Installation and Operation Manual

SiteSync IQ®

Wireless Controller

american time®

Integrated Solutions

Part # H004417
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Safety Precautions

All electrical power and signal wiring connected to the SiteSync IQ Wireless Controller, secondary clocks and signaling devices must be installed by qualified persons in conformance with applicable national and local electrical codes. Improper installation of this equipment can result in lethal electrical shock and fire.

Disconnect and lock out electrical power to the unit before removing the wiring compartment cover or front panel.

The SiteSync IQ Wireless Controller operates from 120vac electrical power.

Voltage applied to clock and signal relay contacts must not exceed 120vac.

To protect against shorts between power and signal circuits, all wires connected to the power, clock and signal circuit terminals must be insulated to 300vac.

The only serviceable parts behind the front panel are, tone selection shunt jumpers and surge suppression switches.

The SiteSync IQ System Controller should be installed in a secure location protected from:

- Physical damage
- Water, including condensation
- Direct sunlight
- Operation by untrained personnel

American Time
140 3rd Street South
PO Box 707
Dassel, MN 55325-0707

Phone: **800-328-8996**
Fax: **800-789-1882**
american-time.com

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Introduction

The SiteSync IQ Wireless Controller provides synchronized control of secondary system clocks and electrical circuits such as those for controlling signaling devices and lights. Synchronization and event programming are achieved wirelessly from a SiteSync IQ Wireless System Controller. Manual control of signal circuits is achieved wirelessly via commands from a SiteSync IQ Wireless System Controller (keypad or Remote Connect Web Interface) or via panel switches on the front of the Wireless Controller.

SiteSync IQ Wireless Controller Standard Features

- Power switch
- Power On indication LED
- Wall mounting hanger (molded into enclosure)
- Knock out wiring compartment
- Screw terminal main power input and relay contacts
- Relay surge suppression on/off switches
- Removable relay contact fuses
- Removable main power fuse
- Relay status indicator LEDs
- Manual control of signal circuits
- Flexible control of four signal circuits

SiteSync IQ Wireless Controller Specifications

- Dimensions: .....8½"h x 10⅛"w x 5"d
- Weight: .....4 lbs.
- Power: .....120vac hard-wired
- Operating temperature: .....41° to 131° degrees F
- Humidity: .....0% - 95% Non-condensing
- Dry contacts: .....10A 240v (resistive), optional 15A (resistive) 240v (socketed) clock only
- Receiver frequency: .....450-470 MHz *(factory set)*
- Paging format: .....POCSAG, Narrow band
- Data baud rate: .....512 BPS
- Receiver sensitivity: 10uV/M
- Channel spacing: .....12.5 KHz

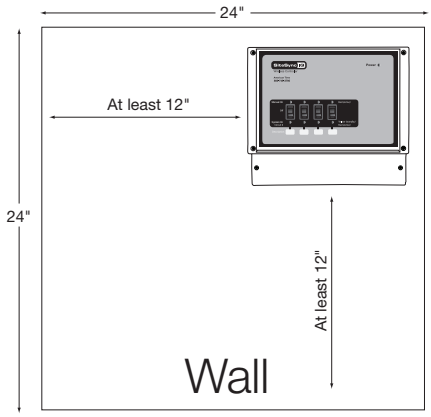
Mounting the SiteSync IQ Wireless Controller

The SiteSync IQ Wireless Controller should be:

- Located indoors in a dry location
- Mounted upright on a vertical surface
- Protected from physical damage
- Protected from water, including condensation
- Out of direct sunlight
- Operated by trained personnel

An area at least 24" wide x 24" high should be reserved to allow a clearance of at least 12" below and on the left side of the SiteSync IQ Wireless Controller. Wiring for power, clock and signal circuits must enter through conduit knockouts along the bottom of the enclosure. Connection for the tone output is located on the left side.

The SiteSync IQ Wireless Controller is designed to be wall-mounted by a molded hanger and screws. Appendix A shows a diagram for locating wall hangers at the appropriate spacings to mate with the unit.



