

CNv Encoder Operation



Upper Left (UL) Encoder

Navigates left/right to desired screen.
Normal rotation scrolls through all screens sequentially.
A fast CCW spin always displays the Cruise/Climb screen.
A fast CW spin always displays the Settings Screen

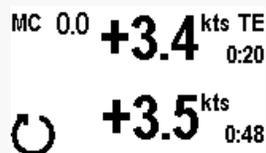
Lower Right (LR) Encoder

Controls vario volume in Cruise/Climb Screen.
Changes Flight parameters (MC, Bugs, Audio Volume, etc.).
Supports Setup parameters (Glider Model, Weight, Constants, etc.).
Selects Display Screen Set (Flight, Settings, or Info).

Flight Screens

Climb Screen

- 20 Second Climb Average - The top row displays the average climb rate for the last 1,2 .. 20 seconds
- Total Climb Average - The lower row shows the average climb rate for the total climb duration. Max duration is one hour.
- Both values are reset to zero when the manual cruise/climb switch is cycled.
- When automatic C/C switching is in use the screen typically switches to Climb at about 45 degrees or one eighth of a turn. The two averages and the timers however are reset after the first few degrees of any turn so that if/when the vario goes into climb mode the averages (and the timers) display values from the first point at which turning was detected.



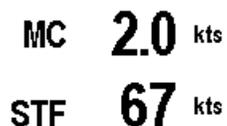
Cruise Screen

- The Netto value is the calculated vertical speed of the air mass based on the last 1 – n seconds of cruise flight where n = cruise time constant. The timer shows duration from the start of the current glide.
- Average can be N or RN, depending on option chosen in Utility.
- The STF is dynamic using selected flight parameters (polar, ballast, bugs and MC) and vertical air mass motion.
- Each chevron corresponds to a five knot difference between the indicated airspeed and the speed-to-fly
- Wind direction and velocity are displayed lower right.



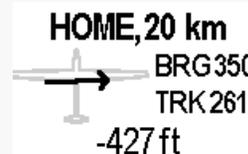
Mac Cready Screen

- The MC Value is adjusted using the LR encoder.
- The STF is calculated using the MC setting, ship polar, dry weight, ballast, and bug % entered by the pilot. This is the STF in neutral air.



Winds Screen

- The solid black arrow shows the direction of the wind relative to the ground track.
- Tail wind is displayed on the left side of the screen - a tail wind of two knots is depicted.
- The wind strength is 8 kts and is blowing from 352 degrees.



NAVIGATE HOME Screen

- The coordinates for HOME and the elevation of the home field must be entered using the configuration utility.
- In this example, the glider has to turn right ~ 90 degrees to get home. but is 427 below the altitude required to arrive with zero margin.
- The arrival height differential is the distance to ground plus the margin set in margin screen.



Ballast Screen

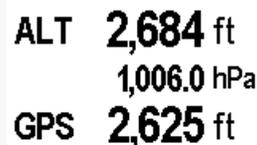
- Ballast may be liters or US gallons as set in the CNv Utility.
- For US gallons the AUW of the ballasted glider is computed and displayed in lbs.
- For liters the AUW of the ballasted glider is computed and displayed in kg. AUW = Dry Weight + Ballast



Bugs / Clean Screen

- Estimated bug coverage is adjusted using the LR encoder.
- 100% = no bugs.
- The impact on L/D is displayed for reference

Glider Settings



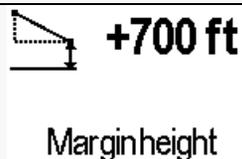
ALT/ GPS Screen

- The altimeter setting can be adjusted using the LR encoder.



OAT

- The outside temp can be entered – if the outside temp probe is not installed.



Margin Height

- Altitude margin added to Get HOME calculations for a higher finish.



Dry Weight

Dry weight is the manufacturer's weight of the empty ship + instruments + pilot + chute + all other baggage. i.e. the actual weight of the ship with you in it - sitting on the takeoff grid - not including ballast.

 POLAR LS6-18W LS6-15W	<u>Polar</u> A representative set of polars is available. Polar (glider) is selectable using the lower encoder. Any new polar may be defined using the configuration utility
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Vario Settings

 1.7s Pointer Response	<u>Pointer Response</u> Pointer Response is adjusted using the LR encoder. 2.5 seconds is the default. Pointer and Audio time constants are independently adjustable.
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 1.7s Audio Response	<u>Audio Response</u> Audio Response is adjusted using the LR encoder. 2.5 seconds is the default. Pointer and Audio time constants are independently adjustable.
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cruise Δt 10.3s Cruise Response	<u>Cruise Response</u> This time constant controls the behavior of the STF chevrons and the netto (or relative netto) averages on the display.
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 (use TE probe) TE Source --- or ---  (no TE probe) TE Source	<u>TE Source</u> TE Probe or Electronic TE is selected using this screen set. The LR encoder toggles between two screen options: 1/ Use TE probe 2/ No TE probe The option selected here determines which TE compensation adjustment screen (following) will be displayed.
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 +0% Probe +/-	<u>TE Probe Compensation</u> This screen appears next with a CW turn of the UL encoder if the 'Use TE probe' option is selected above.
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 +13% Electronic +/-	<u>TE Electronic Compensation</u> This screen appears next with a CW turn of the UL encoder if the 'No TE probe' option is selected above.
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 +00:00 12:14:51 UTC 12:14:51 LOC	<u>UTC</u> The LR encoder is used to enter the UTC offset required for a correct local time display
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 1 Volume	<u>Volume</u> Audio Level (volume) is adjusted using the LR encoder. The Lower Right encoder always functions as a volume control on the Cruise/Climb Screen
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 100% Backlight	<u>Backlight</u> Backlight brightness level is adjusted using the LR encoder. Pilot can adjust the CNv screen backlight from 0 - 100%
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	<u>Gear / Spoiler Warning Activation</u> <ul style="list-style-type: none"> Screen allows activation / deactivation of Gear and Spoilers Warnings. Switch connections from the gear and spoiler actuators must be made to the ADC. The warning will flash over the top of all screens until gear or spoiler retraction is completed.
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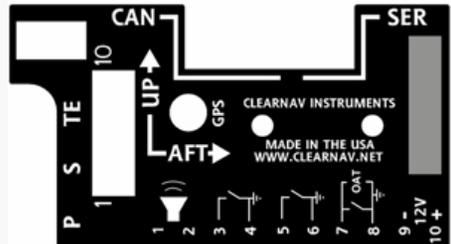
 +10 ZeroPointer +/-	<u>ZERO POINTER</u> Screen allows pilot to position the mechanical pointer at the zero position.
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Tools

2014-04-29 00:00 2014-04-17 1 03:18 2014-04-09 1 04:32 Takeoff: 04-29, 09:12	<u>LOGBOOK</u> Provides view of prior flight dates, duration and take-off time.
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 PROFILE IMPERIAL.CNV LS6.CNV ls6-narrowdb.cnv	<u>Profile</u> Allows selection of a profile from multiple options created in the PC utility and transferred to the CNv using the USB stick.
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 55°F ALT 1,486 ft OAT (Manual)	<u>OAT</u> - The outside temp can be entered – if the outside temp probe is not installed.
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ADC Connections 3/4, 5/6, and 7/8 pairs may be used for gear and spoiler warnings; manual cruise/climb switching; and an OAT. 7/8 can support both OAT and C/C control but ONLY if a momentary switch is used for C/C control.

The CNv PC Utility assigns function. Refer to release notes for details.