

**ELV**

LCD Barometer  
**BA 1010US**

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Operating instructions

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ELV Electronics Ltd. • Hong Kong

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# 1. General

The BA 1010US LCD Barometer displays the current air pressure in a round, stylised instrument display as well as a numerical digit display.

Analogous to traditional barometers, the electronic display moves in the direction of the current trend when the housing is tapped.

Also, the trend of the air pressure development is conveniently displayed by means of an arrow/symbol display and the local weather forecast is shown by means of an easy to understand weather symbol.

Additionally, you can choose to display the temperature and relative humidity for indoors or outdoors as well as a comfort factor based on both temperature and humidity.

## **The functional features of the BA 1010US:**

- Air pressure display from 300 to 1,100 hPa
- Air pressure trend display
- Weather forecast function via symbols
- Knock-on update of display in direction of trend
- Display of the indoor temperature and humidity (sensors in the device)  
or
- Display of the outdoor temperature and humidity via radio reception of data using an outdoor radio sensor (effective up to 100 m unobstructed)
- Climate comfort factor for room climate indicated by three smilies: dry, agreeable, and humid.

**Please read the complete instructions thoroughly before initial operation; these instructions contain information for the correct use of this device.**

### **Intended use**

The BA 1010US LCD Barometer is intended for indoor use with maximum humidity of 95 % and a temperature range of -19.9 °C to +70 °C. The manufacturer does not accept any liability for the consequences of improper use; all rights under the warranty will be forfeited.

## **2. Safety and maintenance information**

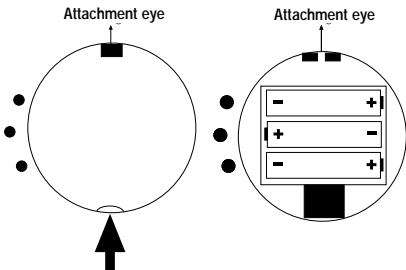
- Do not open the device. It contains no user-serviceable parts.
- Operate the display device only indoors and avoid moisture, dust and direct sunlight.
- Clean the display device using a dry linen cloth; it may be slightly dampened to remove obstinate soiling. Do not use solvents for cleaning.
- The device should be kept out of reach of children. It is not a toy!

## 3. Commissioning

### 3.1. Inserting the batteries

Open the battery compartment on the back of the display device.

Place three 1.5 V Mignon batteries (LR 6 / Mignon / AA alkaline) into the battery compartment, ensuring that the polarity is correct, and then close the battery compartment.



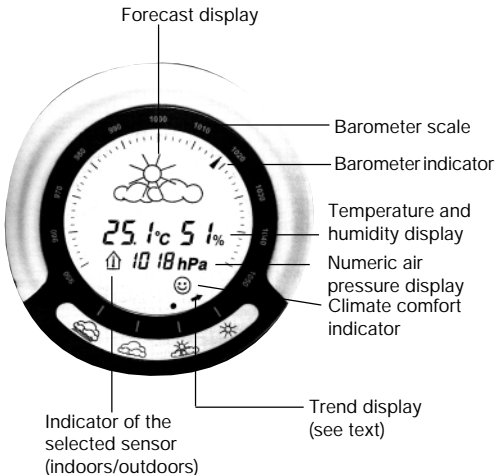
**CAUTION! Observe regulations for the disposal of batteries!**

Used batteries and rechargeable accumulators must not be thrown away with household rubbish!

Please take exhausted batteries and rechargeables to your local dealer or to a collection point for hazardous waste or batteries.



## 3.2. Indicators



## **4. Operation**

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### **4.1. Initialisation**

The device switches on automatically when the three Mignon batteries are inserted. In some cases it may happen that the device does not begin operation after the batteries are inserted, in which case nothing is shown in the display. If this happens, remove the batteries and reinsert to produce a display. This problem does not influence the further operation of the device.

After the segment test, the current data are displayed.

### **4.2. Altitude adjustment**

The air pressure display is based on the altitude above sea level of the location where the device is operated. It is therefore necessary to adjust to the actual altitude in order to have the correct air pressure value displayed.

- Open the battery compartment and take out one of the batteries. Wait about 1 minute.
- Press and hold down the middle button on the back of the device while inserting the battery.
- Release the button and set the altitude with the upper button (increments of +10 m) or lower button (increments of -10 m). The range is to 2,000 m.
- Once the exact altitude is set, save the setting by pressing the middle button. This value remains stored even when the batteries are changed.



