Radio Shack®

Service Manual

26-1208

CCR-81

COMPUTER
CASSETTE TAPE RECORDER

Catalog Number: 26-1208

CUSTOM MANUFACTURED FOR RADIO SHACK, A DIVISION OF TANDY CORPORATION

CONTENTS

(1) SPECIFICATIONS

STANDARD TEST CONDITIONS

1) Speaker impedance: 8Ω
2) Output readings are taken across a non-reactive load
3) Output reference level: 50 mW total power
4) Reference freqnency: 1 kHz 0 dB = 0.775V
5) Power Supply Voltage
   DC..... 6V
   AC For USA, CANADA..... 120V 60 Hz
   AUSTRALIA ..... 240V 50 Hz
   UK/BG ..... 230V 50 Hz
   JAPAN ..... 100V 50 Hz
6) Ambient conditions
   Temperature 17 to 23°C
   Humidity 40 to 70%

		UNIT	NOMINAL	LIMIT
Recording sensitivity	Mic input	dB	−76	−76 ±4
	Aux input	dB	−20	−20 ±4
Audio output max power	input −50 dB	mW	500/400	400/300
	playback	mW	500/400	400/300
Audio output at 10% THD	input −50 dB	mW	350/300	270/220
	playback	mW	350/300	270/220
Distortion	input −50 dB			
	overall	%	4	6
	playback	%	1	4
Track crosstalk	input −76 dB	dB	50	45
	playback	dB	50	45
Frequency response	input −76 dB			
	150 Hz	dB	−4	−4 ±6
	6,000 Hz	dB	−3	−3 ±6
	at playback			
	125 Hz	dB	−2	−2 ±6
	6,300 Hz	dB	−1	−1 ±6
Erasing ratio	input −50 dB	dB	46	40
S/N Ratio (DC/AC)	input −50 dB	dB	49/40	39/35
	at playback	dB	60/50	50/40
ALC effect	input −40 dB			
	to −70 dB	dB	2	8
ALC distortion	input −40 dB	%	8	12
Hum and noise level	at volume Min	mV	0.5	10
	at volume Max	mV	18	30
Battery indicator turn on voltage		V	4.2	4.2 ±0.6
AGC delay time	at recording	S	0.4	<0.5
Turn on time	at play	S	0.4	<0.5
Current consumption	Record no signal	mA	170	260
	Play no signal	mA	170	260
	Fast Forward	mA	170	260
	Rewind	mA	170	260
ALC on level	at Mic input	dB	70	(70 ±4)
Tape speed		%	+1	+3 −2
Wow and Flutter	WRMS	%	0.15	0.20
	RMS	%	(0.28)	(0.40)
Winding Time at C-60 tape	Fast Forward	sec	100	120
	Rewind	sec	100	120
Torque	Play	g.cm	55	35
	Fast Forward	g.cm	70	55
	Rewind	g.cm	70	55

( ) : Reference

NOTE: Nominal Specs represent the design specs; all units should be able to approximate these: Some will exceed and some may drop slightly below these specs. Limit Specs represent the absolute worst condition which is acceptable; in no case should a unit perform to less than within any Limit Spec.

(2) BLOCK DIAGRAM

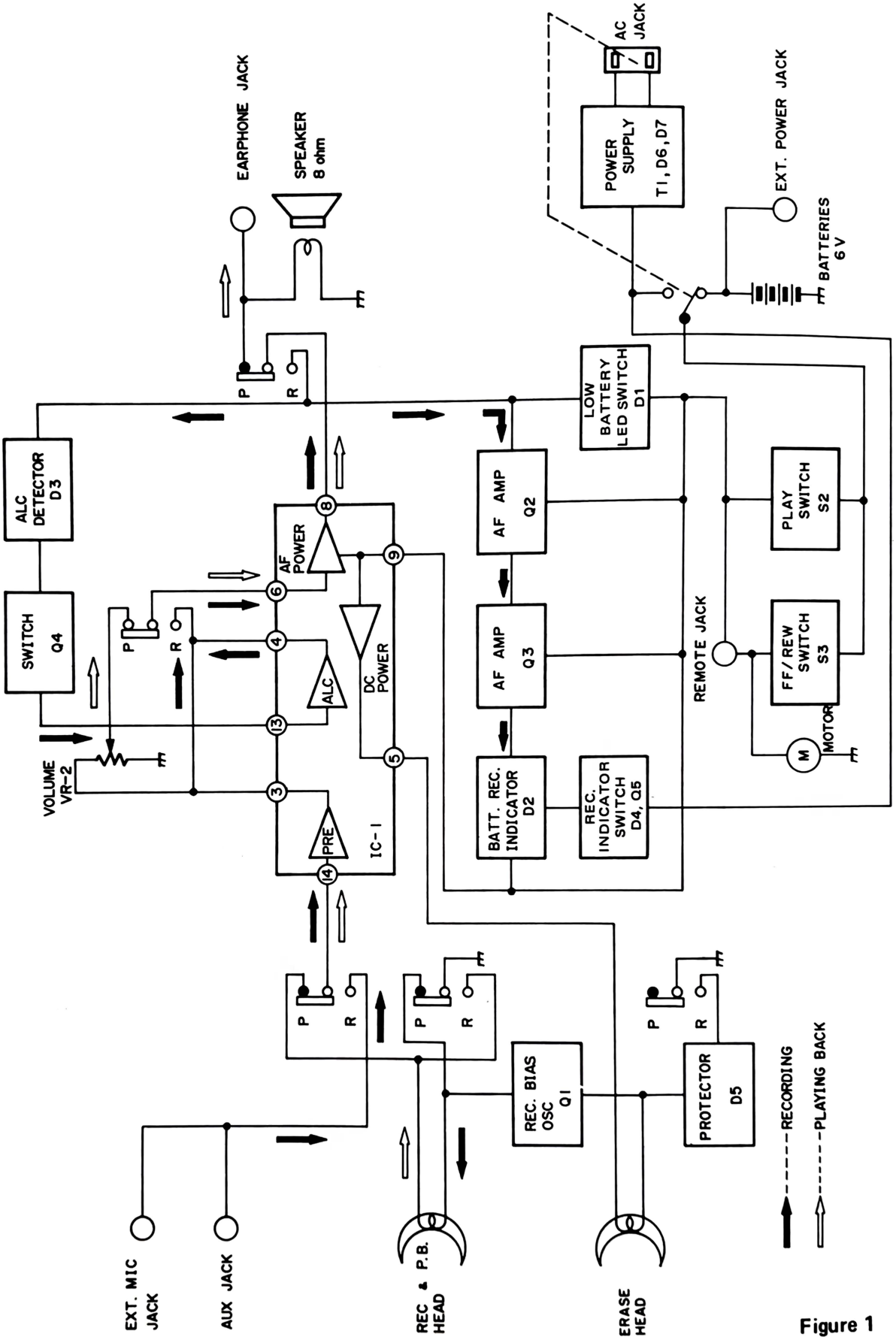


Figure 1

(3) STANDARD MAINTENANCE

Whenever a unit is brought in for service or repair, it should be cleaned and lubricated and the head should be demagnetized.

1. **Cleaning:** Clean the heads and all tape handling surfaces using a standard cleaner and cotton swabs. Wipe dry.
2. **Demagnetization:** Do not use magnetized tools near the head, since they can magnetize the head. With normal use, the head will retain small amounts of residual magnetism (this result in increased noise and loss of high-frequency response). Use a standard tape head demagnetizer to demagnetize the head.
3. **Lubrication:** Use a high-grade of specially formulated grease in the marked places. Lubrication is normally required only when parts tend to bind, or after long periods of use. Use all lubricants very sparingly and avoid contact with other parts.

Grease may be applied to the sliding surfaces indicated with Ⓖ as shown in Figure 2.
(Do not use oil.)

