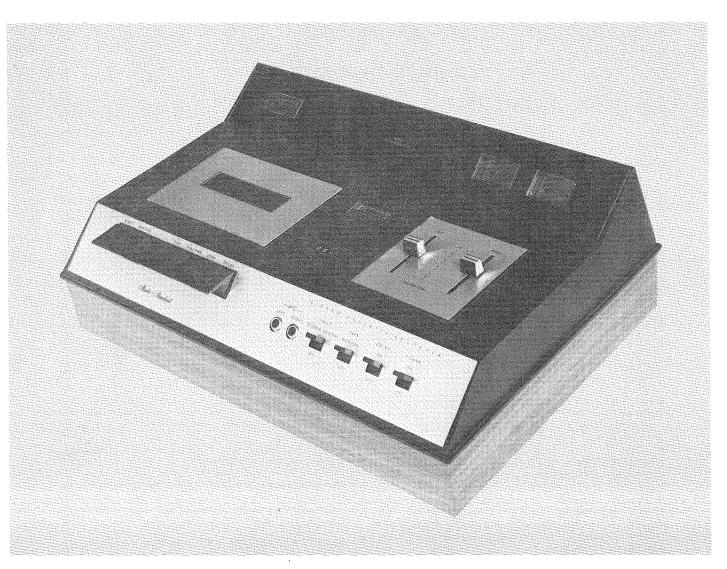
SERVICE MANUAL

PRICE \$2.00

SR-IIO

SERIAL NUMBERS
BEGINNING 10001

The Fisher® SR-110



Stereo Tape-Cassette Recorder

WORLD LEADER IN HIGH QUALITY STEREO

TEST EQUIPMENT and SERVICE TIPS

The Following equipment is required to repair, calibrate and adjust the SR-110 Tape Deck.

- Line Voltage Autotransformer or Voltage Regulator
- DC Vacuum Tube Voltohmmeter
- Accurately Calibrated AC Vacuum Tube Voltmeter
- Frequency Counter (200 KHz) or Oscilloscope and Low-Distortion Audio (Sine Wave) Generator (110 KHz or more)
- Azimuth adjustment cassette tape such as BASF 455-3, TEAC 116L or equivalent (10 KHz recording @ -zero, -10, or -20 dB)
- Takeup, Rewind tension checking cassette, Robins R36004 (Robins Industries, Commack, N.Y. 11725) or equivalent
- · Q-tips and alcohol (rubbing or wood)
- · Light machine oil such as Singer sewing machine oil
- Lubricating grease such as Lubriplate
- Tension Gauges:
 - (1) Zero to 100 grams
 - (2) Zero to 700 grams (or Zero to 25 or more ounces)

CAUTION:

This precision high-fidelity instrument should be serviced only by qualified personnel,

trained in the repair of transistor equipment and printed circuitry.

ELECTRICAL CHARACTERISTICS

Bias and Erase Frequency Bias Current

Erase Current
Microphone Sensitivity

AUX Sensitivity

105 KHz ± 5 KHz 6 V across R/P Head (VTVM only) 20 V across Erase Head 0.2 mV for Zero VU on

recording meters, 1 volt at LINE OUT 100 mV for Zero VU, 1 volt at LINE OUT.

Many of these items are included only as a reminder — they are normal procedures for experienced technicians. Shortcuts may be taken, but these often cause additional damage to transistors, circuit components, or printed circuit boards.

SOLDERING: A well-tinned, hot, clean soldering iron tip will make soldering easier, without causing damage to the printed circuit board or the components mounted on it. Regular use of a sponge cleaner will maintain a clean soldering surface. The heat available at the tip, (not the wattage of the iron) is important. Some 50-watt irons reach temperatures of 1,000° F, while others will hardly melt solder. Small-diameter tips should be used for single solder connections, pyramid and chisel tips for large areas.

Always disconnect the AC power cord from the line when soldering. Turning the power switch OFF is not sufficient. Power-line leakage paths, through the heating elements of the iron, may destroy transistors.

PARTS REMOVAL: If a part is not being returned for inwarranty factory replacement, it may be cut in half (with diagonal cutting pilers) to make removal easier. Multiple terminal parts, such as IF transformers, or electrolytic capacitors, should be removed using special de-soldering tips made especially for this purpose. Removing solder from terminals, reduces the possibility of breaking the printed circuit board when the part is removed.

ACCIDENTAL SHORTS: A clean working area, free of metal particles, screws, etc., is an important preventive in avoiding servicing problems. Screws, removed from the chassis during servicing, should be stored in a box until needed. While a set is operating, it takes only an instant for a base-to-collector short to destroy a transistor (and others direct-coupled to it). In the time it takes for a dropped screw, washer, or screw-

driver, to contact a pair of terminals (or terminal and chassis), a transistor can be ruined.

