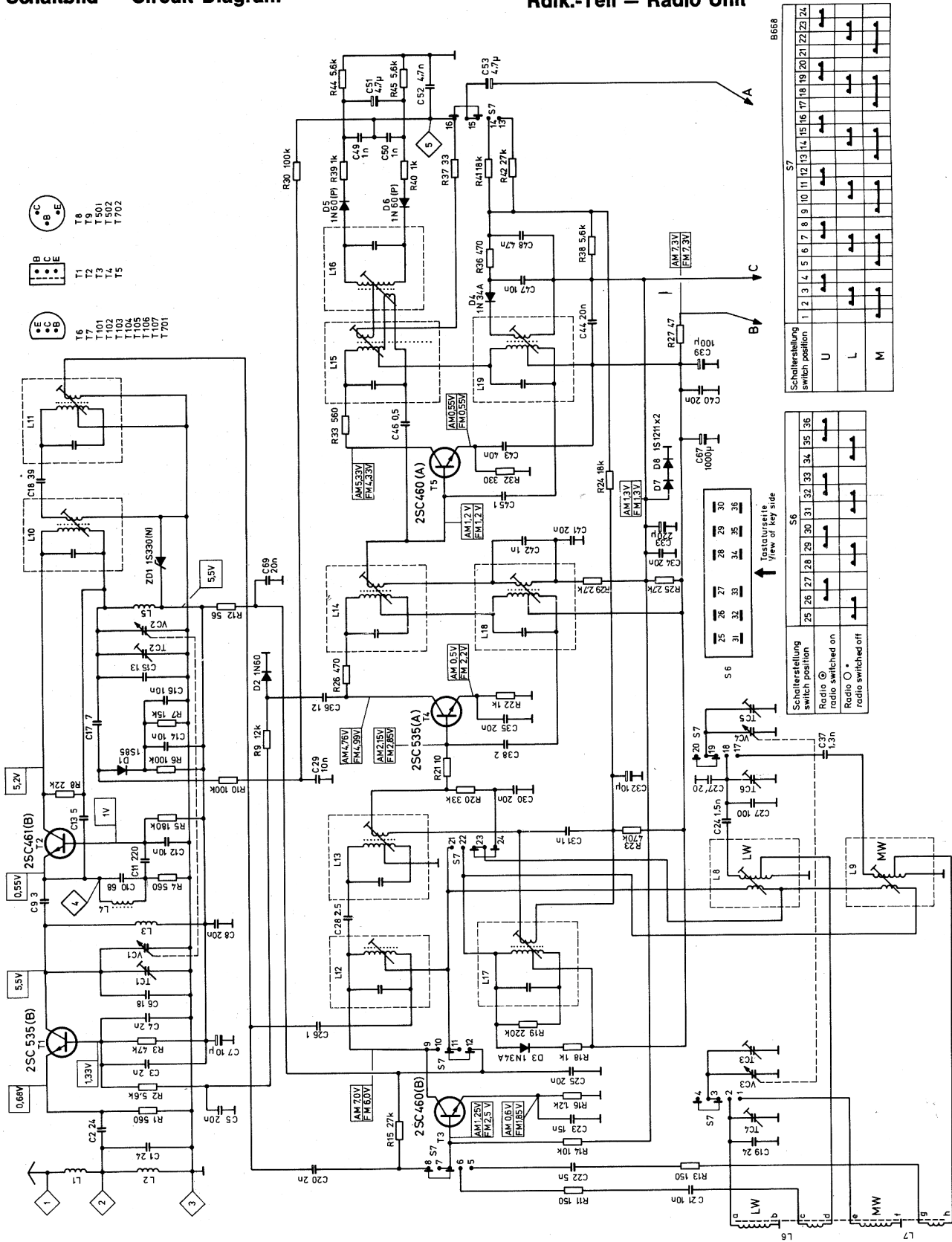


Schaltbild - Circuit Diagram

Rdfk.-Teil - Radio Unit



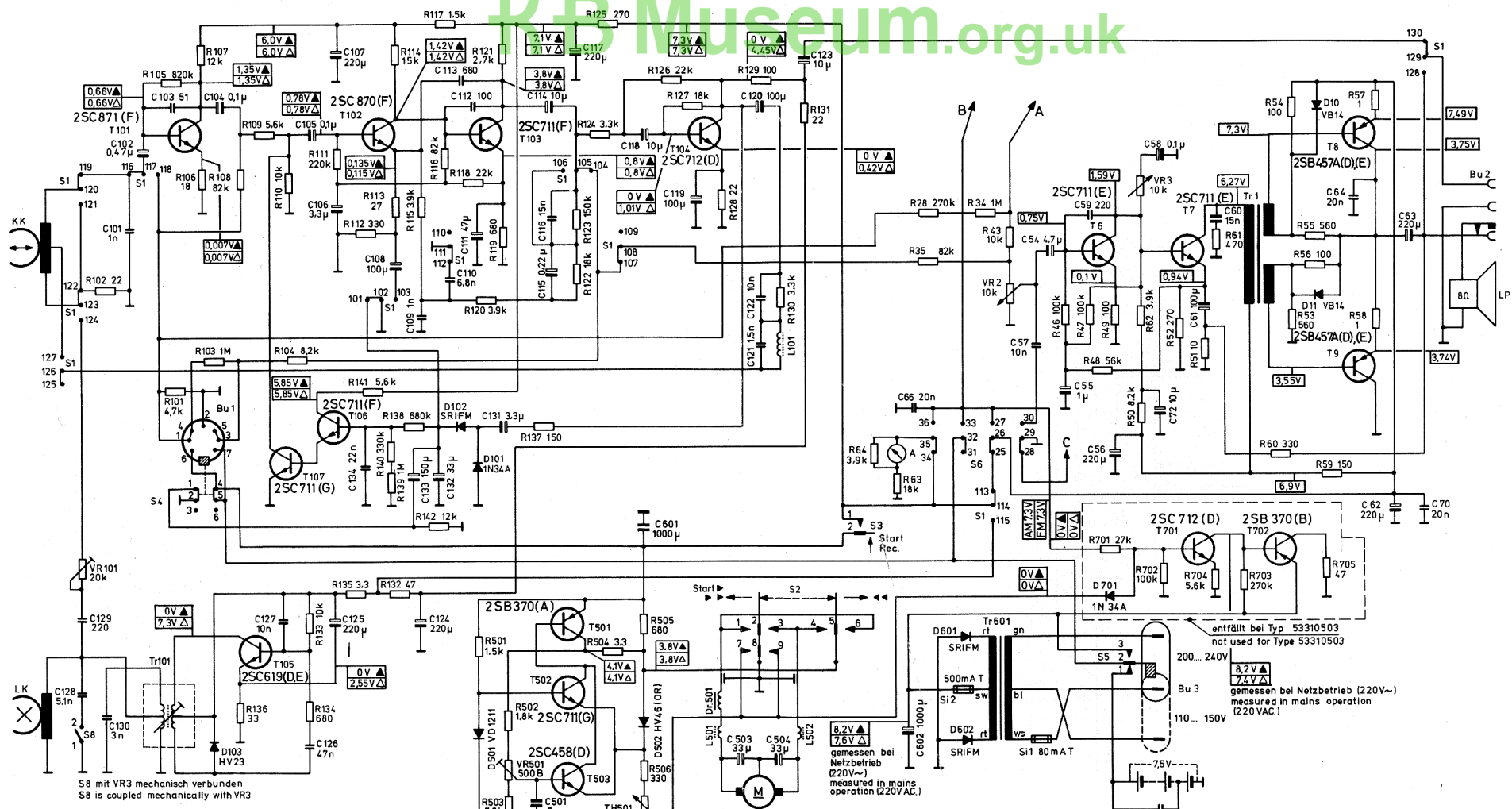
8668

S7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Schaltstellung	U	L	M																						
switch position																									

