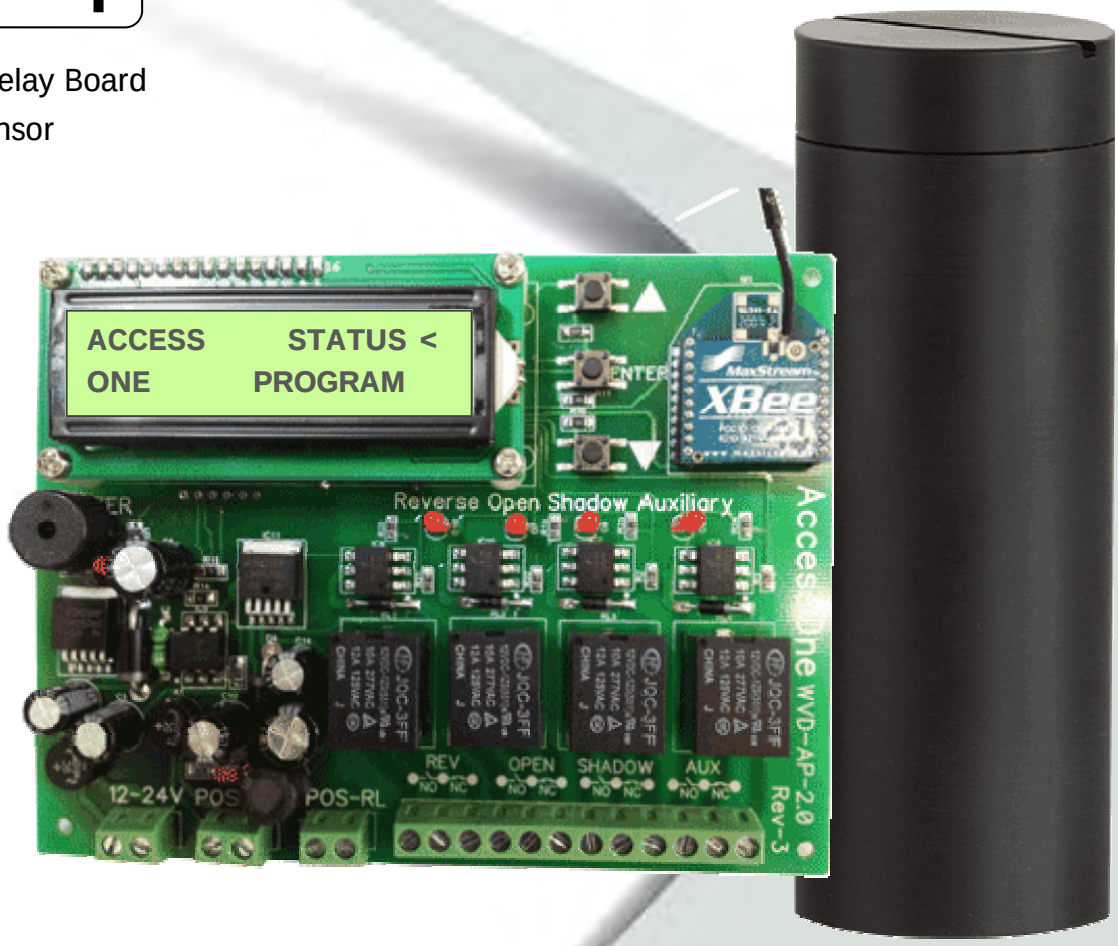
WVD100

Wireless Vehicle Detector

EZ Loop

- AP100 Relay Board
- S200 Sensor



Product Manual

- Installation Instructions
- Program Instructions

Read and follow all U.L. and Safety Standards before installing any access device. Please refer to this manual and qualified personnel for assistance. DO NOT install this device unless all entrapment and pinch points are eliminated.

Revision 1.8A

CONTENTS

SAFETY INFORMATION

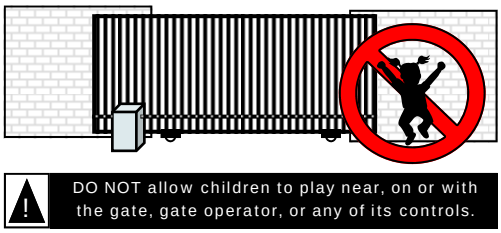
Important User Information:

Automatic gate systems provide user convenience and limit vehicular traffic. Because these systems can produce high levels of force, it is important that you are aware of the potential hazards associated with the system. Potential hazards may include pinch points, entrapment positions, lack of proper pedestrian access, blind spots for traffic visibility.

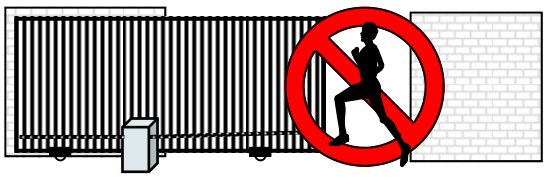
It is the joint responsibility of the designer, purchaser, installer and end user to verify the system is properly configured for its intended use. Be sure the installer has instructed you on the proper operation of the gate system before use. Be sure the installer trains you about the basic functions of the required reversing devices associated with the gate system and how to properly test them. Reversing devices may include reverse loops, sensing edges, photoelectric cells, inherent reverse detection, and/or other external devices.

