

From the Workbench

By Chris Ratcliff

Fault-finding in a Kreisher 11-81 Valve Mantle Radio



The Kriesler Model 11-81 is a 5-valve mantle radio, that uses a ferrite rod aerial.

The valve line up is:

1. ECH80(6AN7) frequency converter
2. EBF80(6N8) intermediate frequency amplifier & demodulation
3. EBC80(6BD7) audio frequency amplifier
4. EL90(6AQ5) power amplifier
5. EZ80(6V4) full wave rectifier

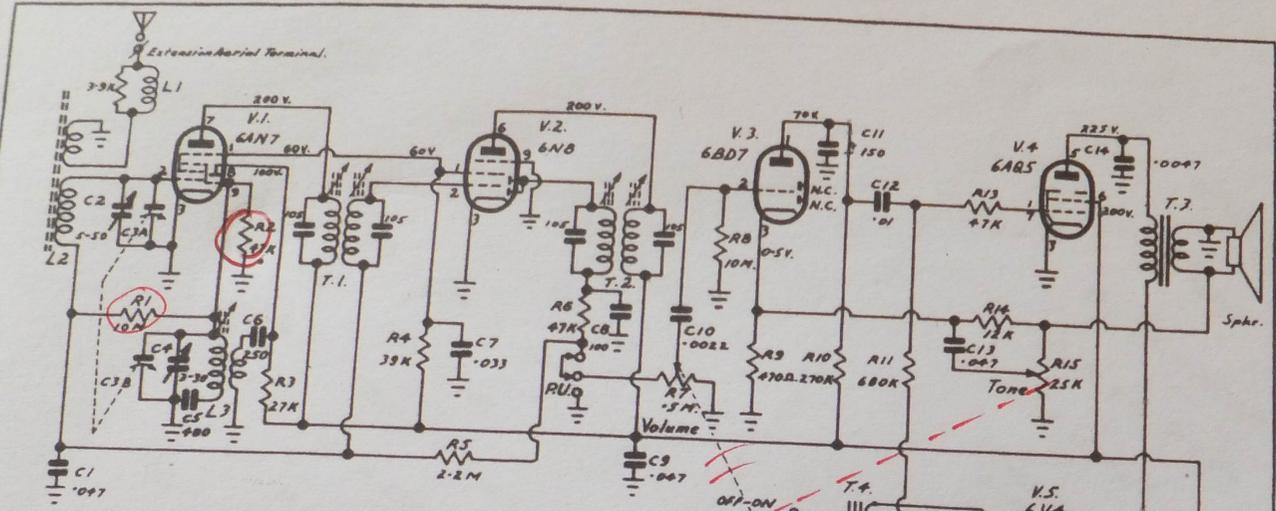
The Job completed so far:

All went well in capacitor replacement, including all the electrolytic capacitors.



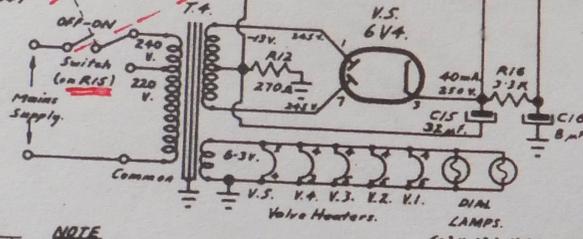
This model and its variants are reliable and are very good performers. But there is a check list that must be followed in reference to the circuit diagram:

- R1 must read 47K.
- R2 must read 10M.