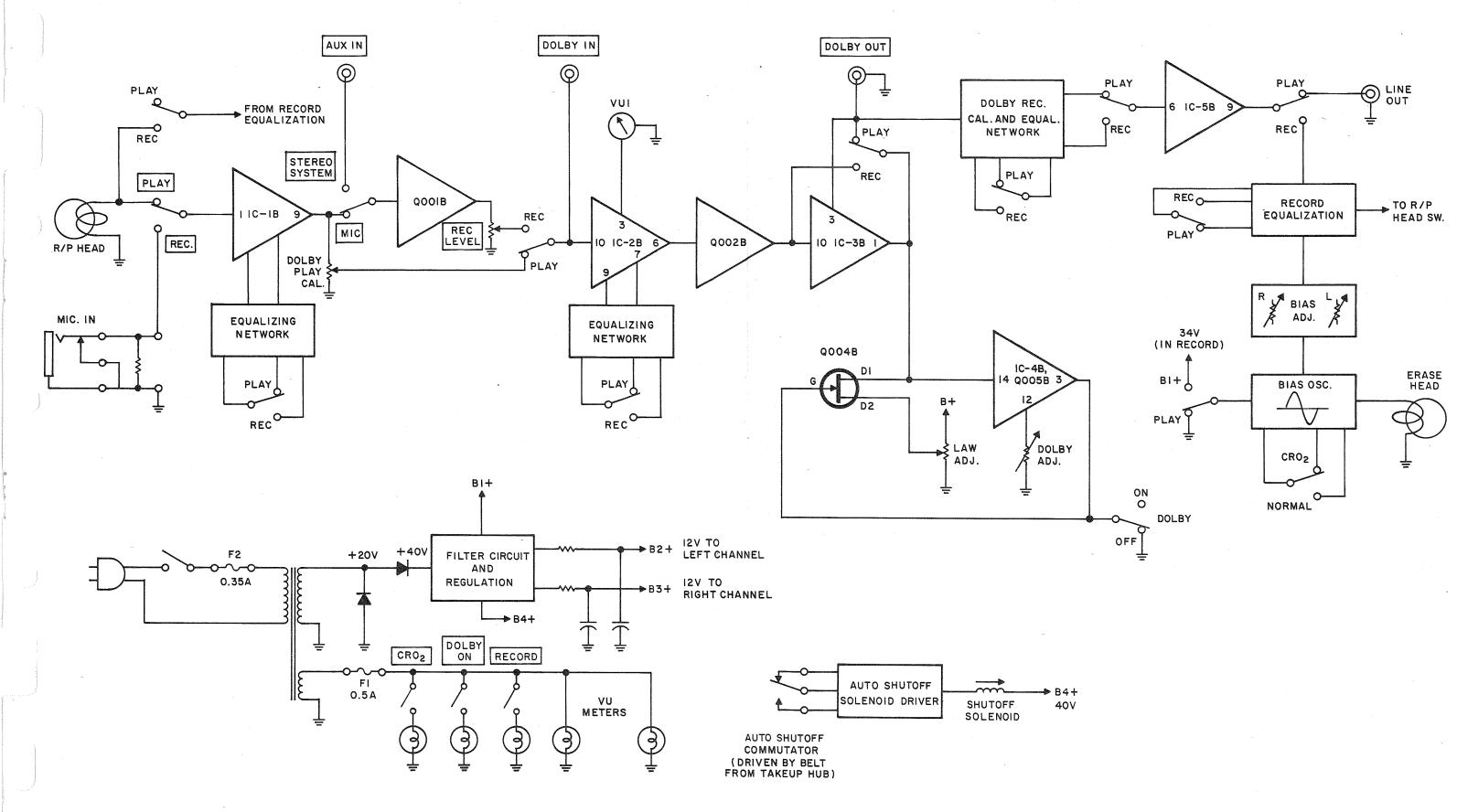
SOLID-STATE DEVICES: Integrated Circuits contain the equivalent of many circuit parts, including transistors, diodes, resistors, and capacitors. The preferred troubleshooting procedure requires isolating the trouble to one stage using AC signal tracing methods. Once the suspected stage is located the DC voltages at the input and output leads are measured to give an accurate indication of the operating conditions of the IC. DO NOT use an ohmmeter, to check continuity with the IC mounted on the printed circuit board. Forward biasing the internal junctions within the IC may burn out the transistors. Do not replace a defective IC until all external resistors, capacitors, and transformers are checked first, to prevent the replacement IC from failing immediately due to a defect in the connecting components. Solder and unsolder each lead separately using a pliers or other heat sink on the lead to prevent damage from excessive heat. Check that the leads are connected to the correct locations on the printed circuit board before turning the set on.

Whenever possible, a transistor tester should be used to determine the condition of a transistor or diode. Ohmmeter checks do not provide conclusive data, and many even destroy the junction(s) within the device.

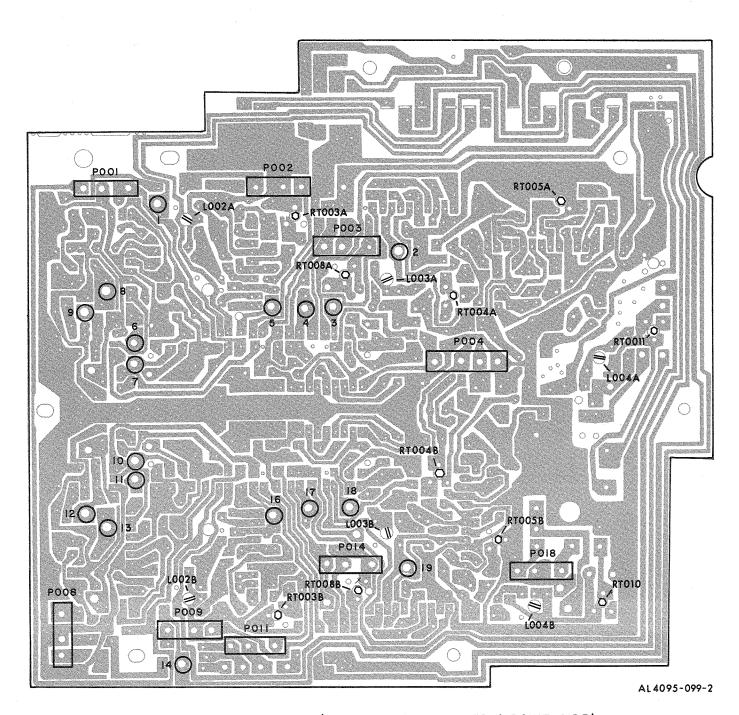
VOLTAGE MEASUREMENTS: All voltages are measured with the line voltage adjusted to 120 volts. All measured voltages are ± 20%. DC voltages are measured to chassis with a VTVM, with no signal input unless otherwise noted. AC signal voltages are measured under the conditions specified on the schematic.

ALIGNMENT PROCEDURES: DO NOT attempt realignment unless the required test equipment is available, and the alignment procedure is thoroughly understood.