Electrical Connections

WARNING
To prevent electrical shock, do not apply electrical power to the SiteSync IQ Wireless Controller, clock relays or signal relays before completing all wiring connections.

120vac Supply Connections

120vac supply connections are located on the block of three (3) screw terminals located center left inside the wiring compartment. The hot terminal is located at the far left position of this block of three. The neutral terminal is located at the center position of this block of three. The ground terminal is located on the right side of this block of three.

Fuse

A 2 amp - 250vac fuse protects the power input circuit. Each clock and signal relay circuit is protected by an 8 amp - 250vac fuse.

WARNING
To protect against shorts between power and signal circuits, all wires connected to the power, clock, and signal circuit terminals must be insulated to 300vac.

Clock Connections

CAUTION
To prevent damage to relays, relay contact voltage must not exceed 240vac.

Appendix B shows wiring connections to the SiteSync IQ Wireless Controller and secondary clocks for all clock types controlled by the SiteSync IQ Wireless Controller.

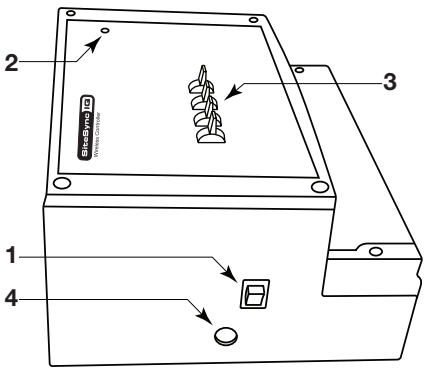
Signal Circuit Connections

CAUTION
To prevent damage to relays, relay contact voltage must not exceed 240vac.

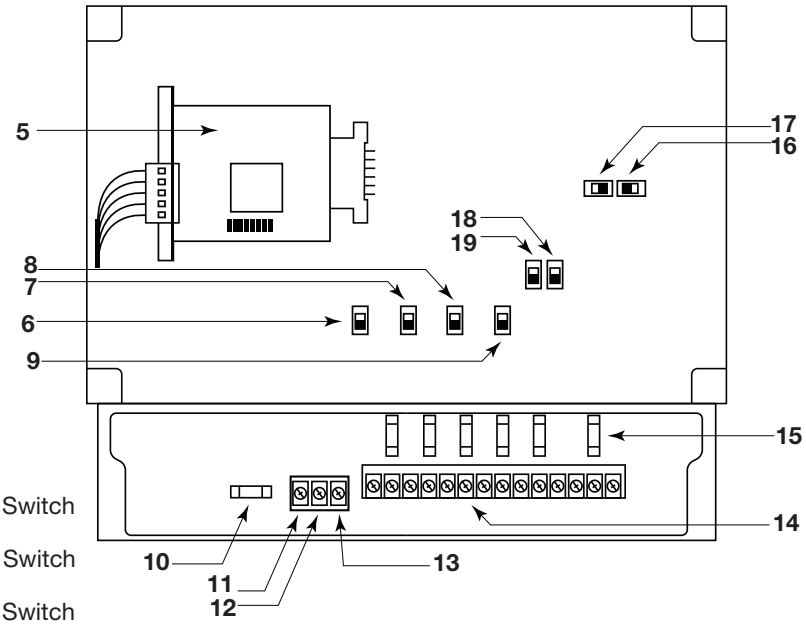
Terminals for connecting to the normally open and common contacts of the optional signal circuit relays are located in the wiring compartment at the bottom of the enclosure.

Operation

Side & Front View



Front View - Open



1. Power Switch
2. Power LED
3. 3 Position Relay Switches
4. RCA Jack
5. Tone Card
6. Bell Relay 1 Surge Switch
7. Bell Relay 2 Surge Switch
8. Bell Relay 3 Surge Switch
9. Bell Relay 4 Surge Switch
10. Power Input Fuse
11. Hot
12. Neutral
13. Ground
14. Relay Connections
15. Relay Output Fuses
16. NC Surge Switch Clock B
17. NO Surge Switch Clock B
18. NC Surge Switch Clock A
19. NO Surge Switch Clock A

A power switch (#1) is located on the left side of the SiteSync IQ Wireless Controller. When power is connected and the power switch is in the on position the power LED (#2) located in the top right corner of the front panel will light red.

