

ONKYO® SERVICE MANUAL**STEREO CASSETTE
TAPE DECK
MODEL TA2055****TABLE OF CONTENTS**

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SPECIFICATIONS

Track System:	4-track, 2-channel stereo	Headphone Jack: 1
Recording System:	AC bias	8 Ω –200 Ω
Erasing System:	AC erase	DIN Jack: 1 (only G/W models)
Tape Speed:	4.8cm/sec.	Standard output level:
Wow and Flutter:	0.035% (WRMS)	1100mV
Frequency Response:	20–16,000Hz	(at 0dB)
	(20–15,000Hz \pm 3dB)	Optimum load impedance:
	(normal position tape)	more than 50k Ω
	20–18,000Hz	
	(20–17,000Hz \pm 3dB)	Motors:
	(high position tape)	DD motor: 1 DC motor: 2
	20–19,000Hz	Heads:
	(20–18,000Hz \pm 3dB)	Hard permalloy head: 1
	(metal position tape)	Ferrite head: 1
Signal-to-Noise Ratio:	Dolby NR out: 60dB	Semiconductors:
	(metal position tape)	(G/W models)
	A noise reduction of 10dB	TR: 63 Diodes: 22
	above 5kHz and 5dB at 1kHz	IC: 13 LED: 13
	is possible with Dolby B.	(D model)
	A noise reduction of 20dB	TR: 58 Diodes: 19
	at 5kHz is possible with	IC: 13 LED: 13
	Dolby C.	Power supply:
Input Jacks:	Microphone Jacks: 2	AC120V, 60Hz (D model)
	Minimum input level:	AC220V, 50Hz (G model)
	0.3mV/600 Ω	AC120/220V, 50/60Hz
	Input impedance: 5k Ω	(W model)
	Optimum mic impedance:	Power Consumption: 28W
	200 Ω –50k Ω	Dimensions:
	Line In: 2	418(W) \times 100(H) \times 370(D)
	Minimum input level: 50mV	16-1/2" \times 3-15/16" \times 14-9/16"
	Input impedance: 50k Ω	Weight: 6.7kg. (14.8lbs.)
	DIN Jack: 1 (Only G/W model)	Accessories: Pin-type connecting cords
	Minimum input level:	
	0.1mV/1k Ω	Mechanism specification
	Input impedance: 2.7k Ω	PLAY Torque: 35 ~ 60 grcm
Outputs:	Line Out: 2	FF/REW Torque: 55 ~ 140 grcm
	Output level: 1100mV	Wow & Flutter: Less than 0.035%
	(at 0dB)	Auto-Stop Time: 5 \pm 1 sec.
	Optimum load impedance:	Timer-Start Time: 5 \pm 1 sec.
	over 50k Ω	Rewind Time: Less than 90 sec. (Use C-60)
		Eject Time: 0.3 ~ 2 sec.

Specifications and external appearance are subject to change without notice because of product improvements.

SPECIAL MODES OF OPERATION

Real Time Tape Counter

The real time tape counter can be used in two ways:

1. Consumed Time indication (CONS)

When power is turned on, the Real Time Counter will read 0:00 and the green CONS indicator immediately below the counter will come on. Once tape transport has begun in the record or play mode, the counter will begin counting the elapsed time. The two digits on the left side are the minutes and the two digits on the right are the seconds. To return the counter to 0:00, gently press the Reset panel.

2. Remaining Time Indication (REMA)

The real time counter can also be used to show the amount of time remaining on a cassette as it is being recorded or played back. To use this function, gently press the Tape Size button corresponding to the cassette about to be used. When one of the Tape Size buttons has been pressed, the green REMA indicator will come on and the counter

will display the cassette length selected (for example [C:60] if C-60 has been selected) for about five seconds. During this time, the microcomputer is calculating the amount of remaining time. Once the calculations have been completed, the remaining time will be displayed. Note that this function is possible only during the record or play mode.

- If you mistakenly press the incorrect Tape Size button, the remaining time indication will be shorter than the actual remaining time if a cassette length shorter than the correct length is pressed (for example when C-46 is pressed when a C-60 cassette is used) and longer than the actual remaining time if a cassette length longer than the correct length is pressed (for example when C-90 is pressed when a C-60 cassette is used).
- Follow the directions below when using cassettes of a length other than C-46, C-60 and C-90 to obtain the correct remaining time indication:

- C-50: press C-46 and C-60 simultaneously
 C-80: press C-60 and C-90 simultaneously
 C-120: press C-46 and C-90 simultaneously

Note: Once the time indication has been changed from consumed time to remaining time, it can not be returned to the consumed time (COMS) mode. Also, if the reset button is pressed during the remaining time (REMA) mode, the display will return to 0:00 and begin counting tape transport time from that point.

3. To Obtain the Most Accurate Time Indications Possible: The real time counter is not a clock so there is a slight difference between the tape transport time as shown by the counter and the actual time that has elapsed over that period. Including the small differences in tape lengths between different manufacturers, this error is about 30 seconds for C-46 cassettes (from start to finish), about 40 seconds for C-60 cassettes and about 60 seconds for C-90 cassettes. To obtain a more precise reading of remaining time near the end of a cassette, press the correct Tape Size button once again to repeat the remaining time calculations. When a cassette of a different length is inserted, press the Tape Size button for the new length. Once the new remaining time value is displayed, press the reset button to return the display to 0:00 and then press the correct Tape Size button a second time to obtain an even more precise remaining time value.

Note: The real time counter is designed on the assumption that one side of a C-60 cassette is 30 minutes and 40 seconds. In general, most tapes are slightly longer than this, so the counter will return to about 99:20 instead of 0:00 when a tape is rewound to the beginning.

When using cassette with large hubs, the remaining time indication does not operate accurately so only the consumed time should be used.

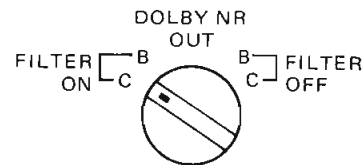
The Dolby Noise Reduction System

There are three types of Dolby noise reduction systems: Dolby A, Dolby B and Dolby C. Dolby A is used only in professional applications. Dolby B is the system that most cassette tape decks use to reduce the background tape noise that is inherent in all cassette tapes. Recently, Dolby Laboratories developed an even more effective noise reduction system, Dolby C, in response to the demand for increasingly better sound quality from cassette tapes. All three Dolby noise reduction systems operate by boosting high range signals during recording that fall below a certain input level. That's because tape hiss is most prominent during quiet, high end portions of a recording. These same signals are the reduced back to their original strength during playback thereby reducing the background noise by the same amount. In order to operate only when necessary, the Dolby system has a varying effect depending on the input level and frequency of the material being recorded. Dolby C can reduce background noise by as much as 20 dB (above 5kHz). Since the midrange tends to sound unnaturally strong when noise is suppressed only in the high range,

Dolby C extends its noise reduction effect down to a lower frequency range than Dolby B. In addition to its noise reduction function, Dolby C has an antisaturation network that lowers high input levels before recording them and returns the signals to their original strength during playback. This raises the high frequency saturation level of cassette tapes to allow you to record signals that would normally cause distortion. The maximum output level of cassette tapes is increased by more than 4dB at 10kHz by this system.

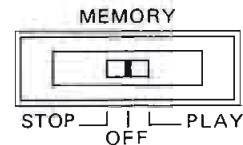
Using the Dolby NR Selector

When an FM stereo broadcast is recorded using one of the Dolby NR systems, the 19kHz pilot signal and 38kHz sub-carrier signal can cause the Dolby circuitry to operate improperly. To prevent this from occurring the Dolby NR selector has filter on and filter off positions for both Dolby NR systems. Use one of the filter on positions when recording an FM stereo broadcast to block the pilot and sub-carrier signals. Use the filter off positions at all other times.



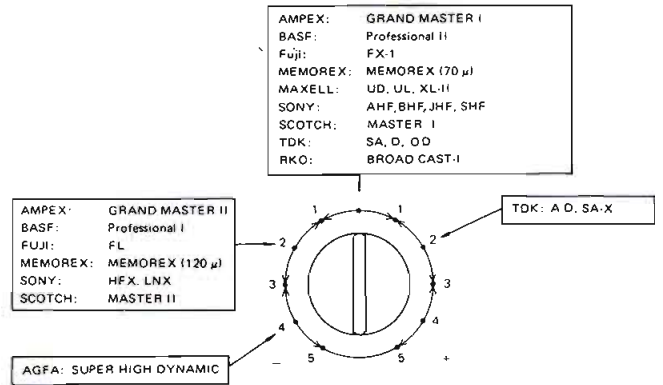
Using the Memory Switch

When the memory switch is in the STOP position, tape will be rewound to the point where the real time counter reads 0:00 when the rewind button is pressed. In the PLAY position, tape will be rewound to the 0:00 point and then the TA-2055 will automatically switch to the playback mode. Actually, tape is rewound to the 99:57 point to be sure the beginning of the song you want to hear is not missed. This is not a malfunction of the unit. If you want to start recording, advance the tape to the 0:00 point to be sure you don't cut off the end of the previous song. To rewind the tape beyond the 0:00 point, press the rewind button again.

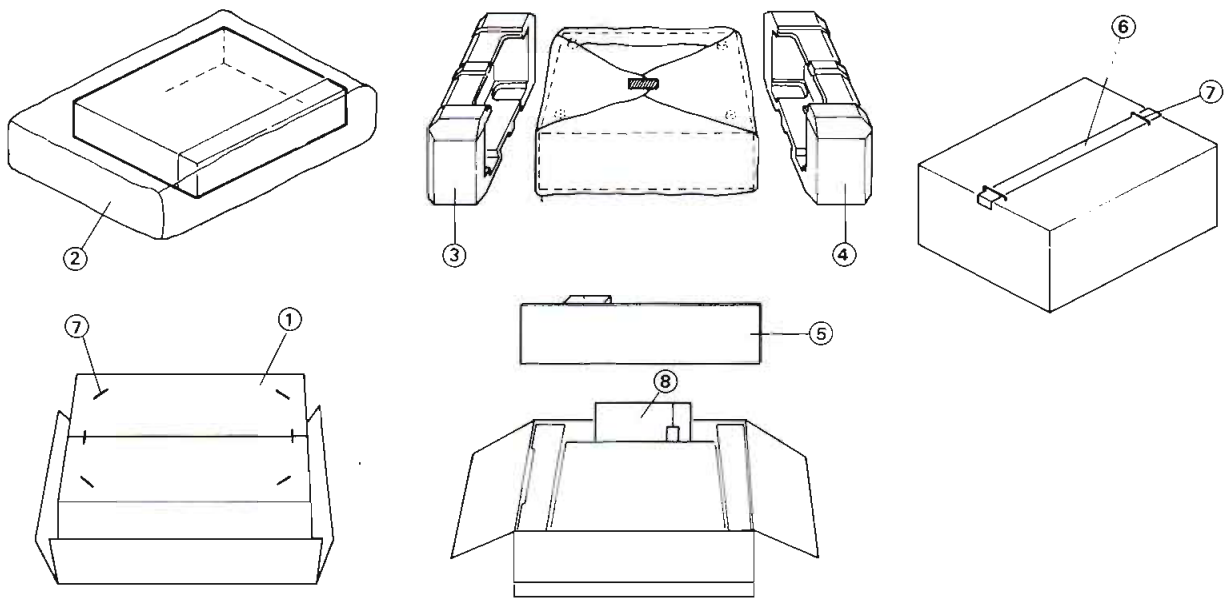


Using the ACCUBIAS Adjust Knob

Although the TA-2055 is equipped with an ACCUBIAS system for fine bias adjustment, you will get excellent results with most tapes by just leaving the bias adjustment knob in the center clickstop position. Nevertheless, some tapes may require additional bias adjustment in order to give flat frequency response. In those cases, refer to the following diagram. For tapes not listed, use the 0 setting. The Accubias adjust knob can be adjusted only when using normal and high position tapes.