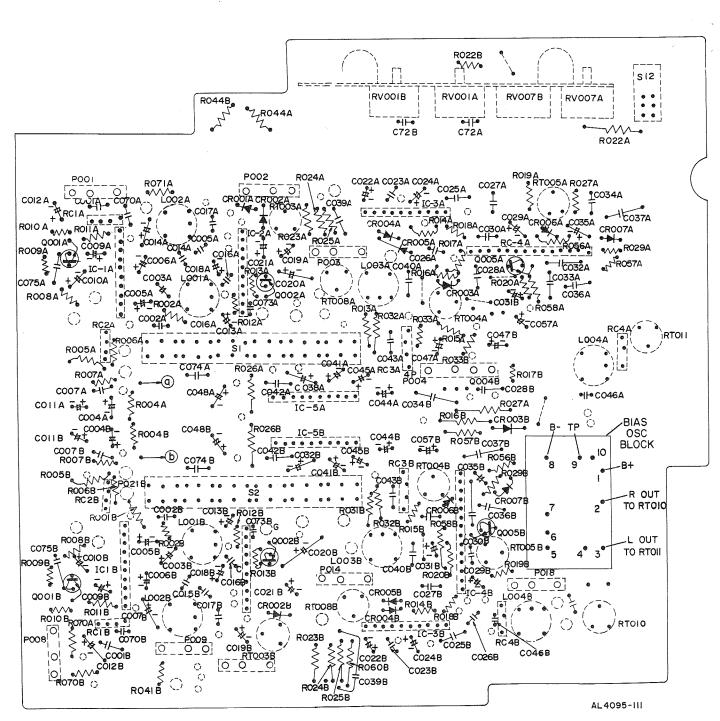
SIGNAL FLOW



MAIN BOARD



MAIN BOARD CONNECTIONS (VIEWED FROM PRINTED CIRCUIT SIDE)



SR-IIO MAIN BOARD (VIEWED FROM FOIL SIDE)

TEST AND ADJUSTMENTS

REMOVAL OF TAPE DECK FROM CABINET

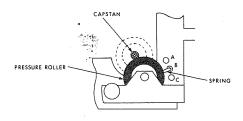
- 1. Turn set upside down on protective surface.
- 2. Remove Philips head screws which secure rubber feet.
- 3. Remove two screws which secure square wood washers.
- Lift wood cabinet off and thread AC line cord out through hole in cabinet.
- Remove the four Philips head screws from the corners of the chassis.
- 6. Holding cabinet top together with metal chassis in both hands, turn entire unit back right side up.
- 7. Slide cabinet top slightly forward to clear the Function keys, and lift cabinet up slightly. Lift left end of cabinet up and stand top on its right end. It may be necessary to release one or two cables from its cable clamp to accomplish this.

CAUTION: When replacing cabinet top in position on the machine take great care that each cable, particularly the one going to plug P018, directly under the tape counter, is dressed well to the right, so that it will not rub against the drive pulley under the counter. If this caution is not observed the pulley may be slowed down or stopped, causing the machine to turn off (Auto-stop).

MECHANICAL ADJUSTMENTS AND TESTS

CAPSTAN/PINCH ROLLER PRESSURE

- 1. Main Power ON, depress PLAY key.
- Hook tension gauge to Point A as shown in Capstan Pressure drawing, and pull pinch roller slowly away from capstan. Take reading when roller barely loses contact with capstan. Pinch roller pressure should be between 550



CAPSTAN/PRESSURE ROLLER ADJUSTMENT

and 650 grams (19 and 22 ounces).

To increase pressure against capstan move spring to hole A. To decrease pressure move spring to hole C.

TAKEUP HUB TORQUE

- 1. Place torque measuring cassette into recorder.
- 2. Press PLAY and observe indicated torque.
- Takeup hub torque should be between 40 and 70 grams/ cm (0.55-1.0 oz/in.)
- 4. Reverse cassette and observe supply hub drag. It should be 2 grams/cm or less.

FAST FORWARD TORQUE

- Place torque measuring cassette into recorder in proper position to measure FORWARD (takeup hub) torque.
- 2. Press FAST FORWARD and observe indicated torque.
- Takeup hub torque in FAST FORWARD should be between 70 and 115 grams/cm (1.0—1.75 oz/in).

REWIND TORQUE

- Remove and replace torque measuring cassette into recorder in position to measure REWIND torque.
- Press REWIND and measure supply hu takeup torque (REWIND).
- REWIND torque should measure between 70 and 115 grams/cm (1.0—1.75 oz/in).

ELECTRICAL TESTS AND ADJUSTMENTS

19 KHz MULTIPLEX TRAP

- 1. Feed 19 KHz, 5 mV into left MIC input.
- 2. Put recorder into RECORD mode.
- Adjust L002 A (top of board, near left) for minimum reading on VTVM at pin 5 of IC2A (C019A or C020A).
- 4. Feed 19 KHz, 5 mV into right MIC input.
- Adjust L002B (lower left corner of board) for minimum on VTVM at pin 5 of IC2B (C019B or C020B).

BIAS FREQUENCY

- Set recorder to RECORD. Put frequency counter across R/P head.
- 2. Frequency should be 105 KHz \pm 5 KHz.

BIAS CURRENT

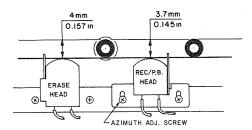
- 1. Set up as above, with VTVM across R/P head.
- 2. Bias current should produce 6 V AC across head.
- Adjust RT010 (lower right corner) and RT011 (center, extreme right) for 6 V.

ERASE CURRENT

- 1. Set up as above, with VTVM across ERASE head.
- Erase current should produce at least 20 volts across ERASE head.

CALIBRATION OF VU METERS

- 1. Feed 1 KHz into AUX IN jacks. VTVM at DOLBY OUT
- Set generator amplitude to produce 580 mV on VTVM with RECORD gain sliders set to maximum.
- Adjust RT003A (top, below P002) and RT003B (bottom, just left of middle) for Zero on VU meters.



HEAD AZIMUTH ADJUSTMENT

HEAD AZIMUTH ADJUSTMENT

- 1. Put 10 KHz alignment tape into recorder. Set to PLAY.
- 2. VTVM at LINE OUT lacks.
- Adjust head azimuth adj. screw for maximum output on VTVM.

HIGH FREQUENCY EQUALIZATION

- Set RV007 A & B (DOLBY RECORD cal. adj. on rear Panel) to mid-point.
- 2. Feed 16 KHz, 50 mV to AUX IN jacks. Set RECORD gain sliders to Max. RECORD On.
- Adjust L003A (upper 1/3, near center) for maximum reading on VTVM at left LINE OUT jack.
- Adjust L003B (lower 1/3, near center) for maximum at right LINE OUT jack.

