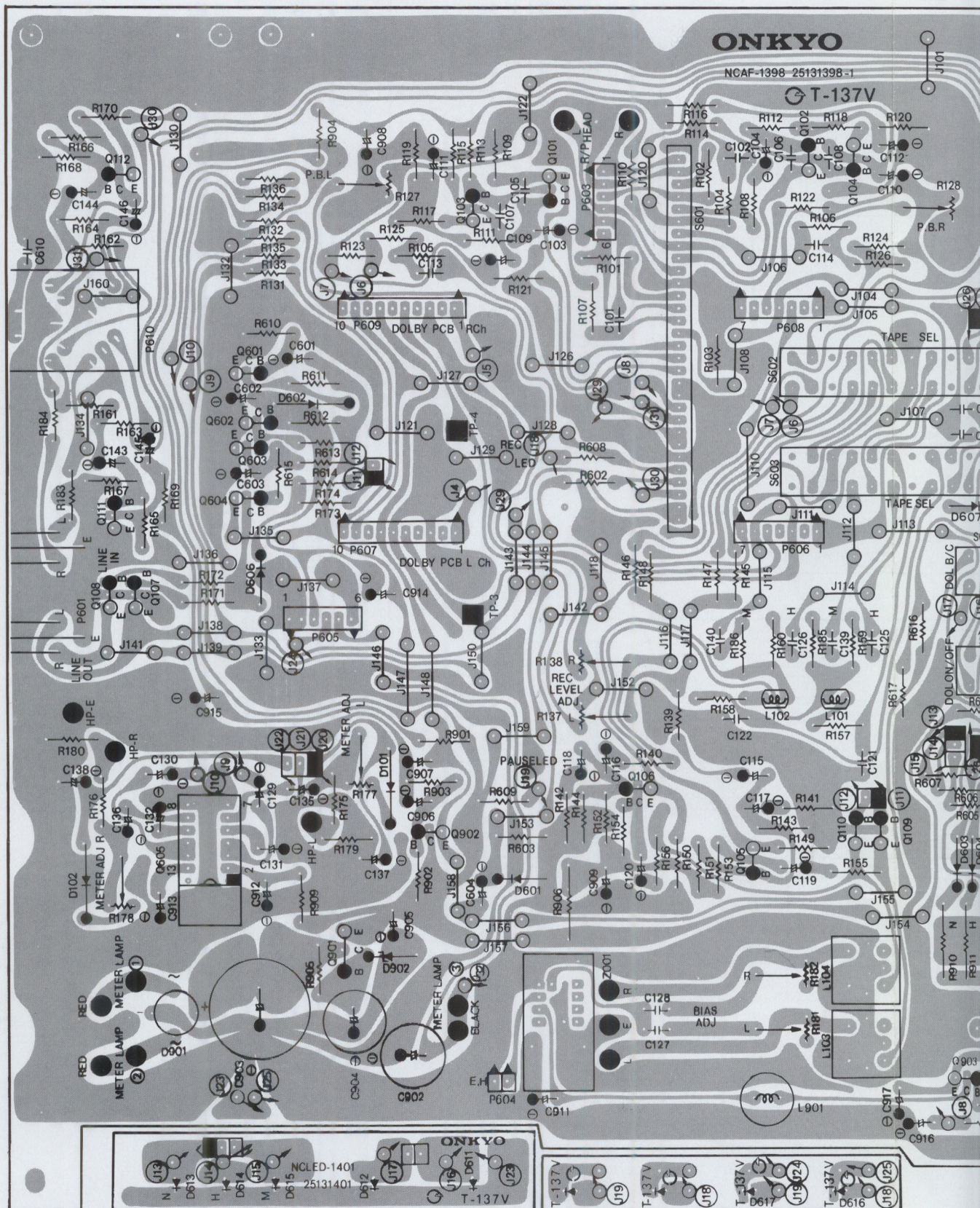


NOTES

- ALL RESISTORS ARE IN OHMS, 1/4 WATTS UNLESS OTHERWISE NOTED.
- ALL CAPACITORS ARE IN μ F, 50WV UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS ($\pm$ H $\pm$) ARE IN μ F/WV.
- VOLTAGE (MEASURED WITH V.T.V.M) $\square$ V IS DC VOLTAGE (NO INPUT SIGNAL)
- THIS CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

