

## **B400 vario/audio/averager**

57mm or 80mm  
Metric or Knots

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### **Installation**

General installation guidelines are available from our website or request a copy - please read prior to installation.

Remove batteries from glider until installation is complete.

Mount B400 in standard 57mm or 80mm panel hole. The top right hole may need enlargement to allow free movement of the spring loaded center off toggle switch. (Volume control). 2 x M4 bolts are provided.

Remove XCB (eXternal Connection Board) from rear of instrument by removing 2 x M3 screws from top corners. Tilt back to disengage DB15 connector then lift to remove from fixed screw at bottom (bottom fixture has a slot to allow this)

Connect Total energy line to pressure barb marked TE (see label on top of instrument). Use green rubber doughnut over TE line to provide a seal. Slide this close to instrument.

Connect 12 volt power and GROUND to XCB, place 4 x AA size ALKALINE batteries in battery box if standby power is to be used. These will be good for at least 8 hours of standby power at reasonable volume levels.

Replace XCB. Plug in DAD (Digital Averager Display) or Repeater, if used, to appropriate socket on XCB. See label on top of instrument.  
Plug in speaker supplied. Any 8 ohm speaker may be used.

Mount power select switch on panel.

Main 12 volt power supply needs to be switched separately.

**Ensure installation is secure and does not interfere with aircraft controls.**

### **Operation**

On power up pointer goes full down for a few seconds, then back to zero, red and green lights near zero point flash on momentarily then vario is ready to use a few seconds later.

Audio volume is set to a reasonable level and is adjusted by the toggle switch in the top right mounting hole position. Moving the toggle left and up increases volume, right and down decreases volume.

The push button switch in the lower left position has two functions. When pushed and held down it causes the pointer to read the 20 second running averager value on the pointer while the audio remains on TE vario. This button

is in parallel with the two screw terminals marked "average select" on the XCB. A remote push button switch may be connected to them.

When pushed momentarily it causes the audio to switch between "up only" and "full range (up and down)" modes. When switching from "up only" to "full range" the red and green lights flash rapidly for a second or so. When switching from "full range" to "up only", only the green light flashes.

When running from the standby AA battery pack the red light flashes briefly every two seconds.

### **Options**

As supplied the B400 variometer response is set to "fast". It may be slowed by gently turning the control marked "response" clockwise using a small flat blade screwdriver. Maximum is 180 degrees of movement. This should not normally be necessary and we recommend you do not adjust this until you have flown with the instrument for some time.

Also as supplied the B400 audio is in "competition" mode. This means that when the vario reading is below the 20 second running average value the beeps above zero are 70% on and 30% off. Above the 20 second running average the beeps are 50% on and 50% off. This is a subtle yet distinctive change which lets you know things are getting better or worse.

The green light also lights when above the 20 second running average. When it goes out the thermal is weakening.

If you wish the audio may be set to "B40 Classic" mode where the beeps are always 50% on, 50% off. Just set the control marked "mode" fully anticlockwise.(180 degree movement).

### **WARRANTY**

If, under normal operating use, any part of the Borgelt Instruments hardware proves to be defective in material and/or workmanship within the warranty period of twenty-four months from date of purchase such defective parts and/or workmanship will be repaired by Borgelt Instruments or their approved agent. All freight charges are to be borne by the owner. This warranty is not transferrable. This warranty does not cover damage caused by misuse, neglect, accident, reversal of polarity or repair or attempts to repair by unauthorized personnel.

Any returns must be authorised by Borgelt Instruments prior to shipping.

Please see "Return of Instruments guidelines" on our website or contact Borgelt Instruments for a copy.  
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