S6

S6	25	26	27	28	29	30	31	32	33	34	35	36
Schaltstellung	radio switched on	radio switched on	radio switched on	radio switched on	radio switched on	radio switched on	radio switched on	radio switched on	radio switched on	radio switched on	radio switched on	radio switched on
switch position	radio switched off	radio switched off	radio switched off	radio switched off	radio switched off	radio switched off	radio switched off	radio switched off	radio switched off	radio switched off	radio switched off	radio switched off

Teststeuerelemente  
View of key side



Die Spannungen sind ohne Signal mit einem Instrument Ri=33k Ohm/V bei 75V Betriebsspannung gemessen.  
Die angegebenen Werte sind gemittelte Serienwerte, sie können um ±10% schwanken.  
Die teilweise nur geringfügigen Unterschiede zwischen Wiedergabe und Aufnahme liegen, entsprechend den tatsächlich gemessenen Werten, in der angegebenen Größenordnung.  
▲ Spannungen bei gedrückter Taste START gemessen. Δ Werte bei REC + START gemessen.

The voltage measurements are taken without signal at the operating voltage of 75V with a measuring instrument 33k ohms/V internal resistance.  
The indicated measurements are average values determined from series measurements. Measurements may deviate ± 10%. The differences between playback and recording, which in part are only slight, lie according to the actual measurements, in the order of the magnitude indicated.

▲ Voltages measured with START-button depressed. Δ Measured with REC + START buttons depressed.

Tastenstellung position of controls

S1	101 130
STOP	Alle Kontakte in der gezeichneten Stellung.
START (Wiedergabe) (play back)	All contacts in the position shown in circuit diagram.
REC. REC. + START	Alle Kontakte umgeschaltet. All contacts switched over.

SWITCH DIAGRAM

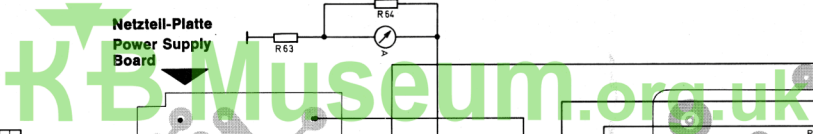
Tastenstellung position of controls	S2	S3
STOP	1 2 3 4 5 6 7 8 9	1 2
REC.	1 2 3 4 5 6 7 8 9	1 2
START	1 2 3 4 5 6 7 8 9	1 2
REC. + START	1 2 3 4 5 6 7 8 9	1 2

SCHALTERDIAGRAM

Funktion function	S4	S5
Ohne Mikrofon without mike	1 2 3 4 5 6	1 2 3
Mit Mikrofon with mike	1 2 3 4 5 6	1 2 3

Gezeichnete Schaltersstellung: Slop/Batteriebetrieb/ohne Mikrofon.  
Position of switch contacts shown in circuit diagram: Slop/ battery operation/ without mike.

