

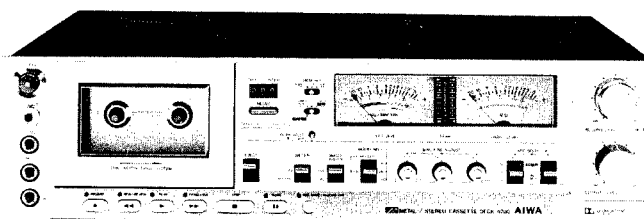
STEREO CASSETTE DECK WITH DOLBY NR SYSTEM

MODEL NO. AD-6700_{H,C,U,E,K,G}

AIWA®

【SERVICE MANUAL】

Code No. 04-670-000-52



Shown above is AD-6700H

DATE OF ISSUE 7/1979

SPECIFICATIONS

Semiconductors: 19 IC's, 81 transistors, 60 diodes, 12 FET's & 6 LED's

Power source: AC 110V/120V/220V/240V (H model)
AC 110~120V/220V/240V (E model)
AC 120V/240V (K,G model) (switchable) 50/60 Hz
AC 120V, 60 Hz (U, C model)

Power consumption: 45W

Dimensions: 450(W) x 120(H) x 327(D) mm (H,C,E,K,G model)
18.9/16"(W) x 4.3/4"(H) x 12.7/8"(D)
(472 x 120 x 327 mm) (U model)

Weight: 9.5 kg (H,C,E,K,G model)
22.5 lbs (10.2 kg) (U model)

Tracks system: 4-track 2-channel stereo

Tape speed: 4.8 cm/sec. $\pm 0.5\%$

Wow & flutter: Less than 0.04% (WRMS) at Pb

Automatic stop system: Full auto-stop

Automatic shut-off action time: 2 $\pm$ 0.5 s.

Pinch roller pressure: 350 $\pm$ 30 g (3.43 $\pm$ 0.29 N)

Take-up torque: 50 $\pm$ 10 g-cm (490 $\pm$ 98 mN-m)

FF & rewind torque: 155 $\pm$ 25 g-cm (1519 $\pm$ 245 mN-m)

FF & rewind time: 65 $\pm$ 8 s. (w/C-60 cassette)

Unattended recording acting time: 3 $\pm$ 1 s.

Playback output: 0.58 $\pm$ 0.06 V (LINE) (TTA-161)

Playback noise: Less than 3.5 mV (LH, DOLBY OFF)
Less than 1.0 mV (Fe-Cr, CrO₂, METAL, DOLBY ON)
0 VU $\pm$ 1.0 dB (LINE)

Rec./Pb output: (400 Hz 0 VU)

Rec./Pb distortion: (400 Hz 0 VU)
Less than 1.5% (LH, Fe-Cr)
Less than 2.5% (CrO₂)
Less than 1.3% (METAL)
More than 40/45 dB (LH, DOLBY OFF/ON)
More than 43/46 dB (Fe-Cr, CrO₂, METAL, DOLBY OFF/ON)

Rec./Pb S/N: (400 Hz 0 VU) (Un-Weighted)
More than 40/45 dB (LH, DOLBY OFF/ON)
More than 43/46 dB (Fe-Cr, CrO₂, METAL, DOLBY OFF/ON)

Channel separation: (1 kHz 0 VU)
More than 30 dB

Cross talk: (1 kHz 0 VU)
More than 60 dB

Erasing ratio: (400 Hz 0 VU + 10 dB)
More than 60 dB

VU meter display error: (0 VU)
0 VU $\pm$ 0.5 dB

Bias frequency: 105 kHz

Frequency response: LH tape, 20~16,000 Hz
25~15,000 Hz (± 2 / -3 dB)
Fe-Cr tape, 20~19,000 Hz
25~17,000 Hz (± 2 / -3 dB)

CrO₂ tape, 20~18,000 Hz
25~16,000 Hz (± 2 / -3 dB)

METAL tape, 20~19,000 Hz
25~17,000 Hz (± 2 / -3 dB)

Motor: 38 pulse FG servo motor (for capstan)
DC servo motor

Head: Sendust guard head (SGH) (for Rec./Pb)
Double gap ferrite head (for Erasure)

Input: MIC; Max. input sensitivity 0.25 mV
(200 Ω ~ 10 k Ω suitable)
LINE IN; Max. input sensitivity 75 mV
(More than 50 k Ω)
DIN; Max. input sensitivity 0.25 mV (50 k Ω) (H,E,K,G model)

Output: LINE OUT; Standard output level 0.41V (0 VU)
Optimum load impedance More than 50 k Ω
DIN; Standard output level 0.41 V (0 VU)
Optimum load impedance More than 50 k Ω (H,E,K,G model)

PHONES; 8 Ω ~ 150 Ω

Remote control unit specifications

Number of channels: 7

Clock frequency: 40 kHz $\pm 1\%$

Power requirements: 4.5V UM-3 (size 'AA') x 3
500 mA (when transmitting)
5 μ A (during shutdown) under normal conditions

Current consumption:

Transmission directivity: About $\pm 45^\circ$

Coverage range: About 8 meters

Semiconductors used: 2 ICs, 5 transistors, 1 diodes, 2 LEDs

Usable temperature range: +0°C to +35°C

Dimensions: 50 (W) x 25 (H) x 150 (D) mm
2"(W) x 1"(H) x 5.15/16"(D)

Weight: 163g 0.36 lbs

- Specifications and external appearance are subject to change without notice due to product improvement.
- Dolby Noise Reduction System is licensed from Dolby Laboratories Incorporated.
- The name "Dolby" and the "Double D" symbol are trademarks of Dolby Laboratories Incorporated.

DISASSEMBLY INSTRUCTIONS

1. To Remove Cassette Lid, Blinder and Cassette Plate

- 1) Remove the cassette lid.
- 2) Remove the blinder.
- 3) Remove 2 screws, securing the cassette plate in place.
(Refer to Fig. 1)

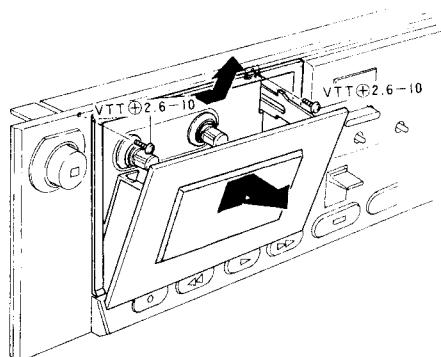


Fig. 1

2. To Remove Front Panel

- 1) Remove the connector.
- 2) Pull out the 13 knobs.
- 3) Remove 6 screws.
(Refer to Fig. 2)

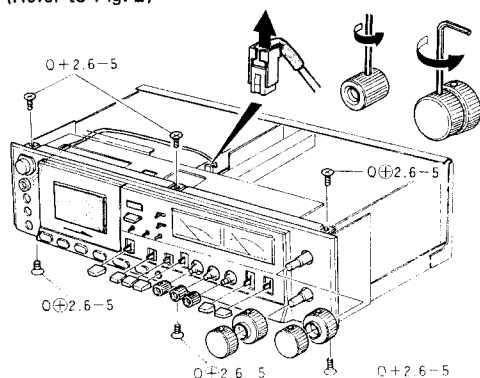


Fig. 2

3. To Remove Mechanism

- 1) Remove 2 screws, securing the player shync circuit board in place.
- 2) Remove 4 screws, securing the power transformer in place.
- 3) Remove 2 screws, securing the power switch holder in place.
- 4) Remove the counter belt and main belt.
- 5) Remove the rod stoppers and take out the selector rods.
(Refer to Fig. 3)

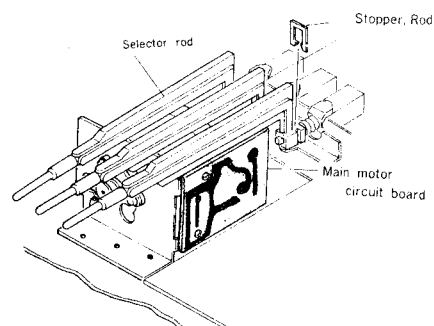


Fig. 3

- 6) Remove 10 screws.
(Refer to Fig. 4 and Fig. 5)

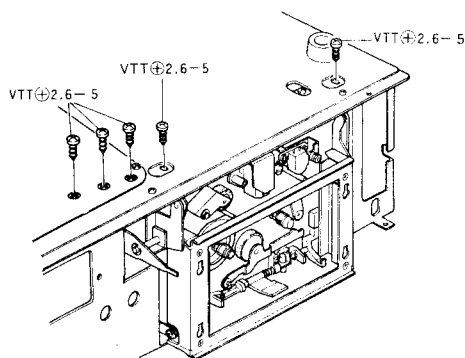


Fig. 4

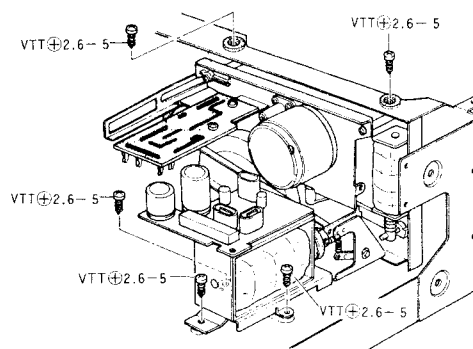
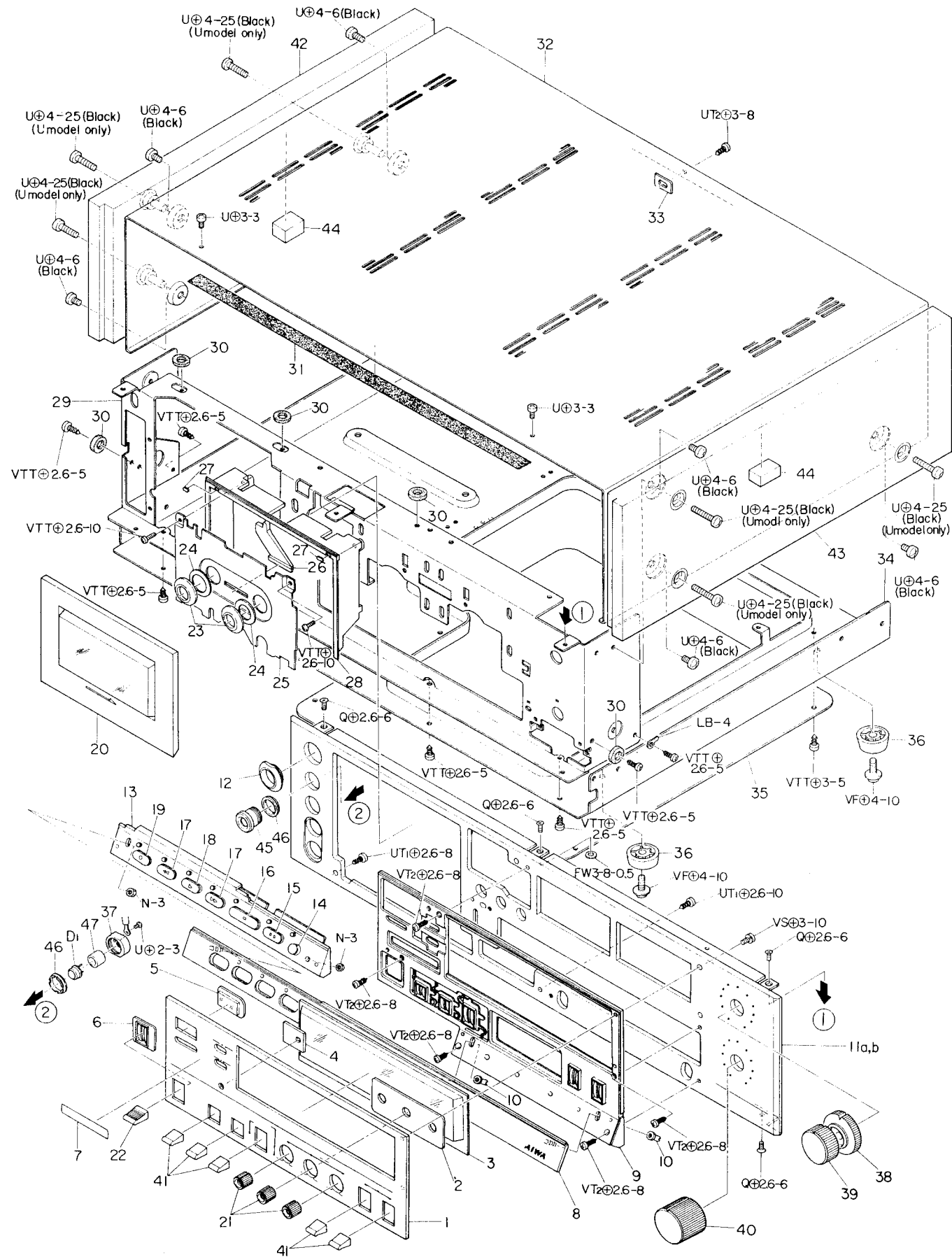


Fig. 5

EXPLODED VIEW-1



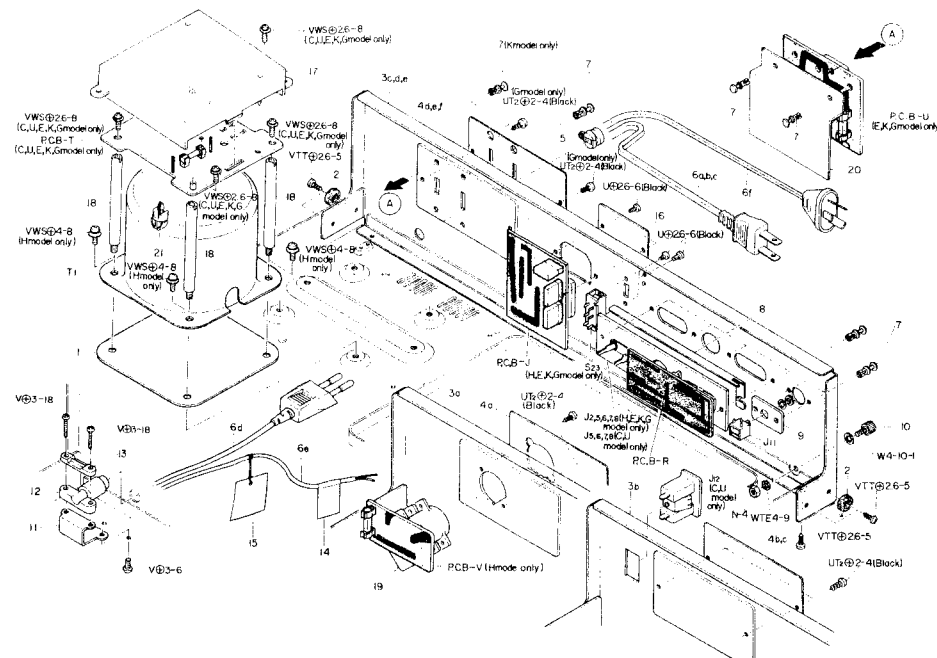
MECHANICAL PARTS

PARTS LIST

■ * mark in this part list shows exclusive part (which is used) for only Model AD-6700.

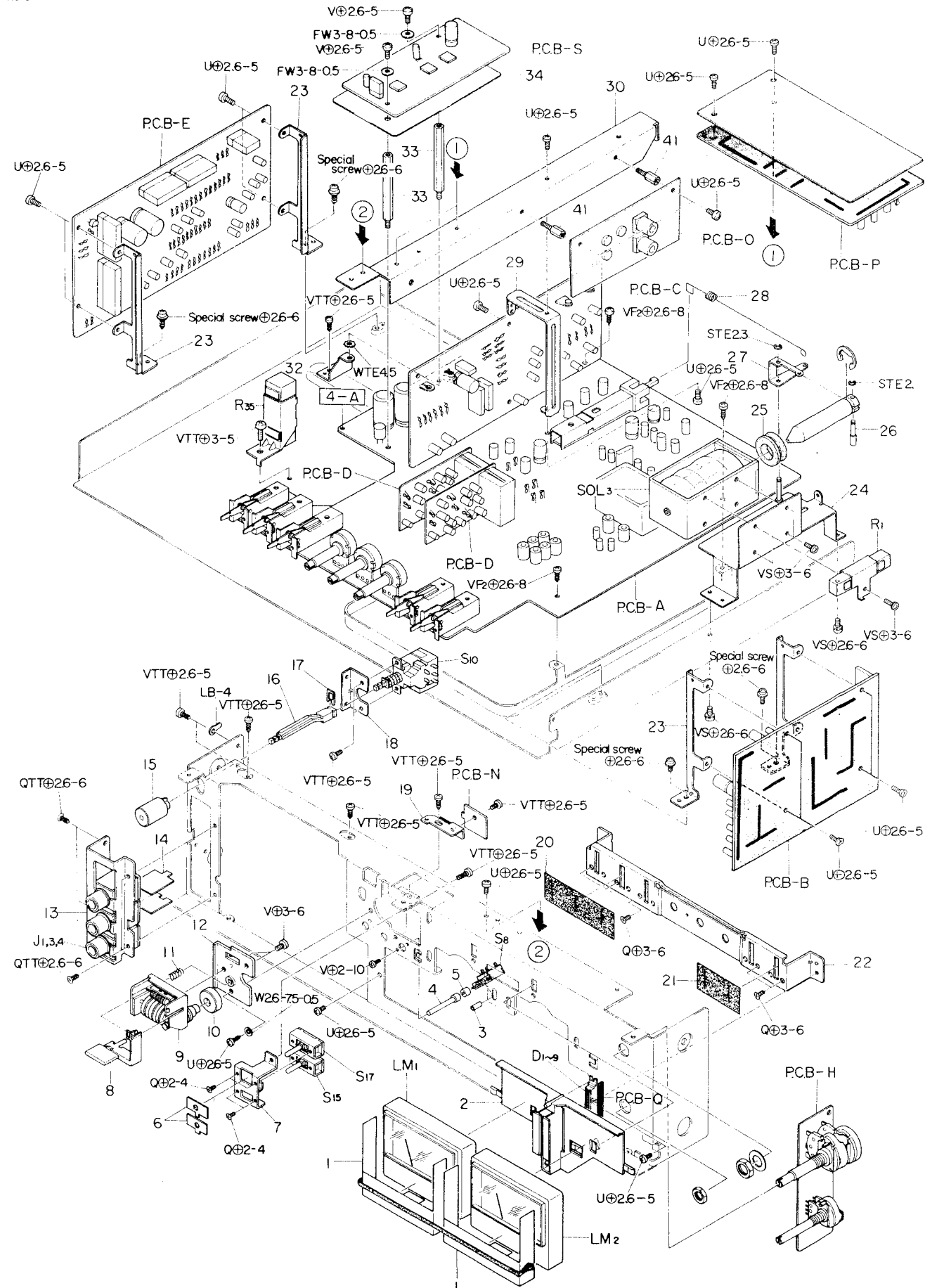
Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1-1	82-307-025-01		Front panel A	*	1
1-2	82-304-053-01		Cover, Bias	AD-6900	1
1-3	82-304-026-01		Window, Meter	AD-6900	1
1-4	82-307-227-01		Guide, Push button	*	1
1-5	82-304-061-01		Window, Counter	AD-6900	1
1-6	82-304-051-01		Cover, Eject	AD-6900	1
1-7	82-328-026-01		Caution label, Timer	*	1
1-8	82-307-022-01		Front panel Bass'y	*	1
1-9	82-304-008-01		Front panel M	AD-6900	1
1-10	82-304-245-01		Nut, 3-9	AD-6900	2
1-11a	82-307-030-01		Base, Front panel (H,E,K,G model only)	*	1
1-11b	82-307-019-01		Base, Front panel (C,U model only)	*	1
1-12	82-478-012-01		Ring, Power button	AA-8700	1
1-13	82-304-653-01		Switch board ass'y	AD-6900	1
1-14	82-304-087-01		Push-key, REC MUTE	AD-6900	1
1-15	82-304-085-01		Push-key, PAUSE	AD-6900	1
1-16	82-304-086-01		Push-key, STOP	AD-6900	1
1-17	82-304-084-01		Push-key, FF	AD-6900	2
1-18	82-304-083-01		Push-key, PLAY	AD-6900	1
1-19	82-304-082-01		Push-key, REC	AD-6900	1
1-20	09-047-154-01		Cassett lid ass'y	*	1
	82-307-009-01		Cassette lid ass'y	*	1
	82-304-043-01		Window, Cassette	AD-6900	1
1-21	82-307-011-01		Knob C ass'y	*	3
1-22	82-304-062-01		Knob, Eject key	AD-6900	1
1-23	82-397-039-01		Ring, Reel platform	AD-6550	2
1-24	82-397-290-01		Ring, Adhesive paper	AD-6550	2
1-25	82-304-065-01		Cassette plate	AD-6900	1
1-26	82-304-044-01		Guide, Light	AD-6900	1
1-27	82-304-066-01		S cushion, Lid	AD-6900	2
1-28	82-304-049-01		Blinder	AD-6900	1
1-29	82-307-213-01		Chassis, Front	*	1
1-30	82-304-302-01		G cushion spacer	AD-6900	5
1-31	82-397-245-01		Himeron cloth, Cabinet	AD-6550	1
1-32	82-307-007-01		Steel cabinet	*	1
1-33	82-380-439-01		Spacer, Back panel	AD-6500	1
1-34	82-307-228-01		Amp. chassis	*	1
1-35	82-304-203-01		Back cover	AD-6900	1
1-36	87-085-161-01		Foot	*	4
1-37	82-307-235-01		Nut	*	1
1-38	82-304-032-01		Knob A ass'y	AD-6900	1
1-39	82-304-034-01		Knob B ass'y	AD-6900	1
1-40	82-307-013-01		Knob D ass'y	*	1
1-41	82-304-030-01		Knob, Selector	AD-6900	1
1-42	87-052-014-01		Side panel L ass'y (U model only)	*	1
1-43	87-052-016-01		Side panel R ass'y (U model only)	*	1
1-44	82-533-229-01		Cushion (U model only)	TPR-920	1
1-45	82-307-024-01		Pipe A	*	1
1-46	82-307-026-01		Guide, Pipe	*	2
1-47	82-307-234-01		G cushion	*	1

