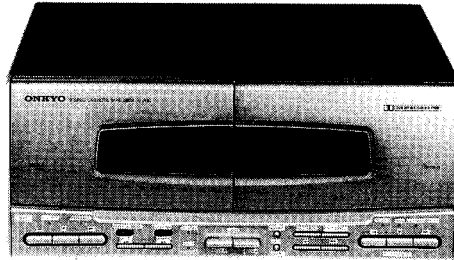


ONKYO SERVICE MANUAL

STEREO CASSETTE TAPE DECK MODEL K-W30



Black and Silver model

UDN, UDC, UD	120V AC, 60Hz
UP	230V AC, 50Hz
UW	120 or 220V AC, 50/60Hz
UQA	240V AC, 50Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle 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 PARTS 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.

SPECIFICATIONS

Track System: 4-tracks, 2-channels
 Erasing System: AC erase
 Tape Speed: 4.8 cm/sec. (1-7/8 i.p.s.)
 9.6 cm/sec. (3-3/4 i.p.s.) (high speed dubbing)
 Wow and Flutter: 0.095% (WRMS)
 Frequency Response: 20 – 15,000Hz (Normal)
 (30 – 14,000Hz \pm 3dB)
 20 – 16,000Hz (High)
 (30 – 15,000Hz \pm 3dB)

S/N Ratio:

Input Jacks:

Outputs:

Motors:

Heads:

Power Supply Rating:

Power Consumption:

Dimensions:

Weight:

20 – 17,000Hz (Metal)
 (30 – 16,000Hz \pm 3dB)
 Dolby NR off: 58dB (metal position tape)
 A noise reduction of 10dB above 5kHz and 5dB at 1kHz is possible with Dolby B NR.
 A noise reduction of 20dB at 5kHz is possible with Dolby C NR.
 Line IN: 2
 Input sensitivity: 300mV
 Input impedance: 50 kohms
 Line OUT: 2
 Standard output level: 500mV (0dB)
 Optimum load impedance: over 50 kohms

DC servo motor x 2

REC/PB:1

PB: 1

ERASE: 1

European models:

AC 230V, 50Hz

U.S.A. and Canadian models:

AC 120V, 60Hz

U.K. and Australian models:

AC 240V, 50Hz

Worldwide models:

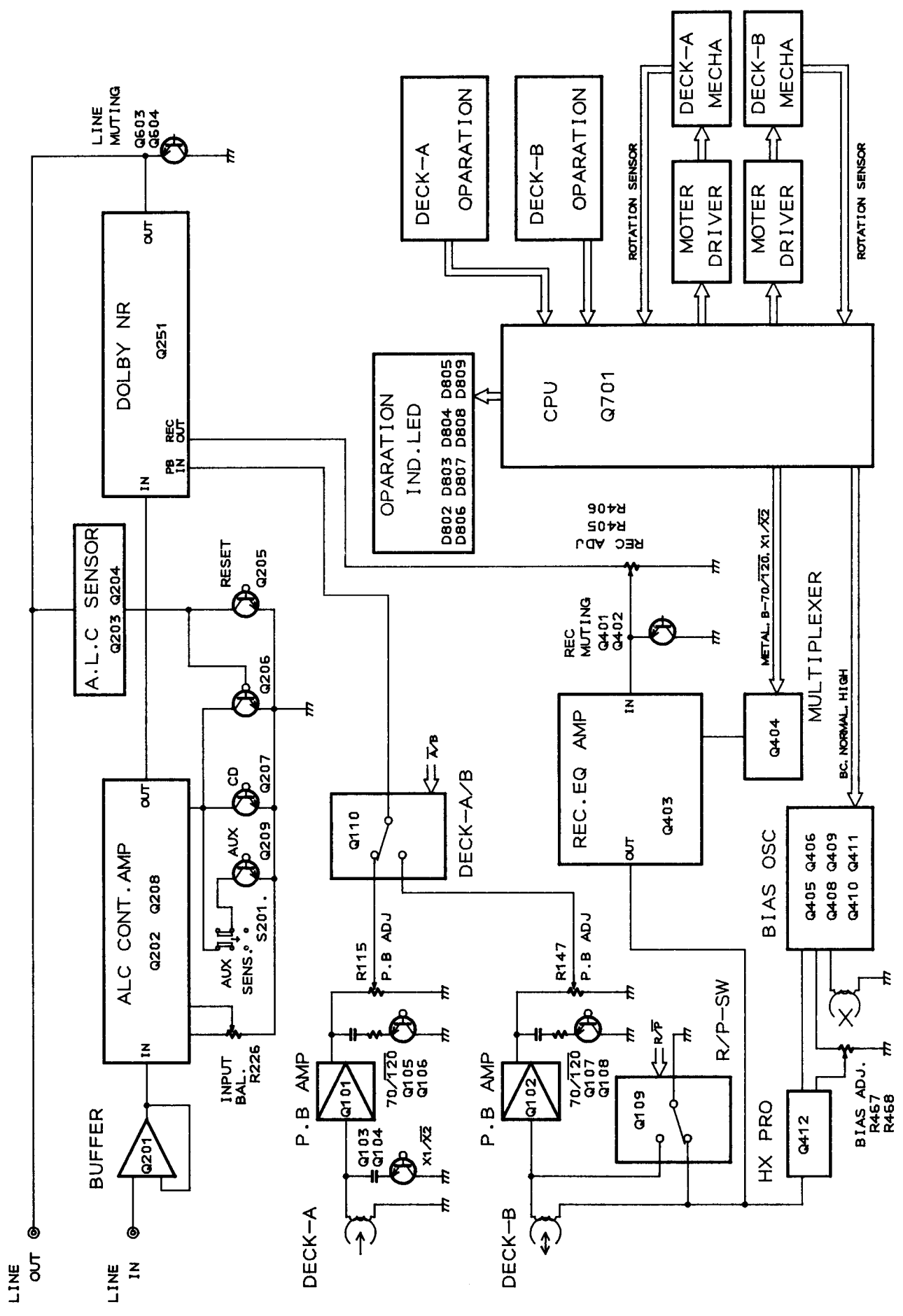
AC 120V and 220V switchable, 50/60Hz

275 (W) x 116 (H) x 313 (D) mm
 (10-13/16" x 4-9/16" x 12-5/16")

4.6kg. (10.1lbs.)

