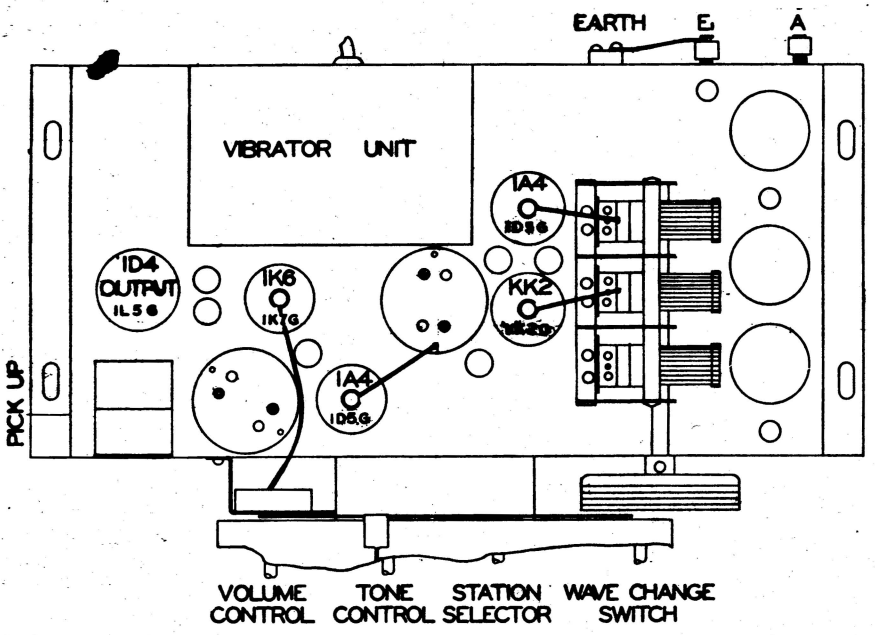
Stromberg-Carlson

STROMBERG-CARLSON
SERVICE BULLETIN, No. 28

Stromberg-Carlson Model 28 Superheterodyne

DUAL WAVE VIBRATOR RECEIVER



Chassis of Model 28

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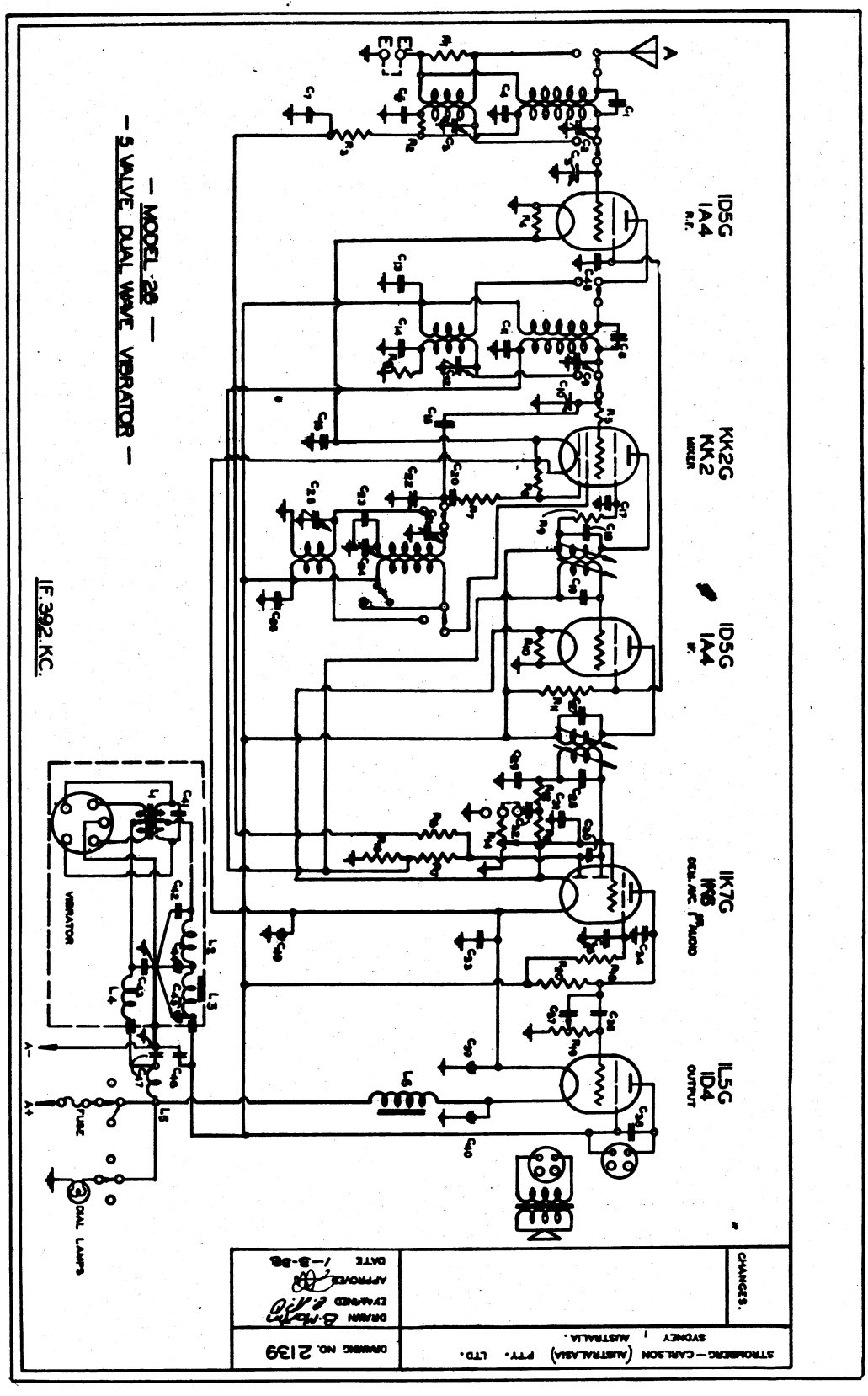
Stromberg-Carlson (Australasia) Ltd. reserves the right to make changes in design details at any time without incurring any obligations to install same on radio receivers previously sold.

