



COMPLETE USER MANUAL · VERSION 2.0

Shot Clock

The watch app, the phone app, the web portal — and Shot Clock Diary. One book for all of it.

Everything both apps do, written for a shooter who has never used either before and who does not want to become a computer expert to run a par timer. Start at the front, or jump straight to what you need.

On your wrist Garmin & Apple Watch	In your pocket iPhone & Android	In a browser shotclock.au/portal
On the range Squad sync & hardware	After the shoot Diary, scoring & stats	For spectators Live scoreboards

Covers Shot Clock 2.0 · Shot Clock Diary · shotclock.au

Support dev@dugongtech.com

Web shotclock.au

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START HERE

Five minutes to your first timed string

You do not have to read this book to use the app. This page gets you timing; everything after it explains why, and what else there is.

FIRST — HOW TO OPEN THE MENU ON A WATCH

Two of the steps below start with **Menu**, and it is not obvious where that is if the watch is new to you:

- **Garmin** — press and hold the **UP** button (marked **MENU** on some models) while Shot Clock is open. On touchscreen watches you can instead swipe up from the bottom of the screen; a small indicator on the edge shows the menu is there.
- **Apple Watch** — **swipe right** on the main timer screen.

QUICK START

From installed to shooting

1 Install it

WATCH Garmin: the Connect IQ Store, through Garmin Connect Mobile. Apple Watch: it arrives with the iPhone app.

PHONE App Store or Google Play.

2 Pick the device you are setting up

WATCH Nothing to pick — you are on it.

PHONE Tap the gear on the bottom bar, tap the top row, and choose your watch — or **This Phone** if you have none.

3 Turn on the match you shoot

WATCH **Menu** > **Select Matches** — switch on the family, then the match inside it.

PHONE The **Sequences** tab — same two steps, then tap **Save**.

Turn everything else off: several matches reuse the same numbers for different timing.

4 Choose a sequence

WATCH On the main screen, swipe up and down, or press the Up and Down buttons.

PHONE Tap the **Timer** icon, then swipe up and down.

The big number is how long that stage runs for.

5 Set sound or vibration

WATCH **Menu** > **Sound** and **Menu** > **Vibration**.

PHONE **Timer** > **gear** > **Sound**.

Decide now, not on the firing line. Indoors, most people run vibration only.



Start it

WATCH Press the Select button, or tap the screen.

PHONE Press and hold — about half a second.

Let it run to zero and listen to what it does.

THAT IS GENUINELY ALL OF IT

Everything past this point is optional. You can shoot a whole season on what is above and never open this book again — or work through Section 9 for the same thing at walking pace, with the reasons attached.

Which kind of shooter are you?

This manual covers two apps, four kinds of device and a website. Almost nobody needs all of it. Find yourself below and skip the rest — you can always come back.

I have a Garmin watch

START AT SECTION 5

Install it, then Parts III and IV for the timer and your DOPE cards.

I have an Apple Watch

START AT SECTION 6

It arrives with the iPhone app. Then Parts III and IV.

I only want to use my phone

START AT SECTION 7

No watch needed anywhere. Then Part III.

I want to type on a real keyboard

GO TO PART V

The web portal edits your watch content in a browser.

I run matches for other people

GO TO PART VI

One clock for a whole squad, plus turning targets and range displays.

I want to record and score what I shoot

GO TO PART VII

Shot Clock Diary — the other half of the family. Separate download.

TWO BOOKS IN ONE

Parts I and II are the onboarding — read them once and you are set up. Everything from Part III on is reference: dip in when you want a feature, not cover to cover.

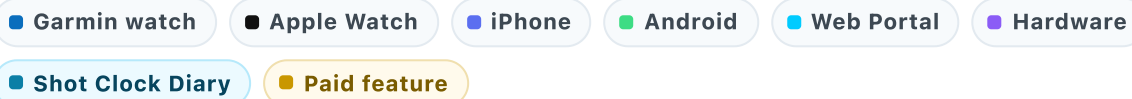
BEFORE YOU BEGIN

How to use this manual

Shot Clock runs on four different kinds of device and a website, and not every feature exists everywhere. Rather than write five manuals, this one book covers all of it and tells you, at the top of every section, exactly where that feature lives.

The coloured tags

Every section starts with a row of tags. They mean “this feature exists here”:



Where iPhone and Android behave identically — which is most of the time, on purpose — this manual just says “**the phone app**”. Where they genuinely differ, it says so.

TWO APPS, ONE BOOK

Parts I–VI are **Shot Clock**, the timer. Part VII is **Shot Clock Diary**, which records and scores what you shot. Two apps, one family, one book — most people who want one end up wanting the other.

The boxes

NOTE

A detail that is easy to miss, or a piece of background that explains why something behaves the way it does.

TIP

A shortcut, a better way of doing something, or a trick that is not obvious from looking at the screen.

WATCH OUT

Something that commonly catches people out, or an action that cannot be undone.

RANGE SAFETY

Something with real safety consequences on a live firing line. Read these ones.

ON THE LINE

A worked example

Boxes like this one put the feature into a real situation — a specific shooter, a specific match, a specific problem — and walk through exactly what they would tap. If you learn better from examples than from descriptions, read only these.

How things are written

Settings > Mode A path through menus. Each > means “then choose”.

Start

A physical button, or an on-screen button you press.

90.60.30.3

A *session string* — Shot Clock’s shorthand for a piece of timing. Section 19 teaches you to read these.

appSetNotes

Something technical you will never need to type. Safe to skip.

IF YOU READ NOTHING ELSE

Four sections will get you shooting:

- **Section 1** — what this app actually is (and what it is not).
- **Section 5, 6 or 7** — setting up whichever device you own.
- **Section 9** — your first countdown, step by step.
- **Section 47** — the one-page quick reference card. Print it.

PART I

Getting your bearings

9 MIN READ

What Shot Clock does, where it lives, what it costs, and the handful of words you need in order to follow the rest of this manual.

SECTION 1

What Shot Clock does — and what it doesn't

■ Garmin watch

■ Apple Watch

■ iPhone

■ Android

Shot Clock is a **par timer** for target shooting. You tell it which course of fire you are shooting; it counts the time for you and makes a noise at the moments that matter — the start of the string, the warnings partway through, and the end.

It has been running on Garmin watches since 2019. Version 2.0 is the biggest release since then.

NEW IN VERSION 2.0

- **The phone app** — the same timer on iPhone and Android, with or without a watch.
- **The web portal** — set everything up in a browser.
- **Squad sync** — one phone runs the clock for the whole line.
- **Range hardware** — turning targets and wall displays.
- **Shot Clock Diary** — recording and scoring, alongside the timer.

The one thing to understand first

WATCH OUT

Shot Clock does not listen for your shots. It is not a PACT-style shot timer with a microphone, and it will never tell you your split times, your first-shot time, or how many rounds you fired.

It is a *par timer*: a clock that runs a known, fixed schedule of time and beeps at the right moments — exactly like the range officer's buzzer on a firing line. If you need shot detection, this is the wrong tool.

That limitation is deliberate, and it is what makes the app useful in the places a microphone-based timer struggles: on a line with fifteen other shooters, behind hearing protection, at 300 metres, or inside a match where the official schedule — not your performance — is what has to be timed exactly.

What it actually gives you

● Nearly 90 courses of fire, already timed

23 disciplines — ISSF, Service, WA/PPC, NPA, PRS, Bullseye and Action Match — timed to the rule book, so you pick a match rather than programme one.

● On your wrist or in your pocket

The same timer on a Garmin, an Apple Watch, an iPhone or an Android phone. A watch is optional; plenty of people never use one.

● One clock for the whole line

A Match Official's phone starts and stops the timer for a whole squad or shooting detail at once, over Bluetooth. No internet, no Wi-Fi.

● It can drive your targets

Optional hardware: a Target Timer that turns physical targets and sounds a horn, and wall-mounted displays that show the countdown across the range.

● Your ballistics on your wrist

DOPE cards — your own elevation and wind holds — readable mid-string without leaving the timer.

● Alerts you can feel

Sound, vibration or both, at the start, at the end, and at every warning time the course of fire defines. Plus notes you can read on your wrist.

And because all of that rests on a programmable interval timer you are already wearing, plenty of people end up using it away from the range as well — draw practice, training sets, or a genuinely excellent egg. Section 20 shows you how to build your own.

ON THE LINE

Sarah shoots a 25 m Centrefire match

Sarah's club runs ISSF Centrefire on Saturday mornings. The duelling stage is five series of three seconds, with a seven-second turn-away between each — and the club's turning target frame has been broken for a month, so the range officer calls the times by hand and they drift.

She enables the **ISSF › Centrefire/25m Pistol** match once, selects the **5×3** sequence, and from then on her watch buzzes the exact rule-book schedule on her wrist: three seconds up, seven seconds away, five times, identical every week. She never has to count anything.

The other half: Shot Clock Diary

Shot Clock deliberately does one job. Everything *around* the shooting — what you shot, in what conditions, what you scored, how you are progressing, and what the spectators see — lives in a second app, **Shot Clock Diary**.

Separate download, separate purchase, its own data — and it stands on its own. That is the last you will hear about it until **Part VII**, which covers it in full. If you only want a timer, skip that part; nothing before it depends on Diary.

SECTION 2

Where Shot Clock lives

■ Garmin watch

■ Apple Watch

■ iPhone

■ Android

■ Web Portal

The same product exists in three forms. You do not need all three — plenty of people use only one — but they are built to work together, and knowing which one does what will save you a lot of hunting through menus.

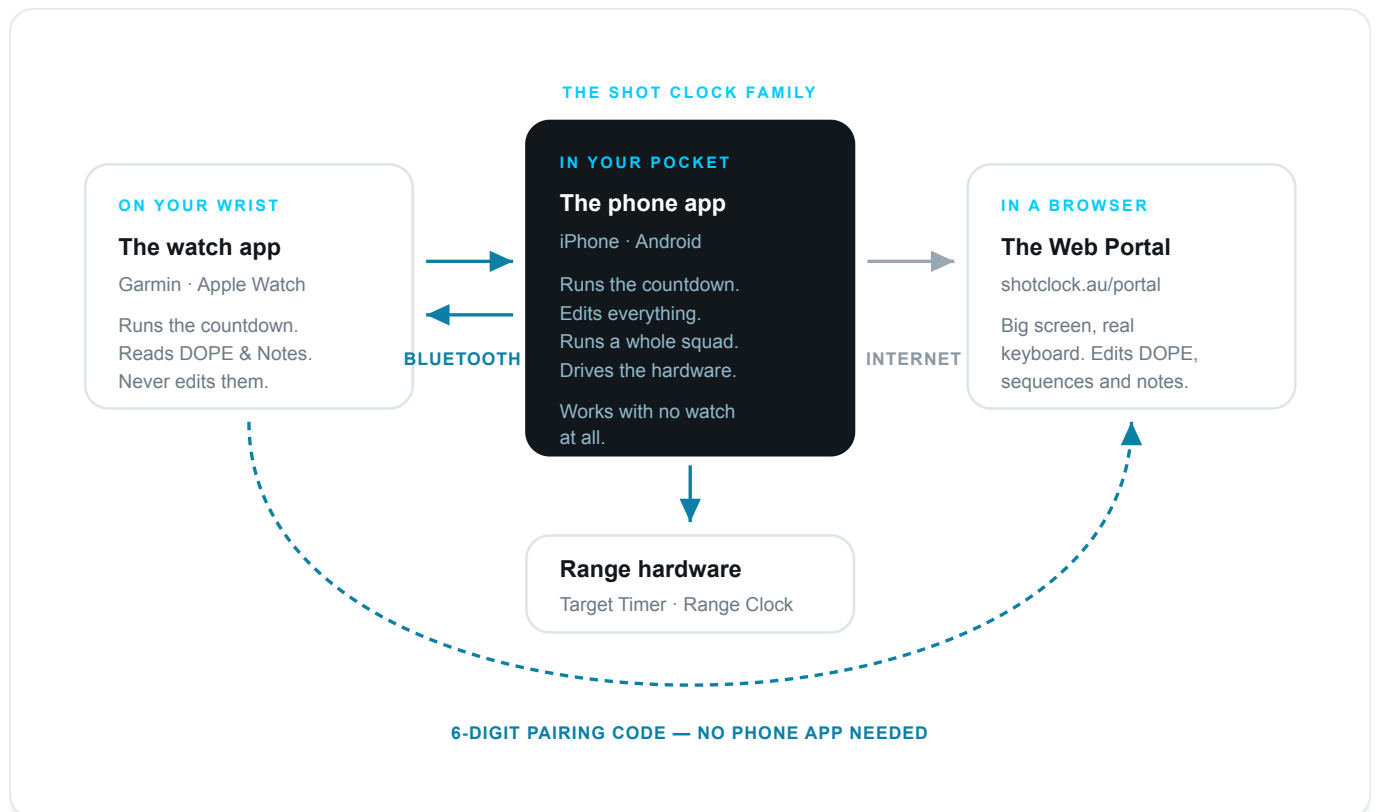


FIGURE 2.1 Three ways in. The phone is the only one that can edit *and* run everything; the watch runs and reads; the Portal edits only.

Which one should I use?

IF YOU...	USE	BECAUSE
own a Garmin or Apple Watch and nothing else	Watch + Web Portal	The watch runs everything you need on the line. When you want to type DOPE numbers, use the Portal on a laptop — no phone app required.
own a watch <i>and</i> a phone	Watch + phone app	Editing over Bluetooth from the phone is the fastest setup there is, and it works with no internet at all.
own no watch	Phone app alone	Fully self-contained. Clamp it to a post or prop it on the bench — the timer screen is designed to be read from a distance.
run matches for other people	Phone app, Match Official Mode	Squad sync, target hardware and wall displays are all phone-side features.

GOOD TO KNOW

The Garmin watch app is the original and is still the reference: when any two of these disagree about how a countdown should behave, the Garmin behaviour is the one that is correct and the others get fixed to match it.

SECTION 3

What you have to buy

■ Garmin watch

■ iPhone

■ Android

■ Paid feature

There are five possible purchases across the two apps, and every one of them is genuinely independent. Buying one never gives you another. Most people buy one or two of these and never think about the rest.

WHAT	WHERE YOU BUY IT	SHAPE	WHAT IT UNLOCKS
The Garmin watch app	Garmin Connect IQ Store	One-off purchase	The whole watch app, permanently — no subscription.
The phone Timer	App Store / Google Play	Subscription (monthly or annual)	The countdown timer on the phone itself.
Match Official Mode	App Store / Google Play	One-off purchase	Squad sync as MASTER, Target Timer and Range Clock control.
Shot Clock Diary (separate app)	App Store / Google Play	Free trial, then a subscription	The session journal, scorecards, statistics and export.
Diary's Match Official Mode	App Store / Google Play	One-off purchase	Multi-Bay scoring, Match Report and Live Scoring. Separate from Shot Clock's own Match Official purchase.

What is free

- **The phone app's editors.** Sequences, DOPE Cards and Notes — and syncing them to a watch you already own — cost nothing. If you bought the Garmin app, the phone app is simply a much nicer way to configure it.

- **The Web Portal.** Free, no account, no sign-up.
- **Joining somebody else's squad.** If a Match Official wants to drive your timer over RangeLink, you can join for free. Only the person *running* the squad needs to have bought Match Official Mode.

Trying before you buy

The Garmin store carries two listings of the watch app: a free **trial** listing that runs for 30 days from the day you first open it, and a **paid** listing you buy up front. They behave identically. When the trial runs out, the app stops at a splash screen instead of the watch face.

WATCH OUT — THE TWO LISTINGS ARE SEPARATE APPS

The trial and the paid version are two **independent** Connect IQ apps. Buying the paid one does not upgrade the trial — it installs alongside it, with its own icon and its own storage.

Nothing carries across on its own. Your enabled matches, edited sequences, DOPE cards, notes and every setting stay with the trial app. Open the paid app for the first time and it is a fresh install.

MOVING YOUR SETUP FROM THE TRIAL TO THE PAID APP

There is one way that works, and one that looks like it should but does not.

Use the phone app. Its Backup & Restore keeps its snapshot on the *phone*, filed under “Garmin”, so it does not care which of the two watch apps it came from:

1. Open the **trial** app on the watch and let the phone finish syncing (Section 23).
2. On the phone: **Settings** > **Backup & Restore** > **Back Up**.
3. Install the paid app and open **it** on the watch instead.
4. On the phone, **Restore** from the Garmin row, check the draft, and **Save**.

That carries your sequences, DOPE cards and notes. It does not carry your timer settings — sound, vibration, gestures, Plus Mode, Time Slice, count direction — which are a couple of minutes to set again. Section 43 lists them all in one table.

WHAT WILL NOT WORK

The watch's own **Manage Customisations** > **Backup** is filed against a fingerprint of **this watch and this app together**, so the paid app cannot see a backup the trial app made, even on the same watch. That one is for surviving a reinstall of the same app, nothing more — and it is being retired in a future version anyway. If you have no phone app, budget for typing your content in again — or copy it across through the Web Portal with two browser tabs open, one session per app.

NOTE

The trial clock starts on first launch and is tracked against your watch by our server, not by the watch alone — so uninstalling and reinstalling the trial does not give you another 30 days.

WATCH OUT

Prices and availability differ by store and by country, and the phone-side purchases were introduced with version 2.0 — on some platforms they may still be rolling out. Whatever the app shows you at the moment of purchase is what applies.

SECTION 4

The words this manual uses

Shot Clock organises time in four nested levels. Almost every confusing screen in the app makes sense the moment these four are clear, so it is worth two minutes.

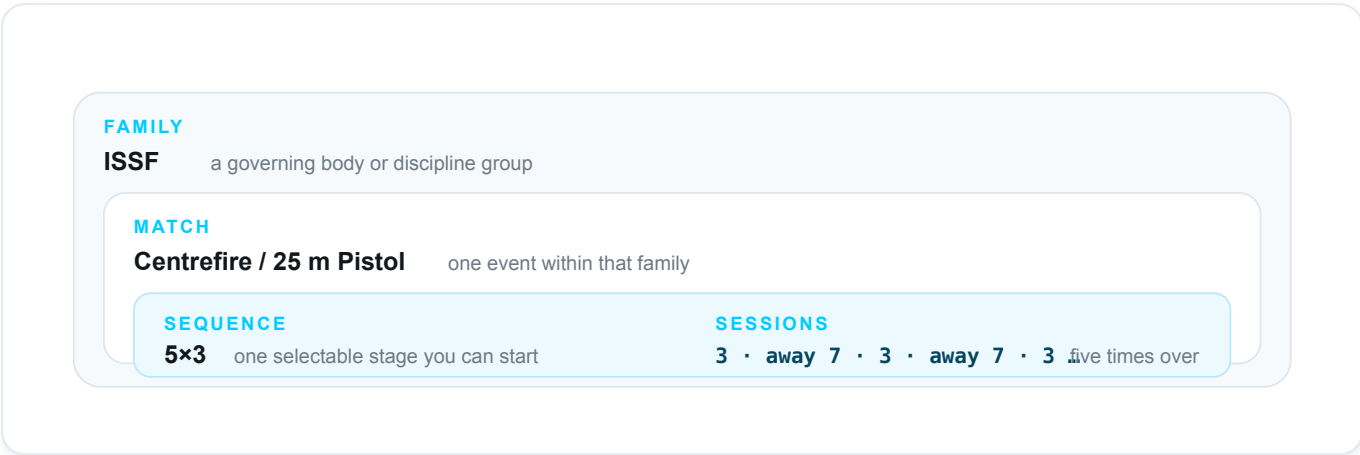


FIGURE 4.1 Family → match → sequence → sessions. You pick a family and a match once; you pick a sequence on the line; the app runs the sessions.

Family	A group of related matches — <i>ISSF, Service, WA/PPC, NPA, Precision Rifle, Action Match, Bullseye, Custom Times</i> . Turning a family off hides all of its matches at once.
Match	One event inside a family, e.g. <i>Rapid Fire</i> or <i>WA1500</i> . You enable the matches you actually shoot; everything else stays out of your way.
Sequence	One stage you can select and start — <i>5x3, 165 sec, 20 sec</i> . This is the thing you scroll through on the watch face.
Session	One continuous block of time inside a sequence. A simple sequence has one session; a duelling sequence has many, running back to back automatically.
String	Shooter’s word for one run of a sequence. Not an app term — but it is what the workout log calls each one.
Session string	The written shorthand for a sequence’s timing, like 90.60.30.3 . Section 19 teaches you to read and write these.
DOPE card	“Data On Previous Engagement” — your own table of elevation and wind corrections at different distances.
Active device	On the phone, the one watch (or the phone itself) that your edits currently belong to. Section 8 explains why this matters more than it sounds like it should.

Match Official	The person running the shoot. Also the name of the app mode they switch into. Older screens and some clubs call this the Range Officer or RO.
MASTER / SLAVE	In squad sync, the one device driving the clock (MASTER) and the devices following it (SLAVEs).
Callsign	A two-word name your device picks for itself — "Silent Falcon" — used so a Match Official can identify you in a squad list.
Bay	One firing position at a range.
Squad	The group of shooters on the line together. Depending on the discipline your club may call it a shooting detail, a relay or a squad — this manual says <i>squad</i> throughout and means whichever yours uses.