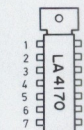
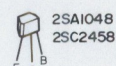
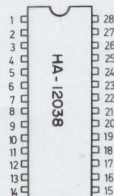
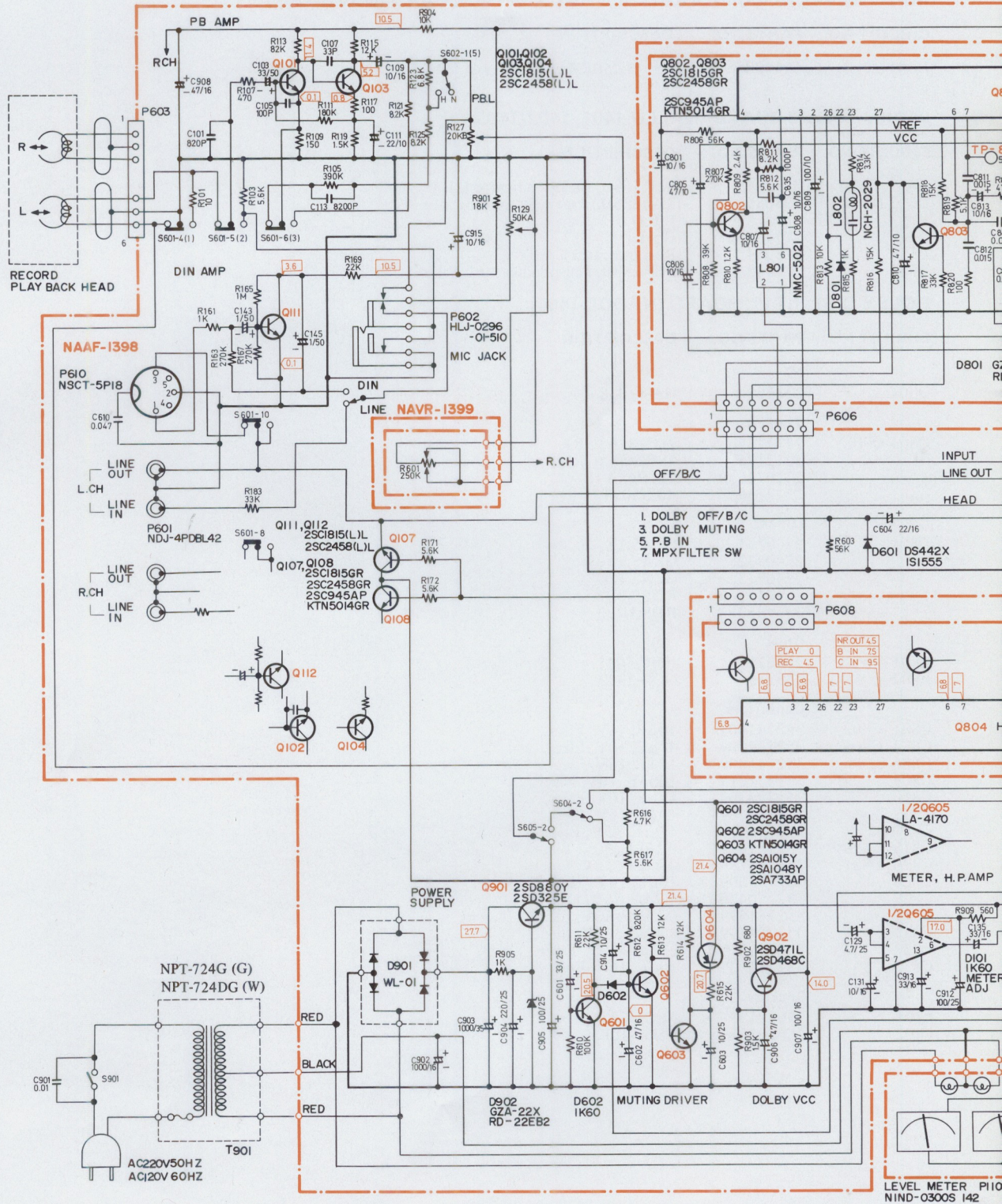
PRINTED CIRCUIT BOARD VIEW FROM COMPONENT SIDE

