



Model ATX6

Wireless Wall Clock Transceiver



Installation & User's Guide



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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.

FCC:

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

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Warranty

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.
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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.

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Introduction:

Lathem’s ATX6 is a Wireless Transceiver that can function in both “Master” (Primary), and “Repeater” (Secondary) modes.

In “**Master**” mode, the ATX6 can wirelessly transmit clock synchronization signals to Lathem AT series Wall Clocks, to other Lathem ATX-series Transceivers in Repeater mode and to Lathem RC Series Wall Clocks. It can provide RS485 Wired synchronization signals to Lathem LTRx-512 and LTR-0 Master Clocks and to DWA-S Bell Ringers. It can also provide a “Dry-Contact” closure to synchronize other timekeeping systems. As a “**Master**”, the ATX6 can synchronize its internal crystal-controlled Real-Time-Clock to “Atomic” references that include GPS and Network Time Servers and other system references.

In “**Repeater**” mode, the ATX6 can receive and synchronize itself to another ATX series Transceiver in Master mode and re-broadcast the signal according to the AirTime Protocol, same as described above in “Master” mode.

The ATX6 can be set to transmit its radio signal at any of several frequencies at either a 4 Watt or 6 Watt output power level. With an optional external amplifier the signal can be boosted to 20 Watts.

FCC License

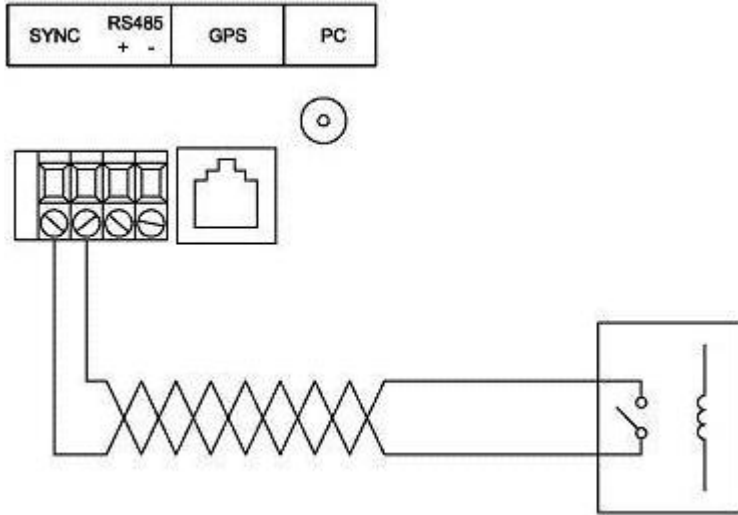
This device requires that an FCC License be obtained. Each installation of this device will require a separate license. It is the responsibility of each user of this device to obtain and maintain the required FCC License. For information on obtaining the required license contact your distributor or review the information in the FCC section of the specifications.

Specifications

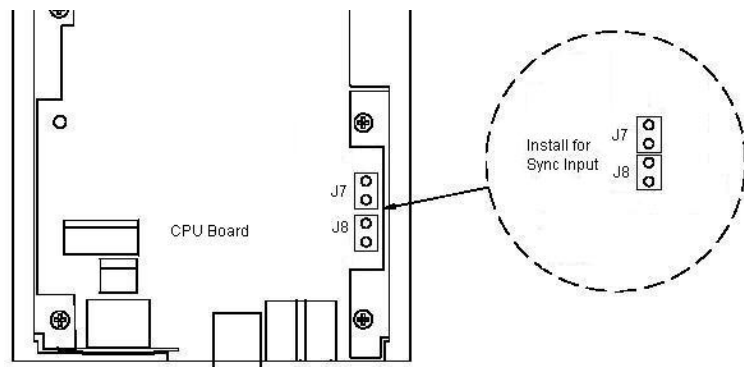
Dimensions	9" H X 5 1/8" W X 3 1/8" D
Weight	3.8 lbs (1.702 kg)
Display	LCD with Time / Status indicators and 4 LED indicators
Housing	All metal enclosure with grey textured paint.
Line Power	90 to 250vAC, 47 - 63Hz, 10W max Max Current = 100mA (while transmitting)
Standby Power	BR2325 3V Lithium Battery (included)
Environment	32° to 130° F (0° to 55° C) 20% - 80% Relative Humidity (non-condensing)
FCC	Conforms to FCC Part 15 FCC ID: UP3ATX6 Individual License Required
UL	
Mounting	Wall (surface)
Inputs / Outputs	6W UHF radio transceiver via BNC antenna connector RS232 via Lathem cable (Part # SAE0370) through an external Ethernet adapter. (Lathem part # TXTOSER) RS485 via UTP (Cat3, CAT5) cable to terminal block From: LTR-0, LTRx-512, LTR-GPS To: LTRx-512, DWA-S, DDC2/4-RS Dry Contact Sync-Out (Load: 24VDC max at 250Ma) from terminal block Dry Contact Sync-In to terminal block GPS Receiver (Part # ATX-GPS) input via RJ45 jack