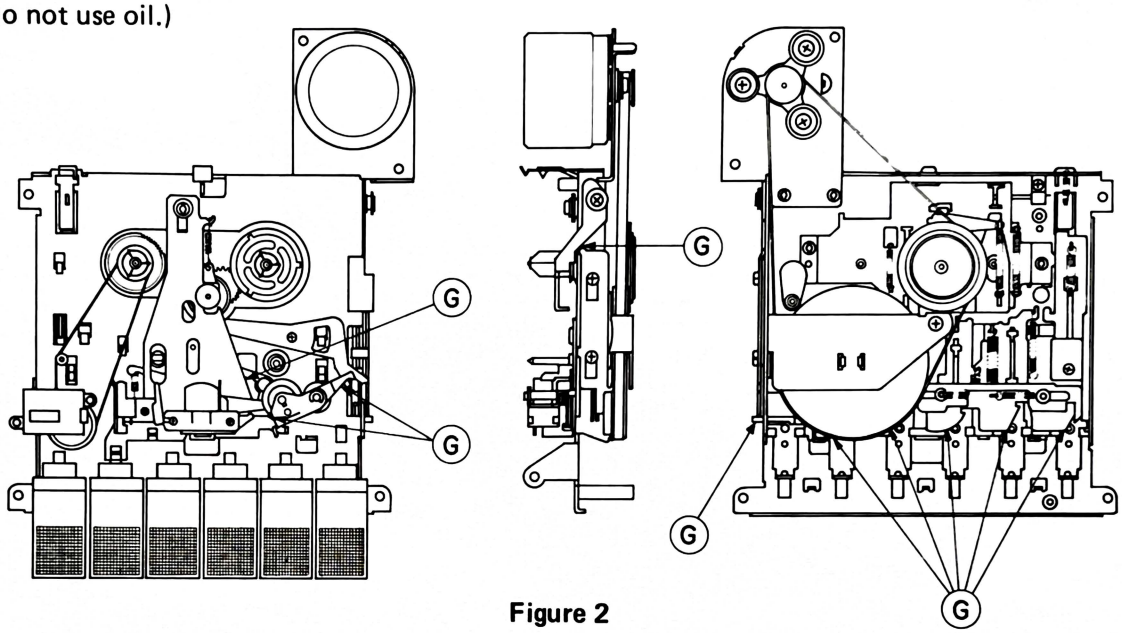


Figure 2

(4) CIRCUIT ADJUSTMENT

Adjustment of the Tape Speed

Load the unit with a 3 kHz test cassette such as MTT-111. Use a Frequency Counter connected to the audio output across 8 ohm speaker. Adjust the 350 Ω, Variable Resistor so the Frequency Counter reading is 3,000 Hz +0.33/+0.67%.

Adjustment of the Recording Bias

Adjust R6 so that the Audio Volt Meter indicates 66 mV RMS (voltage across R15) with a 50 – 52 kHz test frequency at T2. (Figure 3)

Pre-adjustment Procedures

1. Be sure to demagnetize and clean head before proceeding with the Head Adjustment.
2. For the Head Adjustment, never use a magnetized screwdriver.

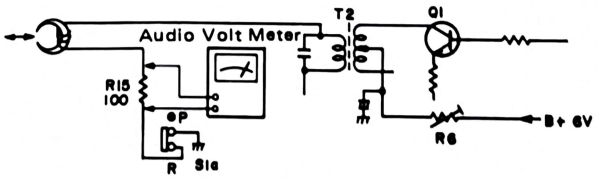


Figure 3

Head Adjustment (Figure 4)

1. Connect a V.T.V.M. to the Earphone Jack.
2. Use 8-ohm dummy load when the V.T.V.M. is plugged into the Earphone Jack.
3. Load a 6.3 kHz test tape MTT-113 in the unit. Turn the Azimuth Adjusting Screw for a maximum reading on the V.T.V.M. (tape play back).
4. After adjustment, fix the Azimuth Adjusting Screw with glyptol or "screw lock".

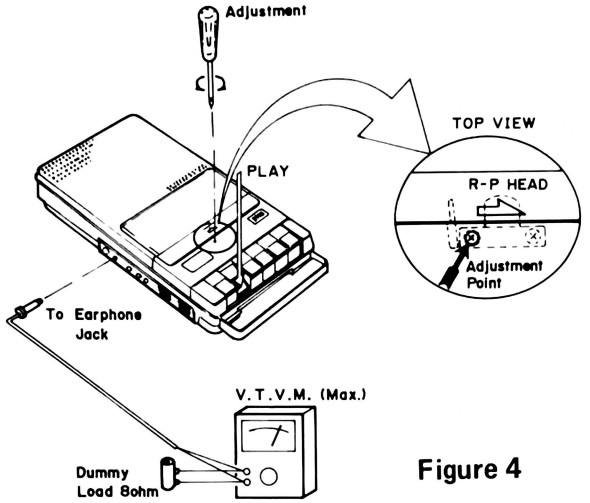


Figure 4

(5) MECHANICAL ADJUSTMENT

General Remarks

Before attempting to adjust the mechanism of this unit, wipe clean the tape contacting surfaces (i.e. tension pick-up, pinch roller, R-P head, erase and capstan) as well as the contact surfaces of the driving parts (i.e., the motor pulley, flywheel, take-up reel, supply reel, rewind pulley and FF Gear) with a piece of soft cloth soaked in alcohol. Grease stains may cause trouble.

CAUTION

Never attempt to clean the drive belts with alcohol-soaked fabric, because they are specially surface-treated. Any belt, which has been stained with grease, should be replaced.

Pinch Roller Adjastment

1. Set the unit in the playback mode. (The pinch roller revolves.)
2. While keeping the unit in the playback mode, measure the pinch roller contact with a spring gauge (0 – 500g gauge) (Figure 5).
   A pinch roller force of 350 – 450g is required.
3. Hook the spring gauge to the pinch roller and pull it away from the capstan. Measure the force at the moment when the pinch roller comes in contact again with the capstan (when the pinch roller starts revolving).
4. To adjust the contact pressure, change the spring location. Replace the spring if necessary.

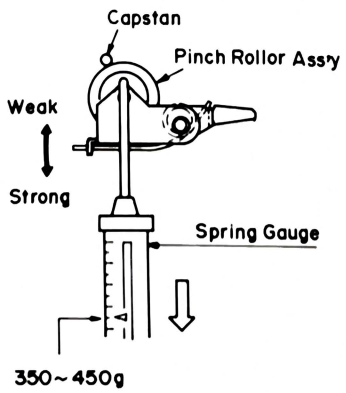


Figure 5

Take Up Torque Adjustment

1. Set the unit in the playback mode and measure the torque of the Take-Up reel with a torque gauge. A take-up torque of 50 – 70 g-cm is required (Figure 6A).
2. If a torque of 50 – 70 g-cm cannot be obtained, adjust the clutch spring as shown in Figure 6B.

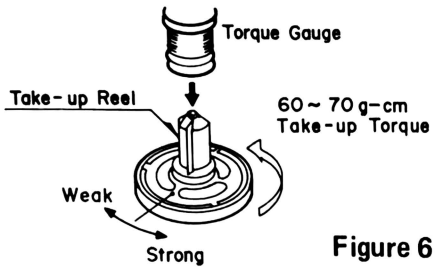


Figure 6 A

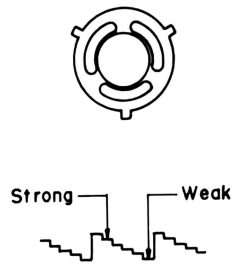


Figure 6 B

Fast-Forward and Rewinding Torque Adjustment

With a cloth soaked in alcohol, wipe clean the contact surfaces of the RF clutch, motor pulley, main BELT, Take-Up roller and flywheel.
Dirty surfaces will cause slippage.

