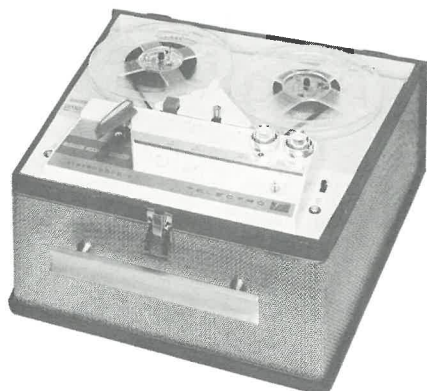




# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>



TRADE NAME : Telectro Model SS-132

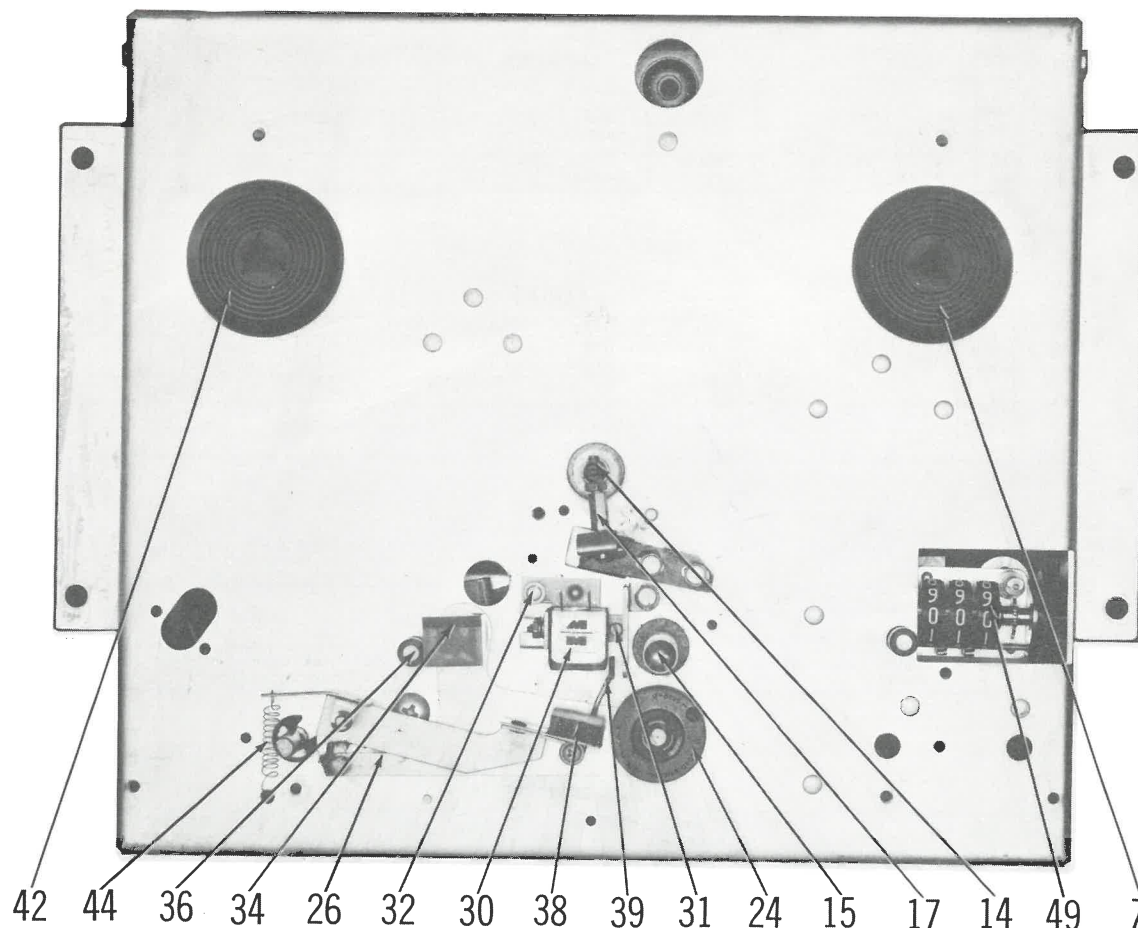
SUPPLIER : Telectro, Div. of Emerson Radio Inc.  
524 W. 23rd St., New York 11, N. Y.

TYPE SET : 2-Speed 4-Track Monaural/Stereo Recorder

POWER SUPPLY : 110 — 120 Volts AC, 60 Cycles

RATING : 55 Watts, .55 Amp. @117VAC

TELECTRO MODEL SS-132



**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

## FUNCTION OF CONTROLS

### Function Control

Idle is neutral, or stationary, tape position. Turn knob to the left for Play. To record, depress Record button and hold while turning function selector knob to the right.

### Wind-Rewind

Before operating Wind-Rewind knob, function selector knob must be placed in Idle position. Turn control to the right for fast wind; to the left for fast rewind.

### Speed Change

For 7 1/2 ips, put speed change control in down position; for 3 3/4 ips, in up position. Do not change speeds unless function selector knob is in Idle position.

### To Record 4-Track Monaural

1. Connect the sound source to input B.
2. Turn volume control A to its minimum position.
3. Turn tone controls to mid-range.
4. Turn selector switch to Stereo Record position.
5. Place Record Level Switch in B position.
6. Adjust recording level with Volume control B.
7. The first track recorded will be track 3. Turning the tape over will record track 2.
8. To record track 1, reverse the reels, set the Selector Switch to Monaural position, change the sound source to Input A, set Volume Control B to minimum position, place Record Level Switch in A position and adjust the Recording Level with Volume Control A.

**NOTE:** Tracks 1 and 4 may be erased and re-recorded without affecting tracks 2 and 3. Tracks 2 and 3 cannot be erased and re-recorded without erasing tracks 2 and 4.

### To Record "Simul-Track"

1. Follow steps 1 through 7 under "To Record 4-Track Monaural".

2. Make the initial recording and rewind the tape. Place the Selector Switch in Monaural position.
3. Move the sound source to Input A, Record Level Switch to A, Tone Control to mid-position, set Function Control to Record, adjust the recording level with Volume Control A, and adjust Volume Control B so the initial recording can be heard faintly.
4. When the "Simul-Track" recording is completed, rewind the tape. Leave the Selector Switch in Monaural position and play back both tracks simultaneously.
5. Two of the four tracks have been used for the first "Simul-Track" recording. To record the remaining two tracks, reverse the reels and repeat.

