ASB NEXUS

RANGECUE

RangeCue RC-1 Touch

User guide



Firmware **2.0.0** · English edition · November 2026

rangecue.asbnexus.com

Contents

01	Welcome and box contents	3
02	Safety, battery and charging	6
03	Keys and touch screen	9
04	First start and running a program	12
05	Menus and settings	15
06	Creating a program on the device	21
07	RangeCue Studio (cable, Bluetooth, Wi-Fi, iPhone)	25
08	Voice and language	32
09	Firmware updates	35
10	Troubleshooting	37
11	Specifications and care	40
12	About ASB Nexus and contact	42

Web edition of this guide: rangecue.asbnexus.com/en/manual · Édition française : rangecue.asbnexus.com/fr/manual

CHAPTER 1

Welcome and box contents

The **RangeCue RC-1 Touch** is a programmable range timer by ASB Nexus. It runs your shooting or training programs to the tenth of a second, gives loud buzzer signals, speaks range commands in English or French, and shows everything on a sunlight-readable touch screen. You can build programs on the timer itself, or in **RangeCue Studio** at rangecue.asbnexus.com.



The RC-1 Touch in finish A (full colour). Product render.

About this guide

This guide covers the RC-1 Touch with **firmware 2.0.0** and RangeCue Studio 2.0.0. The device screens shown here come from the RC-1 Touch PC simulator, which runs the real firmware. The product pictures are renders of the final design. Places marked *PHOTO* will receive real product photos.

Prototype.
The RC-1 Touch is a 2026 prototype and is not on sale yet. Some details (such as what comes in the box and battery life per charge) will be confirmed with the first production units.

In the box

- The RangeCue RC-1 Touch timer, with its rechargeable battery fitted inside.
- This guide (PDF and web edition at rangecue.asbnexus.com).

You also need a **USB-C cable** and a **USB charger or computer** to charge the timer and to connect RangeCue Studio by cable. Check with ASB Nexus whether a cable comes with your unit.

PHOTO: box contents laid out (timer, cable if included, quick-start card)

The RC-1 Touch at a glance

- **2.4-inch IPS screen**, 960 cd/m², readable in sunlight, with a resistive touch panel: a firm press counts, a light brush does not.
- **Five keys**: PAUSE, START and SKIP on the top edge; POWER and TOUCH LOCK on the left side. Everything the touch screen does can also be done with the keys alone.
- **Loud buzzer** (105 dB at 30 cm, component rating) through a slot in the right side, and a **speaker** on the back for spoken range commands.
- **English and French** on screen and in the voice, chosen separately.
- **Up to 20 programs**, steps from 0.1 s to 99 minutes in 0.1 s steps, repeat blocks, steps that wait for START.
- **RangeCue Studio** over USB-C cable, Bluetooth or the timer's own Wi-Fi (the iPhone path).
- **USB-C charging**, battery percentage on every screen.

What the RC-1 Touch does not have.

It has no vibration motor, no volume keys and no trigger output. It is **not waterproof** and carries no certification or water-resistance rating.

Three finishes

The RC-1 Touch exists in three case finishes. They work the same way; this guide shows finish A.



A: full colour shells and keys. B: full colour shells, black keys with engraved icons. C: plain matte shells (white or black) with colour front and back plates.

CHAPTER 2

Safety, battery and charging

Safety

> **Range safety comes first.**
> The RC-1 Touch gives timing signals; it does not replace the range officer or the range rules. Check every program before you use it with live fire, especially example programs and programs received from others. The ISSF example programs are marked “verify before use”: check their timings against the current rules before a match.

- **Loud sound.** The buzzer is rated 105 dB at 30 cm. Do not hold the timer close to your ear while it sounds, and wear hearing protection on the range as usual.
- **Not waterproof.** The case has no seals and no water-resistance rating. Keep the timer out of rain and splashes, and dry it at once if it gets wet. Do not use it if water got inside.
- **Do not open the case** unless ASB Nexus support asks you to. There are no user-serviceable parts inside.
- **Children.** The timer is not a toy. Keep it, and any lanyard attached to it, away from small children.
- **Radio.** The timer can use Bluetooth and Wi-Fi (2.4 GHz). Set *Settings › Studio link › Wireless* to *Off* where radio transmitters are not allowed.

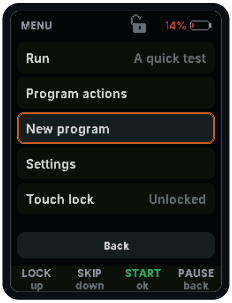
Battery

The RC-1 Touch runs on a built-in rechargeable **lithium-polymer battery (1100 mAh)**. The battery level is shown as a percentage at the top right of every screen.

- Charge at room temperature. Do not charge below 0 °C or above 45 °C.
- Do not leave the timer in a hot car, in direct sun behind glass, or near a heater.
- Do not crush, bend or puncture the timer. If the case swells, gets hot or smells, stop using it, unplug it and contact ASB Nexus support.

- For long storage, charge to about half and top it up every few months.
- At end of life, recycle the timer at an electronics or battery drop-off point. Do not throw it in household waste.

Low battery. At 15 % the timer beeps once and the battery figure turns red; during a program it also shows *Battery low*. At 5 % it beeps again and shows *Battery very low: charge*. These warnings are never spoken.



Battery low: the figure turns red.

Charging

1. Plug a USB-C cable into the port on the **bottom edge** of the timer and into a USB charger (5 V) or a computer.
2. The battery icon shows that it is charging. You can keep using the timer while it charges.
3. Unplug when the battery shows 100 %.

> **Firmware updates need power.**
> The timer refuses a firmware update below 20 % unless it is plugged in.

The timer charges at up to 500 mA, so a full charge from empty takes roughly 2½ to 3 hours (an estimate from the charge current). Battery life per charge has not been measured yet on the prototype; it depends on brightness, volume and whether Bluetooth or Wi-Fi is on.

PHOTO: timer charging from a USB-C cable, battery icon visible

CHAPTER 3

Keys and touch screen



Keys. The USB-C port is on the bottom edge, the buzzer slot on the right side and the speaker grille on the back. The lanyard holes are at the bottom left.

