

Before using the instrument, you are recommended to read this leaflet fully.

QuDieM[®] QuikPLAN is a unique aid for pilots flying at an air speed of 100kts \pm 10%, a range covering the cruising speed of the majority of single engine light aircraft. Restricting the instrument's speed range enables much greater simplicity of operation and clarity of information and presents no practical limitation for the majority of PPL pilots. Careful design has ensured that wind compensation accuracy is well within practical limits.

With no need for supplementary plotting or computing tools, QuDieM[®] QuikPLAN is a uniquely versatile and convenient aid, equally suited to pre-flight and in-flight planning. The capability to easily plan a diversion without reliance on the mental application of traditional "rules of thumb" under exam conditions makes it particularly relevant to student pilots undertaking their navigation skill test.

Disclaimer

QuDieM[®] QuikPLAN is an aid to flight navigation. The pilot must at all times rely on his own skill and judgement to ensure the procedure is conducted safely within the local regulatory environment.

CavOK Ltd disclaims all responsibility for any damage sustained by any party associated with the use of this instrument.

Accuracy

QuDieM[®] QuikPLAN is intended for use at Indicated Airspeeds of 100kts \pm 10kts, a speed range covering most single engine light aircraft.

Wind Correction is calculated at sixteen points of relative wind direction/track around the compass.

Compared to those obtained using a conventional wind computer:

Wind corrected Heading is within

- 2^o for wind speeds up to 20kts, a deviation of just two miles in sixty.
- 4^o for wind speeds up to 40kts.

Wind Corrected Sector Time (ETA) at 100kts is within

- 4% for wind speeds up to 20kts, less than 2.5mins in an hour's flight.
- 8% for wind speeds up to 40kts.
- Different IAS's have a substantially constant impact on sector time and are easily accounted for, eg. flying at 90kts will increase the Sector Time by 10%.

In practice, Headings and Sector Times will be much more influenced by differences between forecast and actual wind and atmospheric conditions, combined Compass/Direction Indicator inaccuracies and the practical limits of accuracy to which light aircraft are flown.

As with all navigation aids, it is good practice to carry out a "sanity check" prior to applying the results obtained from the QuikPLAN to ensure no gross errors have been made.

Product Guarantee

QuDieM[®] QuikPLAN is designed for pilots of light aircraft. It is constructed from materials consistent with normal operating requirements and care has been taken during design and manufacture to ensure that its accuracy and durability will give many years of service in its intended use.

CavOK Ltd. guarantees the product against defective materials, workmanship and shipment damage for a period of twelve months from purchase and will provide a free of charge replacement provided that the faulty item:

- has been paid for in full
- is returned, carriage paid, to **CavOK** within twelve months of purchase
- in the opinion of **CavOK**, has not been subject to misuse or accidental damage
- is returned on receipt, carriage paid, to CavOK in the event of a claim against shipment damage

Caring for your QuikHOLD

It is recommended that the instrument be kept in the wallet in which it was supplied to protect it from dirt and minor accidental damage.

As with most plastics, lengthy exposure to strong sunlight is best avoided.

Should one of the retaining latches around the Central Aperture become unseated, pressing it up from below easily resets it.

Pre-setting the Instrument

Before using **QuikPLAN** the following parameters must be set or checked **Magnetic Variation**: Aligning the reference mark on the underside of the True Protractor against the adjacent scale, using the raised thumb bars. Although this may not require frequent re-setting, it should be checked prior to each use to ensure no accidental misalignment.

Select Wind Speed: Restrain the Wind Speed Tab and rotate the Top Plate using the upstands around its circumference until the forecast wind speed clicks into view within the Display Window.

Set Wind Direction: Rotate the Wind Mark to the forecast direction on the True Compass. Moistening thumbs will help.

Planning a VFR Flight or Diversion

Check that the pre-set parameters above are correct. Note that for accurate ETA, a 1:500,000 chart must be used.

Draw the planned track on the chart between the sector departure and destination waypoints.

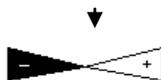
Position the Instrument with Central Aperture over the sector departure waypoint and align the True Protractor with north on the chart. Grid lines are provided on the protractor to assist this. **Align the TO TARGET mark** with the track line. The instrument may now be removed from the chart.

Note Magnetic Track indicated by the TO TARGET pointer against the yellow Magnetic Compass.

Turn the instrument over, set whichever ETA scale against the track line and read off the still air sector flight time (minutes) at 100kts. For sectors longer than 20 minutes, step the scale along the track.

Turn the instrument back over.

Rotate the Top Plate to centre the Wind Compensation Mark within the wind segment as shown, noting the half of the segment within which the Mark was originally positioned.



Apply the Wind Compensation angle ($^{\circ}$ M) and time (%) displayed in the left and right column respectively of the Wind Correction Window.

Whether the triangle below each column is open or solid indicates how the its associated compensation must be applied. If open the heading or ETA is increased by the displayed $^{\circ}$ M or % respectively.

For airspeed other than 100kts, the time compensation should include the relevant % adjustment e.g. for a flying speed of 90kts, the % time compensation is increased by 10. For 110kts decrease by 10.

If the wind is within 10 $^{\circ}$ of track, the application of heading compensation is determined by the direction from which the Compensation Reference Mark was centred. In the illustration below, the heading compensation would be added if centred clockwise and subtracted if counter-clockwise.



Examples

Preset Magnetic Variation to 5 $^{\circ}$ West and wind to 240/20.

Simulate a sector on a track of 125 $^{\circ}$ T on the True Compass.

Note that Magnetic Bearing is 130 $^{\circ}$ M.

Centre the Compensation Reference Mark clockwise. Indicated wind compensation is +10 $^{\circ}$ and -7%.

Apply these to:

- Magnetic bearing to give a planned Heading of $130+10=140^{\circ}$ M.
- If still air sector flight time is 30mins, planned sector flight time is $30-2(7\% \text{ of } 30)=28$ minutes.

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CavOK Ltd PO Box 641, Weybridge, Surrey, United Kingdom KT2 7YJ