

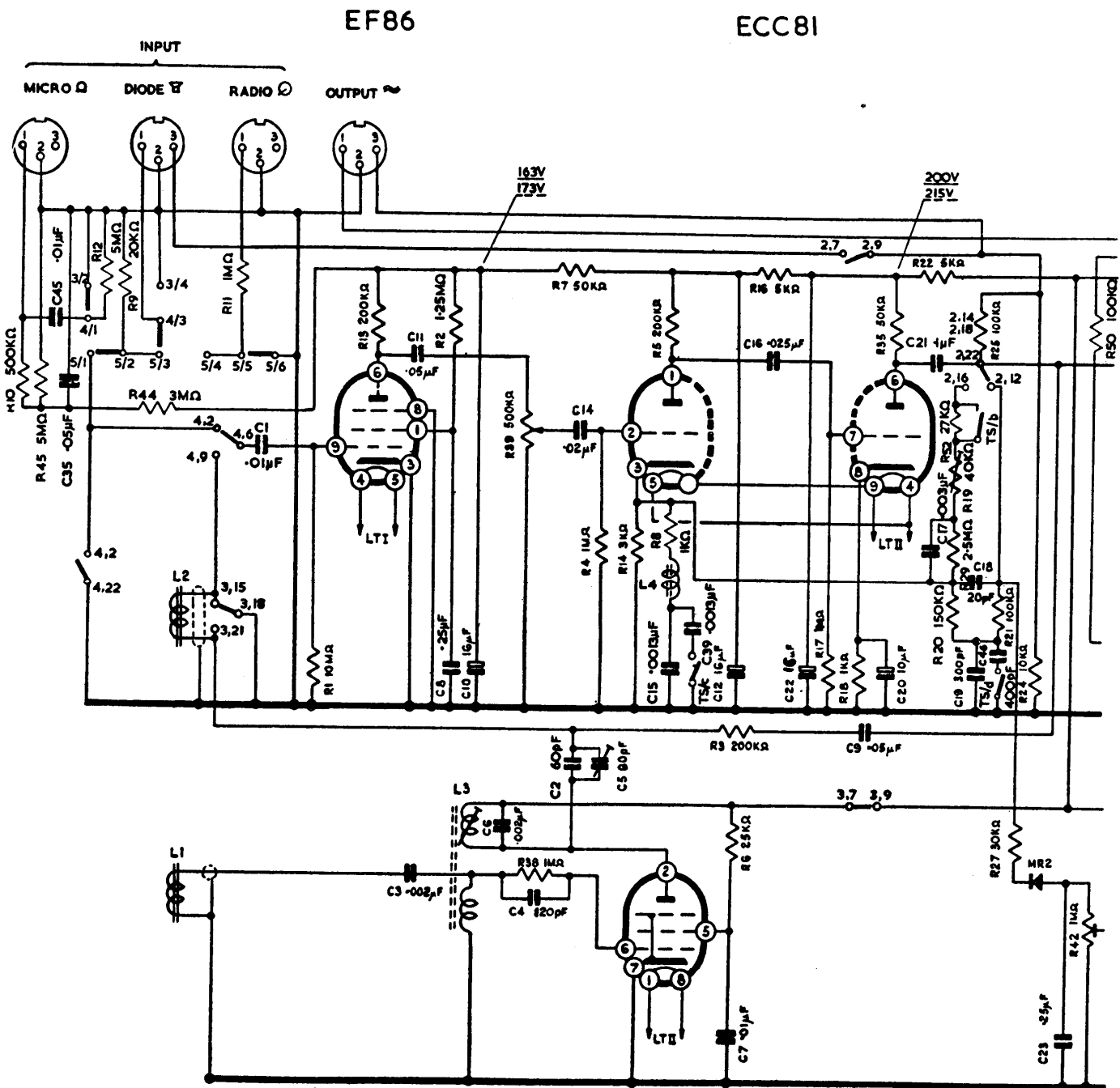
GRUNDIG TAPE RECORDER Model TK8/3D

General Description: Two-speed, dual-track (recording on "top track"), portable tape recorder with maximum spool diameter of 7 in. Weight 32 lb.

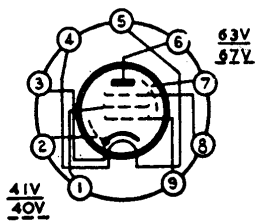
Speeds: $7\frac{1}{2}$ in./sec.; $3\frac{3}{4}$ in./sec.

Power Supply: A.C. mains, 110, 150, 200-250 volts.

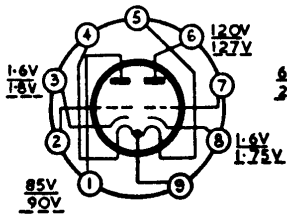
Record-playback Times: 2×30 minutes with 1200 ft. of standard tape at $7\frac{1}{2}$ in./sec.; 2×45 minutes with 1800 ft. of long-play tape. Times will be doubled for $3\frac{3}{4}$ in./sec. recording.



