

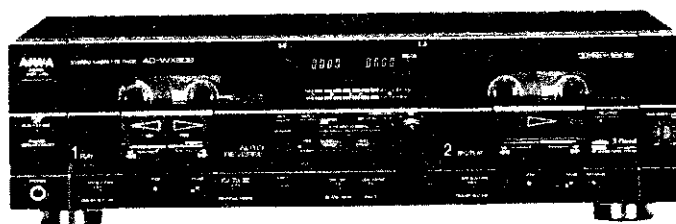
SERVICE MANUAL

MODEL NO. AD-WX909

■STEREO CASSETTE DECK

■TYPE. HB, UB, EB, KB, ZB

■BASIC MECHANISM: X-3 (1DECK)
DM-28 (2DECK)



SPECIFICATIONS

Type	Stereo cassette tape deck
Track format	4 tracks, 2 channels
Power supply	AD-WX909E, Z AC 220 V, 50/60 Hz AD-WX909K AC 240 V, 50/60 Hz AD-WX909U, AC 120 V, 60 Hz AD-WX909H AC 120 V/220 V/240 V switchable, 50/60 Hz
Power consumption	35 W
Frequency response	METAL tape: 10 - 20,000 Hz CrO ₂ tape: 10 - 19,000 Hz NORMAL tape: 10 - 17,000 Hz
Signal-to-noise ratio	75 dB (METAL tape DOLBY C NR ON)
Wow and flutter	Deck ① 0.1% (According to DIN 45500) 0.055% (WRMS) Deck ② 0.09% (According to DIN 45500) 0.028% (WRMS)

Tape speed	4.8 cm/sec. (1-7/8 ips), 9.5 cm/sec (Double speed)
Recording system	AC bias (frequency 100 kHz)
Erase system	AC erase
Motor	DC Servomotor × 2 DC Motor × 1
Heads	Record head: × 1 Playback head: × 2 Erase head: × 1
Inputs	LINE IN/CD maximum input sensitivity: 50 mV (over 50 kΩ)
Outputs	LINE OUT standard output level: 380 mV (0 VU); suitable load impedance: over 50 kΩ
Dimensions	430(W) × 126(H) × 316.5(D)mm
Weight	6.2 kg

- Design and specifications are subject to change without notice.
- Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
- Dolby and the  symbol are trademarks of Dolby Laboratories Licensing Corporation.
- HX professional originated by BANG&OLUFSEN.

See the FX-D1 service manual for the IC pin Description and IC block diagram.

ELECTRICAL MAIN PARTS LIST

※ Please order the all parts for this model to Japan.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
--- IC ---			--- MAIN-1 CIRCUIT BOARD SECTION ---		
87-020-180	IC,BA6146		PCB-A	*	MAIN-1 CIRCUIT BOARD
87-020-454	IC,DM6851		C1	★ 87-018-119	CAP,CERA-SOL SS 100P
82-202-621	IC,HD38702A39		C2	★ 87-018-119	CAP,CERA-SOL SS 100P
87-020-140	IC,L78M12		C3	★ 87-018-116	CAP,CERA-SOL SS 56P
87-020-261	IC,LA6358S		C4	★ 87-018-116	CAP,CERA-SOL SS 56P
82-200-616	IC,LC6520H-3279		C11	★ 87-010-135	CAP,ELECT BP 10-25
87-020-096	IC,M4066BP		C12	★ 87-010-135	CAP,ELECT BP 10-25
87-020-533	IC,M4069UBP		C13	★ 87-018-127	CAP,CERA-SOL SS 470P
87-020-679	IC,M4572BP		C14	★ 87-018-127	CAP,CERA-SOL SS 470P
87-027-895	IC,M5218L		C15	★ 87-018-131	CAP,CERA-SOL SS 1000P
87-027-909	IC,M54523P		C16	★ 87-018-131	CAP,CERA-SOL SS 1000P
87-020-680	IC,NJM2068S		C31	★ 87-018-119	CAP,CERA-SOL SS 100P
87-020-758	IC,NJM2068SD		C32	★ 87-018-119	CAP,CERA-SOL SS 100P
87-020-908	IC,NJU4066BD		C37	★ 87-010-135	CAP,ELECT BP 10-25
87-020-898	IC,M74HC42P		C38	★ 87-010-135	CAP,ELECT BP 10-25
87-027-937	IC,TC4030BP		C39	★ 87-018-131	CAP,CERA-SOL SS 1000P
--- TRANSISTOR ---			C40	★ 87-018-131	CAP,CERA-SOL SS 1000P
87-026-214	TRANSISTOR,DTA114Y		C41	★ 87-018-127	CAP,CERA-SOL SS 470P
89-109-521	TRANSISTOR,2SA952K		C42	★ 87-018-127	CAP,CERA-SOL SS 470P
89-110-155	TRANSISTOR,2SA1015GR		C101	★ 87-015-951	CAP,ELECT 1-50
89-318-155	TRANSISTOR,2SC1815GR		C102	★ 87-015-951	CAP,ELECT 1-50
89-320-011	TRANSISTOR,2SC2001K		C103	★ 87-018-119	CAP,CERA-SOL SS 100P
89-321-204	TRANSISTOR,2SC-2120Y		C104	★ 87-018-119	CAP,CERA-SOL SS 100P
89-322-406	TRANSISTOR,2SC2240BL		C105	★ 87-010-379	CAP,ELECT 22-16
89-411-110	TRANSISTOR,2SD1111		C106	★ 87-010-379	CAP,ELECT 22-16
89-412-753	TRANSISTOR,2SD1275		C107	★ 87-018-130	CAP,CERA-SOL 820P
89-412-763	TRANSISTOR,2SD1276P		C108	★ 87-018-130	CAP,CERA-SOL 820P
89-413-023	TRANSISTOR,2SD1302S		C109	★ 87-018-131	CAP,CERA-SOL SS 1000P
			C110	★ 87-018-131	CAP,CERA-SOL SS1000P
			C151	★ 87-010-379	CAP,ELECT 22-16SME
			C161	★ 87-010-379	CAP,ELECT 22-16SME

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Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
C162	★ 87-010-404	CAP,ELECT 4,7-50SME	L402	★ 87-003-051	COIL 470UH
C163	★ 87-010-404	CAP,ELECT 4,7-50SME	△ K405	★ 87-029-067	RES,FUSIBLE 4,7-1/4W
C164	★ 87-010-236	CAP,ELECT 1000-10S	RY401	87-045-270	RELAY GSA-297P
C181	★ 87-010-379	CAP,ELECT 22-16SME	SFR1	★ 87-021-735	SFR 220
C182	★ 87-010-236	CAP,ELECT 1000-10S	SFR2	★ 87-021-735	SFR 220
C201	★ 87-018-132	CAP,CERA-SOL SS 2200P	SFR3	★ 87-021-739	SFR 2.2K
C202	★ 87-018-132	CAP,CERA-SOL SS 2200P	SFR4	★ 87-021-739	SFR 2.2K
C204	★ 87-018-121	CAP,CERA-SOL SS 150P	SFR5	★ 87-021-738	SFR 1K
C205	★ 87-010-401	CAP,ELECT 1-50SME	SFR6	★ 87-021-738	SFR 1K
C206	★ 87-018-132	CAP,CERA-SOL SS 2200P	SFR31	★ 87-021-735	SFR 220
C208	★ 87-018-132	CAP,CERA-SOL SS 2200P	SFR32	★ 87-021-735	SFR 220
C209	★ 87-018-121	CAP,CERA-SOL SS 150P	SFR33	★ 87-021-739	SFR 2.2K
C210	★ 87-010-401	CAP,ELECT 1-50SME	SFR34	★ 87-021-739	SFR 2.2K
C211	★ 87-010-221	CAP,ELECT 470-6,3SME	--- MAIN-2 CIRCUIT BOARD SECTION ---		
C212	★ 87-018-005	CAP,CERA-CYL 4,7P	PCB-B	*	MAIN-2 CIRCUIT BOARD
C213	★ 87-018-005	CAP,CERA-CYL 4,7P	C502	★ 87-010-101	CAP,ELECT 220-16SME
C305	★ 87-018-119	CAP,CERA-SOL SS 100P	C506	★ 87-010-035	CAP,ELECT 2,2-50
C306	★ 87-018-119	CAP,CERA-SOL SS 100P	C507	★ 87-010-042	CAP,ELECT 47-25(10S)
C307	★ 87-010-379	CAP,ELECT 22-16SME	C508	★ 87-010-112	CAP,ELECT 100-16
C308	★ 87-010-379	CAP,ELECT 22-16SME	C509	★ 87-010-045	CAP,ELECT 100-25V(10S)
C309	★ 87-015-951	CAP,ELECT LL 1-50V	C510	★ 87-010-379	CAP,ELECT 22-16SME
C310	★ 87-015-951	CAP,ELECT LL 1-50V	C511	★ 87-010-383	CAP,ELECT 33-25SME
C331	★ 87-010-404	CAP,ELECT 4,7-50SME	C512	★ 87-010-235	CAP,ELECT 470-16
C355	★ 87-010-401	CAP,ELECT 1-50SME	C513	★ 87-010-398	CAP,ELECT 2200-35VSM
C356	★ 87-010-401	CAP,ELECT 1-50SME	C516	★ 87-010-048	CAP,ELECT 220-25(10S)
C401	★ 87-014-081	CAP,PP 0,01	C517	★ 87-010-237	CAP,ELECT 1000-16SME
C402	★ 87-010-378	CAP,ELECT 10-16SME	C519	★ 87-010-398	CAP,ELECT 2200-35SME
C407	★ 87-010-258	CAP,ELECT 22-35V SME	C1001	★ 87-018-122	CAP,CERA-SOL SS 180P
C408	★ 87-010-112	CAP,ELECT 100-16	C1003	★ 87-010-380	CAP,ELECT 47-16SME
C411	★ 87-018-047	CAP,CERA-SOL S 0,01Y-16	C1202	★ 87-010-380	CAP,ELECT 47-16SME
C503	★ 87-010-101	CAP,ELECT 220-16SME	C1203	★ 87-010-380	CAP,ELECT 47-16SME
C504	★ 87-010-101	CAP,ELECT 220-16SME	C1301	★ 87-010-429	CAP,ELECT 680-16VSM
C505	★ 87-010-404	CAP,ELECT 4,7-50SME	C1302	★ 87-010-429	CAP,ELECT 680-16VSM
D101	87-027-475	DIODE,ZENER H26B1	C1401	★ 87-010-380	CAP,ELECT 47-16SME
D201	87-020-691	DIODE 1SS132	C1402	★ 87-010-380	CAP,ELECT 47-16SME
D202	87-020-691	DIODE 1SS132	D351	87-020-691	DIODE 1SS132
D203	87-020-691	DIODE 1SS132	D502	87-020-691	DIODE 1SS132
D204	87-020-691	DIODE 1SS132	D503	87-020-691	DIODE 1SS132
D205	87-027-286	DIODE,ZENER H25C1	D504	87-020-691	DIODE 1SS132
D301	87-027-633	DIODE,ZENER H29A2	D505	87-027-365	DIODE SS277B
D302	87-052-188	DIODE 1S188FM	D506	87-027-365	DIODE SS277B
D401	87-020-691	DIODE 1SS132	D507	87-020-025	DIODE 2B4841,LC-2
D402	87-020-691	DIODE 1SS132	D1001	87-020-691	DIODE 1SS132
D403	87-020-691	DIODE 1SS132	D1002	87-020-691	DIODE 1SS132
D404	87-020-123	DIODE DS446	D1005	87-020-691	DIODE 1SS132
D405	87-020-691	DIODE 1SS132	D1006	87-020-691	DIODE 1SS132
D407	87-020-691	DIODE 1SS132	D1007	87-020-691	DIODE 1SS132
D408	87-020-691	DIODE 1SS132	D1008	87-020-691	DIODE 1SS132
J451-1	87-049-420	PIN JACK 4P-14,K (LINE OUT L D1)	D1012	87-027-514	DIODE,ZENER H26B2
J451-2	+++	PIN JACK 4P-14,K (LINE OUT R D1)	D1013	87-020-691	DIODE 1SS132
J451-3	+++	PIN JACK 4P-14,K (CD/DAT L)	D1014	87-027-514	DIODE,ZENER H26B2
J451-4	+++	PIN JACK 4P-14,K (CD/DAT R)	D1015	87-020-691	DIODE 1SS132
J452-1	87-049-420	PIN JACK 4P-14 (LINE OUT L D2)	D1016	87-020-691	DIODE 1SS132
J452-2	+++	PIN JACK 4P-14 (LINE OUT R D2)	D1101	87-020-691	DIODE 1SS132
J452-3	+++	PIN JACK 4P-14 (LINE IN L D2)	D1301	87-020-123	DIODE DS446
J452-4	+++	PIN JACK 4P-14 (LINE IN R D2)	D1302	87-020-123	DIODE DS446
L1	★ 82-202-665	COIL TRAP 100K	D1401	87-020-691	DIODE 1SS132
L2	★ 82-202-665	COIL TRAP 100K	D1402	87-020-691	DIODE 1SS132
L51	★ 82-202-616	FILTER,LP 100X2	D1601	87-020-691	DIODE 1SS132
L52	+++	FILTER,LP 100X2	D1602	87-020-691	DIODE 1SS132
L101	82-217-602	FILTER,42W-5012-12	D1603	87-020-691	DIODE 1SS132
L301	★ 82-196-603	COIL TRAP 100K	D1604	87-020-691	DIODE 1SS132
L302	★ 82-196-603	COIL TRAP 100K			
L401	★ 82-200-628	COIL OSC 100KHZ			

