

February 2010 News update from Borgelt

The GOOD news is we are holding prices. Yes, no increases planned in 2010.

We are aware sales of new gliders are down worldwide, however it is times like these that pilot's may consider an avionics upgrade in lieu of a shiny new ship! Of course our preference is for Borgelt to be recommended by you and selected by the customer. Let's see whether we can achieve this by explaining ourselves better..

There is always a tussle for which brand. It is an unfortunate fact that great design largely goes unnoticed. It works as the designer intended. Smooth, integrated, nothing to complain about. We frequently receive feedback that confirms we have achieved great design. It is always difficult to convey that when it is not bright and flashy, just smooth and functional.

We have quietly achieved something which is frequently overlooked and largely underrated - a range of variometers which provide the pilot with the information AT A GLANCE and to quote a customer "makes sense". Professional pilots, military and civilian have told us that they prefer our B2500 display. Instrument design is much more than computer programming. The current trend in the cockpit is installation of "eye-catching gear" – we ask you to look beyond, some of it is poorly suited to use in the cockpit. Is it delivering the information needed for timely decisions? Is it designed for use in the bright outdoors? Is it "hungry" on battery use? Most of the PDA programs seem to be adding too much information - because it is available doesn't necessarily mean it should be displayed. This is one of the key issues in instrument design.

None of what we do or have achieved is accidental. Feedback, experience, lots of commonsense, knowledge and over 31 years of design & manufacturing in the industry, combined with a history of successful cross country and contest soaring experience. (Amongst other achievements Mike was Australian 15 Meter Champion in 1981 and held an Australian distance record for triangular distance for 15 Meter gliders). All that amounts to nought unless the folks selling our instruments have a working knowledge and are enthusiastic about them too. So that's where you come in. By working together we can all benefit. To assist we have highlighted some of the reasons we consider our products are worthy of your sales efforts.

Performance: B400 the leader in its class.

Here's what one happy customer had to say:

"Just to let you know that I flew my 29 in the Seniors for the first time, out of the box, with your B400 and SUBERB is the only word I can find that fits!

I thought my B40 was hard to beat but for clarity, ease of use and decision making in coring thermals, but the B400 takes the prize in my view."

Unless you have flown with a B400 you maybe do not appreciate the fine form & function.

The competition's LCD is inferior in response, clarity and resolution.

Plus, no other manufacturer offers variometers in 2 sizes. (57mm and 80mm) - a big plus for upgrades. Panel hole size is no longer an issue. Repeaters and digital averagers in 2 sizes also.

The B400 is a worthy successor to the B40 which appeared to attain almost mythical status.

So it is great that the B400 does ALL that plus offers other UNIQUE features:

The indicator movement is smooth, accurate and fast with a range +12 knots (6m/s) to -10 knots (-5m/s). The silent band between 1 and 4 knots down causes less distraction and can act as "pseudo optimum speed to fly" indicator.

Customisation of response and silent band is available by us or by a suitably equipped dealer.

Again good design provides instant information - the green LED ON indicates the current rate of climb is greater than the running average, OFF less than running average.

A UNIQUE feature! Green light = climb improving.

Linked with this is the all important audio: The default setting of the B400 climb audio is "competition" mode. This has a change in the on/off ratio of each beep which changes from 70/30 on/off below the running 20 second average to 50/50 above providing instant feedback as to the best part of the circle and when the thermal is weakening.

Customer adjustable from "competition" to "B40 classic" mode audio for those who prefer that.

The red LED flashes briefly every 2 seconds when operating on B400 standby power.

Fact: In 2010 there is no excuse for the old mechanical variometers with flasks.

Capability: No other brand matches the B500 in this price range.

The B500 combines the outstanding variometer features of the B400 and extends them with complete variometer (relative netto, netto, digital averager) & speed to fly functions and also provides an excellent navigation computer including wind speed and direction calculation, wind component, navigation around a turn point, distance to go, Steering information, bearing & glideslope, PLUS outputs data to PDAs or B2500 or many other glide computers AND installs in one standard size panel hole – either 57mm or 80mm plus another part of the panel for the GCD – eg the rarely used area under the glareshield, which also makes for easier access to the controls (closer to pilot).

EASY Turnpoint uploads, polar data and customisation are done via miniSD card.

A lot of thought and experience has been built in to the B500. The displays and the audio modes are quite sophisticated but simple and intuitive to use. Important - cockpits are busy places.

Many local pilots and clubs have equipped their gliders or fleets with the B500 and they found they were easy to install and operate without any fuss or bother. These installations aren't causing us any noticeable support workload.

For pilots flying with the PNA units which rely solely on GPS data the B500 will supply current real time head or tailwind component information which these PNA devices cannot supply.

The B500 software is now complete and operating smoothly. The definitive production version is on our website. www.borgeltinstruments.com

The two speaker audio is being successfully used by several customers who are finding the feature useful. Speaker placement is the key and it appears that the best position is vertically in line with the pilot's ears under the canopy rail on each side. Then the stereo effect is still apparent when you turn your head.

The B500 is now in "b" version - the B500b. We have rationalised the hardware choices. The B500b is still available in either size 57mm or 80 mm main unit but the only GCD choice is the GCD 2 with the miniSD card and the GPS unit still looks the same but is different internally. There are software changes which speed up the internal communications network for even faster vario response for those who prefer that and the network can also handle engine information from suitably interfaced motorglider engine installations, initially our jet project.