1. Measure the F-FWD torque value. Torque of more than 90 g-cm is necessary for Fast-Forward operation (Figure 7).
2. If the fast forward torque is not adequate (over 90 g-cm), replace either the take-up reel or the clutch drum.
3. Measure the rewinding torque value. Torque of more than 90 g-cm is necessary for rewinding operation (Figure 8).
4. If the rewinding torque is not adequate (over 90 g-cm), replace the supply reel and/or the rewind pulley.

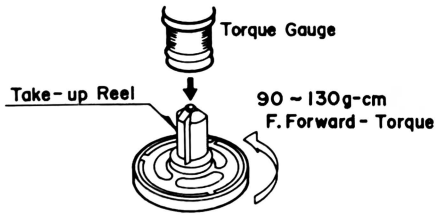


Figure 7

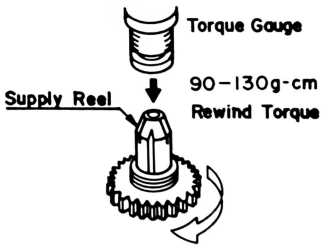


Figure 8

Auto Shut-Off Adjustment

The auto shut-off mechanism automatically switches off the unit at the end of tape during play-back or recording operation.

1. Set the unit in the playback mode.
   Apply a tension gauge to the tension pick-up as illustrated (Figure 9).
   Push the gauge in the indicated direction and measure the force required for shut-off to occur.

2. The tension pick-up sensitivity should be set properly so that the auto shut-off works and switches off the unit when the tension gauge reads 40 to 80g. (reference: 60g).
   If the auto shut-off works and switches off the unit at a tension pick-up force of the less than 40g either bend the spring hook to increase its force or replace the spring.
   If a tension pick-up force of more than 80g is required to shut-off the unit, check the auto shut-off mechanism as outlined below.
   1) Check to see if the head base fastening sensing lever, auto lever and spring are too loose or too secure (Figure 10).
   2) If you don't locate the difficulty by following the above, replace spring.

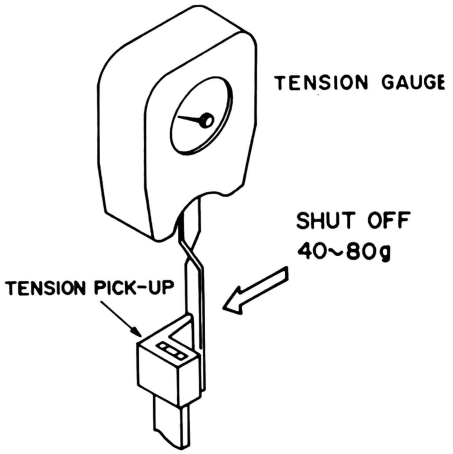


Figure 9

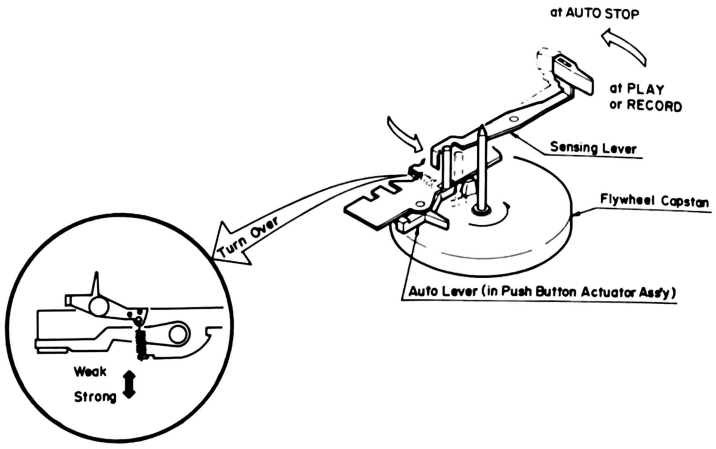


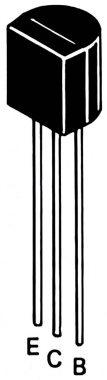
Figure 10

(6) TROUBLESHOOTING CHART

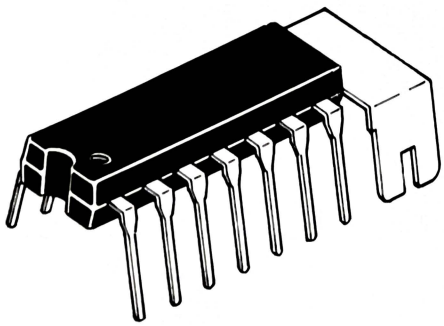
SYMPTOM	CAUSE AND REMEDY
Unit is dead.	1) MOTOR (71) dead: Replace. 2) MAIN BELT (74) slipping: Replace. 3) SHORT SWITCH (87) poor contact: Adjust or replace.
No Take-up of Tape	1) TAKE-UP REEL ASS'Y (25) and CENTER GEAR (32) slipping: Wipe TAKE-UP REEL ASS'Y (25) and CENTER GEAR (32). 2) PINCH ROLLER ASS'Y (17) slipping: Wipe PINCH ROLLER ASS'Y (17). Change the spring location or replace PINCH ROLLER SPRING (19).
Will not Fast Forward or Rewind	1) RF CLUTCH ARM ASS'Y (39), CENTER GEAR (32) or SUPPLY REEL ASS'Y (30) slipping: Wipe RF CLUTCH ARM ASS'Y (39) CENTER GEAR (32) or SUPPLY REEL ASS'Y (30).
Excessive Wow	1) MOTOR (71) defective: Replace. 2) PINCH ROLLER ASS'Y (17) defective: Replace.
Varying Speed	1) MAIN BELT (74) slipping: Wipe FLYWHEEL CAPSTAN (44) and MOTOR PULLEY L (72) or replace MAIN BELT (74). 2) MOTOR (71) defective: Replace.

SYMPTOM	CAUSE AND REMEDY
No Playback	1) R/P HEAD (20) defective or open: Replace. 2) R/P HEAD (20) dirty: Wipe R/P HEAD (20) with a cloth moistened with alcohol. 3) Lead wire to R/P HEAD open: Replace lead wire. 4) No power to Amplifier (IC-1): Replace SHORT SWITCH (87). 5) Defective components in Amplifier (IC-1): Check and replace the defective components.
Low Playback or Distorted Playback	1) Amplifier (IC-1) defective: Check and replace the defective components. 2) R/P HEAD (20) dirty: Wipe R/P HEAD (20) with a cloth moistened with alcohol. 3) R/P HEAD (20) worn out: Replace.
No Record	1) R/P HEAD (20) defective or open: Replace. 2) Components in Amplifier (IC-1) defective: Check and replace the defective components. 3) MICROPHONE Jack defective: Replace. 4) R/P HEAD (20) dirty: Wipe R/P HEAD (20) with a cloth moistened with alcohol. 5) AUXiliary Jack defective: Replace. 6) MIC defective: Replace.
No Erase	1) ERASE HEAD (21) defective: Replace. 2) Lead wire to ERASE HEAD poorly soldered: Re-solder lead wire.