PACKING VIEW



D model

REF. NO. PARTS NO. DESCRIPTION

1	29050544	Master carton box
2	29100036A	Poly bag
3	29090627	Pad, right
4	29090626	Pad, left
5	29090674A	Pad, front
6	260012	Damplon tape
7	282301	Sealing hook
8		Accessory bag ass'y
	29340592	Instruction manual
	253074	Connection cable
	29365006-1	Warranty card
	29358002	Service station list
	29100005	220x330mm, Poly bag
	29355085	Caution sheet

G/W models

REF. NO. PARTS NO. DESCRIPTION

1	29050544	Master carton box
2	29100036A	Poly bag
3	29090627	Pad, right
4	29090626	Pad, left
5	29090674A	Pad, front
6	260012	W=50mm, Damplon tape
7	282301	Sealing hook
8		Accessory bag ass'y
	29340593	Instruction manual
	253074	Connection cable
	29365005-3	Warranty card [G]
	25055040	CV-K-2, Conversion plug [W]
	29100005	220x330mm, Poly bag
	29355085	Caution sheet

[G] : Only Germany model
 [W] : Only 120/220 V model

ADJUSTMENT PROCEDURES

PRECAUTIONS

- Before adjustment, clean the following parts with an alcohol moistend swab.
 - * record/playback head
 - * erase head
 - * pinch roller
 - * capstan
 - * rubber belt
- 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
OUTPUT	MAX
INPUT LEVEL	0
ACCUBIAS	Center
TIMER/MEMORY	OFF

TEST EQUIPMENT/TOOLS REQUIRED:

- Audio ocsillator
- Digital frequency counter
- Oscilloscope
- Attenuator
- AC voltmeter
- Non-magnetic screw drive
- Blank tapes (completely erased)
 - NORMAL UD-C90
 - HIGH UD-XL/II
 - METAL MX
- Test tapes
 - VTT-658 : 10kHz, - 15dB
 - MTT-111 : 3kHz, - 10dB
 - MTT-150 : Dolby level calibration
400Hz tone 200nWb/m
 - TW-2111 : Touque meter

1. Play touque adjustment

Play the torque meter TW-2111 back.
Adjust the R796 so that the torque of take-up reel becomes 40 gr-cm to 45 gr-cm.

2. Tape speed adjustment

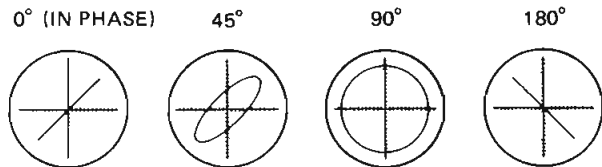
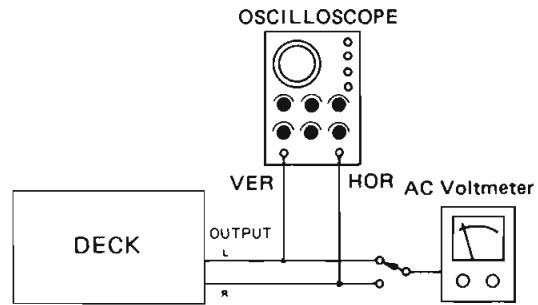
Connect the frequency counter to the line output terminal. Play the MTT-111 back.
Adjust the semi-fixed resistor on the motor control pc board so that the counter indication becomes 3,000Hz to 3,010Hz.

3. Real time counter adjustment

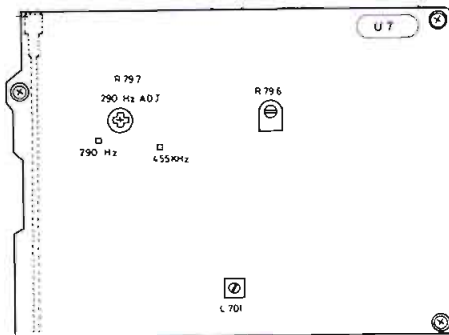
Connect the frequency counter to the F290 terminal on the control pc board.
Adjust the R797 so that the frequency counter indication becomes 301Hz.

4. 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 play back output level is approximately the maximum value in the AC voltmeter.
- Then confirm that the phase difference of the respective frequency is with in the rated value. 90 degrees or less in the range of 40Hz to 10kHz is required.
- Secure the screw with the locking paint.

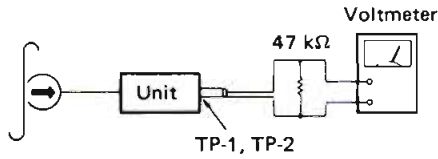


Confirming phase relationship

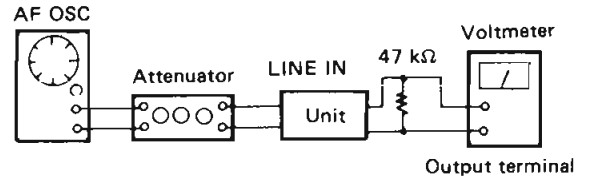


5. Playback level adjustment

Connect the AC voltmeter to the TP1 and TP2 terminals. Insert the MTT-150 test tape into the cassette holder. Play the MTT-150 back. Adjust the R123 (L ch.) and R124 (R ch.) semi-fixed resistors so that the indication of voltmeter becomes 580mV.



Then set the attenuator for -10dB input level. Release the pause button and record on the tape. Next change the frequency of the 10kHz and record again. Adjust the R429 (L ch.) and R430 (R ch.) so that the 400Hz and 10kHz playback level become same.



6. VU meter adjustment

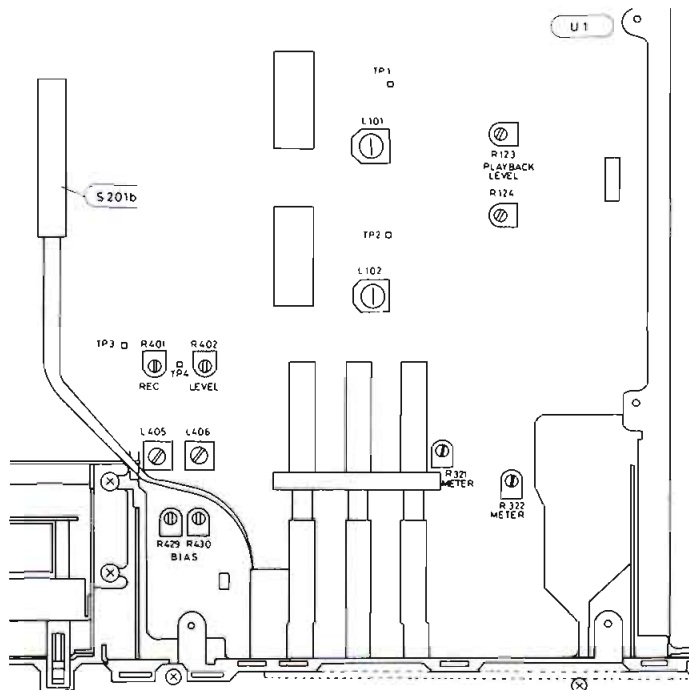
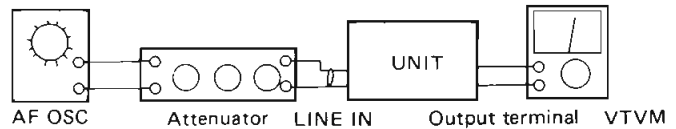
Insert the MTT-150 test tape into the cassette holder. Play the MTT-150 back. Adjust the R321 (L ch.) and R322 (R ch.) semi-fixed resistors so that the LED of 0dB of VU meter light on.

7. Recording bias adjustment

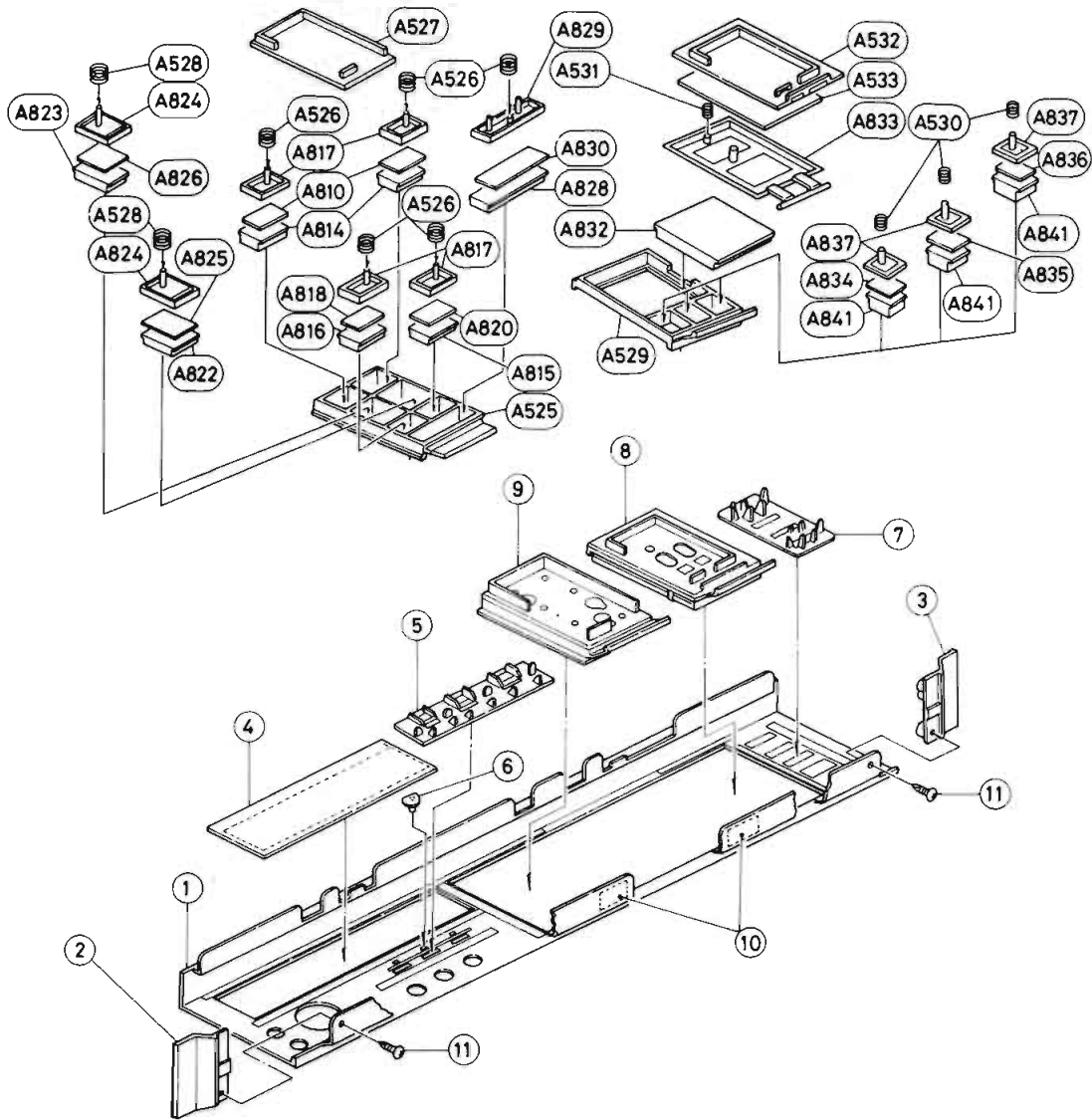
Insert the normal blank tape into the cassette holder. Press the recording and pause buttons together and put the cassette deck into the recording mode. Apply the 400Hz signal to line-in terminal. Adjust the input level volume so that the 0dB indicator light up.

