

RADIO CONTROLLED ALARM CLOCK WITH OUTDOOR TEMPERATURE

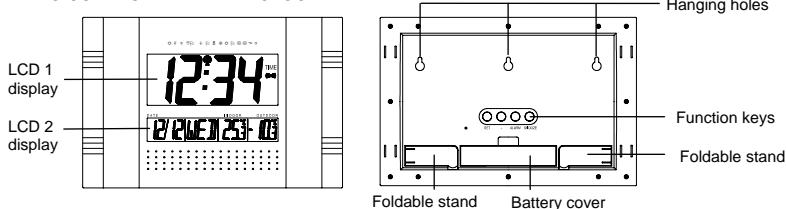
Instruction Manual

INTRODUCTION

Congratulations on purchasing this state-of-the-art Radio Controlled Alarm Clock as an example of superior design and engineering. Providing DCF radio-controlled time, date, time zone, indoor and outdoor temperature display, 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 however receive a better understanding of the Alarm Clock together with the optimum benefit of all its features.

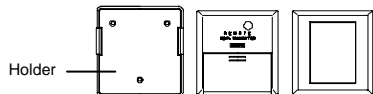
FEATURES

RADIO CONTROLLED ALARM CLOCK:



- DCF Radio controlled time with manual time setting
- 12/24 hour time display
- Time display: hour, minute, second
- Alarm setting with snooze function
- Calendar display
- Weekday display (7 languages to choose from: German, English, French, Italian, Spanish, Dutch, and Danish)
- Time zone setting
- °C or °F temperature display selectable
- Indoor temperature display
- Outdoor temperature display via 433MHz transmission
- Wall mounting or freestanding

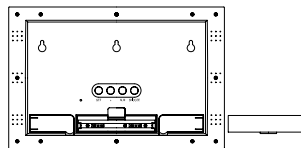
OUTDOOR TEMPERATURE TRANSMITTER:



- Remote transmission of outdoor temperature to Temperature Station by 433MHz signals
- Wall mounting case

BATTERIES INSTALLATION

TO INSTALL AND REPLACE BATTERIES IN THE ALARM CLOCK:

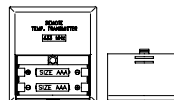


The Alarm Clock uses 2 x AA, IEC LR6, 1.5V batteries. To install and replace the batteries, please follow the steps below:

1. Insert finger or other solid object in the space at the bottom centre of the battery compartment and lift up to remove the cover.
2. Insert batteries observing the correct polarity (see marking).
3. Replace compartment cover.

TO INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE TRANSMITTER:

The transmitter uses 2 x AAA, IEC LR3, 1.5V batteries. To install and replace the batteries, please follow the steps below:



1. Remove the cover.
2. Insert the batteries, observing the correct polarity (see marking).
3. Replace the battery cover on the unit.

SETTING UP

1. Insert the 2 x AAA, IEC LR3, 1.5V batteries into the transmitter (See **"To install and replace batteries in the Temperature Transmitter"** above).
2. Within 3 minutes, insert 2 x AA, IEC LR6, 1.5V batteries into the Alarm Clock as indicated above (see **"To install and replace batteries in the Alarm Clock"** above).
3. Once the batteries are in place, all segments of the LCD will light up briefly. Then the indoor temperature, the time as --:-- , the date as 1.1. , and weekday will be displayed.
4. The Alarm Clock will start receiving data from the transmitter. The remote temperature will then be displayed on the Alarm Clock. If the outdoor temperature is not displayed 90 seconds after inserting the batteries into the receiver, all batteries are needed to be removed and wait for at least 1 minute for reset from step 1.
5. The DCF time code reception will automatically start. This takes typically between 3 - 5 minutes in good conditions. This time period is an excellent opportunity to locate the transmitter(s) in suitable location(s) outdoors. In order to ensure sufficient 433 MHz transmission however, this should under good conditions be no more than 20 - 25 meters from where the Alarm Clock will be finally positioned (see notes on **"Positioning"** and **"433 MHz Reception"**).
6. If after 10 minutes the DCF time has not been received, use the SET key to manually enter the set mode and change either the time or date in order to activate the DCF reception. The clock will then automatically attempt to receive the DCF time every full hour each day. When this is successful, the received time will override the manually set time. The date is also updated with the received time (Please refers to notes on **"DCF Radio controlled time"** and **"Manual time setting"**).

