



Wireless Digital Wall Clock
Model ATDDC4

Installation & User's Guide



LATHEM

**THIS EQUIPMENT COMPLIES WITH FCC 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.

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.

NOTE: This equipment has been tested and found to comply with the limits for a 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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This Transceiver must not be co-located or operating in conjunction with any other antenna or Transceiver.

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.

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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.

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

Other AirTime Products

ATX

Mini Transceiver capable of receiving the WWVB signal and transmitting exact time in smaller facilities



AT12RPS

Solar Powered 12" Analog 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

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 address below:

Lathem Inc
 200 Selig Drive SW
 Atlanta, GA 30336
www.lathem.com
 Form USG0084

Introduction

The AirTime ATDDC4 Wireless Digital Display Wall Clock is designed with a 4-inch red LED display that can be viewed from distances over 100 feet. The optional 6 digit version provides 2 additional 2-inch digits. The bright red display shows the hour and minutes or as an option the hour, minutes and seconds; can be configured for a 12 or 24 Hour format; and keep time synchronized to a Lathem ATX series transceiver's wireless correction signal. The ATDDC4 series Wall Clocks can be mounted directly to a wall, to a single gang outlet box or, with optional mounting kits, as double-faced units from the wall or ceiling.

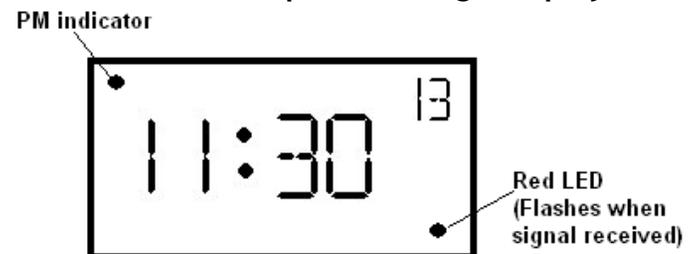
Clock Operation

When the ATDDC4 series Wall Clock is connected to 120vAC (24vAC optional) power, it displays the firmware version for 3 seconds and then changes to 12:00 AM. A flashing LED in the lower right indicates that it is listening to acquire its initial synchronization signal. When a signal is received the LED will extinguish and the internal clock will be set. *Note:* It may take up to several minutes for the clock to initially synchronize. After initial reception, the LED will only flash when future sync signals are received. The clock will continuously listen and correct itself as needed.

Front Panel



Front Panel with optional 6 digit display



Clock Installation

Tools required for mounting the clock:

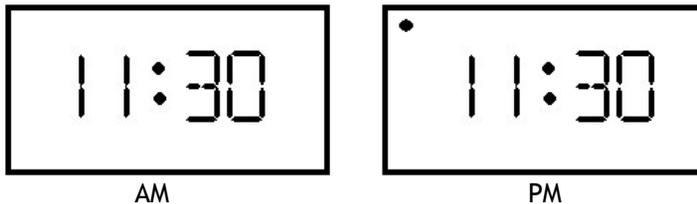
- Drill with a 5/16" bit
- Hammer
- Phillips head screwdriver
- Wall anchors
- Pencil

Separate the electronics from the enclosure and to set the Time Display Format (12hr / 24hr). To do this, remove the plastic end caps, each secured with two Phillips-head screws. Slide the front lens out of the front track, then slide the circuit board and display out of the second track in the enclosure. Carefully place each down on a smooth, clean surface.

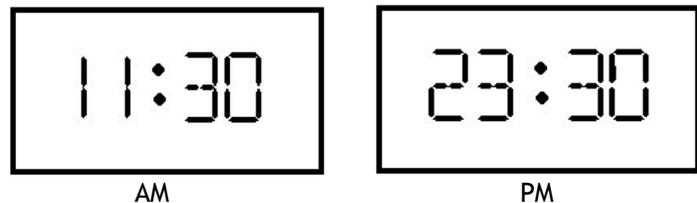
Time Formats

The ATDDC4 Series Wall Clocks can display either 12 Hour or 24 Hour format. When in 12 Hour format, a red LED in the upper left corner of the display indicates PM hours. When in 24 Hour format, the hours are displays in Military style.

