



THE NASAL INDICATOR

The Nasal Indicator or N-Indicator was developed in co-operation with the Department of Speech Communication of the Royal Institute of Technology (KTH) Stockholm Sweden. The N-indicator is primarily intended to be used for training of nasalization or denasalization with children. It is originally designed to be used for training with hard of hearing children but is of course also useful for normal hearing persons.

The display panel of the N-Indicator contains a light emitting diode display, red and green on-off buttons and a yellow and blue button to set the sensitivity. There are also six red lamps, between the yellow and blue buttons, indicating the sensitivity setting.

On the rear of the N-Indicator are inputs for two contact microphones, one can be used for the teacher and one for the student (One contact microphone is delivered with the N-Indicator). On the rear is also an input for connecting a battery charger.

The principle of the N-Indicator is the same as that used in traditional training of nasalization when the vibrations on the side of the nose (ala nasi) are felt with the finger tips. When using the N-Indicator the contact microphone is instead put on the side of the nose picking up the vibrations. The intensity of the vibration is shown by the line of green and red light emitting diodes.

Both nasal consonants and nasalized vowels are well discriminated from normal denasalized sounds that have a very weak vibration level at the nose. The task of the student is, when denasalization is trained, to keep the deflection as low as possible in the green area of the light emitting diode display.

The N-Indicator has an internal rechargeable "green" Nickel-Metal-Hydride battery. The N-Indicator is delivered with a battery charger/eliminator.

**SPECIAL INSTRUMENT DEVELOPMENT
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