CPII Go LED
Model CPII-GOLED
3 LED, Real-Time Weather Indicator and In-Flight Monitor for Co-Pilot II
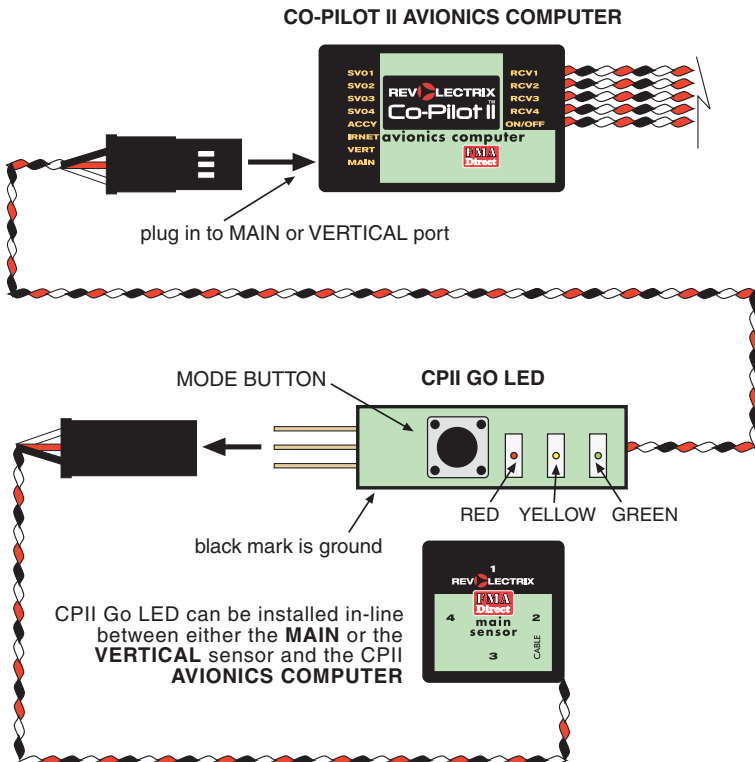
REVOLECTRIX ™

FMA Direct

Features

- Simple to install and operate; connects in-line between the CPII Avionics computer and either the main or vertical sensor.

- Compatible with any CPII systems in which the Avionics Computer is running firmware version 1.42 or higher.

- Provides real-time weather indication at a glance using 3 high intensity SMT LEDs (red, yellow, green).

- When used with CPII systems including the Vertical Sensor, unit mirrors the pre-flight temperature readout usually displayed on the IRNet programmer but using the LED's to let you know the weather status.

- When used with CPII systems that do not include the Vertical Sensor, supports manual weather calibration by pressing and holding the MODE button.

- Includes CPII system error messaging and flashes LEDs in certain sequences to help you trouble-shoot potential CPII issues

- Now with CPII Go LED, CPII systems pre-flight checking and full capabilities are easily accessible at a glance without requiring the IRNet programmer or router.

- The ALL NEW "Co-Pilot II PC Display Software" is available as a free download for your Windows PC. It requires the FUIM3 PC USB interface for interconnecting the CPII Avionics computer to your PC. The software may be used as an alternative to the IRNet Programmer and Router allowing access to any programming or pre-flight functions of CPII on your Windows PC.

- By combining the features of the CPII Go LED, the CPII PC Display Software, and the FUIM3 PC USB interface, Revolectrix is now able to offer lower cost, full-featured Flight Stabilization systems as an alternative to the original IRNet-based systems.

Precautions

- Follow all instructions in this manual to assure safe operation.

- Observe frequency control. If someone else is operating a radio controlled model on the same channel as your transmitter, do not turn on your transmitter—even for a short time. Your transmitter has a channel number marked somewhere on its case. When a model receives signals from two transmitters on the same channel at the same time, it cannot be controlled and will crash—possibly causing personal injury or property damage. For safety, most RC flying fields have formal frequency control rules. Follow them carefully.