Synchronizing the ATX6 to an External Relay Closure

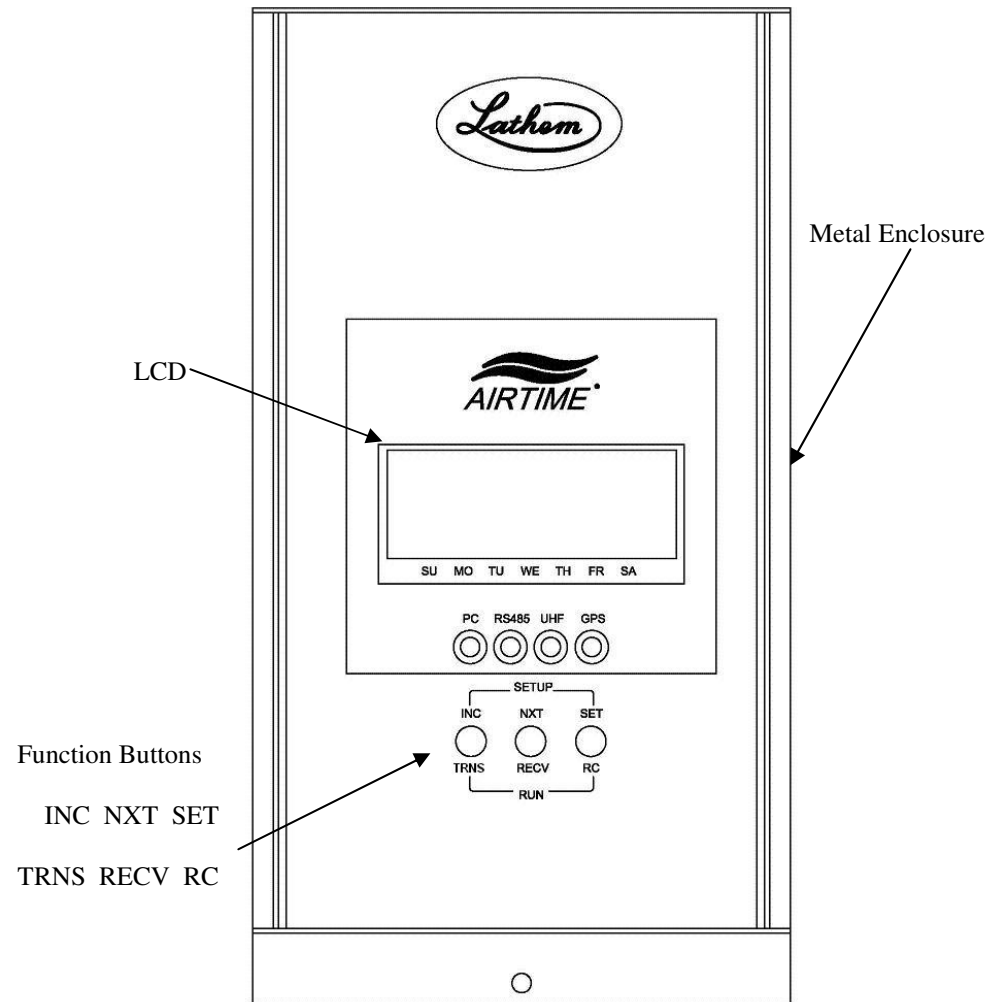
(Program Synchronization “SYN”, verify J7 & J8 are Closed)



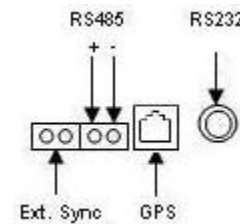
Verify Jumpers are “Closed” as shown for Sync Input.
To access jumpers see page 3.



Case Design



Bottom View



Metal Enclosure

LCD

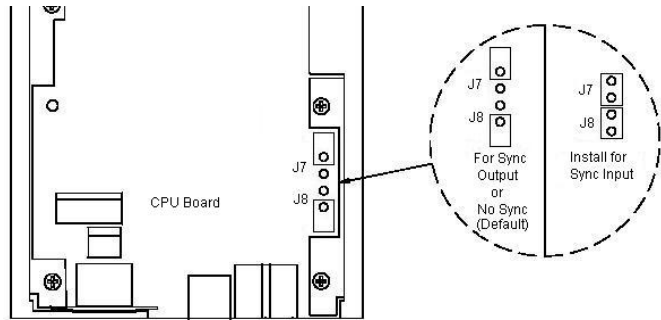
Function Buttons

INC NXT SET

TRNS RECV RC

Installation:

1. Choose an appropriate location to install the ATX6 on a wall.
 - a. If you intend to use the ATX-GPS accessory to synchronize the ATX6, then a site should be selected that is within the 25-foot cable limit of the ATX-GPS to a window or skylight having an unobstructed view of the sky.
 - b. If the ATX6 will be used in synchronizing a wide area / campus, then the site should, generally, be close to the center of the facility; rather than at the perimeter.
 - c. If you intend to synchronize the ATX6 to an ATX Transceiver in Master mode then select a site within approximately 130 feet from where the ATX Transceiver will be located..
2. If synchronizing another system to the ATX6, or if synchronizing the ATX6 to another system via “Dry Contact” (Relay) Closure, install the shunt jumper onto the circuit board’s J7 Pins, according to the following diagrams:



CAUTION: Make sure the AC Power Cord is unplugged *before* opening the ATX6 enclosure

To access the jumpers, remove the two screws from top case cover.

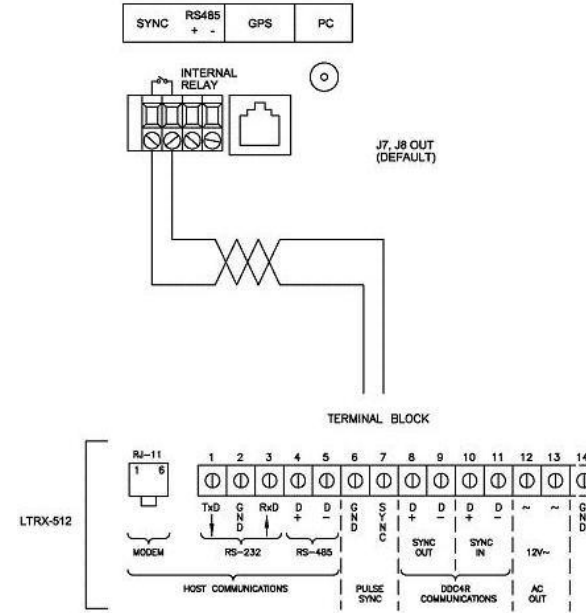
Carefully slide the front panel assembly up until the jumper’s location is accessible.