The five keys

KEY	WHERE	MAIN USE
PAUSE	top, left	Back / cancel. During a program: pause and resume; hold 1.5 s to stop.
START	top, centre	Select / OK, run the highlighted program. Hold 0.7 s in lists for the actions menu.
SKIP	top, right	Move down in lists. During a program: next step; hold for the next series.
POWER	left side, upper	Press to switch on. Hold 2.5 s to switch off.

KEY	WHERE	MAIN USE
TOUCH LOCK	left side, lower	Move up in lists. During and after a program: hold 1.5 s to lock or unlock the touch screen.

The bar at the bottom of the screen always tells you what LOCK, SKIP, START and PAUSE do on the current screen.

Key map

WHERE	LOCK	SKIP	START	PAUSE
Lists, menus, settings, editors	up (hold: repeat)	down (hold: repeat)	select / OK; program list: run. Hold 0.7 s: actions menu	back / cancel; program list: Menu
Number entry	+ (hold: faster)	− (hold: faster)	OK	cancel
Keyboard	previous key	next key	type the key (OK, DEL, SPC)	cancel
Program running	hold 1.5 s: touch lock	next step; hold: next series	go / resume; hold: restart the step	pause / resume; hold 1.5 s: stop
Stopped, complete, message	hold 1.5 s: touch lock	program list	restart (stopped) / program list	program list

Number entry repeats every 0.11 s once you have held the key for 0.4 s. It uses the smallest step for 2 s, then 10 times larger steps (1 s for durations), then 100 times larger steps (10 s) after 4 s.

Touch screen

The touch screen reacts to a **firm press**, like pressing a key with your fingertip. A light brush does not count. You can use a fingertip, a gloved finger or a stylus with a rounded tip; never use a sharp or hard point.

- **Tap** a row: the same as START on that row. In the program list, the first tap selects a program and a second tap on it runs it.
- **Long press** (0.7 s): the same as holding START (actions menu).
- **Drag** up or down to scroll a list.

- The **buttons** above the key bar (Back, Menu, Edit, Run, Save, OK, Cancel) can be tapped. The key bar itself does not react to touch.
- While a program runs and touch is unlocked, a **tap anywhere** = go / resume / pause.

Touch Lock

Touch Lock stops accidental touches, for example in a pocket or on a bench. When it is on, a closed padlock shows in the status bar of every screen; the keys keep working.

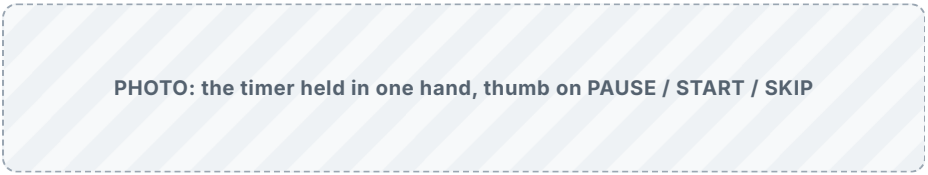
- **Lock or unlock:** in the program list and the menus, use *Menu › Touch lock* (there TOUCH LOCK moves up). On a run screen, a stopped or complete screen or a message, hold **TOUCH LOCK** for 1.5 s. A short press during a program only reminds you how.
- **Auto-lock during run** (on by default): touch locks itself while a program runs; an "A" next to the padlock shows it. Hold TOUCH LOCK 1.5 s to unlock it for that run. Change it in *Settings › Auto-lock during run*.
- **Touch Off**: in *Settings › Touch* you can turn the touch screen off completely and use the keys only.

> **Touch rescue.**
> If touch was turned off or badly calibrated and you cannot get it back, switch the timer off, then **hold TOUCH LOCK while you switch it on**. Touch is set back to On, unlocked, Medium sensitivity and the default calibration ("Touch reset"). Then calibrate it again in Settings.

Switching on and off

- **On:** press **POWER**. The timer shows its start screen, then the program list.
- **Off:** hold **POWER** for 2.5 s until "Powering off" shows.

The timer does not switch itself off. Switch it off after use to save the battery.



CHAPTER 4

First start and running a program

First start: choose the language

The first time you switch the timer on, it asks *Langue / Language*. Choose **Français** or **English** with SKIP or LOCK and confirm with START, or tap your choice. This sets both the screen language and the voice language. You can change each one later in Settings.



First start.



The program list.

The program list

The program list is the home screen. Each card shows the program name, its total time and its number of steps. A new timer comes with the factory program **ISSF 25m Standard Pistol** first in the list.

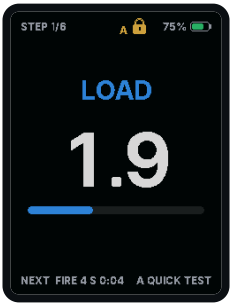
- LOCK / SKIP: move up / down. START: run the highlighted program.
- Hold START 0.7 s (or long-press a card): the program's actions menu (run, edit, rename, duplicate, move, delete).
- PAUSE: the main *Menu*.
- Touch: tap a card to select it, tap it again to run it. The *Menu*, *Edit* and *Run* buttons sit above the key bar.

The status bar at the top of every screen shows the title, the touch lock icon and the battery percentage.

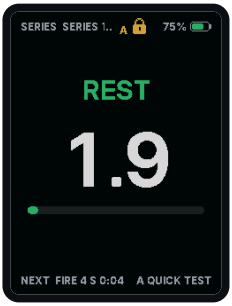
Running a program

Select a program and press START. The run screen shows:

- at the top: the step number (for example *STEP 1/6*) or the series counter of a repeat block, the lock icon and the battery;
- in the middle: the **word on screen** for the step (for example LOAD, FIRE, REST), the **time left to the tenth of a second** and a progress bar;
- at the bottom: the next step and its duration (or *LAST STEP*) and the program name.



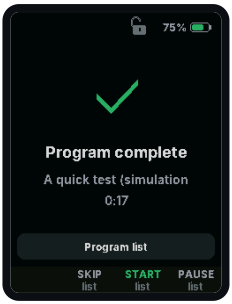
A step running.



Inside a repeat block.



A step that waits for START.



Program complete.

