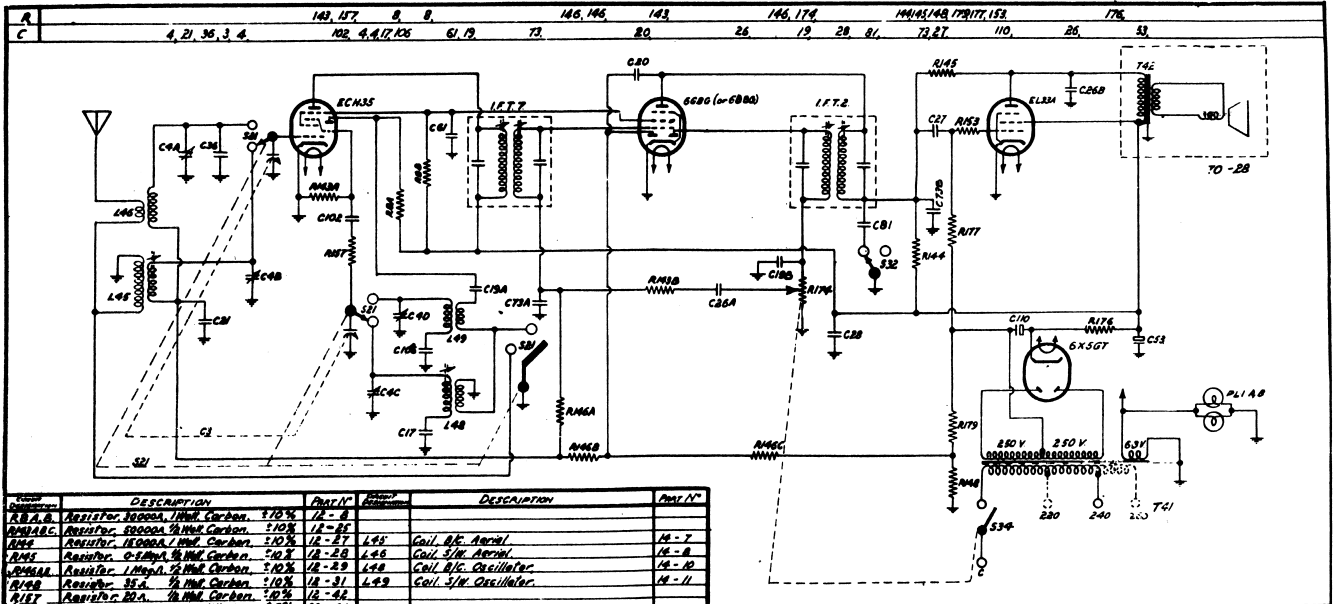


TECHNICAL SERVICE INSTRUCTIONS

ISSUED BY

KRIESLER AUSTRALASIA LTD.



Part No.	Description	Part No.	Description	Part No.
R1A	Resistor 1000Ω 1/4W Carbon 1/2%	69-4	Condenser Variable 250pF	97-4
R1B	Resistor 5000Ω 1/4W Carbon 1/2%	69-5	Condenser Trimmer 3-20pF	
R1C	Resistor 1000Ω 1/4W Carbon 1/2%	67-2	Switch - Tone Control	
R1D	Resistor 1000Ω 1/4W Carbon 1/2%	67-3	Switch - Wave Change	
R1E	Resistor 0.1MΩ 1/4W Carbon 1/2%	17-12	Transformer Power 40-60VA	
R1F	Resistor 1MΩ 1/4W Carbon 1/2%	17-13	Transformer Output 7000 3TA	
R1G	Resistor 100Ω 1/4W Carbon 1/2%	18-42	Speaker & Transformer 5Ω Imp.	
R1H	Resistor 100Ω 1/4W Carbon 1/2%	18-43		
R1I	Resistor 100Ω 1/4W Carbon 1/2%	18-44		
R1J	Resistor 100Ω 1/4W Carbon 1/2%	18-45		
R1K	Resistor 100Ω 1/4W Carbon 1/2%	18-46		
R1L	Resistor 100Ω 1/4W Carbon 1/2%	18-47		
R1M	Resistor 100Ω 1/4W Carbon 1/2%	18-48		
R1N	Resistor 100Ω 1/4W Carbon 1/2%	18-49		
R1O	Resistor 100Ω 1/4W Carbon 1/2%	18-50		
R1P	Resistor 100Ω 1/4W Carbon 1/2%	18-51		
R1Q	Resistor 100Ω 1/4W Carbon 1/2%	18-52		
R1R	Resistor 100Ω 1/4W Carbon 1/2%	18-53		
R1S	Resistor 100Ω 1/4W Carbon 1/2%	18-54		
R1T	Resistor 100Ω 1/4W Carbon 1/2%	18-55		
R1U	Resistor 100Ω 1/4W Carbon 1/2%	18-56		
R1V	Resistor 100Ω 1/4W Carbon 1/2%	18-57		
R1W	Resistor 100Ω 1/4W Carbon 1/2%	18-58		
R1X	Resistor 100Ω 1/4W Carbon 1/2%	18-59		
R1Y	Resistor 100Ω 1/4W Carbon 1/2%	18-60		
R1Z	Resistor 100Ω 1/4W Carbon 1/2%	18-61		

