



PHOTOFACT[®] with

CIRCUITRACE[®]

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

Model 850 is a tape deck only and requires external amplifier/speaker systems. Models 860 and 865 are self-contained except for speakers.

Line Input jacks are provided on all three models for connecting sound sources other than microphone. Line Out jacks are provided on all three models for connecting external amplifiers. External Speaker jacks are provided on Models 860 and 865.

A 110-120 volt, 60-cycle AC power source is required.

TRADE NAME : Ampex Models 850 (Deck Only)
860 (Portable)
865 (Table)

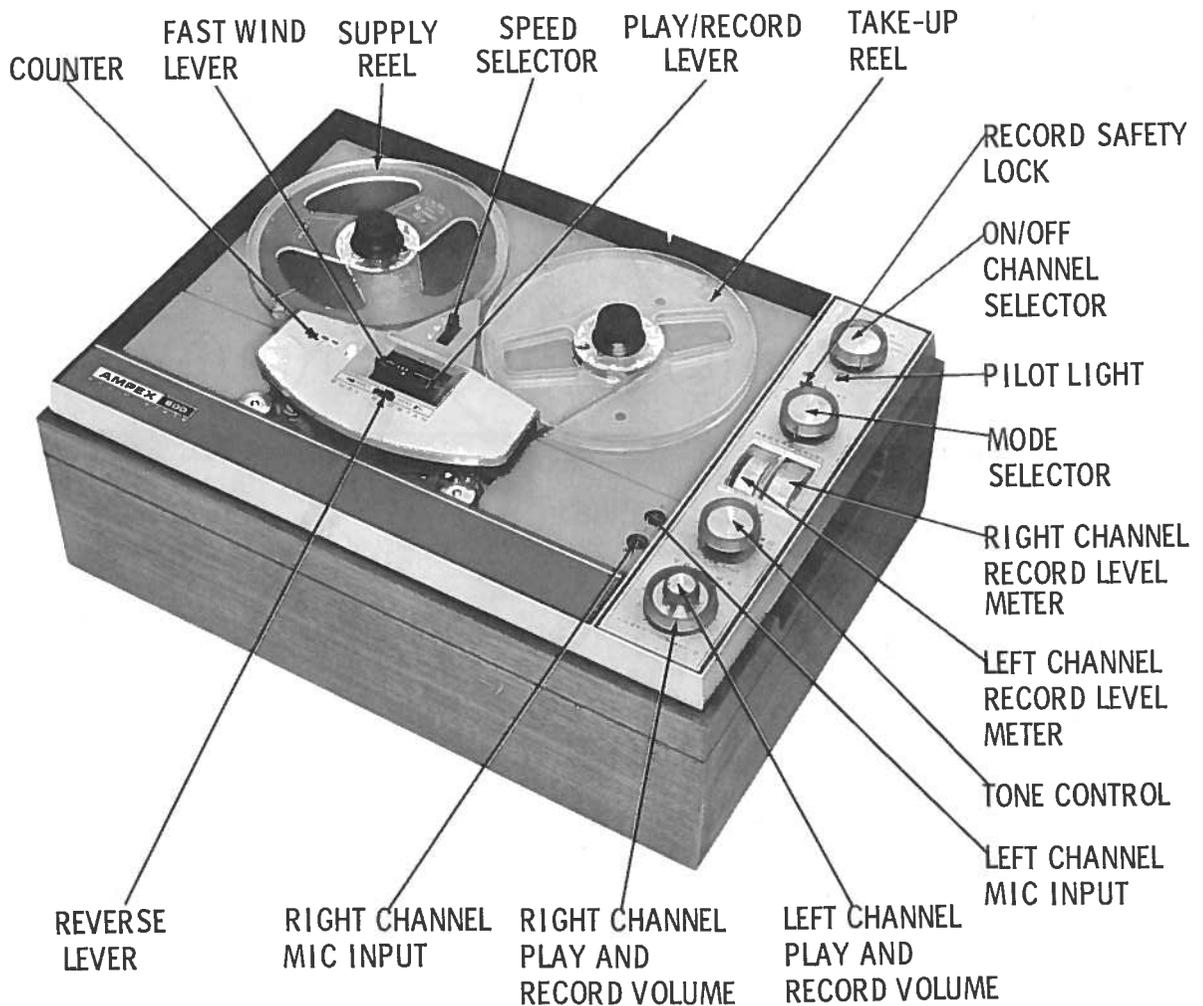
SUPPLIER : For Current Address, see Master Index

TYPE SET : 3-Speed, 4-Track Mono/Stereo Recorder

POWER SUPPLY : 110 - 120 Volts AC, 60 Cycles

RATING : 10 Watts, .15 Amp. @ 117VAC (Less Motor)

AMPEX MODELS 850, 860, 865



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

FUNCTION OF SPECIFIC CONTROLS, JACKS & INDICATORS

Reverse Lever

Selects the direction of fast wind but must be in the left-to-right position when recording or playing. Do not attempt to reverse direction while tape is moving.

Fast Wind

Moves the tape rapidly in the direction indicated by the Reverse Lever.

OPERATING INSTRUCTIONS

Note: Connect amplifier/speaker systems to Model 850 and speakers to Models 860 and 865.

Four-Track Monaural Record

1. Thread the tape, select the speed, turn the Channel Selector to Mono 1, the Mode Selector to Record, and the Reverse Lever to the right. Connect the recording source.
2. Adjust the appropriate volume control so the recording level indicator fluctuates within the white area.
3. To record, simultaneously press the Record Interlock and push the Play/Record Lever forward.
4. After track 1 is recorded, reverse the reels and repeat steps 1, 2 and 3.
5. After track 4 is recorded, reverse the reels and repeat steps 1, 2 and 3 except in step 1 turn the Channel Selector to Mono 2.
6. After track 3 is recorded, reverse the reels and repeat steps 1, 2 and 3 except in step 1 turn the Channel Selector to Mono 2.

Stereo Record

1. Repeat steps 1, 2 and 3 of "Four-Track Monaural

Recording" except in step 1 turn the Channel Selector to Stereo.

2. After tracks 1 and 3 are recorded, reverse the reels and repeat step 1.

Four-Track Monaural Play

1. Thread the tape, select the speed, turn the Channel Selector to Mono 1, the Mode Selector to Play, and the Reverse Lever to the right.
2. Push the Play/Record Lever forward and adjust the volume and tone controls as desired.
3. After track 1 is played, reverse the reels and repeat steps 1 and 2.
4. After track 4 is played, reverse the reels and repeat steps 1 and 2 except in step 1 turn the Channel Selector to Mono 2.
5. After track 3 is played, reverse the reels and repeat steps 1 and 2 except in step 1 turn the Channel Selector to Mono 2.

Stereo Play

1. Repeat steps 1 and 2 of "Four-Track Monaural Play" except turn the Channel Selector to Stereo.
2. After tracks 1 and 3 are played, reverse the reels and repeat step 1.

