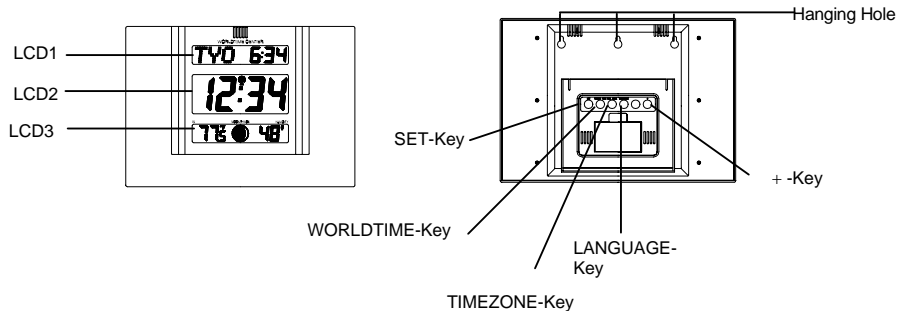# World Time Center

Introduction

Congratulations on purchasing this state-of-the-art World Time Center as an example of superior design and engineering. Providing radio controlled time, indoor temperature and humidity displays, outdoor temperature, this unit will never keep you guessing on time, date or current and future weather conditions. Operation of this product is simple and straightforward. By reading this operating manual, the user will however receive a better understanding of the WorldTime Center together with the optimum benefit of all its features.

World Time Center

- LCD1
- LCD2
- LCD3
- SET-Key
- WORLDTIME-Key
- LANGUAGE-Key
- TIMEZONE-Key
- Hanging Hole
- + -Key

Features

World Time Center

- 4 digits showing Hour and Minute in the main display
- WWVB time signal radio-controlled clock with manual time display
- 12/24 hour display
- Time zone selectable
- World time display with specific place represented by 3 sucessive characters
- Calendar display
- Display of weekday (8 languages to choose from)
- Display of current indoor temperature
- Display of current indoor relative humidity
- Display of 8 Moon phases troughout the year
- °C or °F temperature display selectable
- LCD contrast changeable to 8 different tones
- Low battery indicator
- Wall Mounting

Getting started

Remove all parts from the packaging and place onto a table in front of you. Ensure that the following parts are included:

1. World Time Center (main unit)
2. Instruction manual

If any one of the above mentioned parts is missing please contact your supplier.
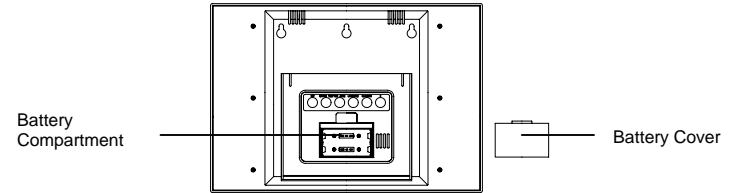
Please follow all further explanations and descriptions in this manual in order to ensure that your World Time Center and Outdoor temperature sensor work correctly.

Important Note:
For all users wanting to get additional informations on the function of the World Time Center there is an alphabetically sorted subject index at the end of this manual offering a number of technical and functional explanations. For use and operation of this product however the knowledge of this index is not necessary.

Putting into Operation

Basic Setup

- Battery Compartment
- Battery Cover

1. Open the battery cover of the World Time Center and - checking the correct polarities – insert 2 x AA, IEC LR6 1.5V batteries into the battery compartment as indicated above and replace the cover.
2. Your World Time Center is now operational.

Reset

To reset the World Time Center. Wait for at least 30 seconds and repeat the setup procedure above.

Important!
After putting into operation (basic setup or reset) all key functions except for the "SET" and the "+" keys should not be operated until the WWVB time signal has been received or the time is manually set.

Self Programming after Basic Setup or Reset (Putting into Operation)

After the the batteries are inserted (see "**Putting into Operation**") into World Time Center and a self programming sequence will start which cannot be influenced by the user. At first all segments in the LCD will light up for appr. 3 seconds. Next, the unit will perform a battery test followed by the measurements of indoor temperature and humidity, and a scanning of the WWVB time signals. After this starting phase the indoor temperature (Left on LCD 3) will be displayed along with the displays "**- - -**" in the weekday, time (LCD 1), WWVB time (LCD 2) and indoor humidity sections (Right on LCD 3). If measurements and signal receptions are successful, the dashes will be updated one by one by the real values measured and received.

