Instructions for RS485 Receiver

The RS485 Receiver is designed to work with the Access Plus system.

Setting the Receiver Address

The only valid device addresses that can be used with the Access Plus system are 003 through 008. Each device (keypad, card reader, RF receiver) must have a unique address and the addresses must start with 003 and continue in sequence. The type of device does not matter, only the address matters.

The small toggle switch and two rotary switches are used to set the address on the 8053 receiver. Since the address on the device must be set between 003 and 008, the toggle switch is set to the OFF position and the first rotary switch is set to 0. You only need to set the second rotary switch for the address of the device (003 – 008).

In the example at right, the receiver address is set for 003.

Each device (card reader, keypad, receiver) must have a unique address and continue in sequence. Do Not Skip an address.
The order in which the device is connected to the Access Plus controller does not matter. What is important is that the address must be in sequence starting with 003.

Learn Transmitter Codes

This is a “Rotating Code” receiver proving a very high degree of security. At least one transmitter code must be “learned” into the receiver memory. Other transmitter codes will be automatically learned when a new transmitter button is pressed twice within 10 seconds, provided that the button number matches the first learned button number.

1. Press the PUSH BUTTON (on side of receiver) until LED 2 flashes once, then release.
2. Press the transmitter(s) to be programmed. LED 2 flashes with incoming RF.
3. Wait 10 seconds until beeping and flashing of LED 2 quits, which indicates programming has ended.

To delete ALL transmitter codes in memory, press and hold the PUSH BUTTON until LED 2 flashes 7 times, 3 times in a row. When performing this function, LED 2 will flash once, then twice, then three times, then four times, then five times, then six times, then finally seven times. Be sure to hold the PUSH BUTTON until you see the seven flashes, three times in a row.
The wires connected from the Access Plus board (terminals 1 & 2) to the RS-485 boards (terminals 8 & 7) MUST be twisted. We recommend that you use Cat5e cable. Use one pair to these terminals and then one wire from one of the other pairs to connect terminal 6. If wiring will be outdoors or underground, use Cat5e Gel Filled (flooded) UV Resistant Direct Burial Cable. Match terminals on RS 485 board (i.e., term 6 to term 6; term 7 to term 7; term 8 to term 8).

Connect Normally Open relay contacts to gate operator OPEN input.

The LED next to SW5 remains ON after a good RS-485 connection has been established.

If the AP Controller is an END unit, then SW 2 (on the AP Controller board) is ON. If the AP Controller is a middle unit, then SW 2 (on the AP Controller board) is OFF.

SW 5 is in the OFF position for middle units, and in the ON position for end units. If terminals 6, 7 & 8 have two wires connected to them, the SW 5 must be OFF. If terminals 6, 7 & 8 have only a single wire connected, the SW 5 must be ON.

Maximum distance from end to end is 4000 feet in a Daisy Chain format as shown in the diagram at right.

Address 003

Address 004

Address 005

Note RS485 ‘Daisy Chain’ wiring. Controller does not need to be on the end.

12 – 24 Volt, AC or DC power. Do not power from the Access Plus controller. Must be supplied with its own power source as shown, or can be powered from the gate operator.

Connect Normally Open relay contacts to gate operator OPEN input.

If terminals 6, 7 & 8 have two wires connected to them, the SW 5 must be OFF. If terminals 6, 7 & 8 have only a single wire connected, the SW 5 must be ON.