# Data Sheet for the USB Flight Data Recorder$^2$

***Patent Pending***

**Document Version 1.0, Model # FDR-02**

## Introduction

Thank you for your interest in our USB Flight Data Recorder. Our Recorder products are designed to be easy to use, reliable and loaded with features, while supplying our customers with high value for their money. Don't hesitate to contact us if you have questions not covered below!

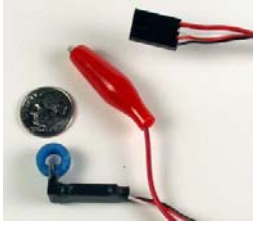
## Intended Uses

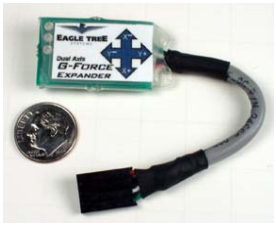
The Flight Data Recorder System was designed to be used to log data in Radio Controlled model airplanes and helicopters.

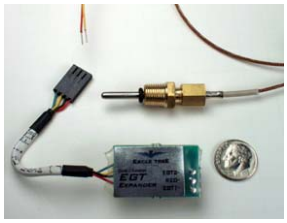
## Packing List

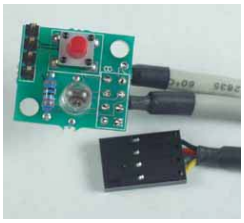

The kit comes complete with: Flight Data Recorder, 4 'Y' Cables, 3 feet of Pitot Tube hose, plastic Pitot Tube extension, 1 Temperature Sensor, 1 RPM sensor with tiny neodymium magnets, Custom USB Cable, CD-ROM, battery backup harness (use optional), decal, and a printed version of the manual.

## Accessories



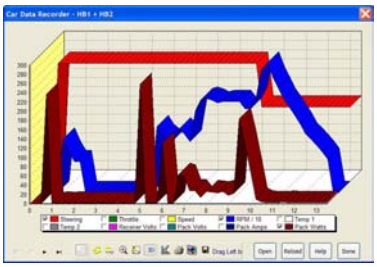


Optional expanders for measuring G-Force, Exhaust Gas Temperature, Electric Motor Current/Voltage, and other parameters are available from Eagle Tree Systems. Additionally, an External Hookup Kit is available for remotely accessing the recorder.

## Application Compatibility



The included CD-ROM is compatible with Windows 98SE™ and Windows Millennium™, Windows 2000 ™ and Windows XP ™. It is NOT compatible with Windows 98™,

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## Data Logged with the Recorder

**Servo movements**: The Recorder will log positions of up to four servos.

**Receiver Battery Voltage:** The recorder will log your receiver's battery voltage (or whatever battery is being used to power the servos). T

**Servo Glitches:** The recorder detects and logs three different types of servo glitches: short servo pulses (less than 740uSec), long servo pulses (greater than 2.25 mSec) and missing servo pulses (no pulse for 100mSec). **Speed:** If this option is selected, the recorder logs the speed of your plane via the air pitot tube.

**Altitude**: The recorder logs the flight's altitude with each sample.

**RPM:** The recorder logs the RPM of your Flight.

**Temperature 1:** The recorder logs temperature from the supplied temperature sensor.

**Temperature 2:** The recorder can log a second temperature input with the purchase of an additional temperature sensor, sold separately.

**Optional Accessories:** Optional expanders for measuring G-Force, Exhaust Gas Temperature, Electric Motor Current/Voltage, and other parameters are available from Eagle Tree Systems.

## Advanced Recorder Features

***Live Mode:*** The recorder can be used in live mode when connected to USB. This enables you to see what is happening in your model in real time when it is on the bench. The information is displayed in the app the same way it is shown during recording playback.

***Joystick Configuration Mode:*** The Recorder application supports US Mode 2 and US Mode 1Joystick configuration.

***"Stop on Full" Feature:*** You can select whether you want the recorder to write over its data when its buffer becomes full, or to stop when the Recorder is full.

***Capture Rate:*** The recorder can be set to log at several different capture rates, up to 40 samples per second

***The Recorder's LED Indication:*** When the Recorder is powered on when installed in your Flight, the LED flashes a number of times to indicate your 4.8 or 6 volt battery's charge state at power-up time.

***Saving Flight Files:*** After downloading flight data, flight data can be saved to play back later or to share with friends.

***Graphing/Spreadsheet Compatibility:*** The Recorder application has extensive graphing capability built in. Also, the Recorder's Data File is compatible with Excel ™ spreadsheet software.

## Flight Data Recorder Specifications

Airspeed: around 9 MPH minimum, approximately 290 MPH maximum
Altitude: 0 to approximately 32000 feet, in approximately 8 foot increments
Operational Voltage: 4.35V to 7.0V
Current Draw: < 35 mA @ 4.8 V
Weight: Recorder, 4 Y cables, RPM and temp sensors, and Pitot tube, approximately 1.5 oz.
Temperature: Dual inputs, 0 degrees F to 424 degrees F
RPM range: approx 100 RPM to 40,000+ RPM
Units supported: English and Metric
Measurements: 1.97" x 1.38" x 0.67"
Record Time: Varies with sample rate, parameters being recorded, and "activeness" of flight. Anywhere from around 8 minutes to hours is attainable depending on these settings.

## Limited Warranty

Eagle Tree Systems, LLC, warrants the Flight Data Recorder to be free from defects in materials and workmanship for a period of one (1) year from the date of original purchase. See our user manual for more details on the Limited Warranty.

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