4 WEATHER STATION OPERATING INSTRUCTIONS

Please read these operating instructions carefully before using the device to familiarise yourself with its features and functions.

4.1 AREA OF APPLICATION

This station has been exclusively designed for use as a weather station. Besides providing information about room climate, weather stations can also be used to forecast local weather conditions and to supply information about external temperature, external humidity and frost (for drivers, farmers, etc.). This weather station can be used in the customer's domain within the specified tolerances. The station should NOT be used for commercial or professional weather forecasts. Any use other than that described in these operating instructions is not permitted and can result in damage and injury. No liability will be accepted for claims arising from improper use.

4.2 SAFETY AND MAINTENANCE

Safety instructions
Please pay particular attention to this section and follow all of the instructions provided. This will ensure reliable operation and enable you to use your weather station for a long time. Keep the packaging and operating instructions in a safe place so that they can be transferred to the new owner if you decide to sell the weather station. Never open the housing for the base station or external sensor, as these do not contain any parts that require maintenance (the exception to this rule is opening the battery compartments to insert or change the batteries). Do not place any items on top of

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the base station or the external sensor and do not exert any pressure on the display. This could cause the display to break. In order to prevent damage do not touch the display with any sharp-edged objects.

Operating environment conditions
The base station is not protected against splash water. Make sure your base station is not exposed to moisture or continually high levels of humidity and avoid dust, heat and prolonged periods of direct sunlight. To ensure optimum radio registration please position or hang the base station on a sturdy, non-metallic surface. The external sensor is protected against splash water. When using outdoors please select a location where the external sensor is not exposed to direct rain or sunlight. Ignoring this information may result in malfunctions or damage to the weather station and the external sensor.

Electromagnetic compatibility
If possible, do not place the base station or the external sensor in close proximity to computers, printers, television sets, mobile telephones or radios, because devices with strong EMC radiation and other radio stations can prevent or interfere with radio reception.

Batteries (supplied)
Your base station and the external sensor are each operated by 2 x 1.5V AA batteries. The following section provides you with information about using batteries:
Always replace batteries with batteries of the same type. Batteries should not be charged or re-activated by any other means and they should not be disassembled, discarded in a fire or short-circuited. Always keep batteries out of the reach of children. Batteries can be fatal if swallowed. Therefore keep batteries and the
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weather station out of the reach of small children. Seek medical assistance immediately if a battery is swallowed. Batteries cannot withstand heat. Prevent the base station and the external sensor (and therefore the inserted batteries) from becoming too hot. Ignoring this information may result in damage and possibly even to the batteries exploding. Temperatures below 0°C can have an adverse effect on battery life.

NOTE:
Please position the external sensor in such a way that it is not exposed to extreme heat or cold. In extremely cold conditions the batteries, and therefore the transmission signal, will be adversely affected. We recommend you operate the weather station with ordinary batteries as opposed to rechargeable batteries.

4.3 COMMISSIONING

We recommend that you read these operating instructions thoroughly before starting to use the weather station. Conduct the commissioning procedure on a table where the base station and the external sensor can be positioned or set up next to each other. In order to be able to operate the weather station, please remove the protective film from the base station display.

NOTE:
Keep this protective film away from babies and young children as it is a suffocation hazard!

Remove the battery compartment cover located at the rear of the base station. Also remove the battery compartment cover located at the rear of the external sensor. Please unscrew this cover using a small screwdriver.
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Please make sure that the batteries are always inserted into the external sensor first and then into the base station, otherwise the base station may not receive the signal from the external sensor.

Now select your desired channel by using the slider in the external sensor's battery compartment and then insert the 2 x 1.5V AA batteries into the compartment (observe the correct polarity +/-). Then insert 2 x 1.5 V AA batteries into the battery compartment of the base station (observe the correct polarity +/-).

NOTE:
Please make sure that the batteries are new and of the correct size.