WARNING - To reduce the risk of injury or death:

1. A moving gate can cause serious injury or death. Read and follow all installation manuals, reference manuals, and warning label instructions.
2. Vehicular gates are for vehicles only. Pedestrians must use a separate entrance. Keep all pedestrian traffic away from any vehicular gate. No one should cross the path of a moving gate.
3. Never allow children to operate or play with gate controls. Never allow children to play in the area of a gate system.
4. Access control devices must be placed far enough from moving gates to prevent the user from coming in contact with the gate while operating the controls.
5. All activating devices must be installed in a clear line-of-sight with the gate and its travel and must be installed a minimum of 10 feet away from the gate.
6. Outdoor or easily accessible controls shall have a security feature to prevent unauthorized use.
7. Mount all operating devices clearly out of reach of through gates.
8. Loops and vehicle sensors are for vehicle use only and do not offer any type of pedestrian protection.
9. **DO NOT install this device unless <u>all</u> potential hazards and pinch points have been eliminated.**



DO NOT allow children to play near, on or with the gate, gate operator, or any of its controls.



DO NOT allow pedestrian use of the vehicular gate. No one should cross the path of a moving gate!

SAFETY INFORMATION

Restrictions and Limitations:

Please read and follow all restrictions and understand all limitations. Do not install this product if it exceeds any limitation or does not abide to all restrictions.

1. This device is intended for vehicular traffic only. Keep all pedestrian traffic including bicycles away from any vehicular gate.
2. Do not use this product for use with motorcycles unless proper safety photo beams and safety edges are installed.
3. This product is a wireless device and subject to occasional communication failures. Therefore proper safety photo beams and safety edges must be used in conjunction to the system.
4. Detection distance and performance will vary based upon location of each application.
5. Average detection distance from the sensor is approximately 8ft wide x 4ft deep x 3-4ft high. In some occasions the distance may be less and in some occasions the distance may be more.
6. Detection range is similar to a rectangular bubble around the sensor.
7. This product is not recommended for applications with commercial trucks with high trailers due to the limited detection height.
8. This product is a wireless device and location of the AP100 Relay Board and each Sensor will have a significant effect on the performance. Try to locate the devices with as much line of sight as possible.
9. Large walls, steel fences, foliage, etc will hamper the radio signal range. Try to avoid such hazards.
10. The system should be checked on a regular basis by a trained and authorized installer.

IMPORTANT:

DO NOT PARK IN THE PATH OF THE GATE. This unit will automatically retune and reset after detecting for more than 14 minutes. This allow the gate to close on a vehicle.

System Overview

Overview:

The EZ Loop is a wireless vehicle detector for vehicle use only that eliminates the costly need for hard wired loops while reducing labor costs. Each system can use one AP100 Access Point Relay Board mounted in the gate operator and up to ten S200 Sensors installed in the driveway.

RF Notes:

The EZ Loop is a wireless system working on the 2.4GHz radio frequency. When using wireless radio controls, it is important to consider the following notes:

- This product is a wireless device and location of the AP100 Relay Board and each Sensor will have a significant effect on the performance.
- Try to locate the devices with a direct line of sight if possible.
- Avoid large walls, steel fences, foliage, etc will hamper the radio signal range. Try to avoid such hazards.
- **The higher the AP100 or antenna is mounted, the better the reception.**

Selecting the Sensor:

There are two different AP100 Relay Boards. The only hardware difference is the radio chip which is easily interchangeable. The difference of the boards is:

	S200 Sensor	S200P Sensor	S200AP Above Ground
AP100-Pa	15-25 feet	25-35 feet	55-65 feet
AP100-PA With Ext Antenna	25-35 feet	45-55 feet	85-100 feet

Location of the AP100:

This product is a wireless device and location of the AP100 Relay Board and each sensor will have a significant effect on the performance. For better performance:

- Locate the devices with a direct line of sight. Use the external antenna kit if needed to insure a line of sight to each sensor.
- **Mount the AP100 Relay Board as high as possible.** The lower it is to the ground the less the reception will be.
- Mount the AP100 Relay Board as far away from the metal of the operator as possible. Metal such as the control box and frame will limit the performance.
- If a good reception is not available when mounted inside the operator, use the AP100-PA with the external antenna kit.

Installation

Mounting The AP100:

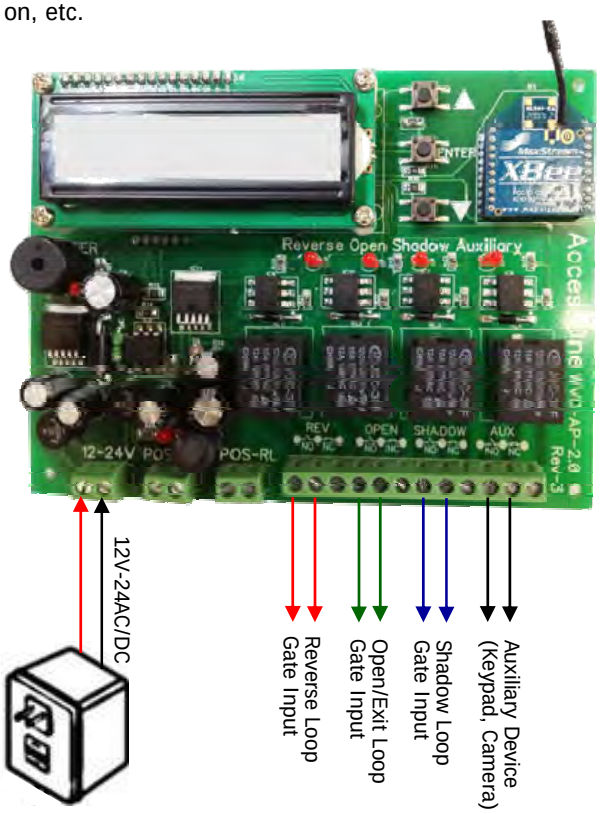
The AP100 Relay Board should be mounted inside the gate operator away from the elements of the weather or in a weather tight housing. When mounting the system inside a gate operator, consider the mounting location and try to locate the AP100 with as much of a line of sight to the ground sensors as possible.