EXPLODED VIEW-2



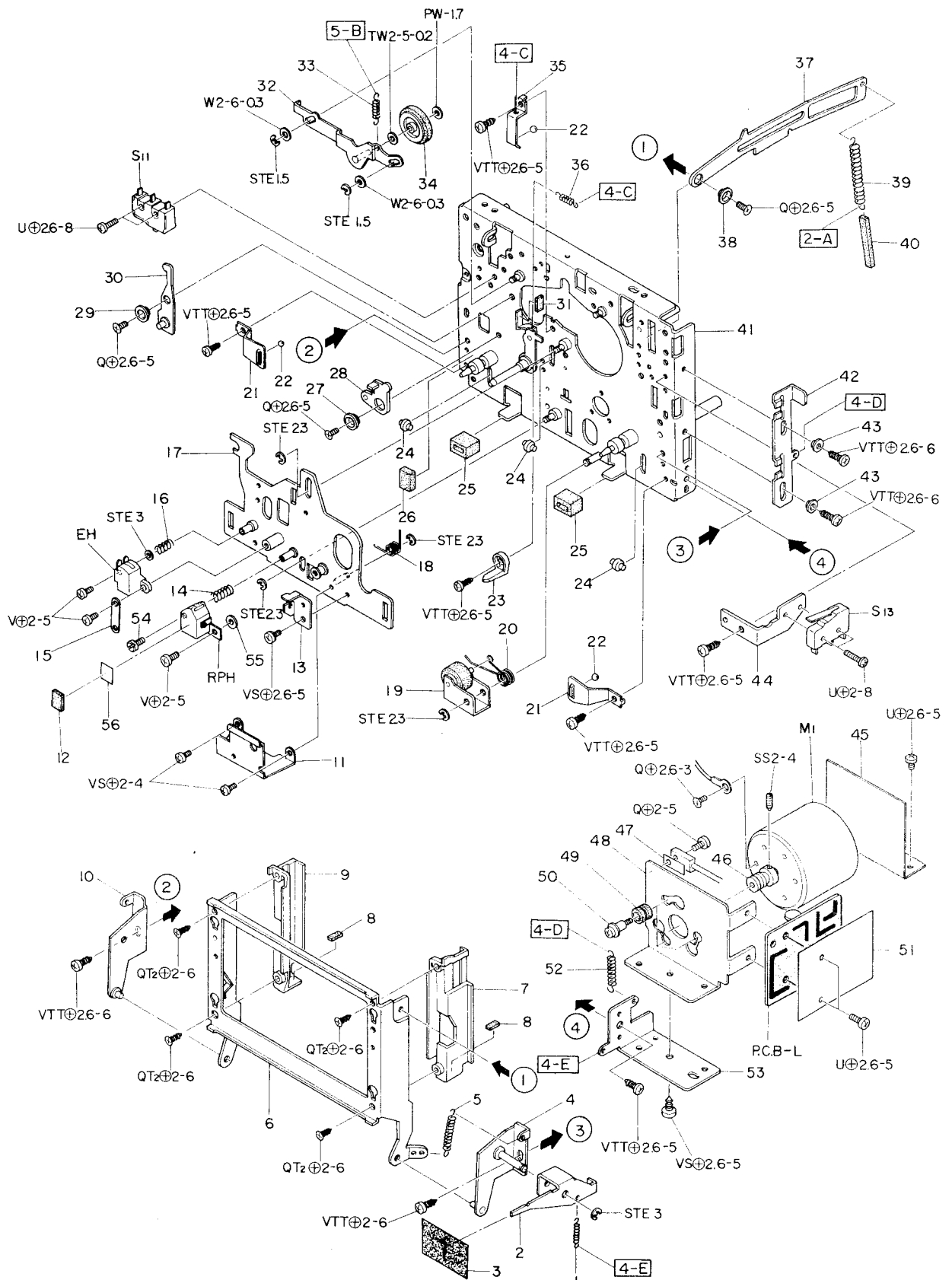
Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
2-1	82-304-735-01		Shield plate, Power transformer	AD-6900	1
2-2	82-304-302-01		G cushion spacer	AD-6900	2
2-3a	82-307-031-01		Back panel (H model only)	*	1
2-3b	82-307-029-01		Back panel (C,U model only)	*	1
2-3c	82-307-032-01		Back panel (E model only)	*	1
2-3d	82-307-033-01		Back panel (K model only)	*	1
2-3e	82-307-034-01		Back panel (G model only)	*	1
2-4a	82-307-035-01		Name plate, Spec. (H model only)	*	1
2-4b	82-307-036-01		Name plate, Spec. (C model only)	*	1
2-4c	82-307-021-01		Name plate, Spec. (U model only)	*	1
2-4d	82-307-037-01		Name plate, Spec. (E model only)	*	1
2-4e	82-307-038-01		Name plate, Spec. (K model only)	*	1
2-4f	82-307-039-01		Name plate, Spec. (G model only)	*	1
2-5	87-085-101-01		Cord bushing (H,C,U,G model only)		1
2-6a	87-034-826-01		AC power cord (H model only)		1
2-6b	87-034-876-01		AC power cord (C model only)		1
2-6c	87-034-874-01		AC power cord (U model only)		1
2-6d	87-034-877-01		AC power cord (E model only)		1
2-6e	87-034-872-01		AC power cord (K model only)		1
2-6f	87-034-878-01		AC power cord (G model only)		1
2-7	87-085-102-01		Nylon rivet		1
					H,C,U:6 E:12 K,G:10
2-8	82-386-629-01		Shield plate, Jack	AD-1250	1
2-9	82-387-273-01		Holder, Jack	AD-6800	1
2-10	87-033-088-01		Earth terminal		1
2-11	82-397-244-01		Holder, AC power cord (E,K model only)	AD-6550	1
2-12	87-085-095-01		Holder B, AC power cord (E,K model only)		1
2-13	87-085-094-01		Holder A, AC power cord (E,K model only)		1
2-14	87-056-008-01		Label, AC power cord (K model only)		1
2-15	87-056-014-01		Tag, Main voltage (K model only)		1
2-16	82-307-028-01		Sheet, Blind	*	1
2-17	82-304-326-01		Shield case, Fuse (C,U,E,K,G model only)	AD-6900	1
2-18	82-304-325-01		Holder, Circuit board I (C,U,E,K,G model only)	AD-6900	4
2-19	82-488-234-01		Holder, Main voltage (H model only)	AX-7400	1
2-20	82-304-749-01		Insulation plate, V selector (E,K,G model only)	AD-6900	1
2-21	87-064-086-01		Holder, Circuit board		1

EXPLODED VIEW-3



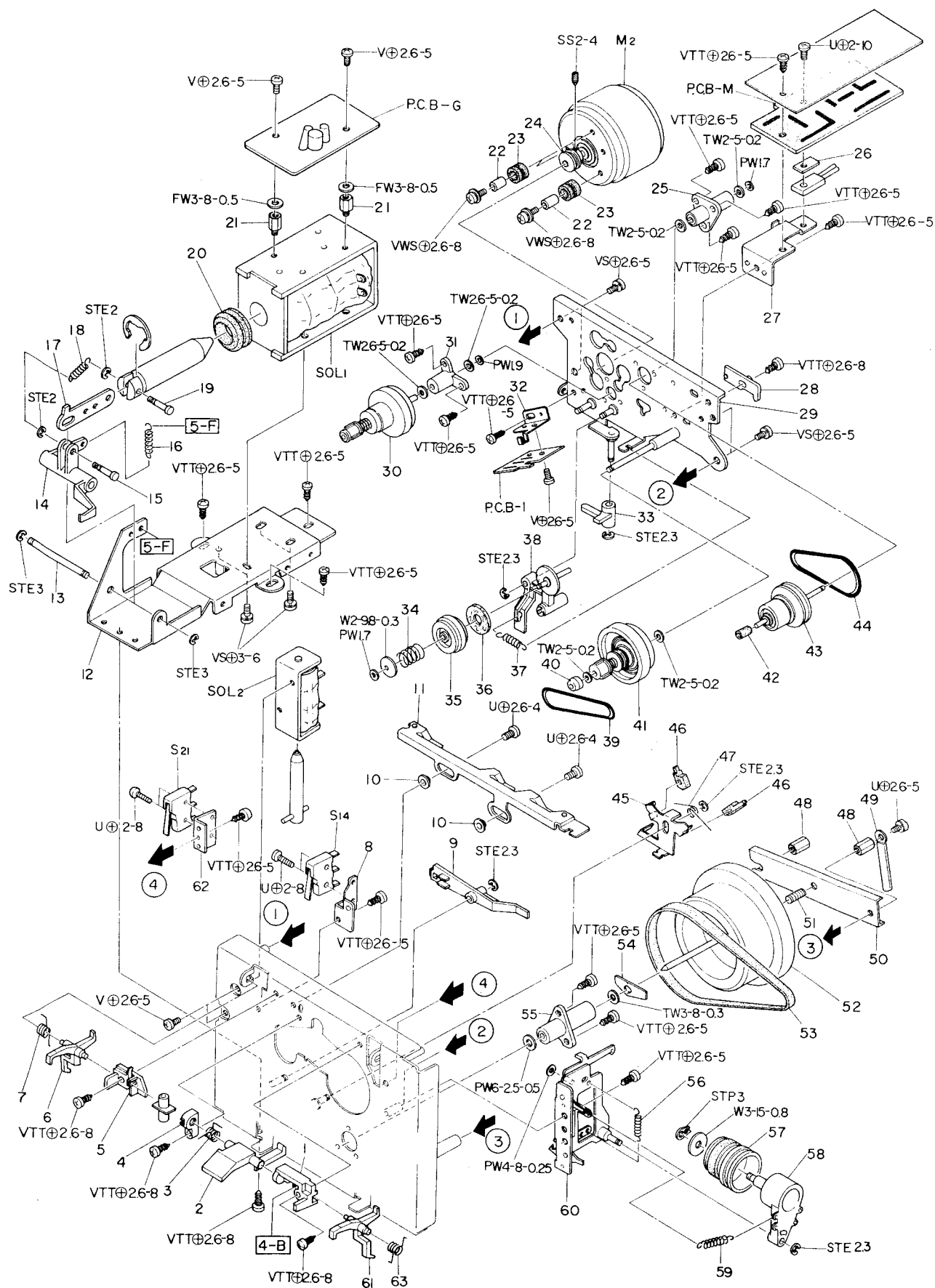
Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty	
3-1	82-307-233-01		Meter cover sheet	*	2	
3-2	82-307-027-01		Frame, LED	*	1	
3-3	87-085-117-01		Bushing		2	
3-4	82-307-016-01		Push-button	*	1	
3-5	82-307-017-01		Collar, Push-button	*	1	
3-6	82-304-048-01		Selector cover	AD-6900	2	
3-7	82-304-205-01		Switch holder B	AD-6900	1	
3-8	82-304-027-01		Reset button	AD-6900	1	
3-9	87-040-100-01		Counter		1	
3-10	82-379-617-01		Ring magnet	AD-6550	1	
3-11	82-304-303-01		Spring, Reset	AD-6900	1	
3-12	82-304-206-01		Holder, Counter	AD-6900	1	
3-13	82-307-644-01		Jack plate ass'y	*	1	
3-14	82-304-647-01		Jack shield plate ass'y	AD-6900	1	
3-15	82-399-025-01		AC switch button ass'y	AD-6400	1	
3-16	82-304-210-01		Rod, Power	AD-6900	1	
3-17	82-385-383-01		Rod, Stopper	AD-6300	1	
3-18	82-304-258-01		Holder, Power	AD-6900	1	
3-19	82-397-269-01		Holder, Hall IC	AD-6550	1	
3-20	82-304-273-01		Himeron cloth, Selector A	AD-6900	1	
3-21	82-304-274-01		Himeron cloth, Selector B	AD-6900	1	
3-22	82-304-204-11		Switch holder A	AD-6900	1	
3-23	82-304-207-01		Holder A, Circuit board	AD-6900	4	
3-24	82-307-214-01		Holder, REC solenoid ass'y	*	1	
3-25	82-304-283-01		G cushion, Solenoid	AD-6900	1	
3-26	82-307-204-01		Shaft, REC solenoid	*	1	
3-27	82-307-203-01		REC lever	*	1	
3-28	82-307-206-01		E spring, REC lever	*	1	
3-29	82-304-262-01		Holder D, Circuit board	AD-6900	1	
3-30	82-307-232-01		Holder C, Circuit board	*	1	
3-31	82-307-229-01		Holder A, Circuit board	*	2	
3-32	82-304-306-01		Holder F, Circuit board	AD-6900	1	
3-33	82-307-236-01		Holder B, Circuit board	*	2	
3-34	82-307-654-01		Shield sheet, Remote control	*	1	

EXPLODED VIEW-4



Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty	
4-1	82-304-426-01		E spring, Eject lever	AD-6900	1	
4-2	82-304-236-01		Lever, Eject key	AD-6900	1	
4-3	82-304-275-01		Himeron cloth, Eject key	AD-6900	1	
4-4	82-304-205-01		Holder, Cassette box R ass'y	AD-6900	1	
4-5	82-304-252-01		E spring, Lid	AD-6900	1	
4-6	82-304-212-01		Cassette box ass'y	AD-6900	1	
4-7	82-304-046-01		Holder R, Cassette	AD-6900	1	
4-8	82-304-284-01		G cushion, Cassette	AD-6900	1	
4-9	82-304-047-01		Holder L, Cassette	AD-6900	1	
4-10	82-304-219-01		Holder, Cassette box L ass'y	AD-6900	1	
4-11	82-307-226-01		Shield plate	*	1	
4-12	82-304-327-01		M cushion, shield plate	AD-6900	1	
4-13	82-303-294-01		T spring, Holder		1	
4-14	82-392-347-01		C spring, Head	AD-6550	1	
4-15	82-365-280-01		Holder, Wire		1	
4-16	82-307-212-01		C spring, EH	*	1	
4-17	82-307-217-01		Actuating chassis ass'y	*	1	
4-18	82-303-315-01		T spring, Actuating chassis		1	
4-19	82-303-260-01		Pinch roller ass'y		1	
4-20	82-307-222-01		T spring, Pinch lever	*	1	
4-21	82-303-299-01		P spring, Actuating B		2	
4-22	82-215-341-01		Steel ball		3	
4-23	82-303-290-01		Guide, Cassette		1	
4-24	82-303-302-01		Actuating roller		3	
4-25	82-303-312-01		G cushion, Actuating		2	
4-26	82-303-367-01		G cushion, Actuating lock		1	
4-27	82-303-295-01		Fringe collar, Actuating lock		1	
4-28	82-303-288-01		Lever, Actuating lock		1	
4-29	82-303-303-01		Fringe collar, Idle lever		1	
4-30	82-303-337-01		Lever, Play idler B ass'y		1	
4-31	82-303-382-01		Felt, Sub brake		1	
4-32	82-303-342-01		Lever, Play idler ass'y		1	
4-33	82-303-325-01		E spring, Play idler		1	
4-34	82-303-274-01		Play idler ass'y		1	
4-35	82-303-298-01		P spring, Actuating A		1	
4-36	82-303-326-01		E spring, Back tension		1	
4-37	82-304-239-01		Lock plate, Lid	AD-6900	1	
4-38	82-304-287-01		Fringe collar, Lid	AD-6900	1	
4-39	82-304-318-01		T spring, Lock plate	AD-6900	1	
4-40	82-304-323-01		S cushion	AD-6900	1	
4-41	82-307-216-01		Mechanism chassis ass'y	*	1	
4-42	82-304-237-01		Slide plate, Eject	AD-6900	1	
4-43	82-304-241-01		Fringe collar, Eject	AD-6900	2	
4-44	82-304-235-01		Holder, Lid switch	AD-6900	1	
4-45	82-304-736-01		Shield plate, Motor	AD-6900	1	
4-46	82-303-387-01		Motor pulley, Flywheel B		1	
4-47	82-304-701-01		Spacer, Insulation	AD-6900	1	
4-48	82-304-256-01		Holder A, Motor	AD-6900	1	
4-49	87-087-029-01		Rubber cushion		3	
4-50	87-081-483-01		Motor screw M2.6		3	
4-51	82-307-635-01		Shield sheet, Motor	*	1	
4-52	82-304-265-01		E spring, Eject	AD-6900	1	
4-53	82-304-257-01		Holder, Motor B	AD-6900	1	
4-54	82-439-373-01		Shaft, REC/Pb head adjuster	TPR-300	1	
4-55	82-392-354-01		G cushion, Head	AD-6550	1	
4-56	87-057-576-01		Label, Head		1	

