

4 VALVE DATA PREFERRED TYPES

B FREQUENCY CHANGERS

UCH 21 Triode heptode with variable-mu characteristics

HEATER

V_h 20 V I_h 0.1 A Suitable for series or parallel operation

CAPACITANCES

Identical with Type ECH 21, to which refer
For Circuit see Fig. 5, page 57

OPERATING CONDITIONS

Heptode Section as mixer

$V_a = V_b$	100	200	V
R_{g2+g4}	15	15	K Ω
R_k	150	150	K Ω
R_{gt-k}	47	47	K Ω
I_{g3+g4}	95	190	μA
V_{g1}	-1	-2	V
V_{g2+g4}	53	100	200
I_a	1.5	3.5	—
I_{g2+g4}	3.0	6.5	—
g_c	580	750	7.5
r_a	1.0	1.0	> 10
R_{eq}	40	55	—

Triode Section as R.F. oscillator

V_b	100	200	V
R_{at}	22	22	K Ω
R_{g3+g4}	47	47	K Ω
I_{g3+g4}	95	190	μA
$V_{osc} (r.m.s.)$	4.5	9.0	V
I_a	1.9	4.1	mA
g_m (effective)	0.44	0.45	mA/V

CHARACTERISTICS

Triode Section

V_a	100	V
V_g	0	V
I_a	12	mA
g_m	3.2	mA/V
μ	19	

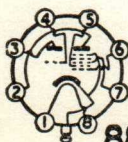
LIMITING VALUES

Heptode Section

$V_{a(b)}$ max.	550	V
V_a max.	250	V
p_a max.	1.5	W
$V_{g2+g4(b)}$ max.	550	V
V_{g2+g4} max. ($I_a = 3$ mA)	100	V
V_{g3+g4} max. ($I_a = 1$ mA)	250	V
p_{g2+g4} max.	1.0	W
I_k max.	15	mA

Triode Section

$V_{a(b)}$ max.	550	V
V_a max.	175	V
p_a max.	0.5	W



BASE :
B8G -

DIMENSIONS :

L=96 mm
D=32 mm

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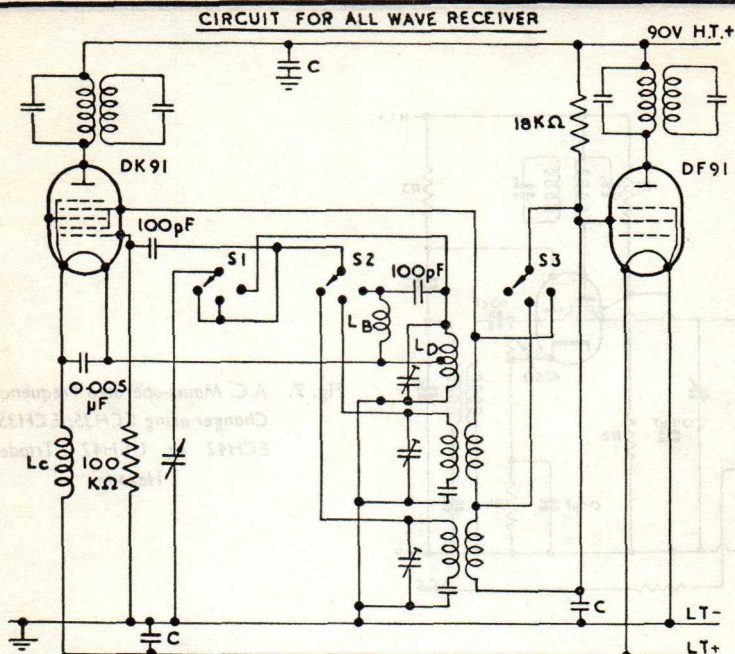


Fig. 4. All-wave Battery-operated Frequency Changer using DK91 Heptode

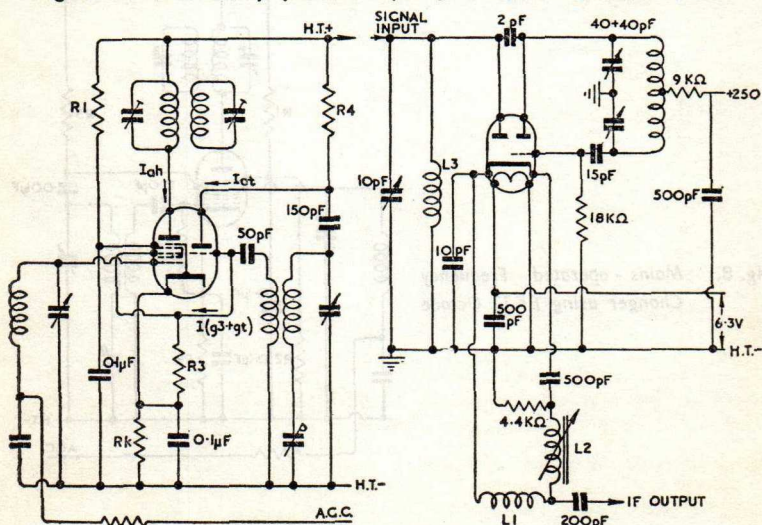


Fig. 5. A.C. Mains-operated Frequency Changer using ECH21 or UCH21 Triode-Hexode

Fig. 6. U.H.F. Mains-operated Frequency Changer using EAC91 Diode-Triode