WARNING
The power switch only removes power to the internal circuitry of the SiteSync IQ Wireless Controller. If performing maintenance within the wiring panel located at the bottom of the SiteSync IQ Wireless Controller, power should be removed prior to service.

Bell Relays

The SiteSync IQ Wireless Controller can be thought of as an extension to the SiteSync IQ System Controller wired relays. When the SiteSync IQ System Controller activates its on-board wired relays, it also sends out a message to activate the SiteSync IQ Wireless Controller relays. Each wired relay on the System Controller corresponds to the same wired relay on the Wireless Controller: i.e. Bell one on the system controller corresponds to bell one on the wireless controller; Bell two corresponds to bell two, and so on.

Each Wireless Controller bell relay comes equipped with a three position switch (#3). These switches allow the user to manually operate each circuit, turn them off or allow automatic control from the SiteSync IQ System Controller via wireless signals.

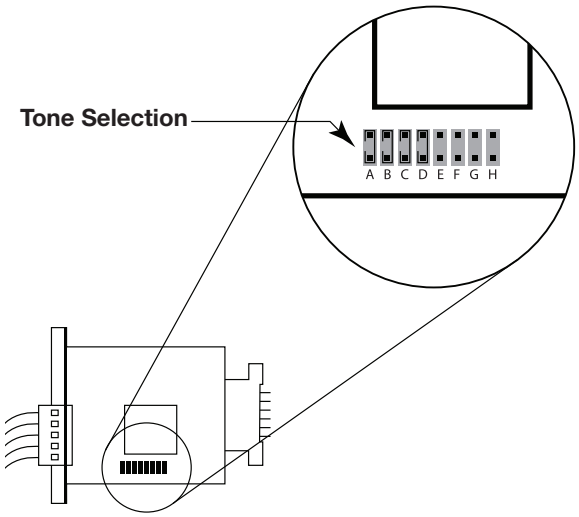
The bell relays on the SiteSync IQ Wireless Controller can be manually activated by moving the corresponding switch to the top *(On or Test)* position. A red LED will light indicating that the relay is currently active.

To disable a relay simply place the corresponding switch in the center position. The LEDs above and below the relay switch will turn off when the corresponding switch is in the OFF position.

Automatic bell relay operation is achieved by placing the corresponding switch in the down *(Auto)* position. In this position the SiteSync IQ System Controller has complete control of the bell relay. A yellow LED will light indicating the relay is ready for a message from the System Controller. A red LED will light indicating the relay is active.

Tone

The audible tone output is located on the left side of the SiteSync IQ Wireless Controller via a RCA style jack (#4). The tone output is a low level non-amplified signal intended for input to an amplified system.



Tone Selection Table	
A*	512 Hz Steady
B*	Slow Whoop
C*	Siren
D*	Mechanical Bell
E	Klaxon
F	Night Ringer
G	Double Chime
H	Doorbell

***Factory Defaults**

■**Note:** Power should be disconnected and off before making any jumper selections.

Tone Selection

The Tone card (#5) installed on the SiteSync IQ Wireless Controller provides a menu of eight tones of which four can be selected to be triggered from the SiteSync IQ System Controller. Place up to four jumper shunts at the lettered positions *(see above)* that correspond to the desired tones *(use Tone Selection Table above).* The tones will be assigned to the trigger terminals in the order they fall into from A to H where the first tone selected on the way from A to H is assigned to SiteSync IQ System Controller circuit 1, the next tone selected is assigned to circuit 2, and so on. If more than four tones are selected via jumpers, only the first four *(from A to H)* are assigned to the SiteSync IQ System Controller circuits 1 through 4. If less than four tones are selected, then only the circuits needed to correspond to the number of tones will be operational.