8. Recording level adjustment

Insert the normal blank tape into the cassette holder. Apply the 1,000Hz signal to line-in terminal. Put the cassette deck into the recording mode. Adjust the input level volume so that the voltmeter reads 775mV. Record on the tape. Adjust the R401 (L ch.) and R402 (R ch.) so that the playback level becomes 775mV ±0.5dB.



FRONT PANEL-EXPLODED VIEW



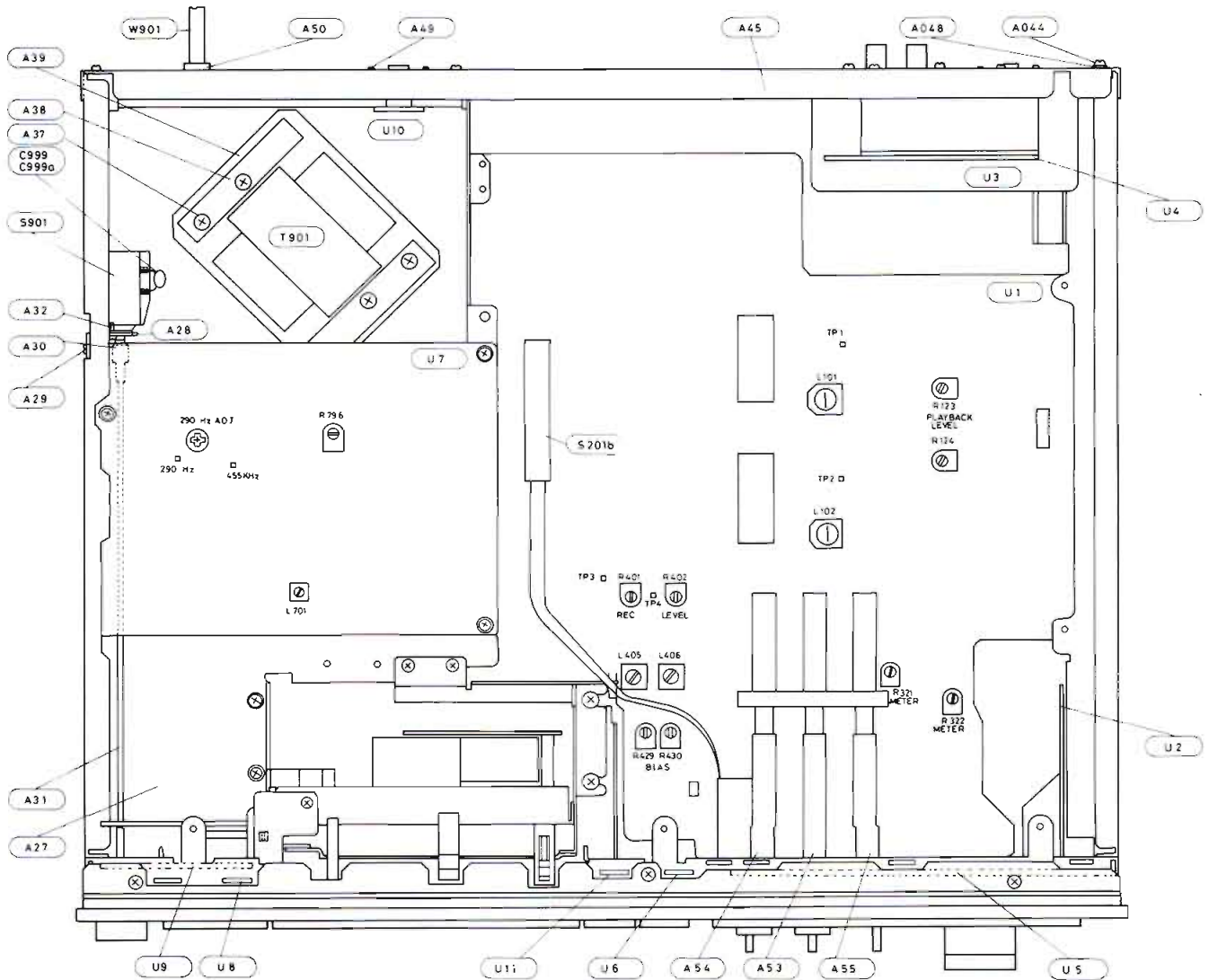
REF. NO. PARTS NO. DESCRIPTION

1	16198121	Front panel ass'y
2	28125116	End cap, right side
3	28125115	End cap, left side
4	28191099	Clear plate
5	27267139	Guide, push
6	28198560A	Facet
7	27267140	Guide, switch
8	27267142A	Guide, left side
9	27267141A	Guide, right side
10	27262155	Plate
11	833130080	3TTP+8P, Tap screw
A525	27267141A	Guide, right side
A526	27180090	Spring
A527	28400043A	Lid, right side
A528	27180095	Spring
A529	27267142A	Guide, left side
A530	27180093	Spring
A531	27180094	Spring
A532	28400044A	Lid, left side
A533	2726132B	Plate, counter

REF. NO. PARTS NO. DESCRIPTION

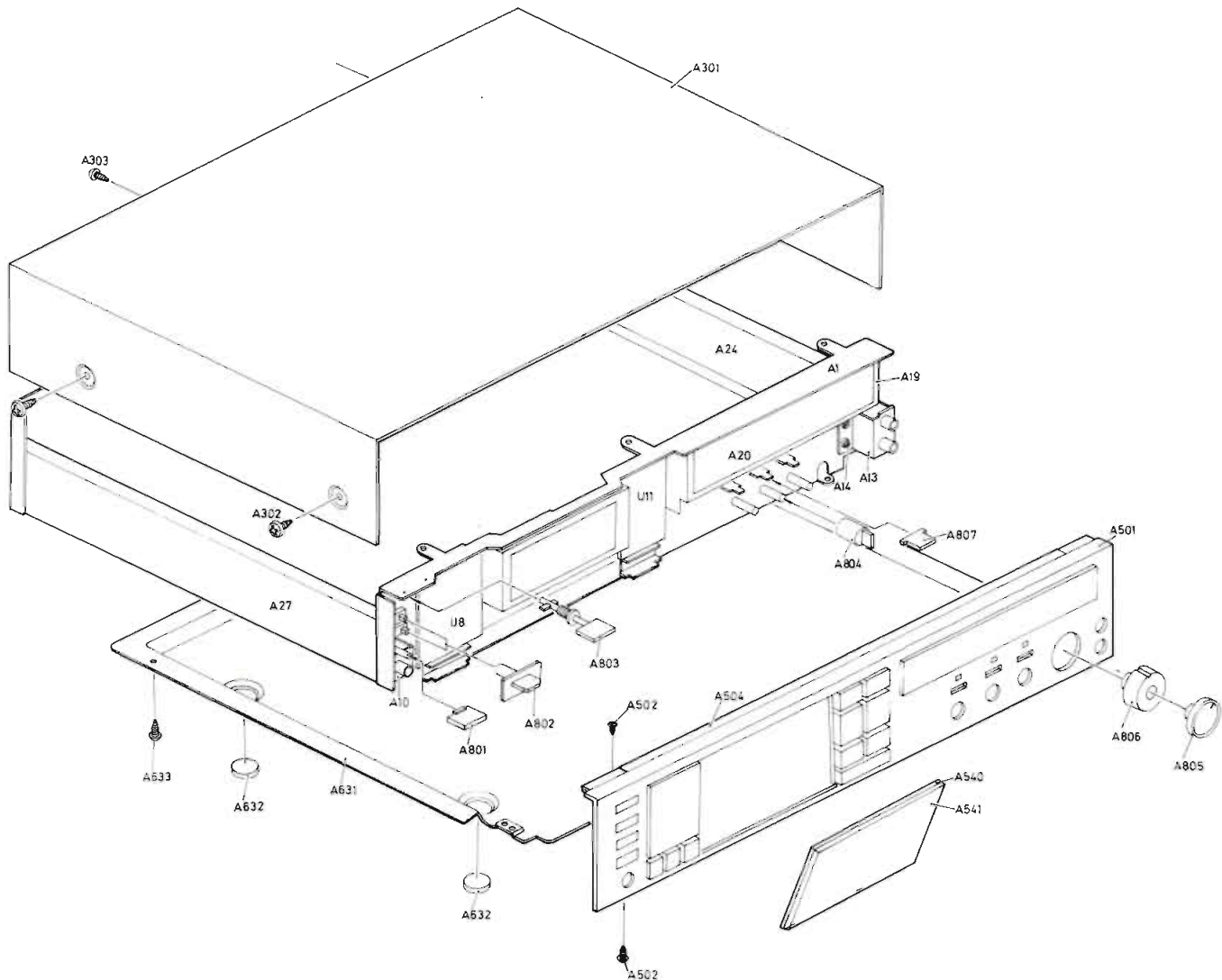
A810	27262133-1	Plate FF
A814~A816	28320601A	Knob A
A817	28320602A	Knob, base
A818	27262136-1	Plate, auto space
A820	27262135-1	Plate, rec
A822, A823	28320603A	Knob B
A824	28320604A	Knob, base
A825	27262137-1	Plate, stop
A826	27262138-1	Plate, play
A828	28320605A	Knob, pause
A829	28320606B	Knob, base
A830	27262139-1	Plate, pause
A832	28320642-1	Knob C
A833	28320643	Knob, base
A834	27262140-1	Plate 46
A835	27262141-1	Plate 60
A836	27262142-1	Plate 90
A837	28320609B	Knob, base
A841	28320608A	Knob T