4.3.1 EXTERNAL SENSOR

After inserting the batteries the external sensor starts to transfer the measured temperature and humidity readings.
In order to ensure the signal is transmitted properly the base station and the external sensor should be positioned a maximum of 30 metres apart. The range of coverage is restricted by brickwork, reinforced concrete, metal windows and fog. Overlapping radio waves can also impair reception. The external sensor measures and transmits the temperature at 40 second intervals. You can now screw the battery compartment cover back onto the external sensor.

4.3.2 BASE STATION

Shortly after inserting the batteries the internal temperature is displayed and the base station starts to search for the external sensor for a period of 2 minutes, which is indicated by flashing semi-circles above the CH symbol. If this search has been successful, the semi -circles stop flashing and illuminate continuously and the external temperature and humidity reading are then displayed.
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Setting the units of measurement and height above sea level for your location:
hPa/mBar flashes to the right of the display at the same level where the moon phase is indicated. You can now use the arrow buttons in the battery compartment of the base station to alternate between two units of measurement for the atmospheric pressure (hPa/mBar or inHg). Confirm your selection by pressing the UNIT button briefly. Then meter starts to flash. Use the arrow buttons again to select your desired unit of measurement (meter or feet) and confirm your selection by pressing the UNIT button. The height above sea level subsequently starts to flash at '10'. Now set the correct height above sea level for your location and confirm your selection by pressing the PRESSURE/ALTITUDE button.

NOTE:
To obtain a meaningful weather forecast you will need to enter the correct height above sea level for your location. When you have done this details of the relative atmospheric pressure will also be displayed.

Registering a second or third external sensor:
The base station is able to display up to three external sensors.
If you want to register an additional sensor, select a free channel in the battery compartment of the external sensor. Then select this channel on the base station as well by using the CHANNEL button. Now insert the batteries into the external sensor and then press and hold the down arrow button (sensor call button) for approx. 3 seconds. The black bars start to flash (indicating the sensor search function) and the values of the new sensor will be displayed after approx. 2 minutes. You can now alternate between the display for the two sensors by pressing the CHANNEL button.
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Random function:
The weather station is also equipped with a so-called RANDOM function. If this function is active the station automatically switches between the registered sensors on a continuous basis. To activate or deactivate this feature simply press and hold the CHANNEL button for around 3 seconds. When the function is active a circular arrow is visible underneath the channel display (CH) on your weather station. If this arrow is not visible, the function is deactivated.

Sensor call button:
If '- -' appears in the display after this time instead of the external temperature and humidity reading, then press and hold the down arrow button on the front of your weather station for approx. 3 seconds. The semi-circles above the CH symbol will then start to flash again and another attempt is made to locate the signal from the external sensor for a period of 2 minutes.
If the search for the external sensor has been successful, the station will now start to search for the DCF77 signal in order to receive the radio-controlled time. This can take 5 - 8 minutes and is indicated by a flashing antenna symbol. If the radio signal has been received successfully, the antenna symbol stops flashing and illuminates continuously and the current time, date and weekday are displayed.

Transmitter call button:
If it is not possible to receive the DCF77 signal at this time (e.g. due to a location with poor reception), then change to another location, if possible, and press and hold the up arrow button on the front of your weather station for approx. 3 seconds. The antenna symbol starts to flash again and another attempt is made to locate the time signal for approx. 5 - 8 minutes.
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The commissioning procedure for your weather station is now complete. You can now set up or hang the external sensor at its intended location.

4.4 RADIO RECEPTION

As is the case with wireless signals for mobile telephones or radio/TV reception, it is possible that your weather station will not always receive a signal at every location. Here are some tips to ensure your station operates properly. The following factors can cause malfunctions:
• Concrete buildings, metal components and electronic equipment.
• Electronic devices such as TVs, computers, various household appliances, transformers, power lines, radio transmitters or electrified railway lines.
• Atmospheric effects can also interfere with radio waves.
• The distance of the radio signal and the geographic environment (mountains, etc.). So-called "dead spots", which make reception impossible, can occur anywhere.
• Reception is better in rural areas in comparison to large cities. There are fewer sources of interference at night compared to during the day. Therefore reception is better at night.
• Weak batteries in the weather station will impair the quality of reception.
• If it is not possible to receive a signal at your current location, you can also set the time manually (see section 1.7 "Manually setting the time, date, language, temperature format (°C/°F) and time format (12/24hr)").