B 669a



Netzteile Power Supply

Stabilisierungsplatte Stabilization Board

Motorregelung Voltage Regulator for Motor

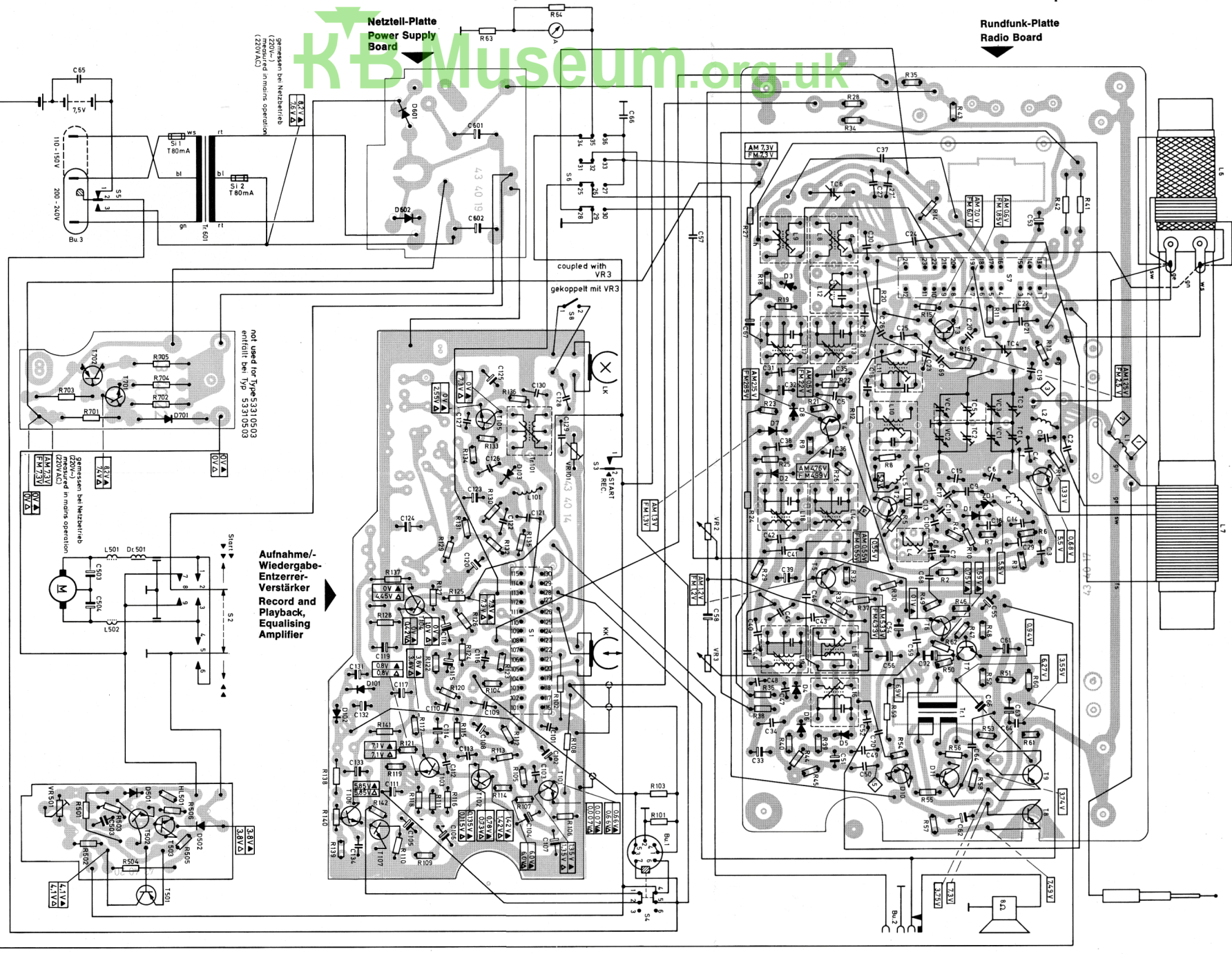
Rundfunk-Platte Radio Board

Netzteile-Platte Power Supply Board

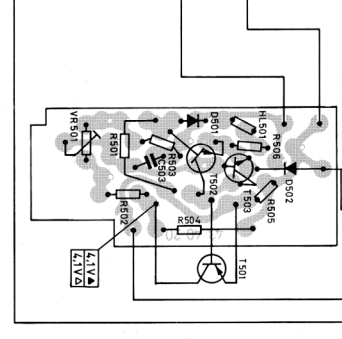
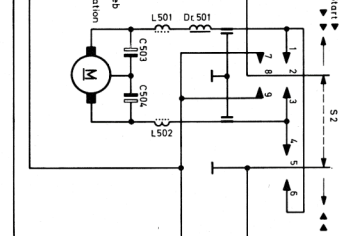
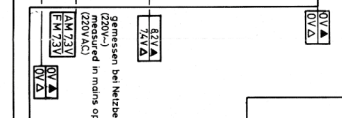
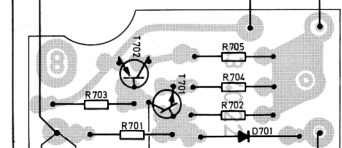
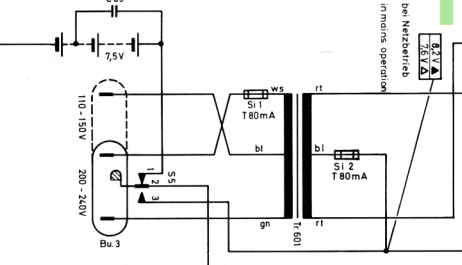
gemeinsam bei Netzbetrieb (220V-~) in mains operation (220V AC)

not used for Type S3310503  
entfällt bei Typ S3310503

Aufnahme-/Wiedergabe-Entzerrer-Verstärker Record and Playback, Equalising Amplifier



