



## AP50 Release Notes

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### Release 040622B

This 040622B release is a special release of the AP50 AutoPilot code. It was specifically released for use on AP50 Autopilots using Revision 17 of the UAV Flight AutoPilot Operating System (Vesta Basic). It is identical in functionality to the 040622, and is simply a recompiled version of the 040622 release.

The operating system revision of the AP50 AutoPilot can be determined from the first line of the POST while monitoring the FP or MP port. The software revision is listed, followed by the two character operating system release number:

**Flight Processor AP50\_040622 17**

**Mission Processor AP50\_040622 17, GCS: Level 1**

The operating system revision of the AP50 AutoPilot is also listed on the small white label on the underside of the AP50. The first line on the label should look similar to:

AP50 UAV77 R17

The last three characters indicate the revision level.

Revision 17 of the operating system was released on 11/11/2004, so many of the AP50s in customer's possession are Revision 16 or earlier. We highly recommend upgrading to Revision 17. This cannot be done in the field, but will be done free of charge to any systems sent prepaid to UAV Flight Systems. We will upgrade the operating system, check the system's functionality, and return to sender (return postage paid by UAV Flight Systems). Please contact Sales (see above email address) for more information.

## Release 040622

### Bugs fixed:

1. Corrected the checksum calculations for the **Read WPLON**, **Set WPA**, and **Set WPS** messages.
2. Corrected the handling of the **Set DM** and **Set DWP** messages; they had been returning invalid responses.
3. Corrected the analog information provided by the **Read AIN1** and **Read AIN2** messages.
4. Changed Flight Processor text messages for correctness and clarity.

### New features added:

1. Added servo information to the telemetry message.

### Known bugs:

1. None.

## Release 040302

### Bugs fixed:

1. The bug with setting waypoints when the adjacent lower-numbered waypoint has an associated hold time (known bug #1 in the 040122 release) has been fixed.
2. A bug that could affect navigation was corrected (bug introduced in 040122 release).

### New features added:

1. In PIC (Pilot In Control) mode, servo outputs are "boosted" to provide handling closer to that of an airframe under direct control without an autopilot.

### Known bugs:

1. None.

## **Release 040122 (previous release: 031110)**

### Bugs fixed:

1. Until GPS fix is acquired, R/C control is disallowed.
2. Hold timer is zeroed when "set waypoint" GCS message is received.
3. Checksum calculations for negative latitude/longitude values have been corrected.
4. GCS message to set servo S7 now works.

### New features added:

1. GCS interface has been completely rewritten.
2. All GCS messages returned by the UAV now have checksums.
3. GCS telemetry packet (the once-per second data message from the UAV) now has a defined message type, and has been increased in size from 47 to 54 bytes.
4. The autopilot produces error messages in response to bad GCS messages.
5. New GCS message types "set waypoint altitude" and "set waypoint speed" added.
6. New GCS message to set C1-C3 outputs added.
7. New GCS message to poll for GCS enable status added.
8. The sign-on message in the operator interface now reports the VSTB revision level, and whether or not the GCS interface is enabled.
9. A new revision of the downloader is provided with this release.

### Known bugs:

1. If you send a "set waypoint #n" message to the UAV, and waypoint #(n-1) has an associated holding pattern, the UAV will make waypoint #(n-1) active for the duration of the holding time.