PART II

Your first hour 9 MIN READ

Install it, connect it, and run a countdown. Read only the setup section for the device you actually own — then everybody meets again at Section 9.

SECTION 5

Setting up on a Garmin watch

■ Garmin watch

Shot Clock is a Connect IQ app. It installs the same way any other Garmin watch app does — through the Garmin Connect Mobile app on your phone, not on the watch itself.

- 1 Install Garmin Connect Mobile and pair your watch.**
If your watch already syncs steps and workouts to your phone, this is done.
- 2 Open the Connect IQ Store.**
It lives inside Garmin Connect Mobile on some phones and is a separate app on others. Search it for *Shot Clock*.
- 3 Choose the trial or the paid listing.**
Two listings exist (Section 3). They behave identically and the free one stops after 30 days — but they are **separate apps** that share no data, so if you think you will buy, read Section 3 before you start building anything in the trial.
- 4 Install to your watch and wait.**
The transfer happens over Bluetooth on Garmin's schedule and can take a few minutes. The app appears in your watch's app list — not on the watch face.

Open Shot Clock on the watch.

The first screen you see is the main screen: a big number, the name of a sequence, and a ring of small setting indicators around the edge.

To reach the app's own menu from here, **press and hold the UP button** — marked **MENU** on some models. On touchscreen watches you can instead swipe up from the bottom of the screen. Everything in the table below lives behind that one press.

NOTE

Older and cheaper Garmin models cannot run the full feature set. Watches without Garmin's newer text rendering — the Fenix 6 generation and similar — get the timer, the matches and the settings, but **not** DOPE Cards, Notes, or the Portal. This is a hardware limit, not a licence one, and there is nothing to switch on. Everything in Parts III and VI still works.

Two places Garmin settings live

This trips up almost everybody, so it is worth being blunt about it. There are two completely different settings screens for the Garmin app.

WHERE	HOW TO REACH IT	WHAT IS IN IT
On the watch	Open Shot Clock, then press the  button (or swipe to the action menu on a touchscreen)	Everything you change often: which matches are enabled, sound, vibration, gestures, Plus Mode, Time Slice, count direction, DOPE Cards, Notes, Portal, Target Timer, backup.
In Garmin Connect Mobile	Connect IQ > My Device > Shot Clock > Settings	Only the raw timing text for each sequence, and per-family on/off switches. Useful in a pinch; unpleasant to use.

TIP

Garmin Connect Mobile's settings screen is generic — Garmin built it, not us, and it shows every sequence in a flat list of text boxes. The phone app (Section 7) and the Web Portal (Part V) both exist specifically so you never have to use it.



SCREENSHOT SCR-01

Garmin main screen, fresh install

Connect IQ simulator or a real Fenix/Forerunner. Show the default GP Timer sequence with the setting indicators visible around the bezel.

SECTION 6

Setting up on an Apple Watch

■ Apple Watch

■ iPhone

The Apple Watch app comes with the iPhone app. There is no separate purchase and no pairing step inside Shot Clock itself — Apple's own Watch app handles all of it.

1 **Install Shot Clock on your iPhone**
from the App Store.

2 **Open the Watch app on your iPhone**
and scroll to **Available Apps**. Tap **Install** next to Shot Clock. If you have automatic app install turned on, it may already be there.

3 **Open Shot Clock on the watch.**
You get the same main screen the Garmin app has: a large number, the sequence name, and swipe navigation.

Swipe right from that screen to open the app's menu — that is where Select Matches, Notes, Portal and the settings live.

4 **Allow the permission prompts.**
The watch app asks for Health access the first time you run a countdown. Section 17 explains exactly why a timer needs it — the short version is that it is the only way Apple lets an app keep the screen awake through a stage.

NOTE

Because your iPhone and Apple Watch are paired by the system, the phone app and the watch app talk to each other automatically. There is no code to enter, nothing to scan, and no "connect" button anywhere — edits you save on the phone simply appear.

TURN ON PROMINENT HAPTIC

Do this before your first match. On the watch, open **Settings › Sounds & Haptics** and turn **Prominent Haptic** on. It adds an extra, stronger pulse to alerts.

Shot Clock already uses the strongest haptic Apple makes available to an app, and on the watch there is no way for an app to go louder than that — unlike a Garmin, where the app sets the vibration strength itself. Prominent Haptic is the one lever *you* hold, and shooters have reported it makes the difference between feeling a start signal through a jacket sleeve and missing it.

Two things on the same screen are worth a glance while you are there. **Silent Mode** does not disable haptics, so leaving it on is fine and keeps the watch quiet on the line. But if **Haptic Strength** is turned down, alerts are weaker — put it at maximum.

SECTION 7

Setting up the phone app

■ iPhone

■ Android

The phone app has two jobs, and it is worth knowing which one you are using it for, because the answer changes what you should set up first.

■ As a companion

A comfortable way to configure a watch you already own. Typing DOPE numbers on a phone beats poking at a watch bezel by a distance.

■ As the timer itself

A complete par timer with no watch involved. Most shooters already carry a phone; a capable watch is a much larger purchase.

The layout, in one picture

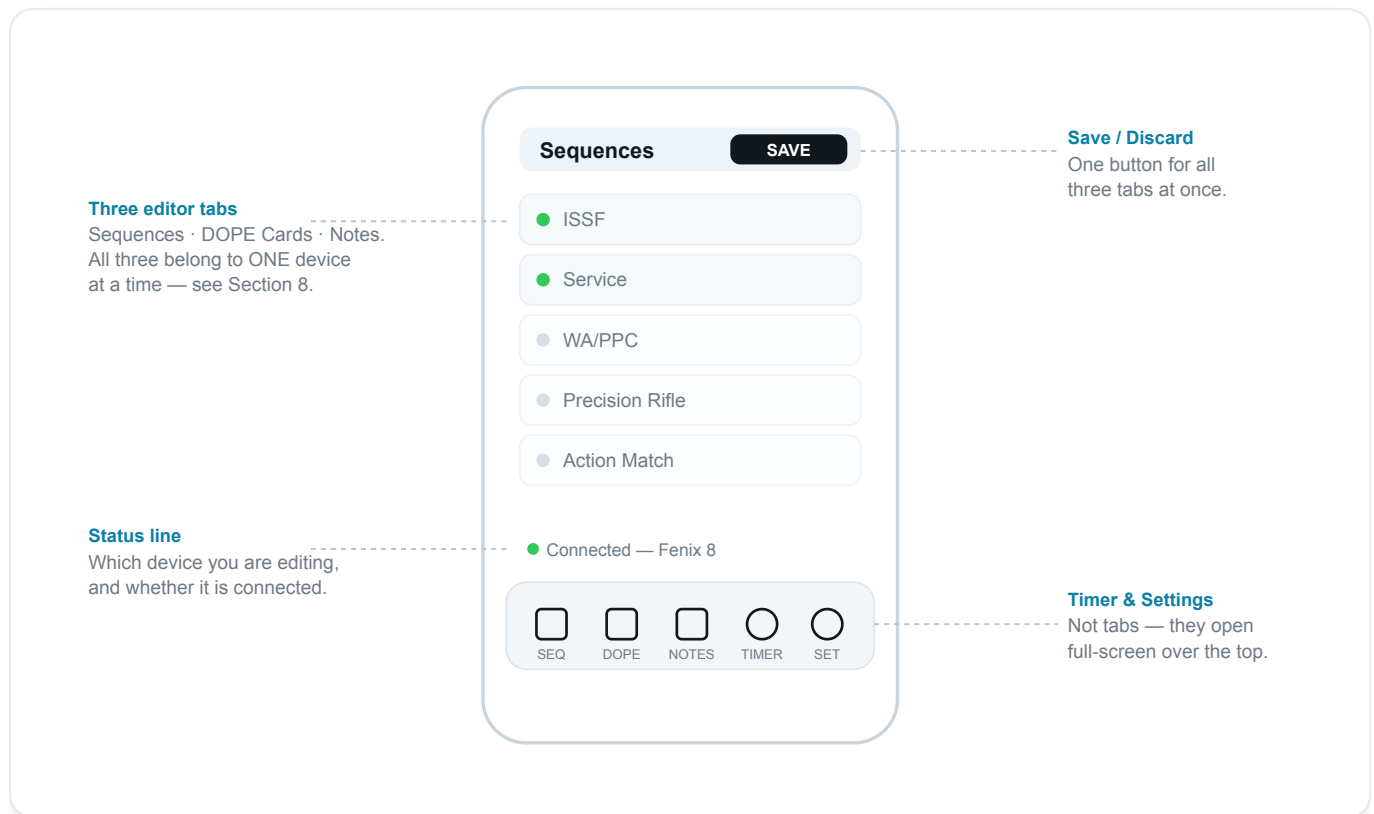


FIGURE 7.1 The phone app's home screen. Three tabs that edit content, plus two buttons that open whole separate screens.

First-run checklist

- 1 Install and open the app.**
You land on the Sequences tab.
- 2 Grant Bluetooth permission when asked.**
On Android this is called "Nearby devices". Without it, squad sync and hardware control cannot work at all. You can decline if you will never use them.
- 3 Pick your active device.**
Tap the **Settings** gear on the bottom bar. The top row shows a device name and a coloured dot. Tap it and choose from the list — your Apple Watch, a Garmin watch, or the phone itself. Section 8 explains this properly. *Do this before you edit anything.*
- 4 Enable the matches you shoot.**
On the Sequences tab, switch on the families and matches you actually use. Everything else stays hidden, so scrolling through sequences on the line stays short.

5

Tap Save.

Nothing you have changed has reached a watch yet. Section 23 explains why, and why that is a good thing.

COMMON MISTAKE — GARMIN OWNERS

For the phone to sync with a Garmin watch, **Shot Clock has to actually be the app open on the watch's screen.** A watch that is paired, charged and sitting on the desk showing its watch face will report as *not connected*, even though Garmin Connect Mobile shows it as connected perfectly happily.

If a sync looks stuck, look at the watch before you look at anything else. This is the single most common support question we get.

Recommended setup for best performance

A handful of settings live outside Shot Clock entirely — in the watch's own system settings, or in a permission prompt — and getting them right up front is the difference between the app working and it working *well* on a live line. Nothing below is required; every one of these has a working default.

PLATFORM	SETTING	WHY IT MATTERS
Garmin watch	Always-On Display (the watch's own system setting, usually Settings ▶ System ▶ Backlight)	Shot Clock's backlight ramp (Section 13) dims the screen between alerts rather than switching it off, but it can only ramp a screen the watch hasn't already put to sleep on its own. With Always-On left off, the watch's own timeout can black the screen out mid-stage regardless of what Shot Clock is doing.
Garmin & Apple Watch	Touch Guard, switched on Menu ▶ Controls ▶ Touch Guard	See Section 11. Requires two taps instead of one to start or stop — cheap insurance against a stray touch during a stage, on either watch.
Apple Watch	Allow the Health permission prompt the first time you run a countdown	The only mechanism Apple gives an app to keep the screen alive and running through a whole stage (Section 17). Decline it and the watch can drop back to its watch face part-way through a long string.
Apple Watch	Auto-Lock While Running, switched on Menu ▶ Auto-Lock While Running	See Section 11. Locks the start/stop gesture automatically for the exact window there is something running to protect, without you having to remember to lock it yourself.
iPhone & Android	Grant Bluetooth permission on first launch	Needed for talking to a Garmin or Apple Watch at all, plus RangeLink, Target Timer and Range Clock. Only decline it if you are certain you will use the phone app on its own.
Android	A generous screen timeout in Android's own display settings	Unlike iPhone, Android's own screen timeout still applies while a sequence is running (Section 13) — worth lengthening if you prop the phone on a bench for a long stage.

TIP

Do this once, on each device, before your first real session — not on the line the first time something surprises you. Every row above is a system or permission setting, not a Shot Clock setting, which is exactly why it is easy to miss.

SECTION 8

Choosing your active device

■ iPhone

■ Android

This is the one idea in the phone app that is worth understanding properly, because getting it wrong looks like data loss even though nothing has been lost.

The phone keeps **one working copy** of your Sequences, DOPE Cards and Notes at a time — the copy belonging to whichever device is currently *active*. It is not a shared library that gets pushed everywhere. If you own a Garmin and an Apple Watch, they each have their own set, and switching between them swaps the editors over completely.

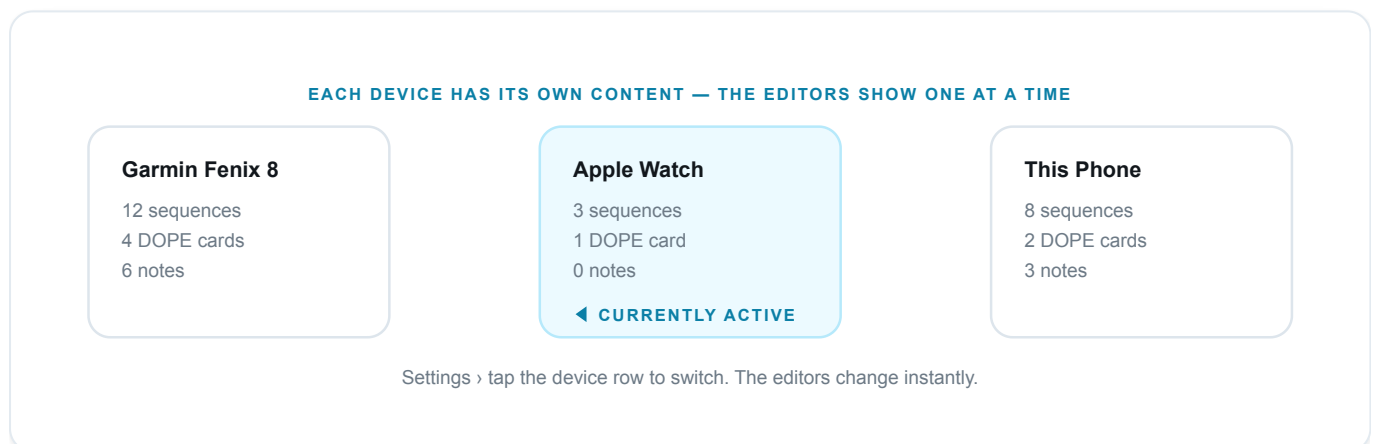


FIGURE 8.1 Switching the active device is not a merge. It is a swap.

Where to see it, and where to change it

- **To see it:** the small status line at the very bottom of the screen, under the tab icons. A green dot means connected, red means not, and “Connecting...” means a sync is running. The device name is next to it.
- **To change it:** **Settings** › **the top row**. Tap it and pick from “Switch to which device?”.
- **To add a Garmin watch:** the same list. **Pair a Garmin Watch** at the bottom of it is the only way in — there is no “Add device” button anywhere else. It hands off to Garmin Connect Mobile.

“This Phone” — the device with no watch

If you have no watch, or want a set of sequences that never leaves your pocket, choose **This Phone**. It behaves exactly like a watch as far as the editors are concerned, except it is always connected and nothing is ever transmitted.

ON THE LINE

Dave thinks his DOPE cards have vanished

Dave built four detailed DOPE cards on his phone while his Garmin was connected. A week later he pairs an Apple Watch to try it out, opens the DOPE Cards tab — and it is empty. He assumes an update wiped his data.

Nothing was lost. The active device changed to the Apple Watch, which has never had any cards, so the editor is correctly showing that device’s (empty) set. The fix is either to switch the active device back to the Garmin, or — better — use **Backup & Restore** to copy the Garmin set onto the Apple Watch as well. Section 24 shows exactly how.

TIP

Glance at the status line before you start editing. It is the one place in the app that always tells you, without opening anything, who you are currently talking to.

SECTION 9

Your first countdown

☒ Garmin watch ☒ Apple Watch ☒ iPhone ☒ Android

Everything below happens on the device itself. You do not need to have configured anything yet — a fresh install can run a countdown in about fifteen seconds.

On a watch

- 1 Open Shot Clock.**
The main screen shows one big number — that is the length of the currently selected sequence — with the match name above it and a stage label below.
- 2 Swipe up or down (or press the Up/Down buttons) to change sequence.**
The number changes as you scroll. Stop on something short, like a 5 or a 20, for your first try.

3 Press — the big button — or tap the screen.

You hear/feel the start alert, the display switches to the running countdown, and the number starts falling.

4 Let it run out.

At zero you get the stop alert and the timer resets itself, ready to go again.

5 Press again mid-run to stop early.

Press  to return to the main screen — that also resets the clock.

On a phone

1 Tap the Timer icon on the bottom bar.

The app goes full-screen and black. The bottom bar and the editor tabs disappear entirely — this is a distraction-free mode of its own.

2 Swipe up or down to choose a sequence.

Same list as the watch.

3 Tap to start.

The screen flashes green when it takes, and the button itself tells you which it wants — it reads *Tap to Start* normally, or *Hold to Start* if you have switched Touch Guard on for starts (see below).

4 Tap again to stop

, and the screen flashes red.

WHY HOLD INSTEAD OF TAP?

A stray tap starting the clock matters far more on a phone than on a watch — the phone is what is clamped to a post or lying on the bench, and if you happen to be running a squad over RangeLink, your Start press fires everybody's timer at once. The hold is a guard, not an annoyance.

ON THE LINE

A five-minute practice drill, day one

1. Open the app and scroll to the **GP Timer** sequence — the plain count-*up* stopwatch that ships enabled by default. Start it, dry-fire a few presentations, then stop it. You have just learned the controls without having to think about a course of fire.
2. Scroll to a **20 sec** sequence and run it right through without shooting. *Let it run to zero rather than stopping it.* You get a warning alert partway down — the **progress alert** — and another as it hits zero — the warnings are what GP Timer does not have.
3. Run the same sequence again and stop it halfway with the button. Notice it goes quiet — the end-of-stage alert belongs to the clock reaching zero, not to you pressing stop.
4. Now go and enable the matches you actually shoot (Section 12) so those are the only ones in your scroll list next weekend.



SCREENSHOT SCR-02 · THREE-UP

The same countdown running on watch, iPhone and Android

Capture all three mid-run on the same sequence (suggest ISSF 5×3, caught during a shooting phase) so the family resemblance is obvious. Portrait, matching crop.

PART III

The Timer

17 MIN READ

The countdown itself: how to read it, how to drive it, and every option that changes what it does. This is the part of the app you will actually use on a firing line.

SECTION 10

Anatomy of the screens

■ Garmin watch

■ Apple Watch

■ iPhone

■ Android

There are only two screens that matter: the one you look at *before* a string, and the one you look at *during* it. They are the same on every device, give or take the shape of the screen.

The main screen (before the string)



FIGURE 10.1 The watch main screen. The phone shows the same three pieces of text, much larger, on a black background.

The running screen (during the string)

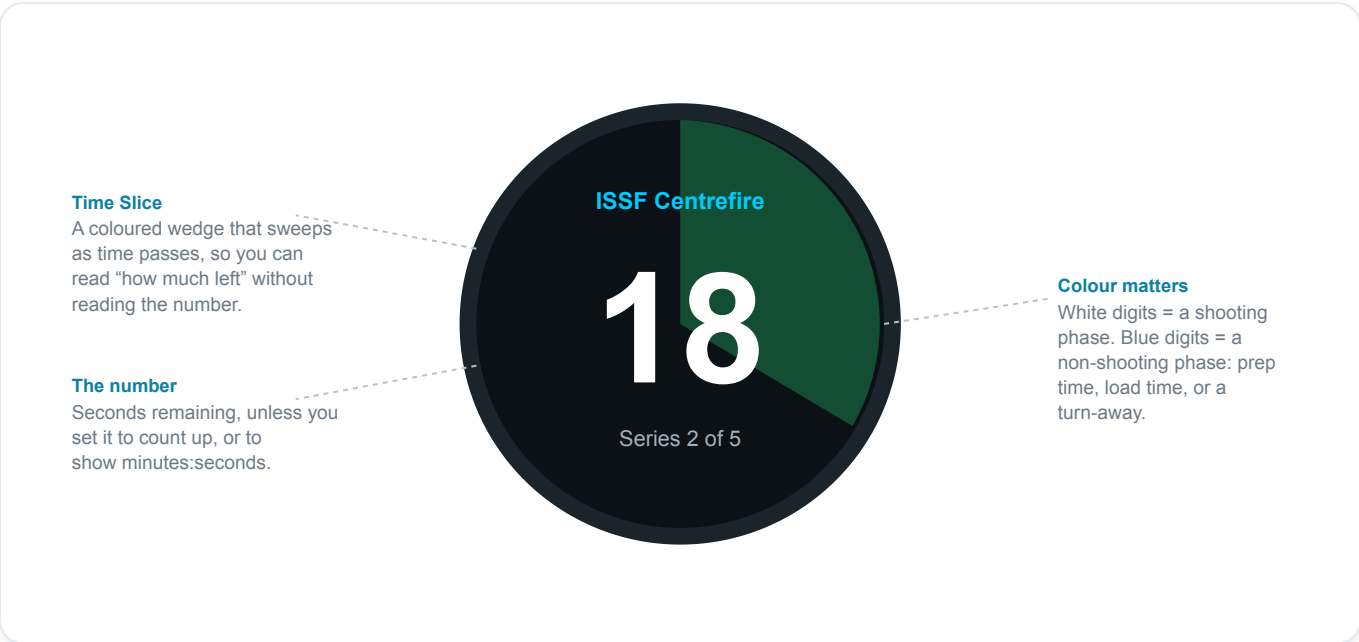


FIGURE 10.2 The running countdown. On the phone this fills the whole screen and rotates with the device.