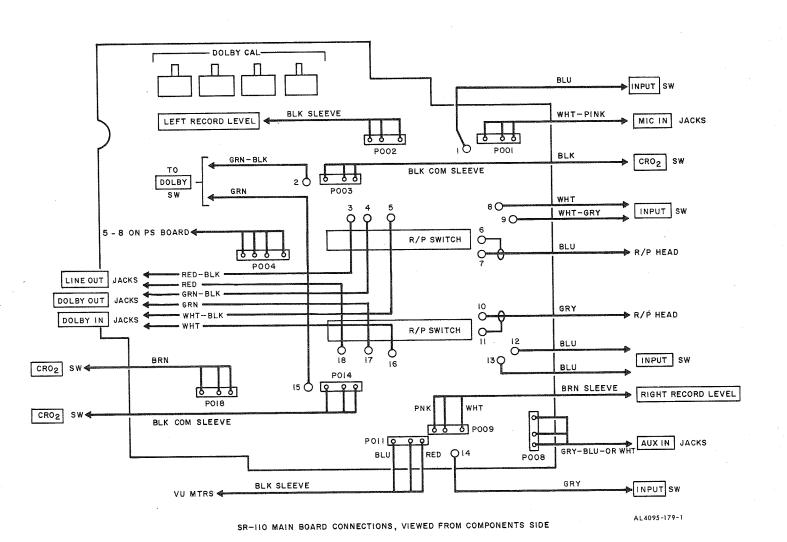
REGULAR TAPE BIAS

- Apply 100 mV, 1 KHz to LINE IN jacks. RECORD On. VTVM to LINE OUT jack(s).
- Adjust RV007A & B (Step 1, above) for 365 mV on VTVM.

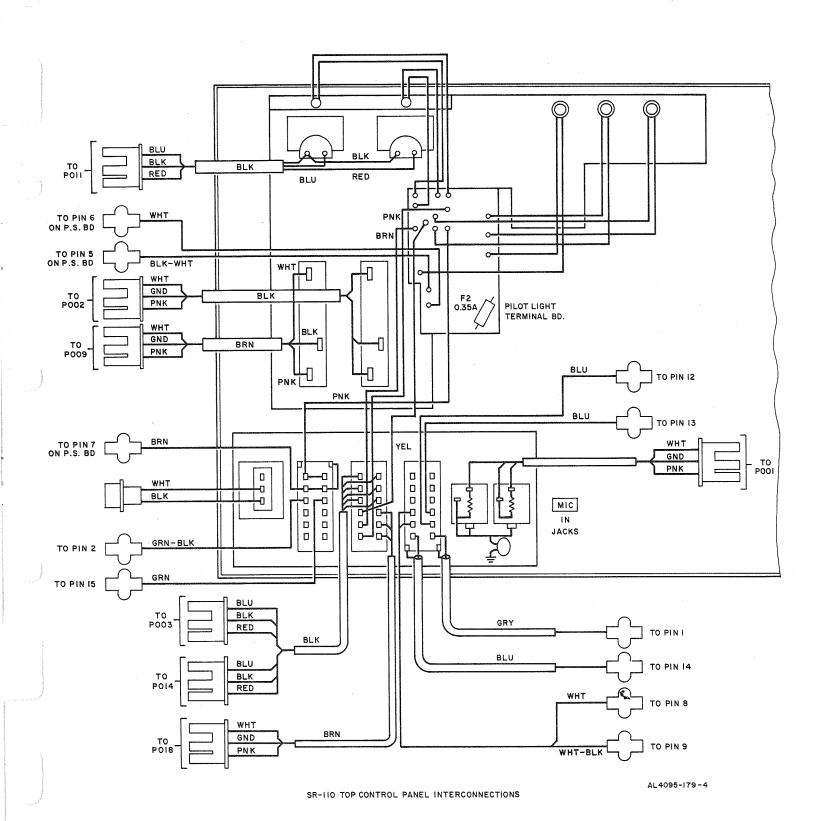
CRO₂ TAPE BIAS

- 1. As above, except CRO₂ switch ON.
- Adjust RT008A (near top, middle below P003) and RT008B near bottom, middle) for 485 mV on VTVM.

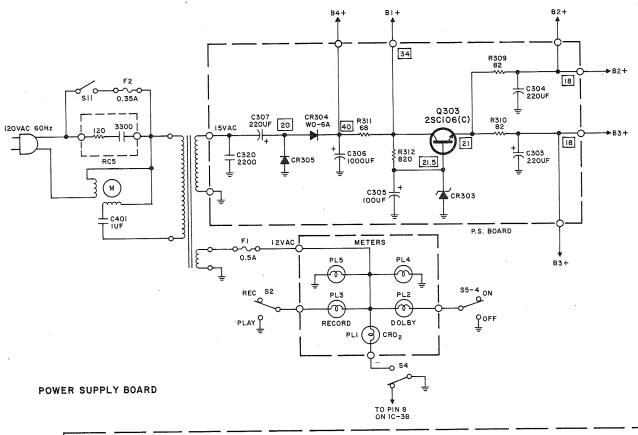
MAIN BOARD INTERCONNECTIONS

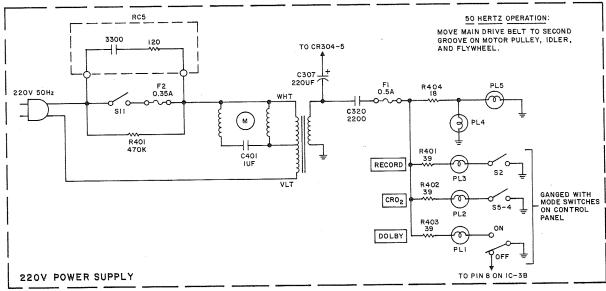


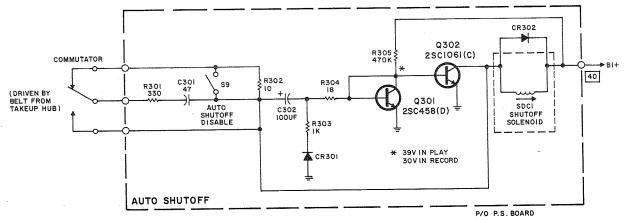
INTERCONNECTIONS TOP (CONTROL PANEL)