COMPONENT LOCATION



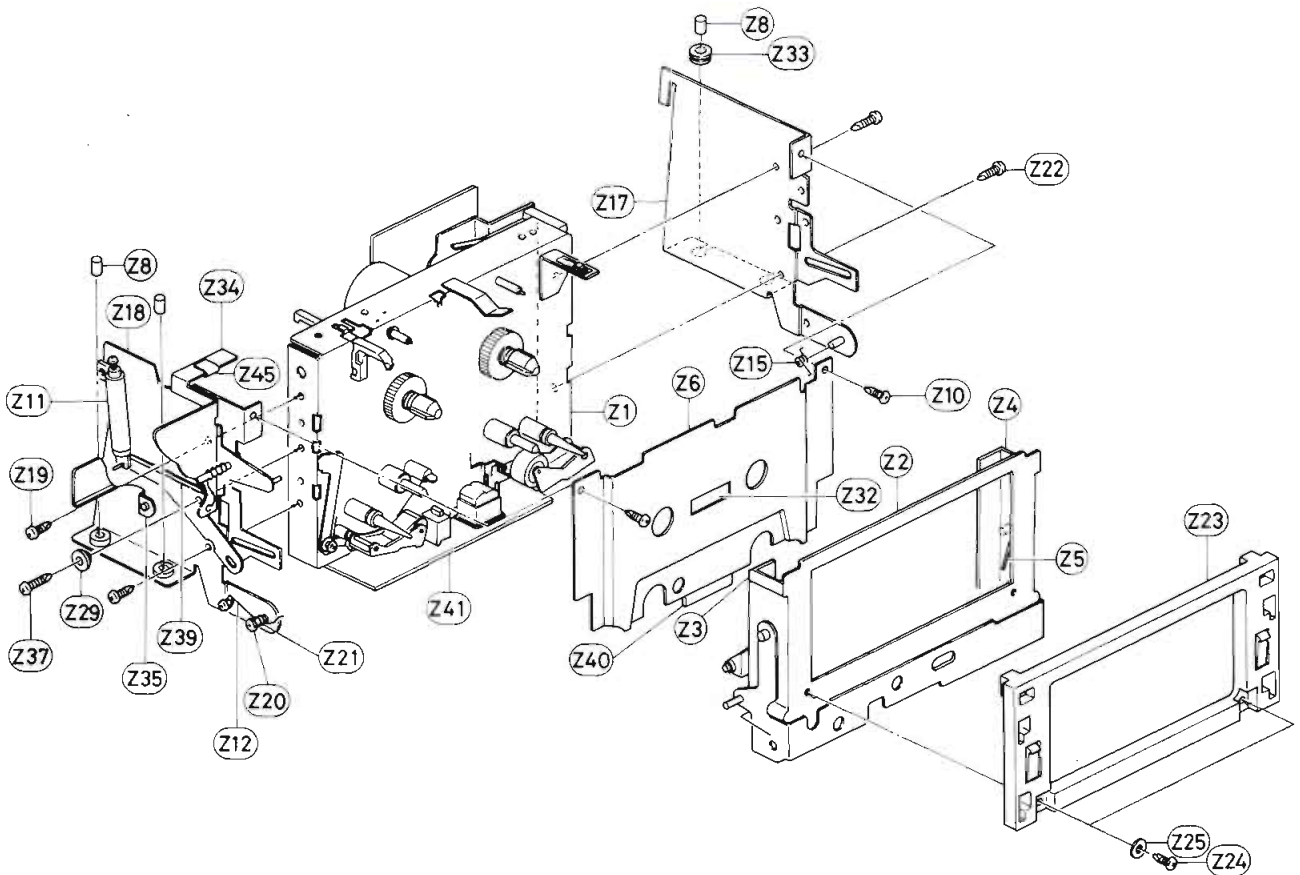
REF. NO.	PARTS NO.	DESCRIPTION	REF. NO.	PARTS NO.	DESCRIPTION
A1	27110150A	Front bracket	A45	27120367	Back panel (D)
A4	27140636	Bracket, meter		27120368	Back panel (G)
A10	27140556	Bracket, headphone		27120369	Back panel (W)
A11	834130068	3TTS+6B, Tap screw	A48	87313006	M-3B, Toothed washer
A13	27140557	Bracket, meter	A49	82142604	2.6P+4F(BC), Pan head screw
A14	834130088	3TTS+8B, Tap screw	A50	270025	SR-3P4, Strainrelief (D)
A16	27140536	Bracket, pc board		270280	SR-4K-4, Strainrelief (G/W)
A17	834130088	3TTS+8B, Tap screw	A53	27273013	Joint, center
A19	27300420	Frame, meter	A54	27273015	Joint, left
A20	28130127A	Plate, meter	A55	27273014	Joint, right
A21	834130088	3TTS+8B, Tap screw	A301	28184143	Top cover
A22	27262156	Plate, recording	A302	838440089	4TTB+8C(BC), Tap screw
A24	27115093	Side bracket	A303	834430108	3TTS+10B(BC), Tap screw
A25	834130068	3TTS+6B, Tap screw	A501	16198121	Front panel ass'y
A27	27100046A	Chassis	A502	838130068	3TTB+6B, Tap screw
A28	27140478	Bracket, power	A504	28140024	4x5x150mm, Cushion
A29	834130068	3TTS+6B, Tap screw	A540	28400052-1	Lid
A30	28320135	Connector	A541	28400053-1A	Window
A31	27260034	Shaft	A631	27170126	Bottom board
A32	82113006	3P+6FN, Pan head screw	A632	27175030	Leg
A37	838440109	4TTB+10C(BC), Tap screw	A633	838130068	3TTB+6B, Tap screw
A38	870065	Washer, power transformer	A801	28320635	Knob, power
A39	27300412	Base, power transformer	A802	28320640	Knob, switch
A43	27130270	Bracket	A803	28320636	Knob, eject
A44	834130088	3TTS+8B, Tap screw	A804	28320641	Knob, selector

CHASSIS-EXPLODED VIEW



REF. NO.	PARTS NO.	DESCRIPTION	REF. NO.	PARTS NO.	DESCRIPTION
A805	28320637	Knob, level, left	U3	16198565	NAAF-1365, Input and output terminal pc board ass'y
A806	28320638	Knob, level, right		16204565A	NAAF-1365a, Input and output terminal pc board ass'y
A807	28320639	Knob, push	U4	16198566	NAPS-1366, Power supply pc board ass'y
C999	3500060	0.01 μ F, 125V, Capacitor, CS [D]	U5	16198567	NADIS-1367, Meter pc board ass'y
C999	3500065A	0.01 μ F, 400V, Capacitor, IS [G]	U6	16198568	NAPL-1368, Dolby indicator pc board ass'y
C999, C998	3500065A	0.01 μ F, 400V, Capacitor, IS [W]	U7	16198543B	NACOC-1143b, Mechanism control pc board ass'y
C999a	27300080	Cover, capacitor	U8	16239544	NADIS-1144, Tape counter pc board ass'y
P201	25045092	HLJ-0607-01-020, Stereo headphone jack	U9	16392545A	NASW-1145a, Memory/Timer switch pc board ass'y
S901	25035224	NPS-121-L188P, Power switch [D]	U10	16239546	NARM-1146, Remote control terminal pc board ass'y
	25035192	NPS-122-L156P, Power switch [G]	U11	16239547	NASW-1147, Control key pc board ass'y
	25035207	NPS-121-L171P, Power switch [W]	W901	253099A	AS-UC-3, Power supply cable [D]
S902	25065123	NSS-1258P, Voltage selector switch [W]		253083	AS-CEE, Power supply cable [G/W]
S201b	25030217-1	NRS-105-20BU, Remote switch		27140577	Bracket, DIN [G/W]
T901	230585	NPT-753D, Power transformer [D]		260208	Binder
	230586	NPT-753G, Power transformer [G]	Note: D: Only 120V model		
	230587	NPT-753DG, Power transformer [W]	G: Only 220V model		
U1	16198563	NAAF-1363, Rec. and playback amplifier pc board ass'y	W: Only 120/220V model		
	16204563A	NAAF-1363a, Rec. and playback amplifier pc board ass'y			
U2	16198564	NAAF-1364, Microphone amplifier pc board ass'y			

TAPE MECHANISM-EXPLODED VIEW

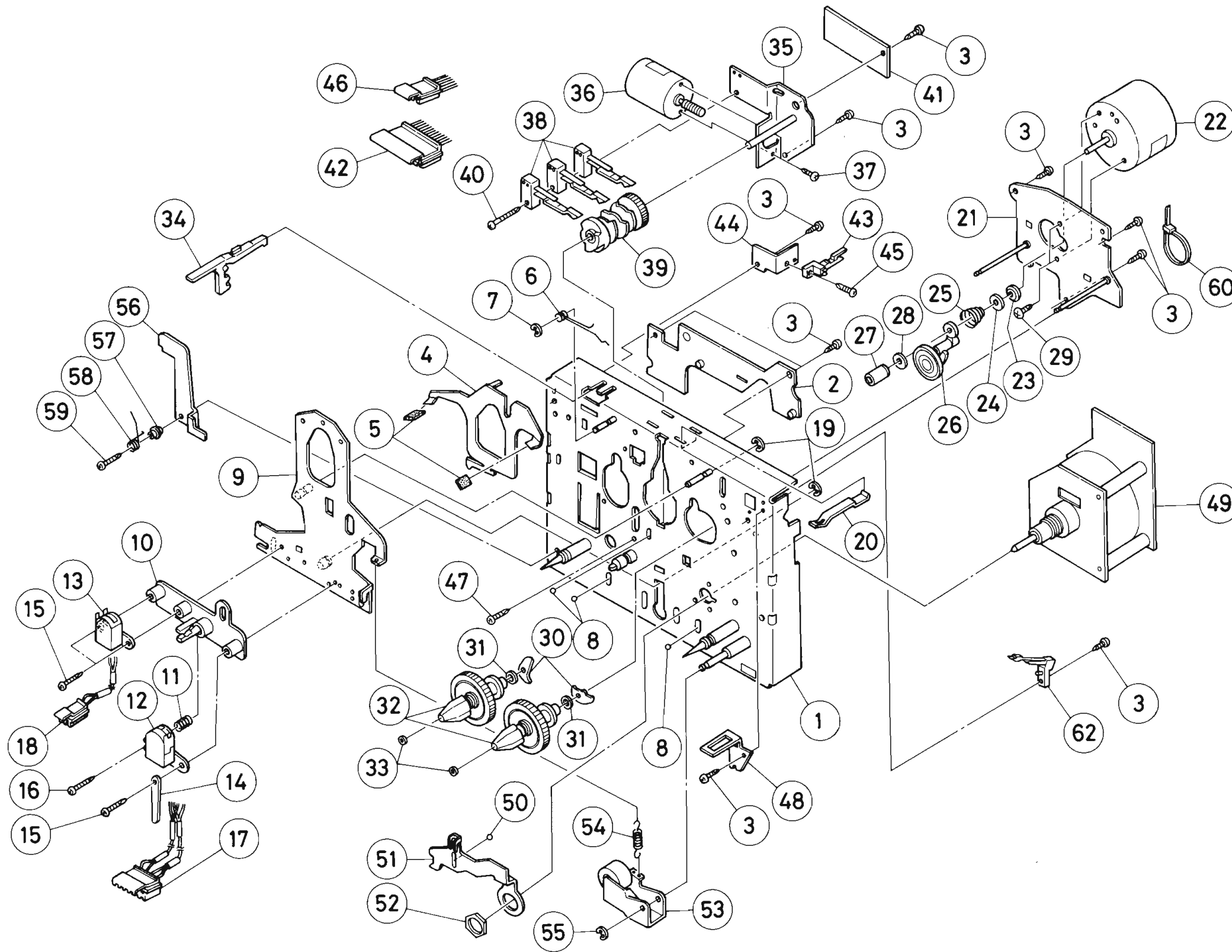


REF. NO. PARTS NO. DESCRIPTION

Z1	244025	NDM-20, Tape deck
Z2	24610630-1	Holder
Z3	24610631-1	Holder, left
Z4	24610632-2	Holder, right
Z5	24605300	Spring
Z6	24610642	Plate
Z8	27265032	3φx4x6, Ring
Z10	833125059	2.5TTP+5C, Tap screw
Z11	24610508	Damper
Z12	24605296	Spring
Z15	24605299A	Spring
Z17	24610638	Side plate, right
Z18	24610640	Side plate, left
Z19	833125059	2.5TTP+5C, Tap screw
Z20	833130127	3TTP+12S, Tap screw
Z21	27265057	3φx4x5, Ring

