

# GV- RK1352 Card Reader

The GV-RK1352 is a card reader with keypad, designed to recognize PIN codes, identification cards or both. Featured with the Wiegand and RS-485 outputs, the unit can be connected to any standard access control panel. GV-RK1352 comes with a weather sealed and IP66 compliant housing for outdoor use.

## 1. Packing List

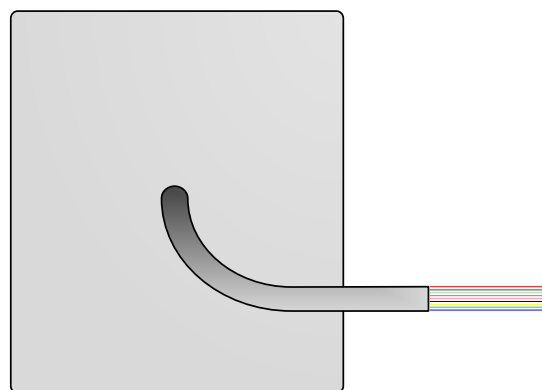
1. GV-RK1352 Card Reader
2. Screw x 2
3. Screw Anchor x 2
4. GV-RK1352 Software CD
5. Front Cover Plate x 2



**Front View**

## 2. Electric Wire

Wire Color	Function
Red	DC 7.5 ~ 12 V
Black	GND
Yellow	Beeper
Orange	Green LED
Light Red	Red LED
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -



**Rear View**

### 3. Keypad

When accessing an entry, you can enter the door's PIN code on the keypad or present the card and then enter the card's PIN code on the keypad to be granted access. The access mode is defined on GV-ASManager.

1. **0~9 Number Keys:** Press the number keys to enter the PIN code.
2. **# Key:** Press the # key to confirm the PIN code.
3. **\* Key:** Press the \* key to cancel the PIN code.

### 4. LED Indicator and Beeper

In standby mode, the LED is blue. When a card is read, the LED flashes green and the beeper beeps once.

GV-RK1352 comes with external control wires for Green LED, Red LED and Beeper. You can connect these control wires to a GV-AS400 / 410 / 810 to allow the status of LED and Beeper to be defined by the GV-AS400 / 410 / 810. For details on how to configure the settings, refer to *7. Enabling External Control of the Beeper and LED* later in this installation guide.

### 5. Connecting GV-RK1352 to GV-AS Controller

The connection between GV-RK1352 and GV-AS Controller varies with different controller models. The following diagrams illustrate **how to connect GV-RK1352 to GV-AS810 Controller** through Wiegand or RS-485 interface.

To see how many readers can be connected to a GV-AS Controller, refer to *The number of GV-RK1352 supported by GV-AS Controllers* table at the end of this installation guide.

**Note:** GV-RK1352 is compatible with GV-AS100 / 110 / 120 / 210 / 400 / 410 / 810 Controllers. However, to enable the keypad function, you can only connect GV-RK1352 to GV-AS100 / 110 / 120 Controllers through the Wiegand interface. For GV-AS210 / 400 / 410 / 810 Controller, the connection through either Wiegand or RS-485 interface is workable for the keypad function.

## 5.1 Connecting through Wiegand Interface

Up to eight GV-RK1352 readers can be connected to GV-AS810 Controller through the controller's Wiegand interface.



## 5.2 Connecting through RS-485 Interface

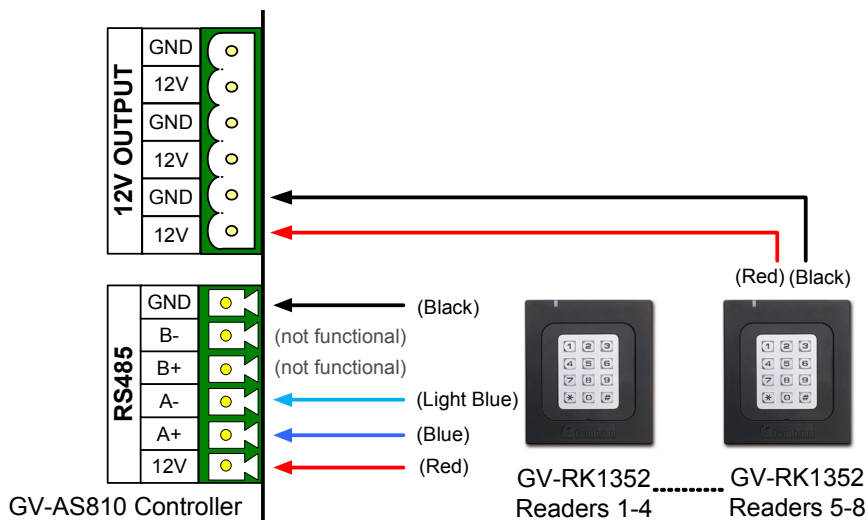
Up to eight GV-RK1352 readers can be connected together to the RS-485 interface on GV-AS810 Controller.

