OPERATING INSTRUCTIONS   **E**

≡FlyTEC≡

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Key functions: ○ **Select the main menu** ○ Select the display units
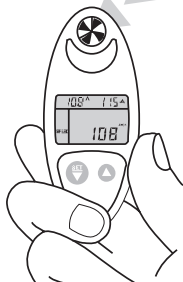
○ **Barometer**
○ hPa · inHg

○ **Altitude**
○ m · ft

○ **Windspeed**
○ mph · beauf · kts · m/s · km/h

○ **Temperature**
○ °C · °F

Wind-/Windchill measurement

Alti-Windwatch – Operating Instructions

Contents

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Wind sensor

Display

Menu key   Unit key

Set-/Reset mode   Option mode

Battery compartment

Your Alti-Windwatch is powered by a lithium battery (3 V, CR 2032). When battery power is low, the message ‹BAT› appears in the display.

The instrument is always initialized with the basic configuration when the battery is replaced. The barometer, the time and the altimeter all have to be reset.

A watertight membrane in the battery compartment serves to equalize pressure. If your Alti-Windwatch is exposed to too much humidity (e. g. if dropped into water or exposed to heavy rain), this membrane must be carefully dried without delay. Leave the battery compartment open until the whole instrument is dry again.

Commissioning

Your Alti-Windwatch is always switched on but enters its energy-saving barometer mode after approximately 15 minutes if the Windwatch is not being used.

The instrument is supplied with a basic configuration. These values can be altered using the Set and Option modes to suit your own personal requirements.

Key functions

Brief pressure

You can cycle through the four main menus Barometer, Altitude, Windspeed and Temperature by briefly pressing the Menu key ○.

By briefly pressing the Unit key ○, you can select the display units in the relevant main menu:

Barometer: barometric pressure display in hPa or in inHg

Altitude: displayed in meters or feet

Windspeed: displayed in miles per hour, Beaufort, knots, m/s or km/h

Temperature: displayed in °C or °F

Extended pressure

Holding down the Menu key ○ (3 seconds) will change from the relevant main menu to Set/Reset mode.

Holding down the Unit key ○ (8 seconds) will change from the relevant main menu to Option mode.

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Pressing both keys briefly

Pressing both keys ○ ○ simultaneously will save the settings and the display will return to the main menu.

If no key is pressed in Set or Option mode for 8 seconds, the settings are automatically saved and the display returns to the main menu.

General remarks

It is possible to forecast the weather based on a change in air pressure at the same location. An improvement in the weather can be expected when the air pressure is rising. Conversely, a deterioration in the weather can be expected if the air pressure is falling.

A barometer measures the current local air pressure. As this decreases as altitude increases, the air pressure at a certain altitude above sea level must be set in relation to the air pressure at sea level. To do this, it is necessary to enter the local altitude above sea-level (= the altitude of your current location).

NB: You must re-enter the altitude of your location whenever you change locations as it would otherwise be impossible to make a reliable weather forecast.

The bar chart in the barometer main menu shows the development of air pressure over the last 16 hours thereby permitting a weather forecast to be made. The chart compares the air-pressure values measured 16, 8, 4 and 2 hours previously with the current value. One bar height corresponds to 2 hPa or the corresponding value in inHg.

If the chart ascends from left to right, the air pressure has risen and better weather can be expected. If the chart descends from left to right, the weather is deteriorating. If the chart shows no movement, there will be no change in the weather.
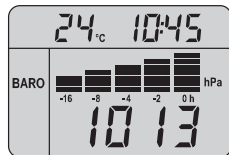

Better weather

Worse weather

No change in the weather

	Temperature
	Time
	Development of air pressure
	Current air pressure

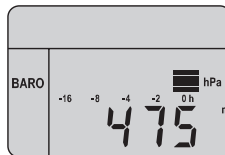| | Development of air pressure |
| | Reference altitude |

Main menu

The Barometer main menu shows the current air pressure, the development of air pressure in the preceding 16 hours, the temperature and the time.

Briefly pressing the ○ key will change the value of the air pressure (hPa or inHg).

Resetting the display for the development of air pressure

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Holding down the ○ key (3 seconds) will change from the main menu to Set mode.

The bar chart with the development of air pressure display is zeroed. The entire trend display is redisplayed. After 2, 4, 8 and 16 hours a new series is displayed.

The currently entered altitude of your location will flash on the display.