REF. NO. PARTS NO. DESCRIPTION

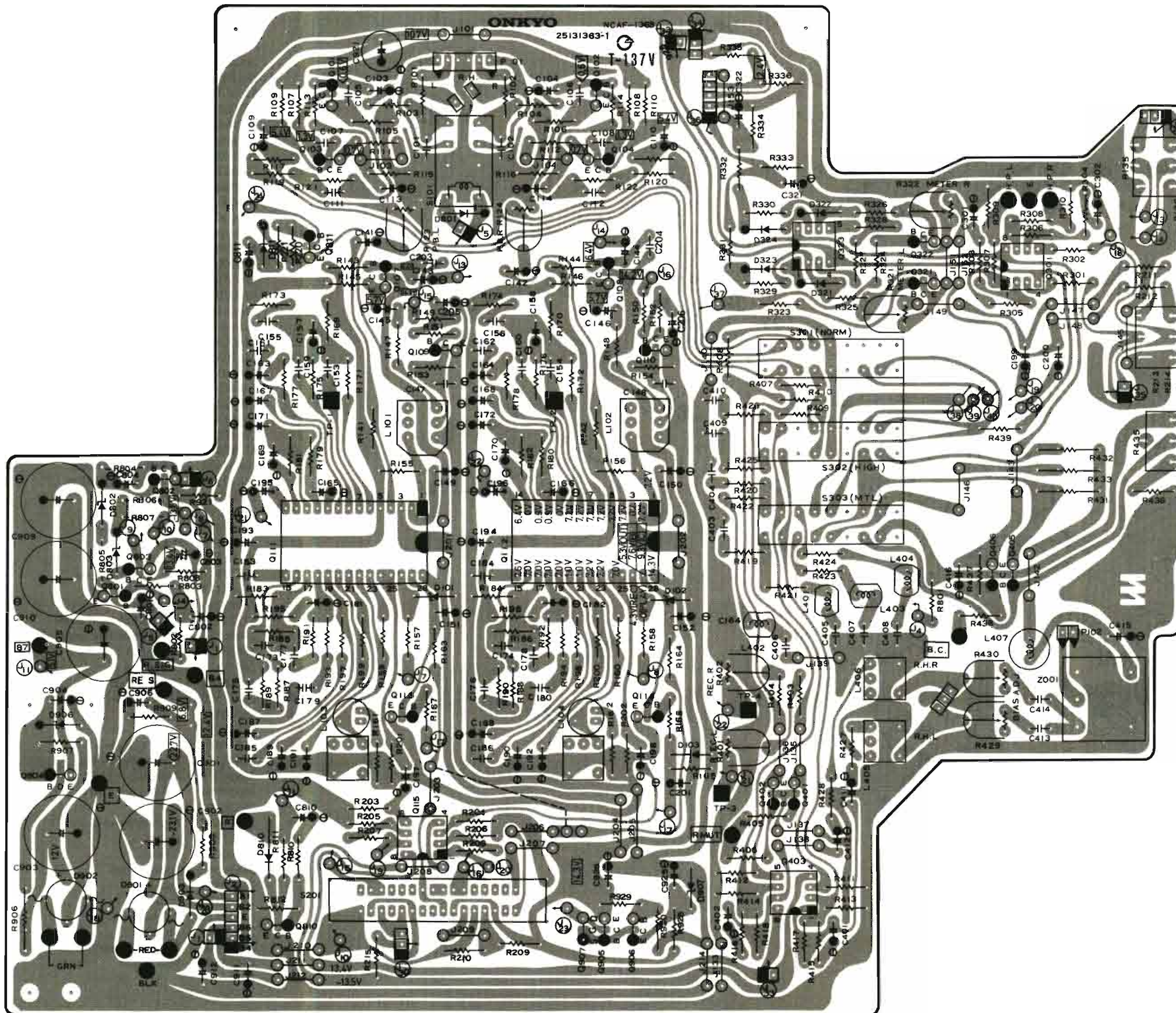
Z22	833125059	2.5TTP+5C, Tap screw
Z23	24610641	Holder, cassette
Z24	82522004	2B+4FN(Ni), Screw
Z25	8762200604	W2x6B(Ni), Flat washer
Z29	24610644	Spacer
Z32	24610643	Plate
Z33	270638	Cushion
Z34	24603200A	Lecer, eject
Z35	893030S	ES-3, Circlip
Z36	24603202A	Lever
Z37	833125089	2.5TTP+8C, Tap screw
Z39	24605371	Spring
Z40	27150149	Shielded plate
Z41	27150148	Shielded plate
Z45	28140383	Cushion



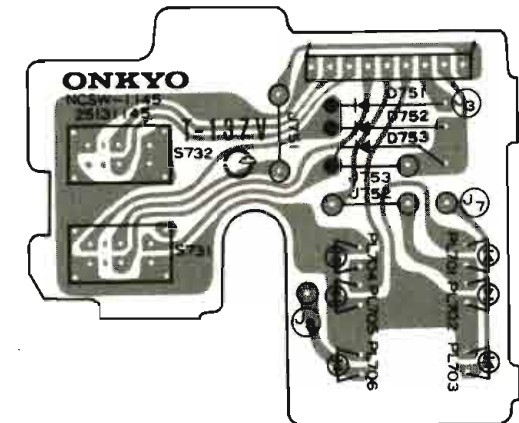
REF. NO.	PARTS NO.	DESCRIPTION
1	24610793	Mechanism chassis
2	24606136	Sensor pc board ass'y
3	833125059	2.5x5, Pan head screw
4	24610664	Brake plate
5	24610376	Brake rubber
6	24605304	Spring
7	8930251	E2.5, Circlip
8	24610351	2φ, Steelball
9	24610665	Head base
10	24610346	Head stand
11	24605185	Spring
12	24600018	Rec. and playback head
13	24600025	Erase head
14	24610666	Holder, wire
15	82512012	2x12, Bind screw
16	801198	2x14, Frange pan head screw
17	25050115	Connector
18	25050119	Connector
19	8930302	E3, Circlip
20	24605183	Cassette holding spring
21	24610667	Motor holding plate
22	24601054	Real motor
23	24610373	Holder, spring
24	24610374	Washer
25	24605194	Spring
26	24602067	Idler lever
27	24601102	Motor pulley
28	24610375	Felt
29	82512603	2.6x3, Bind screw
30	24605303	Spring, back tension
31	24610792	3.1x5.4x013, Washer
32	24602165	Reel stand
33	24610349	Washer
34	24603205	Lever, recording
35	24610668	Holding plate
36	24601103	Assist motor
37	801259	2x3, Machine screw
38	24606119	Leaf switch
39	24602133	Cam gear
40	833125209	2.5x10, Pan head screw
41	24606135	Motor control pc board ass'y
42	25050120	Connector
43	24603129	Leafswitch
44	24610660	Holding plate
45	833125069	2.5x6, Screw
46	25050121	Connector
47	801250	Pan head screw
48	24610659	Protection plate
49	24601114	Direct drive motor
50	24610279	Steelball
51	24610794	Holding plate, head
52	24610795	Nut
53	24610672	Pinch roller arm
54	24605370	Spring
55	8930201	Circlip
56	24610345	Locked plate
57	24610344	Collar
58	24605184	Spring
59	833125109	Pan head screw
60	260208	Binder
61	24601106	Reel motor ass'y (22-28)
62	24606104	Leaf switch

PC BOARD VIEW FROM COMPONENT SIDE

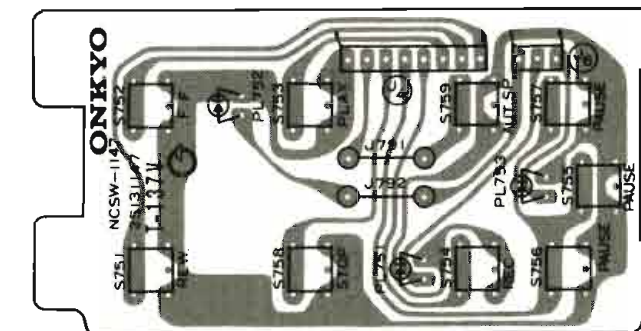
REC/PLAYBACK AMPRIFIER PC BOARD (NAAF-1363)



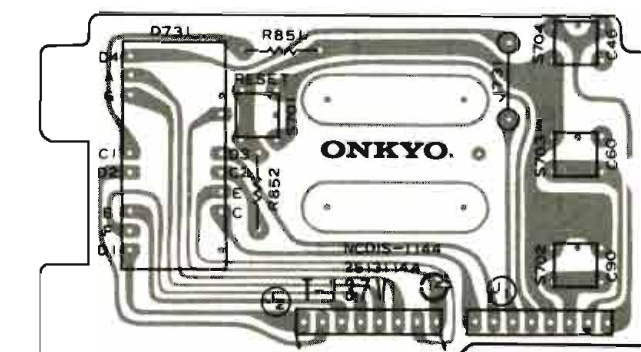
MEMORY/TIMER SWITCH PC BOARD (NASW-1145)



