

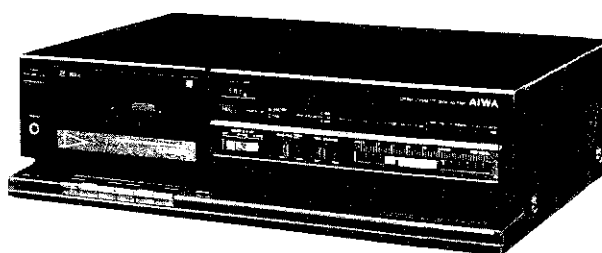
SERVICE MANUAL

MODEL NO. AD-F260,
S10

■STEREO CASSETTE DECK

■TYPE. HB, UB, CB, ES, EB, KB,
GB, ZS, ZB

■BASIC MECHANISM: TN-39ZF



SPECIFICATIONS

Type	Stereo cassette tape deck
Track format	4 tracks 2 channels
Power supply	AD-F260 E, Z AC 220 V, 50/60 Hz AD-F260 K, G AC 240 V, 50/60 Hz AD-S10U, AD-F260 C AC 120 V, 60 Hz AD-F260 H AC 110 V—120 V/220 V—240 V switchable, 50/60 Hz
Power consumption	10 W
Frequency response	METAL tape: 20—17,000 Hz CrO ₂ position tape: 20—16,000 Hz NORMAL tape: 20—15,000 Hz
Signal-to-noise ratio	73 dB (METAL tape DOLBY C NR ON)
Wow and flutter	According to DIN 45 500 0.28% 0.09% (WRMS)
Tape speed	4.8 cm/sec. (1-7/8 ips)
Rewind time	95 sec. (C-60)
Fast forward time	95 sec. (C-60)
Recording system	AC bias (frequency 85 kHz)
Erase system	AC erase
Motor	DC Servomotor
Heads	Record/playback head × 1 Erase head × 1

Inputs	LINE IN maximum input sensitivity: 50 mV (over 50 k Ω) DIN max sensitivity (Z model only): 0.1 mV/k Ω (3.3 k Ω)
Outputs	LINE OUT standard output level: 0.40 V (0 VU); suitable load impedance: over 50 k Ω ; DIN standard level (Z model only): 0.40 V (0 VU) Headphones: 32 Ω
Dimensions	420(W) × 116(H) × 278(D) mm
Weight	3.6 kg

- Design and specifications are subject to change without notice.
- The Dolby noise reduction system is provided under licence from Dolby Laboratories.
- 'Dolby' and 'Double D' are trademarks of Dolby Laboratories.

ELECTRICAL MAIN PARTS LIST

REF.NO. PARTS.NO. DESCRIPTION

=== IC ===

87-020-694-019 IC HA12088J
87-020-489-019 IC IR2E19
87-020-096-019 IC M4066BP
87-027-895-019 IC M5218L
87-020-758-019 IC NJM2068SD

=== TRANSISTOR ===

89-503-735-089 FET 2SK373GR
89-110-155-089 TRANSISTOR 2SA1015(GR)
89-309-456-089 TRANSISTOR 2SC945L(P)
89-318-155-089 TRANSISTOR 2SC1815(GR)
89-320-011-089 TRANSISTOR 2SC2001K
89-322-405-089 TRANSISTOR 2SC2240GR,BL
89-413-023-089 TRANSISTOR 2SD1302S
89-414-065-089 TRANSISTOR 2SD1406GR

=== MAIN CIRCUIT BOARD SECTION ===

PCB-A * MAIN CIRCUIT BOARD
C101 * 87-010-389-019 CAP ELECT,2200-25 SME
C102 * 87-010-381-089 CAP ELECT 330-16 SME
C103 * 87-010-101-089 CAP ELECT 220-16
C104 * 87-010-381-089 CAP ELECT 330-16 SME
C201 * 87-010-134-089 CAP ELECT BP 4.7-35
C202 * 87-010-134-089 CAP ELECT BP 4.7-35
C205 * 87-018-035-089 CAP 180PF K 50V (B)
C206 * 87-018-035-089 CAP 180PF K 50V (B)
C209 * 87-018-039-089 CAP 390PF K 50V (B)
C210 * 87-018-039-089 CAP 390PF K 50V (B)
C215 * 87-010-404-089 CAP ELECT 4.7-50 SME
C216 * 87-010-404-089 CAP ELECT 4.7-50 SME
C302 * 87-010-406-089 CAP ELECT 22-50
C303 * 87-014-065-089 CAP PP 2200P-100
C306 * 87-018-205-089 CAP SS 0.022
C309 * 87-018-034-089 CAP 150PF K 50V (B)
C310 * 87-018-034-089 CAP 150PF K 50V (B)
C311 * 87-018-034-089 CAP 150PF K 50V (B)
C312 * 87-018-034-089 CAP 150PF K 50V (B)
C313 * 87-018-044-089 CAP 1000PF 50V (B)
C401 * 87-010-432-019 CAP ELECT,10-16 OS
C401A * 87-010-402-089 CAP ELECT 2.2-50 SME
C402A * 87-010-402-089 CAP ELECT 2.2-50 SME
C403 * 87-015-952-089 CAP ELECT 2.2-50
C403A * 87-018-034-089 CAP 150PF K 50V (B)
C404 * 87-015-952-089 CAP ELECT 2.2-50
C404A * 87-018-034-089 CAP 150PF K 50V (B)
C405 * 87-010-402-089 CAP ELECT 2.2-50 SME
C405A * 87-018-044-089 CAP 1000PF 50V (B)
C406 * 87-010-402-089 CAP ELECT 2.2-50 SME
C406A * 87-018-044-089 CAP 1000PF 50V (B)
C407A * 87-018-046-019 CAP,4700P
C407 * 87-010-256-089 CAP ELECT 0.68-50
C408A * 87-018-046-019 CAP,4700P
C408 * 87-010-256-089 CAP ELECT 0.68-50
C409 * 87-010-256-089 CAP ELECT 0.68-50
C409A * 87-010-404-089 CAP ELECT 4.7-50 SME
C410 * 87-010-256-089 CAP ELECT 0.68-50
C410A * 87-010-404-089 CAP ELECT 4.7-50 SME
C411 * 87-010-379-089 CAP ELECT 22-16 SME
C421 * 87-010-404-089 CAP ELECT 4.7-50 SME
C422 * 87-010-404-089 CAP ELECT 4.7-50 SME
C501 * 87-010-380-089 CAP ELECT 47-16

REF.NO. PARTS.NO. DESCRIPTION

C502 * 87-010-101-089 CAP ELECT 220-16
C503 * 87-010-378-019 CAP ELECT,10-16 SME
C801 * 87-010-263-089 CAP ELECT 100-10
C802 * 87-010-263-089 CAP ELECT 100-10

D101 82-526-799-089 DIODE 1N4002
D102 82-526-799-089 DIODE 1N4002
D103 82-526-799-089 DIODE 1N4002
D104 82-526-799-089 DIODE 1N4002

D105 87-027-676-089 ZENER DIODE HZ12B3L
D106 87-020-110-089 DIODE 1SS177
D109 87-020-123-089 DIODE DS446
D302 87-020-123-089 DIODE DS446

D501 87-020-110-089 DIODE 1SS177
D502 87-020-110-089 DIODE 1SS177
D503 87-020-110-089 DIODE 1SS177
D506 87-020-110-089 DIODE 1SS177

