Speech Rate Meter 2

Table of Contents

Speech Rate Meter 2 **1**
- Record a session . . . 1
- Open a recording . . . 4
- What you see on Home . . . 4
- What the numbers mean . . . 5
  - How a pace is chosen . . . 6
- History . . . 6
- Settings . . . 8
- If something looks wrong . . . 9
- Other pages . . . 10

Speech Rate Meter 2

Speech Rate Meter 2 shows how fast you are speaking, in words per minute. It does not recognize words, and the recording stays on this device.

While you speak, the chart and the arcs stay on screen. Until five live readings have arrived, “Everything is working. Calculating. About N s left.” blinks on top of them. After that the message goes away and they follow you. The numbers sit above the names inside the arcs while you speak. Press **Stop** to see the session summary. If you stop sooner, that result is shown at once.

Record a session

1. Open **Home**.
2. Press **Start** and speak as you normally would.
3. Press **Stop** when you are finished.

Home before **Start**. The tempo chart is empty, the gauge has no number, and **Start** is on screen. The chip reads **Ready**.

Until five live readings have arrived, the chart and the arcs stay on screen, and “Everything is working. Calculating. About N s left.” blinks on top of them. You can still see the chart and the arcs around that message. N is the estimated seconds until the fifth reading. It uses the update interval and the speech already collected, rounded up. It does not go below zero, and if it would reach zero early the line says “Everything is working. Calculating. A little longer.” After the fifth reading the message goes away

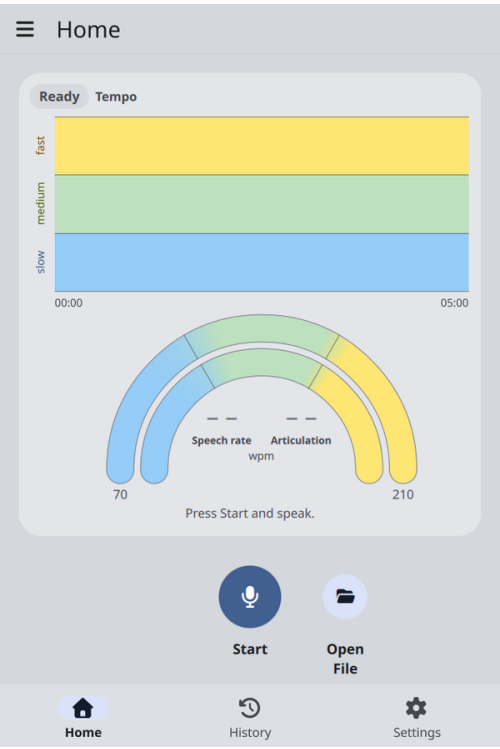


Figure 1: Home, ready to record

and the line grows from the left. When it reaches the right edge, older points slide off. Pressing **Stop** before five readings shows the result at once. **Open File** does not wait.

A session in progress. The gauge card has a red outline, the badge shows the time, and the chart is moving. The centre of the arc shows the live numbers above their names. The chart uses the default **Chart window** of 5 minutes.

A halo around **Stop** follows the microphone. If you are speaking and the halo stays still, the microphone is not being heard.

With **Detect speech automatically** on, stay quiet for a moment after **Start** while the room is measured, then speak. A pause ends the phrase and saves it. The next phrase starts when you speak again. With it off, measuring starts as soon as you press **Start**, a pause does not end the phrase, and the recording is saved in 15-second parts.

Silence and background noise are not counted as speech. A phrase shorter than one second is not saved.

On any page except Settings, a red **Recording** chip in the toolbar shows the same time. Tap it to return to Home. The timer does not reset between phrases. Opening **Settings** stops the session first. A phrase shorter than one second is dropped. A longer one is saved.

After **Stop**: a number in the arc, the chip naming the summary (by default **Median**), the value cards that are switched on, and the **Whole recording** card.

