EDGE All in One 582 (for Edge 530, 830 and Edge 540, 840 and Edge Explore 2)

EDGE All in One 582 is a single data field.

It displays many values for cycling - around the most important values: speed, cadence, heart rate and power.
I have this data field in use for my mountain bike.
The data shown on this layout correspond to my own needs.

If you like my data field and use it, it would be nice if you give me a good rating.

This datafield is free of charge, but maybe you invite me to a beer: https://paypal.me/AndreasWirth

After installing this datafield on your device, various settings can be made. This is best done with Garmin Express or Garmin IQ Mobile. Instructions for this can be found here:
https://forums.garmin.com/developer/connect-iq/w/wiki/14/changing-connect-iq-app-settings

The following settings are supported:
-Optional: colored main data numbers
-Power gauge or Cadence gauge
-Maximum value on gauge for HR, Power and Cadence selectable
-Power zones
-Optional: display of Power zone 7
-Optional: display a pop up with information for distance and time to destination
  -set period between pop ups
  -set duration of pop up
-Period for smoothing the Grade display in seconds (5 - 20 sec)
-Optional: display of a pulsating timer indicator
-Optional: display Index of derailleur
-Optional: I use Varia Radar (shows Varia battery and changes layout)
-Optional: Save Edge battery charge in FIT and display in Garmin Connect
-Optional: Save rear derailleur index in FIT and display in Garmin Connect
-Optional: Definition for 2 additional sport profiles
-automatic layout adjustment for indoor

Both the **metric** and the **US-American system** of measurement are supported.

The following languages are currently supported:
English, German, French, Spanish, Italian, Polish

To use the power section, a power meter must be paired with the device and the values of the individual power zones must be stored in the settings.

For the heartrate graphs the heartrate zones are taken from your profile. It is therefore necessary that the zones are set in your device!

The upper section of the display (without or with Varia Radar):
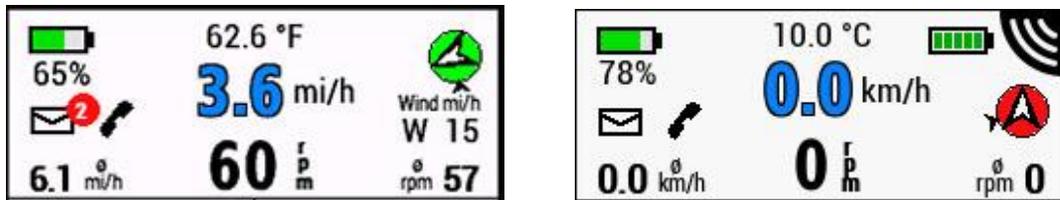
Battery status
of device battery on left - and if enabled, Varia battery on the right side.
Please note that Varia battery can take some time until it shows the status!

Notifications
For notifications there is a envelope symbol on the display.
If there are unread notifications, a red filled circle with the number of notifications pops up and blinks.
Note: on iPhone there are all kinds of notifications counted. So, be sure that all messages are deleted from the lock screen!

Phone connected
is shown by a phone symbol: grey if not connected, black if connected.

Weather data (limited with Varia Radar)
For the display of wind bearing and wind force, as well as the outdoor temperature, the data of a nearby weather station must be available via Garmin Connect Mobile. The app must therefore be loaded on the phone (but it can work in the background).
If no data is available - no such data is shown.

GPS circle
The color of the circle depends on the current GPS signal strength.
red: no GPS available
light red: no GPS available but last GPS Position is shown
light green: poor signal
green: good signal

Compass
There is an arrow inside the circle indicating North direction.
If weather data are available, there is another small arrow outside indicating the wind bearing.

Speed and Cadence
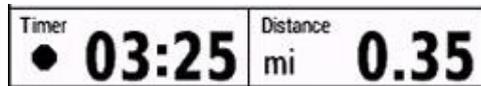The speed display can optionally be set blue with outline.
Below average speed and average cadence are shown.

Timer and Distance

On the left side there is the timer for the activity recording.