CIRCUIT CODE

No.	Component	Part No.	No.	Component	Part No.
C1	0.047 uF 200V E.P.C. 200	Duplex	R4	22K 1W B.T.A.	C107 I.R.C.
C2	5-50 pF Min. Trimmer	M.R.	A5	2.2MA 1/2W B.T.S.	"
C3	2-50 pF Tuning Condenser (Med)	A.M.A.	A8	47K "	520
C4	2-100 pF Wire Trimmer	Chilip.	A7	0.5MA 1/2W B.T.S. "E" Press.	"
C5	100 pF 500V Min. 55-10	Siemens	A8	10MA 1/2W B.T.S.	220
C6	200 pF 500V Min. 55-10	"	A9	470 uF "	110
C7	0.001 uF 500V T.C.B. 200	Duplex	R10	270K 1W B.T.A.	50
C8	100 pF 500V Min. 55-10	Siemens	A11	680K 1/2W B.T.S.	520
C9	0.001 uF 500V T.C.B. 200	Duplex	A12	270K 1/2W B.T.S.	70
C10	0.001 uF 500V T.C.B. 200	"	A13	47K 1/2W B.T.S.	70
C11	100 pF 500V Min. 55-10	Siemens	A14	12K "	5
C12	0.001 uF 500V T.C.B. 200	Duplex	A15	25K 1/2W B.T.S. "E" Press.	5
C13	0.001 uF 500V T.C.B. 200	"	A16	2.2K 2W B.T.S.	10
C14	0.001 uF 500V T.C.B. 200	"	T.1	L.F. Transformer ACC No. K 20-18	"
C15	200 pF 500V Min. 55-10	"	T.2	Speaker Transformer Type 40	"
C16	100 pF 500V Min. 55-10	"	T.3	Speaker Transformer Type 40	"
R1	10MA 1/2W B.T.S.	"	L1	Compensating Coil	K 30-R
R2	47K "	"	L2	Ferrite-Rod Aerial	K 18-8L
R3	27K 1W B.T.A.	"	L3	Resistor Coil	K 18-37
			Spkr.	547H. P.06 Cone	AB10



NOTE
All voltage measurements taken in respect to chassis with a 1000 Ohm/Volt meter.

ISSUE	CHANGE	DATE	BY
1			

MATERIAL	PLANNED	DATE	PROJECT	QTY.	PROJECT	QTY.
GAUGE						
FINISH						
Prescription No.						

RECEIVER A.C. MANTLE 11-81

Work to Dimensions only. Unless otherwise specified. Tolerances to be read as: ± as Fractions, ∞ as Decimal.

Before production, 2 samples must be submitted to Drawing Office for approval.
This Drawing must be returned to KRIESLER AUSTRALIA PTY. LTD. 4 ALICE STREET, MELBOURNE.

SCALE

SERV. 02043
VIDEO TAPES AND ACC.

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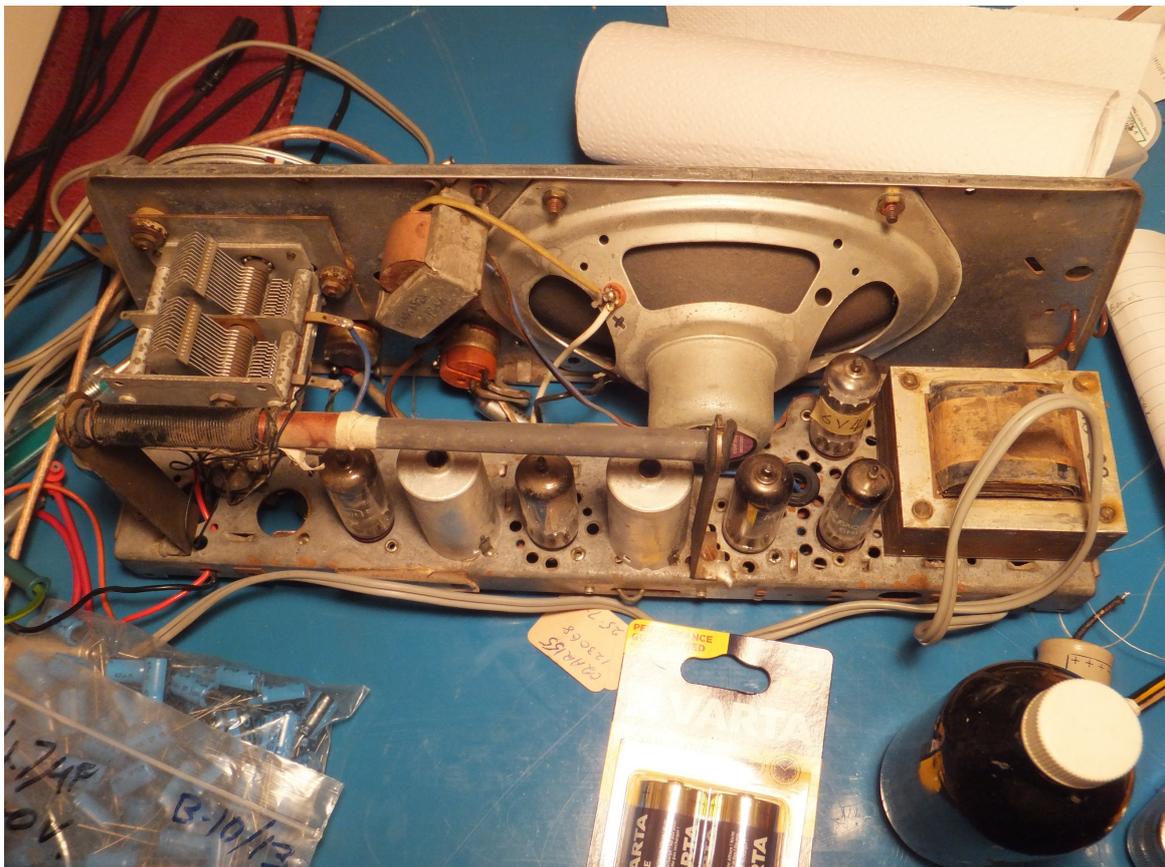
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R2 Must Be 47k
R1 10M Must be checked
IT sets the Max gain as
6mg with No signal
without going into overload
CORRECTION switch on/off
is on R15 (tone control)
NOT R7 as indicated