EXPLODED VIEW-5



Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty	
5-1	82-303-285-01		Guide, Cassette R		1	
5-2	82-303-347-01		Lever, Cassette holder		1	
5-3	82-303-355-01		T spring, Cassette holder		1	
5-4	82-303-348-01		Holder, Cassette case		1	
5-5	82-303-289-01		Guide, Cassette L		1	
5-6	82-303-346-01		REC blocking lever		1	
5-7	82-303-354-01		T spring, REC blocking		1	
5-8	82-303-350-01		REC blocking holder		1	
5-9	82-303-286-01		Lever, Brake		1	
5-10	82-304-286-01		Collar B, Frange	AD-6900	2	
5-11	82-304-238-01		Slide lever, Cassette holder	AD-6900	1	
5-12	82-304-233-01		Holder, Plunger	AD-6900	1	
5-13	82-304-244-01		Shaft, Play lever	AD-6900	1	
5-14	82-304-232-01		Play lever	AD-6900	1	
5-15	82-304-243-01		Shaft B, Plunger	AD-6900	1	
5-16	82-304-248-01		E spring, Plunger	AD-6900	1	
5-17	82-304-234-01		Slide plate, PLAY	AD-6900	1	
5-18	82-304-249-01		E spring, Actuating	AD-6900	1	
5-19	82-304-242-01		Shaft A, Plunger	AD-6900	1	
5-20	82-304-283-01		G cushion, Plunger	AD-6900	1	
5-21	82-304-307-01		Brass post, Circuit board	AD-6900	2	
5-22	87-085-135-01		Bushing		3	
5-23	87-087-029-01		Rubber cushion		3	
5-24	82-303-300-01		Motor pulley, FR		1	
5-25	82-303-340-01		Shaft bearing ass'y		1	
5-26	82-304-701-01		Spacer, Insulation	AD-6900	1	
5-27	82-304-259-01		Holder, Motor circuit board	AD-6900	1	
5-28	82-304-260-01		Guide, Lock plate	AD-6900	1	
5-29	82-303-233-01		Mechanism chassis sub ass'y		1	
5-30	82-307-207-01		Supply reel platform	*	1	
5-31	82-303-396-01		Shaft bearing B ass'y		1	
5-32	82-307-208-01		Holder, SDME	*	1	
5-33	82-303-292-01		FR eject lever		1	
5-34	82-303-322-01		C spring, FR idler		1	
5-35	82-303-271-01		Idler pulley FR ass'y		1	
5-36	82-303-335-01		Felt		1	
5-37	82-303-353-01		E spring, FR lever		1	
5-38	82-303-277-01		FR lever ass'y		1	
5-39	82-304-247-01		Rubber belt, Counter	AD-6900	1	
5-40	82-392-352-01		Cap, Take-up reel platform	AD-6550	1	
5-41	82-303-249-01		Take-up reel platform ass'y		1	
5-42	82-303-309-01		Driver rubber		1	
5-43	82-303-330-01		Slip pulley ass'y		1	
5-44	82-303-385-01		Rubber belt, FRB		1	
5-45	82-303-297-01		Brake slide plate		1	
5-46	82-439-426-01		Brake shoe A	TPR-300	2	
5-47	82-303-318-01		T spring, Brake		1	
5-48	82-303-314-01		Nut		2	
5-49	87-038-039-01		Wire binder		1	
5-50	82-303-291-01		Flywheel plate		1	
5-51	82-385-311-01		Thrust screw	AD-6300	1	
5-52	82-303-246-01		Flywheel ass'y		1	
5-53	82-303-310-01		Rubber belt, Flywheel		1	
5-54	82-303-224-01		P spring, Flywheel		1	
5-55	82-392-256-01		Shaft bearing ass'y	AD-6550	1	
5-56	82-304-251-01		E spring, Lock lever	AD-6900	1	
5-57	82-397-265-01		Drum oil ass'y	AD-6550	1	
5-58	82-397-271-01		Idler oil ass'y	AD-6550	1	
5-59	82-397-302-01		Spring oil	AD-6550	1	
5-60	82-304-221-01		Lock lever ass'y	AD-6900	1	
5-61	82-303-349-01		Lever CrO ₂		1	
5-62	82-303-351-01		Holder, CrO ₂		1	
5-63	82-303-356-01		T spring, CrO ₂		1	

Symbol No.	Part No.	Description
≪ REC/PB CIRCUIT BOARD SECTION ≫		
PCB-A	82-307-604-51	REC/PB circuit board
IC1,2	82-304-682-01	IC, TA7220P
Q1,2	89-107-505-01	Transistor, 2SA750 (E)
Q3,4	89-314-005-01	Transistor, 2SC1400 (E)
Q5,6,9,10, 13,14	89-312-222-01	Transistor, 2SC1222 (E)
Q7,8,11,12 19,20,25,26	89-402-275-01	Transistor, 2SD227 (V)
Q15,16,17,18 23,31,32,33 34,35,36,37 38,39,40	89-309-455-61	Transistor, 2SC945L (P,Q)
Q21	89-404-143-01	Transistor, 2SD414 (Q)
Q22	89-311-734-01	Transistor, 2SC1173 (Y)
Q24	89-107-335-61	Transistor, 2SA733 (K,P)
Q27	89-318-154-51	Transistor, 2SC1815 (Y)
Q28	89-316-347-01	Transistor, 2SC1634 (7)
Q29	89-405-712-01	Transistor, 2SD571 (L)
D5,12,15,16 17	87-027-097-01	Diode, 1S1555
D4	87-027-140-01	Zener diode, 05Z-6.2
D6	82-372-631-01	Zener diode, XZ-315
D7,8,11,13	87-027-163-01	Encapsulated diode, 1B4B1
D9,10	87-027-199-01	Zener diode, 05Z-15U
D14	87-027-436-01	Zener diode, HZ11B1
L1,2	82-306-642-01	Coil, 6.8 mH
L3,4,5,6	82-306-641-01	Coil, 4.7 mH
L7,8	82-304-701-01	Coil, 22 mH
OSC UNIT	82-307-652-01	OSC unit
TC1,2	85-708-604-21	Trimmer, 30pF
VR5,6,7	82-307-602-01	Volume, 50kΩ-K (BIAS ADJUST)
S1	82-307-606-01	Slide switch (REC/PB)
S2,6	82-304-627-01	Lever switch (INPUT SELECTOR, METER)
S3,4,5	82-304-628-01	Lever switch (DOLBY-NR, BIAS, EQ)
SFR1,2,3,4,5	87-021-363-01	Semi-fixed resistor, 47kΩ-B
SFR11,12,13 14	87-021-366-01	Semi-fixed resistor, 10kΩ-B
SFR6,7,9,10	87-021-422-01	Semi-fixed resistor, 22kΩ-B
< Resistors >		
R29,30	82-379-675-01	7.32kΩ 1/4W ±2%
△ R183,184	87-029-017-01	10Ω 1/4W Fuse resistor
△ R181	87-029-016-01	22Ω 1/2W Fuse resistor
< Capacitors >		
C9,10	87-015-242-01	2.2μF 50V Electrolytic LL
C27,28	87-015-246-01	4.7μF 25V Electrolytic LL
C13,14	87-014-053-01	680pF PP
C73,74	87-968-410-01	100pF 500V Dipped mica

2

Symbol No.	Part No.	Description
D5	87-027-416-01	Zener diode HZ3C2
D10	87-026-069-01	Zener diode, WZ-052
D13,14	87-027-365-01	Diode, S5277B
D15	87-027-140-01	Zener diode, 05Z-6.2U
D17	87-027-171-01	Zener diode, RD2.7E
RY1,S18	82-304-651-01	Relay, L
RY2,S19	84-196-630-01	Relay, BR211AD
X1	87-008-186-01	Ceramic, CSB400RI
PIN-7	87-032-904-01	Pin, 4P
PIN-6,22	87-032-905-01	Pin, 5P
PIN-5	87-032-906-01	Pin, 6P
PIN-9	87-032-908-01	Pin, 8P
PIN-8	87-032-909-01	Pin, 9P
PIN-4	87-032-910-01	Pin, 10P
PIN-10	87-032-912-01	Pin, 12P
< Resistor >		
R51	87-029-015-01	10Ω 1/4W Fuse resistor (E,K,G model only)
« TERMINAL CIRCUIT BOARD SECTION »		
PCB-G	82-304-753-01	Terminal circuit board
Q1	82-309-455-01	Transistor, 2SC945L (Q)
D1	87-027-365-01	Diode, S5277 (B)
D2	88-052-188-11	Diode, 1S188 (FM)
« VOLUME CIRCUIT BOARD SECTION »		
PCB-H	82-307-616-21	Volume circuit board
Q1,2	89-402-275-01	Transistor, 2SD227 (V)
D1	87-026-069-01	Zener diode, WZ-052
VR1,2	82-304-680-11	Volume, 20kΩ-A (RECORD LEVEL)
VR3,4	82-307-605-01	Volume, 10kΩ-A (OUTPUT LEVEL)
« DME CIRCUIT BOARD-2 SECTION »		
PCB-I	82-307-637-01	DME circuit board-2
DME	82-397-642-11	DM-101A
« REMOTE CONTROL CIRCUIT BOARD SECTION »		
PCB-J	82-307-653-11	Remote control circuit board
J9	82-307-669-01	Connector
« SWITCH CIRCUIT BOARD SECTION »		
PCB-K	82-304-740-11	Switch circuit board ass'y
D1,6	87-026-112-01	Light emitting diode, SEL-1033 (RED)
D2,3,4,5	87-026-113-01	Light emitting diode, SEL-303E (GRN)
« DME CIRCUIT BOARD-1 SECTION »		
PCB-N	82-307-655-01	DME circuit board-1
DME	82-397-642-11	DM-101A
« METAL CIRCUIT BOARD SECTION »		
PCB-O	82-304-752-01	Metal circuit board
L1,2	82-304-715-01	Coil, 3.9 mH
RY1	84-184-612-01	Relay,
SFR1,2	87-021-366-01	Semi-fixed resistor, 10kΩ-B
PIN-19	87-032-903-01	Pin, 3P
PIN-18,20	87-032-904-01	Pin, 4P
« PEAK HOLD CIRCUIT BOARD SECTION »		
PCB-P	82-307-649-11	Peak hold circuit board
IC1,2	87-027-298-01	IC, C-MOS, TC4001P-NOR
IC3	87-027-299-01	IC, C-MOS, TC4030P, EXC-OR
Q1,2,3,4	89-309-455-61	Transistor, 2SC945L (P,Q)
Q5,6,7,8	89-107-335-01	Transistor, 2SA733 (K)

Symbol No.	Part No.	Description
« PEAK LED CIRCUIT BOARD SECTION »		
PCB-Q	82-307-648-01	Peak LED circuit board
D1~9	87-027-260-01	Light emitting diode, MULTI (-15, -7, -3, 0, 2, 4, 5, 6, 7)
« JACK CIRCUIT BOARD SECTION »		
PCB-R	82-307-622-01	Jack circuit board
D2	87-027-097-01	Diode, 1S1555
RY1,S7	84-184-612-01	Reed Relay (LINE OUT MUTING)
« RX CIRCUIT BOARD SECTION »		
PCB-S	82-307-640-21	RX circuit board
IC1	87-027-355-01	IC, LF357
IC2	87-027-235-01	IC, 4558
IC3	87-027-300-01	IC,555 TIMER
Q1	89-309-455-61	Transistor, 2SC945L (P,Q)
D2	88-052-188-11	Diode, 1S188 (FM)
D3	87-027-097-01	Diode, 1S1555
PIN-21	87-032-903-01	Pin, 3P
« FUSE CIRCUIT BOARD SECTION »		
PCB-T	82-304-731-01	Fuse circuit board (C,U,E,K,G model only)
F1	87-035-117-01	Fuse, "T" 1.25A (C model only)
	87-098-165-01	Fuse caution label (C model only)
F1	87-035-298-01	Fuse, 1.25A (U model only)
	87-098-166-01	Fuse caution label (U model only)
F3,5,6	87-035-107-01	Fuse, "T" 315 mA (E,K,G model only)
	87-098-011-01	Fuse label, "T" 315 mA (E,K,G model only)
F4	87-035-063-01	Fuse, "T" 630 mA (E,K,G model only)
	87-098-014-01	Fuse label, "T" 630 mA (E,K,G model only)
F7,8	87-035-117-01	Fuse, "T" 1.25A (E,K,G model only)
	87-098-017-01	Fuse label, "T" 1.25A (E,K,G model only)
	87-033-147-01	Fuse clamp
< Capacitors >		
C1	87-019-096-01	0.01μF 250V Linecapacitor (E model only)
C1,2	87-019-096-01	0.01μF 250V Linecapacitor (K,G model only)
« VOLTAGE SELECTOR CIRCUIT BOARD SECTION » = E,K,G model		
PCB-U	82-304-730-01	Voltage selector circuit board
S22	87-031-364-01	Slide switch (VOLTAGE SELECTOR) (K,G model only)
S22-1,2	87-031-364-01	Slide switch (VOLTAGE SELECTOR) (E model only)
F1	87-035-075-01	Fuse, "T" 500 mA
	87-098-013-01	Fuse label, "T" 500 mA
F2	87-035-107-01	Fuse, "T" 315 mA (K,G model only)
	87-098-011-01	Fuse label, "T" 315 mA (K,G model only)
	87-032-744-01	Fuse clamp

Symbol No.	Part No.	Description
« VOLTAGE SELECTOR CIRCUIT BOARD SECTION » = H model only		
 PCB-V	82-304-733-11	Voltage selector circuit board
 S22	82-304-732-01	Rotary switch (VOLTAGE SELECTOR)
 F1	87-035-075-01	Fuse, "T" 500 mA
	87-098-013-01	Fuse label "T" 500 mA
	87-032-744-01	Fuse clamp
« MISCELLANEOUS »		
 T1	82-307-663-01	Power transformer (H model only)
 T1	82-307-643-01	Power transformer (C,U model only)
 T1	82-307-662-01	Power transformer (E model only)
 T1	82-307-665-01	Power transformer (K,G model only)
D1	87-027-366-01	PIN diode M133HLF AW
RPH	87-046-171-01	REC/PB head
EH	87-046-173-01	Erase head
M1,PCB-L	82-304-637-11	Main motor, DC-EG
M2,PCB-M	82-304-638-01	Sub motor, DC-EG
SOL1,3	82-304-639-01	Plunger (FWD,REC)
SOL2	82-304-640-11	Plunger (FR)
J1,3,4	82-307-644-01	Jack ass'y (PHONES, LINE IN, MIC)
J2,5,6,7,8	82-304-737-01	Pin jack, 4P W/DIN (DIN, LINE OUT, LINE IN) (H,E,K,G model only)
J5,6,7,8	82-307-623-01	Pin jack, 4P (LINE OUT, LINE IN) (C,U model only)
J11	87-032-882-01	Jack, 2.5φ (PLAYERS SYNC)
 J12	87-032-674-01	Jack (AC OUTLET) (C,U model only)
PL3	82-304-718-01	Pilot lamp 8V (CASSETTE WINDOW)
LM1	82-307-608-01	Level meter A (VU/TAPE TIME)
LM2	82-307-609-01	Level meter B (VU)
 CP1	87-019-081-01	Compound capacitor 0.033μF 120Ω (C model only)
 CP1	87-028-036-01	Compound capacitor 0.033μF 120Ω (U model only)
S8	82-307-634-01	Push switch (PEAK HOLD)
 S10	87-031-408-01	Push switch (POWER) (H,E,K,G model only)
 S10	87-031-480-01	Push switch (POWER) (C,U model only)
S11	82-304-723-01	Micro switch (PLAY DETECTION)
S13,14,21	82-304-724-01	Micro switch (CASSETTE DETECTION, ERASE PREVENTION DETECTION, CrO ₂ AUTO)
S15,17	82-304-630-01	Slide switch (TIMER, MEMORY)
S23	82-375-623-01	Slide switch (DIN OUTPUT LEVEL) (H,E,K,G model only)
 F9	87-035-107-01	Fuse, "T" 315 mA (E,K,G model only)
	87-098-011-01	Fuse, label, "T" 315 mA (E,K,G model only)
	87-033-161-01	Fuse holder, 1P

Symbol No.	Part No.	Description
	87-034-826-01	(E,K,G model only) AC power cord (H model only)
	87-034-874-01	AC power cord (C,U model only)
	87-034-877-01	AC power cord (E model only)
	87-034-872-01	AC power cord (K model only)
	87-034-878-01	AC power cord (G model only)
	87-085-101-01	Cord bushing (H,C,U,G model only)
CON-1	82-304-703-01	Connector ass'y, 3P
CON-17	82-307-661-01	Connector ass'y, 3P
CON-19	82-307-658-01	Connector ass'y, 3P
CON-21	82-307-650-11	Connector ass'y, 3P
CON-7	82-328-617-01	Connector ass'y, 4P
CON-13	82-304-668-01	Connector ass'y, 4P
CON-14	82-307-626-01	Connector ass'y, 4P
CON-18	82-307-656-01	Connector ass'y, 4P
CON-20	82-307-657-01	Connector ass'y, 4P
CON-6	82-328-613-01	Connector ass'y, 5P
CON-12	82-304-669-01	Connector ass'y, 5P
CON-22	82-307-668-01	Connector ass'y, 5P
CON-3	82-307-660-01	Connector ass'y, 6P
CON-5	82-328-619-01	Connector ass'y, 6P
CON-11	82-304-670-01	Connector ass'y, 6P
CON-16	82-307-627-01	Connector ass'y, 6P
CON-9	82-328-620-01	Connector ass'y, 8P
CON-8	82-328-609-01	Connector ass'y, 9P
CON-4	82-328-618-01	Connector ass'y, 10P
CON15	82-307-610-01	Connector ass'y, 10P
CON-10	82-328-610-01	Connector ass'y, 12P
< Resistors >		
R35	82-304-738-01	47Ω 10W ±5% Cement resistor
R1	82-307-625-01	56Ω 10W ±5% Cement resistor
< Capacitor >		
 C1	87-019-096-01	0.01μF 250V Line capacitor (H model only)