DISASSEMBLY

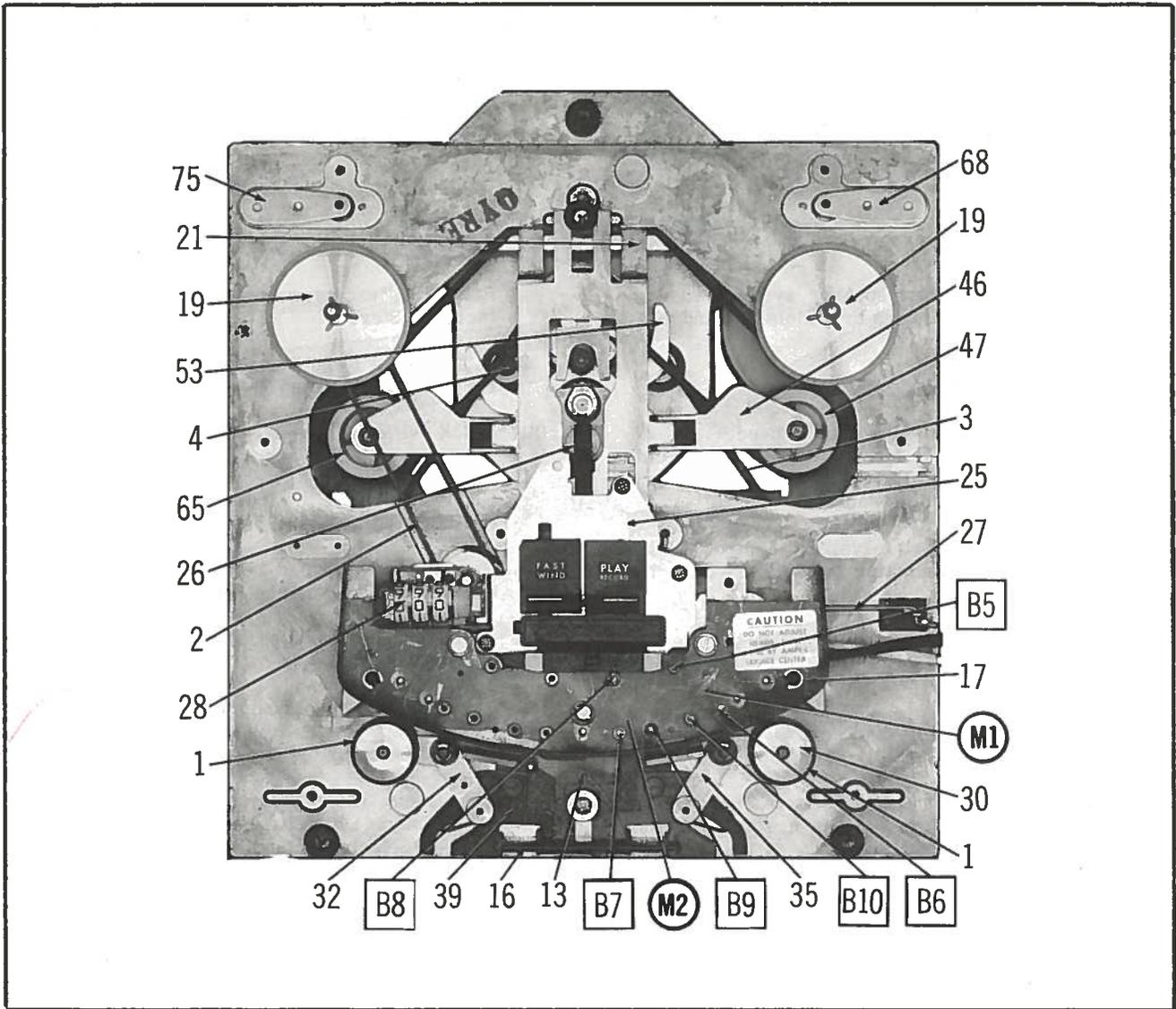
1. Lift off plastic head cover.
2. Remove front plastic deck cover by prying front up.
3. Remove four Phillips and four Allen screws holding the deck cover.
4. Remove four Phillips screws holding the tape deck amplifier assembly to the cabinet.
5. Remove four hex head metal screws (2 at each end) and one Phillips screw and nut holding the amplifier shield.
6. Remove five knobs.
7. Remove two Phillips screws holding the amplifier escutcheon.
8. Remove three screws holding the head assembly.
9. Remove two Phillips screws holding the right amplifier chassis.
10. Remove two Phillips screws holding the left amplifier chassis.

CLEANING

LUBRICATING

HEAD DEMAGNETIZING

Refer to "General Servicing Information" on page 4.



SEQUENCE OF OPERATION

Fast Wind

Pushing the Fast Wind button forward pushes Wind Slide (21) forward, releasing Brake Roller Arm (71) and Wind Lever (46).

With Reverse Lever to the right, the motor reversing switch is positioned so the motor will run clockwise when viewed from the rear, causing the torque applied to Wind Belt (3) to pivot Wind Lever (46) so Pulley Clutch (47) will contact Brake Drum (43) and move the tape from left to right.

With Reverse Lever to the left, the motor reversing switch is positioned so the motor will run counterclockwise when viewed from the rear, causing the torque applied to Wind Belt (3) to pivot Wind Lever (46) so Pulley Clutch (65) will contact Brake Drum (43) and move the tape from right to left.

Play-Record

Pushing the Record/Play button forward not only

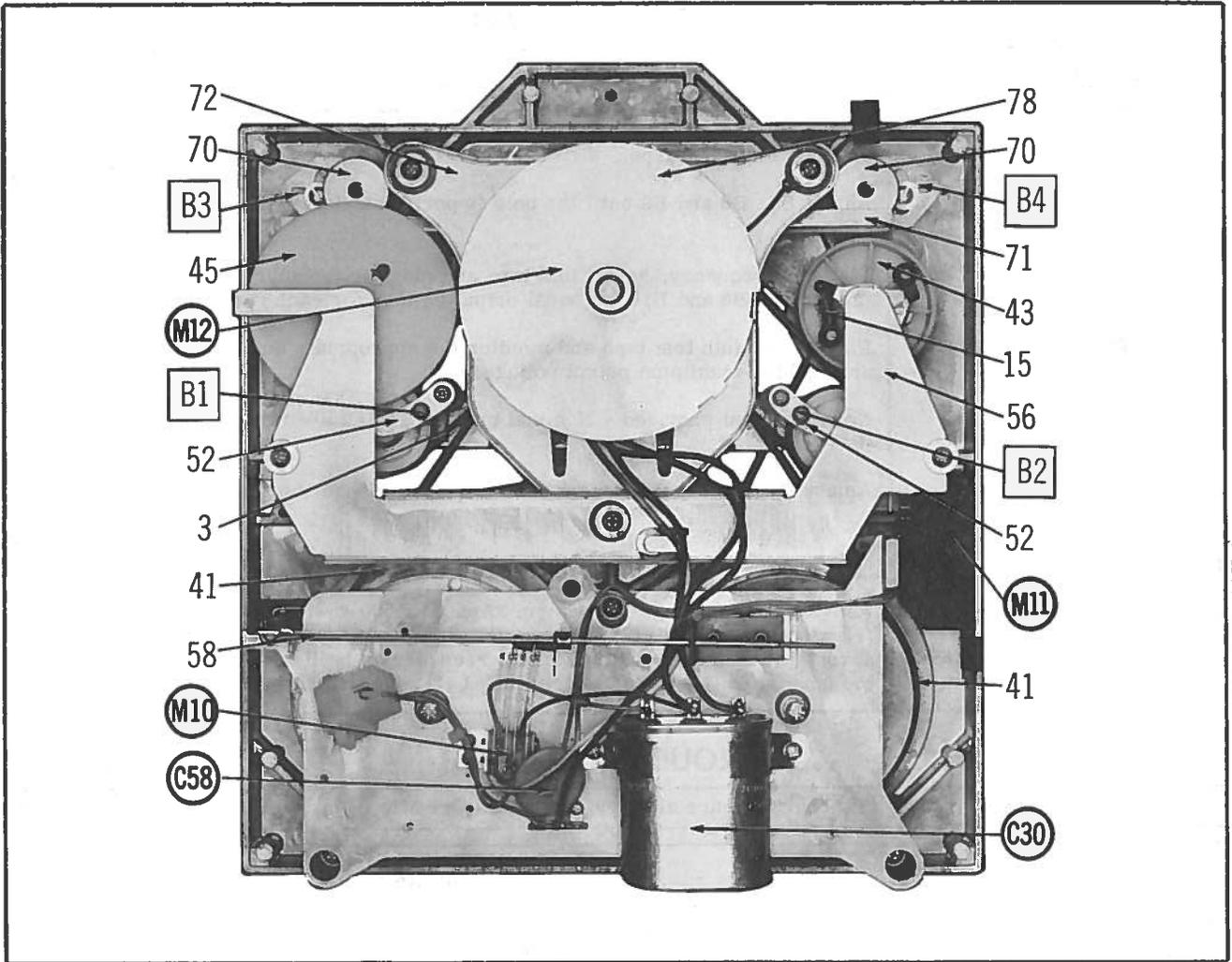
pulls Play Slide (39) forward, engaging Capstan Idler (1) with the capstans but also pushes Wind Slide (21) forward, releasing Brake Roller Arm (71) and Wind Lever (46).

A lance on Play Slide (39) forces Take-up Lever Rod (64) down which pivots Take-up Lever (56) up, forcing Play Pulley (45) up so Play Clutch Tire (49) will contact Play Pulley (45) to keep the tape taut.

Speed Selector

When the Speed Selector is moved from a fast to a slower speed, Lower Belt Lifter (55) forces Flywheel Belt (4) onto the appropriate diameter of Motor Pulley (77) which drives Flywheel (41).

When the Speed Selector is moved from a slow to a faster speed, Upper Belt Lifter (53) forces Flywheel Belt (4) onto the appropriate diameter of Motor Pulley (77) which drives Flywheel (41).



ADJUSTMENTS

IMPORTANT: Before making any adjustments, refer to "General Servicing Information" on page 4.

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	Adjust B1 for 1 ounce.
Fast Forward Take-up Torque	No adjustment provided. Nominal value 10 ounces.
Rewind Torque	Adjust B2 for 10 ounces.
Supply Reel Drag	Adjust B3 for 1 ounce, measured in Forward position.
Take-up Reel Drag	Adjust B4 for 1/2 ounce, measured in Rewind.
Pressure Roller Pressure	No adjustment provided. Nominal value 2 pounds.
Brake Shoe Torque	No adjustment provided. Nominal value 1 1/2 ounces, measured at point of contact in Stop.

