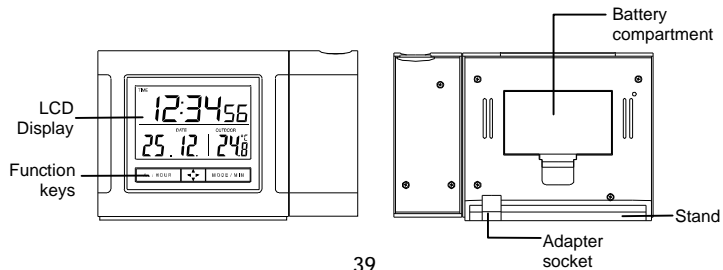


## 433 MHz RADIO CONTROLLED PROJECTION ALARM CLOCK

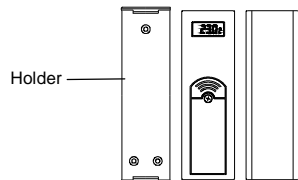
### Instructions manual

#### INTRODUCTION:

Congratulations on purchasing this innovative 433MHz Projection alarm clock which displays indoor temperature and humidity and also outdoor temperature. To enjoy the full benefits of this innovative product, please read this operating manual.



## TEMPERATURE TRANSMITTER:



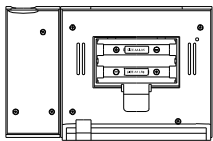
## FEATURES

- Radio-controlled time and date
- Projection of time and outdoor temperature
- EL backlight
- Displays time with seconds, indoor temperature & humidity

- Display outdoor temperature
- Time alarm with snooze

### **TO INSTALL AND REPLACE BATTERIES INTO THE PROJECTION ALARM**

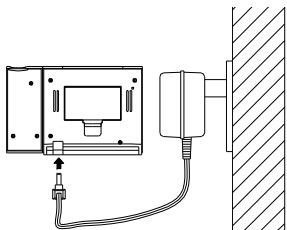
The Projection Alarm uses 2 x AA, IEC LR6, 1.5V batteries. To install and replace the batteries, please follow the steps below:



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

In addition or instead of inserting batteries, the AC adapter can be used:

1. Connect the power adapter to a wall socket
2. Insert the adapter into the jack at the bottom of the clock
3. The Projection clock will now start receiving the DCF time signal. After approximately 3 to 5 minutes, the DCF time will be displayed (Also see "**SETTING UP**" below) .



**Important!**

Use only the adapter provided with the projection clock and make sure that your household voltage is appropriate to the working voltage of the transformer. Otherwise your Projection clock may be damaged.

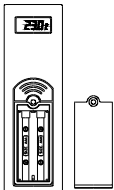
**POWER SUPPLIED BY BATTERIES AND AC/DC ADAPTER**

If the Projection clock is first powered by batteries and the power adapter is subsequently used for extended period of time, the main power source of the Projection clock will switch to AC/DC power. The batteries will then act as a backup power source in case of power failure.

## TO INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE TRANSMITTER

The Temperature 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. First, insert 2 x AA, IEC LR6, 1.5V batteries into the projection clock. Once the batteries are in place, all segments of the LCD will light up briefly. Then the indoor temperature, the time as 0:00, will be displayed. If the indoor temperature is not displayed after a few seconds, remove the batteries and wait for at least 30 seconds before reinserting them. Once the indoor data is displayed proceed to step 2.
2. Within 1-1/2 minutes of activating the Projection clock, place 2 x AAA, IEC LR3, 1.5V batteries into the transmitter.
3. After a few seconds of inserting the batteries into the transmitter, the projection clock will start receiving data from the transmitter. The remote temperature will then be displayed on the clock. If this does not happen after 2 minutes, the batteries will need to be removed from both units and reset from step 1.
4. When the transmitter is set up, there is a testing period. Then DCF-77 time code reception is automatically started just after the clock is activated. This takes typically between 3 - 5 minutes in good conditions. This time period is an excellent opportunity to locate the transmitter in suitable location outdoors. In order to

ensure sufficient 433 MHz transmission however, this should under good conditions be no more than 25 metres from where the Projection clock will be finally positioned (see notes on "**POSITIONING THE OUTDOOR TRANSMITTER**" and "**433 MHZ RECEPTION**").