1. Mount the AP100 inside the gate operator or in a weather tight housing.
2. Mount the AP100 with a good line of sight to each sensor.
3. Use the plastic standoffs to mount the board. Do not allow the board to rest on the ground or any metal shelf as it can cause the board to short and fail.

Basic Wiring Overview:

The AP100 has four relays for multiple loop functions. Each relay has a NO, C, and NC output. Most gate operators use the NO and C outputs. To connect the AP100 for basic use:

1. Connect 12-24VAC/VDC power source to the Power Terminal
2. Connect Relay 1 to the gate operator Reverse Loop input.
3. Connect Relay 2 to the gate operator Open/Exit Loop input.
4. Connect Relay 3 to the gate operator Shadow Loop input.
5. Connect Relay 4 to an auxiliary device. This can be used to arm a keypad or phone entry, turn a camera on, turn a light on, etc.

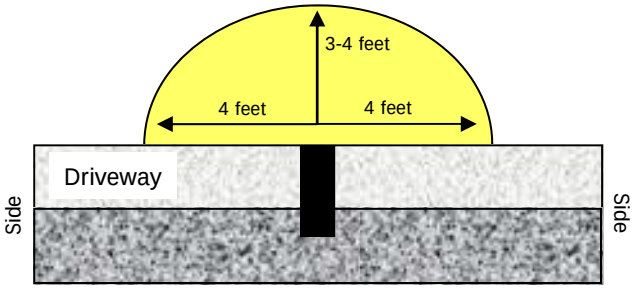


INSTALLATION

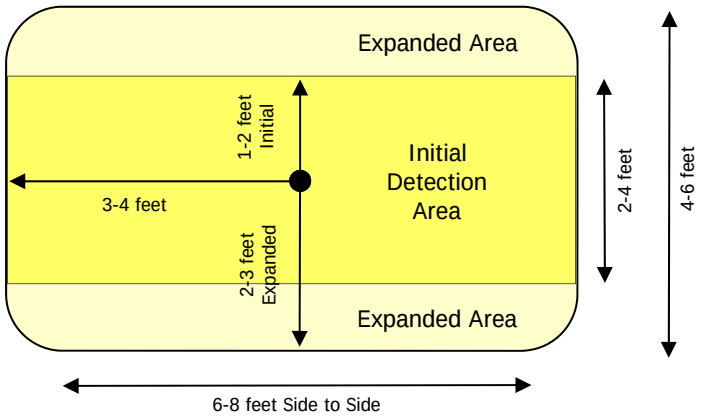
Sensor Detection Overview:

The sensor is monitoring the magnetic axis of the earth and looking for a change it the magnetic value. When a large metal mass such as vehicle enters the detection range, the magnetic values are changed and the sensor sends a signal to the AP100 Relay board. The value change is dependent upon the metal mass. For example, a small hammer a few feet above the sensor may not trigger the detection. But a large vehicle with a lot of metal will trigger the sensor. The larger the metal mass, the better the detection. Therefore bicycles, motorcycles and other small metal vehicles may need to be very close to a sensor for detection or may not be detected.

Sensor detection distance and performance will vary based upon location of each application. Detection range is similar to a rectangular bubble around the sensor. Average detection distance from the sensor is approximately 8ft wide x 4ft deep x 3-4ft high. In some occasions the distance may be less and in some occasions the distance may more. A simple above ground test can help define the distance.



The front and back detection is reduced when the sensor is inactive and increased when in detection mode. For example, a vehicle approaching the sensor straight on will not be detected until 1-2 feet from the sensor. But when the sensor detects the vehicle, it expands the depth to 2-3 feet from the sensor, or 4-6 feet total depth. This feature is used to reduce false triggers and help to not pick up a sliding gate after the vehicle has cleared. Side detection is not reduced and is at full detection distance all the time.

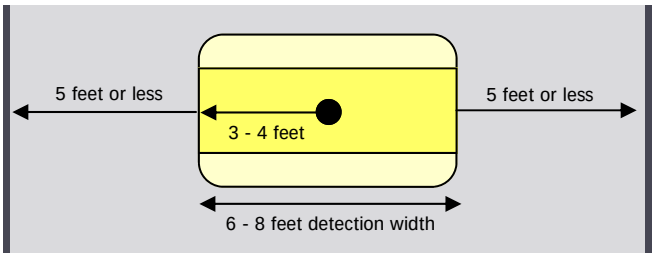


INSTALLATION

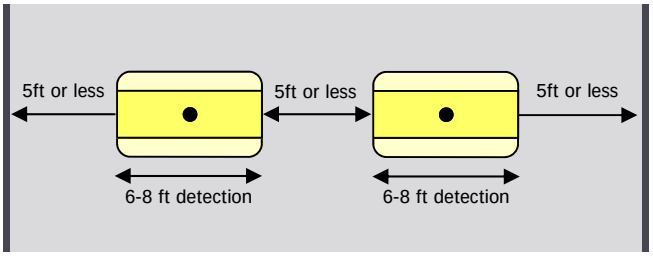
Sensor Location Overview:

For best results, sensors should be placed in the center of the driveway or traffic lane.

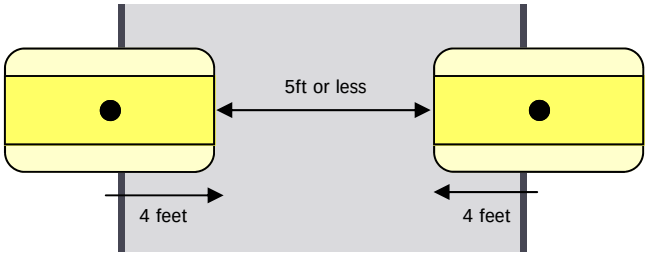
1. Place the sensor in the center of the traffic lane and determine if one or multiple sensors will be needed for full detection. There should be less than 5ft from the edge of the detection and the side of the traffic lane. This is usually a 16ft - 18ft wide lane.



