



Solar Powered Wall Clock

Model AT12RPS

PATENT PENDING



Installation & User's Guide



**THIS EQUIPMENT COMPLIES WITH FCC CLASS-B REQUIREMENTS
PURSUANT SUBPART J OF PART-15**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.

Disclaimer

The information within this document has been carefully checked and is believed to be entirely reliable. However, no responsibility is assumed for inaccuracies. Lathem Time Corp. reserves the right to make changes to any products herein to improve reliability, function, or design.

AirTime, Lathem and the Lathem logo are registered trademarks of Lathem Time Corporation. Other product names mentioned in this manual may be trademarks of their respective companies and are hereby acknowledged.

WARNING: Changes or modifications to this product not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Copyright © 2009 Lathem Time Corporation. All rights reserved.

Lathem Time Corporation
200 Selig Drive SW
Atlanta, GA 30336
www.lathem.com

Document No. USG0080A / Revised August 19, 2011

Other AirTime Products

ATX6 6 Watt Transceiver capable of transmitting exact time in larger facilities/areas



ATDDC4 4" Digital Wireless Wall Clock



AT-ANTOD Outdoor Antenna for maximum coverage with the ATX6 or the AT20WT



AT-MSX AirTime receiver that accepts the AirTime signals from an ATX, ATX6 or AT20WT and corrects Lathem RS485 devices or Intercom systems via a 12:00AM dry contact closure



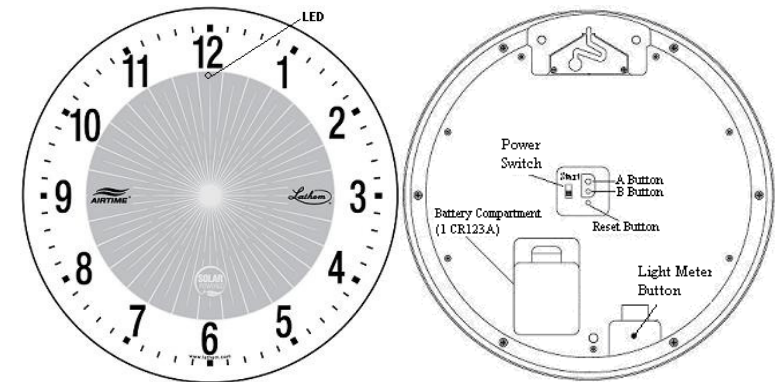
Contact your distributor or visit www.lathem.com for more information

Limited One-Year Limited Warranty

Lathem warrants the hardware products described in this guide against defects in material and workmanship for a period of one year from date of original purchase from Lathem or from an authorized Lathem reseller. The conditions of this warranty and the extent of the responsibility of Lathem Time Corporation ("Lathem") under this warranty are listed below.

1. This warranty will become void when service performed by anyone other than an approved Lathem warranty service dealer results in damage to the product.
2. This warranty does not apply to any product which has been subject to abuse, neglect, or accident, or which has had the serial number altered or removed, or which has been connected, installed, adjusted, or repaired other than in accordance with instructions furnished by Lathem.
3. This warranty does not cover dealer labor cost for removing and reinstalling the machine for repair, or any expendable parts that are readily replaced due to normal use.
4. The sole responsibility of Lathem under this warranty shall be limited to repair of this product, or replacement thereof, at the sole discretion of Lathem.
5. If it becomes necessary to send the product or any defective part to Lathem or any authorized service dealer, the product must be shipped in its original carton or equivalent, fully insured with shipping charges prepaid. Lathem will not assume any responsibility for any loss or damage incurred in shipping.
6. **WARRANTY DISCLAIMER AND LIMITATION OF LIABILITY:** Except only the limited express warranty set forth above, the products are sold with no expressed or implied warranties of any kind, and the implied warranties of merchantability and fitness for a particular purpose are hereby expressly disclaimed. No warranties are given with respect to products purchased other than from Lathem or an authorized Lathem reseller and any such products are purchased "as is, with all faults." In no event will Lathem be liable for any direct, indirect, special, incidental or consequential damages arising out of or in connection with the delivery, use or inability to use, or performance of this product. In the event any limited remedy given herein shall be deemed to have failed of its essential purpose, Lathem's maximum liability shall be to refund the purchase price upon return of the product.
7. Proof of date of purchase from Lathem or an authorized Lathem reseller is required for warranty service on this product.
8. This Warranty grants specific legal rights. Additional legal rights, which may vary by locale, may also apply.
9. Should any difficulties arise with the performance of this product during warranty, or with any Lathem authorized service centers, contact Lathem Time at the following:

Lathem Time
200 Selig Drive SW
Atlanta, GA 30336
Phone: 404-691-0405 Fax: 404-696-6048
Online: www.lathem.com



Quick Install Steps

Important: Before installing the wall clock, verify that an AirTime Transceiver is installed and properly transmitting. You should manually initiate the transmission of the AirTime signal by pressing the TRANS button on the front of your transceiver. If an AirTime transceiver is unavailable, you can still install the clock and set to the current time (see "Setting the Time Manually" on page 7).

1. Insert the supplied lithium battery (CR123A) into the battery compartment on the back of the clock.
2. Turn the clock on, by sliding the **Power Switch** to the **Start** position.
3. Press the **Reset** button on the back of the clock to begin listening for the AirTime correction signal.
4. The **LED** on the front of the clock will flash **green** every two (2) seconds.
5. When the signal is received, the **LED** will flash **green** every second and correction will occur. When correction is complete, the **LED** will stop flashing.

Room Lighting and Battery Usage

The AirTime Solar Wall Clock uses a room's interior lighting for power. Upon initial installation, or for extended periods of low light, the clock will operate accurately using the supplemental CR123A lithium battery (included). Each clock has an innovative light meter feature to check the light level at the precise installation location.

1. Press and hold the **Light Meter Button** on the back of the clock.
2. While holding the button down, position the clock where it will be installed on the wall.
3. Look at the **LED** indicator on the front of the clock to determine the light level (lux).

Average office lighting is between 350 and 500 lux.

LED Indicator	Light Level*	Battery Usage	Battery Life
Green	> 350 lux	N/A	N/A
Red	200 - 350 lux	Yes	~ 4 years
None	< 200 lux	Yes	~ 2 years

* Battery usage and life is based on the lighting level remaining consistent for an average of 8 hours per day.

If the light level is not adequate, you can try moving the clock to a different location in the room or higher position on the same wall closer to the light source.

Setting the Time Manually (requires battery be installed)

If the AirTime transceiver is not installed and transmitting, you can manually set the time on the clock and it will operate as a highly precise standalone clock until an AirTime signal is received.

1. Press and hold the **B button** on the back of the clock for 5 seconds, until the red second hand stops.
2. Press the **A button** on the back of the clock to advance the time one minute. You can press and hold the **A button** to rapidly advance the minute and hour hands.
3. When the time on the clock is one minute after the current time, wait until the exact time reaches the second that the second hand stopped and then press the **B button** on the back of the clock.
4. The clock will begin normal operation.

5. Slide the second clock onto the lip of the double ring assembly and secure using the 3 #4 x 1/4" screws at the 3, 6 and 9 O'clock positions.
6. Press the Transmit (TRNS) button on the Master and allow the clocks to correct.

Verifying Signal Reception

During normal operation, the clock will listen for the AirTime signal twelve times per day on even hours, at the 58th minute, between the 50th and 59th second. For example, the clock listens between 10:58:50 - 10:58:59 and then between 12:58:50 - 12:58:59, continuing every even hour. The LED will not flash during normal operation. To verify that the clock has properly received an AirTime signal:

1. Press the **A button** the back of the clock
2. Look at the **LED** on the front of the clock
 - a. **Green**: Signal was received successfully
 - b. **Red**: Signal was not received.

The **LED** on the front of the clock will flash **Red** automatically if the signal is not received within the previous 72 hours.

The AirTime Solar Wall Clock is equipped with an internal power cell that stores energy from the light source. It can take 8 days or more to fully charge the internal cell. With a fully charged cell the clock can run in complete darkness without a supplemental battery for approximately 7 days.

Smart Second™ Energy Saver

The AirTime Solar Wall Clock has an innovative energy saving feature that conserves power at night or when the lights in the room are turned off. When the room lighting is less than 10 lux, the second hand will stop at 0 seconds and the hour and minute hands continue displaying the correct time. When the room lighting rises above 10 lux, the second hand returns to normal smooth sweeping operation indicating the correct second. Average office lighting is between 350 to 500 lux.