5. If after 10 minutes the DCF time has not been received, use the MODE/ MIN key to manually enter a time (and date) initially. The clock will automatically attempt each hour to receive the DCF time. When this is successful, the received time will override the manually set time.

**Note:**

Should the total time of inserting the batteries into the transmitter take longer than 1-1/2 minutes from the time of inserting the batteries into the projection clock then temperature reception problems may occur. If the temperature is not being received, then see "**433 MHZ RECEPTION**", before resetting the units.

In the event of changing batteries to the transmitter, the projection clock needs to be reset. (See **RESETTING THE PROJECTION CLOCK**)



### **RESETTING THE PROJECTION CLOCK**

To reset the Projection clock to the factory default setting or in case of a malfunction or changing batteries to transmitter, please remove all batteries from the unit and unplug the AC/DC adapter from any power source. Wait at least for 3 minutes before powering up the Projection clock again.

### **BATTERY CHANGE:**

It is recommended to replace the batteries in all units on an annual basis to ensure optimum accuracy of these units.




**Please participate in the preservation of the environment. Return used batteries to an authorized depot.**

## PROJECTION OF TIME

### Note:

The projection is a red light, not harmful under normal usage, yet care should be taken to **avoid looking directly into the light.**

1. When plugged into an AC outlet, the projection alarm can continuously project the time and the outdoor temperature
2. When operating on batteries alone, the projection alarm will only project when the SNOOZE button is pressed or the alarm is sounding.
3. The projection will auto-focus for display from about 1.7 to 2.0 metres away. A dark surrounding will be necessary to clearly see the projection.

The direction of the display can also be rotated 360° in 90° increments by pressing the Projection Direction  button. The projector case can be rotated 180° to further help orient the projected display.

### **TOGGLE BETWEEN THE DISPLAY OF INDOOR TEMPERATURE/ HUMIDITY, PRESET ALARM TIME AND CALENDAR**

By pressing shortly the MODE/MIN key, you will toggle between the following displays:

1. Indoor temperature and humidity;
2. Preset alarm time;
3. Day and weekday;
4. Month and day

### **DCF-77 RADIO CONTROLLED TIME**

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 Projection 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 1500km radius of Frankfurt.

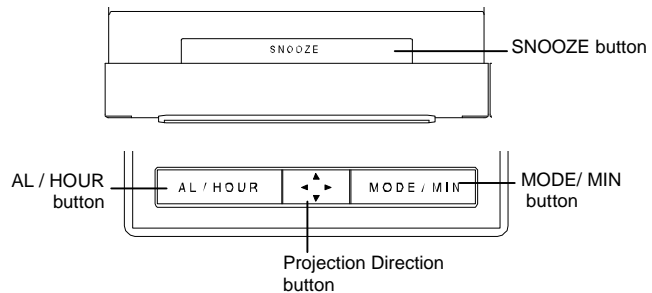
Once the outdoor reception test period is completed, the DCF tower icon in the clock display will start flashing in the upper center. This indicates that the clock has detected that there is a radio signal present and is trying to receive it. When the time code is received, the DCF tower becomes permanently 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 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.

## FUNCTION KEYS

There are three function buttons located on the front of the projection alarm and one on the top. The function buttons are: AL/HOUR button, MODE/MIN button, Projection direction button, and SNOOZE button.