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Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
D1605	87-020-691	DIODE 1SS132	C266	★ 87-010-545	CAP,ELECT 0.22-50SME
D1606	87-020-691	DIODE 1SS132	D261	87-020-691	DIODE 1SS132
D1607	87-020-691	DIODE 1SS132	VR401	82-202-623	VOLUME 250KB(D2 BIAS FINE NOR./CO)
D1608	87-020-691	DIODE 1SS132	--- DISPLAY CIRCUIT BOARD SECTION ---		
D1609	87-020-691	DIODE 1SS132	PCB-E	*	DISPLAY CIRCUIT BOARD
D1610	87-020-691	DIODE 1SS132	C351	★ 87-010-265	CAP,ELECT 33-16V (USL)
D1611	87-020-691	DIODE 1SS132	C352	★ 87-010-265	CAP,ELECT 33-16V (USL)
D1612	87-020-691	DIODE 1SS132	C1901	★ 87-018-119	CAP,CERA-SOL SS 100P
D1614	87-020-691	DIODE 1SS132	D1817	87-020-691	DIODE 1SS132
D1615	87-020-691	DIODE 1SS132	D1818	87-020-691	DIODE 1SS132
D1701	87-020-691	DIODE 1SS132	D1901	87-027-393	DIODE,ZENER HZ4C2
D1702	87-020-691	DIODE 1SS132	FL1901	82-217-603	FL,FG116P9 (COUNTER)
D1703	87-020-691	DIODE 1SS132	FL1902	81-199-635	FL,BG-232ZK 12DOT (PEAK PROGRAM LEVEL METER)
D1704	87-020-691	DIODE 1SS132	LED367	87-027-542	LED,LN217RP (D1 DOLBY NR C)
△F2	87-035-331	FUSE,GHS-1.25A (U ONLY)	LED368	87-027-543	LED,LN317GP (D1 DOLBY NR B)
L1001	★ 82-202-624	COIL OSC LC6520H	LED369	87-027-542	LED,LN217RP (D2 DOLBY NR C)
R523	★ 87-025-440	RES,MFO 1W-330	LED370	87-027-543	LED,LN317GP (D2 DOLBY NR B)
R524	★ 87-025-440	RES,MFO 1W-330	LED401	87-027-637	LED,TLG226 (D2 ADMS)
R1014	★ 82-202-652	RES,ARRAY 47KX9P	LED1811	87-001-138	LED,SLP481C50,Y (SOURCE)
R1015	★ +++	RES,ARRAY 47KX9P	LED1812	87-001-122	LED,SLP381C50,G (TAPE)
R1028	★ +++	RES,ARRAY 47KX9P	LED1813	87-001-137	LED,SLP981C50,R (SYNC DUB,NORM)
R1029	★ +++	RES,ARRAY 47KX9P	LED1814	87-001-137	LED,SLP981C50,R (SYNC DUB,HIGH)
R1030	★ +++	RES,ARRAY 47KX9P	R358	★ 87-025-081	REG,MFO 2W-150
R1031	★ +++	RES,ARRAY 47KX9P	S1817	87-031-893	TACT SW (SYNC DUB,NORM)
R1032	★ +++	RES,ARRAY 47KX9P	S1818	87-031-893	TACT SW (SYNC DUB,HIGH)
R1033	★ +++	RES,ARRAY 47KX9P	S1819	87-031-893	TACT SW (MONITOR)
R1020	★ 82-202-654	RES,ARRAY 10KX9P	S1829	87-031-893	TACT SW (D1 COUNTER RESET)
R1021	★ +++	RES,ARRAY 10KX9P	S1830	87-031-893	TACT SW (D2 COUNTER RESET)
R1022	★ +++	RES,ARRAY 10KX9P	--- DOLBY HX-2 CIRCUIT BOARD SECTION ---		
R1023	★ +++	RES,ARRAY 10KX9P	PCB-F	*	DOLBY HX-2 CIRCUIT BOARD
R1024	★ +++	RES,ARRAY 10KX9P	C81	★ 87-010-421	CAP,ELECT 4.7-50SRE
R1025	★ +++	RES,ARRAY 10KX9P	C82	★ 87-010-421	CAP,ELECT 4.7-50SRE
R1026	★ +++	RES,ARRAY 10KX9P	C83	★ 87-010-401	CAP,ELECT 1-50SME
R1027	★ +++	RES,ARRAY 10KX9P	C84	★ 87-010-401	CAP,ELECT 1-50SME
R1034	★ 82-202-653	RES,ARRAY 47KX8P	C85	★ 87-018-128	CAP,CERA-SOL 560P
R1035	★ +++	RES,ARRAY 47KX8P	C86	★ 87-018-128	CAP,CERA-SOL 560P
R1036	★ +++	RES,ARRAY 47KX8P	C901	★ 87-018-123	CAP,CERA-SOL SS 220P
R1037	★ +++	RES,ARRAY 47KX8P	C902	★ 87-018-123	CAP,CERA-SOL SS 220P
R1038	★ +++	RES,ARRAY 47KX8P	C903	★ 87-014-173	CAP,PP 1000P-G
R1039	★ +++	RES,ARRAY 47KX8P	C904	★ 87-014-173	CAP,PP 1000P-G
R1040	★ +++	RES,ARRAY 47KX8P	C907	★ 87-018-121	CAP,CERA-SOL SS 150P
R1044	★ 82-202-632	RES,ARRAY 4.7KX5P	C908	★ 87-018-121	CAP,CERA-SOL SS 150P
R1045	★ +++	RES,ARRAY 4.7KX5P	C911	★ 87-018-131	CAP,CERA-SOL SS 1000P
R1046	★ +++	RES,ARRAY 4.7KX5P	C912	★ 87-018-131	CAP,CERA-SOL SS 1000P
R1047	★ +++	RES,ARRAY 4.7KX5P	C913	★ 87-018-131	CAP,CERA-SOL SS 1000P
R1301	★ 87-025-437	RES,MFO 82-1W	C914	★ 87-018-131	CAP,CERA-SOL SS 1000P
R1304	★ 87-025-437	RES,MFO 82-1W	C915	★ 87-018-131	CAP,CERA-SOL SS 1000P
SFR1401	★ 87-021-864	SFR 10K	C916	★ 87-018-131	CAP,CERA-SOL SS 1000P
SFR1402	★ 87-021-865	SFR 22K	C919	★ 87-018-047	CAP,CERA-SOL S 0.01Y-16
--- H.P.AMP CIRCUIT BOARD SECTION ---			C920	★ 87-010-382	CAP,ELECT 22-25SME
PCB-C	*	H.P.AMP CIRCUIT BOARD	D901	87-020-156	DIODE MC931
C251	★ 87-010-401	CAP,ELECT 1-50SME	D902	87-020-156	DIODE MC931
C252	★ 87-010-401	CAP,ELECT 1-50SME	D903	87-027-026	DIODE,ZENER HZ-5C1
C253	★ 87-010-401	CAP,ELECT 1-50SME	L61	★ 82-196-603	COIL TRAP 100K
C254	★ 87-010-401	CAP,ELECT 1-50SME	L62	★ 82-196-603	COIL TRAP 100K
C255	★ 87-010-235	CAP,ELECT 470-16	L63	★ 87-003-129	COIL 6.8MHJ
C257	★ 87-010-101	CAP,ELECT 220-16SME	L64	★ 87-003-129	COIL 6.8MHJ
C258	★ 87-010-101	CAP,ELECT 220-16SME	L65	★ 87-003-125	COIL 3.3MHJ
--- METER CONTROL CIRCUIT BOARD SECTION ---			L66	★ 87-003-125	COIL 3.3MHJ
PCB-D	*	METER CONTROL CIRCUIT BOARD	L901	★ 82-202-619	COIL HX 100K,AM
C265	★ 87-010-545	CAP,ELECT 0.22-50SME	L902	★ 82-202-619	COIL HX 100K,AM

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Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
SFR61	★ 87-021-864	SFR 10K	S101	87-036-033	SLIDE SW (INPUT)
SFR62	★ 87-021-864	SFR 10K	S1820	87-036-033	SLIDE SW (BLANK SKIP)
SFR901	★ 87-021-868	SFR 100K	--- SWITCH-4 CIRCUIT BOARD SECTION ---		
SFR902	★ 87-021-868	SFR 100K	PCB-L	*	SWITCH-4 CIRCUIT BOARD
--- KEY SWITCH-1 CIRCUIT BOARD SECTION ---			D1825	87-020-691	DIODE 1SS132
PCB-G	*	KEY SWITCH-1 CIRCUIT BOARD	S1825	82-191-657	SLIDE SW (TIMER)
D1801	87-020-691	DIODE 1SS132	S1828	82-191-657	SLIDE SW (PHONES)
D1803	87-020-691	DIODE 1SS132	--- POWER SWITCH CIRCUIT BOARD SECTION ---		
D1805	87-020-691	DIODE 1SS132	△PCB-M	*	POWER SWITCH CIRCUIT BOARD
D1807	87-020-691	DIODE 1SS132	△C521	87-019-110	SPARK KILLER,0.01 (H ONLY)
LED371	87-001-122	LED,SLP381C50,G (D1 DIRECT▶)	△C521	87-019-112	SPARK KILLER,0.001 (U,E,K,Z ONLY)
LED372	87-001-122	LED,SLP381C50,G (D1 DIRECT◀)	△S1	87-036-115	PUSH SW (POWER)
LED1804	87-001-122	LED,SLP381C50,G (D1 PLAY)	--- VOLUME-1 CIRCUIT BOARD SECTION ---		
LED1805	87-001-122	LED,SLP381C50,G (D1 REV PLAY)	PCB-N	*	VOLUME-1 CIRCUIT BOARD
S1801	87-031-893	TACT SW (D1 MS◀◀)	D102	88-052-188	DIODE,1SS188FM
S1803	87-031-893	TACT SW (D1 REV◀)	VR301	82-217-604	VOLUME,10KAX2 (REC LEVEL)
S1805	87-031-893	TACT SW (D1 FWD▶)	--- VOLUME-2 CIRCUIT BOARD SECTION ---		
S1807	87-031-893	TACT SW (D1 MS▶▶)	PCB-O	*	VOLUME-2 CIRCUIT BOARD
--- SWITCH-1 CIRCUIT BOARD SECTION ---			VR401	82-202-623	VOLUME,250KB (BIAS FINE)
PCB-H	*	SWITCH-1 CIRCUIT BOARD	--- H.P.JACK CIRCUIT BOARD SECTION ---		
D1804	87-020-691	DIODE 1SS132	PCB-P	*	H.P.JACK CIRCUIT BOARD
D1806	87-020-691	DIODE 1SS132	J251	87-049-827	JACK (PHONES)
D1824	87-020-691	DIODE 1SS132	--- RELAY CIRCUIT BOARD SECTION ---		
LED1802	87-001-138	LED,SLP481C50,Y (D1 PAUSE)	PCB-Q	*	RELAY CIRCUIT BOARD
S1804	87-031-893	TACT SW (D1 STOP)	D1819	87-020-691	DIODE 1SS132
S1806	87-031-893	TACT SW (D1 PAUSE)	--- TR CIRCUIT BOARD SECTION ---		
S1824	87-036-032	SLIDE SW (D1 REVERSE MODE)	PCB-R	*	TR CIRCUIT BOARD
S1826	87-036-032	SLIDE SW (D1 DOLBY B-C NR)	--- FUSE CIRCUIT BOARD SECTION ---		
--- KEY SWITCH-2 CIRCUIT BOARD SECTION ---			△PCB-S	*	FUSE CIRCUIT BOARD
PCB-I	*	KEY SWITCH-2 CIRCUIT BOARD	△F1	87-033-147	FUSE CLAMP
D1809	87-020-691	DIODE 1SS132	△F1	87-035-356	FUSE,T250MMA (E,K,Z ONLY)
D1810	87-020-691	DIODE 1SS132	△F1	87-035-294	FUSE,500MMA (U ONLY)
D1813	87-020-691	DIODE 1SS132	△F1	87-035-249	FUSE,1A (H ONLY)
D1815	87-020-691	DIODE 1SS132	--- DECK CIRCUIT BOARD SECTION ---		
D1826	87-020-691	DIODE 1SS132	PCB-T	*	DECK CIRCUIT BOARD (D1)
D1827	87-020-691	DIODE 1SS132	S1102	87-036-039	PUSH SW D2A2120-4 (CO,D1)
LED1806	87-001-137	LED,SLP981C50,R (D2◀◀MS)	S1103	87-036-040	PUSH SW D2A2110-3 (CAST,D1)
LED1807	87-001-122	LED,SLP381C50,G (D2▶▶MS)	S1106	87-036-039	PUSH SW D2A2120-4 (DIRE,D1)
LED1816	87-001-137	LED,SLP981C50,R (D2◀◀MS)	SFR110	★ 87-021-966	SFR 4.7K
LED1817	87-001-122	LED,SLP381C50,G (D2▶▶MS)	SFR110	★ 87-021-966	SFR 4.7K
S1809	87-031-893	TACT SW (D2◀◀MS)	SOL110	86-535-611	SOLENOID X-3 (PLAY,D1)
S1810	87-031-893	TACT SW (D2 REC)	SOL110	86-535-612	SOLENOID X-3 (FR,D1)
S1813	87-031-893	TACT SW (D2▶▶PLAY)	--- SENSOR CIRCUIT BOARD SECTION ---		
S1815	87-031-893	TACT SW (D2▶▶MS)	PCB-U	*	SENSOR CIRCUIT BOARD (D1)
--- SWITCH-2 CIRCUIT BOARD SECTION ---			CP1101	87-020-755	PHOTO SENSOR SPI-900-0102(D1)
PCB-J	*	SWITCH-2 CIRCUIT BOARD	--- AUTO STOP CIRCUIT BOARD SECTION ---		
D1812	87-020-691	DIODE 1SS132	PCB-V	81-505-605	AUTO STOP CIRCUIT BOARD (D2)
D1814	87-020-691	DIODE 1SS132	CP1151	87-027-644	PHOTO SENSOR NJL-5141EA
D1816	87-020-691	DIODE 1SS132	--- DOLBY NR-1 CIRCUIT BOARD SECTION ---		
LED1807	87-001-138	LED,SLP481C50,Y (D2 PAUSE)	87-030-114 DOLBY UNIT HA12088GN (W/PCB-W)		
LED1810	87-001-137	LED,SLP981C50,R (D2 REC MUTE)			
S1812	87-031-893	TACT SW (D2 STOP)			
S1814	87-031-893	TACT SW (D2 PAUSE)			
S1816	87-031-893	TACT SW (D2 REC MUTE)			
S1827	87-036-032	SLIDE SW (D2 DOLBY B-C NR)			
--- SWITCH-3 CIRCUIT BOARD SECTION ---					
PCB-K	*	SWITCH-3 CIRCUIT BOARD			
D1820	87-020-691	DIODE 1SS132			