ADJUSTMENTS (Continued)

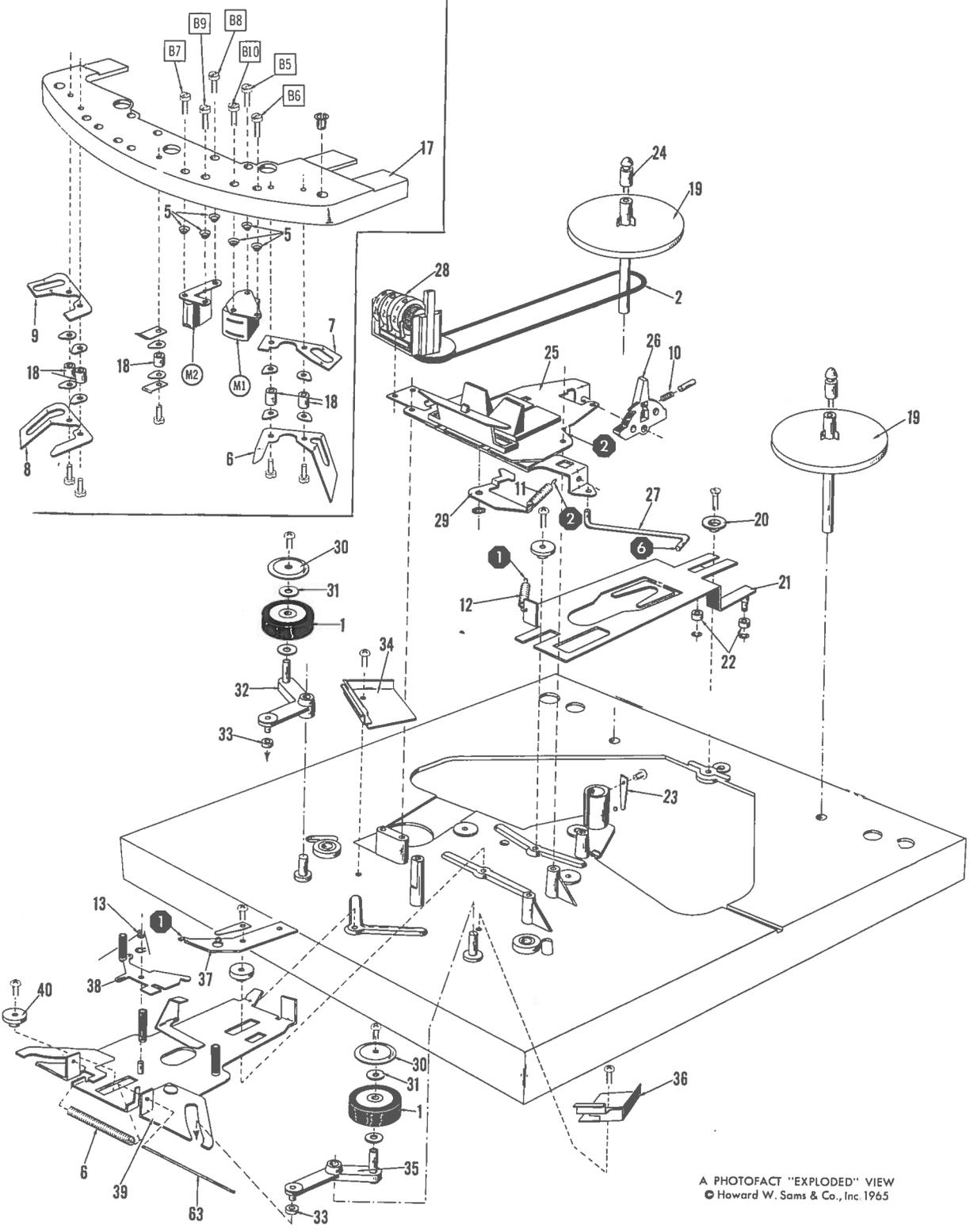
ADJUST	REMARKS
Erase Head Height	Adjust B7, B8 and B9 until top of upper pole piece is even with top edge of a properly threaded tape.
Erase Head Azimuth	Adjust B7, B8 and B9 until the pole is perpendicular to the lateral tape motion.
Record/ Play Head Height	Play a 2-frequency, height test tape and monitor the appropriate output. Adjust B5, B6 and B10 for equal output voltage for each frequency.
Record/ Play Head Azimuth	Play an azimuth test tape and monitor the appropriate output. Adjust B5, B6 and B10 for maximum output voltage.
Erase Current	No adjustment provided. Nominal current 11ma (50V rms) in each section of the erase head.
Record Bias	Adjust R4 (R6) for 20V rms (.6ma) across the record head.
Bias Oscillator	No adjustment provided. Nominal frequency is 70KC.
Record Level Indicator Calibration	Remove the oscillator transistor. Apply a 1000-cycle signal to the channel 1 (2) mic input and adjust the channel 1 (2) volume for 20V rms, measured across the upper (lower) half of the record/play head. Adjust R3 (R5) for the normal peak level on the channel 1 (2) level indicator.

TROUBLE CHART

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

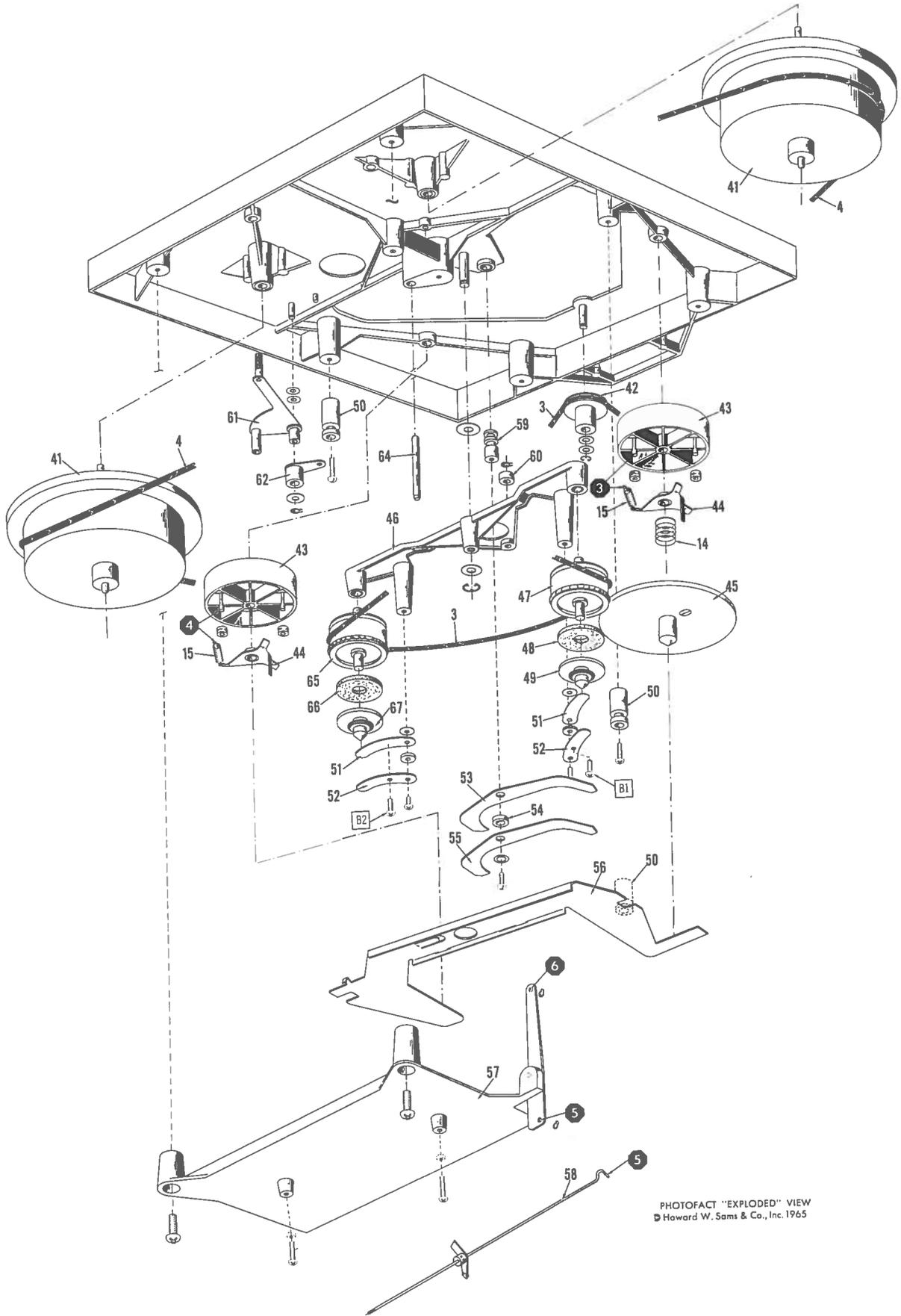
SYMPTOM	REMARKS
Take-up reel revolves erratically, or not at all in Play or Record	<ol style="list-style-type: none"> 1. Flywheel Belt (4) broken or worn. 2. Wind Belt (3) broken or worn. 3. Pressure Roller (1) dirty or worn. 4. B1 or B2 misadjusted.
Take-up reel does not revolve in Fast Forward.	<ol style="list-style-type: none"> 1. Wind Belt (3) broken. 2. Rubber tire on Play Clutch (47) or Wind Clutch (65) worn or broken.
Take-up reel revolves rapidly in Play or Record.	<ol style="list-style-type: none"> 1. Pressure Rollers (1) dirty or worn.
Supply reel does not revolve in Rewind.	<ol style="list-style-type: none"> 1. Wind Belt (3) broken. 2. Rubber tire on Play Clutch (47) or Wind Clutch (65) worn or broken.
Supply reel spills tape in forward positions.	<ol style="list-style-type: none"> 1. B3 or B4 misadjusted.
Take-up reel spills tape in Rewind.	<ol style="list-style-type: none"> 1. B3 or B4 misadjusted.
Reels do not stop immediately when Function button is returned to neutral position.	<ol style="list-style-type: none"> 1. B3 or B4 misadjusted.
Capstan does not rotate in Play or Record.	<ol style="list-style-type: none"> 1. Flywheel Belt (4) broken.
Wow or Flutter.	<ol style="list-style-type: none"> 1. Pressure Rollers (1) dirty or worn. 2. Flywheel Belt (4) dirty or worn. 3. Wind Belt (3) dirty or worn.

