

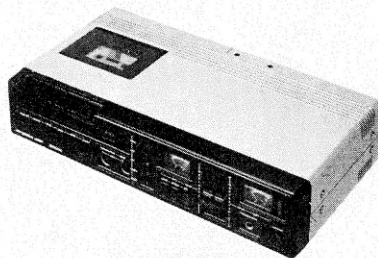


Teleton

SERVICE MANUAL

Stereo Cassette Deck

**MODELS CD-250
CD-250B**



Germany: TELETON Elektro GmbH.
Oberhausener Str. 17 4000 Düsseldorf-Rath
Tel. (0211) 65 30 81 TX 858 6768

United Kingdom: TELETON Electro (UK) Co., Ltd.
Teleton House, Waterhouse Lane,
Chelmsford/Essex
Tel. Chelmsford 62 442 TX 99 338

Technical Service Organization
Waterhouse Lane, Chelmsford, Essex.
Tel. 0245-54621 TX 99338

Belgium: TELETON N.V.
2200 Borgerhout Belgium
Prins-Leopold-Straat 28
Tel. 03/361045 TX32508
03/357670

Netherlands: TELETON NEDERLAND B.V.
Marconiweg 10. Vianen
Tel. 03473-3744 TX 40581

France: TELETON Electro (France) S.à.r.l.
21 rue Paul Lafargue
94270 Le Kremlin-Bicêtre
Tel. 677 6934 TX24 468

Switzerland: TRANSACO AG
Kanzleistrasse 126 8004 Zürich
Tel. 39 45 60/23 50 40 TX 52 362

Specifications are subject to change without notice.

ALIGNMENT PROCEDURE

1. Tape Speed Adjustment

Equipment Required:

- Standard alignment tape of 3 KHz
- Wow & Flutter Meter with Tape Speed Meter
- Amplifier

Procedure:

- Connect the deck and speakers to the amplifier.
- Connect the Wow & Flutter Meter to one of the speakers and playback the standard test tape.
- Adjust *VR on the motor electronic governor circuit to indicate 3 KHz on the center frequency range of the meter.

*This VR is installed inside the motor case.

The VR is covered by a black rubber shroud, but there is a cross-shaped cut in the rubber to allow access to the VR.

2. Head Azimuth Alignment

Equipment Required:

- Standard alignment tape of 10 KHz
- VTVM or Output Meter

Procedure:

- Connect the VTVM or Output Meter to one of the speakers and playback the test tape.
- Adjust the azimuth alignment screw to obtain maximum output voltage on the VTVM or Output Meter.

3. Meter Sensitivity Adjustment

Equipment Required:

- VTVM
- Test Tape: Dolby Level Set Tape

Procedure:

- Connect the VTVM to the Din (Aux) Output (L ch.) terminal and playback the test tape.
- Set Output Control (VR401, 10KΩB) to maximum, and adjust VR103 (50KΩB) to obtain 1V output voltage.
- Adjust VR109 (5KΩB) to indicate +3VU on the VU meter.
- And then adjust R ch. same as L ch.
Adjust Controls VR402, VR104 and VR110.

4. Output VR Level Adjustment

Equipment Required:

- VTVM
- Test Tape: Dolby Level Set Tape

Procedure:

- Connect the VTVM to the Din (Aux) Output (L ch.) terminal and playback the test tape.
- Set Output Control (VR401, 10KΩB) to obtain 350mV output voltage.
- And then adjust VR402 same as VR401.

5. Record Bias Adjustment

Equipment Required:

- VTVM

Procedure:

- Connect the VTVM to both sides of R125 (10 ohm) on the printed circuit board for the left channel.
- Set Selector Switch to Record Mode.
- Adjust VR111 (100K ohm -B) to obtain 4.5mV on the VTVM at tape selector chrome position.
- Confirm voltage value to obtain 2.5mV at tape selector normal position.
- Change the connection to the right channel resistor R126 (10 ohm) and adjust VR112 to obtain 4.5mV at tape selector chrome position.
- Confirm voltage value to obtain 2.5mV at tape selector normal position.