After **Stop** the arc shows the summary of the phrases that were kept. The chip names

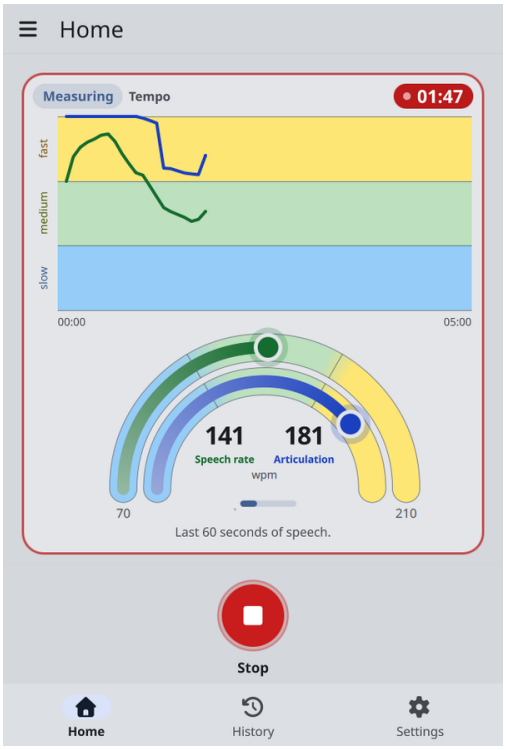


Figure 2: Home while recording

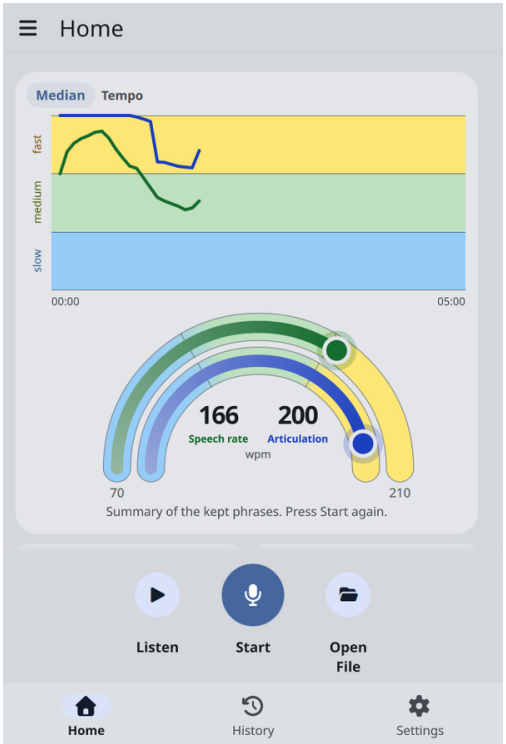


Figure 3: Home after Stop

that summary. The default is **Median**. The cards you left on in Settings appear beside it, and the tempo chart stays above the arcs. **Listen**, to the left of **Start**, plays the recording. Press it again to stop playback. With **Keep recording files** on, that recording is one WAV for the session. The audio is deleted when you leave the app, unless **Keep recording files** is on.

Open a recording

Open File sits to the right of **Start** on a computer and on Android. It measures one WAV file and does not save a session. PCM and 32-bit float files are accepted, including other sample rates, stereo, and files with extra header data. The app converts them to 8000 Hz mono before measuring. **Listen to test** plays that recording. If a file cannot be read, the page says why. On a computer the dialog opens in the tests folder. On Android it is the system file picker.

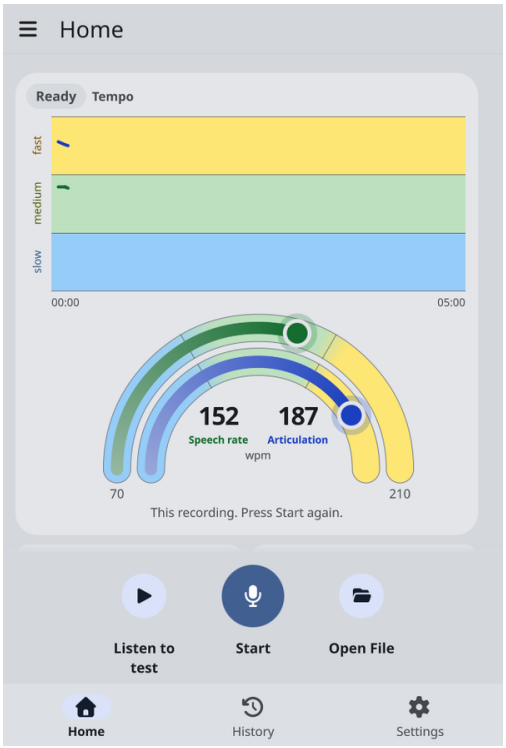


Figure 4: Open File

A measured WAV. The hint reads **This recording**. **Whole recording** compares both speech rates and all three articulation estimates. **Listen to test** plays the file.