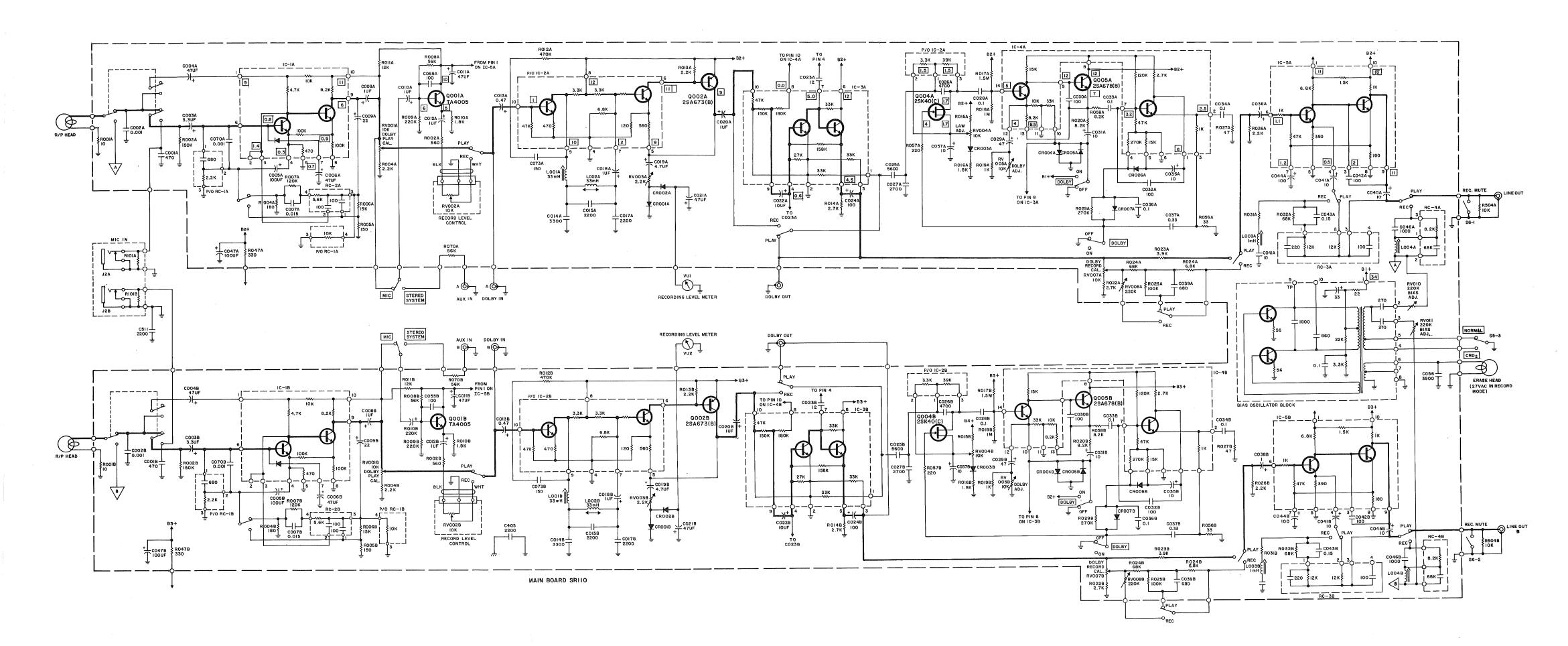
POWER SCHEMATICS



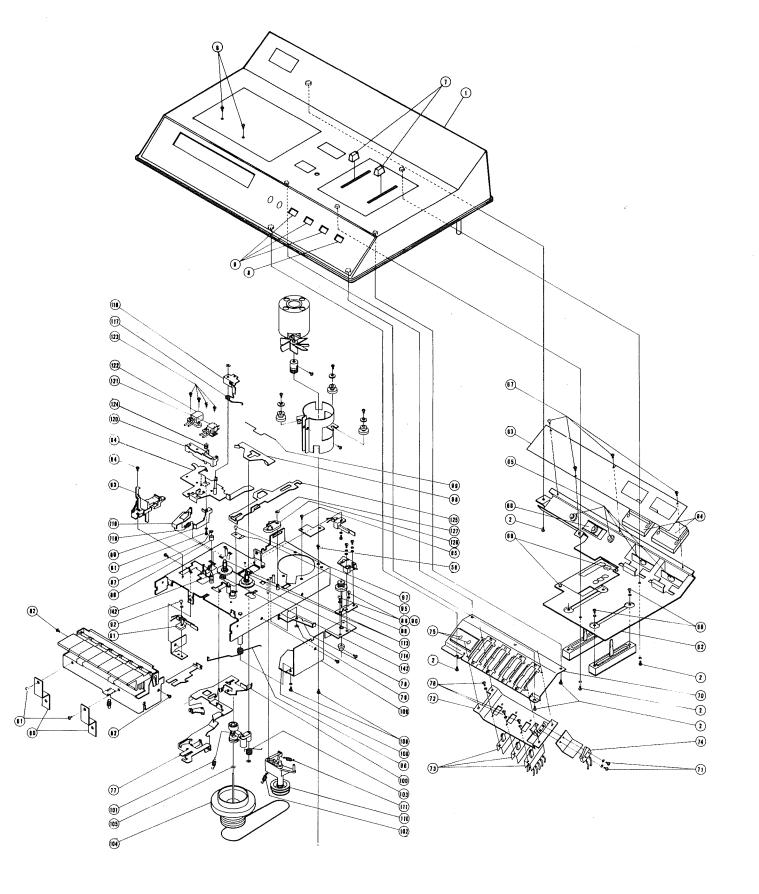


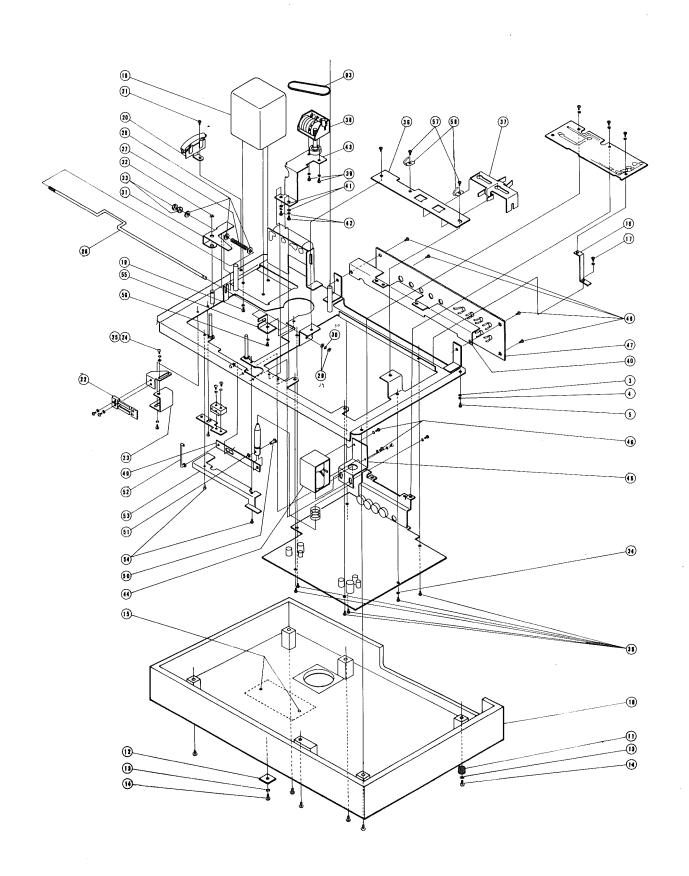


MAIN BOARD



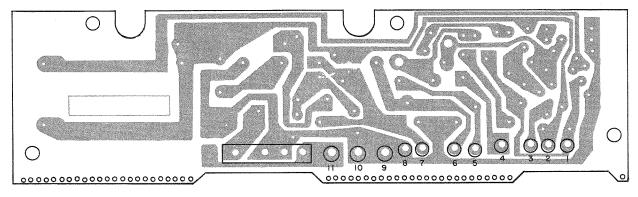
EXPLODED VIEW





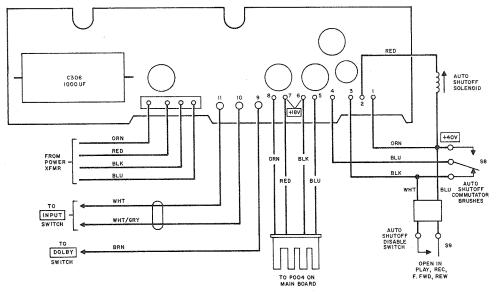
SIGNATION ON PLODED VIEW		PART NUMBER	DESIGNATION ON EXPLODED VIEW	DESCRIPTION	PART NUMBER
1	Control panel cabinet (top) assy.	6217771		Head plate assembly	7252703
	Grommet, motor mounting	7662011		Head plate guide	725295
7	Record gain slider knob	6265624	94	Head plate spring	6324533
8	Power on/off switch knob	6275091	95 06	Brake plate	715033° 6321564
9 10	Switch knob, olby, CRO ₂ , Input Cabinet bottom (wood)	0015330 6152951	96 98	Brake spring Idler assembly	672560
11	Rubber foot (4 required)	0971279	99	Idler spring	632447
18	Power transformer (120 V)	5210643	99	Brake release plate	725351
18	Power transformer (220 V)	5210352	101	Brake release spring	672445
	Motor	5570107	100	Spring, drive idler assy.	6324444
	Motor fan	7185221		(short-3/16" x 3/8")	
	Motor pulley	6342273	102	Spring, Rec/Play switch push rod	632410
	Motor mounting clamp	7771152		Spring, Brake plate	6321564
	Cassette Iid (door)	6171272		Spring, Head alignment	632173
	Lid mounting shaft stop (plastic)	6701292		Spring, Fast Forward	6324583 6324603
	Cushion, motor supporting	0971120		Spring, Rewind lever Spring, Capstan roller	6324482
	Strain relief bushing for AC cord Bracket for strain relief bushing	0043793		Rec/Play push rod	725852
20	Fuse mtg. terminal (2 lug) strip	7256931 5680512		Spring, Stop lever	632373 ⁻
26	Rec/Play push rod	7258521		Spring, back tension	632073
27	Spring for above	6324101		Spring, Capstan pressure roller	632448
29	E retaining ring for above	0637443		Spring, Rec/Play head alignment	632173
30	Fiber washer, mtg., for above	0637119		Spring, Drive idler assy, tension,	632530°
31	Rec/Play actuating arm (L shaped)	7240291		(5/16 dia., x 3 1/2 t)	
36	Rec/Play slide support bracket	7254412		Spring, Rewind idler	632447
37	Rec/Play switch slide assy.	7242743		Flywheel assembly	6307099
	Rec/Play switch cushion	7662041	104	Nylon washer for flywheel	777191:
38	3 digit tape counter	5550176	105	Plastic washer for flywheel assy, mtg.	777818:
40	Support plate for rear panel	7620371	106	Flywheel bearing plate assy.	725445
43 44	Counter mtg. bracket	7260341	108	Support bracket for no. 106 Rewind (hub drive) idlar (smaller)	725280° 672559°
44 45	Solenoid (auto shutoff) coil assy. Solenoid mtg. bracket	5640032	110	Rewind (hub drive) idler (smaller) Drive idler, main, assy., with idler	672559
45	Spacer for rear jack panel	7256372 7720851	111	Spring, drive idler assy. (long-3/16" x	
47	Rear jack panel	5671741	113	Tape hub cap	093000
49	Solenoid linkage plate	7259452	114	Takeup hub assy.	766922
	Microphone jack, closed ckt.	5670404		Supply hub assy.	671225
50	Solenoid lock pin	7501782	115	Capstan pinch roller arm assy.	725299
52	Solenoid linkage rod	7257891	118	Record interlock rocker	725290
53	Solenoid stop plte	7259441	119	Spring for 118	632443
55	Solenoid stop	7258751		Head mounting plate	672569
58	Cable clamp	0923972	121	Rec/Play head	544144
60	Mode push button assy, support bracket	7254361	122	Erase head	544138
64	Recording (VU) meter	5550193	4.05	Pilot lamp	576065
63	Recording meter panel	6217671	125	Pause slide	725281
62	Record control panel chassis Meter cushion (rubber)	7260803 7669702	126	Pause lock	672570
70	Mode (Dolby, etc.) slide switch holding plate	7260814		SEMICONDUCTORS	
72	Mode switch mtg. bracket	7260814			
	Mode pilot lamp reflector plate	7261672	CIRCUIT SYMBOL	DESCRIPTION	PART NUMBER
	Switch, slide, 12 PDT, for Rec/Play	5620113	IC1A,B	Encaps. ckt. FA-6018	535311
73	Switch, 4PDT, Mode, (Dolby, etc.)	0532179	IC1A,B	Encaps, ckt. TA-4005	535606
•	Switch, leaf, SPST (NO)	5610671	IC3A,B	Encaps. ckt. TA-4004	535605
74	Switch, micro, SPDT	56302053	IC4A,B	Encaps. ckt. TA-4006	535607
	Switch, 4PDT, push, Dolby Test	5630833	IC4A,B	Encaps. ckt. FA-6019	535312
	Switch, DPDT (NC) Muting	5632172	Q001A,B	Transistor 2SC458LG(D)	532002
	Bracket, mtg. for muting switch	7254341	Q002A,B,005A,B	Transistor 2SA 673B	532059
	Bracket, mtg., for Dolby Cal. adjust	7257531	Q004A,B	Transistor 2SK40C	532058
	4-Pin socket & cable from	5651262	Q301, 303	Transistor 2SC458D	532006