2. In the case of a wide lane, two or more sensors may be needed to cover the width. (Example: For a 25ft driveway and an 8ft detection width, two sensors are recommended.)



3. If the sensor is going to be placed on the side of the driveway, make sure it reaches far enough into the lane to detect the vehicles. Two sensors, one on each side, may be needed for adequate detection.



4. Place the sensor far enough away from the gate so the moving gate does not activate the sensor. This is usually 6-8 feet from the gate.
5. Refer to the Sensor Slide Gate Layout and Sensor Swing Gate Layout for more guidelines.

Multi-Lane Applications

For multi-lane applications when two or more AP100s and multiple sensors are close enough to each other, different system IDs should be used for each system to prevent cross talk between the two separate systems. For example, Lane 1 would use ID 0001 and Lane 2 would use ID 0002. These IDs are field settable. Refer to the “Change ID” programming on Page 10.

INSTALLATION

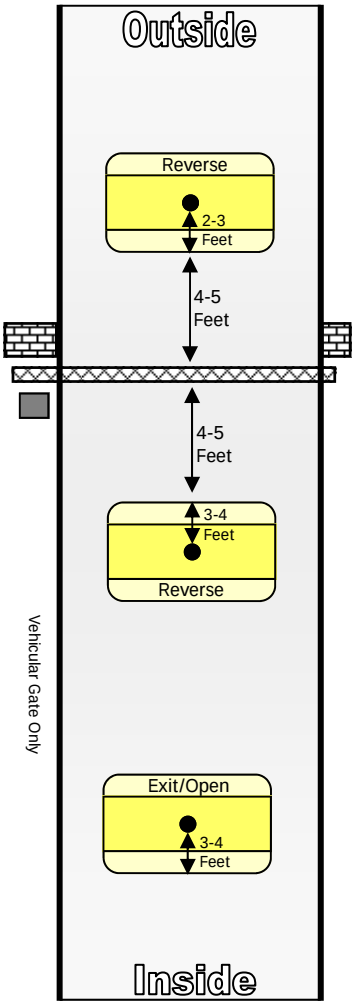
Sensor Slide Gate Layout:

The following diagram shows a typical slide gate application for two-way traffic with a free exit. For one-way traffic, the exit sensor is not needed. (This diagram is a basic layout and does not show safety devices, pedestrian gate, fencing, etc. Refer to the gate operator manual for proper details).

Most slide gate applications will use a Reverse Sensor on the outside inside of the gate, and an Exit/Open Sensor further down the driveway.

Reverse Sensors are used to keep the gate from timing out. When a vehicle is over a Reverse Sensor, the gate operator should remain open until the Reverse Sensor is cleared and then the gate operator should time out and close. A Reverse Sensor is used on the outside and inside of the gate so that a vehicle in the path of the gate should be within the detection range of either the outside or inside Reverse Sensor. Only installing one Reverse Sensor will not offer proper detection coverage.

An Exit/Open Sensor can be used inside the gate and further down the driveway as a convenient way to automatically open the gate when a vehicle is leaving the property. An Exit/Open Sensor can be up to 75ft way using the standard AP100 or up to 150ft using the long range AP100.



To layout a standard slide gate application:

1. Place the sensor in the center of the traffic lane.
2. Determine if one or multiple sensors will be needed for full detection across a wide traffic lane.
3. Place the sensor far enough away from the gate so the moving gate does not activate the sensor. This is usually 8-10 feet from the gate.
4. Mark the location of where each sensor will be installed.

INSTALLATION

Sensor Swing Gate Layout:

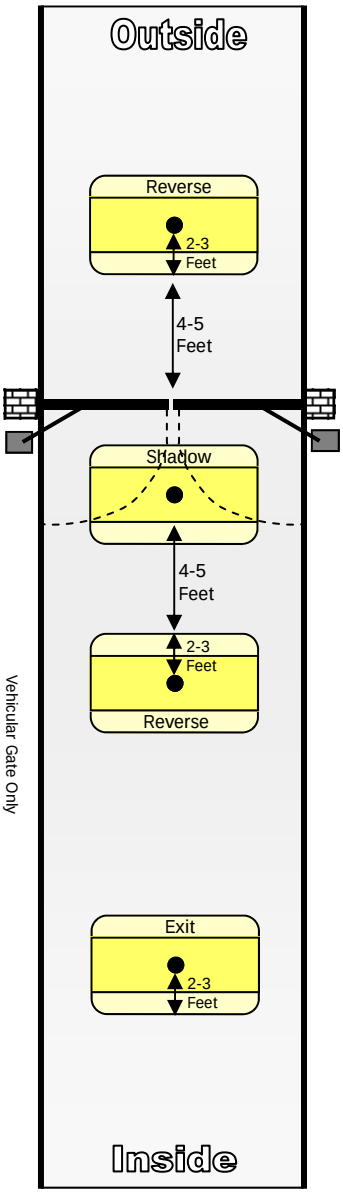
The following diagram shows a typical swing gate application for two-way traffic with a free exit. For one-way traffic, the exit sensor is not needed. (This diagram is a basic layout and does not show safety devices, pedestrian gate, fencing, etc. Refer to the gate operator manual for proper details).

Most swing gate applications will use a Reverse Sensor on the outside and inside of the gate, and an Exit/Open Sensor down the driveway. Some applications will use a Shadow Sensor to cover the swing area of the gate.