What you see on Home

The gauge. The arc is a semicircle. Its ends meet the left and right edges of the chart above it. It runs from **Slow** to **Fast** and is split equally into Slow, Average, and Fast. The track holds one colour in each third: blue through Slow, green through Average, and gold through Fast, with a thin outline around each zone, the same line as on the chart, so the gold stays separate from the card. Each third is lighter than

the one before it, so the three stay apart for people with colour-vision deficiency. The line that marks the current pace is one colour, the same colour as that pace on the chart: green for speech rate, blue for articulation. By default it shows both paces. The printed number is the measured pace. The marker stays inside the Slow–Fast range, so a pace outside that range still prints its real number while the marker sits at the end. Inside the arcs, each number sits above its name, low, near the bottom edge of the arcs. With both paces, **Speech rate** and **Articulation** sit side by side. With one pace, that name is centred. Each name uses the colour of its ring. **wpm** stays with the pace numbers. 70 and 210 stay at the ends. On a short window the words shrink so they stay inside the rings.

The tempo chart. Each point is one live update, at the same pace the arcs are using. The chart keeps the last **Chart window** (5 minutes by default). It uses the same three colours as the gauge track and labels the bands slow, medium, and fast, written upward. Each band is a flat fill of that colour, light enough that the curves stay in front. Slow is blue, medium is green, and fast is gold, and each band is lighter than the one below it so the three stay apart for people with colour-vision deficiency. A thin line marks each border. It does not repeat the Slow and Fast numbers. Those numbers stay under the ends of the arc. The lines use the same colours as the arcs.

The chip in the corner of the gauge tells you the state:

- **Ready** — press **Start** and speak.
- **Listening** — the app is waiting for speech. Speak when you are ready.
- **Too short** — keep speaking. A phrase under one second is not kept.
- **Measuring** — the live pace is following your recent speech.
- **Too short to save** — that phrase was not saved.
- **Microphone blocked** — allow the microphone, then press **Start** again.
- After **Stop**, the chip names the **Session summary**. The default name is **Median**.

Value cards stay hidden while you record. After **Stop** and after **Open File** they appear for the measures you turned on in Settings. A pace already drawn on the gauge is not repeated as a card.

Whole recording is a separate card. It measures the entire take, including silence between phrases, and shows both speech-rate estimates, all three articulation estimates, and how the pause lengths are spread out.

What the numbers mean

- **Speech rate** is the overall pace, in words per minute, pauses between words included. By default it is the outer arc.
- **Articulation** is the pace while you are actually speaking, with those gaps left out. Also in words per minute. It is usually close to the speech rate, and higher when you leave gaps.
- **Pauses** is the length of the longer gaps, in seconds. It is not the total time you were silent.
- **Speech** is the total time that counted as speech. From one minute the card reads `1m 30s`. While you record, the red badge shows the time since **Start** instead. Silence before speech is detected is not included, and a pause is included only

up to the **Pause** setting.

While you record, speech rate, articulation, and pauses use the **Analysis window**: the most recent speech, 10 seconds by default. At the start of a session the window is only as long as the audio collected so far. They are not a running total from **Start**. **Speech** is that total.

After **Stop**, speech rate, articulation, and pauses become one summary of every phrase that was kept. **Speech** stays the total. History uses the same summary.

How a pace is chosen

You can leave these at their defaults.

Speech rate method

- **Direct** (the default) leaves out silence before the first sound and after the last. Pauses between words stay in the time.
- **Legacy** uses the whole buffer, including that silence at the ends.

Articulation method

- **Direct** (the default) takes the same span as Direct speech rate and removes the silent gaps inside it. With no such gaps, the two Direct numbers match.
- **Window** removes those same gaps from the whole measured buffer, and keeps silence at the ends. It can sit below the speech rate.
- **Legacy** keeps an older estimate.

Pauses in Direct mode is the average length of those longer gaps. Legacy shows the older score.

The **Whole recording** card shows both speech rates and all three articulation estimates, so you can compare them without changing the method.

History

History lists each finished session, newest first. A row shows the date, the speech rate, how many phrases were kept, how many times the numbers changed, and the articulation, pauses, and speech time for that session.

The session list. Each row has a speech-rate badge, the date, the phrase count, and the other results.

Open a row to see the same summary as Home, then the value cards Settings leaves on, then a chart for each measure. Each point on those charts is one Home update.

An opened session: the gauge with the summary, the value cards, and the chart of each Home update.

An opened file is not listed here, because **Open File** does not save a session.

