

Buzz-In Solutions Using Wyreless Access Products

Summary

This application note describes how to implement Wyreless Access buzz-in solutions using Wyreless Access Products.

Acronyms	Description
ACP	Access Control Panel
AP	Access Point
CM	Cache Memory
CDT	Configuration Demonstration Tool
IRL	Integrated Reader Lock, a WAPM
PIM	Panel Interface Module
MIRL	Modular Integrated Reader Lock, a WAPM
WAPM	Wyreless Access Point Module
WCM	Wyreless Contact Monitor, a WAPM
WISI	Wyreless Integrated Strike Interface, a WAPM
WPR	Wyreless Portable Reader, a WAPM
WRI	Wyreless Reader Interface, a WAPM
WUSI	Wyreless Universal Strike Interface, a WAPM
WEXK	Wyreless Exit Kit, a WAPM

Introduction:

How to implement a Wyreless Access “Buzz-in” application depends on how the Panel Interface Module (PIM) connects to the access control panel (ACP).

If you are using PIM that connects to the ACP using a Wiegand or Clock & Data reader interface (PIM-TD2 or PIM-TD4) go to page 2, below.

If you are using PIM that connects to the ACP using a RS-485 interface (PIM-OTD-485-xxx) go to 4, below.

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**Buzz-in Solutions for WAPMs Using a PIM-TD2 or PIM-TD4
(Wiegand or Clock & Data Discrete Reader Interfaces)**

General:

A “Buzz-in” is defined as unlocking an access point on demand to allow passage by a party not having a credential available to accomplish the un-lock. Figure 1 (page 2) is a flow chart of the typical process. A person with authority must then accomplish the un-lock from a remote location. The authorizing person must have a means to identify the party requesting admittance. The identification may be made by voice intercom, video or physical position in site of the requesting party. The authorizing party unlocks the access point by providing a contact closure to the access control module or panel Request to Exit input controlling the access point. This can be accomplished using a wired dry contact switch or third party wireless controlled dry contact closure. The access control system must be configured to close the lock output relay for the access point upon a Request to Exit input. The most efficient way of accomplishing the Buzz-in function is different for battery and non-battery powered Wyreless access points. Each is addressed below.

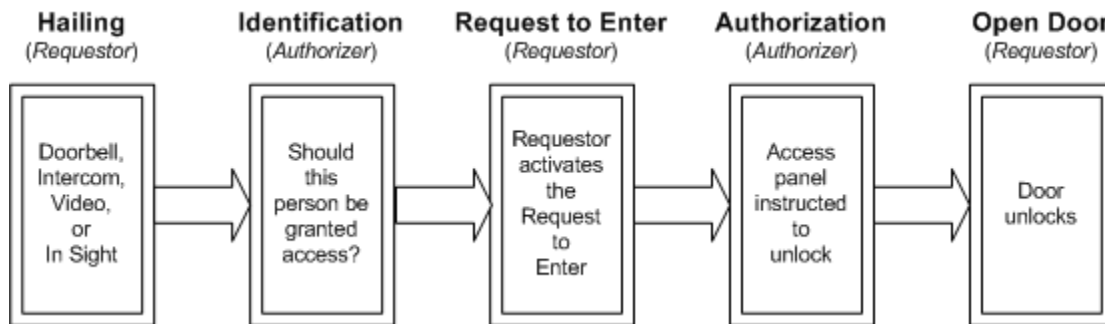


Figure 1 - Flow Chart of the Typical Buzz-in Solution

Battery Powered Wyreless Access Points (MIRL, WEXK and WISI):

The MIRL and WEXK require the activation of the optional Request to Enter function to implement Buzz-in. The WEXK can be ordered with either a Request to Enter button switch in the reader cover or a switch in the reader side handle activated by turning the handle up or down. MIRLs can be ordered with the Request to Enter switch in the reader cover. The WISI has a set of Request to Enter terminal block connections (J4 pins 9 and 10) to connect a third party normally open switch. The third party switch should be sealed and intended for a dry contact to ensure long-term reliability (typically gold plated contacts). The Request to Exit feature may also be used to implement a Buzz-in for the WISI. The use of the WISI Request to Exit feature for Buzz-in is addressed in the second paragraph below.

The Request to Enter wakes up the access point and queries the PIM for unlock authorization for up to 15 seconds. The access point module will perform a momentary unlock so long as the access control system provides a contact closure to the STK-NO and STK-COM inputs to the PIM at the time one of the queries. An authorized individual, as addressed in the General section above, causes the contact closure to occur. Access control credentials are not recognized anytime the Wyreless access point module is in the query mode due to a Request to Enter activation. That is, valid credentials will not be accepted by the Wyreless access control module or provided to the access control system until the Request to Enter function has completed. The Request to Enter function is completed upon authorization to unlock, a Request to Exit due to someone exiting the controlled area or the 15 second query time out, whichever occurs first.

