

PHOTOFACT[®] with

CIRCUITRACE[®]

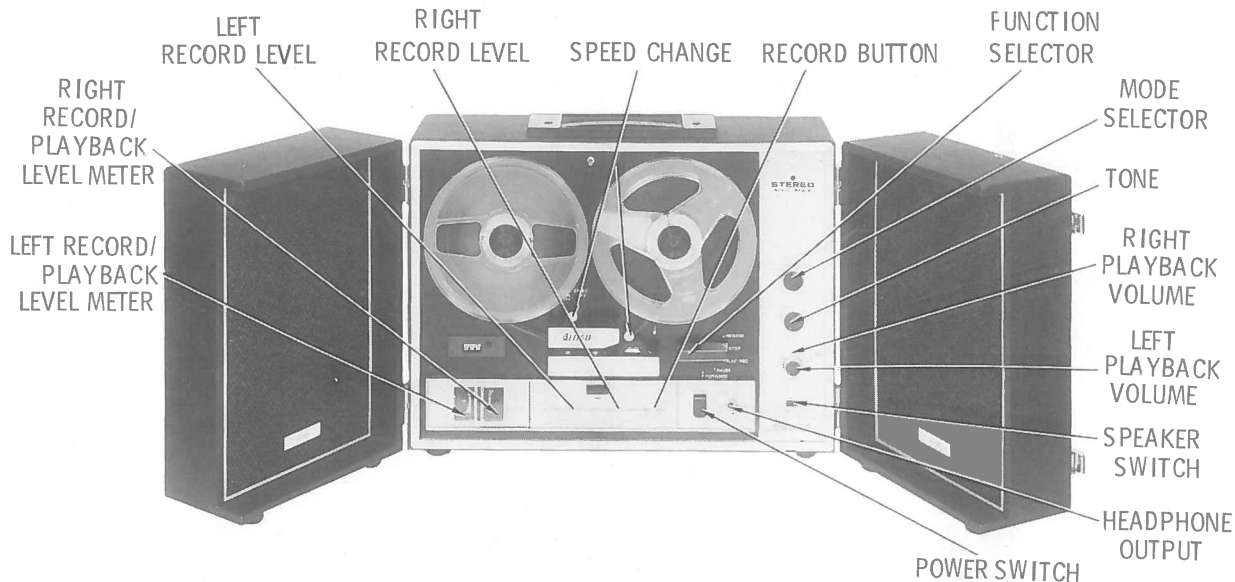
TRADE NAME : Allied Models TD-1030 (15B7103U),
TR-1040 (15B7104U)
SUPPLIER : For Current Address, See Annual Index
TYPE SET : 3-Speed, 4-Track, Monaural/Stereo
Recorders
POWER SUPPLY : 110-120 Volts AC, 60 Cycles

These units are four-track, monaural/stereo recorders having three speeds: 1 7/8, 3 3/4, and 7 1/2 ips.

Jacks are provided for both low- and high-level inputs, external speakers, and preamp. outputs.

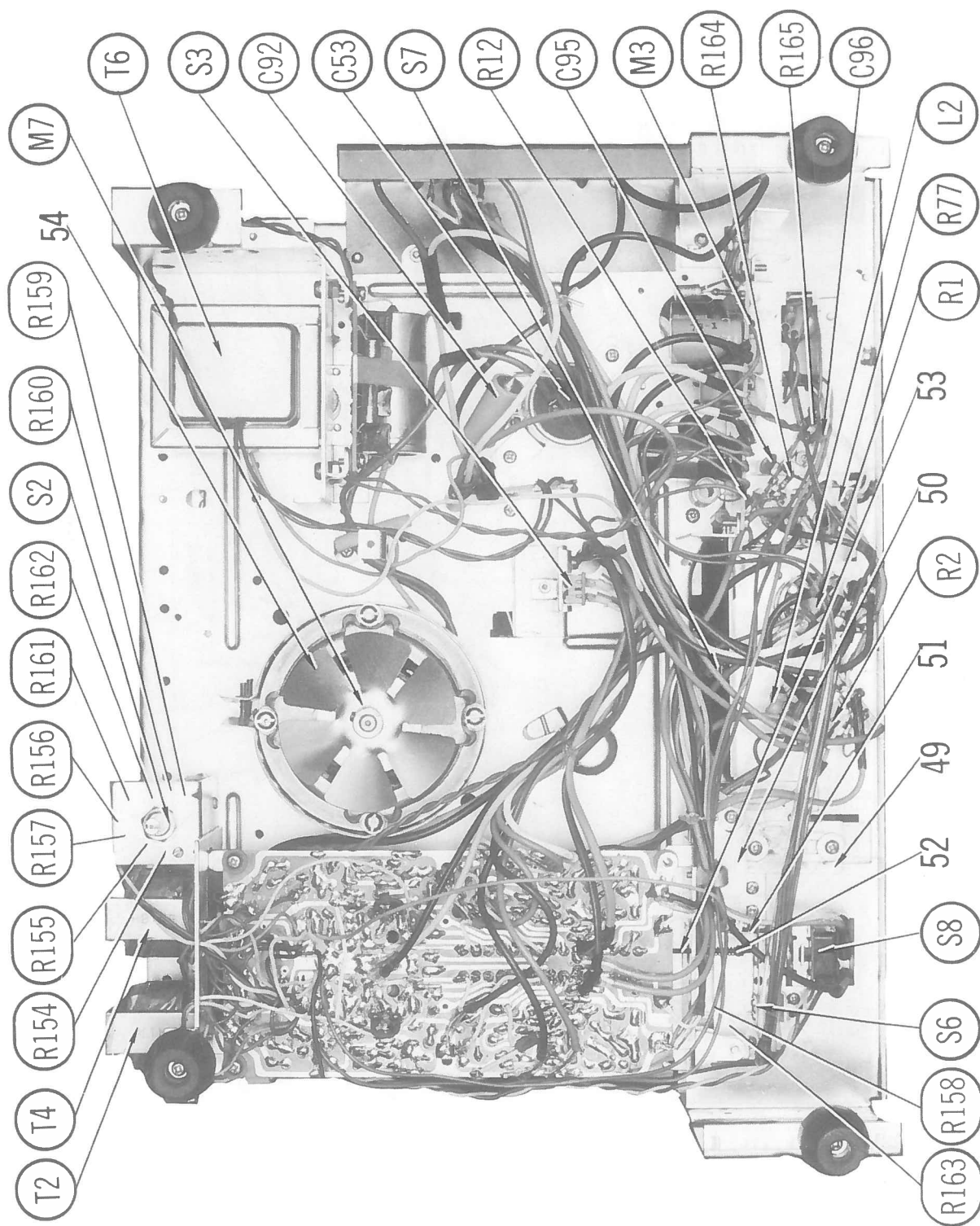
A power source of 110 - 120 volts AC, 60 cycles is required.

ALLIED MODELS TD-1030, TR-1040



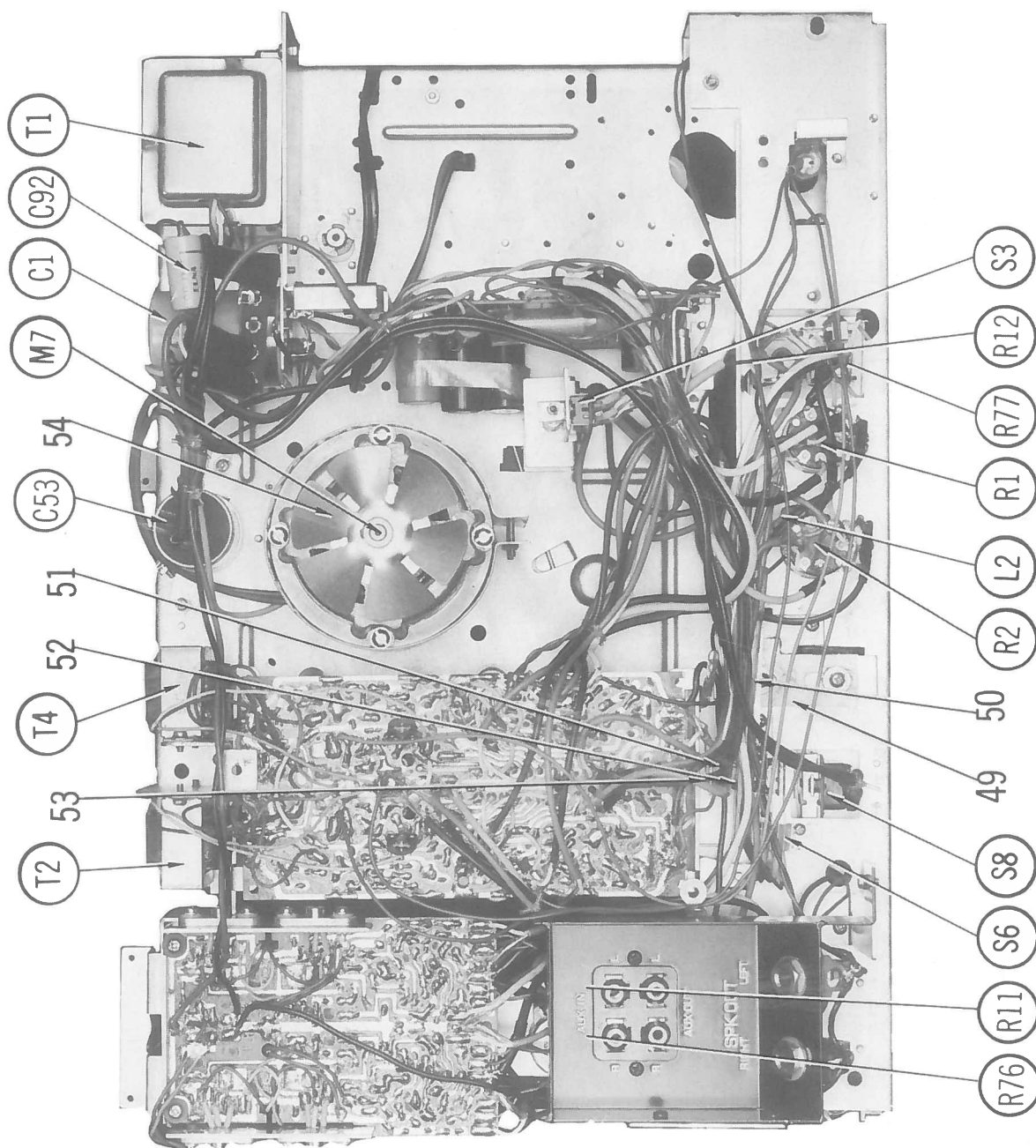
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

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MODEL TD-1030

ALLIED MODELS TD-1030, TR-1040



MODEL TR-1040

OPERATING INSTRUCTIONS

Monaural Record

1. Move Function Selector to Stop, select the speed, and thread the tape.
2. Turn Right Record Level control off, turn Left Record Level control on, and connect a source to a left input.
3. Move Speaker switch to Off (Model TR-1040 only), press and hold Record button while moving Function Selector to Pause, and set the recording level with Left Record Level control.
4. Move Function Selector to Play-Rec. and record the left-channel tracks.
5. To record the right-channel tracks, follow the procedures outlined above, except move the source to a right input, turn Right Record Level control on, and turn Left Record Level control off.

