

R07802

Midi Ripple Tank

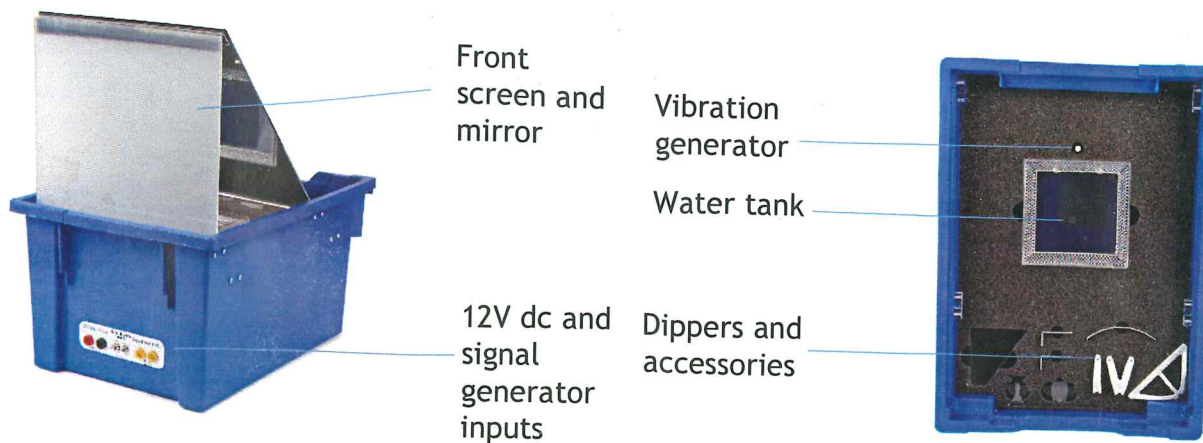
NFU 905



Purpose

The Unilab Midi ripple tank provides a simple and effective method for students to investigate the properties of waves. The tank is completely self-contained, requiring minimal set-up compared to traditional equipment. Simply add water and connect to a power signal generator and a 12V dc power supply and you are ready to go. The Midi ripple tank incorporates a built-in LED stroboscope to provide perfectly stationary images and the large front facing screen makes this ripple tank ideal for demonstrations. The ripple tank comes complete with an extensive range of accessories, all housed in a custom foam insert, including three dippers and a selection of barrier shapes and lenses. The whole ripple tank is housed within a Gragnells tray for easy transport and storage.

Apparatus Details



Specification

input impedance	35 Ohm (Typ)
supply voltage	12Vdc (max)
Screen size	250 x 275mm

Applications

- Properties of water waves
- Properties of waves in general
- Diffraction, refraction, reflection and interference

Equipment required

- 12V dc power supply
- Power signal generator
- 4 x 4mm test leads
- Water and surfactant

Operating Procedure

Waves are generated in a small, rectangular tank which is placed on a raised shelf over the internal illumination source. The wave generator is built into the body of the unit and has an electronic drive circuit which can be synchronised to the light source. Dippers can be attached to the generator by simply pushing them onto the stem. A mirror and screen are situated above the tank and images of the waves are projected on to the front screen for study. When access to the tank is required, the mirror and screen can be removed. The sides of the tank are specially designed to absorb waves thus avoiding multiple reflections which could cause confused patterns.

Getting started



- Place the unit on a level bench and connect a 12V dc power to the 4mm sockets on the front using 4mm leads.
- Connect the power signal generator (low impedance output) to the signal generator inputs.
- Remove the tray lid and then the mirror and screen, to gain access to the wave generator.
- Half fill the tank with clean water (A small amount of surfactant can help to reduce the surface tension of the water).
- The dippers are a friction fit on the stem. Install the dipper of your choice onto the generator stem and adjust the height until the dipper just touches the surface of the water. Alternatively place the dipper on first and then add water slowly until a meniscus forms between the dipper and the water.