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The use of the WISI Request to Exit feature for Buzz-in requires a normally open dry contact switch closure to the WISI Request to Exit input (J4 pins 7 and 8) activated by an authorized individual. This can be accomplished using a wired dry contact switch or third party wireless controlled dry contact closure. The access control system must be configured to provide a closure of the normally open lock output relay for the access point upon a Request to Exit. The WISI must be configured to unlock on a Request to Exit (the factory default setting) when authorized by the access control system. The third party switch should be sealed and intended for a dry contact to ensure long-term reliability (typically gold plated contacts).

Non-Battery Powered Wyreless Access Points (WRI and WUSI):

There are three methods to accomplish a Buzz-in for the WRI and WUSI. The selection of the method is up to the end user and installer. The first method is to use the Request to Enter function as described in the following paragraph. The second method does not use the Request to Enter function but requires the use of the Wyreless Access Control Configuration and Demonstration Tool (CDT) software available free for download at <http://www.wyrelessaccess.com/> to change the heartbeat interval and is addressed in the second paragraph below. The third method uses the Request to Exit feature and is addressed in the third paragraph below.

The first method to enable a Buzz-in solution for the WRI and WUSI uses the Request to Enter feature. The WRI and WUSI have terminal block connections for a Request to Enter dry contact input. These are J7 pins 1 and 2 on the WRI and the top 2 pins of the 6 pin terminal block on the left side of the WUSI. The third party switch used for the Request to Enter input should be sealed and intended for a dry contact to ensure long-term reliability (typically gold plated contacts). The Request to Enter wakes up the access point and puts it in a query mode to the PIM for unlock authorization for up to 15 seconds. The access point module will perform a momentary unlock so long as the access control system is providing a contact closure to the STK-NO and STK-COM inputs of the PIM at the time one of the queries is received by the PIM. This is accomplished as addressed in the General section above. Access control credentials are not recognized anytime the Wyreless access point module is in the query mode due to a Request to Enter activation. That is, valid credentials will not be accepted by the Wyreless access control module or provided to the access control system until the Request to Enter function has completed. The Request to Enter function is completed upon authorization to unlock, a Request to Exit due to someone exiting the controlled area or the 15 second query time out, whichever occurs first.

The second method to enable a Buzz-in solution for the WRI and WUSI requires that the heartbeat be set to a short period using the CDT. The heartbeat of the WRI and WUSI is adjustable in 1-second increments to a minimum of 1 second. The factory default heartbeat setting is 10 minutes. Set the heartbeat to 1 second for the fastest response. The extended unlock feature must be active in the configuration settings (the factory default setting) and the PIM tamper switch in the secure position for this method to work. Using this method will result in the WRI or WUSI setting and holding an unlock state as long as the access control system provides a contact closure to the STK-NO and STK-COM inputs of the PIM. The WRI or WUSI becomes a slave of the access control system lock output normally open relay with a maximum latency in state change being the heartbeat interval. An authorized individual, as addressed in the General section above, causes the contact closure to occur.

The third method to enable a Buzz-in solution uses the Request to Exit feature. It requires normally open dry contact switch closure to the WRI or WUSI Request to Exit input activated by an authorized individual. These are J7 pins 3 and 4 in the WRI and the 3rd and 4th pins from the top of the 6-pin terminal block in the WUSI. This can be accomplished using a wired dry contact switch or third party wireless controlled dry contact closure. The access control system must be configured to provide a closure of the normally open lock output relay for the access point upon a Request to Exit. The WRI or WUSI must be configured to unlock on a Request to Exit (the factory default setting) when authorized by the access control system.

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Buzz-in Solutions for Wyreless Access Point Modules Using a PIM-485

General:

A "Buzz-in" is defined as unlocking an access point on demand to allow passage by a party not having a credential available to accomplish the un-lock. Figure 1 (page 2) is a flow chart of the typical process. A person with authority must then accomplish the un-lock from a remote location. The authorizing person must have a means to identify the party requesting admittance. The identification may be made by voice intercom, video or physical position in site of the requesting party. The authorizing party unlocks the access point by providing a momentary unlock command through the access control system controlling the access point. There are generally two methods of providing the unlock command. If the authorized individual has access to a computer or console connected to the access control system they can issue an unlock command as they would in a wired system. The second method is to use a dry contact switch wired to a discrete panel, door control module or I/O board input. The access control system is then configured with an event-action to provide an unlock command to the PIM-485. The most efficient means of accomplishing the Buzz-in function is different for battery and non-battery powered Wyreless access points. Each is addressed below.

