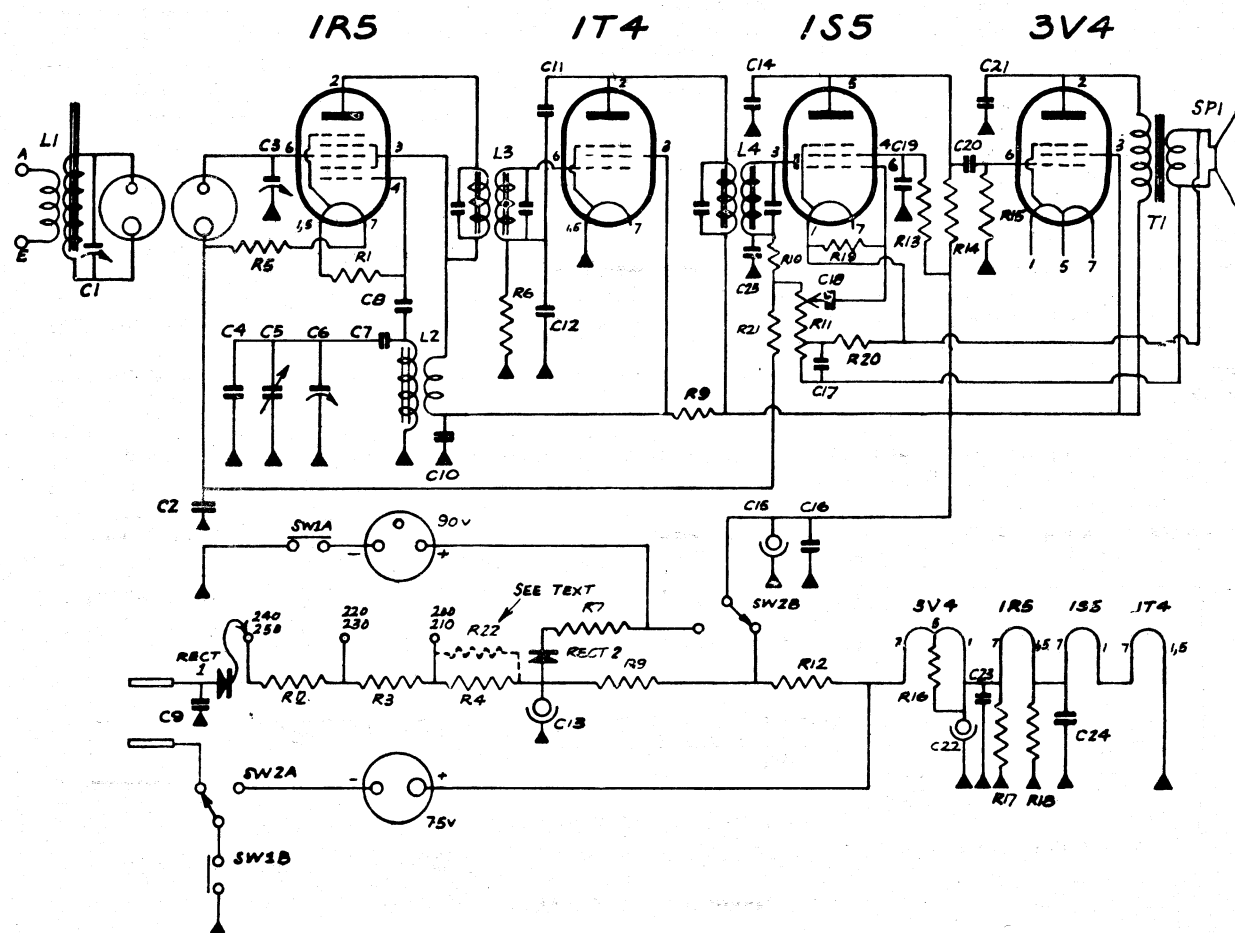


HEALING

MODEL 401 H — Continued



COMPONENTS LIST

Part No.	DESCRIPTION	Part No.	DESCRIPTION
C1, C5	5-30 pfd. Mica Trimmer Condenser.	R9	13,000 ohm $\frac{1}{2}$ Watt Carbon Resistor, 5%.
C2	.05 mfd. 200 Volt Paper Condenser.	R10	47,000 ohm $\frac{1}{2}$ Watt Carbon Resistor.
C3, C6	12-450 pfd. Variable Condenser.	R11	1 megohm potentiometer, tapped at 25,000 ohms with D.P. switch, type RL700.
C4	15 pfd. Ceramicon Condenser Type N750.	R14	470,000 ohm $\frac{1}{2}$ Watt Carbon Resistor.
C7	475 pfd. 400 Volt Silvered Mica Condenser, 1% tol.	R15	1 megohm $\frac{1}{2}$ Watt Carbon Resistor.
C8, C14	.0001 mfd. 400 Volt Mica Condenser.	R16, R17	470 ohm $\frac{1}{2}$ Watt W. W. Resistor, 10%.
C9, C12	.01 mfd. 600 Volt Paper Condenser.	R18	1,000 ohm $\frac{1}{2}$ Watt W. W. Resistor, 10%.
C10, C16	.05 mfd. 400 Volt Paper Condenser.	R19	10 megohm $\frac{1}{2}$ Watt Carbon Resistor.
C11	6.8 pfd. Ceramic Condenser.	R20	1,500 ohm $\frac{1}{2}$ Watt Carbon Resistor.
C13	25 mfd. 250 Volt Working, Electrolytic Condenser.	R21	2.2 megohm $\frac{1}{2}$ Watt Carbon Resistor.
C15	40 mfd. 250 Volt Working, Electrolytic Condenser.	R22	560 ohm 1 Watt Carbon Resistor. (Used only in conjunction with type MU70 rectifier unit).
C17, C18, C19, C20, C21, C22	.005 mfd. 600 Volt Paper Condenser.	L1	Aerial coil type RJ102 with Ferrite rod type 1247/B2.
C23, C24	.1 mfd. 200 Volt Paper Condenser.	L2	Oscillator coil type RJ99.
C25	.0002 mfd. 400 Volt Mica Condenser. Note: C13, C15, C22 in same can.	L3	455 Kc. I. F. Transformer type RJ100.
R1	100,000 ohms $\frac{1}{2}$ Watt Carbon Resistor.	L4	455 Kc. I. F. Transformer type RJ101.
R2, R3, R4	435 ohm W.W. Resistor with sections 60, 175 and 200 ohms.	Rect. 1	Dry Metal Rectifier Type MU58, (Type MU70 used where R22 is included).
R5, R13	3.3 megohm $\frac{1}{2}$ Watt Carbon Resistor.	Rect. 2	Dry Metal Rectifier, type 36K2.
R6	4.7 megohm $\frac{1}{2}$ Watt Carbon Resistor.	SP1	5" Permagnetic Speaker, type 5F.
R7	39,000 ohm 1 Watt Carbon Resistor, 10%.	SW1A	Double Pole Switch on Potentiometer R11.
R8, R12	1,470 ohms and 1,890 ohms 9 Watts W.W. Resistors on common form.	SW1B	
		SW2A	
		SW2B	
		T1	Speaker Transformer type GCL58, 10,000