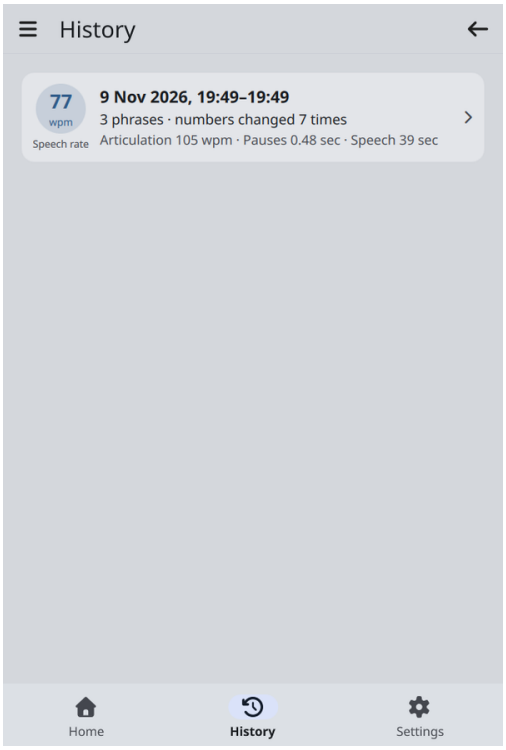


Figure 5: History

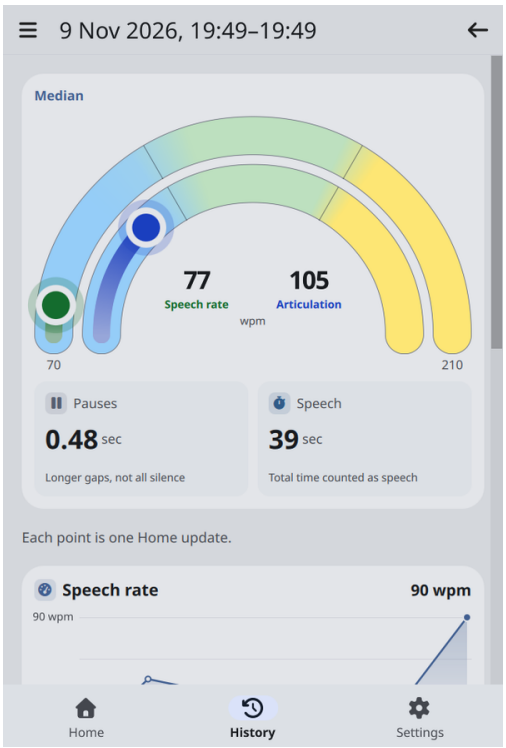


Figure 6: One saved session

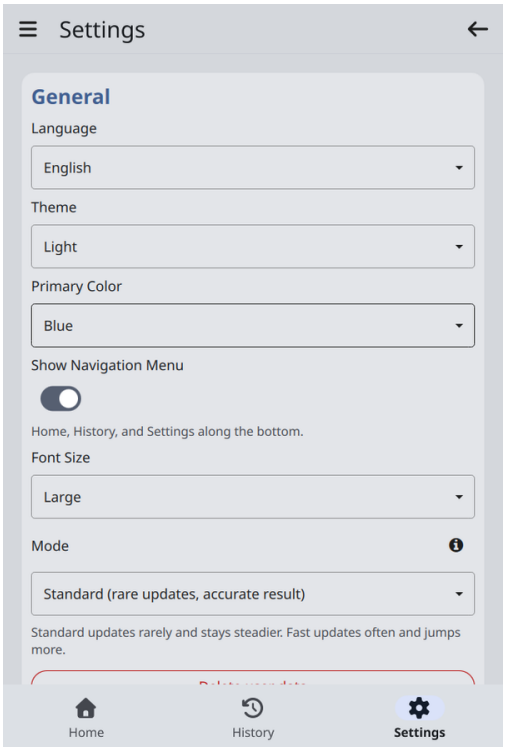


Figure 7: Settings

Settings

General, with **Additional** off. Measurement and the formula controls stay hidden until you turn Additional on.

General is how the app looks, and which preset it uses.

