Service Instructions

Lenco C 1202

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Electrical Adjustment Procedure P.C.B.

Before disassembling, switch the unit off and disconnect the mains cable.

Technical data

Mains voltage:
Normal: 220 VAC

Mains frequency:
50—60 Hz

Power requirements:
13 watts

Motors:
1 DC motor with servo-control

Cassettes:
Compact cassette
Chrome dioxide: BASF, CrO_2, C60, C401R
Standard: MTT2-502

Tape speeds:
4.76 cm/s

Fast forward and rewind:
< 83 with C60 cassette

Erase and bias frequency:
105 kHz

Level meter:
2 VU meters
1 Peak level indicator
Dolby level at ±3 dB

Inputs (for Dolby level):
1. Microphone input with jack plug for high impedance microphones
Sensitivity: 0.250 mV
Impedance: approx. 5.6 kΩ
Max. input voltage: 10 mV

2. Line input (DIN) DIN plug
Sensitivity: 0.1 mV/kΩ
Max. input voltage: 3 mV

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Correct Ordering of Spare Parts

When ordering spare parts please specify the complete name, part number and the relevant page number of the service manual for each required part. By doing so you will be sure to obtain the correct part.

3. Line input (LINE) cinch plug
Sensitivity: 80 mV impedance 100 kΩ
Max. input voltage: 2.4 V

Outputs (for Dolby level):
1. DIN plug, pin 3+5: 715 mV impedance 8.2 kΩ
2. LINE output: 775 mV impedance 100 Ω
3. Headphone output: 200 mV impedance 8 Ω

Harmonic distortion (333 Hz): (for 0 dB VU)
Standard cassette: < 1.5 %
Chrome dioxide cassette: < 2.0 %

Frequency response with:
—20 dB VU
Standard cassette: 30—15,000 Hz ±3 dB
Chrome dioxide cassette: 30—16,000 Hz ±3 dB

Wow and Flutter:
to WRMS < 0.06 %
to DIN 45,507 weighted < ±0.15 %

Drift: < ±1.0 %

Signal/noise ratio (DIN 45 633):
(Reference 3 % third harmonic distortion)

	without Dolby	*with Dolby*
(Linear/Weighted) Play-back	46/56 dB	54/64 dB
Record/Play-back	48/58 dB	56/66 dB

Cross-talk (1000 Hz):
with two-track recording in opposite directions: > 65 dB
with stereo recording: > 35 dB

Erase attenuation (1000 Hz, full modulation CrO2 tape):
> 65 dB

Weight: 8 kg

Dimensions: 462×325×125 mm

Alignment Instructions

Playback

1. Azimuth Adjustment

Connect a scope or VTVM to the LINE OUTPUT CINCH socket for the right channel. Insert a test tape (TEAC MTT-114, 115) into the unit. Adjust the Azimuth for maximum output level from the right channel. (See figure 1 R/P HEAD.)

2. Tape Speed Adjustment

Connect a scope, VTVM and frequency counter to the right channel LINE OUTPUT CINCH socket. Insert a test tape MTT-111 3 kHz) into the unit. Adjust the tape speed adjusting screw for a 3 kHz value in the frequency counter. (See figure 1 DC F.G. Servo Motor.)

3. Output Level Adjustment

Connect a scope and VTVM to the S-1-B and S 2 — right and left. Insert a test tape MTT-150 (Dolby level calibration tape 200 nwb/m) into the unit. Set the unit for PLAY and the Bias and EQ switches in the Fe_2O_3 position. Adjust VR 106 and VR 206 for a 775 mV reading.

4. Level Meter Adjustment

Connection should be made as for adjustment 3. When adjustment 3 has been completed (775 mV) adjust VR 109 and VR 209 for +3 dB on the level meter.

5. Dolby NR

Connect a scope and VTVM to S 1-A and connect a test clip to TP 3 and TP 4. Set the unit for PLAY, Bias to ON, EQ switch for Fe_2O_3 and the Dolby NR switch OFF; switch Record ON. Feed in 5 kHz at a level to give 23.5 mV at TP 3 and TP 4. Switch in the noise reduction and adjust VR 107 for 8 dB ± 0.25 rise at TP 3 and TP 4.

Recording

1. Record Signal Current

Connect the scope and VTVM to the S 1-A and test clip to TP 1 and TP 2. Set the unit to RECORD, Bias and EQ switches to CrO_2, Dolby NR to OFF and the record level control to maximum. Test tape BASF C 401 R. Adjust VR 103 and VR 203 for an 0.8 mV reading. Change the Function Bias and EQ switches to FeCr and the tape to SONY CS 30. Adjust VR 104 and VR 204 for an 0.5 mV reading. Change the Function Bias and EQ switches to Fe_2O_3 and the tape to TEAC MTT-501. Adjust VR 105 and VR 205 for an 0.5 mV reading.

2. Bias Frequency Adjustment

Connect the scope and frequency counter to S 1-A and the test clip to TP 1 and TP 2; connect point A to point B. Set the unit for recording, the Dolby NR switch to OFF and the Bias and EQ switches to CrO_2 position. Adjust L 301 for a 105 kHz reading.

3. Bias Trap Adjustment

Connect the scope and VTVM to the S 1-A and the test clip to TP 5 and TP 6. Set the unit for recording and the record level control to minimum; Dolby NR to OFF, Bias and EQ switches to CrO_2 position. Test tape BASF C 401 R. Adjust L 101 and L 201 for minimum output.

4. Bias Current Adjustment

Connect the VTVM to S 1-A and the test clip to TP 1 and TP 2. Set the unit for recording and the record level control to minimum; Dolby NR of OFF, Bias and EQ switches to CrO_2. Test tape BASF C 401 R. Adjust VR 110 and VR 210 for a 12 mV reading.

5. Record / Playback

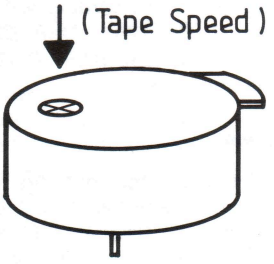
Connect the scope and VTVM to S 1-B and switch the S 2 right and left. Set the unit for Play and Record; Bias and EQ switches to CrO_2 and Dolby NR to OFF. Test tape BASF C 401 R. Feed in 1 kHz at a level to give —28 dB Dolby level on level meter. Record and, afterward, playback. Note signal level obtained at RCA plug output. Feed in 14 kHz at a level to give —25 dB Dolby level on level meter, and record. Afterward, playback. Adjust VR 110 and VR 210 for 0 dB. Change the Function Bias and EQ switches to FeCr and tape to SONY CS 30. Proceed as before with 1 kHz. Feed in 14 kHz at a level to give —25 dB Dolby level on level meter, and record. Afterward, playback. Adjust R 315 — R 317 to 0 dB + 1.5 dB. Change the Function Bias and EQ switches to Fe_2O_3 and the tape to TEAC MTT-501. Proceed as before with 1 kHz. Feed in 12.5 kHz at a level to give —25 dB Dolby level on level meter, and record. Afterward, playback. Adjust R 312 — R 314 to 0 dB ± 1.5 dB.

6. Signal Output

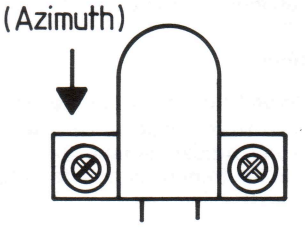
Connect the scope and VTVM to the S 1-B and switch the S 2 right and left. Set the unit for Play and Record. Set Bias and EQ switches to CrO_2 position; Dolby DR switch to OFF. Test tape BASF C 401 R. Feed in 400 Hz at a level to give Dolby level +3 dB on level meter, and record. Afterward, playback. Adjust VR 103 and VR 203 for Dolby level +3 dB on level meter. Change the Function Bias and EQ switches to FeCr and the tape to SONY CS 30. Proceed as before with 400 Hz. Adjust VR 104 and VR 204 for Dolby level +3 dB on level meter. Change the Function Bias and EQ switches to Fe_2O_3 and the tape to TEAC MTT-501. Proceed as before with 400 Hz. Adjust VR 105 and VR 205 for Dolby level +3 dB on level meter.