Each step can sound the buzzer at its start and at its end, beep each second at the end (countdown beeps), and say a range command such as “Load” or “Fire”. A step either starts automatically when the previous one ends, or **waits for START** (“Press START to begin this step”).

The simulator screens here show a short test program that exists only in the simulator; your timer shows your own programs.

Controls during a program

KEY	SHORT PRESS	HOLD
START	Go (step waiting for START) / resume (paused)	Restart the current step
PAUSE	Pause / resume	1.5 s: stop the program
SKIP	Next step	Jump to the next series (repeat)
TOUCH LOCK	Shows how to lock	1.5 s: lock / unlock touch

While paused, the screen shows *PAUSED – START to resume*; sound stops at once. When you stop a program, the *Program stopped* screen offers *Restart* (START) or *List* (PAUSE or SKIP). At the end, *Program complete* shows the program name and its total time; any key or a tap returns to the list.

> **Touch during a program.**
> By default touch locks itself while a program runs (“A” next to the padlock), so a sleeve or a holster cannot pause it. Use the keys, or hold TOUCH LOCK 1.5 s to unlock touch for this run.

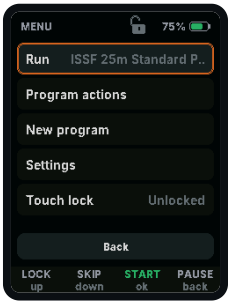
A studio cannot pair with the timer while a program runs, and program changes sent from a studio are loaded when the program ends.

CHAPTER 5

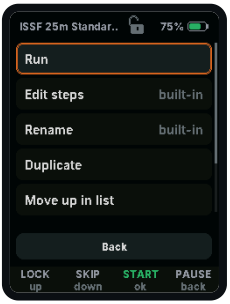
Menus and settings

From the program list, press **PAUSE** (or tap *Menu*) to open the main menu. In every list, LOCK and SKIP move, START selects and PAUSE goes back.

Main menu



Menu.



Program actions.

Run
Runs the program selected in the list (its name is shown on the right).

Program actions
The actions menu of the selected program (below).

New program
Creates “MY PROGRAM *n*” and opens it in the editor (chapter “Creating a program on the device”).

Settings
All the timer’s settings (below).

Touch lock
Locks or unlocks the touch screen (shows *Locked* / *Unlocked*).

Program actions

Hold START on a program (or long-press its card, or tap *Edit*) to open its actions:

Run

Starts the program.

Edit steps

Opens the program editor.

Rename

Changes the program name with the on-screen keyboard (up to 40 characters).

Duplicate

Makes a copy (“… copy”) at the end of the list.

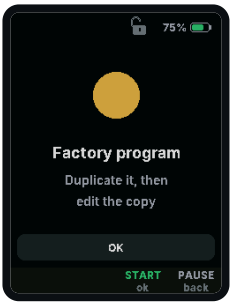
Move up in list / Move down in list

Changes the order of the program list.

Delete

Deletes the program after a confirmation (*No, go back* / *Yes, delete*).

The factory program is marked *built-in*: it cannot be edited, renamed or deleted. Duplicate it and edit the copy. If its file is ever deleted, it comes back by itself.

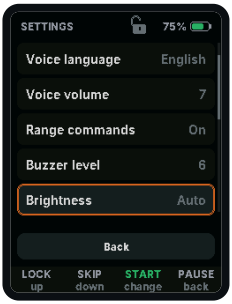


The factory program is protected.

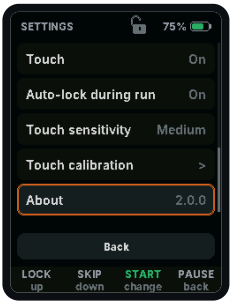
Settings



Settings (1).



Settings (2).



Settings (3).

SETTING	CHOICES	WHAT IT DOES
Langue / Language	English, Français	Language of the screens. Program names are not translated.
Voice language	English, Français	Language of the spoken range commands, independent of the screen. Plays “Attention” when changed.
Voice volume	0–10 (default 7)	0 = no voice. Plays “Attention” at the new volume.
Range commands	On (spoken), Off (beeps only)	Turns all spoken range commands on or off. See “Voice and language”.
Buzzer level	0–10 (default 6)	0 = buzzer off. Beeps at the new level.
Brightness	Auto, Low, Medium, High, Max	Screen backlight. Auto uses the same level as High (the timer has no light sensor).
Studio link	sub-menu	How RangeCue Studio connects (below).
Buzzer tone	1500–5000 Hz (default 3200)	Pitch of the buzzer. The buzzer is loudest near its rated 3200 Hz.
Touch	On, Off (keys only)	Turns the touch screen on or off.
Auto-lock during run	On (default), Off	Locks touch while a program runs.
Touch sensitivity	Low (firm), Medium, High (light)	How hard you must press. Default Medium.

SETTING	CHOICES	WHAT IT DOES
Touch calibration	sub-menu	Calibrate, test or reset the touch screen (below).
About	information	Firmware version, model, device name, touch controller, screen, number of programs (of 20), storage used, maker, and the voice credits.

Number pages

Volume, buzzer level, buzzer tone and durations open a number page: **LOCK** = +, **SKIP** = −, hold to go faster, **START** = OK, **PAUSE** = cancel. By touch, press and hold the − and + buttons, then tap OK. The page shows the current step and the allowed range.

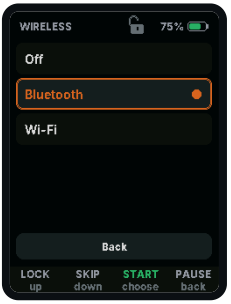


A number page.

Studio link



Studio link.



Wireless choice.

Wireless

Off, *Bluetooth* (default) or *Wi-Fi*. Wi-Fi turns the timer into its own access point `RangeCue-XXXX`, for iPhone, iPad, Safari and Firefox.

Wi-Fi details + QR

Shown only when Wireless is Wi-Fi: network name, password, the address to open and a QR code that a phone camera can scan to join.

Device

The timer's name, `RangeCue-XXXX` (the same name appears in Bluetooth and Wi-Fi lists).

USB cable

Always on: the cable link needs no setting.

Paired studios

How many studios are allowed to make changes.