	D			Transistor 2SC1061C	532043
	Power Supply Board	5651543	Q302		057500
	3-pin connector & cable	5651543	CR001A,B,2A,B,	Diode, IN34A	057500
	3-pin connector & cable (for P001,P011,014,018, etc.)		CR001A,B,2A,B, 3A,B,6A,B	Diode, IN34A	-
	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain	5651543 565144	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B	Diode, IN34A Diode, IS2076	533013
	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009)	565144	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305	Diode, IN34A Diode, IS2076 Diode, W-6A	533013 533034
	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for		CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B	Diode, IN34A Diode, IS2076	533013
	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008)	565144 5651181	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22	533013 533034
	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for	565144	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS	533013 533034 533005
	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008) AC power switch shield plate	565144 5651181 7260391	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH	533013 533034 5330059 5120302
	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008) AC power switch shield plate Fiber insulating piece for AC power switch	565144 5651181 7260391 7722801	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303 L001A,B L002A,B,4A,B	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH Variable, 33 mH	533013 533034 5330059 5120302 527000
78	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008) AC power switch shield plate Fiber insulating piece for AC power switch Record actuating slide Switch function lever Switch plate	565144 5651181 7260391 7722801 7254653 7252851 7261191	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH	533013 533034 5330059 5120302
78	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008) AC power switch shield plate Fiber insulating piece for AC power switch Record actuating slide Switch function lever Switch plate Pause slide actuating lever	565144 5651181 7260391 7722801 7254653 7252851 7261191 7252942	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303 L001A,B L002A,B,4A,B	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH Variable, 33 mH Variable, 1.0 mH	533013 533034 5330059 5120302 527000
78	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008) AC power switch shield plate Fiber insulating piece for AC power switch Record actuating slide Switch function lever Switch plate Pause slide actuating lever Eject function plate	565144 5651181 7260391 7722801 7254653 7252851 7261191 7252942 7252934	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303 L001A,B L002A,B,4A,B L003A,B	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH Variable, 33 mH Variable, 1.0 mH MISCELLANEOUS	533013 533034 533005 512030: 527000 527003:
	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008) AC power switch shield plate Fiber insulating piece for AC power switch Record actuating slide Switch function lever Switch plate Pause slide actuating lever Eject function plate Push button assembly	565144 5651181 7260391 7722801 7254653 7252851 7261191 7252942	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303 L001A,B L002A,B,4A,B L003A,B	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH Variable, 33 mH Variable, 1.0 mH MISCELLANEOUS 10K (B) Potentiometer	533013 533034 533005 5120303 527000 527003
82	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008) AC power switch shield plate Fiber insulating piece for AC power switch Record actuating slide Switch function lever Switch plate Pause slide actuating lever Eject function plate Push button assembly (Stop, Play, Fast Fwd, etc.)	565144 5651181 7260391 7722801 7254653 7252851 7261191 7252942 7252934 7237985	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303 L001A,B L002A,B,4A,B L003A,B	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH Variable, 33 mH Variable, 1.0 mH MISCELLANEOUS 10K (B) Potentiometer 10K (B) Record gain slider	533013 533034 533005 5120303 527000 527003 0151436 0171536