- Connecting four or less readers to GV-AS810 Controller:



- Connecting five or more readers to GV-AS810 Controller:

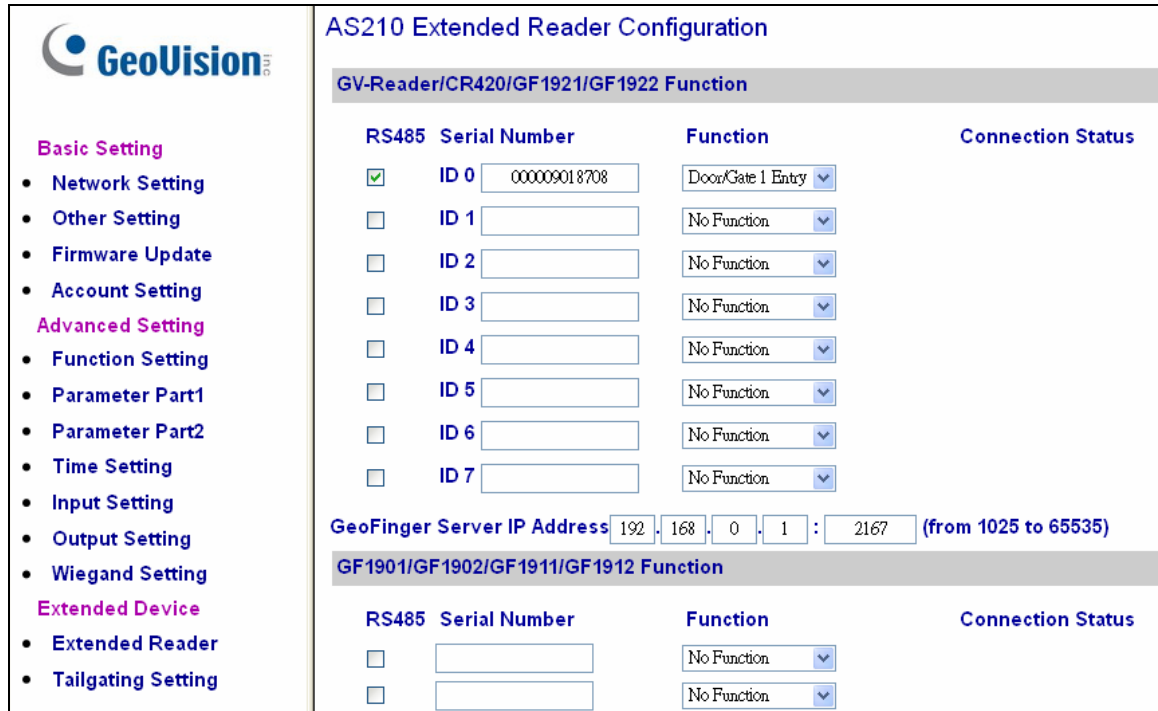
For readers five to eight, connect the RS-485 cable to the RS-485 interface on GV-AS810 Controller and then connect the 12V power output and GND of the reader to a 12V DC power output on the controller.



## 5.2.1 Defining Readers on GV-AS Controller Web Interface

Since multiple readers can connect to GV-AS Controller using one RS-485 interface, you need to specify which door each reader controls. This section explains how to define readers on the Web interface of GV-AS Controller using **GV-AS210 Controller** as an example.

1. On the GV-AS210 Web interface, click **Extended Reader**. This dialog box appears.



2. In the GV-Reader/CR420/GF1921/GF1922 section, select the **RS485** checkbox in front of the ID number and type the **Serial Number** on the rear panel of the reader. The ID number will be assigned to the reader.