6. Record Calibration

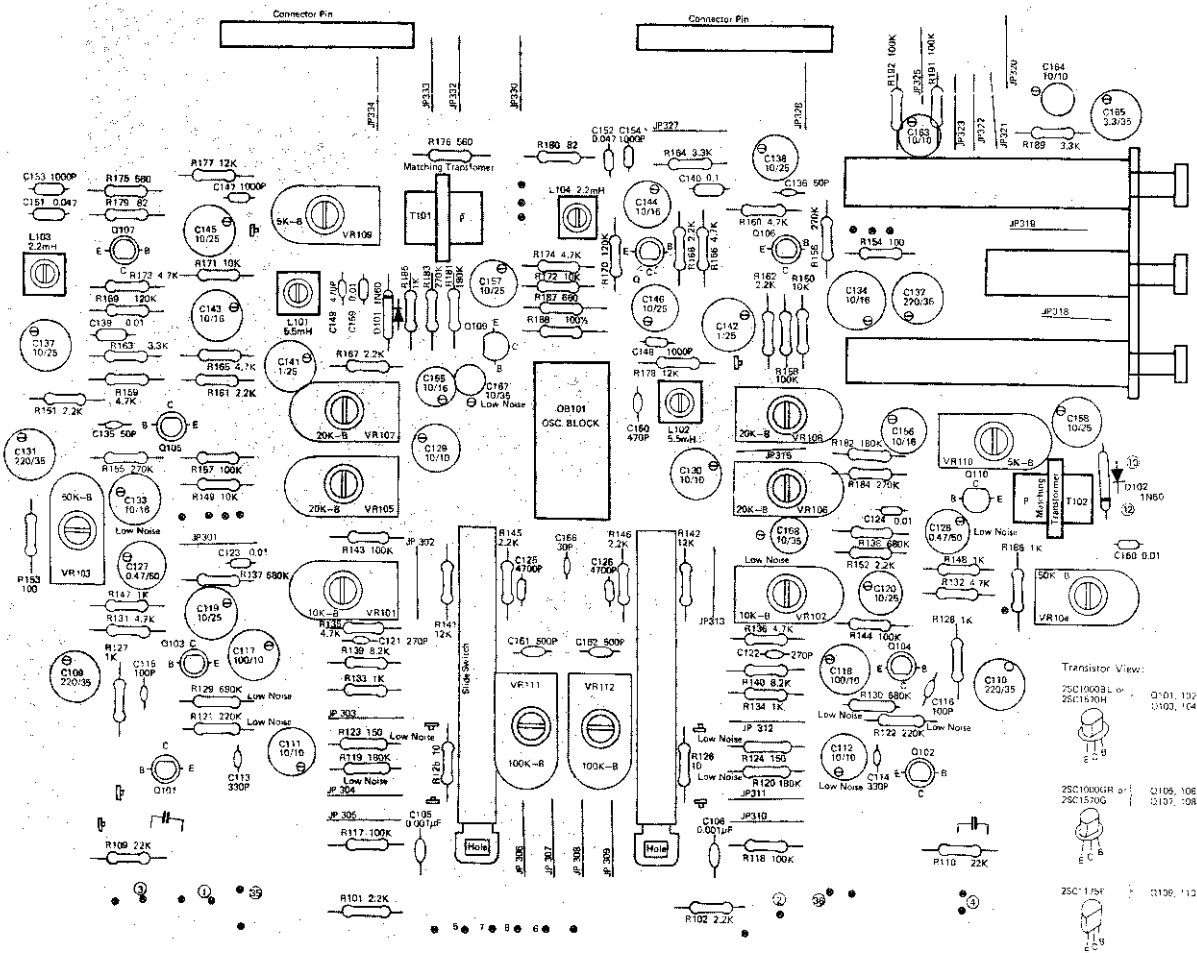
Equipment Required:

- VTVM
- Signal Generator

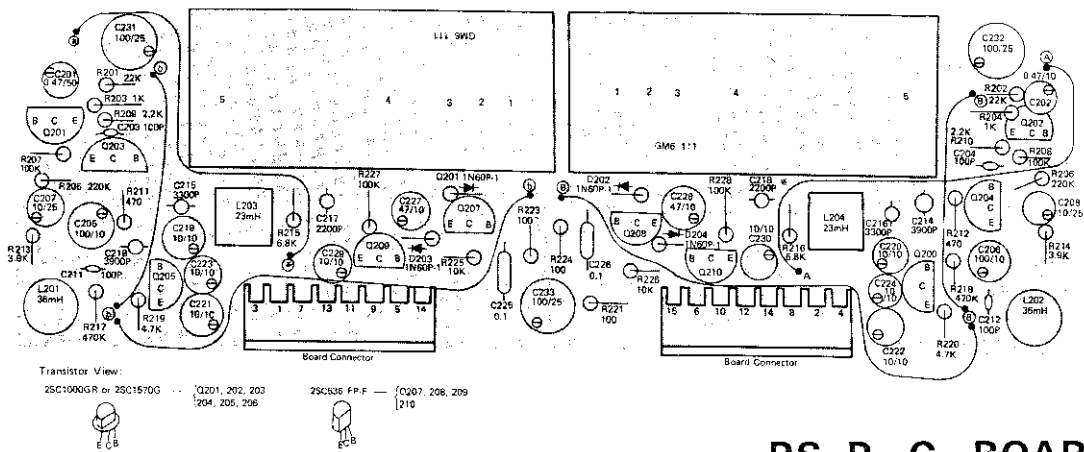
Procedure:

- Connect a source of 400 Hz signal to Din (Aux) input (L+R). With tape selector normal position, record on blank iron-based tape and adjust Record Level control so that meters read OVU.
- Without altering the Record Level control settings, adjust the Fe₂O₃ Rec. cal. VR105, 106 (20K ohm -B) as required and playing back the recorded tape, the meters read OVU.
- Repeat steps 3) and 4) with chrome-based tape (tape selector in the CrO₂ position) using the CrO₂ Rec. cal. VR103, 104 (20K ohm -B).

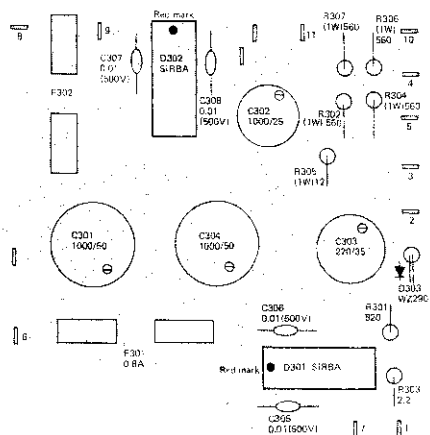
RS P. C. BOARD (RS-250)



