

HIS MASTER'S VOICE (N.Z.) LTD.
WELLINGTON

"Berkeley"
MODEL 5402

DESCRIPTION

6V + eye 3W

RADIO: Seven-valve dual wave A.C. superheterodyne radio-gramophone.

GRAM UNIT: "Monarch" three-speed automatic changer.

TUBES:
6BA6 - R.F. Amp
6BE6 - Converter
6BA6 - I.F. Amp
6AV6 - 2nd det. - aud Amp
6AQ5 - Output
6X4 - Rectifier
6U5/6G5 - Tuning indicator

SPEAKER: Rola 12M with attached output transformer

POWER SUPPLY: 230 volts 50 cycles. Total consumption:
Receiver 65 watts, changer 25 watts.

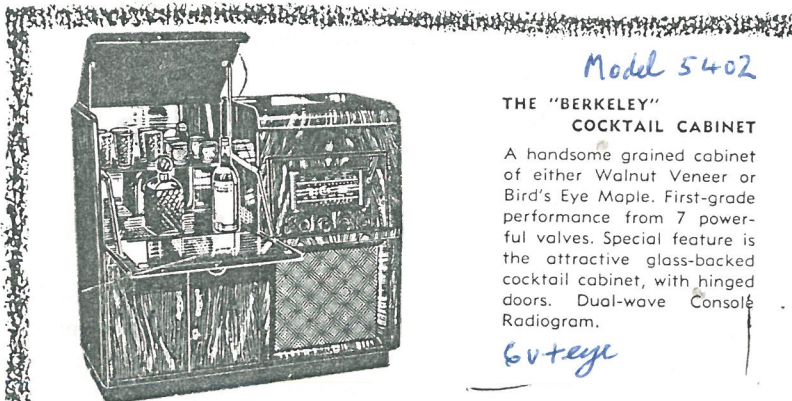
FREQUENCY RANGE:
Broadcast 535 K.C. - 1750 K.C.
Short-wave 5.92 M.C. - 18.5 M.C.
I.F. 455 K.C.

CABINET: Combined radio-gram/Cocktail cabinet.

CONTROLS: (From left) Tone control with on-off switch.
Volume control. Spin tuner. B.C. - S.W. - Gram switch

INSTALLATION: For shipment the record-changer retaining bolts are screwed hard down. Once the set is unpacked, these bolts should be loosened off to allow the record-changer to float. Do not completely remove the nuts.

The glass shelf for the cocktail cabinet is packed in the bottom left hand compartment to avoid breakage in delivery.



Model 5402

THE "BERKELEY"
COCKTAIL CABINET

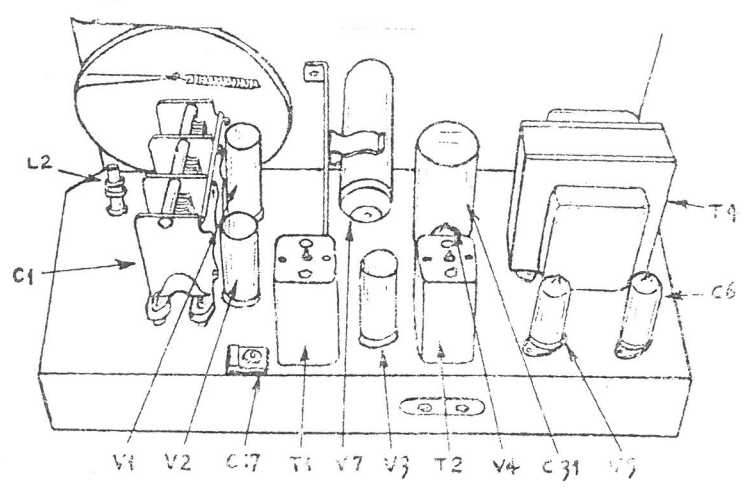
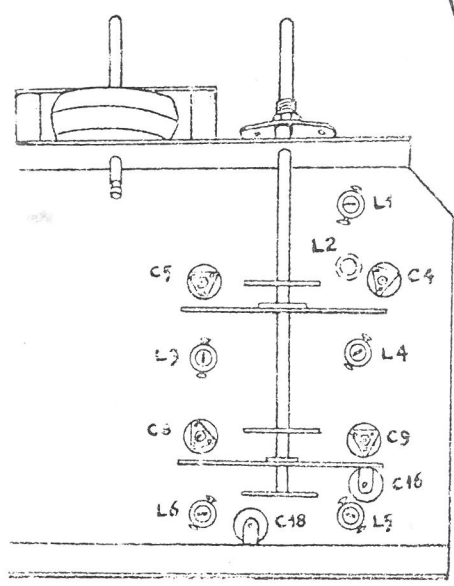
A handsome grained cabinet of either Walnut Veneer or Bird's Eye Maple. First-grade performance from 7 powerful valves. Special feature is the attractive glass-backed cocktail cabinet, with hinged doors. Dual-wave Console Radiogram.