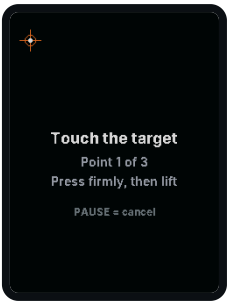
Forget paired studios

Removes every paired studio after a confirmation. Each studio must pair again.

Touch calibration



Touch calibration.



Calibration target.

Calibrate (3 points + check)

Press firmly on each of the three targets, then lift; then press the check target. If the check lands within 15 pixels, the calibration is saved ("Calibration saved"); otherwise it starts again. PAUSE cancels at any time.

Test touch

Shows where the screen sees your finger, and how firm the press is. PAUSE goes back.

Reset to default

Goes back to the factory calibration after a confirmation.

CHAPTER 6

Creating a program on the device

You can build and change programs on the timer itself, by touch or with the keys only. No phone, computer or network is needed. Programs are saved in the timer's memory and stay there when it is switched off.

How a program is built

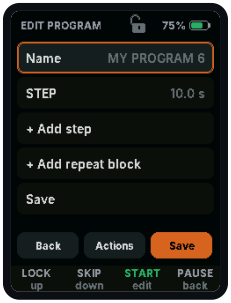
- A **program** has a name and a list of **steps**.
- A **step** has a word shown on screen, a duration (0.1 s to 99 minutes, in 0.1 s steps) and its sounds.
- A **repeat block** groups steps and runs them several times (1 to 99), for example 5 series of "LOAD – FIRE". Its counter word (Series, Round, Set, Stage, Lap) is shown at the top of the run screen.

Limits: 20 programs on the timer; per program 200 steps, 48 blocks and 2400 steps once the blocks are repeated.

Start a new program

1. Program list › **PAUSE** (Menu) › *New program*. The editor opens with a program called "MY PROGRAM *n*" and one step.
2. To change an existing program instead: hold START on it › *Edit steps*.
3. To start from the factory program: *Duplicate* it first, then edit the copy.

The editor



A new program.



A longer program.

The editor lists the program name, then every step and block (steps inside a block are indented, blocks show "× repeats"), then *+ Add step*, *+ Add repeat block* and *Save*.

- **START** on a row (or a tap): edit it.
- Hold **START** on a step or block (or long-press it, or tap *Actions*): *Edit*, *Move up*, *Move down*, *Duplicate*, *Insert step after*, *Delete* (for a block: *Delete block and its steps*).
- *Save* (row or button) writes the program to memory and goes back to the list with "Saved".
- **PAUSE** with unsaved changes asks *Save changes?*: *Save*, *Discard changes* or *Keep editing*.



Step or block actions.



Leaving with changes.

Step settings



A step.

FIELD	WHAT IT SETS
Word on screen	The big word on the run screen, up to 16 characters, in capitals. Pick a preset word or *Type text…*.
Name	A longer name for the step (up to 32 characters), shown under the time.
Duration	0.1 s to 99:00.0, in 0.1 s steps. Hold LOCK or SKIP to go faster: 1 s steps after 2 s, 10 s steps after 4 s.
Sound	*Buzzer*, *Voice*, *Both* or *None*. The rows below change with this choice.
Buzzer at start / Buzzer at end	None, Short, Long, Double, Triple or Continuous.
Countdown beeps	One beep per second during the last 1 to 10 seconds of the step (0 = off).
Voice clip	The range command to say, chosen from the list of 20 (chapter "Voice and language"). The timer plays it when you choose it.
Voice timing	*At start* (spoken as the step starts) or *Lead-in* (spoken so that it ends as the step starts).
Starts	*Automatically* when the previous step ends, or *Wait for START*.

Preset words (English screen): FIRE, LOAD, ATTENTION, SIGHTING, REST, WORK, PAUSE, READY, GO, STOP, TO THE LINE, PREPARATION, WARM-UP, COOL-DOWN, UNLOAD, CHECK, PRESS START, STEP.

Repeat block settings



A repeat block.

Name
Series, Stage 1–3, Rounds, Sighting, Match, or your own text (up to 24 characters).

Repeats
1 to 99 runs of the block.

Counter word
Series, Round, Set, Stage or Lap, shown with the count during the run.

+ Add step in block
Adds a step at the end of the block.

Typing text



The keyboard.

The keyboard has letters, digits, a few signs and the accented capitals É È Ê À Ç. With the keys: **LOCK** / **SKIP** move to the previous / next key, **START** types it, **PAUSE** cancels. By touch, tap the keys. *OK* confirms, *DEL* deletes the last character, *SPC* adds a space.

If saving fails

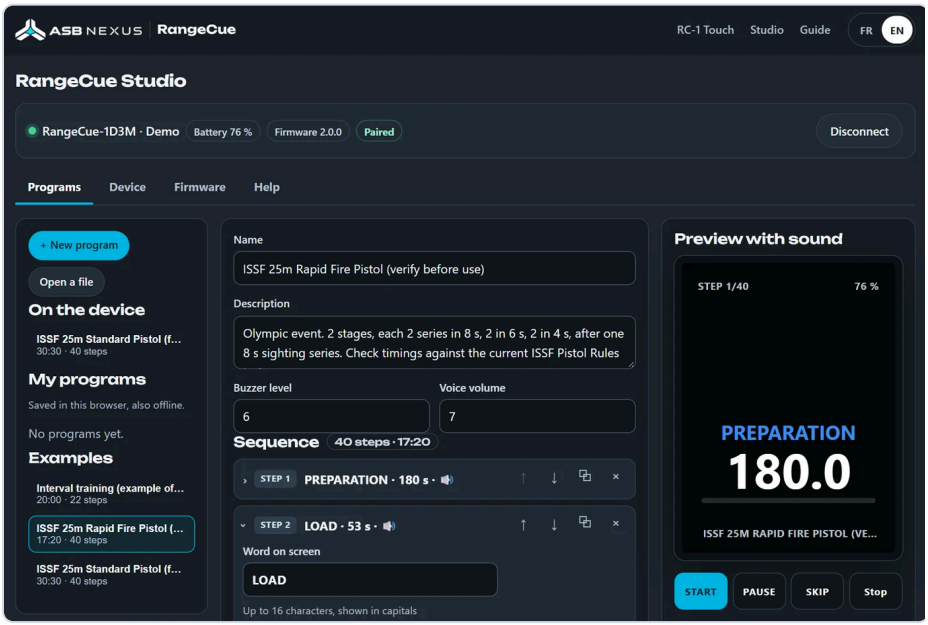
- *Storage full: delete a program*: the memory is full; delete a program you no longer need.
- *List full*: 20 programs already; delete one first.
- *The program has no steps*, *Empty block*, *Too many steps*: fix the program as the message says.