※ Please order the all parts for
this model to Japan

Ref. No.	Part No.	Description
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=== DOLBY NR-2 CIRCUIT BOARD SECTION ===

87-030-114 DOLBY UNIT HA12088GN (W/PCB-X)

=== DOLBY NR-3 CIRCUIT BOARD SECTION ===

87-030-114 DOLBY UNIT HA12088GN (W/PCB-Y)

=== MISCELLANEOUS ===

△	* 87-034-732	AC CORD (H ONLY)
△	* 87-034-731	AC CORD (U ONLY)
△	* 82-034-736	AC CORD (E,Z ONLY)
△	* 87-034-734	AC CORD (K ONLY)
△	* 87-085-184	AC CORD BUSHING (H ONLY)
△	* 87-085-189	AC CORD BUSHING (U ONLY)
△	* 87-085-185	AC CORD BUSHING (E,K,Z ONLY)
CON2	* 82-200-623	CONNECTOR 9P ASSY RH-EH
CON3	* 82-200-621	CONNECTOR 6P ASSY PH
EH	* 87-046-288	E HEAD (D2)
LED501*	87-027-944	LED SLF-301C (D1 LIGHT)
LED502*	87-027-944	LED,SLF-301C (D2 LIGHT)
M1101	87-045-235	MOTOR MMA6B2LW (D1)
M1151	81-505-604	REEL MOTOR (D2)
M1152	87-045-235	MOTOR MMA6B2LW (D2)
PH	87-046-297	PB HEAD (D1)
RPH	87-046-194	RP HEAD HADKH27001 (D2)
△SW1	87-031-586	ROTARY SW (AC VOLT.) (H ONLY)
S1152	81-505-601	LEAF SW GEAR CAM (PLAY,D2)
S1153	81-505-601	LEAF SW GEAR CAM (PAUSE,D2)
S1154	81-505-607	LEAF SW (CAST,D2)
S1155	81-505-607	LEAF SW (ENA A,D2)
S1157	81-505-607	LEAF SW (MT,D2)
S1158	81-505-607	LEAF SW (CO,D2)
SOL115	81-505-603	SOLENOID 9ME-A (PLAY,D2)
SOL115	81-505-603	SOLENOID 9ME-A (PAUSE,D2)
△TS01	* 82-104-648	POWER TRANSFORMER (H ONLY)
△TS01	* 82-104-645	POWER TRANSFORMER (U ONLY)
△TS01	* 82-104-646	POWER TRANSFORMER (E,Z ONLY)
△TS01	* 82-104-647	POWER TRANSFORMER (K ONLY)

Combination circuit board C 86-535-601

PCB-T 86-535-602

PCB-U 86-535-603



2SD1275
2SD1276



DTA114



2SA952
2SA1015
2SC1815
2SC2001
2SC2120
2SC2240
2SD1111
2SD1302

Combination circuit board A 82-217-605

PCB-A 82-217-606

PCB-B 82-217-607

PCB-C 82-217-609

PCB-D 82-217-610

PCB-R 82-217-608

Combination circuit board B 82-217-611

PCB-E 82-217-620

PCB-F 82-217-623

PCB-G 82-217-612

PCB-H 82-217-613

PCB-I 82-217-615

PCB-J 82-217-616

PCB-K 82-217-614

PCB-L 82-217-617

PCB-M 82-217-618

PCB-N 82-217-621

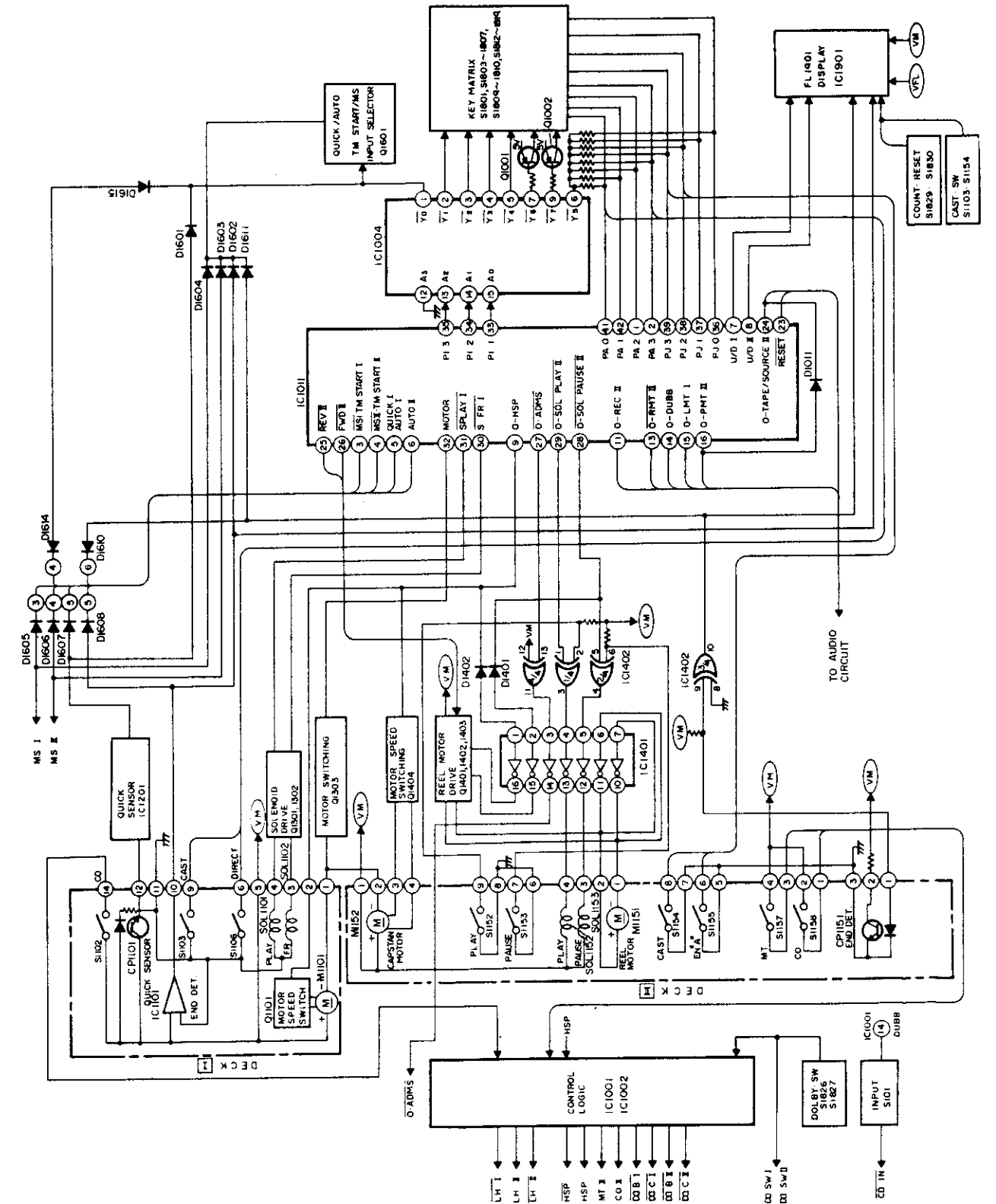
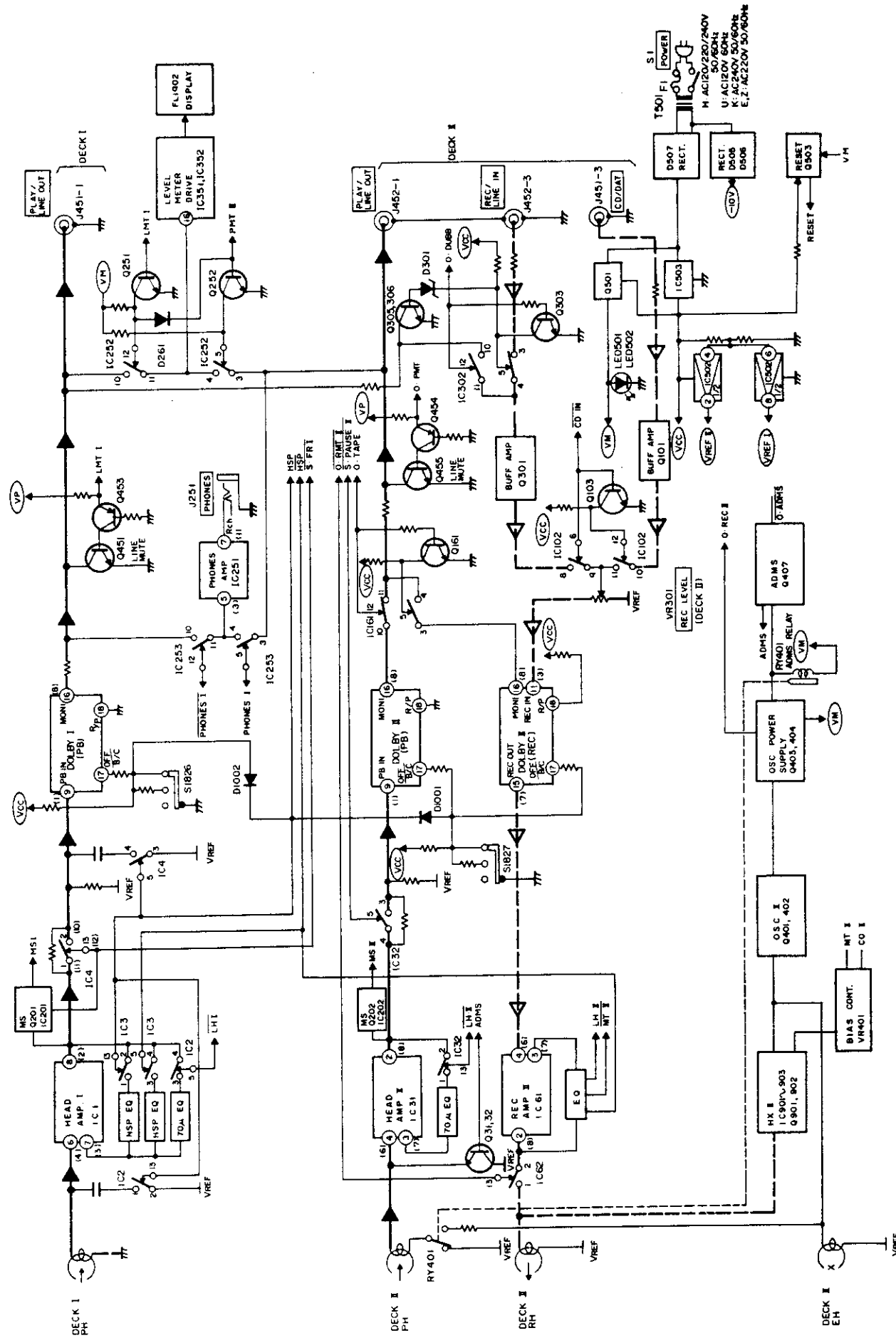
PCB-O 82-217-622