- **Language**, **Theme**, **Primary Color**, and **Font Size**.
- **Show Navigation Menu** adds Home, History, and Settings along the bottom. The menu button stays in the toolbar.
- **Mode** is **Standard (rare updates, accurate result)** or **Fast (frequent updates, lower accuracy)**. Standard uses a 60-second analysis window and 12 updates a minute, so each number covers more speech. Fast uses a 5-second window and 120 updates a minute, so the number follows you sooner and jumps more. Choosing a mode again restores it. Language, theme, color, font size, the navigation bar, **Keep recording files**, and the speech-detection thresholds stay as they are.
- **Delete user data** removes saved sessions and any recording files still kept in `data/records`. Your settings stay.

Additional opens **Measurement** and the formula controls. The switch turns off when you leave the app. The values stay as you left them.

Measurement is how a session is read. The question mark beside a control explains that control in more detail.

- **Analysis window** is how many recent seconds of speech the live pace uses. Shorter reacts faster and jumps more. The shortest value is 3 seconds. Standard mode uses 60 seconds. Fast mode uses 5 seconds.
- **Updates per minute** is how often the pace is recalculated and how often the tempo chart gains a point. The shortest value is 1, once a minute. Standard mode uses 12, once every 5 seconds. Fast mode uses 120, twice a second.
- **Chart window** is how many seconds the tempo chart keeps. The default is 300 seconds (5 minutes). The range is 30 to 1800 seconds.
- **Pause** is how much silence ends a phrase and saves it. The default is 2 seconds. This is used only when **Detect speech automatically** is on. A phrase longer than 15 seconds is cut at the next pause, or at 15 seconds.
- **Phrasal pause** is the shortest silent gap that counts as a pause inside the pace calculation. The default is 200 ms. Short stop closures in a word are not counted.
- **Detect speech automatically** waits for speech and lets a pause end the phrase. Off, measuring starts at **Start** and the recording is saved in 15-second parts.
- **Session summary** is how the kept phrases are combined after **Stop**. **Median**, the default, takes the middle phrase. A longer phrase counts more if you pick a weighted summary. **Speech** is always the total time, whichever you pick. History uses the same choice, and the chip on Home shows its name.
- **Gauge** chooses the pace on the arc: **Speech rate**, **Articulation rate**, or **Both**. With both, speech rate is the outer arc and articulation is inside it.
- **Show Speech rate tile**, **Show Articulation rate tile**, **Show Pauses tile**, **Show Speech tile**, and **Show Whole recording tile** choose which cards appear after **Stop**, after **Open File**, and on a saved session. A pace already on the gauge cannot also be a card, and that switch stays off. The others are on by default.
- **Slow** and **Fast** are the ends of the gauge, in words per minute. The defaults are 70 and 210.
- **Use all readings** is on by default. Each tempo-chart point is then the middle of every live reading since **Start**, and **Gauge median** cannot be changed. The arcs still use **Gauge median**. Turn it off and each chart point matches the arcs, with the tip at zero while the arcs are at rest.
- **Gauge median** is how many latest readings the gauge takes the middle of. The default is 3, so one jump moves the arc less. Set it to 1 to show the current reading. After **Stop** the gauge shows the session summary, not this median.

Under the same **Additional** switch, the detection and formula controls follow **Measurement**, including **Keep recording files** and **Shortest vowel**. Leave them as they are unless you are comparing methods. **Keep recording files** stays as you set it. On, Stop leaves one WAV for the session in `data/records`. Off, the phrase files are deleted when you leave the app.

A change applies to the next phrase.

If something looks wrong

- **You are speaking and nothing moves.** The halo around **Stop** should grow with your voice. If it stays still, the microphone is not being heard. If the chip says **Microphone blocked**, allow the microphone and press **Start** again.

- **The arc shows a dash.** Nothing has been measured yet. Once a reading arrives, the integer sits above its name, including while the session is running. Press **Stop** to see the session summary.
- **The chip says Listening.** The app is waiting for speech. Speak when you are ready. With automatic detection, give it a quiet moment first so it can measure the room.
- **The chip says Too short to save.** That phrase was under one second, so it was not kept. Speak a little longer.
- **A message covers the chart while you speak.** That lasts until five live readings have arrived. “Everything is working. Calculating. About N s left.” blinks on top of the chart and the arcs, which stay visible. After the fifth reading, and after **Stop**, the message is gone.
- **Open File does not list a recording.** On a computer, put the WAV in the tests folder next to the app and open it from there. On Android, pick the file with the system picker. The button is beside **Start** on both.

Other pages

- **User Guide** is this text.
- **Privacy Policy** describes what stays on the device.
- **Open-source licences** lists the components built into the application.