Initial Displays

If the "**SET**" key is pressed **after** "**- - -**" is displayed (as described in 7.1)**, but **before** the real measurements are displayed, the learning mode will be terminated. Apart from the temperature already displayed on LCD 3 the following initial displays will now be assigned to the various sections on the LCD:

- Date (LCD 1)   **"MON 1.1.99"**
- Time of day (LCD 2)   **"12:00"**

If selected:
- Worldtime location (LCD 1)   **"- - -"**
- Worldtime (LCD 1)   **"12:00"**
- Time zone (LCD 2)   **"EST"**

Further default values:
Display modes
- Time: 12 hours
- Temperature: °F (degrees Fahrenheit)
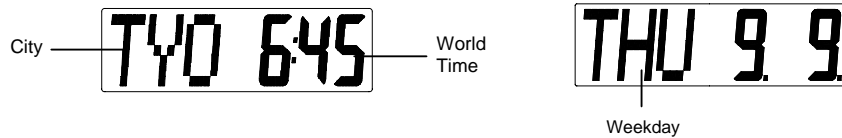- Language for weekday display: GB (English)
- LCD Contrast: Level 5

Note:

After completion of the self programming procedure check that all frequency signals are correctly received and displayed in the appropriate sections of the LCD screens. Should any one signal not be received, then see Items "**WWVB Reception Check"** below before performing a reset (see **Reset** above).

LCD Screens

The LCD of your World Time Center consists of three separate screens which provide - from top to bottom - the following information:

LCD 1 - Worldtime and Date/Weekday

City —— TYO 6:45 —— World Time

THU 9. 9.

Weekday

- In normal mode display of current date (Day and Month. Year will only show in programming mode) with current weekday (abbreviated to 3 letters; 8 languages to choose from).
- By key stroke display of radio controlled, highly accurate worldtime at any location on earth (identified by 3 letter abbreviation).
- By key stroke alternating display of both above modes every 5 seconds.

LCD 2 - Time of Day

12:34

- In normal mode display of radio controlled, highly accurate time of day depending on programming - 12 or 24 hours mode.
- A transmission tower symbol in the upper center of the display indicates that the WWVB time signal is scanned for (flashing) or received (steady).
- A battery symbol in the lower center indicates low running batteries.
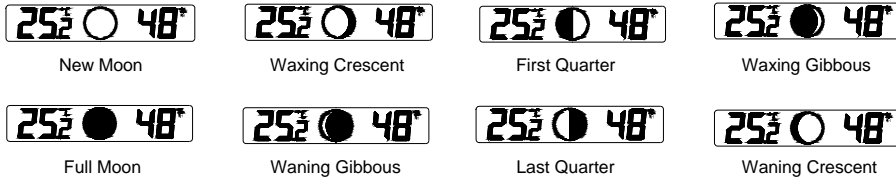
LCD 3 - Temperature/Indoor Humiditiy and Moon phases

Indoor temperature —— 77.5°F ● 48% —— Indoor relative humidity

- On the left, display of current indoor temperature.
- On the right, display of current indoor relative humidity.
- In the center, the display of current Moon phase

Moon phases symbols:

The World Time Center will display all 8 Moon phases throughout the year and back forth

New Moon   Waxing Crescent   First Quarter   Waxing Gibbous

Full Moon   Waning Gibbous   Last Quarter   Waning Crescent

Function Keys

SET Key

- Serves in normal mode to enter the programming mode and - once in programming mode - the selection of the various setting modes as well as the acknowledgements of the selected values.

WORLDTIME Key

- Serves the selection of the displays of current date with weekday, worldtime with location or alternating display of both above modes every 5 seconds on LCD 1.

TIMEZONE Key

- Serves to enter the time zone change mode. The preset time zone on LCD 2 will start flashing. By use of the **+** key the time zone can now be selected. Alter the time zone to Hawaii (HAW, -10), Alaska (ALA, -9), Pacific (PST, -8), Mountain (MST, -7), Central (CST, -6), Eastern (EST, -5; default time zone), Atlantic (AST, -4) and Greenwich Mean Time (GMT, 0).To acknowledge the selected value and to exit this setting mode and return to normal display mode, press the **SET** key or wait appr. 15 seconds for an automatic switch back.

LANGUAGE Key

- Serves to enter the selection mode for the one language by which the weekday is to be displayed on LCD 1. Selection takes place by use of the **"+"** key from following languages:

  D   German
  GB   English
  F   French
  I   Italian
  NL   Dutch
  DK   Danish
  E   Spanish
  J   Japanese

To acknowledge the selected language and to exit this setting mode and return to normal display mode, press the **LANGUAGE** key or wait appr. 15 seconds for an automatic switch back.

+ Key

- Serves in programming mode the change/selection of all changeable/selectable values and displays.