D507 87-020-110-089 DIODE 1SS177
D508 87-020-110-089 DIODE 1SS177
D510 87-027-301-089 ZENER DIODE HZ3A1
D524 87-020-110-089 DIODE 1SS177

D525 87-020-110-089 DIODE 1SS177
AFR101 * 87-029-361-090 RES,FUSIBLE 3.3 1/2W
L201 * 82-127-624-019 COIL TRAP 85K
L202 * 82-127-624-019 COIL TRAP 85K

L203 * 87-003-128-089 MICRO INDUCTOR 5.6UH
L204 * 87-003-128-089 MICRO INDUCTOR 5.6UH
L301 * 82-127-625-019 COIL OSC BIAS 85K
L401A * 82-127-621-019 FILTER DOLBY 85K 2CH

L401 * 82-127-626-019 FILTER SQ 20K
L402 * 82-127-626-019 FILTER SQ 20K
L403 * 87-005-220-019 COIL 1MMH J
L404 * 87-005-220-019 COIL 1MMH J

SFR201 * 87-021-737-019 SFR 470
SFR202 * 87-021-737-019 SFR 470
SFR203 * 87-021-738-019 SFR 1K
SFR204 * 87-021-738-019 SFR 1K

SFR205 * 87-021-742-019 SFR 10K
SFR206 * 87-021-742-019 SFR 10K
SFR301 * 87-021-745-019 SFR 47KB
SFR302 * 87-021-745-019 SFR 47KB

=== FRONT CIRCUIT BOARD SECTION ===

PCB-B * FRONT CIRCUIT BOARD
C501 * 87-010-379-089 CAP ELECT 22-16 SME
C502 * 87-010-379-089 CAP ELECT 22-16 SME
C503 * 87-010-379-089 CAP ELECT 22-16 SME

D501 * 87-020-679-019 LED TLR208 (PEAK LED.METER)
D502 * 87-020-679-019 LED TLR208 (PEAK LED.METER)
D503 * 87-020-679-019 LED TLR208 (PEAK LED.METER)
D504 * 87-020-679-019 LED TLR208 (PEAK LED.METER)

D505 * 87-020-679-019 LED TLR208 (PEAK LED.METER)
D506 * 87-020-679-019 LED TLR208 (PEAK LED.METER)
D507 * 87-027-679-019 LED TLR208 (C-TYPE)
D508 * 87-027-679-019 LED TLR208 (METAL)

D509 * 87-027-551-019 LED TLG208 (PEAK LED.METER)
D510 * 87-027-551-019 LED TLG208 (PEAK LED.METER)
D511 * 87-027-551-019 LED TLG208 (PEAK LED.METER)
D512 * 87-027-551-019 LED TLG208 (PEAK LED.METER)

D513 * 87-020-551-019 LED TLG208 (PEAK LED.METER)
D514 * 87-020-551-019 LED TLG208 (PEAK LED.METER)
D515 * 87-020-551-019 LED TLG208 (PEAK LED.METER)
D516 * 87-020-551-019 LED TLG208 (PEAK LED.METER)

REF.NO.	PARTS.NO.	DESCRIPTION
D517	* 87-027-551-019	LED TLG208 (PEAK LED.METER)
D518	* 87-027-551-019	LED TLG208 (PEAK LED.METER)
D519	* 87-020-551-019	LED TLG208 (B-TYPE)
D520	* 87-020-551-019	LED TLG208 (NORMAL)
D521	* 87-020-765-019	LED TLY208 (CO)
D523	* 87-020-142-019	LED SLP984A-51 (REC)
S501	87-031-807-019	SLIDE SW (DOLBY B-C NR)
VR501	82-199-632-019	VOLUME 250KW (REC BALANCE)
VR502	82-127-623-019	VOLUME 50KA (REC LEVEL)
VR503	82-197-632-019	VOLUME 50KB (BIAS FINE)
=== JACK CIRCUIT BOARD SECTION ===		
PCB-C	*	JACK CIRCUIT BOARD
C701	* 87-018-047-089	CAP 0.01-16 (Y)
J701	87-049-464-019	JACK (PHONES)
S701	87-031-805-019	PUSH SW (POWER)
=== SWITCH CIRCUIT BOARD SECTION ===		
PCB-D	*	SWITCH CIRCUIT BOARD
S702	86-992-604-019	TACT SW (REC MUTE)
=== PIN JACK CIRCUIT BOARD SECTION ===		
PCB-E	*	PIN JACK CIRCUIT BOARD
P701	87-049-055-010	PIN JACK, 4P (LINE IN/REC, LINE OUT/PLAY)
=== DIN CIRCUIT BOARD SECTION (Z ONLY) ===		
PCB-F	*	DIN CIRCUIT BOARD
C703	* 87-010-378-089	CAP ELECT 10-16 SME
C704	* 87-010-378-089	CAP ELECT 10-16 SME
C705	* 87-010-260-089	CAP ELECT 47-25
C707	* 87-010-401-089	CAP ELECT 1-50
C708	* 87-010-401-089	CAP ELECT 1-50
C709	* 87-018-012-089	CAP 15PF J 50V SL
C710	* 87-018-012-089	CAP 15PF J 50V SL
C711	* 87-018-040-089	CAP 470PF 50V (B)
C712	* 87-018-040-089	CAP 470PF 50V (B)
D701	87-020-123-089	DIODE DS446
J702	87-049-079-019	DIN JACK 5P (REC/PB)
RY701	* 87-045-237-010	RELAY GSA237P 12VDC
S703	87-031-752-019	SLIDE SW (INPUT SELECTOR)
=== TERMINAL CIRCUIT BOARD SECTION === (E,K,Z,G, ONLY)		
△PCB-G	*	TERMINAL CIRCUIT BOARD
=== MISCELLANEOUS ===		
△	* 87-085-184-010	AC CORD BUSHING (H,U,C ONLY)
△	* 87-085-185-010	AC CORD BUSHING (E,K,Z,G ONLY)
△	87-033-140-010	SPLICE CONNECTOR (H,U,C ONLY)
△	* 87-034-732-010	AC CORD (H ONLY)
△	* 87-034-578-010	AC CORD (U,C ONLY)
△	* 82-187-797-019	AC CORD (E,Z ONLY)
△	* 82-187-796-019	AC CORD (K ONLY)
△	* 82-187-795-019	AC CORD (G ONLY)
CON301	* 82-127-656-019	CONNECTOR ASSY 8P PRH40
EH	* 87-046-196-010	ERASE HEAD
M101	S1-820-133-200	MOTOR ASSY
M101	S1-820-133-060	MOTOR ASSY
RPH	87-046-226-010	RP HEAD

REF.NO.	PARTS.NO.	DESCRIPTION
S101	S6-401-016-600	LEAF SW (MOTOR)
S102	82-127-640-010	LEAF SW (REC)
S103	82-127-228-010	LEAF SW (PAUSE)
S104	81-533-370-010	LEAF SW (MUTE)
S105	S6-401-013-800	LEAF SW (FR)
S106	S6-401-017-300	LEAF SW (MT)
S107	S6-401-017-300	LEAF SW (CO)
△S702	87-031-027-019	ROTARY SW (VOLTAGE SELECTOR) (H ONLY)
△T1	82-127-611-019	POWER TRANSFORMER (H ONLY)
△T1	82-127-612-019	POWER TRANSFORMER (U ONLY)
△T1	82-127-614-019	POWER TRANSFORMER (K,G ONLY)
△T1	82-127-615-019	POWER TRANSFORMER (C ONLY)
△T1	82-127-613-019	POWER TRANSFORMER (E,Z ONLY)