Change the jumper settings as needed

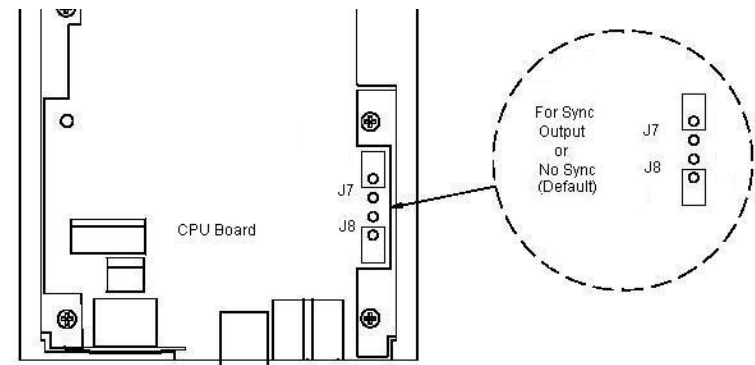
Slide the front panel assembly back into place and secure the top case cover.

Synchronizing a LTRX-512 to ATX6 using Sync Relay closure

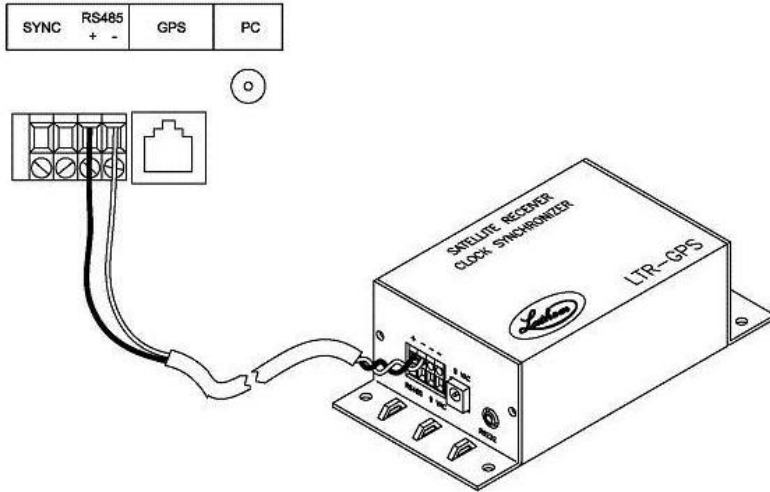
(Program ATX6 Relay closure at 12:00AM)



Verify Jumpers are “Open” as shown for Sync Output. To access jumpers see page 3.



Synchronizing the ATX6 to a LTR-GPS

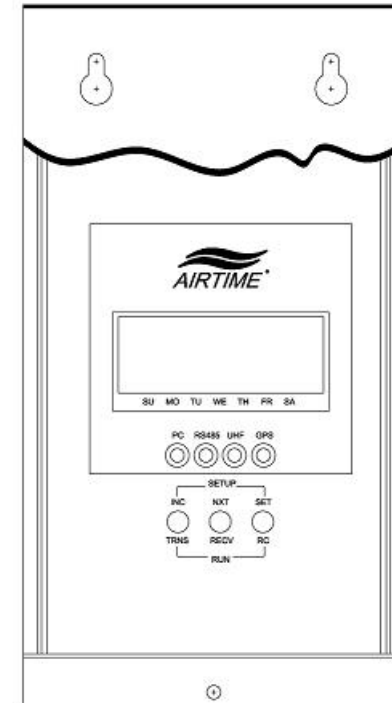


3. Mount the ATX6 on a suitable wall, according to the following steps.

If mounting near a ceiling, make sure the top holes are at least 2" away from the ceiling.

If an external amplifier will be used, mount the ATX6 within 6 feet of its location.

- » After deciding the location where the clock will be mounted, use the enclosed template to make the three marks for the mounting screws.
- » Drill a 5/16" hole at each of the marks
- » Insert a wall anchor in each hole and tap it flush to the wall with the hammer.
- » Insert a screw into the top two wall anchors leaving 1/8" exposed.
- » Line up the two keyholes on the back of the case and slip over the two screws.
- » The lower mounting screw can now be inserted into the wall anchor and secured.



- Attach the UHF Antenna to the ATX6's BNC Connector and place it on top of the ATX6 or on a shelf within 12 feet.

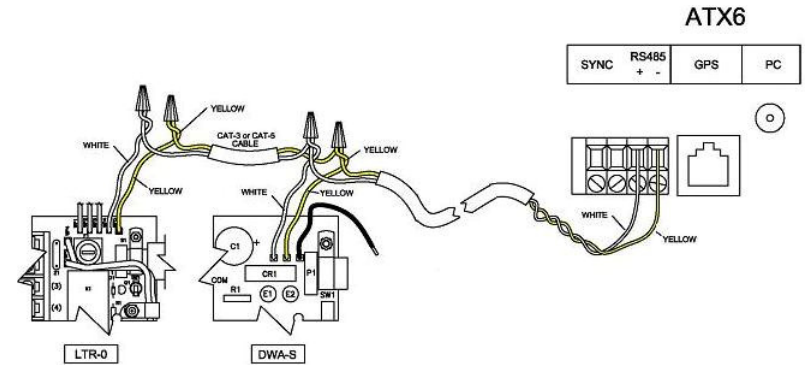
If an external amplifier is used, attach the amplifiers cable to the "RF IN" BNC connector and to the BNC connector on the ATX6. Connect the antenna to the "ANT" BNC connector and place the antenna in the desired location.

IMPORTANT: Refer to function 19 of the setup on page 12, this function must be enabled when using an amplifier.