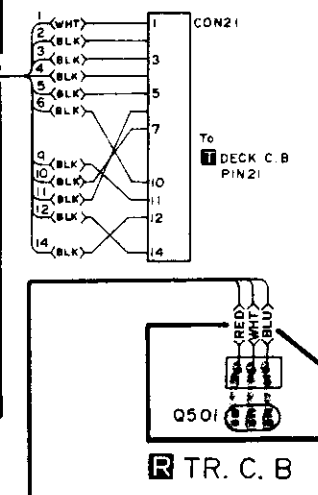
PCB-P 82-217-619

PCB-Q 82-217-640

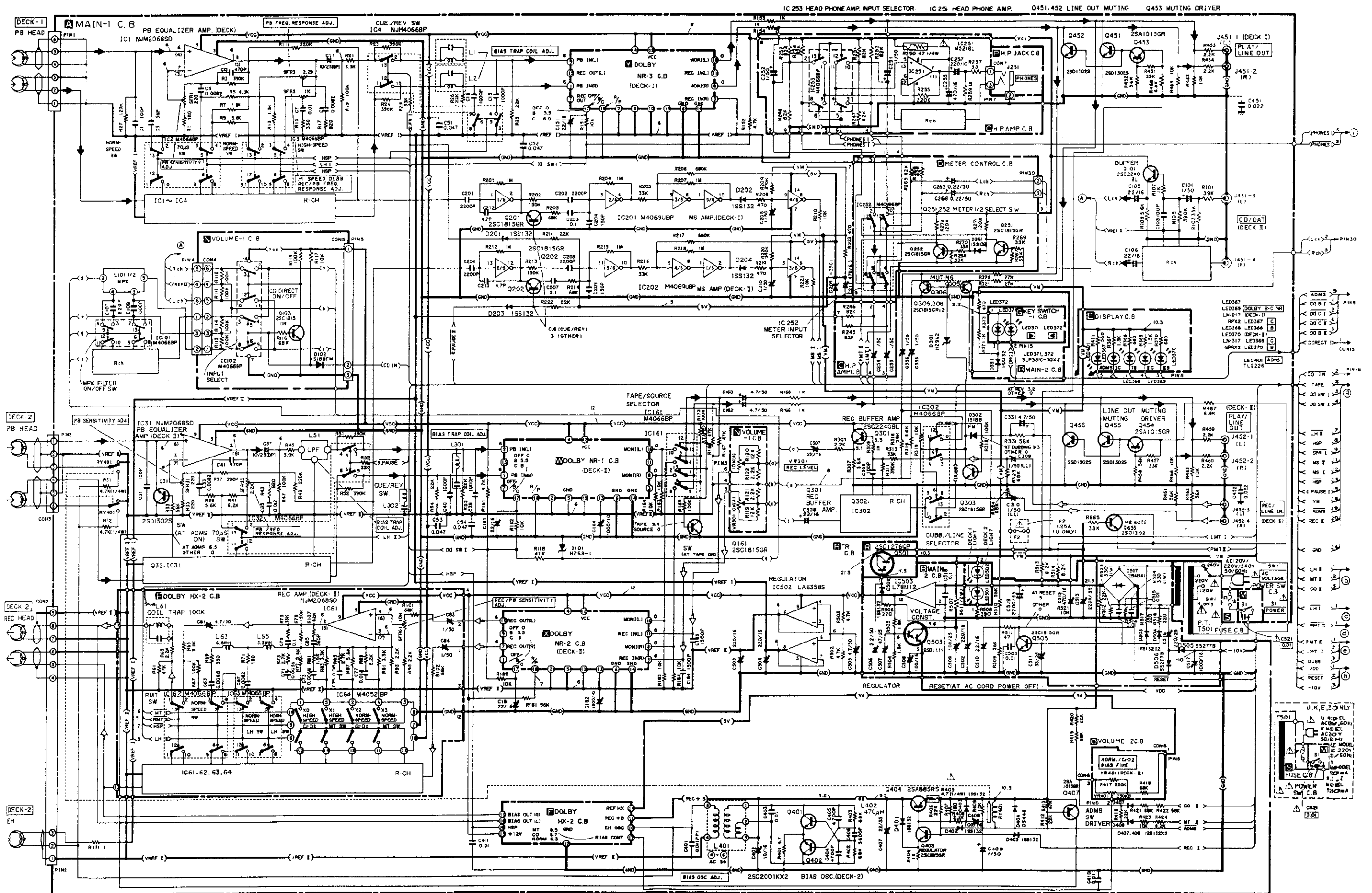
PCB-S 82-217-624

BLOCK DIAGRAM

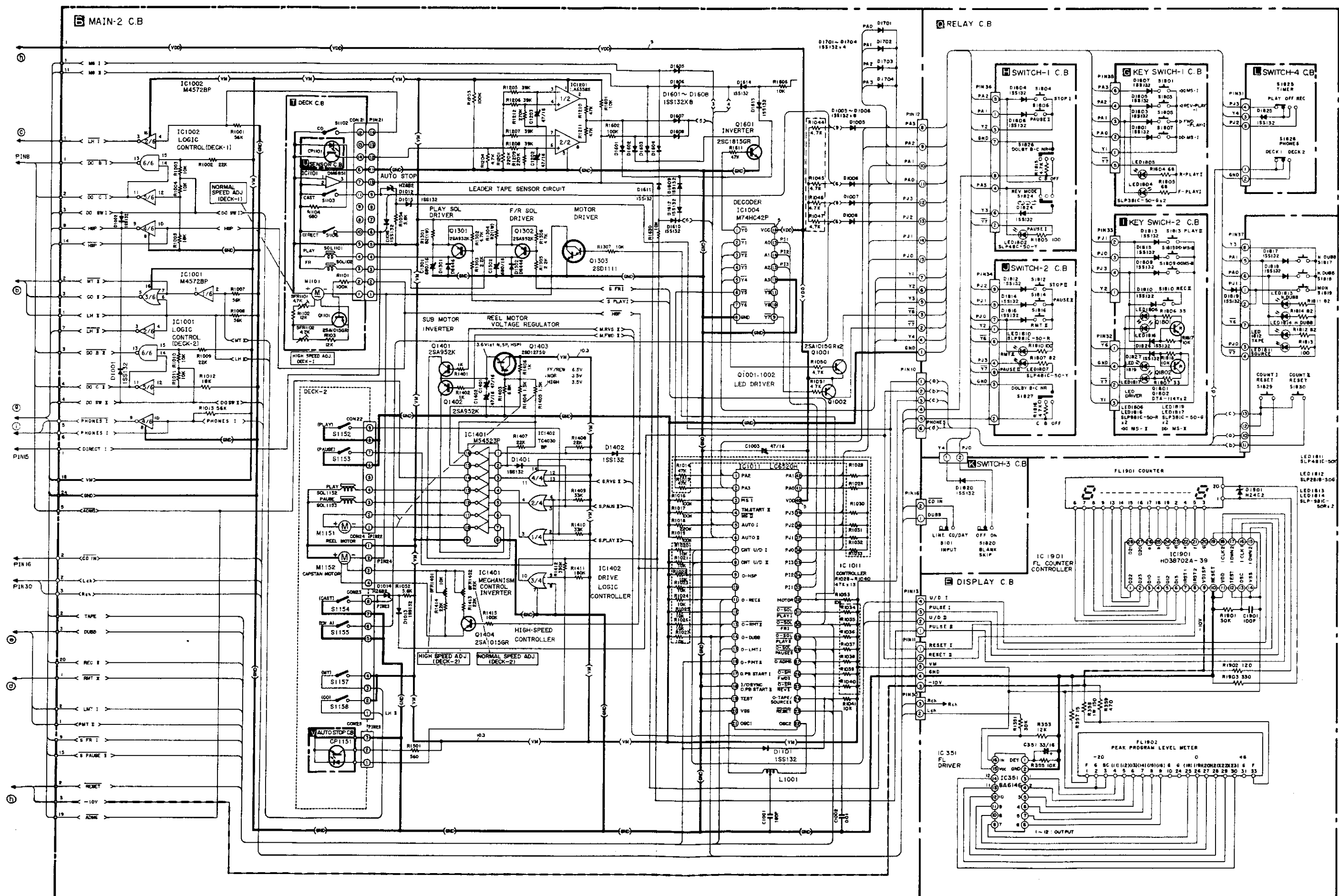


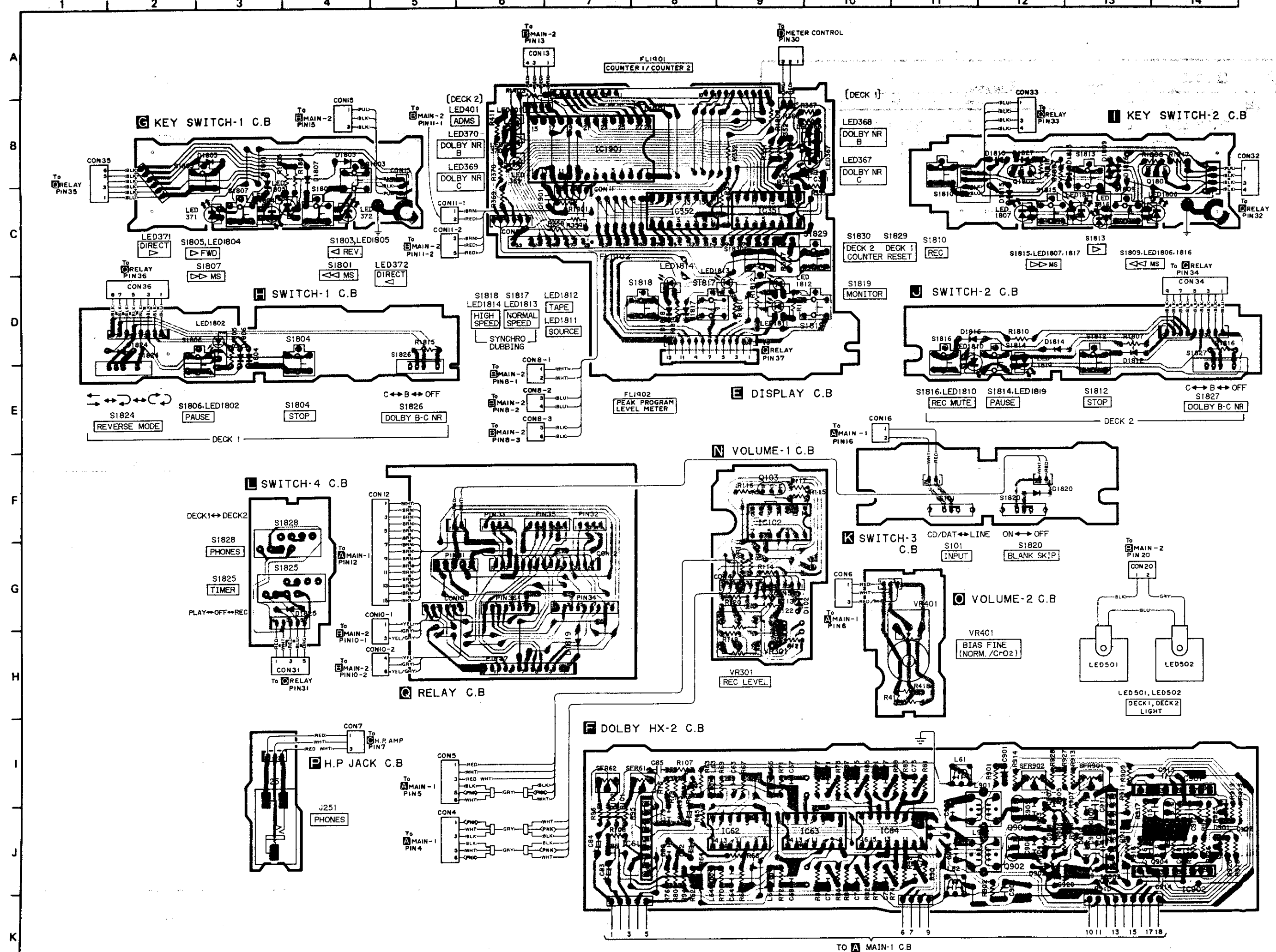


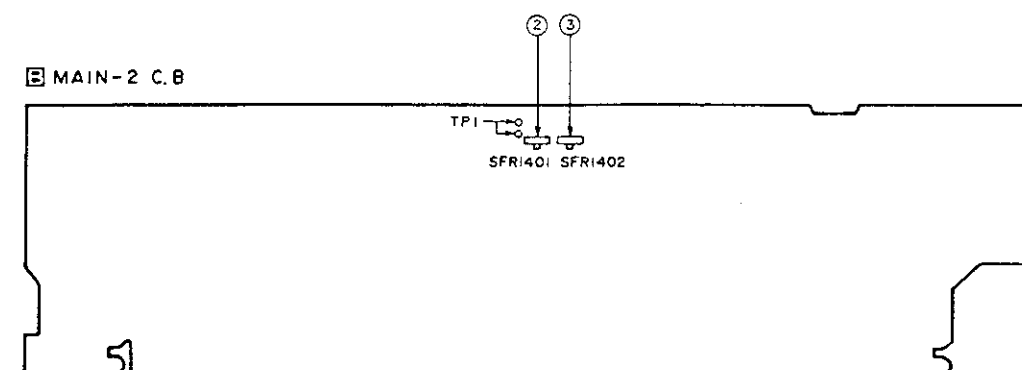
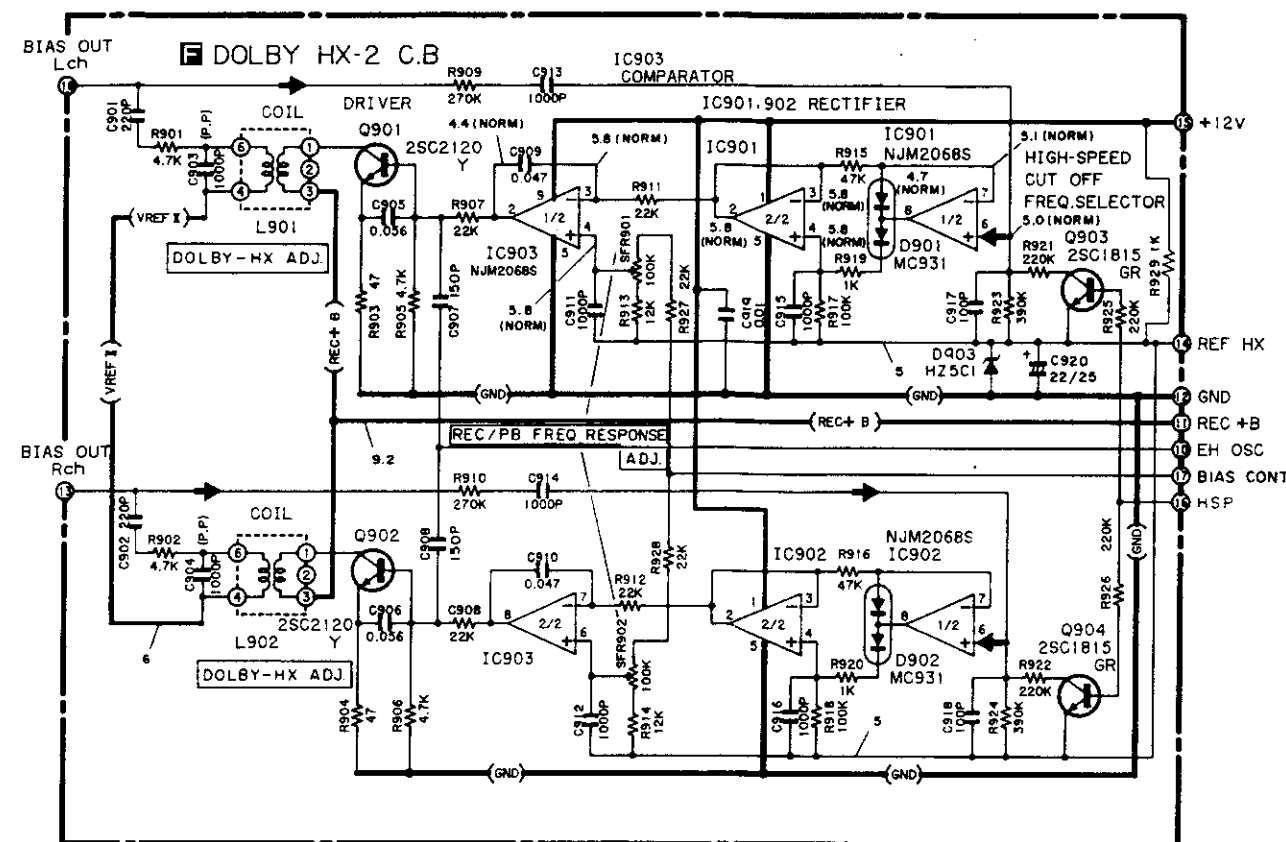
SCHEMATIC DIAGRAM-1



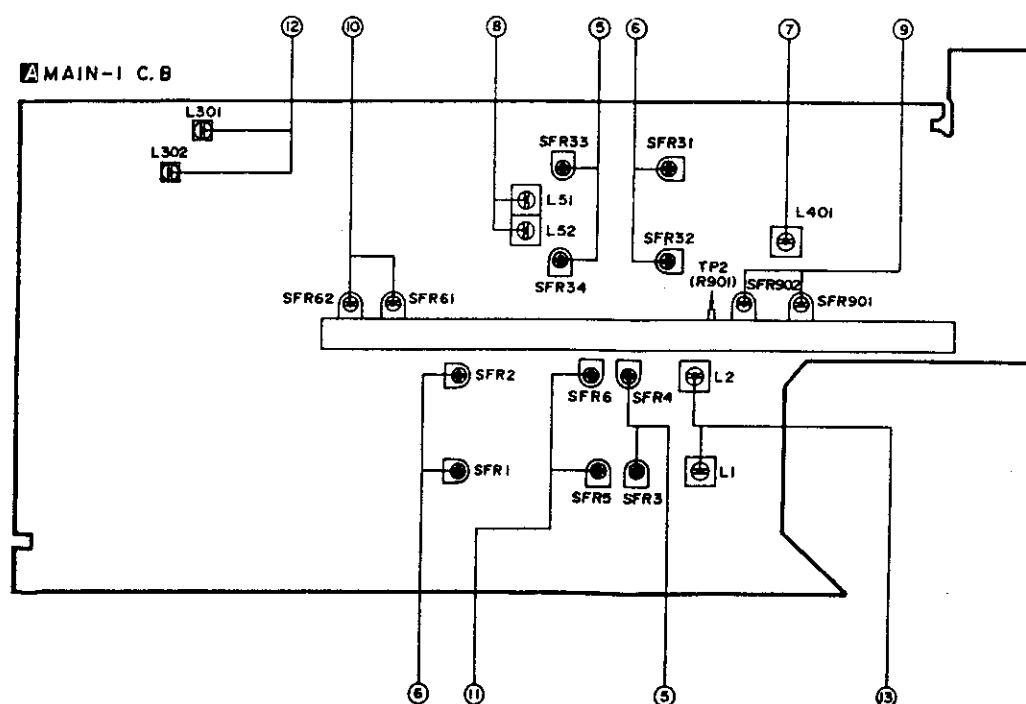
SCHEMATIC DIAGRAM-2







ADJUSTMENT



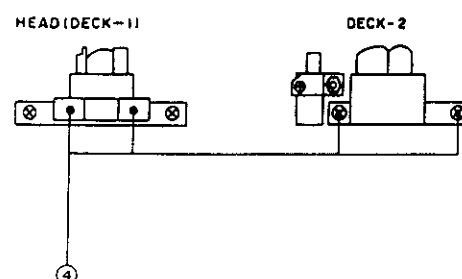
1. High Speed Adjustment (DECK-1)
Settings : • Test tape : TTA-111H
• Test point : LINE OUT
• Adjustment location : SFR 1102
Method : Set up the high speed condition.
Adjust for 3kHz.
2. High Speed Adjustment (DECK-2)
Settings : • Test tape : TTA-111H
• Test point : LINE OUT
• Adjustment location : SFR 1401
Method : Make pins of TP1 shorted to set up the high speed condition. Then play back the test tape. Adjust for 3kHz.
3. Normal Speed Adjustment (DECK-1, DECK-2)
Settings : • Test tape : TTA-111S
• Test point : LINE OUT
• Adjustment location : SFR 1101 (DECK-1)
SFR 1402 (DECK-2)
Method : Play back the test tape, adjust for 3kHz.
4. Head Azimuth Adjustment (DECK-1, DECK-2)
Settings : • Test tape : TTA-317H
• Test point : LINE OUT
• Adjustment location : Head azimuth adjustment screw
Method : Play back the 10kHz signal of the test tape, and adjust for maximum output.
5. PB Frequency Response Adjustment (DECK-1, DECK-2)
Settings : • Test tape : TTA-317H
• Test point : LINE OUT
• DOLBY NR switch : OFF
• Adjustment location : SFR 3 (DECK-1, Lch)
SFR 4 (DECK-1, Rch)
SFR 38 (DECK-2, Lch)