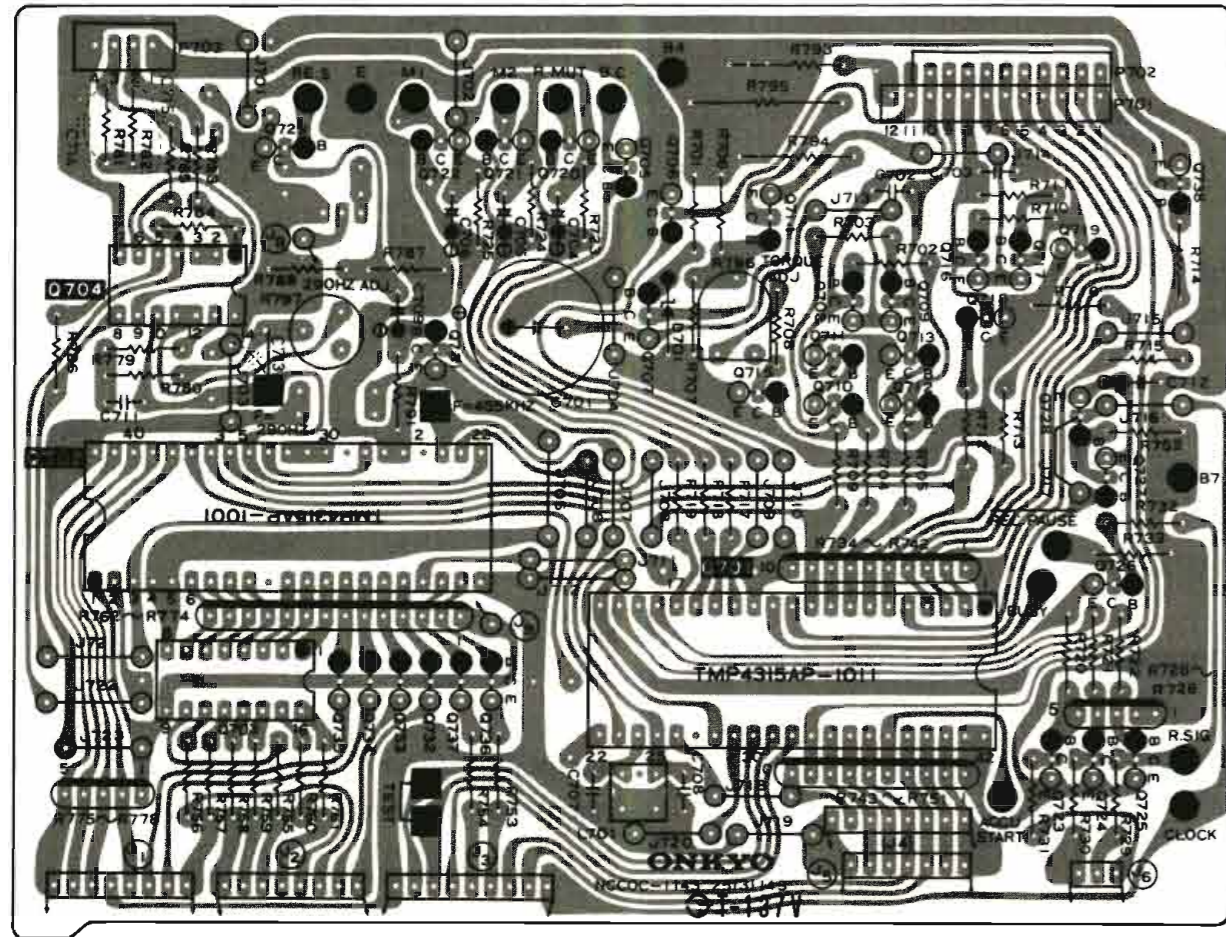
CONTROL KEY INPUT PC BOARD (NASW-1147)



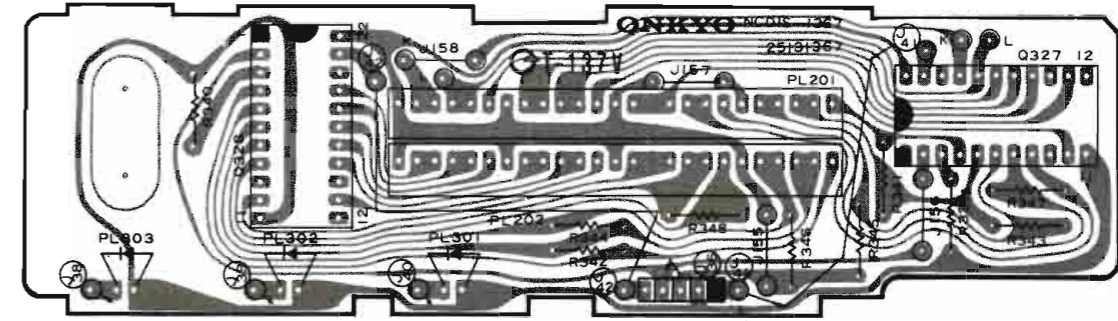
TAPE COUNTER PC BOARD (NADIS-1144)



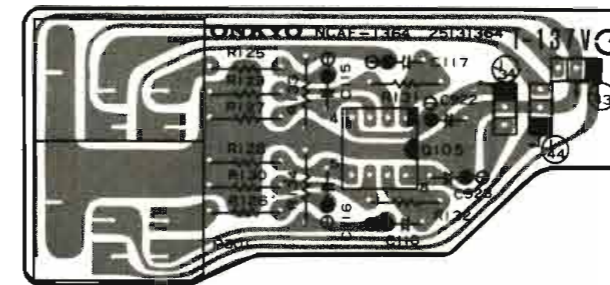
MECHANISM CONTROL PC BOARD (NACOC-1143)



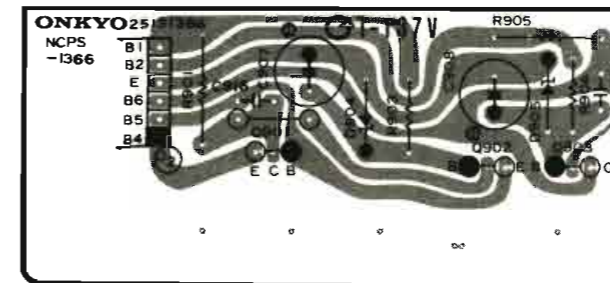
METER CIRCUIT PC BOARD (NADIS-1367)



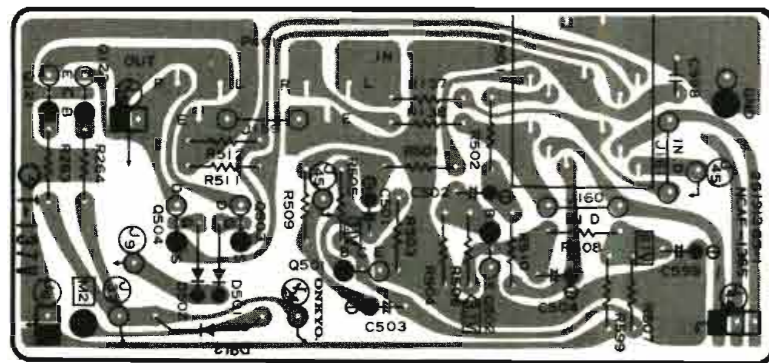
MIC. AMPLIFIER PC BOARD (NAAF-1364)



POWER SUPPLY PC BOARD (NAPS-1366)



INPUT/OUTPUT TERMINAL PC BOARD (NAAF-1365)



PRINTED CIRCUIT BOARD-PARTS LIST

REC. AND PLAYBACK AMPLIFIER PC BOARD (NAAF-1363/a) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION	CIRCUIT NO.	PARTS NO.	DESCRIPTION
					Coils
			L101, L102	233221	NMC5021
			L103, L104	233245	NMC2029
			L401, L402	24606069	NCH-1007
			L403, L404	24606072	NCH-1010
			L405, L406	233247	NCH-4054
			L407	233235	NCH-2050
					Oscillator block
			Z001	24606115	NOB-016
					Capacitors
			C103, C104	392880337	3.3µF, 50V, LL
			C109, C110	352741009	10µF, 16V, Elect.
			C113, C114	352732209	22µF, 10V, Elect.
			C141, C142	352744709	47µF, 16V, Elect.
			C143–C146	352741009	10µF, 16V, Elect.
			C149, C150	352731019	100µF, 10V, Elect.
			C151, C152	352732209	22µF, 10V, Elect.
			C157, C158	392841007	10µF, 16V, LL
			C163, C164	352750479	4.7µF, 25V, Elect.
			C165–C168	352781599	0.15µF, 50V, Elect.
			C169–C172	352784799	0.47µF, 50V, Elect.
			C181, C182	392841007	10µF, 16V, LL
			C187, C188	352750479	4.7µF, 25V, Elect.
			C189, C190	352781599	0.15µF, 50V, Elect.
			C191, C192	352784799	0.47µF, 50V, Elect.
			C193, C194	352732219	220µF, 10V, Elect.
			C195–C200	352741009	10µF, 16V, Elect.
			C201	352742209	22µF, 16V, Elect.
			C205, C206	352741009	10µF, 16V, Elect.
			C301, C302	352741009	10µF, 16V, Elect.
			C321, C322	352750479	4.7µF, 25V, Elect.
			C401, C402	352781599	0.15µF, 50V, Elect.
			C411, C412	352750479	4.7µF, 25V, Elect.
			C415	352741009	10µF, 16V, Elect.
			C416	352722219	220µF, 6.3V, Elect.
			C801	352750479	4.7µF, 25V, Elect.
			C802	352741009	10µF, 16V, Elect.
			C803	352750479	4.7µF, 25V, Elect. [G/W]
			C804	352732209	22µF, 10V, Elect.
			C810	352783399	0.33µF, 50V, Elect.
			C811	352750479	4.7µF, 25V, Elect.
			C901, C902	352752229	2,200µF, 25V, Elect.
			C903	352744729	4,700µF, 16V, Elect.
			C904	352722219	220µF, 6.3V, Elect.
			C905	352726829	6,800µF, 6.3V, Elect.
			C906	352750479	4.7µF, 25V, Elect.
			C909, C910	352744729	4,700µF, 16V, Elect.
			C911, C912	352741019	100µF, 16V, Elect.
			C921	352742219	220µF, 16V, Elect.
			C925	352732209	22µF, 10V, Elect.
			C926	352744709	47µF, 16V, Elect.
					Resistors
			R123, R124	5215046 or 5215023	N08HR50KBC, Playback level adjustment semi-fixed
			R135, R136	5104123	N16RKL50KA40F, Input level control variable
			R213, R214	5147014	N16RGL10KB20, Output level control variable
			R321, R322	5215003 or 5215022	N08HR20KBC, Meter adjustment semi-fixed
			R401, R402	5215044 or 5215020	N08HR5KBC, recording level adjustment semi-fixed
			R429, R430	5015047 or 5215024	N08HR100KBC, Bias current adjustment semi-fixed
			R431	441521014	100Ω, 1/2W, Metal oxide film
			R432	441521214	120Ω, 1/2W, Metal oxide film
			R433	441521804	18Ω, 1/2W, Metal oxide film
			R435	5146035	N16RLC500B20, Accubias adjustment variable
			R906	441520224	2.2Ω, 1/2W, Metal oxide film
					Relay
			S101	25065174	NRL-2P1ADC12-09
					Switches
			S201a	25065193	NSS-4687
			S301–S303	25035274	NPS-362-L238

CIRCUIT NO.	PARTS NO.	DESCRIPTION
		Plugs
P101	25055037	NPLG-6P28
P102	25055038	NPLG-2P29
		Radiator
	27160029	
		Screw
	82113006	3P+6FN, Pan head screw

MIC. AMPLIFIER PC BOARD (NAAF-1364) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
		IC
Q105	222534 or 222502	NJM4559DX or NJM4558DX
		Capacitors
C115, C116	392883397	0.33µF, 50V, LL
C117, C118	352780109	1µF, 50V, Elect.
C922, C923	352741009	10µF, 16V, Elect.
		Jack
P301	25045091	HLJ-0335-01-030, Mic.