### Play-Back Monaural

1. Thread the tape.
2. Turn Selector Switch to Monaural.
3. Turn Function Control to Play.
4. Adjust Volume and Tone Controls A as desired.

### Play-Back, Stereo

1. Thread the tape.
2. Turn Selector Switch to Monaural Stereo.
3. Turn Function Control to Play.
4. Adjust Volume and Tone Controls A and B for balanced output.

### Play-Back, Simul-Track

1. Thread the tape.
2. Turn Selector Switch to Monaural.
3. Turn Function Control to Play.
4. Adjust Volume and Tone Controls A and B as desired.

## DISASSEMBLY

### To Remove Recorder from Cabinet

1. Remove all control knobs.
2. Remove the head cover.
3. Remove the top escutcheon.
4. Remove all screws from the bottom and sides of cabinet.
5. Lift recorder and disconnect the speaker leads.

### To Remove Amplifier from Tape Transport

1. Unplug the head leads.
2. Disconnect the motor.
3. Disconnect tension spring from Play-Record Switch.
4. Remove two screws from bottom of amplifier chassis.
5. Lift amplifier from tape transport.

## CLEANING

Use a soft cloth dipped in alcohol to remove tape oxide from pressure roller (24), capstan shaft, and record play head (30).

## LUBRICATION

When unit is disassembled, clean all bearings with a clean soft cloth and apply a thin film of oil on bearing surfaces.

## MECHANICAL ADJUSTMENTS

### Play-Record-Erase Head

The head (30) must be aligned with the tape to prevent low output, loss of high frequencies, or track overlap.

1. Thread an alignment tape onto the recorder.
2. To adjust the head height, loosen screw (31) and slightly raise or lower the head (30). Adjust so the top edge of the tape is even with the top of the head lamination.
3. Play back the high frequency section of the tape and adjust head tilt screw (32) to the left or right to obtain maximum high frequency output.

### Brake Release Bracket

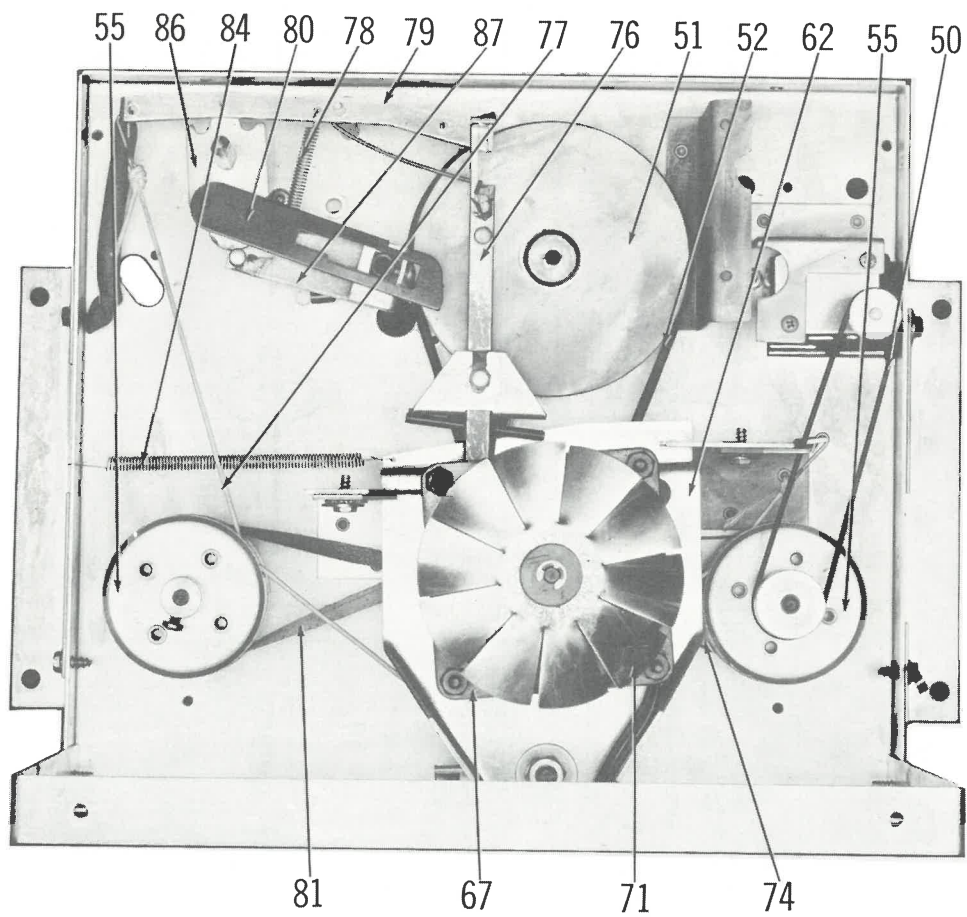
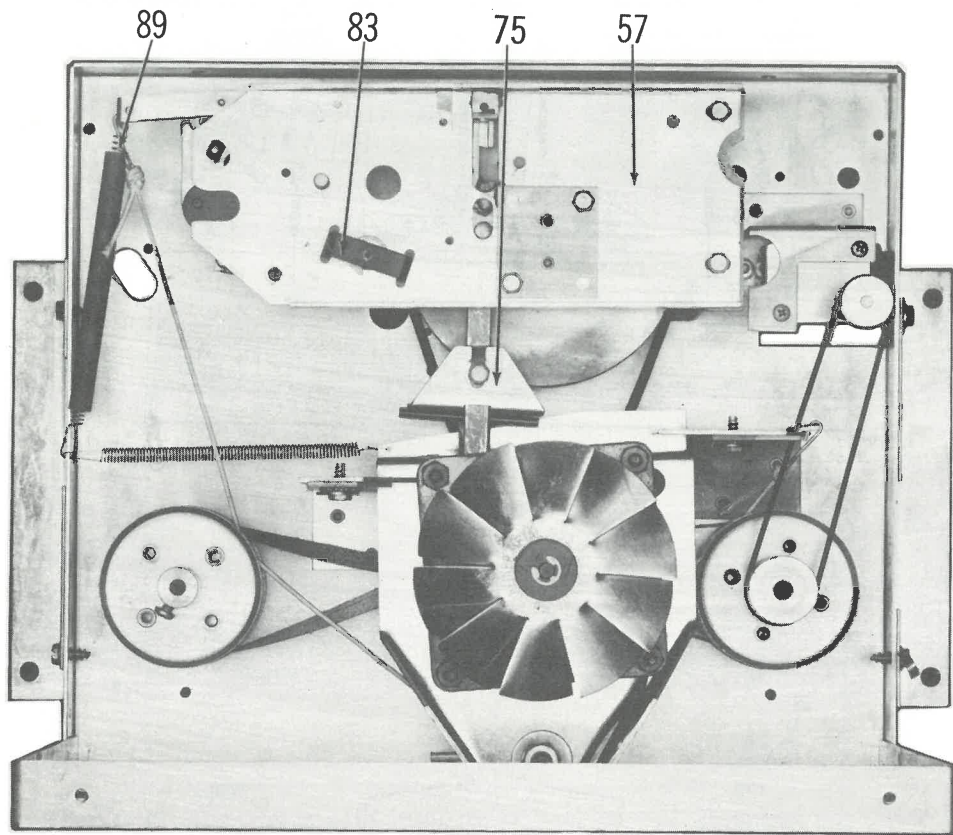
Brake release bracket (75) can be adjusted by loosening screw (75A) and moving bracket forward or backward. When bracket (75) is moved toward the rear of the recorder, wind-rewind lever assembly (14) contacts release bracket (75), giving brake cord (77) more slack. For less slack in brake cord (77), reverse the procedure.