B712d



L8

L9

L10

**Head Current Adjustment:** Select Recording/Stereo. Make automatic level setting inoperative by bridging the two test terminals on the amplifier panel (corresponding to L<sub>4</sub> and L<sub>5</sub> of slider switch). Short circuit R.F. bias (link on head terminal tag strip). Measure head current as potential drop across a 100 Ohm resistor in series with head chassis return lead, using millivoltmeter. Supply signal to radio socket through a 2.2 MΩ series resistor and 150pF parallel capacity from pin 1 to chassis and pin 4 to chassis. Also measure control potential at point A or B. At 333Hz 6V should appear at point A (or B), head current should be  $68 \mu\text{A} = 6.8\text{mV}/100 \Omega$ . Adjust by R<sub>40</sub> and R<sub>140</sub> for each head system. Note input signal required. This is full level input signal. Afterwards remove automatic short circuit and bias short circuit.

**Setting of Automatic Divider:** Select Automatic Recording/Start. Turn R<sub>60</sub> (on panel A) fully clockwise (viewed from component side). Supply full level input signal (*see above*) +20dB (i.e. ten times full level input signal) to pins 1 + 2 or 4 + 2 of radio socket, measured prior to the 2.2MΩ resistor. Adjust R<sub>60</sub> to obtain 6V at point A or B. To check control range increase input signal by a further 20dB (e.g. to 100 times maximum input level signal). Voltage at point A or B must change by a maximum of ±1dB. Total harmonic distortion must not exceed 2 per cent. With input level held constant change input frequency to 12.5kHz. Voltage at point A or B must change by not more than ±1dB.

## I.T.T./K.B.

## Model SL52

**General Description:** This model is electrically similar to the R.G.D. Model TC<sub>401</sub> which is described elsewhere in this volume. See also the Supplementary Information at the end of this volume.

## I.T.T./K.B.

## Model SL75

**General Description:** A portable cassette tape recorder with an integral A.M./F.M. radio powered by internal batteries or direct mains supply.

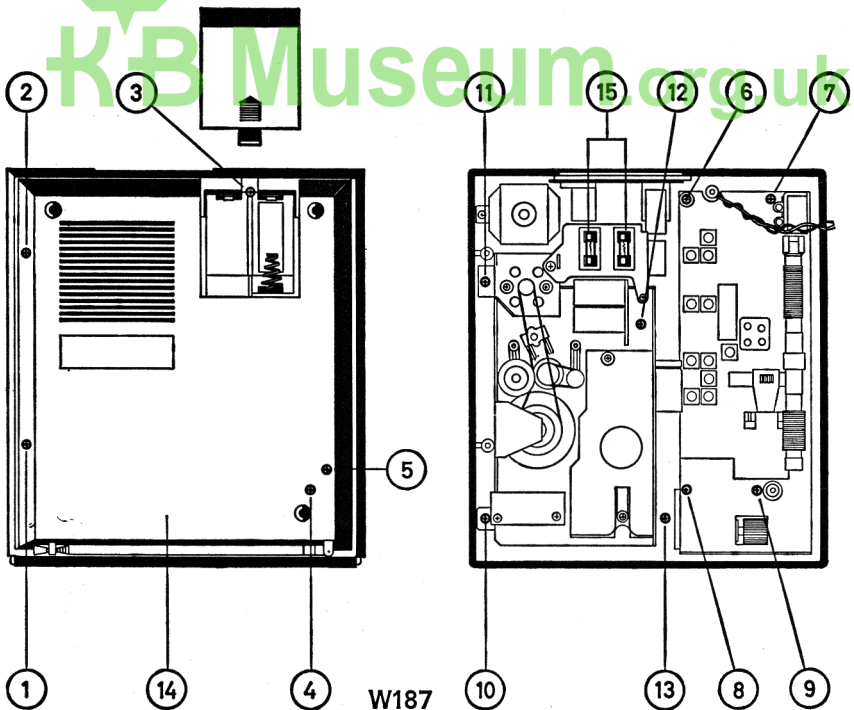
**Mains Supply:** 110–150 and 200–240 volts, 50–60Hz.