NAAF-1398



SCHEMATIC DIAGRAM

G/W model



NOTES

- ALL F
- ALL C
- ELEC
- VOLT.
- THIS



- ALL RESISTORS ARE IN OHMS, 1/4 WATTS UNLESS OTHERWISE NOTED.
- ALL CAPACITORS ARE IN μF , 50V UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS ($\frac{+}{-}$) ARE IN $\mu\text{F}/\text{WV}$.
- VOLTAGE (MEASURED WITH V.T.V.M) $\square \text{V}$ IS DC VOLTAGE (NO INPUT SIGNAL)
- THIS CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

PRINTED CIRCUIT BOARD-PARTS LIST

REC./PB AMPLIFIER AND POWER SUPPLY CIRCUIT PC BOARD (NAAF-1398)

CIRCUIT NO.	PARTS NO.	DESCRIPTION	CIRCUIT NO.	PARTS NO.	DESCRIPTION
Q101-Q104	2211896 or 2212256	2SC1815L (L) or 2SC2458 (L)		Switches	
Q105-Q110	2211255,	2SC1815 (GR),	S601	25065206	NSS-10291, Rec and playback
Q601-Q603	2212115, 2210746 or 2212155	2SC2458 (GR), 2SC945A (P) or KTN5014 (GR)	S602-S605	25035327	NPS-282-222-1291, Dolby, Tape selector
Q111, Q112	2211896 or 2212256	2SC1815L (L) or 2SC2458L (L)		Terminals	
Q604, Q903	2211454, 2212124 or 2210803	2SA1015 (Y), 2SA1048 (Y) or 2SA733AP	P601	25045084	NPJ-4PDBL42, Input/output
Q901	2201074 or	2SD880 (Y) or	P602	25045057	HLJ-0296-01-510, Mic.
Q902	2201035 2211612 or 2211683	2SD325 (E) 2SD471L or 2SD468 (C)	D610	25050064	NSCT-5P-18, DIN (G/W)
	IC			Plugs	
Q605	222534	LA-4170	P603	25055037	NPLG-6P28
	Diodes		P604	25055038	NPLG-2P29
D101, D102	223132	1K60	P605	25055037	NPLG-2P28
D601	223133 or	DS442X or	P606	25055066	NPLG-7P52
	223105	1S1555	P607	25055046	NPLG-10P34
D602	223132	1K60	P608	25055066	NPLG-7P52
D603-D607	223133 or	DS442X	P609	25055046	NPLG-10P34
	223105	1S1555			
D901	223862	WL-01			
D902	2241231 or 2239752	GZA-22X or RD-22EB2			
	Coils				
L101, L102	24606072	NCH-1010, 4.7mH			
L103, L104	233146	NCH-4021, Trap			
L901	233235	NCH-2050, 1mH			
	Block, osc.				
Z001	24606138	NOB-020			
	Capacitors				
C103, C104	392880337	3.3 μ F, 50V, LL			
C109, C110	352741009	10 μ F, 16V, Elect.			
C111, C112	352732209	22 μ F, 10V, Elect.			
C115, C116	352750479	4.7 μ F, 25V, Elect.			
C117, C118	352781599	0.15 μ F, 50V, Elect.			
C119, C120	352761009	10 μ F, 35V, Elect.			
C135, C136	352743309	33 μ F, 16V, Elect.			
C137, C138	352741009	10 μ F, 16V, Elect.			
C143-C146	352780109	1 μ F, 50V, Elect (G/W)			
C601	352753309	33 μ F, 25V, Elect.			
C602	352744709	47 μ F, 16V, Elect.			
C603	352751009	10 μ F, 25V, Elect.			
C604	352742209	22 μ F, 16V, Elect.			
C902	352741029	1,000 μ F, 16V, Elect.			
C903	352761029	1,000 μ F, 35V, Elect.			
C905	352751019	100 μ F, 25V, Elect.			
C904	352752219	220 μ F, 25V, Elect.			
C906, C908	352744709	47 μ F, 16V, Elect.			
C907	352741019	100 μ F, 16V, Elect.			
C909	352754709	47 μ F, 25V, Elect.			
C911	352780109	1 μ F, 50V, Elect.			
C912	352751019	100 μ F, 25V, Elect.			
C913	352743309	33 μ F, 16V, Elect.			
C914	35271009	10 μ F, 25V, Elect.			
C915	352741009	10 μ F, 16V, Elect.			
C916	352780109	1 μ F, 50V, Elect.			
	Resistors				
R127, R128	5215046	N08HR50KBC, Semi-fixed			
R129, R130	5148057	N16RGL50KA 35, Variable.			
R137, R138	5215022	N08HR20KBC, Semi-fixed			
R177, R178	5215044	N08HR5KBC, Semi-fixed			
R181, R182	5215047	N08HR100KBC, Semi-fixed			
R906	441521014	100 Ω , 1/2W, Metal oxide film			
R910	441522714	270 Ω , 1/2W, Metal oxide film			
R911	441521214	120 Ω , 1/2W, Metal oxide film			
R912	441521504	15 Ω , 1/2W, Metal oxide film			