Wave Change Switch shown in 'Broadcast' Position.
 Tone Control Switch shown in 'Bass' Position.
 Mains Switch controlled by Volume Control Spindle.

When ordering replacement parts please state the following—
 Receiver Model No. Chassis No. Part No. Circuit Designation. General Description.

Before production is commenced 3 samples must be submitted to Drawing Office for approval.

Work to Dimensions only.	DRAWN	M. J. Miller	28-1-45	USED ON	QTY.	USED ON	QTY.
TOLERANCES: Unless otherwise specified Tolerances to be used as—	CODING	M.E.T.	4-9-45				
+ On Fractions. + on Decimals.	PLANNING	H. J. Miller	4-9-45				
	CHECKED						

SCALE: Prescription No.

RECEIVER. A.C.

11-20

ISSUE: 2/2

APPROVED: *[Signature]*

CHD No. _____

FILE No. _____

SHEET No. _____

No. of Sheets: _____

This Drawing must be returned to
KRIESLER (A'SIA) LTD.
 43 ALICE ST., NEWTOWN, SYDNEY.

RECEIVER MODEL No. 11-20 (Issue 2)

Typical Voltage Analysis.

- VALVE COMPLEMENT.**
 ECH35—Mixer; Local Oscillator.
 6G8-G—I.F. Amp.; Det.; A.F. Amp.
 EL33A—Power Amplifier.
 6X5-GT—Rectifier.
- TYPICAL VOLTAGE ANALYSIS.**
 Input to Primary of Transformer = 240v. A.C.
 B+ (filtered) = 235v. D.C.
 B+ Current = 35m. A.D.C.
 Heater Supply = 6.2v. A.C.
 Heater & Dial Light Current = 2.8 A.A.C.

- ECH35—
 Hexode Plate = 235v. D.C.
 Hexode Screen = 83v. D.C.
 Triode Plate .. = 93v. D.C.
 Fixed Bias = -1.4v. D.C.
- EL33A—
 Plate = 230v. D.C.
 Screen = 235v. D.C.
 Bias = -6.5v. D.C.

- 6G8-G—
 Plate = 135v. D.C.
 Screen = 83v. D.C.
 Fixed Bias = -1.4v. D.C.
- 6X5-GT—
 Plate = 255v. A.C.
 B+ at Cathode .. = 275v. D.C.
- TRANS. PRIMARY CURRENT.**
 On Load = 155m. A.A.C.
 Off Load = 43m. A.A.C.

NOTE.—All Voltage measurements made with respect to chassis.
VOLTMETER SENSITIVITY.—20,000 ohms per Volt on D.C. Ranges.
 1,000 ohms per Volt on A.C. Ranges.
 All alternating measurements made with moving iron meter.

MODEL 11-20G.

CIRCUIT: As on 11-20 (Issue 2) Circuit.

COIL KIT: Part No. 15-15 (A.W.A. Tuning Condensers).

