Upgrade Legacy Serial Barcode Reader to Wiegand Reader

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Introduction

This document is intended for customers with a standalone access controller upgrading from a legacy serial (RS232) barcode reader to a Wiegand interface reader. The legacy barcode reader connects to the controller through the following components:

- a Cat5 cable with beige couplers at both the reader and controller
- a 5VDC power supply
- a Serial/Wiegand adapter (small black box), and
- a short length of wire connecting to the controller.

The Wiegand barcode reader connects directly to the controller with only a voltage regulator between. The voltage regulator steps down the 12VDC from the controller to 5VDC needed for the reader.

NOTE: We do not recommend re-using your existing Cat5 cable to connect the reader to the controller. The very thin wires in a Cat5 cable is not designed to carry current, which is needed to power the reader.

Before you start

You should thoroughly document your current setup before disconnecting anything. This will give you an easy way to back out of the installation and return the system to its prior state should you encounter a problem.

- Take clear pictures of the existing controller with all wire connections visible.
- Take pictures of all connectors.
- Label existing wires wherever possible. For example: Reader, Door Lock, Controller Power, Reader Power, etc.

What is included in the box?

- Wiegand Interface Slot Barcode Reader
- Voltage Regulator (12VDC-to-5VDC)
- Wire Crimps
- 4-conductor and/or 2-conductor wire (if ordered)

Wiegand Barcode Reader

5VDC Voltage Regulator
Required for reader power (see below)
Pre-installed inside controller enclosure

Crimp Connectors
(Found in controller enclosure)

Tools that you will need

- Wire cutters/strippers (appropriate for 24-gauge wire)
- Pliers (for crimping wire connections)
- Voltmeter (optional)

To connect wires using the enclosed wire crimps:

- Strip both wires.
- Insert both wires into the wide end of the wire crimp as far as they will go. The wires do not need to be twisted together.
- Squeeze the wire crimp with a pair of pliers.
- Test both wires to make sure that they are firmly attached.

Disconnect the Existing Legacy Barcode Reader

Turn off the controller power before disconnecting any wires.

The terminals where you will disconnect/connect wires for the reader are shown below:
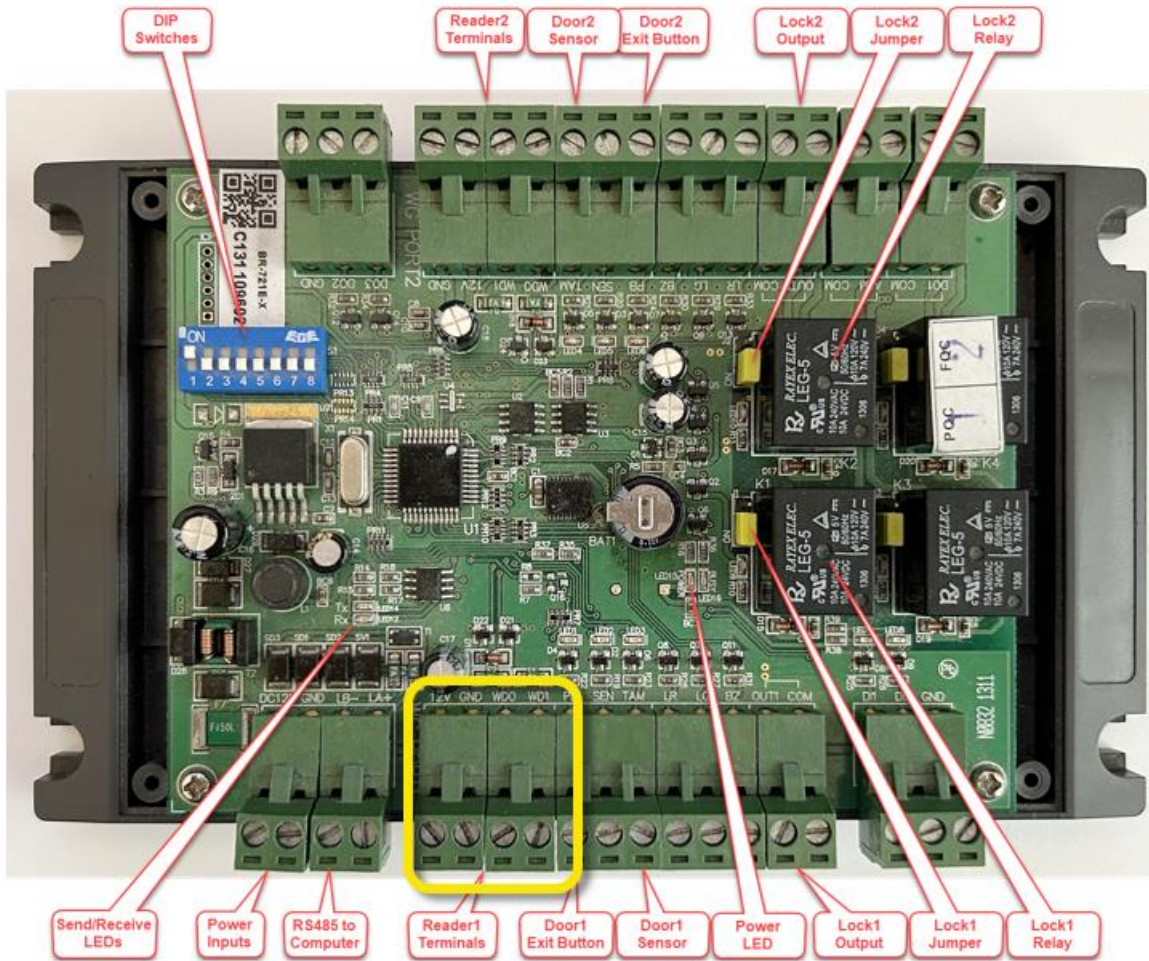