Note:

In the event of changing batteries of the unit ensure that the batteries do not spring free from the contacts. Always wait at least 1 minute after removing the batteries before reinserting, otherwise start up and transmission problems may occur.

BATTERIES CHANGE



For best performance, batteries should be replaced at least once a year 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.

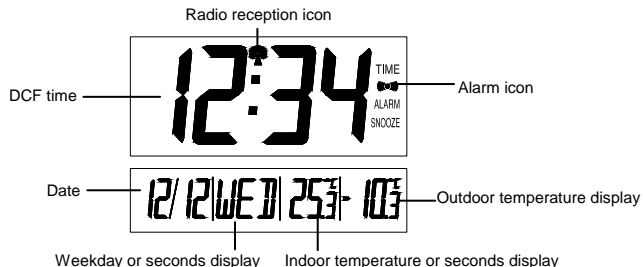
FUNCTION KEYS

The Alarm 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, day, weekday, 12/24 hour, °C or °F temperature display
- +** key : To toggle between the second, temperature or weekday display
To change any values in manual set mode
- ALARM** key : To enter into the alarm set mode
To set the alarm ON/OFF
- SNOOZE** key : To activate the snooze function during alarm
To display the alarm time in normal mode display
To exit the setting modes

ALARM CLOCK LCD SCREEN DESCRIPTIONS

The Alarm 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 and outdoor temperatures.



CHANGING THE DISPLAY MODE (DAY, SECONDS, AND TEMPERATURES)

There are three possible display modes to view the day, seconds, and temperatures.

The *date&month/weekday/indoor temperature/outdoor temperature* is the default.

To change the display:

1. Press the + key. The display should now show the *date&month/weekday/seconds/outdoor temperature*.

2. Press the + key a second time and the display will now show the *date&month/seconds/indoor temperature/outdoor temperature*.
3. Press the + key third time and the display will return to the normal display.

DCF RADIO CONTROLLED TIME

The time base for the radio controlled time is a Cesium Alarm 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 Alarm 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 1,500 km radius of Frankfurt.

Once the outdoor temperature is displayed on the Alarm Clock, the DCF tower icon in the clock display will start flashing in the top center of 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.

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 – 2.0 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.

Note:

In case the Alarm Clock is not able to detect the DCF-signal (disturbances, transmitting distance, etc.), the time can be manually set (please refer to notes on “**Manual time setting**”).

MANUAL SETTINGS

Note:

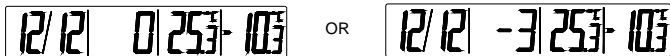
If the Alarm Clock has already successfully received the DCF time signal and displays the correct time and date, then the Manual time settings can be omitted.

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
- 12/24 hour time display setting
- °C or °F setting

TIME ZONE SETTING

After entering the manual setting mode as described above, the time zone can be set between the 0 to ± 12 hour range in LCD 2. To do this:



1. The time zone (LCD 2) will start flashing (default setting "0h"). Select the desired time zone by use of the + key.
2. Press the **SET** key to enter the "Language Setting".

LANGUAGE SETTING

The weekdays can be displayed in LCD 2 with the pre-set languages: "D" for German, "GB" for English, "F" for French, "I" for Italian, "E" for Spanish, "NL" for Dutch, and "DK" for Danish (default setting "D").



1. Set the desired language for the weekday display in LCD 2 by use of the + key.
2. Press the **SET** key to enter the mode "Manual Time Setting".