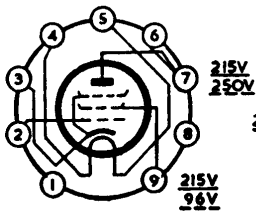
EL42



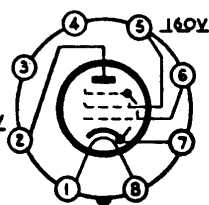
EF86



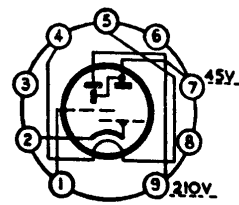
ECC81



EL84



EL42

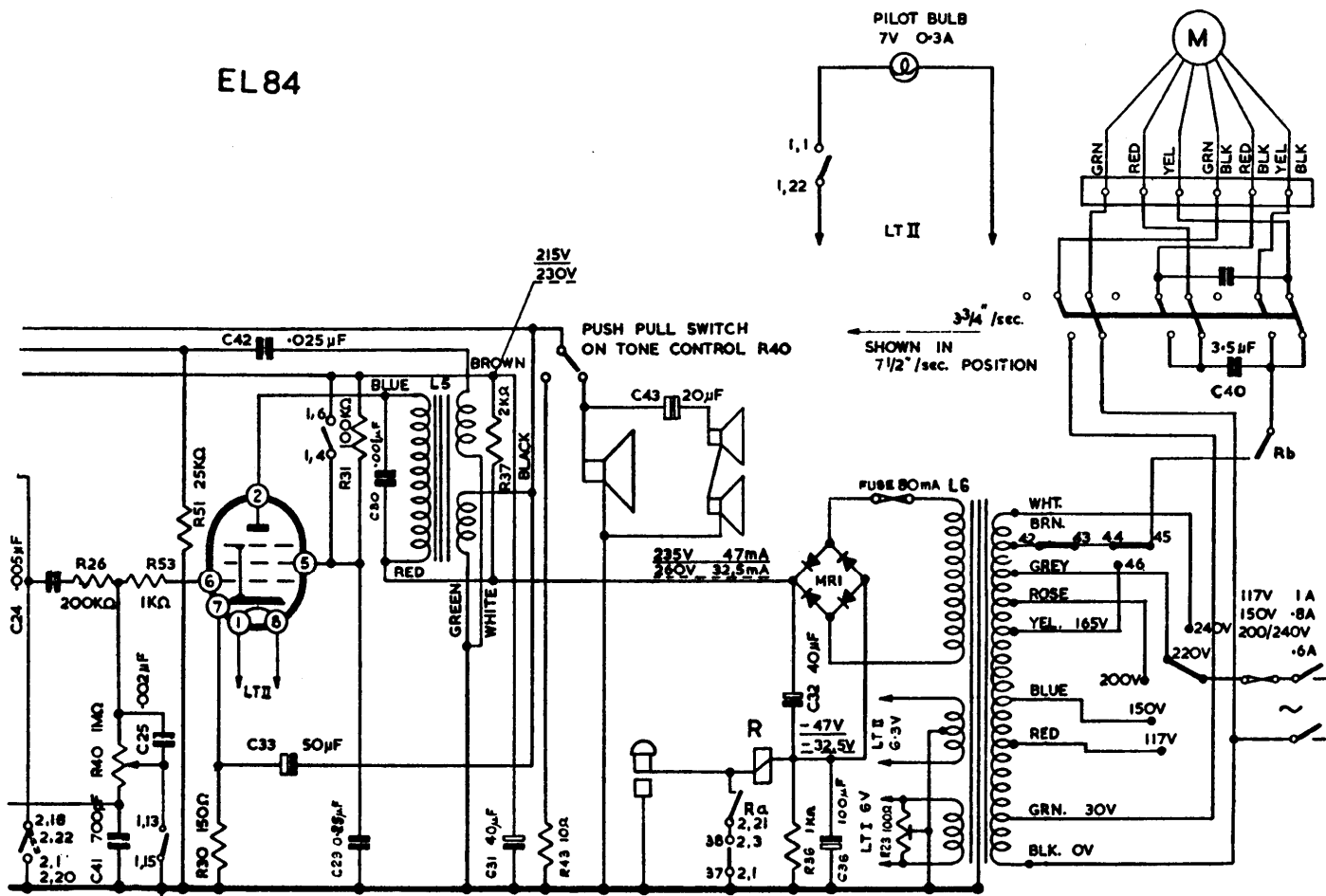


EM81

—— READINGS TAKEN IN PLAYBACK POSITION
 - - - READINGS TAKEN IN RECORD POSITION

Notes: Circuit diagram applies to models with Serial Numbers 501107005 onwards. Voltages measured on 1000 ohms/volt testmeter. Switches shown with press button in diode position, selector switch off and machine not switched on.