Setting the barometer

Press the ○ key briefly. A new reference altitude is displayed. The ○ key can be used to reduce the display and the ○ key increases it. Either press the key briefly to alter the altitude in one-meter increments or hold it down continuously for fast resetting.

Save your entry by pressing both keys ○ ○ simultaneously or wait 8 seconds; the display will change from Set mode to the main menu.

**Altering air-pressure measurement in QFE or QNH**

Absolute air pressure (QFE)

If the altitude of your location is zeroed, the effectively measured air pressure is displayed in the Barometer main menu (absolute measurement).

Calculating the air pressure set back to sea level (QNH)

If the altitude of your location is set using the effective altitude above sea level, the air pressure – reduced to sea level – will be calculated and displayed in the Barometer main menu.

Option mode
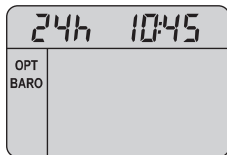
```
 24h  10:45
OPT
BARO
```
Time

Setting the time

Holding down the ● key for a long time (3 seconds) will change from the main menu to Option mode. The currently entered time will flash.

The time can be put back with the ● key and put forward with the ● key. Either press the key briefly to alter the time displayed in one-minute increments or hold it down continuously for fast resetting.

Save your entry by pressing both keys ● ● simultaneously or wait 8 seconds; the display will change from Option mode to the main menu.

Altimeter

General remarks

An altimeter measures the altitude on the basis of air pressure. The air pressure at sea level is assumed to be zero pressure. This zero pressure is called QNH. Dependent on weather conditions, the air pressure at sea level fluctuates between 950 and 1050 millibars. Even on a stable day, there can be fluctuations in the air pressure of ±1 mbar due to the temperature and this corresponds to a deviation in altitude of ±8 meters.

When the weather is changing fast, for example, cold fronts, the air pressure can change by up to 5 mbars in one day and the deviation in altitude can amount to up to 40 meters. Owing to these fluctuations in air pressure, an altimeter must be recalibrated each time it is used. This means that the altimeter must be reset at a known altitude (e. g. at home, at a railway station, at a ski hut, etc.).

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	Temperature
24°C 10:45	Time
ALT 475 m	Altitude

|	
1013	QNH
ALT 475 hPa m	Altitude
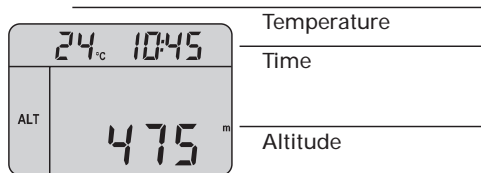
Main menu

The Altitude main menu displays the current altitude above sea level, the temperature and the time. The resolution of the altitude display is 1 meter (3 feet). Normally, the altitude is remeasured every 10 seconds. Each press of a key results in a faster measuring mode (1 second). If the change in altitude exceeds 1 meter per second, the update rate automatically changes to the faster measuring mode (1 second). If the change in altitude is lower, the update rate changes back to every 10 seconds.

Briefly pressing the ○ key will change the unit of altitude (meters or feet).
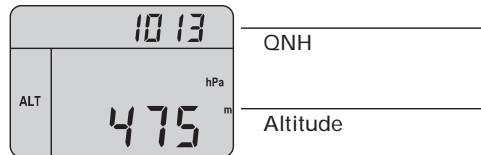
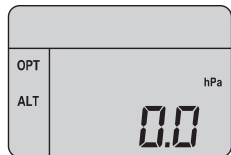## Setting the altitude

Holding down the ○ key (3 seconds) will change from the main menu to Set mode.

The altitude display and the QNH flash (current air pressure in hPa (1 hPa = 1 mbar), calculated back to sea-level). The ○ key can be used to reduce the values and the ○ key to increase it. Either press the key briefly to alter the value in 1-metre increments or hold it down continuously for fast resetting.

Save your entry by pressing both keys ○ ○ simultaneously or wait 8 seconds; the display will change from Set mode to the main menu.

Value of the pressure sensor in mbar

Calibrating the pressure sensor

If the QNH value at a known altitude deviates drastically from the QNH value of a weather station in the vicinity, the pressure sensor can be adjusted accordingly.

Warning: the altitude figures will be false if the pressure-sensor correction value is set wrongly. Do not alter the setting without a good reason.

Holding down the ● key (8 seconds) will change from the main menu to Option mode. The pressure-sensor correction value will flash on the display.