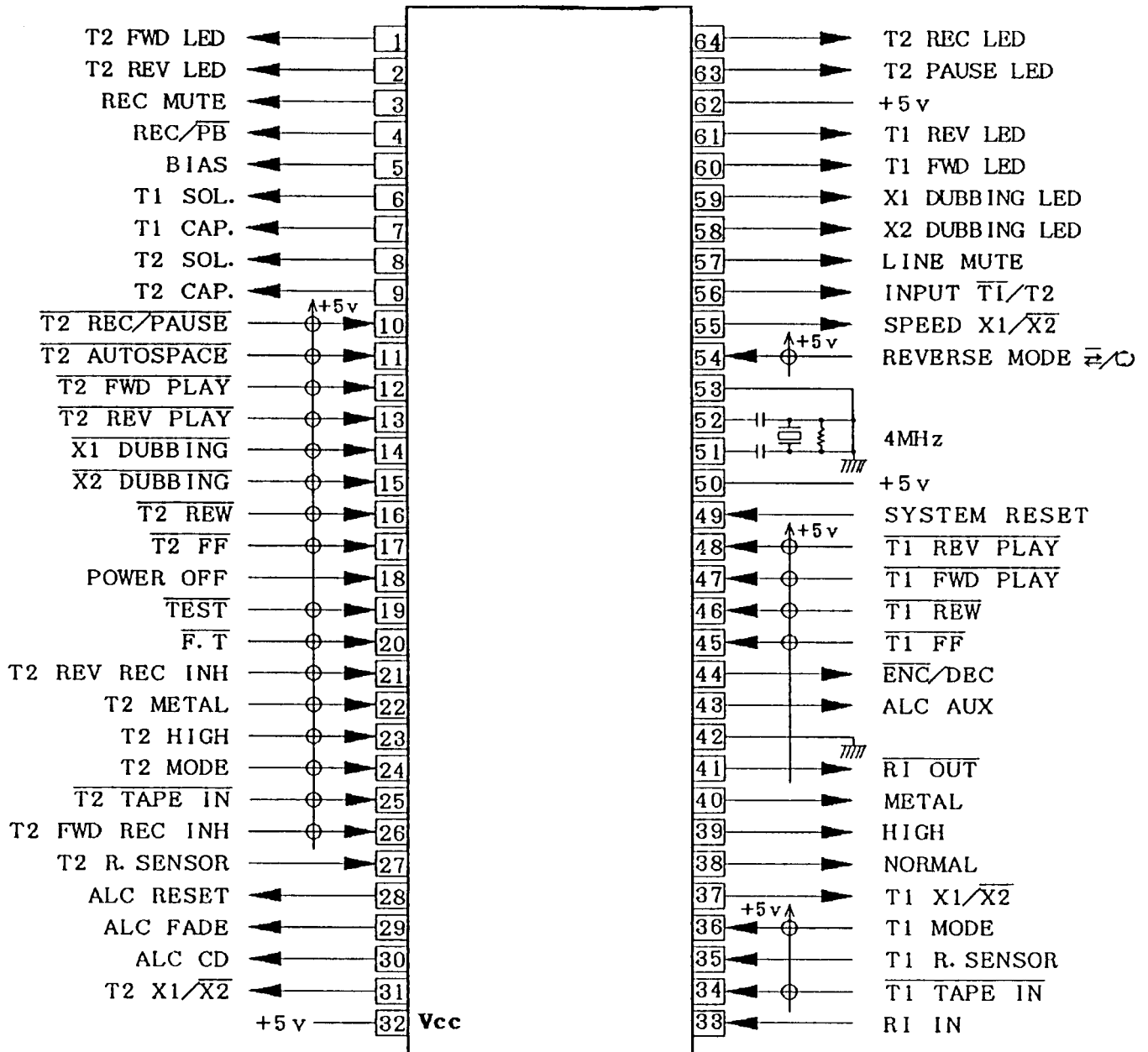


BLOCK DIAGRAM



MICROCOMPUTER

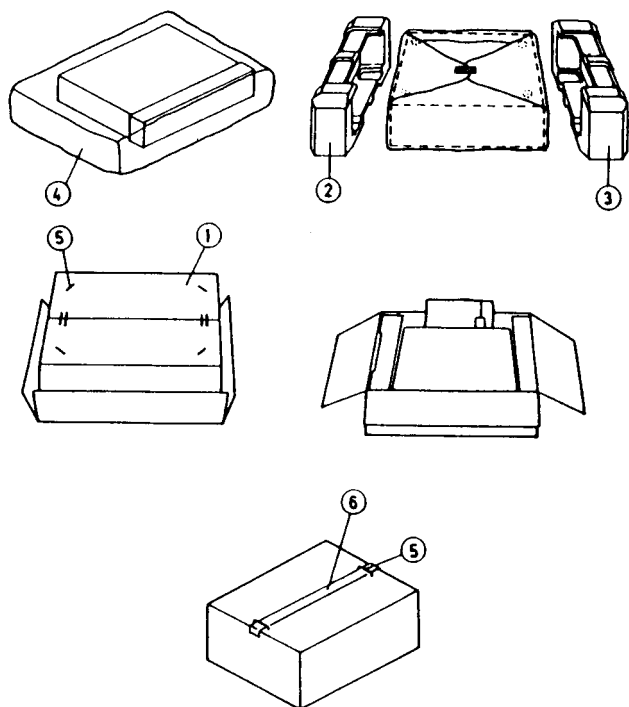
HD614089SD06



MICROCOMPUTER TERMINAL DESCRIPTION

Port No.	NAME	IN/OUT	FUNCTION	Port No.	NAME	IN/OUT	FUNCTION
1	T2 FWD LED	OUT	FWD play indication	32	Vcc		+ 5 V
2	T2 REV LED	OUT	REV play indication	33	RI IN	IN	RI cord input
3	REC MUTE	OUT	Recording muting: H	34	T1 TAPE IN	IN	Cassete tape lording detection
4	REC/PB	OUT	Recording/play back selection	35	T1 R. SENSOR	IN	Reel rotation sensor
5	BIAS	OUT	Bias oscillator control	36	T1 MODE	IN	Mechanism position sensor, STOP: H
6	T1 SOLENOID	OUT	Solenoid drive control	37	T1 X1/X2	OUT	Normal/high speed selection
7	T1 CAPSTAN	OUT	Capstan motor control	38	NORMAL	OUT	Normal tape: H
8	T2 SOLENOID	OUT	Solenoid drive control	39	HIGH	OUT	High tape: H
9	T2 CAPSTAN	OUT	Capstan motor control	40	METAL	OUT	Metal tape: H
10	T2 REC/PAUSE	IN		41	RI OUT	OUT	RI cord output
11	T2 AUTOSPACE	IN		43	ALC AUX	OUT	Recording sensitivity, AUX with: H
12	T2 FWD PLAY	IN		44	ENC/DEC	OUT	Dolby ENC/DEC selection
13	T2 REV PLAY	IN		45	T1 FF	IN	
14	X1 DUBBING	IN	Key input	46	T1 REW	IN	
15	X2 DUBBING	IN		47	T1 FWD PLAY	IN	Key input
16	T2 REW	IN		48	T1 REV PLAY	IN	
17	T2 FF	IN		49	SYSTEM RESET	IN	System micron reset
18	POWER OFF	IN	Power off detection	50	TEST		
19	TEST			51, 52	OSC		Clock oscillator 4.00MHZ
20	F. T			53	GND		
21	T2 REV REC INH	IN	REV recording prevention: H	54	REVERSE MODE	IN	Reverse mode selection
22	T2 METAL	IN	Metal tape detection	55	SPEED X1/X2	OUT	Normal/High speed equalizer selection