Monaural Play (Model TR-1040)

1. Repeat step 1 of "Monaural Record", move Mode Selector to "L", move Speaker switch to On, and move Function Selector to Play-Rec.
2. Set Tone and Left Playback Volume controls as desired and play left-channel tracks.
3. To play right-channel tracks, repeat steps 1 and 2, except move Mode Selector to "R" and adjust Right Playback Volume control.

Monaural Play (Model TD-1030)

1. Repeat step 1 of "Monaural Record", connect Preamp. Outputs (Line Outputs) to an external amp., move Function Selector to Play-Rec., and set Head Volume control on back of cabinet to 2.

2. Adjust the operating controls on the external amp. as desired, turn its balance control to eliminate the right channel, and play left-channel tracks.
3. To play right-channel tracks, repeat steps 1 and 2, except adjust the balance control on the external amp. to eliminate the left channel.
4. Connect stereo headphones to Headphone Output and set Headphone Volume control as desired to play without using an external amp.

Stereo Record

1. Repeat the procedure outlined under "Monaural Record". However, connect sources to left and right inputs, turn Left and Right Record Level controls on, and set the recording level for each channel.

Stereo Play (Model TR-1040)

1. Repeat the procedure outlined under "Monaural Play". However, move Mode Selector to Stereo and set both Left and Right Playback Volume controls as desired.

Stereo Play (Model TD-1030)

1. Repeat the procedure outlined under "Monaural Play", and set operating controls on external amp. as desired, or connect stereo headphones to Headphone Output and adjust Headphone Volume control.

Monitor

1. To monitor the recording source, move Speaker switch to On (Model TR-1040 only), connect unit to an external amp. (Model TD-1030 only), or connect stereo headphones to Headphone Output.

DISASSEMBLY

Model TR-1040

1. Remove six push-on knobs, two knobs held with setscrews, front head cover, and pressure roller.
2. Remove playback control escutcheon held by four Phillips screws, remove deck cover panel held by five Phillips screws and capstan storage post, and remove handle held by two Phillips screws.
3. Disconnect speaker leads from hinges, remove two red-painted Phillips screws at bottom corners of mechanism and chassis assembly, and lay unit deck down.

4. Remove two Phillips screws from back of cabinet and remove cabinet.

Model TD-1030

1. Remove two push-on knobs, two knobs held with setscrews, front head cover, and pressure roller.
2. Remove deck panel held by five Phillips screws.
3. Loosen two red-painted screws holding jack panel on left side and push jack panel in.
4. Invert unit, remove four feet, one Phillips screw, and cabinet.

SEQUENCE OF OPERATION

Play (From Stop)

Moving the Function Selector to Play rotates Cam (24), locked by Spring (25) and Lock (26), to pivot Lever (55), pulling Slide (10) to pivot Arms (7) and (12), releasing the brakes.

Cam (24) also pulls Link (23) to pivot Cam (20), releasing Lever (22), pulled by Spring (11), to move Idler (3) against Pulleys (56) and (16).

The motor — through Pulley (56), Idler (3), Pulley (16), and Clutch (15) — drives Spindle (14).

Cam (24) also releases Rod (32) to release Lever (33), pulled by Spring (30), moving Idler (2) against Pulley (56) and Flywheel (44).

Cam (24) also releases Lever (27), pulled by Spring (29), to press Roller (1) against Capstan (44), to allow Retractor (48) to release Assemblies (46) and (47), and to actuate Switch (S4).

Cam (24) also pivots Lever (28) to pull Link (43), pivoting Lever (40) to release Wire (39), actuating Switch (S7).

Record

The Record sequence is the same as "Play". However, the Record button is also moved to move Slide (49), pivoting Lever (50) to pivot Lever (51). Lever (51) slides Slide (45) into Cam (24), actuates Switch (S6), and, through Spring (52) and Link (53), actuates Switch (S1).

Pause (From Play)

Moving the Function Selector to Pause rotates Cam (24), locked by Spring (25) and Lock (26) to release Lever (55), releasing Slide (10) which is pulled by Spring (13). Slide (10) releases Arms (7) and (12), pulled by Spring (8), to apply the brakes.

Cam (24) also pulls Link (23) to pivot Cam (20) and pivots Lever (27) to move Roller (1) from Capstan (44), to cause Retractor (48) to move Assemblies (46) and (47), and to actuate Switch (S4).

Fast Forward (From Pause)

Moving the Function Selector to Fast Forward rotates Cam (24), locked by Spring (25) and Lock (26), to pivot Lever (55), pulling Slide (10) to pivot Arms (7) and (12), releasing the brakes.

Cam (24) also pulls Link (23) to pivot Cam (20), lifting Lever (21) to lift Idler (3) to contact Spindle (14).

The motor, through Pulley (56) and Idler (3), drives Spindle (14).

Rewind

Moving the Function Selector to Rewind rotates Cam (24), locked by Spring (25) and Lock (26), to pivot Lever (55), pulling Slide (10) to pivot Arms (7) and (12), releasing the brakes.

Cam (24) also pushes Link (23) to pivot Cam (20), releasing Lever (18), pulled by Spring (9). Lever (18) causes Pulley (19) to press Belt (4) against Pulley (56).

The motor — through Pulley (56), Belt (4), Pulley (36), and Clutch (37) — drives Spindle (35).

Cam (24) also pushes Rod (32) to pivot Lever (33), moving Idler (2) from Flywheel (44). Cam (24) pivots Lever (28) to pull Link (43). Link (43) pivots Lever (40) to release Wire (39), actuating Switch (S7).

Stop

Moving The Function Selector to Stop reverses "Rewind", "Play", or "Record".

TROUBLE CHART

IMPORTANT: Before consulting this chart be sure all servicing procedures listed on page 4 have been followed.

SYMPTOM	REMARKS
Take-up reel revolves erratically, or not at all in Play or Record	<ol style="list-style-type: none"> 1. Clutch (15) dirty or worn. 2. Idler (3) dirty, worn, or binding. 3. Bearing (57) binding.
Take-up reel does not revolve in Fast Forward.	<ol style="list-style-type: none"> 1. Idler (3) dirty, worn, or binding. 2. Lever (22) bent. 3. Lever (21) bent. 4. Bearing (57) binding.
Supply reel does not revolve in Rewind.	<ol style="list-style-type: none"> 1. Belt (4) dirty, worn, or broken. 2. Pulley (19) binding or defective. 3. Spindle (35) binding or worn.
Supply reel spills tape in forward positions.	<ol style="list-style-type: none"> 1. Belt (4) missing.
Take-up reel spills tape in Rewind.	<ol style="list-style-type: none"> 1. Spring (17) missing.

TROUBLE CHART (Continued)

SYMPTOM	REMARKS
Reels do not stop immediately when Stop button is pressed.	<ol style="list-style-type: none"> 1. Pads on Arms (7) and (12) worn or dirty. 2. Spring (8) weak or missing.
Capstan does not rotate in Play or Record.	<ol style="list-style-type: none"> 1. Idler (2) worn, dirty, or binding. 2. Lever (33) binding. 3. Spring (30) weak or missing. 4. Bearing (59) defective. 5. Motor defective or not supplied with power.
Tape rides up and down between capstan and pressure roller.	<ol style="list-style-type: none"> 1. Roller (1) worn. 2. Excessive take-up torque. 3. Excessive supply drag.
Wow or Flutter.	<ol style="list-style-type: none"> 1. Roller (1) worn. 2. Excessive take-up torque. 3. Idler (2) worn or dirty. 4. Motor defective. 5. Bearing (59) binding.
Sound is weak or distorted.	<ol style="list-style-type: none"> 1. Head (M1) dirty, misadjusted, or defective. 2. Amps defective. 3. Bias Oscillator defective. 4. Assembly (46) defective or misadjusted.
Erase weak or inoperative.	<ol style="list-style-type: none"> 1. Head (M2) dirty or defective. 2. Assembly (47) defective or misadjusted.

ADJUSTMENTS

<p>IMPORTANT: Before making any adjustments, refer to "General Servicing Information" on page 4.</p> <ol style="list-style-type: none"> 1. All voltage measurements are made at a tape speed of 7 1/2 ips with an audio VTVM having a flat response to 100KC. 2. All torque measurements are made at a tape speed of 7 1/2 ips with a spring scale applied to a point on an empty tape reel 2 inches from reel center. 3. All pressure measurements are made by using a spring scale to determine that point at which pressure is just removed. 	
ADJUST	REMARKS
Play Take-up Torque	Nominal value 1 3/4 ounces. Controlled by condition of Clutch (15).
Fast Forward Take-up Torque	Nominal value 8 ounces. Controlled by condition of Idler (3).
Rewind Torque	Nominal value 10 ounces. Controlled by condition of Belt (4) and Clutch (37).
Supply Reel Drag	Nominal value 1 ounce. Dependent on drag of Belts (4) and (5).
Take-up Reel Drag	Nominal value 1 ounce. Dependent on tension of Spring (17).
Pressure Roller Pressure	Nominal value 4 1/2 pounds. Controlled by tension of Spring (29).
Brake Torque	Measured in Stop. Nominal values 7 ounces counterclockwise on supply reel and 12 ounces clockwise on take-up reel. Controlled by condition of pads on Arms (7) and (12).
Pressure Pad Pressure	Nominal values 3/8 ounce on erase pad and 1/2 ounce on record/play pad. Controlled by repositioning Assemblies (46) and (47).

ADJUSTMENTS (Continued)

ADJUST	REMARKS
Erase Head Height	No adjustment provided.
Erase Head Azimuth	No adjustment provided.
Record/ Play Head Height	No adjustment provided.
Record/ Play Head Azimuth	Connect an AC VTVM across left output. Play an azimuth test tape and adjust B1 for maximum.
Erase Bias	Nominal current 60ma @ 18Vrms (Model TR-1040) or 62ma @ 22Vrms (Model TD-1030) in each section. No adjustment provided.
Record Bias	Nominal bias 12Vrms @ .54ma (Model TR-1040) or 17Vrms @ .56ma (Model TD-1030) across each section. Adjust C85 for upper section and C86 for lower section.
Bias Oscillator	Nominal frequency 58KC. No adjustment provided.
Record Level Indicator Calibration	Disable the bias oscillator by shorting the secondary. Apply a 1000-cycle tone at .0006Vrms to the Left (Right) Mic Input, adjust Left (Right) Record level for .05Vrms across upper (lower) section of Head (M1), and adjust R5 (R6) for normal maximum on Left (Right) Record/Playback Level Meter.