4.5 ASSEMBLY

The base station can either be set up on its hinged stand or mounted on a wall using the rear hanging mount. The external sensor also has a rear hanging mount for wall assembly.
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4.6 DESCRIPTION OF FUNCTIONS

The weather station comes with 5 different display modes in the time window:
Time with seconds display
Time with weekday display
Time zone with weekday display
Time zone with seconds display
Date display

To alternate between the display modes please press the MODE button briefly.

NOTE:
To quickly increase or decrease a value simply press and hold the up or down arrow button.

4.7 MANUALLY SETTING THE TIME, DATE, LANGUAGE (GERMAN, ENGLISH, SWEDISH, DUTCH, SPANISH, ITALIAN, FRENCH), TEMPERATURE FORMAT (°C/°F) AND TIME FORMAT (12/24HR.)

If it is not possible to receive a signal at your current location, you can also set the time and date manually. To access this setting mode please press and hold the MODE button for approx. 3 seconds while the time is being displayed together with the seconds or the weekday. You can now alter the respective values by pressing the up and down arrow buttons. You can then confirm these values and jump to the next value by briefly pressing the MODE button. When you have finished setting all of the values, press the MODE button again to return to the time mode.

Setting the time zone:
To access the setting mode for the time zone please press and hold the MODE button for approx. 3 seconds while the time zone is being displayed together with
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the seconds or the weekday. Select your desired time zone using the up or down arrow button and confirm your entry by pressing the MODE button again.

4.8 SETTING, ACTIVATING AND DEACTIVATING THE THREE ALARM TYPES

The base station is equipped with a weekday alarm (recurring MON-FRI), a single alarm (non-recurring) and a pre-alarm (only active if the external temperature falls to +2°C or below +2°C). The pre-alarm can be set in such a way that if the temperature drops to 2°C or below 2°C it sounds 15, 30, 45, 60 or 90 minutes before the set weekday alarm or single alarm. This ensures you an awoken earlier than the set alarm time in the event of poor weather conditions (primarily during the winter when there is a risk of frost), thereby making sure you have sufficient additional time to prevent you from running late.

Press the ALARM button to alternate between the weekday alarm (W), the single alarm (S) and the pre-alarm (PRE_ALARM) and press the arrow buttons to activate or to deactivate (OFF) the respective alarm. The pre-alarm only functions in connection with the weekday alarm or single alarm. To access the setting mode for the alarm time press the ALARM button to select the desired alarm (W, S or PRE-AL) and then press and hold this button for approx. 3 seconds. The hour display then starts to flash. Select the relevant hour using the up or down arrow button and confirm your entry by pressing the ALARM button. The minute display now starts to flash. Select the relevant minutes using the up or down arrow button again and confirm your entry by pressing the ALARM button. The alarm is now set and active. To activate the pre-alarm in addition to a weekday alarm or single alarm simply
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switch to the pre-alarm display using the ALARM button and then activate it by pressing the up arrow button. The pre-alarm time is set to 15 minutes by default; if you want to change this to 30, 45, 60 or 90 minutes, simply press and hold the ALARM button for approx. 3 seconds until the minutes start to flash. Select your desired time using the arrow buttons and confirm your entry by pressing the ALARM button.

If the alarm starts to sound you can stop it immediately by briefly pressing the ALARM button. In this situation press the up or down arrow button to switch off the alarm completely (OFF is displayed). If you do not press the button the ALARM will automatically stop after 2 minutes.

4.9 MIN./MAX. MEMORY FOR TEMPERATURE
To view the maximum and minimum values for temperature and humidity press the MEM button in the battery compartment of the weather station; press it once to display the maximum values, twice to display the maximum values and three times to the return to the normal display.

4.9.1 ERASING THE MIN./MAX. MEMORY
To erase the stored maximum and minimum temperature values press and hold the MEM button for approx. 3 seconds.

