

ABSTRACT

Ultrasound therapy is a type of thermotherapy (heat therapy) that can reduce pain. Basically ultrasound therapy works by using sound waves emitted in certain parts of the body to increase the temperature of damaged body tissues. The research contribution of this Personal Computer based ultrasound power meter design analysis is that it is used to determine the best physical dimensions of the mechanical design of the Ultrasound Power Meter. This module uses a 500gr Load Cell sensor as a pressure sensor, a module as a load cell sensor amplifier, an Arduino Uno processor and displays it on a 2x16 character LCD (Liquid Cell Display) and a PC (Personal Computer). Data collection with an average value that is close to the power setting, namely the 45mm cone on 2 different probes, namely when on probe 1 the power setting is 2.2W the average is 2.3W and at the time of setting the power is 8.8W the average of 9W. On probe 2, when setting the 6W power the average is 5.9W and at the 12W power setting the average is 12W. The results of this study can be implemented as an ultrasound power meter that can assist medical personnel in the maintenance, repair, and operation of ultrasound therapy machines and can provide benefits for accurate examination results, especially for patients. efits for accurate examination results, especially for patients.

Keywords: *Ultrasound Power Meter , Ultrasound Therapy, Load Cell, HX711 .*