### Spindle End Play

Spindles should have 1/32" to 1/16" up and down movement. Loosen set screw in lower pulley assembly (55) and remove. Loosen set screw in upper pulley assembly (54) and move pulley up or down until the correct distance is obtained. Replace lower pulley assembly and tighten set screw.

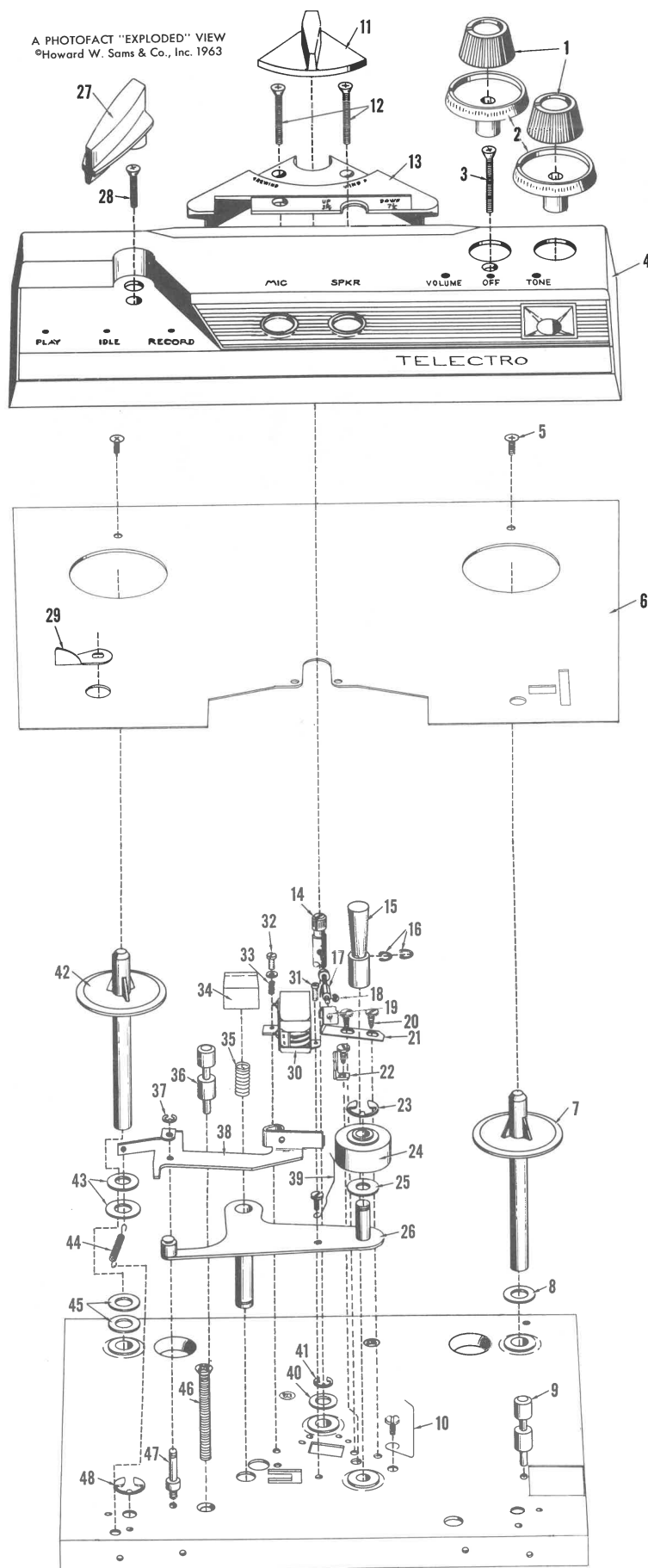
## TROUBLE CHART

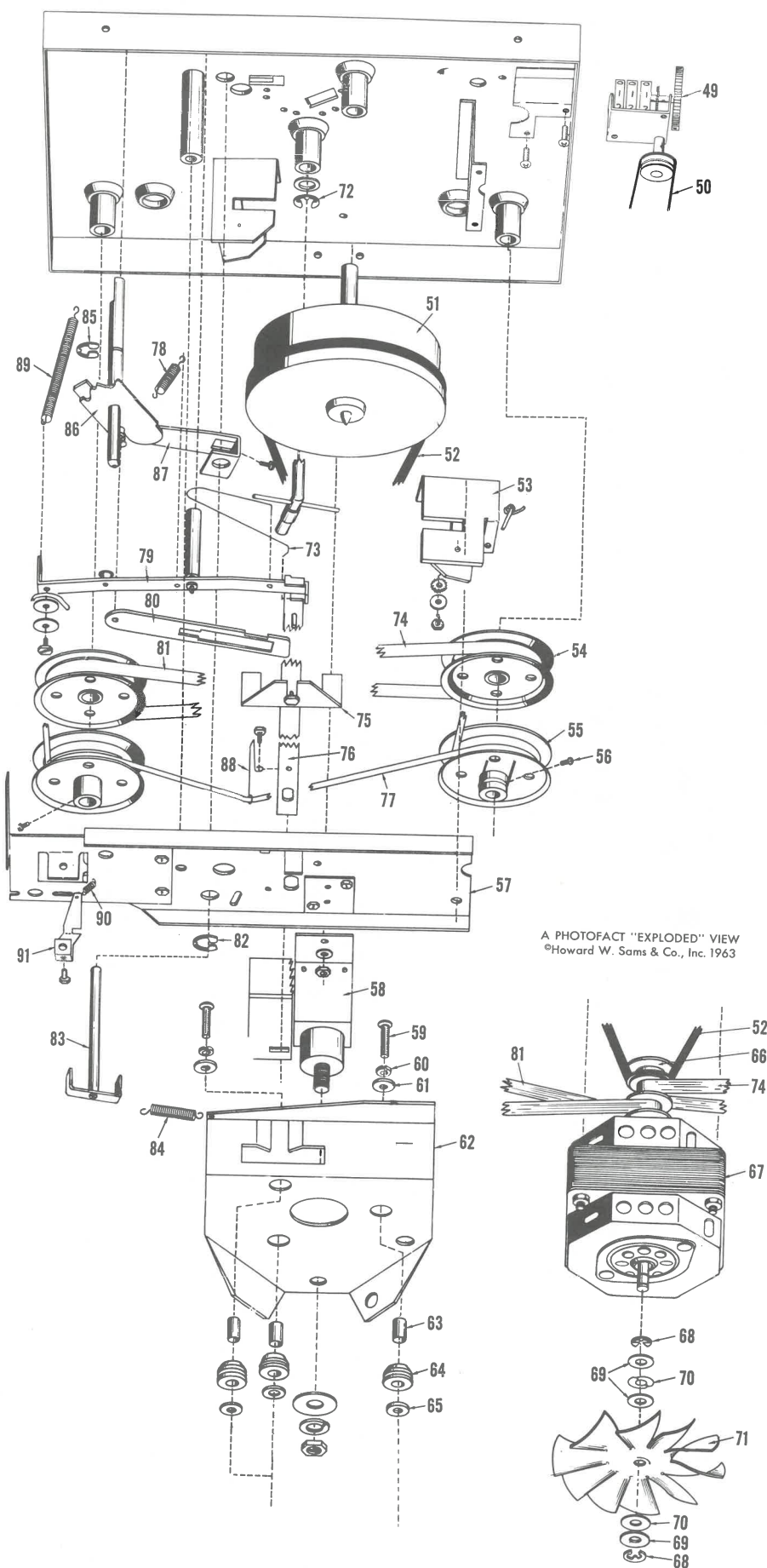
Symptom	Cause	Remedy
Function control does not operate.	1. Brake return spring (73) broken or disconnected.	1. Replace or connect.
No wind or rewind.	1. Drive belt (52), take-up belt (74) or rewind belt (81) worn or broken. 2. Oil or grease on driving surfaces.	1. Replace. 2. Clean with soft cloth and alcohol.
Speed variation or wow.	1. Dirty or oily capstan pressure roller (24), or motor pulley (66).	1. Check for binding.
Fails to erase.	1. Interlock shaft assembly (83) fails to go down far enough to let interlock slide (80) move to one side. Function selector will not go into Record position when this occurs. 2. Erase section of head defective. 3. Defective component in oscillator circuit of amplifier.	1. Check for binding. 2. Replace head (30). 3. Check circuitry per schematic.
No record or playback.	1. Record-playback section of head (30) defective. 2. Defective component in amplifier.	1. Replace head (30). 2. Check circuitry per schematic.
Weak playback or flutter.	1. Head (30) dirty. 2. Drive belt (52) or take-up belt (74) oily.	1. Clean with a soft cloth dipped in alcohol. 2. Clean driving surfaces with alcohol and replace belts.
No drive in record or playback.	1. Drive belt (52) or take-up belt (74) worn or broken. 2. Defective motor (67). 3. Leads fouling fan (71). 4. Flywheel and capstan shaft binding. 5. Take-up spring (84) disconnected or defective.	1. Replace. 2. Replace. 3. Dress leads to miss fan (71). 4. Clean and lubricate flywheel, capstan. 5. Connect or replace.