The existing legacy serial barcode reader is connected to the controller through a Serial/Wiegand adapter (shown below).
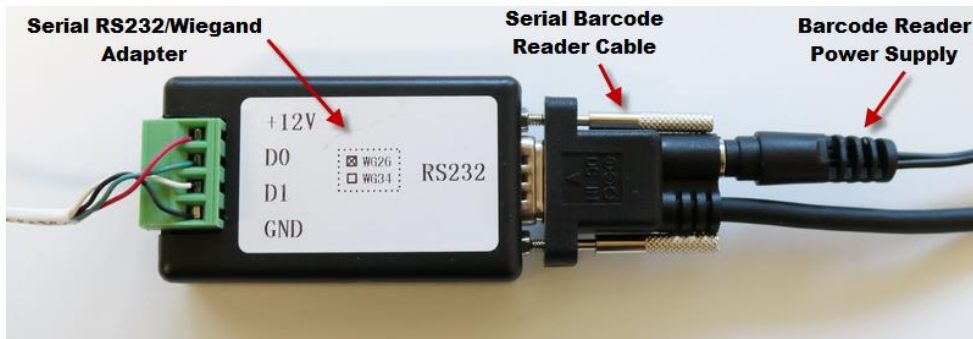
Disconnect the 4-wires connected to the Serial/Wiegand adapter from the Access Controller.

Set aside the wire, Serial/Wiegand adapter, Serial Barcode Reader Cable, Barcode Reader Power supply and all other parts connected to the serial barcode reader, as you will no longer need them.

Connect Wires to the Controller
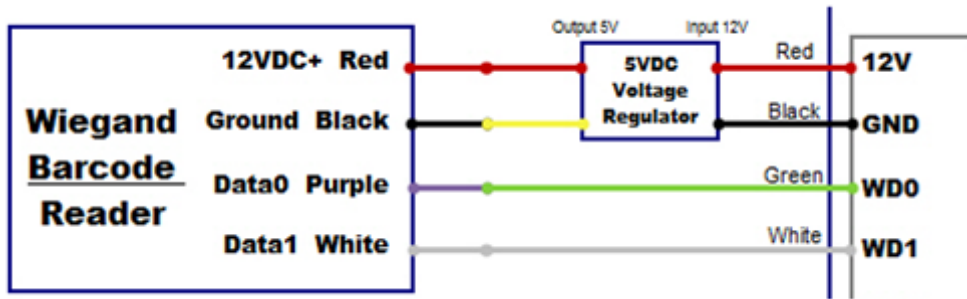
Connect the **Red** and **Black** wires from the voltage regulator to the **12V** and **GND** terminals on the controller.

Connect the **Red** and **Yellow** wires coming from the voltage regulator to the **Red** and **Black** wires that will run to the reader.

Connect Wires to the Reader

Connect the **Red** and **Black** reader wires to the **Red** and **Black** wires running to the controller.

Connect the White reader wire to the White wire running to the controller.

Connect the Purple reader wire to the Green wire running to the controller.

Cut the Brown reader wire short, as it is not used.

Power up the Controller

Once the controller is powered up the Red LED on the reader should light up. When you scan a barcode the reader should beep (to indicate that it saw a good scan), and GateKeeper should display the barcode.