**Batteries:** 7.5 volts ( $5 \times 1.5\text{V}$ ).

**Fuses:** Mains 80mA; H.T. 500mA.

**Wavebands:** A.M. L.W. 145–260kHz; M.W. 515–1605kHz; F.M. 87.5–108MHz.

**Cassettes:** C60 and C90.



(W187) LOCATION OF FIXING SCREWS—MODEL SL75

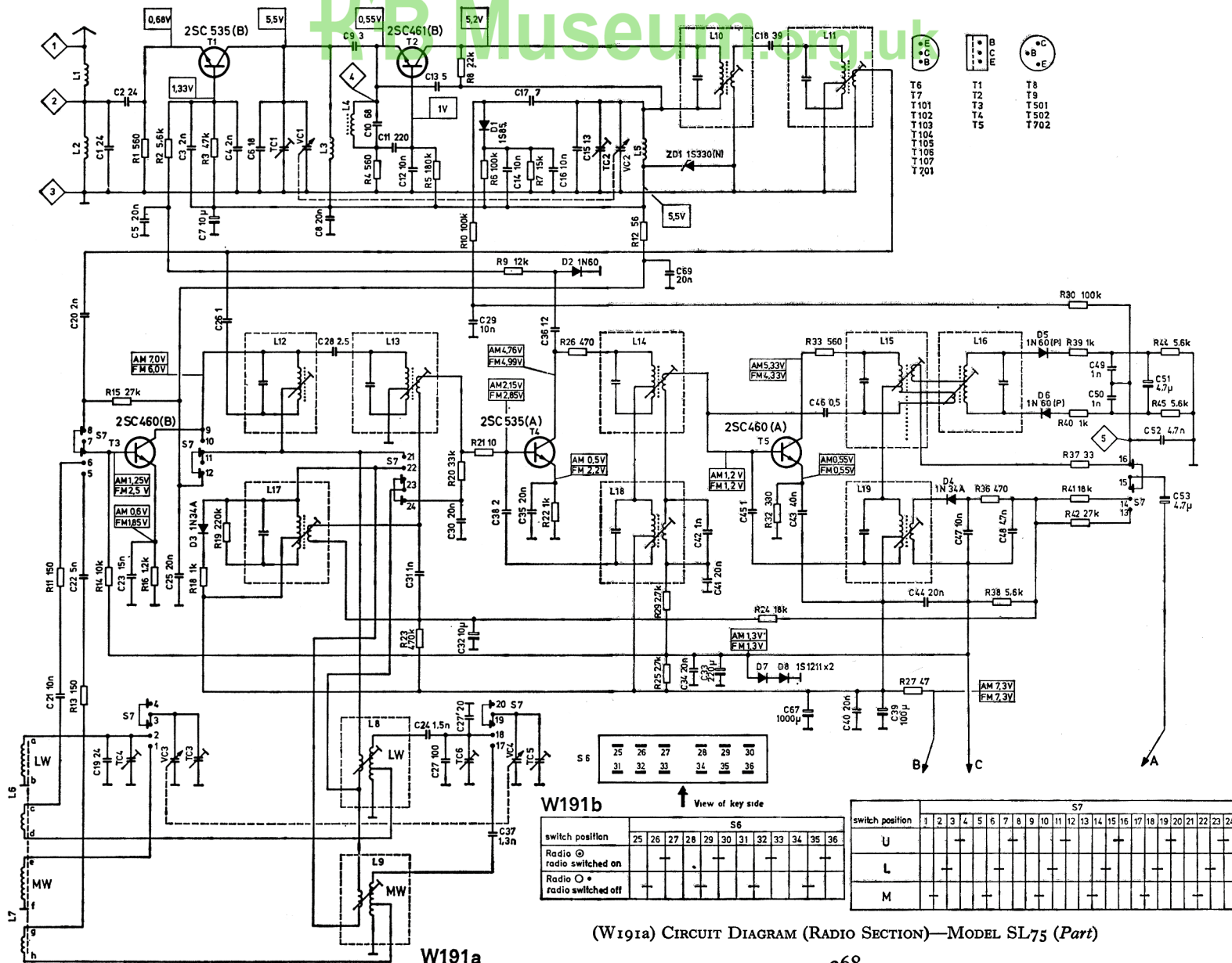
**Sockets:** 7-pin standard socket for microphone/radio, gram/second recorder, post-amplifier (800mV across  $\leq 22k$ ); External speaker (approx.  $8\Omega$ ); Earphone (approx.  $2000\Omega$ ).