- Do not operate your radio control transmitter within 3 miles of a flying field. Even at a distance, your transmitter can cause interference.

Installing the CPII Go LED

CO-PILOT II AVIONICS COMPUTER

plug in to MAIN or VERTICAL port

MODE BUTTON   **CPII GO LED**

RED   YELLOW   GREEN

black mark is ground

CPII Go LED can be installed in-line between either the **MAIN** or the **VERTICAL** sensor and the CPII **AVIONICS COMPUTER**

IMPORTANT: Make sure to observe polarity of all connections when installing the CPII Go LED. The JR style output plug should be inserted into the CPII Avionics computer with the black wire up (facing the label side of the computer), and the black wire coming from the sensor should align with the black mark on the CPII Go LED pins.

LED Readouts Defined

Solid RED – The weather is poor for stabilization. 3D will not work (Less than 4 deg F)

Solid YELLOW – Co-Pilot will work in 3D modes, but the weather is still poor (10 – 20 deg F)

Solid GREEN – Weather is great for stabilization (greater than 20 deg F)

ALL LEDs FLASHING – Stabilization is disabled for some reason. This could mean the main sensor is not connected, no receiver is found, setup has not yet been completed, etc.

ALL LEDs OFF – Co-Pilot II Avionics Computer firmware version is too old to support CPII Go LED. Update your CPII Avionics computer using the free CPII Firmware Update Utility. Firmware version 1.42 (or newer) must be used with the CPII Go LED.

ANY SINGLE LED FLASHING – A system error code has occurred. Note, this is a different type of error from ALL LEDs FLASHING. In this case, stabilization will still be operational, but a specific error has occurred during the time Go LED has been monitoring the CPII system.

MODE Button Functions

1. Pressing and releasing the MODE button will blink out any error codes which have occurred. All the LEDs will blink simultaneously. The tens places is long blinks followed by the ones place as short blinks. If the LEDs don't blink, an error has not occurred. Only active errors are shown. Error history is not shown.

2. Holding the button for 1 second and releasing it will perform a manual field calibration. This is only necessary when the vertical sensor is not installed. If the vertical sensor has not been installed, the LED will always show Solid RED on power up until a calibration is completed. If you have not installed the vertical sensor, then perform manual field calibration as detailed below, one time per flying session, whenever you change batteries, or when the weather changes considerably during a flying session. Always point the nose of the model straight up or straight down, then press and hold the MODE button for 1 second.

3. When the vertical sensor is installed, calibration is continuous and the results update and display on the LED's in real-time.

Performing a Manual Field Calibration

(Only required when vertical sensor not installed)

1. Hold the aircraft facing the earth over grass; nose up or nose down. The main sensor needs to be oriented vertically so that it can see the ground and the sky. Be sure not to block the sensor view with your body.
2. Press the button for 1 or more seconds and release. The field calibration only takes a fraction of a second to complete. The weather reading will immediately show on the LED's as defined in the section above titled "LED Readouts Defined".

Here is the link for the CPII firmware update. Use this application to update the CPII Avionics Computer to firmware version 1.42 or newer. This program will work with either the FUIM2 or the FUIM3 PC USB interface.

http://www.revolectrix.com/new_applications/software/co-pilot2_software.html

Here is the link for the Co-Pilot II Display Software. Use this application to perform all of the same functions as the IRNet Programmer and Router, but from your Windows PC. This program requires the FUIM3 PC USB interface and will not work with the older FUIM2.