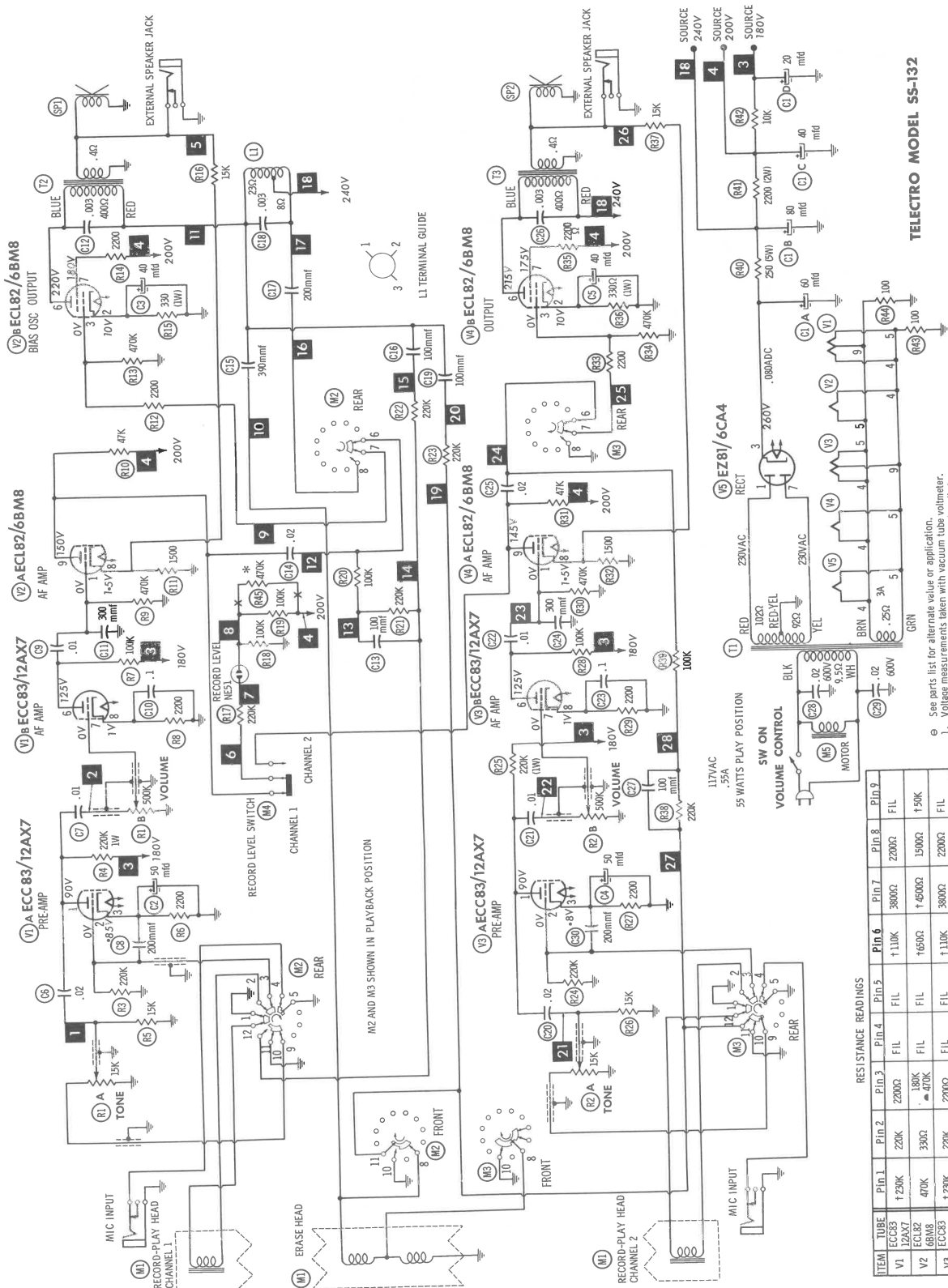




A PHOTOFACT "EXPLODED" VIEW  
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