



Darling Downs Soaring Club

Duo Discus VH-GRL

Serial Number 613

Supplementary Pilot Handling Guide and Conversion Document

Schempp-Hirth



Rev 1

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These notes are a conversion guide only and not a substitute for the Manufacturer's Flight Manual.

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Why Supplementary Pilot Handling Notes

The original handling notes were written in December 2011. The original native document cannot be located.

Apart from the instrumentation and battery sections, these handling notes are still highly relevant.

Instrumentation



Figure 1- Front Instrument panel



Figure 2- Rear Instrument panel

Batteries

- Master switch (large red switch on front panel) turns on the battery. Up for ON; Down for OFF.
- Use the battery switch to select either '1', '2' or 'AUTO'. GRL has been fitted with a GBMS (glider battery management system) such that when the AUTO state is selected, it will manage the batteries in the glider for the pilot. Therefore, **AUTO is the recommended** position ensuring that both batteries are discharged evenly (resulting in better short and long term battery longevity)

OpenVario

- The OpenVario IS NOT A TOUCH SCREEN. AVOID TOUCHING THE SCREEN. Clean with water only (like a canopy)
- There is a separate and comprehensive manual about the DDSC OpenVario on the DDSC website
- There are also short training videos on various topics about using the DDSC OpenVarios.
- There are many YouTube videos and other info on the web
 - https://www.youtube.com/watch?v=qppuKiyIH_Y&list=PLPHdOV0Gq_NSyApS-LwkfvNwopDW68Lf&index=3

- You should have your own SD card (and 'special' USB stick) to operate the OpenVario. This stores your own profile look and feel for OpenVario.
- The SD card must be inserted in the panel before the Master Switch is Turned ON (and remain installed for the duration of the OpenVario's use). Note - The OpenVario will not work without an SD card. A 'dead' screen most likely means a SD card issue (missing, corrupt, wrong one 😊).
- After the Flarm and/or Borgelt Vario obtains a GPS fix, the Openvario is ready for use.
- Both the front and rear OpenVarios' are powered together and provided by a unique circuit breaker / switch (labelled *computer/flight computer*) mounted on the front panel.
- Be sure that the Duo profile is active in the 'Setup Plane' under the menu.

If flying from the rear seat, Device C will need to be DISABLED (via 'devices' in the menu). By default, Device C is enabled. More details and the explanation is provided in the dedicated OpenVario manual. If you buy the correct SD card (eg front or rear seat), you don't need to worry about this

B600 Borgelt

- See the Borgelt Manual on the DDSC website
- The Vario power is provided by a unique circuit breaker and switch (labelled *vario*)
- The cruise/climb switch is on the front of the control column (toggle pushbutton):
 - Note the cruise/climb function will operate (defaults to climb mode) if the OpenVario is unserviceable/OFF in the Duo only. It has a backup power supply.
 - The OpenVario will *message* the vario mode (cruise or climb)
 - The LED under the OpenVario encoder will also indicate the mode:
 - RED → climb
 - GREEN → cruise
 - Changing the mode (cruise or climb) from either the front or back seat will transfer this setting to the other seat, thus keeping both varios in step

Flarm

- LED Flarm displays are provided on each panel.
- Can also be viewed in detail on the OpenVario by changing screens ('arrow' left or right until the desired screen is reached)
- Keeping the data.fln file up-to-date in OpenVario will display the Flarmnet database (aircraft IDs). One is provided by default
- The Flarm power is provided by a shared circuit breaker and no switch (labelled *flarm/dittolog*). This can only be turned off with the master switch

Dittolog

- Each pilot is issued with a unique dittokey. This IDs you as the Pilot.
- Insert your key in the lower most part of the tilt up panel (same as every other DDSC glider)
- The Dittolog power is provided by a shared circuit breaker and no switch (labelled *flarm/dittolog*). This can only be turned off with the master switch.

Undercarriage Warning Buzzer

- A normally closed micro switch on the undercarriage down position, another on the airbrake locked position is in series with a piezo buzzer

- If the airbrakes are unlocked while the undercarriage isn't locked down, the buzzer will sound.
- The undercarriage warning buzzer power is provided by a shared circuit breaker and no switch (labelled *flarm/dittolog*). This can only be turned off with the master switch.

Shutting down the Instruments

- Turn the radio OFF
- Turn the EACH OpenVario OFF by
 - MENU
 - Scroll to last menu item QUIT
 - Enter, accept YES to shut down, scroll down to POWER OFF, ok, scroll to YES
 - Turnoff unique switch
- Switch off the Borgelt Vario at unique switch
- Switch Master down to OFF.
 - (Dittolog and Flarm shut off with the master)

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