Manual for Element Speed

version 1.0.05

Last modified 30/07/2017
© 2003 - 2017 ... Naviter d.o.o.
Table of Contents

Foreword 0

Part I Introduction 2
  1 In the Box ................................................................. 2

Part II General 4
  1 Getting started .......................................................... 4
    Switching Element Speed on and off .................................. 4
    Batteries ........................................................................ 4
    Setting a language .......................................................... 5
    Keypad functions ......................................................... 5
  2 Technical notes ............................................................. 6
    Batteries ........................................................................ 6
    Maintenance .................................................................... 6
    Reboot .......................................................................... 6
    If exposed to water ....................................................... 7
    Warranty ......................................................................... 7
    Technical support ......................................................... 7

Part III Flight preparation 9
  1 Mounting ................................................................. 9
    Cockpit mount ............................................................. 10
    Harness mount ............................................................. 11
    Leg mount .................................................................... 12
    Hang glider mount ........................................................ 13
  2 Altimeters and altitude adjustment .................................... 13
    Altimeters ..................................................................... 13
    Absolute altitude .......................................................... 14
    Alternative altitude display ............................................ 15
    Relative altitude .......................................................... 15

Part IV Flight mode 18
  1 Overview ...................................................................... 18
  2 List of indicators ............................................................ 19
  3 Relocating thermals .......................................................... 20
  4 Flight pages .................................................................... 20
  5 Audio volume .................................................................. 22
  6 Summary page upon landing ............................................ 22

Part V Flight analysis 25

Part VI Configuration 27
  1 General settings ............................................................ 27
<table>
<thead>
<tr>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time zone (UTC)</td>
</tr>
<tr>
<td>Language</td>
</tr>
<tr>
<td>Pilot information</td>
</tr>
<tr>
<td>Units of measurement</td>
</tr>
<tr>
<td>Key tone</td>
</tr>
<tr>
<td>Display contrast</td>
</tr>
<tr>
<td>Battery type</td>
</tr>
<tr>
<td>Further customisation</td>
</tr>
<tr>
<td>2 Vario profiles</td>
</tr>
<tr>
<td>Profile types</td>
</tr>
<tr>
<td>Profile customisation</td>
</tr>
<tr>
<td>Profile reset</td>
</tr>
<tr>
<td>Vario integration</td>
</tr>
<tr>
<td>3 Audio settings</td>
</tr>
<tr>
<td>Audio Frequency</td>
</tr>
<tr>
<td>Audio mode</td>
</tr>
<tr>
<td>4 Speed settings</td>
</tr>
<tr>
<td>External wind vane sensor</td>
</tr>
<tr>
<td>Stall alarm</td>
</tr>
<tr>
<td>Stall threshold</td>
</tr>
<tr>
<td>Correction</td>
</tr>
<tr>
<td>Part VII Menu tree</td>
</tr>
<tr>
<td>Part VIII Technical specification</td>
</tr>
<tr>
<td>Part IX Troubleshooting</td>
</tr>
<tr>
<td>Part X Notice of non-liability</td>
</tr>
<tr>
<td>Part XI Limited Warranty</td>
</tr>
<tr>
<td>Index</td>
</tr>
</tbody>
</table>
Part I
1 Introduction

Element Speed version 1.0.05

Company Flytec by Naviter is dedicated to solve soaring pilot's problems and Element Speed is surely one of the result on this challenge. Mainly Element Speed is helping para-glider and hang glider pilots navigate during leisure, cross country and competition flights.

Element Speed is robust and reliable vario. For this reason it has a big screen, excellent vario and a great battery autonomy, which offers more than 30 hours of flying. You can literally take your Element Speed out of the box and just use it!

Naviter is a Slovenian based company. Our focus is on highly featured and "easy to use" software and hardware which is suitable for beginners, recreational and pro soaring pilots. What we are interested in are the needs of paraglider, hang glider and sailplane pilots worldwide.