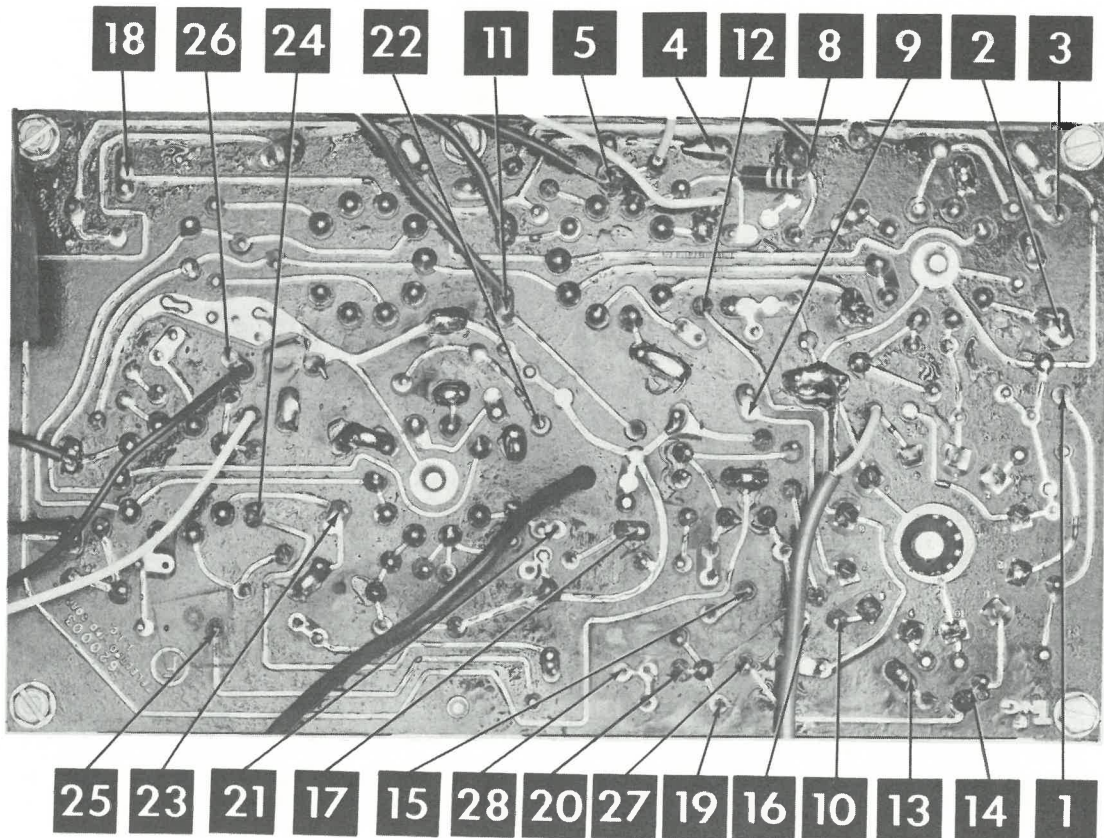
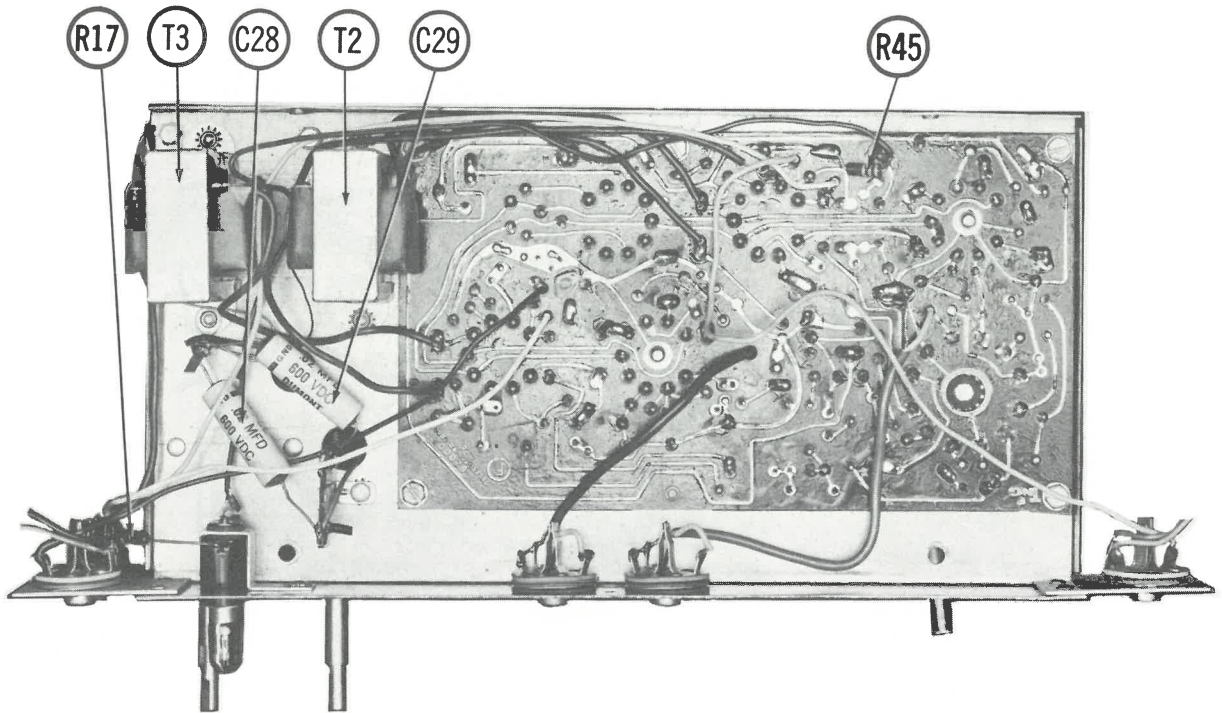