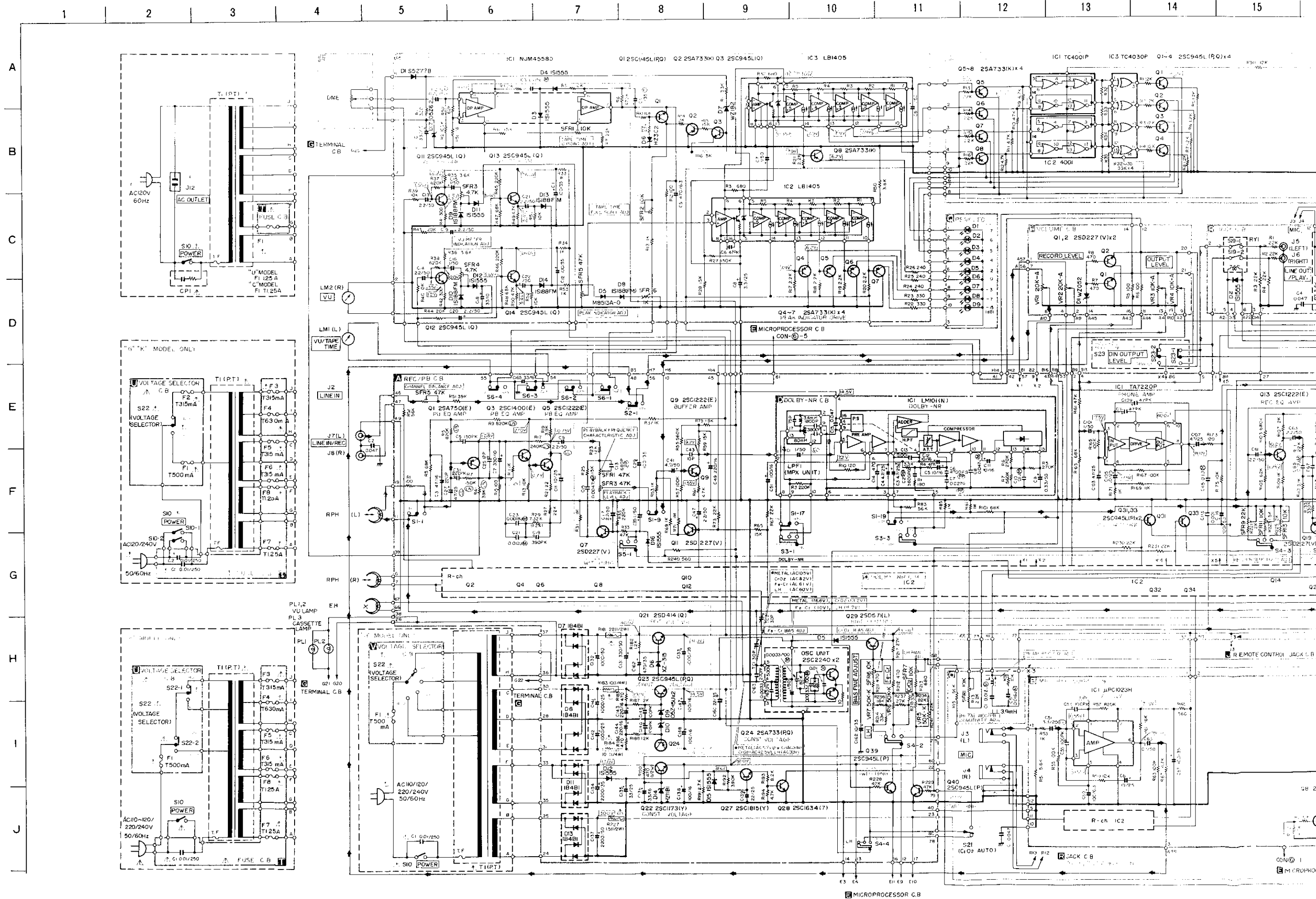
Safety component symbol

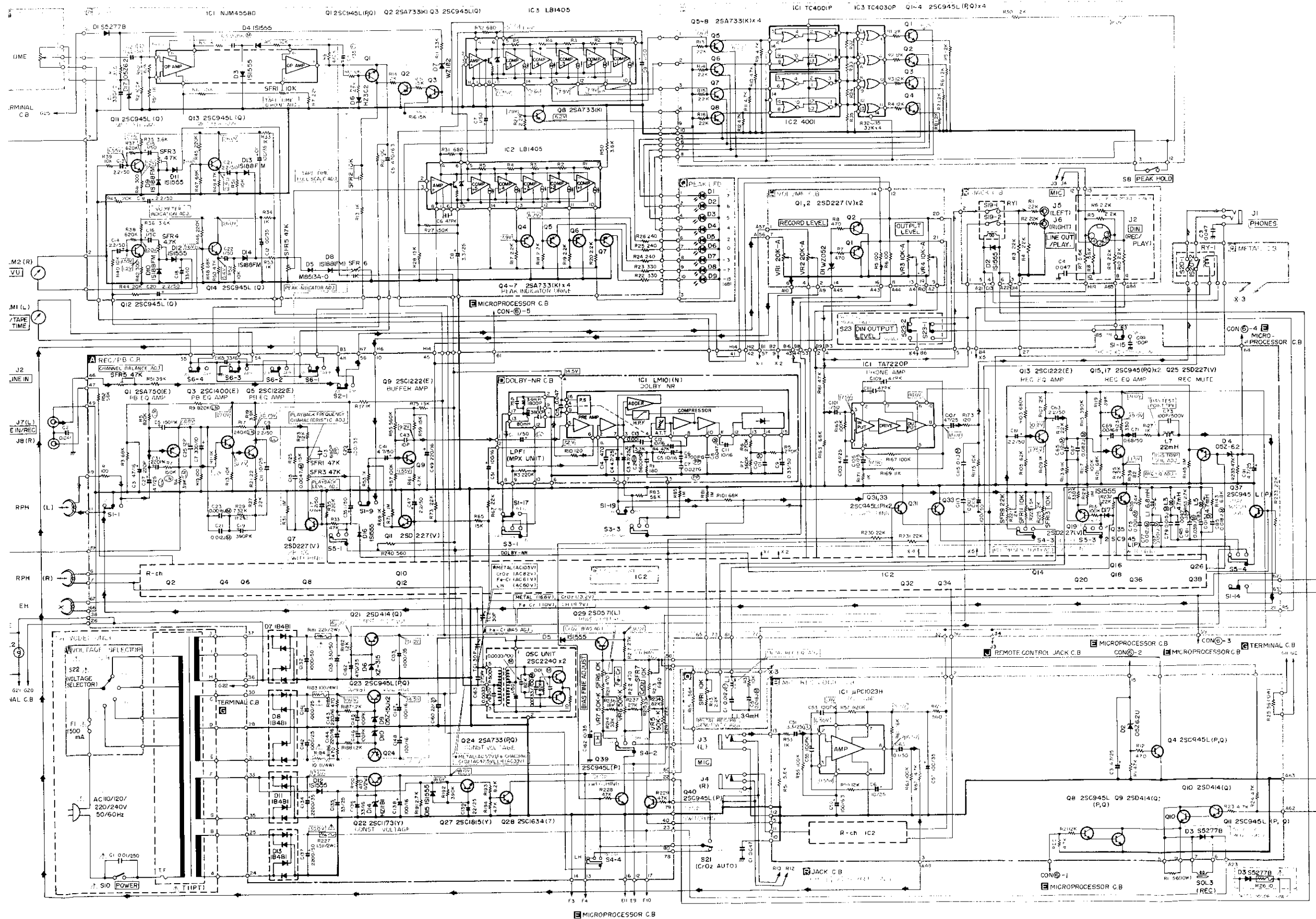
 This symbol is given to important parts which serve to maintain the safety of the product, and which are made to conform to special safety specifications. Therefore, when replacing a component with this symbol, make absolutely sure that you use a designated part.

[RC-100 REMOTE CONTROL SECTION]

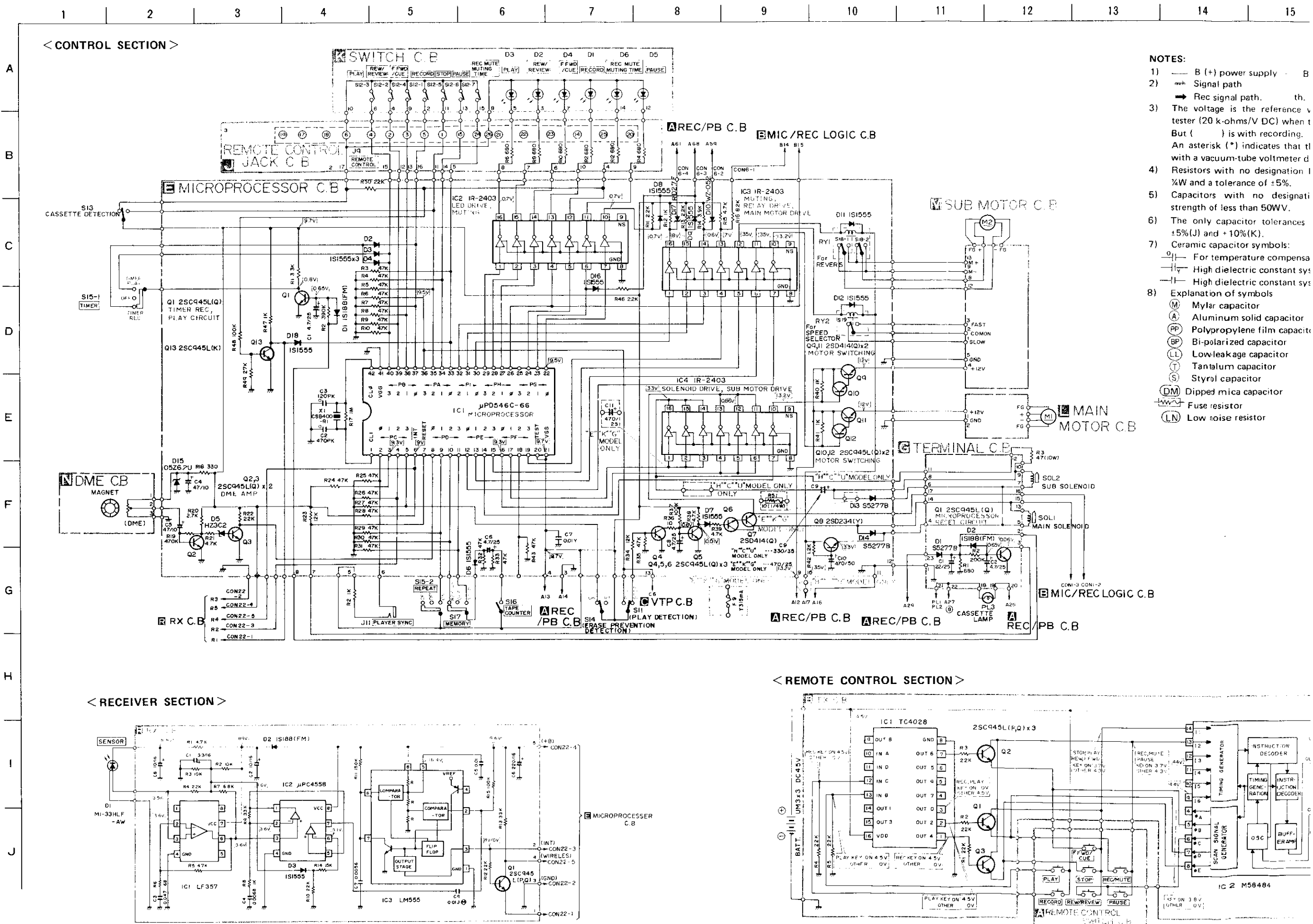
Symbol No.	Part No.	Description
« REMOTE CONTROL CIRCUIT BOARD SECTION »		
PCB-A	82-307-639-01	Remote control circuit board
« TX CIRCUIT BOARD SECTION »		
PCB-B	82-307-638-11	TX circuit board
IC1	87-027-421-01	IC, TC4028
IC2	87-027-424-01	IC, M58484
Q1~4	89-309-455-61	Transistor, 2SC945L (P,Q)
Q5	89-404-673-01	Transistor, 2SD467 (C)
D1	87-027-363-01	Light emitting diode, GL-520
D2	87-027-097-01	Diode, 1S1555
D3	87-027-356-01	Light emitting diode, GL-9P-6
X1	87-008-191-01	Ceramic, SFB-455R

SCHEMATIC DIAGRAM -1

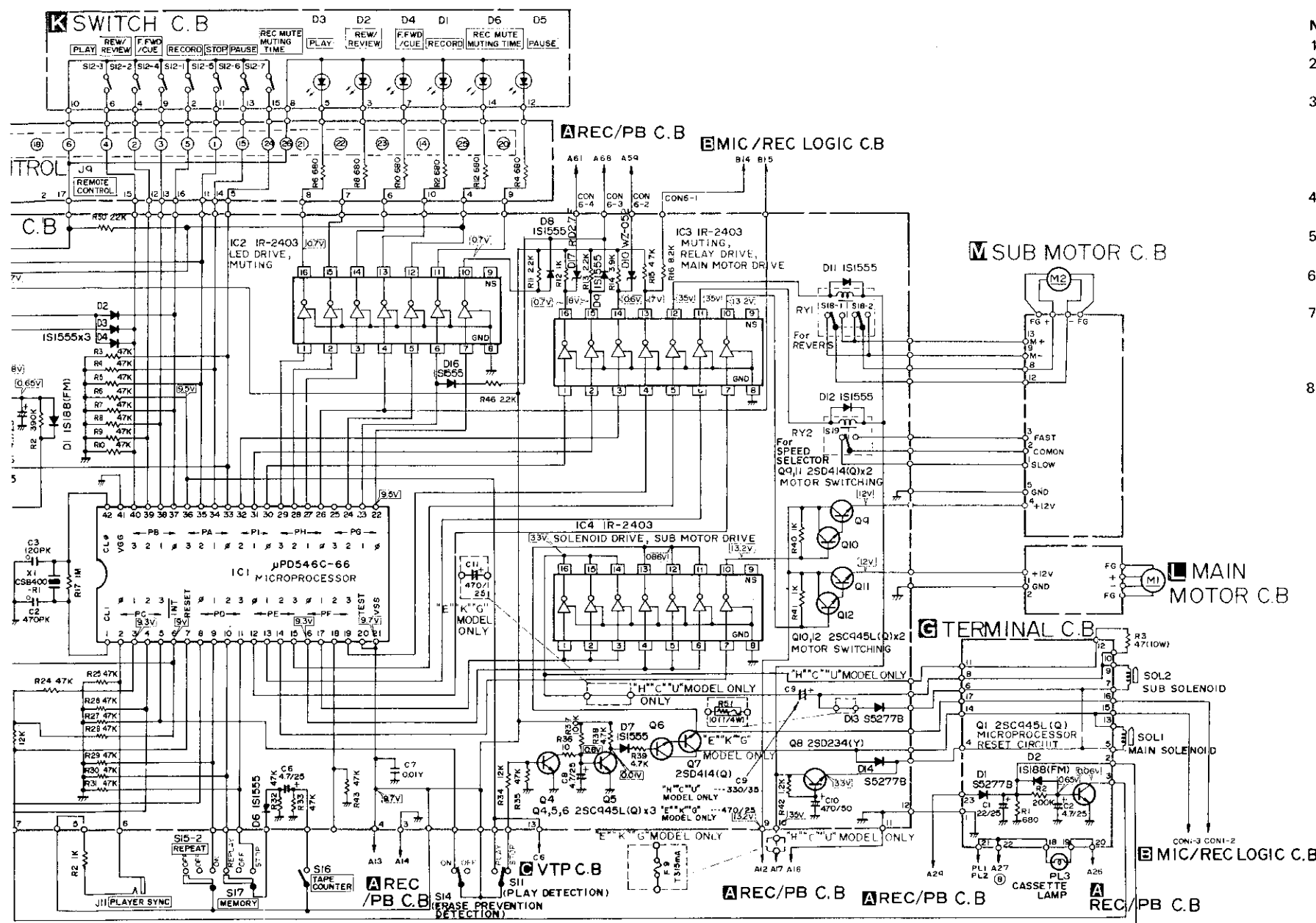




SCHEMATIC DIAGRAM-2



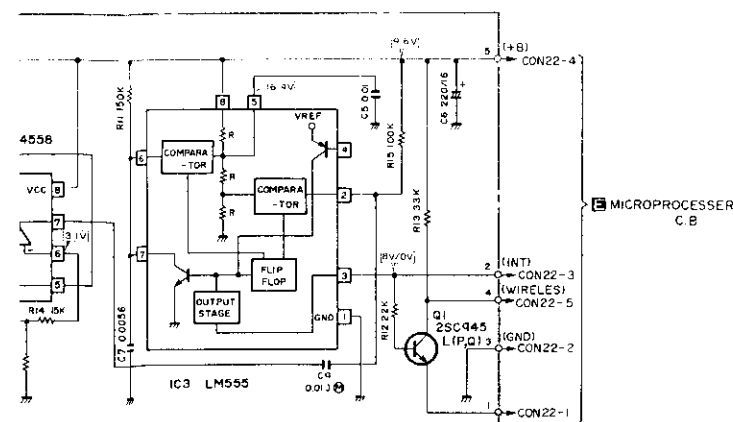
4 5 6 7 8 9 10 11 12 13 14 15 16



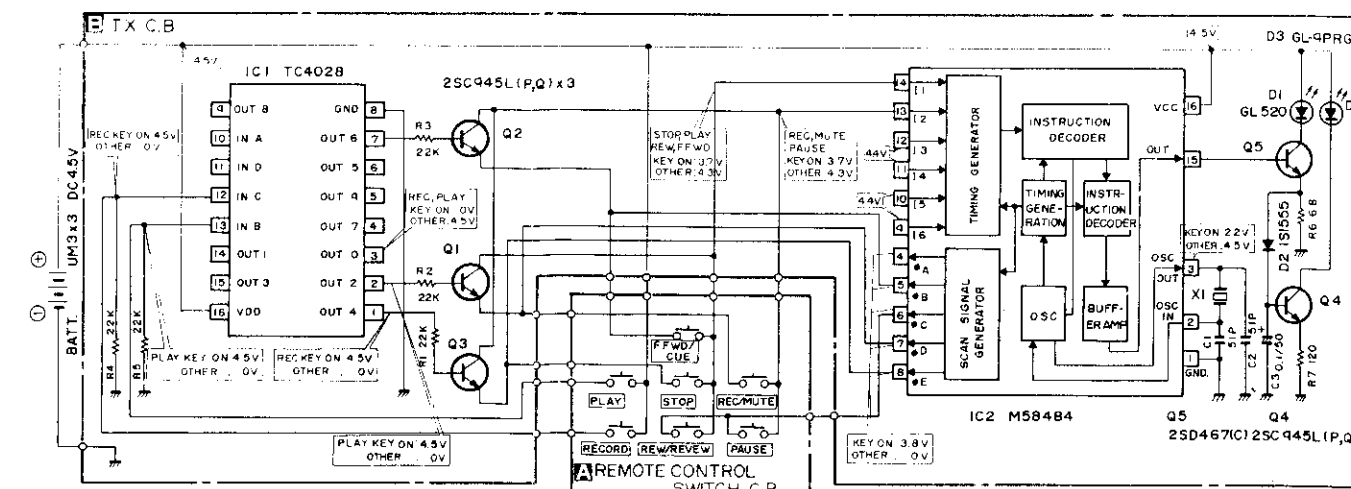
NOTES:

- 1) — B (+) power supply — B (-) power supply
- 2) → Signal path
→ Rec signal path. th.
- 3) The voltage is the reference value measured with a tester (20 k-ohms/V DC) when there are no signals. But () is with recording. recording.
An asterisk (*) indicates that the value was measured with a vacuum-tube voltmeter during recording.
- 4) Resistors with no designation have a rated power of 1/4W and a tolerance of ±5%.
- 5) Capacitors with no designation have a dielectric strength of less than 50WV.
- 6) The only capacitor tolerances indicated are ±2%(G), ±5%(J) and ±10%(K).
- 7) Ceramic capacitor symbols:
— For temperature compensation (SL)
— High dielectric constant system (YY)
— High dielectric constant system (YW, YP, YZ)
- 8) Explanation of symbols:
Ⓜ Mylar capacitor
ⓐ Aluminum solid capacitor
Ⓟ Polypropylene film capacitor
Ⓟ Bi-polar capacitor
Ⓛ Low-leakage capacitor
Ⓣ Tantalum capacitor
Ⓢ Styrol capacitor
Ⓜ Dipped mica capacitor
— Fuse resistor
Ⓛ Low noise resistor
- 9) Switches are set to the following positions.
S1-1 ~ 20 PLAY/REC (PLAY)
S2-1 ~ 4 INPUT SELECTOR (MIC)
S3-1 ~ 4 DOLBY NR (OFF)
S4-1 ~ 4 TAPE SELECTOR-BIAS (LH)
S5-1 ~ 4 TAPE SELECTOR-EQ (LH)
S6-1 ~ 4 METER (VU)
S7-1, 2 LINE OUT MUTING (OFF)
S8 PEAK HOLD
S9
S10 POWER (OFF)
S11 PLAY DETECTION (STOP)
S12-1 ~ 7 LOGIC CONTROL BUTTONS
S13 CASSETTE DETECTION (ON)
S14 ERASE PREVENTION (ON)
S15-1, 2 TIMER (PLAY)
S16 TAPE COUNTER
S17 MEMORY (STOP)
S18-1, 2 SUB MOTOR SELECTOR
S19 SUB MOTOR SPEED SELECTOR (SLOW)
S20-1 ~ 2 PHONES MUTING (OFF)
S21 CrO₂ AUTO (OFF)
S22 VOLTAGE SELECTOR
S23-1 ~ 2 DIN OUTPUT LEVEL (FIXED) (VARIABLE)