The same two screens, on the watch itself



Idle

Match name, sequence, stage label, and your settings around the edge.



Running

The number, and the Time Slice wedge sweeping behind it.

THE SYMBOLS AROUND THE EDGE (APPLE WATCH)

The Apple Watch main screen shows your settings around the edges as small symbols rather than words, so they stay readable without crowding the number in the middle. Each has **ON** or **OFF** beside it — white when on, red when off.

SYMBOL	WHERE	WHAT IT MEANS
A sound wave	Left edge	Vibration — whether the watch buzzes at the start and end of a stage.
A speaker	Left edge	Sound — whether the watch beeps as well as buzzes.
A gyroscope, drawn as a circle with crossed rings	Right edge	Gesture — whether a double roll of the wrist starts the timer hands-free.
A hand	Right edge, above the gyroscope	Touch guard — whether the screen needs a firm press rather than a light tap, so a sleeve cannot start a stage.
A target	Top centre, level with the battery and the time	Target Timer — grey once paired, blue once connected, and red once armed . Press and hold it to arm or disarm.

The symbols on the left and right edges are turned on their sides to match the text beside them, so each edge reads in a single direction.

The phone timer screen, specifically

Tapping the Timer icon on the phone's bottom bar opens a full-screen mode of its own. A few things about it are worth knowing before you are standing on a line trying to find them:

Top-row icons	Sound, vibration and Competition Mode indicators. They are status only — tapping them does nothing.
The gear icon	Next to those icons. This opens a second, separate settings screen specific to the Timer — not the same one behind the bottom bar's gear. Almost everything in Sections 13–15 lives here, along with squad sync and hardware. Section 43 lays out which settings are on which screen.
Swipe up / down	Change sequence, exactly as on the watch.
Swipe left	Your active DOPE card, readable mid-string. Swipe back to return.

Colour flash	Green fills the screen on start, red on stop. It is there so that in bright sunlight, with ear defenders on, you still know the press registered.
Rotation	The live screens rotate with the phone, so you can lay it on its side on a bench or a tripod. Menu screens stay portrait on purpose.



SCREENSHOT SCR-03 · ANNOTATED

Phone Timer pre-start screen

iPhone, portrait, Timer open and idle. Needs the top status icons and the gear visible.
Annotate over the capture with the five callouts above.

SECTION 11

Starting and stopping

- Garmin watch
- Apple Watch
- iPhone
- Android

There are four ways to start a countdown, and three separate guards against starting one by accident. Which ones you want depends entirely on what you shoot.

WAY IN	WHERE	BEST FOR
Press the Select button	Garmin	The default. Reliable with gloves, no screen needed.
Tap the screen	Garmin (touch models), Apple Watch	Quick, but easy to trigger by accident — see the guards below.
Press and hold	Phone, Apple Watch	The phone's only start method. About 0.6 seconds.
Double wrist-roll	Garmin, Apple Watch	Starting the clock without touching anything — hands on the firearm.

The wrist-roll gesture

Turn on [Menu](#) > [Controls](#) > [Use Gestures](#) (Garmin) or the equivalent watch setting, and a quick **flick of the wrist out and back, twice**, starts the timer. You will feel three short confirmation clicks when it is recognised.

Sensitivity has three levels — **Low, Medium, High** — and tapping the setting cycles through Off → Low → Medium → High → Off. Start on Medium.

NOTE

The detector works out which way “down” is by watching your wrist while it is still, so it works just as well with the watch rotated inboard for a firing grip as it does worn normally. It also compensates the countdown for the time the flick itself took, so a gesture-started clock is not silently a fraction of a second long.

The four accident guards

Touch Guard

Controls > **Touch Guard** on **all four** — Garmin, Apple Watch, iPhone and Android. Four settings, the same everywhere: **Off**, **Start Only**, **Stop Only**, or **Start & Stop**. A guarded action needs a deliberate press of about two-thirds of a second instead of a tap; an unguarded one takes a tap. On Garmin it only appears when touch is enabled.

Start Only is worth considering on a live range, and it is not the obvious choice: an accidental *stop* mid-string is the costly mistake, while an accidental start merely needs a reset. Guarding stop but leaving start instant is a perfectly sensible way round.

It ships **Off** on the phones, so both start and stop are a single tap until you decide otherwise. The button always says which it expects.

Screen lock

Apple Watch only. While a run is in progress, a small padlock badge appears. Long-press it to lock and unlock. Locking blocks the start/stop gesture but deliberately leaves swiping alone — it protects against an accidental *stop*, not against changing screens.

Auto-Lock While Running

Apple Watch only. **Menu** > **Controls** > **Auto-Lock While Running**. A stronger, automatic version of the screen lock above — it engages the moment a stage starts and clears the moment it resets, ignoring every gesture except a long-press on the lock icon, rather than waiting for you to lock it yourself.

Stopping, resuming and resetting

- **Stop:** the same press that started it. The clock holds where it is, silently — see the note below.
- **Resume:** press again. It carries on from where it stopped.

- **Reset:** press [Back](#) (watch) or swipe back to the main screen. Backing out always resets — the clock will never be sitting half-finished when you return to it.
- **Finished naturally:** at the end of the last session the app fires the stop alert and resets itself. You do not have to do anything.

NOTE

Stopping the clock yourself makes no sound and no buzz. The end-of-stage alert is tied to the countdown reaching zero, not to the button — so on a live line, an alert always means something about the course of fire rather than something about whoever is holding the timer. Section 15 covers all three alerts.

GOOD TO KNOW

If you are a squad member being driven by somebody else's phone over RangeLink, your screen goes grey with a *"Controlled by the Match Official"* banner and your own start, stop and sequence-change controls are disabled. That is correct — somebody else is driving. Section 31 covers how to leave.

SECTION 12

Choosing what to run

[Garmin watch](#)
[Apple Watch](#)
[iPhone](#)
[Android](#)

Out of the box, only a handful of matches are enabled. That is on purpose: the scroll list on the main screen contains every sequence from every enabled match, and you want it short.

Enabling matches

1 Open Select Matches.

Garmin: [Menu](#) > [Select Matches](#)

Apple Watch: [Menu](#) > [Select Matches](#)

Phone: the [Sequences tab](#), or [Timer](#) > [gear](#) > [Select Matches](#)

2 Pick a family first.

ISSF, Service, WA/PPC, NPA, Precision Rifle, Action Match, Bullseye, Custom Times. A green dot marks a family that is switched on.

3 Then tick the individual matches inside it.

This is a multi-select list — tick as many as you like.

4 Back out.

The main screen's scroll list is rebuilt immediately.

NOTE

Only *enabled* families appear in the match picker. If a match you want is missing, the family it belongs to is switched off — turn the family on first.



SCREENSHOT SCR-05

Select Matches — family list and match list

Phone, Sequences tab. Show a family expanded with a couple of matches ticked and the rest off.

Selecting a sequence on the line

Swipe up/down, or press Up/Down. The list wraps around, so scrolling past the end brings you back to the start. Your position is remembered when you close the app, so the sequence you shot last is still there next time.

COMPETITION TIP — ENABLE ONE MATCH AT A TIME

The strongest habit you can build with this app is to keep **exactly one match enabled**: the one you are about to shoot. Turn it on before the relay, turn the last one off. It takes about ten seconds.

The reason is that **different matches reuse the same big number for genuinely different timing**. The number on the watch face is the sequence's display text, not its behaviour — and several disciplines have landed on the same round figures. Enable four matches and your scroll list can contain four entries that all just say **20**, and none of them run the same way.

20	ISSF · Standard Pistol	Twenty seconds, no warnings at all .
20.3	Bullseye · Action Match Short Course	Twenty seconds, one warning with three left.
20.10.3	WA/PPC · WA1500, WA48, WA60	Twenty seconds, warnings at ten <i>and</i> three.
#-60:-7:20	ISSF · Standard Pistol	A 60-second load and a 7-second turn-away before the twenty seconds even start.

Pick the last one by mistake and you stand there for over a minute wondering why nothing has happened. Pick the first one when you expected the third and you get no warning before the stage ends.

5x3 has the same problem in a nastier form: ISSF and Service run it with **seven-second** turn-aways, NPA Super Magnum with **five-second** ones. Same three characters on screen, different rhythm.

WATCH OUT

The match name above the number and the stage label below it are what tell these apart — but **the stage label is often blank**, so on some pairs the match name is the only thing that differs. That is a lot to read carefully with a range officer counting you down. Far easier to make sure the wrong one is not in the list at all.

ON THE LINE

Priya sets up for a WA1500 shoot

Priya shoots WA1500 and nothing else. She enables the **WA/PPC** family and, inside it, only the **WA1500** match. Her main screen scroll list is now exactly five entries long — 12, 20, 35, 90 and 165 seconds — matching the five stages of the course of fire in order.

On the day, she starts on 12, shoots, swipes once to 20 for the next stage, and so on down the line. No hunting, no scrolling past ninety irrelevant sequences.

Her club also shoots Bullseye on Wednesdays, and she used to leave both matches enabled. She stopped after scrolling onto Bullseye's 20 instead of WA1500's during a match — the number looked right, and the three-second warning she was waiting for at ten seconds never came. Now she switches the match over between disciplines and leaves nothing else on.

TIP

The default **GP Timer** sequence is a plain count-up stopwatch and is always available. It is the one exception worth leaving enabled alongside your match — it is genuinely useful for dry-fire and for timing anything that is not a formal course of fire — though if you time the same thing often, give it a Custom Time slot of its own instead (Section 20). Its display text cannot be confused with anything else. It has no warning times and no end, so once it starts it stays silent until you stop it; that is the point of it.

SECTION 13

Reading the display

■ Garmin watch

■ Apple Watch

■ iPhone

■ Android

Count Direction

Menu > **Display & Alerts** > **Count Direction** — **Down** (the default) or **Up**. Down shows the seconds remaining; Up shows the seconds elapsed. It changes only what you see; the alerts fire at exactly the same moments either way.

NOTE

Your setting applies to every phase of every sequence, including load phases, turn-aways and Plus Mode lead-ins. Only one built-in sequence overrides it: the **GP Timer** stopwatch, which always counts up because a stopwatch that counted down from 9,999 would be useless. Nothing else in the library does, and a load phase is not an exception — it counts the same way as everything else you shoot.

Display Timer In

Menu > **Display & Alerts** > **Display Timer In** — **Seconds** (the default) or **Minutes**. Seconds shows **165** ; Minutes shows **2:45** . For long precision-rifle or bullseye stages, Minutes is much easier to read at a glance; for anything under a minute, Seconds is better.

Time Slice — the coloured sweep

Time Slice draws a coloured wedge behind the number that grows or shrinks as time passes. It is a peripheral-vision cue: you can tell roughly how much time is left without focusing on the digits at all.

SETTING	OPTIONS	WHAT IT DOES
Time Slice	Off · Build Up · Tear Down	<i>Build Up</i> starts empty and fills clockwise as time is used. <i>Tear Down</i> starts as a full circle and retreats to nothing. Tapping the setting cycles through all three.
Mode	Next Alert · End Time	What the wedge measures against. <i>Next Alert</i> resets the sweep at each warning time, so it shows progress toward the next one. <i>End Time</i> sweeps once across the whole session.

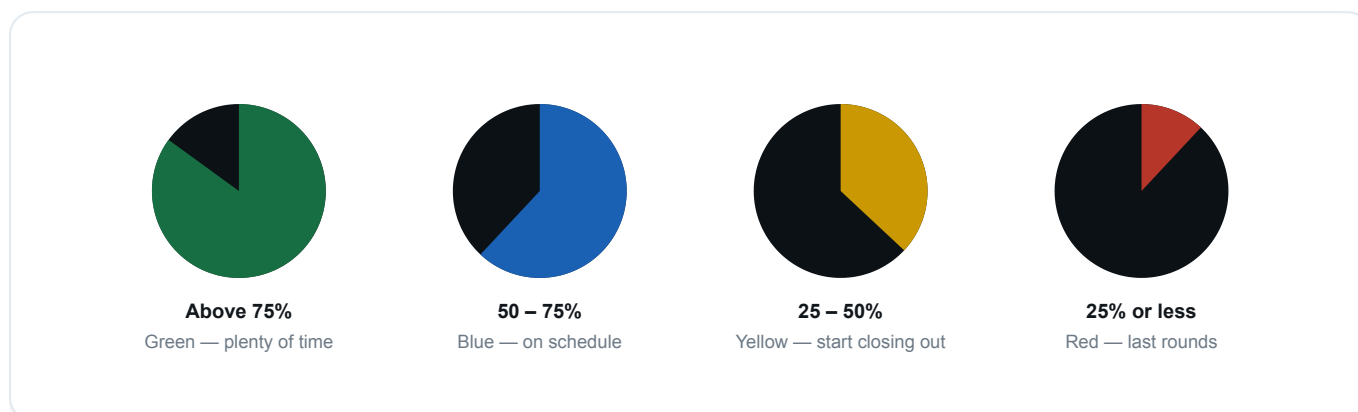


FIGURE 13.1 Time Slice colours by time remaining, shown here in Tear Down mode where the wedge shrinks away as the phase runs out. The sweep updates five times a second, so it moves smoothly rather than jumping once a second.

THE LAST FEW SECONDS ARE ONE UNBROKEN SWEEP

In *Next Alert* mode the wedge does not restart for a final warning of seven seconds or less — the 3-second warning on most matches, the 5-second one on a PRS stage. That last warning is not telling you to change position or start a new string; it is telling you that you are almost out of time. Restarting the wedge there would refill it to green and spin it a full turn in three seconds, right when you most want a glance to say "nearly done".

So the wedge runs from the previous warning straight through to zero, shrinking into the red the whole way. **Every warning still sounds and buzzes exactly as before** — this changes the picture, not the alerts. Warnings earlier in a stage keep their own sweep however close together they are, and a stage shorter than seven seconds keeps one sweep across the whole thing.

TIP

On DOPE Card screens the wedge is replaced by a thin ring around the edge of the display, so it does not sit behind the numbers you are trying to read.

The backlight

While a countdown is running, Shot Clock takes the screen over. It does not time out and drop dark part-way through your stage, and you never have to flick your wrist to read it.

On watches with an **AMOLED** screen it does something more considered than simply sitting at full brightness. Between events the display holds at a low, readable level; as each warning time approaches it ramps smoothly up to full, then eases back down once the moment has passed. It does the same at every change of phase, and climbs steadily to full brightness through the last ten seconds of a stage.

The screen is therefore brightest at the moments you are most likely to look at it, and dim in between, which is what makes it practical to leave lit for a 165-second stage. Stages of ten seconds or less stay at full brightness throughout.

On other watches the backlight comes on when the countdown starts and stays on until it ends.

On an iPhone the screen is held awake for as long as a sequence is in progress — including while it is paused part-way through — and normal auto-lock returns once the clock is reset. **On Android** the phone's own display timeout still applies, so if you are propping the phone on a bench for a long stage, set a generous screen timeout in Android's own display settings first.

NOTE

There is nothing to configure — no setting, no timeout to lengthen. It applies whichever screen you are on, so a DOPE card read mid-stage is lit the same way the countdown is. Your watch's own always-on and burn-in-protection settings still apply on top.

SECTION 14

Plus Mode and Komacha

■ Garmin watch

■ Apple Watch

■ iPhone

■ Android

Plus Mode — a run-up before the clock

Menu > Controls > Plus Mode adds a fixed lead-in of **1 to 15 seconds** in front of every sequence you start. You press Start, the lead-in counts down in blue, and only then does the real course of fire begin.

The point is to give you time to get your attention back on the match after pressing the button — to mount the rifle, settle a grip, or simply stop looking at your wrist. **Seven seconds** is the common choice because it matches the standard turning-target interval, but any value works for any purpose.

WHAT PLUS MODE +7 DOES TO A 20-SECOND SEQUENCE



FIGURE 14.1 Plus Mode does not eat into your shooting time — it is added in front of it.

NOTE — SOME SEQUENCES IGNORE PLUS MODE ON PURPOSE

If you start one of these and no lead-in appears, nothing is broken. Two kinds of sequence opt out:

- **ISSF sequences that begin with a load phase.** These already *have* a run-up built into the course of fire — sixty seconds to load, then a seven-second turn-away, and only then the string. Adding your own lead-in in front of that would just be a second gap before the first one.
- **Precision-rifle stages**, which the rule book has starting the instant the clock does.

Everything else respects your Plus Mode setting normally.

Komacha — getting back in sync with the targets

Plus Mode has a second job, and it is the one that will save you a match: it gives you a way to **recover when you press Start at the wrong moment**.

On a turning-target course you are supposed to press Start as the targets turn, so that your lead-in runs out exactly as they come round to face. Miss that moment by four seconds and your watch is four seconds out for the rest of the course of fire — every alert lands late, and no amount of stopping and restarting fixes it without losing your place.

While the lead-in is still counting, press the Up button (or swipe down). The lead-in ends there and then, and the next phase begins *from that instant*. So you wait for the targets to move, press Up at the moment they do, and your watch is back in step with the line.

ON THE LINE

Peter, and the series he nearly lost

Peter is shooting a duelling stage. The targets turn away, and he forgets to press Start. By the time he notices and presses it, several seconds of the away period have already gone — so his lead-in is going to expire several seconds after the targets have come round, and his three-second series will be wrong every single time for the rest of the stage.

Instead of restarting and losing count, he leaves it running and waits. The moment the targets turn back, he presses **Up**. The lead-in ends instantly, the first series starts from that press, and his watch is in sync with the targets again.

The feature is named after him.

NOTE

Komacha works only during the **opening** lead-in of a sequence — your Plus Mode prep, or a built-in load period on a sequence marked "+60s Load". It deliberately will *not* fire during a turn-away in the middle of a course of fire, even though those look much the same on screen: skipping one of those would wreck the very pause it exists to time.

What it starts is simply the *next* phase. On a sequence running your Plus Mode lead-in, that is your first shooting phase. On an ISSF "+60s Load" sequence, the phase after the load is the turn-away — so press Up as the targets turn away, and the seven-second away period plus the series that follows both land correctly.

SECTION 15

Sound, vibration and haptics

■ Garmin watch

■ Apple Watch

■ iPhone

■ Android

There are three separate alert moments — **start**, **progress** and **stop** — and three independent ways of delivering them. You will almost certainly want a different combination indoors than outdoors.

ALERT	WHEN IT FIRES	FEEL
Start	The instant a session begins — including each new session inside a multi-stage sequence.	Two quick taps, then a full second of buzz.
Progress	At each warning time built into the sequence, e.g. 60, 30 and 3 seconds remaining.	One second of buzz.
Stop	When the countdown reaches zero at the end of the last session — the stage is over.	The same as Start — two quick taps, then a full second.

THE RHYTHM IS THE SAME ON GARMIN AND ON BOTH PHONES

A Garmin watch, an iPhone and an Android phone all buzz identically, so what you learn on one means the same on the others. Start and stop deliberately feel the same as each other: on the line you always know which one is coming, and a single unmistakable buzz beats a rhythm you have to decode.

The **Apple Watch is the exception, deliberately**. Apple does not let an app choose how long or how hard the watch buzzes, and it merges pulses that fall close together — copying the rhythm either ran them into one long buzz or meant spreading them out so far that they delayed the very signal being given. So on the Apple Watch each alert is a single, strongest-available pulse at exactly the right moment. Section 6 has the two watch settings that make it easier to feel.

WATCH OUT — STOPPING IT YOURSELF IS SILENT

The stop alert belongs to **the clock reaching zero**, not to the button. Press Stop part-way through a stage and the countdown halts without a sound — which is what you want, because a squad on the line should only ever hear an alert that means something about the course of fire.

So a sequence you interrupt, and a sequence that never reaches zero, both stay silent at the end. The **GP Timer** stopwatch is the obvious case: it counts up, it has no warning times, and it is not going to hit its ceiling in any session you will ever shoot — so after the alert at the start, it says nothing at all. Use a real sequence when you need to be alerted during a stage.

Sound

DEVICE	OPTIONS	NOTES
Garmin, Apple Watch	Off · Start/Stop · Start/Stop/Interval	Tapping the setting cycles through them.
Phone	Off · On · Loud	<i>Loud</i> lengthens and repeats the tone so it carries down a whole firing line. Match Official Mode selects it automatically.

Vibration

Garmin offers four settings — **Off**, **Start only**, **Stop only**, **Start and stop** — cycled by tapping. Phones and Apple Watch simply switch it on or off.

Use Haptics

A separate Garmin setting that gives a small click on *menu button* presses. It has nothing to do with the timer alerts; it is about the feel of navigating the app. Turn it off if you find it noisy.

ON THE LINE

Two very different setups

Tom, indoor 25 m pistol, strict club: Sound *Off*, Vibration *Start and stop*. Nobody else hears a thing; he feels every transition of the duelling stage through his wrist.