The timer writes the new file next to the old one and replaces it only when the write succeeded, so a failed save never damages the program you had.

CHAPTER 7

RangeCue Studio

RangeCue Studio is a free web app at rangecue.asbnexus.com (*Open the studio*). Use it to build programs on a bigger screen, listen to them with the real buzzer patterns and voice, keep them in your browser, share them, change the timer's settings and update its firmware. Once loaded, the studio also works offline, and you can install it like an app.

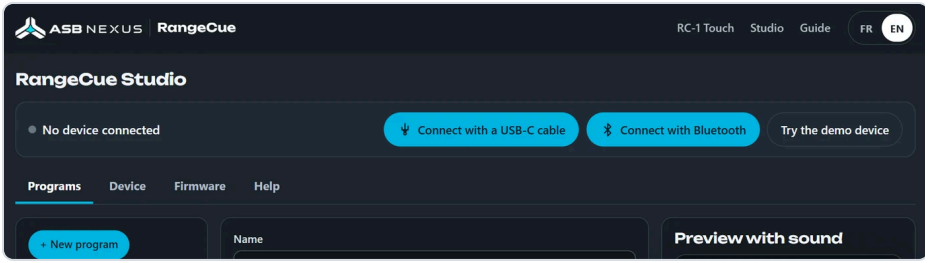


The studio with the demo device connected: library on the left, editor in the middle, preview with sound on the right.

Three ways to connect

LINK	ON THE TIMER	IN THE STUDIO
USB-C cable	Nothing to set: always on.	*Connect with a USB-C cable*, then pick the timer in the browser's list.

LINK	ON THE TIMER	IN THE STUDIO
Bluetooth	*Settings* › *Studio link* › *Wireless* = *Bluetooth* (default).	*Connect with Bluetooth*, then pick `RangeCue-XXXX`.
The timer's Wi-Fi	*Wireless* = *Wi-Fi*, then *Wi-Fi details + QR*.	Join `RangeCue-XXXX`; the studio page opens from the timer itself (below).



The studio shows only the buttons your browser supports. *Try the demo device* lets you try everything without a timer.

Which browser?

BROWSER	USB-C CABLE	BLUETOOTH	TIMER'S WI-FI	BUILD, PLAY, SAVE, SHARE
Chrome / Edge on Windows, macOS, Linux, ChromeOS	Yes	Yes[1]	Yes	Yes
Chrome on Android	Recent versions[2]	Yes	Yes	Yes
Safari on iPhone / iPad (and every iOS browser)	No	No	**Yes: use this**	Yes
Safari on macOS	No	No	**Yes**	Yes
Firefox (computer and Android)	No	No	**Yes**	Yes

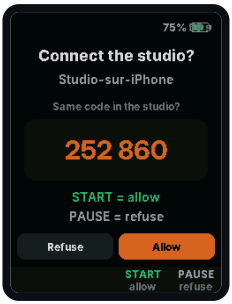
[1] On some Linux systems Bluetooth must first be enabled in Chrome's experimental settings. [2] USB from Chrome on Android needs a recent Chrome version and a USB-C to USB-C cable from the phone to the timer.
Why: cable and Bluetooth from a web page (Web Serial, Web Bluetooth) exist only in Chrome, Edge and other Chromium browsers. Apple allows no other browser engine on iPhone, so every iPhone browser takes the Wi-Fi path.

Pairing: nobody changes your timer without you

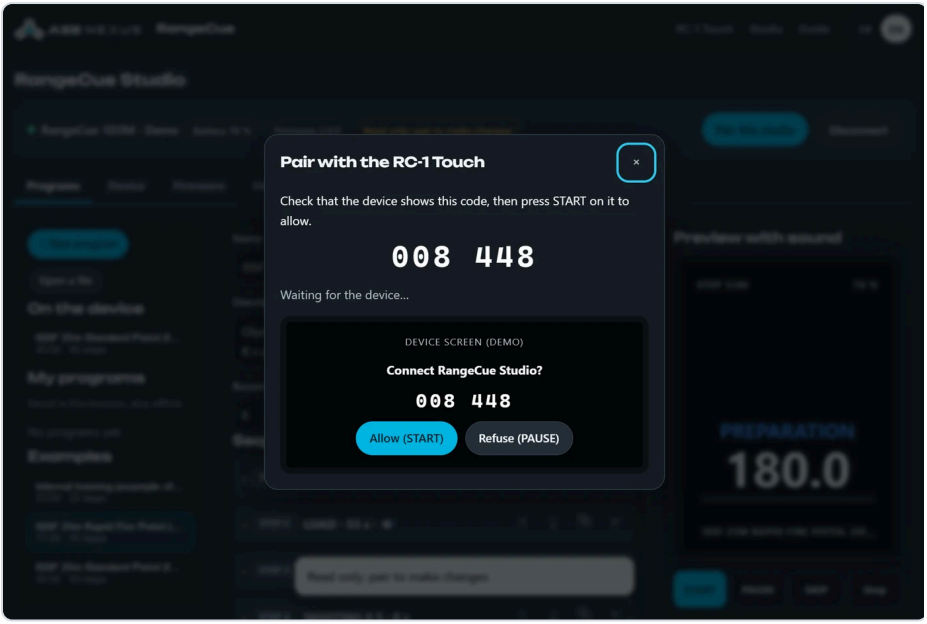
A studio can read the timer as soon as it connects, but it can make changes only after you **pair** it once:

1. In the studio, click *Pair this studio*. The studio shows a 6-digit code.
2. The timer shows *Connect the studio?* with the same code. Check that the codes match.
3. Press **START** (or tap *Allow*) on the timer. **PAUSE** (or *Refuse*) refuses. With no answer within 60 seconds, nothing is paired.