MANUAL TIME SETTING

In case the Alarm Clock is not be 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.

Note:

In 12 hours mode the time will be displayed with an additional "PM" for the time from 12:00 noon until 11:59.



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

Note:

The unit will still try and receive the signal every day despite it being manually set. When it does receive the signal, it will change the manually set time into the received time. During reception attempts the DCF tower icon will flash. If reception has been unsuccessful, then the DCF tower icon will not appear but reception will still be attempted the following hour.

DCF time reception takes place every hour each day. The other times DCF reception takes place, are upon setup and after manual time set exiting mode.

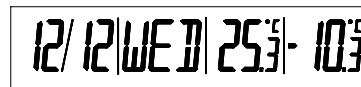
YEAR SETTING



The year can be selected sequentially from 2000 to 2049 and will then start over again (default setting 2000). Only the last 2 digits of the year will be visible on LCD 2.

1. The year digits will start flashing on LCD 2. Select the desired year by use of the + key.
2. Press the **SET** key to switch to the "Month Setting".

MONTH SETTING



1. The month digits on LCD 2 will start flashing. Set the desired month by use of the + key.
2. Press the **SET** key to move to the mode "Date Setting".

DATE SETTING

1. The digits for the date will start flashing on LCD 2 (Default setting 1). Set the desired date by use of the + key.

Note:

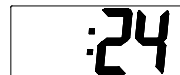
The date can only be set in conjunction with the selected month. For example, it is not possible to set the date 30 if the month of February is selected.

2. Press the **SET** key to enter the "Weekday Setting".

WEEKDAY SETTING

1. The weekday symbols will be displayed on LCD 2 in the pre-set language and flashing (default setting "MON"). Set the desired weekday by use of the + key.
2. Press the **SET** key to enter the mode "12/24 Hours Time Display Setting".

12/24 HOURS TIME DISPLAY SETTING



1. The "12h" or "24h" will start flashing in LCD 1 (Default setting 24h). Select the desired time display mode by use of the + key.
2. Press the **SET** key to enter the "°C/°F Temperature Setting".

°C OR °F TEMPERATURE SETTING



1. The characters "°C" or "°F" will start flashing on LCD 1 (Default setting °C). By use of the + key select "°C" for temperature display in degrees Celsius or "°F" for degrees Fahrenheit.
2. Press the **SET** key to exit the setting mode and switch back to the normal display mode.

EXIT THE MANUAL SETTING MODES

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

ALARM SETTING



To enter into the alarm setting mode:

1. Hold the **ALARM** key for 2 seconds. The hour digits start flashing.
2. Press the + key to set the hour.
3. Press the **ALARM** key to set the minutes. The minute digits start flashing.
4. Press the + key to set the minutes.
5. Press again the **ALARM** key to exit the Alarm setting mode or wait for 15 seconds automatic timeout

TO DEACTIVATE THE ALARM:



The alarm will be automatically ON. To deactivate the alarm (OFF), press once the **ALARM** key in normal mode display.

SNOOZE SETTING

The snooze can only be activated during alarm time for a snooze duration of 10 minutes.

OUTDOOR TEMPERATURE TRANSMITTER

The temperature is measured and transmitted to the Alarm Clock every 1 minute. The Alarm Clock will update the temperature display every 5 minutes.

The range of the Outdoor Temperature Transmitter may be affected by the temperature. At cold temperatures the transmitting distance may be decreased. Please bear this in mind when positioning the transmitter. Also the batteries may be reduced in power.

433MHz RECEPTION CHECK FOR OUTDOOR TEMPERATURE TRANSMITTER

If the temperature data is not being received 90 seconds after setting up or within a period of 15 minutes during normal operation (the display shows "--"), then please check the following points:

1. The distance of the Alarm Clock or Outdoor Temperature Transmitter should be at least 2 meters away from any interfering sources such as computer monitors or TV sets.
2. Avoid placing the receiver onto or in the immediate proximity of metal window frames.
3. Using other electrical products such as headphones or speakers operating on the same signal frequency (433MHz) may prevent correct signal transmission and reception.