12 Hour Format



24 Hour Format

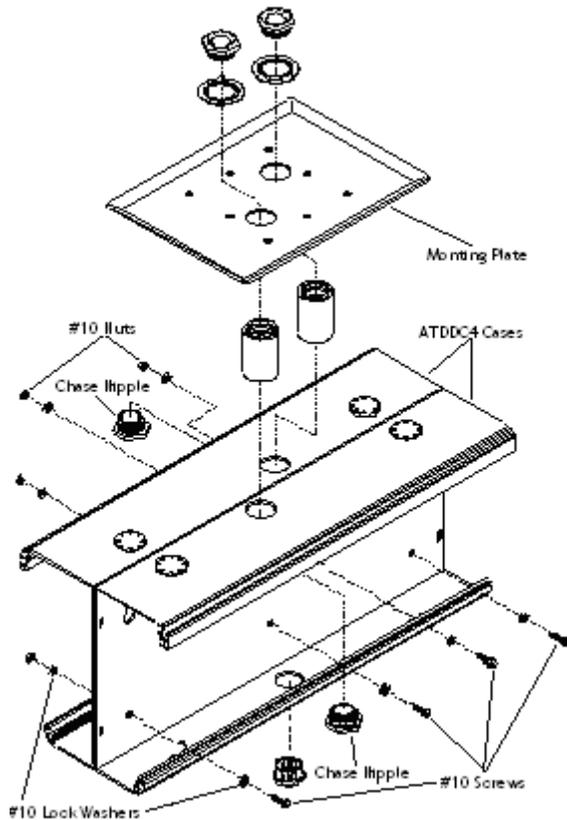


Specifications

Dimensions	6 3/4" H X 15 1/2" W X 3 1/8" D 17.1 cm H X 39 cm W X 7.9 cm D
Weight	9 lbs. (4.086 kg)
Display	4-Inch 7-Segment LED for Hours and Minutes 2-inch 7-Segment LED for Seconds (optional)
Housing	Extruded aluminum main case with black textured paint, molded plastic end caps with black texture.
Line Power	120VAC, 80mA typical 24vAC, 400mA typical (optional)
FCC	Conforms to FCC Part 15
Environment	32° to 140° F (0° to 60° C) 95% Relative Humidity (non-condensing)
Mounting	Wall (surface) Single Gang Box (surface) Double Face (wall or ceiling) (optional)

Ordering Options

ATDDC4	Wireless Digital Clock, 4 Digits (HH:MM), 120vAC
Optional	6 Digit display (HH:MM:SS)
Optional	24vAC Input
VSE0050	120vAC Power Cord Kit
SAM0625	Double Wall-Mounting Kit
SAM0626	Double Ceiling-Mounting Kit
VIS1551-L	Pre-Drilled End Panel (Left)
VIS1551-R	Pre-Drilled End Panel (Right)

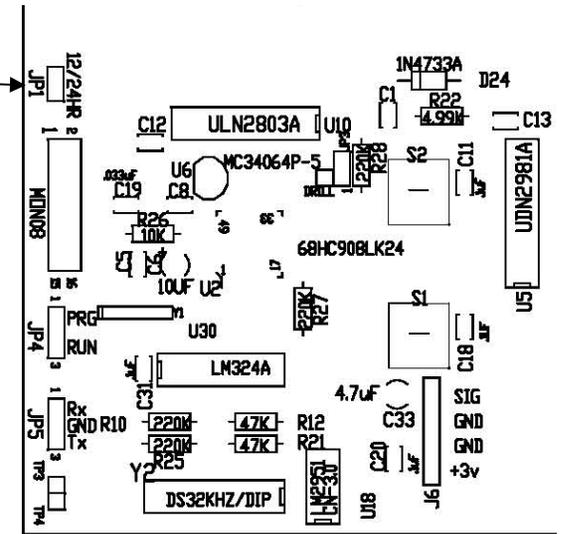


5. Slide the circuit board assemblies in partially and secure the required wiring.
6. Slide the circuit board assemblies in fully, then slide the front lenses into place. *Note: the inside of the lens has a paper backing which should not be removed. The end with wider paper should go to the right.* Replace the end caps and secure each with two Phillips head screws.

To set the display format, use the jumper (J1) located on the back of the circuit board which can be accessed by removing the right side end cap and sliding the circuit board out slightly.

Back Side of Circuit Board

Jumper J1
 On = 12 Hour display
 Off = 24 Hour display



Mounting the Enclosure

The ATDDC4 Series Wall Clock can be mounted directly to a wall, to a single gang outlet box or, with optional mounting kits, as double-faced units from the wall or ceiling.

Remember that 120VAC power is needed when selecting the clock's mounting location (24vAC Power optional).