CLEANING

LUBRICATING

HEAD DEMAGNETIZING

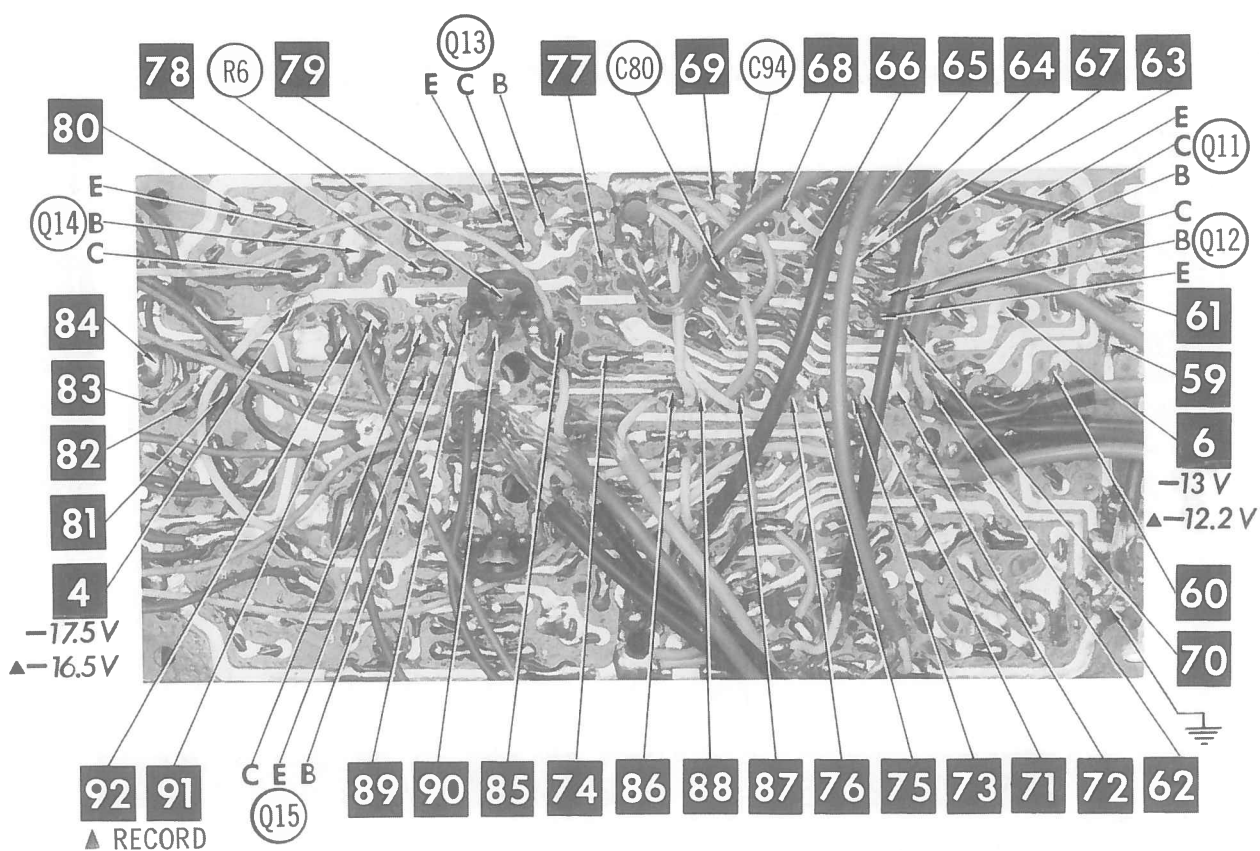
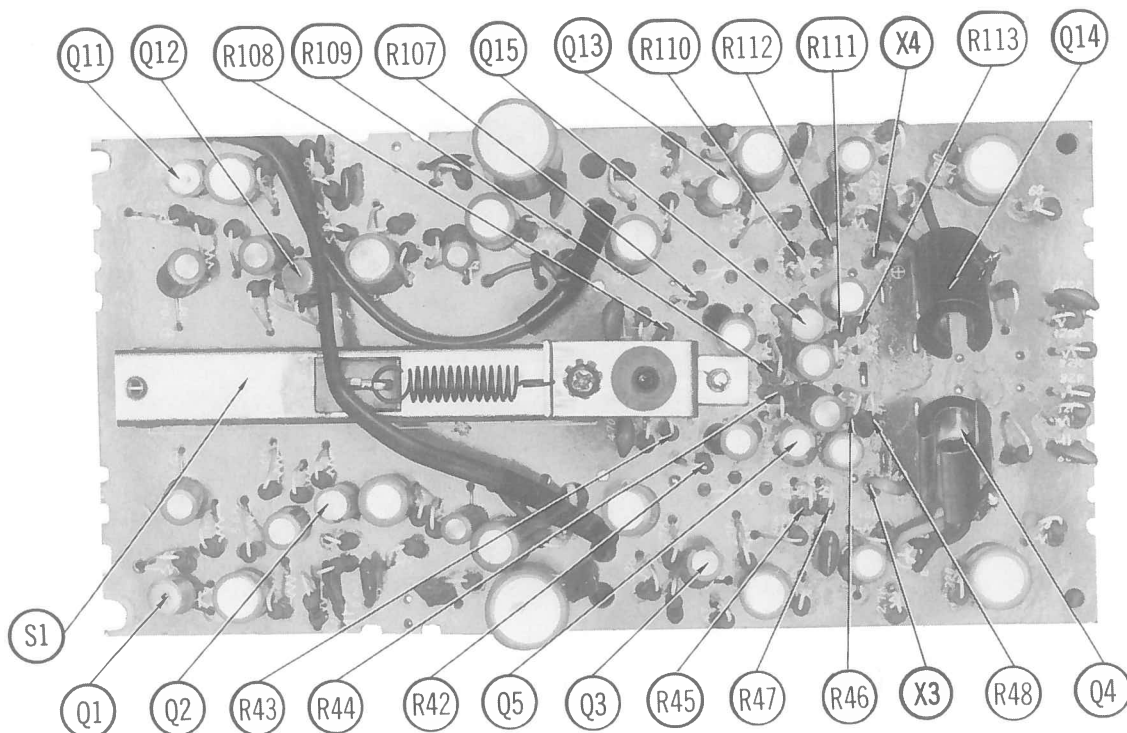
Refer to "General Servicing Information" on page 4.