Electrical Adjustment Procedure For Lenco C 1202

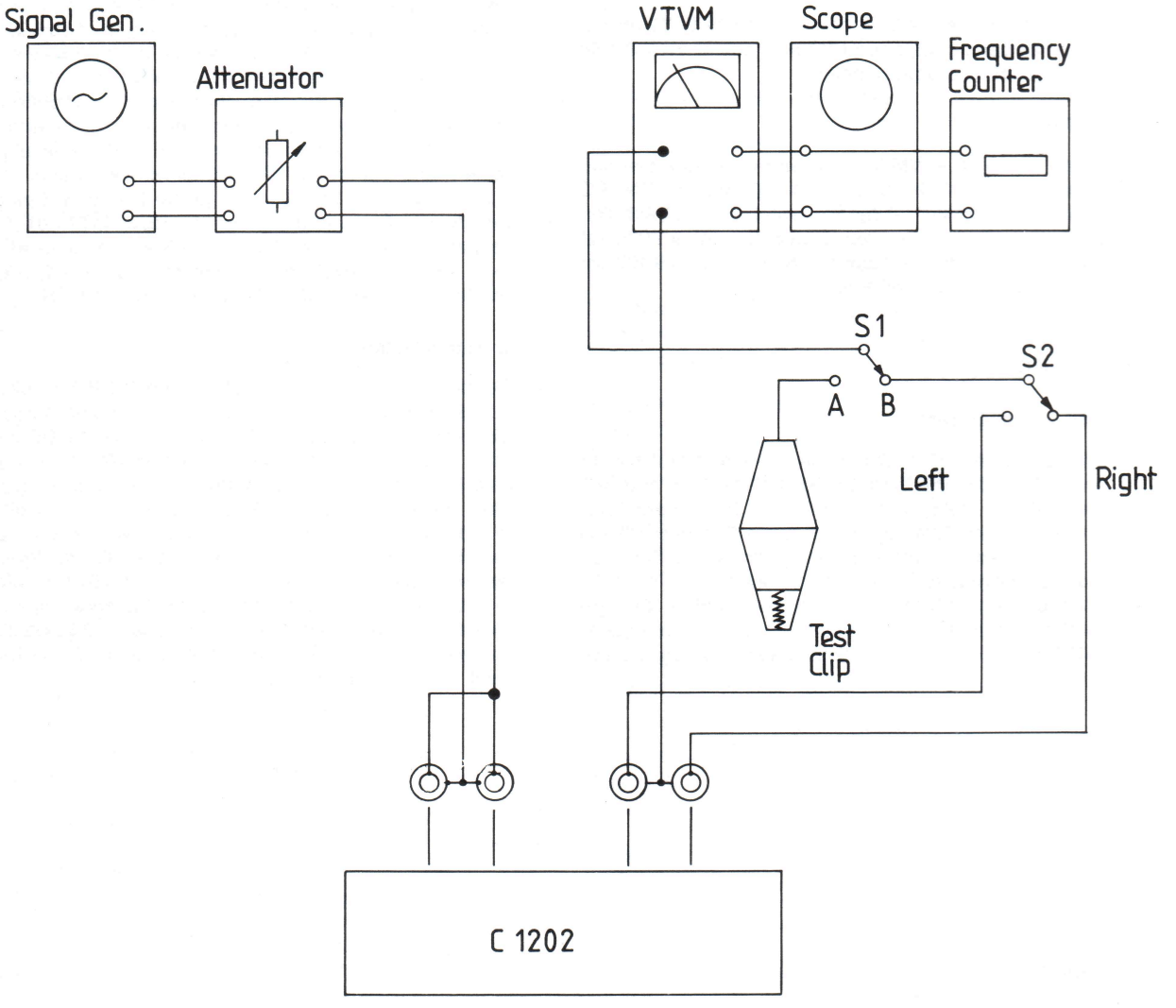
DC F·G Servo Motor



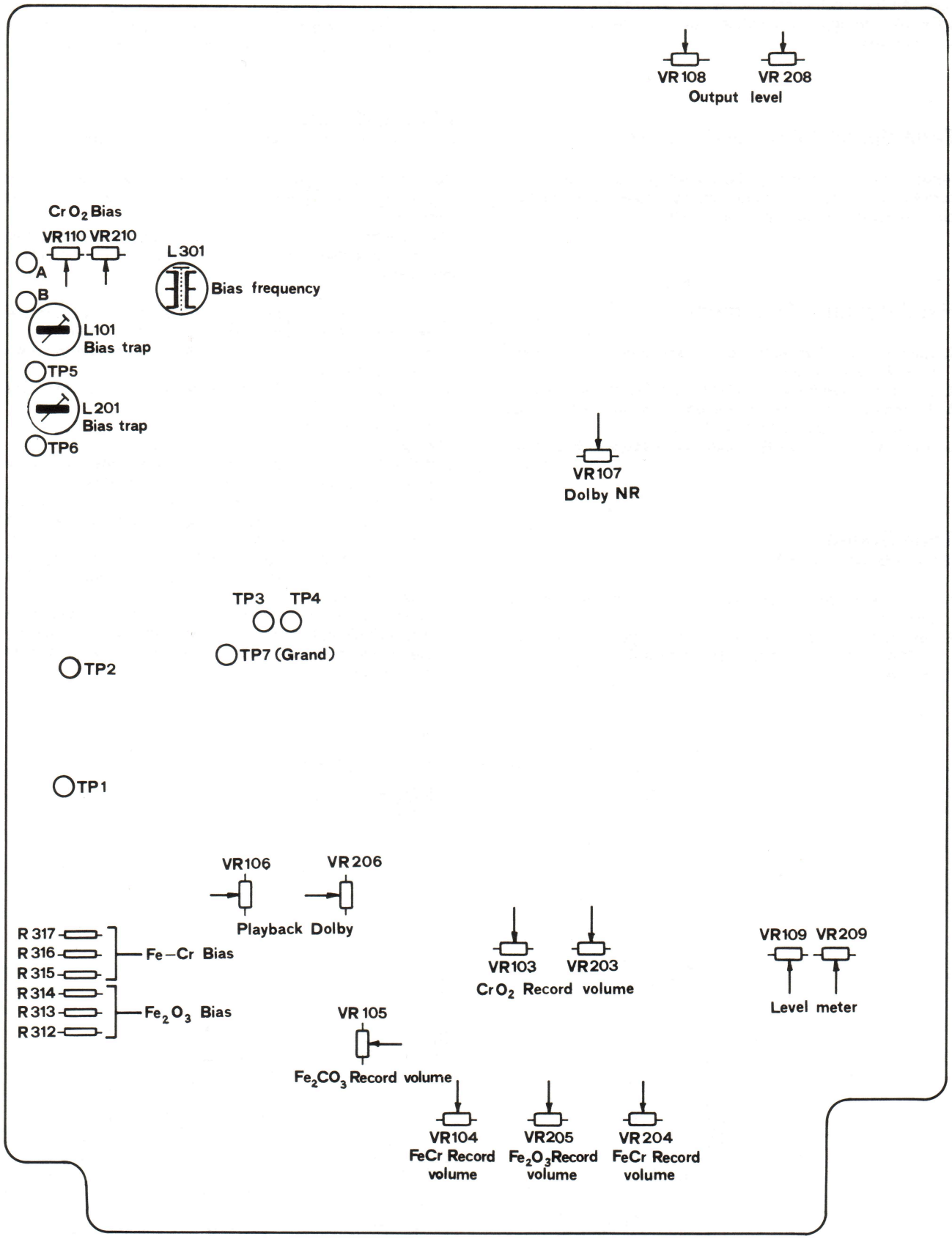
R/P Head



Equipment Measurement



Electrical Adjustment Procedure for Lenco C 1202 P. C. B. (Top View)



Mechanical Checks and Adjustments Model C 1202

Note: All the mechanical checks and alignments should be done with the upper and bottom cabinet assembly (A 1 and A 2) removed.

Tape Speed / Wow and Flutter

Note: Before commencing the following alignments, make sure that all parts in the tape path, particularly the capstan, pinch roller and head, are cleaned with pure alcohol.

Head Azimuth Alignment

1. Connect the AC vacuum tube voltage meter to both channels of the «Line-out».
2. Use a test tape (in which 10,000 Hz signal is recorded).
3. To achieve the maximum reading on the AC VTVM adjust the azimuth alignment screw (Fig. 2).
4. After the adjustment, fix the screw in place with lacquer.

Tape Speed

(Spec. 3000 Hz ± 45 Hz)

1. Connect the frequency counter to both channels of the line-out.
2. Set the EQ switch to normal position, then load and play a TEAC MTT-111 test tape in which a 3000 Hz signal is recorded.
3. Adjust the control located at the top of the meter for a reading of 3000 Hz ± 5 Hz on the frequency counter (Fig. 3). (This tape speed alignment should be done after approximately 30 seconds operating time.)
4. Then, verify the reading on the frequency counter as being within the specified range of 3000 Hz ± 45 Hz at the beginning, middle and near the end of the tape.

Wow and Flutter

(Spec. DIN weighted: within ± 0.2 % at record and playback)

Note: When using these methods, obtain the maximum wow and flutter value, by repeated play, stop or pause mode of operation.
This operation is necessary to make sure that the wow and flutter value between record and playback will not create a false reading.

1. Connect the oscillator to the line-in of the unit, and the wow and flutter meter to either channel of the line-out.
2. Set line or record controls of the unit to obtain the optimum input level.
3. Load a test tape (BASF C60) and set the BASF/EQ switches to the normal position.
4. Apply and record a 3000 Hz signal.
5. Record and play the recorded section.
6. Read the value on the wow and flutter meter. The wow and flutter value should be within ± 0.2 %, DIN maximum.
7. If the measured value is out of specification, check the take-up torque and pinch roller pressure, and see that the capstan or belt is not stretched or oily.
8. If the above checks prove ineffective, repair or replace the pinch roller assembly (B 1—6), motor and any other defective parts.
9. When the capstan assembly must be replaced, make sure it is well oiled. Re-adjust the end clearance by adjusting the thrust-screw (B 1—111) until the clearance is between 0.15—0.3 mm.