All B500 instruments may be ungraded to "b" model status as any future software development will be done on this instrument. Some units will require a new sensor processor card in the main unit (unless there is already a "64" processor present) , a new GPS and a GCD2 if not already fitted. Contact us for details and price.

There's no built in IGC flight recorder - why?

Our belief is various with inbuilt IGC flight recorders do not make sense - reasons being added initial cost, added inconvenience of removing what is an even more valuable instrument from the panel when recalibration is required, if failure occurs you lose the lot, vario & flight recorder. Flight recorders require recalibration every two years and this requires disturbing the installation with opportunity to introduce leaks on re-installation and without a flight recorder you can still fly the glider but it is much less interesting without the vario! There are also many, many different brands of flight recorder and FLARM units also have one so we believe a flight recorder in the B500 is redundant.

Power & data distribution solution:

Our PDA-PS makes for very easy wiring installation as this acts as power and data distribution centre for the glider by supplying power to flight recorder, Flarm, PDA (5 volts at 1 amp switch mode supply) and B2500 and allowing them to share data.

PDA-PS with optional combiner module plugs in to the PDA-PS and strips the B500 GPS data from the B500 NMEA messages and substitutes flight recorder or Flarm GPS messages when available,

along with, for example, pressure altitude and Flarm proximity data. This device autobauds so that when switching from logger at 4800 baud to Flarm at 19200 baud as a data source this happens seamlessly. The output baud rate is the same as the input baud rate so the PDA program must handle this also. Should the flight recorder or Flarm messages stop, the B500 messages will automatically be substituted.

PDA declarations can be done to Flarm or flight recorder and these may also supply GPS data to the PDA in flight or the PDA may be run from the B500 settings/air/GPS data. If the switches are panel mounted these options are in-flight selectable.

RELIABILITY: customers don't need to buy 2 or 3 units - one in the ship, one at the factory & one in transit!! We have no desire to have our job sheet filled with repairs, or receive lots of emails and phone calls from unhappy customers and we are sure that also applies to you.

The reality is Borgelt does equal reliability.

Excellent design, in-house manufacture, attention to detail, understanding the environment. We certainly can't make a living out of repairs! Currently we know of just ONE instrument needing repair- a B40.

The B400, B500 & B2500 range offers absolutely proven sensor technology, stable software combined with clear readable displays, extremely low power drain providing the pilot with real, useful information visually & with audio including voice.

We take pride in building variometers and have built up a good reputation for producing instruments with characteristic smooth, fast responses and audio which makes them pleasant to use.

Confirmed by repeat customers either upgrading or fitting out their latest glider.

We are proud to have kept abreast of the changes and our current range of software based instruments demonstrates our commitment to the sport.

Borgelt B2500 Navigation Computer

(pronounced B twenty-five hundred – 27 years ago we manufactured the very popular B25 Glide/nav/wind computer and the B2500 carries on this tradition)

The question is why bother going along the expensive path of developing another navigation instrument when it appears pilots have readily adopted PDA in the cockpit.

We feel rather strongly about this as being a better solution reinforced by hearing of the problems encountered by pilots using PDA's or computers using "Windows based software", many with displays not suited to the environment including brightness, power drain and temperature.

If there is a requirement for a color moving map as well, a PDA, PNA or portable GPS can be installed. This should only be at all necessary in very complex airspace but we prefer the moving map visible outside the canopy.

Hence the B2500 continues our design philosophy by providing only the useful information required for flying cross country - unnecessary data occupies time best spent looking outside the cockpit.

The B2500 is a panel mount solution with a CLEAR display that actually gets better NOT WORSE in bright sunlight and has no reason to get covered with greasy finger marks. Easy installation, low power drain, with both voice & LED information enhancement which supports FAI, AAT, POST, AST task types, an in built flight recorder – download via Mini SD card (not IGC approved but is IGC file format); a solution with proven wind algorithms, a friendly, readable, uncluttered moving map display whilst seamlessly integrating the airdata and GPS information supplied from the B500. Mini SD card for voice messages, database, airspace and pilot configuration uploads plus flight downloads.

The B2500 is a useful nav instrument which is part of the scan not a distraction.

For full functionality the B2500 has been designed for use with the B500, however the B2500 can be used as a stand alone navigation computer with a GPS module or logger providing NMEA data. (check suitability of logger output with Borgelt Instruments) It can also provide an upgrade path ie add the B500 later.

What else are we doing? Work is continuing on solving the horizontal gust problem with Total energy variometers. We have done flight tests with real hardware with encouraging results and it is planned for this to be an add-on/add-in to the B500b.

The jet project has seen considerable progress with delivery of the engines and completion of the extend/retract electronics and integration of engine data with the B500b so when the engines are active the engine data will be displayed on the GCD2. The fuel will be in the fuselage on the Ventus C a and the tanks are close to being fabricated and installed and the detail designs of the engine mounts and retract mechanisms are in progress..

In conclusion: So now what we ask from you is for feedback. We have compiled this newsletter in an attempt to remind you of some of the features offered by our range of instruments before the northern hemisphere soaring season begins. In reply we would appreciate a response from you including the following information:

1. Do you require additional information on any point raised?
2. Please let us know what you are doing to promote sales.
3. Estimated sales forecast for the coming season
4. Stock in hand
5. Other relevant comments

We look forward to your early response.

Mike & Carol Borgelt
Specifications subject to change .

26 Feb 2010