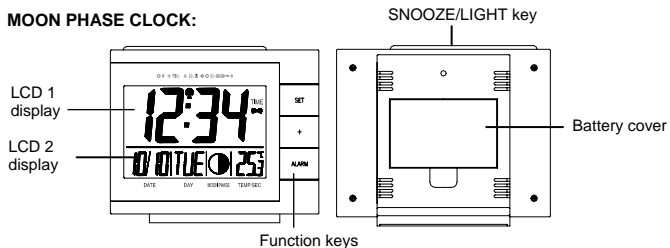## MOON PHASE CLOCK
Instruction Manual

INTRODUCTION

Congratulations on purchasing this state-of-the-art Moon Phase Clock as an example of superior design and engineering. Providing radio-controlled time, date, indoor temperature display, and Moon phases, this innovative clock is ideal for home or office use. Operation of this product is simple and straightforward. By reading this operating manual, the user will receive a better understanding of the functions and the optimum benefit of all its features.

MOON PHASE CLOCK:

SNOOZE/LIGHT key

LCD 1 display

LCD 2 display

Battery cover

Function keys

FEATURES

DCF-77 Radio controlled time with manual setting option
12/24 hour display
Time display: hour, minute and seconds
Calendar display
Weekday display with seven language options: German, English, French, Spanish, Italian, Dutch and Danish.
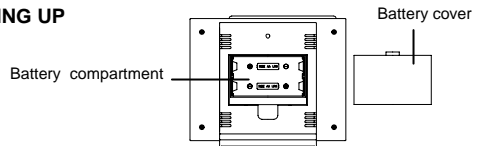Time zone options ±12 hours
Alarm setting with snooze function
Indoor temperature display in degree Celsius or Fahrenheit
Display of 8 Moon phases throughout the year
E.L. back light
Table standing

SETTING UP

Battery cover

Battery compartment

1. Slide the battery cover open on the Moon Phase Clock as indicated.

2. Checking the correct polarization, insert 2 x AA IEC LR6, 1.5V batteries into the battery compartment and replace the battery cover.
3. Once the batteries are in place while beep sounds shortly, all segments of the LCD will light up briefly. Then the indoor temperature, the time as 0:00, the date as 1/1, weekday as MON and the Moon phase will be displayed.
4. The DCF-77 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, the clock will automatically attempt to receive the DCF time at the next full hour. When this is successful, the received time will be displayed. The date and Moon phase will also be updated with the received time (Please refer also to notes on "**Radio controlled time**")

BATTERIES CHANGE

For best performance, batteries should be replaced at least once and a year to maintain the best running accuracy. Ensure that the batteries used are new of the correct size.

Note:
Always wait for 2 minutes after removing the batteries before reinserting, otherwise start up and transmission problems may occur.

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

FUNCTION KEYS

The Moon Phase Clock has four easy to use keys:

SET key:
To enter the manual setting modes if press for about 1 second
To activate the E.L. back light for about 4 seconds
To stop the alarm

+ key:
To change the values in all setting modes
To **a**lternate between indoor temperature and seconds display
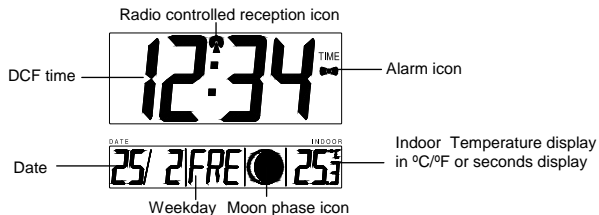To switch ON the E.L. back light for about 4 seconds
To stop the alarm

ALARM key:
To enter the alarm setting mode if press for about 1 seconds
To activate the E.L. back light for about 4 seconds
To set the alarm ON/OFF
To stop the alarm

SNOOZE/LIGHT key:
To activate the snooze function during alarm
To switch OFF the alarm for the next 24 hours if pressed for about 1 second during alarm function or snooze
To display the alarm time and to activate the E.L. back light for 4 seconds
To stop the alarm
To exit any setting modes