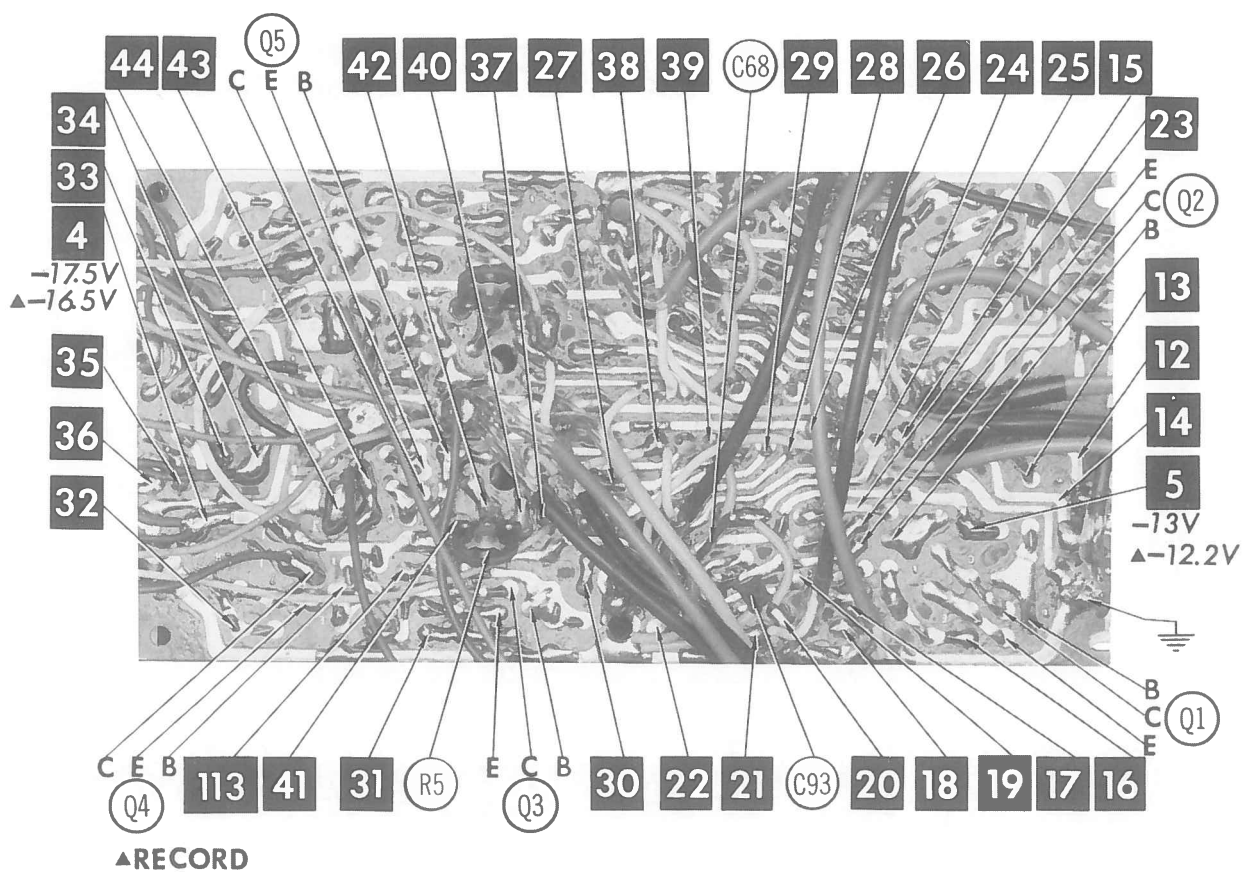
MECHANICAL PARTS LIST

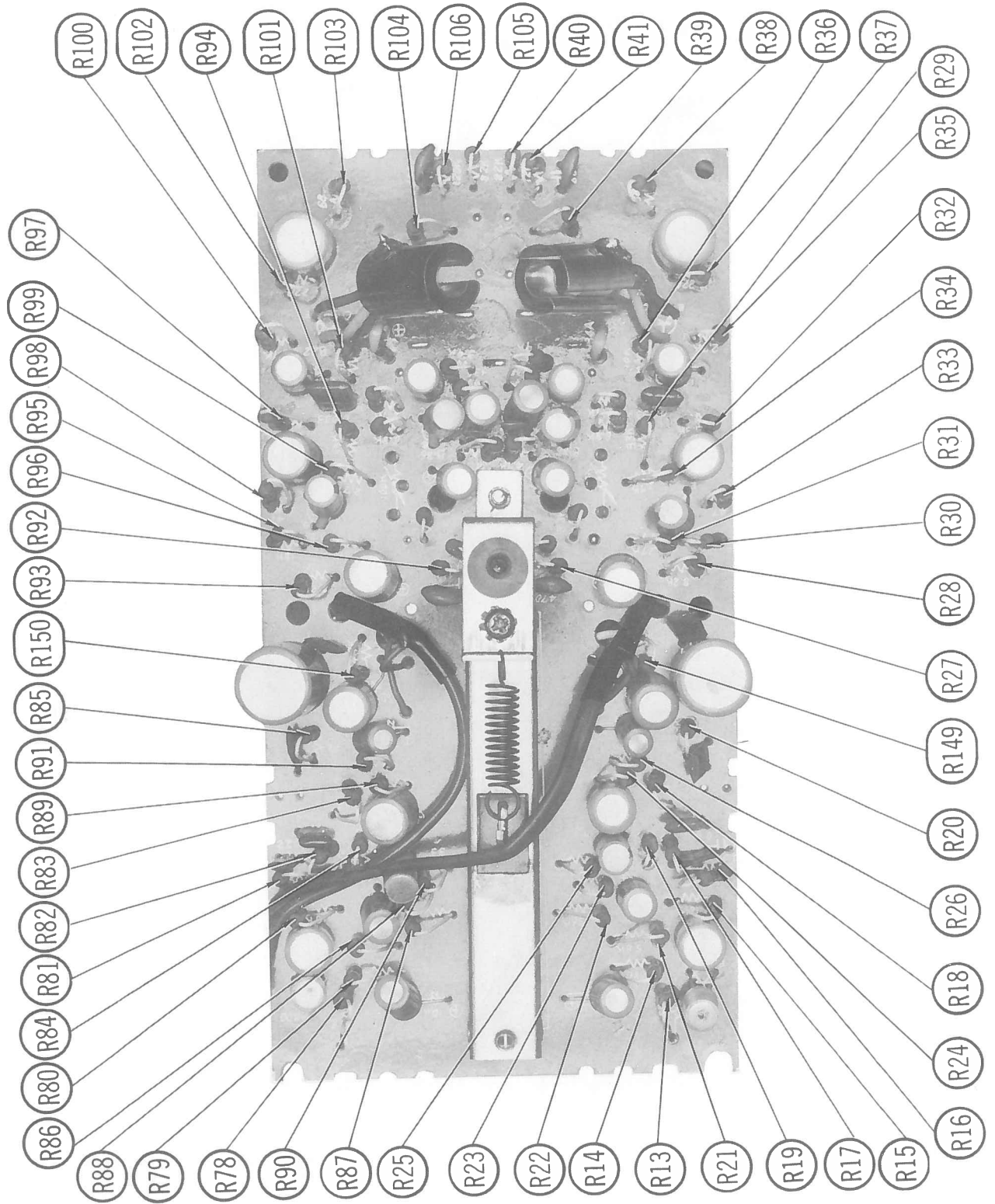
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1		Pressure Roller	32		Flywheel Idler Release Rod
2		Flywheel Drive Idler	33		Flywheel Idler Support Lever
3		Forward Drive Idler	34		Flywheel Idler Retractor Spring
4		Rewind Belt	35		Supply Spindle
5*		Smaller Counter Belt*	36		Supply Drive Pulley
6*		Larger Counter Belt*	37		Supply Clutch
7		Supply Brake Arm	38		Counter Pulley
8		Brake Arm Spring	39		Tape Switch Wire
9		Rewind Tension Spring	40		Tape Switch Release Lever
10		Brake Slide	41		Counter
11		Forward Drive Tension Spring	42		Tape Switch Release Lever Spring
12		Take-up Brake Arm	43		Tape Switch Release Link
13		Brake Slide Spring	44		Flywheel and Capstan Assembly
14		Take-up Spindle Assembly	45		Record Lock Slide
15		Take-up Felt Clutch	46		Record/Play Pad Assembly
16		Forward Drive Pulley	47		Erase Pad Assembly
17		Clutch Tension Spring	48		Pad Retractor
18		Rewind Pulley Lever	49		Record Button Slide
19		Rewind Pulley	50		Record Actuator Lever
20		Function Actuator Cam	51		Record Switch Lever
21		Idler Lifting Lever	52		Record Switch Tension Spring
22		Idler Support Lever	53		Record Switch Link
23		Cam Link	54		Motor Fan
24		Main Function Cam	55		Brake Actuator Lever
25		Cam Lock Spring	56		Motor Pulley
26		Cam Lock	57		Take-up Spindle Bearing
27		Pressure Roller Lever	58		Supply Spindle Bearing
28		Tape Switch Actuator Lever	59		Capstan Bearing
29		Pressure Roller Tension Spring			
30		Flywheel Idler Tension Spring			
31		Flywheel Idler Position Spring			

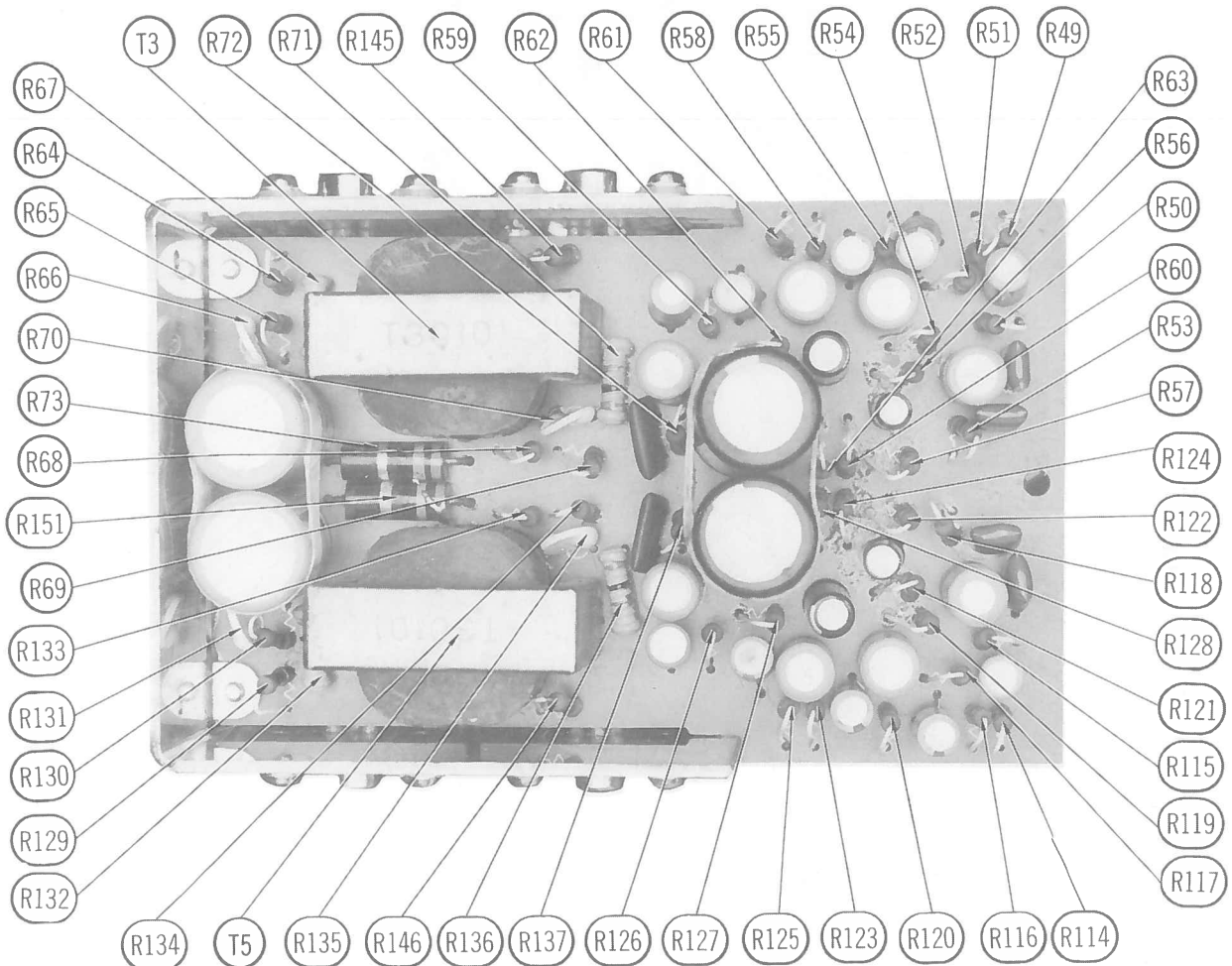
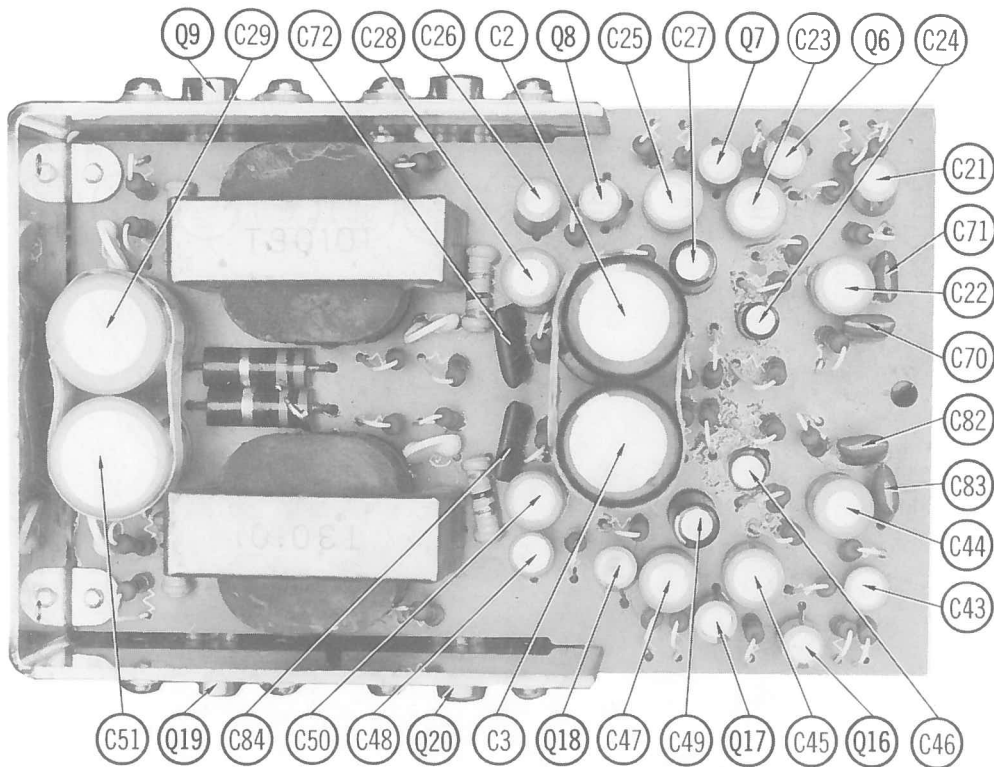
* Smaller Counter Belt - WALSCO Part Number 1410-64.