A PHOTOFAC "EXPLODED" VIEW
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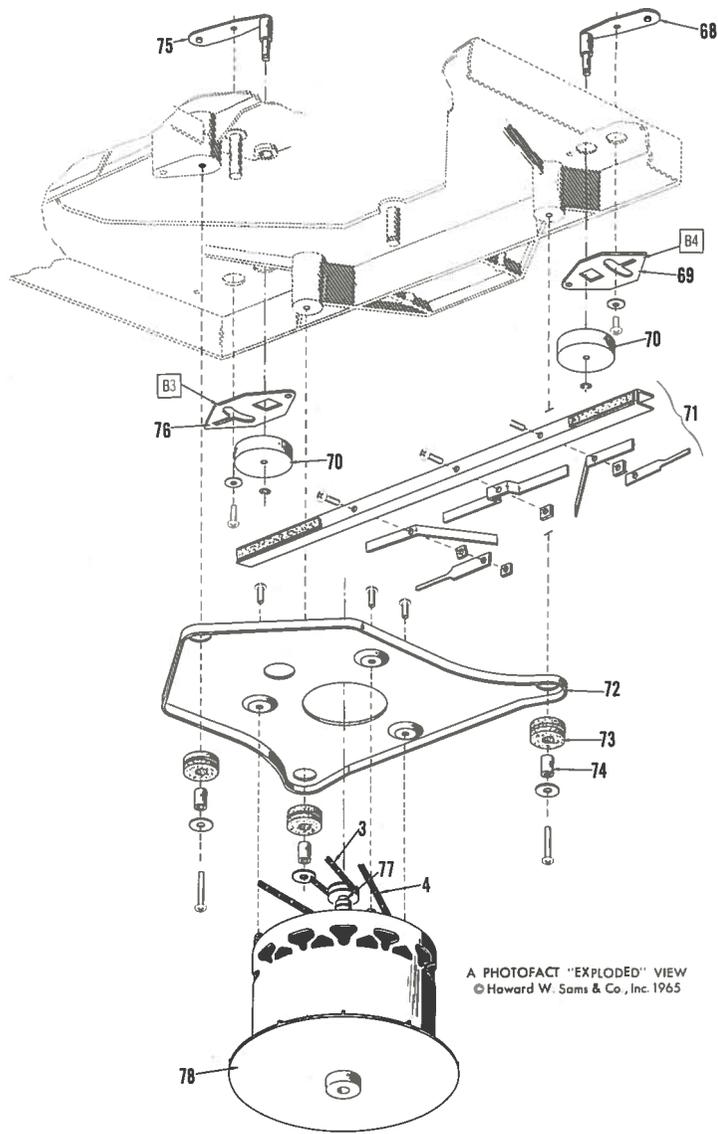


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AMPEX MODELS 850, 860, 865



PHOTOFACT "EXPLODED" VIEW
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TROUBLE CHART (Continued)

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

SYMPTOM	REMARKS
Prerecorded tapes are weak or distorted.	1. Record/Play Head (M1) misaligned or dirty.
Tapes recorded on the machine are weak or distorted.	1. Insufficient Record Bias. 2. Bias Oscillator inoperative. 3. Insufficient erase.
Sound is weak or distorted.	1. Record/Play Head (M1) misaligned or dirty or defective.
Erase weak or inoperative.	1. Insufficient erase current. 2. Erase Head (M2) misaligned or defective.

MECHANICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1		Capstan Idlers (2)	40		Play Slide Spacer
2		Counter Belt	41		Flywheel (2)
3		Wind Belt	42		Pulley
4		Flywheel Belt	43		Brake Drum
5		Head Stack Springs	44		Brake Lever
6		Lower Right Tape Guide	45		Play Pulley
7		Upper Right Tape Guide	46		Wind Lever
8		Lower Left Tape Guide	47		Play Clutch
9		Upper Left Tape Guide	48		Play Clutch Washer
10		Speed Shift Index Spring	49		Play Clutch Tire
11		Wind Knob Hold Spring	50		Spacer
12		Wind Slide Spring	51		Play Pulley Tension Spring
13		Torsion Leaf	52		Holding Bracket
14		Clutch Pressure Spring	53		Upper Belt Lifter
15		Brake Pulley Spring	54		Belt Guide Spacer
16		Coil Spring	55		Lower Belt Lifter
17		Head Mounting Plate	56		Take-up Lever
18		Tape Guide Spacers	57		Lower Casting
19		Turntable	58		Reverse Switch Rod
20		Spacer	59		Speed Shifter Shaft
21		Wind Slide	60		Spacer
22		Roller	61		Automatic Stop Lever
23		Leaf Spring	62		Bearing
24		Shaft Extender	63		Play Slide Rod
25		Control Plate	64		Take-up Lever Rod
26		Speed Shift Knob	65		Wind Clutch
27		Reverse Control Rod	66		Clutch Spacer Washer
28		Counter	67		Wind Clutch Tire
29		Play-Wind Interlock Lever	68		Brake Adjustment Lever
30		Capstan Idler Retainer	69		Locking Plate
31		Nylon Washer	70		Brake Roller
32		Left Capstan Idler Arm	71		Brake Roller Arm
33		Roller	72		Motor Mounting Plate
34		Left Tape Guide	73		Shock Mounts
35		Right Capstan Idler Arm	74		Spacer
36		Right Tape Guide	75		Brake Adjustment Lever
37		Locking Lever	76		Locking Plate
38		Tape Lifter	77		Motor Pulley (60 Cycle)
39		Play Slide	78		Fan

PARTS LIST AND DESCRIPTION TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			AMPEX PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		AF Amp.				570005452	NPN
X2		AF Amp.				570005503	NPN
X3		AF Amp.				570005452	NPN
X4		AF Amp.				570005503	NPN
X5		AF Amp.				570004503	NPN
X6		Output	DS-503	GE-3		DTG-110	PNP
X7		Output	DS-503	GE-3		DTG-110	PNP
X8		AF Amp.				570005452	NPN
X9		AF Amp.				570005503	NPN
X10		AF Amp.				570005452	NPN
X11		AF Amp.				570005503	NPN
X12		AF Amp.				570004503	NPN
X13		Output	DS-503	GE-3		DTG-110	PNP
X14		Output	DS-503	GE-3		DTG-110	PNP
X15		Bias Oscillator				570009-01-504	NPN
X16		Bias Oscillator				570009-01-504	NPN

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X17	310MA	10B2	1N1692	1N2089 or 1N538 ①	SK-3018 or SK-3017	F-2 ② or 20C ②	
X18	310MA	10B2	1N1692	1N2089 or 1N538 ①	SK-3018 or SK-3017	F-2 ② or 20C ②	
X19	1.6MA						1N34AS
X20							1N34AS
X21							1N34AS

① Part #CTP200 may be used to replace X17 and X18.

② Part #6TFC20 may be used to replace X17 and X18.