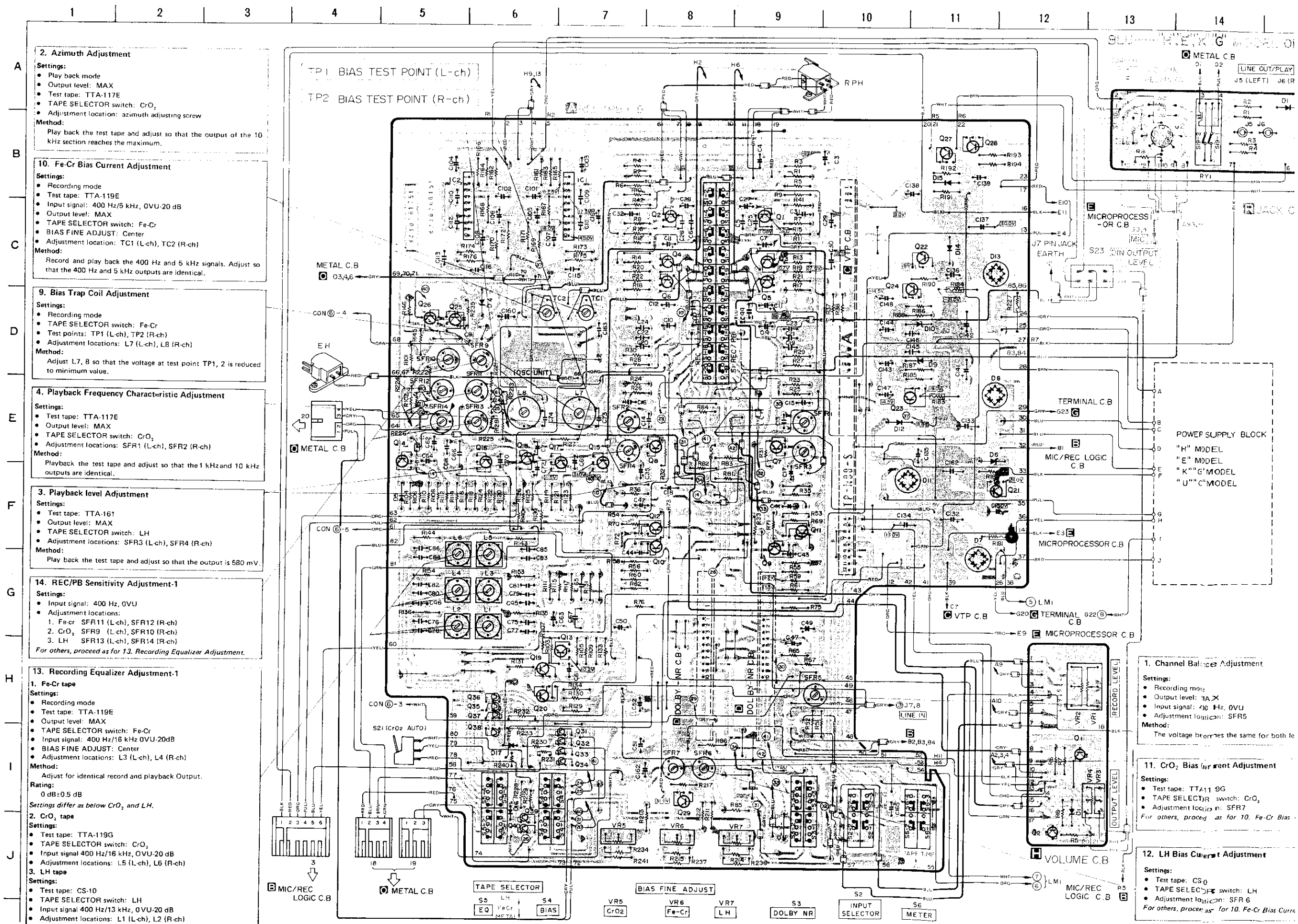
⚠ Safety component symbol
This symbol is given to important parts which serve to maintain the safety of the product, and which are made to conform to special safety specifications. Therefore, when replacing a component with this symbol, make absolutely sure that you use a designated part.
• This schematic diagram is subject to change without notice in the interests of improved performance.

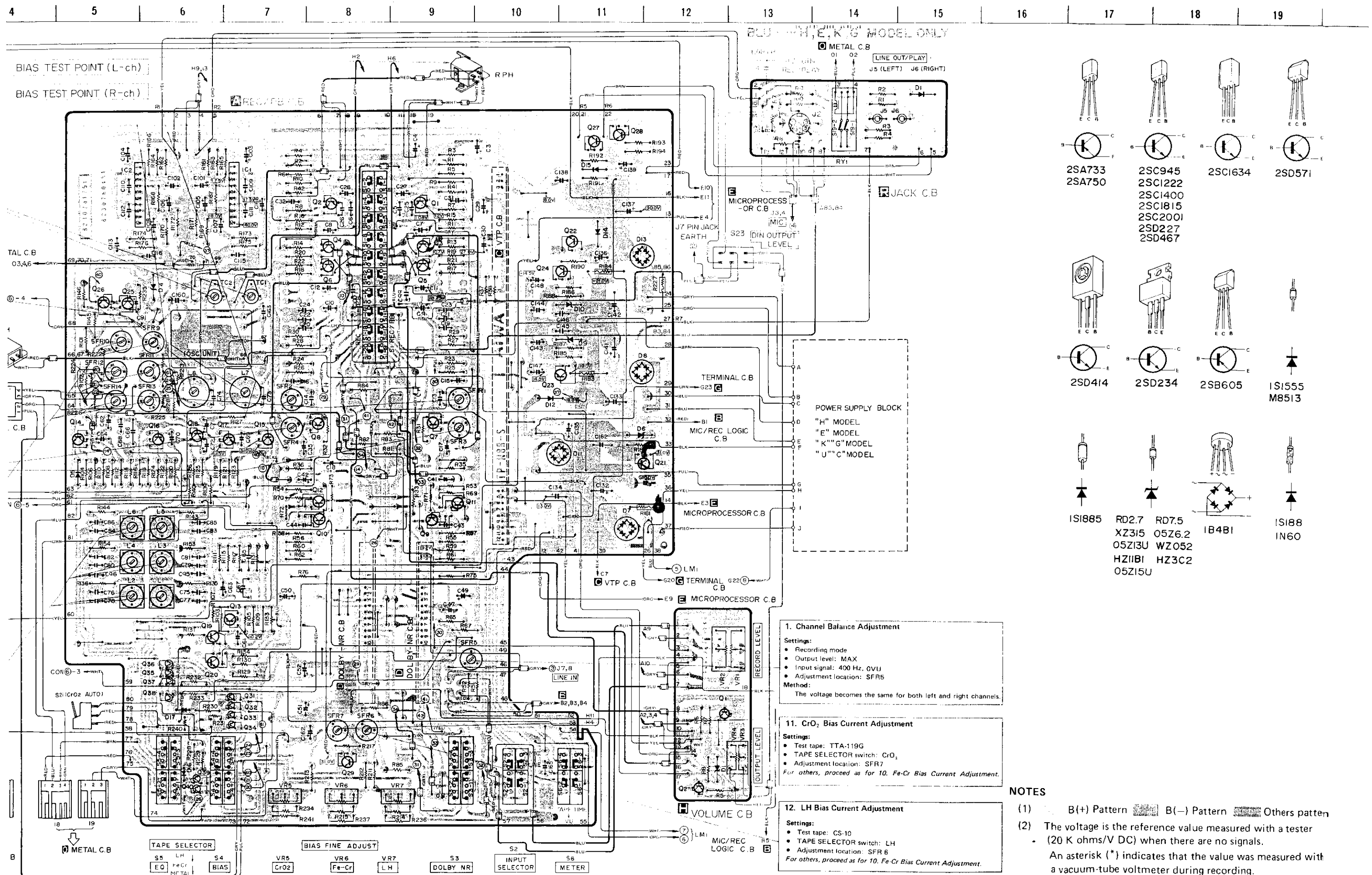


< REMOTE CONTROL SECTION >



WIRING-1





WIRING-2

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A

5. VU Meter Indication Adjustment

Settings:

- Recording mode
- Output level: MAX
- Input signal: 400 Hz, -16 dB
- Adjustment locations: SFR3 (L-ch), SFR4 (R-ch)

Method:

Adjust the RECORD LEVEL so that the output of 410 mV. Adjust so that VU meter indication is 0VU.

6. Peak Indicator Adjustment-1

Settings:

- Output level: MAX
- Input signal: 400 Hz -16 dB
- Adjustment locations: SFR5

Method:

Adjust the RECORD LEVEL so that the VU meter indication is 0VU.
Following adjust SFR5 so that the 0VU LED lights up.

7. Tape Time 0 Point Adjustment

Settings:

- TAPE SELECTOR switch: Fe-Cr
- METER: TAPE TIME
- Test tape: AIWA Fe-Cr C-60
- Adjustment location: SFR1

Method:

Run the test tape for 90 seconds beginning at the magnetic substance of the tape. (from the RPH passing point)
Then turn the tape over and adjust so that the indicator points to "0" within 30-60 seconds from that point.

8. Tape Time Full scale Adjustment

Settings:

- TAPE SELECTOR switch: Fe-Cr
- METER: TAPE TIME
- Test tape: AIWA Fe-Cr C-60
- Adjustment location: SFR2

Method:

Adjust SFR2 so that the indicator points to "Full Scale" when first starting to wind the test tape.

B

C

D

E

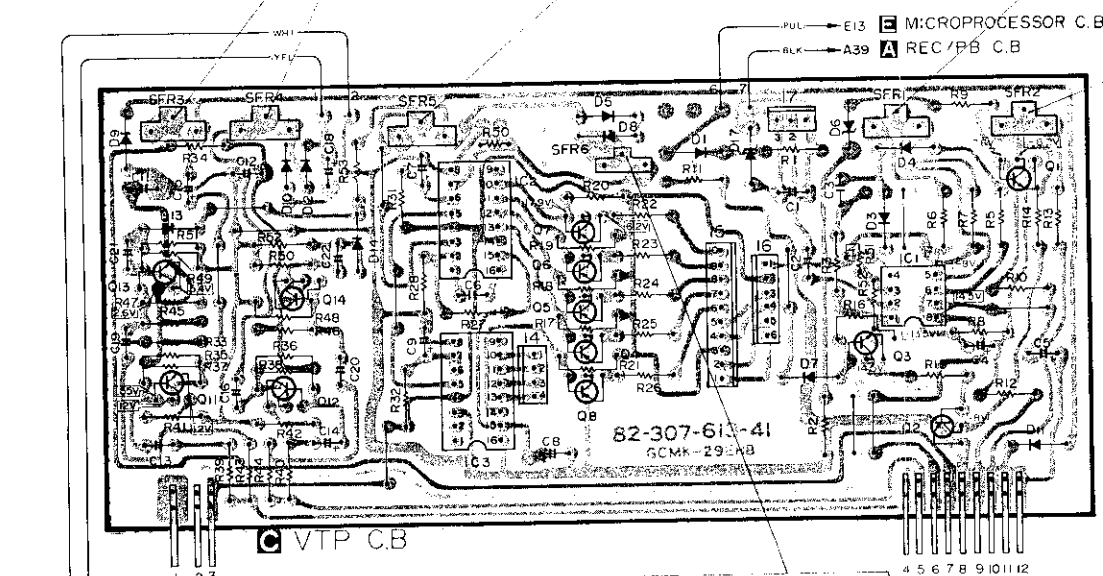
F

G

H

I

J



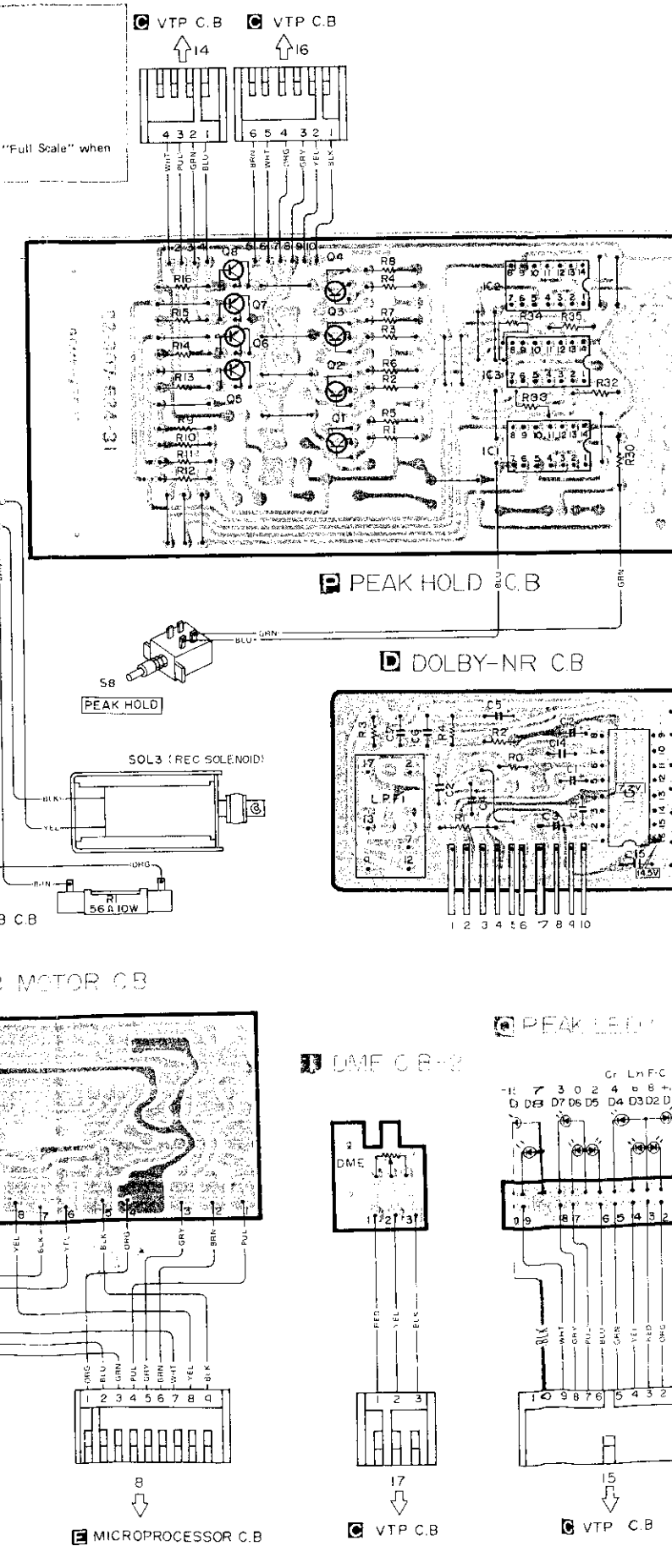
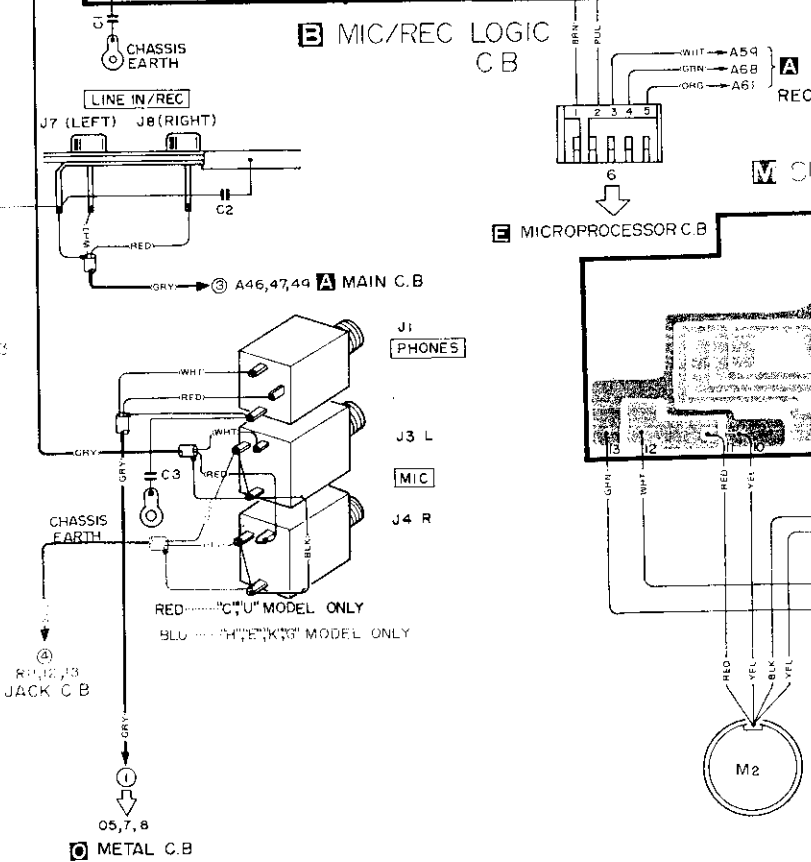
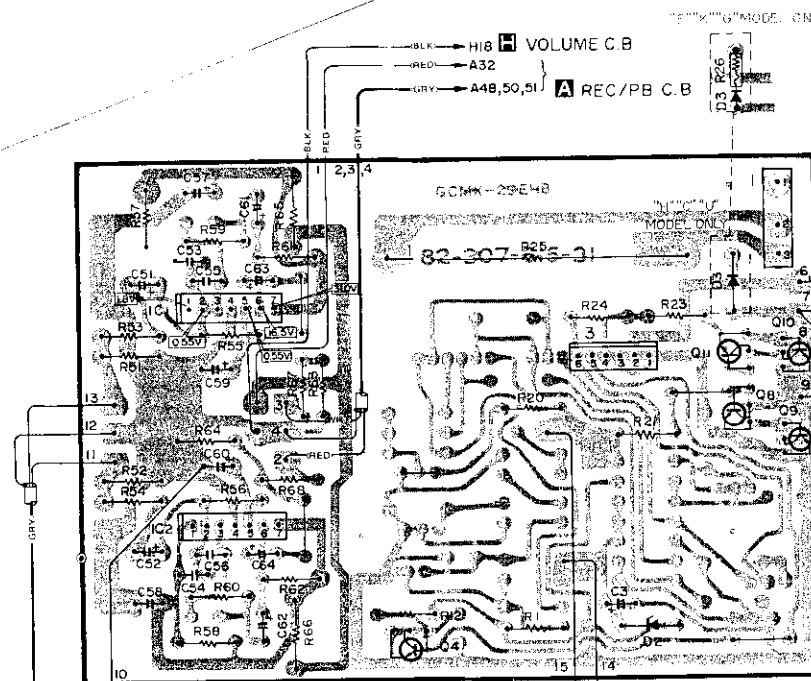
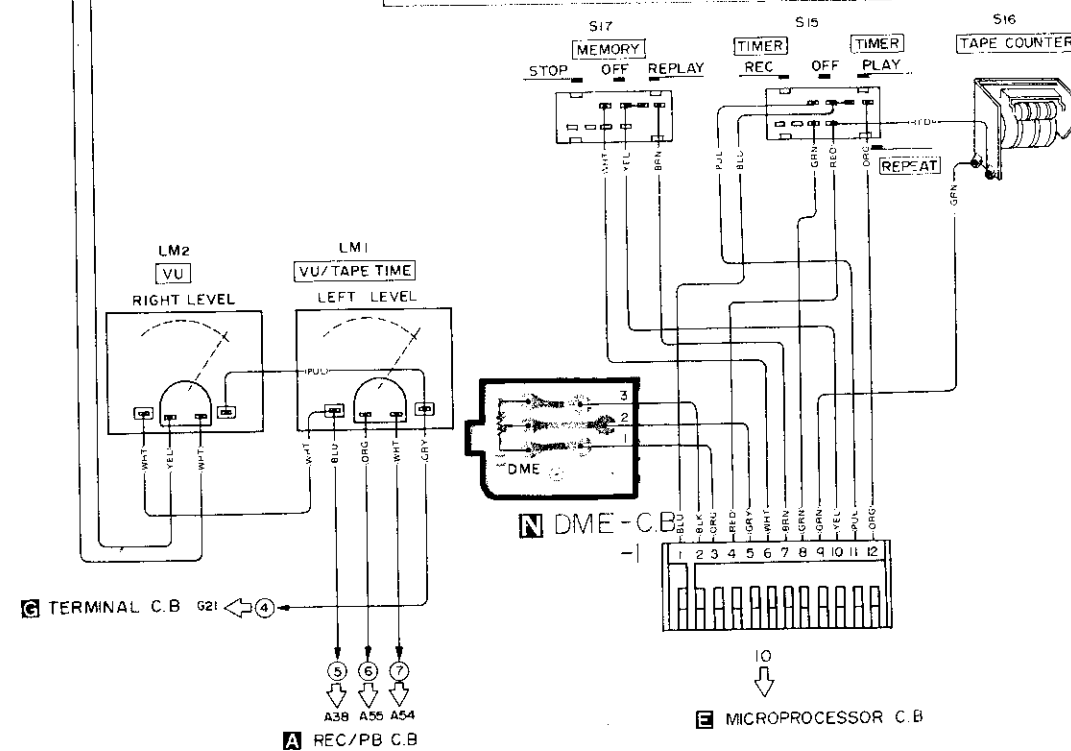
6. Peak Indicator Adjustment-2

Settings:

- Input signal: 400 Hz, 0VU +10 dB
- Adjustment location: SFR6

Method:

Adjust SFR6 so that the +10 dB LED lights up.
Finally +10 dB LED put out when input signal decrease by 5 dB.