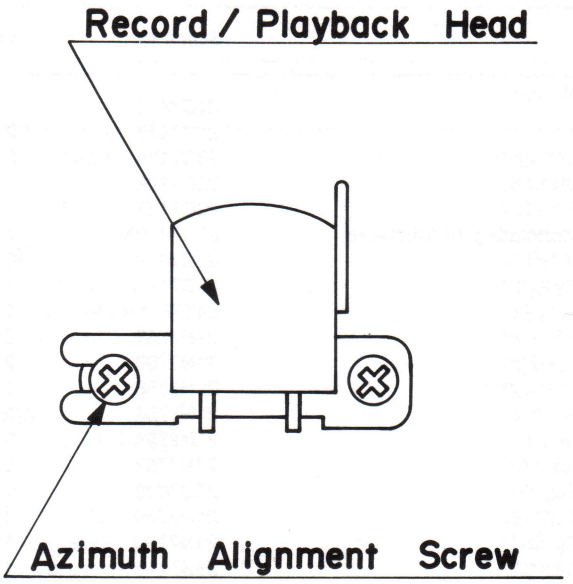


Fig. 1 Head Azimuth Adjustment Location

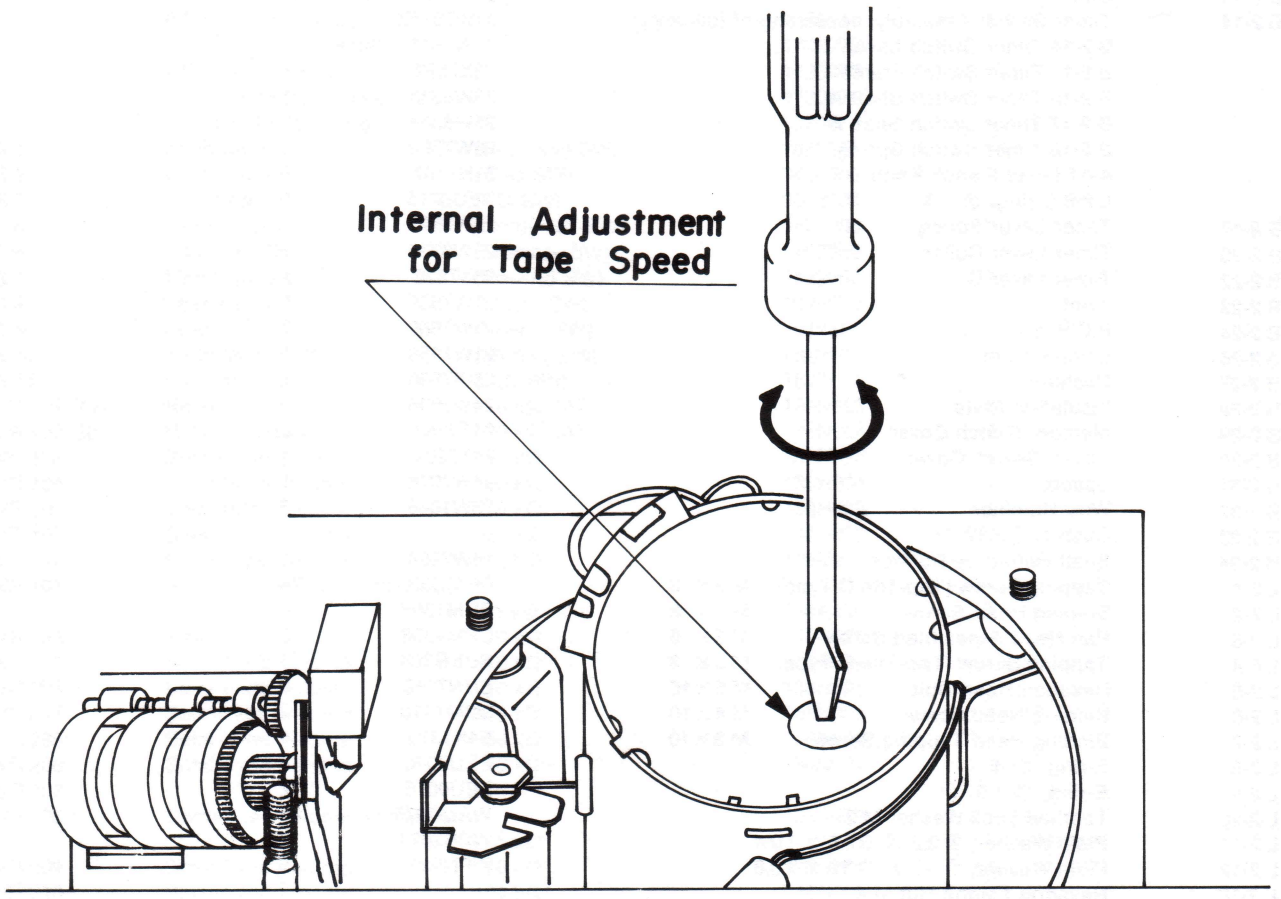


Fig. 2 Tape Speed Adjustment Location

Mechanical Parts (exploded view)

Reference No.	Designation	Stock No.	Quantity
A-1	Front Panel	21C7414	1
A-2	Side Panel	21C7415	2
A-3	Bottom Cover	23C7128	1
A-4	Bonnet	23C7126	1
A-5	Rear Panel	23C7127	1
A-6	Cassette Door Assembly, consisting of following:	21C7419X	1
	A-6 Cassette Door	21C7419	1
	A-7 Door Cap	21C7420	1
	B 2-25 Adhesive Tape	24T7871	1
A-8	Volume Knob, right	21N7759	2
A-9	Power Switch Button	21N7760	2
A-10	Power Switch Button	21N7756	1
A-11	Lever Switch Knob	21N7757	2
A-12	Piano Key	21N7751	5
A-13	Piano Key (Record Section)	21N7752	1
A-14	Edge Spacer	23U7030	2
A-15	Dolby Switch Knob	21N7758	1
A-16	Memory Switch Button	21N7770	1
B 2-1	Main Chassis	23S7443	1
B 2-2	Front Chassis, consisting of following:	23S7442X	1
	B 2-2 Front Chassis	23S7442	1
	B 2-12 P.C.B. Stud	23W7623	1
	B 2-21 Timer Lever Guide	25W8336	2
B 2-3	Power Switch Holder	23X7801	1
B 2-4	Record Lever	23X7737	1
B 2-5	Record Spring	26W7633	1
B 2-6	Record Lever B Shaft	25W8330	1
B 2-7	Cord Bushing	21W7538	1
B 2-8	Lamp Holder S	21W8502	2
B 2-9	Reflection Plate	23X7815	1
B 2-10	Switch Cover	24W7952	4
B 2-11	Push Rivet, ϕ 3.5×4		2
B 2-13	Cloth	24W7431	1
B 2-14	Timer Switch Assembly, consisting of following:	21W7511X	1
	B 2-14 Timer Switch Lever	21W7511	1
	B 2-15 Timer Switch Frame	23X7529	1
	B 2-16 Timer Switch Shaft A	25W8333	1
	B 2-17 Timer Switch Shaft B	25W8334	1
	B 2-18 Timer Switch Spring	26W7592	1
	A-11 Lever Switch Knob	21N7757	1
	L 2-9 E-ring, ϕ 1.5	EEU0015	1
B 2-19	Timer Lever Spring	26W7591	1
B 2-20	Timer Lever Collar	25W8335	2
B 2-22	Timer Lever C	23X7826	1
B 2-23	Joint	21W7533	1
B 2-24	P.C.B. Stud	25W7666	2
B 2-26	Lamp Holder	21W7558	1
B 2-27	Cushion	25W7936	1
B 2-28	Insulation Plate	24W7806	1
B 2-29	Memory Switch Cover	24T7283	2
B 2-30	Power Switch Cover	24T7284	1
B 2-31	Spacer	24W7976	1
B 2-32	Wire Retainer	23W1046	3
B 2-33	Cushion 2×12×lt		8
B 2-34	Shaft Reinforce Rubber	24W7984	1
L 2-1	Tapping Screw (Tap-Tite C Type) M 3× 6	SBMB306	24
L 2-2	Binding Head Screw M 3× 6	SBM1306	4
L 2-3	Pan Head Assembled Screw M 3× 6	CPM1306	10
L 2-4	Tapping Screw (Tap-Tite C Type) M 3× 8	SBKB308	11
L 2-5	Hexagon Head Bolt M 5×16	SHN7516	8
L 2-6	Binding Head Screw M 4×10	SBM1410	2
L 2-7	Binding Head Tapping Screw M 3×10	S4K1310	4
L 2-8	E-ring, ϕ 4	EEU0040	1
L 2-9	E-ring, ϕ 1.5	EEU0015	2
L 2-10	Toothed Lock Washer M 3	WAM3075	3
L 2-11	Plain Washer, ϕ 2.2 × ϕ7.5 × t 0.4	WPB2074	2
L 2-12	Plain Washer, ϕ 5.3 × ϕ 12 × t 0.8	WPN5128	8
L 2-13	Hexagon Flange Nut M 4		2
L 2-14	Locking Ring C Type, ϕ 8		1
L 2-15	Pan Head Assembled Screw M 36	FPM1306	2
L 2-16	Hexagon Nut M 3	NHM0030	1
L 2-17	Spring Lock Washer M 5	WSN510U	8
L 2-18	Toothed Lock Washer M 3	WBM3075	1
L 2-19	Plain Washer M 3	WPB3075	3

Electrical Parts

Reference No.	Designation		Stock No.	Quantity
R.P.H.	Record/Playback head		1650133	1
E.H.	Erase head		1650099	1
LM 101	Level meter		1831307	1
LM 201	Level meter		1831307	1
M	FG servo motor		164N131	1
PL 301	Pilot lamp 12 V 40 mA		1830069	1
PL 302	Pilot lamp 14 V 40 mA		1830184	1
PL 303	Pilot lamp 14 V 40 mA		1830184	1
J 1	Mic jack		1630109	1
J 2	Mic jack		1630107	1
J 3	Headphones jack		1630108	1
J 4	Jack board (RCA jack, DIN jack)		174C043	1
	Main PCB		1611828	1
	Mic jack PCB		1611829	1
	LED PCB		1611830	1
	Patch cord (Black)		1720122	2
	Patch cord (Brown)		1720884	2
	Power cord		1750277	1
	Cord stopper		SR-4N-4	1
P.T.	Power transformer		118G483A	1
	6 P Lug board		1720813	1
F 1	Fuse (315 mA T)		1790095	1
F 2	Fuse (315 mA T)		1790095	1
	Fuse holder		1720835	4
	3 P Connector socket		1720728	2
	3 P Connector plug		1720731	2
	4 P Connector socket		1720827	1
	4 P Connector plug		1720826	1
	5 P Connector socket		1720729	2
	5 P Connector plug		1720732	2
	6 P Connector socket		1720716	1
	6 P Connector plug		1720718	1
	7 P Connector socket		1720972	1
	7 P Connector plug		1720973	1
	10 P Connector socket		1720675	1
	10 P Connector plug		1720676	1
S 1	Slide switch	(Rec/Play SW)	1621373	1
S 2	Lever switch	(Bias SW)	1624065	1
S 3	Lever switch	(EQ SW)	1623194	1
S 4	Lever switch	(Dolby NR SW)	1624066	1
S 5	Push switch	(Memory SW)	1622389	1
S 7	Micro switch	(Rewind SW)	1623052	1
S 8	Leaf switch	(Motor SW)	1624060	1
S 9	Push switch	(Power SW)	1622381	1
S 10	Slide lever switch	(Muting SW)	1623186	1
S 11	Push switch	(DIN SW)	1622174	1
VR 101, 201	Relay volume	20 kΩ (A)	139N895	1
VR 102, 202	Rotary volume	50 kΩ (A)	139N904	1
VR 103	Semi-fixed volume	20 kΩ	138N028	1
VR 104	Semi-fixed volume	100 kΩ	138N004	1
VR 105	Semi-fixed volume	50 kΩ	138N029	1
VR 106	Semi-fixed volume	50 kΩ	138N029	1
VR 107	Semi-fixed volume	10 kΩ	138N271	1
VR 108	Semi-fixed volume with knob	1 kΩ	138A438	1
VR 109	Semi-fixed volume	10 kΩ	138N271	1
VR 110	Semi-fixed volume	100 kΩ	138N004	1
VR 203	Semi-fixed volume	20 kΩ	138N028	1
VR 204	Semi-fixed volume	100 kΩ	138N004	1
VR 205	Semi-fixed volume	50 kΩ	138N029	1
VR 206	Semi-fixed volume	50 kΩ	138N029	1
VR 207				
VR 208	Semi-fixed volume with knob	1 kΩ	138A438	1
VR 209	Semi-fixed volume	10 kΩ	138N271	1
VR 210	Semi-fixed volume	100 kΩ	138N004	1
U 101	Filter unit		1810171	1
U 201	Filter unit		1810171	1
L 101	Variable coil	15 mH	117D078	1

