Night Access Control System

Allow Only Registered Customers In After Hours
Model: NACS-TA, Turbo Accessories Registration Database Required

Overview

The Turbo Accessories Night Access Control System provides a door-mounted Wicket Reader so only your preferred registered customers can use their Wickets to open your locked business doors after your attendant has gone for the day.

While operators typically experience a 15% - 25% increase in revenue when going to a 24 hour operation, many are either reluctant to pay for an attendant 24 hours a day or are concerned for vandalism when their business is unattended. With the Night Access Control System you can limit access to only your registered Wicket customers and know exactly who was there and when they were there. Those customers will know that you know and act responsibly.

The Wickets Turbo Accessories software that provides you with the Jackpot, Registration and Redemption functions also provides the Night Access Control function for registered customers. As can be seen from the figure above, a door-mounted Wicket Reader is powered from the Night Access Controller and communicates with the Turbo Accessories Computer which, by command, can activate the electric strike on you door to release the latch. When a late night customer reads his Wicket at the door-mounted Wicket Reader, the read UserID is transmitted to the Turbo Accessories Computer to check the UserID with its database of registered customers and then release the door latch if registration is confirmed.

An electric strike is an access control device for doors that replaces the fixed strike faceplate that presents a ramped surface to the locking latch. An electric strike's ramped surface can, upon command, pivot out of the way of the latch allowing the door to be pushed open without the latch being retracted. The Night Access Control System uses electric strikes of the "fail-secured" configuration where applying an electric current to the strike causes it to open. If there is a power failure the door will remain locked, but a knob or lever is provided to open the door from the inside in case of emergency.

Control Kit

The Control Kit consists of the below pictured items. The Turbo Accessories Night Access Control software can separately communicate with and manage up to two Night Access Controllers. Special access privileges may optionally be given to a registered customer and may optionally be required of a registered customer as further condition of access at a particular door.
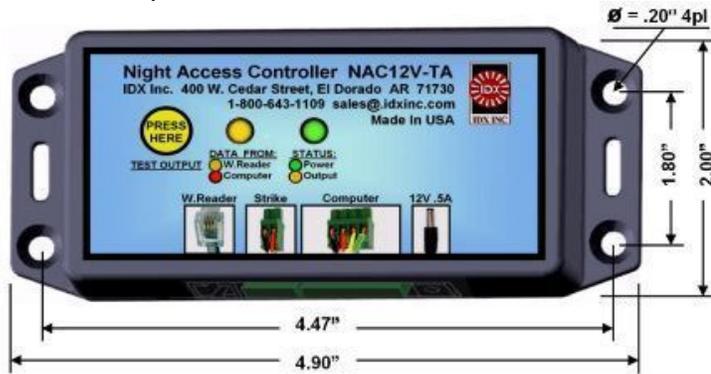
Night Access Controller
NAC12V-TA (TA = Turbo Accessories)

Night Access Reader Box
NARB-TA-15

Universal AC Adapter
NAUA12V

Computer Interface Cable
NACIC-xx (xx = length in ft.)

Electric Strike Wire
NAESW-15

▸ The **Night Access Controller** module provides regulated 6VDC to the Wicket Reader and switches 12VDC at up to 330mA to drive the electric strike. It also connects the Wicket Reader serial port to the Turbo Accessories Computer serial port (maximum of 4,000 feet of cable) and receives a control line from the Turbo Accessories Computer to control power switching to the electric strike. Typically mounted in the ceiling above the door.

▸ The **Night Access Reader Box** mounts on the outside door frame with no visible mounting screws and includes the Wicket Reader with a 15 foot cable. Its Model WR88 Wicket Reader is shipped from the factory in its "virgin state" and must be programmed by reading data from a Reader Programming Wicket set up with the Wickets Administrator software utility to have your assigned SiteID and to operate with the MDB Vendor Protocol interface. Any later field re-programming of the WR88 (to accept another SiteID for example) must also ensure that the MDB Vendor Protocol setting is retained so that it can communicate with the Turbo Accessories Computer.

