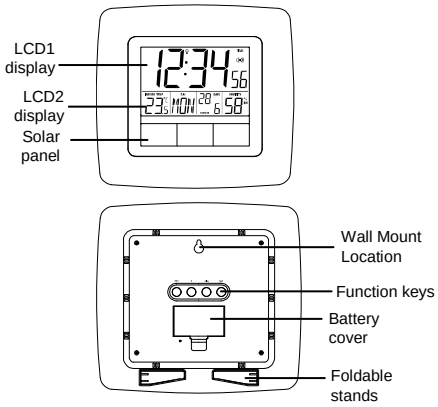
SOLAR WALL CLOCK

INSTRUCTION MANUAL

FEATURES:

SOLAR WALL CLOCK:



- DCF-77 Radio controlled time with manual time setting
- Time display: hour, minute, second
- 12/24h time format display
- Alarm setting with snooze function
- Calendar display
- Weekday display (4 languages to choose from: English, Spanish, French, German)
- Time zone setting
- Solar mode setting
- Indoor temperature display in ºC/ ºF selectable
- Indoor humidity display in RH%
- Primary Alkaline battery or rechargeable Alkaline battery selection

- Low battery indicator
- Wall mount or freestanding

TO INSTALL / REPLACE BATTERY

The solar wall clock can use either the included 1 x AA Alkaline rechargeable battery (charged by solar panel) or 1 x AA Alkaline battery (non-rechargeable; not included).

Important: the battery type selection (rechargeable or non-rechargeable) must be made BEFORE inserting the battery into the compartment otherwise it may cause damage to the clock!

INITIAL SETUP

The included alkaline rechargeable battery should provide you with many years of service. If your battery needs to be replaced, we suggest you use a fully charged AA Alkaline.

Rechargeable batteries should be fully charged before inserting into clock. **Alkaline rechargeable batteries are recommended.**

If you choose to use a non-rechargeable battery, the battery switch MUST be moved to the **BATTERY** position (not the SOLAR position). In this position, the solar cells do not charge the battery.
REGARDLESS OF THE TYPE OF BATTERY INSTALLED, THE BATTERY SWITCH MUST BE IN THE BATTERY POSITION WHEN THE BATTERY IS INSERTED.

If a rechargeable battery is used, the battery switch should be moved to the SOLAR position AFTER it is has been inserted.

To use the included rechargeable Alkaline battery (charged by solar panel):

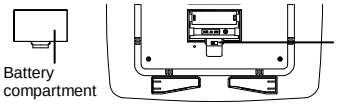
1. Remove the insulation tape.
2. Replace battery cover
3. Remove the black protective foil on the solar panel.

DO NOT SET THE CLOCK.

To use a non-rechargeable alkaline battery:

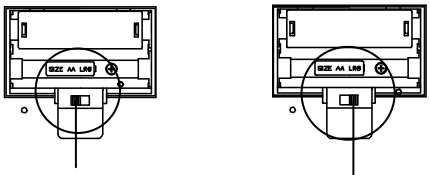
1. Remove the included rechargeable AA battery from the compartment.
2. Use the switch to select the alkaline battery (see below).
3. Insert 1 x AA, IEC LCR6, 1.5V Alkaline battery into the compartment, observing the correct polarity (see marking inside battery compartment.
4. Replace battery cover

DO NOT SET THE CLOCK.



Battery compartment cover

Use switch to select which type of battery will be used before inserting the battery into the compartment



Primary Alkaline battery switch position

Rechargeable Alkaline battery switch position

Note: For best performance, batteries should be replaced at least once every 2 years to maintain the best running accuracy. Ensure that the batteries used are new and the correct size.

Please help in the preservation of the environment and return used batteries to an authorized depot.

SETUP AFTER CHANGING/REPLACING THE BATTERY

1. After powering up the solar clock, all LCD segments will light up briefly and it will show the time (00:00), indoor temperature, date, and indoor humidity.
2. Next, the DCF time code reception will automatically start. This takes typically between 3 - 5 minutes in good conditions. If after 10 minutes the DCF time has not been received, use the “SET” key to enter the set-up mode to manually set the Time, Time Zone and Date (see manual settings below). The clock will continue to search for DCF at 3am and 5am. When the clock has successfully connected with DCF signal, it will override the manually set time and date.