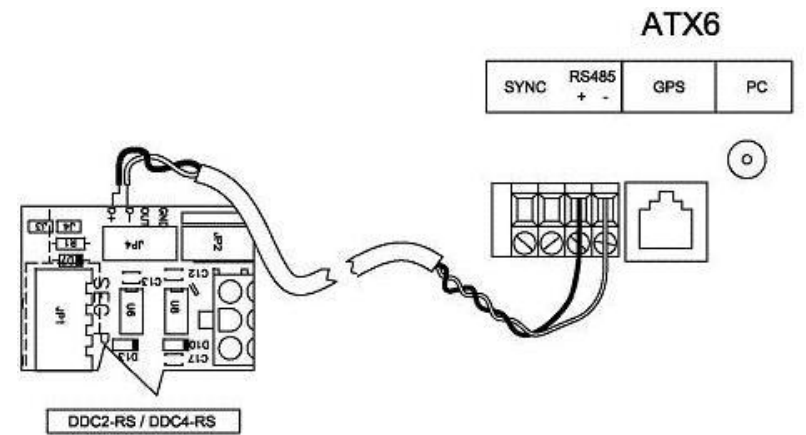
For best performance, mount the antenna in a vertical position not horizontal

- If synchronizing the ATX6 to an ATX-GPS, attach the cable to the RJ-45 Modular Jack, and mount the ATX-GPS according to the instructions included in its package.
- If synchronizing the ATX6 to a Lathem Master Clock or LTR-GPS, or if synchronizing a Lathem Master Clock or DWA-S to the ATX6 via RS-485, install a Cat-3 or Cat-5 (UTP) Cable between the Terminal Block connections on the ATX6 and the connections on the other unit, taking note of signal polarity: plus to plus / minus to minus.
- If synchronizing the ATX6 to Lathem's AirTime TimeSync Software using an Ethernet to RS232 Adapter (Lathem part # TXTOSER) and cable, install the Ethernet to RS232 Adapter according to the instructions included with its package.
Install and execute the AirTime TimeSync Software according to the instructions included with its package.
- If synchronizing another system to the ATX6, or if synchronizing the ATX6 to another system via "Dry Contact" (Relay) Closure, install a Cat-3 or Cat-5 (UTP) Cable between the Terminal Block connections on the ATX6 and the connections on the other unit.
- If synchronizing another system to the ATX6 using the Remote Wireless Relay Option, install the Wireless Relay at the remote location, according to the instructions in its package.

Synchronizing a LTR0 or DWA-S to an ATX6

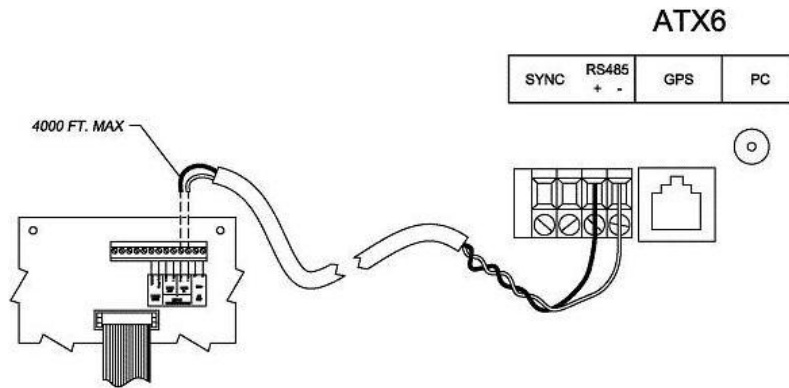


Synchronizing a DDC2/4-RS to an ATX6

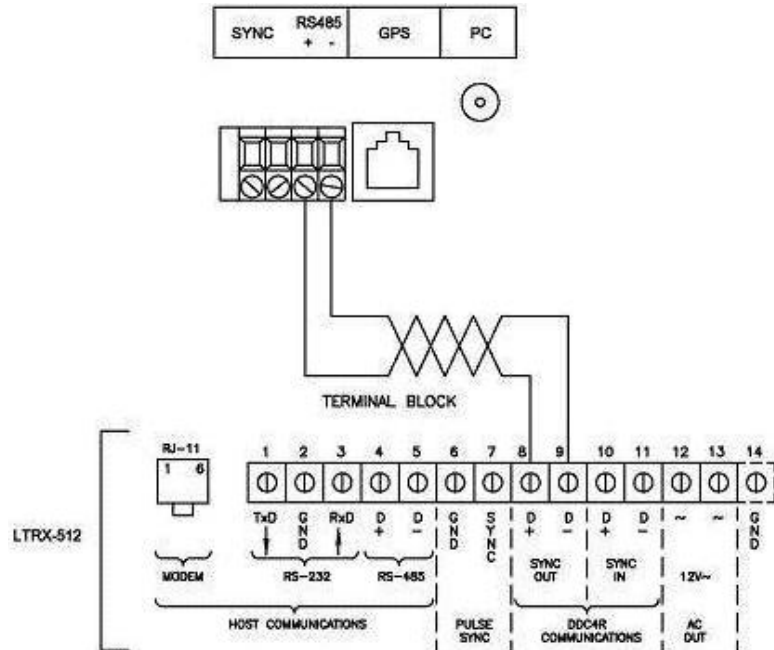


When attaching wires to the terminal block the ATX6 should be in a vertical position. If the ATX6 is horizontal the terminal block will not lock down the wires.

Synchronizing a LTRX-512 to an ATX6 using RS485



Synchronizing the ATX6 from a LTRX-512 (Program Synchronization “485”)



10. Connect the ATX6 to an AC Power Outlet using the integral cable.

Apply a minimum of 3.5 to 4.5 lb-in torque for tightening field wires into the terminal blocks. Use Cat-3 or Cat-5 Twisted-Pair Wires Use only Copper Wire.