▸ The **Universal AC Adapter** provides power to the Night Access Controller, Night Access Reader Box, and the electric strike. It takes 90VAC to 264VAC power and produces 12VDC @500mA.
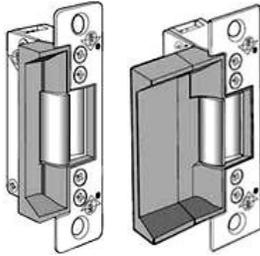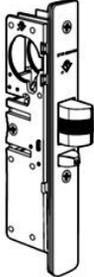
▸ The **Computer Interface Cable** provides the serial data port connection and the signal to control the electric strike. You must specify the length when ordering. Wires connect to screw terminal connectors.

▸ The **Electric Strike Wire** provides 15 feet of wire to connect your electric strike to the screw terminal connector of the Night Access Controller. Wire polarity is unimportant.

Door Kit

The components of the Door Kit are generally as pictured below, but will depend on the particular dimensions and configuration of your door and its frame. You will be asked to gather and provide certain information so we can work through the details of determining the exact parts needed for your door.

Typical Components For Single Doors

Electric Strike	Deadlatch	Mortise Cylinder	Exit Paddle
- may require lip extension - uses 12VDC 330mA max. - operates in "fail secure" mode	auxiliary bolt deadlocks latch to prevent "loading" or case-knife entry.	- 1-5/32" diameter - 5-pin tumbler - keyed alike pairs	-emergency exit -right/left, push/pull field configurable

Typical Additional Components For Double Doors

| Keyed Flushbolt	Door Power Loop
Ensures inactive door stays locked at night.	Inactive door armored wiring path for electric strike.

Information To Gather And Provide

After reviewing the above information, please contact IDX (or click link on WEB) for a list of information you will need to gather about your doors and frames so that we can identify the specific model numbers and appropriate options required to put together a door kit that will work for you. You will need to measure various dimensions of the door and its frame and identify hardware already present on the door and frame.

Installation

Installation will require the tools and ability to a) drill holes, b) pull wires through the door frame, c) modify the door frame for mounting the electric strike, and other similar tasks.

‣ The **Night Access Controller** module is typically mounted in the ceiling above the door. Use appropriate fasteners on the enclosure mounting tabs to hold it in place. Choose a location that is within wiring range of the 15 foot length wire provided for the Night Access Reader Box and the electric strike.

‣ The **Night Access Reader Box** mounts on the outside door frame typically at height of 60" from the ground. 1.) Prepare the frame by drilling three holes as specified in the sketch to the right. 2.) Unscrew the box cover and use the provided screws and nuts to fasten the box bottom to the door frame. 3.) Run the Wicket Reader cable up through the door frame and up into the ceiling to plug it into the Night Access Controller. 4.) Replace the cover with its attached Wicket Reader onto the box bottom and fasten it with the cover screws. 5.) Peal the release paper from the back of the cover label, align its central hole with the Wicket Reader and press it carefully onto the cover making sure it is well centered and aligned with the edge of the box. The cover label will hide the cover screws and provide a professional looking finish.
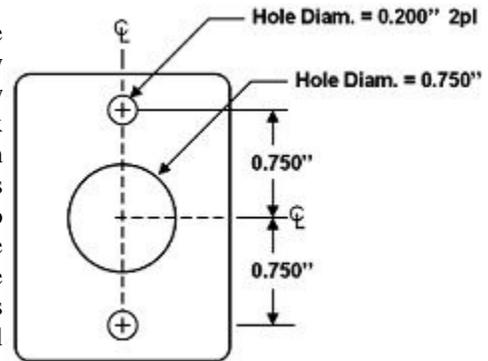
‣ The **Deadlatch, Exit Paddle, and Mortise Cylinder Lock** come with their own specific installation instructions for installation on the door. You will only need these if your door has only a keyed deadbolt, which is generally much too large to fit in an the latch retainer of an electric strike. You may wish to keep the keyed deadbolt in its current location and add the deadlatch above or below it on the door.