C14 connect across
The primary of T3
NOT to chassis as in
CCT

1. These resistors set the maximum gain of the I.F. amplifier at no, or minimal signal without valve EBF80 going into overload.
2. This negative bias voltage is obtained from the grid-leak bias from the local oscillator (which is the triode of the ECH80.)
3. Normally this voltage is applied from the back-bias resistor labelled R12 in the circuit diagram.
4. Check that R12 is of the correct value, as R12 sets the bias of the P.A. EL90.
5. C14 connect across the primary of T.3. which is the audio output transformer.
6. If C14 shorts out, nothing will happen, except a loss of sound. But in its present connection, anode to chassis, such a fault would place the anode at chassis potential. V4 screen(G2) would take all of high-tension (H.T.) current, burning out the PA.
7. Meanwhile T3 primary is also across the H.T. also burning out the primary, with the possibility of taking out both the rectifier & the mains transformer. This would create a nightmare situation!

A small note: The power switch is mounted on the Tone control R15. not on the Volume control as shown in the circuit diagram.



TECHNICAL SERVICE INFORMATION
ISSUED BY
KRIESLER AUSTRALASIA PTY. LTD.
43 ALICE ST. NEWTOWN. Phone: LA 0400

C.S. RATCLIFF'S
VIDEO AND TELEVISION
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VIDEO TAPES AND ACC.

TECHNICAL SERVICE INFORMATION K21 & 22.
ISSUED BY
KRIESLER AUSTRALASIA PTY. LTD.
43 ALICE ST. NEWTOWN. Phone: LA 0400

DESCRIPTION.
Model 11-80 is a four valve, mains-operated, Broadcast Band, mantel receiver housed in a moulded polystyrene cabinet. Pick-up terminals are provided at the rear of the cabinet.

DIMENSIONS. 16 1/2" x 6 1/4" x 6".

AERIAL AND EARTH.

Leads are provided at the rear of the cabinet for the connection of an aerial and earth. (Red lead is aerial). All electrical appliances are required to be fitted with an approved earth. Where the chassis is not grounded, hum may be minimised by correct 'phasing' of the mains lead.

OPERATING VOLTAGE.

This receiver is factory adjusted for 240 volt operation at 50-60 c.p.s. For 220 volts operation, connect mains lead from switch to 220 volt tap.

TO REMOVE CHASSIS FROM CABINET.