Service Data for the Healing Receiver

MODEL 401H

Power Supply: 200 to 240 volts A.C. or D.C.
 1-7½ volt battery, type 719.
 1-90 volt battery, type 490P.

Frequency Range: 535-1630 Kc/s.

Intermediate Frequency: 455 Kc/s.

Speaker Transformer Impedance: 10,000 ohms.

Power Consumption (Mains): 19 watts.

D.C. RESISTANCE OF R.F. COILS			
Coil	Type	Primary Ohms	Secondary Ohms
Aerial	RJ102	.07	0.8
Osc.	RJ99	.6	1.5
1st I.F.	RJ100	22	22
2nd I.F.	RJ101	22	22

Typical Working Voltages

Measured to chassis with no signal input. Filament voltages read across appropriate pins. Mains voltage 230 volts. Battery voltages 7.5 and 85. Same readings should appear with 200 and 240 volt mains and mains taps set to appropriate positions.

Valve	Use	1000 OHM PER VOLT D.C. METER SCALES					
		10 Volt		250 Volt		250 Volt	
		Filament		Screen		Plate	
		Battery	Mains	Battery	Mains	Battery	Mains
1R5	Converter	1.5	1.3	45	43	45	43
1T4	I.F.	1.5	1.3	45	43	85	90
1S5	Det. AVC., 1st A.F.	1.5	1.3	6	6	15	15
Note: 1S5 H.T. voltages read low because of high-value resistors.							
3V4	2nd A.F.	3.0	2.6	85	90	80	85

Output voltage of Rectifier read across C13 = 178.

Voltage applied to filament chain at pin 7 of 3V4 = A.C. 6.6 volts, Battery 7.5 volts.

Typical Valve Currents

Milliamps

Figures are correct for mains input voltages of 200, 230 or 240 with mains tap set to appropriate position. Battery voltages, 7.5 and 85.

Total H.T. current: Battery 12.5 m/a. Mains 15 m/a.

Valve	Use	Screen		Plate		Osc. Grid.	
		Battery	Mains	Battery	Mains	Battery	Mains
1R5	Con.	2.1	2.2	.4	.5	.15-.18	.16-.19
1T4	I.F.	.7	.7	1.8	2.0		
1S5	Det. AVC. 1st A.F.	.02	.02	.1	.1		
3V4	2nd A.F.	1.34	1.8	6.0	7.9		

Caution: The receiver is of standard transformerless construction, therefore, due caution should be exercised when the chassis is exposed, to ensure that the mains are correctly polarised. Gang shaft extension and volume control shafts are insulated from chassis.

To open case, press in each knob on back of case as far as they will go then allow them to spring out. To fasten, close halves of case then push in each knob until a distinct click is heard.

Dial Removal: Turn the gang full in, then continue to rotate the dial while at the same time easing it away from the panel. To refit, firmly push the centre dial boss with a twisting action at the same time supporting the gang from the rear.

Dial Adjustment: Firmly twist the dial so that with the gang plates full in, the vertical indicator line runs centrally between the state names on the dial.

Alignment. Set dial as stated above. Adjust oscillator trimmer at approx. 1400 Kc/s. and Osc. coil slug at approx. 600 Kc/s. To align aerial section, remove clip from coil former on ferrite rod. Turn signal generator to high output and loosely couple to receiver by placing generator leads in close proximity to receiver. Do not directly couple to aerial and earth terminals. Adjust aerial trimmer at 1400 Kc/s. and slide coil along ferrite rod adjusting its position for maximum response at 600 Kc/s. Aerial trimmer is near the ferrite rod. Oscillator trimmer is on the gang. Oscillator coil is beneath the oscillator trimmer.

Reactivation: The maximum reactivating current applied to the H.T. battery is 2.5 m/a. While operating from the mains Rectifier No. 2 is used to protect the H.T. battery from discharge should the receiver switch be left on, but the power disconnected at the power point.

Rectifier Replacement: Chassis are fitted with either MU58 or MU70 rectifier units. The MU58 has 8 cooling fins while the MU70 has 11 fins. Type MU70 must always be used in conjunction with R22. Where an MU58 is used as a replacement, R22 should be removed.