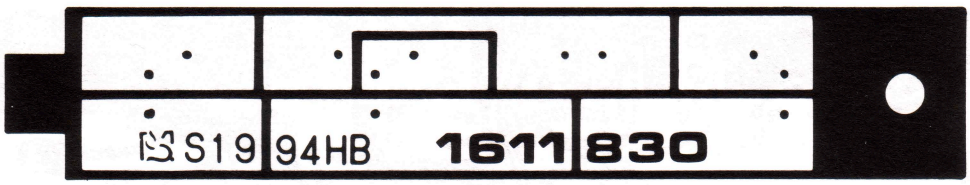
Reference No.	Designation			Stock No.	Quantity
L 102	Coil	3.3 mH		117D240	1
L 103	Coil	3.9 mH		117D111	1
L 104	Coil	8.2 mH		117D236	1
L 201	Variable coil	15 mH		117D078	1
L 202	Coil	3.3 mH		117D240	1
L 203	Coil	3.9 mH		117D111	1
L 204	Coil	8.2 mH		117D236	1
L 301	Oscillator coil			117D195	1
L 302	Solenoid			166Z043	1
IC 1	Dolby NR IC			HA11226	1
IC 101	Headphone amp IC			TA7066P	1
IC 201	Headphone amp IC			TA7066P	1
Q 101	Transistor			2SD661T	1
Q 102	Transistor			2SD661T	1
Q 103	Transistor			2SD661T	1
Q 104	Transistor			2SD661T	1
Q 105	Transistor			2SD636R	1
Q 106	Transistor			2SD636R	1
Q 107	Transistor			2SD636R	1
Q 108	Transistor			2SD661T	1
Q 109	Transistor			2SD661T	1
Q 110	Transistor			2SD636R	1
Q 201	Transistor			2SD661T	1
Q 202	Transistor			2SD661T	1
Q 203	Transistor			2SD661T	1
Q 204	Transistor			2SD661T	1
Q 205	Transistor			2SD636R	1
Q 206	Transistor			2SD636R	1
Q 207	Transistor			2SD636R	1
Q 208	Transistor			2SD661T	1
Q 209	Transistor			2SD661T	1
Q 210	Transistor			2SD636R	1
Q 301	Transistor			2SC1518R	1
Q 302	Transistor			2SB641Q	1
Q 303	Transistor			2SD235Y	1
Q 304	Transistor			2SD235Y	1
Q 305	Transistor			2SD636R	1
Q 306	Transistor			2SD636R	1
D 101	Diode			1S1555	1
D 102	Diode			1N60	1
D 103	Diode			1S1555	1
D 104	Diode			1S1555	1
D 105	Diode			1N60	1
D 106	Diode			1N60	1
D 201	Diode			1S1555	1
D 202	Diode			1N60	1
D 203	Diode			1S1555	1
D 204	Diode			1S1555	1
D 205	Diode			1N60	1
D 206	Diode			1N60	1
D 301	Diode			1B4B41	1
D 302	Diode			1B4B41	1
D 303	Diode			S5277	1
D 304	Diode			1S1555	1
D 305	Diode			1S1555	1
D 306	Diode			1S1555	1
ZD 301	Zenner diode			1224A	1
ZD 302	Zenner diode			HZ6C	1
LED 301	L.E.D. (Record)			GL-3AR1	1
LED 302	L.E.D. (Peak level)			GL-3AR1	1
LED 303	L.E.D. (Dolby NR)			GL-3PY1	1
C 101	Tantalum electrolytic capacitor	4.7	µF / 10 V	1224475	1
C 102	Electrolytic capacitor	100	µF / 25 V	1204107	1
C 103	Electrolytic capacitor	10	µF / 16 V	1203106	1
C 104	Electrolytic capacitor	10	µF / 16 V	1203106	1
C 105	Electrolytic capacitor	10	µF / 16 V	1203106	1
C 106	Electrolytic capacitor	10	µF / 16 V	1203106	1
C 107	Electrolytic capacitor	10	µF / 16 V	1203106	1
C 108	Electrolytic capacitor	100	µF / 25 V	1204107	1
C 109	Tantalum electrolytic capacitor	4.7	µF / 10 V	1224475	1

Reference No.	Designation				Stock No.	Quantity
C 110	Electrolytic capacitor	100	µF / 25 V		1204107	1
C 111	Electrolytic capacitor	470	µF / 16 V		1203477	1
C 112	Electrolytic capacitor	470	µF / 16 V		1203477	1
C 113	Electrolytic capacitor	4.7	µF / 25 V		1204475	1
C 114	Tantalum electrolytic capacitor	0.68	µF / 25 V		1210684	1
C 115	Electrolytic capacitor	1	µF / 50 V		1221105	1
C 116	Electrolytic capacitor	47	µF / 10 V		1202476	1
C 117	Tantalum electrolytic capacitor	1	µF / 25 V		1210105	1
C 118	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 119	Mylar capacitor	0.012	µF (J)		1254123	1
C 120	Mylar capacitor	0.022	µF (J)		1254223	1
C 121	Mylar capacitor	0.012	µF (J)		1254123	1
C 122	Mylar capacitor	0.018	µF (J)		1254183	1
C 123	Mylar capacitor	0.012	µF (J)		1254123	1
C 124	Styrol capacitor	150	pF (J)		1231151	1
C 125	Styrol capacitor	390	pF (J)		1230391	1
C 126	Tantalum electrolytic capacitor	10	µF / 10 V		1224106	1
C 127	Electrolytic capacitor	100	µF / 25 V		1204107	1
C 128	Ceramic capacitor	100	pF		1270101	1
C 129	Electrolytic capacitor	47	µF / 10 V		1202476	1
C 130	Ceramic capacitor	30	pF		1270300	1
C 131	Ceramic capacitor	12	pF		1270120	1
C 132	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 133	Mylar capacitor	0.0039	µF (J)		1254392	1
C 134	Mylar capacitor	0.0068	µF (J)		1254682	1
C 135	Electrolytic capacitor	1	µF / 50 V		1221105	1
C 136	Mylar capacitor	0.15	µF (J)		1254154	1
C 137	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 138	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 139	Mylar capacitor	0.1	µF (J)		1254104	1
C 140	Electrolytic capacitor	0.33	µF / 50 V	(M)	124R334	1
C 141	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 142	Mylar capacitor	0.015	µF (J)		1254153	1
C 143	Mylar capacitor	0.0047	µF (J)		1254472	1
C 144	Mylar capacitor	0.01	µF (J)		1254153	1
C 145	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 146	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 147	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 148	Mylar capacitor	0.001	µF (J)		1254102	1
C 149	Electrolytic capacitor	100	µF / 25 V		1204107	1
C 150	Electrolytic capacitor	3.3	µF / 50 V		1221335	1
C 151	Electrolytic capacitor	1	µF / 50 V		1221105	1
C 152	Electrolytic capacitor	0.33	µF / 50 V	(M)	124R334	1
C 153	Mylar capacitor	0.0047	µF (J)		1254472	1
C 201	Tantalum electrolytic capacitor	4.7	µF / 10 V		1224475	1
C 202						
C 203	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 204	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 205	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 206	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 207	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 208						
C 209	Tantalum electrolytic capacitor	4.7	µF / 10 V		1224475	1
C 210						
C 211						
C 212						
C 213	Electrolytic capacitor	4.7	µF / 25 V		1204475	1
C 214	Tantalum electrolytic capacitor	0.68	µF / 25 V		1210681	1
C 215	Electrolytic capacitor	1	µF / 50 V		1221105	1
C 216	Electrolytic capacitor	47	µF / 10 V		1202476	1
C 217	Tantalum electrolytic capacitor	1	µF / 25 V		1210105	1
C 218	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 219	Mylar capacitor	0.012	µF (J)		1254123	1
C 220	Mylar capacitor	0.022	µF (J)		1254223	1
C 221	Mylar capacitor	0.01	µF (J)		1254123	1
C 222	Mylar capacitor	0.018	µF (J)		1254183	1
C 223	Mylar capacitor	0.012	µF (J)		1254123	1
C 224	Styrol capacitor	150	pF (J)		1231151	1
C 225	Styrol capacitor	390	pF (J)		1230391	1
C 226	Tantalum electrolytic capacitor	10	µF / 10 V		1224106	1
C 227						

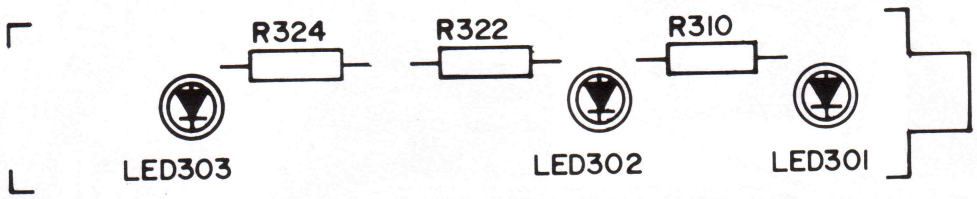
Reference No.	Designation				Stock No.	Quantity
C 228	Ceramic capacitor	100	pF		1270101	1
C 229	Electrolytic capacitor	47	µF / 10 V		1202476	1
C 230	Ceramic capacitor	30	pF		1270300	1
C 231	Ceramic capacitor	12	pF		1270120	1
C 232	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 233	Mylar capacitor	0.0039	µF (J)		1254392	1
C 234	Mylar capacitor	0.0068	µF (J)		1254682	1
C 235	Electrolytic capacitor	1	µF / 50 V		1221105	1
C 236	Mylar capacitor	0.15	µF (J)		1254154	1
C 237						
C 238	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 239	Mylar capacitor	0.1	µF (J)		1254104	1
C 240	Electrolytic capacitor	0.33	µF / 50 V	(M)	124R334	1
C 241	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 242	Mylar capacitor	0.015	µF (J)		1254153	1
C 243	Mylar capacitor	0.0047	µF (J)		1254472	1
C 244	Mylar capacitor	0.015	µF (J)		1254153	1
C 245	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 246	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 247	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 248	Mylar capacitor	0.001	µF (J)		1254102	1
C 249	Electrolytic capacitor	100	µF / 25 V		1204107	1
C 250	Electrolytic capacitor	3.3	µF / 50 V		1221335	1
C 251	Electrolytic capacitor	1	µF / 50 V		1221105	1
C 252	Electrolytic capacitor	0.33	µF / 50 V	(M)	124R334	1
C 253	Mylar capacitor	0.0047	µF (J)		1254472	1
C 301	Electrolytic capacitor	1000	µF / 16 V		1203108	1
C 302	Electrolytic capacitor	470	µF / 35 V		1200477	1
C 303	Electrolytic capacitor	100	µF / 25 V		1204107	1
C 304	Electrolytic capacitor	470	µF / 25 V		1204477	1
C 305	Electrolytic capacitor	1000	µF / 35 V		1200108	1
C 306	Electrolytic capacitor	10	µF / 25 V		1204106	1
C 307	Electrolytic capacitor	10	µF / 25 V		1204106	1
C 308	Electrolytic capacitor	33	µF / 16 V		1203336	1
C 309	Mylar capacitor	0.012	µF (J)		1254123	1
C 310	Mylar capacitor	0.01	µF (J)		1254103	1
C 311	Mylar capacitor	0.018	µF (J)		1254183	1
C 312	Styrol capacitor	1000	pF (J)		1231102	1
C 313	Styrol capacitor	1000	pF (J)		1231102	1
C 314	Electrolytic capacitor	10	µF / 16 V		1203106	1
C 315	Electrolytic capacitor	33	µF / 16 V		1203336	1
R 101	Carbon resistor	100	Ω		1321101	1
R 102	Carbon resistor	8.2	kΩ		1321822	1
R 103	Carbon resistor	470	kΩ		1337474	1
R 104						
R 105	Carbon resistor	56	kΩ		1337563	1
R 106	Carbon resistor	68	Ω		1337680	1
R 107	Carbon resistor	10	kΩ		1337103	1
R 108	Carbon resistor	1.5	kΩ		1337152	1
R 109	Carbon resistor	1.2	kΩ		1321122	1
R 110	Carbon resistor	680	kΩ		1321684	1
R 111	Carbon resistor	1.2	kΩ		1321122	1
R 112	Carbon resistor	1.2	kΩ		1321122	1
R 113	Carbon resistor	680	kΩ		1321684	1
R 114	Carbon resistor	33	kΩ		1321333	1
R 115	Carbon resistor	270	Ω		1321271	1
R 116	Carbon resistor	560	Ω		1321561	1
R 117	Carbon resistor	47	kΩ		1321473	1
R 118	Carbon resistor	1	kΩ		1321102	1
R 119	Carbon resistor	39	kΩ		1321393	1
R 120	Carbon resistor	220	Ω		1321221	1
R 121	Carbon resistor	56	kΩ		1321563	1
R 122	Carbon resistor	470	kΩ		1321474	1
R 123	Carbon resistor	10	kΩ		1321103	1
R 124						
R 125	Carbon resistor	1.5	kΩ		1321152	1
R 126	Carbon resistor	5.6	kΩ		1321562	1
R 127	Carbon resistor	100	kΩ		1321104	1
R 128	Carbon resistor (Flame and solvent retardant type)	470	Ω	½ W	1330154	
R 129	Carbon resistor	6.8	kΩ		1321682	1