**Input Sensitivities:** Microphone/radio:  $0.1-2\text{mV}$  across  $1k\text{ ohm}$ ; gram:  $0.5-2\text{V}$  across  $1\text{ megohm}$ .

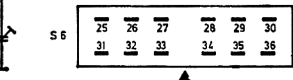
### Dismantling (See Fig. W187)

**Removal of the Base Panel (14):** Remove the battery lid. Release the screw (3), which is accessible in the battery compartment, and the screws (1), (2), (4) located at the corners of the base panel (14). Do not release the screw (5); it holds the V.H.F. antenna in place.

**Removal of the Radio Chassis:** Release the screws (6), (7), (8), (9) (four Philips screws) and tilt the chassis by  $90$  degrees towards the tape recorder chassis. The blue antenna lead is detachable from the radio chassis.



- E
  - C
  - B
  - A
- C
  - B
  - E
- T6
  - T7
  - T8
  - T9
  - T101
  - T102
  - T103
  - T104
  - T105
  - T108
  - T107
  - T701
- T1
  - T2
  - T3
  - T4
  - T5
- T8
  - T9
  - T501
  - T502
  - T702



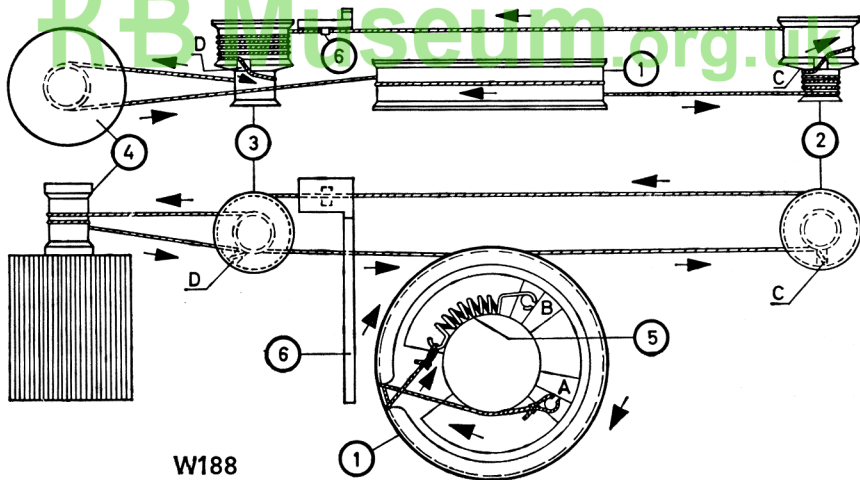
**W191b**

switch position	S6					
	25	26	27	28	29	30
Radio $\odot$	-	-	-	-	-	-
radio switched on	-	-	-	-	-	-
Radio $\circ$	-	-	-	-	-	-
radio switched off	-	-	-	-	-	-

switch position	S7																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(W191a) CIRCUIT DIAGRAM (RADIO SECTION)—MODEL SL75 (Part)





W188

(W188) DRIVE CORD—MODEL SL75

**Fuse Replacement:** Remove the base panel (14) to gain access to the fuses (15) which are located near the connection sockets.