INPUT LEVEL VOLUME VARIABLE RESISTOR PC BOARD (NAVR-1399)

CIRCUIT NO.	PARTS NO.	DESCRIPTION
R601	6142006	N30LL250KW15F, Variable resistor

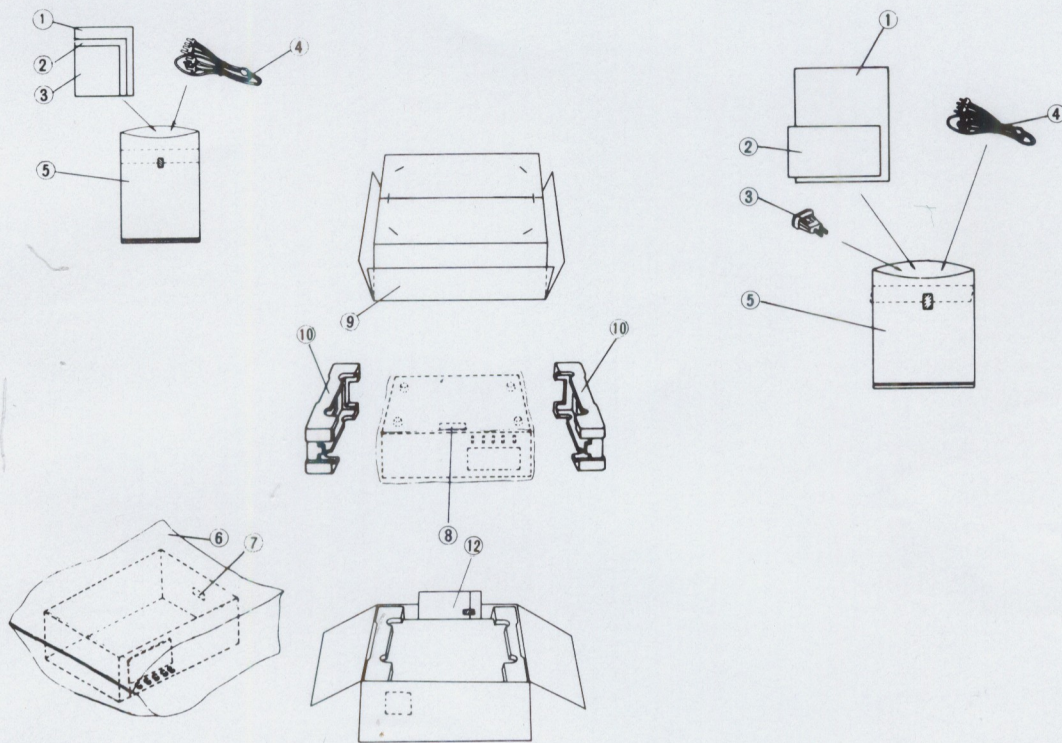
INDICATOR PC BOARD (NALED-1401, 1402/1403)

