Where the Free-Flight Timer Fits

Stevens Aeromodel · Free-Flight Motor-Run Timer · Version 1 board · Firmware v1.0 · Info sheet

A sport timer for fun, recreational electric free flight.

It is built to make simple models fly the same way every time, with as little fuss as possible. It is **not a competition timer**, and it does not try to be one. This sheet explains who it is for, why it is shaped the way it is, and how it differs from our control-line timer.

WHO IT IS FOR

The timer is made for **small sport and 1/2A-type models converted to electric, flown casually for fun** — the models that once flew on a Cox .020 or a small diesel. In the UK and Australia these are often called "Ebenezer"-type models, after Bert Striegler's *Ebenezer* (Aeromodeller, April 1958), a 20 in all-sheet sport biplane meant to be built overnight and flown for fun. That means:

- **Small sport, 1/2A and kit models** converted to electric, flown in an open field for the pleasure of a good climb and a long glide.
- **Vintage and old-timer designs** flown recreationally, where the joy is the model, not the score.
- **Trimming and test flying** — short, repeatable runs at low power while you dial in a new model.
- **Newcomers to free flight**, who need a timer they can understand at the field without a manual.

WHAT MATTERS FOR SPORT FLYING

Sport flyers want…	How this timer delivers it
Repeatability	The run time is stored in memory. Once a flight works, it flies again exactly, flight after flight, with one press.
Confidence before launch	The stored time is played back on the LED every time a battery is connected. You always know what's about to fly.
Fine enough control	1 second resolution from 1 to 99 seconds. Power from 0 to 100% on a trimmer that holds its setting.
A gentle end to the climb	A fixed 5 second run-down eases the model from climb into glide and helps prevent a power-off stall.
Simplicity	One button, one trimmer, one LED. Tap for seconds, hold for tens. Tap or grip launch.
Safe handling	The motor starts only on release. After a flight the timer locks until the battery is reconnected, so retrieving the model can't start it.

WHY NOT COMPETITION?

Competition electric free flight asks for different things, and those things add cost and complexity that a sport flyer doesn't need:

- **Very short motor runs.** The main US and FAI electric classes allow about 10 seconds in regular rounds and 5 seconds in flyoffs. Top flyers already use 5 s runs.
- **An overrun scores zero,** and the motor is timed until it stops. A soft run-down — one of this timer's best sport features — would count against the limit.
- **Sub-second resolution.** Competition timers set the run in 0.1 to 0.5 s steps.
- **Integrated multi-function control.** Competition timers combine the motor run with dethermalizer, radio DT and surface functions, tuned for each class.
- **Special devices in some classes** — an approved energy limiter (F1Q) or an approved altitude limiter (SAM EALOT).

ELECTRIC FREE-FLIGHT CLASSES AT A GLANCE

Class	Motor run (rounds / flyoffs)	What the timer needs	This timer
AMA E-36, Class A, Class B	10 s / 5 s	Hard cut, sub-second setting, DT. Overrun scores zero.	No
FAI F1S (E36)	10 s / 5 s	As above.	No
FAI F1Q	energy-limited, max 30 s / 20 s	EDIC-approved energy limiter.	No
SAM EALOT, vintage glider e-launch	30 s	SAM-approved altitude limiter cuts at 200 m.	No
SAM Electro Rubber LMR	up to 90 s	Motor run limited to the first 90 s of flight.	Possible*
Sport & recreational	**no rule; typically 10–60 s**	**Repeatable run, adjustable power, easy to use.**	**Yes**

* Set the stored time so that **stored time + 6 s** stays inside the limit, and confirm the event's current rules and any timer requirements with the contest director first. Class rules change; check the current rulebook before relying on any figure here.

FREE FLIGHT VS. CONTROL LINE TIMERS

The free-flight and control-line timers share the same board but run different firmware, because the two kinds of flying ask for opposite things.

	Control-line timer	Free-flight timer
Run time	1–10 **minutes**, set by counting blips at every power-up	1–99 **seconds**, stored and shown at every power-up
Start	Pilot on the handle first; 5 s delay for the assistant to clear the propeller	Instantly on release, for a hand launch
Ramps	5 s up, 25 s wind-down to set up a dead-stick landing	1 s up, 5 s run-down into the glide
End warning	Engine "stumble" felt through the lines	None — no one is holding the model
Power	50–100%, to keep the lines tight	0–100%, so trim flights can start gently
After the flight	Ready to program again	Locked until the battery is reconnected

Why not swap them? On a free-flight model the CL timer would run for minutes, wait 5 s in your hand before starting, and never go below half power. On a control-line model the FF timer would start the motor the instant the button is released, with no time for the assistant to clear the propeller, no end warning, and a run of at most 99 seconds. Use the timer made for your kind of flying.

WORKS ALONGSIDE YOUR DT

This timer does one job — **an uncomplicated, repeatable motor run** — and is designed to work alongside the dethermalizer you already use, whether that is a fuse, a mechanical timer or a stand-alone electronic DT or RDT. Your DT keeps doing what it does; the timer takes care of the motor.

- **Fly at a large, open field** with room downwind. Never near power lines, roads or people.
- **Trim with short runs at modest power,** then work up. The stored time makes each step repeatable.
- **Set your DT for the conditions,** and put your name and phone number on the model.

Sources. AMA Outdoor Free Flight Rulebook 2024–2025 (events 160, 161, 165); FAI Sporting Code SC4 Vol. F1, 2026 (F1Q); SAM 2025 Electric Rules Changes; SEN 2411 (F1S); Outerzone plan oz2208 (*Ebenezer*, Aeromodeller April 1958). Figures reflect these sources as of October 2026.