Reference No.	Designation		Stock No.	Quantity
R 130	Carbon resistor	3.3 kΩ	1321332	1
R 131	Carbon resistor	33 kΩ	1321333	1
R 132	Carbon resistor	22 kΩ	1321223	1
R 133	Carbon resistor	100 kΩ	1321104	1
R 134	Carbon resistor	330 kΩ	1321334	1
R 135	Carbon resistor	4.7 kΩ	1321472	1
R 136	Carbon resistor	100 kΩ	1321104	1
R 137	Carbon resistor	470 Ω	1321471	1
R 138	Carbon resistor	4.7 kΩ	1321472	1
R 139	Carbon resistor	12 kΩ	1321123	1
R 140	Carbon resistor	10 Ω	1321100	1
R 141	Carbon resistor	5.6 kΩ	1321562	1
R 142	Carbon resistor	10 Ω	1321100	1
R 143	Carbon resistor	10 Ω	1321100	1
R 144	Carbon resistor	10 Ω	1321100	1
R 145	Carbon resistor	100 kΩ	1321104	1
R 146	Carbon resistor	220 Ω	1321221	1
R 147	Carbon resistor	220 kΩ	1321224	1
R 148	Carbon resistor	330 Ω	1321331	1
R 149	Carbon resistor	1 kΩ	1321102	1
R 150	Carbon resistor	18 kΩ	1321183	1
R 151	Carbon resistor	27 kΩ	1321273	1
R 152	Carbon resistor	3.9 kΩ	1321392	1
R 153	Carbon resistor	820 kΩ	1321824	1
R 154	Carbon resistor	10 kΩ	1321103	1
R 155	Carbon resistor	8.2 kΩ	1321822	1
R 156	Carbon resistor	3.3 kΩ	1321332	1
R 157	Carbon resistor	100 kΩ	1321104	1
R 158	Carbon resistor	10 kΩ	1321183	1
R 159	Carbon resistor	100 kΩ	1321104	1
R 160	Carbon resistor	12 kΩ	1321123	1
R 161	Carbon resistor	270 kΩ	1321274	1
R 162	Carbon resistor	270 kΩ	1321274	1
R 163	Carbon resistor	180 Ω	1321181	1
R 164	Carbon resistor	47 kΩ	1321473	1
R 165	Carbon resistor	3.9 kΩ	1321392	1
R 166	Carbon resistor	5.6 kΩ	1321562	1
R 167	Carbon resistor	82 Ω	1321820	1
R 168	Carbon resistor	10 kΩ	1321103	1
R 169	Carbon resistor	10 kΩ	1321103	1
R 170	Carbon resistor	2.2 kΩ	1321222	1
R 171	Carbon resistor	470 kΩ	1321474	1
R 201	Carbon resistor	100 Ω	1321101	1
R 202	Carbon resistor	8.2 kΩ	1321822	1
R 203	Carbon resistor	470 kΩ	1337474	1
R 204				
R 205	Carbon resistor	56 kΩ	1337563	1
R 206	Carbon resistor	68 Ω	1337680	1
R 207	Carbon resistor	10 kΩ	1337103	1
R 208				
R 209				
R 210	Carbon resistor	680 kΩ	1321684	1
R 211	Carbon resistor	1.2 kΩ	1321122	1
R 212		1.2 kΩ	1321122	1
R 213		680 kΩ	1321684	1
R 214	Carbon resistor	33 kΩ	1321333	1
R 215	Carbon resistor	270 Ω	1321271	1
R 216	Carbon resistor	560 Ω	1321561	1
R 217	Carbon resistor	47 kΩ	1321473	1
R 218	Carbon resistor	1 kΩ	1321102	1
R 219	Carbon resistor	39 kΩ	1321393	1
R 220	Carbon resistor	220 Ω	1321221	1
R 221	Carbon resistor	56 kΩ	1321563	1
R 222	Carbon resistor	470 kΩ	1321474	1
R 223	Carbon resistor	10 kΩ	1321103	1
R 224				
R 225				
R 226	Carbon resistor	5.6 kΩ	1321562	1
R 227	Carbon resistor	100 kΩ	1321104	1
R 228				
R 229	Carbon resistor	6.8 kΩ	1321682	1

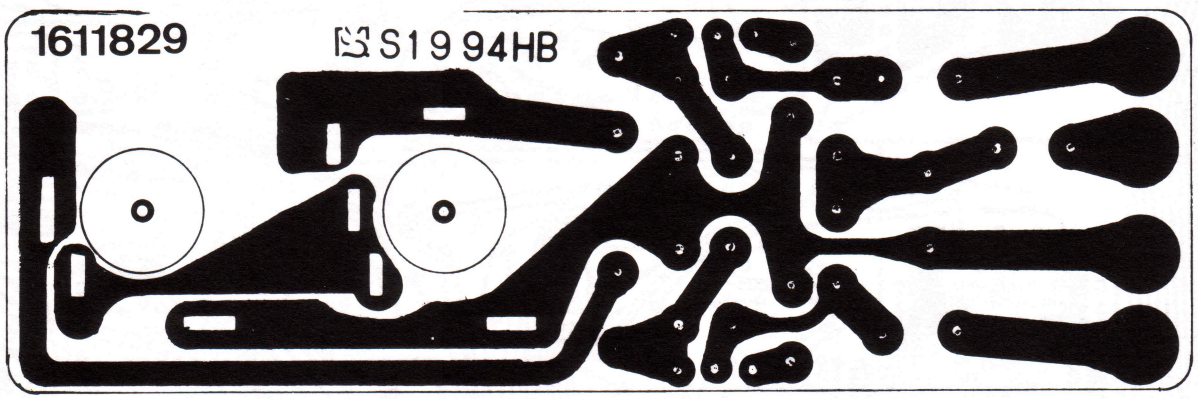
Reference No.	Designation		Stock No.	Quantity
R 230	Carbon resistor	3.3 kΩ	1321332	1
R 231	Carbon resistor	33 kΩ	1321333	1
R 232	Carbon resistor	22 kΩ	1321223	1
R 233	Carbon resistor	100 kΩ	1321104	1
R 234	Carbon resistor	330 kΩ	1321334	1
R 235	Carbon resistor	4.7 kΩ	1321472	1
R 236	Carbon resistor	100 kΩ	1321104	1
R 237	Carbon resistor	470 kΩ	1321471	1
R 238	Carbon resistor	4.7 kΩ	1321472	1
R 239	Carbon resistor	12 kΩ	1321123	1
R 240	Carbon resistor	10 Ω	1321100	1
R 241	Carbon resistor	5.6 kΩ	1321562	1
R 242	Carbon resistor	10 Ω	1321100	1
R 243	Carbon resistor	10 Ω	1321100	1
R 244	Carbon resistor	10 Ω	1321100	1
R 245	Carbon resistor	100 kΩ	1321104	1
R 246	Carbon resistor	220 Ω	1321221	1
R 247	Carbon resistor	220 kΩ	1321224	1
R 248	Carbon resistor	330 Ω	1321231	1
R 249	Carbon resistor	1 kΩ	1321102	1
R 250	Carbon resistor	18 kΩ	1321183	1
R 251	Carbon resistor	27 kΩ	1321273	1
R 252	Carbon resistor	3.9 kΩ	1321392	1
R 253	Carbon resistor	820 kΩ	1321824	1
R 254	Carbon resistor	10 kΩ	1321103	1
R 255	Carbon resistor	8.2 kΩ	1321822	1
R 256				
R 257	Carbon resistor	100 kΩ	1321104	1
R 258	Carbon resistor	18 kΩ	1321183	1
R 259	Carbon resistor	100 kΩ	1321104	1
R 260	Carbon resistor	12 kΩ	1321123	1
R 261	Carbon resistor	270 kΩ	1321274	1
R 262	Carbon resistor	270 kΩ	1321274	1
R 263	Carbon resistor	180 Ω	1321181	1
R 264	Carbon resistor	47 kΩ	1321473	1
R 265	Carbon resistor	3.9 kΩ	1321392	1
R 266	Carbon resistor	5.6 kΩ	1321562	1
R 267	Carbon resistor	82 Ω	1321820	1
R 268	Carbon resistor	10 kΩ	1321103	1
R 269	Carbon resistor	10 kΩ	1321103	1
R 270	Carbon resistor	2.2 kΩ	1321222	1
R 271	Carbon resistor	470 kΩ	1321474	1
R 301	Fuse resistor	12 Ω	1348120	1
R 302	Carbon resistor (Flame and solvent retardant type)	1 kΩ	1330146	1
R 303	Carbon resistor	100 Ω	1321101	1
R 304	Cement resistor	470 Ω 2 W	1330144	1
R 305	Cement resistor	330 Ω 1 W	1331143	1
R 306	Carbon resistor	82 Ω	1321820	1
R 307	Carbon resistor	10 kΩ	1330103	1
R 308	Carbon resistor	100 kΩ	1330104	1
R 309	Carbon resistor	27 kΩ	1330273	1
R 310	Carbon resistor	2.2 kΩ	1330222	1
R 311	Carbon resistor (Flame and solvent retardant type)	82 Ω ½ W	1330148	1
R 312	Carbon resistor	82 Ω ½ W	1330148	1
R 313	Carbon resistor	100 Ω ½ W	1330149	1
R 314	Carbon resistor	120 Ω ½ W	1330150	1
R 315	Carbon resistor (Flame and solvent retardant type)	150 Ω ½ W	1330151	1
R 316	Carbon resistor	180 Ω ½ W	ERD-50-FJ-181	1
R 317	Carbon resistor	220 Ω ½ W	ERD-50-FJ-221	1
R 318	Carbon resistor	82 Ω ½ W	1330148	1
R 319	Carbon resistor	10 Ω	1321100	1
R 320	Carbon resistor	100 Ω	1321101	1
R 321	Carbon resistor	22 kΩ	1321223	1
R 322	Carbon resistor	2.2 kΩ	1321222	1
R 323	Carbon resistor	330 kΩ	1321334	1
R 324	Carbon resistor	2.2 kΩ	1321222	1
C 154	Electrolytic capacitor	1 μF / 50 V	1221105	1
C 254	Electrolytic capacitor	1 μF / 50 V	1221105	1