Naviter d.o.o.
Planina 3
4000 Kranj
Slovenia
email: support@naviter.com
web: http://www.naviter.com/

All rights reserved by Naviter d.o.o. 2003-2017

1.1 In the Box

The Element Speed is delivered with pre-installed Element Speed software. Your Element Speed was delivered in a package with the following items:

1. Element Speed
2. Protective case
3. Getting started manual
2 General

- Getting started General information on your Element Speed, such as switching on/off, batteries and handling
- Technical notes Taking care of your Element Speed.

2.1 Getting started

This topic covers some of the basic things you need to know about how to use your Element Speed. If this is the first time you are using Element Speed please take a few moments to read about the basics about how to use Element Speed:

- Keypad functions
- Switching Element Speed on and off
- Batteries
- Setting a language

2.1.1 Switching Element Speed on and off

Switching on

1. Press and hold the on/ off key.
2. Confirm On? with OK.
3. Cancel with ←.

Switching off

1. Press and hold the on/ off key.
2. Confirm Off? with OK.
3. Cancel with ←.

2.1.2 Batteries

The Element Speed comes with two standard AA batteries, which are inserted on the back of the instrument. The instrument warns you, when the charge level drops below 30 %. See the Technical notes for information on re-chargeable batteries.
2.1.3 Setting a language

1. Press and hold MENU.
2. Use the arrow keys to find **Settings**.
3. Use the arrow keys to find **Language**.
4. Select your preferred language by pressing **OK**.

2.1.4 Keypad functions

The following two diagrams show the functions of the keypad. The second diagram for text entry is needed for example when entering the pilot's name.

**Keyboard functions.**
2.2 Technical notes

Taking care of your Element Speed.

2.2.1 Batteries

Your Element Speed comes with two AA alkaline batteries. Battery life in normal use should last around 30 hours. If you store your Element Speed for long periods of time, remove the batteries to prevent corrosion.

If you choose to power your Element Speed with NiMH rechargeable batteries, it is important to configure the power supply setting on the device.

1. Press and hold **MENU**, then use the arrow keys to scroll to **Settings**.
2. Press **OK**.
3. Use the arrows to select **Battery type** and press **OK**.
4. Select **NiMH 2.1Ah** using the arrow keys. Press **OK**.
5. Press ← to return to the Main Setup Menu.

**Note:** We do not recommend using NiCad rechargeable batteries in the Element Speed.

2.2.2 Maintenance

The Element Speed is a sensitive instrument—handle it gently. Always store it in its cloth bag when not in use, and only wipe it clean with a soft, damp cloth. Never expose the Element Speed to extreme temperatures, water, or mechanical force.

2.2.3 Reboot

In the event your Element Speed locks up, you may perform a hard reboot by removing the batteries for **5 minutes** before replacing them and restarting the device.
2.2.4 **If exposed to water**

The Element Speed is not water resistant! Exposure to water or any other liquid will cause serious damage. In case your Element Speed gets wet, remove the batteries immediately to prevent more damage. If your Element Speed was exposed to salt water, rinse it in warm, clean, fresh water. Dry your Element Speed thoroughly and return it to your vendor or directly to Naviter for servicing.

2.2.5 **Warranty**

Naviter provides a 2-year warranty on your Element Speed, and we encourage you to contact us via our website any time for support. After your warranty has expired we will still repair your Element Speed at a reasonable charge.

For more details see also: [Limited Warranty](#)

2.2.6 **Technical support**

Direct all inquiries to your vendor, or directly to Naviter via our website [www.naviter.com](http://www.naviter.com) or via e-mail on [support@naviter.com](mailto:support@naviter.com).

If you need access to your serial number (S/N) or software version follow these steps:

1. Press and hold **MENU**.
2. Use the arrow keys to scroll to **Device**, press **OK**.
3. Use the arrow keys to scroll to **About**, press **OK**.
Part III
3 Flight preparation

- **Mounting**: See how to mount your Element Speed in various ways
- **Vario profiles**: Element Speed offers 5 profiles for weak, regular, and strong thermals, for ridge/coastal soaring, and for balloon flights.
- **Altimeters and altitude adjustment**: Altimeters and their adjustments before your take-off