Marie, running a squad outdoors: phone in Match Official Mode, so Sound is forced to *Loud* automatically. Her phone is the buzzer for eight shooters at once, and everyone’s own watch buzzes them individually as well through RangeLink.

WATCH OUT

Competition Mode (Section 32) locks Sound to *Off* and will not let you change it. If the sound setting appears stuck and shows “Off (Locked)”, that is why.

SECTION 16

Multi-stage courses of fire

- ☒ Garmin watch
- ☒ Apple Watch
- ☒ iPhone
- ☒ Android

Many courses of fire are not one block of time. Duelling stages alternate between firing and turned-away. ISSF stages have a load period, then an away period, then the string. Shot Clock runs all of these as one sequence, unattended.



FIGURE 16.1 One sequence, eleven sessions, one button press.

Pause markers — when the app should wait for you

Some courses of fire need a genuine human gap in the middle: “make ready... stand by... go”. A sequence can include a **pause**, and when the countdown reaches it the timer stops, shows the next stage’s time, and waits. Press Start again when you are ready and it carries on.

In the timing language (Section 19) a pause is written as a session whose value is **0**.

SECTION 17

Recording a session as a workout

☒ Garmin watch ☐ Apple Watch

Both watch platforms can log your shooting as a recorded activity — with heart rate — so it shows up alongside your runs and rides.

Garmin

Menu > Other Systems > Track Activity. Switch it on and the watch records a normal Garmin activity, with heart rate, for as long as the app is open. When you switch it off, if there is data to keep, the watch asks whether to save it. The result appears in Garmin Connect like any other activity.

Apple Watch

The Apple Watch behaves differently for a reason worth knowing: watchOS gives apps no way to keep the screen awake on their own. The *only* mechanism Apple provides that keeps a display visible and an app running through a whole stage is the same one the built-in Workout app uses.

So on Apple Watch, a workout session is **always** running while your countdown is running — that is what stops the watch face taking over halfway through your string. The **Track Activity** setting controls only whether the resulting session is *saved* to Health afterwards or quietly thrown away.

NOTE

One recorded session covers one match: from the moment the clock leaves reset to the moment it returns there, however many strings that includes. It carries per-string detail — string number, the preset time, the time remaining — as workout laps.

WATCH OUT

If you decline the Health permission prompt, the countdown still works, but the Apple Watch may drop back to its watch face part-way through a long stage. Allow it if you intend to use the watch on the line.

PART IV

Sequences, DOPE Cards & Notes

16 MIN READ

The three things you own and edit. All three are written on a phone or in a browser, read on a watch, and saved together in one action.

SECTION 18

The Sequences editor

■ iPhone

■ Android

■ Web Portal

The Sequences tab does two jobs: it decides which matches appear in your scroll list, and it lets you change the actual timing of any sequence in the library.

Turning things on and off

The top level is a list of **families**, each with a toggle. A green dot marks a family that is on. Tapping a family's *row* — not its toggle — opens the matches inside it, each with its own toggle.

COMMON MISTAKE

Tapping the row and tapping the toggle do different things. The toggle enables or disables; the row opens. This catches people out on both the family list and the match list.

Changing a sequence's timing

Tap through to an individual match and then tap a sequence. You get an editor containing the raw timing text and — this is the useful part — a **"What this means"** panel underneath that translates it into plain English as you type.

TIMER VALUE

90.60.30.3

WHAT THIS MEANS

Counts down from 90 seconds.

Alerts at 60, 30 and 3 seconds remaining.

Then stops.

FIGURE 18.1 Never guess at the syntax. Type, then read the panel underneath before you save.

NOTE

The editor will refuse to save timing it cannot understand, and tells you what is wrong. If you manage to get an invalid value onto a watch some other way, the watch quietly puts that one sequence back to its factory default and shows you an error — it will never run timing it does not trust.

Getting back to factory

Timer > gear > **Reset Time Sequences** on the phone, or

Menu > More > **Manage Customisations** > **Reset** on Garmin.

WATCH OUT

Reset puts **every** sequence back to default, not just the one you are looking at. Custom Time slots included. There is a confirmation prompt, and it means it.

SECTION 19

The timing language

■ iPhone

■ Android

■ Web Portal

■ Garmin (via Connect)

Every sequence's timing is one line of text. It looks cryptic at first and then becomes obvious — there are only five things to learn, and most sequences use one or two of them. This section is the complete reference.

YOU MAY NOT NEED THIS

Nearly ninety ready-made sequences are already built in and correctly timed. You only need this section if you are building a custom sequence or adjusting a built-in one to match your club's local variation.

Rule 1 — a full stop separates the time from its warnings

The **first** number is how long the phase lasts. Every number after it is a moment where an alert fires, counted in *seconds remaining*.



FIGURE 19.1 **90.60.30.3** — the WA1500 18-shot stage.

Rule 2 — a colon starts a new phase

Phases run back to back automatically, with a start alert at each handover. **90.60.30.3:60.30.3** is ninety seconds with three warnings, then straight into sixty seconds with two.

Rule 3 — a minus sign means “not shooting”

A negative phase is a **non-shooting** period — a load phase, a turn-away, a rest. The digits turn **blue** instead of white, so you can tell at a glance that you should not be firing.

That is the *only* thing the minus sign changes. The phase still runs for the number of seconds you wrote, and it still counts in whatever direction your Count Direction setting says — the sign is a label, not a direction.

-7 is a seven-second turn-away. **-60** is a sixty-second load period.

Rule 4 — the special characters

SYMBOL	NAME	WHAT IT DOES	WHERE IT GOES
#	Skip prep	Ignore Plus Mode entirely for this sequence — start the instant the button is pressed.	First character of the whole line.
^	Force count-up	This phase counts up regardless of the user's Count Direction setting. Rarely wanted — the only built-in sequence that uses it is the GP Timer stopwatch.	Immediately before a phase's number.
0	Pause	Stop and wait for the shooter to press Start before continuing.	As a phase's own value.
-	Non-shooting	See Rule 3.	Before a phase's number.

Rule 5 — a warning must be smaller than its phase

You cannot alert at 90 seconds remaining inside a 60-second phase. The editor will tell you so.

Read these and you can read anything

SESSION STRING	USED BY	IN PLAIN ENGLISH
20.3	Bullseye, Action Match	Twenty seconds, one warning with three seconds left.
165.124.83.41.3	WA1500 · 24-shot stage	165 seconds, warnings at 124, 83, 41 and 3 remaining — a quarter, a half and three-quarters through, plus a last call.
3:-7:3:-7:3:-7:3:-7:3	ISSF Centrefire 5×3	Three seconds firing, seven seconds turned away, five times over.
#-60:-7:20	ISSF Standard Pistol	Start immediately (no Plus Mode lead-in), a 60-second load, a 7-second turn-away, then the 20-second string. The first two run in blue.
#300.240.180.120.60.30.10.5	PRS 300-second stage	Five minutes, immediate start, with seven warnings on the way down.
^#9999	GP Timer (the default)	A plain count-up stopwatch: starts instantly, runs as long as you need, and has no warning times — so it alerts you at the start and then stays quiet.
120:0:120	A two-part stage with a break	Two minutes, then <i>wait for the shooter</i> , then two minutes more.

ON THE LINE

Ben's club runs a local variation

Ben's club shoots a WA1500-style 12-shot stage but gives 40 seconds instead of the standard 35, and the range officer likes a shout at the halfway mark and again with five to go.

Ben opens **Sequences > WA/PPC > WA1500 > 35 sec...** and stops, because overwriting a rule-book sequence would break it for the real matches he also shoots. Instead he uses a **Custom Time** slot (Section 20):

- Timer value: **40.20.5**
- Display text: **40**
- Sub text: **Club 12-shot**

The "What this means" panel confirms: *"Counts down from 40 seconds. Alerts at 20 and 5 seconds remaining. Then stops."* He saves, and it appears in his scroll list next to the official stages.

SECTION 20

Custom Time sequences

☒ Garmin watch ☒ Apple Watch ☒ iPhone ☒ Android ☒ Web Portal

Ten slots that belong entirely to you. Each one has its own timing, its own big display text, and its own stage label, and none of them will ever be overwritten by an update to the built-in library.

FIELD	LIMIT	SHOWS UP AS
Display Text	3 characters	The big number in the middle of the screen.
Display Sub Text	15 characters	The small stage label underneath it.
Timer value	—	The session string that actually runs (Section 19).

Why the app ships with an egg timer

Two slots arrive pre-loaded with something that looks like a joke: a hard-boiled egg at **#420** and a soft-boiled one at **#300**. They are half a joke. They are also the point.

Underneath the match library, Shot Clock is a **programmable interval timer** that you already wear, that alerts you without you looking at it, and that works with gloves on. Nothing about that is specific to shooting. The eggs are there to give you permission to use it for anything you time repeatedly — and once you have written one, it is one swipe away forever.

Things worth putting in a slot

WHAT YOU ARE TIMING	SHOWS AS	TIMER VALUE	WHAT IT DOES
Holster draw practice	DRW Par time	#2	A flat two-second par. Beep, draw, beep. Shorten it as you get quicker.
Dry-fire drill	DRY 3 x 10s	10:-5:10:-5:10	Three ten-second reps with five seconds to reset between them. The rests show in blue, so one glance tells you whether you are working or resetting.
Weight-training set	SET 45 on / 15 off	45:-15:45:-15:45	Three working sets with fifteen seconds of rest between. One press runs the lot.
Rest between heavy sets	RST Recovery	#180.60.30.10	Three minutes, with a nudge at a minute, thirty seconds and ten so you are back under the bar on time rather than whenever you look up.
Plank or position hold	HLD Core hold	#120.60.30.10.5	Two minutes counting down, with warnings on the way.
A hard-boiled egg	EGG Hard Boiled Egg	#420	Seven minutes. Genuinely useful, and the reason the joke stayed in.

TIP

Note how often a minus sign turns up above. In a shooting context it means "not shooting"; in a training context it reads perfectly well as "resting" — the digits go blue, and you can see which side of the interval you are on without reading the number (Section 19, Rule 3).

NOTE

Custom Times are also the right home for anything shooting-related that is not a formal course of fire — your club's local variation on a stage, or a par time you are training towards. Build those here and leave the rule-book sequences untouched so they stay correct for the matches that depend on them.

SECTION 21

DOPE Cards

■ Garmin watch

■ Apple Watch

■ iPhone

■ Android

■ Web Portal

A DOPE card — “Data On Previous Engagement” — is your own table of corrections: how much elevation and how much wind hold you need at each distance. Shot Clock keeps them on your wrist so you can check a number mid-stage instead of doing arithmetic under time pressure.

How a card is put together

.308 175gr 6.5 CM .22 LR + ← one tab per card, up to 25					
TARGET	DISTANCE	ELEVATION	5 MPH	10 MPH	FULL
●	100 m	0.0	0.1 R	0.2 R	0.4 R
■	300 m	4.2 U	0.6 R	1.2 R	2.3 R
▲	500 m	10.5 U	1.4 R	2.8 R	5.1 R
■	700 m	-2.0	-2.1	-4.0	-7.2

Wind-bracket headings are editable text — up to five columns per card.

Shape and colour identify the target on the stage board. A minus sign means DOWN (elevation) or LEFT (wind).

FIGURE 21.1 Cards across the top, wind brackets across the table, one row per distance.



SCREENSHOT SCR-06

The DOPE Cards editor in Edit mode

Phone, DOPE Cards tab, Edit mode on. Show the card tab strip, the drag handles and the wind-bracket icon.

Editing on the phone

Switch card	Tap a card's tab.
Rename a card	Tap the tab that is <i>already</i> active. The same tap means "switch" on an inactive tab and "rename" on the active one.
Rename or delete	Long-press any tab for a menu with both.
Reorder cards	Turn on Edit mode, then drag by the handle that appears.
Wind columns	The small, unlabelled wind icon above the table. Only active in Edit mode. Add, rename, reorder or remove a bracket there — it is separate from editing the numbers inside them.
Target symbol	Tap the coloured square in the Target column to choose a shape, a colour and (for text-only targets) a short label.

THE LIMITS

Up to **25 cards**, up to **5 wind brackets per card**, and **200 entries in total across all cards combined**. That last one is a shared pool, not a per-card cap — one card can hold all 200 if you want it to.

Reading a card on the watch

There are two ways to look at the same data, and you choose which with **DOPE Card Settings** > **View**.



Focus View

One target at a time, in four big quadrants — distance, the live countdown, elevation and wind. Built to be read in a hurry.



The settings menu

Select Card, Sort Order, View and Wind Bracket. Reached with the Menu button while a card is open.

Stage View is the other mode: up to five targets at once as a roster, each showing its symbol, distance, elevation and the currently selected wind bracket. Swipe left and right to change wind bracket; swipe up and down to scroll the list. A fresh install starts in Stage View.



Stage View

The whole stage on one screen.

Reading it left to right:

- **Symbol and colour** — how you identify the target on the stage board. Eight shapes and nine colours, or a two-character label instead.
- **Distance**, right-aligned so the units digit stays put whether it is 25 or 1000.
- **Elevation** — your come-up.
- **Wind hold** for the bracket you are currently on.

The pale pill at the bottom is the countdown, still running, and the coloured band around the rim is Time Slice — a ring here rather than a wedge, so it never sits behind the numbers.

NOTE

There are no column headings — the five rows get the whole screen instead. That is also why only the *active* wind bracket is shown rather than all of them: one swipe left or right moves every row to the next bracket at once, and the bracket's name appears briefly across the screen as it changes.

Getting to a card without losing your countdown

- **Swipe left** from the main screen or a running countdown.
- **Menu > View DOPE Card** at any time.
- **Double-tap the Down button**, or double-swipe down, from either of those screens — *if you switch it on*. See below.

DOPE DOUBLE TAP IS OFF UNLESS YOU TURN IT ON

Menu > Controls > DOPE Double Tap. It ships off, because the Down button is also *previous sequence* on the main screen — so stepping back through sequences quickly used to land you in a DOPE card you did not ask for.

Leaving it off also makes the Down button quicker. With it on, a single press has to wait a fraction of a second to see whether a second press is coming, so changing sequence always lags slightly. Off, it responds immediately. Swiping left to your card works either way.

The countdown keeps running while you are looking. Pressing Select on the DOPE screen starts and stops the timer exactly as it would on the timer screen, and the screen flashes green or red so you get the same confirmation.

Sort Order

DOPE Card Settings > Sort Order — **List Order** (as you typed them in) or **Distance Order** (nearest first). Switching between them never rearranges your actual data; List Order always comes back exactly as entered.

ON THE LINE

Alex on a five-target PRS stage

Alex has 90 seconds and five targets from 300 to 850 m. Before the stage he builds one card — “Stage 4” — with five rows, each given a distinct shape and colour that match the way the stage brief numbers them.

On the clock, he leaves the watch in **Stage View** so all five holds are on screen at once, with the countdown ring around the edge. Wind picks up between his second and third target: one swipe left moves the whole card from the 5 mph column to the 10 mph column, and every hold updates together. He never touches the timer.

SECTION 22

Notes

■ Garmin watch

■ Apple Watch

■ iPhone

■ Android

■ Web Portal

Twenty short pieces of free text you can read on your wrist. Match rules, a stage plan, your zero, the club’s cease-fire procedure — anything you would otherwise write on tape and stick to a rifle.

HOW MANY	TITLE LENGTH	BODY LENGTH	EDITED ON
20 notes	20 characters	250 characters	Phone or Portal

On the phone

Notes work exactly like DOPE Cards: a strip of tabs across the top, one per note. Tap to switch, tap the active tab to rename, long-press for rename and delete, Edit mode to drag them into order.

Next to the note editor is a **Watch Font Size** stepper. It is easy to miss because it is not in Settings — and it applies to every note at once, not just the one you are editing.

On the watch

Menu > **View Notes** lists your notes by title. Open one and scroll with Up/Down. When you reach the bottom of a note, the next press moves to the next note — so you can read straight through all twenty without going back to the list.

TIP — PRESS SELECT TO RESIZE THE TEXT

With a note open, press the **Select** button (or tap the screen). The text resizes, and each press steps to the next of **five sizes** before wrapping back round to the first.

Nothing on screen advertises this, and it is the single most useful thing to know about Notes: bump it up two steps to read a stage plan at arm's length in poor light, or down two to get a whole set of match rules on one screen without scrolling.

Your choice is remembered and applies to **every** note, not just the one you are reading — so you set it once and forget it.

HOW THIS RELATES TO THE PHONE'S WATCH FONT SIZE

The stepper on the phone (above) sets the *baseline* — how big your notes are to begin with, which the watch then scales to its own screen. The five sizes you cycle through with Select sit around that baseline. Setting a sensible baseline on the phone means all five of the on-watch sizes land somewhere useful.

TIP

250 characters is about three sentences. Write notes as checklists, not prose: *"Stage 3: 2 mags, strong hand only, no reload past line"* beats a paragraph you cannot read at a glance.

SECTION 23

Saving and syncing

■ iPhone

■ Android

■ Garmin watch

■ Apple Watch

Everything you type into the three editor tabs is a **draft**. Nothing reaches a watch until you press Save, and Save pushes all three tabs together in one go.

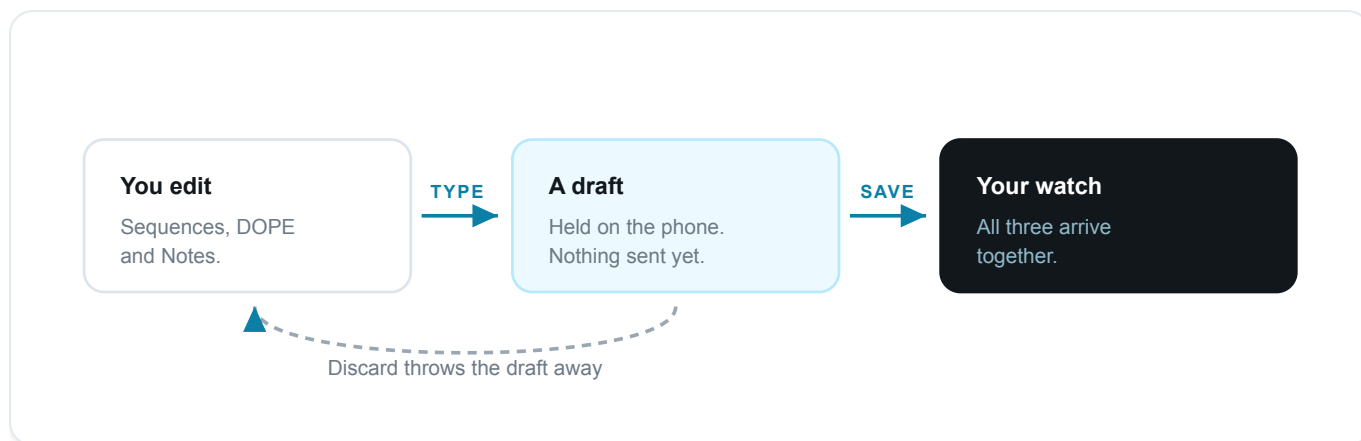


FIGURE 23.1 Edit freely; commit once. Nothing half-finished ever reaches the watch.

Why Save might be greyed out

- **Nothing has changed** — there is nothing to save.
- **The watch has not finished its first sync.** The phone pulls the watch's current content down before it lets you edit, so that it never overwrites something you cannot see. A full pull takes roughly **15 to 20 seconds** on a Garmin.
- **Something is invalid** — the editor will say what.

If a Save does not reach the watch

A banner appears with a **Retry** button. Use it rather than redoing the edit — your draft is intact either way.

WATCH OUT — GARMIN

Shot Clock must be the app **currently open on the watch's screen** for any sync to happen. A watch that is paired, in range, and showing its watch face will correctly report as not connected. Open the app on the watch and it recovers on its own.

WHY THE WATCH, NOT THE PHONE, IS IN CHARGE

Before you can edit, the phone downloads whatever the watch currently holds. The watch is treated as the source of truth. That means you can edit the same watch from two different phones over time without either one silently reverting the other.

It is also why the sync is slow and arrives in many small pieces: a single large Bluetooth transfer to a Garmin watch was found to fail most of the time, so the app breaks it into dozens of small, individually-safe chunks instead. A partial sync leaves you with correct-but-incomplete data, never a corrupted mixture.

Apple Watch

Nothing to do. The iPhone and Apple Watch are already paired by the system; edits you save simply appear. There is no connection screen and no button.

SECTION 24

Backup & Restore

■ iPhone

■ Android

■ Garmin watch

Settings > **Backup & Restore** keeps a snapshot of your Sequences, DOPE Cards and Notes. It is also — slightly unexpectedly — the tool for copying one device's whole setup onto another.

How it works

- One saved snapshot **per device type**: one for Garmin, one for Apple Watch, one for the phone itself. Each appears as its own row with its own **Restore** button.
- It is not a version history. Backing up again replaces that device type's previous snapshot.
- **Restore loads into a draft**. It never overwrites your live data directly — you review it and press Save yourself, exactly as with any other edit.
- **Export Backup to File...** and **Import Backup from File...** do the same thing through a shareable file, which is how you move a setup to a second phone or hand it to somebody else.