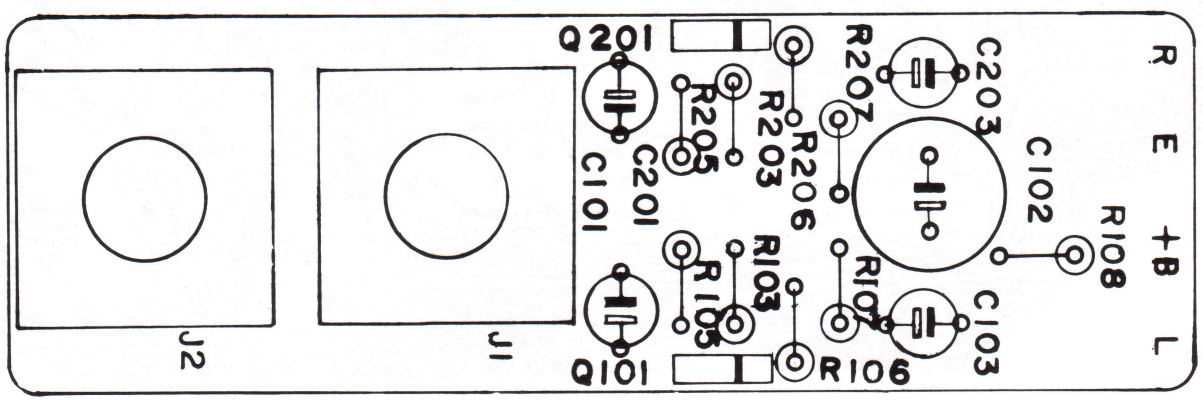
LED P.C.B. D 6508E8



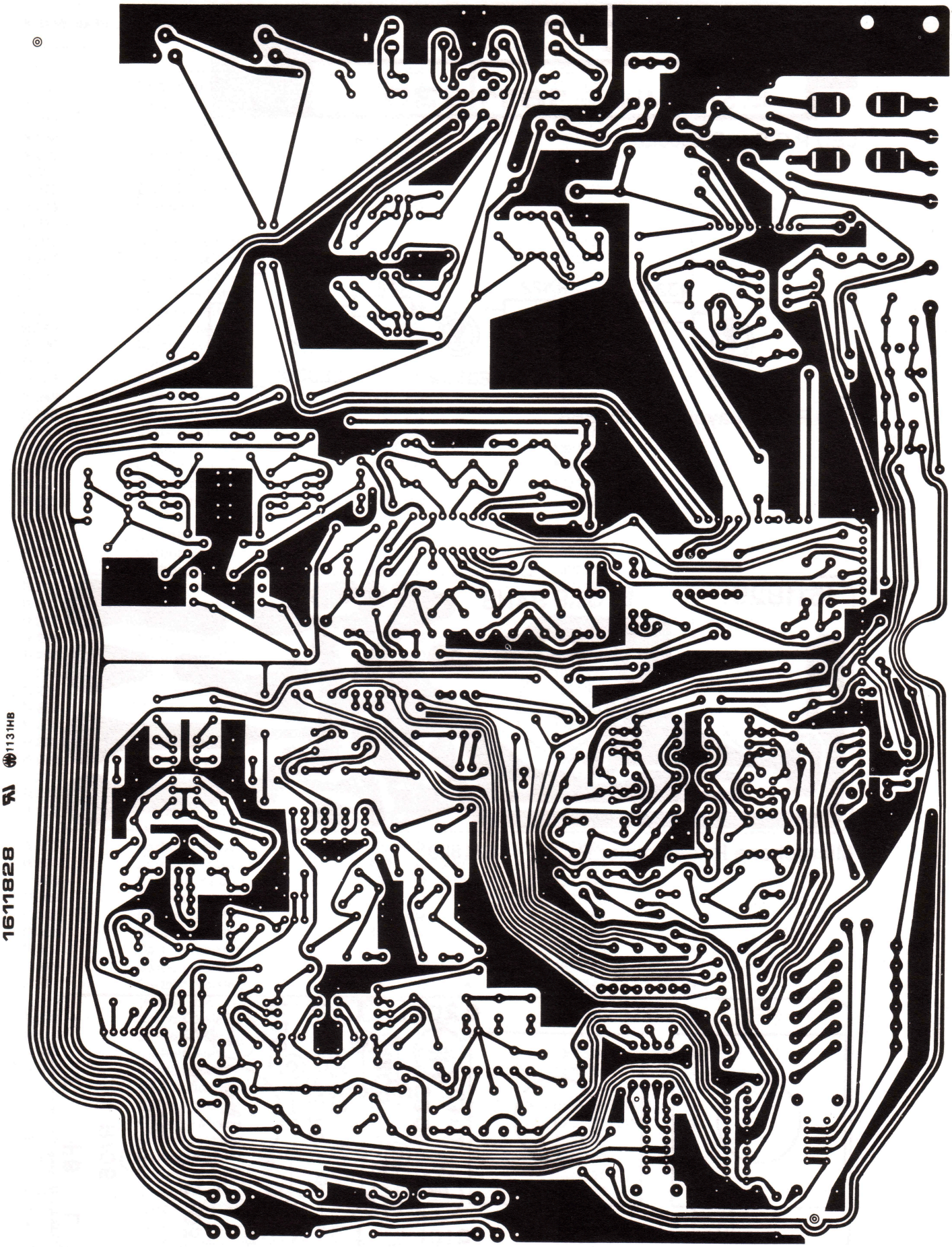
LED P.C.B. Layout D 6508E8



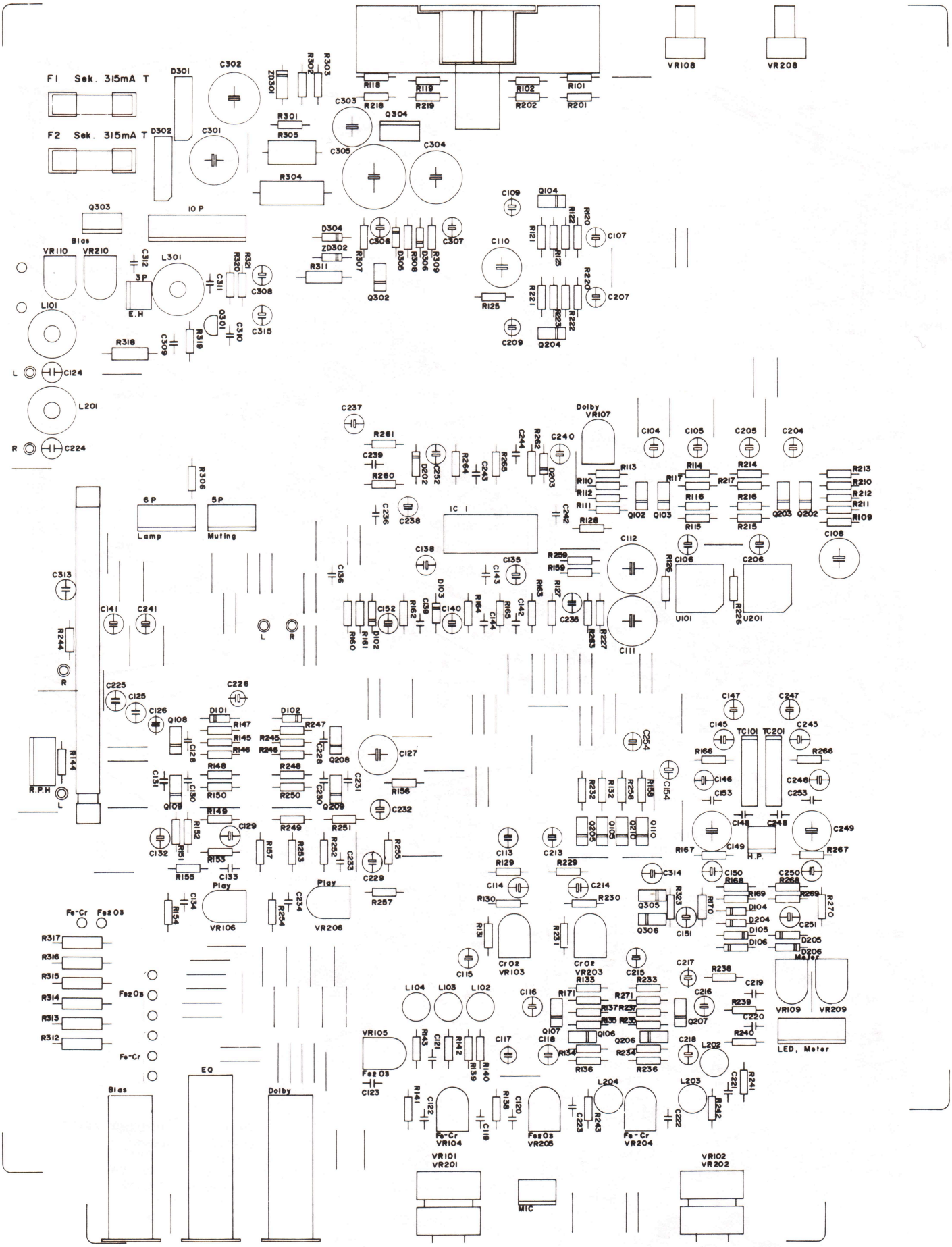