ATX6 Quick Reference Guide

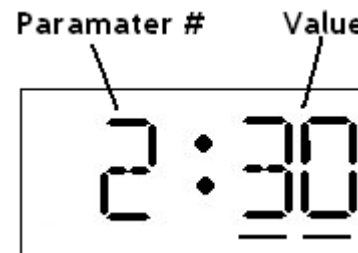
Date/Time Settings (NXT & SET)

#	Parameter	Range of Values
P	Awaiting Password:	(000 ~ 999)
1	Month:	(01 ~ 12)
2	Date:	(01 ~ 31)
3	Year:	(00 ~ 99)
4	Hours:	(00 ~ 12 AM/PM)
5	Minutes:	(00 ~ 59)

Parameter Settings (INC & NXT)

#	Parameter	Range of Values
P	Awaiting Password	(000 ~ 999)
6	Time Zone:	(-12 ~ +12)
7	Time Source:	(rtc, GPS, Air, Syn, 485, PCL)
8	Spring DST Month:	(00 ~ 12)
9	Spring DST Week:	(1,2,3,4,L)
10	Fall DST Month:	(01 ~ 12)
11	Set Fall DST Week:	(1,2,3,4,L)
12	12/24hr Display:	(12 / 24)
13	AirTime Radio Channel:	(1-8)
14	Time Slot:	(A or 0-9)
15	RC Emulation:	(0/1)
16	UHF Power Level:	(Lo / Hi)
17	Sync Pulse Hrs:	(00 ~ 12 AM/PM)
18	Sync Pulse Mins:	(00 ~ 59)
19	External Amplifier	(0 ~ 1)
P	Set Password:	(000 ~ 999)

Sample Display



Note: If you press the SET button too soon, simply continue pressing the SET button until you have the normal date and time on the display. You can then go back into the Set Up mode and continue.

Date/Time Set-Up:

To enter the Date/Time Set-Up Mode, simultaneously press the Center (NXT) and Right (SET) buttons for 1 second. You will see the Password prompt: "P000". For each of the following parameters to be set, the display will show the parameter number in the two left digit positions, and the parameter value in the two right digit positions. The parameters are as follows:

P Awaiting Password (000 ~ 999)

If you have not previously changed the password, press the SET button to continue [Default Password is '000']. If you have previously changed the Password, enter the value using the INC, NXT and SET buttons. The INC button will increment the digit over the displayed cursor. The NXT button will move the cursor to point to the next digit. The SET button will enter your final selection. If correct, the display will advance to enter the first set-up parameter.

If incorrect, an "Err" message will be displayed. Press the Set button to re-enter your password. Press Inc or Next to abort the setup.

1 Month (01 ~ 12)

Use the INC button to advance through the values. Press the SET button when the correct value is displayed.

2 Date (01 ~ 31)

Use the INC button to change the first digit. Press NXT to move the cursor to the next digit, then press INC to change the selected digit. Press the SET button when the correct value is displayed.

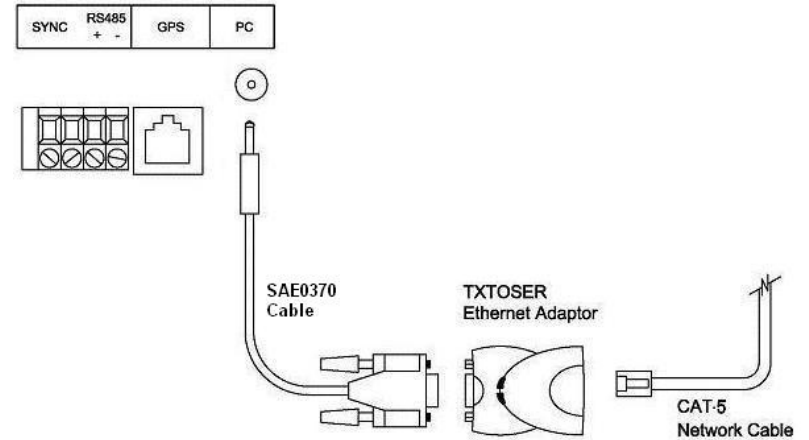
If an incorrect value is entered "Err2" will be displayed. Press the Set button and reenter the date

3 Year (00 ~ 99)

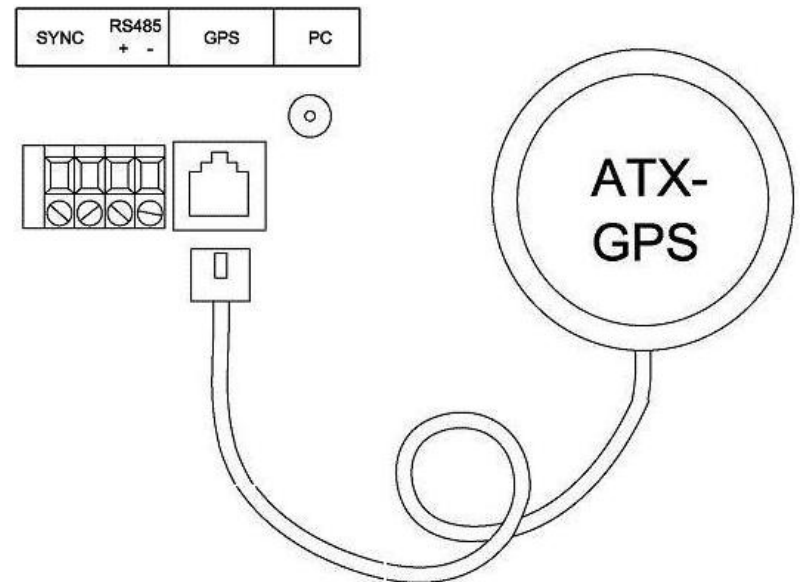
Use the INC button to change the value of the first digit. Press NXT to move the cursor to the next digit, then press INC to change the selected digit. Press the SET button when the correct value is displayed.

Wiring Diagrams

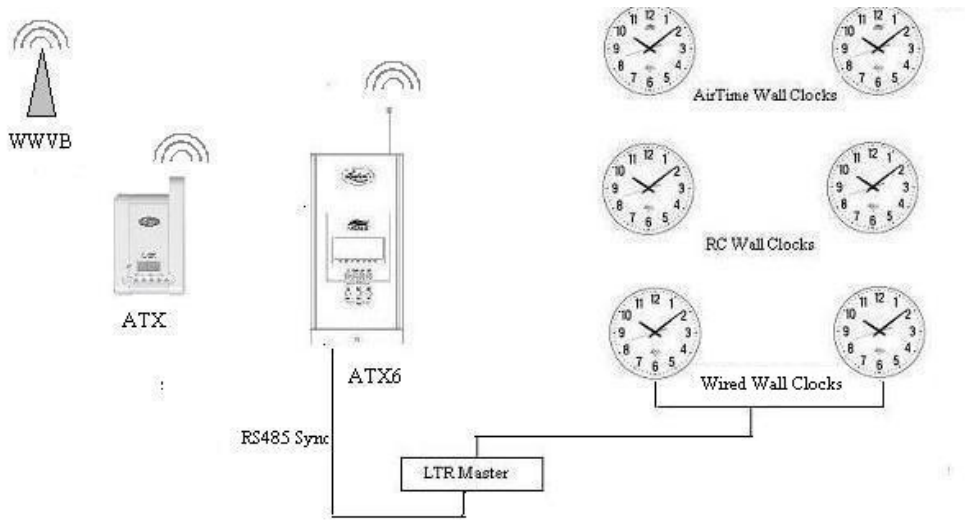
Synchronizing the ATX6 to Lathem's AirTime TimeSync Software via Ethernet to RS232 Converter (Program Synchronization "PcL")