The timer shows mm:ss for time below one hour and shows h:mm for time more than one hour.
A black pulsating dot is displayed by default, signaling that the timer is running. During a pause, the dot is red. This indicator can be turned off in settings.

On the right side there is the elapsed distance displayed.

Heartrate field and Power field
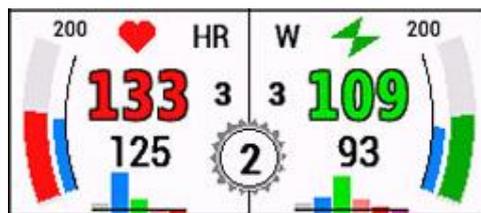
To display the heart rate, a HR-belt or similar must be paired.
The heart rate display can optionally be set red with outline. Next to it a small display shows the current HR zone.
The heart rate zones are read from the user profile stored on the device. It is therefore important that all information in the user profile is entered correctly.
The bar graph continuously shows the time in each zone as a percentage.

To display the power, a power sensor must be paired.
The power display can optionally be set green with outline. Next to it a small display shows the current power zone.

The maximum for the power gauge can be set in settings (100 - 500 W).
Since the power zones cannot be read from the user profile, they must be entered in the settings. Enter the values exactly as they are stored on the Edge under power zones. The bar graph continuously shows the time in each zone as a percentage. By default 6 zones are shown because zone 7 is hardly reached by most cyclists. In settings, however, it is also possible to set zone 7 is also shown.

Derailleur (Gear shifter)
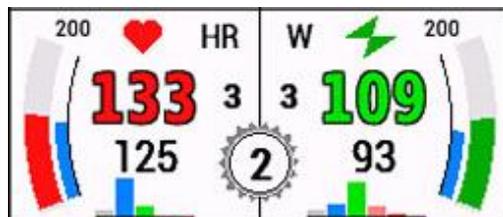
In addition you can set a cogwheel to the display showing the Index of the rear derailleur.
In setup you can chose:
0 … do not show
1 … for mechanical shifter, rear only
2 … for electric derailleurs, rear only
3 … for electric derailleurs, front and rear

For mechanical shifters in setup you have to set:
-rear wheel circumference in cm
-teeth of chainring
-teeth of cogwheels from smallest to biggest

All values are separated by a semicolon.
For my 29" Mountainbike with 30 teeth chainring and SRAM Eagle 12 gears:
220; 30; 10; 12; 14; 16; 18; 21; 24; 28; 32; 36; 42; 50;
Although the program checks the string for plausibility during the evaluation, it is important to enter this series of numbers correctly and not to forget the separating semicolons ";" !
If an error occurred during evaluation of the string, the index 99 is shown on the display.

For a meaningful display of the shift index for mechanical shifting, a speed sensor must be used!
If the display of the current shift index is not stable, you must vary the rear wheel circumference in the setup in 5 cm steps up or down.

Cadence field
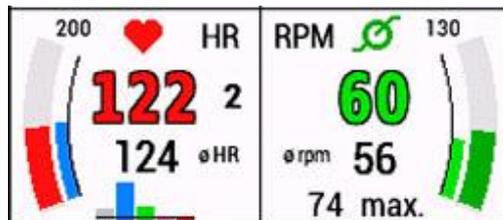
Instead of power you can chose a cadence field in settings.
The maximum of rpm on the gauge can be set in settings (110 - 200 rpm).

For all kind of gauges applies:
-the outer arc represents the current value.
-the inner arc represents the average value in color of the zone.

The bottom section

The bottom section of the display shows clock, Ascent, kcal Consumption, Training Effect and Grade or alternatively the Pause time (when paused).

Grade

The display is calculated via the distance traveled and the associated change in altitude. This has to be done in small steps in order to display the current situation in the best possible way.
To get a good compromise between display stability and delay, the time over which the values are averaged can be selected in settings (5 - 20 sec).
The faster the average speed is the smaller the value of seconds may be.
For my mountain bike the best compromise is around 12 sec.