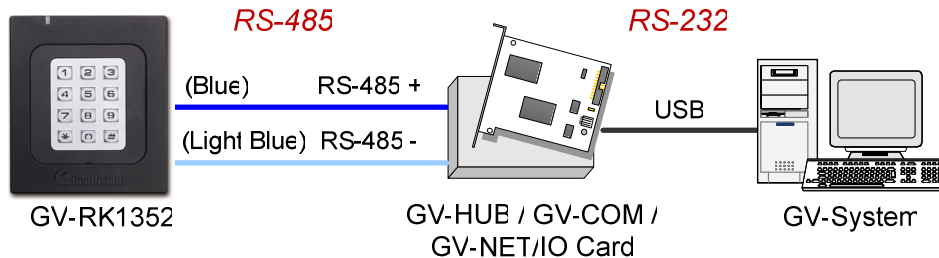


3. Select a door/gate for the reader from the **Function** drop-down list. Click **Submit**.

**Note:** When you click **Submit** on the Extended Reader page of a GV-AS210 / 410 / 810, all GV-RK1352 / R1352 / DFR1352 connected through RS-485 interface will reboot.

## 6. Overlaying Card Numbers on GV-System Live View

You can overlay card numbers recognized at the GV-RK1352 onto a camera channel on GV-System. To overlay card numbers on GV-System channel, the reader needs to be connected to a GV-System through GV-COM, GV-Hub or GV-NET/IO Card V3.1.

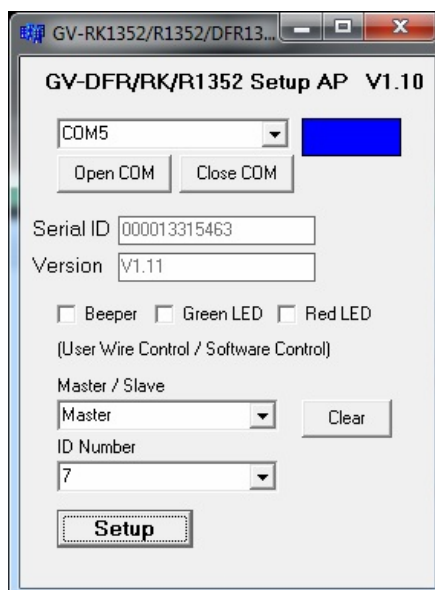


**Note:** GV-RK1352 is not compatible with GV-NET Card and GV-NET/IO Card of versions earlier than V3.

### 6.1 Defining the ID Number and Setting the Reader to Slave

After the reader is connected to the computer of the GV-System, use the **GV-Reader Config AP** in the software CD to define the ID number of the reader and set the reader to Slave.

1. Insert the software CD and the Install Program window will pop up automatically.
2. Select **Install GeoVision USB Devices Driver**.
3. In the GeoVision USB Driver Installer window that appears, select **Install**.
4. Go back to the Install Program window, and select **Run GV-Reader Config Utility**.

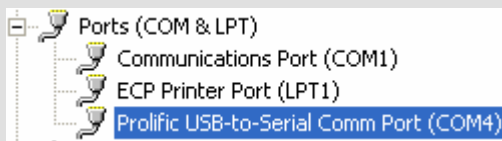


5. Select the COM port that is connected to GV-RK1352 and click **Open COM**. The serial number and firmware version of the reader will be automatically detected. The red square next to the COM port box should change to blue to indicate the COM port is correct.
6. Under **Master / Slave**, set the reader to **Slave**.
7. Select an **ID number** for the reader. The ID number ranges from 0 to 7.
8. Click **Setup**. The settings are sent to GV-RK1352.

If you want to connect multiple readers to the GV-System, you need to set up a unique ID number for each reader. For this you need to connect each reader to the computer one reader at a time, and follow the instructions above to set up an ID number.

