

EVOLClock Hoops — Timing & Scoring Ref Card

Clock Frame

- One game = 24 cycles (two 12-cycle blocks).
- Quarters = 6 cycles each. Halftime = 2 cycles.

Shot Clock (Reciprocal Math)

- Base shot clock: 24 s.
- Possession tempo index: $R = 24 / (\text{seconds used})$; cap R at 3.0.
- Team Tempo Score (per quarter) = average R on made/assisted possessions only.

Set-Clock Bonuses (On-Beat)

- If release at $t \in \{12.0, 8.0, 6.0, 4.0, 3.0, 2.4, 2.0, 1.2, 1.0\}$ s left, add +0.5 EV (max +1.0 per possession).
- 12/24 Interlock Run: any 12-0 run inside one 12-cycle block $\rightarrow +1$ EV and unlocks an Interlock Timeout (free 20 s).

Fouls & Penalties (CleanOps)

- CleanOps starts at 100 each quarter.
- Personal foul: -2, Team technical: -5, Delay/ops: -3.
- End-of-quarter bonus EV = $\text{ceil}(\text{CleanOps} / 50) - 1$ (range 0-1).

Timeout Economy (Pit-Stop Logic)

- 7 timeouts per game.
- Timeouts called exactly on cycle boundaries (6:00 / 3:00 / 1:30 / 0:45 / ...) earn a Pit Sync credit: next ATO first shot: +0.25 EV if assisted and within 10 s.

Overtime

- OT = 6 cycles (one quarter). Shot clock unchanged.
- First team with two on-beat makes in same OT gets a Phoenix Possession (bookkeeping extra possession).

Box Score Add-Ons

- EV Points (on-beat + cleanliness + pit-sync).
- Tempo R (team & player), Interlock Hits, CleanOps remaining.

Example

- Possession uses 8.0 s $\rightarrow R = 24 / 8 = 3.0$ (cap) and release at 8.0 (on-beat).
- Basket = 2 pts + 0.5 EV; team finishes quarter at CleanOps 92 $\rightarrow +1$ EV quarter bonus.