CIRCUIT NO.	PARTS NO.	DESCRIPTION
D611, D612	225084	SLP-153B, Dolby indicator L.E.D
D613-D614	225085	SLP-253B, Tape selector indicator L.E.D
	27190156	Holder
D616	225084	Rec. indicator L.E.D
D617	225085	SLP-253B, Pause indicator L.E.D

DOLBY CIRCUIT PC BOARD (NADOL-1404)

CIRCUIT NO.	PARTS NO.	DESCRIPTION
IC		
Q804	222668	HA-12038
Transistors		
Q801-Q803	2211255,	2SC1815 (GR),
	2212115,	2SC2458 (GR),
	2210746 or	2SC945A (P) or
	2212155	KTN5014 (GR)
Diodes		
D801	2240931,	GZA5.1X,
	2240932,	GZA5.1Y,
	2240933,	GZA5.1Z,
	2239452 or	RD5.1EB2 or
	2239453	RD5.1EB3
Coils		
L801	233221	NMC-5021
L802	233245	NCH-2029
Capacitors		
C801, C802	352741009	10 μ F, 16V, Elect.
C804, C805	352734709	47 μ F, 10V, Elect.
C806-C808	352741009	10 μ F, 16V, Elect.
C809	352731019	100 μ F, 10V, Elect.
C810	352734709	47 μ F, 10V, Elect.
C813	352741009	10 μ F, 16V, Elect.
C817	352750479	4.7 μ F, 25V, Elect.
C818, C819	352781599	0.15 μ F, 50V, Elect.
C820, C821	352784799	0.47 μ F, 50V, Elect.
C826	352741009	10 μ F, 16V, Elect.
C829	352750479	4.7 μ F, 25V, Elect.
C830	352781599	0.15 μ F, 50V, Elect.
C831	352784799	0.47 μ F, 50V, Elect.
C832	352732219	220 μ F, 10V, Elect.
C833, C834	352741009	10 μ F, 16V, Elect.
Sockets		
P801	25050132	NSCT-7P34
P802	25050134	NSCT-10P36

PACKING VIEW



120V model

REF. NO.	PARTS NO.	DESCRIPTION
1	29340604	Instruction manual
2	29358002	Service station list (D)
3	29365006-3	Warranty card (D)
4	253074	Pin-pin connection cord
5	29100005	330x220mm, Poly bag
6	29100037	650x500mm, Poly bag
7	29360567	Caution label (D)
8	29360566	Caution label (D)
9	29050563	Carton box
10	29090565F	Pad
11	29090675	Pad (C)
12		Accessory bag complete

(D): Only U.S.A. model

G/W model

REF. NO.	PARTS NO.	DESCRIPTION
1	29340605	Instruction manual
2	29365005-3	Warranty card (G)
3	25055040	Conversion plug (W)
4	253074	Pin-pin connection cord
5	29100005	330x220mm, Poly bag
6	29100037	650x500mm, Poly bag
9	29050563	Carton box
10	29090565F	Pad
11	29090675	Pad (C)
12		Accessory bag complete

(G): Only West Germany model

(W): Only 120/220V model

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