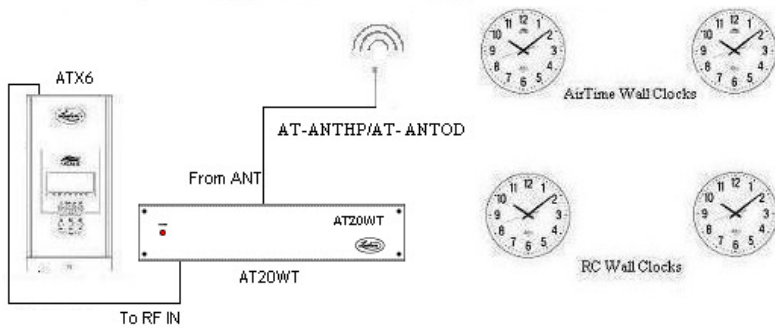
Synchronizing the ATX6 to the ATX6-GPS Receiver (Program Synchronization "GPS")



ATX Receiving WWVB signal synchronizing an ATX 6 correcting Wireless Wall Clocks and LTR Master



ATX6 through an external amplifier correcting Wireless Wall Clocks (Requires function 19 of ATX6 be set to "1")



4 Hours (00 ~ 12 AM/PM)

Use the INC button to advance through the values. Advancing past '11' will also toggle the AM and PM indicators. Press the SET button when the correct value is displayed.

5 Minutes (00 ~ 59)

Use the INC button to change the value of the first digit. Use the NXT button to move the cursor to the next digit, and then use the INC button to change the selected digit. Press the SET button when the correct value is displayed.

Press SET after this step to set seconds to :00. For the most precise manual time setting, increment the displayed value to represent the up-coming minute. Then, at the start of the new minute, press the SET button to record the programmed MM-DD-YY HH:MM:00.

Parameter Set-Up:

To enter the Parameter Set-Up Mode, simultaneously press the Left (INC) and Center (NXT) buttons for 1 second. You will see the Password prompt: "P000". For each of the following parameters to be set, the display will show the parameter number in the two left digit positions, and the parameter value in the two right digit positions. The parameters are as follows:

P Awaiting Password (000 ~ 999)

If you have not previously changed the password, press the SET button to continue [Default Password is '000']. If you have previously changed the Password, enter the value using the INC, NXT and SET buttons. The INC button will increment the digit over the displayed cursor. The NXT button will move the cursor to point to the next digit. The SET button will enter your final selection. If correct, the display will advance to enter the first set-up parameter.

If incorrect, an "Err" message will be displayed. Press the Set button to re-enter your password. Press Inc or Next to abort the setup.

6 Time Zone (-12 ~ +12)

Use the INC button to advance through the values. Advancing past '11' will also toggle the '+' and '-' indicators. The most common Western Hemisphere values (offsets from GMT / UTC) are:

Atlantic Time	-04
Eastern Time	-05
Central Time	-06
Mountain Time	-07
Pacific Time	-08
Alaska	-09
Hawaii	-10

Press the SET button when the correct value is displayed

7 Time Reference Source (rtc, GPS, Air, 485, PCL)

Use the INC button to advance through the values. Select which Time Reference is to be used by the ATX6. Press the SET button when the correct value is displayed.

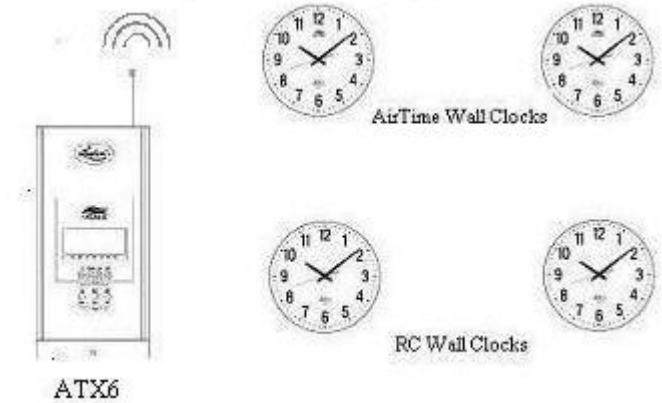
- rtc Real-Time-Clock, set in parameters # 1 through 5
- GPS External ATX-GPS Receiver option
- Air Another ATX-series Transceiver
- Syn Synchronize to an external Relay closing for 1 second at 00:00:00
- 485 Sync from a Lathem LTRx-series Master Clock or LTR-GPS
- PcL Sync from a PC using Lathem's AirTime TimeSync, via Ethernet to RS232 (with external Adapter)