DIAL GLASS: Part No. 50-27.

SPEAKER: Part No. 70-28 (5" Permanent Magnet Type).

OUTPUT TRANSFORMER: Part No. 18-43 (7000Ω to 3.7Ω).

POWER TRANSFORMER: Part No. 18-42 (H.T.: 250 Volts each side of centre tap).

NOTE.—Due to non-technical reasons, a 6AG6G valve was used in lieu of the EL33A valve in some model 11-20 receivers. A 150Ω grid stopper resistor was inserted in the screen grid circuit and C26B ($.005\mu\text{F}$) was connected between plate and B+ instead of plate and earth.

MODEL 11-20H.

CIRCUIT: As on 11-20 (Issue 2) Circuit, except for the following modifications:—

(a) H.T. Filter Circuit: Resistor R176 (1500Ω) replaced by L4 (6 Henry, 60m. A. Filter choke).

COIL KIT: Part No. 15-15 (A.W.A.) tuning condenser.

DIAL GLASS: Part No. 50-27.

SPEAKER: Part No. 70-28 (5" Permanent Magnet Type).

OUTPUT TRANSFORMER: Part No. 18-43 (7000Ω to 3.7Ω).

POWER TRANSFORMER: Part No. 18-42 (H.T.: 250 Volts each side of centre tap).

MODEL 11-20M.

CIRCUIT: As in 11-20K.

DIAL GLASS: Part No. 50-27 A.W.A. Tuning manufactured for use in the metropolitan

SPEAKER: Part No. 70-28 (5" Permanent Magnet Type).

OUTPUT TRANSFORMER: Part No. 18-43.

POWER TRANSFORMER: Part No. 18-42.

GENERAL NOTE: In models manufactured later than 11-20L the coils were mounted directly into the chassis.

MODEL 11-20N.

CIRCUIT: As in 11-20K.

DIAL GLASS: Part No. 50-35 S/D midget Tuning condenser.

SPEAKER: Part No. 70-28.

OUTPUT TRANSFORMER: Part No. 18-43.

POWER TRANSFORMER: Part No. 18-42.

MODEL 11-20 O.

CIRCUIT: As for 11-20M except:—

- (a) 6M5 (noval) deleted, replaced with 6V6G (octal).
- (b) .3 meg grid leak deleted replaced with .5 meg (Part No. 12-25).
- (c) 50,000 Ω blocking resistor deleted.
- (d) .03 pfd tone condenser deleted—replaced with .01 pfd (Part No. 23-14).
- (e) Delete 150 Ω 1/2 watt resistor replaced with 350 Ω /watt in bias.

DIAL GLASS: Part No. 50-27.

SPEAKER: Part No. 70-28 (5" Permanent Magnet Type).

OUTPUT TRANSFORMER: Part No. 18-43 (7,000 Ω to 3.7 ohm).

POWER TRANSFORMER: Part No. 18-44.

MODEL 11-20E.

CIRCUIT: As on 11-20 Circuit, except for the following modifications:—

- (a) Speaker: Speaker 70-28 (5" Permanent Magnet Type) was replaced by speaker 70-33 (5" Electrodynamic Type).
- (b) H.T. Filter Circuit: Resistor R163 (1500 ohm centre tapped) was replaced by field of speaker 70-33. Condenser C53B ($8\mu\text{F}$) was deleted. Condenser C53A ($8\mu\text{F}$) was replaced by C109 ($4\mu\text{F}$). Condenser C37 ($16\mu\text{F}$) was replaced by C110 ($30\mu\text{F}$).

COIL KIT: Part No. 15-14 Stromberg Carlson Tuning Condenser).

DIAL GLASS: Part No. 50-35.

OUTPUT TRANSFORMER: Part No. 18-43 (7000Ω to 3.7Ω).

POWER TRANSFORMER: Part No. 18-7 (H.T.: 275v. each side of centre tap).



MODEL 11-20F.

