

What is WHOears?

A **tone-based hearing screening tool** developed by the World Health Organization for **trained personnel** to screen for hearing loss.

Available free on **android & iOS tablets**, suitable for **children aged 5+ and adults** for use in community and clinical settings.

Screening only — not a diagnostic tool



Android & iOS tablets

Tablet-based app

Quiet setting required

Relocate if noise levels are high in the surrounding

Tone-based screening

Sweep audiometry with multiple options

Age >5 years

Community and clinical settings

REQUIRED EQUIPMENT AND SPECIFICATIONS



Tablet

Android 13+ or iOS 17.6+
USB-C port + built-in mic



DAC Adapter

USB-C → 3.5mm audio jack
48kHz / 24-bit resolution

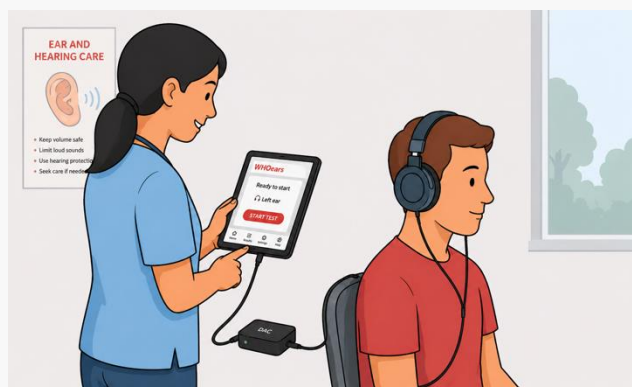


Wired Headphones

No microphone, 24Ω nominal
3.5mm audio jack

Reference models: UGREEN AV161 DAC | SONY MDR-ZX110 Headphones

READY TO SCREEN



A trained health personnel sets up the **WHOears app on tablet** with the **participant seated** and **headphones connected**, ready to begin.



Stand behind participant and start the test.





STEP-BY-STEP TEST PROCEDURE

1 Prepare participant

Introduce yourself to the participant and take time to explain the test. Seat them comfortably. Explain that they will hear beeps play in one ear at a time and they need to raise a hand each time a beep is heard, even if it is very soft.

**Confirm participant understands the test procedure.*

2 Launch app & accept disclaimer

Open WHOears on the tablet → tap continue → read and accept the disclaimer.

3 Connect equipment (Step 1)

Plug DAC into tablet USB-C port → connect headphones to DAC. Confirm indicator light turns green. Tap "Go to Step 2".

4 Set volume & noise check (Step 2)

Place headphones securely over the participant's ears. Set device volume to midpoint → tap "Start Noise Measurement". **Green = pass**; proceed. **Red = fail**; relocate to a quieter area.

5 Practice test (Step 3)

Play practice tone — left ear and then right ear. Repeat until participant responds correctly. Tap "Go to Step 4".

6 Screening test (Step 4)

Stand behind participant. Start left ear test. Record Yes/No after each tone. If the participant raises their hand record yes. If not, record as no. The app presents the same tone (frequency) three times. Repeat for right ear. Tap 'Show Results'.

7 Record & share results

App does not save results of participants. If needed, record manually in data collection template. Results can be shared via email/WhatsApp using the share button (*Please note active internet connectivity is required for sharing results*).



INTERPRETING RESULTS

✓ PASS

Participant responded to tones in both ears. Inform them that results are within normal range. No immediate referral required. [Share tips on ear care.](#)

✗ FAIL

Participant did not respond to one or more tones. Explain that the participant could not pass the screening test and needs a diagnostic audiometry. Refer to a facility where this is available. [Share relevant community resource.](#)

Remind participant: this is a screening, not a diagnosis. If needed, record results using the data collection template.

✓ GOOD PRACTICE



⚠ Do not test in noisy environments

DO ✓

- Always run the practice test
- Clean headphones before each use
- Ensure headphones fit with no gaps on participant's ears
- Use recommended DAC + wired headphones
- Confirm participant understands the instructions

DON'T ✗

- Do not test in noisy environments
- Do not skip the practice test
- Do not use headphones with a microphone
- Do not use non-standard equipment
- Do not proceed if participant does not understand the instructions

