

Ham Training

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Introduction

Ham Training puts the parts of amateur radio you have to practise — Morse, phonetics, Q-codes and your grid square — on your wrist, where you can reach them in the few spare seconds that actually make practice stick. It runs on Apple Watch and on Wear OS.

It is a trainer, not a transmitter

Ham Training never keys a radio and never puts a signal on the air. Everything it makes is sound from the watch's own speaker, for you. That means no licence is needed to use it, and nothing you do in the app can interfere with anyone. Practise as loudly and as badly as you like.

Why a watch

Because a handset comes out of your pocket and a watch does not. Thirty seconds of Morse while the kettle boils, checked against your own fist, beats a half-hour session you keep postponing. The app is built for short, frequent use.

Getting started

Open the app and swipe left and right to move between six pages: Grid, Morse, Phonetics, Q-Codes, Settings and About. The app name sits at the top of every page and the dots at the bottom show where you are.

Set your callsign first

Go to Settings and enter your callsign. It is used to spell your own call on the Phonetics page and it can be shown on your watch face. It is stored on the watch and sent nowhere.

Check the sound

Press the Morse key once. You should hear a tone and feel a tap. If you hear nothing, see the Sound section near the end of this manual before assuming the app is at fault.

Your grid square

The Grid page turns the watch's position into a Maidenhead locator — the six-character square such as LL93eo that you exchange on the air, plus the finer eight-character pair underneath it for anyone who wants it.

Taking a fix

The screen takes a fix by itself whenever you open it and whenever you raise your wrist, so the locator is current without you asking. Tap Get Fix to force a fresh one — what you want if a fix failed, or you have just walked out of a building. The watch needs a moment and a view of the sky; indoors it may take longer or refuse. The figure beneath the locator, for example ± 10 m, is how accurate the receiver believes the fix is; a large number means the square may be wrong at its edges. While this screen is open the app also follows you as you move, updating after about

half a kilometre. Close the screen and it stops — unless you turn on Keep Grid Current, described below.

Keeping it current when the app is closed

By default the app reads your position only while the Grid screen is open. Holding the location radio open costs real battery, so nothing runs behind your back unless you ask for it.

Settings has a switch called Keep Grid Current, and it is off until you turn it on. With it on, the app keeps following your position after you leave the screen, so the square on your watch face becomes right as you move — you do not have to open the app at all. It updates when you cross into a new square, not continuously: a six-character square is roughly 8 by 5 kilometres, so standing still it will not change for hours, and that is correct rather than broken.

Be honest with yourself about the cost. This is continuous GPS, and it uses the battery the way a workout does. Turn it on for a summit, an activation or a drive, and turn it off again afterwards. If the watch is short of power, or you force-quit the app, tracking stops and does not restart until you open the app again.

The Morse key

The Morse page is a straight key. Press and hold the circle: a short hold sends a dit, a longer hold sends a dah. The symbols appear as you send them and the decoded letters build up on the line above.

It reads your timing, not your taps

There is no separate dit button and no dah button. The app measures how long you hold the key and how long you leave between presses, exactly as a real straight key works. That is the point: it grades your fist. If your spacing is uneven the decode will show it, which is the feedback you came for.

How a character is closed

Leave the key alone for one character gap and the app decides you have finished the letter and prints it. Leave it longer than a word gap and it inserts a space. Both gaps come from your speed setting, so a slower setting gives you more thinking time between letters.

The three buttons

Below the key: the red bin clears everything, the arrow deletes the last symbol or letter, and the green return closes the current character immediately instead of waiting out the gap.

If a press is ever missed

The key opens itself after four seconds no matter what. A watch that buzzed until you found a stop button would be a genuinely bad thing to have strapped to your wrist.

Speed and Farnsworth

Two speeds live in Settings, and the difference between them is the whole trick of learning Morse.

Character speed

How fast each individual letter is sent. Set this to the speed you eventually want to copy — many operators learn at 15 to 20 words per minute from the start.