3.1 Mounting

Four different types of mounting your Element Speed:
- **Cockpit mount**
- **Harness mount**
- **Leg mount**
- **Hang glider mount**
3.1.1 Cockpit mount

Insert the Element into the vario pocket, attach your cockpit and secure the Element's lanyard to the cockpit.
3.1.2 Harness mount

Insert the Element into the vario pocket, attach to the velcro bar

Attach the velcro bar to your harness and secure the Element’s lanyard to harness or velcro bar
3.1.3 Leg mount

Front: insert rubber washer  

Back: insert screw, attach to back of Element

Attach strap to leg  

Fix Element's lanyard to harness
3.1.4 Hang glider mount

Front: insert rubber washer

Back: Add washer and screw to the disc and attach to the back of the Element

Fix mount and safety lanyard to the control bar

3.2 Altimeters and altitude adjustment

Check the following chapters concerning altitude adjustment:
- Altimeters
- Absolute altitude
- Alternative altitude display
- Relative altitude

3.2.1 Altimeters

As any pilot knows, there are many different altitudes in aviation. The Element Speed determines altitude using both GPS and barometric pressure, and its altitude display is customisable. You can
select among three altimeters called ALT1, ALT2, and ALT3, and you can manually set the sea level barometric pressure. We will use the following definitions when explaining the altimeter functions:

- **Absolute altitude** – height above mean sea level (MSL)
- **GPS altitude** – MSL altitude indicated by GPS satellites
- **Relative altitude** – height above a known point such as an airfield
- **AGL Altitude** – height over the terrain directly below (above ground level)
- **QNH** – the actual air pressure at sea level
- **Flight Level** – altitude MSL, in hundred feet intervals, relative to the ISA pressure setting of 1013.25 hPa. FL17, for example, indicates that you are in the 1700' band, between 1650' and 1750' MSL

### 3.2.2 Absolute altitude

ALT1 is your altitude above Mean Sea Level (MSL). Toggle between displaying ALT1 and ALT2 by pressing A1 / 2. ALT1 is automatically set to your GPS altitude as soon as the Element Speed acquires a GPS signal. This altitude calibration means, of course, that the QNH pressure setting is also automatically adjusted.

Adjusting altitude or pressure:
In order to adjust ALT1, make sure you have selected it to be displayed by pressing the A1 / 2 key.

1. Press and hold **SET**
2. Use the arrow keys to adjust the ALT1 value.
3. Confirm with **OK**.

- If you DO know your present altitude, but you DO NOT know your QNH setting. For instance, you notice a sign posted at the take-off giving the actual MSL elevation of the ramp. In this case, you might adjust your ALT1 to match the sign. You will notice that adjusting the altitude setting will also cause a change the QNH pressure setting.
- If you DO NOT know your present altitude, but you DO know your barometric pressure. Perhaps you have an aviation weather report giving the local QNH setting, or perhaps you have a setting from air traffic control. In either case you can change ALT1 to reflect this pressure setting

### Setting ALT1 to GPS or FL:

1. Press and hold **SET**
2. In the sub-menu you have entered, press and hold **MENU**.
3. Use the arrow keys to switch between GPS or flight level.

### 3.2.3 Alternative altitude display

Toggle between displaying ALT1 and ALT2 by pressing A1 / 2. When ALT2 is toggled, your Element will not necessarily display the label ALT2, instead it will indicate whichever ALT2 configuration is presently selected. You can configure ALT2 to show any of four different values using the Flight Settings menu.

1. Press and hold **MENU**, then use the arrow keys to select **Flight Settings**.
2. Press **OK**.
3. Use the arrows to select **Alt2 mode** and press **OK**.
4. Then select your **preferred ALT2 mode**.
5. Press **OK**.
6. Press ← to return to the Main Setup Menu.