EL84



SELECTOR SWITCH

	1.1	1.4	1.13	2.12	2.14	2.16	2.7	2.1	2.1	2.2	2.1	3.7	3.18	3.18	4.2	4.6	4.22	4.22
OFF	1.22	1.6	1.5	2.14	2.16	2.18	2.8	2.3	2.2	2.22	2.22	3.9	3.15	3.21	4.4	4.9	4.2	4.6
FAST WIND																		
PLAYBACK																		
RECORDING																		
	I				II				III				IV					

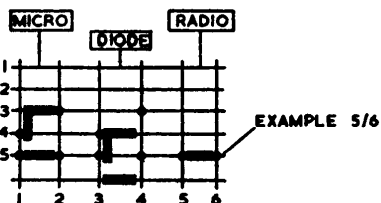
MOTOR SWITCH

	4.2	4.5	4.5
	4.3	4.4	4.6

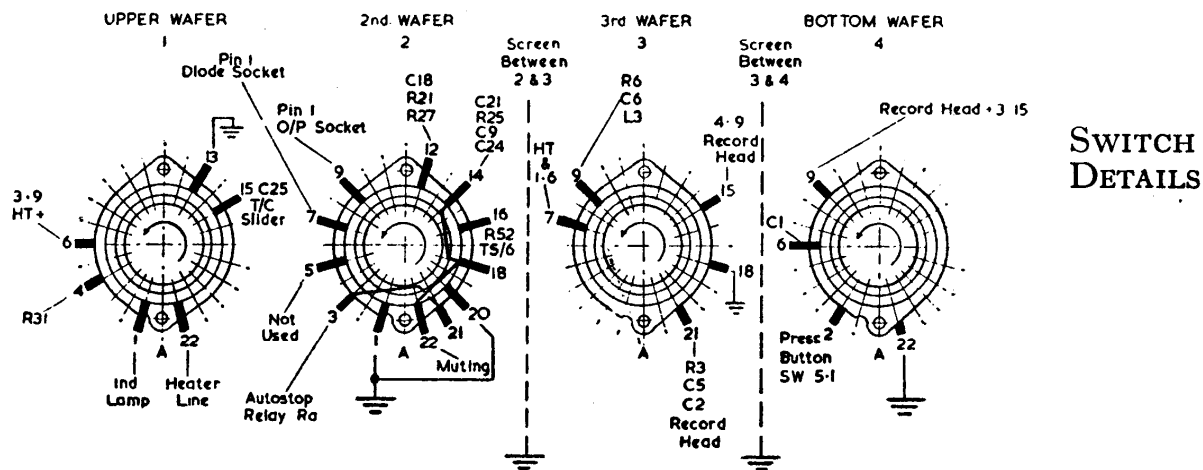
o - DUE TO THE SWITCH ARRANGEMENT THESE CONNECTIONS MAY BE MADE IN ADDITION TO THOSE REQUIRED FOR CORRECT OPERATION.

RELAY

R - AUTO-STOP BY 003
 R a - OPEN IN NON-ENERGISED POSITION
 R b - CLOSED IN NON-ENERGISED POSITION



EM81

SWITCH
DETAILS

Heads: Record/playback; erase.

Valves: (V₁) EF86; (V₂) ECC81; (V₃) EL84; (V₄) EL42 (H.F. oscillator); (V₅) EM81 (recording level indicator).

Notes: Drive is obtained from an outer rotating-cage split-phase induction motor. The tape is driven by friction between the ground tape capstan and rubber pressure roller, the latter being spring controlled. Self-lubricating bearings permit long periods of operation without service. The two spools are carried on the top halves of the two friction clutches, the lower half of the right clutch being driven from the motor pulley by an endless plastic belt. The friction clutching between the lower (driven) and upper (idler) halves being proportional to the weight of the tape on the spool. Counter-type position indicator is fitted, and automatic stop switch.

Clutches: Clutches are of simple friction type and will not normally need attention other than occasional cleaning of felt clutch facings with methylated spirits to remove dirt or grit. For this purpose, clutch may be dismantled as follows: Removal of large circular retaining spring will release tape capstan, exposing retaining circlip of upper half of clutch, this circlip should be removed together with thin steel washer and plastic washer. Note that steel washer is uppermost. Top half of clutch may now be removed, and in case of right-hand clutch, lower clutch drive pulley also. Further plastic and steel washer will be found under this. Note that lower clutch halves are different items, whereas upper clutch members are identical. Oilite bearings fitted do not normally require lubrication.

Hum Level: Adjusted by R23.

Head Currents and Voltages: H.F. bias current to recording/playback head should be 1 mA. (100 mV. across a 100-ohm resistor as in Model TK820/3D) or C5 adjusted. H.F. voltage to erase head when recording should be 100 volts measured with valve voltmeter. Test point is brought out from H.F. oscillator grid. 20,000-ohms/volt meter with 5000 pF. across its terminals should read 13 volts negative D.C. at this point with respect to chassis.