ON THE LINE

Cloning a Garmin setup onto a new Apple Watch

1. Make the **Garmin** the active device (Section 8).
2. **Settings** > **Backup & Restore** > **Back Up**. You now have a Garmin snapshot on file.
3. Switch the active device to the **Apple Watch**.
4. Open Backup & Restore again and press **Restore** on the *Garmin* row — each row restores from its own snapshot no matter which device is currently active.
5. Review the draft, then **Save**. The Apple Watch now has an identical setup.

The same trick works in any direction between Garmin, Apple Watch and This Phone.

Garmin's own backup ■ Being retired

DEPRECATED — DO NOT BUILD A HABIT AROUND THIS

The watch has a backup of its own, at [Menu](#) > [More](#) > [Manage Customisations](#), offering **Reset**, **Backup** and **Restore** against our server. It predates the phone app and **will be removed in a future version**.

Use the phone app's Backup & Restore instead (above). It covers the same content, it is not going away, and it is the only one of the two that can move your setup between devices or between the trial and paid apps.

While it is still there: it saves your edited sequences, your Custom Times, which match families are switched on, and — where present — your DOPE cards and notes. Its one real advantage is that it needs no phone app at all.

It files each backup against an identifier that is unique to **this app on this particular watch**. Restoring works when both halves match, and only then, so in practice it does exactly one job: it brings your content back after you uninstall and reinstall the same app on the same watch.

TWO THINGS IT THEREFORE CANNOT DO

- **Move to a new watch.** The same app on a different watch has a different identifier, so a new watch cannot see the old one's backups. If you are upgrading, use the phone app's Backup & Restore above — that is exactly the job it is built for.
- **Move from the trial app to the paid one**, even on the same watch, because the app is half of the identifier (Section 3).

WATCH OUT

Reset in that menu puts every sequence back to factory default. It does not touch DOPE cards or notes.

This backup does not include your *settings* — sound, vibration, gestures, Plus Mode, Time Slice, count direction and the rest — nor which individual matches you have ticked. Only content.

PART V

The Web Portal

6 MIN READ

<https://shotclock.au/portal> — a full-size editor for your watch content, in any browser, with no account to create and no app to install.

SECTION 25

What the Portal is for

☒ Web Portal ☐ Garmin watch ☐ Apple Watch

Typing a table of ballistic corrections on a watch bezel is miserable. The Portal exists so you can do it on a real keyboard instead, and then send the result to your watch — without needing a phone at all.

ADDRESS	ACCOUNT NEEDED	COST	EDITS
shotclock.au/portal	None	Free	DOPE · Sequences · Notes

NOTE

The Portal is opened **from the watch**, not from the phone app. The phone app has its own built-in editors for exactly the same three things, so it does not need the Portal — the Portal is there for people whose watch is the only device they own, and for anybody who would simply rather type on a laptop.

SECTION 26

Getting in with a code

☒ Web Portal ☐ Garmin watch ☐ Apple Watch

There is no username and no password. Your watch generates a six-digit code, you type that code into the website, and for the next half hour that code *is* your key.



Step 2

The watch shows your code.

1

On the watch, open the Portal.

Garmin: Menu > Other Systems > Open Portal

Apple Watch: Menu > Other Systems > Portal

You can also reach it from inside DOPE Cards or Notes, via **Edit Cards** / **Edit Notes** — which has the small advantage that the website opens straight onto the right tab.

2

Read the six digits off the watch.

3

Go to <https://shotclock.au/portal>

on any phone, tablet or computer and type them in.

4

Edit.

Your watch's current content is already loaded.

WHAT HAS TO BE TRUE

Your **watch needs to be connected to your phone** and your **phone needs internet** — that is the path the code and your data travel along. A watch on its own, out of Bluetooth range, cannot start a session.

JUST LOOKING?

Type `123456` on the landing page. That is a permanent public demo session with sample data in it, so you can try every editor without a watch. It never expires and nothing you do there reaches any real device.

ON AN APPLE WATCH

The watch tries to hand the address to your iPhone for you — you may see Shot Clock appear in your iPhone's app switcher or on its lock screen, ready to open the page. Take it if it appears; type the URL yourself if it does not.

SECTION 27

Editing in the browser

■ Web Portal

Three tabs, matching the three things a watch holds. Most of it is drag-and-type obvious; this section covers the parts that are not.

DOPE Cards

- **The tabs across the top are your cards.**  adds one; clicking a card's name renames it.
- **The :: handle means "drag me".** On a tab it reorders cards; on a row it reorders entries. Nothing labels it — anywhere you see :: in the Portal, you can press and drag.
- **Click the coloured square** in the Target column to pick a symbol, a colour, and — for text-only targets — a short label.
- **Wind bracket headings are editable text.** There is no rename button; you click the heading itself and type.  and  beside them add and remove wind columns, one to five per card.
- **Numbers carry their own direction.** A minus sign means DOWN for elevation and LEFT for windage. No sign means UP or RIGHT. There is no separate direction control to set.

Time Sequences

- Click any sequence in the grid to open it.
- The **"What this means"** box under the timer value translates your text into plain English as you type. Use it. It is the fastest way to be sure a sequence does what you think.
-  opens the full syntax reference — the same rules as Section 19 of this manual.

Notes

- Drag the :: handle in the notes list to reorder.
- The panel on the right is a **live preview of how the note will actually look on your watch**, including the font size slider above it. If a note is going to be unreadable, you will see it here first.
- Counters under each field show how much room is left: 20 characters for a title, 250 for a body.



SCREENSHOT SCR-04 • THREE CAPTURES

Portal DOPE editor, Sequence editor modal, Notes editor

Desktop browser at the demo code 123456. DOPE: several cards and wind columns visible, symbol picker open. Sequences: the edit modal with the "What this means" panel populated.

Notes: list, editor and watch preview all in shot.

Getting your changes back onto the watch

■ Web Portal

■ Garmin watch

■ Apple Watch

THIS IS THE STEP PEOPLE MISS

Pressing **Save** in the Portal does *not* push anything to your watch. Nothing is pushed, ever — the watch has to come back and ask.

After saving, **back out of the “Enter this code” screen on the watch**. That is what triggers the check, and that is when your changes arrive.

ALREADY BACKED OUT? JUST DO IT AGAIN

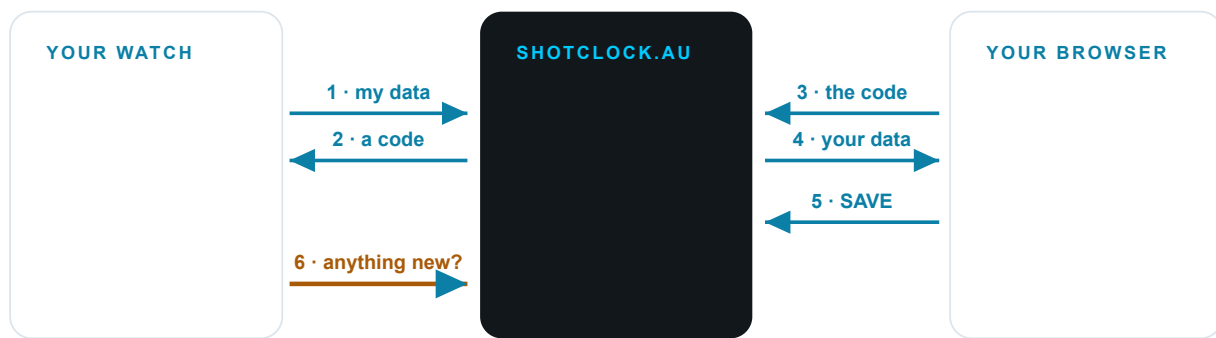
This is the usual way it goes wrong: you leave the code screen on the watch, then remember to press Save in the browser afterwards. Nothing is lost. Simply:

1. Open the Portal on the watch again.
2. **Wait until the six digits actually appear** — they will be the *same* six digits as before.
3. Back out again.

That second exit fires the check, and your saved work comes down. Repeat it as often as you like: re-opening the code screen deliberately does **not** upload the watch's current content over the top of what is sitting in the browser, precisely so that this recovery is safe.

WATCH OUT

Waiting for the code to appear is the part that matters — backing straight out before the watch has re-established the session does nothing. And if more than 30 minutes have passed, you will get a *different* code instead: that session has expired, your browser tab is dead, and the save went with it (Section 29).



Step 6 only happens when you back out of the code screen on the watch.

FIGURE 28.1 Six steps. Only the last one is yours to remember.

NOTE

Only a real **Save** counts as a change. If you edit in the browser and wander off without saving, the watch correctly decides nothing has happened and keeps what it had. Opening the Portal and looking around changes nothing.

SECTION 29

Limits, languages and timeouts

Web Portal

The session expires

A Portal session times out after **30 minutes of inactivity**. Before it goes, a warning banner appears — click **Stay active** to keep working. If it does expire you are returned to the code entry screen, and that code will not work again: back out on the watch and open the Portal once more for a fresh one.

Language and theme

A language selector sits next to the light/dark theme toggle in the top corner. The Portal is available in **English, German, Swedish and Romanian**, and it starts in whatever language your watch is set to. Changing it here does not change your watch.

The limits, in one place

THING	LIMIT
DOPE cards	25
DOPE entries	200 in total, shared across every card
Wind brackets	1–5 per card
Notes	20
Note title	20 characters
Note body	250 characters
Custom Time display text	3 characters
Custom Time sub text	15 characters
Session idle timeout	30 minutes

What is stored, and where

Everything you create lives on your own devices, with two exceptions.

- **The Portal.** Your sequences, notes and DOPE cards are copied to the server while you have them open in a browser, and deleted a short time after you finish — which is why an expired session takes an unsaved edit with it.
- **The watch's own backup** (Section 24). This one deliberately keeps a copy of that watch's configuration on the server, anonymously, so that you can restore it later. It is also the feature being retired — the phone app's Backup & Restore keeps its snapshot on your own phone instead.

PART VI

Running a squad, running a range

11 MIN READ

Everything in this part is for the person *running* the shoot rather than shooting in it: one clock for a whole squad, physical turning targets, and wall-mounted range displays.

SECTION 30

Match Official Mode

■ iPhone

■ Android

■ Paid feature

Settings > **Mode** switches the whole app between **Individual** and **Match Official**. It is not a preference — it changes what the app is for, and several things move at once.

DOPE Cards and Notes disappear	A Match Official working somebody else's squad has no business in the phone owner's personal ballistic data. Sequences stays, because that is what you are about to run.
Sound jumps to Loud	Your alerts have to carry the length of the line, not just to whoever is holding the phone. Your previous setting is remembered and restored when you switch back.
Competition Mode switches off	The two are mutually exclusive by design — see Section 32.
You start driving your squad again	If shooters you registered earlier are still on your list, switching to Match Official Mode picks straight back up with them — nobody needs re-registering, and there is no "become MASTER" button to press. If your list is empty, nothing happens until you register your first shooter (Section 31).
Target Timer and Range Clock unlock	Both are Match Official tools.
Your own progress alerts stop firing	You are running the line, not shooting it, so the warnings partway through a stage are no longer meaningful on your device and are dropped. You still get the start and the end of each stage, which is what you need to run the squad. Every shooter keeps <i>their</i> own. Each device applies its own alert settings to the shared countdown, so a shooter who has set up vibration-only, or particular warning times, gets exactly that.

NOTE

The Individual / Match Official picker does not appear until Match Official Mode has been purchased. A separate purchase section in Settings is always visible, and is where you buy it.

NOT THE SAME THING

Shot Clock Diary has its *own* Match Official mode, which is about scoring a whole relay rather than timing one. The two are separate switches in separate apps. Part VII covers Diary's.

RangeLink — one clock for the whole squad

iPhone

Android

Apple Watch (join only)

Paid to run

RangeLink lets one Match Official's phone start and stop the shot clock for a whole **squad or shooting detail** at once, over Bluetooth. No internet, no shared Wi-Fi, no router, nothing to configure on the range.

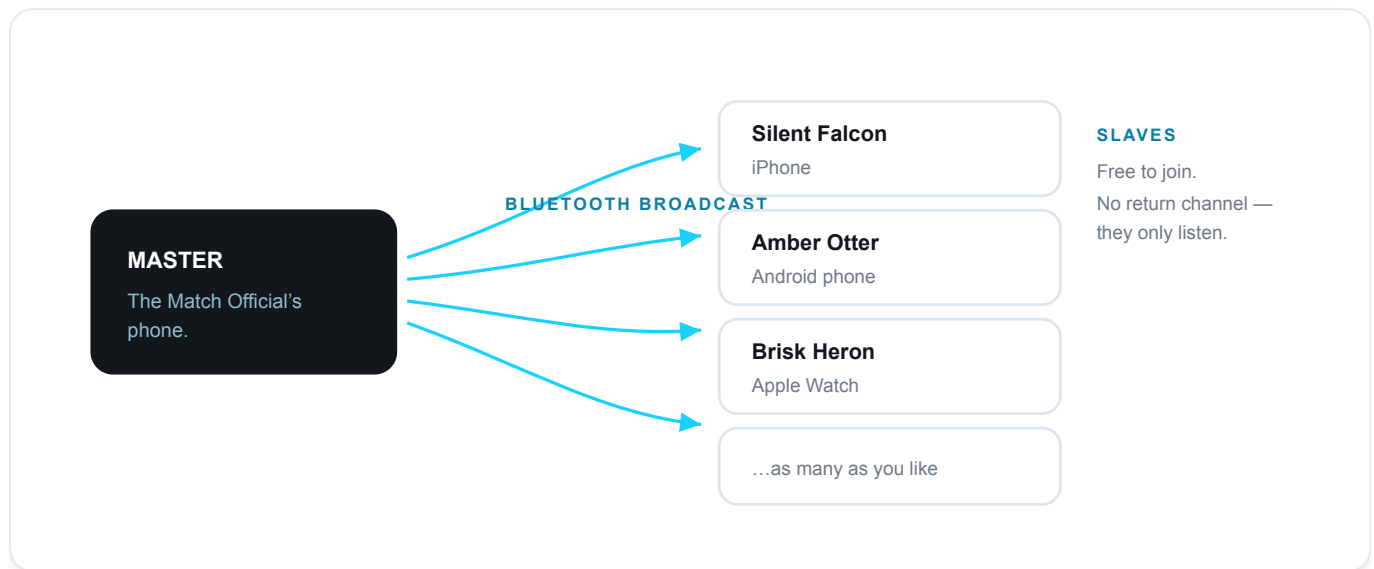


FIGURE 31.1 A broadcast, not a set of connections — so squad size costs nothing and there is no practical limit on how many people can join.



SCREENSHOT SCR-07

Match Official Mode — the squad list

Phone in Match Official Mode, Master Mode open, three or four registered shooters listed by callsign.

Signing a shooter up

1

The shooter opens **Slave Mode** on their own device.

Timer > **gear** > **Slave Mode**. Their screen shows a QR code.

2

The Match Official scans it

from the same row on their own phone — which in Match Official Mode reads **Master Mode**.

3

Keep scanning.

The scanner deliberately stays open after a successful scan, because you are usually signing up a whole squad in one go. Tap **Done** when you have finished the list.

4

Check the list.

Everybody you have registered appears under their own two-word callsign, listed alphabetically. Swipe one off to drop that shooter without disturbing anybody else.

WHY A QR CODE?

Joining somebody's squad — and letting them drive your timer — should always take a deliberate physical action, never something that happens just because you walked into range. The camera scan is that action, and it happens entirely outside Bluetooth.

Callsigns

Your device picks its own two-word callsign — "Silent Falcon", "Amber Otter" — before it has ever met a Match Official, so it is a name you will actually recognise being called across a firing line. If two shooters in one squad happen to land on the same one, the Match Official's phone quietly renames the second.

Running the squad

- Every **Start**, **Stop**, **Resume** and **Reset** the Match Official presses fires on every device at once.
- **Changing sequence** on the Match Official's phone previews on everyone else's, even a sequence a particular shooter does not have enabled locally — and their own browsing position is put back exactly where it was afterwards.
- A shooter's screen goes grey with a *"Controlled by the Match Official"* banner while they are being driven.
- Each shooter's own **sound and vibration preferences still apply**. The Match Official broadcasts the timing; each device decides how to announce it.

STAYING IN STEP

The Match Official's own phone deliberately starts a fraction of a second *after* it sends the signal, so that shooters — who start the instant they hear it — end up on the same second rather than trailing behind. You will not notice it happening.

Leaving and ending

WATCH OUT — NO CONFIRMATION

End Session (Match Official, releases the whole squad) and **Leave Session** (shooter, releases just themselves) both fire immediately with no “are you sure”. Almost everything else destructive in this app asks first. These two do not. End Session also **empties your list of registered shooters** — so if the same squad is shooting another relay, leave the session running rather than ending and re-scanning everybody.

A shooter’s device also releases itself automatically if it stops hearing from the Match Official for about six seconds — a flat battery, a phone in a pocket, or somebody simply walking out of range all look the same from the shooter’s side, and all resolve the same way.

Who can join

DEVICE	CAN RUN A SQUAD	CAN JOIN ONE
iPhone	Yes	Yes
Android phone	Yes	Yes
Apple Watch	No	Yes
Garmin watch	No	Not yet

Apple Watch cannot broadcast — watchOS gives apps no way to do it. Garmin support for the current RangeLink design is not finished; a Garmin watch is a timer in its own right in the meantime.

ON THE LINE

Marie runs a squad of eight

Marie is running relay 2 of a service pistol match. Before the relay she switches her phone to **Match Official Mode** — Sound jumps to Loud on its own — and opens **Master Mode**.

Each of her eight shooters opens Slave Mode; she walks the line scanning eight QR codes without ever closing the scanner, then taps Done. Two of them are on Apple Watches, five on phones, one on an Android tablet clamped to a stand.

For the rest of the relay she runs the whole line from one phone. Everybody’s clock starts on the same second. The shooter who prefers a silent watch still gets a silent watch. When the relay finishes, she taps **End Session** and all eight are released at once.

SECTION 32

Competition Mode

■ iPhone

■ Android

A single switch for sanctioned matches, where a shot timer's networking and noise may be against the rules.

Turning it on:

- **Locks Sound off.** The setting shows "Off (Locked)" and cannot be changed until you turn Competition Mode off again.
- **Stops this app's wireless features.** Any RangeLink session ends, and squad registration is refused from both sides.
- **Is refused in Match Official Mode,** and switching into Match Official Mode turns it off. A Match Official needs sound and RangeLink to work.

BE CLEAR ABOUT WHAT THIS DOES NOT DO

Competition Mode can only guarantee that **this app** stops making noise and stops using Bluetooth. Neither iOS nor Android lets an app switch on Aeroplane Mode or turn off your phone's Bluetooth radio. If your match requires the radio genuinely off, you still have to do that yourself. The app tells you this on screen, and it is worth taking literally.

NOTE

The list of things Competition Mode locks down is expected to grow. The intent is that anything a future feature adds which could contravene a sanctioned match's rules gets folded into this same switch — so it stays the one thing to turn on before a match, not a checklist.

SECTION 33

Target Timer — driving real targets

■ Hardware

■ iPhone

■ Android

■ Garmin watch

■ Apple Watch

■ Paid feature

The Target Timer is a physical Target Timer you wire into a range's turning targets and horn. Once connected, the same Start and Stop you already press turns real targets — with no separate "fire the target" button anywhere.

CHANNELS 6, individually assignable	FACTORY SETUP 1–5 targets, 6 horn	LINK Bluetooth, direct	NEEDS A PHONE? No — a Garmin watch can drive it alone
CLIENTS AT ONCE One	UPDATES Over Wi-Fi, from the Target Timer		

RANGE SAFETY — READ THIS BEFORE ANYTHING ELSE

Nothing STARTS a course of fire unless you have just armed for it. That is the guarantee to rely on, and it holds no matter how the connection was made. Stopping the targets, and sending them back to facing, always work — you should never have to unlock your way out of a problem.

Connections themselves work like this:

- **The first connection is always yours to make.** Never on launch, never when you enable the feature, never to a Target Timer you have not chosen in this session.
- **A Garmin watch will reconnect by itself if the link drops** — you walk downrange, or the Target Timer loses power — but only within **five minutes**, and only to the unit it was already working with. Longer than that and you reconnect by hand. It always comes back *disarmed*.
- **Once you disconnect deliberately, nothing reconnects.**

A target frame moving, or a horn sounding, without a human having just asked for it is a real hazard on a live range — not a user-experience inconvenience. Arming is what prevents it. A reconnected watch can hold a live link and still be unable to move anything, which is the point.

Two different connections, in two different places

This is the part that confuses people. **Configuring a Target Timer does not make it usable in a match**, and pairing it for a match does not let you configure it. They are separate, on purpose.

Both live inside **Match Official Mode**. If you have not bought it, or your phone is currently in Individual mode, neither entry appears at all — a Target Timer is Match Official equipment, so there is nothing useful either one could do for you. Switch the phone to Match Official Mode and both come back.

