POOL VISION · COMMUNITY TEST · DRAFT OF 18 NOV 2026

Pool Vision Tester Guide

What a PC needs to run Pool Vision today, what we want testers to try, and how the first rounds of community testing will run.

What Pool Vision does

A camera over the table watches every stroke. Pool Vision works out which ball was hit first, which balls dropped and where, and whether the cue ball scratched. From that it follows the game: whose turn it is, fouls, ball in hand, and the score for 8-ball, 9-ball, 10-ball and straight pool. It can score live while you play, with a scoreboard and a voice, or analyse a recording afterwards. A second camera can film the shooter, and a projector can put drills on the cloth.

> **Where it stands.** So far it has been built and tuned on one table: an 8 ft table (88 × 44 in playing surface) with olive-grey cloth, an Aramith-style ball set, an Insta360 Link 2 overhead and a Logitech MX Brio on the shooter. Expect it to make more mistakes on your table than on that one. Finding those mistakes is the point of testing.

Hardware: three tiers

Pick the tier for what you want to test. Every tier needs Windows 10 or 11 (64-bit). Pool Vision does not run on macOS or Linux.

TIER A

Record and review

Record games, play them back, run the analysis after the game.

PROCESSOR
6 cores, 2019 or newer

MEMORY
16 GB

GRAPHICS
Not required (analysis runs slower without an NVIDIA card)

STORAGE
SSD, 500 GB free

TIER B · THE MAIN TEST

Live scoring

Scoreboard, spoken results and voice corrections while you play.

PROCESSOR
8 cores with fast single-core speed: Ryzen 7 7700 or Core i7-13700 class, or better

MEMORY
32 GB

GRAPHICS
NVIDIA RTX 20-series or newer, 8 GB (for example RTX 3060 12 GB or RTX 4060)

STORAGE
NVMe SSD, 500 GB free

TIER C · LATER ROUND

Projector drills

Drills and layouts drawn on the cloth, made and missed counted for you.

PC
Everything in Tier B

PROJECTOR
Mounted over the table on its own display output

SETUP
Full table calibration with camera and projector together

> **These tiers are estimates.** All timing so far comes from the development PC (Ryzen 7 9800X3D, RTX 5070 Ti, 32 GB). Lower machines have not been measured yet. Before testing opens, a recorded game will be replayed on that PC with the

> graphics card turned off and fewer processor cores, and the tiers will be corrected from the results.

Why live scoring needs a strong PC

The overhead camera sends 60 frames a second. While balls are rolling, every frame has to be analysed before the next one arrives, which leaves 16.7 milliseconds per frame.

Development PC, with graphics card	15–19 ms
Same PC, processor only	36 ms
Frame with balls at rest	3.2 ms

Scale 0–40 ms. The black line is the 16.7 ms budget at 60 fps. Measured October 2026.

Even the development PC only just keeps up while balls roll. When it falls behind, live analysis keeps up to 20 seconds of frames in memory and catches up once the balls stop. Those 20 seconds take about 7.5 GB of memory, which is why Tier B asks for 32 GB.

WHAT USES IT	AMOUNT	NOTES
Live analysis frame buffer	≈ 7.5 GB	20 s of 1080p frames. Drops to 10 s or 5 s when memory is short, and live scoring gets less reliable.
Analysis after the game	≈ 4.8 GB	A 24-minute game took about 10 minutes on the development PC.
Recording, both cameras	≈ 12 GB / hour	Overhead 1080p at 60 fps plus the shooter camera at 720p 30 fps.
Program and models	≈ 4 GB	Includes the NVIDIA libraries (about 2.5 GB) and speech and ball models (about 0.6 GB).

Table, cameras and room

Needed

- A camera looking straight down on the whole table, mounted so it cannot drift. Known to work: Insta360 Link 2 at 1920 × 1080, 60 fps.
- Manual exposure and white balance on that camera, set once and left alone.
- Steady table lighting. Re-teach the balls if you change the lights.
- Each camera on its own USB controller, or on a tested extender.
- A USB microphone near the table for voice commands.

Expect more errors with

- Cloth that isn't olive-grey. The learned ball finder only switches on for cloth like the development table's. Other cloth colours use the older finder.
- Ball sets with dark balls close to the cloth colour, black stripes, or marked cue balls.
- Tables other than 8 ft. Other sizes are supported in Setup but have not been played on.
- Daylight that changes across the table during a session.

How testing will run

BEFORE ANYONE INSTALLS

Measure the lower limit and package it

- Replay recorded games on reduced hardware to set the real tiers.
- Build an installer that carries its own Python, so testers install nothing else.
- Check the licence of every bundled part, including the video encoder.
- Add a start-up check that tells you which tier your PC reaches and whether your camera holds 60 fps.

ROUND 1 · 3 TO 5 TESTERS

Tables close to the development table

8 ft table, overhead mount, Link 2 camera, Tier B PC. Scope: Setup, recording, live scoring and after-game analysis for 8-ball and straight pool. No projector.

ROUND 2

Different tables and equipment

Other cloth colours, ball sets, table sizes and cameras. Tier A testers who only record and review join here.

ROUND 3

Projector drills

Tier C testers with a projector over the table, once calibration is simple enough to do without help.

What we ask of testers

1. Run Setup through to the end: cameras, table outline, pockets, and teaching your ball set.
2. Play real games with live scoring on. Use the voice corrections when it gets something wrong. Each correction is a record of where it failed.
3. After a session, keep short notes: the time in the recording and what really happened (for example "12:40, the 5 went in the top left, it missed it").
4. Send a report bundle for the games that went wrong. It holds the logs, your setup, the analysis records and short video clips around the strokes you flagged. Whole recordings are too large to send.

Your recordings stay on your PC

Recordings show people and rooms, so nothing leaves your PC unless you choose to send it. Pool Vision collects no usage data. A report bundle is only made when you ask for one, and you can look through it before sending.

Draft for discussion. Hardware figures come from one development PC and will be revised after the lower-limit measurements.