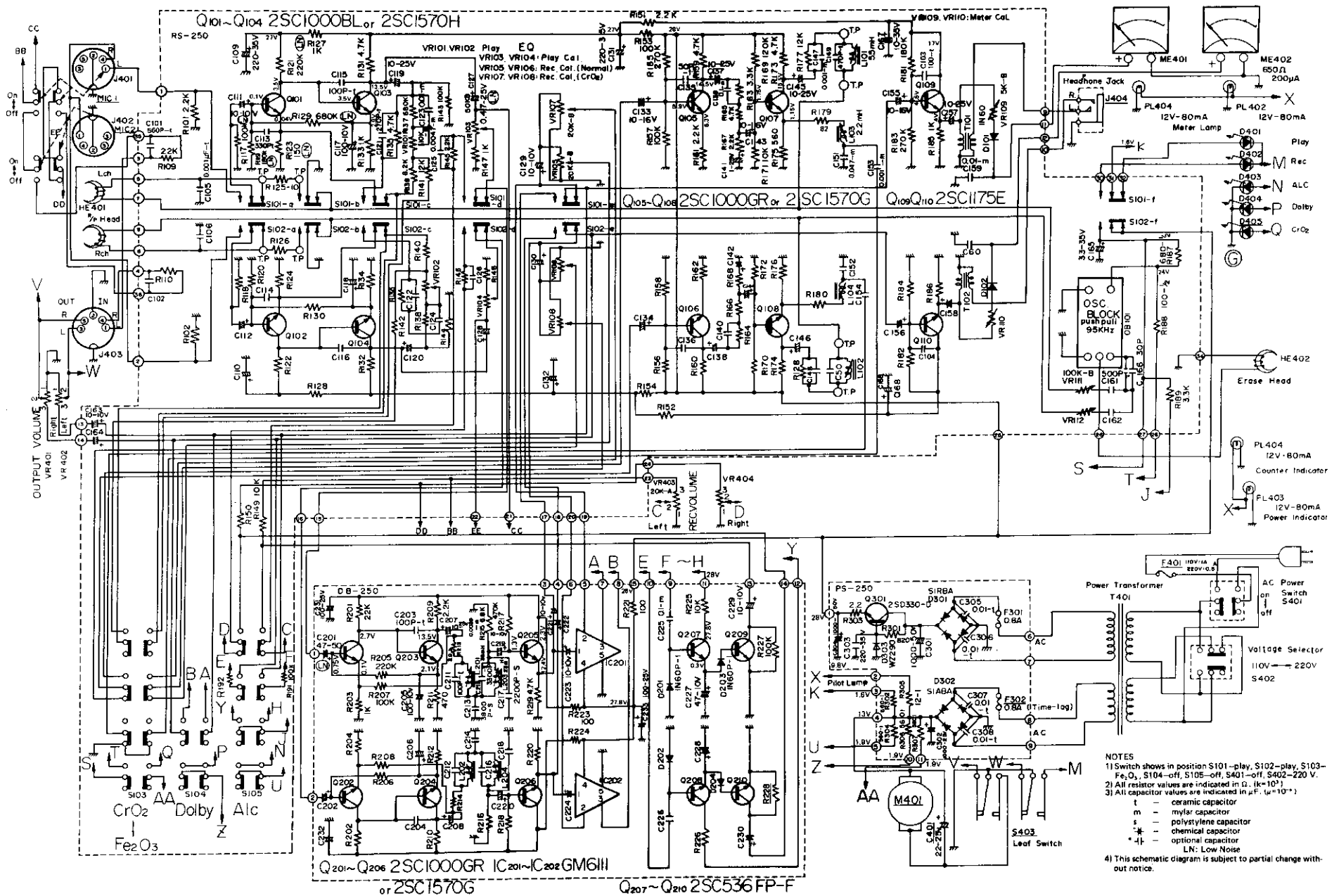
DB P. C. BOARD (DB-250)



PS P. C. BOARD (PS-250)



SCHEMATIC DIAGRAM



- NOTES**
- 1) Switch shows in position S101-play, S102-play, S103-Fe₂O₃, S104-off, S105-off, S401-off, S402-220 V.
 - 2) All resistor values are indicated in Ω. (k=10³)
 - 3) All capacitor values are indicated in μF. (p=10⁻¹²)
- t = ceramic capacitor
 m = mylar capacitor
 p = polystyrene capacitor
 c = chemical capacitor
 + = optional capacitor
 LN: Low Noise
- 4) This schematic diagram is subject to partial change without notice.

PARTS LIST

(Standard Parts as Resistors, Capacitors etc., not listed here.)