These are the four available choices for ALT2:
- **GPS altitude**: (The label GPS appears beside the altitude reading.) Note that you cannot adjust ALT2 when you have selected this option. ALT2 will only display the current GPS altitude.
- **Flight Level**: (The label FL appears beside the altitude reading.) Note that you cannot adjust ALT2 when you have selected this option, because the Flight Level display is always based on a standard atmospheric pressure value of 1013.25 hPa.
- **ALT1 m/ft inverse**: (If ALT1 is displayed in metres, then ALT2 displays true altitude in feet. The label ALT1 remains beside the altitude reading but the units change.) Note that you can adjust this value. Adjusting ALT2 in this mode will automatically adjust ALT1 as well.
- **Relative altimeter**: (The label ALT2 appears beside the altitude reading. Note that you can adjust this value.)

### Adjusting ALT 2

Make sure you have selected ALT2 to be displayed by pressing the A1 / 2 key.

1. Press and hold **SET**
2. Use the arrow keys to adjust the ALT2 value.
3. Confirm with **OK**

When ALT2 is in relative mode you can zero it or set it to GPS:

1. Press and hold **SET**
2. In the sub-menu you have now entered, press and hold the **MENU** key.
3. Use the arrow keys to switch between 0 or **GPS**.

When ALT2 is set to ALT m/ft inverse, your altitude displayed is the same, just in different units. You therefore can only adjust ALT1 as described above.

When ALT2 is set to GPS or Flight Level, you have not further options of adjusting the value.

### 3.2.4 Relative altitude

Toggle between displaying ALT3 and the current time of day by pressing the A3 key. This altimeter always gives a relative altitude and is easy to reset to zero in flight using the Clear ALT3 (CLR) key. It has two main uses:
When your Element Speed detects take-off, it automatically sets ALT3 to zero. In this way, ALT3 will indicate your height above (or below) the launch.
In flight, reset ALT3 to zero at any time by pressing CLR A3. This can be useful to monitor your height gain in a weak thermal.

Toggle between Alt 3, time and flight time, long press to clear Alt 3.
Part IV
4 Flight mode

Your flight screen and flight information on the Element Speed:

- Overview
- List of indicators
- Audio volume
- Summary page upon landing

4.1 Overview

Here we show you what you see on your screen during flight. In order to configure any of these indicators, follow these links: Altimeters and altitude adjustment, Vario profiles which cover all of your acoustic settings as well and General settings, such as time and units.
Flight display overview.

For your navigation, icons on the compass rose indicate bearings relative to your direction of flight. Your direction of flight is always at the very top of this display.

4.2 List of indicators

- ALT 1 gives your altitude above Mean Sea Level. It is automatically calibrated by GPS.
- Ground speed is given in kilometres per hour, knots, or miles per hour.
- The compass rose shows your direction of flight by indicating the relative position of True North with
the symbol N. You are always flying toward the top of the compass rose.

- Last thermal shows the relative position of your last climb. If you need to return to that thermal, turn your glider so that the indicator appears at the top of the compass rose.
- The graphic vario shows your vertical speed (climb or sink) in metres per second, ranging from +10 m/s to -10 m/s. You may also choose feet per minute, ranging from +20 fpm x100 to -20 fpm x100.

![Graphic vario display.](image)

- The integrated vario gives your vertical speed averaged over the last five seconds.
- Wind direction is shown once you have flown a few 360s. Your Element Speed will automatically calculate the wind direction from your drift and show it as a large wind arrow in the compass rose.

**Tip:** Wind direction is shown on the display as an arrow in the compass rose. When the arrow points up, you have a tailwind. When landing, keep the wind arrow pointing down, that means you are flying into wind.

**Note:** The Element Speed calculates wind direction and strength by measuring your track over the ground during 360-degree turns and calculating your drift. For the most accurate wind reading, you should fly two or more slow circles, holding constant speed and bank angle.

### 4.3 Relocating thermals

To help you in your local flight, your Element Speed will remember the location of the last thermal as you fly along. The bearing to your most recent thermal is displayed as a small arrow on the compass rose as well as the "last thermal" flight page showing bearing and distance to your last thermal (see below). If you fall out of a thermal, or if you are sinking out and want to return to the last thermal, turn your glider until the up arrow indicator appears at the top of the compass rose, then fly straight until you enter the thermal and begin climbing again. Learn how to configure the threshold for your last thermal indication.

