WEIN BRIDGE OSCILLATOR PANEL I.E. 11B/12

Input

i/P F/B

R2 15K

C2 ·015mfd

R1 15K C1 ·015mfd

R3 12K

+12V

741

-12V

R4 100K

1N914

R5 12K

R6 15K

Output

RJH

W ien Bridge on the top, excuse my predecessors for the bad spelling! Run the calculations from the video and determine the operating frequency. What is the purpose of the back to back diodes? And the 12kΩ resistor? Given that R3 is 12kΩ what should the feedback resistance be for oscillation?

P hase Shift Oscillator at the bottom. Calculate the frequency of operation after watching the video. What purpose do the back to back diodes serve? Why are they in series with the 27kΩ resistor and not in parallel as with the Wien Bridge? Hook up each board and explore!

PHASE SHIFT OSCILLATOR I.E. 11/A

+15V

i/p

Input i/b

VR1

10 K 27 K

VR.1 R5

1N914 x2

·047 mfd A ·047 mfd B ·047 mfd C

C1 C2 C3

R1 1K R2 1K R3 10K 1K

2

+15V tp

- 741 +

6

3

-15V tp

Output

R4 10K

-15V

RJH