Manual programming

Note:
If the World Time Center has already successfully received the WWVB time signal and displays the correct time and date, then the Manual programming can be omitted.

After completion of the above described procedures in "**Basic Setup"** the manual programming mode can be entered by pressing the **"SET"** key for about 2 seconds.The following settings can now be programmed:

- 12/24 hour setting
- Time setting
- Weekday setting
- Month setting
- Date setting
- Year setting
- World Time location setting
- World Time setting
- ºC or ºF setting
- LCD contrast setting

Note:
If in programming mode no key is pressed for appr. 15 seconds then the LCD will switch back to the normal display mode.

12/24 Hours Setting

After entering the programming mode as described above the 12/24 hours display can be selected on LCD 2 in the following way:

1. The **"12h"** or **"24h"** will start flashing (Default setting 12h). Select the desired time display mode by use of the **"+"**key.
   Note:
   In 12 hours mode the date will be displayed in the configuration **"Weekday / Month / Day"**, in 24 hours mode in **"Weekday / Date / Month"**.
2. Press the **"SET"** key to enter the **"Time Setting"**.

Time Setting

1. The hour digits will start flashing on LCD 2. 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 followed by pressing the **"SET"** key to move to the **"Weekday Setting"**.
   Note:
   In 12 hours mode the time will be displayed with an additional **"PM"** for the time from 12:00 noon until 11:59.

Weekday Setting

1. The weekday symbols will be displayed on LCD 1 in the preset language and flashing. Set the desired weekday by use of the **"+"** key.
2. Press the **"SET"** key to enter the mode **"Month Setting"**.

Month Setting

1. The month digits on LCD 1 will start flashing. Set the desired month by use of then **"+"** 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 1 (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. I.e., it is not possible to set the date 30 if the month of February is selected.
2. Press the **"SET"** key to enter the mode **"Setting of Year"**.

Year Setting

1. The year digits will start flashing on LCD 1 (Default setting 1999). Select the desired year by use of the **"+"** key.
   Note:
   The year can be selected sequentially from 1998 to 2020 and will then start over again. The year furthermore will only be visible on the display of LCD 1 in programming mode.
2. Press the **"SET"** key to switch to the mode **"Worldtime Location Setting"**.

Worldtime Location Setting

1. The dash representing the first character of the worldtime location (Default setting - - -) on LCD 1 will start flashing. Select the desired character by use of the **"+"** key.
2. Press the **"SET"** key to move to the second character.
3. The second dash will start flashing. Select the desired character by use of the **"+"** key.
4. Press the **"SET"** key to switch to the third character.
5. The third dash will start flashing. Select the desired character by use of the **"+"** key.

   Note:
   For designation of the worldtime location the characters **"A"** through **"Z"** and **"0"** as well as **"-"** and **" "** (Space) can be chosen.
6. Press the **"SET"** key to move to the mode **"World Time Setting"**.

World Time Setting

1. The hour digits of the worldtime on LCD 1 will start flashing. Select the desired hour by use of the **"+"** key. Setting of minutes is neither possible nor necessary.
2. Press the **"SET"** key to move on to the **" °C/°F Setting"**.

°C/°F Setting

1. The temperature displays including the characters **"°C"** or **"°F"** will start flashing on LCD 3 (Default setting °F). By use of the **"+"** key select **"°C"** for temperature display in degrees Celsius or **"°F"** for degrees Fahrenheit.
2. Press the **"SET"** key to move to the mode **"LCD Contrast Setting"**.

LCD Contrast Setting

1. The word **"LCD 5"** will be flashing on LCD 1. This is the manufacturer's default setting.
2. Using the **"+"** key choose the most convenient contrast (0 - 7 contrast levels) for the location of the World Time Center.
3. Press the **"SET"** key to exit the programming mode and switch back to the normal display mode.

Leaving the Programming Mode

- To return to the normal display mode from anywhere in programming mode simply press any desired key **but** the **"SET"** or the **"+"** key at any time.
- If no keys are pressed for at least 15 seconds in programming mode, the Wallclock Weather Station will automatically switch back to normal display mode.

Reset of all Data

By removing the batteries from the World Time Center all displayed data will be lost. To reset all data perform a basic setup as described in "**Reset**" above.

Data Reception

Criteria for Reception

For reception and computing of displayed values, the software of the World Time Center performs a number of comprehensive operations **(**see **Index**) which are not necessarily important for the user to know. In case the time is not correctly displayed on LCD 2, then please see " **WWVB Reception Check"**.