Combination circuit board A 82-127-601-019

PCB-A 82-127-602-019

PCB-B 82-127-604-019

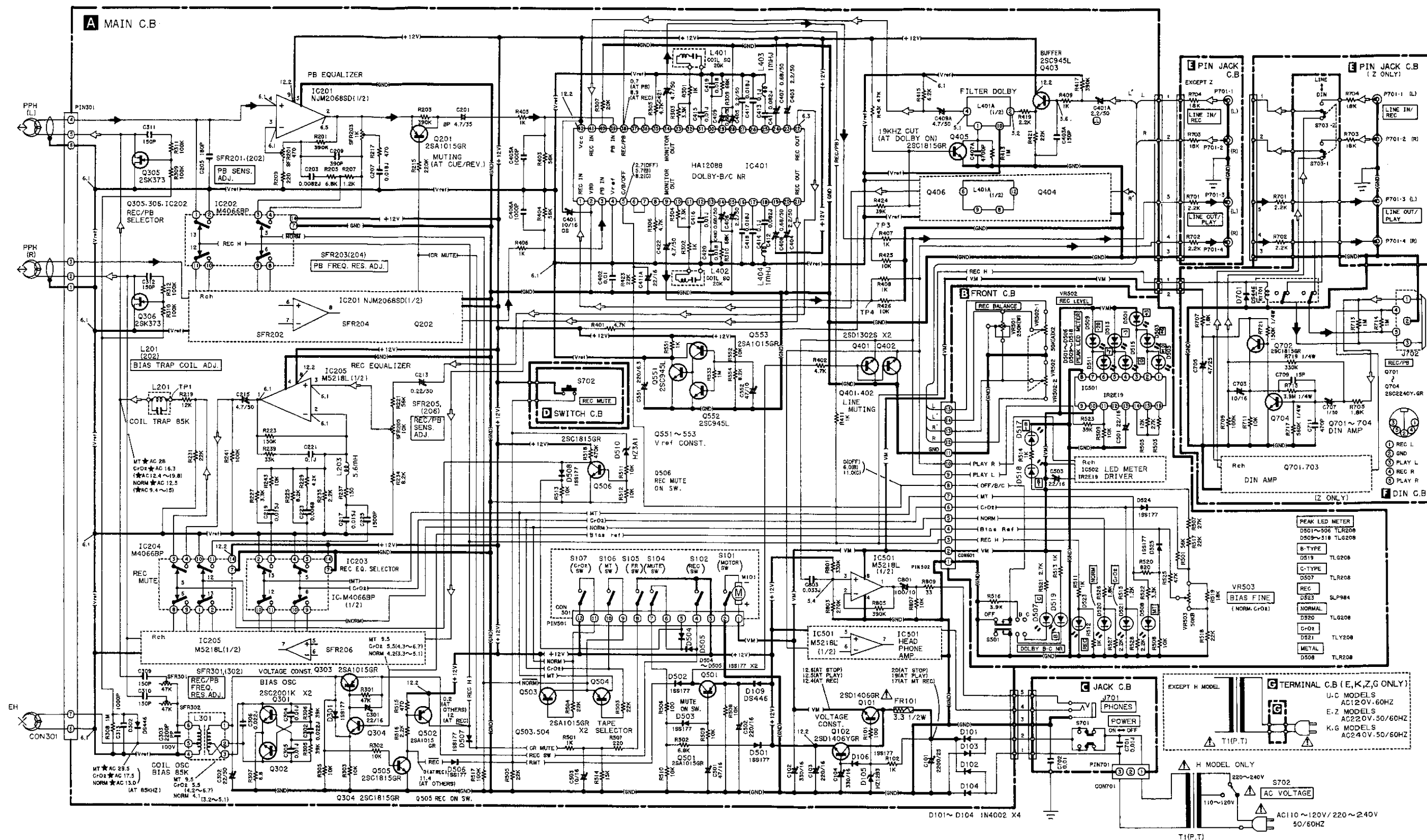
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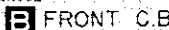
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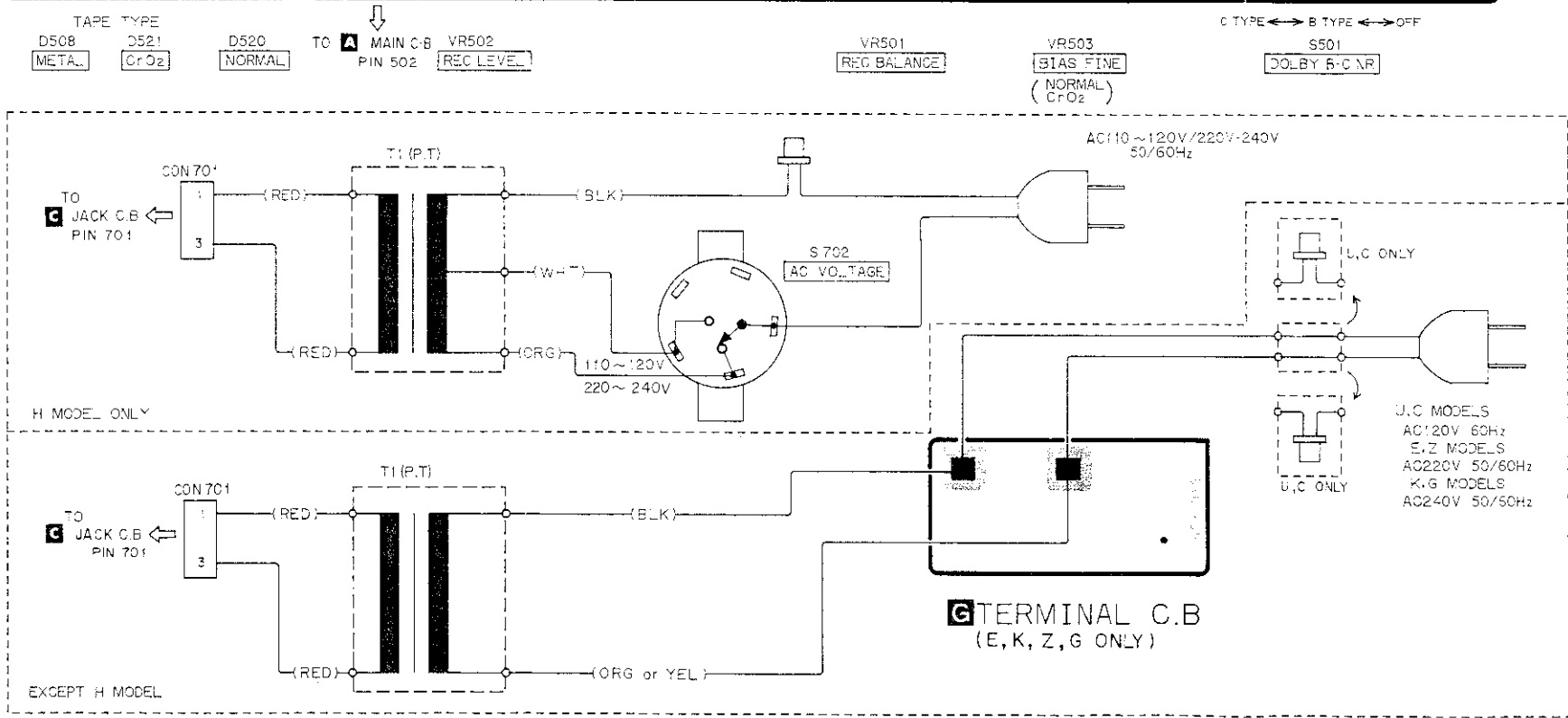
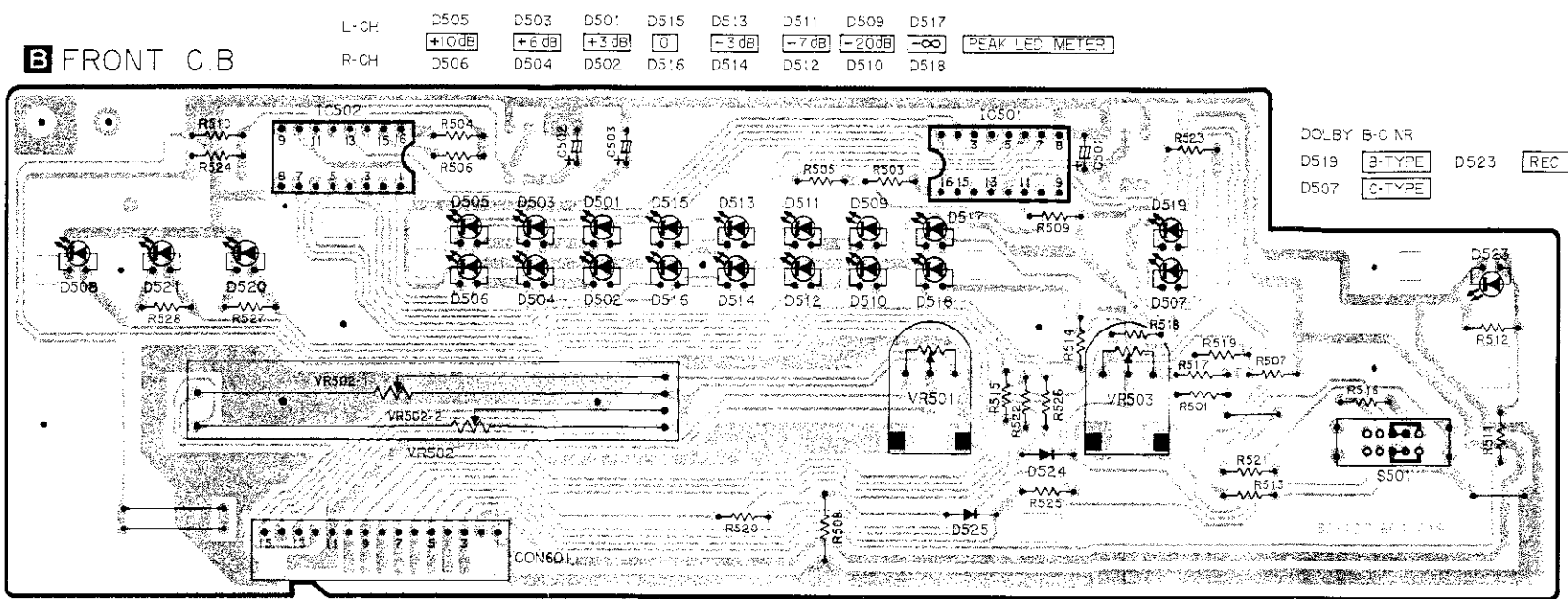
PCB-E 82-127-606-019