**Note:**

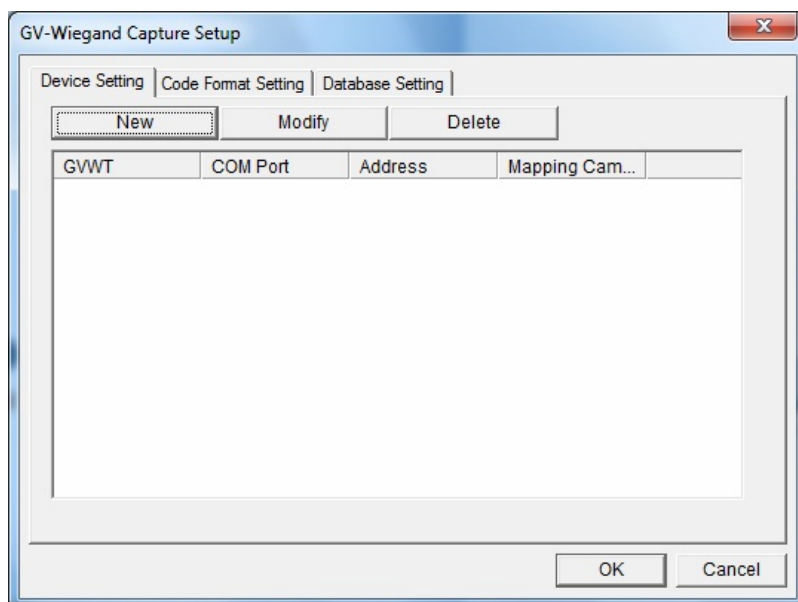
1. If the COM port is incorrect, an “**Error opening serial port**” message will appear. To verify the COM port that is connected to GV-RK1352, go to Windows Device Manager. In the Ports (COM & LPT) field, you should see the entry for **Prolific USB-to-Serial Comm Port** and the COM number currently in use.



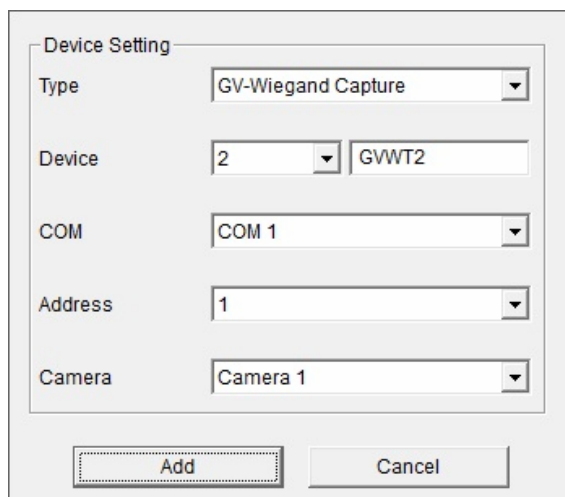
2. If you are using an older version of the GV-Reader Config AP, you will have to manually type the serial number of GV-RK1352. The serial number is on the rear panel of GV-RK1352.

## 6.2 Adding the Reader to GV-System

1. In GV-System, click the **Configure** button, select **Accessories**, and select **GV Wiegand Capture Device Setting**. This dialog box appears.



2. Click the **New** button. This dialog box appears.



- **Type:** Select GV-Wiegand Capture.
  - **Device:** Type a number and name to help you identify the reader.
  - **COM:** Select the COM port connected to the reader.
  - **Address:** Select the ID of the connected reader you set in GV-Reader Config AP.
  - **Camera:** Assign the reader to a channel to overlay card numbers on the live view.
3. Click the **Add** button.

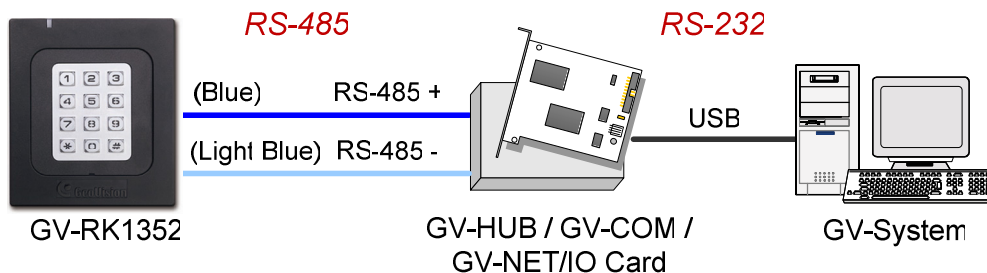
## 7. Enabling External Control of the Beeper and LED

You can change the default settings of the LED and the beeper by enabling a GV-AS400 / 410 / 810 to externally control the LED and Beeper. The GV-AS Controller and the reader need to be connected through Wiegand interface. You will have to:

1. Enable external control of the GV-RK1352's Beeper and LED by using the **GV-Reader Config AP**. Refer to *7.1 Setting up Beeper and LED on GV-Reader Config AP*.
2. Wire the Beeper, Red LED and Green LED from GV-RK1352 to GV-AS400 / 410 / 810.
3. Specify the Beeper and LED settings for each door through the Web interface of GV-AS400 / 410 / 810.