* Larger Counter Belt - WALSCO Part Number 1410-63.

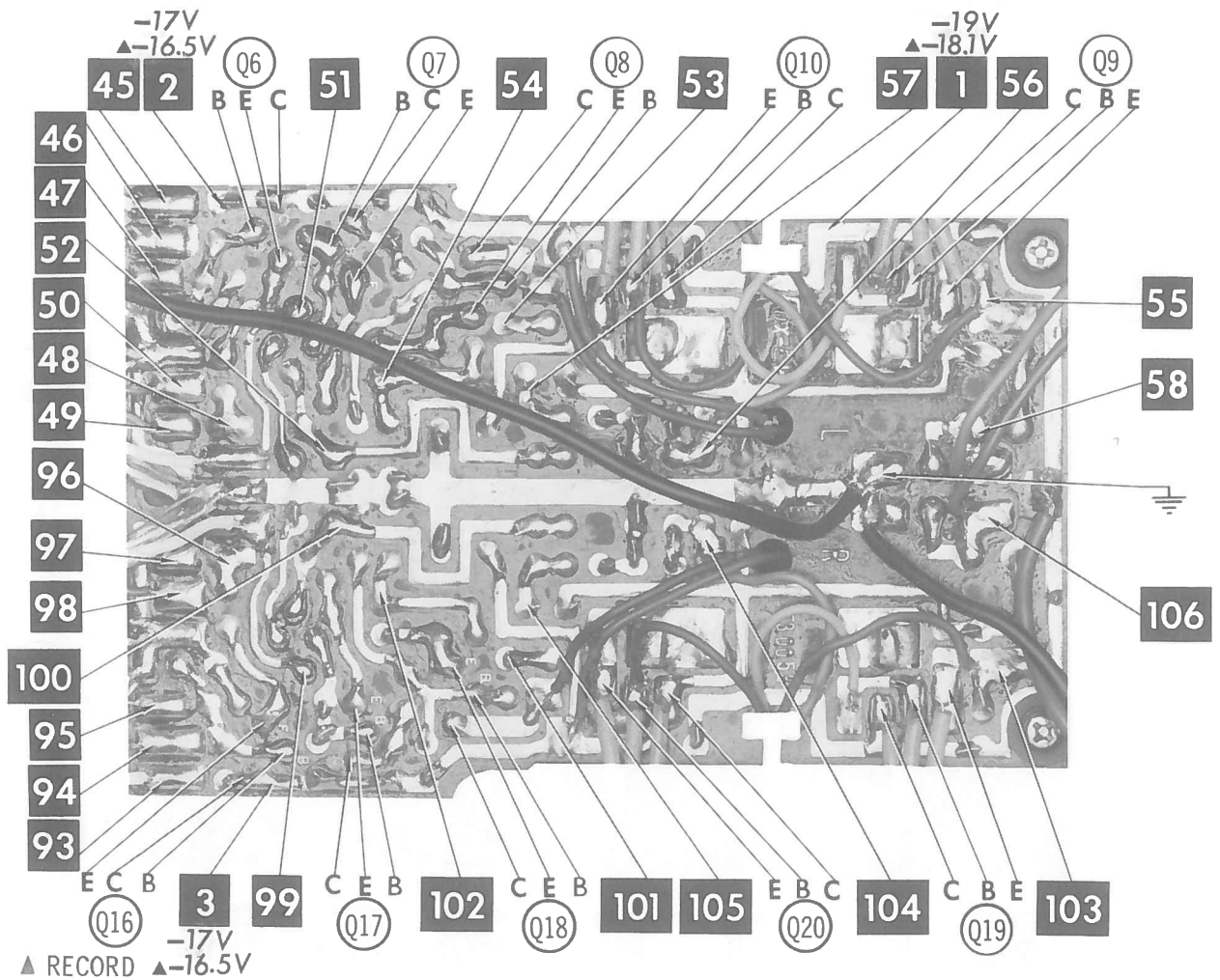
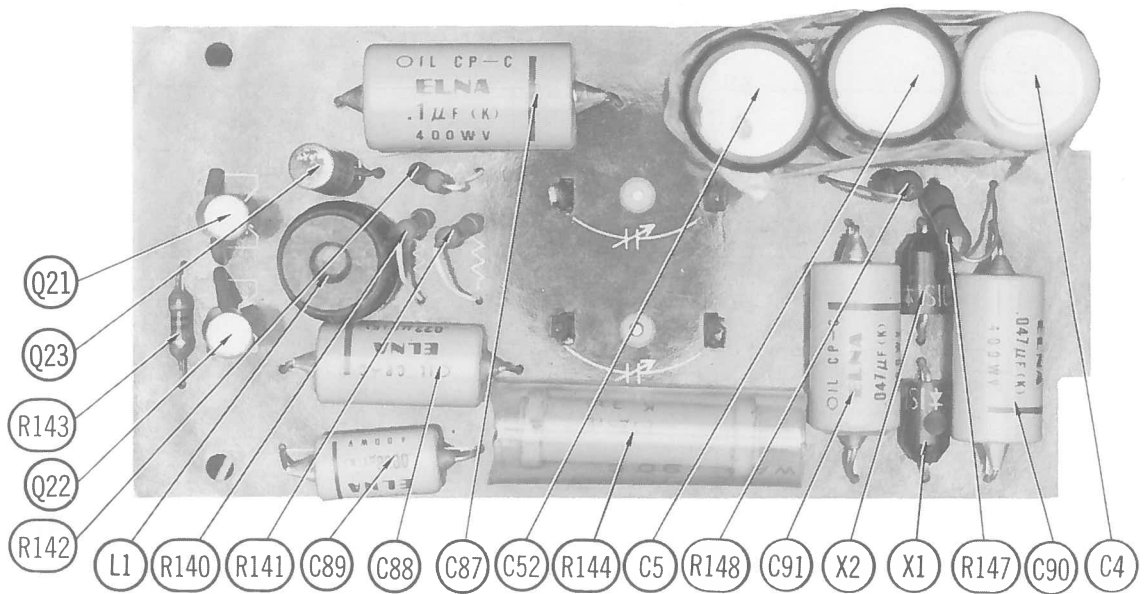