Where	Settings > Configure Target Timer	Timer > gear > Target Timer
How you connect	A plain tap	A long press , about 0.6 seconds
What it does	Reads and writes the Target Timer's setup: name, Wi-Fi, what each channel is for, which way targets rest, where firmware comes from.	Pairs the Target Timer, and connects to an already-paired one before a stage.
Platform	iPhone and Android	iPhone, Android, Garmin and Apple Watch

NOTE

The tap-versus-long-press difference is intentional: configuring is harmless, connecting is not.

Channel roles

Each of the six channels is one of three things:

Target	Driven to face or away as the sequence dictates. A reset always returns every target channel to facing .
Horn	Pulsed for a set number of milliseconds at scheduled moments.
Unused	Switched off and left off.

A Target Timer leaves the factory with channels 1–5 as targets and channel 6 as the horn. Re-tasking it — “channel 6 becomes a sixth target”, “shorten the horn to half a second” — is a configuration change, from a phone.

Resting position

Resting State, on the same screen, decides whether a target channel is switched *on* or *off* when nothing is running. That is the position your targets sit in between strings, at the end of every sequence, after a Reset, and from the moment the Target Timer is powered on.

Which setting is correct is not a preference — it depends on how your target mechanism is wired. Pick whichever one leaves the targets **facing the shooter** at rest, and check it against the hardware in front of you. It applies to Target channels only; horns and unused channels always rest off.

RANGE SAFETY — SAVING CAN MOVE TARGETS

Saving this screen can turn targets *immediately* — changing the resting position, or changing a channel from Unused to Target, makes the Target Timer take up its new resting position the moment the change lands, rather than waiting for the next sequence. The app asks you to confirm before saving for exactly this reason. **Only save when everyone is clear of the targets.**

Wi-Fi and firmware

- Wi-Fi on the Target Timer is used **only** for firmware updates. It is never used to control anything.
- “**Use Current Wi-Fi**” fills in the network name from whatever your phone is on, but it can never fill in the password — iOS does not let any app read a stored Wi-Fi password back out. You will always type that part yourself.
- Leaving the password field blank and saving **keeps** whatever password the Target Timer already has. It does not clear it.
- A firmware update replaces the software only. Your device name, channel roles and Wi-Fi details all survive it.

ON THE LINE

Setting up a duelling stage on a club range

1. Once, ever: connect from an iPhone via **Configure Target Timer**, name the Target Timer “Bay 3”, confirm channels 1–5 are targets and 6 is the horn.
2. On match day, from any device: **Timer** > **gear** > **Target Timer**, **Scan**, then **long-press** “Bay 3” to connect. On a Garmin watch, once you have used “Bay 3” before, the menu offers **Connect** > **Bay 3** directly — it finds that one and connects, with nothing to pick. **Select a Target Timer** is there for when you want a different one.
3. Select the **ISSF 5×3** sequence and press Start.
4. The Target Timer now runs the whole stage: targets turn away for seven seconds, face for three, five times over, with the horn at the right moments. Nobody touches anything.
5. At the end, the targets return to facing on their own.

Arming: the Target Timer will not move until you say so

A Target Timer turns real steel. On the **Garmin** and **Apple Watch** apps it therefore will not move at all until you deliberately *arm* the watch — and firing uses that permission up, so each run needs arming again.

Garmin	Double-press the Back button on the main screen.
Apple Watch	Press and hold the target icon at the top of the main screen.

Armed, a red **TARGET TURNER ARMED** banner sits across the middle of the screen. No banner means the watch will still time the stage perfectly — it simply will not drive the targets, which makes it a useful dry run.

GARMIN: THE BACK BUTTON NOW ASKS BEFORE IT EXITS

Because a double-press of Back arms a device that moves steel, a single press no longer quits the app outright — it asks first. This applies whether or not you own a Target Timer.

WHAT ARMING DOES AND DOES NOT STOP

An unarmed watch can always **stop** the targets. It can never **start** them — stopping is not something you should ever have to unlock first. Arming also lapses on its own after two minutes, when the link drops, and when you change sequence, so a watch left armed on a bench goes safe by itself.

RECONNECTING AFTER WALKING DOWNRANGE

If the Target Timer goes out of range — you walk down to patch targets, or it loses power — a Garmin watch reconnects on its own when it comes back, for up to **five minutes**. After that, reconnect manually. Either way it returns *disarmed*, so nothing can move until you arm it again.

IF THE TARGET TIMER DOES NOT RESPOND

Check you actually long-pressed to connect under **Target Timer**, not just under Configure. A freshly-configured Target Timer still needs an explicit scan-and-connect before it will do anything during a run. That is the intended behaviour, not a fault.

SECTION 34

Range Clock — wall displays

Hardware

iPhone

Android

Paid feature

Range Clock is a separate free app you install on a spare phone or tablet, mount on a wall, and never touch again. It shows the time of day, optionally rotates through event notices, and switches automatically to a live match countdown the moment a Match Official starts a stage.

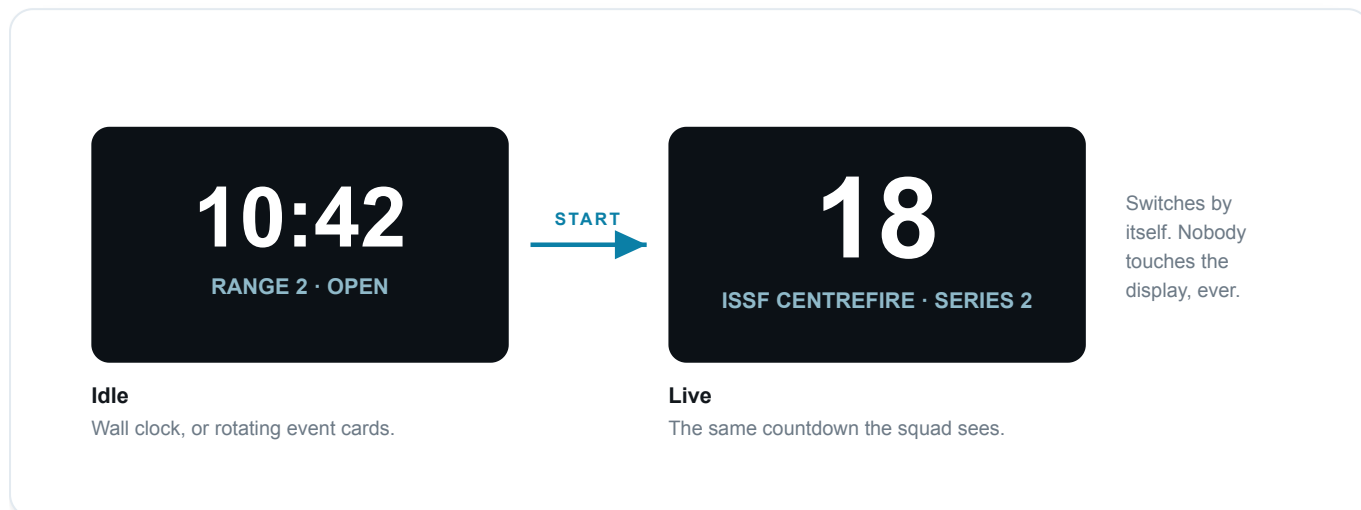
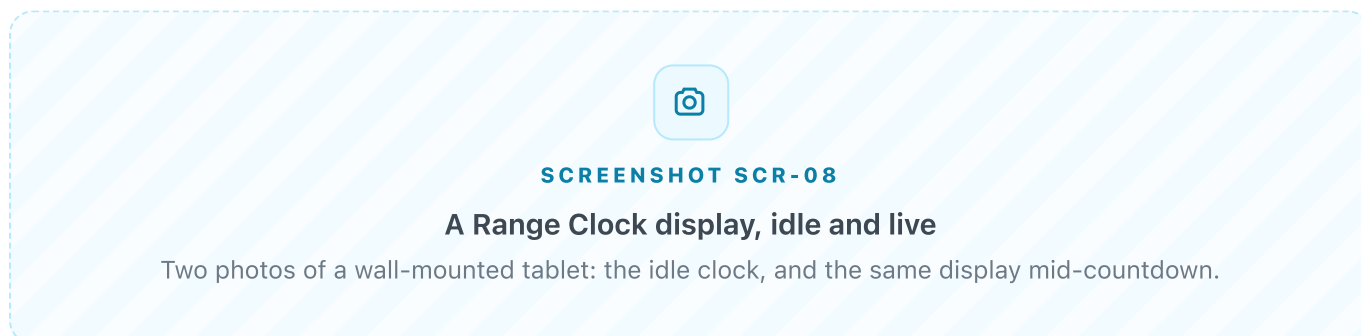


FIGURE 34.1 The display has no settings screen of its own. Everything is pushed to it over Bluetooth from a Match Official's phone.



Pairing and groups

Reachable from the Timer screen and from Settings. Scan, pair, and the display joins your list. If you run more than one, you can organise them into **Groups** — "Range 1", "Pistol bays", whatever suits.

WATCH OUT

At the top of the Groups screen is a **"None (every paired display)"** option. That choice is what decides whether your commands reach *all* your displays or just one group's worth. If a display seems unresponsive, check this before assuming anything is broken.

Keeping their clocks together

Inside a group, one display automatically becomes the group's timekeeper — marked with a small clock icon on its row — and the others follow it rather than your phone.

NOTE

Sync Time on an individual display is silently ignored if that display is following a group timekeeper. Sync the group as a whole instead, from the group's own screen.

Digital Signage

Between matches, a display can rotate through event cards you write: event name, stage, range label, who is staffing it, a start and end time, and your own colours. Each card carries a real date and disappears on its own once it is over.

THE DISPLAY OWNS ITS OWN LIST

Signage lives on the *display*, not on your phone. Connect a phone that has never seen that display before and it is handed the whole current list immediately. Which card is showing right now is worked out by the display itself. This means a range's noticeboard keeps working correctly whether or not anybody's phone is anywhere near it.

Commissioning a new display

Setting up a brand-new display is done entirely from your phone — name, club branding, group membership, operating hours.

WATCH OUT

The **Always On** toggle, when switched off, applies a fixed **8 am–8 pm** daily schedule. It does not open a custom hours editor, and there is no way to set different hours on different days yet — so there is no point looking for one. An active Match Official session always overrides the schedule anyway: a display will not go to sleep in the middle of your stage.

IPHONE DISPLAYS SPECIFICALLY

Apple gives no app a way to wake a screen that has already gone fully to sleep. If an iPhone or iPad being used as a display has slept, connecting to it works fine, but somebody has to physically wake it to see the result. Android displays do not have this limitation.

PART VII

Shot Clock Diary

29 MIN READ

The other app in the Shot Clock family. Shot Clock times your shooting; Diary records it, scores it, analyses it, and — if you are running the match — broadcasts it to spectators.

SECTION 35

Meet Shot Clock Diary

■ Shot Clock Diary

■ iPhone

■ Android

If you can drive Shot Clock you already know how Diary behaves — same conventions, same layout language, same match catalogue. Here is what it adds.

■ Session journal

What you shot, where, in what weather, with what, and how it went — with photos, annotations and sketches.

■ Scorecards

Real course-of-fire scoring on a keypad built for it, with sighting shots, malfunctions and X-counts handled properly.

■ Statistics & trends

Averages, standard deviation, X-rate and progression — per session, and across every time you have shot the same match.

■ Multi-Bay scoring

Score a whole relay from one device: up to 50 bays, with each official taking their own slice of the line.

■ Match Report

An incident log for the day — safety, disciplinary, equipment — attached to the match and printed with it.

■ Live Scoring

A public scoreboard spectators can watch in a browser, updating as you enter scores. Even across multiple ranges at once.

How the two apps relate

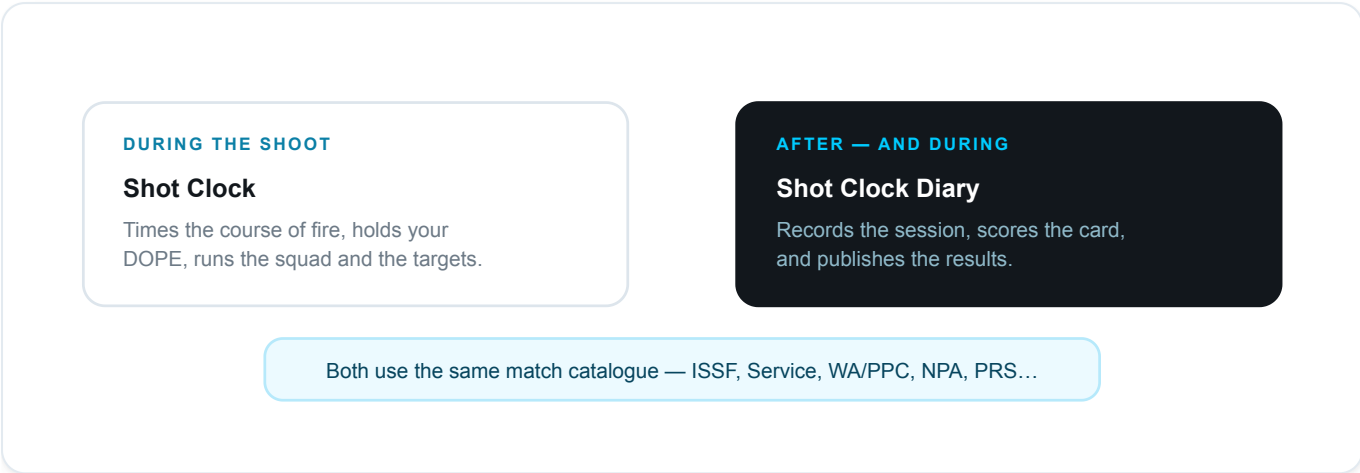


FIGURE 35.1 Separate apps, separate data, one shared vocabulary of matches and disciplines.

THEY DO NOT SHARE DATA

Diary keeps its own records. Nothing you write in Diary appears in Shot Clock, and nothing on your DOPE cards appears in Diary. They are deliberately independent — which also means you can use either one on its own.

The one switch that changes everything

Like Shot Clock, Diary has a **Settings** > **Mode** switch with **Individual** and **Match Official**. It is not a preference; it changes what the tabs are.

TAB	INDIVIDUAL MODE	MATCH OFFICIAL MODE
First tab	Score — your own scorecard	Score — Multi-Bay, a whole relay
Second tab	Diary — your session journal	Match Report — the day’s incident log
Settings	Always present, and always where you switch modes	

Switching is instant, with no confirmation and nothing to save first — anything in progress saves itself before the switch takes effect. Switching back restores your Diary exactly as it was.

What it costs

WHAT	SHAPE	UNLOCKS
Free trial	Time-limited	The whole app, so you can decide properly.
Subscription	Monthly or annual	Diary, Score, statistics, export — everything personal.
Match Official Mode	One-off purchase	Multi-Bay scoring, Match Report and Live Scoring.

Diary’s Match Official purchase is separate from Shot Clock’s. They are different apps with different stores’ billing behind them.

SECTION 36

The Diary — your session journal

■ Shot Clock Diary

■ iPhone

■ Android

One entry per range session. Everything saves as you type — there is no Save button to remember and nothing to lose by backing out.

When and where

Date & range type	Indoor or outdoor.
Location	Type it, or use Find Nearby Range — a venue search built specifically for shooting ranges rather than general points of interest. It translates non-English venue names, so a club whose name is not in English still turns up.
Map thumbnail	Appears under Location once there are real coordinates behind it — from picking a range, or simply from typing a place name and pausing. If it cannot find what you typed, the map disappears rather than showing you the wrong place. It is included in the exported PDF.
Temperature	Type it, or fetch it. The app looks up the weather for the date the entry is set to , not for right now — diary entries are usually written up afterwards.
Weather details	Once fetched, a button opens the full historical report: temperature range, wind and conditions across an hourly window around your session.

What you shot with

Firearm, ammunition, load data and rounds fired. Names you type are remembered as suggestions for next time, and each picker has a **Manage...** option:

- Tap a saved name to **rename** it — and every past entry that used it updates too. Fixing “Glock19” to “Glock 19 Gen 5” does not fork your history in half.
- Swipe to **remove** a name from the suggestion list. Past entries keep exactly what they had.

How it went

Mindset records mood, energy and hydration on a 1–5 scale — three taps, and over a season they turn out to correlate with results more than most people expect.

Reflection is three proper rich-text fields — General Comments, What Went Well, What Didn’t Go Well — plus a short *Key Takeaway* and a free-text score field.

TWO THINGS WORTH KNOWING

Dictate instead of typing. Tap the microphone on your keyboard and talk. Genuinely the best way to capture an after-action note while your hands are still full at the range.

Bold, italic and underline apply to a *selection*. Select some text and the option appears in the popup your phone already shows — on iPhone in the standard formatting popup, on Android as extra rows in the Cut/Copy/Paste menu. You cannot turn a style on before typing.

The Attachments panel

Photos, canvases and linked scores live together in one collapsible panel, closed by default so a quick entry stays quick.

PHOTOS AND VIDEO

- Attach several at once, from the camera or your library. Tap a thumbnail for a full-screen viewer.
- The viewer has a real **annotation tool**: freehand drawing with adjustable colour and width, a highlighter, an eraser, and undo/redo. Draw straight onto a photo of your target to mark a group or call out a flyer.
- Pinch to zoom — your annotations stay lined up with the image.
- This one screen rotates to landscape for a bigger canvas, even though the rest of the app stays portrait.
- Rename a photo or video and that name is what appears everywhere afterwards, including the PDF. You can then refer to it from a reflection field — “see [Group 3]”.

CANVASES

A blank page to sketch on, rather than drawing on top of a photo — a target diagram, a range sketch, a wind call. Same drawing tools. Each canvas shows a real preview of what you drew on its tile, not a generic icon, and press-and-hold renames or deletes it. Canvases are included in the PDF.

LINKED SCORES

Attach saved scorecards to a diary entry — ideal for a multi-day event where every day's card belongs to one journal entry. Tap a linked session and it opens in the real Score screen, not a stripped-down preview. Delete the session later and the entry shows a "Removed Score" placeholder with an option to unlink, rather than breaking.

Only solo scorecards can be linked; Multi-Bay sessions belong to other shooters' records.

Finding things again

- Search across every entry.
- Sort and filter by location, firearm, ammunition, match or range type — and the filters stack, so "outdoor + .308 + Bisley" is one query.
- With an entry open, swipe left and right to page through the rest of your current filtered list.
- Swipe to delete, or multi-select several entries for batch actions.
- Export one entry or a whole batch as a PDF, or print it directly — photos, annotations, maps and all your written fields included. Section 41 covers where it can go from there.

YOUR DIARY IS NOT BACKED UP AUTOMATICALLY

Diary entries live **only on your phone**. Nothing is uploaded, synced or copied anywhere — not to iCloud, not to us, not to a watch.

If you lose the phone, or delete the app, without having exported a backup first, those entries are gone. Section 41 shows you how to protect against that. It takes about fifteen seconds and it is worth doing today rather than eventually.

ON THE LINE

Jo works out why her Tuesdays are worse than her Saturdays

Jo logs every session for four months: location, firearm, ammunition, mood, energy, hydration, and a two-line takeaway. Nothing elaborate — under a minute per entry, mostly dictated in the car park.

When she filters to one firearm and one load, the pattern is obvious in the entries themselves: her Tuesday evening sessions are all logged at energy 2 and hydration 2, straight from work. Her Saturday mornings are 4s and 5s, and score two points better on average.

That is not something a scorecard alone would ever have shown her, and it is the whole reason the Mindset block is three taps rather than a text box.

SECTION 37

Score — running a scorecard

■ Shot Clock Diary

■ iPhone

■ Android

A real scorecard for a real course of fire, on a keypad designed for scoring rather than a spreadsheet pretending to be one.

History is the resting state

Open the Score tab with nothing in progress and you land on **Score History** — a list of every session, with match name, date and time, and small icons where you filled in a location or event.

- The  button lives **here**, not on the scoring screen. Tap it to pick a match and start a genuinely fresh session; whatever was open saves itself first.
- Tap any row to resume scoring it.
- Search by name, location or event; sort newest or oldest first; filter to one match.
- Once a card is open, the back chevron at the top left is how you return to History. It autosaves on the way out.

Entering shots

Each card is set to one scoring mode or the other — a property of the card, not something that changes shot to shot.

MODE	HOW IT WORKS	KEYS
Integer	One tap per shot.	0–10 for the ring · X for inside the ten (same ten points, counted separately because X-count is its own tiebreaker) · M for a called miss (zero, but recorded as a miss rather than an empty box).
Decimal	Two taps: ring, then tenths.	For electronic-target scoring like 10.5. No X key — a ten with a tenths digit already carries the same precision.

ENTER THEM IN ANY ORDER

You do not have to work highest-to-lowest as you go — tap them in whatever order they were called. Each string re-sorts itself into the usual convention when you leave that card, not while you are still entering.

Boxes lock themselves — the red border

Scores you have already entered protect themselves. Twenty seconds after your last entry anywhere on the card, every filled box locks, and tapping one will not overwrite it.

This exists because the most expensive mistake in scoring is a stray tap landing on a settled score — and the moment it is most likely to happen is when you are moving between bays with the phone in your hand. Locking is what stops a brush of the thumb quietly rewriting somebody's result.