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Indicator Adjustment-1

Level: MAX
Tape: 400 Hz - 16 dB
Adjustment locations: SFR5

Set the RECORD LEVEL so that the VU meter indication is at the 0VU LED lights up.

7. Tape Time 0 Point Adjustment

Settings:

- TAPE SELECTOR switch: Fe-Cr
- METER: TAPE TIME
- Test tape: AIWA Fe-Cr C-60
- Adjustment location: SFR1

Method:

Run the test tape for 90 seconds beginning at the magnetic substance of the tape. (from the RPH passing point)
Then turn the tape over and adjust SFR1 so that the indicator points to "0" within 30 - 60 seconds from that point.

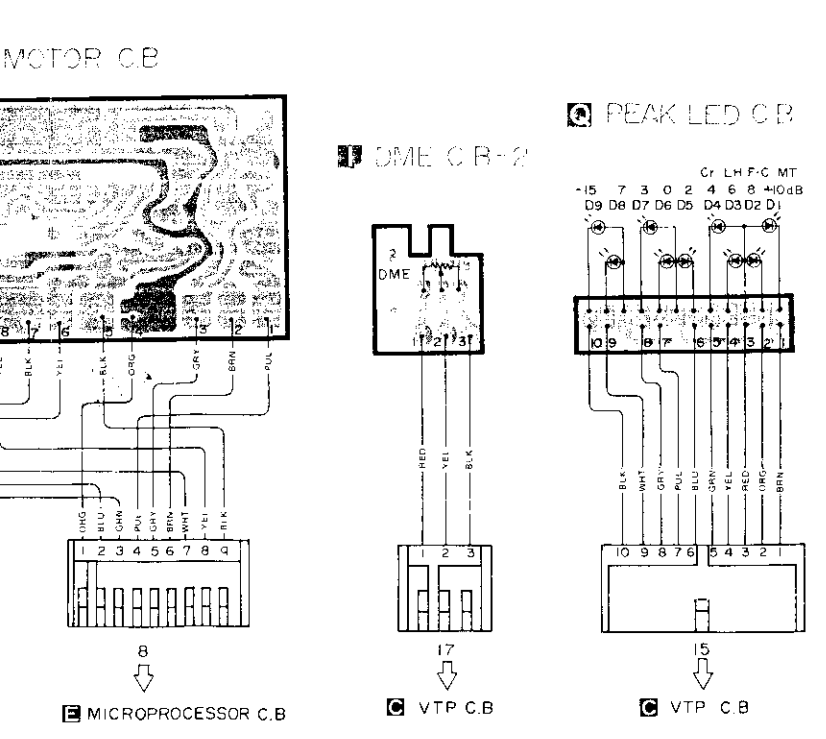
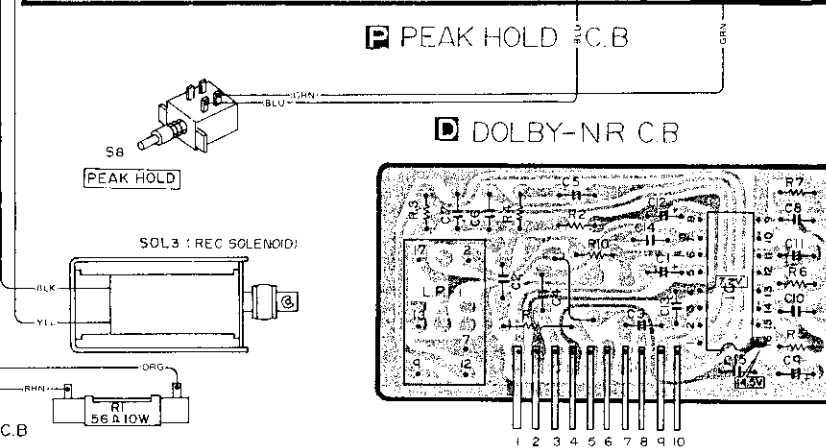
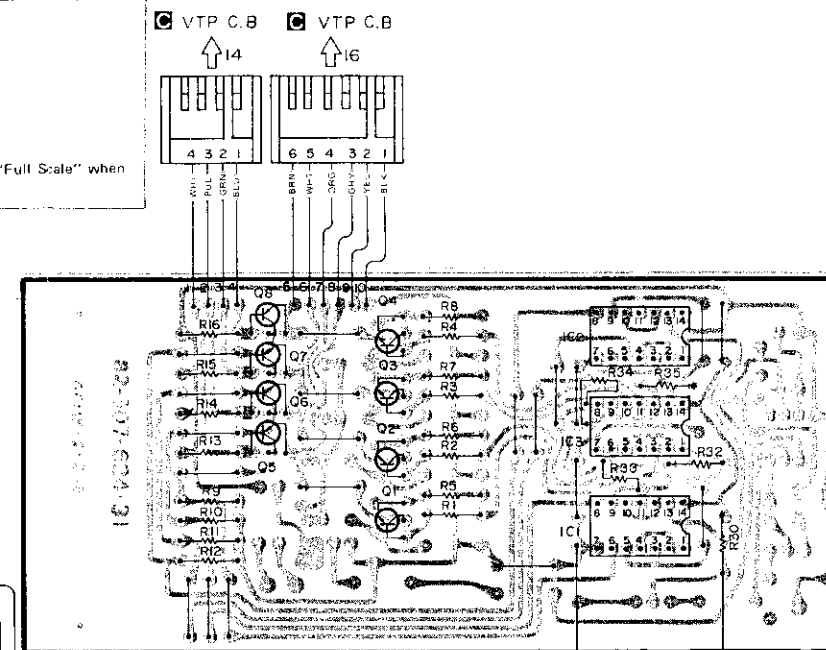
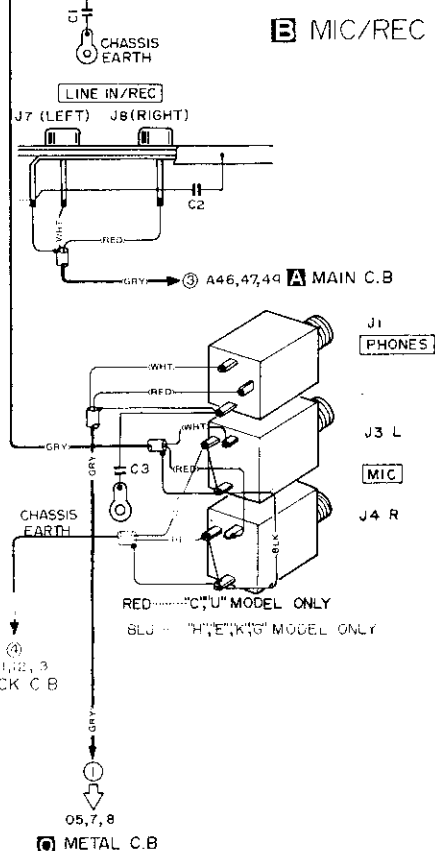
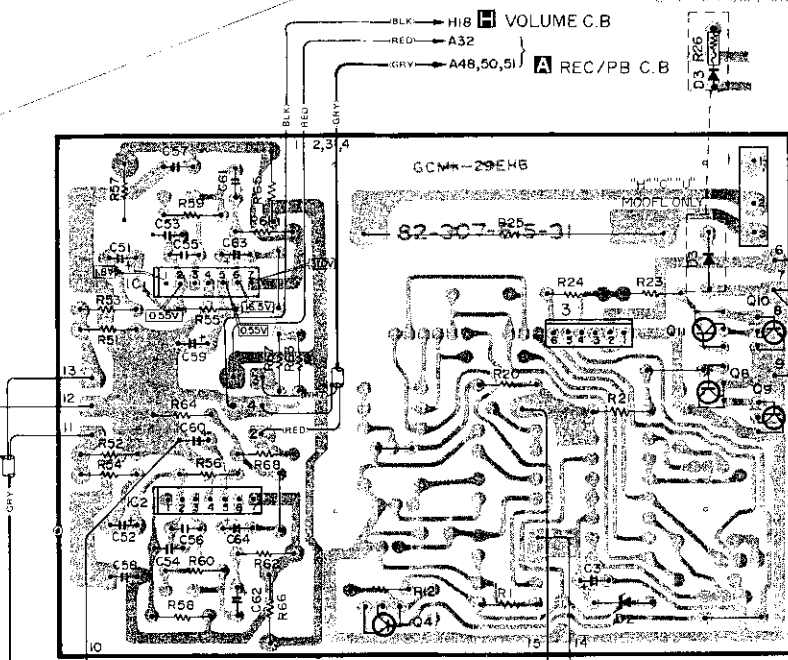
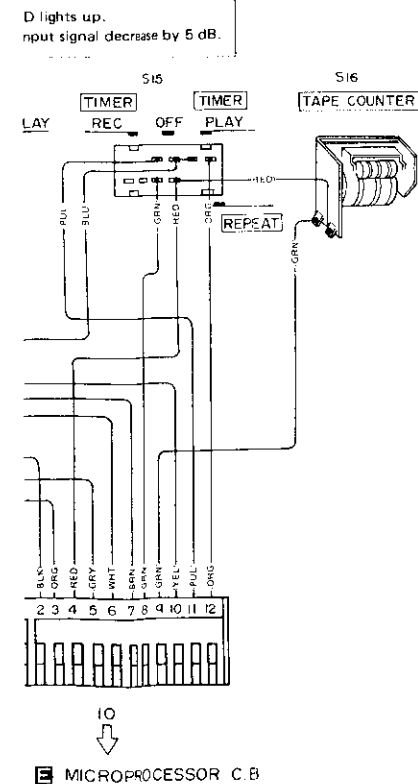
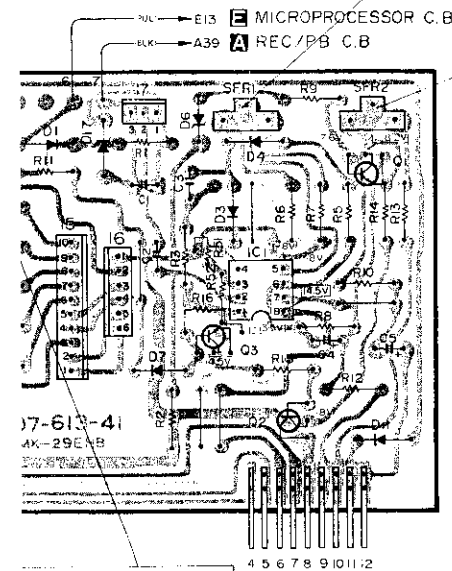
8. Tape Time Full scale Adjustment

Settings:

- TAPE SELECTOR switch: Fe-Cr
- METER: TAPE TIME
- Test tape: AIWA Fe-Cr C-60
- Adjustment location: SFR2

Method:

Adjust SFR2 so that the indicator points to "Full Scale" when first starting to wind the test tape.

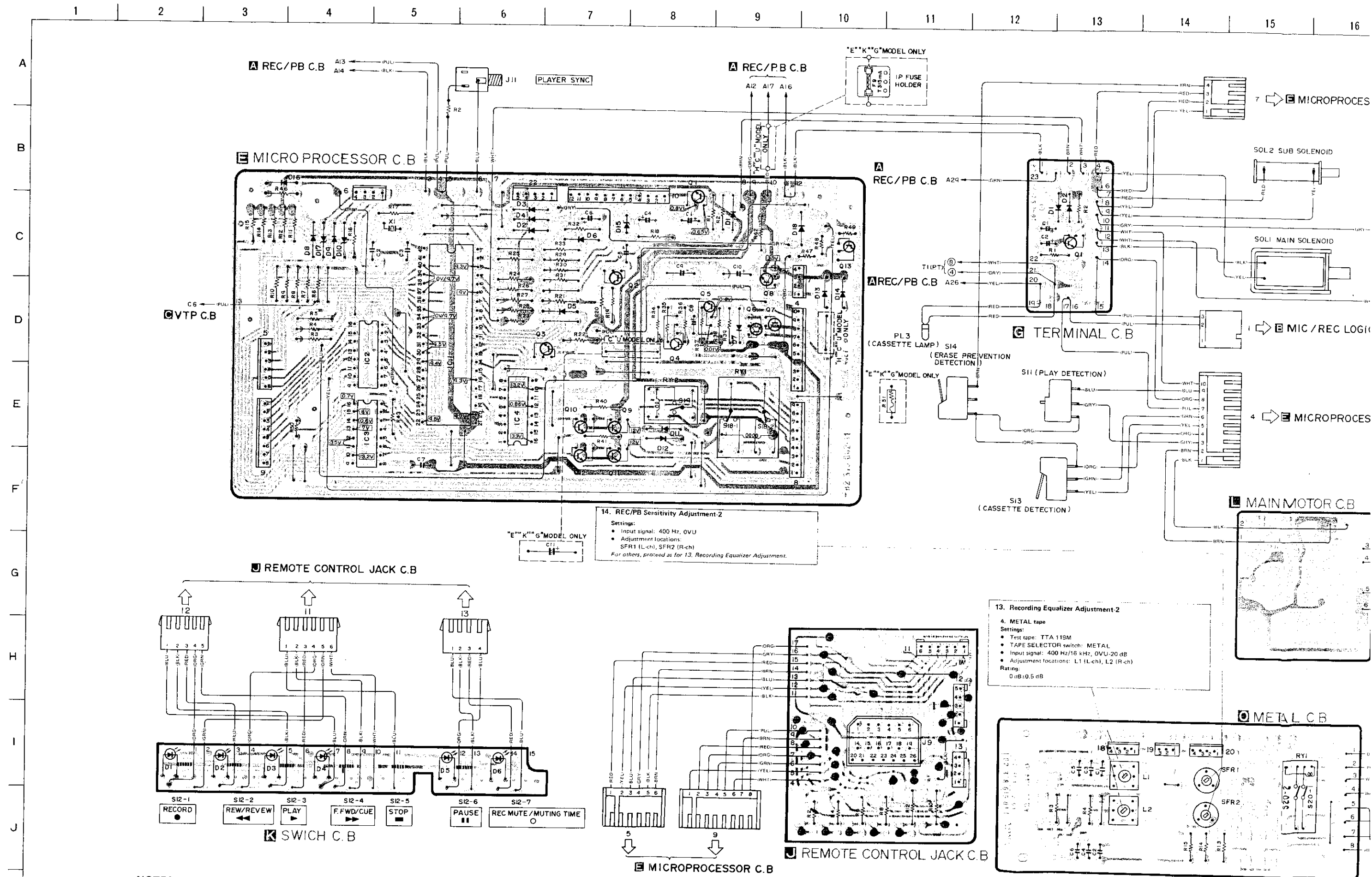


NOTES

- (1) B(+) Pattern B(-) Pattern Others pattern
- (2) The voltage is the reference value measured with a tester (20 K ohms/V DC) when there are no signals.

CMOS IC handling precautions

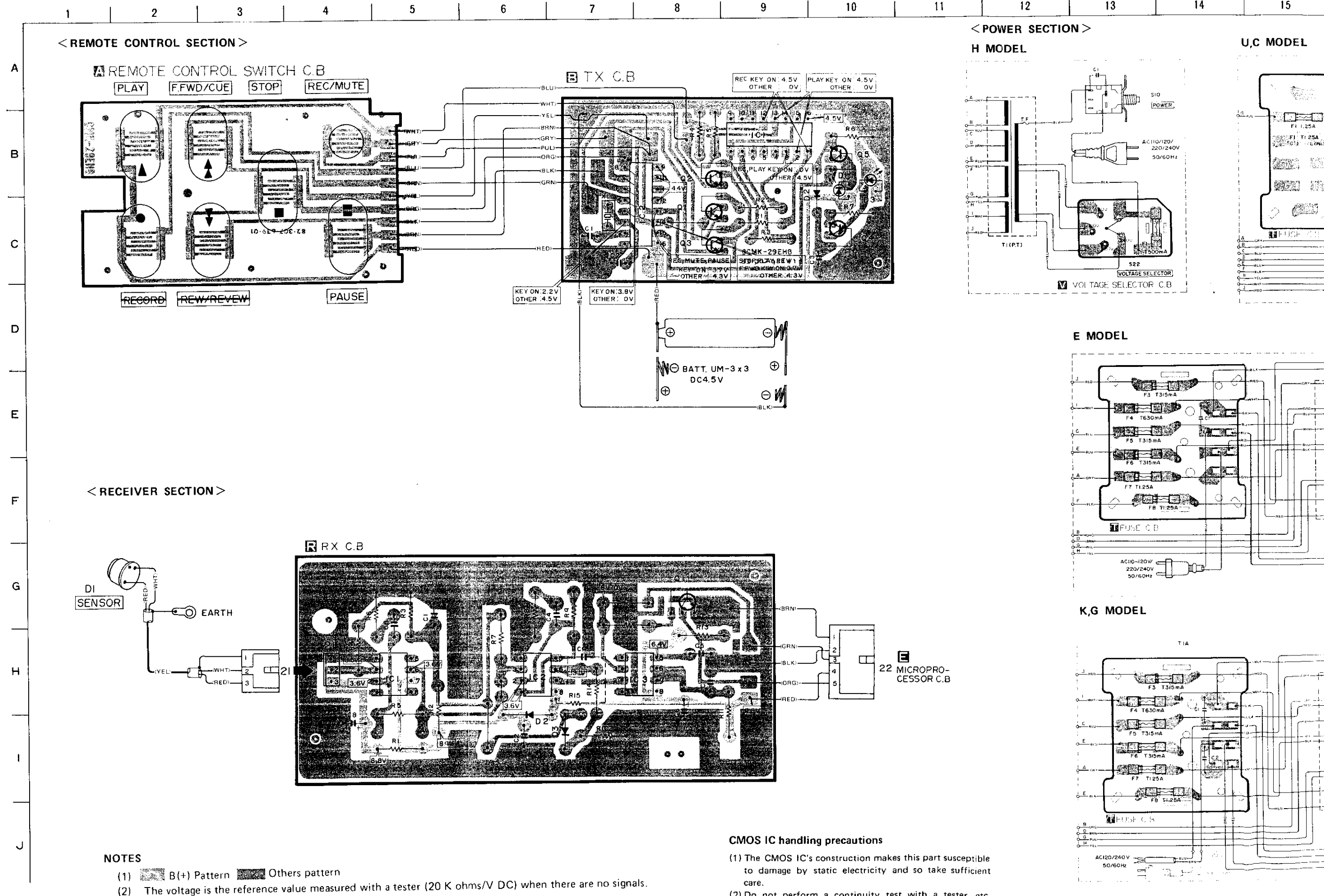
- (1) The CMOS IC's construction makes this part susceptible to damage by static electricity and so take sufficient care.
- (2) Do not perform a continuity test with a tester, etc. Refer to the circuit voltages of each part.