PARTS LIST AND DESCRIPTION (CONTINUED)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	AMPEX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	1000	50						TVLS2335, 4*
B	1000	50						
C2A	500	50			BR500-50			
B	500	50			BR500-50			
C	500	50			BR500-50			
C3	22	25		CRE612A	NLW25-25	MT1-11	TT25X25	TE-1207
C4	22	25		CRE812A	NLW25-25	MT1-11	TT25X25	TE-1207
C5	10	150		CRE957A	NLW10-150	MT1-8	TT150X10	TE-1507
C6	27	6	7540052		TYR13BB270K		TAS276K006POC	
C7	68	6	7540049	CRE320A	TYR13BB680K	MT1-18	TT6X75	VL-1097
C8	1.8	25			TYR13BF1R8K		TAS185K035POC	
C9	10	10		BCD10010	TYR13BC100K	MT1-5	TT10X10	VL-1127
C10	10	10		BCD10010	TYR13BC100K	MT1-5	TT10X10	VL-1127
C11	10	10		BCD10010	TYR13BC100K	MT1-5	TT10X10	VL-1127
C12	27	15		CRE463A	TYR13BD270K	MT1-14	TT15X25	TE-1158
C13	250	6		CRE333A	TYR13BB271K	MT1-24	TT6X250	TE-1105
C14	47	25		CRE617A	NLW50-25	MT1-17	TT25X50	TE-1209
C15	10	10		BCD10010	TYR13BC100K	MT1-5	TT10X10	VL-1127
C16	5.6	6		CRE305A	TYR13BB5R6K	MT1-5	TT6X6	TE-1085
C17	500	35		PRS1390	BR500-50	QT1-31	TC50050	TVA-1315
C18	27	6	7540052		TYR13BB270K		TAS276K006POC	
C19	68	6	7540049	CRE320A	TYR13BB680K	MT1-18	TT6X75	VL-1097
C20	1.8	25			TYR13BF1R8K		TAS185K035POC	
C21	10	10		BCD10010	TYR13BC100K	MT1-5	TT10X10	VL-1127
C22	10	10		BCD10010	TYR13BC100K	MT1-5	TT10X10	VL-1127
C23	10	10		BCD10010	TYR13BC100K	MT1-5	TT10X10	VL-1127
C24	27	15		CRE463A	TYR13BD270K	MT1-14	TT15X25	TE-1158
C25	250	6		CRE333A	TYR13BB271K	MT1-24	TT6X250	TE-1105
C26	47	25		CRE617A	NLW50-25	MT1-17	TT25X50	TE-1209
C27	10	10		BCD10010	TYR13BC100K	MT1-5	TT10X10	VL-1127
C28	5.6	6		CRE305A	TYR13BB5R6K	MT1-5	TT6X6	TE-1085
C29	500	35		PRS1390	BR500-50	QT1-31	TC50050	TVA-1315

① Some versions may use 500mfd @ 50V.

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.
C30A	3 330VAC	#7540041-01						
B	1 330VAC							
C31	.1 25V		P288N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C32	.0082		P288N-008	DD-822	WMF-D82	1DP-1-752	PVC628	6PS-D82
C33	820		ADM-19-821	CPR-820J	F821J100	DM-15-821	SX382	MS-382
C34A	8-100			423				
B	8-100			423				
C35	300		ADM-15-301	CPR-300J	F301J300	DM-15-301	SX330	MS-33
C36	.47						MAG12047	
C37	.02 25V		P288N-02	DD-203	PM2S22	4DP-2-203	PVC212	2TM-S20
C38	.068 100V	(.02) †	P288N-068	DD-203	WMF-1S68	1DP-2-683	PVC1168	4PS-S68
C39	.047 100V		P288N-047	DD-503	PM2S47	4DP-3-473	PVC2147	2TM-S47
C40	.1 25V		P288N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C41	.0082		P288N-008	DD-822	WMF-D82	1DP-1-752	PVC628	6PS-D82
C42	820		ADM-19-821	CPR-820J	F821J100	DM-15-821	SX382	MS-382
C43	.1 100V		P288N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C44	300		ADM-15-301	CPR-300J		DM-15-301		MS-33
C45	.47						MAG12047	
C46	.02 25V		P288N-02	DD-203	PM2S22	4DP-2-203	PVC212	2TM-S20
C47	.068 100V	(.02) †	P288N-068	DD-203	WMF-1S68	1DP-2-683	PVC1168	4PS-S68
C48	.047 100V		P288N-047	DD-503	PM2S47	4DP-3-473	PVC2147	2TM-S47
C49	680		DI-680	DD-681	JBY601YP681K	CCD-681	GP368	10TS-T68
C50	880		DI-680	DD-681	JBY601YP681K	CCD-681	GP368	10TS-T68
C51	.0043		P288N-004	DD-432	PM2D47	1DP-2-502	PVC6247	6PS-D47
C52	.068		P288N-068	DD-432	WMF-1S68	1DP-2-683	PVC1168	4PS-S68
C53	.088		P288N-068	DD-432	WMF-1S68	1DP-2-683	PVC1168	4PS-S68
C54	.005 1400V		DAC-9	DD16-502	ACV142ZU502E	16DP-2-502	UAC250	BL-D50
C55	.005 1400V		DAC-9	DD16-502	ACV142ZU502E	16DP-2-502	UAC250	BL-D50
C56	.01 1400V		DAC-27	DD16-103	HVT162ZV103P	16DP-3-103	UAC110	BL-S10
C57	.01 1400V		DAC-27	DD16-103	HVT162ZV103P	16DP-3-103	UAC110	BL-S10
C58	.01 1400V		DAC-27	DD16-103	HVT162ZV103P	16DP-3-103	UAC110	BL-S10

† Alternate Value.

Ampex Part Number

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA					
			AMPEX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	Play/Record Volume Right	50K	7520000-01					
B	Play/Record Volume Left	50K				†QJ-1941R		FB54A, RU54A, OS1125①
R2A	Tone, Left	50K	7520001-01					
B	Tone, Right	50K						
R3	Bass Boost Switch							
R4	Meter Calibrate, Left	200K				X201R254B		MTC184L1
R5	Bias Adjust, Left	250K				X201R254B		MTC254L1
R5	Meter Calibrate, Right	200K				X201R254B		MTC184L1
R6	Bias Adjust, Right	250K				X201R254B		MTC254L1

† "CONCENTRIKT" Equivalent: K-6 Kit with Base Elements and Shafts: B13-123, P23-103 ② (Panel) B13-123, R26-112 (Rear)

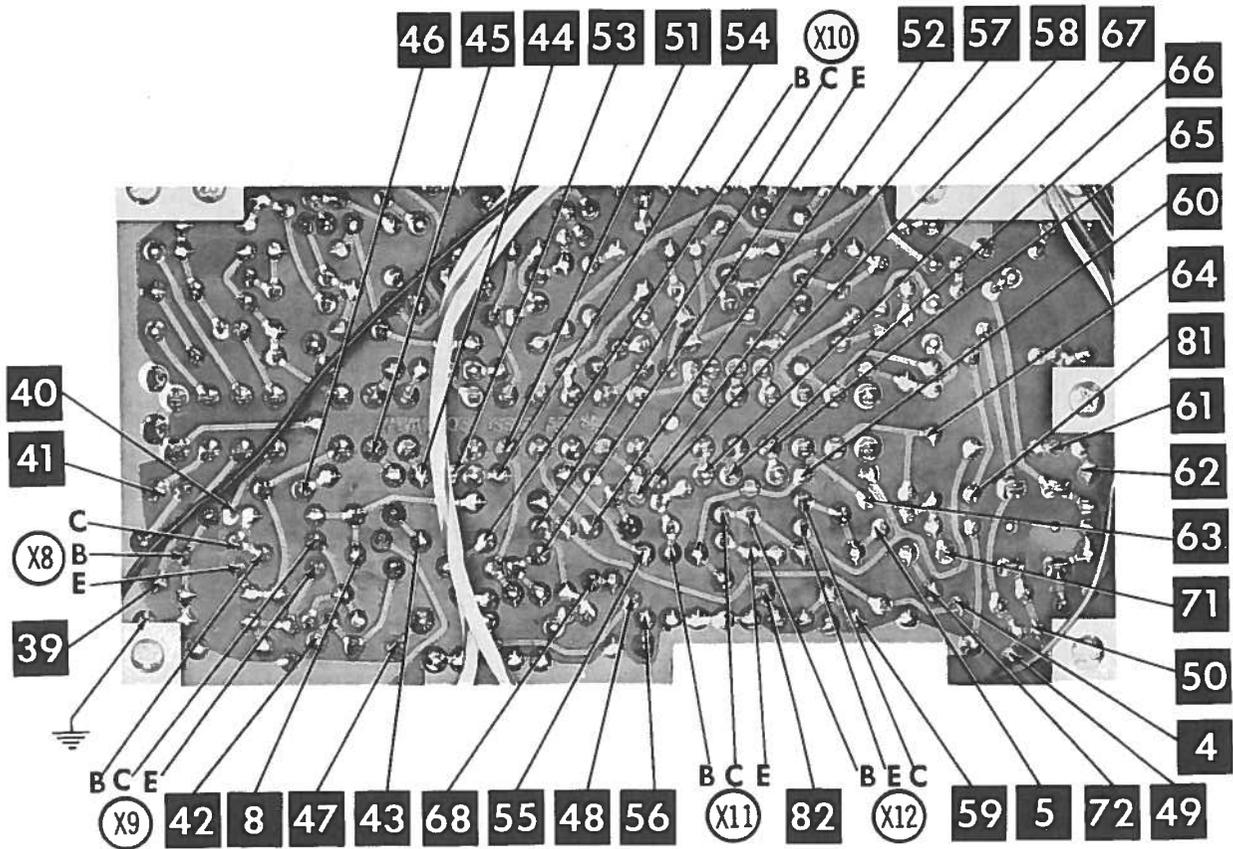
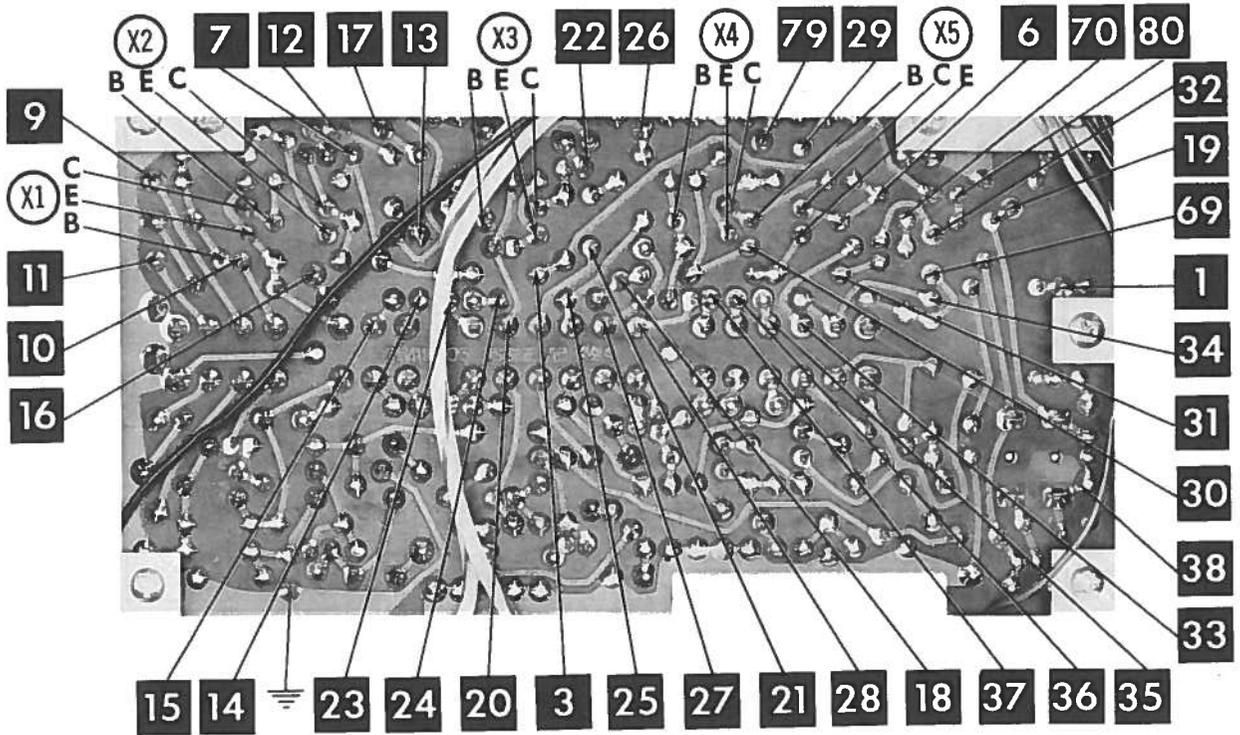
"SNAPTROL" Equivalent: BU5, CF12, CR7, SF7 ②, SR6, DC1