MODIFICATION TO DESIGN

Modification	Result	Refer to Service Bulletin No. --

1. Add one turn to the primary winding of the Short-wave Oscillator Coil.
2. In cases where the D.C. voltage is less than 135 it is necessary to replace the Vibrator Transformer.
3. Replace the Intermediate Transformers with the later type of iron core Transformer.
4. Reduce the value of the filament shunt across the R.F. 1A4 to approximately 24 ohms in order to develop a full 2 volts across the KK2 filament.


— MODEL 28 —
— 5 VALVE DUAL WAVE VIBRATOR —
I.F. 392 KC.
ID5G
IA4
R.F.
KK2G
KK2
MIXER
ID5G
IA4
I.F.
IK7G
IK8
DUAL A.V.C. DIODE
IL5G
ID4
OUTPUT
VIBRATOR
FUSE
DIAL LAMPS
STROMBERG-CARLSON (AUSTRALASIA) PTY. LTD.
SYDNEY AUSTRALIA.
DRAWING NO. 2139
DRAWN
CHECKED
APPROVED
DATE 1-3-28
CHANGES.

CIRCUIT CODE -- MODEL 28.

C	Part No.	Item	C	Part No.	Item	R	Part No.	Item	L	Part No.	Item
C1	33/102	4 uuF	C26	526/15	.01 uF	R1	573/1904	500 w	L1	598/13	Transformer
C2	1/303	Air Trimmer	C27	526/60	250 uuF	R2	573/1915	.5 Mw	L2	28/303	HT.RF. Choke
C3	724/19	3 Gang Type F	C28	526/60	250 uuF	R3	573/1913	.1 Mw	L3	28/1	HT.LF. Choke
C4	526/2104	.1 uF	C29	526/1	100 uuF	R4	573/209	28 w	L4	28/3	Fil. RF. Choke
C5	1/303	Air Trimmer	C30	526/1	100 uuF	R5	573/1901	50 w	L5	28/3	Fil. RF. Choke
C6	526/14	.006 uF	C31	526/1	100 uuF	R6	573/1912	.05 Mw	L6	28/302	Fil. LF. Choke
C7	526/17	.01 uF	C32	526/19	.02 uF	R7	573/1901	50 w			
C8	33/102	4 uuF	C33	526/2104	.1 uF	R8	573/1915	.5 Mw			
C9	1/303	Air Trimmer	C34	526/9	.001 uF	R9	573/200	.05 Mw			
C10	724/19	3 Gang Type F	C35	526/2104	.1 uF	R10	573/210	33 w			
C11	526/2104	.1 uF	C36	526/9	.001 uF	R11	573/200	.05 Mw			
C12	1/303	Air Trimmer	C37	526/17	.01 uF	R12	573/1913	.1 Mw			
C13	526/15	.01 uF	C38	526/12	.002 uF	R13	573/1916	1 Mw			
C14	526/14	.006 uF	C39	526/54	500 uF Electrolytic	R14	573/6	1 Mw (Volume)			
C15	--	2 uuF (on Gang)	C40	526/54	500 uF Electrolytic	R15	573/1916	1 Mw			
C16	526/16	.01 uF	C41	526/1302	.005 uF	R16	573/1915	.5 Mw			
C17	526/2104	.1 uF	C42	526/15	.01 uF	R17	573/1915	.5 Mw			
C18	526/60	250 uuF	C43	526/23	.5 uF	R18	573/19	1 Mw			
C19	526/60	250 uuF	C44	526/52	16 uF Electrolytic	R19	573/8	.5 Mw (Tone)			
C20	526/1	100 uuF	C45	526/52	16 uF Electrolytic	R20	573/202	.2 Mw			
C21	1/303	Air Trimmer	C46	526/15	.01 uF						
C22	724/19	3 Gang Type F	C47	526/23	.5 uF						
C23	526/55	500 uuF	C48	526/2104	.1 uF						
C24	1/304	Air Trimmer (Padder)	C49	526/4901	25 uF Electrolytic						
C25	1/303	Air Trimmer									

IMPORTANT: To prevent excessive vibration and hum the vibrator box must float freely on its rubbers. In transit the box is held rigid by a block of wood, a steel rod, and wing nut. Remove these when the set is installed. See instructions attached to the receiver chassis.