## TELEPHOTO MODEL SS-132

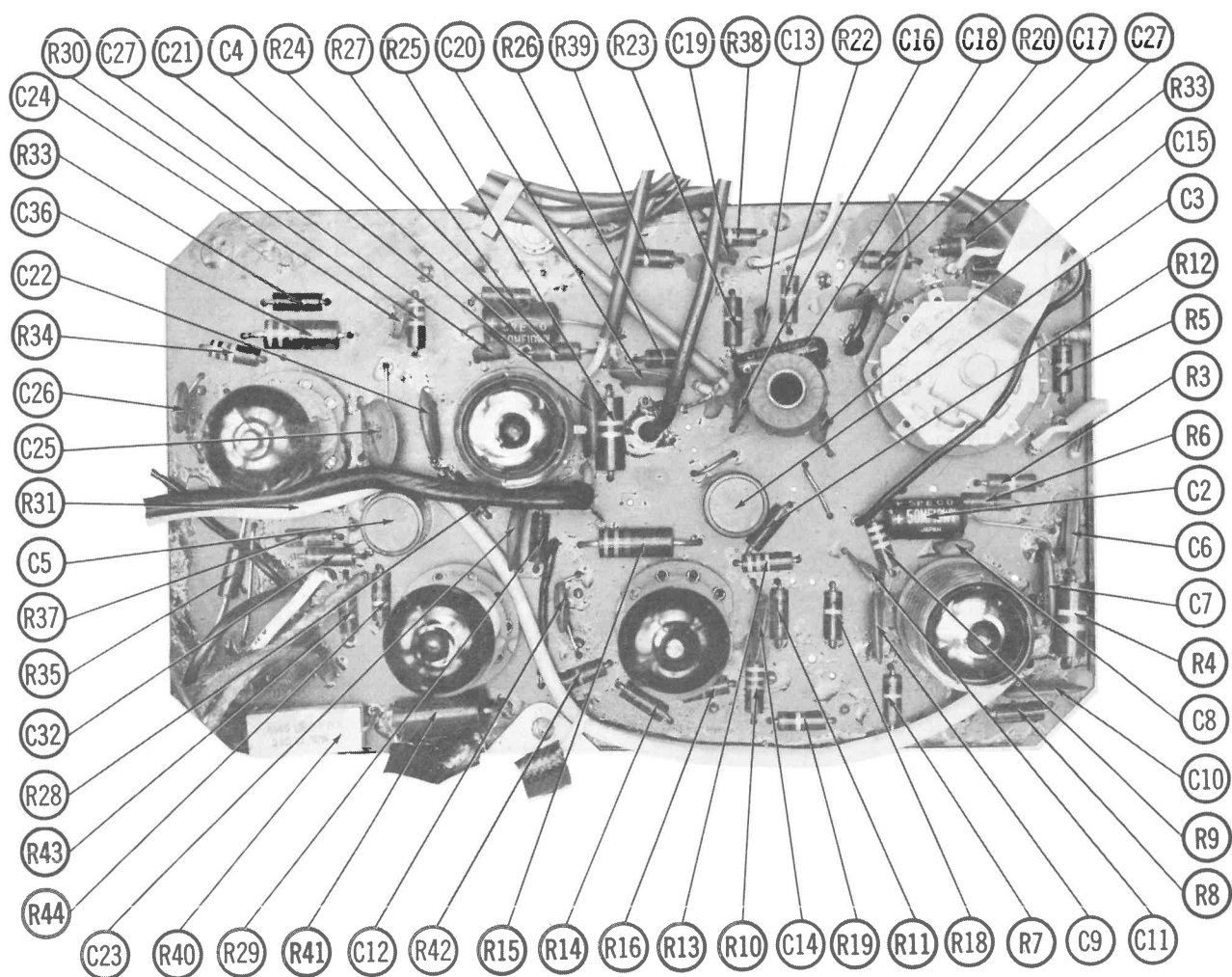
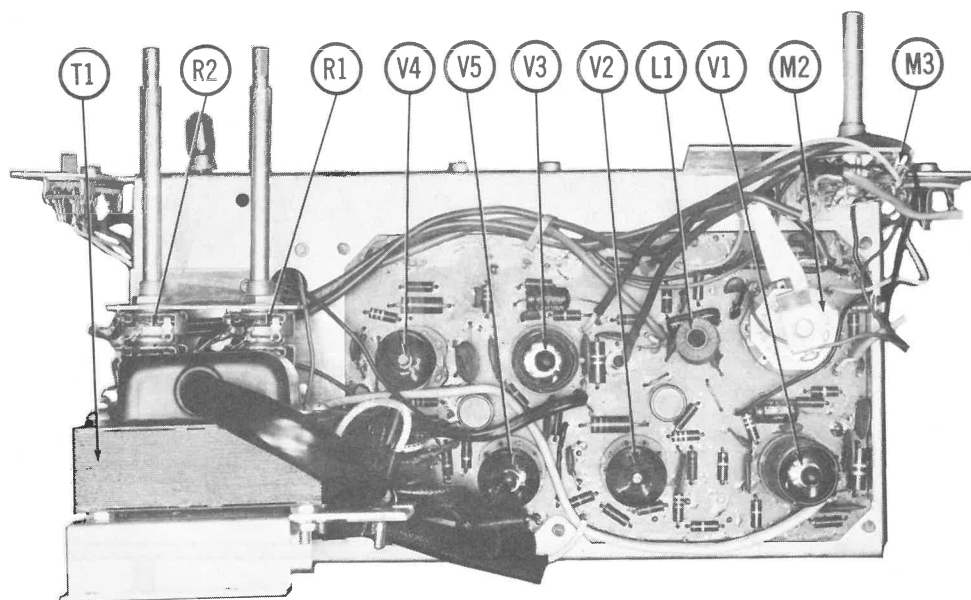
A PHOTOFACT STANDARD NOTATION SCHEMATIC  
with **CIRCUITACE**