   Note: When changing the battery:
   1. Be careful that it does not spring free from the contacts.
   2. Always wait at least 1 minute after removing battery before re-inserting, otherwise start up problems may occur.

RADIO CONTROLLED TIME

The time base for the radio controlled time is a Cesium clock operated by the Physikalisch Technische Bundesanstalt Braunschweig, which has a time deviation of less than one second in one million years. The time is coded and transmitted from Mainflingen near Frankfurt via frequency signal DCF-77 (77.5 kHz) and has a transmitting range of approximately 1,500 km. Your radio-controlled Weather Station receives this signal and converts it to show the precise time in summer or wintertime.

The quality of the reception depends greatly on the geographic location. In normal cases, there should be no reception problems within a 1500km radius of Frankfurt.
Once the indoor temperature is displayed on the solar wall clock, the DCF tower icon in the clock display will start flashing in the LCD. This indicates that the clock has detected that there is a radio signal present and is trying to receive it. When the

time code is received, the DCF tower becomes permanently lit and the time will be displayed.

Daily DCF reception is done at 03:00. If the reception is not successful at 03:00, then the other reception occurs at 05:00. If the reception at 05:00 is still not successful, then the next try will take place the next day.

If the tower icon flashes, but does not set the time or the DCF tower does not appear at all, then please take note of the following:

- Recommended distance to any interfering sources like computer monitors or TV sets is a minimum of 1.5 - 2 metres.
- Within ferro-concrete rooms (basements, superstructures), the received signal is naturally weakened. In extreme cases, please place the unit close to a window and/ or point its front or back towards the Frankfurt transmitter.
- During nighttime, the atmospheric disturbances are usually less severe and reception is possible in most cases. A single daily reception is adequate to keep the accuracy deviation below 1 second.

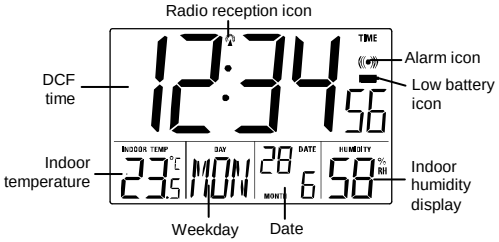
FUNCTION KEYS

The radio-controlled clock has four easy to use keys:

SET key	:	To enter into the set mode for the following functions: time zone, language, hour, minute, year, month, date, weekday, 12/24h time format display, ºC/ ºF temperature unit, and solar mode
+ key	:	To change any values in manual set mode
ALM key	:	To enter into the alarm set mode To activate/deactivate the alarm
SNZ key	:	To activate the snooze function during alarm To exit manual setting modes

LCD SCREEN DESCRIPTIONS

The radio-controlled clock's LCD is divided into 2 sections and once the batteries are inserted, all the segments will light up briefly before displaying the information for time, date, indoor temperature and indoor humidity.



MANUAL SETTINGS

Note:

If the solar wall clock has already successfully received the DCF time signal and displays the correct time and date, then the Manual settings can be skipped.

After completion of the above described procedures in "**Setting-up"** the manual setting modes can be entered by pressing the **SET** key. The following settings can now be programmed:

- Time zone setting
- Language display setting
- Manual time setting
- Year setting
- Month setting
- Date setting
- Weekday setting
- 12/24h time format display
- ºC/ºF temperature setting
- Solar mode setting

TIME ZONE SETTING

The time zone can be set between the 0 to -12 hour and then runs from 12 back to 0 in consecutive 1-hour interval. To do this:

1. After pressing the SET-Button the current time zone value starts flashing.
2. Use the **+** key to set the time zone. The range runs from 0 to -12 and then runs from 12 back to 0 in consecutive 1-hour interval.
3. Press and release the **SET** key to enter the **"Language Setting"**.

LANGUAGE SETTING

The weekdays can be displayed in LCD1 with the pre-set languages: English (US), Spanish (E), French (F), and German (d). (default language: German):

1. Set the desired language for the weekday display using the **+** key.
2. Press and release the **SET** key to enter the mode **"Manual Time Setting"**.

MANUAL TIME SETTING

In case the solar wall clock is not able to detect the DCF-signal (disturbances, transmitting distance, etc.), the time can be manually set. The clock will then work as a normal Quartz clock.