SFR 34 (DECK-2, Rch)
Method : Play back the test tape, and adjust so that 10kHz signal becomes $1 \pm 0.5\text{dB}$ against 1kHz signal.

6. PB Sensitivity Adjustment (DECK-1, DECK-2)
Settings : • Test tape : TTA-161
• Test point : LINE OUT
• DOLBY NR switch : OFF
• Adjustment location : SFR 1 (DECK-1, Lch)
SFR 2 (DECK-1, Rch)
SFR 31 (DECK-2, Lch)
SFR 32 (DECK-2, Rch)
Method : Play back the test tape, and adjust for $560\text{mV} \pm 0.5\text{dB}$.
7. REC OSC Frequency Adjustment (DECK-2)
Settings : • Test tape : TTA-119K
• Test point : TP2
• Adjustment location : L 401
Method : Set in REC mode and adjust for $100\text{kHz} \pm 1\text{kHz}$
8. Bias OSC Trap Coil Adjustment (DECK-2)
Settings : • Test tape : NORM. CASSETTE removed tape.
• Test point : LINE OUT
• TAPE MONITOR switch : TAPE
• Adjustment location : L 51 (Lch)
L 52 (Rch)
Method : Set the DECK-2 in REC mode. Adjust for minimum level of the bias leakage.
9. REC/PB Frequency Response Adjustment (DECK-2)
Settings : • Test tape : TTA-119H
• Test point : LINE OUT
• Input signal : 1kHz, -20dB (41mV)
10kHz, -20dB (41mV)
• REC VR : Center click point.
• DOLBY NR switch : OFF
• Adjustment location : SFR 901 (Lch)
SFR 902 (Rch)
Method : Record the 1kHz and 10kHz signals, then play back the two signals and adjust so that 10kHz signal becomes higher of $0.5 \pm 0.5\text{dB}$ than 1kHz signal.

Diagram illustrating the connection of the SFRI101 and SFRI102 components. The SFRI101 component is connected to a common line, and the SFRI102 component is connected to a line labeled 1. A line labeled 3 is also shown.