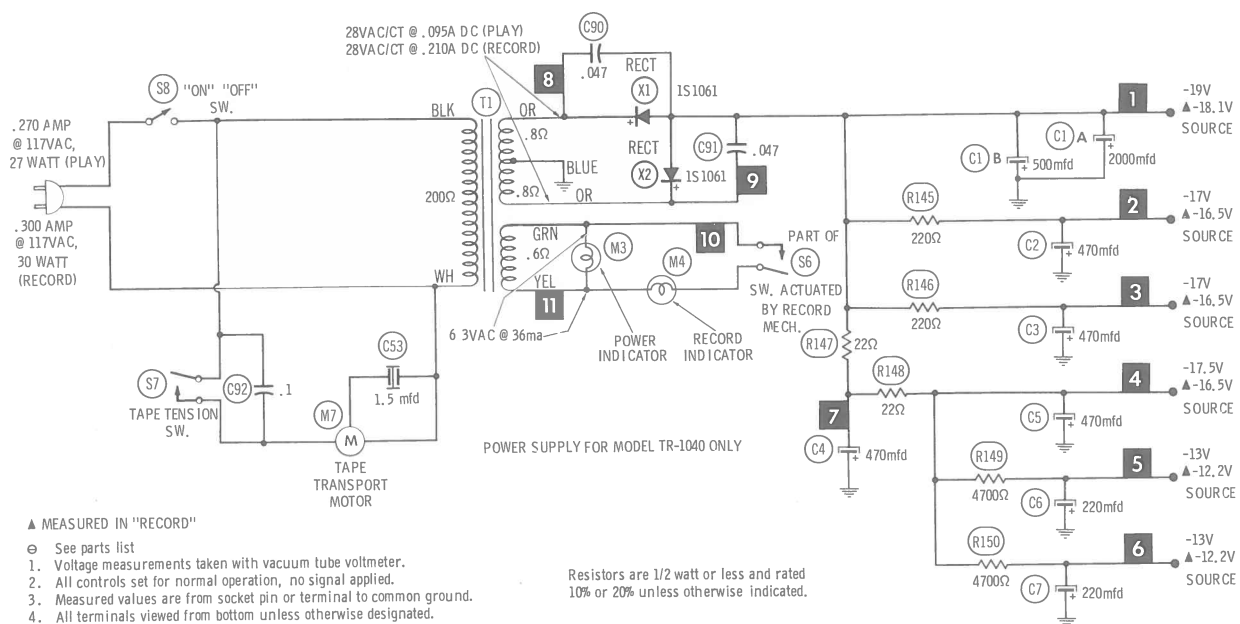


MODEL TR-1040



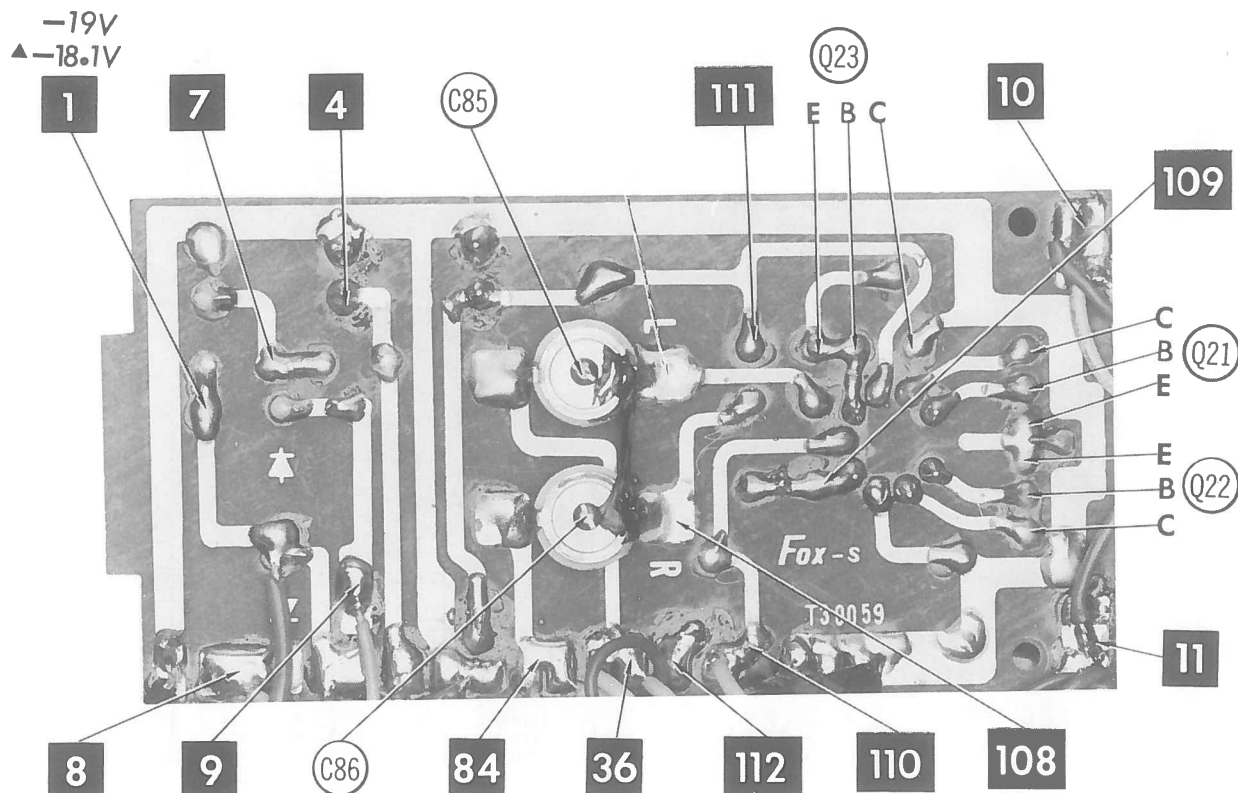
MODEL TR-1040

NOTE: DEMAGNETIZE HEADS AFTER SERVICING RECORDER



ALLIED MODEL TR-1040

▲ RECORD



A Howard W. Sams **CIRCUITRACE** Photo

PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	DELCO PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.
Q1	2SB400	Preamp		DS-26	GE-2	TR-14	SK-3004	ECG 126
Q2	2SB186	Preamp		DS-26	GE-2	TR-14	SK-3004	ECG 102
Q3	2SB186	AF Amp		DS-26	GE-2	TR-14	SK-3004	ECG 102
Q4	2SB22	AF Amp		DS-26	GE-2	TR-14	SK-3004	ECG 102
Q5	2SB186	Meter Amp		DS-26	GE-2	TR-14	SK-3004	ECG 102
Q6	2SB186	AF Amp	(1)	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q7	2SB186	AF Amp	(1)	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q8	2SB22	Driver	(1)	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q9	2SB492	Output	(1)	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q10	2SB492	Output	(1)	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q11	2SB400	Preamp		DS-26	GE-2	TR-14	SK-3004	ECG 126
Q12	2SB186	Preamp		DS-26	GE-2	TR-14	SK-3004	ECG 102
Q13	2SB186	AF Amp		DS-26	GE-2	TR-14	SK-3004	ECG 102
Q14	2SB22	AF Amp		DS-26	GE-2	TR-14	SK-3004	ECG 102
Q15	2SB186	Meter Amp		DS-26	GE-2	TR-14	SK-3004	ECG 102
Q16	2SB186	AF Amp	(1)	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q17	2SB186	AF Amp	(1)	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q18	2SB22	Driver	(1)	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q19	2SB492	Output	(1)	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q20	2SB492	Output	(1)	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q21	2SB324	Bias Oscillator		DS-26	GE-2	TR-14	SK-3004	ECG 102
Q22	2SB324	Bias Oscillator		DS-26	GE-2	TR-14	SK-3004	ECG 102
Q23	MA25	Bias Regulator		DS-26	GE-2	TR-14	SK-3004	ECG 102

(1) Not used in Model TD-1030.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS		NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	SARKES TARZIAN PART No.	
X1	1S1061 (1)	GE-504A	8D4 or 18DJ6A (3)	ECG 116 or ECG 117	SK-3030 or SK-3031	40C or S-5981-N (3)	
X2	1S1061 (1)	GE-504A	8D4 or 18DJ6A (3)	ECG 116 or ECG 117	SK-3030 or SK-3031	40C or S-5981-N (3)	
X3	1N34A (1)	1N34AS	1N34A	ECG 109			
X4	1N34A (1)	1N34AS	1N34A	ECG 109			
X5	SG105 (4)	GE-504A	8D4 or 18DB2A (2)	ECG 116 or ECG 117	SK-3030 or SK-3031	40C or S-5959 (2)	
X6	SG105 (4)	GE-504A	8D4 or 18DB2A (2)	ECG 116 or ECG 117	SK-3030 or SK-3031	40C or S-5959 (2)	
X7	SG105 (4)	GE-504A	8D4 or 18DB2A (2)	ECG 116 or ECG 117	SK-3030 or SK-3031	40C or S-5959 (2)	
X8	SG105 (4)	GE-504A	8D4 or 18DB2A (2)	ECG 116 or ECG 117	SK-3030 or SK-3031	40C or S-5959 (2)	

- (1) Used in Model TR-1040. (4) Used in Model TD-1030.
 (2) A single unit replacement for all four bridge circuit rectifiers.
 (3) A single unit replacement for both rectifiers.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		ALLIED PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	2000 25V		AFH-1-14-55 PRS1290		BR2000-25 BR500-25		TC25200 TC2505B	TL-1220 TL-1217
C2	470 25V		PRS1290	EA30-500	BR500-25	QT1-31	TC2505B	TL-1217
C3	470 25V		PRS1290	EA30-500	BR500-25	QT1-31	TC2505B	TL-1217
C4	470 25V		PRS1290	EA30-500	BR500-25	QT1-31	TC2505B	TL-1217
C5	470 25V		PRS1290	EA30-500	BR500-25	QT1-31	TC2505B	TL-1217
C6	220 16V		BCD20200	EA15-250	NLW200-15	MT1-23	MTV200CP15	TE-1164
C7	220 16V		BCD20200	EA15-250	NLW200-15	MT1-23	MTV200CP15	TE-1164
C8	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C9	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C10	1 16V		BCD25001	EP50-2	NLW1-50	MT1-1	TT25X1	TE-1148
C11	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C12	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C13	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C14	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C15	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C16	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C17	100 10V		BCD10100	EP15-100	NLW100-12	MT1-19	MTV100CD10	TE-1135
C18	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C19	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C20	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C21	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C22	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C23	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C24	10 10V		BCD10010	EP15-10	NLW10-15	MT1-5	PET1340	TE-1128
C25	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C26	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1132.1

(CONTINUED ON PAGE 22)



PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

ELECTROLYTIC CAPACITORS (cont)

ITEM No.	RATING	REPLACEMENT DATA						
		ALLIED PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C27	33 10V	(1)	BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C28	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C29	470 16V		PRS1290	EA15-500	BR500-15	QT1-30	MTV500DN15	TL-1166
C30	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C31	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C32	1 16V		BCD25001	EP50-2	NLW1-50	MT1-1	TT25X1	TL-1148
C33	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C34	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C35	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C36	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C37	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C38	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C39	100 10V		BCD10100	EP15-100	NLW100-12	MT1-19	MTV100CD10	TE-1135
C40	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C41	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C42	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C43	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C44	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C45	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C46	10 10V		BCD10010	EP15-10	NLW10-15	MT1-5	PET1340	TE-1128
C47	33 16V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV30CB25	TE-1158
C48	10 16V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TL-1155
C49	33 10V		BCD25035	EP15-25	NLW30-15	MT1-16	MTV25CB25	TE-1132.1
C50	33 16V		BCD25035	EP15-16	NLW30-15	MT1-16	MTV25CB25	TE-1158
C51	470 16V		PRS1290	EA15-500	BR500-15	QT1-30	MTV500DN15	TL-1166
C52	470 25V		PRS1290	EA30-500	BR500-25	QT1-31	TC2505B	TL-1217
C53	1.5 250VAC		NP-PRS7525		KGDL3020			OV-4015
C54	500 50V		PRS1390	EA50-500	BR500-50	QT1-31	TC50050A	TL-1316
C55	470 25V		PRS1290	EA30-500	BR500-25	QT1-31	TC2505B	TL-1217
C56	200 25V		PRS1280	EA30-250	BR250-25	QT1-28	MTV200DJ25	TE-1213

(1) Model TD-1030 uses 200mfd @ 25 Volts.