1. The hour digits will start flashing on LCD1.
2. Set the desired hours by pressing and releasing the **+** key followed by pressing the **SET** key.
3. Now the minute digits will start flashing.
4. Set the desired minutes by pressing and releasing the **+** key. If the **+** key is held, the units will increase by 5.
5. Press and release the **SET** key to move to the **"Year Setting"**.

YEAR SETTING

The year can be selected sequentially from 2001 to 2029 and will then start over again (default setting 2006). The year will only appear in the manual setting mode.

1. The year digits will start flashing (only last 2 digits) on LCD2. Select the desired year by use of the **+** key.
2. Press and release the **SET** key to switch to the **"Month Setting"**.

MONTH SETTING

1. The month digit on LCD2 will start flashing (Default setting 1). Set the desired month by use of the **+** key.
2. Press and release the **SET** key to move to the mode **"Date Setting"**.

DATE SETTING

1. The digits for the date will start flashing on LCD2 (Default setting 1). Set the desired date by use of the **+** key. **Note:** The date can only be set in conjunction with the selected month. For example, it is not possible to set the date 30 if the month of February is selected.
2. Press and release the **SET** key to move to "**Weekday Setting**".

WEEKDAY SETTING

1. The weekday symbols will be displayed on LCD2 in the pre-set language and flashing. Set the desired weekday by use of the **+** key.
2. Press and release the **SET** key to enter the mode **"12/24h Time Format Setting"**.

12/24H TIME FORMAT SETTING

The time format can be display in 12h or 24h (Default setting "24h").

1. The digits **"12"** or **"24"** will start flashing on LCD1. By use of the **+** key select 12h or 24h time format display.
2. Press and release the **SET** key to enter the mode **"ºC or ºF Temperature Setting"**.

℃ OR ℉ TEMPERATURE

The temperature setting can be set to either to ºC or ºF (Default setting ℃).

1. The characters **"°C"** or **"°F"** will start flashing on LCD1. By use of the **+** key select **"°F"** for temperature display in degrees Fahrenheit or **"°C"** for degrees Celsius.
2. Press and release the **SET** key to enter the mode **"Solar Mode Setting"**.

SOLAR MODE

The Solar Mode is used for saving the power consumption of the rechargeable battery (Default setting ON):

1. The characters **"ON"** or **"OFF"** will start flashing on LCD1. By use of the **+** key select **"ON"** or **"OFF"** to set the solar mode.
2. Press and release the **SET** key to exit the setting mode and switch back to the normal display mode.

If the solar mode setting is ON:

- LCD will automatically turn OFF if the environment is too dark
- LCD will automatically turn ON if the environment is bright enough; the surrounding environment brightness is checked every 5 seconds (brightness detection is not checked during DCF reception)
- No information will be displayed when the LCD is OFF, but all the settings and operations will remain, except for the temperature and humidity measurements.
- If the user wants to check data while the display is automatically turned off, because the environment is not bright enough, take the clock into a brighter environment. The display will turn on again.

Important note:
If the environment is dark for 3 consecutive days:

- The brightness is checked every 30 seconds; it will resume to be check every 5 seconds once it has detected that the brightness level is high enough
- There is no DCF time reception until the level of brightness is high enough; the DCF reception will restart once the brightness level is high enough.

If the solar mode setting is OFF:

- LCD will remain ON constantly.

EXIT THE MANUAL SETTING MODES

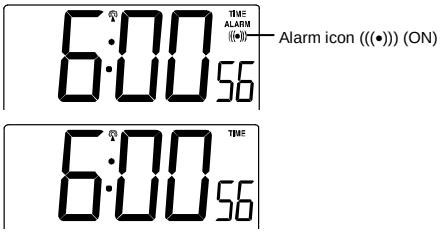
- To return to the normal display mode from anywhere in manual setting mode simply press the **SNZ** key anytime.
- If no keys are pressed for at least 15 seconds in setting mode, the radio-controlled solar clock will automatically switch back to normal display mode.

ALARM

To enter into the alarm setting mode:

1. Hold the **ALM** key for 4 seconds. The hour digits start flashing.
2. Press and release the **+** key to set the hour.
3. Press and release the **ALM** key to set the minutes. The minute digits start flashing.
4. Press and release the **+** key to set the minutes. If the **+** key is held, the unit will increase by 5
5. Press and release again the **ALM** key to exit the Alarm setting mode or wait for 15 seconds automatic timeout.