Select a method from among the following options:

Mounting to a Wall

After deciding where to mount the clock, make two marks 12" apart and horizontal. *Note: If mounting near a ceiling, make sure the holes are at least 2 1/4" away from the ceiling. Also, provide at least 16" of side clearance on one side in order to remove the front panel.*

Installation Steps

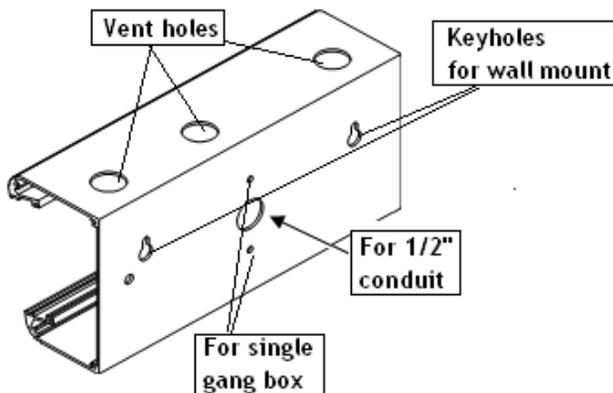
1. Drill a 5/16" hole at each mark
2. Insert a wall anchor and tap it flush to the wall with the hammer.
3. Insert a screw into each wall anchor leaving 1/4" exposed.
4. Line up the two keyholes on the back of the case and slip over the two screws and tighten securely. (The lower mounting holes can be marked at this point, the case removed, holes drilled and wall anchors installed if so desired)

Mounting to a Single Gang Box

Two mounting holes are located in the center of the case 2 1/4" apart for mounting to a single gang wall box. A 7/8" hole is located between the mounting holes that will accommodate conduit, if desired.

Note: If mounting near a ceiling, make sure the holes are at least 2-1/4" away from the ceiling. Also, provide at least 16" of side clearance on one side in order to remove the front panel.

Line the two holes in the case up to the single gang box and insert proper screws for the single gang box and tighten securely.



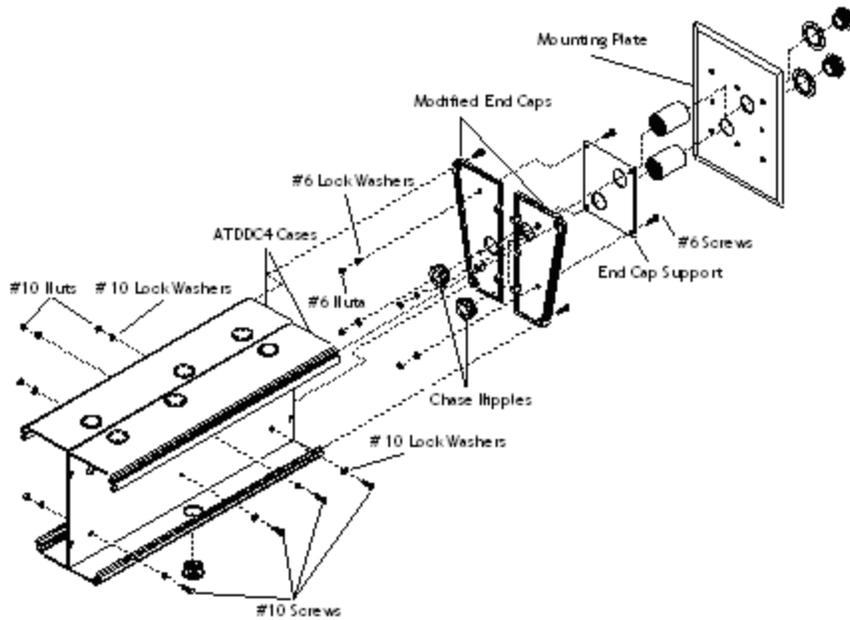
Double Mount - Ceiling

Requires optional mounting kit (SAM0626)

Double-Mounting - Ceiling

Note: Make sure you have at least 16" of side clearance on one side in order to remove the front panel assembly.

1. Place the two clock enclosures back to back and secure by inserting a #10 screw through the four mounting holes using lock washers and nuts supplied with the mounting kit.
2. *Note: If the ATDDC4 clocks will be mounted too near a wall on one side to secure the end caps, install the "wall side" end caps now.*
3. Remove the center vent cap from the top of each ATDDC4 clock.
4. Line the two posts from the mounting plate up with the vent holes of the ATDDC4 clocks. Insert the chase nipples through the vent holes and secure to the mounting plate with a 15/16" wrench.



5. Slide the circuit board assemblies in partially and secure the required wiring.
6. Slide the circuit board assemblies in fully, then slide the front lenses into place. *Note: the inside of the lens has a paper backing which should not be removed. The end with wider paper should go to the right.* Replace the end caps and secure each with two Phillips head screws.
7. Discard or store the two original end caps that the modified end caps replaced.