### 4.4 Flight pages

You can scroll between different indications displayed in the lower part of your screen using the "pages" button on the keyboard.
• Glide ratio and ground speed:
  L/ D-G: Glide ratio over ground
  km/h: Your ground speed is indicated here in your preferred unit, if you have a vane wind sensor connected, your air speed is shown on the right, toward the middle of your screen.
• Wind data: This page informs you about the Element’s measurement of wind, which is calculated from your drift.
  Wind: Shows you the wind direction as a cardinal direction
  km/h: Indicates the wind speed in your chosen unit
• Last thermal ↓ page: This page shows you bearing and distance to your last climb.
  Last ↓: Bearing to last thermal as a cardinal direction
  km: Distance to last thermal in your preferred unit
• Launch: Helps you get back to your launch site
  Launch: Bearing to launch as a cardinal direction
  km: Distance to launch in your preferred unit

<table>
<thead>
<tr>
<th>L/D-G</th>
<th>km/h</th>
<th>Wind</th>
<th>km/h</th>
<th>Last</th>
<th>km</th>
<th>Launch</th>
<th>km</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.8</td>
<td>42</td>
<td>SO</td>
<td>8</td>
<td>NW</td>
<td>1.275</td>
<td>W</td>
<td>23.68</td>
</tr>
</tbody>
</table>

Glide ratio and ground speed
Wind data
Distance and direction to last thermal
Distance and direction to launch
4.5 Audio volume

In flight you may adjust the audio volume by pressing the loudspeaker key on your keyboard.

4.6 Summary page upon landing

Note that upon landing, your Element Speed will need a few seconds to determine for sure that you’ve stopped moving. Once it has, it will display a summary of your flight. While the flight summary is displayed, press the on/off button to switch off your Element Speed. The same summary page is presented to you in your flight memory. The flight summary page displays the following information:

- Maximum value of ALT1
- Maximum climb rate of the flight
- Maximum sink rate of the flight
- Total flight time
- Position in Element Speed's memory (most recent flight is always #1)
- Date
- Time of take-off
Flight summary page.
5 Flight analysis

The Element Speed stores 50 flights in its internal memory. Once the 50 are full, each new flight
replaces the oldest one in the memory. Every flight is shown as a summary page as shown below and
can be accessed as follows:
1. Press and hold MENU.
2. Use the arrow keys to select Flights, press OK.
3. Toggle through your flight summary pages using the arrow keys.
6 Configuration

See the following topics to configure your Element Speed:

- **General settings**: Set your personal preferences, units, time zone, etc.
- **Vario profiles**: Configuring the vario profiles
- **Audio settings**: Additional acoustic settings such as audio mode and frequency
- **Speed settings**: For info on external wind vane sensors, airspeed calibration and settings for the stall alarm

6.1 General settings

For some of these settings you will have to enter text, view the diagram for text entry. All configuration on this page is accessed in the Preferences menu:

1. Press and hold **MENU**.
2. Use the arrow keys to reach **Settings**, press **OK**.

6.1.1 Time zone (UTC)

Your Element Speed time and date are automatically set by GPS, however you must input your time zone in the form of an offset from Coordinated Universal Time (UTC). To look up your UTC setting, use [www.worldtimeserver.com](http://www.worldtimeserver.com) and click on your country and city. When you have selected **Time zone** in the Menu, you use the arrow keys to set your UTC offset.

6.1.2 Language

Choose between English, German, French, Spanish, and Italian.

6.1.3 Pilot information

Enter your name.

6.1.4 Units of measurement

The Element Speed offers different units of measurement for altimeter, vario, distance, time, speed, and pressure.

6.1.5 Key tone

Set a key tone for the Element Speed. You may choose between **off**, **low**, **default**, and **loud**. These values are relative to the overall audio volume you have set. **Default** means that the key tone is set at the same level as your overall audio volume.

6.1.6 Display contrast

Set your display contrast here with a value from -7 to +7 according to your preferences.

6.1.7 Battery type

If you want to change the type of battery used in the Element Speed, see the [Technical notes](#).