	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008) AC power switch shield plate Fiber insulating piece for AC power switch Record actuating slide Switch function lever Switch plate Pause slide actuating lever Eject function plate Push button assembly (Stop, Play, Fast Fwd, etc.) Eject assembly	565144 5651181 7260391 7722801 7254653 7252851 7261191 7252942 7252934 7237985 7253033	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303 L001A,B L002A,B,4A,B L003A,B RV001A,B,007A,B RV002,B RV003A,B	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH Variable, 33 mH Variable, 1.0 mH MISCELLANEOUS 10K (B) Potentiometer 10K (B) Record gain slider 2.2K (B) Potentiometer	533013 533034 533005 512030 527000 527003 0151436 0171536 0151884
82	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008) AC power switch shield plate Fiber insulating piece for AC power switch Record actuating slide Switch function lever Switch plate Pause slide actuating lever Eject function plate Push button assembly (Stop, Play, Fast Fwd, etc.) Eject assembly Eject board holder	565144 5651181 7260391 7722801 7254653 7252851 7261191 7252942 7252934 7237985 7253033 7257931	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303 L001A,B L002A,B,4A,B L003A,B RV001A,B,007A,B RV002,B RV003A,B RV004A,B,005A,B	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH Variable, 33 mH Variable, 1.0 mH MISCELLANEOUS 10K (B) Potentiometer 10K (B) Record gain slider 2.2K (B) Potentiometer	533013 533034 5330059 5120303 527000 5270033 0151433 0171536 0151884
82 83	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008) AC power switch shield plate Fiber insulating piece for AC power switch Record actuating slide Switch function lever Switch plate Pause slide actuating lever Eject function plate Push button assembly (Stop, Play, Fast Fwd, etc.) Eject assembly Eject board holder Bushing, head plate stop	565144 5651181 7260391 7722801 7254653 7252851 7261191 7252942 7252934 7237985 7253033 7257931 7534421	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303 L001A,B L002A,B,4A,B L003A,B RV001A,B,007A,B RV002,B RV003A,B RV004A,B,005A,B RT001A,B,008A,B,	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH Variable, 33 mH Variable, 1.0 mH MISCELLANEOUS 10K (B) Potentiometer 10K (B) Record gain slider 2.2K (B) Potentiometer	533013 533034 533005 512030 527000 527003 0151436 0171536 0151884
82 83 88,89,90	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Accord gain (P002 & P009) 4-pin connector & cable for Aux In jacks (P008) AC power switch shield plate Fiber insulating piece for AC power switch Record actuating slide Switch function lever Switch plate Pause slide actuating lever Eject function plate Push button assembly (Stop, Play, Fast Fwd, etc.) Eject assembly Eject board holder Bushing, head plate stop Auto shutoff commutator assy.	565144 5651181 7260391 7722801 7254653 7252851 7261191 7252942 7252934 7237985 7253033 7257931 7534421 7254691	CR001A,B,2A,B,3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303 L001A,B L002A,B,4A,B L003A,B RV001A,B,007A,B RV002,B RV003A,B RV004A,B,005A,B RT001A,B,008A,B,009A,B	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH Variable, 33 mH Variable, 1.0 mH MISCELLANEOUS 10K (B) Potentiometer 10K (B) Record gain slider 2.2K (B) Potentiometer 10K (B) Potentiometer	533013 533034 5330059 5120302 5270002 5270032 0151436 0151884 0151886
82 83	3-pin connector & cable (for P001,P011,014,018, etc.) 3-pin connector & cable for Record gain (P002 & P009) 3-pin connector & cable for Aux In jacks (P008) AC power switch shield plate Fiber insulating piece for AC power switch Record actuating slide Switch function lever Switch plate Pause slide actuating lever Eject function plate Push button assembly (Stop, Play, Fast Fwd, etc.) Eject assembly Eject board holder Bushing, head plate stop	565144 5651181 7260391 7722801 7254653 7252851 7261191 7252942 7252934 7237985 7253033 7257931 7534421	CR001A,B,2A,B, 3A,B,6A,B CR004A,B,5A,B,7A,B CR301,302,304,305 CR303 L001A,B L002A,B,4A,B L003A,B RV001A,B,007A,B RV002,B RV003A,B RV004A,B,005A,B RT001A,B,008A,B,	Diode, IN34A Diode, IS2076 Diode, W-6A Diode, Zener AW01-22 INDUCTORS Trap, 33 mH Variable, 33 mH Variable, 1.0 mH MISCELLANEOUS 10K (B) Potentiometer 10K (B) Record gain slider 2.2K (B) Potentiometer	533013 533034 5330059 5120303 527000 5270033 0151433 0171536 0151884