### 7.1 Setting up Beeper and LED on GV-Reader Config AP

To enable the external controls of the Beeper and LED on GV-Reader Config AP, the reader needs to be connected to a computer through GV-COM, GV-Hub or GV-NET/IO Card V3.1.

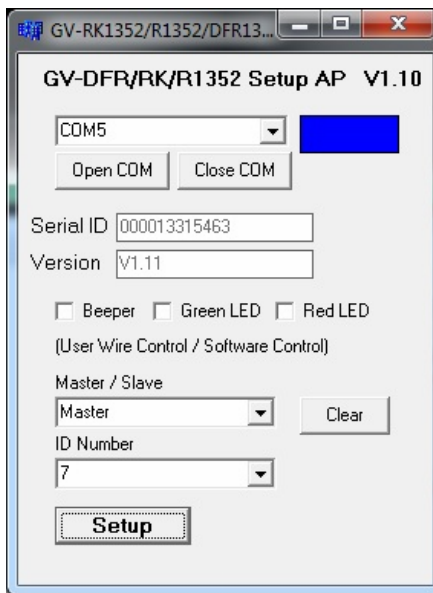


1. Install **GV-Reader Config AP** from the Software CD.
2. Start the **GV-Reader Config AP** and select the COM port that is connected to GV-RK1352.

**Note:** To see how to install the GV-Reader Config AP and how to identify the COM port of the reader, refer to *6.1 Defining the ID Number and Setting the Reader to Slave* earlier in this installation guide



3. Click **Open COM**. The serial number and the firmware version of the reader will be automatically detected.



4. To enable external control of Beeper or LED, select **Beeper**, **Green LED** or **Red LED**.
  - **Beeper**: Enables the external control of Beeper.
  - **Green LED**: Changes the standby color to green.
  - **Red LED**: Changes the standby color to red.
5. Select **Master** from the Master / Slave drop-down list.
6. Select an ID number for the reader. Make sure the ID number on the GV-Reader Config AP matches the ID number set on the Extended Reader page of the GV-AS400 / 410 / 810 Web interface.
7. Click **Setup**. The settings are sent to GV-RK1352.

If you want to set up multiple readers to be controlled by the controller, you need to connect each reader to the computer one reader at a time, and follow the above instructions to enable external control.

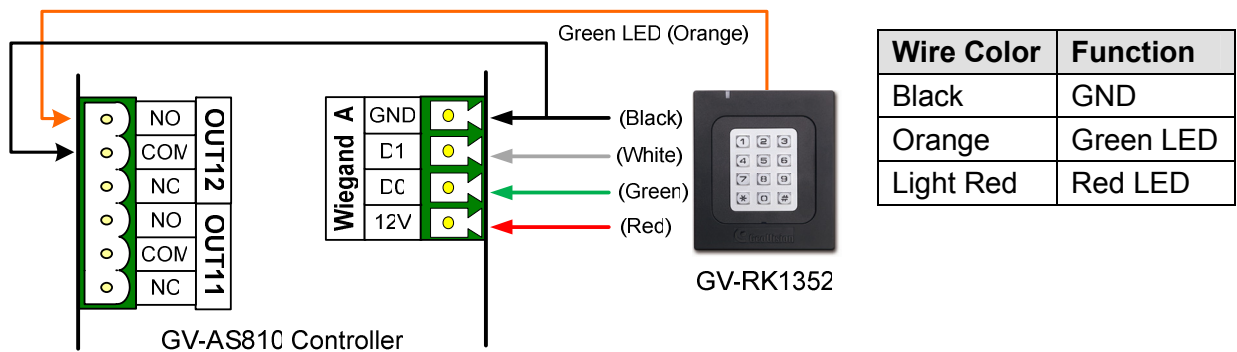
After the above settings, you need to connect the Beeper, Red LED and Green LED wires from GV-RK1352 to GV-AS400 / 410 / 810.

## 7.2 Wiring the Beeper and LED to GV-AS400 / 410 / 810

To wire the beeper and LED to GV-AS400 / 410 / 810, connect the control wires of GV-RK1352's Beeper, Red LED or Green LED to any of outputs 9 ~ 16 on GV-AS Controller.