6.1.8 Further customisation

You can customise your Element Speed according to flight type and weather conditions with one of 5 **Vario profiles**, additional **Audio settings**.
6.2 Vario profiles

To set your vario check following chapters:

- Profile types
- Profile customisation
- Profile reset
- Vario integration

6.2.1 Profile types

The Element Speed offers 5 profiles for weak, regular, and strong thermals, for ridge/coastal soaring, and for balloon flights.

1. Press and hold Menu
2. Use the arrow keys to scroll to Vario profiles, press OK
3. With Select you enter the list of profiles, select from weak, regular, strong, soaring, or balloon with OK
4. Return with ←.

6.2.2 Profile customisation

Each profile can be customised to the pilots preference. All values which are changed are saved in that particular profile. In order to edit and profile, it must first be selected as described above. Like most all varios, the Element Speed beeps when you climb and sounds a low tone when you sink. But the vario acoustics are slightly more sophisticated than that. In addition to the familiar climb and sink tones, your Element Speed also features a near-thermal Tone to help you find weak thermals and it can sound a sink tone if you are sinking rapidly.
The various tones for the Element vario.

1. Press and hold **Menu**
2. Use the arrow keys to scroll to **Vario profiles**, press **OK**
3. Choose **Details** to customise the profile you have activated as described above
4. Return with ←.

**You may customise:**

- **Sensitivity**: Choose from a slow, regular, or fast reaction
- **Audio General**
**Tone change**: Linear or harmonic. This describes how the vario tone changes with increasing vertical speed. With the setting "linear", the tone frequency goes up linearly with the vertical speed. So the change from 1 m/s to 2 m/s gives the same change in frequency as the change from 5 m/s to 6 m/s. With the setting "harmonic", the change is different. This is because we perceive frequencies differences differently, depending on how high the frequencies are: On a piano, B3 and C4 have 246.942 and 261.626Hz. Difference is 14,684 Hz. If we take it a few octaves higher, B6 and C7 have 1975.53 and 2093.00. Difference is 117,47Hz. To the human ear, the difference is exactly one tone - just a few octaves higher. So with the setting "harmonic", we change the frequency in a way so that a climb frequency of 0.1 m/s will always be perceived as the same tone difference, regardless of the absolute climb values.

**Tone rise**: Off, slow, medium, fast

**Cadence change**: Logarithmic or linear. This describes how the vario cadence (the number of beeps per second) changes with increasing vertical speed. With the setting "linear", the cadence goes up linearly with the vertical speed. So the change from 1 m/s to 2 m/s gives the same change in frequency as the change from 5 m/s to 6 m/s. Because this will make for some very fast, nervous beeping with higher climb rates, we introduced the logarithmic setting. With this, the beeping still gets faster the faster you climb, but it does not increase as much. The change from 1 m/s to 2 m/s is much more than the change from 5 m/s to 6 m/s.

**Cadence rise**: Off, slow, medium, fast

- **Climb tone**:
  - **Active**: Activate or deactivate the climb tone.
  - **Threshold**: Set the threshold at which the climb tone sets in.

- **Near-thermal tone**:
  - **Active**: Activate or deactivate the near-thermal tone.
  - **Threshold**: Set the threshold at which the near-thermal tone sets in.
  - **Duration**: Short, long, or constant defines the actual tone length with which you like the near-thermal tone played by the vario.
  - **Volume**: Off, reduced, default, and loud are values relative to your general audio volume.

- **Sink tone**: The settings here are the same as for the near-thermal tone.

- **Last thermal threshold**: The Element Speed records thermals using readings of its numeric vario. You can adjust the threshold of the last thermal value from between 0.1 to 3.0 m/s (or 0.2 to 6 ft/ min x 100). The default setting is 0.5 m/s or (1.0 ft/min x 100).

### 6.2.3 Profile reset

In order to reset a profile to its original settings, you must first select it as described above, then perform the reset:

1. Press and hold **Menu**
2. Use the arrow keys to scroll to Vario profile, press **OK**
3. Select the profile you want to reset
4. Then scroll to **Reset profile**, press and confirm with **OK**
5. Cancel with ←.