8 Spring DST Month: (00 ~ 12)

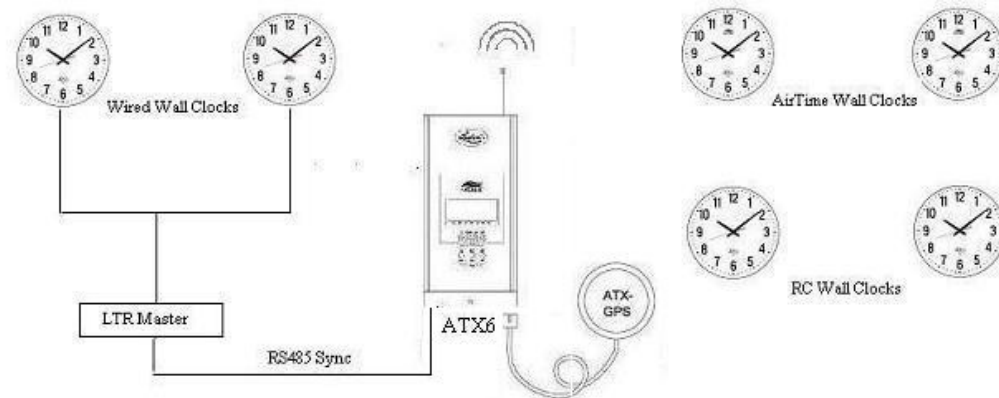
Use the INC button to advance through the values. Default value is '03' (March). Selecting '00' will disable automatic DST adjustment and settings 9,10 and 11. Press SET when the correct value shows.

Installation Examples

ATX6 Stand Alone correcting Wireless Wall Clocks



ATX-GPS to ATX6 correcting Wireless Wall Clocks and LTR Master



RC Transmit:

If RC EMULATION is enabled [Set-Up parameter #15, above, = '1'] RC Transmit is selected by pressing and holding RC (SET) for 2 seconds.

The ATX6 transmits one (1) RC synchronization signal to all RC-series Wall Clocks, as indicated by illumination of the UHF Indicator. This is helpful when installing and testing RC-series devices in the system.

During RC Transmit, lasting approximately 5-seconds, "Normal" operations are suspended.

Firmware Version Number Display:

The Firmware Version installed in the ATX6 can be displayed by pressing and holding INC, NXT and SET buttons simultaneously for 2 seconds. The display will show "F2.03" for example.

The Firmware Version also displays for 2 seconds after power up.

This information may be helpful to Lathem's Tech Support personnel, in the course of answering a technical question about the ATX6 product.

Battery Replacement:

The ATX6 includes a #BR2325 Lithium Coin-Cell Battery that maintains the Real-Time-Clock during AC Power Failures. Typical battery life, when the ATX6 is normally powered from an AC outlet, is eight years. As battery life may be less, depending upon your circumstances, it is suggested that the battery be replaced every five years.

CAUTION: Make sure that the AC Power Cord is unplugged before opening the ATX6 enclosure.

To replace the battery, remove the two screws from top case cover. Lift the top case cover.

Carefully slide the front panel assembly up until the battery's location is accessible.

Using a pen point, push the old battery through the Holder access opening, so that it emerges from its Holder

Insert a new battery with the positive side pointing away from the board into the Holder and slide the front panel assembly back into place and secure the top case cover

9 Spring DST Week: (1,2,3,4,L)

Use the INC to select which Sunday of month that Daylight Savings Time begins: 1st, 2nd, 3rd, 4th or Last Sunday of month. Default is '02' (2nd Sunday in March). Press SET when the correct value is displayed.

10 Fall DST Month: (01 ~ 12)

Use the INC button to advance through the values. Default value is '11' (November). Press SET when the correct value shows

11 Set Fall DST Week: (1,2,3,4,L)

Use the INC button to select which Sunday of month that Daylight Savings Time ends: 1st, 2nd, 3rd, 4th or Last Sunday of month. Default is '01' (1st Sunday in November). Press SET when the correct value shows.

12 12/24hr Display (12 / 24)

Use the INC button to toggle between selection of a 12-hour display with AM/PM indicators, or a 24-hour (Military Time) display (00:00 ~ 23:59). Press SET when the desired value shows.

13 AirTime Radio UHF Channel (1~8)

The ATX6 is pre-loaded with the multiple Frequency selections:

Use the INC button to select the frequency channel for your installation; default is '1'. **Do not change unless AirTime system components have been specifically ordered for a different frequency.** Press SET when the correct value shows.

14 Time Slot: (A or 0-9)

To support systems that include multiple Transceivers using the same Frequency Channel, AirTime Transceivers can automatically determine their position in a network of transceivers. In most cases, the ATX6 will determine its own position by listening to transmissions from other Transceivers in the area. To select this feature, set the parameter value to Automatic.

In installations with an ATX Transceiver receiving the time from WWVB and transmitting it to multiple ATX6's or a combination of ATX6's and ATX Repeaters, Channel Interference may be avoided by setting specific "Transmission Slots" for each Transceiver. The ATX and ATX6 Transceivers can be set to transmit on one of ten Transmission Slots, numbered 0 through 9. When manually selecting a Transmission Slot following this chart will often provide the best results:

Recommended Parameter # 14 Setting for each device

#of ATX Transceivers	Device #1	Device #2	Device #3	Device #4	Device #5	Device #6
1	5					
2	2	7				
3	1	5	8			
4	1	3	5	7		
5	1	3	5	7	9	
6	0	2	4	6	8	9

Fixed positions are numbered 0 - 9, and may be selected using the INC button. Press the SET button when the correct value is displayed

15 RC Emulation (0/1)

Use the INC button to toggle between Enabling ('1') and Disabling ('0') the transmission of radio signals to synchronize Latham's RC-series Wall Clocks. If there are no RC-series Wall Clocks in the system, or if they are to be controlled by a separate RC-MASTER, then RC Emulation should be disabled. Press SET when the correct value shows.

Receive Mode:

Automatic:

If RS485, GPS or Air have been selected as the synchronization type (in Set-Up Parameter #7) , then the ATX6 will automatically enter a "listen" mode for 15 minutes after power up and each day at 1:05AM, 3:05AM and 10:45PM. This is indicated by the "~" symbol flashing. The UHF LED will flash twice during this time each time a signal is received.

Manual:

Receive Mode is entered by pressing and holding RECV (NXT) for 2 seconds, and is evidenced by the '~' symbol appearing in the display solidly. The UHF LED will flash twice each time a signal is received.