23	T2 HIGH	IN	High tape detection	56	INPUT T1/T2	OUT	Playback signal T1/T2
24	T2 MODE	IN	Mechanism position sensor, stop: H	57	LINE MUTE	OUT	Line muting: H
25	T2 TAPE IN	IN	Cassete tape lording detection: L	58	X2 DUBBING LED	OUT	High speed dubbing indication
26	T2 FWD REC INH	IN	FWD recording prevention: H	59	X1 DUBBING LED	OUT	Normal speed dubbign indication
27	T2 R. SENSOR	IN	Reel rotation sensor	60	T1 FWD LED	OUT	FWD play indication
28	ALC RESET	OUT	ALC reset: H	61	T1 REV LED	OUT	REV play indication
29	ALC FADE	OUT	Fade out, supper dubbing with: H	63	T2 PAUSE LED	OUT	Pause indication
30	ALC CD	OUT	Recording sensitivity, CD with: H	64	T2 REC LED	OUT	Recording indication
31	T2 X1/X2	OUT	Normal/high speed selection				

PACKING VIEW



PART LIST

REF NO.	PART NO.	DESCRIPTION
1	29052437Y	Carton box (Black model)
	29052436Y	Carton box (Silver model)
2	29091583	Pad(F)
3	29091584	Pad(B)
4	29100037AY	Poly bag
	29355187Y	Instruction sheet(D)
	29341754Y	Instruction sheet(P)
		Put on the Top cover them fix by FIXLON TAPE
5	282301	Sealing hook
6	2911007-1	Damplon tape
	Accessory	
	29365029	Warranty card (Q)
	29365019A	Warranty card (N)
	29358002J	Service stration list(N)
	29365024A	Warranty card (F)
	291000107	Poly bag
	29365020F	Warranty card(V)
	2910094A	Poly bag

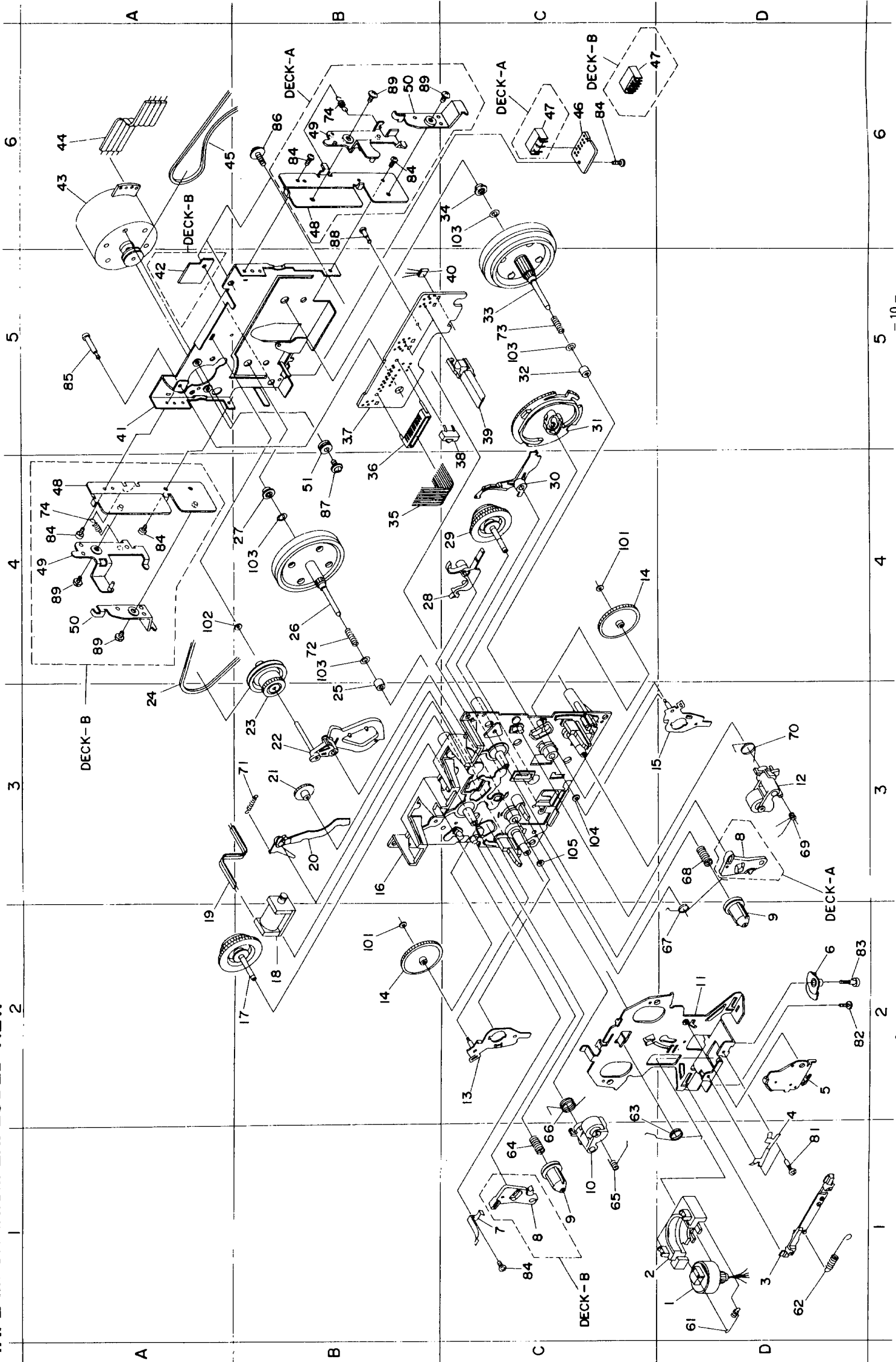
NOTE

- (V):Only Germany model
- (Q):Only Australian model
- (N):Only U.S.A model
- (F):Only France model
- (D):Only 120V model
- (P):Only 230V model
- (B):Black model
- (S):Silver model