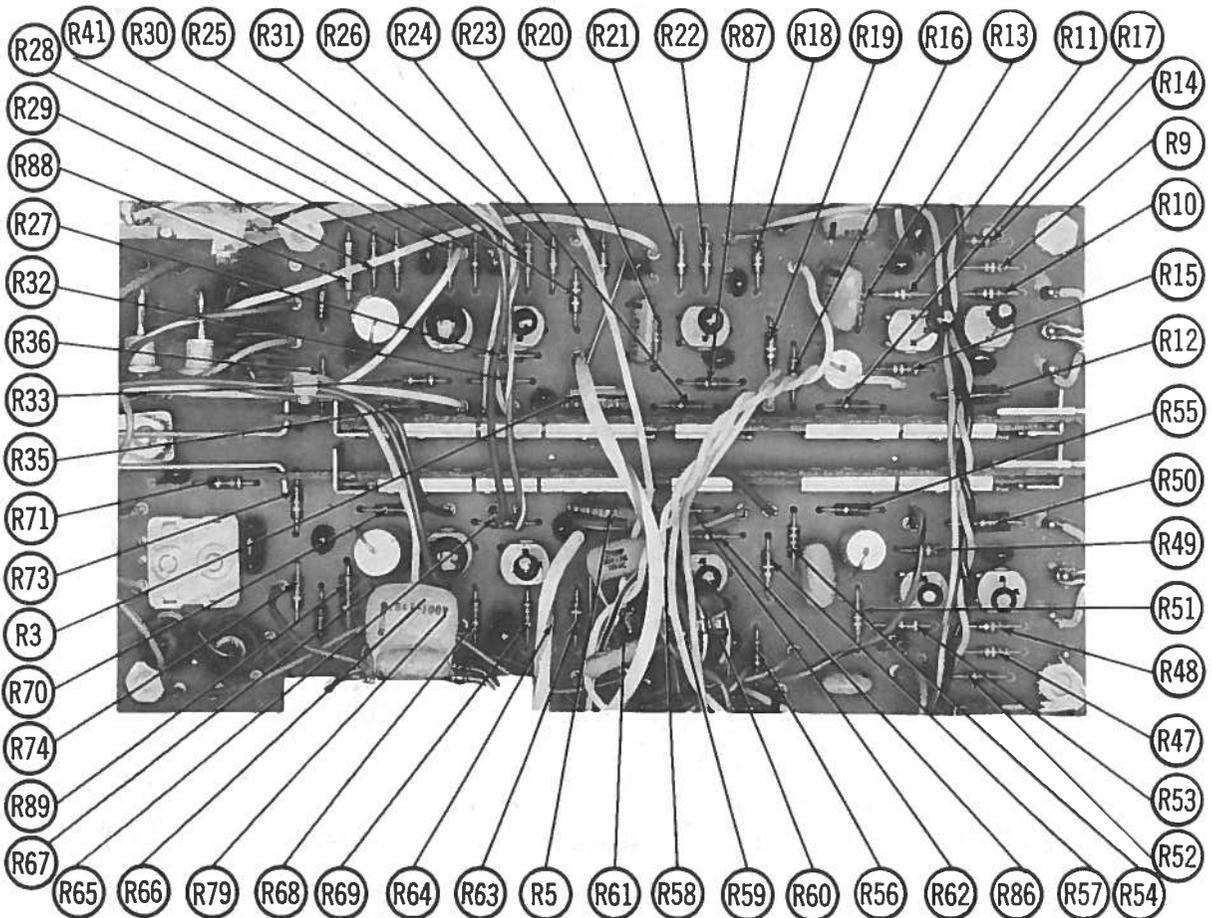
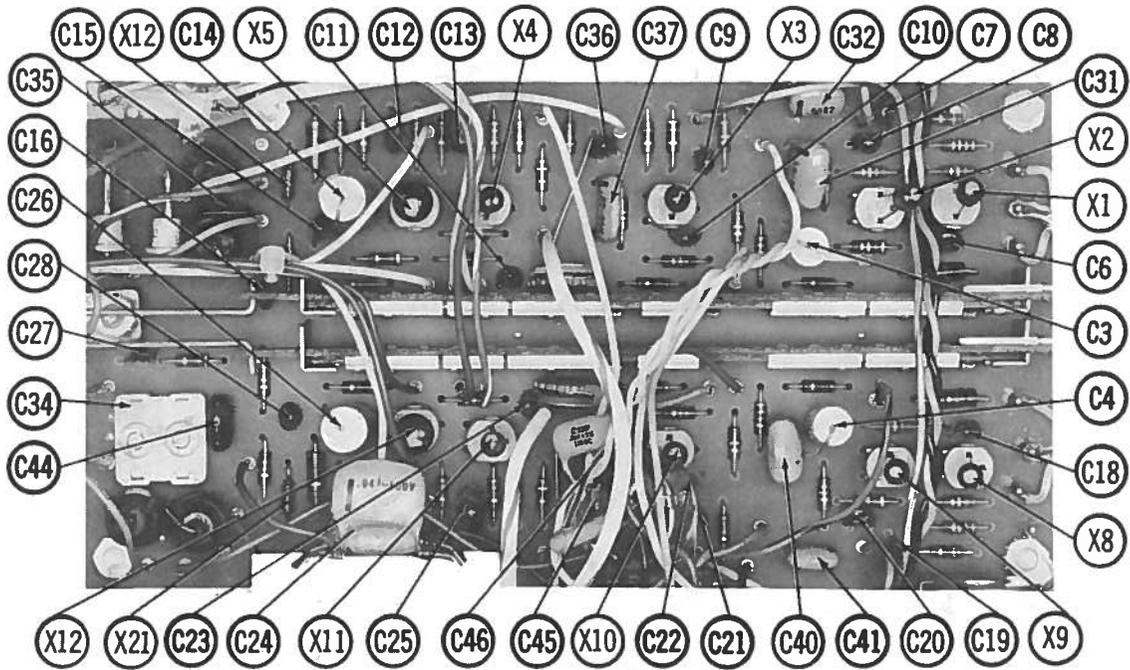
① Squeeze the control end of the outer shaft until the lines touch each other; force inner shaft through compressed end of outer shaft, and proceed in normal manner.