When Receive Mode is active, the ATX6 will listen for AirTime signals transmitted by other ATX-series devices for one hour, allowing it to configure itself as a member of the AirTime Network. This is helpful when installing and testing other ATX-series devices in the system.

Radio transmissions are inhibited during receive mode.

If another AirTime Transceiver (ATX or ATX6) is selected as the time reference for this unit (Set-Up parameter #7 is set to 'Air'), then the ATX6 will synchronize its clock to the received transmission.

Receive Mode can be terminated by pressing and holding RECV (NXT) for 2 seconds, indicated by the '~' symbol extinguishing on display.

If 'PcL', '485' or 'GPS' is selected as the time reference, the 'PcL', '485' or 'GPS' LED will flash twice each time a valid signal is received.

The '485' or 'UHF' LED will flash once each time a signal is transmitted by the ATX6.

AirTime Transmit Mode:

Automatic:

When not in Receive Mode (automatically or manually initiated) the ATX6 will transmit the RC radio signal each odd minute (if RC Emulation has been enabled). The ATX6 will transmit the AirTime radio signal each minute, or each even minute (if RC Emulation has been enabled). When an external amplifier is used, the ATX6 will transmit an AirTime signal 4 times per hour.

Manual:

Transmit Mode is entered by pressing and holding TRNS (INC) for 2 seconds, and is evidenced by the '-' symbol appearing in the display solidly and the UHF LED flashing once each time it transmits a signal.

When AirTime Transmit Mode is active, the ATX6 will transmit the AirTime synchronization signal to all ATX-series devices, once every 10-seconds for one hour. This can be helpful when installing and testing other ATX-series devices in the system.

If the TRANSMIT (INC) button is pressed during the 15-minute Receive Mode that occurs automatically upon unit power-up and during the period beginning at 1:05AM, 3:05AM and 10:45PM each day, or as a result of manually starting Receive Mode (see below), transmissions will not occur until Receive mode has expired or been cancelled.

During AirTime Transmit Mode, all other Normal operations (except RC radio transmissions) will continue. Transmit Mode can be terminated by pressing and holding the TRNS (INC) button for 2 seconds, and is evidenced by the '-' symbol disappearing from the display.

16 UHF Power Level (Lo / Hi)

Use the INC button to toggle between Lo (4-Watt) and Hi (6-Watt) transmission power settings. Select the Hi setting for the widest area of coverage. Select the Lo to minimize interference with systems outside of your facility. Press SET when the desired value is displayed.

17 Sync Pulse Hrs (00 ~ 12 AM/PM)

If an external system will be synchronized to the ATX6 by a "Dry Contact" Relay closure, set the Hour at which the event should occur. The double-cursor indicates that both digits may be changed using the INC button. Advancing past '11' will also toggle the AM / PM indicators. Press SET when the correct value is displayed

18 Sync Pulse Mins (00 ~ 59)

If an external system will be synchronized to the ATX6 by "Dry Contact" Relay closure, set the Minute when the event should occur. A two second closure will occur at the 58th second of the previous minute syncing the device to the ATX6. Use the INC button to change the value of the first digit. Press NXT to move cursor to the next digit, and then press INC to change the selected digit. Press SET when the correct value shows.

The Sync Pulse will not execute if programmed between 1:05AM and 1:20AM, 3:05AM and 3:20AM, 10:45PM and 10:59PM or during the first 15 minutes after power is applied.

19 External Amplifier (0 ~ 1)

If an external amplifier will be used this function **must** be set to 1 (Enable). Enabling this function changes the frequency of transmissions. When enabled, the ATX6 will transmit an AirTime signal 4 times per hour.

P Password (000 ~ 999)

For security purposes, you may set a unique password for your ATX6. To change the Password, use the INC, NXT and SET buttons. The INC button will increment the digit over the displayed cursor. The NXT button will move the cursor to the next digit. The SET button will enter your final selection. If you do not wish to change the current Password, simply press SET.

This is the final step, indicated by the display showing the correct time and Day-Of-Week cursor. Daylight Savings Time is also indicated.

Operating Modes:**Normal:**

In Normal Mode, the ATX6 will listen for synchronization signals from the device selected as the Time Reference (Set-Up parameter # 7). If an external Time Source is selected, the ATX6 will synchronize its Real-Time-Clock to that source, when the synchronization signal is received. In the event of a power failure, the RTC Date and Time parameters are protected and continue to operate using a Lithium “coin-cell” battery.

In Normal Mode, the ATX6 transmits a radio signal (indicated by the UHF LED flashing once) to other ATX-series devices during the last ten seconds of each minute. If RC Emulation is enabled (Set-Up parameter # 15), the ATX6 will transmit a radio signal to RC-series Wall Clocks at the top of each odd minute; except the minute designated to generate a relay closure (see below). If an external amplifier is used, the ATX6 will transmit a signal every 15 minutes of each hour.

If “Dry Contact” (Relay) synchronization is not selected as the time reference (Set-Up parameter #7 is not equal to ‘Syn’), then the ATX6 will activate the local Relay [and Wireless Remote Relay (option)] at the selected HH:MM:00.

If 485 is not selected as the time reference (Set-Up parameter #7 is not equal to ‘485’), then the ATX6 will transmit the RS-485 protocol to synchronize Lathem Master Clocks and Bell Ringers that support the RS-485 interface at the 40th second of each minute (HH:MM:40). This is indicated by the 485 flashing indicator once.

Each day for 15 minutes, beginning at 1:05AM, 3:05AM and 10:45PM the ATX6 will listen to and re-evaluate its radio environment, to determine if any Automatic Time Slot adjustment is required. During this period, the “~” symbol will flash and radio transmissions are inhibited. Transmission parameters are automatically adjusted, as may be necessary. If another AirTime Transceiver (ATX or ATX6) is selected as the time reference for this unit (Set-Up parameter #7 is set to ‘Air’), then this ATX6 will synchronize its clock to the received transmission. The ATX6 will indicate when it receives a signal by the UHF LED flashing twice.