

# Electronic Apex Locator for Root Canal Treatment

## Introduction

Working length is the distance between the coronal/incisal reference point and the area that has been prepared and at which the filled canal should end. Failure to determine the root canal length can result in both over- and underestimation of the root canal length. Overestimated working length can result in preparation beyond the apical isthmus, which can damage the peri-apical region. Underestimated working length and inadequate debridement can cause unsuccessful treatment and dissatisfaction of both the patient and dentist. Finding the accurate working length of a tooth is very crucial when it comes to Root Canal Treatment. Working length determines how much filling is actually required for the treatment. It is possible to measure the working length using impedance-based spectroscopy during the treatment in real time. Electronics Apex locator is an impedance based device which will measure the working length of the root canal during the treatment. According to Indian dental market survey report by Morulaa Health Tech, India is having more than 500 dental laboratories & 297 dental institutes. With this available dental infrastructure, Indian dental market is vast, and it will be the single largest country for dental products and materials.

## Features

- Multi frequency technology to measure the impedance of the root canals.
- Locate the apical foramen with great precision under a wide range of canal conditions.
- Automated calibration of the device.
- User friendly interface, endo files can be tracked visually on a screen with audio signals and digital indicators.
- Powered by a rechargeable battery, eliminates the need for frequent battery replacement.

## Specifications

- Battery : 3.7V/1500mAH
- Charging : USB
- Consumption Power : <0.5W
- Screen : 3.2" LCD
- Audio Alert : The buzzer will alert when the endo file is less than 2mm to the apex

- Calibration : Inbuilt

## Benefits

- Electronic Apex Locators reduce the number of radiographs required and assist where radiographic methods create difficulties.
- Measurement of pulpitis, pulp necrosis, periapical periodontitis and tooth length.
- Measurement of the tooth length before restoration of post crown.
- Detects the root canal perforation.
- Recognize any connection between the root canal& periodontal membrane such as root fracture and cracks.
- Confirm suspected periodontal or pulpal perforations during pinhole Preparation.

## Applications

For use in Dental department of hospitals

## Status

Present TRL Level – 6

### Electronic Apex Locator

