RC TIME CONSTANT DISPLAYED ON AN OSCILLOSCOPE

CAPACITANCE & DIELECTRICS - RC Circuits

\[ f = \frac{1}{2\pi \sqrt{LC}} \quad \text{and} \quad T = \frac{1}{f} = 2 \text{ msec} \]

Diagram:
- 500 Hz square wave
- Transformer
- Resistor (R2)
- Capacitor (C1)
- Invert

Note: Channel A is 180° out of phase with the incoming pulse from the frequency generator.

Diagram:
- 500 Hz square wave
- Transformer
- 450 Ω resistor
- 500 Ω resistor
- Capacitor (0.1 μF)
- To Channel A (V_a)
- 0.3 μF capacitor
- 100 kΩ resistor
- To Channel B (V_b)