WWVB-Signal Test

The World Time Center will automatically start scanning for the WWVB frequency signal (time signal transmission) after the batteries are inserted. In normal surroundings (i.e. at a safe distance from interferring sources such as TV sets), it takes between 6 to 10 minutes to receive the signal. If after 10 minutes of inserting the batteries the WWVB signal is not properly received then check the following list before manually setting the time (see "**Time Setting"**) in programming mode.
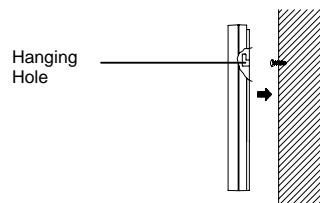
1. The distance of the units should be at least 1.5 - 2.0 Meters away from interferring sources such as computer monitors or TV sets.
2. Avoid placing the unit onto or in the immediate proximity of metal window frames.
3. Within thick concrete rooms such as basements and tower blocks, the WWVB frequency signal is naturally weaker for reception. In extreme cases, place the unit closer to a window and/or point its front or rear towards the general direction of NIST Radio Station WWVB in Ft. Collins, Colorado (again avoid placing near metal frames or structures).

Note:
Users may be located in areas where atmospheric disturbances are the immediate cause for not receiving the WWVB frequency signal. During nighttime, atmospheric disturbances are usually less severe and reception is possible in most cases. With a single daily reception, it is adequate for the World time Center to keep time accuracy deviation to below 0.5 seconds in a period of 24 hours.
When reception is successful, the WWVB transmission tower icon will start flashing in the upper center of LCD 2 as a sign that the signal has been located and is about to be received. Once the signal has been locked, the WWVB tower icon will stay fixed on the LCD and the received time will then update and correct the manually set time.

Positioning of World Time Center

Hanging Hole

The World Time Center has been designed to be hung on a wall. To mount please do the following:

1. Fix a screw (not supplied) into the desired wall, leaving the head extended out the wall by about 5 mm as indicated above.
2. Using the World Time Center's hanging hole on the back of the unit, carefully hang it onto the screw. Always ensure that the product securely locks onto the screw head before releasing.

Note:

Users are recommended to check that the WWVB time signal is properly received before permanent standing, hanging or mounting of World Time Center. Should the World Time Center not pick up the signal from the desired location, then relocate slightly. Once the signal is received, mount your system units permanently.

Important Notes

- Avoid placing the World Time Center where it can be exposed to sudden changes in temperature, i.e. direct sunlight, extreme cold and wet/moist conditions since the design of this product is for indoor use only. This will help to avoid any inaccurate readings and any possible damage to the unit.
- Should the World Time Center be exposed to extreme and sudden temperature changes, it will lead to rapid changes in its readings and thereby reduce its accuracy.

Care and Maintenance

- Avoid placing the units in places prone to extreme temperatures, vibration and shock as these may cause damage and inaccurate readings.
- When cleaning the World Time Center and Temperature Sensor's displays and casings, use a soft damp cloth only. Do not use solvents or scouring agents as they may mark the LCDs and casing.
- 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 size.
- Do not make any attempts to repair the units. Return them to their original point of purchase for repair by a qualified engineer. Opening and tampering with the units may invalidate their guarantee.

Battery Change

For best performance, batteries to all units should be replaced when the low battery indicator is displayed on the LCD of the World Time Center and the Outdoor temperature sensor or at least once a year to maintain maximum running accuracy.

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

Specifications

Radio controlled time signal	:	WWVB
Recommended operating temperature		
World Time Center	:	0°C to +50°C
LCD contrast	:	8 levels
Temperature measuring range		
Indoor	:	+14ºF to +158ºF with 0.2ºF resolution (-9,9°C to +69,9°C with 0.1°C resolution) ("OFL" displayed if outside this range)
Relative indoor humidity range	:	19% to 96% with 1% resolution
Data checking intervals		
Indoor Temperature	:	Every 20 seconds
Indoor Humiditiy	:	Every 1 minute
Power Supply		
World Time Center	:	3 x 1.5V Battery Typ AA, IEC LR6
Dimensions (L x W x D)		
World Time Center	:	375 x 30 x 250mm

Liability Disclaimer

- The manufacturer and supplier cannot accept any responsibility for any incorrect readings and any consequences that occur should any inaccurate reading take place.
- This product is not to be used for medical purposes or for public information.
- This product has been designed for strict use in the home
- 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.

Subject Index

Here the interested user will find a number of additional informations regarding the function of this Wallclock Weather Station. Their knowledge however is not necessary for efficient operation of this system.