‣ The **Electric Strike** comes with its own specific installation instructions for door frame preparation.

‣ The **Electric Strike Wire** must be run up through the door frame and up into the ceiling to the Night Access Controller. Wire polarity is not important. The wires are connected to the electric strike using the provided wire nuts. A pluggable connector with two screw terminals is provided with the Night Access Controller as pictured to the right. Fasten the two wires to the screw terminals as shown and plug the connector into the Night Access Controller.

‣ For **Double Door Installations** the electric strike must actually be installed in the edge of the door that remains locked and inactive at night. The electric strike wire must then be routed from the door frame through the **Door Power Loop** into the door and to the electric strike. The Door Power Loop provides protection for these wires which may otherwise chafe or be physically damaged by large objects passing through the opened door. A **Keyed Flushbolt** installed on the inactive door is important for ensuring that the security of this door is not compromised by a late night customer whom may for any reason manually unlock the door from the inside.

‣ The **Computer Interface Cable** must be run from the serial port of your Turbo Accessories Computer up to the ceiling and over to the Night Access Controller mounted over the door. The computer end of the cable has a D-9 connector that will plug right onto the computer's serial port. A pluggable connector with four screw terminals is provided with the Night Access Controller as pictured to the right. The wires must be connected in the order shown to the right... the black-red pair are connected in positions 1 and 2 respectively, and the black-white pair are connected in positions 3 and 4 respectively. Fasten the four wires to the screw terminals and plug the connector into the Night Access Controller.

‣ The **Universal AC Adapter** is powered from a standard AC power wall outlet. Presuming that there is not one already present in the ceiling above the door, then one must be installed. Plug the Universal AC Adapter into the outlet and plug its small circular low voltage power connector into the Night Access Controller. If power is on, the STATUS LED on the Night Access Controller will turn green.

‣The Turbo Accessories Computer hardware requirements and Turbo Accessories Software application download are described on the above page link.

‣**Test The Installation** by pressing the TEST OUTPUT button and confirming that the STATUS LED turns yellow and the electric strike is activated. Also, observe the Wicket Reader and confirm that its face is illuminated purple to indicate power is on but it is receiving no communication from the computer. When the computer is eventually connected you will observe the DATA LED on the Night Access Controller blinking red and green and the face of the Wicket Reader will turn blue to indicate it is ready and idle.

Operation

To enable the Night Access Control System within Wickets Turbo Accessories, click the Setup button on the main screen to get the "Setup Wickets Turbo Accessories" screen shown below to the right. In the upper left frame, check the box to enable the module for the Night Access Control System as shown. The two serial ports associated with this function will then be enabled in the upper right frame. Set the serial port assignments according to the way you have physically set them up.

In the example to the right, a connection has been found for Door #1 with serial port #2. Although Door #2 has serial port #1 assigned to it, Turbo Accessories software is unable to communicate with any Wicket Reader as shown by the yellow text indicating No Data. Next, click the Night Access System Setup button at the center-bottom of the screen to bring up the "Night Access Options" screen shown below.
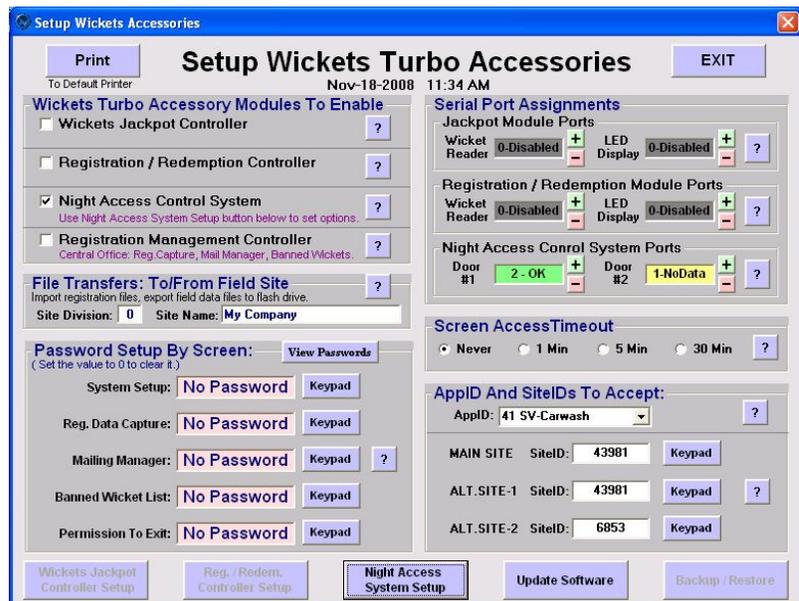
Each of Door #1 and Door #2 have the same selection of options to determine the rules for customer access and service personnel access. For customers, you may; 1) allow any customer with one of your Wickets to open the door, 2) allow only registered customers to open the door, or 3) require that they have permission in their registration record to open that particular door. (see next graphic below). The same options apply separately for your service personnel and may be different than what you have selected for your customers.