TAPE MECHNISM PARTS LIST

REF.NO.	ADDRESS	PARTS NO.	DESCRIPTION	REF.NO.	ADDRESS	PARTS NO.	DESCRIPTION
1	1-D	24600115	HEAD AS (DECK-A)	51	4-B	24611559	CUSHION
		24600116	HEAD AS (DECK-B)	61	1-D	24605771	SPRING
2	1-D	24611530	FRAME (HEAD)	62	1-D	24605772	SPRING
3	1-D	24611531	LEVER (HEAD)	63	2-C	24605773	SPRING
4	1-D	24605734	SPRING (AZIMUTH)	64	1-C	24605774	SPRING
5	2-D	24607122	ARM AS (ASSIST)	65	1-C	24605775	SPRING
6	2-D	24602555	ARM (HEADGEAR)	66	1-C	24605776	SPRING
7	1-C	24605770	SPRING (CASSETTE)	67	2-D	24605777	SPRING
8	1-C,3-D	24611541	LOCKER (EJECT)	68	3-D	24605778	SPRING
9	1-C,2-D	24602556	CAP (REEL)	69	3-D	24605779	SPRING
10	1-C	24602557	PINCH ROLLER AS (L)	70	3-D	24605780	SPRING
11	2-D	24611532	CHASSIS (HEAD)	71	3-B	24605781	SPRING
12	3-D	24602558	PINCH ROLLER AS (R)	72	4-B	24605722	SPRING
13	2-C	24607123	ARM AS (PLAY)L	73	5-C	24605782	SPRING
14	2-B,4-C	24602559	GEAR (PLAY)	74	4-A,6-B	24605783	SPRING
15	3-D	24607124	ARM AS (PLAY)R	81	1-D	24609021	SCREW
16	3-B	24611533	CHASSIS (MECHANISM)	82	2-D	838120060	SCREW 2×6
17	2-B	24602560	SUB REEL AS (L)	83	2-D	24609024	SCREW
18	2-B	24606499	SOLENOID COIL	84	4-A,6-B	833120047	SCREW 2TTP+4S
19	3-A	24606500	WIRE	85	5-A	24609059	SCREW
20	3-B	24607125	ARM (RVS)	86	6-B	831126080	TP SCREW
21	3-B	24602565	GEAR (F.F.)	87	4-B	24609067	SCREW (MOTOR)
22	3-B	24607128	ARM AS (FR)	88	6-B	833126080	TAP-TIGHT SCREW 2.6+8
23	3-B	24602562	PULLEY AS (FR)	89	4-A,6-B	24609061	SCREW
24	3-A	24602563	BELT (FR)	101	2-B,4-C	24611542	WASHER
25	3-B	24602566	METAL	102	4-A	24611543	WASHER
26	4-B	24602568	FLY WHEEL AS (L)	103	4-B,5-C	24611544	WASHER
27	4-B	24602511	METAL	104	3-C	24611545	WASHER
28	4-B	24607126	ARM (BRAKE)	105	3-C	24611546	WASHER
29	4-C	24602561	SUBREEL AS (R)				
30	4-C	24607127	ARM (TRIGGER)				
31	5-C	24602570	CAMGEAR				
32	5-C	24602567	METAL				
33	5-C	24602569	FLY WHEEL AS (R)				
34	6-C	24602510	METAL				
35	4-B	24606505	WIRE [DECK-A]				
		24606506	WIRE [DECK-B]				
36	4-B	24606508	HOLDER (WIRE)				
37	5-B	24606501	P.C.B.				
38	4-C	24606502	SWITCH (MODE)				
39	5-C	24606376	LEAF SWITCH				
40	5-C	24606503or 24606513	DN6851Aor LB9051A,HOLE I.C.				
41	5-A	24607129A	BRACKET (FW)				
42	5-A	24611560	PLATE [DECK-B]				
43	6-A	24601272	MOTOR AS				
44	6-A	24606507	WIRE				
45	6-A	24602564	MAIN BELT <i>2P012</i>				
46	6-C	24606504	P.C.B.				
47	6-C	25055234 25055237	NPLG-3P218 [DECK-A] NPLG-6P221 [DECK-B]				
48	4-A,6-B	24611536 24611535	PLATE (EJECT) R [DECK-A] PLATE (EJECT) L [DECK-B]				
49	4-A,6-B	24611538 24611537	ARM (EJECT) R [DECK-A] ARM (EJECT) L [DECK-B]				
50	4-A,6-B	24611540 24611539	ARM (PUSH) R [DECK-A] ARM (PUSH) L [DECK-B]				

