

Transverse travelling wave (2)

Aim: To show a traveling wave and the inverse relationship between frequency and wavelength.

Subjects: 3B10 (Transverse Pulses and Waves)

Diagram:



Equipment:

- 2 1-meter sections of the slow wave motion demonstrator.
- 1 dashpot filled with water

Presentation: Couple the two sections of the wave motion demonstrator together. Connect the end of the complete demonstrator to the dashpot.

Give, by hand, the beginning of the wave demonstrator a sharp up and down disturbance, so that one or two sine-waves travel along the demonstrator. (The dashpot minimizes reflections at the far end.)

It can be observed that the speed of the travelling wave is independent of the frequency.

Also the inverse relationship between frequency and wavelength can be shown.

Sources:

- [PASCO scientific, Instruction Manual for the PASCO scientific Model SE-9600, 9601, 9602, and 9603](#)