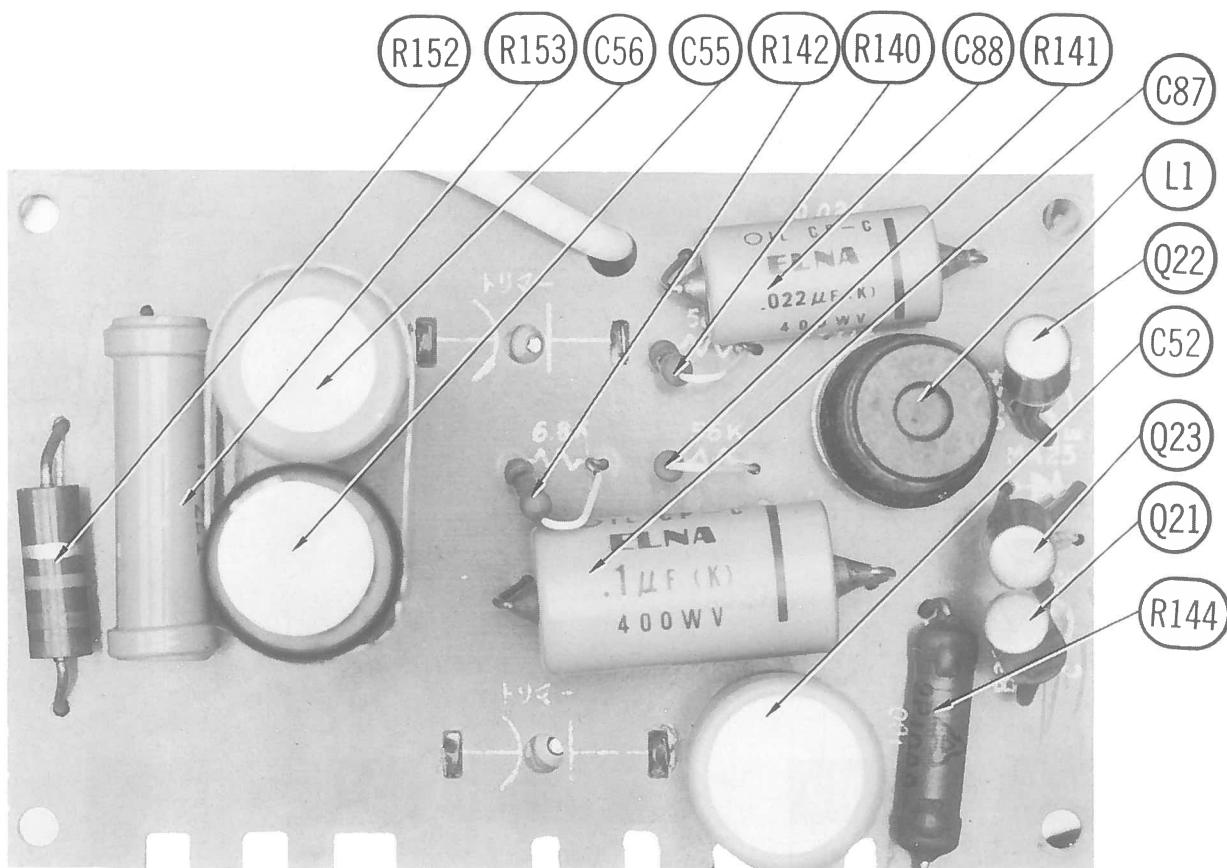
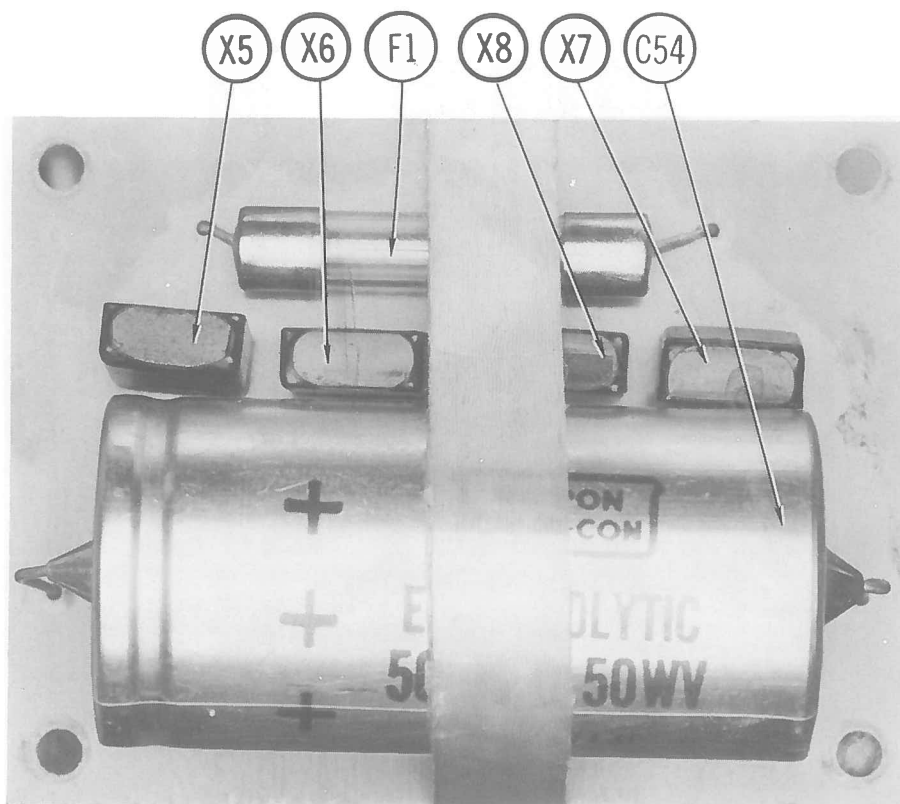
CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C61	.015 50V	(1)	TTP-02	CK-203	HOR1012V203P	CCD-203	TA120	TG-S20
C62	.0033 50V		GPD X5R332K	DD-332	JBV601YP332K	CCD-332	JF233	2SS-D33
C63	.01 50V		TTP-01	CK-103	HOY1012V103P	CCD-103	TA110	TG-S10
C64	.01 50V		TTP-01	CK-103	HOY1012V103P	CCD-103	TA110	TG-S10
C65	470 50V		GPD X5F471K	DD-471	JBZ601YP471K	CCD-471	GP347	10TS-T47
C66	.033 50V		TTP-03	CK-303		CCD-303	GP130	TG-S30
C67	680 50V		GPD X5F681K	DD-681	JBY601YP681K	CCD-681	GP368	10TS-T68
C68	.0047 50V		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C69	.0068 50V		GPD X5R682K	DD-682	BYX6012U682P	CCD-682	JF268	10TS-D68
C70	.033 50V		TTP-03	CK-303		CCD-303	GP130	TG-S30
C71	.033 50V		TTP-03	CK-303		CCD-303	GP130	TG-S30
C72	240 50V			DD-241			GP324	
C73	.015 50V		TTP-02	CK-203	HOR1012V203P	CCD-203	TA120	TG-S20
C74	.0033 50V		GPD X5R332K	DD-332	JBV601YP332K	CCD-332	JF233	2SS-D33
C75	.01 50V		TTP-01	CK-103	HOY1012V103P	CCD-103	TA110	TG-S10
C76	.01 50V		TTP-01	CK-103	HOY1012V103P	CCD-103	TA110	TG-S10
C77	470 50V		GPD X5F471K	DD-471	JBZ601YP471K	CCD-471	GP347	10TS-T47
C78	.033 50V		TTP-03	CK-303		CCD-303	GP130	TG-S30
C79	680 50V		GPD X5F681K	DD-681	JBY601YP681K	CCD-681	GP368	10TS-T68
C80	.0047 50V		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C81	.0068 50V		GPD X5R682K	DD-682	BYX6012U682K	CCD-682	JF268	10TS-D68
C82	.033 50V		TTP-03	CK-303		CCD-303	GP130	TG-S30
C83	.033 50V		TTP-03	CK-303		CCD-303	GP130	TG-S30
C84	240 50V			DD-241			GP324	
C85	50-100 400V							
C86	50-100 400V							
C87	.1 400V		DBE4P1		DMF4P1	4DP-3-104	PVC401	4PS-P10
C88	.022 400V		V1614S22		DMF4S22	4DP-2-223	PVC6122	4PS-S22
C89	.0068 400V		V1614D68	CPR-6800J	DMF4D68	6DP-1-682	PVC6268	6PS-D68
C90	.047 400V		V1614S47		DMF4S47	4DP-3-473	PVC4147	4PS-S47
C91	.047 400V		V1614S47		DMF4S47	4DP-3-473	PVC4147	4PS-S47
C92	.1 400V		DBE4P1		DMF4P1	4DP-3-104	PVC401	4PS-P10
C93	.0047 400V		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C94	.0047 400V		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C95	150 400V		GPD X5F151K	DD-151		CCD-151	GP315	10TS-T15
C96	150 400V		GPD X5F151K	DD-151		CCD-151	GP315	10TS-T15

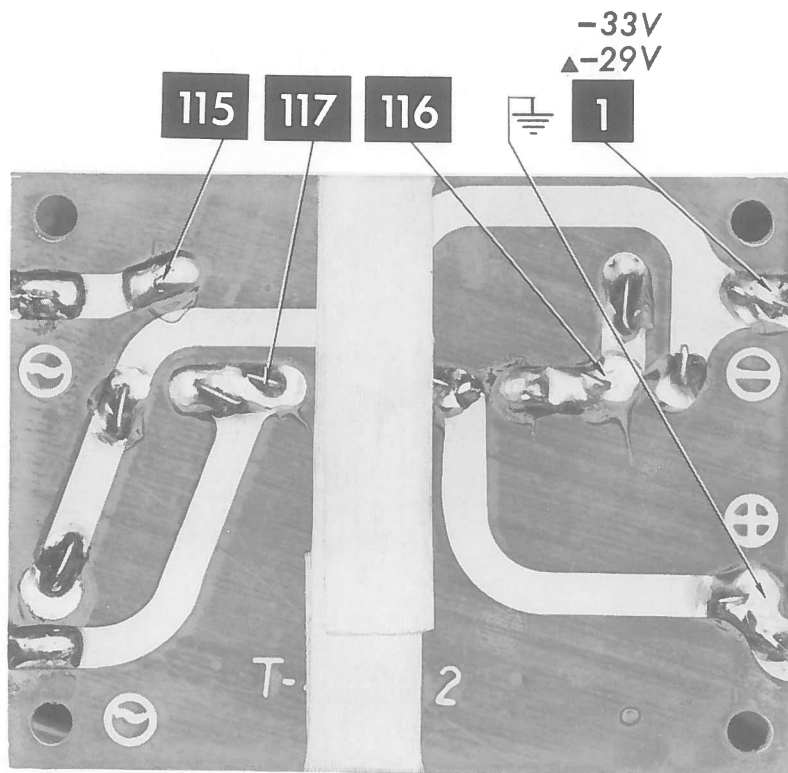
(1) Not used in Model TD-1030.

(2) Used in Model TD-1030 only.