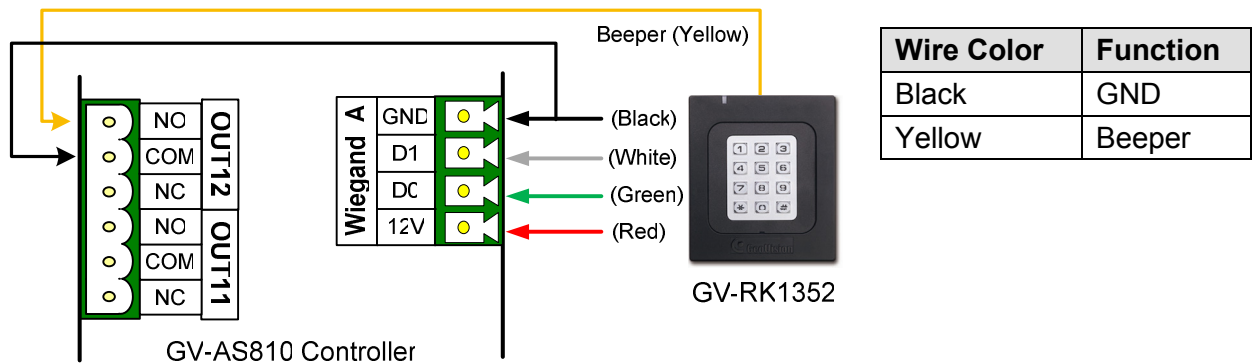
### Wiring LED to GV-AS Controller

The diagram below shows the connection for wiring Green LED on GV-AS810. For Red LED, use the light red wire instead.

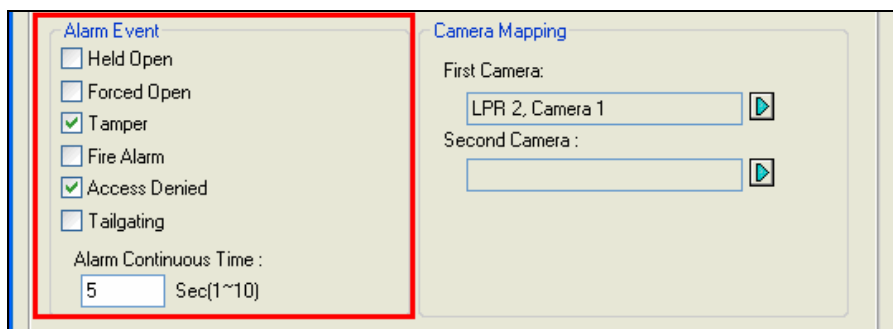


### Wiring Beeper to GV-AS Controller

The diagram below shows the connection for wiring the beeper on GV-AS810.



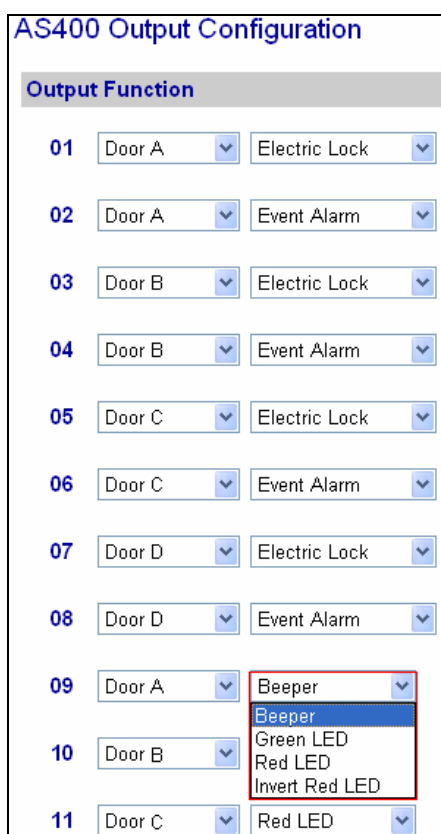
After wiring, you also need to go to GV-ASManager to select the alarm conditions that will set off the reader's beeper. In GV-ASManager, right-click the GV-AS Controller in the device list, click **Settings**, and click the **Door / Gate** tab to select the alarm conditions.



### 7.3 Configuring the Beeper and LED Settings for Each Door/Gate

After connecting the wires for Beeper or LED, specify the Beeper or LED settings for each door/gate on the GV-AS400 / 410 / 810 Web interface.