OPERATION: Looking at the front of the chassis and reading from left to right the four controls are as follows:- Volume -- Tone -- Station Selector -- Wave Change Switch. The Battery Switch is located on the left end of the cabinet.

Wave Change Switch: This has two positions. The extreme left (anti-clockwise) position is the broadcast band 1500 to 550 KC's, and the right hand position a short wave band 13 to 38 metres.

Battery Switch:

Position	1	(Anti-clockwise)	Receiver off.
"	2	(Middle)	Receiver on, dial lights on
"	3	(clockwise)	Receiver on, dial lights off

To save unnecessary "A" Battery drain, use position 2 to find station then turn switch to position 3.

Pick-up Jacks: These are located at the left hand end of the chassis. To use a pick-up, remove the metal bar between the centre and back jacks and insert the pick-up leads in the centre and front jacks. The tone and volume controls both operate the pick-up. Replace the shorting bar in its original position when the radio is to be used again.

VALVES AND VOLTAGES: The location of all valves is shown on page 1. The bias for the valves is obtained from the series parallel arrangement of filaments.
DON'T REMOVE VALVES WHILE SET IS SWITCHED ON.

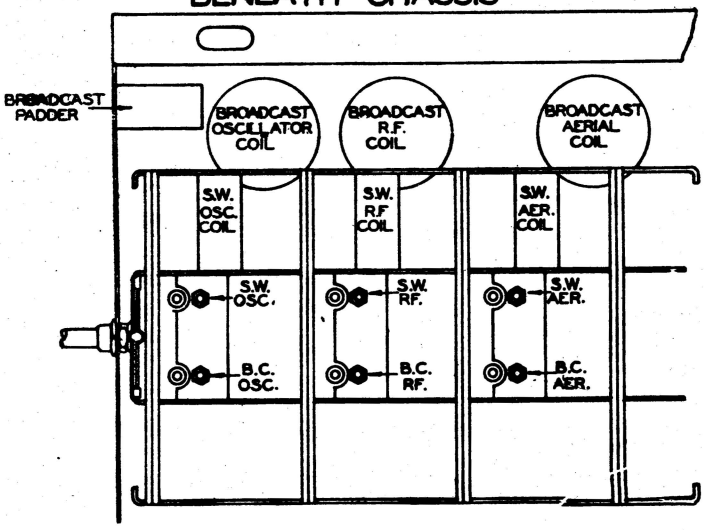
VALVE		PLATE	SCREEN
1D5G - 1A4	RF	140	60
KK2G - KK2	Octode Section	140	60
	Triode Section	140	—
1D5G - 1A4	IF	140	60
1K7G - 1K6	Dem.A.V.C. 1st Audio	80	
1L5G - 1D4	Output	140	140

Series fed through 1 meg. from Max HT.

ALIGNMENT INSTRUCTIONS:

Refer to drawings of chassis layout and coil unit for the location of the trimming adjustments. There are two on each Intermediate Frequency transformer, four on the sides of the chassis, and six on the coil assembly. No attempt should be made to adjust these unless a competent service man equipped with a calibrated oscillator and output meter is available.

LOCATION OF COILS & TRIMMERS BENEATH CHASSIS



IF Alignment: Set the oscillator to 392 KC, and connect to the grid of the KK2 valve. Turn the volume and tone controls full on, and the wave change switch to the Broadcast band (extreme anti-clockwise position). Adjust the four trimmers on the two IF transformers for maximum gain.

Broadcast Alignment:

1. Connect oscillator to aerial terminal, adjust to 1500 KC. Turn the Receiver dial to 1500 KC and adjust Broadcast oscillator trimmer till maximum output is obtained.

2. Set oscillator to 1400 KC, and Receiver dial to same frequency. Adjust broadcast RF and aerial trimmers.

3. Set oscillator to 600 KC, and Receiver dial to same frequency. Adjust broadcast padder till the oscillator signal is heard. Then, while rotating the gang to and fro about 600 KC, complete the padder adjustment for maximum output.

   Repeat the three operations.

Short Wave Alignment:

Note: On the short wave bands the oscillator operates at a lower frequency than the incoming station and hence the image will be found at the high frequency side of the station.

1. Turn the wave change switch to the extreme clockwise position for the 13-38 metre band and set the oscillator on 13 metres, and the Receiver dial pointer to the same wavelength. Adjust the short wave oscillator trimmer for maximum output.

2. Set the oscillator to 14 metres, tune this in on the Receiver and adjust the short wave RF and aerial trimmers.
   This completes the alignment of the Short Wave band because the padding condenser is non adjustable.