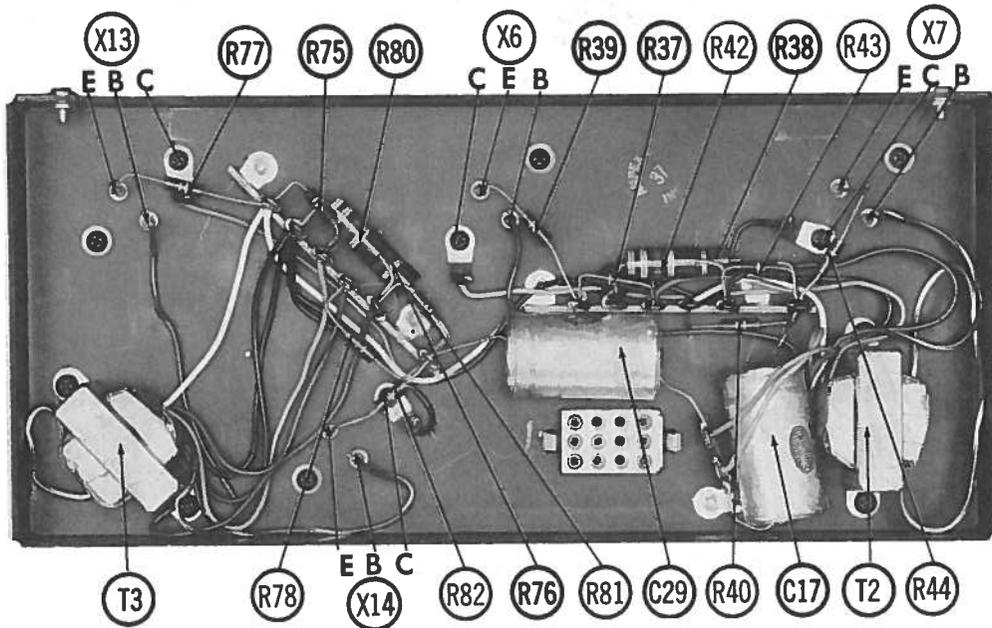
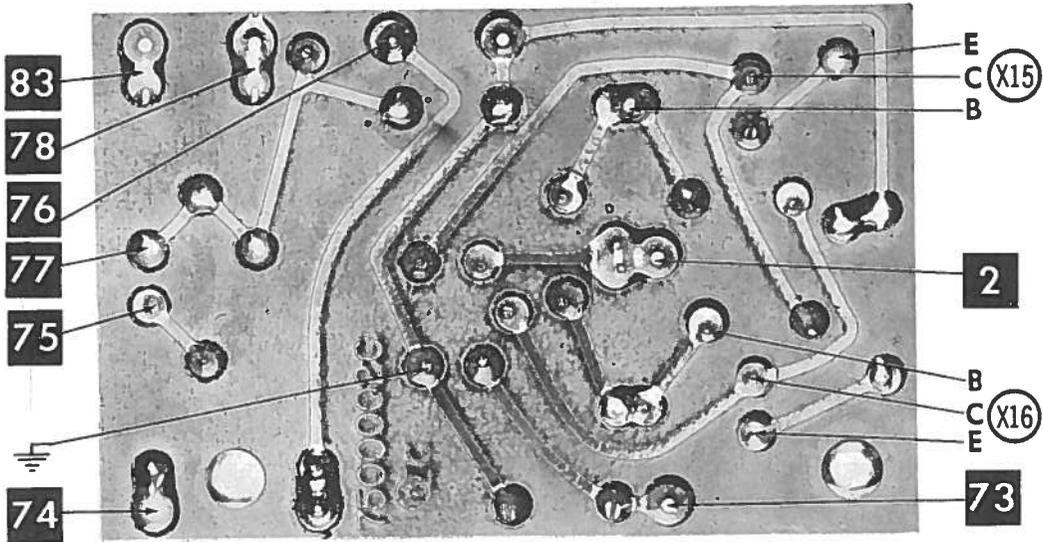
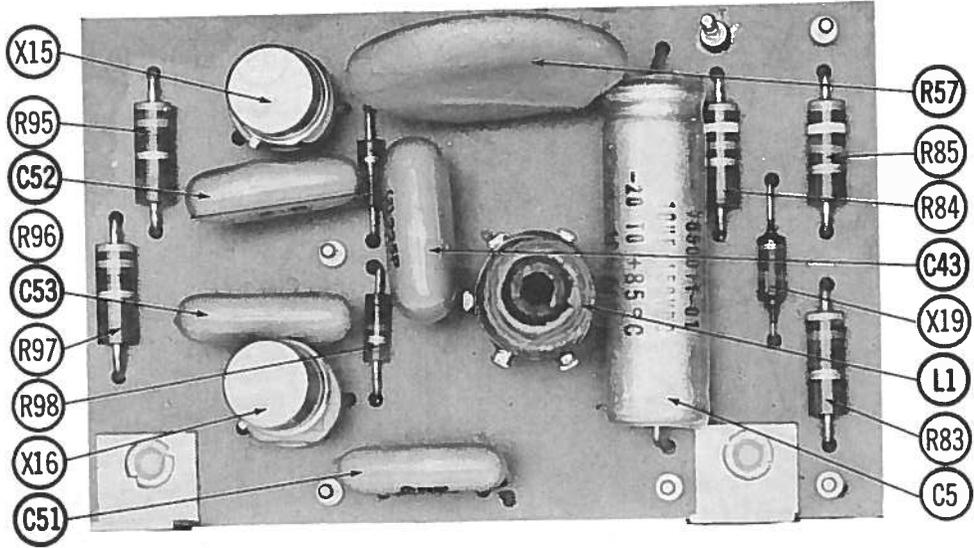
② Form a small dimple with a hammer and punch on the flat mil portion (rear of slot) of the outer shaft to provide drag (friction clutch effect) between shafts. Assemble control in a normal manner.

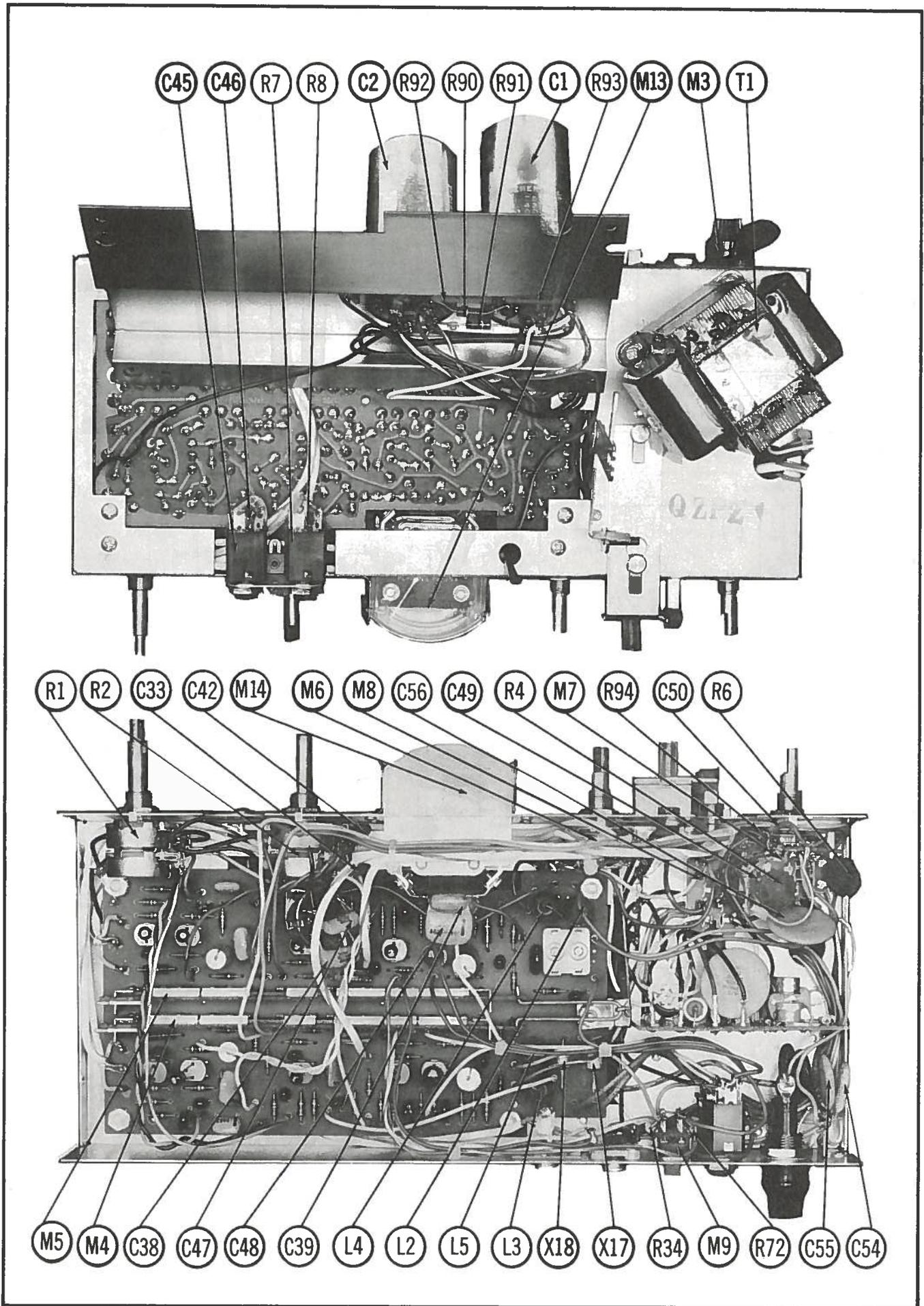
(CONTINUED ON PAGE 28)