Overall speed

How fast the message goes as a whole. Setting this lower than the character speed stretches the gaps between letters and words while leaving the letters themselves fast. This is Farnsworth timing, and it is the standard method: you learn each character by its sound at full speed, and buy your thinking time in the silence between them.

The app uses the ARRL Farnsworth formula, and the same numbers on the Apple Watch and the Wear OS build — the same setting sounds identical on both. The default is 15 words per minute character speed at 10 overall.

Tone

The sidetone pitch, in hertz. The default of 600 Hz suits most ears; operators who work weak signals often prefer something lower.

Phonetics

The Phonetics page lists the NATO alphabet and the numbers. Tap any entry to hear it spoken.

Your own callsign

There is a button that spells your callsign the way you would on the air — A41UX becomes Alfa, Fower, Wun, Uniform, X-ray. It is worth hearing your own call spelled correctly a few times before you need it in a pile-up.

Q-codes

The Q-Codes page carries the codes and abbreviations you meet in ordinary operating, each with what it actually means rather than a bare expansion.

Hear it two ways

Every entry can be spoken aloud, and can be played as Morse at your own speed using the same engine the key uses. Hearing QRM sent at the speed you are learning at is a different skill from reading it on a page, and the one you will need on the air.

On your watch face

Ham Training offers two complications, so you can put its information on the face itself and never open the app at all.

Grid

Shows the last locator the app saw, with how old that fix is. The age is deliberate. A complication cannot run GPS — the system gives it a moment to draw and expects it back — so it shows the last known square rather than pretending to be live.

The age under it now counts up on its own, so a fix never looks fresher than it is. The square itself changes when the app takes a new fix: whenever you open the Grid screen, and also while you move if you have turned on Keep Grid Current in Settings. With that switch off, the square only changes when you open the app — which is the behaviour to expect unless you deliberately ask for more. Tap the complication to open the app and take a fresh fix.

Callsign

Shows your callsign from Settings. It updates when you leave the Settings page.

Adding them

Long-press the watch face, choose Edit, then Complications, and pick Ham Training. Both appear as separate entries, so you can place one in each corner. If a complication looks unchanged after an app update, remove it and add it again — the system caches them hard.

Settings

Callsign, character speed, overall speed and sidetone pitch, plus a Dark Mode switch and Keep Grid Current. Dark uses less battery on the watch's OLED screen, and is easier on the eyes at night or in a dark shack. Keep Grid Current is off by default and is described under Your grid square. On the iPhone app there is one extra field — your email address — which is used only to fill in the Support form so a reply can reach you. It is stored on your phone and is never sent anywhere else.

On your iPhone

Ham Training also installs a companion app on your iPhone. The watch app works on its own and needs neither the phone nor the phone app — the companion is there for the things a wrist is a poor place to do.

What is on the phone

The same six pages as the watch, with room to breathe: the grid, the Morse key, phonetics, Q-codes and settings. Its About page also carries this user manual, a Support form and the version history.

Support

The Support form fills in your callsign and email from Settings, adds which iPhone and which iOS you are running, and hands the whole thing to your mail app. Sending that rather than a bare message usually saves a round of questions.

Sound

All of the audio — the sidetone, the spoken phonetics and the Q-code Morse — plays through the watch speaker or through headphones paired to the watch.

If you hear nothing

Check three things, in this order. Raise the volume using the Digital Crown while the app is open. Turn off Silent Mode, which is a separate switch from the volume. Disconnect any Bluetooth headphones paired to the watch, because the watch will send the sound there instead of to its own speaker.

The app will tell you

If the app genuinely cannot start its audio it says so: a small warning appears beside the decoded text, and the About page explains what failed. If neither is showing, the app believes sound is working and the cause is one of the three above.

Support

Email unixeer@gmail.com. Please say which watch you are using and whether the About page shows a sound warning — that answers most questions immediately.

73 de A41UX