TO DEACTIVATE THE ALARM:



The alarm will be automatically ON when the alarm time is set. To deactivate the alarm (OFF), press and release once the

ALM key in normal mode display. The alarm icon will disappear, the alarm is now off.

SNOOZE SETTING

The snooze can only be activated during alarm time for a snooze duration of 10 minutes by pressing the **SNZ** key on the back of the clock.

POSITIONING

Before permanently mounting ensure that the solar wall clock is able to receive DCF signals from the desired location. Also, extreme and sudden changes in temperature will decrease the accuracy of the solar wall clock.

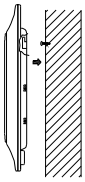
There are two possible ways to mount the solar clock:

- use of the foldable table stands, or
- wall mounting

FOLDABLE TABLE STANDS

The foldable table stands legs are located on the backside. Unfold the stands out, below the battery compartment. Once the foldout table stands are extended, place the radio-controlled solar clock in an appropriate location.

WALL MOUNTING



1. Install a mounting screw (not included) into a wall—leaving approximately 5mm extended from the wall.
2. Place the solar clock onto the screw, using the hanging hole on the backside. Gently pull the radio-controlled clock down to lock the screw into place.

Note: Always ensure that the radio-controlled clock locks onto the screw before releasing.

CARE AND MAINTENANCE:

- Avoid placing the unit in areas prone to vibration and shock as these may cause damage.
- Avoid areas where the unit can be exposed to sudden changes in temperature, i.e. direct sunlight, extreme cold and wet/moist conditions as these will lead to rapid changes which reduce the accuracy of readings.
- When cleaning the LCD and casing, use a soft damp cloth only. Do not use solvents or scouring agents.
- Do not submerge the unit into water.
- Immediately remove all low powered batteries to avoid leakage and damage. Replace only with new battery of the recommended size.
- Do not make any repairs to the unit. Please return it to the original point of purchase. Opening and tampering with the unit may invalidate the warranty.

SPECIFICATIONS:

Temperature measuring range

Indoor : -9.9°C to +59.9°C with 0.1°C resolution
(14.1°F to 139.8°F with 0.2°F resolution)
("OFL" displayed if outside this range)

Temperature checking interval

Indoor : every 60 seconds

Humidity measuring range

Indoor : 20% to 95% with 1% resolution
("—" displayed if temperature is OFL; "19%" displayed if below 20%, "96%" displayed is above 95%)

Power consumption

Alkaline rechargeable battery :
1 x AA, IEC LR6, 1.5V (included), rechargeable by solar cell
Rechargeable Alkaline battery life :
18 – 60 months, depending on usage
Primary Alkaline battery :
1 x AA, IEC LR6, 1.5V battery (not included)
Primary Alkaline battery life : about 24 months

Dimensions (L x W x H)
Solar clock : 233.4 x 28.4 x 216.5mm

LIABILITY DISCLAIMER

- The electrical and electronic wastes contain hazardous substances. Disposal of electronic waste in wild country and/or in unauthorized grounds strongly damages the environment
- Please contact your local or/and regional authorities to retrieve the addresses of legal dumping grounds with selective collection
- All electronic instruments must from now on be recycled. User shall take an active part in the reuse, recycling and recovery of the electrical and electronic waste.
- The unrestricted disposal of electronic waste may do harm on public health and the quality of environment.
- This product must however not be thrown in general rubbish collection points.
- As stated on the gift box and labeled on the product, reading the “User manual” is highly recommended for the benefit of the user.
- The manufacturer and supplier cannot accept any responsibility for any incorrect readings and any consequences that occur should an inaccurate reading take place.
- This product is not to be used for medical purposes or for public information.
- This product is only designed to be used in the home as indication of the future weather and is not 100% accurate. Weather forecasts given by this product should be taken only as an indication and not as being totally accurate.
- The specifications of this product may change without prior notice.
- This product is not a toy. Keep out of the reach of children.
- No part of this manual may be reproduced without written consent of the manufacturer.

R&TTE DIRECTIVE 1999/5/EC
Summary of the Declaration of Conformity : We hereby declare that this wireless transmission device does comply with the essential requirements of R&TTE Directive 1999/5/EC.