BORDER	MEANS	WHAT HAPPENS IF YOU TAP IT
Blue	Selected and editable — this is the box your next keypress goes into.	It takes the score.
Red	Locked. The value is settled and is being protected.	Nothing. The border flashes red to tell you the tap was refused.
No border	An ordinary box, not currently selected.	It becomes the selected box, ready for a score.

UNLOCKING

Press and hold any red box. That unlocks every box on the card — not just the one you held — for a fresh twenty seconds, which is long enough to make a correction without fighting the lock for each box in turn. When the twenty seconds lapse, everything locks again on its own.

NOTE

Empty boxes never lock. There is nothing to protect and you must always be able to score forward, so normal scoring is never interrupted — the lock only ever stands between you and a value that is already there.

The twenty-second clock is one clock for the whole card, not one per box, and it runs from your most recent entry *anywhere* on it. Once boxes have locked, ordinary scoring elsewhere does not quietly unlock them again; only the long-press does.

Sighting shots

On a course of fire that includes them, sighters are entered exactly like any other shot but roll up into their own separate subtotal, completely isolated from your real running total. You can see how they went; they never touch the result.

Malfunctions — AM and NAM

Where a course of fire supports it, two extra keys appear:

NAM **Non-Allowable Malfunction** — the shooter's own fault, or otherwise not qualifying. A permanent zero, no reshoot. Kept distinct from a plain miss purely so the record shows *why* it was a zero.

AM **Allowable Malfunction** — a genuine equipment failure confirmed by the official. Each AM marks **one shot still owed** in the makeup round and unlocks one enterable box in that string's makeup row.

MARK ONE AM PER SHOT OWED, NOT ONE PER MALFUNCTION

How many shots you owe depends on your discipline's rules, not on the app. Some require reshooting the *entire* string once any malfunction occurs; others only the shots not actually fired.

Example. A five-shot 25 m Pistol string, malfunction right after shot 1. Under "reshoot only what's missing": enter your one real score, then mark the other four boxes AM. Under "reshoot the whole string": five AMs, discarding the shot already fired.

The makeup round is fired at the end of that stage, alongside anyone else who owes shots, before targets change. Those shots count toward your real score.

Session details

Every card has its own date, location and event name, under the toolbar's ... menu. Location behaves exactly like Diary's, including **Find Nearby Range** and the map thumbnail that ends up in the PDF.

Statistics and trends

- **Per session:** shot count, average, highest, standard deviation, X-rate and miss-rate — broken out *per phase* of the course of fire, so Precision and Rapid Fire are scored separately rather than blurred together. Plus a frequency chart and a progression chart.
- **Across sessions:** every saved solo session under the same match name pulled into one view, filterable by time range or location. This is where you find out whether you are actually getting better.
- **In the PDF:** the score grid side by side with its statistics, plus a plain-English "How to Read This Report" page.

What a score card is made of

Before you build one, it helps to know how the built-in cards are put together, because a custom card uses exactly the same pieces.

A card is a stack of **rows**. Most rows start with a **label** — a series number, a stage name, a total's name — and everything after the label is a run of **boxes**. Some boxes you type into; others the app fills in for you.

LABEL	THEN...	WHAT THAT ROW IS
Precision	— nothing —	Section header. A label on its own just titles the stage that follows.
Sighting	SX SX SX SX SX SS	Five sighting shots and their own subtotal, kept out of the real score.
1	X X X X X S	A series. Five scoring shots, then a subtotal.
2 ... 6	X X X X X S	The remaining series, identical.
MF	M M M M M S	Malfunction makeup shots, which do count.
Precision Total	T	Stage total. Adds up that stage's subtotals.
...then the whole block repeats for Rapid Fire ...		
Match Total	G	Grand total. Adds up the stage totals.

FIGURE 37.1 The ISSF Centre Fire card, top to bottom — two stages of six five-shot series, each with sighters and a makeup row, then a grand total.

THE BOXES

BOX	MEANING	COUNTS TOWARD THE SCORE?
X	A shot. The X ring is available.	Yes
N	A shot, ring value only — for targets with no X ring.	Yes
M	A malfunction makeup shot.	Yes
SX / SN	A sighting shot, with or without an X ring.	No
S	Subtotal — adds the shots since the last subtotal.	Computed
T	Total — adds the subtotals since the last total.	Computed
G	Grand total — adds the totals.	Computed
SS	Sighting subtotal — adds the sighters, and nothing else.	Computed, separately

Building your own card

From the  menu, open **Custom > New Custom Definition**. You are laying out the same rows and boxes described above, and a live preview shows them as real scoring boxes as you go rather than as text.

- 1 Add boxes with the keypad.**
Each tap appends one box to the row you are working on, using the codes in the table above.
- 2 Name the row.**
Tap its label — or the placeholder dash if it has none — and type. A row whose label is the only thing on it becomes a section heading.
- 3 Add more rows**
as you go, or long-press a row's label for **Insert Row Above / Insert Row Below** to put one in a specific place.
- 4 Finish with your totals.**
A subtotal at the end of each series, a total at the end of each stage, and a grand total at the foot of the card.

CORRECTING AS YOU BUILD

- **Replace a box:** tap it to select it — the next keypad tap overwrites it and moves the selection along, so you can fix a run without re-tapping each one.
- **Insert a box:** tap the *gap between* two boxes to drop a cursor there. New boxes land in the gap instead of at the end.

- **Delete:** long-press a box to remove it. Each row has its own delete icon for the whole row.
- **Nothing needs saving** — the card is written as you build it, so there is no Save button and no way to abandon a half-made edit.

Editing a card you already made

Saved cards appear under  > **Custom**, ready to score. To change one, open **Manage Templates...** from that same menu:

Tap the name	Reopens the card in the editor, exactly as you left it. Every tool above still applies — add rows, insert boxes, retitle stages.
Pencil icon	Renames it, without opening the editor.
Bin icon	Deletes it.

NOTE

The  makeup box can be placed on a custom card but will not become usable while scoring, because the AM key that reveals it is only enabled on a handful of built-in courses of fire. Worth knowing before you design a card around it.

Export

Export PDF and **Export CSV** sit next to each other on the same menu. The PDF is the printable report; the CSV is one row per string, for a spreadsheet. Both hand off to your phone's own share sheet — Section 41.

COMING — EXPORTS FOR CLUB SCORING SYSTEMS

We are adding export formats that drop straight into the scoring systems clubs already run, rather than making somebody retype a card. The first is **OpenWPlus**, widely used across Australia and New Zealand.

If your association uses something else, we would like to support it. Send us a sample of the file your system expects — a real export from it is ideal — and we will look at adding it: dev@dugongtech.com.

ON A TABLET, THE KEYBOARD MOVES

On an iPad or a large Android tablet the score keypad does not stretch across the whole screen. It docks as a narrower panel, and it is **draggable** — a small grip handle sits above the keys, and dragging it slides the panel to wherever your thumb actually is. Wherever you leave it is remembered. Width is Small, Medium or Large under [Settings](#) > [Score Keyboard](#). Nothing on screen advertises this, so it is easy to miss.

SECTION 38

Multi-Bay — scoring a whole relay

■ Shot Clock Diary

■ iPhone

■ Android

■ Paid feature

In Match Official mode the Score tab becomes a Multi-Bay scoring screen: one device, many shooters, up to fifty bays.

Match History

One row per *match event*, not per bay — match name, date, bay count. Tap to resume at whichever bay you left off on. Each row has its own export button, so you can share a finished match's PDF without reopening it.

Bay ranges — the important idea

A match line can have fifty bays, but one official standing at one part of the line is realistically scoring a handful. So each official sets their own **assigned bay range** — a Start Bay and an End Bay — and swiping cycles within just that band.

ONE MATCH · FIFTY BAYS · THREE OFFICIALS



Ali's phone

Sam's phone

Kim's phone

Each official swipes only within their own band — it wraps at both edges, so nobody has to swipe through twenty bays that are not theirs to get back to their own.

FIGURE 38.1 Banding is what lets several officials run the same match from separate devices without stepping on each other.

- A new match defaults to bays **1–10**. Adjust it from the toolbar's Bay Range settings to match your actual section of the line.

- The range is a **hard fence**. Swiping off either edge wraps straight to the other edge — there is no swiping past it, and no way to jump directly to a bay number. If you need a bay outside your band, widen the range first.
- Session details — date, location, event — are **shared across the whole match**, not set per bay.
- Scores you have already entered **lock themselves** after twenty seconds, so swiping between bays with the phone in your hand cannot overwrite a settled result. Press and hold a red-bordered box to unlock (Section 37).

Exporting a match

A Match PDF is a full roster table (one row per bay or competitor) followed by a statistics page per bay and one shared explainer page. An **"Include Statistics in PDF"** toggle in the same menu turns the per-shooter pages off if you just want the roster. The CSV is one row per bay, with the same columns as the roster table. Club scoring-system exports are on the way here too — see Section 37. If you are streaming the match live, the spectator link offers its own downloads as well, including a sheet laid out for an official scorer (Section 40).

SECTION 39

Match Report — the day's log

■ Shot Clock Diary

■ iPhone

■ Android

■ Paid feature

A lightweight incident log kept alongside a Multi-Bay match: disciplinary matters, safety concerns, equipment failures, or simply a note about how the day went.

It is deliberately simpler than a formal ISSF Range Incident Report — no serial numbers, no signature chain. This is one official running a club match on their own phone, not a jury process.

IT FOLLOWS WHATEVER IS OPEN IN SCORE

There is no match picker on this tab. Whichever scorecard is open in Score is the one Match Report reads and writes; switch match in Score and Match Report follows. If Score is sitting on History with nothing open, Match Report is empty and disabled — there is no match for an entry to belong to.

Logging an entry

Tap . Six categories, each with its own coloured icon in the list and on the PDF:

CATEGORY	FOR
Disciplinary	Conduct matters.
Safety	Anything with safety consequences.
Equipment Fault	A competitor's own gear.
Range Equipment Failure	The range's gear — target systems, electronic scoring, timers.
General Comment	Everything else worth recording.
Other	When none of the above fits.

- **Bay** is a dropdown scoped to that match's assigned range, plus "None" — an entry does not have to belong to one competitor. A range-wide power cut belongs to nobody.
- **Competitor name** is free text and optional.
- **Details** is the write-up and is required — Save stays disabled until there is something in it.
- **Applicable Rules** and **Action Taken** are optional on purpose. You often will not know the rule number in the moment; come back and fill it in later.
- Log entries mid-match, alongside active scoring. They are separate tabs, not exclusive states.

Time defaults to the moment you started the entry, and can be changed — tap it to pick a date and then a time. Useful when you are writing an incident up afterwards rather than as it happens.

Where it ends up

Every entry appears as its own **Match Report** section on that match's exported PDF, after the statistics pages, newest first — and it prints even with "Include Statistics in PDF" turned off. There is also a share icon on the tab itself that exports *just* the report: match name, date, location and every entry, for when somebody needs the incident log on its own.

SECTION 40

Live Scoring — a public scoreboard

■ Shot Clock Diary

■ iPhone

■ Android

■ Web

■ Paid feature

Broadcast a Multi-Bay match's roster — names, per-stage scores and running totals — to anyone watching in a browser, updating as you enter shots. Nothing for them to install, and nothing they can change.

Turning it on

- 1 From the Multi-Bay screen's ... menu, tap **Live Scoring**.
- 2 Switch on **Stream Live Scores**.
- 3 Choose a **Destination** (below).
- 4 Share the link.

A **Timeout** setting (5–240 minutes, 30 by default) turns streaming off by itself after that long without a successful update, so it does not keep quietly retrying once you have closed the match or lost signal. If it lapses, switch it back on.

The three destinations

DESTINATION	NEEDS	GIVES YOU
shotclock.au	Internet	A shareable public link anyone can open from anywhere. This is the one most people want.
livescores.local	A Scoreboard on the same network	The same live board over local Wi-Fi with no internet anywhere in the chain. Hand out the server's own address.
Local Server	The same, typed in by address	For when the friendly name does not resolve on that network.

The first time a browser connects to a local server it will warn that the connection is not private. That is expected — click through once and most browsers remember.

Your spectator link

With shotclock.au selected, your device is given a permanent two-word **callsign** — two words, in the style of "Steady Falcon" — and a link built from it. Unlike a scoreboard name this one is generated for you, so there is nothing to type and nothing to agree with anybody:

<https://shotclock.au/livescores/wooden-teapot>

The callsign names *your device*, not one particular match — so the same link keeps working all day as you finish one match and start the next. Send it once in the morning.

WATCH OUT

Regenerate mints a brand-new callsign and the old link stops updating from your next match onward. It cannot be undone. Only do it if you genuinely need a fresh one.

Combining several ranges into one board

Turn on **Multi-range match**, and every range that enters the *same* **Scoreboard Name** is combined onto one shared, ranked scoreboard — regardless of how far apart those devices physically are.

● One complex, several officials

Each runs their own bays; the whole event appears on one board.

● A live postal shoot

Different clubs, different countries, shooting the same match at the same time and competing on one live scoreboard.

ORGANISERS — CHOOSE A NEW ONE FOR EVERY EVENT

Do not reuse last month's, and do not use any name printed in this manual. The examples here are built from words the app cannot generate, so they will not work — that is deliberate.

Stuck for one? Tap **Suggest one** under the Scoreboard Name field and the app will offer a name. Copy it, send it to every site taking part, and each of you types it in. Nothing is filled in for you — the suggestion is thrown away when you close it, so the callsign your device actually uses is always one a person entered deliberately.

Scoreboard Name **A fresh name, chosen by the organiser, for this one event.** Every site types the identical one. The board shows how many sites are attached, so if you expected four and see three, somebody mistyped it — and if it is higher than you expected, somebody outside your event is using the same name.

Any name you like, as long as every range types it identically — something like *Saturday Morning Comp 18 Aug*. **Put the date in it.** A bare “Saturday Morning Comp” is a name another club could pick on the same day without either of you knowing, and two events sharing a name share a board.

This manual deliberately does not print a name you could use as-is, for that

same reason. If you would rather not invent one, **Suggest one** mints a name nobody else is likely to have chosen.

Location	A short label — “Hobart” — identifying your site on the combined board, since bay numbers repeat across sites. Falls back to your device callsign if left blank.
Ranking	By average score per shot fired , not total. Sites rarely start and finish together, and average is what stays fair while some are still mid-match. A competitor needs a full series’ worth of shots before they are ranked at all, so two lucky early shots cannot put somebody falsely on top.
Memory	The Scoreboard Name is remembered for 12 hours, so a phone restart mid-event does not mean retyping it. It is shown on the Match screen with a one-tap clear.

WATCHING A COMBINED MATCH

The combined board has its own address, built from the scoreboard name rather than from any one device:

```
https://shotclock.au/livescores/saturday-morning-comp-18-aug
```

Open that in any browser to watch every attached site at once. **Share** and **Copy** buttons sit under the Scoreboard Name field so you can send the finished link straight to competitors and spectators without typing it out — and since it is built from the callsign, every site can hand out the identical link.

WATCH OUT — TWO KINDS OF LINK, AND ONLY ONE COMBINES RANGES

A live-scores address can name *either* one device or a whole scoreboard. Nothing in the address itself tells you which; the name does:

ADDRESS	SHOWS
<code>.../livescores/wooden-teapot</code>	One device's board. The bays that one Match Official is scoring. Right for a match with a single official — and this is the link the app gives you when you have not set a Scoreboard Name at all.
<code>.../livescores/saturday-morning-comp-18-aug</code>	The combined board. Every range streaming under that scoreboard name, ranked together. This is the only form that combines anything.

Use the **Share** or **Copy** button rather than typing an address by hand. A name that does not match anything currently streaming gives you an empty page rather than an error — which looks identical to a match that has not started yet, so a typo is easy to mistake for a phone that is not sending.

EVERY MATCH NEEDS ITS OWN CALLSIGN — AND NOTHING CHECKS IT FOR YOU

A scoreboard name is simply typed in, on every range, by hand. The server does not verify that it is yours, that it is unused, or that you were given it — it groups together **everyone who typed the same thing**, and that is the whole mechanism.

Which means two unrelated competitions that happen to use the same callsign will silently merge into one ranked board. No error, no warning, no way for either organiser to tell from their own screen: just other people's competitors appearing in your results.

The examples in this section — `wooden-teapot` , `saturday-morning-comp-18-aug` — are illustrations, not names to use. The device one is built from words the app's own callsign generator does not contain, so it can never belong to a real device. That is on purpose: anything printed in a manual gets copied verbatim by enough people to guarantee a clash.

So: use exactly what your organiser gives you for that event. Never reuse the one from last month, and never copy an example out of a manual — including this one. If you are the organiser, **Suggest one** will give you a starting point; it cannot see what other matches are live, so treat it as a name generator rather than a guarantee, and check the site count on the board once everyone is streaming.

IF YOU ARE THE ONE ORGANISING

Pick something nobody else will land on by chance, and tie it to the event rather than to a habit — the date and the club, say, rather than a favourite pair of words. Send it round in writing so every site types the identical thing, and check the site count on the board once everyone is streaming: if it is higher than the number of clubs you invited, somebody else is on your callsign.

What else that link can do

The address you hand out is not only a scoreboard. Adding a little to the end of it gives you a printable results table, or the results as a file — no login, no separate admin page, and it works on a scoreboard name and a single device's callsign alike.

ADD TO THE END OF THE LINK	WHAT YOU GET
nothing	The scoreboard. The big, self-refreshing display meant for a screen in the clubhouse.
<code>?view=results</code>	A plain results table. The same standings without the scoreboard styling — readable on a laptop, and sensible to print.
<code>?export</code>	The download chooser, listing the formats below with a description of each. The one to use if you cannot remember the rest.
<code>?export=csv</code>	A spreadsheet. Opens in Excel, Numbers or Google Sheets; one row per competitor.
<code>?export=pdf</code>	A printable results sheet — ranked, one row per competitor, with stage totals.
<code>?export=scorer</code>	A scoring sheet: every shot, laid out for an official scorer keying results into a scoring system.

So a full example, for the results secretary rather than the spectators:

```
https://shotclock.au/livescores/saturday-morning-comp-18-aug?view=results
```

TIP — THESE ARE BOOKMARKABLE, AND THAT IS THE POINT

They are part of the address rather than buttons on the page, so each person can bookmark the one they want and never think about it again: whoever sets up the clubhouse screen bookmarks the bare link, the results secretary bookmarks `?view=results`, and neither has to explain to the other how to get there.

NOTE

None of this is behind a login, deliberately. Everything in a download is already on the scoreboard for anyone holding the link, so a spreadsheet of the standings gives away nothing the page does not. Treat the link itself as the thing worth being careful with.

NOTE

A bay only appears on the live board once it has a competitor name typed in or at least one score entered. Swiping past an empty bay does not put it on the board.

ON THE LINE

A four-club postal match, run from four phones

Four clubs — Hobart, Launceston, Devonport and Burnie — agree to shoot the same 60-shot match on the same Sunday morning. The organiser sends round one line giving the scoreboard name for that morning — a name none of them has used before.

Each club's official sets Destination to **Match**, types that callsign, sets Location to their own town, and scores their own bays exactly as they normally would. One shared board shows all four clubs ranked together, live, and it tells the organiser that all four sites are attached.

No server was set up, no accounts were created, and nobody drove anywhere.

SECTION 41

Sharing, printing and backing up

■ Shot Clock Diary

■ iPhone

■ Android

Everything you record can leave the app three ways: shared, printed, or bundled into a backup file. The first two use your phone's own machinery, so they reach wherever your phone already reaches.

Sharing

Anywhere you see **Export PDF**, **Export CSV** or a share icon — a diary entry, a batch of entries, a scorecard, a whole match, a Match Report, a Live Scoring link — what happens next is your phone's **standard share sheet**. We do not put a list of destinations in front of you; we hand the finished file to the operating system and let it offer everything it knows about.

In practice that means the file can go, without any of it being a Shot Clock feature:

- straight into an **email** to your match secretary;
- to **WhatsApp**, **Messages**, **Signal** or whatever your club uses;
- into **iCloud Drive**, **Google Drive**, **Dropbox** or Files;
- to another phone by **AirDrop** or **Nearby Share**;
- anywhere else you have installed that accepts a document.

GOOD TO KNOW

If a destination you expect is missing, it is your phone's list rather than ours — the app that would receive it either is not installed or has not registered itself for PDFs. Adding it to your phone adds it here.

Printing

Print hands the same document to your phone's own print system — AirPrint on iPhone, the print service on Android. Any printer your phone can already reach will appear, including one shared over your club's Wi-Fi.

PRINT IS ALSO HOW YOU GET A PDF FILE

Both platforms offer **Save as PDF** as a destination inside the print dialog. If you want a file rather than paper — and you are somewhere that Export has not put a button — printing to PDF gets you one.

Worth knowing for match day: a Match PDF is laid out for printing, not just for reading on a phone. A roster table, then a statistics page per bay, then the Match Report if you logged anything. Printed at the end of a match it is a complete paper record without anybody retyping a card.

Backing up

One file containing everything: diary entries, equipment lists, every solo and Multi-Bay scorecard, custom templates, Match Report entries, and every attached photo and video.

[Settings](#) > [Backup & Restore](#).

Backup Writes one file and hands it to your phone's normal share sheet — save it to iCloud Drive, Google Drive, local storage, or anywhere else that sheet offers.