AMPEX MODELS 850, 860, 865

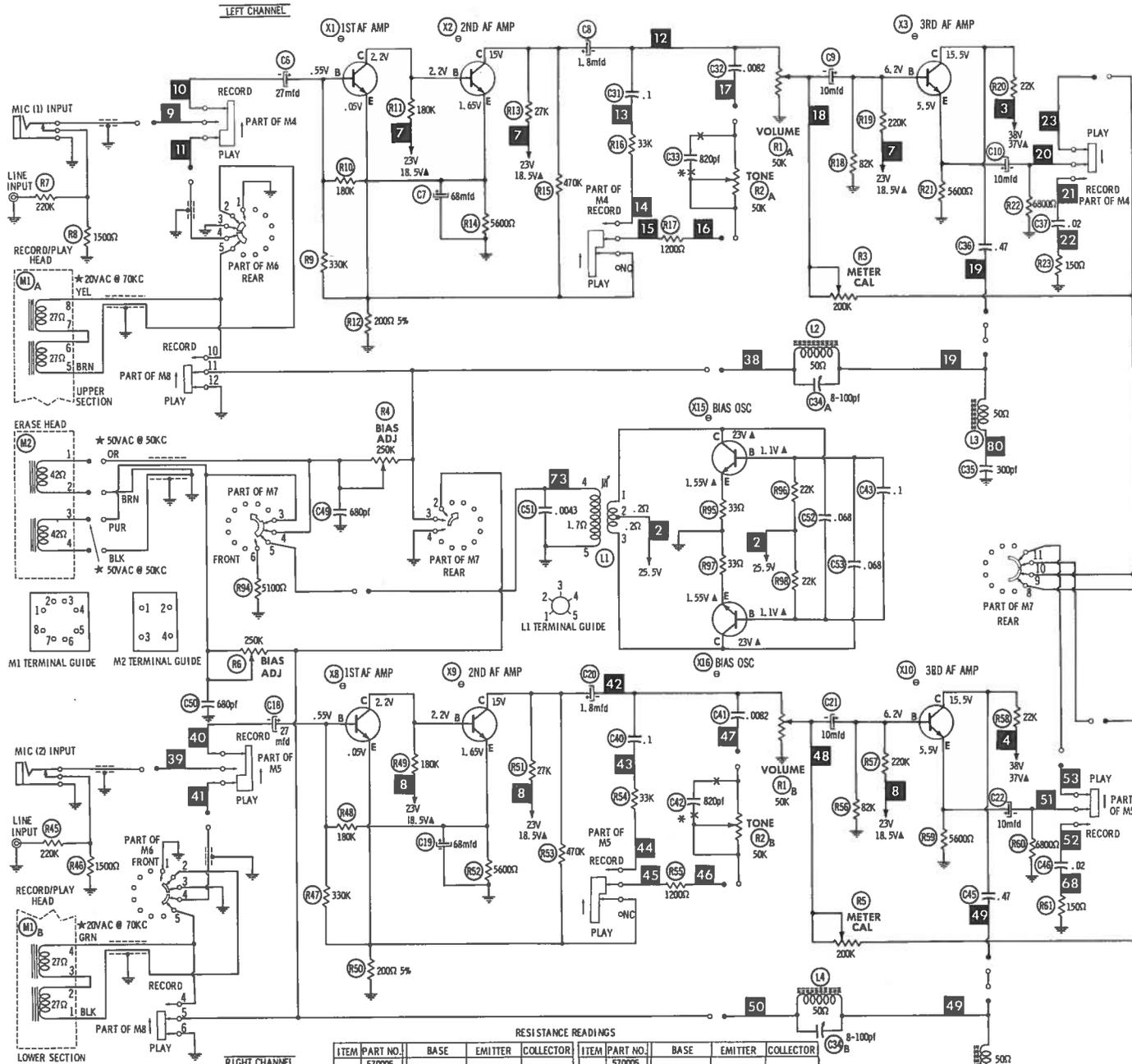








NOTE: DEMAGNETIZE HEADS AFTER SERVICING RECORDER



RESISTANCE READINGS

ITEM	PART NO.	BASE	EMITTER	COLLECTOR	ITEM	PART NO.	BASE	EMITTER	COLLECTOR
X1	570005 452	115K	200Ω	207K †	X11	570005 503	8500Ω	33Ω	21K †
X2	570005 503	207K †	56000Ω	45K †	X12	570004 503	21K †	430Ω	1470Ω †
X3	570005 452	65K	56000Ω	22K †	X13	DTG-110	30Ω †	11Ω †	250Ω †
X4	570005 503	8500Ω	33Ω	21K †	X14	DTG-110	260Ω †	145Ω †	0Ω
X5	570004 503	21K †	430Ω	1470Ω †	X15	570009-01-504	22K †	33Ω	150Ω †
X6	DTG-110	30Ω †	11Ω †	250Ω †	X16	570009-01-504	22K †	33Ω	150Ω †
X7	DTG-110	260Ω †	145Ω †	0Ω					
X8	570005 452	115K	200Ω	207K †					
X9	570005 503	207K †	56000Ω	45K †					
X10	570005 452	65K	56000Ω	22K †					

ALL MEASUREMENTS TAKEN IN "PLAY" POSITION UNLESS OTHERWISE NOTED.
 † MEASURED FROM OUTPUT OF X1 AND X16.
 † MEASURED IN "RECORD" POSITION.
 TRANSISTORS REMOVED FOR RESISTANCE MEASUREMENTS.

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

- ★ MEASURED IN "RECORD" POSITION WITH AN AUDIO VTVM * USED IN SOME VERSIONS
- ⊖ See parts list for alternate value or application.
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.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with CIRCUITRACE
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PARTS LIST AND DESCRIPTION (CONTINUED)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		AMPEX PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	Bias Oscillator	7580008-01					
L2	Trap Coil						
L3	Trap Coil						
L4	Trap Coil						
L5	Trap Coil						

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	AMPEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117V @ .150A	80VCT @ .310A		758-0005-01					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.1	AMPEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	3	1	7580008-01					
		SEC.2						
		1						
		SEC.1						
T3	3	1	7580008-01					
		SEC.2						
		1						

TAPE HEADS

ITEM NO.	MEASURED			AMPEX PART NO.	NORTRONICS PART NO.	DESCRIPTION
	INDUCTANCE	BIAS/ERASE VOLTS (RMS)	BIAS FREQ.			
M1	166MH	20VAC	70KC	4040737-10①	1207 & QK06	4-Track Stereo Record/Play
M2	9.3MH	50VAC	70KC	7680005-01①	1401 & QK18	4-Track Stereo Erase

① Part #704003P includes heads and mounting assembly.

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M3	3AG S/B	1 1/2A①		085-001	313015	342012	MDL 1 1/2	HKP

① 1A used in Model 850.

MISCELLANEOUS

ITEM No.	PART NAME	AMPEX PART No.	NOTES
M4	Switch		Play-Record, Left Channel (Slide)
M5	Switch		Play-Record, Right Channel (Slide)
M6	Switch		Play-Record (Rotary Wafer)
M7	Switch		Channel Selector (Rotary Wafer) Includes On-Off Switch(Snap Type)
M8	Switch		Record Safety Lock (Slide)
M9	Switch		Monitor (Slide)
M10	Switch	4625010-01	Fast Reverse (Leaf)
M11	Switch		Tape Tension (Leaf)
M12	Motor	7590000-01	
M13	Meter	7140000-01	Left Channel
M14	Meter	7140000-01	Right Channel
	Printed Board	7050017-01	With Components, Model 850
	Printed Board	7050017-02	With Components, Models 860, 865
	Printed Board	7050019-01	Bias Oscillator

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Case, Model 865	7040045-01	Control Panel, Models 860, 865	7040037-02
Case, Model 860	7040043-01	Head Cover	4045046-04
Control Panel, Model 850	7040037-01		

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.
Power Cord (Interlock Type)	Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)
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)