4.10 ATMOSPHERIC PRESSURE DISPLAY
The atmospheric pressure is measured every hour, starting from the time the batteries are inserted into the base station. By pressing the PRESSURE/ ALTITUDE button in the battery compartment of the weather station you can alternate between absolute atmospheric pressure (LOCAL), relative atmospheric pressure (SEA LEVEL) and the set altitude.

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You can view the atmospheric pressure for the past 36 hours by pressing the HISTORY button. The respective hour is indicated in the small display field located to the right of the moon phase display.

Setting the units of measurement:
You can alternate between two units of measurement for the height above sea level and the atmospheric pressure by pressing the UNIT button in the weather station's battery compartment.

Simply switch to the relevant display by pressing the PRESSURE/ALTITUDE button and then press and hold the UNIT button for approx. 3 seconds. The respective unit of measurement starts to flash.
You can now use the arrow buttons in the weather station's battery compartment to alternate between **hPa/mBar** and **inHg** for the atmospheric pressure and between **Meter** and **Feet** for the height above sea level. Confirm your selection by pressing the UNIT button again.

The weather station also has a graphical display to indicate the atmospheric pressure over the past 12 hours.

4.11 WEATHER FORECAST
The weather forecast is an approximate indication that is calculated for the next 12-24 hours over a radius of approximately 30 to 50 km. It is based on the fluctuations of atmospheric pressure and it predicts actual weather conditions with an accuracy of 70%. As it is not possible to predict the weather with 100% accuracy, we do not accept any liability for damage which may occur as a result of an incorrect weather forecast.

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The weather forecast is displayed using the following symbols:

Indicator displays on the unit	☀	⛅	☁	🌧	🌨
Forecast	Sunny	Slightly Cloudy	Cloudy	Rainy	Snowy

4.12 WEATHER TREND DISPLAY
The weather station is also able to display the weather trend. This is also based on the fluctuations of atmospheric pressure and it is indicated by three arrows to the left above the weather forecast. If the atmospheric pressure falls drastically, the arrow in the trend display will point downwards. If the atmospheric pressure increases drastically, the arrow in the trend display will point upwards. If the atmospheric pressure stays roughly the same, the arrow will remain horizontal.

4.13 TREND DISPLAY FOR INTERNAL AND EXTERNAL TEMPERATURE AND INTERNAL AND EXTERNAL HUMIDITY
The development of the values for external temperature, internal temperature and humidity is indicated by an arrow to the right or left of the respective field. If the value changes dramatically within one hour, it will be indicated by an upward or downward pointing arrow. If there has been no change, a horizontal arrow is displayed.

4.14 COMFORT DISPLAY FOR ROOM CLIMATE PROVIDED BY THREE SYMBOLS (WET, COMFORT AND DRY)
The weather station indicates the room climate via three symbols located to the right above the internal humidity display: WET indicates a humidity level

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above 70%; COMFORT indicates a humidity level of 40% - 70% and 20°C - 25°C; and DRY indicates a humidity level below 40%.
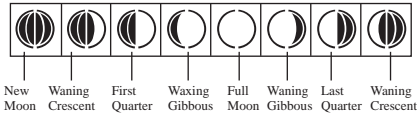
4.15 ADJUSTABLE ALARM FOR EXTERNAL TEMPERATURE
The weather station can store an individually adjustable alarm for each external sensor; it then sounds the alarm if the temperature falls below or exceeds the specified limit. To display the temperature alarm briefly press the TEMP AL. button. The upper limit is displayed initially (default setting 70°C). To access the setting mode simply press and hold the TEMP AL. button for approx. 3 seconds. The set upper limit starts to flash. Now use the arrow buttons to set your desired upper limit and then confirm your selection by pressing the TEMP AL. button. Then press the TEMP AL. button twice briefly to display the lower limit (default setting -50°C). To access the setting mode for the lower limit press and hold the TEMP AL. button again for approx. 3 seconds. The set lower limit then starts to flash. Use the arrow buttons to set your desired lower limit and then confirm your selection by pressing the TEMP AL. button again. The temperature alarm is now set and active.