### **SNOOZE key**

- Press to initiate the snooze function when the alarm is sounding.
- Press to activate the projection of time
- Press to confirm the manual setting in the different setting modes
- Press to activate the EL back-light

### **AL/HOUR key**

- Press and hold to advance to the alarm time setting
- Press to set the hour in alarm setting mode
- Press to set the hour in time setting mode
- Press to set the date in calendar setting
- Press to activate the EL back-light
- Press to stop the alarm and snooze

### **MODE/MIN key**

- Press and hold to advance to the manual setting
- Press to set the minute in alarm setting mode

- Press to set the minute in time setting mode
- Press to set the month, weekday and year in calendar setting mode
- Press to activate the EL back-light
- Press to stop the alarm and snooze

 **Projection Direction key**

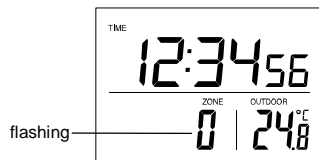
- Press to rotate the time/ outdoor temperature projection image in 90° increments
- Press to activate the EL back-light

## MANUAL SETTING

### Time zone setting

The time zone default of the Projection clock is "0". To set a different time zone:

1. Press and hold the MODE/MIN key for about 3 seconds. The current time zone value at the bottom of the LCD display starts flashing.

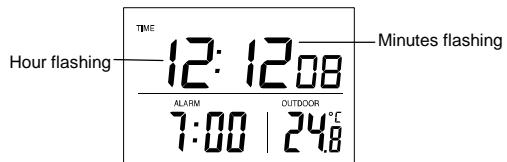




2. Press and release MODE/MIN key to adjust the time zone. The range runs from 0, 1 to 9, then -9, -8 to 0, in consecutive 1-hour intervals.
3. Confirm with the SNOOZE key and enter the **Manual time setting**.

### Manual time setting

In case the Projection clock cannot detect the DCF-signal (for example due to disturbances, transmitting distance, etc.), the time can be manually set. The clock will then work as a normal Quartz clock.



1. The hour and the minute digits will start flashing.
2. Use the AL/HOUR key to set the hour; MODE/MIN key to set the minute.
3. Confirm with the SNOOZE key and enter the **Calendar setting**.

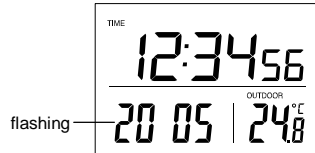
**Note:**

The unit will still try and receive the signal every hour despite it being manually set. When it does receive the signal, it will change the manually set time into the received time.

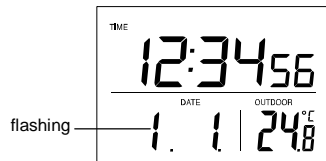
**Calendar setting**

The date default of the Projection clock is 1. 1. in the year 2005. Once the radio-controlled time signals are received, the date is automatically updated. However, if the signals are not received, the date can also be set manually.

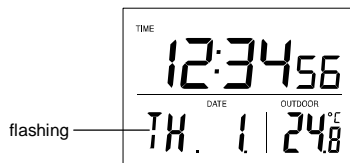
1. The year starts flashing.



2. Use the MODE/MIN key to set the year (between year 2000-2029).
3. Press the SNOOZE key to confirm and to enter the month and day setting. The month and day digits will start flashing.



4. Use the AL/HOUR key to set the day and MODE/MIN key to set the month.
5. Press the SNOOZE key again to confirm and to enter the Weekday setting mode.  
The weekday digit starts flashing.



6. Use the MODE/MIN key to set the weekday (Mo, Tu, We, Th, Fr, Sa or Su).
7. Confirm all calendar settings with the SNOOZE key and return to the normal display.

## TIME ALARM

### Setting the alarm

1. Press and hold "AL/HOUR" button for about three seconds until the alarm time is flashing.



2. Press and release "AL/HOUR" to advance the hour, and "MODE/MIN" to advance the minute. The time will display in 24-hour format.

3. Press the SNOOZE key to confirm. The alarm is now set and activated.

### **Activating / Deactivating the alarm**

1. After entering the alarm setting mode, the alarm is activated.
2. To toggle between activating and deactivating the alarm, press the “AL/HOUR” button briefly. Alarm-on icon, “(((•)))” will be displayed next to the time display when the alarm is activated.