INPUT TERMINAL PC BOARD (NAAF-1365) [D model]

CIRCUIT NO.	PARTS NO.	DESCRIPTION
		Transistors
Q121, Q122	2211706	2SD655(F)
		Diode
D812	223132 or 223103	1K60 or IN60
		Terminal
P401	25045084	NPJ-4PDBL42, Input/output

INPUT TERMINAL PC BOARD (NAAF-1365a) [G/W model]

CIRCUIT NO.	PARTS NO.	DESCRIPTION
		Transistors
Q121, Q122	2211706	2SD655(F)
Q501, Q502	2211406	2SC2240(BL)
Q503, Q504	2211944 or 2211945	2SK246(Y) or 2SK246(GR)
		Diodes
D501, D502	223105 or 223133	1S1555 or DS442X
D812	223132 or 334103	1K60 or IN60
		Capacitors
C501, C502	392880107	1µF, 50V, LL
C503, C504	352780109	1µF, 50V, Elect.
C599	352741009	10µF, 16V, Elect.
		Terminals
P401	25045084	NPJ-4PDBL42, Input/output
P501	25050064	NSCT-5P18, DIN

POWER SUPPLY PC BOARD (NAPS-1366) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
		Transistors
Q901	2201035 or 2201074	2SD325(E) or 2SD880(Y)
Q902	2201285 or 2201286	2SD882(Q) or 2SD882(P)
Q903	2201275 or 2201276	2SB772(Q) or 2SB772(P)

CIRCUIT NO.	PARTS NO.	DESCRIPTION
		Diodes
D904, D905	2241132 or 2239653	GZA13Y or RD13EB3
		Resistors
R901	441520104	1Ω, 1/2W, Metal oxide film
R905	441520224	2.2Ω, 1/2W, Metal oxide film
		Capacitors
C907, C908	352742219	220µF, 16V, Elect.
		Radiator
	27160075A	
		Spacer
	223019	AC-229, Transistor

METER CIRCUIT PC BOARD (NADIS-1367) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
		ICs
Q327, Q328	222636	IR2E07
		L.E.D.s
PL201, PL202	225091	GL-112M13, Array
PL301–PL303	225093	SLP-260C
		Spacer
	27270071	L.E.D.

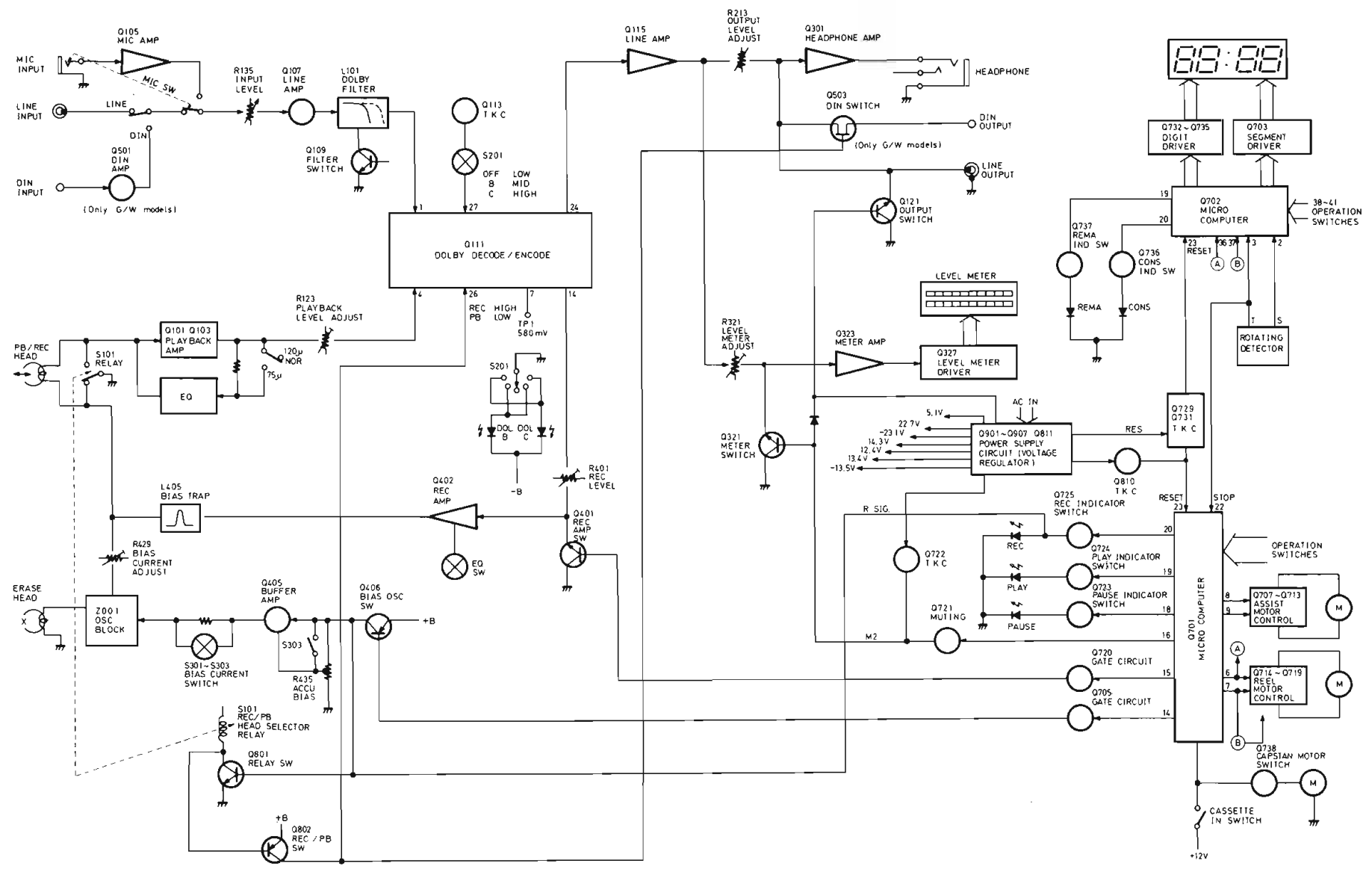
DOLBY INDICATOR PC BOARD (NAPL-1368) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
PL101, PL102	225092	SLP-160C, L.E.D.
	27270071	Spacer, L.E.D.

TAPE MECHANISM CONTROL PC BOARD (NACOC-1143b) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
		ICs
Q701	222637	TPM4315AP-1011, Mechanism control
Q702	222638	TMP4315AP-1001, Tape counter control
Q703	222639	LB1275, Hex inverter
Q704	222840692	TC4069UBP, Hex inverters
		Transistors
Q705, Q715	2211253, 2211254, 2212113 or 2212114	2SC1815(O), 2SC1815(Y), 2SC2458(O) or 2SC2458(Y)
Q737	2201074	2SD880(Y)
Q707	2201074	2SD880(Y)
Q708, Q709	2211554	2SA562TM(Y)
Q711, Q713	2211544	2SC1959(Y)
Q714	2201060	2SD549
Q716, Q717	2211554	2SA562TM(Y)
Q718, Q719	2211951 or 2211952	2SC1472K(A) or 2SC1472K(B)
Q720, Q721	2212124 or 2211454	2SA1048(Y) or 2SA1015(Y)
Q723–Q725		
Q729	2211706	2SD655(F)
Q732–Q735	2211563	2SB562(C)
Q738	2211253 or 2212113	2SC1815(O) or 2SC2458(O)

BLOCK DIAGRAM



CIRCUIT NO. PARTS NO. DESCRIPTION

CIRCUIT NO.	PARTS NO.	DESCRIPTION
D701	Diode 2239571 or 2241033	RD9.1EB1 or GZA8.2Z
	Elect. capacitors	
C701	352741009	10 μ F, 16V
C704	352780109	1 μ F, 50V
C705	352750479	4.7 μ F, 25V
C709	352781099	0.1 μ F, 50V
C712	352734709	47 μ F, 10V
C714, C715	352782299	0.22 μ F, 50V
	Resistors	
R726-R728	49121222404	2.2k Ω x4, 1/8W, Network
R734-R742	49121392409	3.9k Ω x9, 1/8W, Network
R743-R751	49121222409	2.2k Ω x9, 1/8W, Network
R762-R774	49121392413	3.9k Ω x13, 1/8W, Network
R775-R778	49121223404	2.2k Ω x4, 1/8W, Network
R794	441521004	10 Ω , 1/2W, Metal oxide film
R795	441722704	27 Ω , 2W, Metal oxide film
R796	5215044	N08HR5KBC, Semi-fixed
R797	5225076	N10HR22KBDM, Semi-fixed

CIRCUIT NO.	PARTS NO.	DESCRIPTION
L701	Transformer 232100	NMIF-6030

CIRCUIT NO.	PARTS NO.	DESCRIPTION
P702	Plugs 25055046	NPLG-10P34
P703	25055045	NPLG-4P-33

TAPE COUNTER PC BOARD (NADIS-1144) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	L.E.D	
D731	225094	SL-2405-20, Tape counter
	Switches	
S701-S704	25035275	NPS-111-S239, Reset/C-90/C-60/C-46

MEMORY/TIMER SWITCH PC BOARD (NASW-1145a)**– PARTS LIST**

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	Diodes	
D751-D752	223103 or 223132	1N60 or 1K60
	L.E.Ds	
PL702, PL705	225093	SLP-260C
	Switches	
S731, S732	25065170	NSS-2377, Memory/Timer
	Holder	
	27190130	L.E.D.