TAPE MECHANISM-EXPLODED VIEW



CHASSIS-EXPLODED VIEW PARTS LIST

REF.NO.	PARTS NO.	DESCRIPTION	REF.NO.	PARTS NO.	DESCRIPTION
A1	27110716Y	FRONT BRACKET AS [S]	A502a	27301605B	CASSETTE LID (T2) [S]
A1b	27110717Y	FRONT BRACKET AS [B]	A502b	27301607B	CASSETTE LID (T2) [B]
A1c	28198784Y	FACET (L)	A502c	27301609AY	CASSETTE LID (R) [S]
A1d	28198786AY	FACET (R)	A801	27301611AY	CASSETTE LID (R) [B]
A2	28198785Y	FACET (MD)	A802	28191635Y	CLEAR PLATE (R) [S]
A3	27130700BY	BRACKET (F)	A803	28191643Y	CLEAR PLATE (R) [B]
A4	28400520	DAMPER	P101A	28324653AY	KNOB (EJ-A) [S]
A5	27180332Z	SPRING (A)	P102A	28324654AY	KNOB (EJ-A) [B]
A6	27180332AY	SPRING (B)	S901	28324654AY	KNOB (EJ-B) [S]
A7	27301617AY	SPRING (EJ)	F901	28324652AY	KNOB (EJ-B) [B]
A8	27301612Y	FRAME AS (CASSETTE)	P901	28324646AY	KNOB (DOL) [S]
A8a	27301603Y	FRAME (CASSETTE)		28314655AY	KNOB (DOL) [B]
A8b	27180435Y	BRACKET (EJ)		2009990246	NSAS-6P0354 (DECK-A CONNECTION CORD)
A9	27141556Y	KNOB [S]		2009990248	NSAS-14P0355 (DECK-B CONNECTION CORD)
A10	28324647AY	KNOB [B]		25065340Y	NSS-0001
A11	28324648AY	CHASSIS		252075Y	2.5A-SE-EAK [P]
A12	27100260AY	HOLDER		253173Y	AC CORD AS-UC-7#18 [D]
A13	27190266	HOLDER		253164Y	AC CORD AS-CEE [P/W]
A14	27190657	HOLDER		253170	AC CORD AS-SAA [Q]
A15	27141339	BRACKET (SLD)	T901	NPT-1153D [D]	NPT-1153D [D]
A16	834430088	TAP-TIGHT SCREW 3TTS+8BBC		NPT-1153P [P]	NPT-1153P [P]
A17	831130088	TAP-TIGHT SCREW 3TTW+8B		NPT-1153DG [W]	NPT-1153DG [W]
A18	833430080	TAP-TIGHT SCREW 3TTP+8PBC		NPT-1153Q [Q]	NPT-1153Q [Q]
A19	833426080	TAP-TIGHT SCREW 2.6TTP+8P	U1	NAAR-4548	NAAR-4548
A20	830440109	TAP-TIGHT SCREW 4TTC+10CB	U2	NAAR-4549	NAAR-4549
A21	835430068	TAP-TIGHT SCREW 3TTP+6BBC	U3	NASW-4550	NASW-4550
A22	833420108	TAP-TIGHT SCREW 2TTP+10BB	U4	NASW-4551	NASW-4551
A23	27121603AY	REAR PANEL [D]	U5	NAPS-4552 [D]	NAPS-4552 [D]
A24	27121608AY	REAR PANEL [P]		NAPS-4552A [P]	NAPS-4552A [P]
A25	27121609AY	REAR PANEL [W]		NAPS-4552B [Q]	NAPS-4552B [Q]
A26	27121610AY	REAR PANEL [Q]	U6	NAPS-4552C [W]	NAPS-4552C [W]
A27	27300750	BUSHING (CORD)	U7	NAPS-4553	NAPS-4553
A28	870065	WASHER (PT)	U8	NAETC-4554	NAETC-4554
A29	831430088	TAP-TIGHT SCREW 3TTW+8BBC	U9	NAEIC-4555 [P]	NAEIC-4555 [P]
A30	27262560Y	PLATE (P.T.)	Z1	NAETC-4556 [W]	NAETC-4556 [W]
A31	27190905	HOLDER (MB-2)	Z2	CASSETTE DECK-A MECHANISM, NDM-159	CASSETTE DECK-A MECHANISM, NDM-159
A32	28184521AY	TOP COVER		CASSETTE DECK-B MECHANISM, NDM-160	CASSETTE DECK-B MECHANISM, NDM-160
A33	838430088	TAP-TIGHT SCREW 3TTB+8BBC			
A34	2717525Z-1A	LEGAS			
A35	27301613Y	CASSETTE LIDAS (T1) [S]			
A36	27301615Y	CASSETTE LIDAS (T1) [B]			
A37	27301604B	CASSETTE LID (T1) [S]			
A38	27301606B	CASSETTE LID (T1) [B]			
A39	27301608AY	CASSETTE LID (L) [S]			
A40	27301610AY	CASSETTE LID (L) [B]			
A41	28191634Y	CLEAR PLATE (L) [S]			
A42	28191642Y	CLEAR PLATE (L) [B]			
A43	27301614Y	CASSETTE LIDAS (T2) [S]			
A44	27301616Y	CASSETTE LIDAS (T2) [B]			

NOTE : [S]:Silver model
 [B]:Black model
 [D]:120V model
 [P]:230V model
 [Q]:240V model
 [W]:Worldwide model