### 6.2.4 Vario integration

The vario integration is as such not part of any profile and is therefore set as a global value. This value may be adjusted from 1 to 60 seconds. Though the default setting is 10 seconds, it may be useful to adjust the averaging interval to a longer setting. A good strategy is to set the numeric vario averaging interval to at least the time it takes you to turn a complete circle when thermalling: approximately 15 seconds or longer.

1. Press and hold **MENU**.
2. Use the arrow keys to select **Settings**, press **OK**.
3. Use the arrow keys to select **Flight settings**, press **OK**.
4. Use the arrow keys to select **Vario integration**, press **OK**.
5. Set the desired integration time.

### 6.3 Audio settings

Apart from the acoustic settings related to the Vario profiles, you can define general audio settings on the Element Speed. All these settings are in the **Flight settings** menu:

1. Press and hold **MENU**.
2. Use the arrow keys to select **Settings**, press **OK**.
3. Use the arrow keys to scroll to **Flight settings**, press **OK**.

#### 6.3.1 Audio Frequency

You can raise or lower the frequency of the lowest climb tone to hear overall higher or lower pitched beeps. The default is 800 Hz.

#### 6.3.2 Audio mode

Choose between two settings:
- **Always** or
- **In flight**.

When in the default mode of **Always**, the Element Speed will emit vario tones whenever it is switched on (and you have the audio volume level above "mute"). It can be inconvenient to hear tones when preparing your gear for flight or if you want to use your Element Speed to record hike-and-fly adventures, for instance, because you won't want to hear vario tones while you walk through nature. Selecting **In Flight** ensures that the Element Speed will only emit vario tones after it detects your take-off.

When your vario is set to **In flight** audio mode, you can still get a vario sound by briefly pressing the loudspeaker key. You will have vario sound for the next 20 seconds, then your Element Speed will be silent again until it detects a take-off.

### 6.4 Speed settings

For info on external wind vane sensors, airspeed calibration and settings for the stall alarm

#### 6.4.1 External wind vane sensor

The Element Speed can be connected to an external wind vane sensor, available for purchase from your vendor. Normally, the Element Speed displays Ground Speed with the label **GND** shown on the flight screen (see **Overview**), but when connected to a functioning airspeed sensor the label will change to **AIR** and the Element Speed will display airspeed instead.
All configuration on this page can be accessed in the Flight settings menu:

1. Press and hold **MENU**.
2. Use the arrow keys to scroll to **Flight settings**, press **OK**.
3. Use the arrow keys to scroll to **Airspeed**, press **OK**.

### 6.4.2 Stall alarm

Here you may activate or deactivate the stall alarm, which only works, if an external sensor is connected.

### 6.4.3 Stall threshold

Set the threshold at which the stall alarm sets in. Stall threshold can be set to any value from 15.0 to 99.9 km/h (or from 8.1 to 53.9 kts or from 9.3 to 62.0 mph).

### 6.4.4 Correction

Airspeed can be corrected +/-50% under the Speed menu. This could be useful if the shape of your pod harness is affecting your speed sensor's accuracy, for example.
Part VII
Overview of the Element Speed menu, accessible by long press of the **Menu** key.

The **Element Speed** menu tree.
Part VIII
8 Technical specification

<table>
<thead>
<tr>
<th>Device</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Loudspeaker</td>
<td>Yes, buzzer</td>
</tr>
<tr>
<td>Buttons</td>
<td>Yes</td>
</tr>
<tr>
<td>Battery</td>
<td>2x standard AA battery</td>
</tr>
<tr>
<td>Battery indicator</td>
<td>Yes</td>
</tr>
<tr>
<td>Battery autonomy</td>
<td>30 h</td>
</tr>
<tr>
<td>Size</td>
<td>138x74x21 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>182 g</td>
</tr>
<tr>
<td>Vario</td>
<td>Yes, high sensitivity</td>
</tr>
<tr>
<td>Pressure altitude</td>
<td>Yes, high precision</td>
</tr>
<tr>
<td>Flight storage</td>
<td>Yes, statistics for 50 flights</td>
</tr>
<tr>
<td>Operating Temp.</td>
<td>-15°... +50°</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Software</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Languages</td>
<td>7</td>
</tr>
<tr>
<td>Software updates</td>
<td>Free</td>
</tr>
<tr>
<td>Units</td>
<td>Metric/Imperial</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In the box</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Element Speed</td>
<td></td>
</tr>
<tr>
<td>Protective case</td>
<td></td>
</tr>
<tr>
<td>Getting started manual</td>
<td></td>
</tr>
</tbody>
</table>
Part IX
9 Troubleshooting