**Dial Cord Stringing (See Fig. W188):** (Length of dial cord approx. 1 m, diam. 0.45 mm).

Rotate the tuning capacitor fully clockwise.

Secure the drive drum (1) with screw in the position shown in the diagram.

Hook the dial cord on to the drive drum (1) at point "A".

Lay the dial cord with  $\frac{1}{2}$  turn around the drive drum (1) in the direction of the arrow). After four turns around the rear small pulley (2), pass the cord through the notch "C" and then lay it with  $\frac{3}{4}$  turn around the front large pulley (2) (in the direction of the arrow).

After  $4\frac{1}{4}$  turns around the front large pulley (3), pass the cord through the notch "D" and then lay it with  $\frac{3}{4}$  turn around the rear small pulley (3) (in the direction of the arrow).

Lay the cord with  $2\frac{1}{2}$  turns around the tuning shaft (4) (in the direction of the arrow).

Lay the cord with  $\frac{3}{4}$  turn around the drive drum (1) (in the direction of the arrow). Connect the end of the dial cord to the spring (5) and hook the spring on to the drive drum (1) at point "B".

Connect the pointer (6) to the cord such that it is in the position shown in the diagram.



**Bias Adjustment:** The adjustment is carried out with the button REC. depressed. All measurements are made with the oscilloscope.

The erase frequency is 54kHz and can be adjusted with TR101. An adjustment of the R.F. transformer TR101 can also be carried out by a frequency comparison (Lissajous figures).

The limiting values of the erase head voltages lie between 25V<sup>DP</sup> and 35V<sup>DP</sup> (measured parallel to erase head).

The bias current is adjusted with the potentiometer VR101. This adjustment was made very accurately at the factory. It is advisable to change the bias current with VR101 only after the Record/Replay head had been replaced.

The limiting values for the bias lie between 90mV<sup>DP</sup> and 125mV<sup>DP</sup> (adjustable with VR101, measured at the resistor R102). On account of the manufacturing tolerances of the Record/Replay heads, only the limiting values can be indicated.

## Alignment

### A.M.:

Wave Range	Signal to	Tuning	Detune	Adjust
M.W. (512-1622kHz)	452kHz (/50)	<b>A</b>	S8/9, S10/11,	S12/13, S14/15
	460kHz (/52/59) 470kHz (/55) via 33nF	—Min. L <b>B</b>	S14/15	S8/9, S10/11, S12/13
M.W. (512-1622kHz)	508kHz (/50/52/59) 512kHz (/55)	Max. L.	C7 midposition	S6
	640kHz	<b>C</b>		S5, S1
	1450kHz			C7
L.W. (150-290kHz)	147kHz	Max. L.		S7
	170kHz	Tune in		S2
	290kHz	<b>C</b>		S3
	1 MHz			S4 (Min.)

### F.M. I.F.:

#### Alignment:

Alignment Frequency	Test Equipment Connections	Adjust
10.7MHz		L 12/13
"	Connect sweep generator via 2 MMF TP4 (C9)	L 10/11
"	Oscilloscope via 0.1 MF and 10kΩ to TP5 (R37)	L14
"		L 15/16

**F.M. R.F.:** *Note* : Prior to the F.M.-R.F. alignment remove from the component side the wire link between R10 and R30 (A.F.C. voltage is disconnected). After the alignment re-establish the connection.

<i>Dial Pointer</i>	<i>Signal Generator</i>		<i>Connect High Side of Signal Generator</i>	<i>Coil Adjustment</i>	<i>Dial Pointer</i>	<i>Signal Generator</i>		<i>Trimmer Adjustment</i>	<i>Indication</i>
	<i>Frequency</i>	<i>Modulation</i>				<i>Frequency</i>	<i>Modulation</i>		
Minimum	87MHz	F.M. 22.5kHz	to TP2	L5	Maximum	109.0MHz	F.M. 22.5kHz	TC2	Maximum A.F. Output
„	88MHz	„	„	L3	„	108.0MHz	„	TC1	„

**Modifications:** Refer to the additional information given in the Supplementary Information section at the end of this volume.