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- See parts list for alternate value or application.  
 1. Voltage measurements taken with vacuum tube socket applied.  
 2. All controls set for normal operation, or terminal to common ground.  
 3. Measured values are from socket, or terminal to common ground.  
 4. All terminals viewed to terminals may not be found on the unit.  
 5. Supply ratings maintained at rated value for voltage readings.  
 \*NOT USED IN SOME VERSIONS







PARTS LIST AND DESCRIPTION

WIRING DATA

General-use Unshielded Hook-up Wire .....		Use BELDEN No. 8530 (Solid) Available in 12 Colors
Power Cord .....		8524 (Stranded) Available in 12 Colors
Power Cord (Interlock Type) .....		17006 (Plastic) or 17126 (Rubber) - 6 Ft.
Low-Loss Shielded Lead (Interconnecting) .....		17006 (Plastic) or 17126 (Rubber) - 9 Ft.
Phono Pick-up Arm Cable .....		8874 (Rubber) or 8895 (Plastic)
..... Use BELDEN No. 8401 or 8421		
..... Use BELDEN No. 8430 (Two Conductor-Unshielded)		
..... Use BELDEN No. 8428 (Two Conductor-Shielded)		
..... Use BELDEN No. 8419 (Three Conductor-Shielded)		

TUBES

ITEM No.	AMPEREX	GENERAL ELECTRIC	RCA	RAYTHEON	SYLVANIA	TYPE
V1	Preamp. - AF Amp.	EC83/12AX7				
V2	AF Amp. -Output-Bias Osc.	EC83/6BM8				
V3	Preamp. -AF Amp.	EC83/12AX7				

ELECTROLYTIC CAPACITORS

RATING		REPLACEMENT DATA			
ITEM No.	CAP.	TELETYPE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C1A	60	780003	PR4-450		
B	80				
C	40				
D	20				
C2	50				
C3	40				
C4	50				
C5	40				

FIXED CAPACITORS

RATING		REPLACEMENT DATA			
ITEM No.	CAP.	TELETYPE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C6	.02				
C7	.01				
C8	.001				
C9	.01				
C10	.1				
C11	.003				
C12	.003				
C13	.003				
C14	.02				
C15	.02				
C16	.003				
C17	.003				
C18	.003				
C19	.003				
C20	.02				
C21	.02				
C22	.01				
C23	.1				
C24	.003				
C25	.003				
C26	.003				
C27	.003				
C28	.02				
C29	.02				
C30	.003				

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.		USE	RESISTANCE	TELETYPE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	B	Tone Volume & Switch	15K 500K	560000	F1-15K, R2-500K, RFS307, KR-1	P-15K-S, R-500K-Z, CP-3, FR-307, SWE-12	† QJ-1628R	
R2A	B	Tone Volume	15K 500K	560002	F1-15K, R2-500K, RFS215, RFS307	P-15K-S, R-500K-Z, CP-3, FR-307	* QJ-1630R	

† "CONCENTRIK" Equivalent:

K-6 Kit with base Elements and Shafts, B11-118, P17-300 (Panel) B13-133, R26-312 (Rear) 76-1 (Switch)

(Not available as a factory assembled unit).

"SNAPTROL" Equivalent:

BU5, CF10, SF21, CR20, SR28, GC

\* "CONCENTRIK" Equivalent:

K-6 Kit with base Elements and Shafts, B11-118, P17-300 (Panel) B13-133, R26-312 (Rear)

(Not available as a factory assembled unit).