Reverse Sensors are used to keep the gate from timing out. When a vehicle is over a Reverse Sensor, the gate operator should remain open until the Reverse Sensor is cleared, then the gate operator should time out and close. A Reverse Sensor is used on the outside and inside of the gate so that a vehicle in the path of the gate should be within the detection range of either the outside or inside Reverse Sensor. Only installing one Reverse Sensor will not offer proper detection coverage and the addition of a Shadow Sensor may be needed.

A Shadow Sensor is used to cover the swing area of the gate when the Reverse Sensors are too far apart to cover a vehicle in between.

An Exit/Open Sensor can be used inside the gate and further down the driveway as a convenient way to automatically open the gate when a vehicle is leaving the property. An Exit/Open Sensor can be up to 75ft way using the standard AP100 or up to 150ft using the long range AP100.



To layout a standard swing gate application:

1. Place the sensor in the center of the traffic lane.
2. Determine if one or multiple sensors will be needed for full detection across a wide traffic lane.
3. Place the sensor far enough away from the gate so the moving gate does not activate the sensor. This is usually 8-10 feet from the gate. Note: The Reverse Sensor near the swing of the gate should be 8-10 feet from the swing path of the gate.
4. Mark the location of where each sensor will be installed.

INSTALLATION

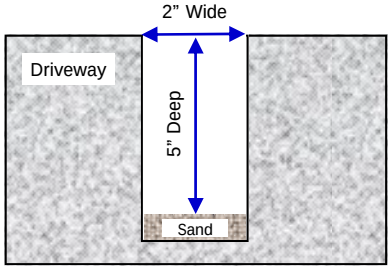
Installing The Sensor:

To install a Sensor, a 2" hole will need to be drilled and prepared, the Sensor will need to be Learned, and then the sensor installed and secured in the ground.

Prepare The Sensor Hole

To prepare the Sensor hole for installation:

1. Drill a 2" wide hole 5" deep. (Tip: Use a Dry Diamond Core Bit for concrete or asphalt to core drill the hole)
2. If the hole is more than 5" deep, add sand to **make the sensor flush with the top of the driveway.**



Learn The Sensor

To learn the sensor before installing into the ground:

1. Make sure the AP100 is installed and power is on.
2. Open the Sensor, remove the circuit board, and plug the battery on to the board.

3. Move the Sensor near the AP100
4. Enter the LEARN mode on the AP100 Relay board:
   a. Use the Up, Down, Enter buttons to the right of the LCD
   b. Select PROGRAM, press Enter

ACCESS ONE	STATUS PROGRAM ->

   c. Select SENSOR, press Enter

PROGRAM	SENSOR AP

   d. Select LEARN, press Enter

SENSOR	LEARN EDIT

   e. AP100 is now in LEARN mode

SEARCHING
ENTER TO BACK

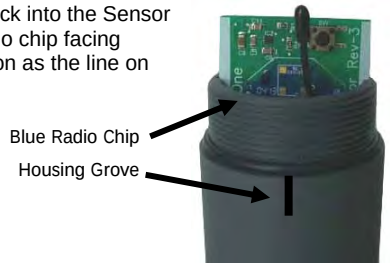
INSTALLATION

Learn The Sensor (Cont)

5. In LEARN mode, press the Sensor learn button
   a. AP100 will see the sensor and display the SENSOR# EXISTS message

SENSOR1	EXISTS

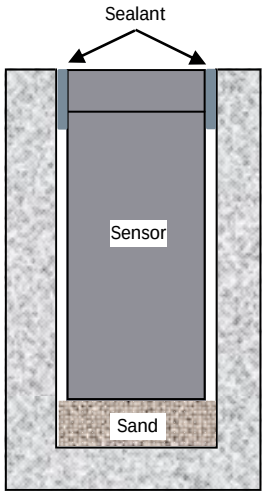
   b. Repeat for each Sensor
   c. Note the Sensor number on each sensor as they will be setup in the programming steps.
6. Place the circuit board back into the Sensor housing with the blue radio chip facing forward, the same direction as the line on the housing.



Install The Sensor In The Ground

To install the Sensor in the driveway:

1. Close the Sensor housing tightly making sure the top has sealed against the O-rings.
2. If the hole is more than 5" deep, add sand to **make the sensor flush with the top of the driveway.**
3. Place the sensor in the hole with the line on the housing facing toward the gate and toward the traffic.
4. Secure the housing in the driveway with a sealant. The Sensor needs to be secured enough that it does not turn when a vehicle drives over it.
5. Let the Sensor sit in the ground for 10-20 minutes to adjust to the air and ground temperature.



Unordinary installation suggestions:

1. If the driveway is less than 5 inches thick, drill the 2" wide hole 5" deep into the road base. Use sand to level it and the sealant to secure the sensor.
2. If installing a sensor on the side of the driveway, we recommend using a small irrigation box installed and filled with sand or gravel. This will make it much easier to locate the sensor for future service.
3. If installing a sensor into a gravel or DG driveway, it is suggested to dig out an area and pour a small pad of concrete for the sensor. This pad can be a few inches below the road surface but needs to be large enough to anchor and hold the sensor in place when a vehicle drives over it.

PROGRAMMING

Program Sensor Active

Once a Sensor has been learned and installed in the ground, it needs to be programmed Active. Programming the Sensor active will start the detection mode and allow the sensor to report back to the AP100. **NOTE: Once a Sensor has been Activated, any movement will cause it to detect.** Therefore the Sensor should not be programmed Active until completely installed. If you want to test a Sensor before installing, program the Sensor Active, test, and then program the Sensor Inactive while installing into the ground. Once it is installed, then program it Active. To program a Sensor Active:

1. Select PROGRAM, press Enter

2. Select SENSOR, press Enter
3. Select ACTIVE, press Enter
4. Select SENSORx, press Enter (x = Sensor being programmed)
5. Select ACTIVE, press Enter
6. SENSOR ACTIVE OK message should display
7. Hold the Enter button or let the program mode time out to exit.