6V + eye

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CHASSIS LAYOUT



$V_1 + V_2 = 7V$

Handwritten note: 1000 microfarads

COIL & TRIMMER LAYOUT

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The broadcast paddler, oscillator trimmer, and short-wave trimmer are accessible without removal of the chassis from the cabinet for minor calibration adjustments only. If complete alignment is necessary, the procedure is as follows:-

I.F. ALIGNMENT

Set wave-band switch to broadcast position. Tune set to the extreme low frequency end of the band. Set output meter to 50 milliwatts and connect across the voice-coil of the speaker. Turn the volume control fully clockwise i.e. maximum volume. Connect signal generator to receiver via a .1 mfd condenser.

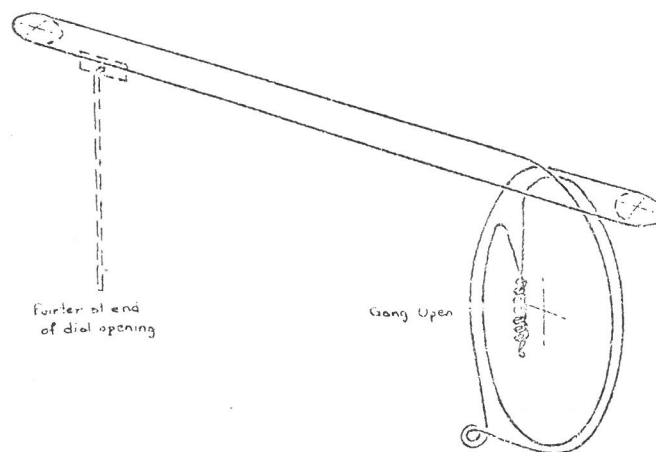
R.F. ALIGNMENT

Set pointer to reference mark at left hand end of dial. Connect signal generator to the receiver via a standard dummy antenna, then proceed as follows:-

Feed Sig.Gen to	Sig.Gen Setting	Radio Dial Setting	Adjust	Adjust for
1. C1 (Centre gang staton)	455 KC/S	535 KC/S	C21A-C21-C19A-C19	Max output
2. Aerial lead	600 KC/S	600 KC/S (Rock gang)	C17	Max output
3. Aerial lead	1400 KC/S	1400 KC/S	C18 first, then C19, C5	Max output
4. Aerial lead	18 KC/S	18 KC/S	C16 first, then C8 and C4	Max output

Item No:	Part No:	Description:
C1	1500-R5	Polar 3 Gang C1043
C2	1500-C3	5 Pfd Ceramicon N750
C11	1500-P1	2 Pfd Ceramicon N750
C3-26	1500-R	100 Pfd Silver Mica
C4-5-8-10-16-18	1500-E5	3.30 Pfd Phillips Trimmer
C6-12-20-27	1500-A7	.05 350 W.V.
C7-14	1500-J1	.1 350 W.V.
C9	1500-F	50 Pfd Silver Mica
C13	1500-J	.00025 Mfd Mica
C17	1500-Q9	TP 11D Padder
C15	1500-B7	.0047 Mfd Mica + 2% (Simplex)
C19-21	1500-IE	I.F. Base - 130-130
C22-23	1500-Q	.0001 Mfd Mica
C24-32	1500-W	.005 500 W.V.
C25	1500-C4	.01 600 W.V.
C28	1500-B4	.01 500 W.V.
C29	1500-L	.0005 Mica
C30	1500-Q5	25 Mfd Electro 25 W.V.
C31	1500-N4	40-40-20 Electro 350 W.V.
R1-12	1300-G8	100K $\frac{1}{2}W$
R2	1300-EC	15K $\frac{1}{2}W$
R3-6	1300-L1	25K $\frac{1}{2}W$
R4	1300-IC	30K $\frac{1}{2}W$
R7	1300-G	100 Ohm Carbon $\frac{1}{2}W$
R8-13	1300-IE	1 Meg $\frac{1}{2}W$
R9	1300-G2	50K $\frac{1}{2}W$
R10-16	1300-H7	270K $\frac{1}{2}W$
R11	1300-J1	2 Meg $\frac{1}{2}W$
R14	PO 219	$\frac{1}{2}$ Meg Pot Less Switch
R15	1300-J7	5 Meg $\frac{1}{2}W$
R17	1300-CC	2K $\frac{1}{2}W$
R18	1300-N8	33K $\frac{1}{2}W$
R19	PO 1145	$\frac{1}{2}$ Meg pot with Switch
R20	1300-D7	10K $\frac{1}{2}W$
R21	1300-A5	330 Ohm $\frac{1}{2}W$
R22	1300-B4	500 Ohm $\frac{1}{2}W$
R23	1300-C1	750 Ohm $\frac{1}{2}W$
R24	1300-L3	1K $\frac{1}{2}W$
R5	1300-D	45 Ohm $\frac{1}{2}W$
V1-V3	1400-W	Valve 6 BA 6
V2	1400-IE	Valve 6 BE 6
V4	1400-IE	Valve 6 AV 6
V5	1400-Z	Valve 6 AQ 5
V6	1400-Q7	Valve 6X4
V7	1400-Q4	Valve 6U5/6C5
T4	TR 1234	Power Transformer 70MA
L1	CO 873	S/W Aerial Coil
L2	CO 875	B/C Aerial Coil
L3	CO 873	S/W R.F. Coil
L4	CO 873	B/C R.F. Coil
L5	CO 880	S/W Osc Coil
L6	CO 877	B/C Osc Coil