Next time, the same studio connects without a code. Pairing is refused while a program runs. *Settings › Studio link › Forget paired studios* removes every paired studio.



On the timer.



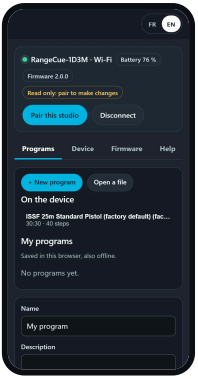
In the studio (here with the demo device, whose screen is drawn in the dialog).

iPhone, iPad, Safari and Firefox: the timer's own Wi-Fi

1. On the timer: *Settings › Studio link › Wireless › Wi-Fi*, then *Wi-Fi details + QR*.
2. On the phone: scan the QR code with the camera to join the network `RangeCue-XXXX`, or join it in the Wi-Fi settings with the 8-digit password shown on the timer.
3. The studio page opens by itself. If it does not, open **http://192.168.4.1** in the browser.
4. Pair (code on the timer, START), then edit programs and settings.
5. When you are done, leave the `RangeCue-XXXX` network: while connected to it, the phone has no internet. If iOS warns "No Internet Connection", choose *Use Without Internet*.



Wi-Fi details on the timer (simulator; your timer shows its own name and password).



The full studio page served by the timer, on a phone.

- Everything stays between the phone and the timer; no internet is used.
- The online studio at rangecue.asbnexus.com cannot reach the timer's Wi-Fi: on an iPhone, always use the page served by the timer. To bring a program made online, use *Download file* in the online studio, then *Open a file* on the timer's page and *Send to device*.
- **Install the full studio page once.** Out of the box, the timer serves a small built-in page: pairing, settings and program files (download, upload, delete). To get the full studio on the phone, connect once from a computer or an Android phone by cable or Bluetooth and use studio › *Firmware* › *Install the studio page on the device*. The page stays on the timer.
- After 10 minutes without activity the Wi-Fi session closes; reload the page to connect again.

What you can do in the studio

Programs

On the device lists the programs on the timer (*Read* opens one). *My programs* are saved in this browser, also offline. *Examples* are ready-made programs. *New program* and *Open a file* start editing.

Editor

The same fields as on the timer: word on screen, step name, duration (0.1 to 5940 s), spoken command, when it is said, buzzer at start and end, countdown beeps, next step (automatic or wait for START), repeat blocks

with their repeats and counter word. Steps can be moved, duplicated and removed.

Preview with sound

Plays the program with START, PAUSE, SKIP and Stop, with the buzzer patterns and the timer's own voice clips, in the voice language you choose. The buzzer plays quieter than on the timer.

Send to device, Save, Download file, Share

Send to device writes the program to the timer (paired studio only). *Share* makes a link and a QR code; the program travels inside the link itself, nothing is stored on a server.

Device

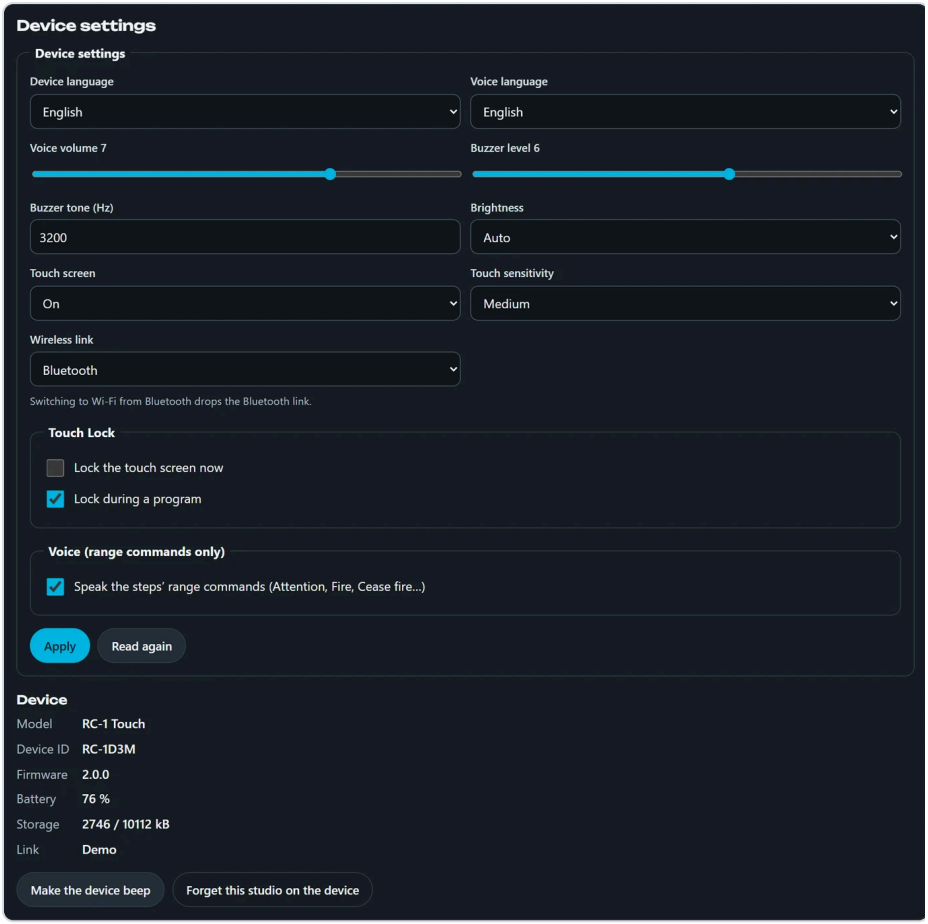
The timer's settings: languages, voice volume, buzzer level and tone, brightness, touch, Touch Lock, sensitivity, wireless link and range commands on/off. *Apply* sends them. Also: model, device ID, firmware, battery, storage, *Make the device beep* and *Forget this studio on the device*.

Firmware

Firmware updates and recovery (chapter "Firmware updates").

Help

The browser table and the Wi-Fi steps.



The Device tab.