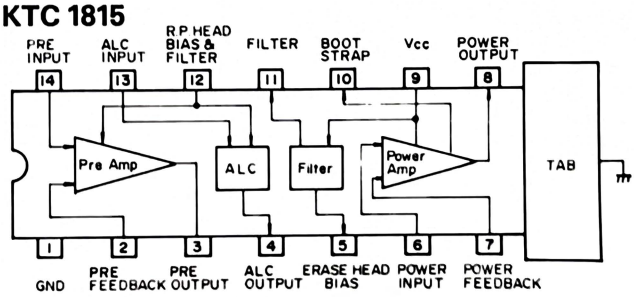
(7) IC & TRANSISTOR LEAD IDENTIFICATION/ VOLTAGE CHART



IC-1 (μPC1350C) (NEC)

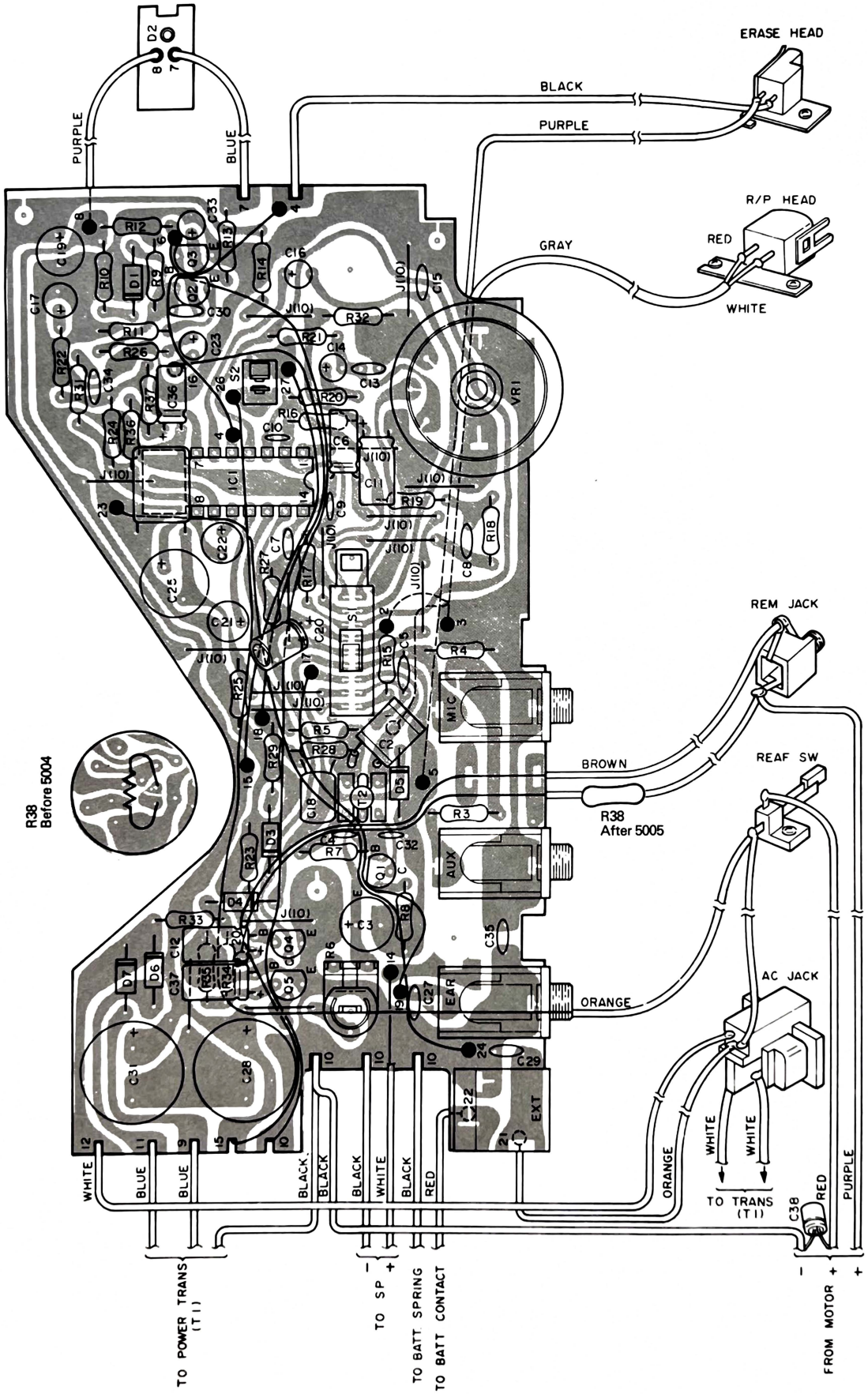


KTC 1815

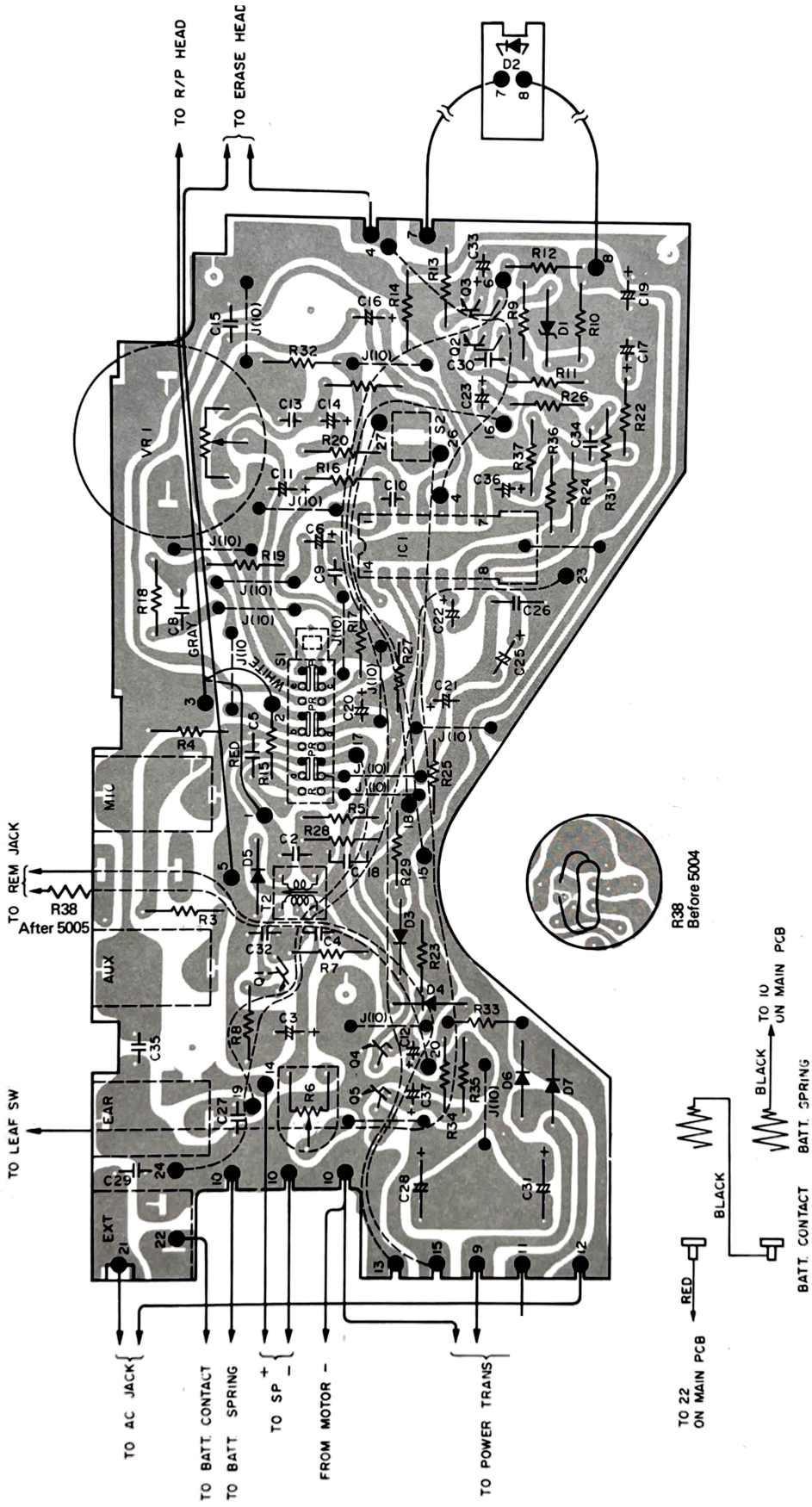


(8) P.C. BOARD (TOP & BOTTOM VIEWS)