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

PRINTED CIRCUIT BOARD – PARTS LIST

NAAR-4548

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
	Ics			Capacitors	
Q201	22240368	M5218AL	C201,C202	354780109	1 μ F50V,ELECT.
Q202	22240256	M51131L	C203-C206	354741009	10 μ F16V,ELECT.
Q412	222959	# PC1297CA	C209	354742209	22 μ F16V,ELECT.
Q701	22240617	HD614089SD06	C211,C212	354780229	2.2 μ F50V,ELECT.
Q901	222780125MIT	78M12	C213,C214	354721019	100 μ F6.3V,ELECT.
Q902	222780055MIT	78M05	C410	354724719	470 μ F6.3V,ELECT
	Transistors		C413	354742219	220 μ F16V,ELECT.
Q203,Q204	2213285 or	2SC1740S-S or	C416	370131234	0.012 μ F100V,APS
	2213284	2SC1740S-R	C418	354780229	2.2 μ F50V,ELECT.
Q205	221281	DTC114YS	C429,C430	370131214	120PF100V,APS
Q206	2213285 or	2SC1740S-S or	C431	354744709	47 μ F16V,ELECT.
	2213284	2SC1740S-R	C433	353741009	10 μ F16V,ELECT.
Q207	221281	DTC114YS	C601	354780479	4.7 μ F50V,ELECT.
Q208	2212600	DTA124ES	C701	354780109	1 μ F50V,ELECT.
Q209	221281	DTC114YS	C705	354780479	4.7 μ F50V,ELECT.
Q405	221281	DTC114YS	C708	354762209	22 μ F35V,ELECT.
Q406	2212853	2SB1068-K	C709	354780479	4.7 μ F50V,ELECT.
	2212855	2SB1068-U	C710	354780109	1 μ F50V,ELECT.
Q408,Q409	221281	DTC114YS	C901	393152227S	2200 μ F25V,ELECT.
Q410,Q411	2211544	2SC1959-Y	C902	393156827S	6800 μ F25V,ELECT.
Q601	221281	DTC114YS	C905	354744719	470 μ F16V,ELECT.
Q602	2213355 or	2SA933S-S or	C907	354780109	1 μ F50V,ELECT.
	2213354	2SA933S-R	C908	354741019	100 μ F16V,ELECT.
Q603,Q604	2211706 or	2SD655-F or	C910,C911	354744709	47 μ F16V,ELECT.
	2211705	2SD655-E	C912	354741029	1000 μ F16V,ELECT.
Q702-Q705	221281	DTC114YS	C914	354741019	100 μ F16V,ELECT.
Q706-Q709	2212853 or	2SB1068-K or	C915	354780479	4.7 μ F50V,ELECT.
	2212855	2SB1068-U	C917	354762209	22 μ F35V,ELECT.
Q710	221281	DTC114YS	C918	353741009	10 μ F16V,ELECT.
Q711	2213355 or	2SA933S-S or			
	2213354	2SA933S-R	Resistors		
Q712	221281	DTC114YS	R226	5210068	N06HR47KBD
Q713-Q715	2213355 or	2SA933S-S or	R467,R468	5210064	N06HR10KBD
	2213354	2SA933S-R	R475	442525604F	RS1/2WBJ56 Ω
Q716	2212600	DTA124ES	R702	49163392407	3.9K Ω \times 7,1/10W
Q903	2202115 or	2SD2061-E or	R703	49163472415	4.7K Ω \times 15,1/10W
	2202116	2SD2061-F	R721,R722	5210064	N06HR10KBD
Q904	2213285 or	2SC1740S-S or	R727,R728	5210064	N06HR10KBD
	2213284	2SC1740S-R	R738	442524714F	RS1/2WBJ470 Ω
			R901	441723304F	RS2WBJ33 Ω
			R902	442520474F	RS1/2WBJ4.7 Ω
	LED				
D201,D906	225227	SLV-31VC			
	Diodes			Switch	
D601-D603	223163	1SS133	S201	25065414	NSS-22155
D701	223124,	1S2473,			
	223150 or	US1040 or		Plug,Socket	
	223145	1S2076TD	P201	25045329	NPS-4PDBL183
D702-D712	223163	1SS133	P202	25055509	NPLG-13P484
D713	224150683	05AZ6.8Z	P203	25055505	NPLG-3P480
D714	223163	1SS133	P204	25055509	NPLG-13P484
D715	224150562	05AZ5.6Y	P401	25055532	NPLG-2P116
D716	223163	1SS133	P701	25045330	NPJ-2PDBL184
D901,D904	22380046 or	AM01Z or	P702	25055157	NPLG-13P141
	22380035	GPI04003E	P703	25055158	NPLG-14P142
D905	223163	1SS133	P704	25055632	NPLG-11P594
D906	225227	SLV-31VC	P705	25055634	NPLG-13P596
D907	224151303	05AZ13Z			
	Coils			Miscellaneous	
L403,L404	231127	NCH-4183		27160211-1	RAD-68B,RADIATOR
L405	231063	NLO-2037		27141059	BRACKET
	Ceramic OSC				
X701	3010150	CST4.00MGW			

NAAR-4549

CIRCUIT NO.	PART NO.	DESCRIPTION
Q101,Q102	222905	1/4 PC1228HA
Q109	22240147	1/4 PC1330HA
Q110	222933	BU-4066B
Q251	22240388	HA12142NT
Q403	22240267	CXA1198AP
Q404	222840511	4051B

Transistors

Q103-Q108	221299	DTC114TS
Q111,Q112	221282	DTC144ES
Q252	221281	DTC114YS
Q401,Q402	2213285 or 2213284	2SC1740S-S or 2SC1740S-R

Coils

L201,L202	233407	NMC-6079
L401,L402	231165	NTR-6506

Capacitors

C107,C108	354780229	2.2 μ F50V,ELECT.
C111,C112	354741019 or 354721019	100 μ F16V,ELECT. or 100 μ F6.3V,ELECT.
C135,C136	354780229	2.2 μ F50V,ELECT.
C139,C140	354741019 or 354721019	100 μ F16V,ELECT. or 100 μ F6.3V,ELECT.
C251,C252	354780229	2.2 μ F50V,ELECT.
C257,C258	354780229	2.2 μ F50V,ELECT.
C265,C266	354741019	100 μ F16V,ELECT.
C267	354742209	22 μ F16V,ELECT.
C268	354780109	1 μ F50V,ELECT.
C270,C271	354741009	10 μ F16V,ELECT.
C401,C402	354780109	1 μ F50V,ELECT.
C403,C404	354780479	4.7 μ F50V,ELECT.
C405,C406	354741019	100 μ F16V,ELECT.
C407-C409	354780479	4.7 μ F50V,ELECT.
C917	354744719	470 μ F16V,ELECT.
C918	354741019	100 μ F16V,ELECT.
C919	354741029S	1000 μ F16V,ELECT.
C920	354741019	100 μ F16V,ELECT.

Resistors

R115,R116	5210244	N06HR47KBE
R147,R148	5210244	N06HR47KBE
R405,R406	5210240	N06HR10KBE

Plug

P101	25055133	NPLG-3P117
P102	25055136	NPLG-6P120

NASW-4550

CIRCUIT NO.	PART NO.	DESCRIPTION
D802,D803	225256B,	SEL3410E-B
	225256C or	SEL3410E-C or
	225256D	SEL3410E-D
D804,D805	225255B,	SEL3110S-B,
	225255C or	SEL3110S-C or
	225255D	SEL3110S-D
S801-S805	25035570	NPS-111-S532
	25065344	NSS-12134
	25065346	NSS-13135
P702A	2006392630	NSAS-26P0352

NASW-4551

CIRCUIT NO.	PART NO.	DESCRIPTION
D806	225256B,	SEL3410E-B,
	225256C or	SEL3410E-C or
	225256D	SEL3410E-D
D807	225255B,	SEL3110S-B,
	225255C or	SEL3110S-C or
	225255D	SEL3110S-D
D808	225256B,	SEL3410E-B,
	225256C or	SEL3410E-C or
	225256D	SEL3410E-D
D809	225255B,	SEL3110S-B,
	225255C or	SEL3110S-C or
	225255D	SEL3110S-D