> **Privacy.**
> The studio collects no personal data. Your programs stay in your browser and on your timer.

CHAPTER 8

Voice and language

Screen language and voice language

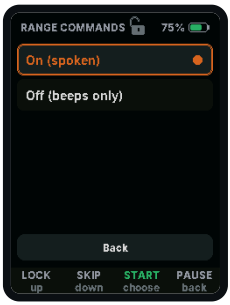
The screen and the voice each have their own language, English or French. At the first start, your choice sets both. After that:

- *Settings › Langue / Language*: the screen language (this row is always written in both languages, so you can find it).
- *Settings › Voice language*: the language of the spoken range commands. The timer says “Attention” in the new language.

For example, a French screen with English commands for an international match is fine. Program names and words you typed are not translated. Both settings can also be changed in the studio (*Device* tab).



Voice language.



Range commands on or off.

The voice says range commands only

The RC-1 Touch speaks **only shooting-range commands**, the ones a program step uses, such as “Load”, “Attention”, “Fire” or “Cease fire”. **Nothing else is spoken**: countdown numbers, step names, menus, battery warnings, pairing and system messages appear on screen and use beeps.

A step says its command when its sound is set to *Voice* or *Both* and a voice clip is chosen, either as the step starts or as a lead-in that ends when the step starts.

The 20 range commands

ENGLISH	FRENCH
Call athletes to the line	Athlètes, sur la ligne
Preparation time starts now	Le temps de préparation commence maintenant
Load	Chargez
Load and make ready	Chargez et préparez-vous
Attention	Attention
Get ready	Préparez-vous
Ready	Prêt
Start	Commencez
Go	Partez
Fire	Feu
Pause	Pause
Stop	Stop
Cease fire	Cessez le feu
Unload	Déchargez
Unload and show clear	Déchargez et montrez l’arme vide
Sighting	Essais
Change targets	Changez les cibles
Check	Vérifiez
Time	Temps
Time is up	Le temps est écoulé

The same clips play in the studio’s preview, so you hear exactly what the timer will say.

Voice settings

Range commands

On (spoken) or *Off (beeps only)*. Off silences every spoken command at once; buzzer signals still sound.

Voice volume

0 to 10 (default 7). 0 = no voice. The voice comes from the speaker on the back: do not cover the grille.

Buzzer level and Buzzer tone

The buzzer is separate from the voice: level 0 to 10 (default 6), tone 1500 to 5000 Hz (default 3200).

The voices

The voices are made with Piper text-to-speech. French voice: MLS dataset, CC BY 4.0. English voice: LJ Speech, public domain. The credits are also in *Settings › About › Voices*.

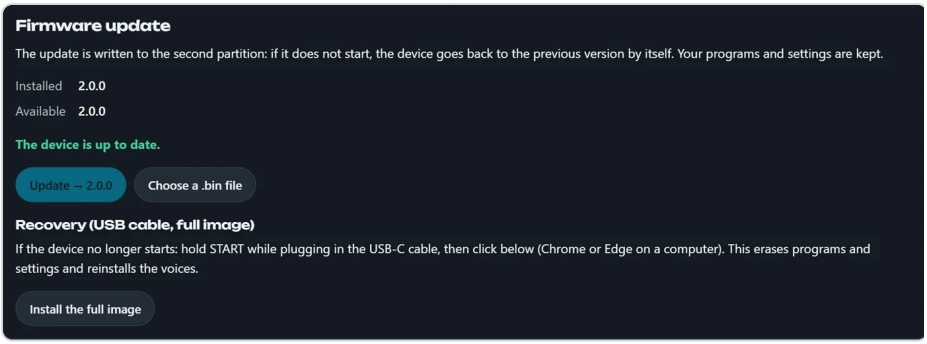
CHAPTER 9

Firmware updates

The firmware is the timer's own software. ASB Nexus publishes new versions on rangecue.asbnexus.com. To see which version you have: *Settings › About › Firmware*, or the studio's connection bar.

Normal update from the studio

1. Charge the timer to at least 20 %, or keep it plugged in. The timer refuses an update below 20 % on battery.
2. Connect the studio and pair it (chapter "RangeCue Studio"). Stop any program that is running.
3. Open the *Firmware* tab. It shows the *Installed* and *Available* versions.
4. Click *Update → version*. To install a file you downloaded, use *Choose a .bin file*.
5. The timer shows *Updating firmware – Keep the device on* with a progress bar. Do not switch it off or disconnect it.
6. The timer restarts with the new version.



The studio's Firmware tab.



On the timer during an update.

Expected time: about 20 s over the USB cable, about 40 s over the timer's Wi-Fi and about 3 minutes over Bluetooth. Over Wi-Fi the full studio page must be installed on the timer.

Automatic rollback

The new version is written next to the current one. After the restart, the timer keeps it only once it has shown the program list for 10 seconds. If the new version does not start properly, the timer goes back to the previous version by itself. **Your programs, settings and voices are kept** in a normal update.

Recovery (if the timer no longer starts)

Use this only if the timer does not start at all, or shows *Storage error*. It reinstalls everything and **erases your programs and settings**.

1. On a computer, open the studio in **Chrome or Edge** › *Firmware* › *Recovery (USB cable, full image)*.
2. **Hold START while you plug in the USB-C cable** (update mode).
3. Click *Install the full image* and pick the timer in the browser's list.
4. When it is done, unplug the cable, switch the timer on and choose the language again.

The full image and the update file are also in the *Downloads* section of rangecue.asbnexus.com.

CHAPTER 10

Troubleshooting

Power and battery

The timer does not switch on.

Charge it for at least 15 minutes with a USB-C cable, then press POWER. If it still does not start, use the recovery in “Firmware updates”.

The battery figure is red.

The battery is at 15 % or less. Charge it soon; at 5 % the timer beeps again and shows *Battery very low: charge*.

The timer shows “Storage error” at start.

Its memory could not be read. Reinstall the full image (recovery). This erases programs and settings.

Touch screen

Touch does nothing.

Look at the status bar. A padlock means Touch Lock is on: *Menu › Touch lock*, or hold TOUCH LOCK 1.5 s on a run screen. During a program, auto-lock is on (“A” next to the padlock). If *Settings › Touch* is *Off*, turn it on with the keys.