POWER CONNECTION DIAGRAMS



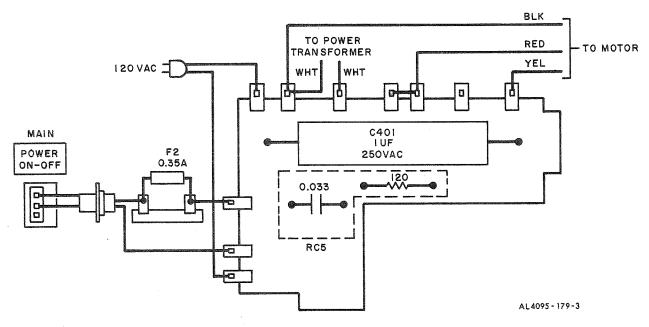
POWER SUPPLY BOARD SHOWING LOCATION OF TERMINALS (FOIL SIDE)

AL4095-099-1



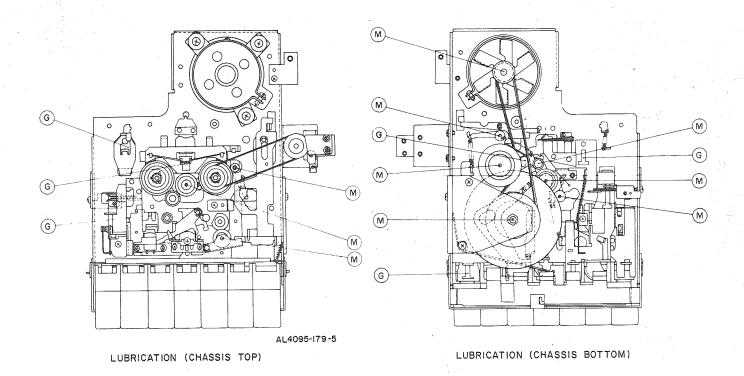
POWER SUPPLY BOARD SHOWING CONNECTIONS (FOIL SIDE)

AL4095-099-I



SR-IIO AC POWER TERMINAL BOARD (VIEWED FROM FRONT OF RECORDER)

LUBRICATION



GENERAL LUBRICATION

Lubricate all points shown in the chassis lubrication illustrations. Use a standard lubricating grease such as Lubriplate at points marked G and light machine oil such as Singer sewing machine oil at points marked M. Take care not to use excessive lubricant. Keep all belts and drive surfaces free of lubricants.

LUBRICATION OF FLYWHEEL BOTTOM BEARING

- Remove two Philips head screws which secure flywheel bearing bracket.
- Turn bracket right side up so that the small teflon bearing is visible. Clean out teflon bearing cup and put a small amount of fresh Lubriplate into bottom of bearing cup.
- 3. Replace cup. Secure bracket with the two screws.

LUBRICATION OF CAPSTAN

- 1. Lift the small nylon washer (below top of capstan) off.
- Apply one drop of machine oil to capstan at that point (where washer stays) and replace the nylon washer. Run machine while wiping capstan clean with cloth or Q-tips.
- Also apply one drop of machine oil to center of capstan pinch roller, clean off excess and run.

LUBRICATION OF MOTOR

- Turn recorder upside down. Remove nylon drive belt pulley from motor shaft.
- 2. Remove fan from motor shaft using Allen wrench.
- Place one drop of machine oil at place where motor shaft enters the bearing. Run motor for a few seconds and clean off excess lubricant.
- Replace fan and pulley. Replace drive belt, taking care to use same pulley groove belt was removed from. The groove nearest the motor is the one for 60 Hz. The other one is for 50 Hz operation.