Hanging the Clock - Surface Mount

AirTime wall clocks feature an innovative maze style mounting bracket that prevents simple upward motion from removing them from the wall.

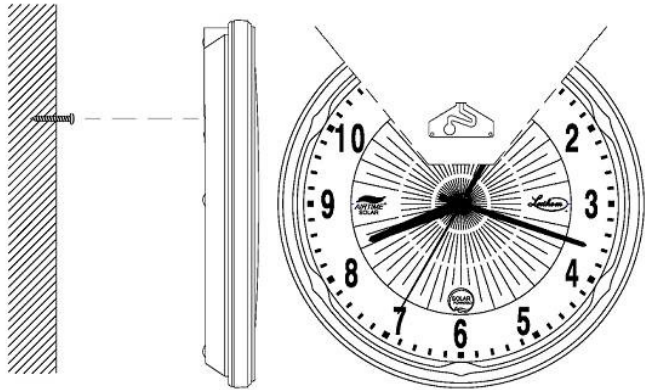


Figure 1: 12 inch Surface Mount

1. Secure the supplied anchor and mounting screw into the wall leaving the head exposed.
2. Slide the clock onto the screw head at the bottom of the maze track.
3. Move the clock down, left, down and then right until it rests securely at the top of the bracket.
4. To remove the clock, reverse the process above.

Hanging the Clock - Double Mount

The AirTime AT12RPSD is available for wall mount applications.

1. Install wall box (Fig. 2, #1)
2. Attach box adaptor plate (Fig 2, #2) to wall box with (4) #8-32 x 1" screws (Fig 2, #3).
3. Attach the case assembly to couplings with recessed flanged washers (Fig. 2, #4) and chase nipples (Fig. 2, #5). Tighten all components securely.

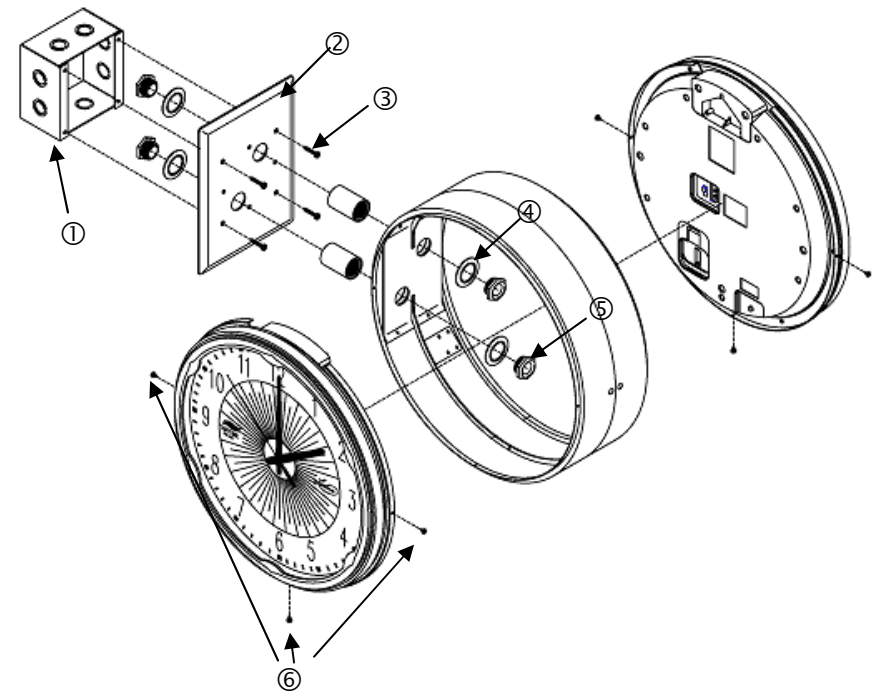


Figure 2: 12 inch Solar Double Mount Assembly

4. Slide one clock onto the lip of the double ring assembly and secure using the 3 #4 x 1/4" screws at the 3, 6 and 9 O'clock positions. (Fig. 2, #6)
 - a. Install 1 CR123A battery in each clock and press the Reset button on each clock.