CIRCUIT: As on 11-20 Circuit, except for the following modifications:—

- (a) Coil Kit and Tuning Condensers: Coil Kit Part No. 15-14 was replaced by Part No. 15-15, e.g., i.e., Tuning Condensers C3 (Stromberg Carlson) was replaced by C95 (A.W.A.).
- (b) H.T. Filter Circuit: Resistor R163 (1500Ω C.T.) was replaced by R176 (1500Ω). Condenser C53B ($8\mu\text{F}$) was deleted. Condenser C53A was replaced by C109 ($4\mu\text{F}$). Condenser C37 ($16\mu\text{F}$) was replaced by C110 ($30\mu\text{F}$).

DIAL GLASS: Part No. 50-27.

SPEAKER: Part No. 70-28 (5" Permanent Magnet Type).

OUTPUT TRANSFORMER: Part No. 18-43 (7000Ω to 3.7Ω).

POWER TRANSFORMER: Part No. 18-7 (H.T.: 275v. each side of centre tap).



ERRATA.

MODEL 11-20 (Issue 1).

TYPICAL VOLTAGE ANALYSIS:

6V6GT:—

Cathode = 16v. D.C., should be Grid Bias = —16v. D.C.

MODEL 11-20J.

CIRCUIT: As for 11-20 issue 2 except for the following alterations:—

- (a) 6BE6 Converter (7 pin miniature) replaces ECH35 (octal).
- (b) 10 pfd condenser (Part No. 13-43). in coil unit deleted.
- (c) 30,000 ohm. 1 watt screen resistor (R8) deleted.
lead connecting screens 6BE6 and 6G deleted.
- (d) .05 mfd 40V condenser (Part No. 23-8 wired from 6G8G screen to earth.
- (e) 50,000 ohm. 1/2 watt (R143B) grid leak deleted, replace by 20,000 ohm. 1/2 watt (Part No. 12-68).
- (f) .01 mfd 600V (C27) Audio coupling condenser deleted, replaced by .005 mfd 600V (Part No. 23-13).
- (g) 75,000 1 watt resistor (12-5) wire to 6G8G screen.
- (h) 30,000 ohm. 1 watt resistor (Part No. 12-8) fitted from H.T. to 6BE6 screen.
- (i) 20 ohm 1/2 watt grid stopper (R157) deleted, replaced by 70 ohm. 1/2 watt (Part No. 12-67).
- (j) 250 mmf oscillator coupling condenser (Part No. 13-44).
- (k) 3 mmf neutralising condenser (Part No. 13-52) fitted between control grid and oscillator grid of 6BE6. (In circuit S/W only).

COIL KIT: Part No. 15-15 A.W.A. Tuning condenser.

DIAL GLASS: Part No. 50-27.

SPEAKER: Part No. 70-28 (5" Permanent Magnet Type).

OUTPUT TRANSFORMER: Part No. 18-43 (7,000 Ω to 3.7 Ω).

POWER TRANSFORMER: Part No. 18-42 (H.T. 250V each side of C.T.).

GENERAL NOTE: Minimum hum conditions prevail in this receiver when

1. Audio coupling condenser is .01 mfd 600V (10%).
2. Grid leak 6V6G is .3 megohm.
3. Screen bypass 6G8G is .03 mfd 400V.

MODEL 11-20K.

CIRCUIT: As on 11-20 circuits Issue 2 except for the following valve changes:—

- (a) 6AN7 (noval) replaces ECH35 (octal).
- (b) 6M5 (noval) replaces EL33 (octal).

COIL KIT: Part No. 15-15 (A.W.A. Gang used).

DIAL GLASS: Part No. 50-27.

SPEAKER: Part No. 70-28.

OUTPUT TRANSFORMER: Part No. 18-43.

POWER TRANSFORMER: Part No. 18-42.

MODEL 11-20L.

CIRCUIT: As on 11-20K except:—

A.W.A. Tuning gang deleted, replaced by S/C midget (Part No. 63-12).

DIAL GLASS: Part No. 50-35.

SPEAKER: Part No. 70-28 (5" Permanent Magnet Type).

OUTPUT TRANSFORMER: Part No. 18-43.

POWER TRANSFORMER: Part No. 18-42.

GENERAL NOTE: 50 of these receivers were manufactured for use in the metropolitan areas.