Restore Opens a file picker to choose a backup you made earlier.

RESTORE CAN ONLY EVER ADD

Restoring **never overwrites or removes anything**. Whatever is already on the device stays exactly as it is; only records genuinely missing locally are added from the file.

There is deliberately no “replace” option, which means a restore can never wipe out work you have done since your last backup. It also means restoring the same file twice is harmless.

THIS IS MANUAL, AND IT IS THE ONLY PROTECTION YOU HAVE

Nothing backs itself up in the background. Put a reminder in your calendar for the first of every month, or back up on the drive home from a match you care about. A season's worth of entries is not something you want to rediscover the hard way.

PART VIII

Reference

15 MIN READ

Menu maps, every setting in one table, the complete built-in match library, troubleshooting, a glossary, and a quick reference card worth printing.

SECTION 42

Menu maps

Where everything actually is. If you are hunting for a setting, start here rather than tapping through.

Garmin watch

SHOT CLOCK · GARMIN

Main screen | Select / tap → *start the countdown* | Up / Down → *previous / next sequence* | Swipe left → *DOPE Card (or double-tap Down, if switched on)* | Menu → | **Select Matches** → *family → matches* | **View DOPE Card** ♦ | **View Notes** ♦ | **Controls** → | | **Use Gestures** Off → Low → Medium → High | | **Touch Screen** On / Off | | **Touch Guard** double-tap to start (only when Touch is on) | | **DOPE Double Tap** On / Off – ships Off ♦ | | **Plus Mode** Off, +1 ... +15 seconds | **Display & Alerts** → | | **Time Slice** → Off/Build Up/Tear Down · Mode: Next Alert / End Time | | **Count Direction** Down / Up | | **Display Timer In** Seconds / Minutes | | **Sound** Off → Start/Stop → Start/Stop/Interval | | **Vibration** Off → Start → Stop → Start+Stop | | **Use Haptics** click on button press | **Other Systems** → | | **Target Timer** scan · connect · disconnect | | **Open Portal** shotclock.au/portal – every watch | | **Track Activity** In Garmin Connect – with heart rate | **More** → | **Manage Customisations** → Reset · Backup · Restore – *deprecated* | **Stats** battery runtime estimates | **About** version, links **DOPE Card** → Menu → Select Card · Sort Order · View · Wind Bracket · Edit Cards ♦ *not available on older watches without vector fonts* Open Portal and Target Timer are available on every watch. From 2.0.4 those older watches can build Time Sequences in the Portal or the phone app and sync them across – they still cannot show DOPE Cards or Notes, which is what the ♦ above marks.

Apple Watch

SHOT CLOCK · WATCHOS

Main screen | Tap or long-press → *start* | Swipe up / down → *change sequence* | Swipe left → *DOPE Card* | Swipe right → *Menu* → | **Select Matches** → *family → matches* | **DOPE Card** select card · sort order · view · wind bracket | **Notes** | **Controls** → | | **Use Gestures** Off / Low / Medium / High | | **Touch Guard** | | **Auto-Lock While Running** | | **Plus Mode** Off, +1 ... +15 seconds | **Display & Alerts** → | | **Time Slice** + Mode | | **Count Direction** | | **Display Timer In** | | **Sound** | | **Vibration** | | **Haptics** | **Other Systems** → | | **Target Timer** | | **Slave Mode** join a Match Official's squad | | **Portal** 6-digit code · shotclock.au/portal | | **Track Activity** In Apple Health – saves the run | **More** → | **Reset Time Sequences** | **Statistics** | **About**

The phone app — two separate settings screens

This is the single most common source of "I cannot find that setting". There genuinely are two, and they hold different things.

SHOT CLOCK · IPHONE & ANDROID

Bottom bar | **Sequences** *families → matches → edit a sequence* | **DOPE Cards** *tab strip · Edit mode · wind brackets* | **Notes** *tab strip · watch font size* | **Timer** *full screen →* | **gear icon** = *TIMER SETTINGS* → | | **Select Matches** | | **Select DOPE Card** | | **Controls** → | | | **Plus Mode** | | | **Touch Guard** *Off / Start Only / Stop Only / Start & Stop* | | **Display & Alerts** → | | | **Time Slice + Mode** | | | **Count Direction** | | | **Display Timer In** | | | **Sound** *Off / On / Loud* | | | **Vibration** | | **More** → | | | **Reset Time Sequences** | | **Competition Mode** | | **Other Systems** → | | **Master Mode / Slave Mode** *RangeLink* | | **Target Timer** *long-press to connect* | | **Range Clock** | **gear icon** = *APP SETTINGS* → | **Device** *which watch you are editing · pair a Garmin* | **Mode** *Individual / Match Official* | **Match Official Mode** *purchase* | **Backup & Restore** *per device · export / import file* | **Competition Mode** *also here, same switch* | **Configure Target Timer** *setup, not match use* | **Range Clock** *paired displays* | **About**

Shot Clock Diary

SHOT CLOCK DIARY · IPHONE & ANDROID

Individual mode | **Score** → *Score History → a card →* | | **...** *Session Details · Statistics · Export PDF · Export CSV* | **Diary** → *entry list → an entry (attachments, photos, canvases, linked scores)* | **Settings** → *Mode · Score Keyboard · Backup & Restore · purchases* | **Match Official mode** | **Score** → *Match History → Multi-Bay →* | | **...** *Session Details · Bay Range · Live Scoring · Include Statistics · Export* | **Match Report** → *entries for whatever match is open in Score* | **Settings**

The Web Portal

SHOTCLOCK.AU/PORTAL

Code entry 6 digits from the watch · 123456 = public demo └ **Editors** ─ **Time Sequences** grid → edit modal → “What this means” · Help ─ **DOPE Cards** card tabs · :: drag · symbol picker · wind columns ─ **Notes** list · editor · live watch preview · font size └ **Save** then back out of the code screen on the watch **Top corner** language (EN · DE · SV · RO) · light/dark theme

SECTION 43

Every setting, and where it lives

One table for the whole of Shot Clock. “Timer settings” means the gear icon *inside* the Timer screen; “App settings” means the gear on the bottom bar.

SETTING	OPTIONS	GARMIN	APPLE WATCH	PHONE	WHAT IT DOES
Select Matches	—	Menu	Menu	Sequences tab · Timer settings	Which matches appear in your scroll list.
Sound	Garmin: Off / Start-Stop / +Interval Phone: Off / On / Loud	Menu › Display & Alerts	Menu › Display & Alerts	Timer settings	Audible alerts. Loud carries down a firing line.
Vibration	Garmin: Off / Start / Stop / Start+Stop Watch & phone: On / Off	Menu › Display & Alerts	Menu › Display & Alerts	Timer settings	Haptic alerts at the same moments.
Use Haptics	On / Off	Menu › Display & Alerts	—	—	A click when you press a menu button. Nothing to do with the timer.
Use Gestures	Off / Low / Medium / High	Menu › Controls	Menu › Controls	—	Start with a double wrist-roll.
Touch	On / Off	Menu › Controls	—	—	Whether the touchscreen does anything at all.
Touch Guard	On / Off	Menu › Controls	Menu › Controls	—	Require a double tap before starting or stopping.
DOPE Double Tap	On / Off (ships Off)	Menu › Controls	—	—	Whether double-tapping Down opens your DOPE card. Off keeps the Down button instant for changing sequence; swipe left reaches the card either way.
Plus Mode	Off, +1 ... +15 s	Menu › Controls	Menu › Controls	Timer settings	A lead-in before the course of fire begins.

SETTING	OPTIONS	GARMIN	APPLE WATCH	PHONE	WHAT IT DOES
Time Slice	Off / Build Up / Tear Down	Menu › Display & Alerts	Menu › Display & Alerts	Timer settings	The coloured sweep behind the number.
Time Slice Mode	Next Alert / End Time	Menu › Display & Alerts	Menu › Display & Alerts	Timer settings	Whether the sweep measures to the next warning or to the end.
Count Direction	Down / Up	Menu › Display & Alerts	Menu › Display & Alerts	Timer settings	Seconds remaining, or seconds elapsed.
Display Timer In	Seconds / Minutes	Menu › Display & Alerts	Menu › Display & Alerts	Timer settings	165 versus 2:45 .
Track Activity	On / Off	Menu › Other Systems	Menu › Other Systems	—	Log the session as a workout with heart rate.
Manage Customisations ■ Being retired	Reset / Backup / Restore	Menu › More	—	—	The watch's own cloud backup. Deprecated — use the phone app's Backup & Restore instead (Section 24).
Reset Time Sequences	—	via Manage Customisations	Menu › More	Timer settings	Puts every sequence back to factory.
Stats	—	Menu › More	Menu › More	—	Battery use and estimated runtime left today.
Competition Mode	On / Off	—	—	Timer settings · App settings	Locks sound off and stops this app's wireless features.
Master / Slave Mode	—	—	Menu › Other Systems (Slave only)	Timer settings	RangeLink squad sync.
Target Timer	—	Menu › Other Systems	Menu › Other Systems	Timer settings	Connect a Target Timer for a match. Long-press to connect.

SETTING	OPTIONS	GARMIN	APPLE WATCH	PHONE	WHAT IT DOES
Configure Target Timer	—	—	—	App settings	Set a Target Time up: name, Wi-Fi, channel roles, resting position, firmware source. Match Official Mode only, and only while it is switched on.
Range Clock	—	—	—	Timer settings · App settings	Pair and drive wa displays.
Device	—	—	—	App settings	Which watch you edits belong to. Also where you pair a Garmin.
Mode	Individual / Match Official	—	—	App settings	Changes what the app is for. See Section 30.
Backup & Restore	—	—	—	App settings	Snapshot per device type, plus export and import to a file.
Watch Font Size	stepper	—	—	Notes tab	The baseline size notes render at o the watch, for all of them. On the watch, Select cycles five sizes around it (Section 22).
About	—	Menu › More	Menu › More	App settings	Version and links. Check this before reporting anything

TIP

On both watch platforms, several of these are **cycling** settings rather than toggles or pickers — Sound, Vibration, Count Direction, Display Timer In, Time Slice and Use Gestures each advance to the next option every time you tap them. It is not obvious until you tap once and see it change.

SECTION 44

The built-in match library

Every course of fire that ships with the app, with the sequences each one offers. Sequences marked *+60s Load* include the ISSF load-and-away preamble; the plain versions are the same string without it.

FAMILY	MATCH	SEQUENCES OFFERED	ON BY DEFAULT
Default	GP Timer	Count-up stopwatch — no warning times, no end	Yes
ISSF	Standard Pistol	150, 20, 10 — each with and without the +60 s load	Yes
	Centrefire / 25 m Pistol	5×3 duelling, 240 — with and without load	Yes
	Rapid Fire	8, 6, 4 — with and without load	No
	50 m Pistol	900 (15 minutes)	No
Service	PA Service	165, 35, 15 (barricade), 15 (unsighted), 8, 6, 4	No
	PA Service 25	210, 25 (unsighted), 6, 4, 5×3 duelling	Yes
	Police Service	165, 35, 15 (barricade), 12, 8, 7, 5	No
WA/PPC	WA1500	165, 90, 35, 20, 12	Yes
	WA48	90, 20, 8	No
	WA60	165, 90, 20, 12	No
NPA	Police Pistol 1	120, 6×2 duelling, 3×2 duelling	No
	Police Pistol 2	180, 120, 5	No
	Police Pistol 3/4	100, 5×2 duelling, 3×2 duelling	No
	Super Magnum	120, 5×3 duelling, 5×2 duelling	No
	NPA SVC Pistol	15, 10, 6, 3×3 duelling	No
	NPA Carry	15, 10, 8, 3×2 duelling	No
Precision Rifle	PRS	300, 180, 120, 100, 90, 60, 45 — all with dense warning schedules and no Plus Mode delay	No
Bullseye	Bullseye	600 (10 minutes), 20, 10	No
Action Match	Practical	15, 10, 8, 7, 6, 5, 4, 3	No
	Barricade	8, 7, 6, 5	No
	Plates	9, 8, 7, 6	No
	Short Course	20, 8, 5	No
	Mover	450, 6	No

FAMILY	MATCH	SEQUENCES OFFERED	ON BY DEFAULT
Custom Times	Custom Time #0 – #9	Ten slots you define yourself (Section 20)	#0 and #1

NOTE

Duelling sequences shown as "5×3" run five three-second firing periods separated by turn-aways — seven seconds in ISSF and Service families, five in NPA. The exact timing is visible in the sequence editor if you want to check it against your rule book.

SECTION 45

Troubleshooting

WHAT YOU ARE SEEING	ALMOST CERTAINLY	DO THIS
The phone says my Garmin is not connected, but Garmin Connect says it is	Shot Clock is not the app currently open on the watch.	Open Shot Clock on the watch. The phone recovers on its own within a few seconds. This is by far the most common one.
I bought the paid Garmin app and it is completely empty	The trial and the paid listing are two independent apps.	Working as designed — nothing is shared between them, and no backup will move it across either. You will have to set the paid app up from scratch; Section 3 explains the quickest way to copy content over by hand.
My DOPE cards / notes / sequences have vanished	The active device changed.	Check the status line at the bottom of the screen. Switch the active device back, or use Backup & Restore to copy the set across (Sections 8 and 24).
Save is greyed out	Nothing has changed, the first sync has not finished, or something is invalid.	Wait 20 seconds for the sync, then look for a validation message.
I saved in the Portal but the watch has not changed	You have not backed out of the code screen yet.	Press Back on the watch's code screen — that is the step that pulls the changes down. Already backed out? Open the Portal on the watch again, wait for the same six digits to appear, and back out once more (Section 28).
My Portal code stopped working	The session timed out after 30 minutes idle.	Back out on the watch and open the Portal again for a fresh code.
Sound will not turn on and says "Off (Locked)"	Competition Mode is on.	Turn Competition Mode off in Timer settings (Section 32).
Sound jumped to Loud on its own	You switched into Match Official Mode.	Intended. Switching back to Individual restores your previous setting.
The Target Timer does not respond during a run	You configured it but never connected it for the match.	Timer > gear > Target Timer , then long-press the Target Timer to connect.

WHAT YOU ARE SEEING	ALMOST CERTAINLY	DO THIS
		Nothing connects automatically, ever (Section 33).
A Range Clock display is ignoring me	You are addressing a group it is not in.	Check the Groups screen, including the “None (every paired display)” option at the top (Section 34).
“Sync Time” on one display does nothing	That display follows a group timekeeper.	Sync the group as a whole from the group’s own screen.
My squad member’s timer went back to normal by itself	They stopped hearing from you for about six seconds.	Distance, a flat battery, or a phone in a pocket. Move closer and re-register if needed.
The countdown ran but nothing beeped	Sound is off, Vibration is off, or Competition Mode is on.	Check the status indicators at the top of the timer screen — they show all three at a glance.
My Apple Watch dropped back to the watch face mid-stage	The Health permission was declined.	Allow it. It is what keeps the app in front (Section 17).
DOPE Cards and Notes are missing from my Garmin’s menu	That watch model cannot run them.	A hardware limit on older models, with nothing to switch on. Everything else works (Section 5).
The alerts came at the wrong times, or not at all	You were on a same-looking sequence belonging to a different match.	Check the match name above the number. Several matches share a display text — four different sequences all read 20 — so enable only the match you are shooting (Section 12).
A sequence reverted to its original timing	The value was invalid, so the watch restored the factory default.	Re-enter it and read the “What this means” panel before saving (Section 19).
Plus Mode does not seem to apply to a sequence	That sequence opts out on purpose.	PRS stages start immediately by design, and ISSF sequences that open with a load phase already contain their own run-up (Section 14).

WHAT YOU ARE SEEING	ALMOST CERTAINLY	DO THIS
Tapping a score box does nothing and it flashes red	That score has locked itself to stop it being overwritten by accident.	Press and hold the box. That unlocks every box on the card for twenty seconds (Section 37).
A bay is not appearing on my live scoreboard	It has no competitor name and no scores yet.	Intended. Type a name or enter a shot (Section 40).

BEFORE YOU REPORT A PROBLEM

Note the build version from **About**, your device model and OS version, which watch was paired at the time, and what you were doing in order. A screenshot is worth a paragraph. Send it to dev@dugongtech.com.

SECTION 46

Glossary

Active device	The one watch — or the phone itself — that the phone app's editors currently belong to.
AM	Allowable Malfunction. A genuine equipment failure, entitling a makeup shot. Diary only.
Bay	One firing position on a range.
Squad	The shooters on the line together — a shooting detail or relay in some disciplines. Used interchangeably in this manual.
Callsign	A two-word name a device picks for itself — "Silent Falcon" — used to identify it in a squad or on a scoreboard.
Competition Mode	A lockdown switch for sanctioned matches: sound off, this app's wireless features off.
Course of fire	The prescribed sequence of shooting for a match. What Shot Clock calls a sequence.
DOPE	Data On Previous Engagement — your own elevation and wind corrections at each distance.

Family	A group of related matches: ISSF, Service, WA/PPC, NPA, Precision Rifle, Action Match, Bullseye, Custom Times.
Focus View	The DOPE display that shows one target at a time in four large quadrants.
Komacha	Ending an opening lead-in early so the next phase starts from that instant — the way you re-sync a watch to the targets after a late Start. Named after Peter Komacha (Section 14).
Match	One event within a family.
Match Official	The person running the shoot; also the app mode they switch into. Some clubs say Range Officer or RO.
MASTER	The device driving a RangeLink squad.
Multi-Bay	Diary's mode for scoring a whole relay from one device.
NAM	Non-Allowable Malfunction. A permanent zero with no reshoot. Diary only.
PAR timer	A timer that runs a fixed, known schedule and signals its boundaries — as opposed to one that listens for shots.
Plus Mode	A configurable 1–15 second lead-in before a sequence starts.
Portal	shotclock.au/portal — the browser editor for watch content.
Progress alert	A warning that fires partway through a phase, at a time the course of fire defines.
RangeLink	Bluetooth squad sync: one phone runs the clock for everybody.
Range Clock	A wall-mounted display product, driven remotely from a Match Official's phone.
Sequence	One selectable, startable stage.
Session	One continuous block of time inside a sequence.
Session string	The written shorthand for a sequence's timing, e.g. 90.60.30.3 .
Sighting shots	Practice shots recorded but never counted toward a score.
SLAVE	A device following a RangeLink MASTER.

Stage View	The DOPE display that shows up to five targets at once as a roster.
String	One run of a sequence.
Target Timer	The physical Target Timer that turns targets and sounds a horn.
Time Slice	The coloured sweep behind the countdown showing time remaining.
X	A shot inside the ten ring. Same ten points, counted separately as a tiebreaker.

SECTION 47

Quick reference card

Everything worth knowing on the line, on one page. Print it, or keep it on a phone.

Shot Clock — on the line			QUICK REFERENCE
TO...	ON A WATCH	ON A PHONE	
Start / stop	Select button, or tap	Press and hold	
Start hands-free	Double wrist-roll	—	
Change sequence	Up / Down, or swipe up / down	Swipe up / down	
See your DOPE	Swipe left (double-tap Down too, if switched on)	Swipe left	
Reset the clock	Back	Swipe back	
Re-sync to the targets ends the lead-in now (Komacha)	Up button / swipe down	Swipe down	
Resize a note cycles 5 sizes	Select, while reading a note	—	
Reach the settings	Menu button, or swipe right	Gear icon inside Timer	

Reading the screen

AT A GLANCE

- **White digits** — a shooting phase.
- **Blue digits** — a non-shooting phase: prep, load, or turned away.
- **Green flash** — the start registered. **Red flash** — the stop registered.
- **Green sweep** — more than 75% of the phase left. **Blue** 50–75%. **Yellow** 25–50%. **Red** 25% or less.
- **Grey screen with a banner** — a Match Official is driving your timer.

WHAT THE BUZZES MEAN

- **3 pulses** — a phase has just begun. Fires at the start, and again at every handover inside a multi-stage sequence.
- **2 pulses** — a warning time. How long is left depends on the sequence.
- **4 pulses** — the stage is over: the clock has reached zero.
- **Silence** — you stopped it yourself. Pressing Stop never alerts.

Writing timing

SESSION STRINGS

YOU WRITE	YOU GET
20	Twenty seconds, no warnings.
20.3	Twenty seconds, one warning with three left.
20:20	Twenty seconds, then twenty more.
-7	A seven-second non-shooting period.
#20	Twenty seconds, ignoring Plus Mode.
^20	Twenty seconds, counting up whatever your setting says.
20:0:20	Twenty, wait for me, twenty more.

Before a match

CHECKLIST

- Charge the watch. Check **Stats** for estimated runtime left.
- Enable **only the match you are shooting** — several matches reuse the same big number for different timing (Section 12). Switch it over between disciplines rather than leaving them all on.
- Set Plus Mode to whatever the range commands actually give you.
- Decide sound versus vibration *before* you are standing on the line.
- Sanctioned match? Turn on **Competition Mode** — and switch the phone's radios off yourself as well if the rules require it.
- Running a squad? Register everybody before the relay starts, not during it.
- Using a Target Timer? Long-press to connect, and confirm one dry cycle before anybody is on the line.