Switch

S808-S816	25035570	NPS-111-S532
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Socket

P703A	2006342830	NSAS-28P0361
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Capacitor

C951	3500065A	0.01 μ F,AC400V/125V
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NAETC-4554

CIRCUIT NO.	PART NO.	DESCRIPTION
P901	25050684	NSCT-2P488,AC SOCKET

NAETC-4555

CIRCUIT NO.	PART NO.	DESCRIPTION
P902	25050410	NSCT-2P235,AC SOCKET

NAETC-4556

CIRCUIT NO.	PART NO.	DESCRIPTION
S903	25065437	NSS-22157P,SWITCH

NAPS-4552A

CIRCUIT NO.	PART NO.	DESCRIPTION
	25050065	YSH403T,FUSE HODER

ADJUSTMENT PROCEDURES

PRECAUTIONS

1. Before adjustment, clean the following parts with an alcohol moistened swab.

- * record/play back head
- * erase head
- * pinch roller
- * capstan

2. Do not use magnetized screwdriver for adjustments.

3. Demagnetize record/playback head with a lead demagnetizer.

TEST EQUIPMENT/TOOLS REQUIRED:

Audio oscillator

Digital frequency counter

Oscilloscope

Attenuator

AC voltmeter

Non-magnetic screw driver

Test tapes

TCC-153 : 10KHz, -15dB

MTT-111 : 3kHz, -10dB

MTT-150 : Dolby level calibration
400Hz, tone 200nWb/m

Item	Connection of instrument	Line input	Test tape	Mode	Out put indicator	Adjustment point	Adjust	Remarks
1	Tape speed		MTT-111	PB	Frequency counter	DECK-A H.SP. R722 N.SP. R721 DECK-B H.SP. R728 N.SP. R727	DECK-A 6010±10Hz 3005± 5Hz DECK-B 6010±10Hz 3005± 5Hz	High speed connect the FT terminal to GND. push the FWD button twice continuously. High speed first
2	Head azimuth		TCC-153	PB	AC voltmeter	Head azimuth screw	Maximum and same phase at channels L and R	fig-1
3	Play-back level		MTT-150	PB	AC voltmeter	T1 R115(Ch.L) T1 R116(Ch.R) T2 R147(Ch.L) T2 R148(Ch.R)	300mV	
4	ALC balance	1KHz 210mV		REC/ PAUSE	AC voltmeter	R226	Same level at ch.L and R	
5	OSC Block		METAL TAPE XS C60	REC	Frequency counter	L-405	85KHz (±1HKz)	
6	HX-PRO		METAL TAPE XS C60	REC	AC voltmeter	L-403, L404	Maximum	R-467 R-468 maximum
7	Bias current	fig-2	1KHz, -20dB and 12KHz, -20dB	XL-II C-90	REC/PB	AC voltmeter R467(Ch.L) R468(Ch.R)	Same level at REC/PB	Input VR maximum
8	Record level	fig-2	1KHz	XL-II C-90	REC	AC voltmeter Attenuator or AF OSC output	350mV	
					REC/PB	AC voltmeter R405(Ch.L) R406(Ch.R)	Same level at REC/PB	

Black tape

NORMAL.....UD-1 C-90

HIGHXL-II C-90

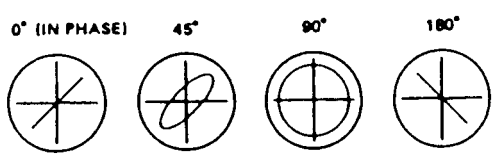
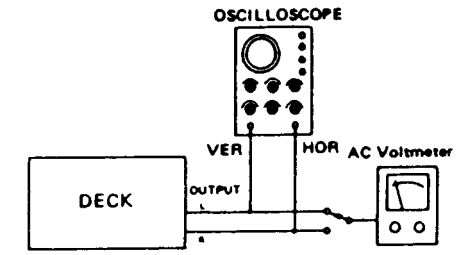
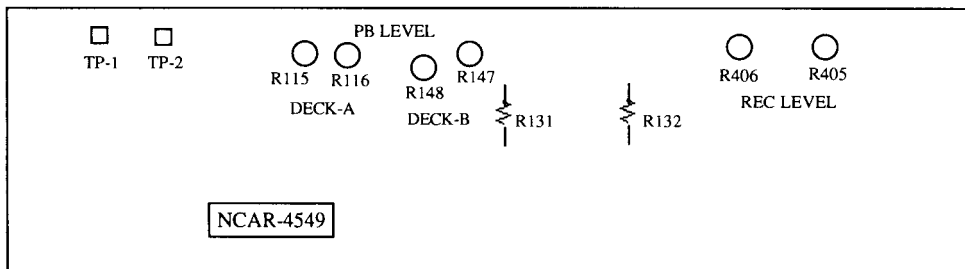
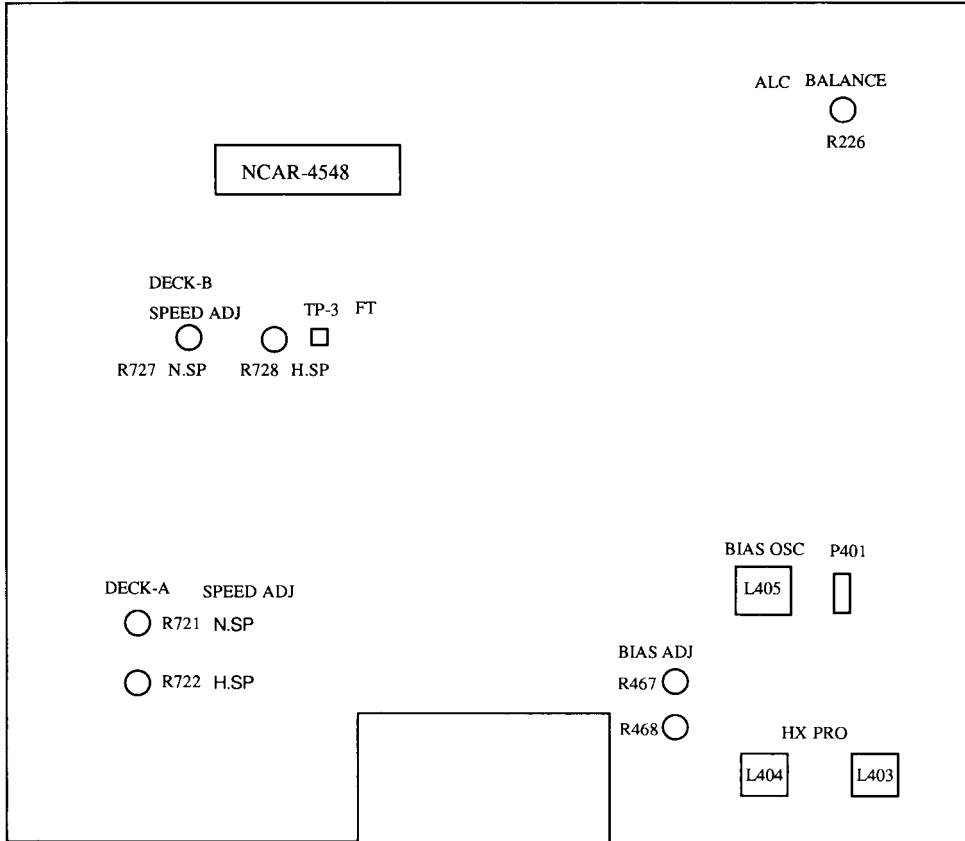
METALXS-C60