PCB-F 82-127-608-019(Z ONLY)

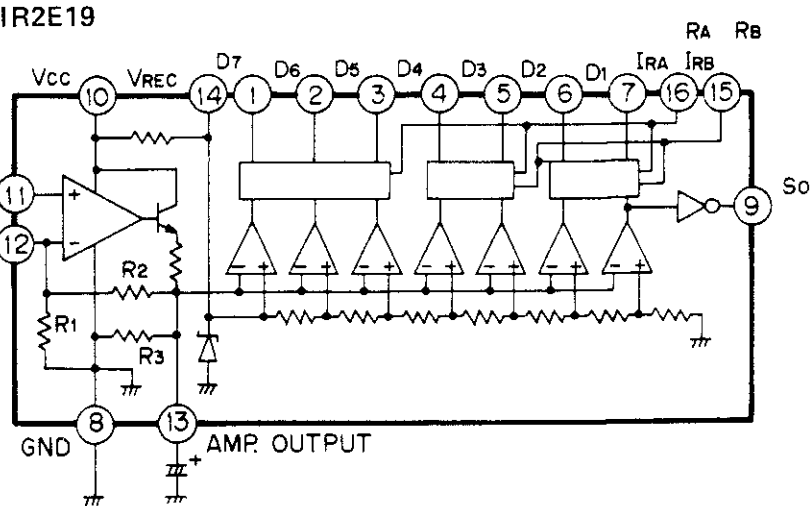
PCB-G 82-127-607-019(E,K,G,Z ONLY)