http://www.revolectrix.com/cp2_display_software.html

List of Error Codes

Code	Cause	Resolution
1	Firmware corrupt	Update the firmware
2	Sensor A failed	Check sensor connection
3	Sensor B failed	Check sensor connection
4	Vertical sensor failed	Check sensor connection
5	Setup is empty	Use Quick Setup to configure CPII
6	Menu not found	Call Tech Support
7	Remote ON/OFF error	Setup the Remote on/off again
8	System soft start	Check Power Switch or Supply
9	Altitude to high for altimeter	
10	V. Hover requires the vertical sensor	
11	V. Hover mode not for helicopters	
12	V. Hover does not allow diagonal Sensor	Setup with main sensor facing forward, not diagonal
13	Knife Edge requires the vertical sensor	
14	Knife Edge not for helicopters	
15	Knife edge does not allow diagonal sensor	Setup with main sensor facing forward, not diagonal
16	Altitude Hold set too high or too low	Change the Altitude hold setting
17	Factory error	Call tech support
18	Main sensor lost communication	Check the main sensor wire
19	Vertical sensor lost communication	Check the vertical sensor wire
20	Lost communication on the avionics network	Check the wires and connections

List of Error Codes, continued

Code	Cause	Resolution
21	Altimeter or GPS not found	Check the wires and connections
22	Co-Pilot setup is not complete	
23	Supply less than 3.6V	Check the receiver supply regulator and wires
24	Factory error	Call tech support
25	Factory error	Call tech support
26	Weather too bad for Co-Pilot	
27	Co-Pilot greater than 1 mile return home	Return home only works up to 1 mile out.
28	Altitude hold range error	
29	Weather not good for arming 3D modes	Make sure the vertical sensor has a clear view of the ground and sky
30	Factory error	Call tech support
31	Main sensor has communication errors	Check the sensor wiring
32	Vertical sensor has communication errors	Check the sensor wiring
33	Gain is set too low for emergency recovery	Raise the pitch and roll gains
34	Vertical sensor was removed	
35	Weather too poor for flying Co-Pilot	Make sure the vertical sensor has a clear view of the ground and sky
36	Bad weather. The gain is reduced	Make sure the vertical sensor has a clear view of the ground and sky
37	Factory testing not completed	Call tech support
38	Main sensor not found	Make sure the main sensor is plugged in with the correct polarity
39	Factory error	Call tech support
40	GPS fix lost while flying	Make sure the GPS isn't mounted close to any power wires or speed controls
41	Low battery warning	The warning voltage is adjustable in the preferences menu
81	GPS/Altimeter soft start	Check connection to GPS
82	Factory error	Call tech support
83	GPS receiver is not updating	Make sure the GPS isn't mounted close to any power wires or speed controls
84	Factory error	Call tech support
85	Factory error	Call tech support
86	Factory error	Call tech support
87	Factory error	Call tech support
88	Altimeter high over range	Call tech support
89	Altimeter low over range	Call tech support

Specifications	
Operating voltage	+3.5 to +9 volts DC
Operating current	<10 milliamps
Weight	0.10 oz (2.8 gm)
Dimensions	1.25" x 0.40" x 0.35" (not including connectors)
Interface	Communicates with CPII Avionics computer on the sensor network

REVOLECTRIX Limited Warranty for CPII Go LED

REVOLECTRIX warrants this product to be free of manufacturing defects for the term of one year from the date of purchase. Should any defects covered by this warranty occur, the product shall be repaired or replaced with a unit of equal performance by REVOLECTRIX or an authorized REVOLECTRIX service station.

Limits and Exclusions

This warranty may be enforced only by the original purchaser, who uses this product in its original condition as purchased, in strict accordance with the product's instructions. Units returned for warranty service to REVOLECTRIX will be accepted for service when shipped postpaid, against a Return Authorization. Please contact support@revolectrix.com to obtain an RA, or you may start a case on line at www.store.revolectrix.com after logging into your account page.

This warranty does not apply to:

• Consequential or incidental losses resulting from the use of this product.
• Damage resulting from accident, misuse, abuse, neglect, electrical surges, reversed polarity on connectors, lightning or other acts of God.
• Damage from failure to follow instructions supplied with the product.
• Damage occurring during shipment of the product either to the customer or from the customer for service (claims must be presented to the carrier).
• Damage resulting from repair, adjustment, or any alteration of the product by anyone other than an authorized REVOLECTRIX technician.
• Installation or removal charges, or damage caused by improper installation or removal.
• Call (301) 829-5533 for more information about service and warranty repairs.