Power Connection – Wall Mount

120vAC Electrical Supply can be brought into the ATDDC4 enclosure from any of the six vent-hole positions, from the back, or from either side. **Conduit access is not available from the bottom.**

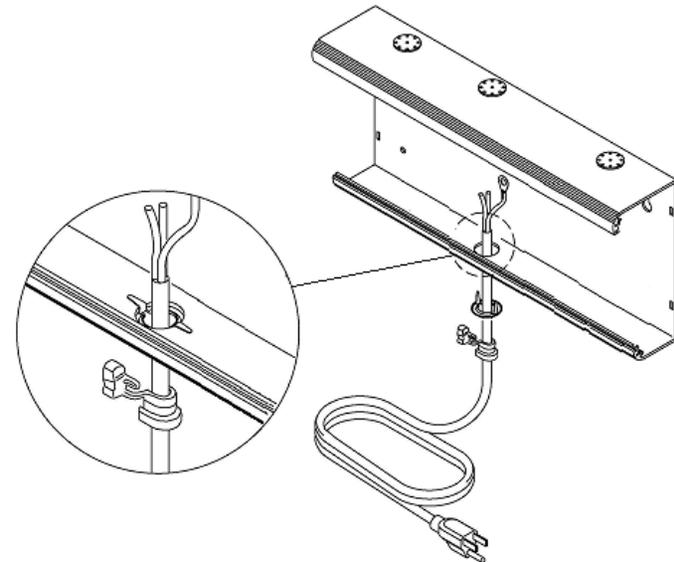
Note: Optional plastic end-panels may be ordered (left VIS1551-L), (right VIS1551-R) that have access holes pre-drilled for side access.

Power Cord Installation

The optional AC Power Cord Kit (part# VSE0050) includes a 120vAC Power Cord, metal fastener, 2 wire nuts and plastic strain relief that can be installed through any of the available vent holes.

Strip away 1/2" of insulation from each wire of the power cord. Leave eyelet on Ground Wire, if attached.

Remove the vent cap from the selected opening and insert the metal fastener with the tabs toward the inside of the clock. Bend the tabs down and away from the opening to secure it. Feed the cord through, allowing sufficient length to attach the wires; **including the ground.** Wrap the plastic strain relief around the cord close to the entry point, squeeze it together and insert it into the metal fastener, to secure the power cord to the enclosure.



Power Cord Installation

Attaching Conduit

The Electrical Supply can be brought into the ATDDC4 enclosure from any of the top three vent-hole positions, from the back, or from either side. **Conduit access is not available from the bottom.**

Note: Optional plastic end-panels may be ordered (left VIS1551-L), (right VIS1551-R) that have access holes pre-drilled to allow side access.

If Conduit access is through either of the optional plastic end-panels, Conduit should NOT be used to support the weight of the Clock. The Clock must be properly secured to a wall.

Remove the vent cap from the selected mounting hole (if not accessing through side panels). Attach the conduit with locking nut and extend the wires into the enclosure.

Making the Connection

1. Slide the circuit board with display part-way back into the case. Connect the two black wires from the circuit board to the power-wires from the power cord or conduit using wire nuts. Connect the Ground Wires from the circuit board and from the power source (usually green) to the green ground screw on the inside of the enclosure.
2. Slide the circuit board fully into place, then slide the front lens into place. ***Note: the inside of the lens has a paper backing which should not be removed. The end with wider paper should go to the right.*** Replace the end caps and secure with the two Phillips head screws.
3. When the clock is energized, it will set itself, upon receiving the AirTime radio signal.

Double Mount - Wall

The ATDDC4 SERIES requires optional mounting kit (SAM0625)

Tools required for mounting the clock:

- Flat blade screwdriver
- Phillips head screwdriver
- 15/16" open end wrench

The double wall mount plate attaches to a double or single gang box installed securely in the wall. Required wiring should be available through the gang box at time of installation.

Installation Steps

1. Remove the two chase nipples from the mounting plate posts.
2. Secure the mounting plate securely to the gang box with the proper screws. (not supplied)

Note: The long dimension of the mounting plate must be perpendicular to the ground to assure proper alignment of wall clocks.

See remaining [Wall](#) or [Ceiling](#) mount instructions below

Double-Mounting - Wall

1. Place the two clock enclosures back to back and secure by inserting a #10 screw through the four mounting holes using lock washers and nuts supplied with the mounting kit.
2. Attach the modified end cap to the clock's end to be attached to the wall mount plate using the original end cap screws.
3. Align the holes of end cap support plate with the holes in the modified end cap and secure with 4 #6 Phillips head screws (supplied).
4. Line the two posts from the mounting plate up with the two holes of the modified end cap. Insert the chase nipples through the holes of the modified end cap and secure to the mounting plate with a 15/16" wrench.