Clock, Radio Controlled

The time base for radio controlled time and date is a operated by the NIST radio station WWVB in Ft. Collins, Colorado. WWVB broadcasts are used by millions of people throughout the United States to synchronize electronic products like clocks, clock radios and wristwatches. WWVB continuously broadcasts time and frequenzy signals at 60kHz and the time information received and displayed is absolutely accurate regardless of summer or wintertime.

Software Operations

- **WWVB Time Signal**
  Once every day with reception within 12:00am to 6:00am, after every setup or reset and after leaving the programming mode with the time manually changed the software of the World Time Center will start a reception of the WWVB time signal.

- **Indoor Temperature and Humidity**
  The software of the World Time Center will perform measurements of the current indoor temperature every 20 seconds, the current indoor humidity every 1 minute. In programming mode and while any one key is pressed no WWVB reception will take place.

- **Battery**
  After setup, reset or after every 12:00 am reception a low-battery detection is started by the software of the World Time Center. If the batteries run low, a low battery indication flag is shown on the display.

WARRANTY INFORMATION

La Crosse Technology, Ltd provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and used in North America and only to the original purchaser of this product. To receive warranty service, the purchaser must contact La Crosse Technology, Ltd for problem determination and service procedures. Warranty service can only be performed by a La Crosse Technology, Ltd authorized service center. The original dated bill of sale must be presented upon request as proof of purchase to La Crosse Technology, Ltd or La Crosse Technology, Ltd's authorized service center.

La Crosse Technology, Ltd will repair or replace this product, at our option and at no charge as stipulated herein, with new or reconditioned parts or products if found to be defective during the limited warranty period specified above. All replaced parts and products become the property of La Crosse Technology, Ltd and must be returned to La Crosse Technology, Ltd. Replacement parts and products assume the remaining original warranty, or ninety (90) days, whichever is longer. La Crosse Technology, Ltd will pay all expenses for labor and materials for all repairs covered by this warranty. If necessary repairs are not covered by this warranty, or if a product is examined which is not in need of repair, you will be charged for the repairs or examination. The owner must pay any shipping charges incurred in getting your La Crosse Technology, Ltd product to a La Crosse Technology, Ltd authorized service center. La Crosse Technology, Ltd will pay reasonable return shipping charges to the owner of the product.

Your La Crosse Technology, Ltd warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (including the lack of reasonable and necessary maintenance); (2) damage occurring during shipment (claims must be presented to the carrier); (3) damage to, or deterioration of, any accessory or decorative surface; (4) damage resulting from failure to follow instructions contained in your owner's manual; (5) damage resulting from the performance of repairs or alterations by someone other than an authorized La Crosse Technology, Ltd authorized service center; (6) units used for other than home use (7) applications and uses that this product was not intended or (8) the products inability to receive a signal due to any source of interference.. This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.

LA CROSSE TECHNOLOGY, LTD WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS PRODUCT. THIS PRODUCT IS NOT TO BE USED FOR MEDICAL PURPOSES OR FOR PUBLIC INFORMATION. THIS PRODUCT IS NOT A TOY. KEEP OUT OF CHILDREN'S REACH.

This warranty gives you specific legal rights. You may also have other rights specific to your State. Some States do no allow the exclusion of consequential or incidental damages therefore the above exclusion of limitation may not apply to you.

For warranty work, technical support, or information contact:

La Crosse Technology, Ltd
2809 Losey Blvd. S.
La Crosse, WI 54601
Phone: 608.782.1610
Fax: 608.796.1020

e-mail:
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(warranty work)

sales@lacrossetechnology.com
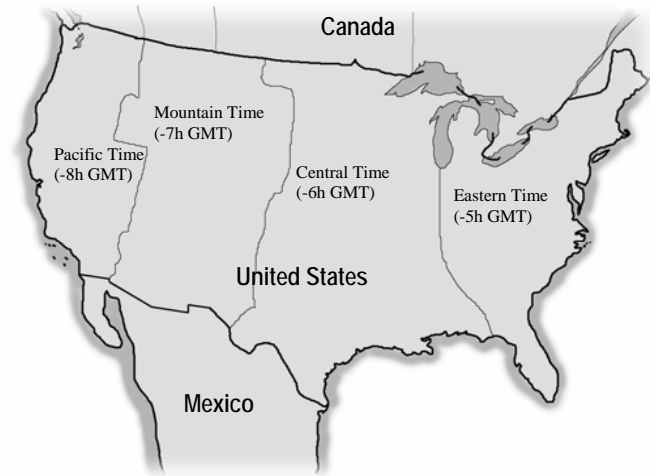(information on other products)

web:
www.lacrossetechnology.com

Questions ? Instructions? Please visit:
www.lacrossetechnology.com

EJIN70920010

Operating Manual