4. Neighbours using electrical devices operating on the 433MHz signal frequency can also cause interference.

Note:

When the 433 MHz signal is received correctly, do not re-open the battery cover of either the Outdoor Temperature Transmitter or Alarm Clock, as the batteries may spring free from the contacts and force a false reset. Should this happen accidentally then reset all units (see **Setting up** above) otherwise transmission problems may occur.

The maximum transmission range is 25 meters from the Outdoor Temperature Transmitter to the Alarm Clock (in open space). However, this depends on the surrounding environment and interference levels. If no reception is possible despite the observation of these factors, all system units have to be reset (see **Setting up**).

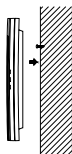
POSITIONING

The Alarm Clock can be either free standing or hanging on a wall



To free stand:

Simply unfold the 2 stands at the back of the clock and place on a flat surface.



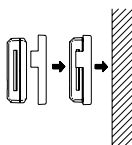
To wall mount:

- 1) Install three mounting screws (not included) into a wall within transmission range—leaving approximately 5 mm extended from the wall
- 2) Using a straightedge, horizontally space at 100.58 mm three screw positions on a wall.
- 3) Place the Alarm Clock onto the screws, using the hanging holes on the backside. Gently pull the Alarm Clock down to lock the screws into place.

Note:

Always ensure that the Alarm Clock locks onto the screws before releasing.

POSITIONING THE OUTDOOR TEMPERATURE TRANSMITTER



The Temperature Transmitter is supplied with a holder that may be attached to a wall with the three screws supplied. Before securing the transmitter, ensure that the 433MHz signal (outdoor temperature readings) is properly received. To attach to the wall, please follow the steps below:

1. Mark the wall using a pen through the holes in the holder to obtain the exact drilling position.
2. Drill holes in the wall at the points marked.
3. Screw holder onto wall.

There is also double sided tape included with the wall mount. On smooth surfaces this can be used instead of drilling holes. The mounting surface can, however, affect the transmission range. If for example the unit is attached to a piece of metal, it may then either reduce or increase the transmitting range. For this reason, we recommend not placing the unit on any metal surfaces or in any position where a large metal or highly polished surface is in the immediate proximity (garage doors, double glazing, etc.). Before securing in place, please ensure that the Weather station can receive the 433 MHz signal from the Temperature transmitter at the positions that you wish to situate them.

The Temperature Transmitter simply clicks in or out of the holder. When inserting or removing the Temperature Transmitter from the wall holder please hold both units securely.

CARE AND MAINTENANCE

- Avoid placing the units in areas prone to vibration and shock as these may cause damage.
- Avoid areas where the units 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 units 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 units. Please return it to the original point of purchase. Opening and tampering with the units may invalidate the warranty.

SPECIFICATIONS

Temperature measuring range

Indoor	:	0°C to +60°C with 0.1°C resolution +32°F to +140°F with 0.2°F resolution ("OFL" displayed if outside this range)
Outdoor	:	-29.9°C to +69.9°C with 0.1°C resolution -21.8°F to +157.8°F with 0.2°F resolution ("OFL" displayed if outside this range)

Temperature checking interval

Indoor	:	every 10 seconds
Outdoor	:	every 5 minutes
Transmission distance	:	maximum 25 meters in open field, depending upon surrounding structures, mounting location and possible interfering sources

Power source (Alkaline batteries recommended)

Alarm Clock	:	2 x AA, IEC LR6, 1.5V batteries
Transmitter	:	2 x AAA, IEC LR3, 1.5V batteries
Battery life	:	about 12 months
Dimensions (L x W x H)	:	
Alarm Clock	:	290 x 25 x 190 mm
Transmitter	:	59 x 21 x 65 mm

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 or office.
- 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.

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.