TOP VIEW



BOTTOM VIEW


TO R/P HEAD
TO ERASE HEAD
TO REM JACK
R38
After 5005
TO LEAF SW
TO AC JACK
TO BATT. CONTACT
TO BATT. SPRING
TO SP +
TO SP -
FROM MOTOR -
TO POWER TRANS
R38
Before 5004
BLACK
TO 10
ON MAIN PCB
BATT. SPRING
BLACK
RED
TO 22
ON MAIN PCB
BATT. CONTACT

(9) ELECTRICAL PARTS LIST

Ref. No.	Description			R/S Part No. Mfr's Part No.
	CAPACITORS SL: 350 – 1000 ppm/ °C			
C1	Not used			
C2	0.0047 μF ±5%	50WV	Polystyren	CC472JJEP
C3	220 μF/6.3V		Electrolytic	CC227MBAP
C4	0.0033 μF	25WV	Ceramic	
C5	0.015 μF ±10%	50WV	Mylar	CC153KJMP
C6	1 μF/50V		Electrolytic	CC105MJAP
C7	0.0027 μF ±10%	50WV	Mylar	CC272KJMP
C8	0.022 μF ±10%	50WV	Mylar	CC223KJMP
C9	47 pF ±5%	50WV SL	Ceramic	CF-7342
C10	10 pF ±1 pF	50WV SL	Ceramic	CF-7341
C11	4.7 μF/50V		Electrolytic	CC475MJAP
C12	2.2 μF/50V		Electrolytic	CC225MJAP
C13	0.01 μF ±10%	50WV	Mylar	CC103KJMP
C14	1 μF/50V		Electrolytic	CC105MJAP
C15	0.001 μF ±10%	50WV	Mylar	CC102KJMP
C16	1 μF/50V		Electrolytic	CC105MJAP
C17	10 μF/25V		Electrolytic	CC106MFAP
C18	0.0047 μF ±10%	50WV	Mylar	CC472KJMP
C19	100 μF/10V		Electrolytic	CC107MCAP
C20	22 μF/16V		Electrolytic	CC226MDAP
C21	47 μF/10V		Electrolytic	CC476MCAP
C22	47 μF/10V		Electrolytic	CC476MCAP
C23	1 μF/50V		Electrolytic	CC105MJAP
C24	Not used			
C25	470 μF/6.3V		Electrolytic	CC477MBAP
C26	0.1 μF ±10%	50WV	Mylar	CC104KJMP
C27	0.0047 μF ± 10%	50WV	Mylar	CC472KJMP
C28	2200 μF/10V		Electrolytic	CC228MCAP
C29	0.0047 μF ±10%	50WV	Mylar	CC472KJMP
C30	0.0022 μF ±10%	50WV	Mylar	CC222KJMP
C31	2200 μF/10V		Electrolytic	CC228MCAP
C32	0.0022 μF	25WV	Ceramic	
C33	1 μF/50V		Electrolytic	CC105MJAP
C34	0.0022 μF ±10%		Mylar	CC222KJMP
C35	0.001 μF ±10%	50WV	Mylar	CC102KJMP
C36	1 μF/50V		Electrolytic	CC105MJAP
C37	4.7 μF/50V		Electrolytic	CC475MJAP
C38	10 μF/25V		Electrolytic	CC106MFAP

Ref. No.	Description		R/S Part No.	Mfr's Part No.
	DIODES			
D1	RD4.7EB2	Zener	DX-1248	KEC
D2	KLR124E	LED	L-1417	
D3-5	KDS1555	Silicon	DX-1394	KEC
D6-7	1N4002	Silicon	DX-0206	KEC

Ref. No.	Description	R/S Part No.	Mfr's Part No.
	INTERGRATED CIRCUIT		
IC-1	μPC1350C	MX-3850	NEC
	TRANSISTORS		
Q1-2	KTC-1815 (GR)	MX-5156	KEC
Q3-4	KTC-1815 (Y)	MX-4360	KEC
Q5	KTC1815 (GR)	MX-5156	KEC

Ref. No.	Description	R/S Part No. Mfr's Part No.
	RESISTORS PZ: Axial Type	
R1	Not used	
R2	Not used	
R3	820K ohm ¼W PZ Carbon	NO440EEC
R4	1K ohm ¼W PZ Carbon	NO196EEC
R5	51K ohm ¼W PZ Carbon	NO344EEC
R6	300 ohm Semi Fixed	P-6736 (175204850A)
R7	15K ohm ¼W PZ Carbon	NO297EEC
R8	10 ohm ¼W PZ Carbon	NO063EEC
R9	22K ohm ¼W PZ Carbon	NO311EEC
R10	39K ohm ¼W PZ Carbon	NO330EEC
R11	560 ohm ¼W PZ Carbon	NO176EEC
R12	39K ohm ¼W PZ Carbon	NO330EEC
R13	3.3K ohm ¼W PZ carbon	NO230EEC
R14	33K ohm ¼W PZ Carbon	NO324EEC
R15	100 ohm ¼W PZ Carbon	NO132EEC
R16	560 ohm ¼W PZ Carbon	NO176EEC
R17	15K ohm ¼W PZ Carbon	NO297EEC
R18	100K ohm ¼W PZ Carbon	NO371EEC
R19	4.7K ohm ¼W PZ Carbon	NO241EEC
R20	2.2K ohm ¼W PZ Carbon	NO216EEC
R21	10K ohm ¼W PZ Carbon	NO281EEC
R22	120 ohm ¼W PZ Carbon	NO136EEC
R23	68K ohm ¼W PZ Carbon	NO354EEC
R24	39K ohm ¼W PZ Carbon	NO330EEC
R25	100 ohm ¼W PZ Carbon	NO132EEC
R26	4.7K ohm ¼W PZ Carbon	NO241EEC
R27	470K ohm ¼W PZ Carbon	NO423EEC
R28	18K ohm ¼W PZ Carbon	NO303EEC
R29	150 ohm ¼W PZ Carbon	NO142EEC
R30	Not used	
R31	100K ohm ¼W PZ Carbon	NO371EEC
R32	33K ohm ¼W PZ Carbon	NO324EEC
R33	10K ohm ¼W PZ Carbon	NO281EEC
R34	10K ohm ¼W PZ Carbon	NO281EEC
R35	10K ohm ¼W PZ Carbon	NO281EEC
R36	18K ohm ¼W PZ Carbon	NO303EEC
R37	18K ohm ¼W PZ Carbon	NO303EEC
R38	1K ohm ¼W PZ Carbon	

Ref. No.	Description	R/S Part No.	Mfr's Part No.
	SWITCHES		
S1a-f	6-2 R/P Slide Switch	S-2776	183105491A
S2	Leaf Switch		MSW1230NBK
S3	Leaf Switch	S-8266	185010010A
	TRANSFORMERS		
T1	Power Transformer 120V 60 Hz (For U.S.A./ A1: 120V Area)	TA-0979	10100829MA or 10100890WA or 10100894KA
T1	Power Transformer 120V 60 Hz (For Canada)		10100829MA or 10100891WA or 10100895KA
T1	Power Transformer 230V 50 Hz (For Belgium/ U.K./A2: 220V Area)		10100830MA or 10100892WA or 10100896KA
T1	Power Transformer 240V 50 Hz (For Australia)		10100831MA or 10100893WA or 10100897KA
T1	Power Transformer 100V 50 Hz (For Japan)		10101035KA or 10101036WA
T2	OSC Coil 230	CA-5837	124002300A

Ref. No.	Description	R/S Part No.	Mfr's Part No.
	VARIABLE RESISTORS		
VR1	VOLUME 10K ohm (B)	P-7287	171004220A
	JACKS		
MIC/EAR	HSJ0707-01-010	J-1266	191203110A
AUX			
REM	HSJ0289-01-050	J-1287	191400680A
EXT	HEC0721-01-020 (For DC)	J-1288	196204340A
	MOTOR		
Motor	M9S60T24	M-4676	582100180A