REF. NO.	PARTS NO.	DESCRIPTION
Cabinet		
	R840816	Top Cabinet (Silver)
	R840832	Top Cabinet (Black)
	R840817	Bottom Cabinet (Silver)
	R840833	Bottom Cabinet (Black)
	R830595	Leg
	R840815	Front Panel
	R811720	Counter Cover
	R811459	Power Indicator
	R871399	Slide Volume Knob
	R871405A	Push Knob
		Screw Type
		Speed Knut (Used for Rear Cabinet)
Chassis		
T401	R610480	Center Deck
P401	R110202	Power Transformer
	R440126	Power Supply Cord
	R811577	Cord Stopper
S402	R424003	Seesaw Switch
J403	R439011	DIN 5P Jack
VR401, 402	R361213	Rotary Volume
	R434008	Fuse Holder (for 20mm Type)
F401	R412046	Fuse 250V 1A (At AC line 110V)
F401	R412044	Fuse 250V 0.5A (At AC line 220V)
	R610479	Front Deck
	R437012	1P Terminal Chip.
	R676257	Spacer
	R700448	Spring
S401	R429110	AC Power Switch
ME401, 402	R590112	Level Meter
J404	R439083	Headphone Jack
VR403, 404	R361214	Slide Volume
	R530579	LED P.C. Board
D403, 405,		LED Yellow
D404		
D402		LED Red
D401		LED Green
J401 - 404	R439028	DIN 5P Jack with Switch
PL401 - 403	R411153	12V 80mA
PL404	R411154	12V 80mA
	R830589	Lamp Holder
REC/PLAY P.C. Board (RS-250)		
	R530576	R/P P.C. Board
	R436031	P.C. Board Terminal
	R439076	Connector Pin
	R422067	Slide Switch
S101, 102	R162020	Oscillator Block
OB101	R130020	Matching Transformer
T101, 102	R161008	Trap Coil 5.5mH ±20% Variable
L101, 102	R161007	EQ Coil 2.2mH ±20% Variable
L103, 104	R429114	Push Switch
S103, 104, 105	R437011	Lontal Pin
	R382047	Semi-Fixed Variable Resistor 5KΩ B
	R382028	Semi-Fixed Variable Resistor 10KΩ B
	R382036	Semi-Fixed Variable Resistor 20KΩ B
	R382029	Semi-Fixed Variable Resistor 50KΩ B
	R382030	Semi-Fixed Variable Resistor 100KΩ B
Q101, 102		Transistor 2SC1570-H or 2SC1000-B1
Q105, 106,		Transistor 2SC1570-G or 2SC1000-GR
107, 108		
Q109, 110		Transistor 2SC1175E
D101, 102		Diode 1N60
Dolby P.C. Board (DB-250)		
	R530575	DB P.C. Board
L203, 204	R439075	Board Connector
L201, 202	R154094	Filter Coil 23mH ±20% Variable
IC201, 202	R154091	Filter Coil 36mH
Q201, 202, 203,		Dolby Unit GM-6111
204, 205, 206		Transistor 2SC1570-G or 2SC1000-BL
Q207, 208,		Transistor 2SC536-F or 2SC372-GR
209, 210		
Q201, 202		Diode 1N60P-1
203, 204		
Power Supply P.C. Board (PS-250)		
	R530572	PS P.C. Board
	R436031	P.C. Board Terminal
	R434013	Fuse Holder
F301	R412069	Fuse 250V-0.8A
F302	R412070	Fuse 250V-0.8A Time Lag.
D301, 302		Silicon Rectifier SIR BA
D303		Zener Diode WZ29D
Q301		Transistor 2SD330-D
CD-250 Mechanism		
1	200942	Chassis Stake Ass'y
2	402152	Stop Lever Ass'y
3	301153	Rec. Lever Ass'y
4	401154	Rev. Lever Ass'y
5	401155	Play Lever Ass'y
6	401156	FF Lever Ass'y
7	401157	Pause Lever Ass'y
8	401013	Push Lever Guide
9	401026	Pause Operating Plate
10	404109	Spring
11	401024	Pause Lock
12	404105	Pause Lock Spring
13	404107	Spring
14	401014	Brake Operating Plate
15	402070	Operating Plate Guide
16	404320	Spring for Wave Board
17	401033	Pause Lever
18	402070	Operating Plate Guide
19	401021	Rev. Cue Lever
20	404117	Rev. Cue Spring
21	401027	Rev. Operating Plate
22	401023	Brake Arm
23	405122	Rubber Ring
24	404116	Brake Spring
25	401025	Rec. Lock Lever
26	402056	Rec. Lock Shaft
27	404210	Spring for Rec. Lock Lever
28	401022	Lock Lever for Cassette Case
29	402086	Play Lever Push
30	404109	Spring
31	403099	Support
32	402139	Steel Ball, 2φ
33	405122	Rubber Ring
34	401046	Cassette Up Stopper
35	301161	Head Chassis Stake Ass'y