12. Dolby "C" NR Bias OSC Trap Coil Adjustment
Settings : • Test tape : TTA-119K
 • Test point : LINE OUT
 • TAPE MONITOR switch :
 TAPE

Wow & flutter :	Less than 0.065 % (DECK1) Less than 0.046 % (DECK2) (FWD. /REV.)
Pinch roller pressure :	290 ± 70g (DECK1) (2.84 ± 0.69N) 350 ± 30g (DECK2) (3.43 ± 0.3N)
Take-up torque :	30 ~ 60g-cm (DECK1) (0.29 ~ 0.59mN·m) 35 ± 6g-cm (DECK2) (0.34 ± 0.06mN·m)
F. F & REW torque :	130 ± 30g-cm (DECK1) (1.27 ± 0.29mN·m) 150 ± 30g-cm (DECK2) (1.47 ± 0.29mN·m)
Back tension :	2.5 ~ 5.5g-cm (DECK1) (0.025 ± 0.054mN·m) 5 ± 1g-cm (DECK2) (0.05 ± 0.001mN·m)
PB output level :	500 ± 50mV (TTA-161)



- Method : Make in high speed dubbing mode, adjust for minimum level of the bias leakage.

REC/PB output : 0 VU $\pm$ 1.5 dB

REC/PB S/N ratio : More than 42/48 dB
(METAL, CrO₂,
DOLBY-NR C OFF/ON)
More than 39/46 dB
(NORMAL, DOLBY-NR
OFF/ON)

Distortion (REC/PB) : Less than 2% (METAL,
CrO₂, NORMAL)

Noise (PB) : Less than 2.5/1.2 mV
(METAL, CrO₂ DOLBY
-NR C OFF/ON)
Less than 3.0/1.5 mV
(NORMAL, DOLBY
-NR C OFF/ON)

Erasing ratio : More than 60 dB (at 125 Hz)

Channel separation : More than 30 dB

Recording bias frequency : 100 kHz

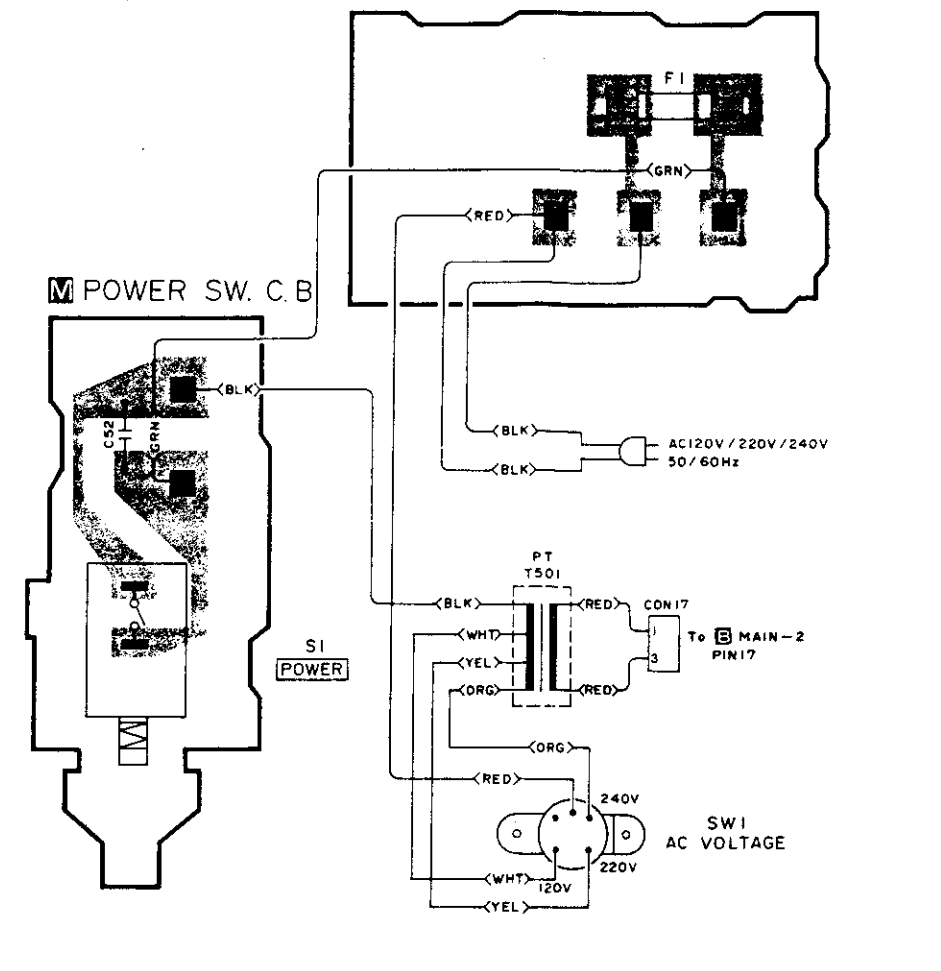
Test tape : METAL TTA-119MP
CrO₂ TTA-119H
NORMAL TTA-119K

A
B
C
D
E
F
G
H
I
J
K

H MODEL Only

S FUSE C. B

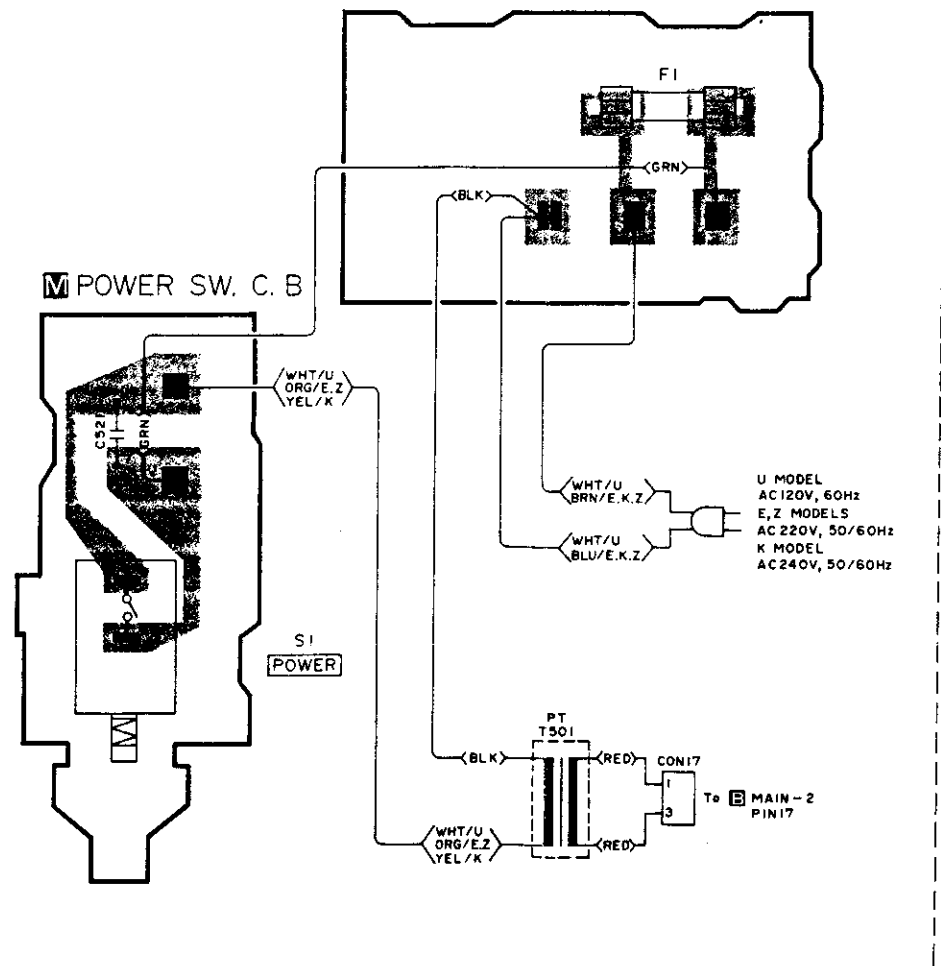
M POWER SW. C. B



U, E, Z, K MODELS Only

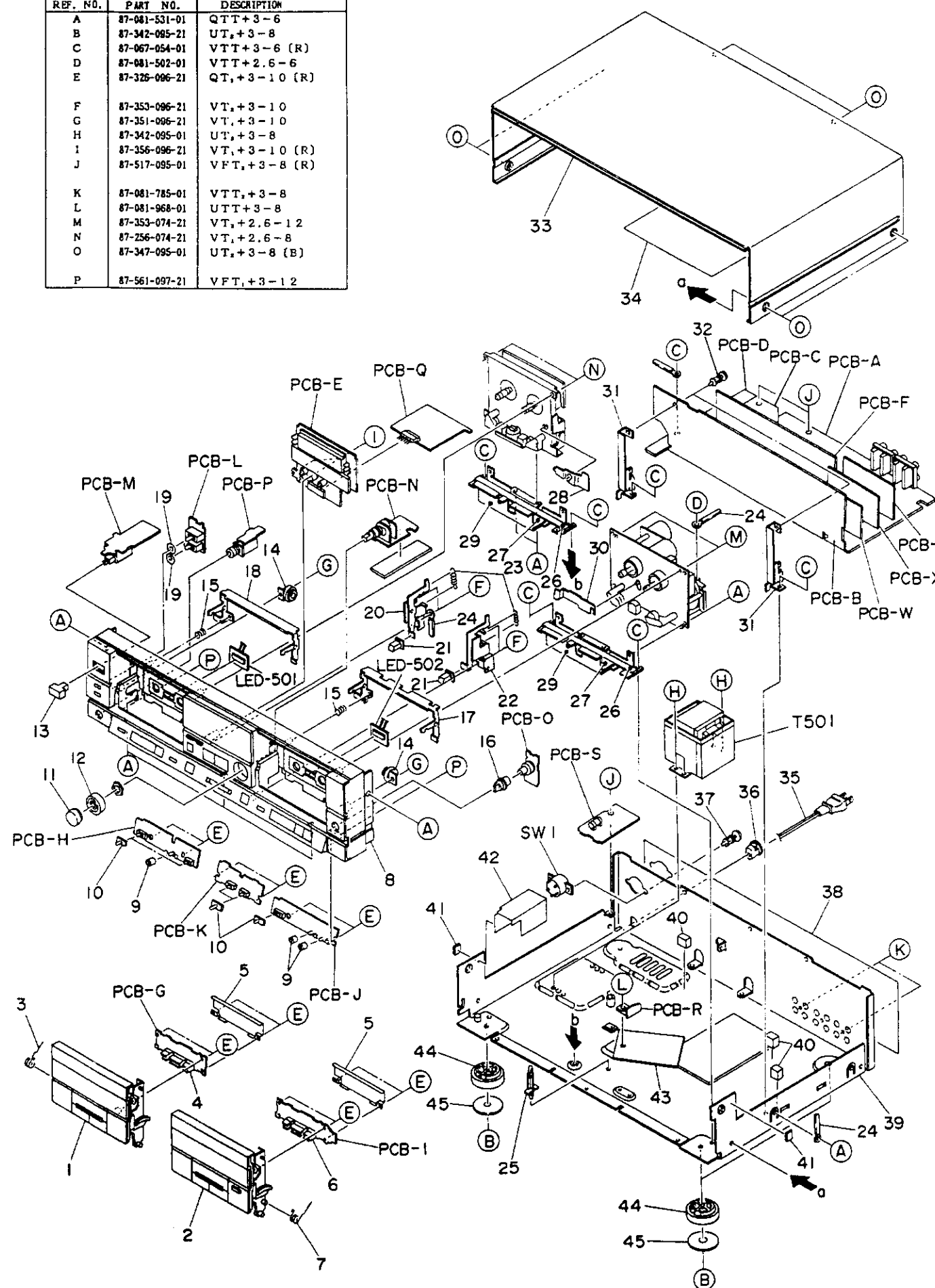
S FUSE C. B

M POWER SW. C. B



EXPLODED VIEW-1

REF. NO.	PART NO.	DESCRIPTION
A	87-081-531-01	QTT+3-6
B	87-342-085-21	UT,+3-8
C	87-067-054-01	VTT+3-6 (R)
D	87-081-502-01	VTT+2.6-6
E	87-325-096-21	QT,+3-10 (R)
F	87-353-096-21	VT,+3-10
G	87-351-096-21	VT,+3-10
H	87-342-095-01	UT,+3-8
I	87-356-096-21	VT,+3-10 (R)
J	87-517-095-01	VFT,+3-8 (R)
K	87-081-785-01	VTT,+3-8
L	87-081-968-01	UTT+3-8
M	87-353-074-21	VT,+2.6-12
N	87-256-074-21	VT,+2.6-8
O	87-347-095-01	UT,+3-8 (B)
P	87-561-097-21	VFT,+3-12



MECHANICAL PARTS LIST

※ Please order the all parts for
this model to Japan.