4.16 MOON PHASE DISPLAY

The display for the current moon phase is located to the left below the atmospheric pressure display. The moon phase depends on the current date and is displayed with the following symbols:

You can display the moon phases for the previous and next 39 days by using the arrow buttons in the weather station's battery compartment. The respective day is indicated in the small display window located to the right of the moon phase display.

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New Moon	Waning Crescent	First Quarter	Waxing Gibbous	Full Moon	Waning Gibbous	Last Quarter	Waning Crescent

4.17 LOW BATTERY DISPLAY
Weak batteries in the base station and external sensor are indicated by the low battery display. We recommend you operate the weather station with ordinary batteries as opposed to rechargeable batteries.

4.18 TROUBLESHOOTING
Please check the batteries before issuing a complaint about the weather station and replace these, if necessary, with new batteries.

The external temperature is no longer displayed on the base station: If the external sensor no longer registers, this may be for one of the following reasons:
• The batteries in the external sensor and/or base station are too weak. Replace the old batteries. Never use a mixture of old and new batteries and proceed as described under the section entitled "Sensor call button" to re-register the sensor.
• External sensor reception is interrupted by obstacles. As these are often impossible to remove (e.g. thermopane glazing, walls with steel reinforcements or certain concrete compositions, steel bearers, etc.), please reduce the distance between the external sensor and the base station.
• If external temperatures fall below 0°C, the battery power of the external sensor diminishes and the radio transmission signal becomes weaker. In this case please reduce the distance between the external sensor and the base station.

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• If the base station does not display the external temperature but only "- - - -", it may be because the batteries in the base station are too weak, meaning it is unable to receive the signals from the external sensor. Replace the batteries with new ones.
• Interruptions to reception can also be caused by other household equipment, TV and radio remotes, interfering transmitters or external transmitters, etc. In this case "- - - -", "HHH" or "LLL" can be seen on the display. If this occurs, press and hold the down arrow button for approx. 5 seconds to start the sensor scanning process. Then wait a few moments. The current external temperature should be displayed again after the external sensor's next transmission signal.
• Weak batteries in the base station
Replace the batteries as soon as the low battery symbol is displayed. Wait for approximately 5 minutes before inserting the new batteries. Do not touch the battery contacts when inserting the batteries. This will reduce the corrosion behaviour of the contacts and extend the life of the batteries. When inserting the new batteries always make sure the polarity is correct. After changing the batteries proceed as described under section 1.3 "Commissioning".
• Weak batteries in the external sensor
Replace the batteries as soon as the low battery symbol is displayed. When inserting the new batteries always make sure the polarity is correct. The external sensor must then be registered again. To do this proceed as described under section 1.3 "Commissioning".
• Incorrect temperature and humidity display.
The temperature and humidity display are affected by direct sunlight and rain respectively. Please position the external sensor in such a way that it is not exposed to direct sunlight or rain.

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• The radio-controlled clock does not receive a radio signal
If the radio-controlled clock does not receive a signal, please try again at a different location. The reception of the signal can be impaired or even prevented by structural or natural obstructions (e.g. mountains). The weather station is equipped as a substitute with a quartz clock, which can then be operated as a substitute (see section 1.7 "Manually setting the time, date, language, temperature format (°C/°F) and time format (12/24hr)"). Electromagnetic or atmospheric interference can also disrupt the radio-controlled clock signal. This type of interference can normally be eliminated by simply selecting a different location.
• Electromagnetic interference
If possible, do not place the base station or the external sensor in close proximity to computers, printers, television sets, mobile telephones or radios, because devices with strong EMC radiation and other radio stations can prevent or interfere with radio reception.

4.19 TECHNICAL SPECIFICATIONS
Batteries: (supplied)
2 x 1.5 V AA batteries for the base station
2 x 1.5 V AA batteries for the external sensor

Please dispose of old batteries properly at designated collection points!

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