Clock

Clock relays are located on the far right side of the block of 14 screw terminals (#14) inside the wiring panel. *(See Appendix B for wiring diagram)*

■**Note:** For AUTO operation, reference the SiteSync IQ Operation Manual (Part # H004095)

Testing Wireless Operation of Signal Circuits

Signal circuits can be controlled manually with the MAN key on the SiteSync IQ System Controller acting as a momentary push-button switch. To initiate manual wireless control:

Using the SiteSync IQ System Controller

❶ Press MAN, enter User Lock *(unless User Lock is disabled)* and press OK *(unless User Lock is disabled)*.

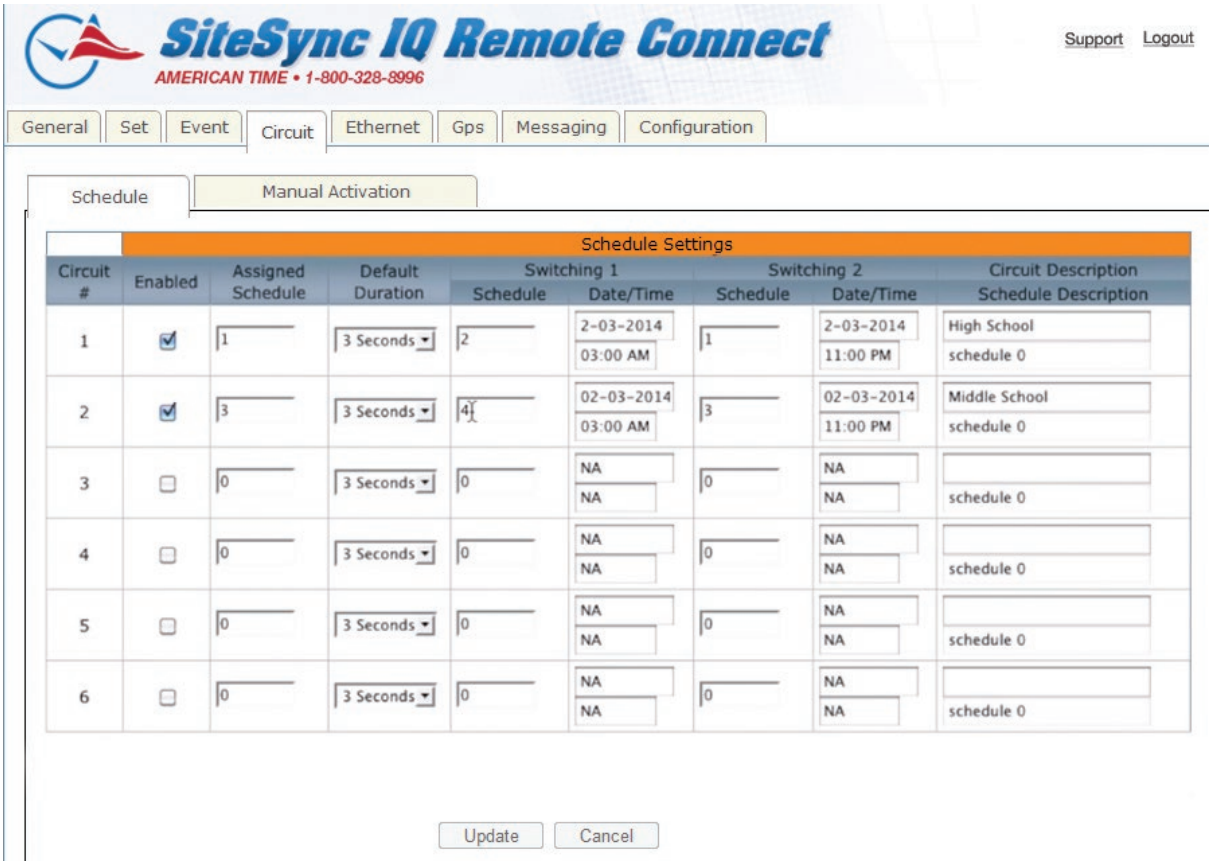
■**Note:** If circuit numbers are not highlighted, press 0 to select wireless circuit activation.

❷ Press any combination of keys 1-4 to select or deselect the circuits to be turned on with the MAN key. The MAN key can be pressed as many times as needed. Control of the signal circuits reverts to its previous state *(AUTO or OFF)* upon exiting this menu.