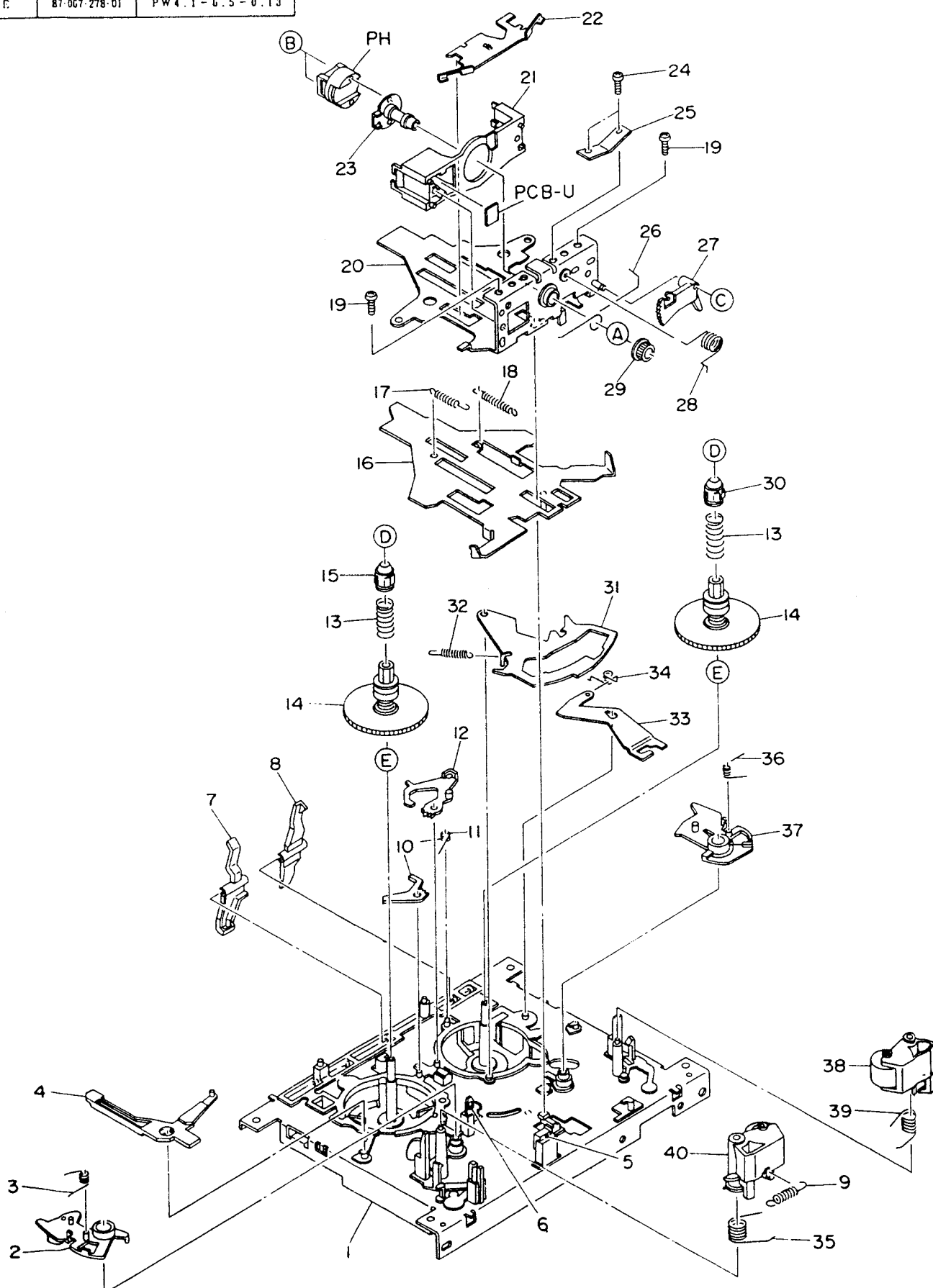
PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q, TY
	1-1	09-047-264	CASSETTE BOX 1 ASSY	*	1
	1-2	09-047-265	CASSETTE BOX 2 ASSY	*	1
	1-3	*82-217-209	T-SPRING,EJECT 1	*	1
	1-4	---	LAMP HOUSE 1		1
	1-5	---	PLATE,BOX REAR		1
	1-6	---	LAMP HOUSE 2		1
	1-7	*82-217-210	T-SPRING, EJECT 2	*	1
	1-8	*09-047-263	FRONT CABINET ASSY	*	1
	1-9	---	RUBBER TUBE 5-3-7		3
	1-10	*82-217-013	KNOB,SLIDE	*	5
	1-11	82-217-015	KNOB,VOLUME L	*	1
	1-12	82-217-016	KNOB,VOLUME R	*	1
	1-13	*84-721-023	PUSH-BUTTON,POWER	XC-001	1
	1-14	*87-063-143	OIL-DAMP 75		2
	1-15	*82-217-211	C-SPRING,EJECT LEVER	*	2
	1-16	*84-424-008	KNOB,VOLUME		1
	1-17	*82-217-204	PLATE,EJECT 2	*	1
	1-18	*82-217-203	PLATE,EJECT 1	*	1
	1-19	---	BLIND HIMERON		2
	1-20	*82-217-237	HOLDER EJECT 1 ASSY	*	1
	1-21	*82-217-014	KNOB,EJECT	*	2
	1-22	*82-217-238	HOLDER EJECT 2 ASSY	*	1
	1-23	*81-747-327	E-SPRING,PANEL		2
	1-24	---	WIRE BINDER		3
	1-25	*82-217-244	HOLDER,CIRCUIT BOARD	*	1
	1-26	---	DAMPER,MECHANISM 2		2
	1-27	---	DAMPER,MECHANISM 1		2
	1-28	*82-217-213	LEVER,EJECT BLOCKING 1	*	1
	1-29	*82-217-215	HOLDER,MECHANISM	*	2
	1-30	*82-217-214	LEVER,EJECT BLOCKING 2	*	1
	1-31	---	HOLDER,CIRCUIT BOARD		2
	1-32	*87-085-102	NYLON RIVET 3.5-5.5	*	2
	1-33	*82-217-041	CABINET,STEEL		1
	1-34	---	DAMPER 150-100		1
	1-35	*87-034-732	AC CORD ASSY(H ONLY)		1
	1-35	*87-034-731	AC CORD ASSY(U ONLY)		1
	1-35	*87-034-736	AC CORD ASSY(E,Z ONLY)		1
	1-35	*87-034-734	AC CORD ASSY(K ONLY)		1
	1-36	*87-085-184	CORD BUSHING(H ONLY)		1
	1-36	*87-085-189	CORD BUSHING(U ONLY)		1
	1-36	*87-085-185	CORD BUSHING(E,K,Z ONLY)		1
	1-37	*87-085-090	NYLON RIVET 3-6.5(H ONLY)		2
	1-38	---	PLATE,JACK		1
	1-39	---	AMP.CHASSIS ASSY		1
	1-40	---	CUSHION 12-15-12.5		3
	1-41	---	G CUSHION 4X9.5X13.5		2
	1-42	---	COVER,POWER		1
	1-43	---	HEAT SINK		1
	1-44	*81-715-051	FOOT(40)		4
	1-45	*82-217-096	FELT 33.5		4

■ACCESSORIES/PACKAGE LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q, TY
	1	*82-217-901	INSTRUCTION BOOKLET	*	1
	2	*87-032-845	SIEMENS PLUG (H ONLY)		1
	3	*87-034-978	CW-254 BSK		3

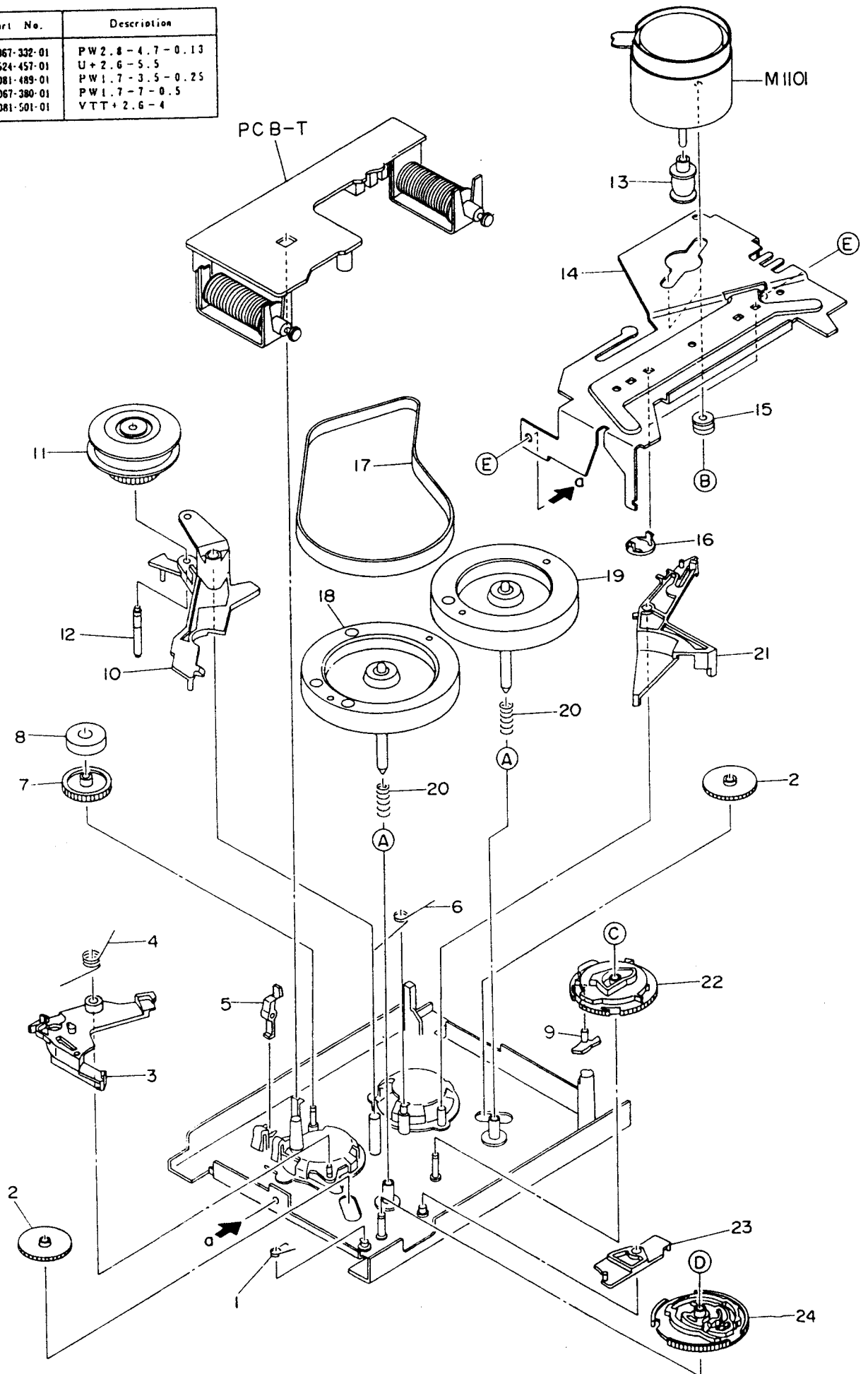
EXPLODED VIEW-2 (DECK 1)

Ref. No.	Part No.	Description
A	87-067-364-01	PW3.58-6-0.25C
B	87-067-177-01	V+1.6-5.5
C	87-081-489-01	PW1.7-3.5-0.25
D	86-524-418-01	VFT, +1.4-5
E	87-067-278-01	PW4.1-G.5-0.13



EXPLODED VIEW-3 (DECK 1)

Ref. No.	Part No.	Description
A	87-067-332-01	PW 2.8 - 4.7 - 0.13
B	86-524-457-01	U + 2.6 - 5.5
C	87-081-489-01	PW 1.7 - 3.5 - 0.25
D	87-067-380-01	PW 1.7 - 7 - 0.5
E	87-081-501-01	VTT + 2.6 - 4