1. On the controller Web interface, click **Output Setting**. The page below appears.
2. From the output 9~12, select a door and select **Beeper**, **Green LED**, **Red LED** or **Invert Red LED**. Click **Submit**.



AS400 Output Configuration	
Output Function	
01	Door A Electric Lock
02	Door A Event Alarm
03	Door B Electric Lock
04	Door B Event Alarm
05	Door C Electric Lock
06	Door C Event Alarm
07	Door D Electric Lock
08	Door D Event Alarm
09	Door A Beeper
10	Door B Green LED
11	Door C Red LED

- **Beeper:** Enables the external control of Beeper.
- **Green LED:** Changes the standby color to blue. When a card is read, the LED flashes green.
- **RED LED:** Changes the standby color to red. When a card is read, the LED flashes blue.
- **Invert Red LED:** Changes the standby color to blue. When a card is granted access, the LED flashes red.

## 8. Firmware Upgrade

GeoVision will periodically release the updated firmware on the website. The new firmware can be simply loaded into GV-RK1352 by using **Update Utility** included in the Software CD.

### Important Notes before You Start

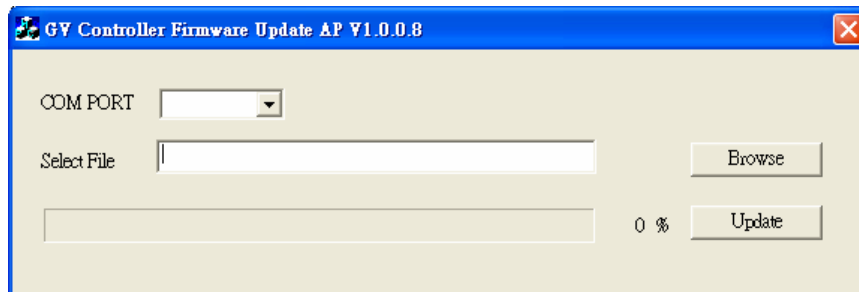
Before you start updating the firmware, please read these important notes:

1. While the firmware is being updated, the power supply must not be interrupted.
2. Do not turn the power off within 10 minutes after the firmware is updated.

**WARNING:** The interruption of power supply during updating causes not only update failures but also damages to the device. In this case, please contact your sales representative and send your device back to GeoVision for repair.

To upgrade firmware:

1. Insert the Software CD and select **Run Firmware Update Utility**. This dialog box appears.



2. Select the COM port of GV-RK1352.
3. Click the **Browse** button to locate the firmware file (.img) saved at your local computer.
4. Click **Update**.
5. The LED indicator should flash purple during the process of firmware upgrading. When the process is complete, GV-RK1352 will be sounded twice and the LED indicator will change to green.

## 9. Specifications

<b>CPU</b>	8-bit microprocessor
<b>Frequency</b>	13.56 MHz for ISO14443A (Mifare DESFire, Mifare Plus and Mifare Class)
<b>Wiegand Interface</b>	Wiegand 26 / 34 bits, distance 30 m / 98.43 ft
<b>RS-485</b>	9,600 bps, connect up to 8 GV-RK1352 units
<b>Power</b>	DC 7.5 V ~ 12 V
<b>LED</b>	Red, Green and Blue LED
<b>Beeper</b>	Buzzer
<b>Reader Color</b>	Black
<b>Operating Temperature</b>	-35 °C ~ 65 °C / -31 °F ~ 149 °F
<b>Operating Humidity</b>	10% ~ 90% (no condensation)
<b>Dimensions (W x H x D)</b>	95 x 108 x 23 mm / 3.74 x 4.25 x 0.91 in
<b>Weight</b>	260 g / 0.57 lb
<b>Ingress Protection</b>	IP66
<b>Certification</b>	CE, FCC, RoHS

## 10. The number of GV-RK1352 supported by GV-AS

### Controllers

GV-AS Controller Model	GV-RK1352 Interface	
	Wiegand	RS-485
GV-AS100	1	1
GV-AS110 / 120	1	Not supported
GV-AS100 / 110 / 120 with GV-ASBox	2	4
GV-AS100 / 110 / 120 with GV-ASNet	Not supported	2
GV-AS210	4	8
GV-AS400	8	8
GV-AS410 / 810	8	8