(10) EXPLODED VIEW PARTS LIST

Ref. No.	Description	R/S Part No.	Mfr's Part No.
1-2	Cassette Door Ass'y	DA-0390	
	1 Cassette Door		603608860A
	2 Door Plate		711910010A
3-11	Top Cabinet Ass'y		
	3 Top Cabinet		601210160A
	4 Plate	RT-4275	711310030A
	5 Cassette Mirror	HC-1610	919303950A
	6 Speaker Net		851310060A
	7 Speaker	SP-5020	271001150A
	8 Not used		
	9 Cushion		851003140A
	10 Spacer (C)		852002590A
	11 Voltage Plate (For Canada)		718010610A
	11 Voltage Plate (For Belgium/ U.K./A2: 220V Area)		718010620A
	11 Voltage Plate (For Australia)		71810630A
	11 Voltage Plate (For Japan)		71810790A

Ref. No.	Description	R/S Part No.	Mfr's Part No.
12	Handle	H-6312	714002400A
13	Door Spring		434604910B
14	Mechanism Ass'y		900400000A
15	Push Button Spring		900200780A
16	Push Button (REW/FF/EJECT/ PAUSE)	K-5050	659110100A
17	Push Button (PLAY-Gray)	K-5052	659110090A
18	Push Button (RECORD-Red)	K-5051	659105540A
19	Push Button Lever Shaft		900200770A
20	VOLUME Knob	K-5049	651110020A
21	Jack Board	HC-1609	604010040A
22	P.C.B. UNIT		U-21020
	22A Main P.C.B.		
	22B LED P.C.B.		
	22C Switching P.C.B.		

Ref. No.	Description	R/S Part No.	Mfr's Part No.
23	AC Socket (For U.S.A./Canada/ A1: 120V Area)	J-4802	196103250A
23	AC Socket (For Belgium/U.K./ Australia/ A2: 220V Area)		196103260A
24	COVER 335(For U.S.A./Canada)	HC-1602	482303350A
25-27	Battery Cover Ass'y		
	25 Battery Cover	DB-0467	602108870A
	26 Cushion		851003090A
	27 Battery Cushion		851002530A
28-31	Bottom Cabinet Ass'y		
	28 Battery Spring		434101780A
	29 Battery Contact		198101350A
	30 Bottom Cabinet		601310130A
	31 Name Plate (For U.S.A./A1)		718010590A
	31 Name Plate (For Canada)		718010560A
	31 Name Plate (For U.K./ Belgium/A2)		718010570A
	31 Name Plate (For Australia)		718010580A
	31 Name Plate (For Japan)		718010800A

Ref. No.	Description		R/S Part No.	Mfr's Part No.
32	Shield Sheet		HC-1601	473310100A
33	Stud			4611050B
F1	Plax Screw	3 x 6PT		
F2	Plax Screw	2.3 x 6PT		
F3	E Ring	3.2E		
F4	Plax Screw	3 x 10PT		
F5	Screw	2.6 x 6B		
F6	Screw	2.6 x 6P		
F7	Lug			HAL-#10030A
F8	Toothed Washer	2.6TW-B		

(11) MECHANISM ASS'Y PARTS LIST

Ref. No.	Description	R/S Part No.	Mfr's Part No.
1	Chassis Ass'y		1700 01 012
2	Pack Spring	RB-7537	1510 01 08
3	Rec Safety Lever	HC-1603	1510 02 01
4	Rec Safety Lever Spring	RB-7538	1510 02 03
5-7	Not used		
8	Head Panel	RT-4253	1700 03 14
9	Head Base (H)	RT-4254	1510 03 02
10	RC Spring	RB-7539	1700 03 07
11	Head Spring	RB-7540	40 04 01
12	Take-Up Roller Ass'y	RA-1512	1700 03 91
13	Take-Up Roller Spring	RB-7541	1700 03 08
14-16	Not used		
17	Pinch Roller Ass'y	RA-1513	1510 04 91
18	Pinch Roller Arm Sleeve	RA-1514	1510 04 03
19	Pinch Roller Spring	RB-7542	1700 04 02
20	PLAY/RECORD Head	H-4491	583000090A
21	Erase Head	H-4482	583100100A
22	Sensing Plate	HC-1604	1700 03 13
23	Sensing Cap	HC-1605	1200 11 07
24	Reel Rest Ass'y	RA-1515	1700 05 81
25	Take-Up Reel Ass'y	RA-1516	1700 05 98
26	Back Tension Spring	RB-7543	1330 13 03
27-29	Not used		
30	Supply Reel Ass'y	RA-1517	1700 05 202
31	FF Idler Arm Ass'y	RA-1518	1700 05 82
32	Center Gear	RA-0432	1700 05 16
33	FF Gear Plate Spring	RB-7544	1700 05 12

Ref. No.	Description	R/S Part No.	Mfr's Part No.
34	Main Plate	RT-4255	1700 05 30
35	Main Plate Spring	RB-7545	1700 05 13
36-38	Not used		
39	RF Clutch Ass'y	RA-0433	1700 06 92
40	RF Clutch Arm Spring	RB-7546	1700 06 05
41	REW Spring	RB-7547	1700 05 05
42	Flywheel Plate	RT-4256	1200 09 06
43	Flywheel Holder	RA-3382	1510 07 01
44	Flywheel Capstan	RA-7165	1510 07 02
45	Thrust Spring	RB-7548	1700 07 01
46-48	Not used		
49	Button Base	RT-4257	1700 09 01
50	RECORD Button Lever Ass'y	RA-0434	1700 09 117
51	FF Actuator Spring	RB-7549	878 08 03
52	Leaf Spring	RB-7550	1700 02 01
53	PLAY Button Lever Ass'y	RA-0435	1700 09 118
54	PLAY Button Lever Spring	RB-7551	1700 09 32
55	FF Button Lever Ass'y	RT-4258	1700 09 119
56	REWIND Button Lever Ass'y	RT-4259	1700 09 120
57	Button Lever Spring	RB-7552	1700 09 33
58	Stop Button Lever (H)	RT-4260	1700 09 62
59	PAUSE Button Lever Ass'y	RT-4261	1700 09 121
60	PAUSE Lever	RT-4262	1222 17 02
61	PAUSE Lever Spring	RB-7553	1323 17 01
62	PAUSE Button Lever Spring	RB-7554	1700 09 34
63	PAUSE Lever Stopper	RT-4263	1700 09 35
64	Push Button Actuator Ass'y	RT-4264	1700 09 87S