■**Note:** Reference **Setting Signal Circuit Schedule and Duration** in SiteSync IQ System Controller Operation Manual.

■**Note:** Upon pressing MAN, a TX will appear in the upper right hand corner to signify that the wireless activation is being transmitted.

■**Note:** The Remote Connect Web Interface may also be used to manually activate circuits via the Circuit tab..



Troubleshooting

SiteSync IQ Wireless Controller power LED OFF when power is connected

- Verify power switch is in the ON position
- Disconnect power to the SiteSync IQ Wireless Controller and remove the junction box cover. Restore power and carefully check for 120vac between terminals H and N.
- Disconnect power and remove the front panel. Check power input fuse (F2) and replace if necessary.

Secondary Clocks not synchronized with System Controller

- If system controller time was recently changed, allow up to 24 hours for secondary clocks to re-synchronize to the system controller.
- Make sure there is sufficient voltage across each secondary clock.
- If fewer than 25 secondary AllSync clocks are connected to the SiteSync IQ Wireless Controller, the secondary clocks might not recognize the correction from the SiteSync IQ Wireless Controller. Connect all intended clocks and allow time for the normal SiteSync IQ Wireless Controller correction. If secondary clocks still have not corrected, you may need to disable surge suppression circuitry (set surge switches S7 and S8 to the OFF position to disable surge suppression circuitry).
- Check for signal reception at installation location. Contact American Time Technical Support or reference the SiteSync IQ Site Survey instructions.

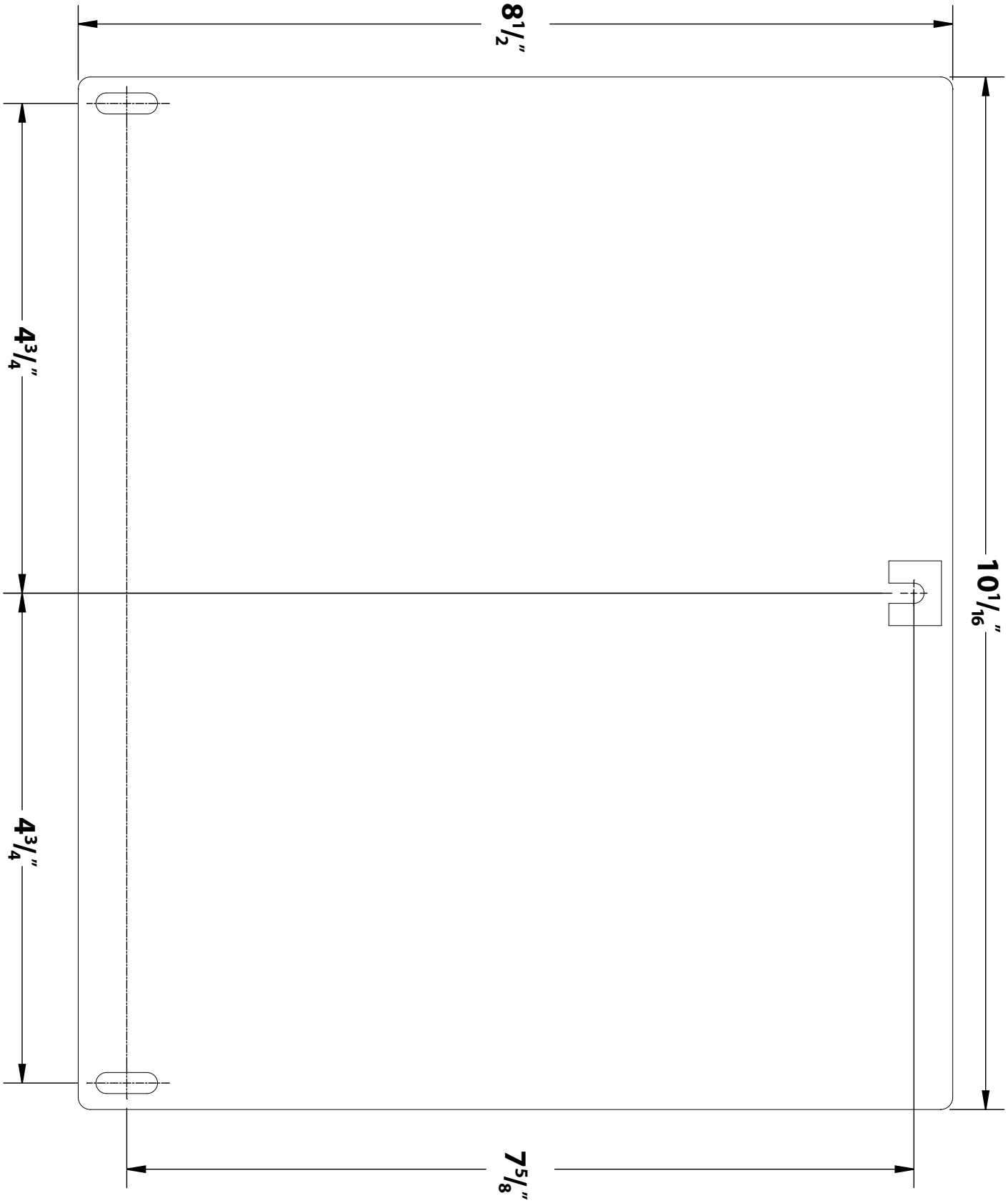
Signal Circuits Not responding to programmed events