The ● key can be used to reduce the value and the ● key increases it. Either press the key briefly to alter the display in 0.1-mbar increments or hold it down continuously for fast resetting.

Save your entry by pressing both keys ● ● simultaneously or wait 8 seconds; the display will change from Option mode to the main menu.

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Wind measurement

Turn the wind-vane ball until the aperture in the casing is in exact alignment with it.

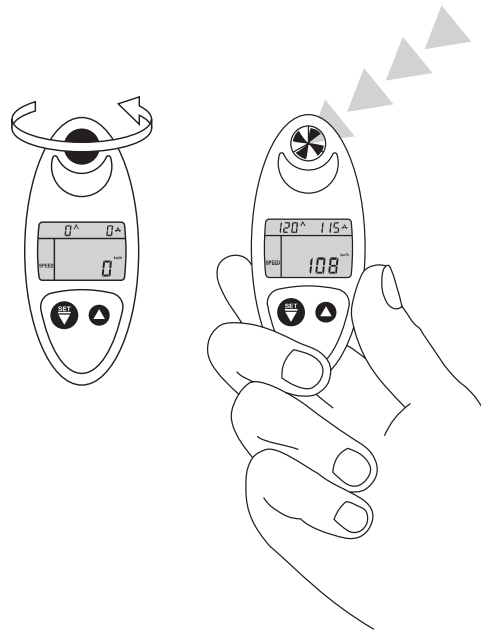Incomplete opening will falsify your wind measurement data!

Hold your Alti-Windwatch steadily in one hand and, with your arm outstretched, point it precisely in the direction from which you wish to measure the wind.

Protecting the wind vane

Turn the wind-vane ball until the aperture is fully closed. In this position, the wind vane is fully protected.

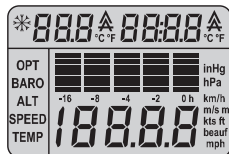|	Peak windspeed
$120^\wedge$ 115ᴀ	Mean value (ᴀ) or peak mean value (𝔸) of the windspeed
SPEED 108 km/h	Current windspeed

Main menu

The Windspeed main menu displays the current windspeed, the peak windspeed and the mean value of the windspeeds or the peak mean-value measured over a certain period of measurement (5 to 60 seconds).

Press the ◯ key briefly to alter the unit of speed (mph, Beaufort, knots, m/s, km/h).

The symbols have the following meanings:

∧ Peak speed (maximum windspeed measured)

ᴀ Mean value (average windspeed measured over a certain period of time (5 to 60 seconds – q. v. Setting the calculation time))

𝔸 Peak mean value (highest mean value measured)

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Windspeed display
Set mode

Zeroing the peak
windspeed and
the mean values

Windspeed display
Option mode

Calculation time for
the mean values

Resetting the peak speed and the mean value display

Holding down (3 seconds) the ○ key will reset the peak-speed and mean-value displays to zero. All LCD segments are displayed. Release the key to return to the main menu.
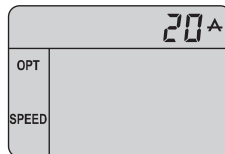
In the Option mode of the windspeed indicator, pressing both keys ○ ○ simultaneously will move on to the next option.

Setting the calculation time for the mean values

Holding down the ○ key (8 seconds) will change from the main menu to Option mode. The currently set calculation time for the mean values will flash on the display.

The ○ key can be used to reduce the calculation time while the ○ key increases it. Press the key briefly to alter the display in 5-second increments.

```
        Cor
OPT

SPEED   100
```
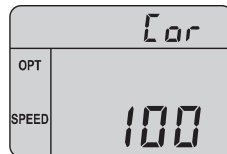
Calibration factor for
the wind-vane sensor

The calculation time can be set between 5 and 60 seconds.

Save your entry by waiting 8 seconds and return to the main menu; alternatively, you can change to the calibration factor of the wind-vane sensor by pressing both keys ○ ○ simultaneously. The calibration factor for the wind-vane sensor flashes on the display.

Calibrating the wind-vane sensor

The ○ key can be used to reduce the factor and the ○ key increases it. Press the key briefly to alter the factor in 1% increments; continuous pressure will alter the factor at a higher speed.

Save your entry by waiting 8 seconds and return to the main menu or change to the selection of the display of the mean value or the peak mean value by pressing both keys ○ ○ simultaneously. The indicator for the mean value or the peak mean value will flash in the display.

