

Arphi®



2001 DIGITAL CLINICAL DIAGNOSTIC AUDIOMETER

The **2001** is a new generation digital audiometer from **Arphi**. This clinical / diagnostic audiometer features a unique menu-driven display and user-programmable test setups for optimal operating efficiency during daily routine examinations. New features incorporated into the **Arphi 2001** include, amongst others, data interface, 1 dB attenuator resolution, ipsilateral masking, and simultaneous presentation of stimulus and masking binaurally.

State-of-the art technology has enabled Arphi to produce a compact lightweight instrument not only capable of performing the standard battery of tests but also featuring many other advanced and innovative facilities.

All these features have been incorporated into a striking simple user friendly and ergonomic design, which makes operation fast, easy and efficient.

Arphi has developed a completely new attenuator which permits totally clickfree operation over the entire attenuator range.

Simple menu-driven dialogue makes the **Arphi 2001** easy to learn and easy to use. Working with a menu-driven display is uncomplicated, the upper line simply prompts the operators to select one of the options from the lower line by pressing the appropriate softkey. In this way, you can rapidly set up tests and then alter them as required. The display itself is easily readable under any lighting conditions and from any viewing angle thanks to state-of-the-art LCD technology.

In addition to a complete patient communication and monitoring systems with talk-over and talk-back facilities, patient response may also be audible, if desired, enabling the operator to concentrate visually on the patient.

The **Arphi 2001** is fitted with an RS232C serial data interface as standard, enabling data transfer to and from a computer, and entry of a patient identification number.

CHANNELS

Two separate channels: one for stimulus and one for masking.

FREQUENCIES

Air, Free Field: 125-250-500-750-1000-1500-2000-3000-4000-6000-8000 Hz.

Bone: 250-500-750-1000-1500-2000-3000-4000-6000 Hz.

ATTENUATOR RANGE

0 to 120 dB steps with Range Extender function. Fully clickfree operation over entire range.

HEARING LEVEL RANGE

Maximum output is limited by transducer capability.

Typical values for Air: Max 120 dB HL at 500-6000 Hz.

Bone: 70 dB HL at 500-4000 Hz.

EXTERNAL INPUTS

- Microphone** : Dynamic, for speech audiometry and patient communication.
- Patient Mic** : Dynamic.
- Tape/CD 1** : Stimulus channel, Sensitivity 0.1-3.0 Vrms, 47 kOhm.
- Tape/CD 2** : Masking channel, Sensitivity 0.1-3.0 Vrms, 47 kOhm.

OUTPUTS

- Phones** : Air Conduction.
 - Bone** : Bone Conduction.
 - Insert Masking** : insert phone
 - F.F.** : Free Filed Loudspeaker via external Amplifier.
- Output voltage: max. 3 Vrms.
Output load: max. 5 mA.

TECHNICAL SPECIFICATION

Standard Functions

- Speech Audiometry** : Stimulus via Microphone or Tape/CD1
- Masking** : White Noise, Speech Noise or Narrow band.
- Tone** : Tone Duration is controlled manually.
- Pulsing Rate** : User-programmable (range: 1.5-3.5Hz)
- Warble** : Frequency Modulation $\pm 5\%$
- Left/right Shift** : Automatic switching of all selected parameters from left to right channel and vice versa.
- Hearing Level Lock** : Locking of masking level to stimulus level at any preselected interval.

Special Functions

- SISI Test** : Display shows presentation Counter. Patient Score counter with current score percent constantly indicated. Increments of 1 or 5 dB Interrupt/Reset function Initiated by Tone switch.
- Fowler Test (ABLB)** : Alternate Binaural Loudness Balance Test.
- Stenger Test** : Binaural Tone Stimulation

User Functions

User setups are stored in a non-volatile memory (EEPROM)

Communication and Monitoring

Built in, talk-over and talk-back amplifiers with individually adjustable monitoring.

The monitoring signal is mixed with the talk-back signal.

Visible Patient Response (LED indicator) supplemented by Audible Patient Response with a separate level control via monitor headset LED bar-graph V.U. Meter provides visual indication of stimulus level as well as displaying level for sensitivity adjustment of Microphone/Tape/CD input signals.

Display

Alphanumeric transreflective LCD 2 rows of 40 characters. Screen dimensions 155 x 16 mm. LED backlighting.

Distortion

Less than 1% (T.H.D)

Accuracy

Frequency: Better than $\pm 2\%$
Hearing Level Electrical: Within $\pm 1\%$ dB of indication
Acoustical: Within ± 3 dB of indication

Calibration

AIRIEC 645/ANSI 3.6-1996
BONE ISO 7556-1987/ANSI S.3.26-1981
MASKING IEC 645/ISO 8798-1987
Calibration data are stored in a programmable non-volatile memory.

Power Supply

230V AC 50Hz $\pm 10\%$

Power Consumption

25VA Approximately

Operating Environment

Temperature: 15° - 50° C
Relative Humidity: 30 - 90%

Construction

Aluminium light weight, Non-corrosive

Dimensions & Weight

(400 x 330 x 135) mm. - 5Kg Approx. Without Carrying Case.

Standard Accessories

Head set,
Bone Conductor with Headband
Patient Response Hand switch RS 232 C Data Interface,
Dust Cover, Audiogram Pad, 1 Blue and 1 Red Pen.
Operation manual

Optional Accessories

Free-Field loudspeakers, Amplifiers and Speech Units.
Patient Talk-Back Microphone
Monitor Headset.

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