The smart choice for hearing screening programs
The ECHOCHECK is a hand-held screening device for use in hearing assessment programs. It features efficient and trusted TEOAE technology and provides fast objective indication of healthy cochlear function. Tiny echoes in response to a mild clicking sound delivered by the ECHOCHECK probe are recorded, processed and evaluated by the ECHOCHECK’s OAE processor. Even slight sensory hearing loss usually stops the production of these echoes. For more than a decade Otodynamics’ TEOAE screening systems have been used on many hundreds of thousands of infants, in more than a thousand centers around the world. The professional consensus is that screening with TEOAEs is sensitive and reliable. It is found that 30dB sensory hearing loss leads to the absence of TEOAEs.

**ECHOCHECK proven OAE technology**

The ECHOCHECK delivers proven OAE testing power right into your hand - wherever and whenever you need it. The ECHOCHECK incorporates the industry standard ILO88 nonlinear TEOAE acquisition and validation system - ‘Quickscreen’. This ensures reliable, fast OAE results free from misleading artefacts - a hallmark of ILO systems since 1989. The ECHOCHECK has a common-sense built-in Pass criteria too, based on the ILO’s well proven cross-correlation and signal-to-noise method. Like automated ABR, the ECHOCHECK only conducts a test if conditions are right, and it only recognises signals showing typical OAE characteristics. The ECHOCHECK automatically stops and recommends a Pass as soon as it confirms the presence of a valid response across the speech frequency band. What could be simpler?

**ECHOCHECK applications**

The ECHOCHECK ideally meets the needs of intensive universal newborn hearing screening programs where the convenience, portability and speed of the ECHOCHECK achieve high specificity and coverage - even in early discharge regimes. Nursing staff and health visitors appreciate the simplicity of operation of the ECHOCHECK. It’s a powerful test because TEOAEs specifically target the cochlea. There is no evidence of any significant risk of missing hearing losses in the well baby or low risk population with this method. TEOAEs complement ABR measurements in the high risk population too. Their use on certain types of population may influence the interpretation of the test result. TEOAEs specifically target the cochlea. Visitors appreciate the simplicity of operation and the specificity and coverage - even in early and intensive universal newborn hearing screening programs.

**ECHOCHECK operation**

The ECHOCHECK is live to sound and probe fit as soon as it is turned on. Once the probe is well fitted into an ear, touching the START key commences the entire in-the-ear calibration and OAE test sequence. Brightly coloured indicators show the test progress and then the result. Once completed, touching the left illuminated button (Start/Stop) or the right illuminated button (Store/Recall) saves the test details in the memory, including date, time, ear and result. If the optional printer is connected, an automatic printout is produced. Up to 96 test results can be stored in the ECHOCHECK and downloaded to your PC if required, using the supplied software. Reliability of the instrument is ensured by the diagnostic test automatically implemented each time the ON button is pressed. Acoustic and probe fitting conditions are clearly indicated.

**Numeric display**

The ECHOCHECK features an LED readout of the OAE dB SPL, unique test ID number, internal time and date.

**ECHOCHECK probe**

The ECHOCHECK probe is based on 12 years experience. It is suitable for all ages and is supplied with a wide range of disposable plastic ear tips. The probe may be disassembled for cleaning and the replacement of coupler tubes.

**ECHOCHECK specification**

Test stimulus: a click of 84dB SPL p.e. repeated 100 times per second. In-the-ear calibration with automatic ear canal size compensation at test start. Accommodates newborn to adult ear canals. Sensitive to OAEs from 1-4kHz with a primary response band of 1.6-3.2kHz.

**ECHOCHECK printout**

The standard ECHOCHECK will print a test report directly on a (serial) label printer. The printout includes test sequence number, time and date of test, test result with recommendation for further testing, together with numerical data on the stimulus, OAE response and noise level during testing. Otodynamics provides an optional battery powered, portable, serial, mini-printer - which is color co-ordinated.

**ECHOCHECK PC and pocket PC links**

Windows software is supplied as standard with the ECHOCHECK and provides a data-link with any PC via the serial port. Application software is included for data management allowing names and details to be added to a database of ECHOCHECK test results, and the transfer of this data to patient management packages including ‘OZ’. The PC link is also used to set the internal clock of the ECHOCHECK to local time. Pocket PC software is available from your dealer to interface your Ecocheck to your PDA.

**ECHOCHECK probe features**

- **Numeric display**: Includes: numeric 4-digit LED - time, date, test ID, OAE dB SPL.
- **OAE Probe**: Features: General Purpose Serviceable TE for newborn and adult use.
- **Controls**: On/Off control and indicator, Start/Stop test control, Store left and right ear, Recall/Print test results.
- **Connectors**: Probe/Battery recharge socket, Serial port, downlead/ update, printer jack.
- **Software**: Features: Internal software held on replaceable ROM, PC Windows® software on CD for uploading test results.
- **Options**: OAE Probe - powered, serial port, mini-printer (dimensions: 5in x 5in x 2.25in, weight: 14.75oz).

**Hardware**

The ECHOCHECK and all accessories are supplied in a zip-up bag. ECHOCHECK Dimensions: 7.45 x 3.6 x 1.15in reducing to 1in. Weight: 11oz. Changer: 110V/240V input, 13V output. Internal rechargeable 2.4V battery. Battery life: 2-5 days of typical use per charge. Self-adhesive score pads.

**Standards**

The ECHOCHECK complies with all current regulatory and safety standards and is totally battery powered. The TEOAE method has an exceptionally good false negative result proven over 10 years. Classification: Internal battery powered system, Type BF, Charger Class I. To be manufactured and sold to meet IEC601, EN60601-1, BS5724-1, CSA 22.2 No. 601-1, CE, EMC. Protected by copyright and patents including: USA 4374526, Canada 1148659. Otodynamics is an ISO 9001 compliant company.

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