

Multiple-Function Electronic Timer EFLA172

The E-flite C/L Timer has been designed to deliver control of an R/C ESC for use in an electric control line model. The timer has a very low weight of only 3.2 grams and is very compact in size. The timer is programmable and has a second function for controlling other features on your model such as retractable landing gear. The main features of the C/L Timer are listed below:

1. Programmable timer settings in 1 minute increments
2. Motor rpm is adjustable from off to full throttle
3. Motor cut-off alert in flight
4. Gradual motor rpm slow down prior to cut off
5. Optional control for items like retractable landing gear
6. quick and easy stopping control

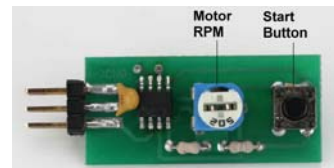
Introduction of Use

The top of the timer has the start button and Motor RPM adjustment knob. The label is located on the bottom of the timer.

You will note the label is on the bottom of the timer. On the left side there are two sets of pins. These pins are for the ESC and second function. Please note the labeling of the ground wire, positive wire, and signal wire on the left side of the timer. This labeling is correct when viewed from the bottom of the timer. The ESC port is on the top of the timer and the Optional control is for retract servos, etc. This is the port that is on the bottom of the timer.



In the middle of the label we show the Motor RPM potentiometer. This potentiometer is located on the opposite side of the timer. To increase motor RPM you turn the knob clockwise. To decrease motor RPM you turn the knob counter-clockwise. Please note that if you turn the knob fully counter-clockwise the motor will not run.



On the right hand side of the label we show the Start button. This button is located on the top of the timer. This button controls the duration of flight as well as the emergency stop ability of the timer.

Battery power required for timer operation must exceed 5 volts as a minimum voltage.

Instructions for Use

Plugging in the ESC and optional device

1. Plug the ESC into the timer ensuring to align the ground and signal wires. The ground wire is usually brown or black. The signal wire is usually orange or white. If you plug the ESC in backwards, the unit will fail to operate. You will want to plug the ESC onto the top of the timer.
2. Plug the retract servo into the timer ensuring to align the ground and signal wires. This will plug into the lower set of pins on the timer, or under the ESC.
3. If using the optional device (designed for retract operation) you will find the retracts to raise 15 seconds after the motor begins to run. The retracts will lower 18 seconds before the cut-off warning occurs.

Setting timing for flight

1. Pushing the start button and holding it down will cause the motor to run for a split second at minimal throttle. As you continue to hold the start button down the motor will run and stop, run and stop, run and stop every few seconds. Each of these run and stop periods dictates one minute of flight time. Three starts and stops would equal three minutes.
2. When you come to the number of cycles (equaling the number of minutes) you would like to fly, release the start button and the motor will start within 5 seconds and will achieve full throttle as set by the potentiometer within 3 seconds. Once at full power the motor will run for the specified period of time.
3. We recommend if this is the first time you have flown control line or at least the first time in a few years, you might start at either 1 or 2 minutes.
4. You will need to set the timing for every flight once you plug in the battery.

Stopping the Motor

1. If for some reason you would like to stop the motor once it has started to run, you only need to press the start button once briefly. Doing this shuts the motor down and erases the timing for this operation.

Adjusting Motor RPM

1. The potentiometer on the top of the timer allows you to adjust the RPM during operation. You can also move the potentiometer before setting the timing if you desire.
2. Screwing the potentiometer fully clockwise will result in the motor running at full RPM. Please ensure you match your propeller, battery, and motor to run within the specifications of your equipment.
3. Screwing the potentiometer fully counter-clockwise will result in the motor shutting down. All that is needed is to turn the potentiometer clockwise until the motor starts up again.

Motor Cut-Off Alert

1. Approximately 3 seconds before the motor begins to gradually slow down, the cut-off alert will occur. This is a very brief reduction in motor RPM. This signals that the motor will begin to slow down to a full stop within 10 seconds.

Limited Warranty Period

Horizon Hobby, Inc. guarantees this product to be free from defects in both material and workmanship for a period of 1 year from the date of purchase.

Limited Warranty

(a) This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for warranty claims. Further, Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

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HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability.

If you as the Purchaser or user are not prepared to accept the liability associated with the use of this Product, you are advised to return this Product immediately in new and unused condition to the place of purchase.

Law: These Terms are governed by Illinois law (without regard to conflict of law principals).

Safety Precautions:

This is a sophisticated hobby Product and not a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the Product or other property. This Product is not intended for use by children without direct adult supervision. The Product manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or injury.

Questions, Assistance, and Repairs:

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the Product has been started, you must contact Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a service technician.

Inspection or Repairs

If this Product needs to be inspected or repaired, please call for a Return Merchandise Authorization (RMA). Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as **Horizon is not responsible for merchandise until it arrives and is accepted at our facility.** A Service Repair Request is available at www.horizonhobby.com on the "Support" tab. If you do not have internet access, please include a letter with your complete name, street address, email address and phone number where you can be reached during business days, your RMA number, a list of the included items, method of payment for any non-warranty expenses and a brief summary of the problem. Your original sales receipt must also be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

Warranty Inspection and Repairs

To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Horizon Hobby.

Non-Warranty Repairs

Should your repair not be covered by warranty the repair will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for repair you are agreeing to payment of the repair without notification. Repair estimates are available upon request. You must include this request with your repair. Non-warranty repair estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Please advise us of your preferred method of payment. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. If you choose to pay by credit card, please include your credit card number and expiration date. Any repair left unpaid or unclaimed after 90 days will be considered abandoned and will be disposed of accordingly. **Please note: non-warranty repair is only available on electronics and model engines.**

Products requiring inspection or repair should be shipped to the following address (freight prepaid):

**Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822**

Please call 877-504-0233, or e-mail us at productsupport@horizonhobby.com with any questions or concerns regarding this product or warranty.

**United Kingdom:
Horizon Hobby UK
Units 1-4 Ployters Rd
Staple Tye
Harlow, Essex CM18 7NS
United Kingdom**

Please call +44 (0) 1279 641 097 or email us at sales@horizonhobby.co.uk with any questions or concerns regarding this product or warranty.

**Germany:
Horizon Technischer Service
Hamburger Strasse 10
25335 Elmshorn
GERMANY**

Please call +49 4121 46199 66 or email us at service@horizonhobby.de with any questions or concerns regarding this product or warranty.

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equipment by handing it over to as designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