Microphone Pre-amplifier P.C.B. 1611829



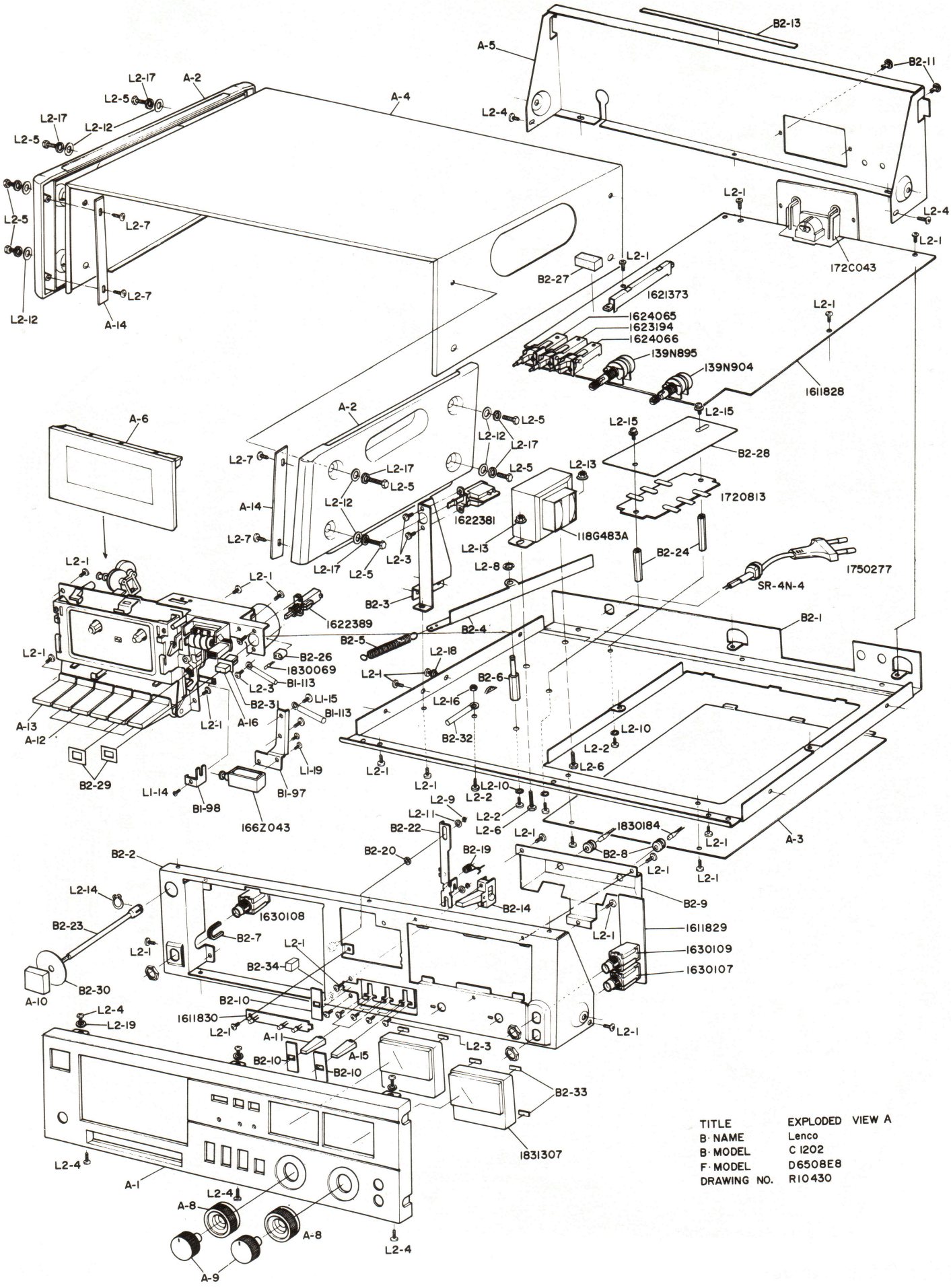
Microphone Pre-amplifier Layout 1611829



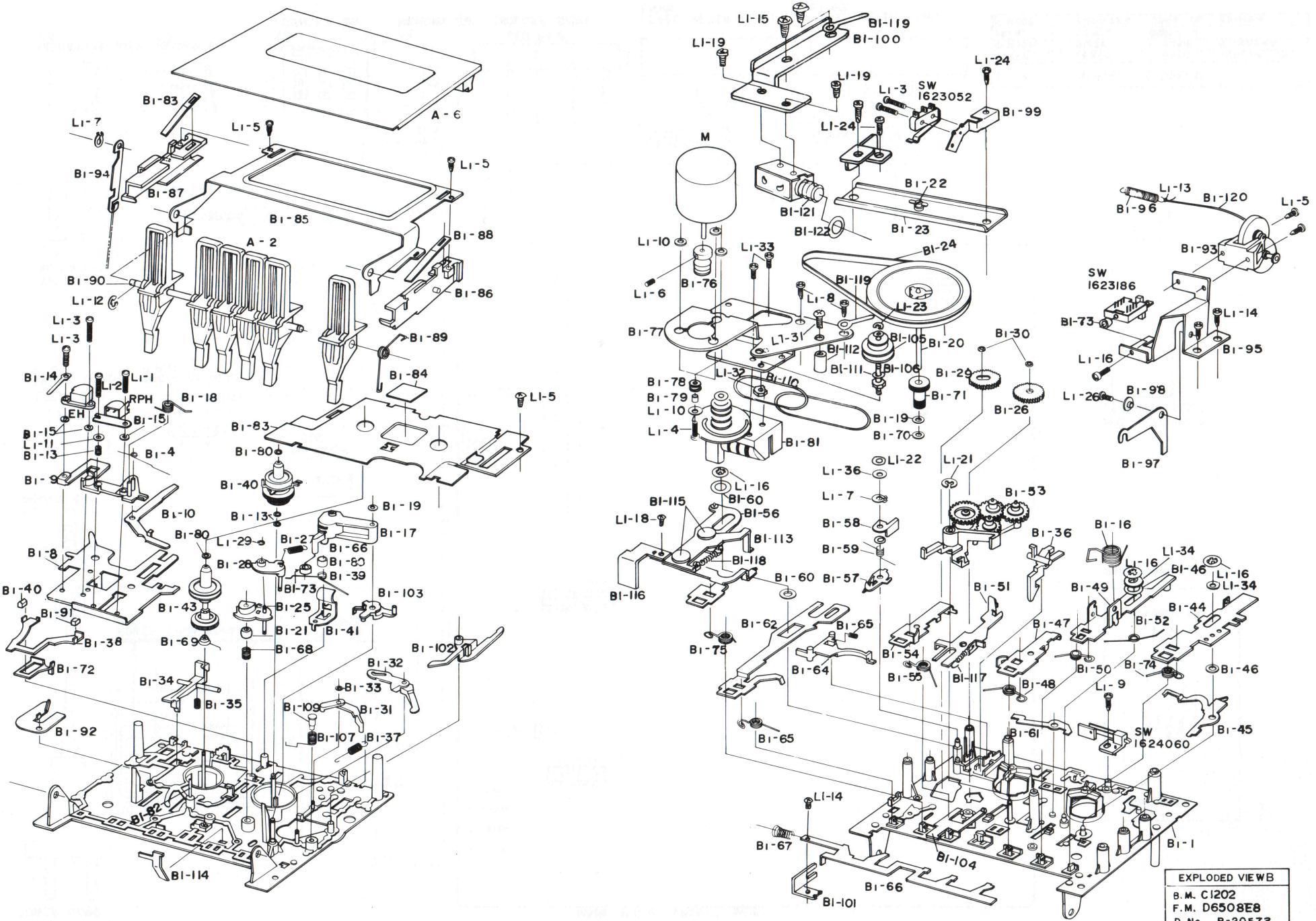
Main P.C.B.