- 3 - DIAL STRINGING



CIRCUIT ANALYSIS

Voltage Readings

Valve	No	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
6BA6	1	0	-	-	6.3AC	210	85	-	-
6BE6	2	-4,5	0	-	6.3AC	210	85	0	-
6BA6	3	0	1	-	6.3AC	210	85	1	-
6AV6	4	0	-	-	6.3AC	0	0	80	-
6AQ5	5	0	11	-	6.3AC	225	210	0	-
6H4	6	275AC	-	0	0	-	275AC	280	-
6US/6G5	7	6.3AC	25	0	215	-	-	-	-

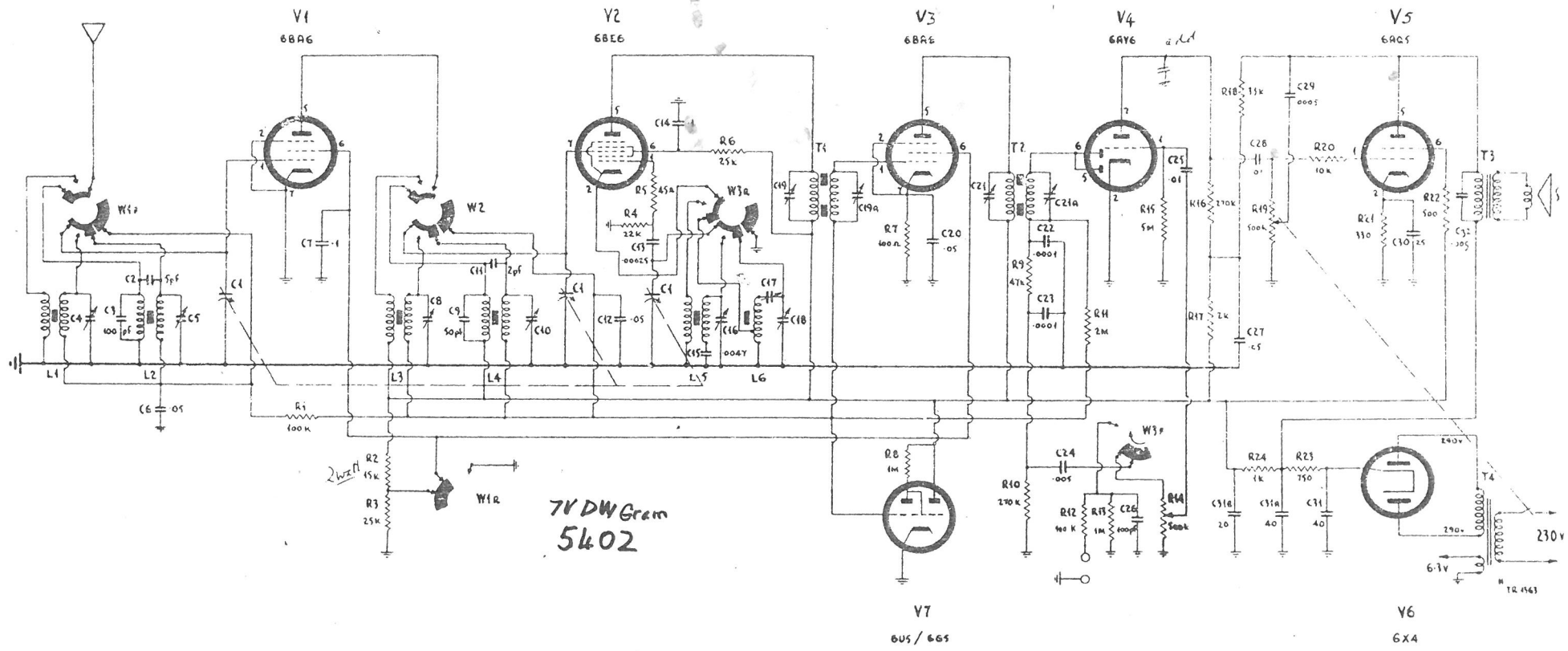
RESISTANCE READINGS

Valve	No	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
6BA6	1	2.5M	0	0	2.5ohm	35K	25K	0	-
6BE6	2	22K	0	0	2.5	35K	58K	2.4K	-
6BA6	3	2.4M	100ohm	0	2.5	35K	25K	100ohm	-
6AV6	4	5M	0	0	2.5	300K	300K	310K	-
6AQ5	5	510K	330ohm	0	2.5	40K	35K	510K	-
6H4	6	270ohm	-	Inf	Inf	-	270ohm	35K	-
6US/6G5	7	2.5	1.05M	2.4M	35K	0	0	-	-

All voltage measurements are at 1,000 Ohms per volt, all readings taken between socket pins and chassis, volume control at minimum, wave-change switch in B.C. position, gang full in, no signal.

Resistance and voltage readings in B+ circuits may vary, according to condition of filter capacitors.

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