



# FY91Q FIRMWARE VERSION 1.1

This is the first firmware upgrade for the FY91Q.

Following multiple request to make the Hover Hold and RTH procedure easier, FY has designed Firmware Version 1.1 to do just that.

**PLEASE NOTE THAT ONCE YOU HAVE UPLOADED THIS FIRMWARE, THERE IS NO OPTION TO RETURN TO THE ORIGINAL FIRMWARE.**

All FY91Qs will now have Version 1.1 as the default firmware.

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## Hover Hold (Mode 2)

### Preface to updated Mode 2:

You now do not need to move the THR stick to the middle position to engage hover hold (Mode 2). When you engage the Hover Hold switch, your hovering throttle position will be recognized by FY91Q as the throttle level to hold altitude (plus or minus stick range of 100 $\mu$ s).

### New HH Procedure

- (1) Hover your aircraft for hands free flight as before. Use trims to bring the aircraft into a good hovering attitude.
- (2) Adjust your throttle so that the aircraft maintains altitude.
- (3) After the aircraft attains hands free hover, activate Hover Hold.
- (4) The aircraft will maintain altitude and hold position. **You do not need to move your throttle stick to the middle position anymore.** Keep it where it is.
- (5) If you wish to move Hover Hold to another location, disengage the Hover Hold switch; move to the new location, attain good hover and re-activated the Hover Hold switch.
- (6) You can also change the altitude of the aircraft in Hover Hold by moving your throttle stick up or down. But you will need to bring it back to the

hovering throttle position to re-engage Hover Hold. If you cannot remember this position, just carry out as per no. (5).

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## **Return to Home - RTH (Mode 3)**

### **Preface to updated Mode 3:**

You now do not need to move the THR stick to the middle position to engage RTH (Mode 3). When you engage RTH, your hovering throttle position will be recognized by FY91Q as the throttle level for maintaining altitude during RTH.

### **New RTH Procedure**

- 1) Carry out Hover Hold for at least 2 seconds, so that your FY91Q learns your hovering trims for level flight.
  - 2) When you require RTH, as much as possible bring the aircraft to as stable hover before engaging RTH.
  - 3) Engage RTH as before. But in Firmware 1.1, you can change the altitude up or down at any time during the RTH procedure. **You do not need to put the throttle stick back to the middle position.**
  - 4) Upon reaching Home position (location where GPS lock occurred) the aircraft will automatically engage Hover Hold. Bring your throttle stick to the hovering level to maintain Altitude and Position hold.
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### **AP117 OSD Display**

1. The FY91Q Data output has been modified to fit that interface of AP117.
2. Flight mode display has now been corrected to show as in the manual:

**ABM**=auto balance mode = stabilization mode (Mode 1)

**FAF**=fixed altitude flight= hover mode (Mode 2)

**RTL**=return to launch = RTH mode (Mode 3)