- Make certain that SiteSync IQ System Controller circuits are set to AUTO and signal circuits are enabled. Press AUTO 8 on the System Controller keypad, enter User Lock, if applicable, then press OK .
- Confirm that signal circuits and events programmed to control them are assigned to the same schedule.
- Check for correct voltage at signal relay contacts.
- Check for signal reception at installation location.
- Check for signal reception at installation location. Contact American Time Technical Support or reference the SiteSync IQ Site Survey instructions.

Power outage during Daylight Saving Time Correction

- If there is a power outage during the correction period for Daylight Saving Time, the secondary clocks might not correct. In this event wait for the next 12 hour correction.

Appendix A: Wall Mounting Diagram



Note: This diagram is not to scale.

Appendix B: Relay Wiring Diagram

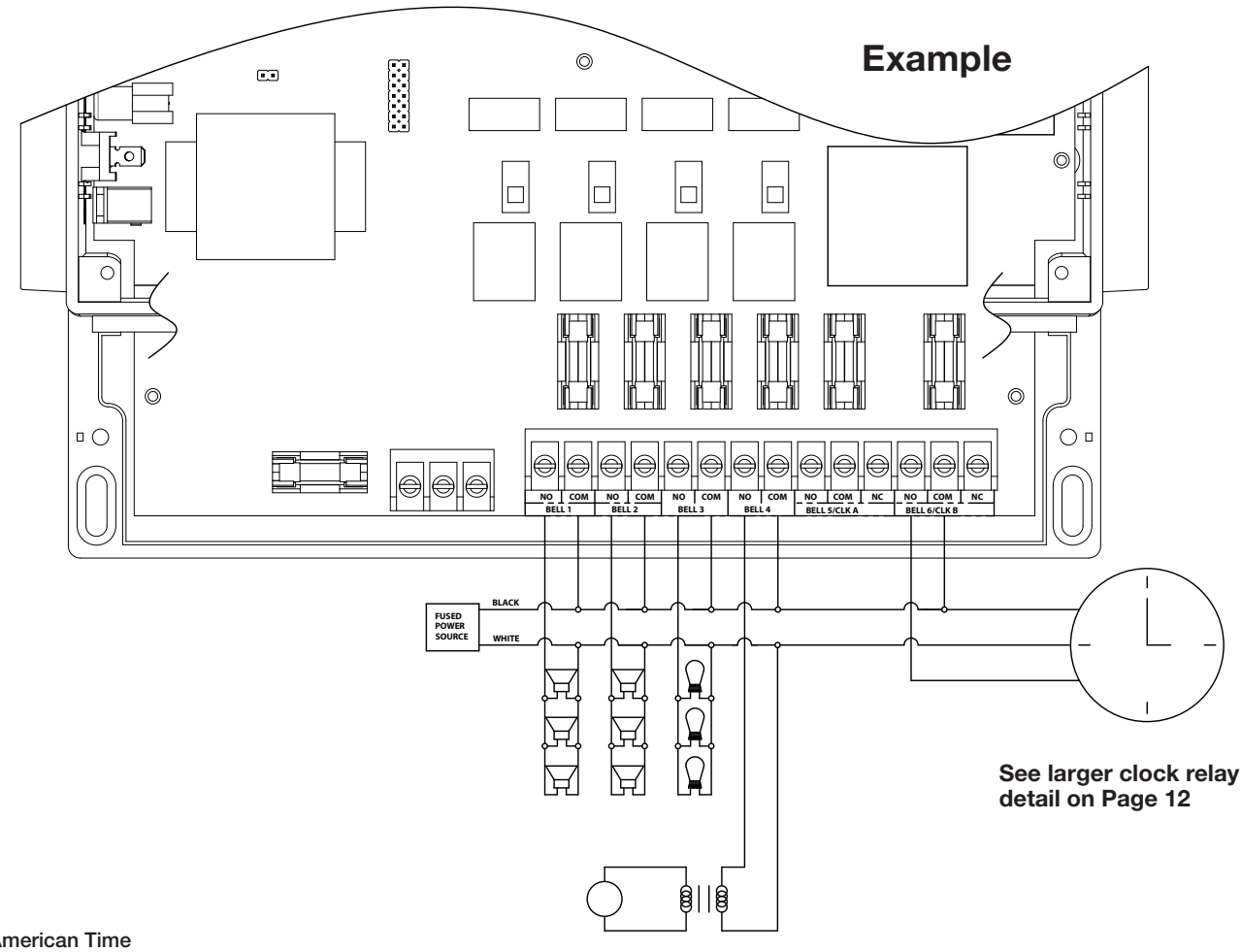
Wired Signal Circuit Installation

To install wired signal circuits (for electrical device control including bells, tone generators, lights, etc.):

1. Disconnect and lock out power to the SiteSync IQ Wireless Controller and any circuit wiring.
2. Remove the cover from the Wireless Controller.
   a. Remove 2 screws from each side of the wire compartment cover.
   b. Remove the wire compartment cover
3. Route signal circuit wires into the wiring compartment of the Wireless Controller.
   a. Remove knockout(s) below wire compartment.
   b. Use copper conductors only.
   c. Use strain relief connector fittings in the knockout holes to secure the wires.
   d. Route the wires into the wiring compartment, leaving enough slack to make all connections to the relay terminals.
4. Connect signal wires to the circuit relay terminals.
   a. Route the power (feed) line of each circuit to the COM terminal of the desired circuit (1-6) being connected.
   b. Route the switched (load) line of each circuit to the NO terminal of the desired circuit (1-6) being connected.
   c. Label the wires for each circuit as desired.
5. Replace the wire compartment cover.

■**Note:** The signal circuits are protected with surge suppression components. In some applications, this protection can cause leakage current to trigger the output device(s) when the circuit is switched OFF. In these cases, the surge protection switches can be moved to the OFF position. Contact American Time Technical Support with any questions at 800-328-8996.

6. Apply power to the Wireless Controller and signal circuit(s).
7. Test the signal circuits using the Sitesync IQ System Controller circuit menu or Remote Connect circuit tab.