### **Turning alarm off (while sounding)**

1. While the alarm is sounding, press and release the SNOOZE bar to disable the alarm for 10 minutes. (After the SNOOZE bar is pressed, the alarm icon will keep flashing. After 10 min, the alarm will sound again.)
2. To disable the alarm, press and release the AL/HOUR or MODE/MIN button.

## **EL BACKLIGHT**

1. The projection alarm has an EL backlight designed for night-viewing. This will light up for about 2 seconds when any button is pressed.
2. The EL backlight cannot be turned on constantly; this would drain the batteries.

## **433MHz RECEPTION**

If the outdoor temperature data are not being received within three minutes after setting up (or “- . -” is shown in the outdoor temperature section of the Projection alarm clock after 3 failed attempts during normal operation), please check the following points:

1. The distance of the Projection alarm clock or transmitter should be at least 2 metres away from any interfering sources such as computer monitors or TV sets.
2. Avoid placing the transmitter onto or in the immediate proximity of metal window frames.
3. Using other electrical products such as headphones or speakers operating on the 433MHz-signal frequency may prevent correct signal transmission or reception.

Neighbors using electrical devices operating on the 433MHz-signal frequency can also cause interferences.

**Note:**

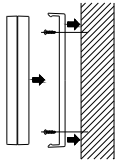
When the 433MHz signal is received correctly, do not re-open the battery cover of either the transmitter or Projection alarm clock, as the batteries may spring free from the contacts and force a false reset. Should this happen accidentally then reset all units (see “**Setting up**” above) otherwise transmission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

The transmission range is around 25 metres from the Temperature transmitter to the projection 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**” above).

**POSITIONING THE OUTDOOR TRANSMITTER:**

The Outdoor transmitter is supplied with a holder that may be attached to a wall with the three screws or double-sided tape supplied. To attach to the wall using screws, 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.

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

There is also double sided tape included with the wall holder. 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 Temperature Station can receive the 433 MHz signal from the Outdoor Transmitter at the positions that you wish to situate them.

**CARE AND MAINTENANCE:**

- Extreme temperatures, vibration and shock should be avoided as these may cause damage to the units and give inaccurate forecasts and readings.
- When cleaning the display and casings, use a soft damp cloth only. Do not use solvents or scouring agents as they may mark the LCD and casings.
- Do not submerge the units in water.
- Immediately remove all low powered batteries to avoid leakage and damage. Replace only with new batteries of the recommended type.
- Do not make any repair attempts to the units. Return it to their original point of purchase for repair by a qualified engineer. Opening and tampering with the units may invalidate their guarantee.
- Do not expose the units to extreme and sudden temperature changes, this may lead to rapid changes in forecasts and readings and thereby reduce their accuracy.

## **SPECIFICATIONS:**

### **Temperature measuring range:**

Indoor : -9.9°C to +69.9°C with 0.1°C resolution  
(“OF.L” displayed if outside this range)

Indoor humidity range : 1% to 99% with 1% resolution  
(Display “-” if < 1%, display "99%" when >99%)

Indoor temperature checking intervals : Every 10 seconds

Indoor humidity checking intervals : Every 10 seconds

Outdoor : -29.9°C to 69.9°C with 0.1°C resolution  
(“OF.L” displayed if outside this range)

Outdoor temperature checking intervals : Every 5 minutes

### **Power consumption:**

Projection alarm clock : 2 x AA, IEC LR6, 1.5V

Outdoor transmitter : 2 x AAA, IEC LR3, 1.5V  
(alkaline batteries recommended)

**Dimensions (L x W x H):**

Projection alarm clock	:	140.3 x 48.5 x 90.6 mm
Outdoor transmitter	:	40 x 22 x 128 mm (stand excluded)

**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.

- As stated on the gift box and labeled on the product, reading the “User manual” is highly recommended for the benefit of the user. This product must however not be thrown in general rubbish collection points.
- 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 designed for use in the home only as indication of the temperature.
- 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.