



Wireless Sync Device
Model AT-MSX

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.

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 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.

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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Operation

When connected to AC power, the AT-MSX automatically powers up and an LED on the case bottom flashes 3 times then begins flashing every 2 seconds indicating that the AT-MSX is waiting to receive an AirTime radio signal. The LED will flash brighter upon receipt of an AirTime signal. The AT-MSX will set its internal clock to the exact time and the LED will flash every second to indicate normal operation. The unit will transmit the Lathem RS485 digital signal once per minute, to provide time synchronization to other Lathem devices. It also closes the dry relay contact for two (2) seconds once per day at 23 hours 59 minutes and 58 seconds to provide a synchronization time reference signal to external third party devices such as an intercom system.

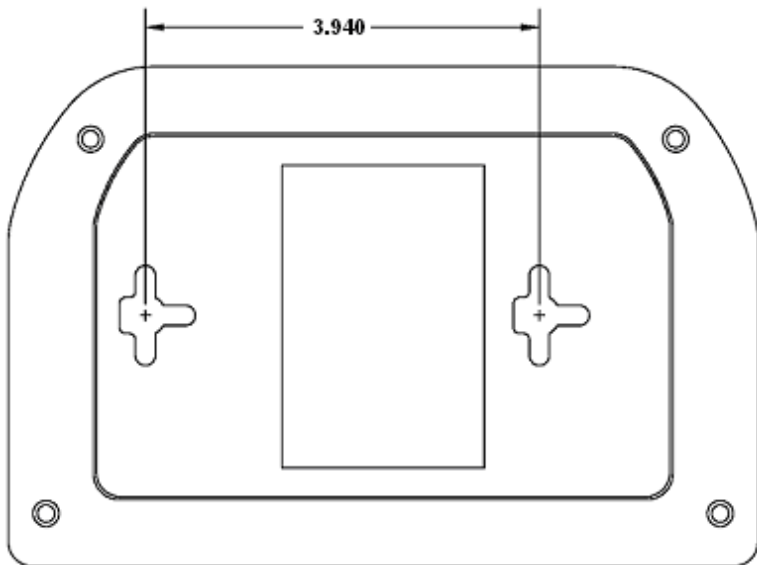
Physical

The AT-MSX contains a microprocessor and UHF radio receiver housed inside an impact resistant keyhole wall mount plastic enclosure. The bottom of the enclosure features a five (5) place removable terminal block connector for wiring to external devices, a red LED signal reception indicator, four (4) position program jumpers, and power port for an external AC power adaptor.

Install Steps

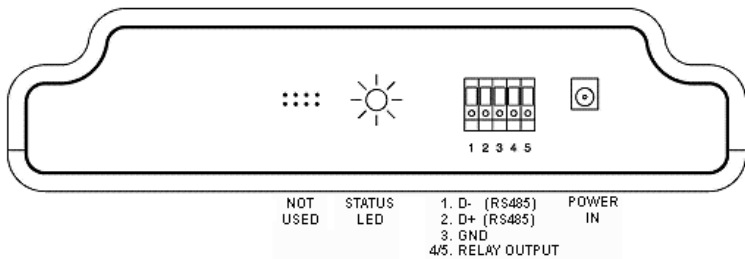
Important: Before installing the AT-MSX, verify that an AirTime Transceiver is installed and properly transmitting. You should manually initiate the transmission of the AirTime signal by pressing the TRANS button on the front of your transceiver.

1. Mount the AT-MSX within range of an AirTime transceiver's signal. It is important that the AT-MSX be mounted upright as described to achieve maximum antenna reliability.
 - » After locating where the AT-MSX will be mounted, mark the two spots for the mounting screws using the enclosed template.
 - » Drill a 5/16" hole at each mark
 - » Insert wall anchors and tap flush to the wall with the hammer.
 - » Insert both screws into wall anchors leaving 1/8" exposed.
 - » Align both keyholes on case back and slip over the two screws.



- Pull and disconnect the removable terminal block and connect the remote devices in the RS485 or Dry Sync connectors. (IMPORTANT: RS485 requires proper polarity + to +, - to -.) Once the connections are secure, reconnect the removable terminal block.

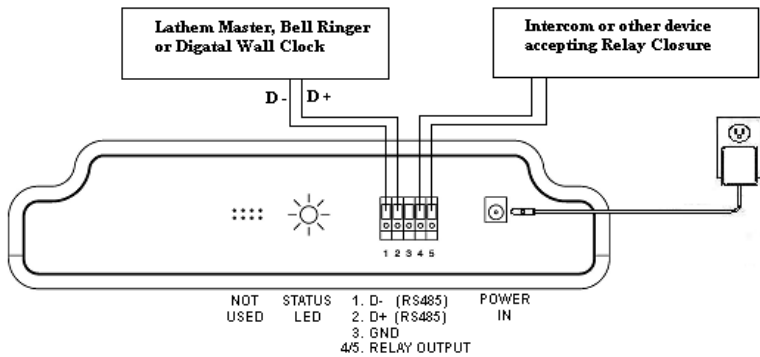
Apply a minimum of 5.0 to 7.0 lb-in torque for tightening field wires into the removable terminal block. Use Cat-3 or Cat-5 Twisted-Pair Wires. Use only Copper Wire.



- Insert plug from AC power adapter into the Power In port.
- Plug the power adapter into an 110vAC outlet.
- The Status LED will flash once every two seconds. When the signal is received, the LED will flash every second and the AT-MSX will set its internal clock.

Wiring Diagram

An AT-MSX correcting a Lathem RS485 device and/or a dry contact device.



Specifications

Power:	6VDC/ 300 mA wall-mount power supply. UL approved
Frequency	452 MHz
Channels	1x10 = 10
RS485 Connection	D - / D + terminal block
Relay Connection	Terminal block
Relay Rating	10 VA max / 0.5 A max switch current
Dimensions	6.5" wide x 3.8" tall x 2" deep
Weight	0.6 pounds
Operating Temperature	0 ~ + 50°C

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.
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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 following:

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