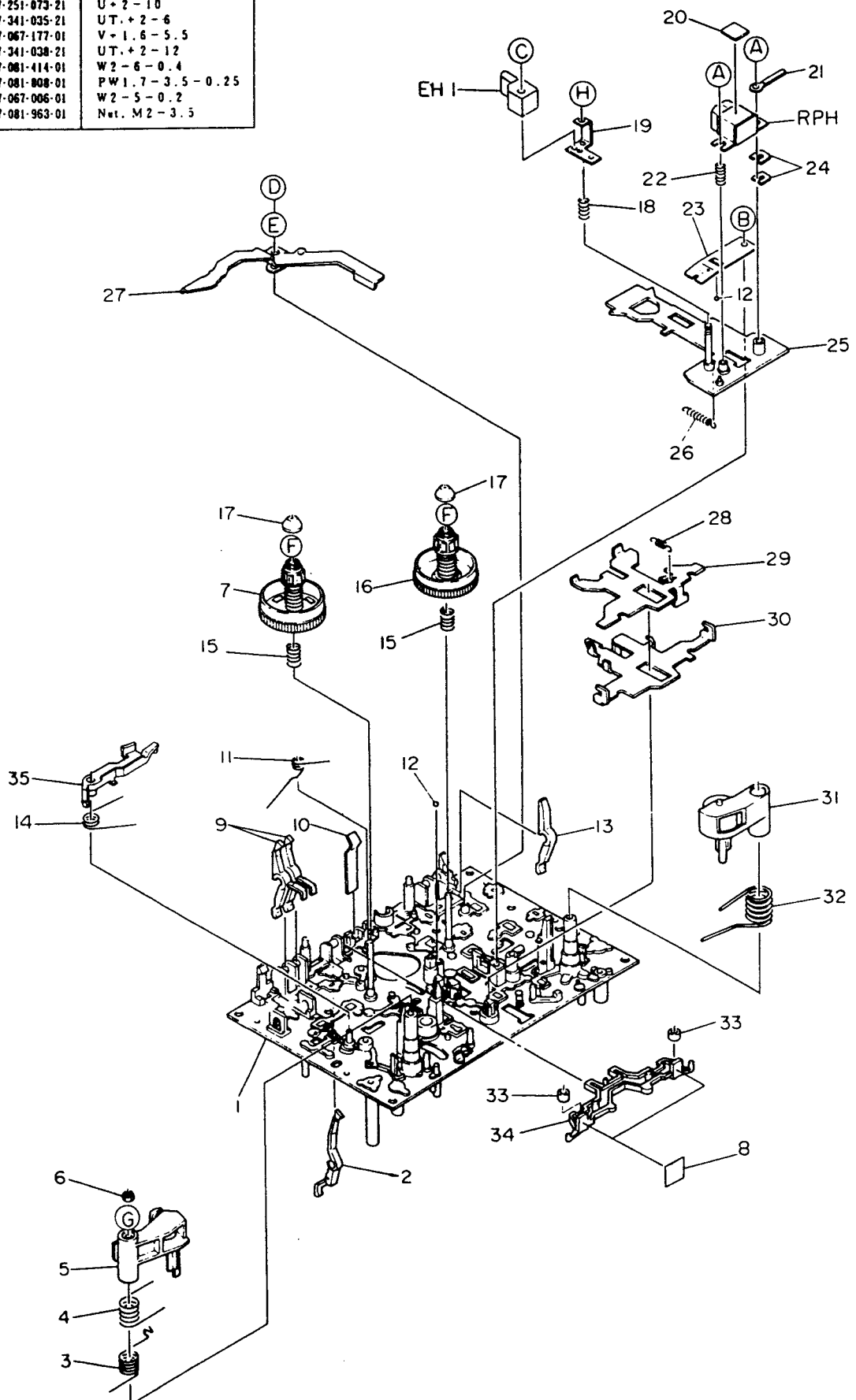
※ Please order the all parts for
this model to Japan.

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q. TY
	2-1	★86-535-201	OUTSERT CHASSIS ASSY		1
	2-2	★86-535-239	LEVER,PLAY R		1
	2-3	★86-535-283	T-SPRING,PLAY GEAR R		1
	2-4	★86-535-242	LEVER,EJECT BLOCKING L		1
	2-5	★86-535-296	FELT 5-5-2		1
	2-6	★86-517-353	SHEET		1
	2-7	★86-535-249	LEVER,CASSETTE DETECTION		1
	2-8	★86-535-254	LEVER,CHROME		1
	2-9	★86-535-287	E-SPRING,PINCH		1
	2-10	★86-535-252	LEVER,BRAKE R		1
	2-11	★86-535-276	T-SPRING,BRAKE		1
	2-12	★86-535-251	LEVER,BRAKE F		1
	2-13	★86-535-293	C-SPRING,REEL PLATFORM		2
	2-14	86-535-240	REEL PLATFORM R ASSY		1
	2-15	★86-524-218	STOPPER,REEL PLATFORM S		1
	2-16	★86-535-215	SLIDE PLATE ASSY		1
	2-17	★86-535-285	E-SPRING,SLIDE		1
	2-18	★86-535-286	E-SPRING,ACTUATING		1
	2-19	★86-535-310	ADJUSTMENT SCREW		2
	2-20	★86-535-351	ACTUATING CHASSIS ASSY		1
	2-21	★86-535-237	GUIDE,TAPE		1
	2-22	★86-535-289	P-SPRING,ACTUATING		1
	2-23	★86-535-270	HEAD HOUSING ASSY		1
	2-24	★86-535-297	ADJUSTMENT SCREW,AZIMUTH		2
	2-25	★86-524-300	P-SPRING,AZIMUTH		1
	2-26	★86-535-298	T-SPRING,GUIDE		1
	2-27	86-535-246	GEAR,SEGMENT		1
	2-28	★86-535-290	T-SPRING,GEAR SEGMENT		1
	2-29	86-524-278	GEAR,HEAD HOUSING		1
	2-30	★86-524-233	STOPPER,REEL PLATFORM T		1
	2-31	★86-535-218	LEVER,DIRECTION ASSY		1
	2-32	★86-535-284	E-SPRING,LEVER DELECTION		1
	2-33	★86-535-225	LEVER,D SWITCH		1
	2-34	★86-535-277	T-SPRING,D SWITCH		1
	2-35	★86-535-281	T-SPRING,PINCH R		1
	2-36	★86-535-282	T-SPRING,PLAY GEAR F		1
	2-37	★86-535-238	LEVER,PLAY F		1
	2-38	86-535-226	PINCH LEVER F ASSY		1
	2-39	★86-535-280	T-SPRING,PINCH F		1
	2-40	86-535-228	PINCH LEVER R ASSY		1

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q. TY
	3-1	★86-535-291	T-SPRING,FR CAM		1
	3-2	86-535-259	GEAR,PLAY		2
	3-3	★86-535-230	LEVER,TRIGGER FR		1
	3-4	★86-535-278	T-SPRING,FR		1
	3-5	★86-535-253	LEVER,RELAY		1
	3-6	★86-535-279	T-SPRING,MAIN		1
	3-7	86-535-258	GEAR,IDLER		1
	3-8	★86-535-614	RING,MAGNET(4P)		1
	3-9	★86-535-308	LEVER,SELECT		1
	3-10	★86-535-233	LEVER,FR		1
	3-11	★86-535-301	SLIPDISC ASSY		1
	3-12	★86-535-235	SHAFT,FR		1
	3-13	★86-535-315	MOTOR PULLEY		1
	3-14	---	HOLDER,MOTOR		1
	3-15	★86-513-441	COLLAR		2
	3-16	★86-535-255	FLYWHEEL BEARING		2
	3-17	86-535-294	BELT		1
	3-18	86-535-264	FLYWHEEL F ASSY		1
	3-19	86-535-267	FLYWHEEL R ASSY		1
	3-20	★86-535-288	C-SPRING,FW		2
	3-21	★86-535-231	LEVER,TRIGGER PLAY		1
	3-22	★86-535-260	CAM,MAIN		1
	3-23	★86-535-223	LEVER,PAUSE		1
	3-24	★86-535-261	CAM,FR P		1
	3-25	★86-535-308	LEVER,SELECT		1

I EXPLODED VIEW-4 (DECK 2)

Ref. No.	Part No.	Description
A	87-251-073-21	U + 2 - 10
B	87-341-035-21	UT + 2 - 6
C	87-067-177-01	V - 1.6 - 5.5
D	87-341-038-21	UT + 2 - 12
E	87-081-414-01	W2 - 6 - 0.4
F	87-081-808-01	PW1.7 - 3.5 - 0.25
G	87-067-006-01	W2 - 5 - 0.2
H	87-081-963-01	Net. M2 - 3.5



※ Please order the all parts for
this model to Japan.

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q, TY
4-1		*81-507-260	OUTSERT CHASSIS ASSY(4L-1)		1
4-2		*81-505-242	LEVER,METAL		1
4-3		*81-507-228	C-SPRING,PINCH LEVER S		1
4-4		*81-507-217	T-SPRING,PINCH LEVER S		1
4-5		81-507-207	PINCH LEVER S ASSY		1
4-6		*87-081-963	NYLON NUT M2-3.5		1
4-7		81-505-275	REEL PLATFORM S ASSY		1
4-8		*81-505-237	FELT,SLIDE BRAKE		2
4-9		*81-505-241	REC BLOCKING LEVER		2
4-10		*86-516-289	P-SPRING,CASSETTE PRESSURE		1
4-11		*81-505-268	T-SPRING,SLIDE BRAKE		1
4-12		*87-073-005	STEEL BALL 2		2
4-13		*81-505-240	SENSOR LEVER,CASSETTE		1
4-14		*81-507-223	T-SPRING,B.T		1
4-15		*81-507-219	C-SPRING,REEL S		2
4-16		81-505-369	REEL PLATFORM T ASSY-2		1
4-17		*82-303-398	CAP,TAKE-UP REEL		2
4-18		*81-507-251	C-SPRING,EH B		1
4-19		*81-507-250	HOLDER C,EH		1
4-20		---	LABEL,HEAD		1
4-21		---	WIRE BINDER 2.3		1
4-22		*82-307-212	C-SPRING,EH		1
4-23		*81-507-224	P-SPRING,ACTUATING CHASSIS		1
4-24		*81-507-227	SPACER		2
4-25		*81-507-252	ACTUATING CHASSIS ASSY B		1
4-26		*81-505-265	E-SPRING,ACTUATING CHASSIS		1
4-27		*81-505-307	LEVER,EJECT BRAKE		1
4-28		*81-505-266	E-SPRING,PAUSE PLATE		1
4-29		*81-505-207	PLATE,PAUSE		1
4-30		*81-507-220	PLATE,PINCH LEVER		1
4-31		81-505-210	PINCH LEVER F ASSY		1
4-32		*81-505-267	T-SPRING,PINCH F		1
4-33		*81-507-229	G.BRAKE		2
4-34		*81-505-236	LEVER,SLIDE BRAKE		1
4-35		*81-507-222	LEVER,BACKTENSION		1

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q, TY
5-1		*81-505-230	LEVER,PLAY		1
5-2		81-505-234	GEAR,PLAY CAM		1
5-3		*81-505-231	TRIGGER LEVER,PLAY		1
5-4		*81-505-272	T-SPRING,CAM		1
5-5		*81-505-308	LEVER B,PAUSE		1
5-6		*81-505-283	T-SPRING,PAUSE LEVER		1
5-7		81-505-235	GEAR,PAUSE CAM		1
5-8		*81-505-233	TRIGGER LEVER,PAUSE		1
5-9		---	MECHANISM CHASSIS B		1
5-10		*81-505-261	C-SPRING,FLYWHEEL F		2
5-11		81-505-225	GEAR,FLYWHEEL		1
5-12		*81-507-244	FLYWHEEL S ASSY FD		1
5-13		81-507-247	RUBBER BELT B		1
5-14		*87-081-483	MOTOR SCREW,M2.6		3
5-15		*87-087-029	RUBBER CUSHION		3
5-16		---	HOLDER,MOTOR(4L-1)		1
5-17		*81-507-262	PULLEY,MOTOR		1
5-18		*82-565-373	SCREW,THRUST		2
5-19		81-507-261	RUBBER BELT(4L-1)		1
5-20		*81-507-242	FLYWHEEL T ASSY FD		1
5-21		*81-505-361	T-SPRING,FR IDLER B		1
5-22		*81-505-359	IDLER LEVER FR C		1
5-23		81-505-356	FR IDLER B ASSY		1
5-24		*81-505-271	T-SPRING,TRIGGER LEVER		1
5-25		*81-505-269	T-SPRING,PINCH PLATE		1
5-26		81-505-354	GEAR,FLYWHEEL 2.7		1
5-27		09-011-038	REEL MOTOR ASSY		1
5-28		---	PLATE,MOTOR		1