Tip: To test a Sensor before installing it, program the Sensor Active, test, then program Inactive while installing and program Active again once installed.

Program Sensor Inactive

A Sensor may be programmed Inactive if it is not being used or needs to be moved. When a Sensor is Inactive, the Sensor will still detect but will not be recognized by the AP100 as a valid Sensor. Programming a Sensor Inactive, moving it, and programming it Active again will eliminate the 18-20 minute retune timeout period. A sensor that is programmed Inactive does not need to be learned again since it is still in the AP100 memory. To program a Sensor Inactive:

1. Select PROGRAM, press Enter
2. Select SENSOR, press Enter
3. Select ACTIVE, press Enter
4. Select SENSORx, press Enter (x = Sensor being programmed)
5. Select INACTIVE, press Enter

PROGRAMMING

Delete Sensor

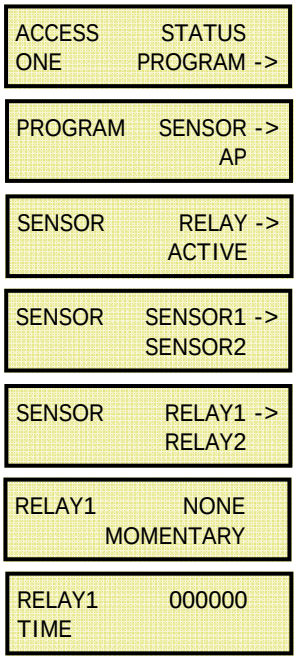
A Sensor may be deleted from the AP100. However, once a Sensor is deleted, it will have to be learned again before it can be programmed Active. To delete a Sensor:

1. Select PROGRAM, press Enter
2. Select SENSOR, press Enter
3. Select ACTIVE, press Enter
4. Select SENSORx, press Enter (x = Sensor being programmed)
5. Select DELETE, press Enter
6. SENSOR DELETED message will display

Relay Programming

There are four relays on the AP100. Each relay is pre-labeled for Reverse, Open, Shadow, and Auxiliary outputs but they can be used for whatever function you desire. Each Sensor can be set to activate a single relay or multiple relays and different relay functions can be set for each Sensor. For example Sensor1 may be programmed to activate Relay1 as a momentary contact for 1 second, while Sensor2 may be programmed to activate Relay2 as momentary contact and Relay4 as a toggle contact. The relay actions available are: None, Momentary, Latch, Latch Timeout, Unlatch, Toggle. To set the relay function for a Sensor:

1. Select PROGRAM, press Enter



2. Select SENSOR, press Enter
3. Select RELAY, press Enter
4. Select SENSORx, press Enter (x = Sensor being programmed)
5. Select RELAYx, press Enter (x = Relay to be programmed)
6. Select Relay mode, press Enter
7. For Momentary or Latch Timeout, enter the time in HH:MM:SS

Sensor Time Schedule Programming

This function is not implemented on this version.

PROGRAMMING

Sensitivity Adjustment

Each Sensor monitors the X, Y, and Z axis of the earth and activates when the current value of X, Y, or Z is greater than the set range. To make a Sensor more sensitive, this range would be smaller and to make a Sensor less sensitive, this range would be larger. **NOTE: Increasing the sensitivity increases the chance of false detections.** When changing the sensitivity, change the value by a few points at a time. The direction of each value is: X = width, Y = height, Z = overall (should not need to be changed). Default settings are X=20, Y=35, Z=100. The new setting does not take affect immediately but after the Sensor communicates with the AP100 - after 1 minute when it reports or if there is an activation. To increase or decrease the sensitivity of a sensor:

1. Select PROGRAM, press Enter
2. Select SENSOR, press Enter
3. Select SENSE, press Enter
4. Select SENSORx, press Enter (x = Sensor being programmed)
5. Select the X, Y, or Z setting, press Enter
6. Change the setting, press Enter

Axis	Default	Action
X	20	Side detection. Average = 3-4ft each direction
Y	35	Height detection. Average = 3-4ft upward
Z	100	Overall detection. Should not be adjusted

Setting the Clock

The clock on the Access Point Relay Board is used for tracking system faults and for relay and sensor time schedules (not implemented on this version). The time clock uses the date, time, and day of the week. It does not automatically adjust for day lights saving time and is a 12-hour format with an AM/PM setting. When entering the time or date, use the UP and Down buttons to change the number and press Enter to move to the next digit. To set the clock:

1. Select PROGRAM, press Enter
2. Select AP, press Enter
3. Select SET CLOCK, press Enter
4. Enter MMDDYY for the date, press Enter
5. Enter HHMMSS (12-hour format) for time, press Enter
6. Select AM or PM, press Enter
7. Select the current day of the week, press Enter

PROGRAMMING

Fail Mode Programming

The Fail Mode programming allows a relay to be set in a Fail Safe or Fail Secure mode. Fail Safe will activate the relay if there is a sensor failure and release the relay when the fault is cleared. Fail Secure will not activate the relay if there is a sensor failure and will clear when the fault is cleared. **IMPORTANT: Only use the Fail Secure mode on Exit/Open relay.** Do not use the Fail Secure mode on any Reverse or Shadow relay or on an Exit/Open relay that also operates as a Reverse. Default setting is Fail Safe for Relay 1-4. To change the Fail Mode:

1. Select PROGRAM, press Enter
2. Select AP, press Enter
3. Select FAIL MODE, press Enter
4. Select relay to program, press Enter
5. Select SAFE or SECURE, press Enter

Alarm Programming

There is a built-in alarm on the AP100 that is sounded when there is a fault in the system. For example if Sensor1 fails due to a communication failure or even a bad battery, the AP100 will recognize the fault within 60 seconds and activate a fault mode for the sensor. This mode will activate the alarm if the alarm is set to on = default. This programming will turns the alarm on, off, and resets the Fault Status Log. Default setting is On. To change the setting or clear the Fault Status Log:

1. Select PROGRAM, press Enter
2. Select AP, press Enter
3. Select ALARM, press Enter
4. Select function, press Enter

Function	Action
ON	Activates alarm during a fault
OFF	Does not activate the alarm during a fault
CLEAR F	Clears & resets the Fault Log in status

AP100 System Reset

CAUTION: This step will completely reset the AP100. Once the system reset is complete, the AP100 will be in a new factory default setting and will require all Sensors to be relearned and activated, and all other settings such as relay activations to be reprogrammed. To system reset the AP100:

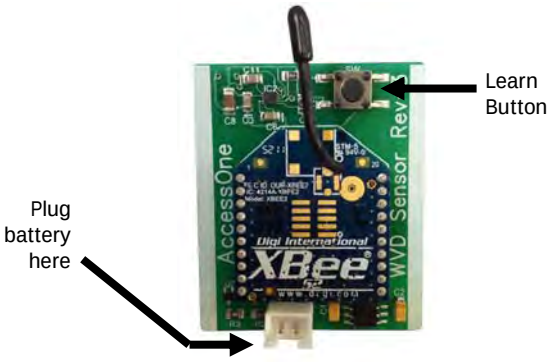
1. Select PROGRAM, press Enter
2. Select AP, press Enter
3. Select SYST RESET, press Enter
4. Press Enter to confirm, or press Up to cancel

PROGRAMMING

Sensor Reset

CAUTION: This step will completely reset the Sensor and require the Sensor to be relearned and activated by the AP100. This step is helpful if a Sensor has been learned but needs to be unlearned for any reason. To reset a Sensor:

1. Unplug the battery
2. Press and hold the Learn button while plugging the battery back on.
3. Continue to hold the Learn button
4. The green LED will begin to blink
5. Continue to hold the Learn button for 10 seconds while the green LED is blinking.
6. Release the Learn button, the green LED should be solid and turn on or off each time the Learn button is pressed.



Changing the Unit ID

For applications where two or more controllers will be used close to each other, the Unit IDs should be different to make sure that an AP100 does not pick up sensors programmed to a different AP100 close by. This should be done before any sensors are learned to an AP100. Once the Unit ID is changed on the AP100, it will assign that ID to each sensor that it learns. The current Unit ID can be displayed in the STATUS menu under CONTROLLER. To change the Unit ID:

1. Select PROGRAM, press Enter
2. Select AP, press Enter
3. Select CHANGE ID, press Enter
4. Select YES=Enter or NO=Up

NOTE: The Unit ID must be changed before any sensors are programmed to the AP100. If a sensor has been learned by the AP100 before changing the Unit ID, the sensor will need to be reset and then relearned after the new Unit ID.

OPERATING INSTRUCTIONS

Sensor Detection

To activate a sensor, metal must be present in the sensor detection field. The larger the mass of metal, the better detection the sensor will have. Special metals such as stainless steel or aluminum will not activate the sensor. Smaller metal items such as motorcycles may need to drive over the sensor to be detected.

The front and back detection is reduced when the sensor is inactive and increased when in detection mode. For example, a vehicle approaching the sensor straight on will not be detected until 1-2 feet from the sensor. But when the sensor detects the vehicle, it expands the depth to 2-3 feet from the sensor, or 4-6 feet total depth. The detection width is always at full detection distance.

Sensor Automatic Retune

If a sensor is programmed with the Reset feature and is held detecting for more than 14 minutes, it will automatically retune itself and drop the detection. This is helpful for applications that have intermittent sensor lockup issues. However, a vehicle cannot park in the path of a gate as the sensor will detect the vehicle, retune after 14 minutes, and then allow the gate to close on the parked car. **DO NOT PARK IN THE PATH OF THE GATE!**

Sensor Park Fault

If a sensor is programmed with the Park Fail feature and is held detecting for more than 10 minutes, it will create a sensor park fault. After 10 minutes, the sensor will generate the fault and the fault will continue to hold the gate open until the sensor is cleared. Once the sensor is cleared (vehicle drives away), it will reset itself to the current conditions and clear the fault allowing the gate to close.

This feature will also occur if a sensor is moved after the sensor has been programmed Active. In this case, the sensor will not reset and clear the fault since there is not a vehicle present. To reset the sensor, simply program the sensor Inactive and then Active again.

Status Menu

The status menu on the Access Point Relay Board allows the user or installer to view the current status of the system including relay status, sensor status, controller status, fault status, and clock status. To access the status menu, use the Up, Down, Enter buttons to move the cursor to STATUS and press ENTER.

Relay Status

The relay status shows the current state of for relay 1 - 4. The current state is displayed as TURNED ON or TURNED OFF. To view the relay status:

1. Select STATUS, press Enter
2. Select RELAY, press Enter
3. Select the desired relay, press Enter
4. Relay status will be displayed

OPERATING INSTRUCTIONS

Status Menu (Cont)

Sensor Status

Sensor status is a quick way to see if a sensor has been learned and programmed Active. If a sensor is Active, the status will display Active under the selected sensor. If it is Inactive, the status will display Inactive under the selected sensor. To check the state of a sensor:

1. Select STATUS, press Enter
2. Select SENSOR, press Enter
3. Select the desired sensor, press Enter
4. ACTIVE, INACTIVE or NOT ASSIGNED status will be displayed

Controller Status

Controller status displays the Model and Firmware Version of the AP100 followed by the Unit ID. To view the controller status:

1. Select STATUS, press Enter
2. Select CONTRL, press Enter
3. Model and Firmware Version will be displayed on the first screen and then automatically display the Unit ID on the second screen a few seconds later.