PLAY torque35~70g/cm

FF.REW torque.....80~170g/cm

Back tension 2~6g/cm

ADJUSTMENT POINT



Confirming phase relationship

fig-1

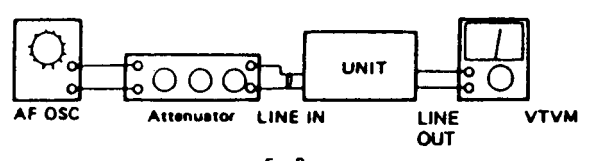
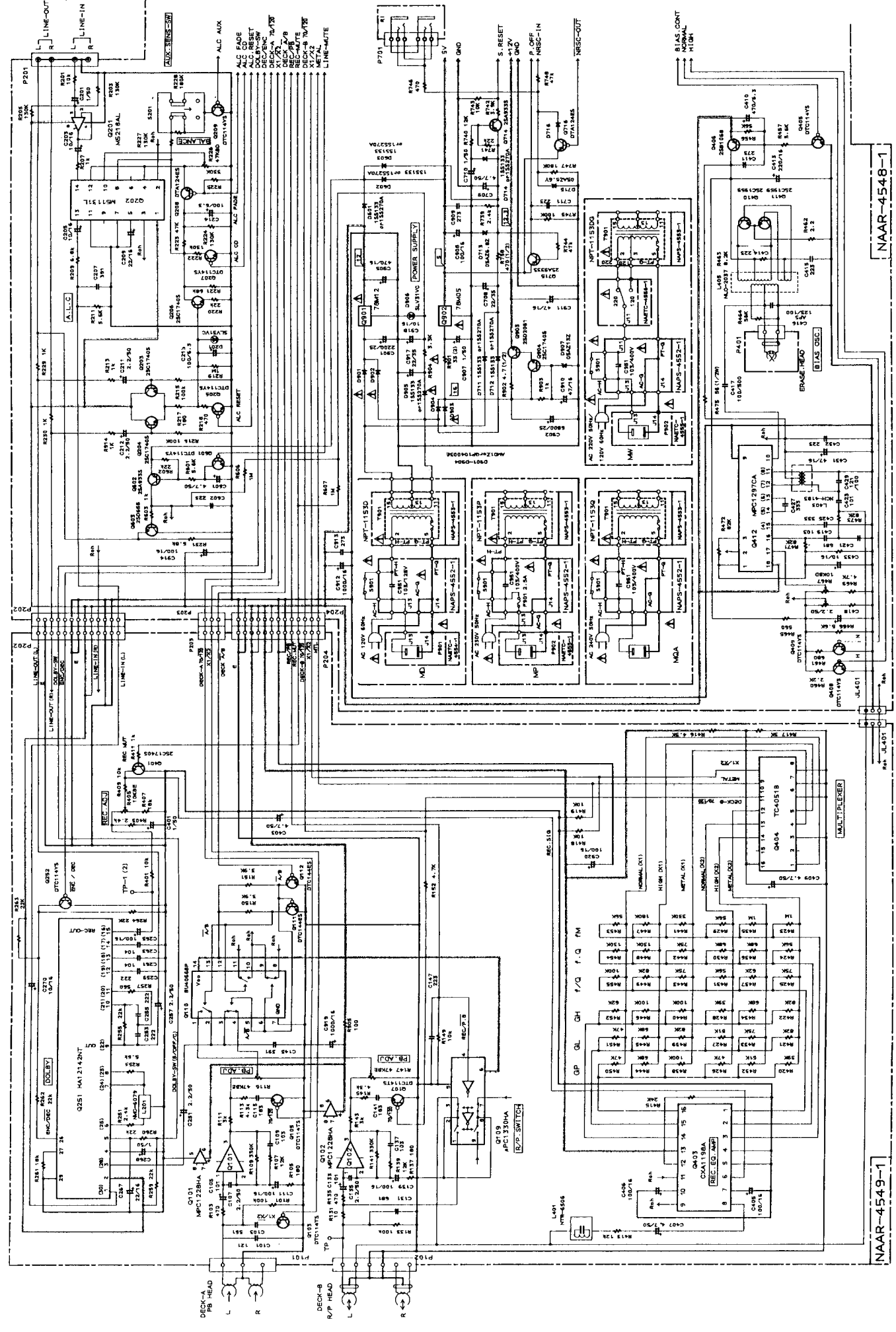


fig-2

SCHEMATIC DIAGRAM (1/2)



1

2

3

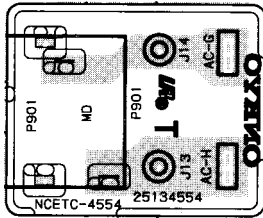
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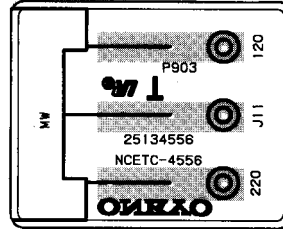
NAAR-4549-1

NAAR-4548-1

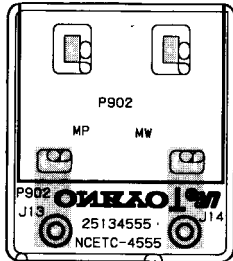
NCETC-4554



NCETC-4556



NCETC-4555



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