Taps land in the wrong place.

Run *Settings › Touch calibration › Calibrate*. Press firmly in the middle of each target.

Light touches are ignored, or touches happen too easily.

Change *Settings › Touch sensitivity* (Low = firm press, High = light press).

I cannot get touch back at all.

Switch off, then hold TOUCH LOCK while you switch on (touch rescue). Everything else can always be done with the keys.

Sound and voice

No voice.

Check *Settings › Range commands* = On and *Voice volume* above 0. Check that the step's sound is *Voice* or *Both* and that it has a voice clip. The timer says only range commands: countdowns, step numbers and messages are never spoken.

The voice is in the wrong language.

Change *Settings › Voice language*. It is separate from the screen language.

A step shows "(missing)" before its voice clip.

The program asks for a clip the timer does not have (for example a program made for another firmware). Choose another clip.

No buzzer.

Check *Settings › Buzzer level* above 0, and the step's *Buzzer at start / at end* or *Countdown beeps*. Do not block the slot in the right side.

Programs

I cannot edit, rename or delete a program.

It is the factory program (*built-in*). Duplicate it and edit the copy.

"List full" or "Storage full".

The timer holds 20 programs. Delete one you no longer need.

A program sent from the studio does not appear.

If a program was running, the list updates when it ends. Otherwise send it again from a paired studio.

Studio and connections

The studio shows no cable or Bluetooth button.

Your browser cannot use them (iPhone, iPad, Safari, Firefox). Use the timer's Wi-Fi, or Chrome / Edge on a computer, or Chrome on Android.

The timer is not in the Bluetooth list.

Set *Settings › Studio link › Wireless* to *Bluetooth*, keep the timer close, and disconnect any other phone or computer that is connected to it.

“Read only: pair to make changes”.
Click *Pair this studio* and press START on the timer when it shows the same code.

“No answer on the device (60 s)”.
Press START on the timer within 60 seconds of starting the pairing, then try again.

“A program is running”.
Stop the program on the timer (hold PAUSE 1.5 s), then try again.

The Wi-Fi network `RangeCue-XXXX` is missing.
Set *Wireless* to *Wi-Fi* on the timer. The network name and password are in *Wi-Fi details + QR*.

The studio page does not open on the phone.
Open **http://192.168.4.1** (http, not https) while connected to `RangeCue-XXXX`. If the phone switches back to another Wi-Fi, choose *Use Without Internet*.

A studio I no longer use can still change my timer.
Settings › Studio link › Forget paired studios.

Firmware

The update is refused (battery low).
Charge to 20 % or more, or plug the timer in.

After an update the timer shows the old version.
The new version did not start properly and the timer went back to the previous one by itself. Try the update again over the USB cable; if it happens again, contact support.

Still stuck? Write to support@asbnexus.com with the firmware version (*Settings › About*) and what you see on the screen.

CHAPTER 11

Specifications and care

Specifications

Model	RangeCue RC-1 Touch (2026 prototype)
Size	58 × 98 × 22 mm
Screen	2.4-inch IPS, 240 × 320, 960 cd/m², readable in sunlight
Touch	4-wire resistive, pressure-sensing (firm press); can be locked or turned off
Keys	5: PAUSE, START, SKIP (top); POWER, TOUCH LOCK (left side)
Buzzer	Piezo, 105 dB at 30 cm (component rating), tone 1500–5000 Hz (default 3200 Hz), level 0–10
Voice	1.2 W, 8 Ω speaker; 20 range commands in English and in French; volume 0–10
Languages	Screen: English, French. Voice: English, French (chosen separately)
Programs	Up to 20; steps 0.1 s to 5940 s (99 min) in 0.1 s steps; repeat blocks 1–99; up to 2400 steps per program once repeated
Timing display	Tenths of a second
Processor	ESP32-S3, 16 MB flash, 8 MB PSRAM
Connections	USB-C (charging and data); Bluetooth LE; Wi-Fi 2.4 GHz access point (the timer's own network)
Studio	RangeCue Studio web app, rangecue.asbnexus.com; pairing confirmed on the timer
Battery	Lithium-polymer, 1100 mAh, built in; USB-C charging at up to 500 mA; percentage on every screen
Case	3D-printed resin, 4 screws, lanyard holes; three finishes (A, B, C)
Water	Not waterproof, no water-resistance rating
Certifications	None claimed (prototype)

Firmware	2.0.0, updated from the studio over USB, Bluetooth or Wi-Fi, with automatic rollback
Not included in the design	Vibration, volume keys, trigger output

Care

- Clean the case and screen with a soft, dry or slightly damp cloth. Do not use solvents, alcohol or abrasive cleaners, and never spray liquid on the timer.
- Press the screen with a fingertip or a rounded stylus only; sharp or hard points can damage the touch surface.
- Keep the timer dry. It is not waterproof.
- Keep the buzzer slot (right side) and the speaker grille (back) clear of dirt and tape.
- Avoid drops and heat. Do not leave the timer in a hot car or in direct sun behind glass.
- For long storage, charge to about half, switch off and top up every few months.

PHOTO: the RC-1 Touch on a range bench, in use

CHAPTER 12

About ASB Nexus

ASB NEXUS

INNOVATE • BUILD • GROW

RangeCue is designed by **ASB Nexus**, a development studio in Québec. We build software, apps, websites and products, from the first idea to the release, and we look after them afterwards.

- **Custom software** for businesses and clubs: desktop tools, automation, back-ends.
- **Mobile and web apps**, from prototype to store release.
- **Websites**: fast, bilingual, easy to update.
- **Chatbots and AI assistants** that answer your customers and members.
- **Freelance development**: we join your project for a feature, a fix or a whole product.
- **Connected devices** like RangeCue: hardware, firmware and the app that goes with it.

Have a project in mind? Tell us about it, in English or French.

Contact

RangeCue support	**support@asbnexus.com**
Projects and questions	**contact@asbnexus.com**
Privacy	**privacy@asbnexus.com**
RangeCue and the studio	**rangecue.asbnexus.com**
ASB Nexus	**www.asbnexus.com**

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