REF. NO.	PARTS NO.	DESCRIPTION
36	401162	Pinch Roller Lever Ass'y
37	404115	Spring
38	402063	Head Adjust Pin
39	404111	Head Adjust Spring
40	R461058	RP Head
41	R461032	E Head
42	401030	Leaf Spring
43	402139	Steel Ball, 2φ
44	186111503	Spring
45	401010	Stop Cam
46	401598	Play Rec. Lock Cam
47	401009	FF Rev. Lock Cam
48	401011	Rev. Cue Cam
49	409132	Mylar Washer for Cam
50	404106	Spring
51	401164	Take Up Idler Arm (A) Ass'y
52	401165	Take Up Idler Arm (B) Ass'y
53	402059	Take Up Idler Bush
54	403096	Take Up Idler (Large)
55	408126	Take Up Clutch
56	403093	Take Up Idler (Small)
57	404112	Take Up Clutch Spring
58	409144	Washer
59	404106	Spring
60	401167	FF Idler Lever Stake
61	403097	Idler
62	3 x 6 x 0.2t	Mylar Washer
63	404106	Spring
64	402086	Play Lever Bush
65	401169	Idler Arm Stake
66	3 x 6 x 0.2t	Mylar Washer
67	403097	Idler
68	404108	Spring
69	401171	Rev. Idler Lever Stake
70	3 x 6 x 0.2t	Mylar Washer
71	403097	Idler
72	404382	Rev. Spring
73	402086	Play Lever Bush
74	401173	Lock Release Arm Stake
75	403101	Lock Release Lever
76	404107	Spring
77	301177	Reel Table Chassis Ass'y
78		E Ring, 5φ
79		Spacer
80	401040	Mylar Washer
81	404464	Spring for Reel Table
82	403090	Wheel
83	408127	Felt Washer
84	401040	Spacer
85		E Ring, 5φ
86	404041	Washer
87	404103	Pressure Spring
88	404041	Washer
89	303095	Motion Pulley
90	408127	Felt Washer
91	303088	Reel Table
92		E Ring, 5φ
93	401040	Spacer
94	409223	Mylar Washer
95	404484	Reel Table Spring
96	403090	Wheel
97	408127	Felt Washer
98	401040	Spacer
99		E Ring, 5φ
100	303088	Reel Table
101	403098	Cap
102	401133	Stopper
103	401636	Slide Plate
104	402086	Play Lever Bush
105	404104	Spring for Slide Plate
106	401178	Motion Lever Ass'y
107	401035	Lod
108	401034	Lod Holder
109	303179	Gear Holder Ass'y
110	306123	Flywheel
111	404129	Fly-wheel Spacer
112	401031	Fly-wheel Retainer
113	409130	Bearing Spacer
114	407125	Bearing
115	401032	Motor Bracket
116	402232	Motor Pulley
117	R480043	DC Motor
118	405118	Fly-wheel Belt
119	405619	Belt, 1.2φ
120	G-48733	Counter Bracket
121	G-48732	Repeating Pulley Holder
122	R644050	Repeating Pulley
123	R590113	Counter
124	405935	Counter Belt A
125	405936	Counter Belt B
126	402187	Button Shaft
127	402064	Cassette Case Shaft
128	R700342	Cassette Up Spring
129	R811722	Cassette Case
130	R652202	Mech. Cover
131	R811723	Cassette Button
132	R652240	Button Shaft Holder
133	R700438	Tape Holder Spring
a		E Ring 2.5φ
b		E Ring 1.5φ
c		E Ring 3φ
d		Pan Headed Screw 2.6 x 3
e		Flat Headed Screw 2.6 x 4
f		Pan Headed Screw 2.6 x 4
g		Pan Headed Screw 2 x 4
h		Pan Headed Screw 2 x 6
i		Pan Headed Screw 2.6 x 5
j		Pan Headed Screw 2.6 x 6
k		Pan Headed Screw 2.6 x 5
l		Pan Headed Screw 3 x 8
m		Flat Washer M3φ x 0.5t
n		Machine Screw of Hexagon Socket Head 2 x 3
o		Pan Headed Screw 3 x 6
p		Pan Headed Screw 3 x 4

CASSETTE MECHANISM

(TOP VIEW)

(BOTTOM VIEW)