Battery Powered Wyreless Access Points (MIRL, WEXK and WISI):

The MIRL and WEXK require the activation of the optional Request to Enter function to implement Buzz-in. The WEXK can be ordered with either a Request to Enter button switch in the reader cover or a switch in the reader side handle activated by turning the handle up or down. MIRLs can be ordered with the Request to Enter switch in the reader cover. The solution for the WISI can also use the Request to Enter feature. The WISI has a set of Request to Enter terminal block connections (J4 pins 9 and 10) to connect a third party normally open switch. The third party switch should be sealed and intended for a dry contact to ensure long-term reliability (typically gold plated contacts). The MIRL, WEXK and WISI Buzz-in process using the Request to Enter function is illustrated in figure 1 (page 2). The Request to Exit feature may also be used to implement a Buzz-in for the WISI. The use of the WISI Request to Exit feature for Buzz-in is addressed in the second paragraph below.

Activating a Request to Enter wakes up the access point and begins a series of queries to the PIM for unlock authorization for up to 15 seconds. The access point module will unlock provided an authorized individual, as addressed in the General section above, causes the unlock command to occur within the 15 seconds by either entering an unlock command from a computer or pressing a switch depending on the method implemented. Access control credentials are not recognized anytime the Wyreless access point module is in the query mode due to a Request to Enter activation. That is, valid credentials will not be accepted by the Wyreless access control module or provided to the access control system until the Request to Enter function has completed. The Request to Enter function is completed upon authorization to unlock, a Request to Exit due to someone exiting the controlled area or the 15 second query time out, whichever occurs first.

The use of the WISI Request to Exit feature for Buzz-in requires a normally open dry contact switch closure to the WISI Request to Exit input (J4 pins 7 and 8) activated by an authorized individual. This can be accomplished using a wired dry contact switch or third party wireless controlled dry contact closure. The access control system must be configured to provide an unlock command for the access point upon a Request to Exit. The WISI must be configured to unlock on a Request to Exit when authorized by the access control system. This is the factory default setting for the WISI. The third party switch should be sealed and intended for a dry contact to ensure long-term reliability (typically gold plated contacts).

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Non-Battery Powered Wyreless Access Points (WRI and WUSI):

There are three methods to accomplish a Buzz-in for the WRI and WUSI. The selection of the method is up to the end user and installer. The first method is to use the Request to Enter function as described in the following paragraph and illustrated in figure 1 (page 2). The second method requires the use of the Wyreless Access Control Configuration and Demonstration Tool (CDT) software available free for download at <http://www.wyrelessaccess.com/> to change the heartbeat interval and is addressed in the second paragraph below. The third method uses the Request to Exit feature and is address in the third paragraph below.

The first method to enable a Buzz-in solution for the WRI and WUSI uses the Request to Enter feature. The WRI and WUSI have terminal block connections for a Request to Enter dry contact input. These are J7 pins 1 and 2 on the WRI and the top 2 pins of the 6-pin terminal block on the left side of the WUSI. The third party switch used for the Request to Enter input should be sealed and intended for a dry contact to ensure long-term reliability (typically gold plated contacts). The Request to Enter wakes up the access point and puts it in a query mode to the PIM for unlock authorization for up to 15 seconds. The access point module will unlock provided an authorized individual, as addressed in the General section above, causes the unlock command to occur within the 15 seconds by either entering an unlock command from a computer or pressing a switch depending on the method implemented. Access control credentials are not recognized anytime the Wyreless access point module is in the query mode due to a Request to Enter activation. That is, valid credentials will not be accepted by the Wyreless access control module or provided to the access control system until the Request to Enter function has completed. The Request to Enter function is completed upon authorization to unlock, a Request to Exit due to someone exiting the controlled area or the 15 second query time out, whichever occurs first.

The second method to enable a Buzz-in solution for the WRI and WUSI requires that the heartbeat be set to a short period using the CDT. The heartbeat of the WRI and WUSI is adjustable in 1-second increments to a minimum of 1 second. The factory default heartbeat setting is 10 minutes. Set the heartbeat to 1 second for the fastest response. The extended unlock feature must be active (the factory default setting) in the configuration settings and the PIM tamper switch in the secure position for this method to work. The access point module will unlock provided an authorized individual, as addressed in the General section above, causes the unlock command to occur by either entering an unlock command from a computer or pressing a switch depending on the method implemented.

The third method to enable a Buzz-in solution uses the Request to Exit feature. It requires normally open dry contact switch closure to the WRI or WUSI Request to Exit input activated by an authorized individual. These are J7 pins 3 and 4 on the WRI and the 3rd and 4th pins from the top of the 6 pin terminal block on the left side of the WUSI. This can be accomplished using a wired dry contact switch or third party wireless controlled dry contact closure. The access control system must be configured to provide an unlock command for the access point upon a Request to Exit. The WRI or WUSI must be configured to unlock on a Request to Exit (the factory default setting) when authorized by the access control system.

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