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Windspeed display
Option mode
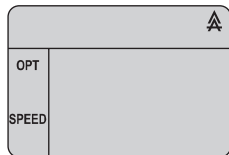
Indicator for the mean-value ($\curlywedge$) or the peak mean-value ($\bar{\curlywedge}$)

### Selecting the mean-value display or the peak mean-value display

The display shows the currently selected display with the indicator for the mean value $\curlywedge$ or with the indicator for the peak mean-value $\bar{\curlywedge}$.

Press the ● key briefly to access the mean-value display $\curlywedge$; press the ● key briefly to access the peak mean value display $\bar{\curlywedge}$.

Save your entry by pressing both keys ● ● simultaneously or wait 8 seconds; the display will change from Option mode to the main menu.

Temperature display
Main menu
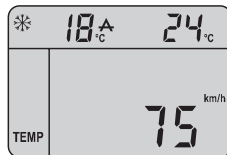
Windchill with indicator $\curlywedge$/$\bar{\curlywedge}$

Actual temperature

Current windspeed

Main menu

The Temperature main menu displays the current windspeed, the actual temperature and the windchill figure (the sense of cold caused by the windspeed).

The indicator shows whether windchill is being calculated using the mean value ($\curlywedge$) or the peak mean value ($\bar{\curlywedge}$) of the windspeed measured (change mean value/peak mean value in the Option mode of the windspeed indicator).

Press the ● key briefly if you wish to alter the Temperature display (°Celsius or °Fahrenheit).

Temperature display
Set mode

Temperature display
Option mode
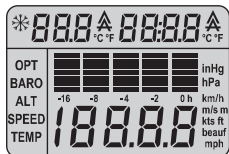
Zeroing the
windchill display

Correction value
for the temperature

Resetting the Windchill display

Holding down (3 seconds) the ⟳ key will reset
the windchill display. All LCD segments are
displayed. Release the key to return the
display to the main menu.
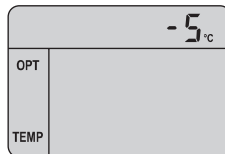
Calibrating the temperature sensor

A false temperature display reading can be
corrected.

Holding down the ⟳ key (8 seconds) will
change from the main menu to Option mode.
The currently set correction value for the tem-
perature will flash on the display.

The ⟳ key can be used to reduce the value
and the ⟳ key increases it. Press the key
briefly to alter the display in 1° C increments.
If the display is too high, the correction value
must be entered as a minus value; if it is too
low, the correction factor must be entered as
a plus value.

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Temperature display
Option mode

Altitude display: 0–9,000m (0–30,000ft)
Altitude display resolution: 1 metre (3ft)
Update rate of the altitude display: dependent on the user's rate of ascent/descent (1 or 10 seconds)
Air pressure display: hPa or inHg
Air pressure adjustment range: 900–1100 hPa (26.60–32.49 inHg)
Air pressure display resolution: 1 hPa or 0.01 inHg
Update rate of the air pressure display: 4x per hour
Windspeed measurement: from 0.1 m/s to 40 m/s (145 km/h)
Accuracy of wind measurement: ± 4% (can be corrected)
Windspeed display resolution: 0.1 m/s
Update rate of the windspeed display: every second
Calculation times for average windspeed: 5 to 60 seconds in 5-second increments
Temperature measurement range: –20° C to 55° C
Accuracy of temperature measurement: ± 2° C (can be corrected)
Temperature display resolution: 1° C
Weight incl. battery: approx. 45 g
Size: 10.3 x 4.5 x 1.8 cm (3.93 x 1.57 x 0.70 in)
Casing: ABS
Water-repellent
Battery type: 3V lithium battery, CR 2032
Battery life: approximately 2 years, automatic warning of low battery status
Guarantee: 2 years
Made in Switzerland

The correction value can be set between –5° C (–10° F) and +5° C (+9° F).
Save your entry by pressing both keys ⊙ ⊙ simultaneously or wait 8 seconds; the display will change from Option mode to the main menu.

Key functions: ⊘ **Select the main menu** ⊙ Select the display units

⊘ **Barometer**
⊙ hPa · inHg

⊘ **Altitude**
⊙ m · ft

⊘ **Windspeed**
⊙ mph · beauf · kts · m/s · km/h

⊘ **Temperature**
⊙ °C · °F

Wind-/Windchill measurement