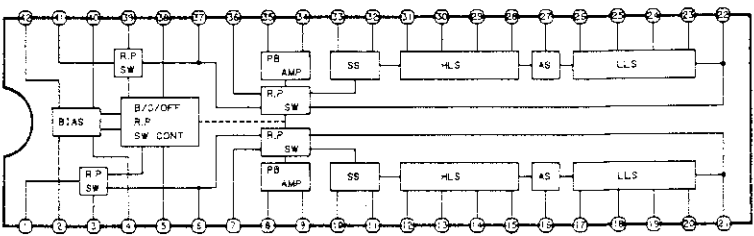




IC BLOCK DIAGRAM



IC HA12088J

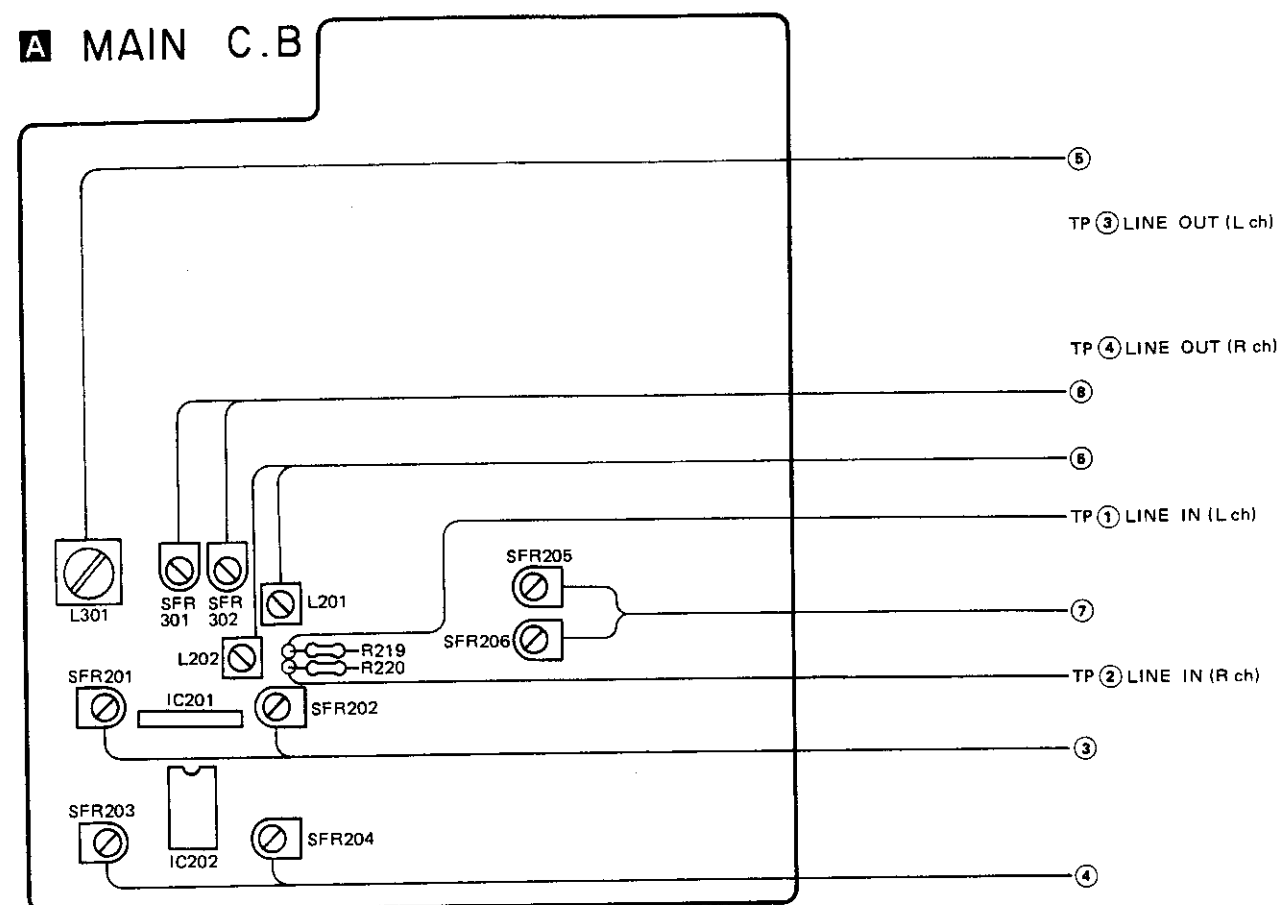


Terminal name

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
NAMES	REC IN	GND	PB IN	REF	B/C/OFF	1A OUT	NR IN	PB IN	PB OUT	SS IN	SS OUT	HLS COR	HLS HPF	HLS DET 1	HLS DET 2	AS	HLS COR	HLS HPF	HLS DET 1	HLS DET 2	REC OUT	REC OUT	LLS COR	LLS HPF	LLS DET 1	LLS DET 2	AS	HLS COR	HLS HPF	HLS DET 1	HLS DET 2	SS OUT	SS IN
PIN NO.	34	35	36	37	38	39	40	41	42																								
NAMES	PB OUT	PB IN	NR IN	1A OUT	RP	PB IN	BIAS	REC IN	VCC																								

ADJUSTMENT

A MAIN C.B



③ Playback Sensitivity Adjustment

- Settings:
- Test tape: TTA-161
 - Test point: TP ③
 - Adjustment location: SFR201 (Lch), SFR202 (Rch)

Method: Play back the test tape and adjust so that output levels at TP ③ (Lch), and TP ④ (Rch) become $520\text{mV} \pm 10\text{mV}$.

④ Playback Frequency Response Adjustment

- Settings:
- Test tape: TTA-317E
 - Test point: TP ③
 - Adjustment location: SFR203 (Lch), SFR204 (Rch)

Method: Play back the test tape and adjust so that output difference between the 1kHz and 10kHz signals become $+0.5 \pm 0.5\text{dB}$.

⑤ Bias Oscillation Frequency Adjustment

- Settings:
- Test point: TP ① (R219, Lch), TP ② (R220, Rch)
 - Adjustment location: L301

Method: Connect a frequency counter to the test point TP1, 2 and adjust the coil L301 for $85\text{KHz} \pm 0.5\text{KHz}$.

⑥ Bias Trap Coil Adjustment

- Settings:
- Test tape: TTA-119J
 - Test point: TP ① (R219, Lch), TP ② (R220, Rch)
 - Adjustment location: L201 (Lch), L202 (Rch)

Method: Set the unit to the record mode and adjust so that the recording bias leak voltages at TP ① and TP ② are minimum.

⑦ REC/PB Sensitivity Adjustment

- Settings:
- Test tape: TTA-119J
 - Test point: TP ③
 - Adjustment location: SFR205 (Lch), SFR206 (Rch)
 - Input level: Supply a 1kHz (-30dB) signal and adjust so that the outputs at TP ③ (Lch) and TP ④ (Rch) become 35mV .
- Method: Record and play back a 1kHz ($0 \sim 0.5\text{dB}$) signal and adjust so that the playback output level becomes the same.

⑧ REC/PB Frequency Response Adjustment

- Settings:
- Test tape: TTA-119J, TTA-119G,
 - Test point: TP ③
 - Adjustment location: SFR301 (Lch), SFR302 (Rch)
 - Input level: Supply a 1KHz (-30dB), (-70dB , Z ONLY) signal and adjust so that the outputs at TP ③ (Lch) and TP ④ (Rch) become 35mV .
- Method: Record and play back the 1kHz and 10kHz signals, and adjust so the output difference becomes $-0.5 \pm 1\text{dB}$ (TTA-119J)
- Rating:
- TTA-119MS $1 \pm 2\text{dB}$.
 - TTA-119G $1 \pm 1.5\text{dB}$.
 - TTA-119D $-1 \pm 1.5\text{dB}$ (Z ONLY)

PRACTICAL SERVICE FIGURE

AD-F260/S10

Wow & Flutter: (RMS)	Less than 0.35%
Take-up torque:	30 ~ 60 g·cm (0.29 ~ 0.59 mN · m)
FF & rewind torque:	80 ~ 140 g·cm (0.8 ~ 1.4 mN · m)
Back tension:	2 ~ 6 g·cm (0.02 ~ 0.06 mN · m)
PB output:	EXCEPT Z $520 \pm 20\text{mV}$ (TTA-161, LINE OUT) Z MODEL $520 \pm 20\text{mV}$ (TTA-161, DIN OUT)
REC/PB output:	EXCEPT Z $0 \pm 1\text{dB}$ (LINE OUT) Z MODEL $0 \pm 1\text{dB}$ (DIN OUT)
REC/PB distortion:	Less than 2.5% (METAL) Less than 2.5% (CrO ₂) Less than 2% (NORMAL)
Playback noise: (Unweighted)	Less than 2.5mV (NORMAL, DOLBY-NR OFF) Less than 2.0mV (CrO ₂ , DOLBY-NR OFF) Less than 2.0mV (METAL, DOLBY-NR C)
REC/PB SN ratio: (Unweighted)	More than 37dB (NORMAL, DOLBY-NR OFF) More than 45dB (NORMAL, DOLBY-NR B) More than 53dB (NORMAL, DOLBY-NR C)
Erasing ratio (125Hz):	More than 60dB
Bias frequency:	85kHz
Test tape:	METAL TTA-119MX CrO ₂ TTA-119G (EXCEPT Z) TTA-119D (Z MODEL) NORMAL TTA-119J