Remove the two control knobs, four screws in back of cabinet, and four screws in base of cabinet. Remove loose back of cabinet and slide out the chassis.

VALVE COMPLEMENT.

- V1. Mixer-Oscillator 6AN7
- V2. Det./ I.F. Amplifier .. 6NS
- V3. A.F. Amplifier/ Output. 6BMS
- V4. Rectifier 6V4

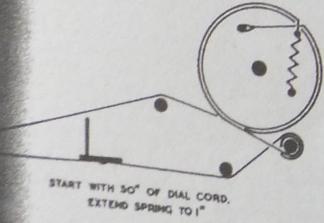
TUNING FREQUENCY RANGE.

535 - 1650 Kc/s.

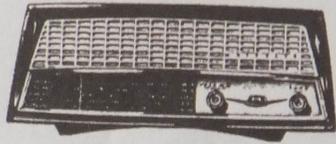
ALIGNMENT PROCEDURE.

Conventional. (Refer Series "C" Radio Handbook.)

DIAL CORD LAYOUT



11-80 MANTEL RECEIVER A.C.



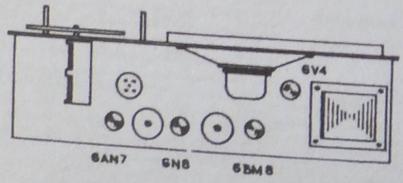
REPLACEMENT PARTS.

- Knobs Part No. 90-647
- Screws, cabinet back ... 3/8" No. 8 P.K. Binding Hd.
- Screws, chassis mtg. ... 1/4" No. 8 P.K. Binding Hd.
- Dial Scale Part No. 69-28 (Philips)

INTERMEDIATE FREQUENCY.

455 Kc/s.

VALVE LAYOUT



DESCRIPTION.
Model 11-81 is a five-valve mains-operated Broadcast Band mantel receiver housed in a moulded polystyrene cabinet. Pick-up terminals are provided at the rear of the cabinet.

DIMENSIONS. 16 1/2" x 6 1/4" x 6".

AERIAL AND EARTH.

An inbuilt ferrite-rod aerial is provided. All electrical appliances are required to be fitted with an approved earth. Where the chassis is not grounded, hum may be minimised by correct phasing of the mains lead.

OPERATING VOLTAGE.

This receiver is factory adjusted for 240 volt operation at 50-60 c.p.s. For 220 volt operation, connect mains lead from switch to 220 volt tap.

TO REMOVE CHASSIS FROM CABINET.

Remove the three control knobs, four screws in back of cabinet and four screws in base of cabinet. Remove loose back of cabinet and slide out the chassis.

VALVE COMPLEMENT.

- V1. Mixer-Oscillator 6AN7
- V2. I.F. Amplifier/ Det. .. 6NS
- V3. A.F. Amplifier 6BD7
- V4. A.F. Output 6AQ5
- V5. Rectifier 6V4

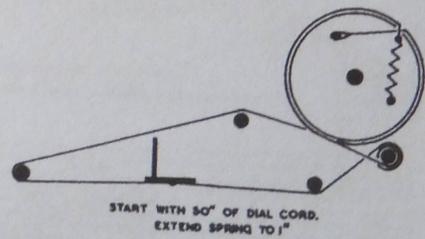
TUNING FREQUENCY RANGE.

535-1650 Kc/s.

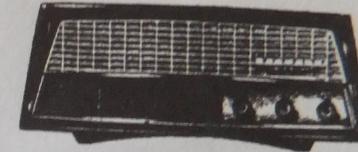
ALIGNMENT PROCEDURE.

Conventional. (Refer Series "C" Radio Handbook.)

DIAL CORD LAYOUT.



11-81 MANTEL RECEIVER A.C.



REPLACEMENT PARTS.

- Knobs Part No. 90-647
- Screws, cabinet back ... 3/8" No. 8 P.K. Binding Hd.
- Screws, chassis mtg. ... 1/4" No. 8 P.K. Binding Hd.
- Dial Scale Part No. 69-27 (A.V.A.)

INTERMEDIATE FREQUENCY.

455 Kc/s.

VALVE LAYOUT.

