

B. Taking Photos

1. At least 20 minutes prior to leaving Base for aircraft, power up VIRB (GVE) and place camera to the open sky to maximize number of satellites acquired. After 20 minutes, power down GVE and replace with fresh battery. Begin charging replaced battery.
2. After mounting GVE on wing and before entering aircraft, power up GVE. Then check for full battery icon in monitor window. If not fully charged, replace with fully charged battery.
3. Just prior to entering aircraft, start the camera by pressing **OK**. (To stop interval timer, press **OK** again.)
4. On the viewfinder, countdown timer begins; observe GVEs taking first image at the end of interval (image freezes briefly). Verify two image cycles to ensure **Repeat On** is functioning. Viewfinder indicates how many images have been taken, time remaining until next image and GPS lock status.
5. At end of mission, press OK to stop photo-taking. Press and hold **MODE** key until GVE power-down icon appears, then release. GVE powers down.

C. Taking Video

1. To start video, slide large **REC** button towards lens. Count-up timer in viewfinder indicates how much time video has recorded. Not cumulative from one video to another.
2. To stop video, slide **REC** button away from lens.
3. To power down GVE, press and hold **MODE** key until GVE power-down icon appears, then release. GVE powers down. If power down icon does not disappear, remove and reinstall battery. Icon will disappear.

D. Preparing GVE For Next Sortie

1. Download photos/video using the included cable.
2. If the camera has been out of your “command and control”, assume menu settings to be suspect. In this case, repeat Section A, 1 – 33: pages 2 and 3.
2. In power OFF state, and if the camera has been under your “command and control”, replace battery with fresh battery, or plug in to charge.
3. Press **MODE**, scroll to **ADVANCED**, press **OK**.
4. Press **MODE**, then scroll to **CARD**, press **OK**.
5. Scroll to **ERASE**, press **OK**. After **ERASE**, press **OK**.
6. Press **MODE**, GVE defaults to **VIEWFINDER**. (GVE now remembers all settings).
7. Do not turn on WIFI. Press and hold **MODE** until GVE power down icon appears, then release. GVE powers down. (It will blink green once and power down).

Garmin VIRB Elite (GVE) Camera System

Settings, Usage, and Download Procedures Handbook

CIVIL AIR PATROL

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Adapted from work by Gauci/Sullivan/Malone/Sobel, Rev 5.4 19-Jun -16

A. Settings (Password: **garminvirb**)

Note 1: The Garmin VIRB Elite (GVE) has been set up and should be ready to go, out of the case. These procedures should only be used when changes are desired or there is doubt about existing settings.

Note 2: The GVE can only be programmed if WIFI is **off**. Ensure most recent **Software Version** installed. As of 16Nov2015: 4.1.10.0; **WLAN** 1.20.

1. Ensure large video **REC** slide button is positioned away from lens on the GVE. Ensure fully charged battery installed.
2. Press and release **Power/Mode** key **⏻** on the side until indicator light near lens flashes red, then green, to indicate power-on. (The time indicated in the viewfinder shows time remaining on the micro-SD card for VIDEO mode only). The battery icon (upper right hand corner) shows battery charge remaining. Full icon indicates fully charged battery. The other icon, when steady, indicates GPS satellite lock. Flashing icon: GPS searching.
3. Press and release **Power/Mode** key **⏻** until **SETUP** (Crossed Wrench and Screwdriver icon) highlights.
4. If **WIFI** indicates: **On**, press – – **OK** button to turn **WIFI Off**. If **WIFI** was **Off**, GVE menus display.
5. Press **Power/Mode** key, Scroll (using **△** and **▽** keys on the side) up to **SYSTEM**, press **OK**.
6. Scroll to **GPS**, if **On** go to line 7. If **Off**, press **OK**. Scroll to **On**. Press **OK**.
7. Scroll to **Record Light**, if **Off**, go to line 8. If **On**, press **OK**. Scroll to **Off**. (Now indicates: **off**)
8. Scroll to **Tones**, if **off**, go to line 9. If **on**, press **OK** to **off**.
9. Scroll to **Power Save**, if **off**, go to line 10. If **on**, press **OK** to **off**.
10. Scroll to **Time/Date**, press **OK**. If **24-Hour**, go to **Date Format**. If not, press **OK** then scroll to **24-Hour**. Press **OK**.
11. Scroll to **Date Format**. If **DD/MM/YY**, go to line 12. If not, press **OK**, scroll to **DD/MM/YY**, press **OK**.
12. Scroll to **Time Zone**. If **Automatic**, go to line 13. If not, press **OK**, scroll to **Automatic**. Press **OK**.
13. Press **Power/Mode** key once. Scroll to **Units**. If **Statute**, go to line 14. If not, press **OK**, scroll to **Statute**, press **OK**.
14. **DO NOT Reset Settings**. Camera will “forget” all stored satellites.
15. Press **Power/Mode** key once.
16. Scroll to **VIDEO**. Press **OK**. If **Mode 1080p**, go to line 17. If not, press **OK**, scroll to **1080p**, press **OK**.
17. Scroll to **Field of View**. If **Ultra-Zoom**, go to line 18. If not, press **OK**. Scroll to **Ultra-Zoom**. Press **OK**.
18. Scroll to **Loop**. If **Off**, go to line 19. If not, press **OK**, scroll to **Off**, press **OK**.
19. Scroll to **Auto Record**. If **Off**, go to line 20. If **On**, press **OK**.

21. Scroll to **Format**. If **NTSC**, go to line 22. If not, press **OK**, scroll to **NTSC**.
22. Press **Power/Mode** key, scroll to **PHOTOS**, press **OK**. If **Resolution** is **16 MP (4:3)**, go to line 23. If not, press **OK**. Scroll to **16 MP (4:3)**, press **OK**.
23. Scroll to **Burst**. If **off**, go to line 24. If not, press **OK**, scroll to **off**. Press **OK**.
24. Scroll to **Self Timer**, press **OK**. Set according to planned sortie elevation using the table below (100 kts, 40% overlap):

Elevation (AGL)	Flight track spacing	Self Timer Setting
1000 ft	0.4 nm	<5 sec
1500 ft	0.5 nm	5 sec
2000 ft	0.6 nm	5 sec
2500 ft	0.7 nm	10 sec

25. If **Repeat On**, go to line 26. If not, scroll to **Repeat On**. Press **OK**.
26. Scroll to **Date Stamp**, if **Off**, press **Power/Mode** key, go to line 27. If not, press **OK**. Then press **Power/Mode** key.
27. Scroll to **ADVANCED**. Press **OK**.
28. At **Lens Correct**, if **on**, go to line 29. If **off**, press **OK** to **On**. **Lens Correct On** automatically enables video **Ultra-Zoom**. (See line 17)
29. Scroll to **Stabilizer**. If **on**, go to line 30. If **off**, press **OK** to **on**.
30. Scroll to **Flip Camera**. If **This Side Up**, press **MODE**. If not, press **OK**, press **MODE**.
31. Scroll to **CARD**, press **OK**. Scroll to **ERASE**. Press **OK**. After **ERASE**, press **OK**.
32. Press **MODE** once, GVE defaults to **VIEWFINDER**. GVE now remembers all settings). Do not turn on **WIFI**.
33. To power down, press and hold **MODE** until GVE power down icon appears, then release. GVE powers down.

Printing:

Print the two pages above back-to-back and fold down the middle.

For changes/updates/suggestions, contact Capt Tim Graham.