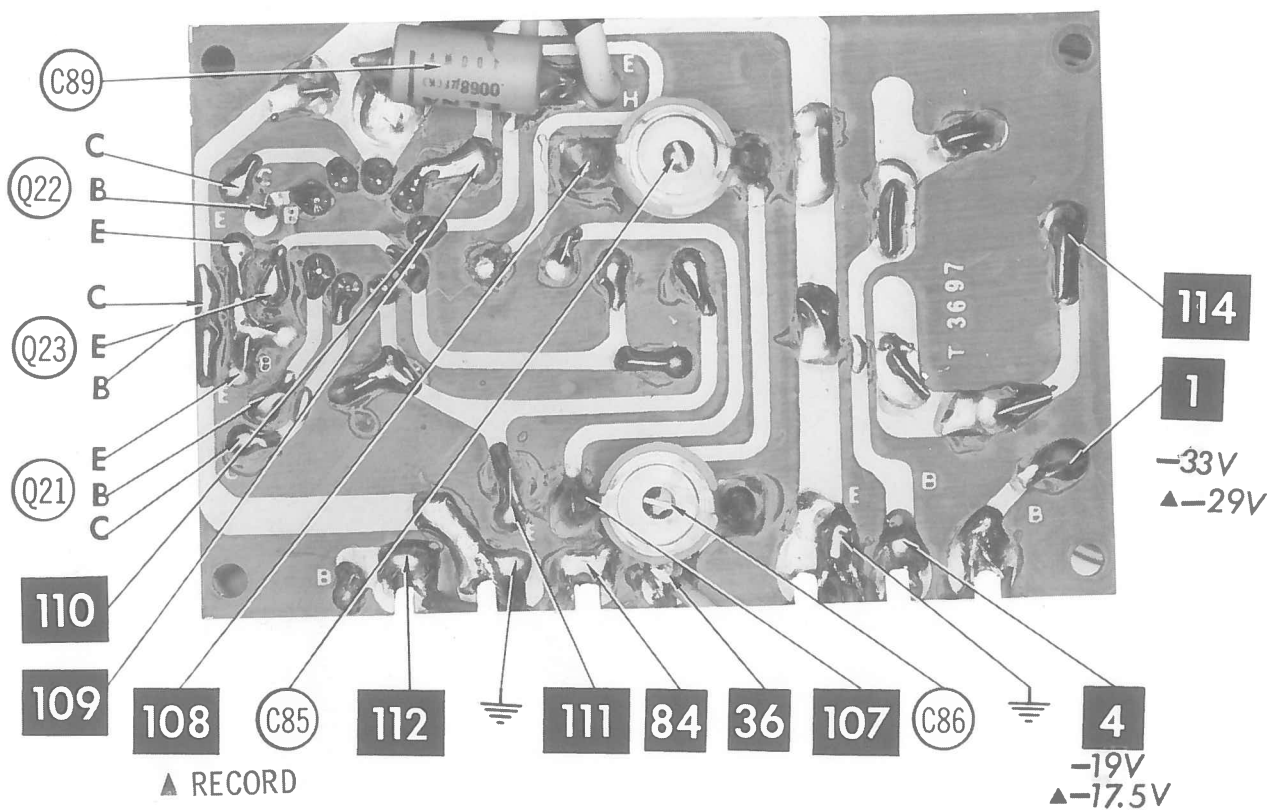
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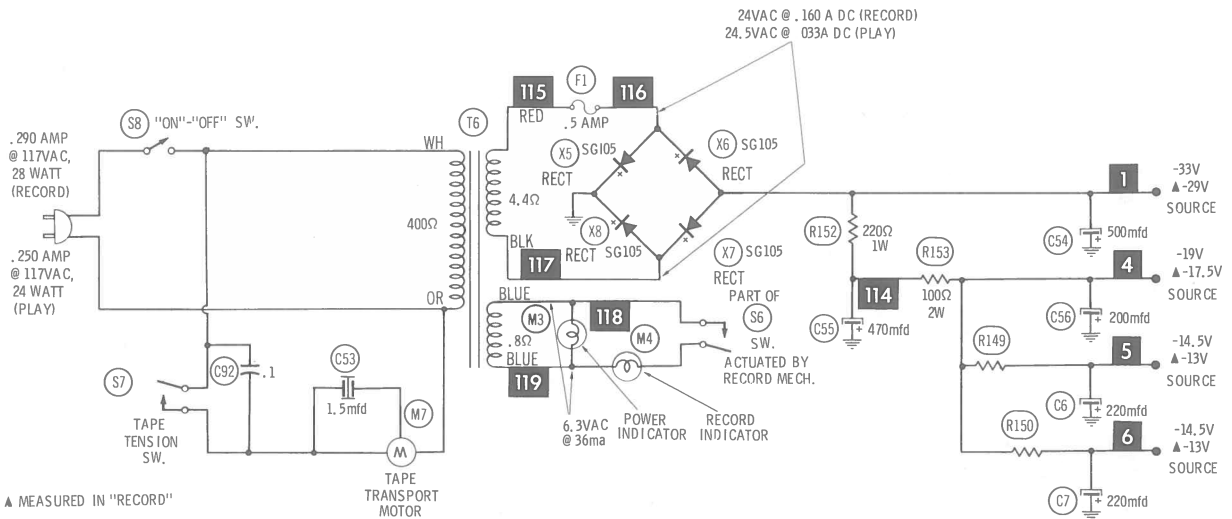
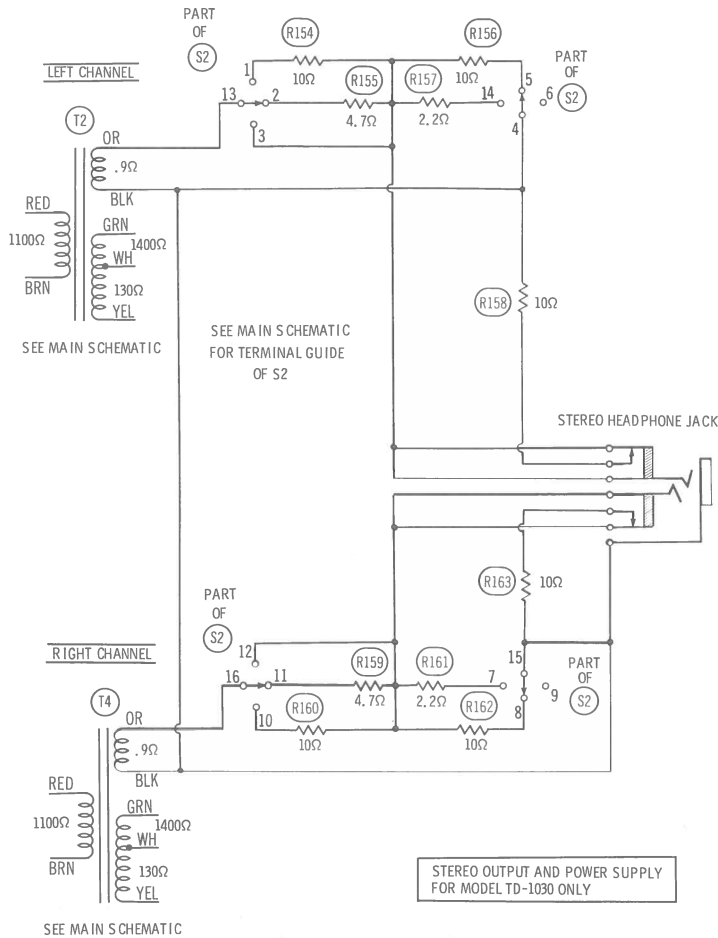
MODEL TD-1030



▲ RECORD



NOTE: DEMAGNETIZE HEADS AFTER SERVICING RECORDER



▲ MEASURED IN "RECORD"

- ③ See parts
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.
- 8. All measurements taken in "PLAY" unless otherwise indicated.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC

with **CIRCUITRACE**

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Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

ALLIED MODEL TD-1030

ALLIED MODELS TD-1030, TR-1040

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Record Level	10K	(1)				
R1A	Aux. Input Level	250K	(2)				
B	Record Level	10K					
R2	Record Level	10K	(1)				
R2A	Aux. Input Level	250K	(2)				
B	Record Level	10K					
R3A	Playback Volume, Right	10K	(1)				
B	Playback Volume, Left	10K					
R4A	Tone, Right	5000	(1)	F1-5000(4), R1-5000, SSK104, CPL-2	NP-5000-S(4), NR-5000-S, UP-C-400, DC-2	B11-114, B11-114, SK1(4), QCM or (BU1(4), CF8, CR4, SS1, SS7A, DC1)* X201R104B X201R104B	FA53L(4) (P53L, 3038(4) (5)) RU53L, CS3500
B	Tone, Left	5000					
R5	Meter Adjust	100K		TH-100K(3)			MTC15L1
R6	Meter Adjust	100K		TH-100K(3)			MTC15L1

(1) Used in Model TR-1040.

(2) Used in Model TD-1030.

(3) Cut off mounting studs.

(4) Enlarge mounting hole.

(5) Panel and Bushing components listed in parentheses may be substituted for the panel unit.

* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.			IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R66	50 (Cold) Thermistor		GM47		R131	50 (Cold) Thermistor		GM47	
R70	50 (Cold) Thermistor		GM47		R135	50 (Cold) Thermistor		GM47	
R74	8.2, 5W	PWS-7.5	5W-SQ-7.5		R138	8.2, 5W	PWS-7.5	5W-SQ-7.5	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Bias Oscillator				
L2	Dummy Coil	T6554			

TRANSFORMER (Power)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .300A	28VAC/CT @ .210ADC	6.3VAC @ 36ma	T3995-2(1)					(1) Used in Model TR-1040.
T6	117VAC @ .290A	24VAC @ .160ADC	6.3VAC @ 36ma	T3975(2)					(2) Used in Model TD-1030.

TRANSFORMER

ITEM No.	TURNS RATIO			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	ALLIED PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2				T40387					
T4				T40387					

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	ALLIED PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T3	3.8	1	1	T30101					
T5	3.8	1	1	T30101					

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA			NOTES
		ALLIED PART No.	JENSEN PART No.	QUAM PART No.	
SP1	3 3/4" X 6" PM 8 ohms	SK2173E			
SP2	3 3/4" X 6" PM 8 ohms	SK2173E			

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	3AG, .5 Amp, Pigtail			GJV1/2		318.500		

TAPE HEADS

ITEM NO.	MEASURED			ALLIED PART NO.	NORTRONICS PART NO.	DESCRIPTION
	INDUCTANCE	BIAS/ERASE VOLTS (RMS)	BIAS FREQ.			
M1	185mh	17Vrms	58KC		1008 & QK-66	4-Track Stereo Record/Play (1)
	150mh	12Vrms	58KC		1008 & QK-66	4-Track Stereo Record/Play (2)
M2	1.2mh	22Vrms	58KC		1408 & QK-18 & L-5	4-Track Stereo Erase (1)
	1mh	18Vrms	58KC		1408 & QK-18 & L-5	4-Track Stereo Erase (2)

(1) Used in Model TD-1030.

(2) Used in Model TR-1040.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M3	Pilot Lamp		Indicator
M4	Pilot Lamp		Record Indicator
M5	Meter		Record Level
M6	Meter		Record Level
M7	Motor		Tape Transport
M8	Microphone		
S1	Switch		Record/Play
S2	Switch		Mode Selector (Left/Stereo/Right)
S3	Switch		Equalization
S4	Switch		Mute
S5	Switch		Speaker On/Off (Model TR-1040 only)
S6	Switch		Record
S7	Switch		Tape Tension
S8	Switch		Power On/Off

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
Power Cord	Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) -6 Ft.
	17109 (Plastic) or 17129 (Rubber) -9 Ft.
Low-Loss Shielded Lead (Interconnecting)	Use BELDEN No. 8401 or 8421
Phono Pick-up Arm Cable	Use BELDEN No. 8430 (Two Conductor-Unshielded)
	8429 (Two Conductor-Shielded)
	8419 (Three Conductor-Shielded)