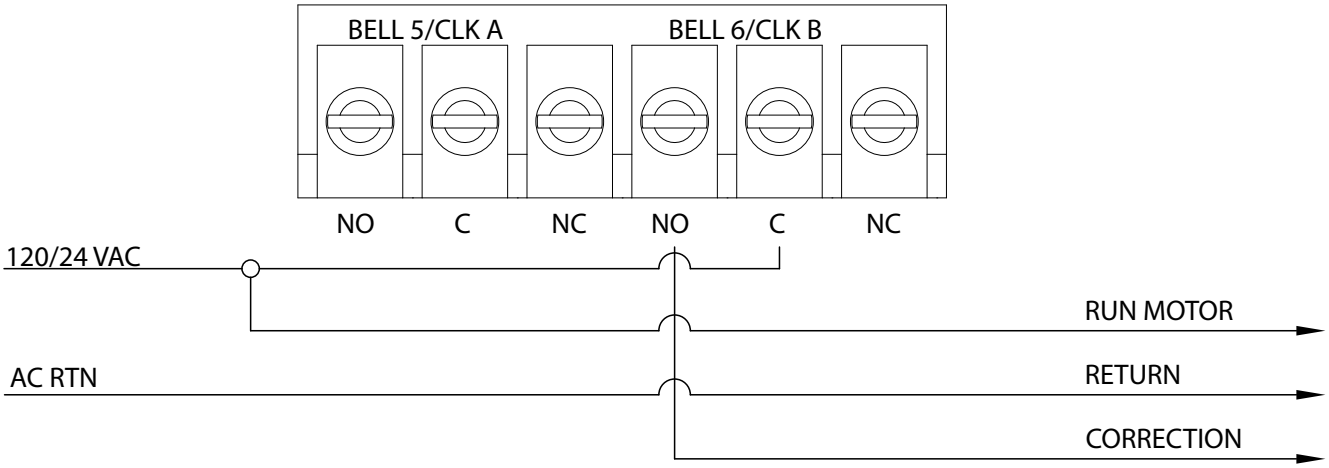
See larger clock relay detail on Page 12

Appendix C: Clock Relay Wiring Diagram

Wired Clock Circuit Installation

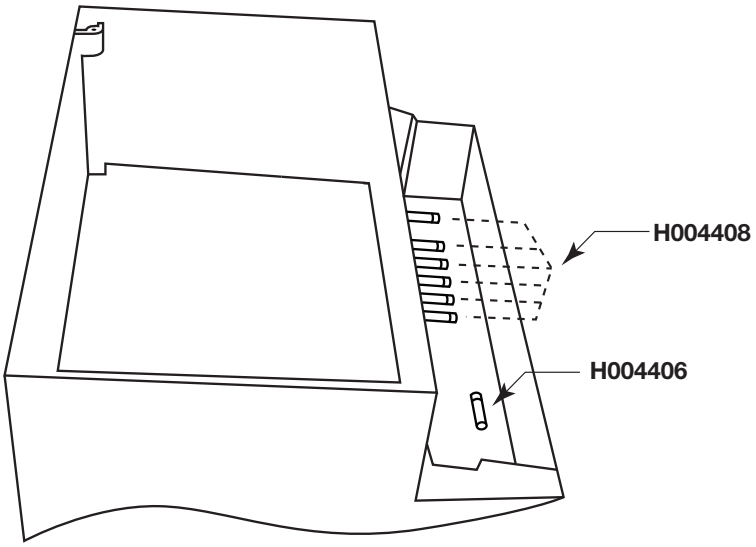
To install wired clock circuits:

1. Disconnect and lock out power to the SiteSync IQ Wireless Controller and any circuit wiring.
2. Remove the cover from the Wireless Controller.
   a. Remove 2 screws from each side of the wire compartment cover.
   b. Remove the wire compartment cover.
3. Route clock circuit wires into the wiring compartment of the Wireless Controller.
   a. Remove knockout(s) below wire compartment.
   b. Use copper conductors only.
   c. Use strain relief connector fittings in the knockout holes to secure the wires.
   d. Route the wires into the wiring compartment, leaving enough slack to make all connections to the relay terminals.
4. Connect clock wires to the circuit relay terminals.
5. Replace the wire compartment cover.
6. Apply power to the wireless controller and clock circuit(s).
7. Test the clock circuit. Clock relay B should activate at HH:57:54 for 8 seconds and at 05:57:54 for 14 seconds.



Clock Code 01 - 3 wire Synchronous

Appendix D: Replacing Fuses



Part Number	Description	Where used
H004406	Fuse 2A 250V 5x20 Fast Glass, SSIQ WRLS CNTR	Power input (F2)
H004408	Fuse 8A 250V 5x20 Fast Glass, SSIQ WRLS CNTR	Relay contacts (F3-F8)