2SA1015
2SC945
2SC1815
2SC2001
2SC2240
2SD1302



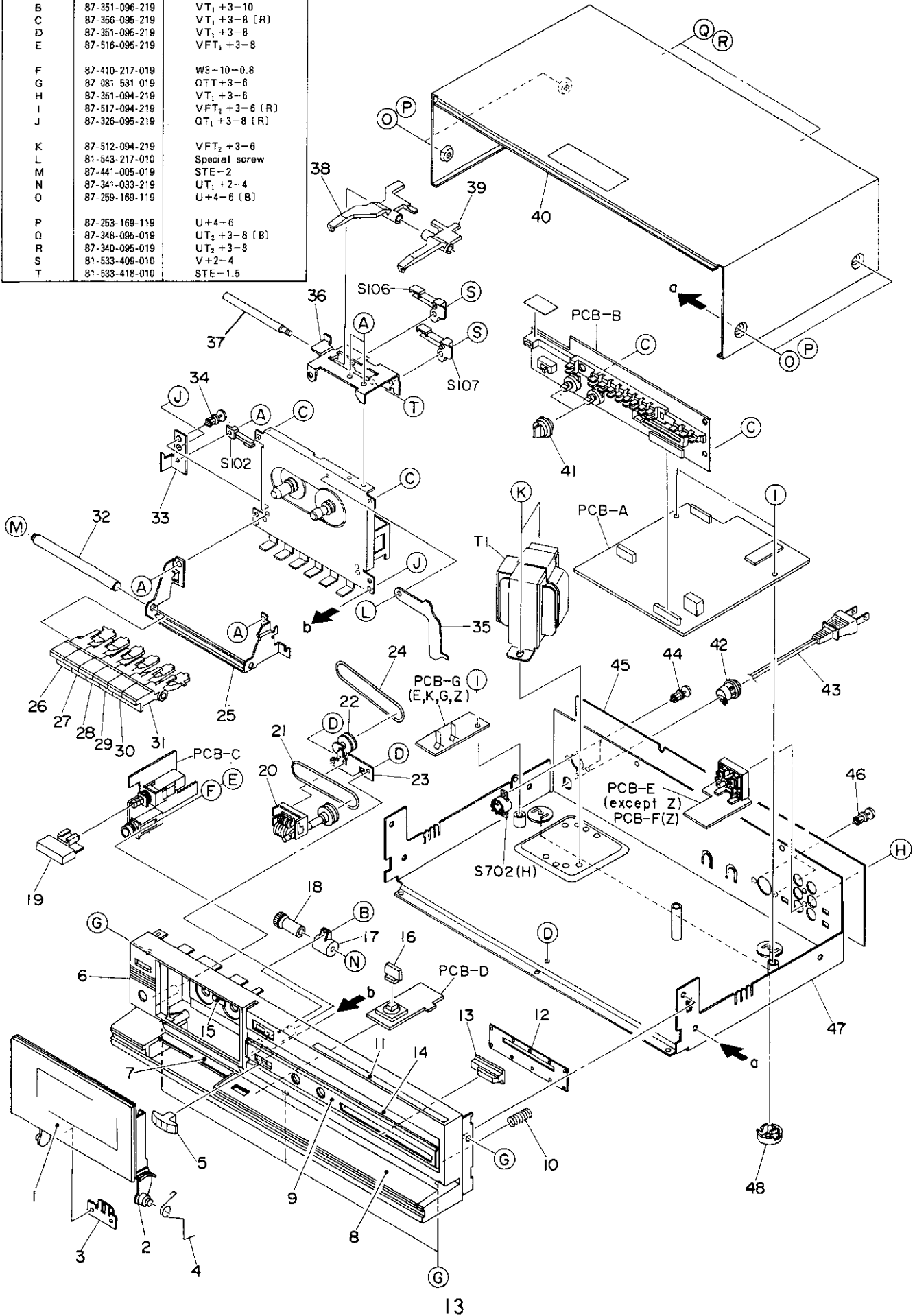
2SK373



2SD1406

EXPLODED VIEW-1

REF.NO.	PART NO.	DESCRIPTION
A	87-081-501-019	VTT+2.6-4
B	87-351-096-219	VT ₁ +3-10
C	87-356-095-219	VT ₁ +3-8 (R)
D	87-351-095-219	VT ₁ +3-8
E	87-516-095-219	VFT ₁ +3-8
F	87-410-217-019	W3-10-0.8
G	87-081-531-019	QTT+3-6
H	87-351-094-219	VT ₁ +3-6
I	87-517-094-219	VFT ₁ +3-6 (R)
J	87-326-095-219	QTT ₁ +3-8 (R)
K	87-512-094-219	VFT ₂ +3-6
L	81-543-217-010	Special screw
M	87-441-005-019	STE-2
N	87-341-033-219	UT ₁ +2-4
O	87-269-169-119	U+4-6 (B)
P	87-263-169-119	U+4-6
Q	87-246-095-019	UT ₂ +3-8 (B)
R	87-340-095-019	UT ₂ +3-8
S	81-533-409-010	V+2-4
T	81-533-418-010	STE-1.5



MECHANICAL PARTS LIST

PARTS NO. CHANGED TO	REF.NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1-1	★82-127-009-010	WINDOW, CASSETTE	※	1
	1-2	82-126-010-010	CASSETTE BOX L		1
	1-3	★81-558-231-010	P-SPRING, CASSETTE C		1
	1-4	★82-127-224-010	T-SPRING, EJECT	※	1
	1-5	82-148-011-010	SLIDE-KNOB, DOLBY BM		1
	1-6	★82-127-001-019	CABINET, FRONT (B) (EXCEPT U)	※	1
		★82-127-010-019	CABINET, FRONT (B) (U only)	※	1
		★82-127-030-019	CABINET, FRONT (S) (E, Z only)	※	1
	1-7	★82-127-008-010	NAME PLATE, PUSH-KEY	※	1
	1-8	★82-127-005-019	PANEL, CONTROL, (B) (EXCEPT U)	※	1
		★82-127-011-019	PANEL, CONTROL, (B) (U only)	※	1
		★82-127-032-019	PANEL, CONTROL, (S) (E, Z only)	※	1
	1-9	★82-127-006-019	PANEL, FRONT (B)	※	1
		★82-127-033-019	PANEL, FRONT (S)	※	1
	1-10	★82-127-223-010	C-SPRING, EARTH	※	1
	1-11	---	SHEET, BIAS EX		1
	1-12	★82-148-027-010	PLATE, REC		1
	1-13	★82-148-009-010	KNOB, REC BM		1
	1-14	★82-127-007-010	WINDOW, METER	※	1
	1-15	★82-148-030-019	LABEL, TAPE IND		1
	1-16	★82-127-004-010	KNOB, REC MUTE	※	1
	1-17	★81-546-211-110	HOLDER OIL-DAMP Ass'y		1
	1-18	81-546-210-010	GEAR, OIL-DAMP		1
	1-19	★82-188-012-010	KNOB, POWER (B)		1
		★82-134-022-010	KNOB, POWER (S)		1
	1-20	★87-040-192-010	COUNTER		1
	1-21	82-422-279-010	BELT, COUNTER		1
	1-22	82-146-202-010	PULLEY		1
	1-23	---	HOLDER COUNTER Ass'y		1
	1-24	82-127-212-010	RUBBER BELT COUNTER	※	1
	1-25	---	HOLDER, PUSH-KEY		1
	1-26	★82-127-012-010	PUSH-KEY, REC	※	1
	1-27	★82-127-013-010	PUSH-KEY, PLAY	※	1
	1-28	★82-127-014-010	PUSH-KEY, REW	※	1
	1-29	★82-127-015-010	PUSH-KEY, FF	※	1
	1-30	★82-127-016-010	PUSH-KEY, STOP	※	1
	1-31	★82-127-017-010	PUSH-KEY, PAUSE	※	1
	1-32	---	SHAFT, PUSH-KEY		1
	1-33	---	HOLDER, LEAF SWITCH		1
	1-34	★87-084-080-010	NYLON RIVET 3-3.5		1
	1-35	★81-543-215-010	LEVER, EJECT		1
	1-36	★S1-820-160-300	DETECTION LEVER ANGLE		1
	1-37	★S1-820-160-400	SHAFT, DETECTION LEVER		1
	1-38	★S1-820-160-100	DETECTION LEVER, METAL		1
	1-39	★S1-820-160-200	DETECTION LEVER, CrO ₂		1