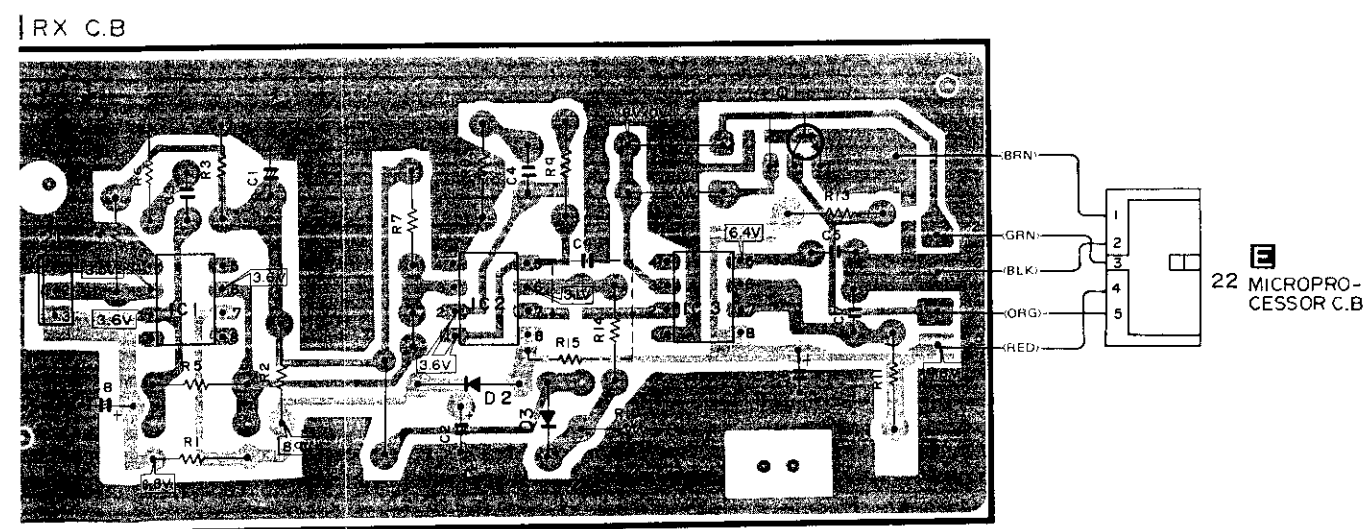
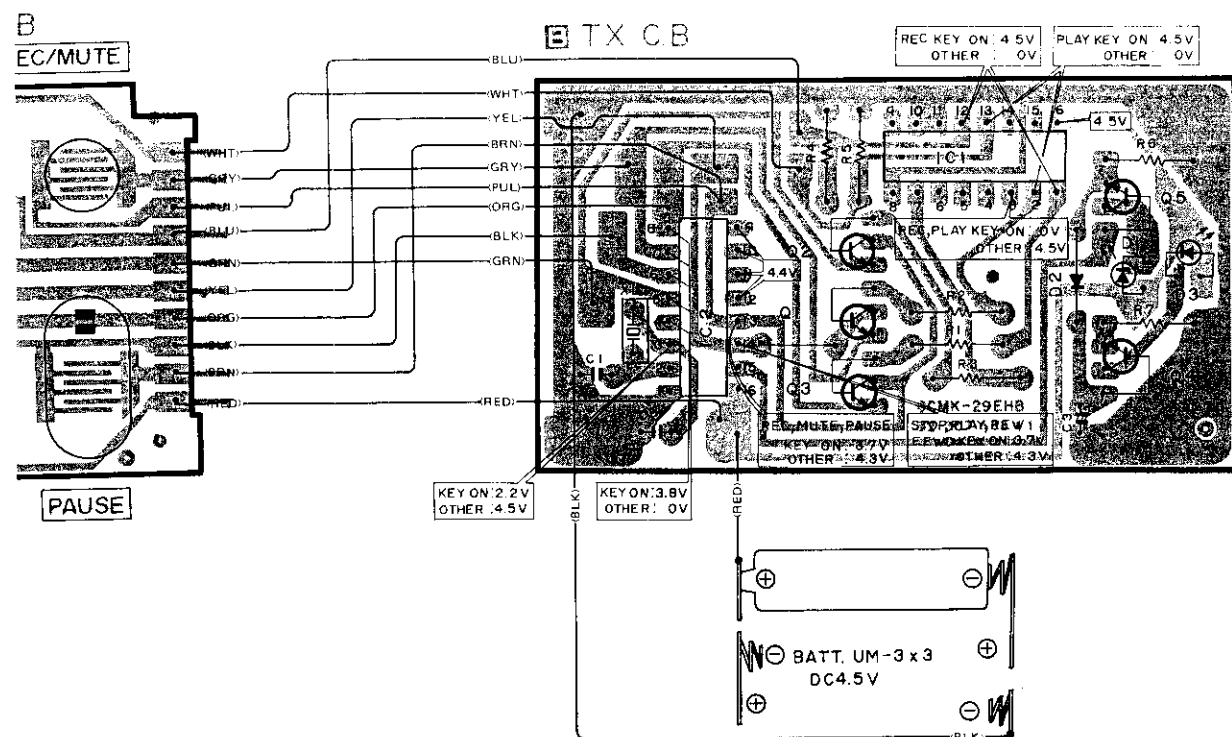
NOTES

- (1) B(+) Pattern Component side pattern Others pattern
- (2) The voltage is the reference value measured with a tester (20 K ohms/V DC) when there are no signals.

WIRING-4



4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----

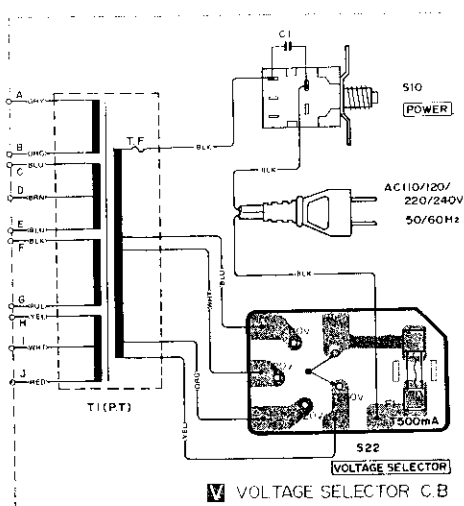


CMOS IC handling precautions

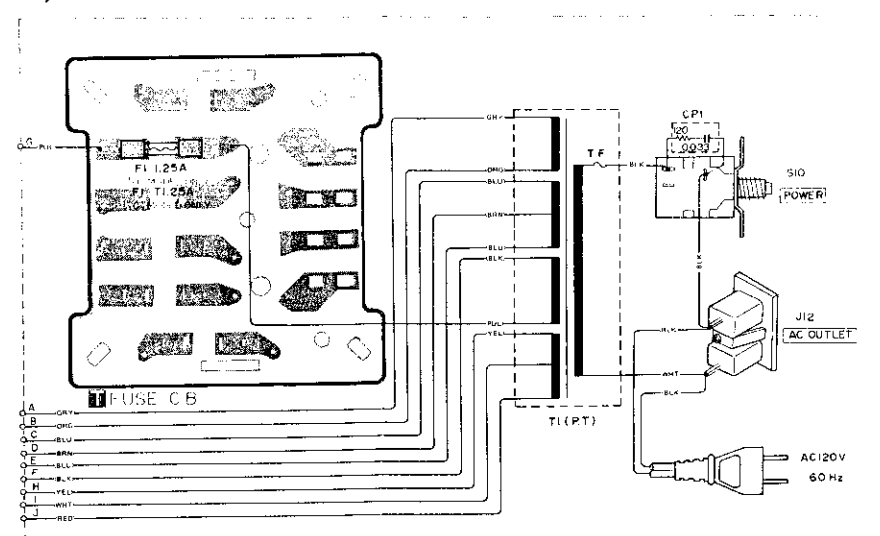
- (1) The CMOS IC's construction makes this part susceptible to damage by static electricity and so take sufficient care.
- (2) Do not perform a continuity test with a tester, etc. Refer to the circuit voltages of each part.

<POWER SECTION>

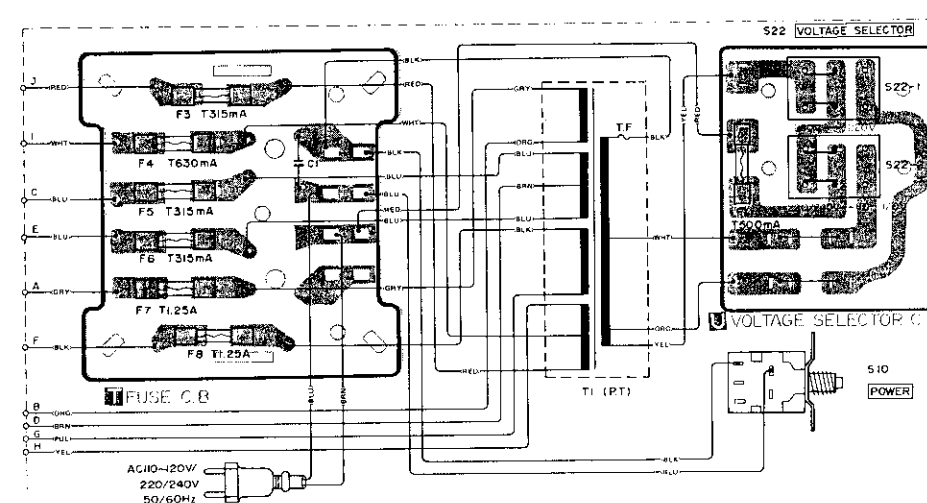
H MODEL



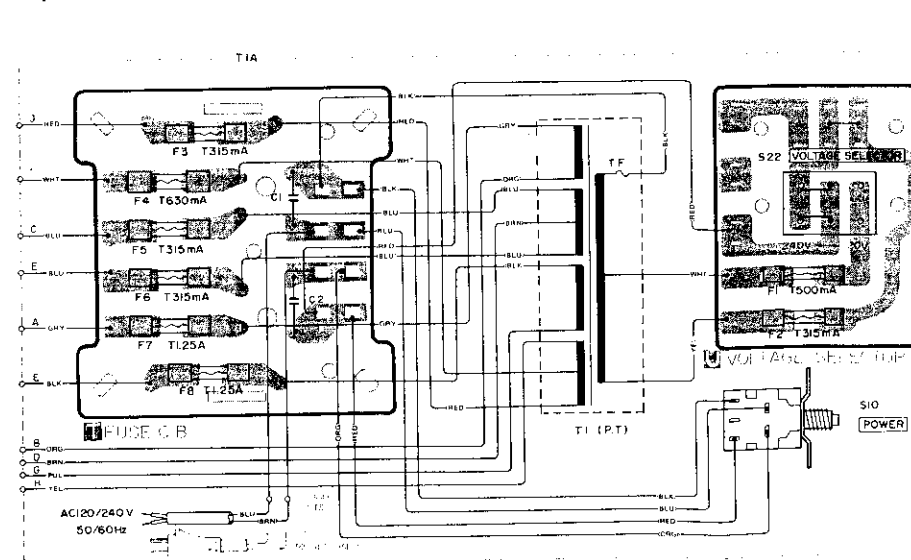
U,C MODEL



E MODEL



K,G MODEL



attern

measured with a tester (20 K ohms/V DC) when there are no signals.

Slide chassis continuous switch ON

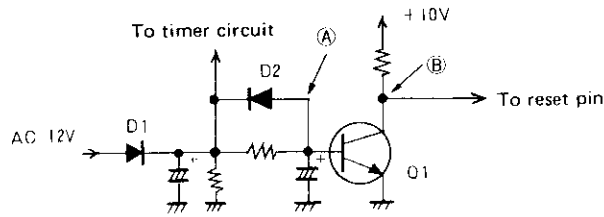


Fig. 1 Reset circuit

In order for the switching on and off of the power to be rapid, separate rectification is provided from the transformer (low time constant). Furthermore, part of the power supply is also used for the timer circuit.

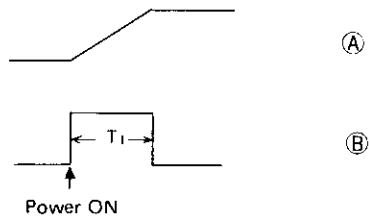


Fig. 2 Waveforms at points A and B

3. Timer REC/PLAY circuit

The timer's REC/PLAY functions are checked first by the micro-processor and part of the power supply of the reset circuit is used.

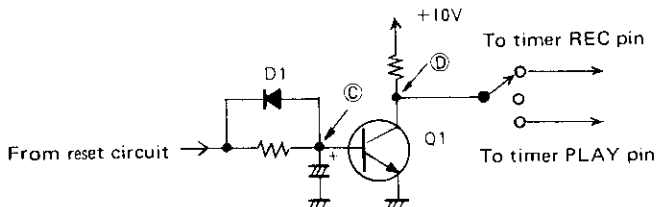


Fig. 3 Timer REC/PLAY circuit

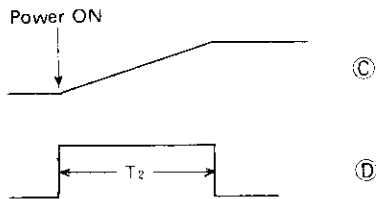


Fig. 4 Waveforms at points C and D

The reset and timer signals have the following relationship and when this relationship no longer exists, the timer REC and PLAY functions are not executed.

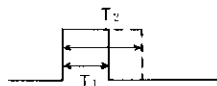


Fig. 5

4. DME amp circuit

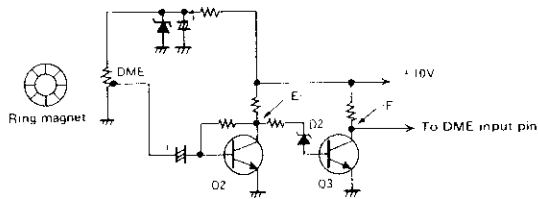


Fig. 6 DEM amp circuit for auto stop detection

Q2 is the DME amp and Q3 is for waveform shaping.

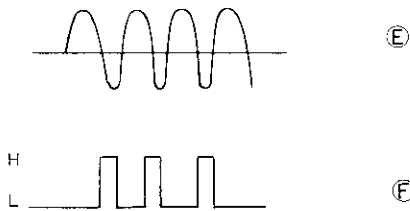


Fig. 7 Waveforms at points E and F

The potential at point F is low when the ring magnet is stationary but when it rotates, the potential alternates between high and low. The period is 8 to 16Hz.

5. Main plunger reduced voltage shift circuit

The plunger goes to ON with a command of the main plunger ON, and when the play detection switch which is coupled with the activation chassis goes to ON, the voltage is reduced over a fixed time interval.

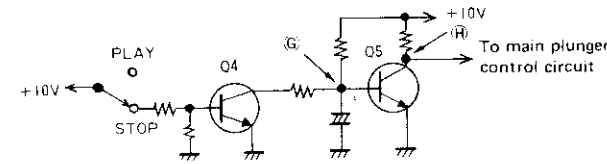
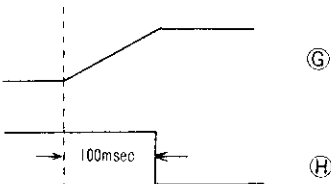


Fig. 8 Reduced voltage shift circuit



Play detection switch ON chassis

Slide chassis continuous switch ON

Fig. 9 Waveforms at points G and H

6. Output relationships in normal operation modes

The operation symbols stand for the following:

- Q : REC
- Q1 : PLAY
- Q2 : FF
- Q3 : REW
- Q4 : PAUSE
- Q5 : STOP
- Q6 : REC MUTE
- Q7 : ON
- No symbol : OFF

Out put	Display					Mechanism						Muting					
Mode	Q	< <	<	>	Q _N	Main motor	Sub motor	Sub FAST	Re- lay	Main Dis- cuss	Sub discuss	REC AMP	REC OSC	REC mute	PLAY AMP	C.D. AMP	
▷			1			1	1				1		1	1			
▷▷				1			1	1			1	1	1		1		
<◁		1					1	1	1		1	1	1		1		
▷▷▷			1	1		1	1				1	1	1			1	
▷◁◁		1	1			1	1		1		1	1	1			1	
▷◁◁			1		1	1						1	1		1		
Q	1																
Q-1	1		1			1	1			1							
Q-103	1			1													
Q-111	1		1		1	1											
Q-120	1	1				1	1	1		1				1			

Fig. 10

7.

- Fig. 11 gives the response to the mode prior to the function keys.
- Fig. 12 gives the response to the double depressing of the function keys.
- Fig. 13 shows the mechanism timing and audio muting timing with respect to the above operations.
- Fig. 14 gives the responses to the peripheral switches.

