15456 Wave Generator, 30cm Ripple Bar

Purpose:

Designed to generate straight and circular wave fronts of varying frequencies, for use with water ripple tanks to demonstrate the relationship between frequency and wavelength, as well as some aspects of interference.

Required Accessories:

Variable voltage power supply, 0 to 1.5 volts DC, ripple tank, support stands

Procedure:

To generate straight waves, either remove the metal rods with poppet beads from the wooden bar or pivot them up and away from the water. To generate circular waves, insert the metal rods with poppet beads into the pre-drilled holes in the vertical face of the bar. The procedures for generating both circular and straight waves are similar. The water level in your ripple tank should be approximately 5 to 8 millimeters deep.

Attach a rubber band to the screw hook in each end of the rippler bar, and suspend the unit by these rubber bands from hangers mounted on your ripple tank. Adjust the height of the rippler bar by raising or lowering the hanger supports until the bar just touches the surface of the water. (For circular waves, the poppet beads should just touch the surface of the water).

Connect the Rippler Bar motor to the variable DC power supply. The voltage controls the frequency of the waves (the higher the voltage, the higher the frequency) and the offset mass on the motor's flywheel controls the amplitude of the waves.

Time Allocation:

Five minutes of prior assembly is required before using this product. Individual experiment times will vary depending on student needs and methods of instruction, but normally a selection of plane waves, circular waves, and interference demonstrations will not exceed one class period.

Feedback:
If you have a question, a comment, or a suggestion that would improve this product, you may call our toll free number below.