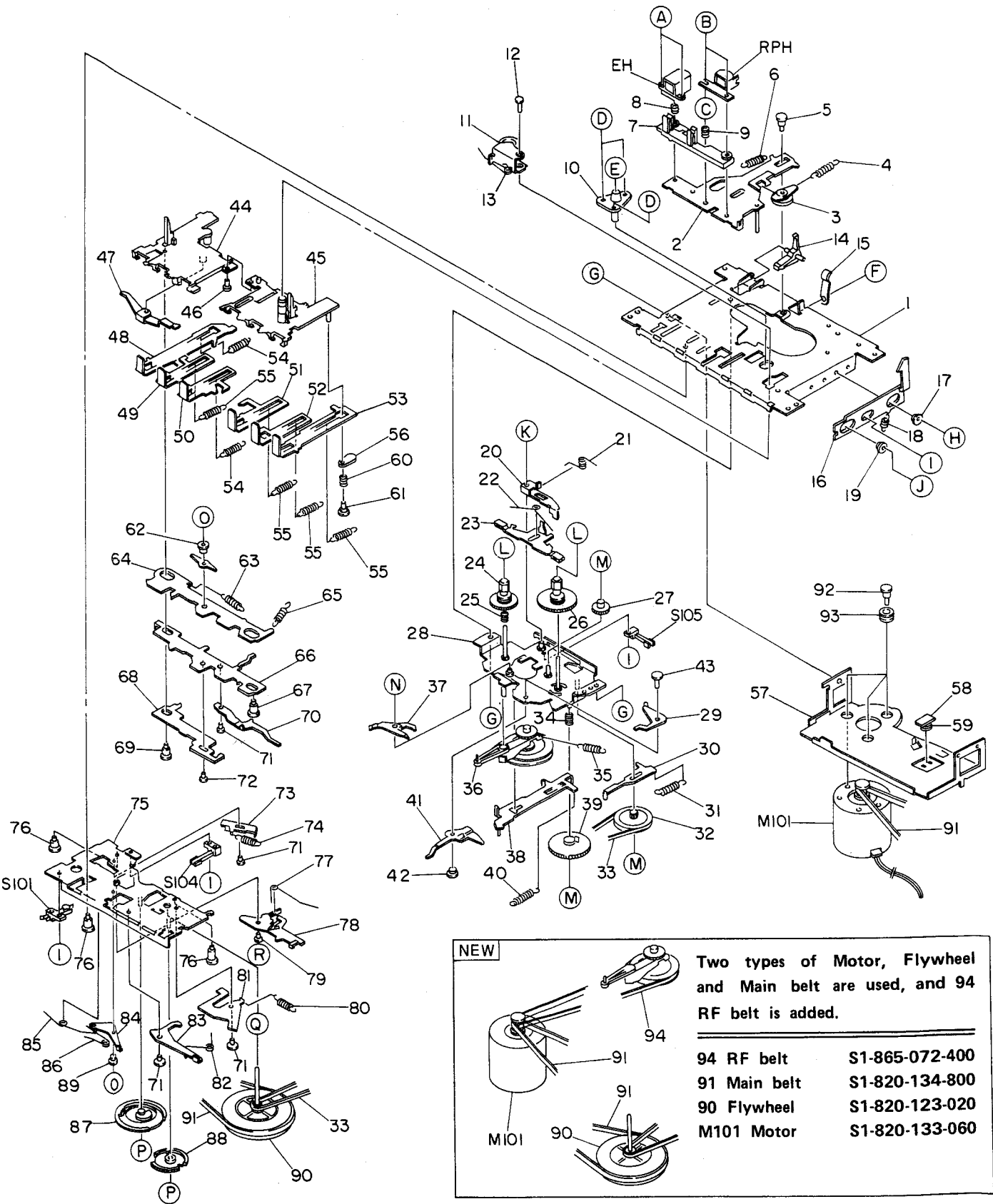
PARTS NO. CHANGED TO	REF.NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1-40	★82-127-002-010	CABINET, STEEL (B)	※	1
		★82-127-031-010	CABINET, STEEL (S)	※	1
	1-41	82-127-018-010	KNOB, BIAS	※	2
	1-42	★87-085-184-010	CORD BUSHING (H, U, C only)		1
		★87-085-185-010	CORD BUSHING (E, K, G, Z only)		1
	1-43	★87-034-732-010	AC POWER CORD (H only)		1
		★87-034-578-010	AC POWER CORD (U, C only)		1
		★82-187-797-019	AC POWER CORD (E, Z only)		1
		★82-187-796-019	AC POWER CORD (K only)		1
		★82-187-795-019	AC POWER CORD (G only)		1
	1-44	★87-085-090-010	NYLON RIVET ϕ 3-6.5 (H only)		1
	1-45	---	NAME PLATE, JACK		1
	1-46	★87-048-063-010	NYLON RIVET 3-5.5 (Z only)		2
	1-47	---	AMP. CHASSIS Ass'y		1
	1-48	★87-085-186-010	FOOT		2

■ ACCESSORIES/PACKAGE LIST

PARTS NO. CHANGED TO	REF.NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1	★82-127-904-019	INSTRUCTION BOOKLET H	※	1
	2	★87-034-978-010	CORD CW-254 BSK		1
	3	★87-049-137-019	PLUG SIEMENS		1

EXPLODED VIEW-2

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
A	81-533-401-010	V+2-8	G	81-533-406-010	VS+2-4	M	81-504-264-010	PW1.2-3-0.25 (Cut)
B	81-504-255-010	⊕⊕Screw M2-7	H	81-504-259-010	V+2.6-5	N	81-518-332-010	STE-1.2
C	81-533-403-010	W2.1-5-0.2	I	81-533-409-010	V+2-4	O	86-522-343-010	Q+2-2.5
D	81-533-425-010	Q+2-3	J	81-533-410-010	VS+2-6	P	81-533-416-010	STE-2.0
E	81-533-422-010	NW2-5-0.5	K	81-533-418-010	STE-1.5	Q	86-521-287-010	PW2.2-3.8-0.4
F	S9-200-000-000	Special screw VTT+2.6-3	L	82-138-248-010	STE-1.5 (Special)	R	81-518-334-010	VS+2.6-6