Current mode	Q	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Q	1	1	1	1	1	1	1	1
Q1	1	1	1	1	1	1	1	1
Q2	1	1	1	1	1	1	1	1
Q3	1	1	1	1	1	1	1	1
Q4	1	1	1	1	1	1	1	1
Q5	1	1	1	1	1	1	1	1
Q6	1	1	1	1	1	1	1	1
Q7	1	1	1	1	1	1	1	1

- x : indicates OFF
- : indicates no change
- Q : REC
- Q1 : PLAY
- Q2 : REC MUTE
- Q3 : REW
- Q4 : PAUSE
- Q5 : STOP
- Q6 : REVERSAL OF PREVIOUS "FF" MODE
- Q7 : FF

Fig. 11

When the switch is depressed, electrically locked, and then kept in the depressed position

Current mode	Q	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Q	1	1	1	1	1	1	1	1
Q1	1	1	1	1	1	1	1	1
Q2	1	1	1	1	1	1	1	1
Q3	1	1	1	1	1	1	1	1
Q4	1	1	1	1	1	1	1	1
Q5	1	1	1	1	1	1	1	1
Q6	1	1	1	1	1	1	1	1
Q7	1	1	1	1	1	1	1	1

Fig. 12

Mechanism timing

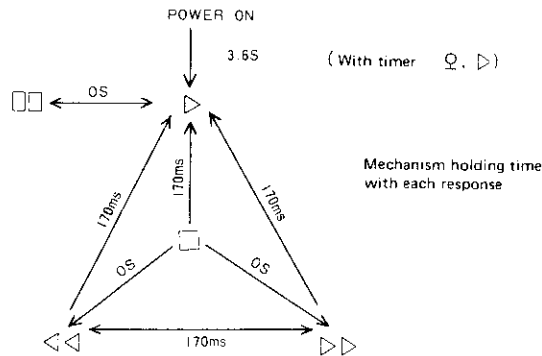


Fig. 13

Muting timing (play amp)

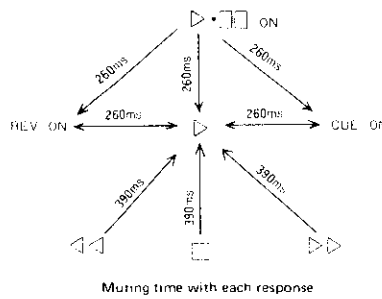


Fig. 14

Responses for peripheral switches

Switch state	Timer	Memory	Memory	Auto repeat	Turnable sync
POWER ON	Q	Q	Q	Q	Q
Q	Q	Q	Q	Q	Q
Q1	Q	Q	Q	Q	Q
Q2	Q	Q	Q	Q	Q
Q3	Q	Q	Q	Q	Q
Q4	Q	Q	Q	Q	Q
Q5	Q	Q	Q	Q	Q
Q6	Q	Q	Q	Q	Q
Q7	Q	Q	Q	Q	Q

- Capacitor on input at the keys operable
- Auto stop 2.5 seconds after DME OFF
- Reversal of previous "FF" mode

Fig. 15

HE.
Pro

(Key scan strobe signal)

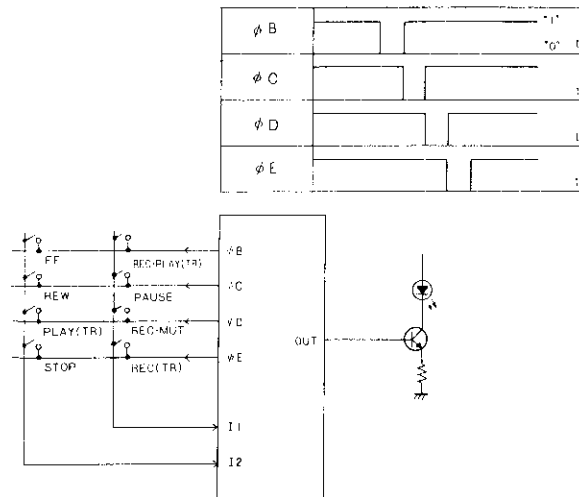


Fig. 18

* Key matrix figure

	I ₁	I ₂
ϕ_B	FF	REC·PLAY
ϕ_C	REW	PAUSE
ϕ_D	PLAY	REC·MUT
ϕ_E	STOP	REC

If I₁ is "0" when ϕ_B is "0", it means that the FF key is depressed.

D. Code generator

The data which is fed in from the matrix is converted into the designated pulse code modulation (PCM) mode and it then enters the transmission LED driver. The figure below shows the relationship between the key and code.

Mode	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	Matrix
STOP	0	0	0	0	1	0	$\bar{I}_1 \cdot \bar{\phi}_E$
PLAY	1	0	0	0	1	0	$\bar{I}_1 \cdot \bar{\phi}_D$
REC	0	0	1	0	1	0	$\bar{I}_2 \cdot \bar{\phi}_E$
REW/REV	0	1	0	0	1	0	$\bar{I}_1 \cdot \bar{\phi}_C$
FF/CUE	1	1	0	0	1	0	$\bar{I}_1 \cdot \bar{\phi}_B$
REC·PLAY	1	1	1	0	1	0	$\bar{I}_2 \cdot \bar{\phi}_B$
PAUSE	0	1	1	0	1	0	$\bar{I}_2 \cdot \bar{\phi}_C$
REC·MUT	1	0	1	0	1	0	$\bar{I}_2 \cdot \bar{\phi}_D$

2. Receiver

Block diagram

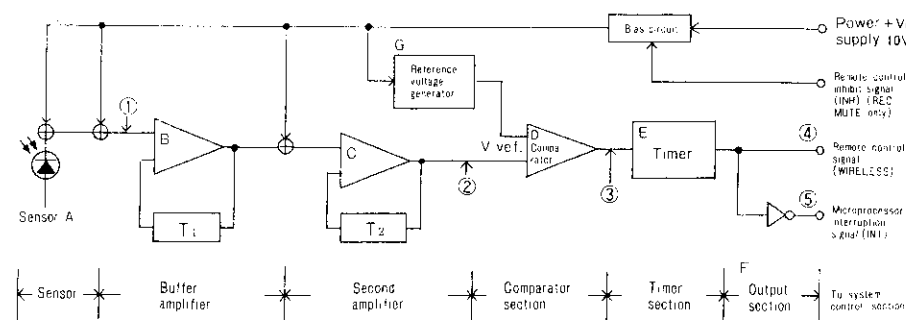


Fig. 20

The transmission signal carrier is 40kHz. A single pulse is made of 20 and its width is 500 μ sec. Differentiation between bit "0" and "1" is performed by period where 2T = "0" and 4T = "1". To use the FF as an example, the code is 110010 and so:

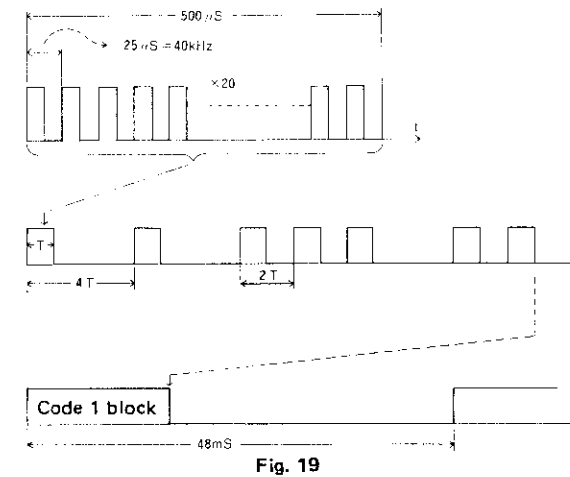


Fig. 19

One block of the transmission signal code is composed of six bits and a block is made up of seven pulses. Here the key has been entered and the pulses are transmitted by a 48 msec period.

E. Clock generator

This generates the reference sync signal (clock) that controls the code generator. The frequency of the signal is 455kHz.

F. Q5 LED driver

This drives the transmission LED.

G. Q6 LED driver

The output from the Q5 emitter is detected by D2 and C3, it is applied to the Q6 base, and the during transmission display and battery display LED is driven.

H. D1

This transmits the infrared light using pulse code modulation by means of the transmission LED.

I. D3

This is the LED for transmission display and battery display.

A. Sensor

The sensor uses a PIN diode and it transmits signals from the transmitter.

B. Buffer amplifier

This amplifier amplifies the signals from the sensor and it is configured as a bypass filter by T1 (time constant feedback circuit).

C. Second amplifier

This amplifies the signals from B to a level at which the comparator D can compare them with the designated Vref voltage (reference voltage). It is configured as a bypass filter by T2.

D. Comparator

This compares the signals from C with the Vref reference voltage, shapes them into ON or OFF signals and feeds out a trigger pulse for the timer start.

E. Timer

The remote control signals use the 40kHz pulse series (20 pulses and their intervals) as signals and so the 20 pulses are masked by the timer.

This makes it possible to set to the microprocessor processing speed when the microprocessor is decoding.

F. Output section

This handles the remote control signals and the reverse outputs, and it feeds out a remote control interruption signal.

G. Reference voltage generator

This generates the reference voltage that determines whether the voltage received has exceeded the Vref reference voltage.

[Waveforms at each section]

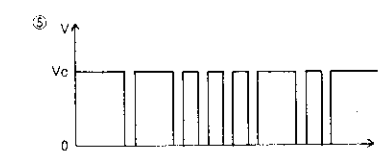
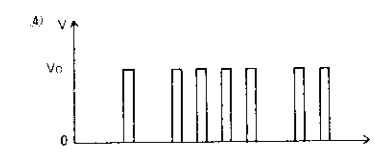
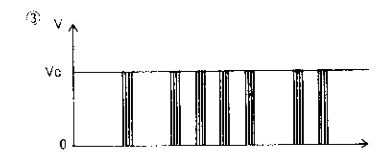
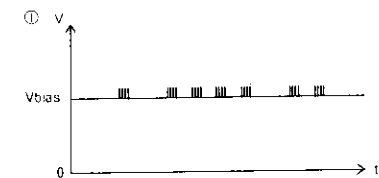


Fig. 21

The comparator output is normally fed out at +Vc but if an input signal with a voltage lower than the reference is supplied, an output such as that in Fig. ③ is fed out only during that interval.

The 40kHz pulses are masked by the timer and so the 20, 40kHz pulses are treated in the same way as for one pulse.

Output ④ is inverted by the Q1 inverter and this becomes the interruption signal of the microprocessor.

[Example of code decoding]

Pulse series	P ₁	P ₂	P ₃	P ₄	P ₅	P ₆	P ₇
Code	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇
D ₁	→					2T = 1	
D ₂	→					T = 0	
D ₃	→					T = 0	
D ₄	→					T = 0	
D ₅	→					2T = 1	
D ₆	→					T = 0	

"100010" indicates "PLAY"

Fig. 22

3. Relationship between wireless remote control and microprocessor

when the timer audio muting timer for the input timing is activated during the 3.6 seconds when the power is switched on in the AD-6700, the wireless interruption signal is not received. It is received at all other times.

* Wireless decoding

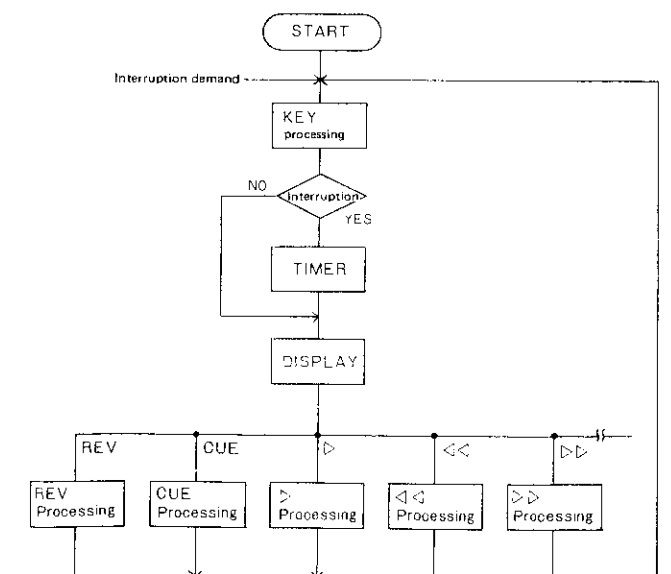
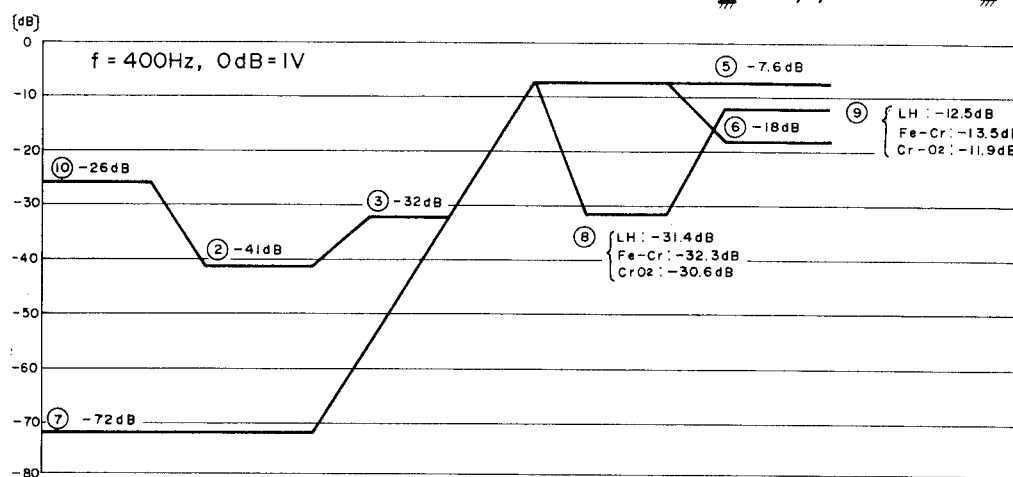
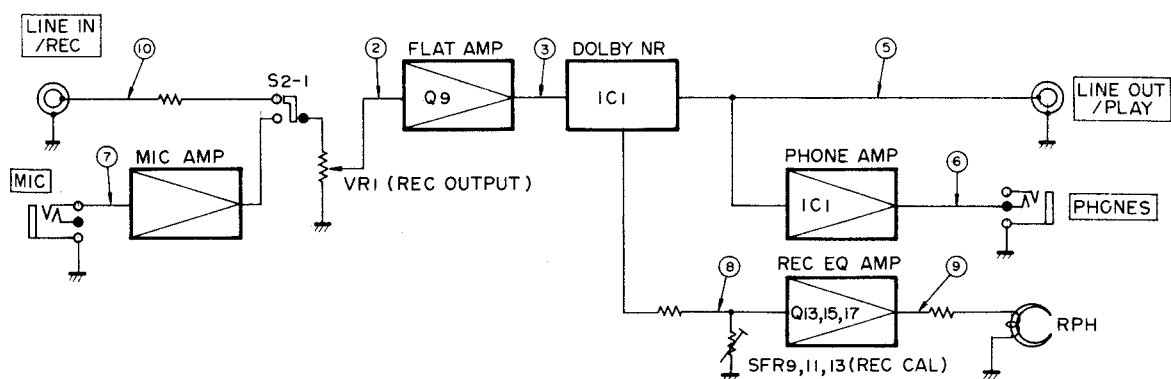


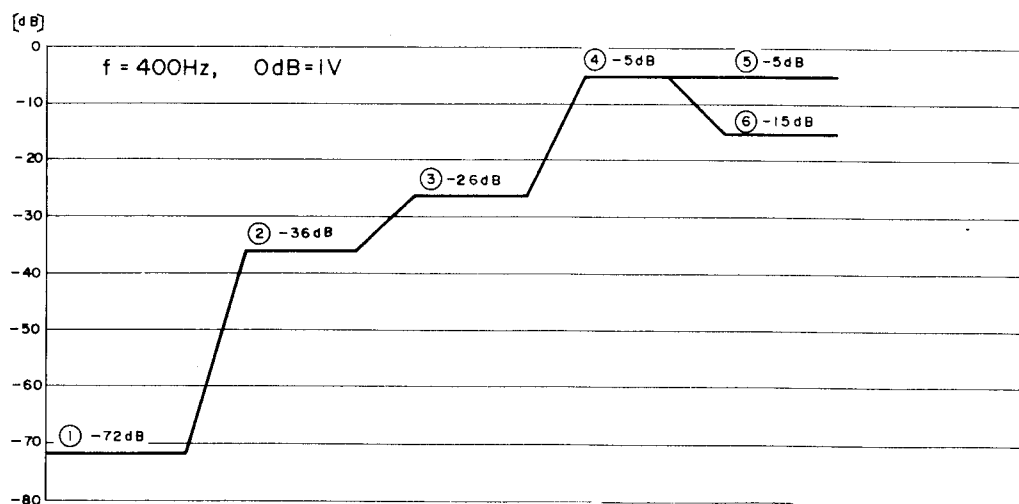
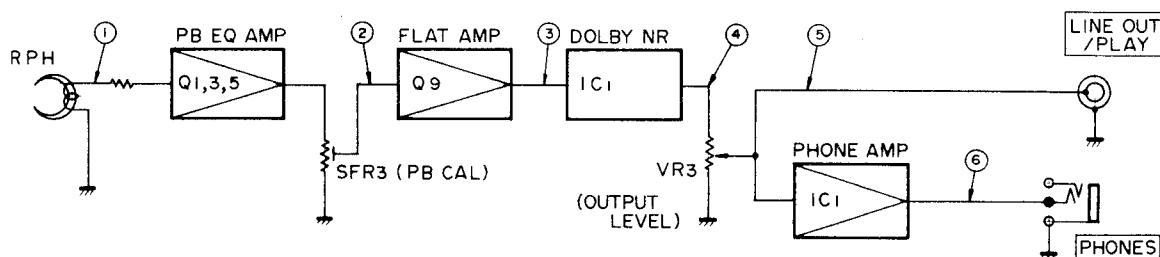
Fig. 23

LEVEL DIAGRAM

• RECORD



• PLAYBACK



ACCESSORIES/PACKAGE

Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty	
1a	82-307-859-01		Printed indiv., Packing (H,E,K,G model only)	*	1	
1b	82-307-860-01		Printed indiv., Packing (C model only)	*	1	
1c	82-307-854-01		Printed indiv., Packing (U model only)	*	1	
2a	82-304-852-01		Cushion L, Printed indiv. (H,C,U,E,K model only)	AD-6900	1	
2b	82-304-852-11		Cushion L, Printed indiv. (G model only)	AD-6900	1	
3a	82-304-853-01		Cushion R, Printed indiv. (H,C,U,E,K model only)	AD-6900	1	
3b	82-304-853-11		Cushion R, Printed indiv. (G model only)	AD-6900	1	
4	87-051-135-11		Poly-vinyl sack (for AC power cord)		1	
5	87-056-564-01		Curl stopper		2	
6	87-056-607-01		Poly-vinyl sack (for case)		1	
7	82-307-858-01		Sub cushion, Rear	*	1	
8	82-304-080-01		Label, Timer caution	AD-6900	1	
9a	82-307-907-01		Instructions booklet (H model only)	*	1	
9b	82-307-908-01		Instructions booklet (C model only)	*	1	
9c	82-307-906-01		Instructions booklet (U model only)	*	1	
9d	82-307-909-01		Instructions booklet (E model only)	*	1	
9e	82-307-910-01		Instructions booklet (K model only)	*	1	
9f	82-307-911-01		Instructions booklet (G model only)	*	1	
10	87-051-175-01		Poly-tube A (for instruction)		1	
11	87-051-132-01		Poly-vinyl sack		1	
12	87-056-009-41		Distributors list (H,C,E,K,G model only)		1	
13	87-056-008-11		Label, AC power cord (K model only)		1	
14	87-056-016-01		Tag, Main voltage (K model only)		1	
15	87-056-013-01		Guarantee card (C model only)		1	
16	87-056-036-01		Guarantee card (U model only)		1	
17	87-056-032-01		Guarantee card (G model only)		1	
18	87-056-034-01		Service station list (U model only)		1	
19	87-056-035-01		Card, Limited warranty (U model only)		1	
20	87-051-155-01		Poly-vinyl sack (for guarantee card)		1	
21	86-121-100-01		Remote control unit RC-100		1	
22a	86-944-619-01		Connection cord, CW-129KS (H,C,U model only)		2	
22b	86-925-006-01		Connection cord, CW-115KS (E,K model only)		1	
22c	86-944-012-01		Connection cord, CW-129BSK		2	
23	87-047-063-01		Battery, SUM-3(AE)		3	
24	87-058-023-01		Cord binder		1	
25	87-058-024-01		Head cleaning pole ass'y		1	
26	87-032-845-01		Siemens plug (H model only)		1	

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