There are two buttons at the bottom of the screen that allow for testing of the wiring from the computer to the Night Access Controller module and then to the electric strike mounted in the door frame. If Turbo Accessories is able to communicate with the Wicket Reader associated with that door, then it will enable the Test Door #x button. When you click one of the test buttons, ten test output pulses of one
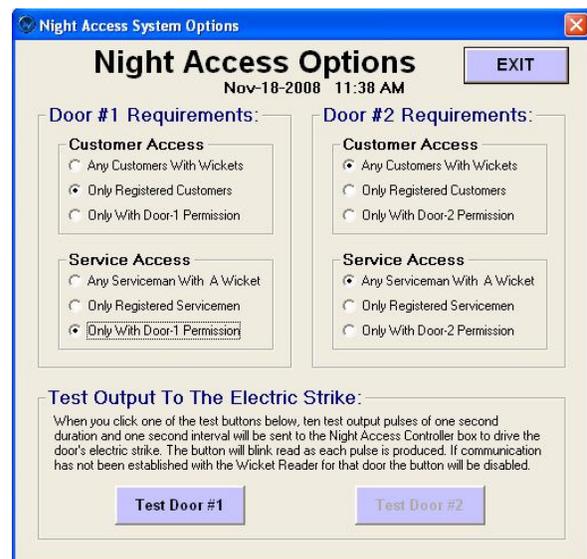
second duration and one second interval will be sent to the Night Access Controller box to drive the door's electric strike. The button will blink read as each pulse is produced. Check the LED on the Night Access Controller to see if it is getting the signal and check the electric strike to see if it is activating.

As mentioned above, if you require that a customer or a serviceman have permission to open a door, permission must be set in the registration records for that person's Wicket. In the center upper portion of the screen shot to the right you can see the two check boxes for the two doors that set the permission. You can only change things on this screen if the Registration Management Controller module check box on the Setup screen is checked. If you are running a system with a central office computer and a field site computer, then you will have to set these permissions in the registration records at the central office and use the Import/Export Data tab on the above screen to facilitate transferring the registration files to the field site with your USB Flash drive. For more information, see the Registration Management Controller page.

The Night Access History button on the main screen will bring up the report screen to the right showing the date, time, WicketID, door number, what happened, the type of customer and the customer name of the last 1,000 times the Wicket Reader at either door read a Wicket.

Records beyond the 1,000 list limit are automatically purged. If you need to save this list for a long period of time you have the following options: 1) use the Print button to print the screen to the system printer, or 2) use your USB Flash drive with the Import/Export Data Tab feature and export a copy of the file to the Flash drive that you may later examine at your central computer. We don't recommend using the Backup button on the Setup page for this purpose because if you do later restore data, you will loose all of the data in-between that time unless you also save a new backup copy just before you restore the old one and don't forget to re-restore the real data later.