"SNAPTROL" Equivalent:

BU5, CF10, SF21, CR20, SR28, DC1

RESISTORS (Power and Special)

ITEM No.		RATING	IRC PART No.	WORKMAN PART No.	REMARKS	ITEM No.	RATING	IRC PART No.	WORKMAN PART No.	REMARKS
R40		2500 5W	PW5-250	5W-SQ-250						

COILS

ITEM No.		USE	TELETYPE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	NOTES
L1		Osc.	TC-2463					

TRANSFORMER (POWER)

ITEM No.		RATING	TELETYPE PART No.	MERIT PART No.	STANCOR PART No.	THORNDARSON PART No.	TRIAD PART No.	NOTES
T1		117VAC 460VCT 6.3VAC @ .35A DC	640002		PM8419	24R12		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.		IMPEDANCE	TELETYPE PART No.	MERIT PART No.	STANCOR PART No.	THORNDARSON PART No.	TRIAD PART No.	NOTES
T2		640002 3-4Ω	630002	A-3032	A-3878	22S33	S-49X	
T3		640002 3-4Ω	630002	A-3032	A-3878	22S33	S-49X	

TAPE HEADS

ITEM No.		MEASURED	TELETYPE PART No.	TELETYPE PART No.	DESCRIPTION
M1A	B	INDUCTANCE 485MH 11.2MH	48K 48K	520000	Quarter-Track Record-Play Quarter-Track Erase

MISCELLANEOUS

ITEM No.		PART NAME	TELETYPE PART No.	ITEM No.	TYPE	REPLACEMENT DATA
M2		Play-Record Switch	TS-3679	SP1	4 1/2" PM 3-4Ω	TELETYPE PART No. QUAM PART No.
M3		Simul-Track Switch	TS-3680			
M4		Record Level Switch	TS-1997			
M5		Motor	TA-120036	SP2	4 1/2" PM 3-4Ω	TS-1926 (TS-1926-4) (789205-4)

TELETYPE MODEL SS-132

# MECHANICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	TK-295	Knob, Volume (2 used)	46		Screw, Amplifier Mounting
2	TK-296	Knob, Tone (2 used)	47		Post, Pressure Pad
3		6-32 x 1 1/8 Phil. Hd. M. Scr.	48		"C" Washer, Switch Shaft
4	TA-1976	Escutcheon, Front	49*	*TC-2465	* Counter
5		6-32 x 5/16 Lg. Truss Phil. Hd. M. Scr.	50*	*TR-2387	* Drive Belt, Counter
6	TP-1588	Dress Plate, Motor Board	51	TF-304	Flywheel Assembly
7	TS-2152	Spindle	52*	*TO-171	* Drive Belt, Capstan
8		.315 I.D. x 9/16 O.D. x .01 Washer	53	TB-619	Excursion Limit Bracket
9	TT-712	Post, Tape Guide	54	TA-265	Upper Pulley Assembly
10	TG-414	Tape Guide, Upright	55	TA-1183	Lower Pulley Assembly
11	TK-243-1	Knob, Wind-Rewind	56		6-32 x 3/16 Set Screw
12		6-32 x 1 1/8 Phil. Hd. M. Scr.	57		Sub Plate, Motor Board
13	TE-274-5	Escutcheon, Rear	58	TB-635	Bearing, Motor Pivot
14		Wind-Rewind Lever Ass'y.	59		Screw, Motor Mounting
15	TA-1204	Capstan Sleeve Assembly	60		Lockwasher
16	5000-25	"C" Washer	61		Flat Washer
17	TP-983	Hex Shaft	62	TB-1061	Bracket, Motor Mounting
18		"C" Washer	63	TS-1942	Spacer, Motor
19	TL-344	Wind-Rewind Latch	64	TM-407	Motor Shock Mount
20		Screw, Metal	65		No. 6 Washer, Flat
21	TS-1854	Spring	66		Part of Motor Assembly
22	TB-2007	Tape Guide Bracket	67	TA-120036	Motor Assembly
23	5133-25	"C" Washer	68		"C" Washer
24*	*TR-1846	* Roller, Pressure	69		Fiber Washer
25		Washer, Fiber	70		Felt Washer
26	TA-1186	Capstan Roller Plate Ass'y.	71	TF-337-2	Fan
27	TA-1978	Knob, Function	72		"C" Washer
28		6-32 x 3/4 Phil. Hd. M. Scr.	73	TS-1657	Return Spring, Brake Rod
29	TL-495	Lever Knob, Simul-Track	74	TB-998	Takeup Belt
30	520000	Play-Record-Erase Head	75	TB-858	Bracket, Brake Release
31		2-56 x 5/16 Head Adj. Scr.	76	TA-1128	Brake Rod Sub Assembly
32		2-56 x 7/16 Head Adj. Scr.	77	TB-1004	Brake Cord (25" Long)
33	TS-1755	Spring, Record Head	78	360011	Capstan Roller Plate Lever
34	TA-1979	Knob, Record	79	TA-1004	Spring
35	TS-1659	Spring	80	TS-1625	Switch Detent Lever Ass'y.
36	TT-712	Post, Tape Guide	81*	*TB-999	Interlock Slide
37	5133-25	"C" Washer	82		*Rewind Belt
38	TP-863	Pressure Pad	83	TA-1207	"C" Washer
39	TE-479	Tape Release Guide	84	360016	Interlock Shaft Ass'y.
40	5103-25	"C" Washer	85		Takeup Spring
41		.255 I.D. x 1/2 O.D. x .01 Fiber Washer	86	TA-1119	"C" Washer, Switch Shaft and
42	TS-2152	Spindle	87	TA-1112	Cam Assembly
43		.315 I.D. x 1/2 O.D. x .032 Thk. Fiber Washer	88	360010	Switch Shaft and Cam Ass'y.
44	360019	Spring, Pressure Pad	89	TS-1905	Capstan Roller Plate Cam
45		.315 I.D. x 9/16 O.D. x .01 Flat Steel Washer	90		Ass'y.
			91		Brake Spring
					Switch Detent Lever Spring
					Spring, Simul-Track Lever
					Lever, Simul-Track Switch

- \* Pressure Roller, WALSCO Part No. 1482-04
- \* Counter Drive Belt, WALSCO Part No. 1410-63
- \* Capstan Drive Belt, WALSCO Part No. 1410-14
- \* Rewind Belt, WALSCO Part No. 1409-04