TECHNICAL INFORMATION

BULLETIN No. 117.

(TYPE)
1937

TECHNICAL DATA ON TYPE V.6 6-VALVE DUAL-WAVE

VIBRATOR-OPERATED RECEIVER.

RECEIVER

COLLIER & BEALE LTD.

WELLINGTON

S4. 1938.

Care for mechanical noise

Dormant Vibrator Socket Standoffs

& Heavy Vibrator unit on live rubber

Put cycle tubing over Vibrator contacts

& slacken Side clips.

TECHNICAL DATA ON TYPE V.6

6-VALVE DUAL WAVE VIBRATOR

OPERATED RECEIVER

The new CROMWELL Vibrator operated Receiver is generally of conventional type, the radio frequency circuits being of identical type and design to that used in the A.C. Model Dual-Wave Receiver. Adjustment, if ever required, should be undertaken along the lines as suggested for this Receiver.

Valves used are:-

1 - Type 1A4 Radio frequency amplifier
1 - " 1C6 Oscillator and 1st Detector
1 - " 1A4 Intermediate frequency amplifier
1 - " 1F6 Diode rectifier and audio amplifier
1 - " '30 Driving amplifier
1 - " '19 Class "B" power amplifier

Reference to the diagram will indicate that the filament circuit is somewhat unconventional, a form of series parallel circuits being used to obtain the requisite filament voltages, and also as a means of providing grid bias to the various amplifier stages.

A "split-reed" self-rectifying type Vibrator is used as the Converter Unit in this Receiver, the "split-reed" feature allowing the filter system to be contained in the main negative supply lead and, therefore, permitting the voltage drop in this filter system to be used for grid bias purposes. This feature alone is responsible for the remarkably low battery drain of this Receiver.

The Power Unit, other than this feature, and provision, is quite conventional. The Unit is entirely clear from "hash", due to the effective high frequency filter circuits that have been incorporated.

All of the components making up these filter circuits have a high voltage rating, and it is considered unlikely that defects will arise in these Units in service.

There is one exception, however, and this is C.7, and is known as the buffer condenser, and in this particular model is made up of two .01 Condensers of 600-volt rating in series. These condensers

have to withstand a very high peak voltage in operation, and although an adequate margin has been provided by using two Units in series, any failure of the Vibrator Unit to operate satisfactorily or any indication of excess "A" battery current may be caused through failure of either one or both these condensers. These Units should be carefully checked for leakage or break-down.

COLLIER & BEALE LIMITED,
66 GHUZNEE STREET,
WELLINGTON, C.2.

3rd. August, 1937.

TYPE V.6 6-VALVE DUAL-WAVE VIBRATOR

OPERATED RECEIVER

CONDENSERS:

C.1	...	8-mfd
2	...	25 "
3	...	.25 "
4	...	.1 "
5	...	.05 "
6	...	.02 "
7	...	.01 " Buffer (2/.01^2)
8	...	.004 "
9	...	.00025"
10	...	.0001 "
11	...	4 "

RESISTORS:

R. 1	...	1-megohm
2	...	.5 "
3	...	.25 "
4	...	.1 "
5	...	50,000-ohm
6	...	15,000 "
7	...	10,000 "
8	...	2,000 "
9	...	300 "
10	...	.1-meg. (Volume Control)
11	...	.5-meg. (Tone Control)

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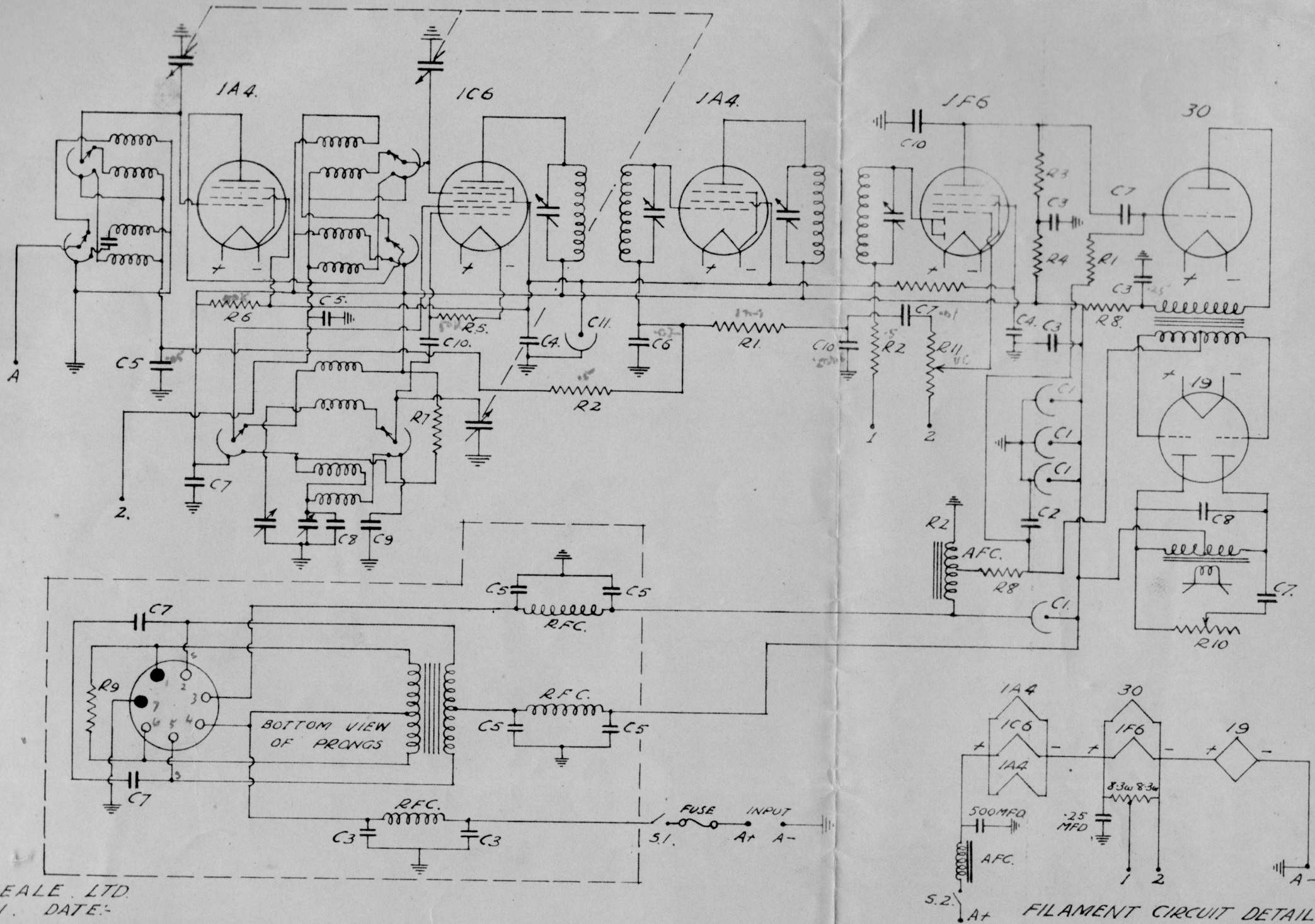
SCHEMATIC DIAGRAM OF SIX VALVE DUAL WAVE VIBRATOR OPERATED RECEIVER.



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TON. DATE:-