Distance and Time to Destination:

When a course is loaded, the data for time and distance to destination can be displayed at selectable intervals in a pop-up window.

As long as no average speed is available - e.g. after loading the course but before the start - an avg speed of 10 km/h (6.2 mi/h) is used. After that the time is calculated continuously over the avg speed.

This pop up can be activated in settings.
It is off by default!

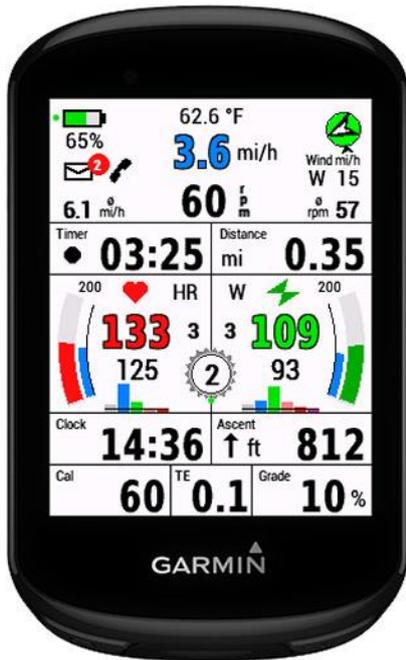For the pop up info you can select interval and duration in seconds.

Log values to the FIT Activity file and show them in Garmin Connect:

Currently, the following values can be logged and displayed in Garmin Connect:
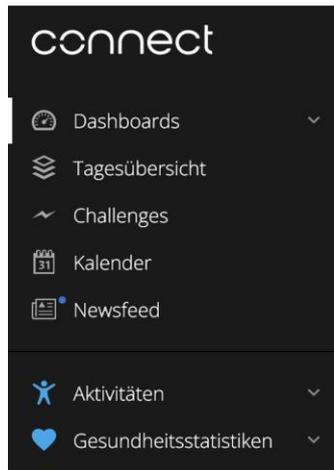
-Battery Status in %
-Shift index for front and rear

ATTENTION:
After activation in the setup,
the device must be restarted!

These options must be enabled in the setup.
The readiness to log these values is confirmed by a
small green dot at battery or derailleur display:

ATTENTION:
After activation in the setup,
the device must be restarted!

Settings for 2 additional activity profiles:

In the setup - in addition to the default layout - 2 additional activity profiles can be defined, for which own values for gear shifting and Vario use can be set.
For automatic assignment, please select the sport that is set on the Edge for the desired profile.
e.g. Road, Commuting, Mountain Bike, Indoor etc....

If INDOOR is assigned to the selected activity profile, the layout also changes automatically:

The data of the standard layout that is not relevant for indoor use is hidden and other data is inserted.

Thus, a graph for heart rate and power/cadence over the last 4 minutes is shown in the lower area.
The height of the graphs depends on the settings for the maximum value on the display for HR, power or cadence.

IMPORTANT:
After settings are done for optional sports in the setup, the device must be restarted!

RADAR Target-vehicle Speed

You can show the target vehicle speed in two ways:

In the setup chose:
0 … don't show at all
1 … show in TE field
2 … show as big overlay

Note: there is a orange dot on screen proving that the datafield will show the speed.
Without orange dot - no such speed will be shown.
(see next page!)

orange dot if option 2 was chosen

orange dot if option 1 was chosen

Show Speed Option 1   Show Speed Option 2

Setup:

The setup in Garmin Connect Mobile is shown below. The setup in Garmin Express is practically identical!

As stated at the beginning, you will find an explanation of how the setup is called:

https://forums.garmin.com/developer/connect-iq/w/wiki/14/changing-connect-iq-app-settings

If optional sports have been defined, the values set there for power or cadence, Varia use and gear shifting are used. However, the respective sport must correspond to the selected activity profile.

Indoor is a special type of sport, because the layout is automatically adjusted. If you don't want a gear indicator for Indoor, you don't need to specify any optional values for Indoor.