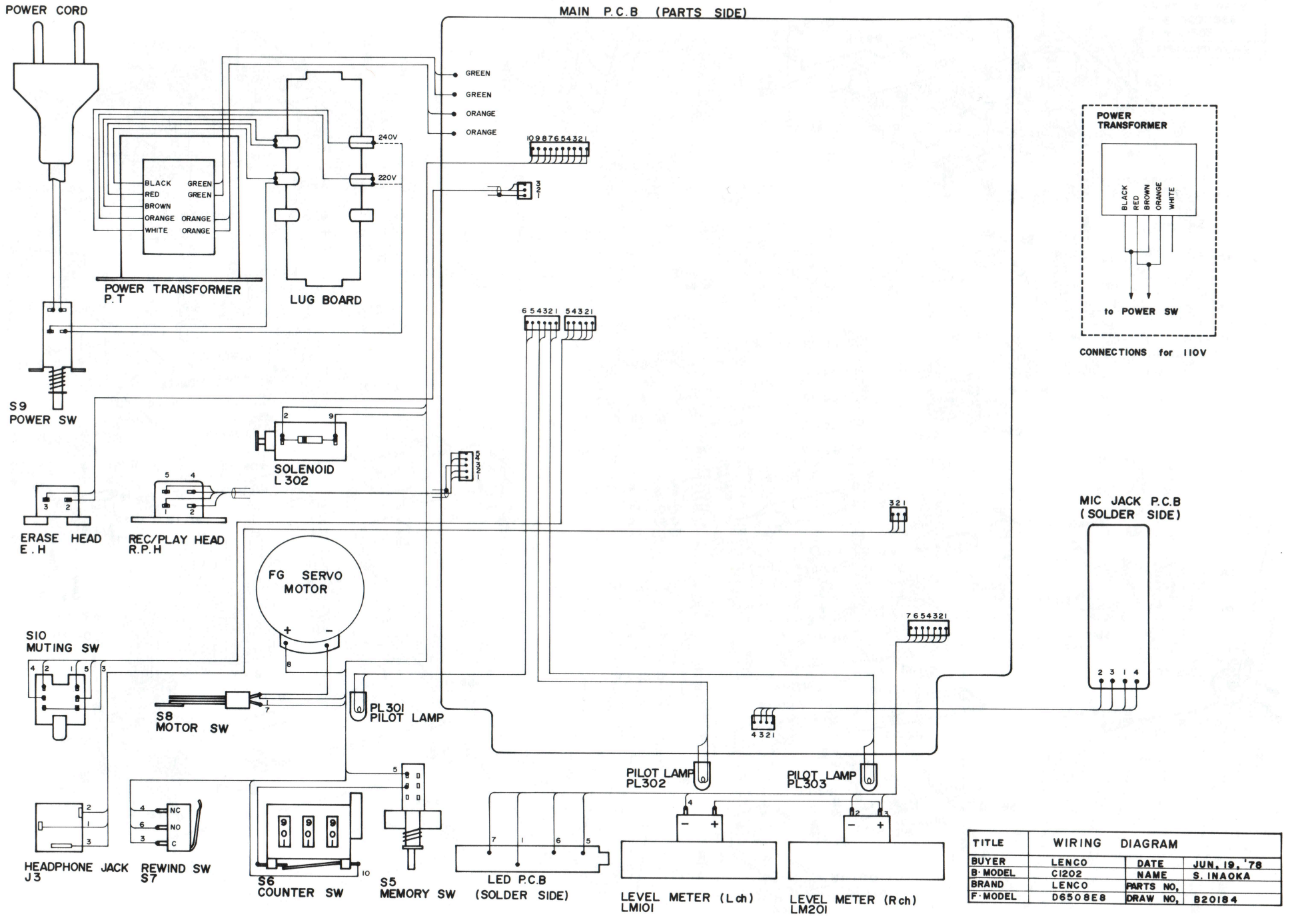


Main P.C.B. Layout

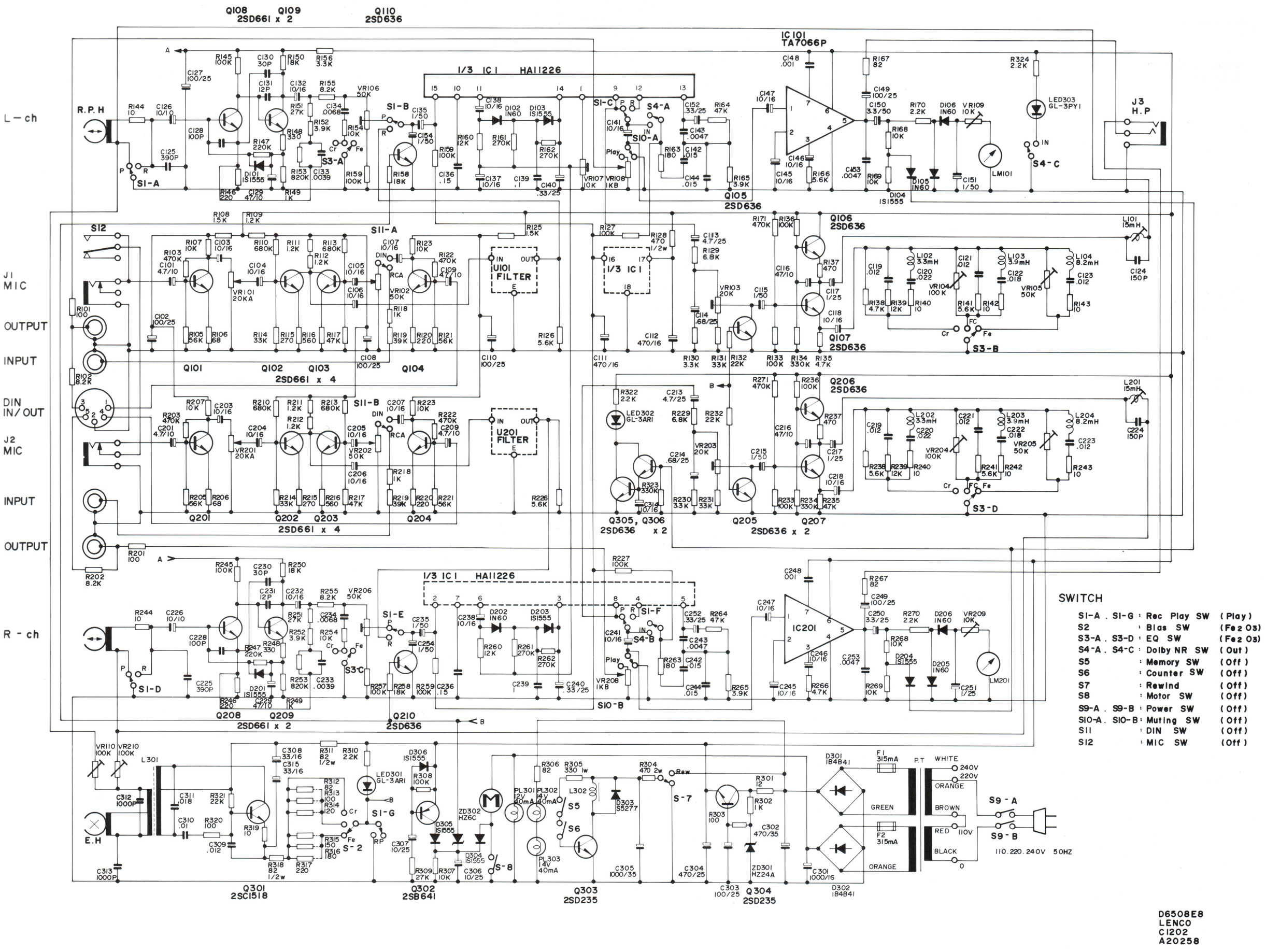


TITLE	EXPLODED VIEW A
B· NAME	Lenco
B· MODEL	C 1202
F· MODEL	D6508E8
DRAWING NO.	R10430


A - 6
A - 2
M
SW 1623052
SW 1623186
SW 1624060
RPH
EH
EXPLODED VIEW B
B.M. C1202
F.M. D6508E8
D.No. R-20572



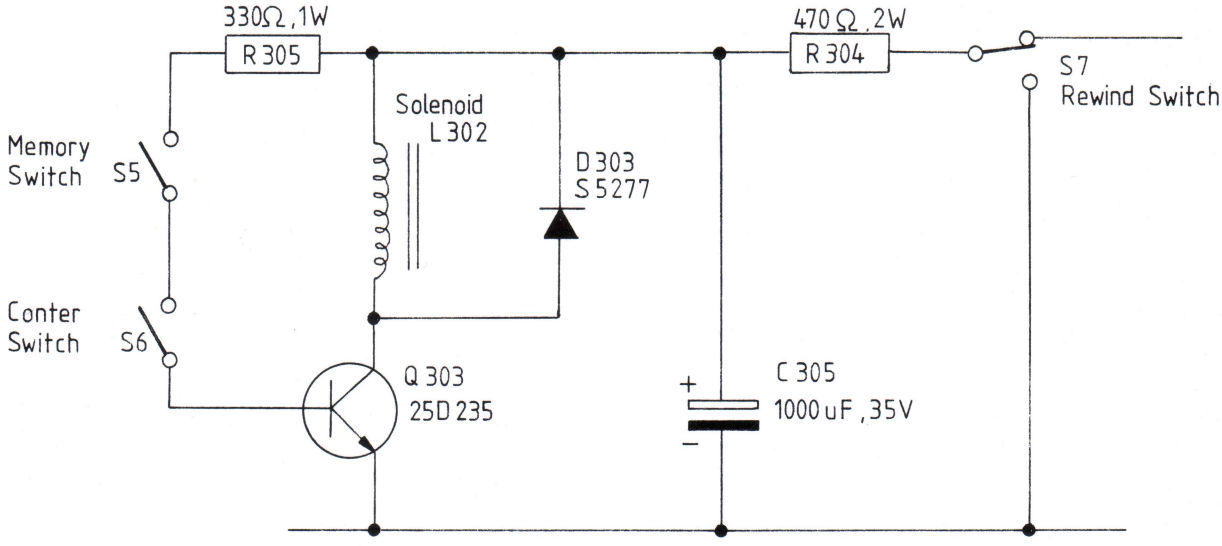
TITLE	WIRING DIAGRAM		
BUYER	LENCO	DATE	JUN. 19, '78
B·MODEL	C1202	NAME	S. INAOKA
BRAND	LENCO	PARTS NO,	
F·MODEL	D6508E8	DRAW NO,	B20184


Q108 Q109 2SD661 x 2
Q110 2SD636
IC101 TA7066P
1/3 IC1 HA11226
L-ch
R.P.H
S1-A
S1-B
S1-C
S3-A
S4-A
S4-C
S10-A
J3 H.P
LED303 GL-3PY1
LM101
Q105 2SD636
Q106 2SD636
Q107 2SD636
S3-B
J1 MIC
OUTPUT
INPUT
S12
S11-A
U101 FILTER
Q101
Q102
Q103
Q104
2SD661 x 4
DIN IN/OUT
J2 MIC
S11-B
U201 FILTER
Q201
Q202
Q203
Q204
2SD661 x 4
Q305, Q306 2SD636 x 2
Q205
Q207
2SD636 x 2
Q206 2SD636
S3-D
R-ch
S1-D
S1-E
S1-F
S3-C
S4-B
S10-B
IC201
Q208
Q209
2SD661 x 2
Q210 2SD636
Q301 2SC1518
Q302 2SB641
Q303 2SD235
Q304 2SD235
E.H
S-2
S-7
S-8
S5
S6
PL301 12V 40mA
PL302 14V 40mA
PL303 14V 40mA
D301 IB4B41
D302 IB4B41
F1 315mA
F2 315mA
P.T
WHITE
ORANGE
BROWN
RED
BLACK
GREEN
240V
220V
110V
0
S9-A
S9-B
110.220.240V 50HZ
SWITCH
S1-A . S1-G : Rec Play SW (Play)
S2 : Bias SW (Fe2 O3)
S3-A . S3-D : EQ SW (Fe2 O3)
S4-A . S4-C : Dolby NR SW (Out)
S5 : Memory SW (Off)
S6 : Counter SW (Off)
S7 : Rewind (Off)
S8 : Motor SW (Off)
S9-A . S9-B : Power SW (Off)
S10-A . S10-B : Muting SW (Off)
S11 : DIN SW (Off)
S12 : MIC SW (Off)
D6508E8
LENCO
C1202
A20258

Modification No. 1

To insure proper Memory function, a modification on the electronics has been done, as follows, on sets beginning with the 2001st:

OLD



NEW