### **4.3. Setting sensor address for outdoor sensor**

- Commissioning and addressing the outdoor sensor is to be performed in accordance with their respective instructions.
- First position the outdoor sensor near the barometer and then carry out addressing on the barometer as follows:
- Press the middle button on the back for approximately 2 seconds until "SEN x" appears in the display. The "X" stands for a sensor address.
- Using the upper button, you can now select the address (1-8) set on the sensor.
- Once the sensor is selected, no further buttons need to be pressed. The device exits the setting mode automatically after about 5 seconds.
- Now the automated synchronisation with the outdoor sensor takes place. This process takes 6 minutes. During this time it is not possible to operate the device.

### **4.4. Indicators and indicator adjustment**

#### **4.4.1. Air pressure, forecast, trend**

- The analogue air pressure indicator is located on the outer edge. The current air pressure (950 to 1,050 hPa) is indicated by an arrow.
- In the centre below is the numerical display of this air pressure value in an expanded range between 300 to 1,100 hPa.
- At the top of the display the local weather forecast is indicated by weather icons (sunny, fair, cloudy, rain).
- At the bottom is a trend display for the air pressure

development in the next few hours. One point also shows the weather forecast. An arrow shows the air pressure development trend if there are air pressure changes.

- Analogous to traditional hand-display barometers, the air pressure indicator updates in the direction of the trend when the display is tapped a few times.

#### **4.4.2. Temperature, humidity, climate**

- In the centre of the display the temperature and humidity values of the currently selected sensor location are shown.
- The climate comfort factor based on the temperature and humidity is shown in the bottom display line by means of smilies (dry, agreeable, humid).

#### **4.4.3. Sensor selection**

- The barometer permits you to select the display of temperature and humidity at the indoor sensor (in the device) or at the addressed outdoor sensor.
- You can switch from one to the other using the bottom button on the back of the device. The selected sensor is indicated by the house icon at the bottom left of the display:  
Thermometer icon in the house: indoor values  
Thermometer icon next to the house: outdoor values
- Switching over can also be done by tapping. After tapping several times, the trend is shown in the analogue display. Afterward the house flashes to indicate that the display can be switched over by tapping again.

## **5. Changing the batteries**

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A change of batteries is necessary if the display becomes unusually pale or disappears altogether.

Then it is time to change batteries in accordance with Section 3.1.

## **6. Range and reception interference**

The free field range (i.e. the range of the line of sight contact between the transmitter and the receiver) is 100 m under optimum conditions. Walls and even reinforced concrete can be penetrated, which does, however, reduce the range.

**Before mounting the system, try out interference-free reception at different times of the day.**

Reduced range can have the following causes:

- High frequency interference of all kinds.
- Buildings of all types or vegetation.
- The distance of the transmitter or receiver from conductive surfaces or objects (even to the human body or the ground) has an effect on the radiation characteristics and therefore the range.
- Wide band interference in built up areas can reach levels that reduce the signal-noise ratio throughout the frequency band which reduces the range.
- Devices working on adjacent frequencies can also affect the receiver.
- Badly shielded PCs can radiate into the receiver and reduce the range.

## 7. Technical data

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Display: .....	large area LCD
Air pressure measurement range: .....	300 to 1,100 hPa
Resolution: .....	1 hPa
Accuracy: .....	±1hPa
Analog display range: .....	950 to 1,050 hPa
Digital display range: .....	300 to 1,100 hPa
Temperature display range: .....	-40 °C to +80 °C
Resolution: .....	0.1 °C
Accuracy: .....	±1 °C
Relative humidity display range: .....	20 to 90 % RH
Resolution: .....	1 %
Accuracy: .....	±8 %
Weather forecast:	Weather icons for sunny, fair, cloudy, rainy
Air pressure trend display:	by arrow in the corresponding direction
Climate comfort indicator: .....	dry, agreeable, humid
Reception frequency for outdoor sensors: ...	433.92 MHz
Battery: .....	3 x 1.5 V LR 6/Mignon/AA
Battery life: .....	2 - 3 years
Dimensions (ø x D): .....	170 x 36 mm

## 8. FCC Information

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FCC ID: RNT-BA1010US

Changes or modifications not expressly approved in writing by ELV Electronics Limited may void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The internal antenna used for this mobile transmitter must provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