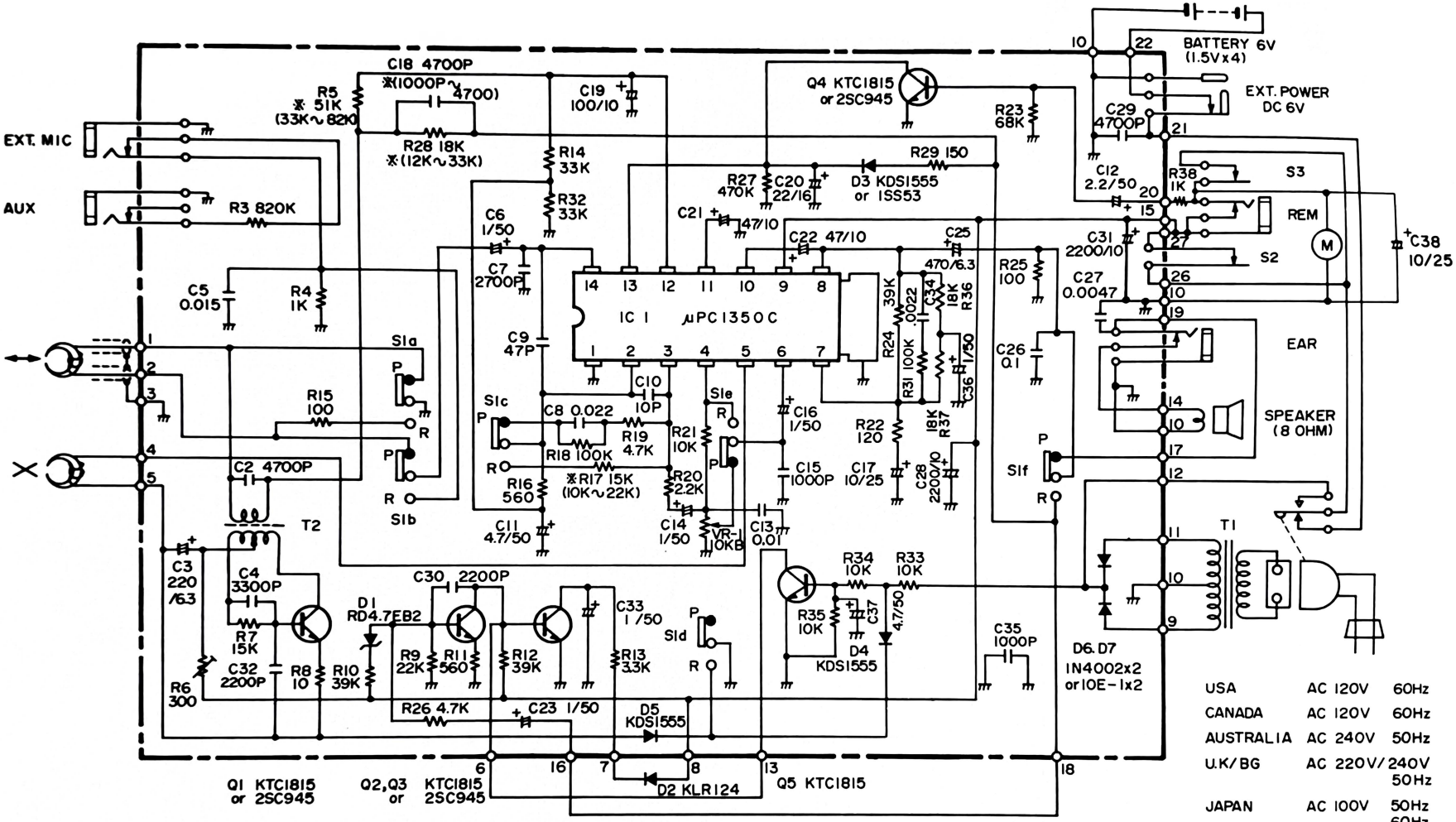
Ref. No.	Description	R/S Part No.	Mfr's Part No.
65	Push Button Actuator Spring	RB-7555	1700 09 36
66	Actuator Shaft	RT-4265	1700 09 20
67	Not used		
68	Sub Actuator	RT-4266	1700 09 65
69	Sub Actuator Spring	RB-7556	1510 09 38
70	Not used		
71	Motor	M-4676	582100180A
72	Motor Pulley (L)	RA-0436	973 12 02L
73	Motor Bracket	HC-1606	1700 10 12
74	Main Belt	B-6563	1464 12 02
75	Motor Rubber	HC-1607	588 09 10
76	Collar Screw (S)		1200 12 01
77-79	Not used		
80	EJECT Slide Lever	RT-4267	1510 11 01
81	Not used		
82	EJECT Screw	RT-4268	1700 11 11
83	Head Panel Screw (A)		1700 03 10
84	Not used		
85	Arm Lever		1700 12 01
86	Arm Lever Screw		1700 12 02
87	Short Switch	S-5091	MSW-1230NBK
88	RC Kick Lever	RT-4269	1510 14 02
89	Center Lever	RT-4270	1700 14 07
90	Arm Lever (B)	RT-4271	1700 14 06
91	Arm Lever Screw		1700 12 02
92	Mini Counter	D-2120	556001360A
93	Counter Bracket	RT-4272	1700 13 04
94	Belt	B-6564	393 12 02
95	V Roller	RA-0437	260 01 08
96	EJECT Lever	RT-4273	1700 11 28
97	EJECT Kick Lever Coller	RT-4274	1510 11 05
98	EJECT Kick Lever Spring	RB-7557	1510 11 09
99	Not used		

Ref. No.	Description		R/S Part No.	Mfr's Part No.
100	Screw	2 x 4		
101	TAMS Screw	2.6 x 4		
102	Screw	M2 x 5		
103	±Screw	M2 x 7		
104	DEL TITE Screw	3 x 6BT-III		
105	Not used			
106	Tapping Screw	M2.6 x 4		
107	Tapping Screw C	M2.6 x 5		
108	Tapping Screw P	M2.6 x 14		
109	Tapping Screw	M2.6 x 6		
110	E Ring	1.5ϕ		
111	Poly Slider Washer	2.1 x 5 x 0.4t		
112	E Ring	2.3ϕ		
113/114	Not used			
115	Nylon Washer	1.8 x 5 x 0.5t		03 15 03
116/117	Not used			
118	Nylon Washer	2.05 x 4 x 0.5t		1510 08 13
119/120	Not used			
121	Poly Slider Washer	1.2 x 3 x 0.25t		1200 15 03
122	Poly Slider Washer	1.6 x 3.8 x 0.3t		1610 06 04

MISCELLANEOUS PARTS LIST

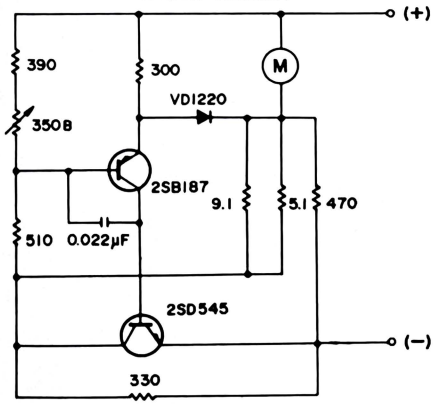
Ref. No.	Description	R/S Part No.	Mfr's Part No.
	Patch Cord		313510050A or 313510010A
	AC Cord Set (U.S.A./Canada/A1: 120V Area)		311001290A or 311001300A or 311001660A
	AC Cord Set: with Tag (7341069404) (Belgium/U.K.)		311001310A
	AC Cord Set (A2: 220V Area)		311001310A
	AC Cord Set (Australia)		311001320A
	AC Cord Set (Japan)		311010110A