REMOTE CONTROL TERMINAL PC BOARD (NARM-1146)**– PARTS LIST**

CIRCUIT NO.	PARTS NO.	DESCRIPTION
P701	25050070	NSCT-7P20, DIN terminal

CONTROL KEY PC BOARD (NASW-1147) – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	L.E.Ds	
PL751, PL753	225092	SLP160C
PL752	225093	SLP260C
	Switches	
S751-S754	25035275	NPS-111-S239, Rewind/FF/Play/ Rec./Stop/Auto space/Pause
S756-S759		
	Spacers	
	27270071	

ONKYO CORPORATION

International Division: No. 24 Mori Bldg., 23-5, 3-chome, Nishi-Shinbashi, Minato-ku, Tokyo, Japan
Telex: 2423551 ONKYO J. Phone: 03-432-6981

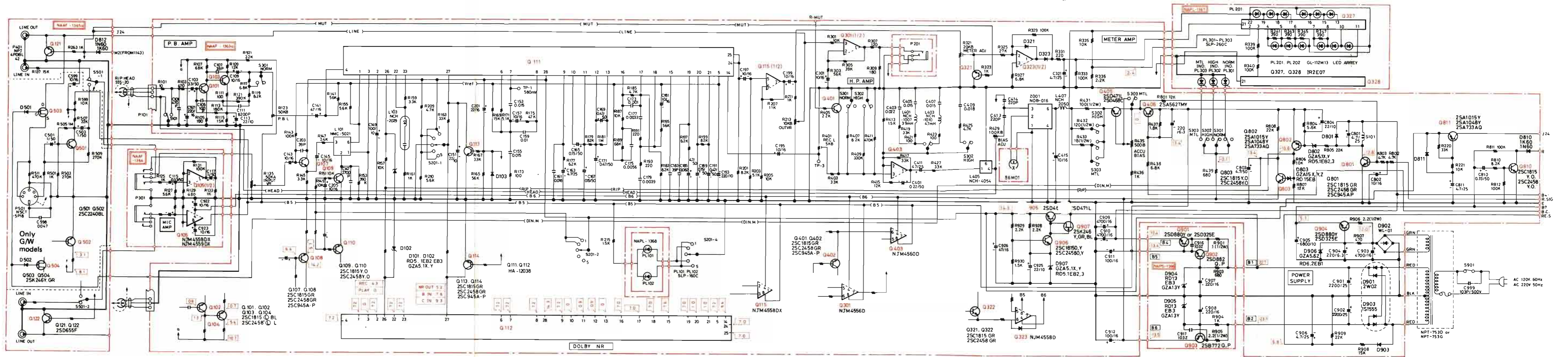
ONKYO U.S.A. CORPORATION

Eastern Office: 200 Williams Drive, Ramsey, N.J. 07446 Tel. 201-825-7950
Midwest Office: 107 North Lively Blvd., Elk Grove, IL 60007 Tel. 312-364-5010
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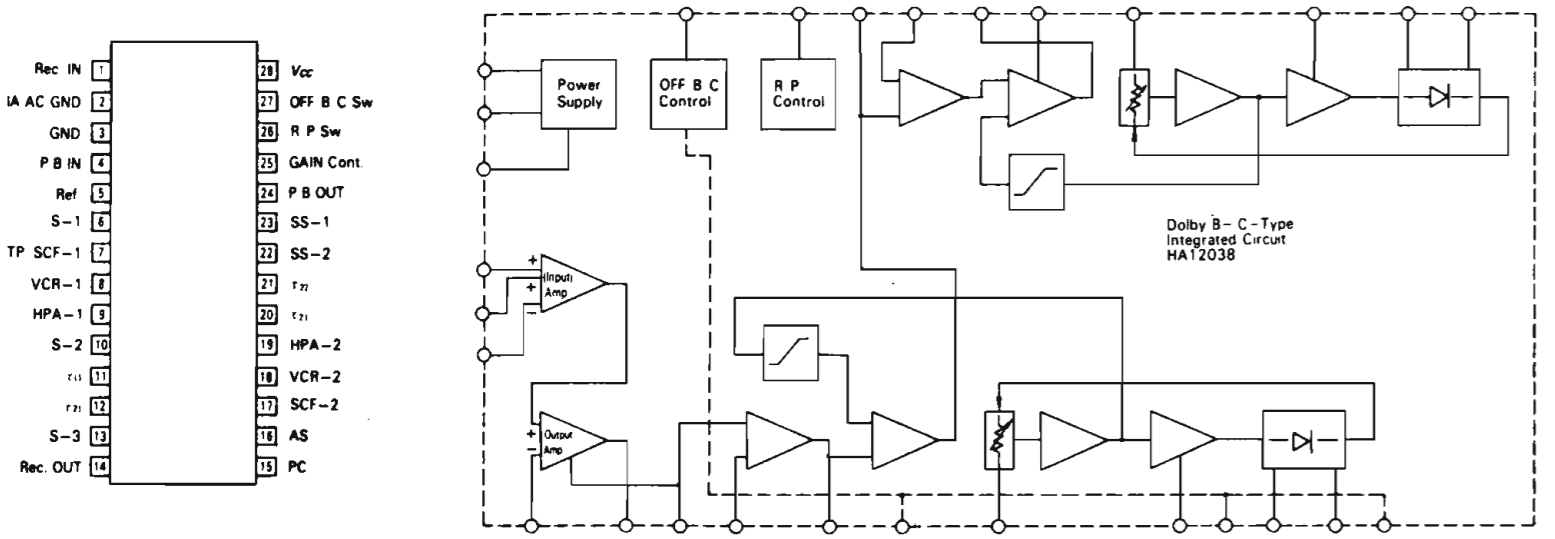
8034 München-Germering, Industriestrasse 18, West Germany. Telex: 521726 Telefon: (089)-84-3071

SCHEMATIC DIAGRAM

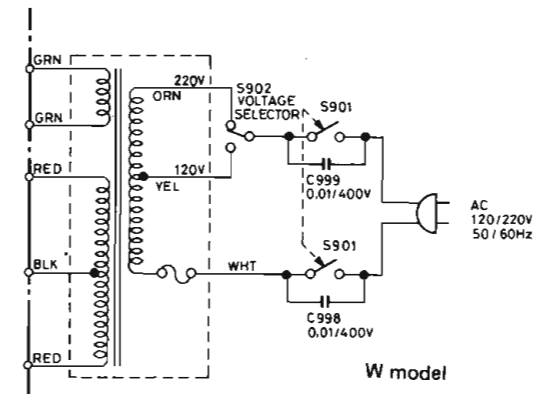
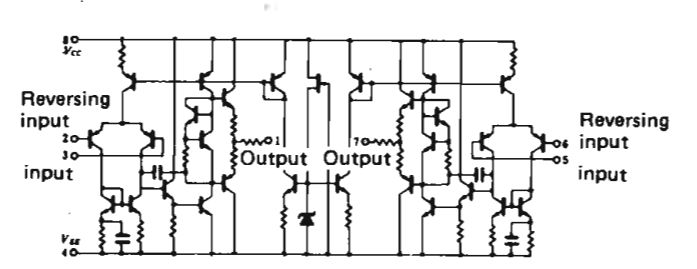


SW NO.	SW FUNCTION	SW POSITION
S101	REC/PLAY	PLAY
S201	NR SELECTOR	OFF
S301	TAPE	NORM ON
S302	SELECTOR	HIGH OFF
S303		METAL OFF
S901	POWER	ON

HA12038 (DOLBY B & C TYPE NOISE REDUCTION SYSTEM)

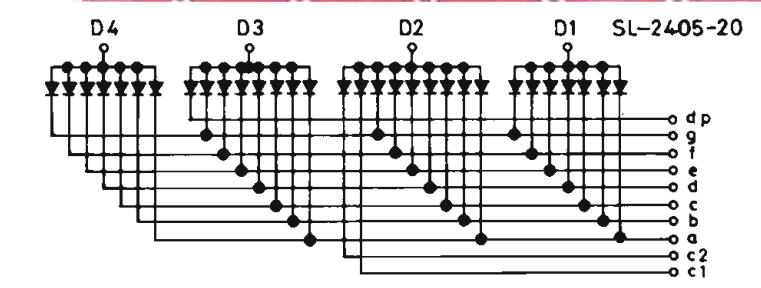
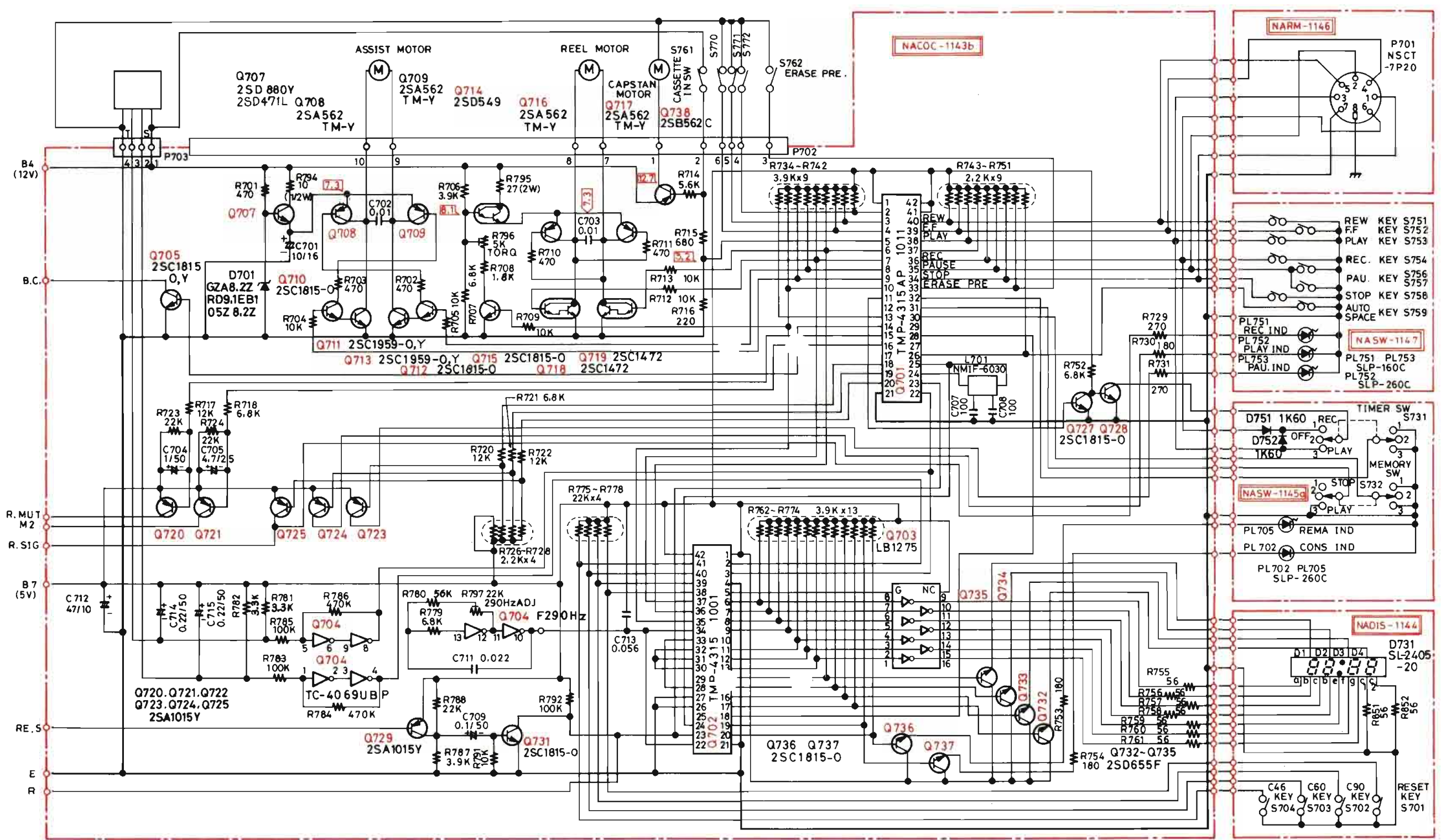


NJM4558/4559 (Operational amplifier)



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

SCHEMATIC DIAGRAM



Vdd	C46	C60	C90	REW	PLAY/FF	PLAY	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	CLOCK	RST	INT
42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
TEST (5V)	GND	GND	a	b	c	d	e	f	g	D1	D2	D3	D4							