LCD SCREEN

The Moon Phase Clock's LCD is divided into 2 sections and once the batteries are inserted, all the segments will light up briefly before displaying:

Radio controlled reception icon

DCF time

TIME

Alarm icon

Indoor Temperature display in ºC/ºF or seconds display

Date

Weekday Moon phase icon

LCD1- DCF RADIO CONTROLLED TIME, ALARM AND SNOOZE

Once the batteries are inserted into the battery compartment, the Moon Phase Clock will receive the DCF time within 3-5 minutes. Once received, all segments of the clock will display the informations accordingly, then no further reception will take place for the DCF signal that day.

The DCF reception takes places at 2:00 and 3:00 am each day. If the clock is unable to receive the reception, it will attempt to receive the DCF time at the next full hour or as long as it receives the DCF time successfully.

The time base for the radio controlled time is a Cesium Atomic 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 Moon Phase Clock 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.

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

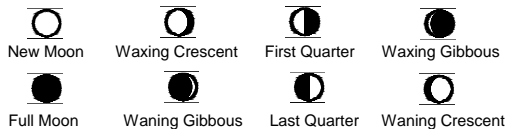## LCD2- DATE, WEEKDAY, MOON PHASE, SECONDS AND INDOOR TEMPERATURE

Once the DCF time has been received, the date (day and month) , weekday, Moon phase and indoor temperature will be displayed accordingly.

DATE AND WEEKDAY

The date and weekday will be automatically displayed after the DCF time has been received.

MOON PHASES SYMBOLS:

The Moon Phase Clock will display all 8 Moon phases throughout the year.

New Moon	Waxing Crescent	First Quarter	Waxing Gibbous

Full Moon	Waning Gibbous	Last Quarter	Waning Crescent

INDOOR TEMPERATURE AND SECONDS DISPLAY

The indoor temperature will be displayed and updated every 10 seconds.
The seconds can be displayed when pressing the + key. To return to the indoor temperature display, press again the + key.

MANUAL SETTING

By pressing and holding the SET key for about 1 second, the following settings can be changed.
1.   Time zone setting
2.   Language for weekday display setting
3.   Time setting (hour and minutes)
4.   Calendar setting (year, month, day and weekday)
5.   12 or 24 hour setting
6.   Temperature setting in °C (degrees Celsius) or °F (degrees Fahrenheit)

TIME ZONE SETTING

The time zone can be be ajusted between ±12 hours. To change the time zone:
1.   Press the + key to set the time zone (default setting 0 hour)
2.   Using the SET key to move into the "Language setting" mode. To exit the programming mode, press the SNOOZE /LIGHT key anytime or wait around 15 seconds to automatically return to normal display mode.

LANGUAGE FOR WEEKDAY DISPLAY SETTING

The weekday can be shown in seven different languages (D=German, GB=English, F=French, E=Spanish, I=Italian, NL=Dutch and DK=Danish), and every weekday is shown with 3 letters each (e.g. MON=Monday), except for Dutch (only 2 letters).
1.   Press the + key to select the desired language. (default in "D")

2. Using the SET key to move into the "Time setting" mode. To exit the programming mode, press the SNOOZE /LIGHT key anytime or wait around 15 seconds to automatically return to normal display mode.

TIME SETTING
1. After entering into the time setting, the Hour digit in the time section starts flashing
2. Press the + key to set the hours of the current time and then followed by pressing the SET key to move into the minutes mode.
3. Again, press the + key to set the minutes of the current time (by holding the key down, the digits are incremented in steps of five).
4. Press the SET key to enter the "Calendar setting" mode or do not touch any buttons for around 15 seconds to confirm the time setting. To exit the programming mode, press the SNOOZE/LIGHT key anytime. The mode will return to normal.