If you have any question or problems feel free to support@naviter.com
10 Notice of non-liability

This is a personal navigation assistance device only. It is not a replacement for any legally required device, method or service.

Before it is put to use it is the responsibility of any user who will use this device to become familiar with operation and safety aspects of this device. Using the system improperly could cause failure and lead to possible property damage and/or personal injury.

Naviter by Flytec assumes no responsibility for property damage, accidents, injury or death that may result from the misuse of this device/equipment. This includes any use of this device/equipment outside the scope of common sense, the User Manual, inserts and other related documentation.
11 Limited Warranty

Naviter company warrants your Element Speed against defects in materials and workmanship for two (2) year from date of purchase invoice. The warranty is non-transferable. Should any part of the Element Speed become defective within the warranty period return the Element Speed with a description of what/why it is not functioning and we will repair or replace it, at our discretion, free of charge (you pay only shipping to Flytec by Naviter).

Return the unit to:

Naviter d.o.o.
Planina 3
4000 Kranj
Slovenia

The warranty is non-transferable and only valid if Naviter determines that the system and its components have not been damaged due to improper use, been submerged in fluids, dismantled or abused. Naviter reserves the right to determine if repairs are to be done under warranty or at a nominal charge. As a proof of activated warranty you must send a copy of the purchase invoice.
Index

- < -

< Prev and Next > 18

- A -
Airspace 9
Airspace warning 9
Alt. Colors 27
Altitude 27
Altitude Colors 27
Animation speed 9
Arrow towards the North 9

- B -
BAD 28

- C -
center 7
Circling North 22
CIT 27
COM 31
Command bar 5, 9

- D -
Default 6
Defaults 27
Details 27
Display Options 5, 7
drag 22

- E -
East Up 22
Esc 18

- F -
FAI Triangle Assistant 7
Filter 25
Final glide 5
Finish 7
first time 5
Flarm 9
flash 28
flashing 28
Flight properties 5
Flight trace 9
Free FAI 7

- G -
Getting Started 4, 7
Glider 28
Glider position 9
Glideslope indicator 9
Goal Up 22
goto 5, 25
goto dialog 25
GPS 28, 31
green 25

- H -
Hardware 31
Header 5
Header line 9
Heading Up 22

- L -
Landable 25
lift 7

- M -
map 5, 9, 22, 27
Map 1 9
Map 2 9
Map orientation 5, 13, 22
Map view 27
Menu 5, 18
multi 6
Index

- N -
  Navboxes 5, 9
  Navigation 5
  Near Airport 25
  Next 19
  NMEA 31
  North 5, 13
  North arrow 5
  North Up 22

- O -
  Optimization 5

- P -
  Pan 13, 22
  Pan mode 22
  Pause 31
  Pocket PC 2
  Port settings 31
  position 28
  Prev 19
  profile 6
  Profiles 6

- R -
  recently used 25
  Relative coloring 27
  rotate 7, 22

- S -
  Save As 27
  Scheme 27
  SeeYou Mobile 2
  Send 31
  Settings 27
  Show 27
  South Up 22
  Speed to Fly indicator 9
  symbol 28
  symbols 5

- T -
  Tap 5, 28
  Tap and hold 28
  Task 5, 9
  Terminal 31
  Terrain 27
  Terrain collision 9
  Thermal 7
  Thermal Assistant 7
  Today screen 5
  Track Up 22

- V -
  Variometer 31
  Vector map 9

- W -
  Waypoints 9
  West Up 22
  Wind 5
  Wind vector 9

- Y -
  yellow 25

- Z -
  Zoom 5