Faults Status

Fault status is a log of the last ten faults. It tracks the date, time, and sensor or controller that failed. To view the fault log:

1. Select STATUS, press Enter
2. Select FAULT, press Enter
3. Use the UP and DOWN buttons to scroll through the faults

Clock Status

Clock status displays the current time and date that has been set on the AP100. To view the clock status:

1. Select STATUS, press Enter
2. Select CLOCK, press Enter
3. The date and time will be displayed

Default Settings

Function / Action	Default Setting
Relay Action (Relay 1-4)	None
Sensor Sensitivity	X=20 Y=35 Z=100
Clock/Date Setting	Not set
Fail Mode	Fail Safe
Alarm	ON

TROUBLESHOOTING

SYMPTOM:	POSSIBLE SOLUTION:
AP100 does not appear to have power	1. If the AP100 is powered by a gate operator, make sure the operator power is on 2. Check the connections for clean tight connections. 3. Test the power level using a VOM meter at the supply power. 4. Test the power level using a VOM meter at the AP100.
Sensor does not appear to have power	1. Make sure the battery is tightly plugged on 2. Test the battery power using a VOM meter 3. Battery power should be between 3.6V and 2.8V 4. Replace the battery
Sensor will not learn	1. Make sure the AP100 is in learn search mode 2. Make sure the sensor battery is tightly plugged on 3. Press the learn button a few times. The green LED should be ON solid when being learned. 4. Reset the sensor 5. Reset the AP100 - Caution this will completely clear the AP100 and all sensors
AP100 does not see Sensor detect	1. Make sure the Sensor has been programmed ACTIVE 2. Mount the AP100 as high as possible and away from metal 3. Use an external antenna for better range
Relay is on and AP100 LCD shows SENSOR FAIL	1. AP100 is not communicating with the sensor 2. Mount the AP100 higher to get better communication 3. Make sure the sensor is flush with the roadway and not below the road surface.
All relays are on and the AP100 LCD shows AP FAIL	1. AP100 is not communicating with any of the sensors. 2. Mount the AP100 higher to get better communication 3. Move the sensors closer to make sure they communicate with the AP100
Sensor detects and shows on LCD but does not activate relay	1. Make sure that Sensor is programmed to a relay. 2. Make sure the relay is programmed to a function other than NONE. None is the default.

LIMITED WARRANTY

You MUST read, understand and agree with ALL items in this limited warranty!

Access One Technologies warrants this product to be free of defects in workmanship and materials for a period of (1) one year from the date of purchase. Access One Technologies reserves the right of final determination to the cause of any defect or failure. Access One Technologies shall, at its option, either repair or replace this product if returned freight prepaid to Access One Technologies during the warranty period. This warranty does not include freight, taxes, duties, or installation and service expenses. This warranty will not apply to circumstances which are considered beyond our control including: incorrect installation or application, vandalism, misuse, acts of God (lightning, insects and rodents, floods, etc.), power surges, or improper system installation.

The warranty set forth above is exclusive and no other warranty, whether written or oral, is expressed or implied. Access One Technologies specifically disclaims any implied warranties or merchantability and fitness for a particular purpose. The remedies provided herein are the buyer's sole and exclusive remedies. In no event shall Access One Technologies be liable for direct, indirect, special, incidental or consequential damages (including loss of profits or property), whether based on contract, tort or any other legal theory. Access One Technologies can not be held responsible for damage or injury caused by improper, erroneous or unreasonable use or installation. The installer and end user agree to assume all responsibility for ALL liability in use of this product releasing Access One Technologies of all liability.

IMPORTANT: It is the joint responsibility of the installer and end user to verify the system is properly configured for its intended use including proper safety devices. Failure to comply with these guidelines may create a dangerous situation and will void any and all warranties. All users must follow and understand:

1. The user and installer have fully read, understand, and abiding by the Safety Information and Restrictions and Limitations set forth in this manual.
2. A moving gate can cause serious injury or death. Read and follow all installation manuals, reference manuals, and warning label instructions.
3. Vehicular gates are for vehicles only. Pedestrians must use a separate entrance. Keep all pedestrian traffic away from any vehicular gate. No one should cross the path of a moving gate.
4. Never allow children to operate or play with gate controls. Never allow children to play in the area of a gate system.
5. Access control devices must be placed far enough from moving gates to prevent the user from coming in contact with the gate while operating the controls.
6. All activating devices must be installed in a clear line-of-sight with the gate and its travel.
7. Activating devices must be installed a minimum of 10 feet away from the gate.
8. Outdoor or easily accessible controls shall have a security feature to prevent unauthorized use.
9. Be sure to mount all operating devices clearly out of reach of through gates.
10. Any required contact edges and/or photo beams must be installed before placing this system into operation.
11. Make sure all residents and users are familiar with the proper use of this equipment and its potential hazards.
12. Protect against all pinch and entrapment points. If entrapment and pinch points can not be protected, **DO NOT install this equipment.**
13. Read and follow all U.L. and Safety Standards before installing any access device.
14. Installation, service and maintenance must be carried out by qualified personnel.

In order to install and use this system, the installer and end user must understand and be in FULL unconditional agreement with all stipulations outlined above. **If you are not in FULL agreement, do not put the system into operation.** If the system is put into operation, this will confirm that you are in FULL unconditional agreement with all of the above stipulations.

_____

Customer's Signature Date

_____

Installer's Signature Date

Serial Number: _____ Date Installed:_____

Installed By: _____

Installation Address:_____

City:_____ State:_____ Zip:_____

Customer Name:_____

For the warranty to be valid, a completed and signed copy must be mailed or emailed to Access One Technologies.

www.AccessOneTechnologies.com