CALENDAR SETTING
1. The year digit starts flashing (default setting "00")
2. Press the + key to set the current year, (The range runs from 2000 to 2019, and only last 2 digits of the year will be displayed. e.g. 2000=00) and then followed by pressing the SET key to move into the month mode.
3. Again, press the + key to set the current month and then followed by pressing the SET key to move into the date mode.
4. Press the + key to set the current date and then followed by pressing the SET key to move into the weekday mode.
5. Once again, press the + key to set the current weekday.

6. Press the SET key to enter the "12/24 hour display setting" mode or do not touch any buttons for around 15 seconds to confirm the calendar setting. To exit the programming mode, press the SNOOZE /LIGHT key anytime. The mode will return to normal.

12/24 HOUR DISPLAY SETTING
The default time display for the clock is 24 hour, to select 12 hour display:
1. "24" will start flashing on the LCD, press the + key to select "12"
2. Press the SET key to enter the "Celsius or Fahrenheit degree setting" mode or do not touch any buttons for around 15 seconds to confirm the 12/24 hour display setting. To exit the programming mode, press the SNOOZE/LIGHT key anytime. The mode will return to normal.

CELSIUS OR FAHRENHEIT DEGREE INDOOR TEMPERATURE SETTING
Following from the 12/24 hour setting mode, the indoor temperature setting display can be changed.
1. "°C" will appear on the LCD (default in "°C"). If "°C" is displayed then the current temperature reading is set to Celsius. If "°F" is displayed then the current temperature reading is set to Fahrenheit.
2. To select the temperature setting, simply press the + key.
3. Press SET key to confirm or do not touch any buttons for around 15 seconds or press the SNOOZE/LIGHT key to exit the programming mode anytime. The mode will return to normal.

ALARM SETTING

The maximum alarm duration is 80 seconds. To set the alarm function:
1. Press the ALARM key for about 1 second or until the digits start flashing in the LCD to enter into the Alarm setting mode. The hour digits start flashing.
2. Press the + key to set the hour.
3. Press the ALARM key to enter the minute mode. The minute digits start flashing.
4. Press the + key to set the minutes.
5. Press the ALARM key or the SNOOZE/LIGHT key to exit the Alarm setting mode or wait for 15 seconds automatic timout.

Note:
If the ALARM key is pressed for a short time, the alarm toggles between ON/OFF. At the same time, the current alarm time will be displayed together with E.L. back light ON for about 4 seconds.

TO ACTIVATE / DEACTIVATE THE ALARM:

The alarm will automatically be ON upon entering and exiting the Alarm setting mode. To desactivate the alarm (OFF), use the ALARM key in normal mode display.

SNOOZE SETTING

When pressing the SNOOZE/LIGHT key during alarm sounding, the snooze function is activated for a duration of 9 full minutes and the E.L. back light will be ON for about 4 seconds.

When keeping the SNOOZE/LIGHT key during alarm sounding for 1 second, after confirmation of a "beep" sound, the alarm will switch OFF for the next 24 hours and no snooze function will be activated.

Note:
If the SNOOZE/LIGHT key is pressed shortly anytime, except during alarm ringing, it will activate the E.L. back light for 4 seconds
If the SNOOZE/LIGHT key is pressed for about 1 second, except during alarm ringing, it will display the alarm time together with the E.L. back light ON for about 4 seconds.

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 reduces 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 batteries of the recommended size.
Do not make any repairs to the unit. Please return it to the original point of purchase for repair by a qualified engineer. Opening and tampering with the unit may invalidate its guarantee.

SPECIFICATIONS

Indoor temperature measuring range : 0ºC to +50ºC with 0.1ºC resolution
32ºF to +122ºF with 0.2ºF resolution
("--:-" displayed if outside this range)
Indoor temperature checking interval : every 10 seconds
Power source : 2 x AA, IEC LR6, 1,5V batteries
(Alkaline batteries recommended)
Battery life : about 12 months
Dimensions (L x W x H) : 118 x 50 x 100mm

LIABILITY DISCLAIMER

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 only designed for use in the home

This product is not to be used for medical purposes or for public information.

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 authorization of the
manufacturer.