PARTS NO. CHANGED TO	REF.NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	2-1	---	CHASSIS		1
	2-2	★81-533-303-010	HEAD PANEL Ass'y	CA-W50	1
	2-3	★81-533-306-010	TAKE-UP ROLLER SHAFT BEARING Ass'y	CA-W50	1
	2-4	★86-522-277-010	SPRING, TAKE-UP ROLLER SHAFT BEARING		1
	2-5	★81-544-304-010	COLLAR SCREW	CS-W550	1
	2-6	★81-533-305-010	SPRING, HEAD PANEL	CA-W50	1
	2-7	★81-533-302-010	HEAD BASE	CA-W50	1
	2-8	★S9-400-312-000	SPRING, HEAD		1
	2-9	★81-533-301-010	SPRING, HEAD	CA-W50	1
	2-10	★81-533-313-010	METAL, FLYWHEEL	CA-W50	1
	2-11	S1-820-043-060	PINCH ROLLER ARM Ass'y		1
	2-12	★81-533-308-010	STOPPER, ACTUATING PLATE	CA-W50	1
	2-13	★S1-820-040-300	SPRING, PINCH ROLLER		1
	2-14	★81-504-202-210	REC SAFETY LEVER		1
	2-15	★S1-820-010-400	SPRING, PACK BEARING		1
	2-16	★81-533-314-010	EJECT SLIDE LEVER	CA-W50	1
	2-17	★81-533-315-010	COLLAR	CA-W50	1
	2-18	★81-518-321-010	SPRING, EH BASE	CS-W330	1
	2-19	★81-533-317-010	COLLAR	CA-W50	1
	2-20	★81-533-318-010	CONTROL LEVER	CA-W50	1
	2-21	★81-533-319-010	SPRING, CONTROL LEVER	CA-W50	1
	2-22	★82-138-234-010	SPRING, BRAKE	FX-W20	1
	2-23	★82-138-235-010	BRAKE ARM Ass'y	FX-W20	1
	2-24	S1-800-063-020	SUPPLY REEL Ass'y		1
	2-25	★S1-820-061-300	SPRING, BACK TENSION		1
	2-26	S1-820-063-140	TAKE-UP REEL Ass'y		1
	2-27	81-504-216-010	GEAR, FF		1
	2-28	★81-533-329-010	REEL BASE Ass'y	CA-W50	1
	2-29	★81-533-330-010	T.ROLLER KICK LEVER	CA-W50	1
	2-30	★81-533-332-010	DETECTION LEVER	CA-W50	1
	2-31	★81-533-333-010	SPRING, DETECTION LEVER	CA-W50	1
	2-32	★81-533-334-010	PULLEY	CA-W50	1
	2-33	81-533-335-010	FULL AUTO BELT	CA-W50	1
	2-34	★S1-820-082-100	SPRING, CAM GEAR		1
	2-35	★S1-820-070-800	SPRING, RF CLUTCH ARM		1
	2-36	★81-533-338-010	RF CLUTCH ARM Ass'y	CA-W50	1
	2-37	★81-533-393-010	KICK LEVER	CA-W50	1
	2-38	★81-533-340-010	RF SLIDE LEVER Ass'y	CA-W50	1
	2-39	★81-533-336-010	CAM GEAR	CA-W50	1
	2-40	★82-138-247-010	SPRING, RF SLIDE LEVER	FX-W20	1
	2-41	★81-533-341-010	AUTO LEVER	CA-W50	1
	2-42	★81-533-342-010	COLLAR, AUTO LEVER	CA-W50	1
	2-43	★81-533-404-010	COLLAR SCREW	CA-W50	1
	2-44	★81-533-345-010	BUTTON BASE R	CA-W50	1
	2-45	★81-533-343-010	BUTTON BASE L	CA-W50	1
	2-46	★81-533-344-010	COLLAR SCREW	CA-W50	1
	2-47	★81-504-202-010	REC STOPPER		1
	2-48	★81-533-283-010	BUTTON LEVER, REC	CA-W50	1

PARTS NO. CHANGED TO	REF.NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	2-49	★S1-820-107-700	BUTTON LEVER, PLAY		1
	2-50	★81-533-349-010	BUTTON LEVER, RWD	CA-W50	1
	2-51	★81-533-350-010	BUTTON LEVER, FF	CA-W50	1
	2-52	★81-533-351-010	BUTTON LEVER, STOP	CA-W50	1
	2-53	★81-533-352-010	PAUSE BUTTON LEVER Ass'y	CA-W50	1
	2-54	★81-533-353-010	SPRING, BUTTON LEVER	CA-W50	2
	2-55	★81-504-240-010	SPRING, BUTTON LEVER		4
	2-56	★81-533-355-010	PAUSE LEVER	CA-W50	1
	2-57	---	FM BEARING PLATE		1
	2-58	★81-533-390-010	FL PLATE HOLDER	CA-W50	1
	2-59	★81-533-391-010	DAMPER SPRING	CA-W50	1
	2-60	★81-533-426-010	SPRING, PAUSE LEVER	CA-W50	1
	2-61	★81-533-356-010	P.STOPPER	CA-W50	1
	2-62	★82-138-242-010	COLLAR	FX-W20	1
	2-63	★81-533-359-010	SPRING, SWITCH ACTUATING PLATE	CA-W50	1
	2-64	★81-533-360-010	PUSH-BUTTON, ACTUATING PLATE	CA-W50	1
	2-65	★81-533-361-010	SPRING, PUSH-BUTTON	CA-W50	1
	2-66	★81-533-362-010	SWITCH ACTUATING PLATE	CA-W50	1
	2-67	★81-533-363-010	COLLAR SCREW	CA-W50	1
	2-68	---	T.P.S LEVER		1
	2-69	★81-533-366-010	COLLAR SCREW	CA-W50	1
	2-70	★81-533-364-010	E.KICK LEVER	CA-W50	1
	2-71	★81-533-331-010	COLLAR SCREW	CA-W50	4
	2-72	★81-533-407-010	COLLAR SCREW	CA-W50	1
	2-73	★81-533-367-010	REC ACTUATING PLATE	CA-W50	1
	2-74	★81-533-368-010	SPRING, AUTO LEVER ANGLE	CA-W50	1
	2-75	★S1-820-115-110	SUB CHASSIS Ass'y		1
	2-76	★81-533-392-010	COLLAR SCREW	CA-W50	3
	2-77	★81-533-387-010	SPRING, LIFT ARM	CA-W50	1
	2-78	★S1-820-115-050	LIFT ARM Ass'y		1
	2-79	★81-533-385-010	LIFT ARM COLLAR	CA-W50	1
	2-80	★81-533-384-010	SPRING, PAUSE ARM	CA-W50	1
	2-81	★81-533-383-010	PAUSE ARM Ass'y	CA-W50	1
	2-82	★81-533-382-010	SPRING, P.TRIGGER ARM	CA-W50	1
	2-83	★81-533-381-010	P.TRIGGER ARM Ass'y	CA-W50	1
	2-84	★S1-820-115-210	M.TRIGGER ARM Ass'y		1
	2-85	★81-533-374-010	SPRING, M.GEAR	CA-W50	1
	2-86	★81-533-375-010	SPRING, M.TRIGGER ARM	CA-W50	1
	2-87	S1-820-116-800	M.GEAR		1
	2-88	81-533-378-010	P.GEAR	CA-W50	1
	2-89	★81-533-395-010	COLLAR	CA-W50	1
	2-90	★S1-820-123-110	FLYWHEEL Ass'y		1
	2-91	S1-820-134-500	MAIN BELT		1
	2-92	★81-533-389-010	COLLAR SCREW	CA-W50	3
	2-93	★81-533-388-010	MOTOR RUBBER	CA-W50	3