(12) SCHEMATIC DIAGRAM



USA	AC 120V	60Hz
CANADA	AC 120V	60Hz
AUSTRALIA	AC 240V	50Hz
U.K/BG	AC 220V/240V	50Hz
JAPAN	AC 100V	50Hz 60Hz

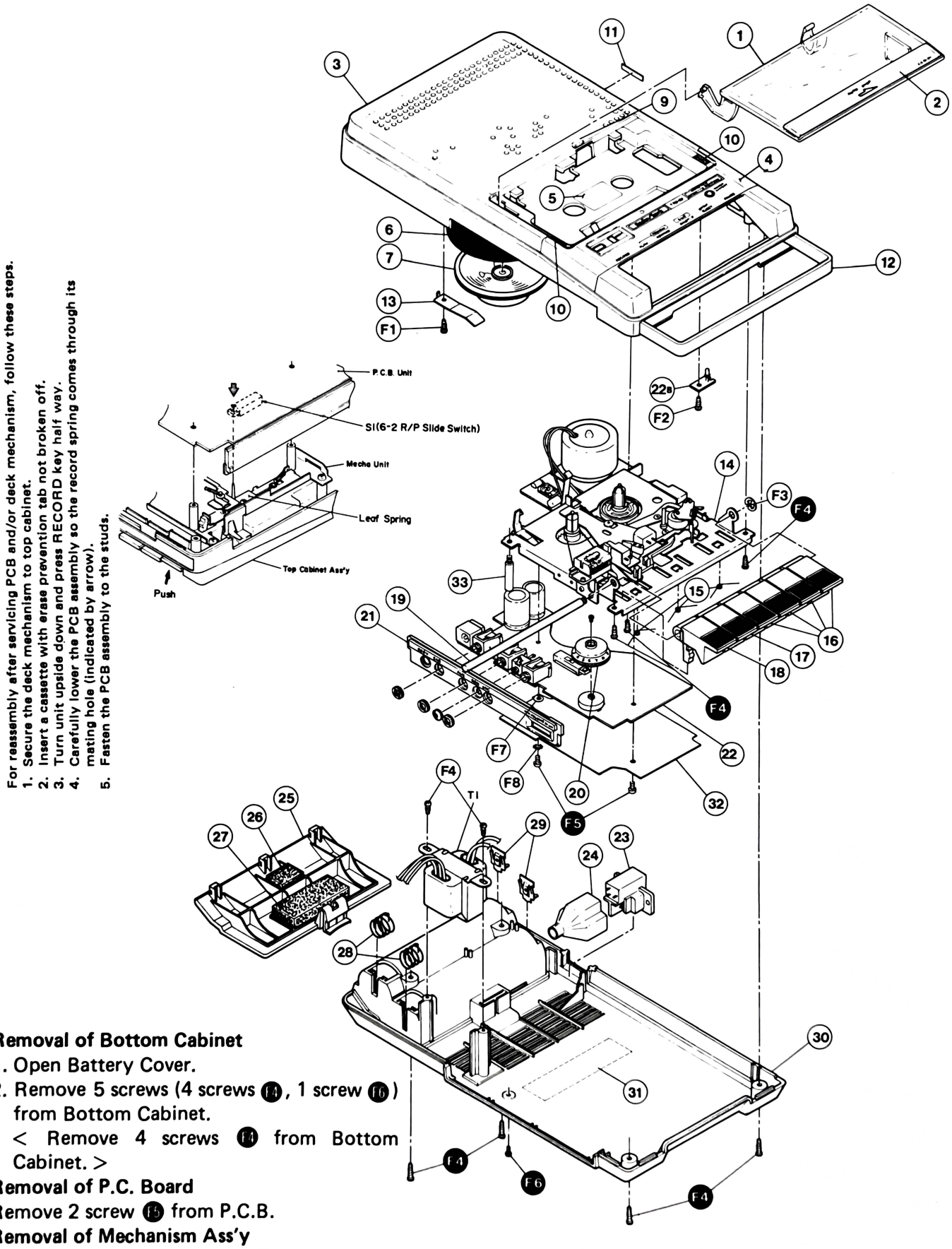
GOVERNOR CIRCUIT



NOTES

(1) SWITCH (S1a ~ S1f) SHOWN IN (P) PLAY POSITION.
(2) ALL RESISTANCE VALUES ARE INDICATED IN "OHM" ($K = 10^3$ OHM)
(3) ALL CAPACITANCE VALUES ARE INDICATED IN "μF" ($P = 10^{-6}$ μF)
(4) SWITCH S2 IS TURN ON AT PLAY AND RECORD POSITION
(5) SWITCH S3 IS TURN ON AT FF AND RW. POSITION

(13) EXPLODED VIEW/ DISASSEMBLY INSTRUCTION



For reassembly after servicing PCB and/or deck mechanism, follow these steps.

1. **Secure the deck mechanism to top cabinet.**
2. **Insert a cassette with erase prevention tab not broken off.**
3. **Turn unit upside down and press RECORD key half way.**
4. **Carefully lower the PCB assembly so the record spring comes through its mating hole (indicated by arrow).**
5. **Fasten the PCB assembly to the studs.**

A. Removal of Bottom Cabinet

1. Open Battery Cover.
2. Remove 5 screws (4 screws F4, 1 screw F6) from Bottom Cabinet.
   < Remove 4 screws F4 from Bottom Cabinet. >

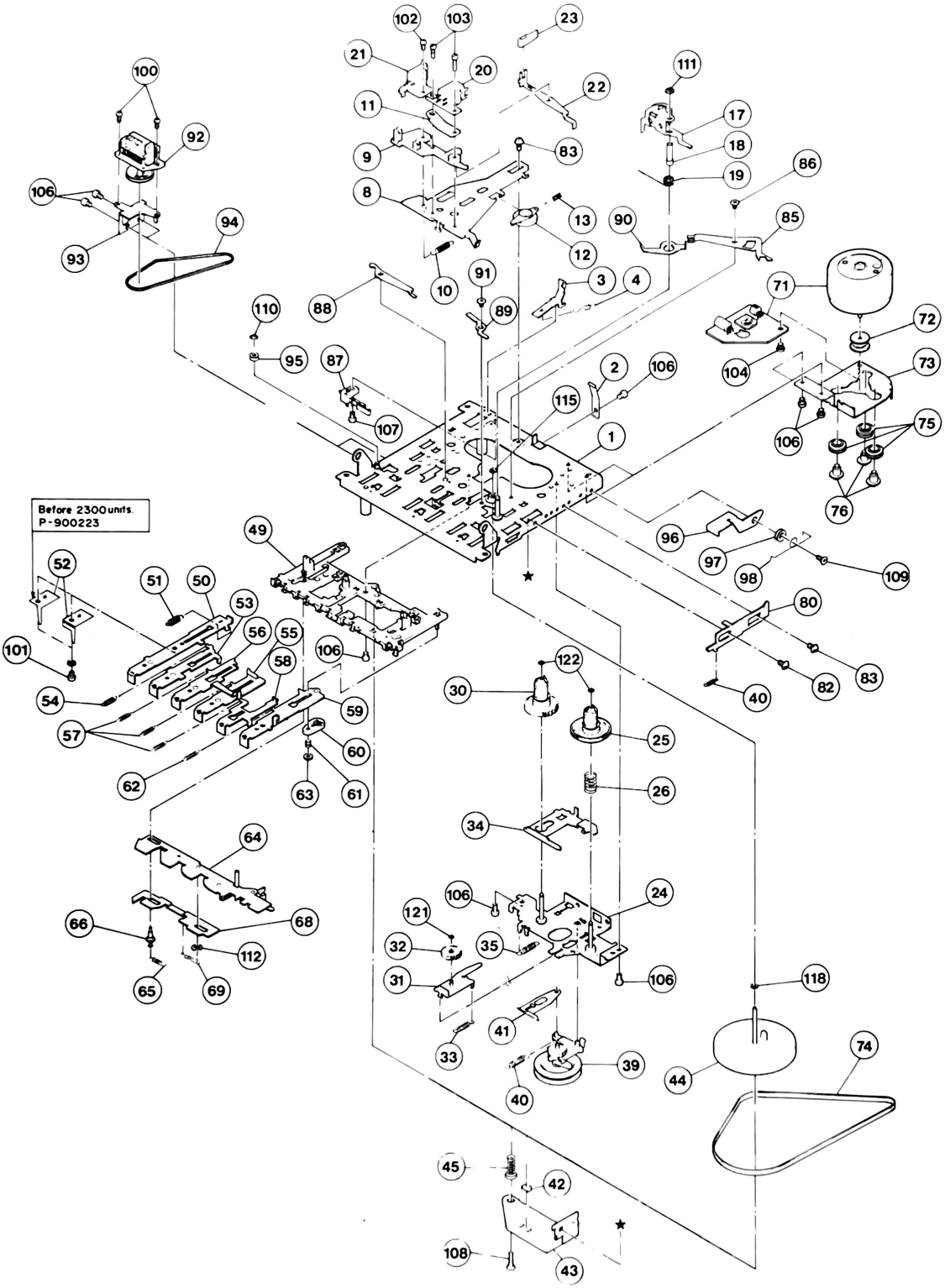
B. Removal of P.C. Board

Remove 2 screw F5 from P.C.B.

C. Removal of Mechanism Ass'y

Remove 3 screws F4 and stud 33 from Chassis Ass'y.

(14) MECHANISM EXPLODED VIEW



RADIO SHACK, A DIVISION OF TANDY CORPORATION

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CANADA: BARRIE, ONTARIO L4M 4W5

TANDY CORPORATION

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