

418 MHz ELITE DIAL CODE COMPATIBLE RF RECEIVER

DoorKing Part Number
8040-090
 Compatible with
 Elite Dial Code
 Transmitters

The model 8040-090 RF receiver is compatible with Elite Dial Code transmitters. The receiver will output received transmitter codes in 26, 30 or 31-bit wiegand format allowing it to be used with most access controllers, or it can be used as a stand-alone receiver using its built-in Form C (NO, NC, C) dry contact relay. The 8040-090 receiver operates at 418 MHz and can ONLY be used with Elite Dial Code transmitters.

Elite DT-418 Transmitters

The 8040-090 receiver is compatible with Elite DT-418 single button; DT-418-2 two button; and Elite DT-418-4 four button transmitters. These transmitters were typically used with the Elite Dial Code series of access controllers. The 8040-090 allows installers to replace the Dial Code series controller with a DKS 1830 Series access controller, but still utilize the Elite DT transmitters.



Elite Dial Code (418 MHz) Transmitters

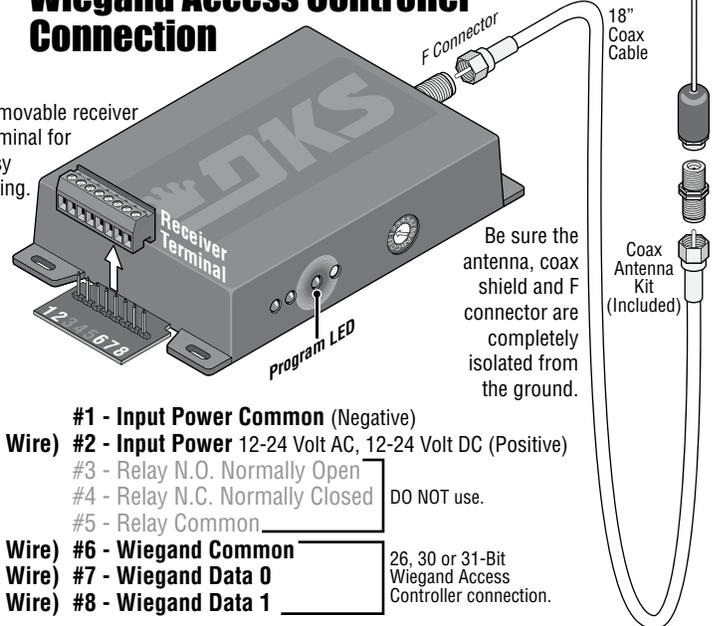
Installation

This receiver is **NOT** designed to be installed outdoors without being protected from the weather. An outdoor enclosure is available for the receiver if required, (P/N 8057-110 - Metal Outdoor Box).

Install the 8040 receiver in a location so the antenna is **NOT surrounded by metal and is in free air as high as possible above the ground**. A longer Coax Antenna kit is available for the receiver if required (P/N 1514-073 - Includes antenna, mounting "L" bracket and 15 feet of coax cable). An antenna amplifier kit (P/N 8058-080) or a Yagi directional antenna kit (P/N 1514-072) is also available for the receiver if required. The **Program LED** on the side of the case will blink as RF energy is received. If the program LED blinks or is on continuously, this indicates that there may be interference on the frequency (418 MHz) and short range may be the result. If this happens, try relocating the receiver or remove the source of interference. An antenna amplifier or a directional antenna may be needed.

Wiegand Access Controller Connection

Removable receiver terminal for easy wiring.



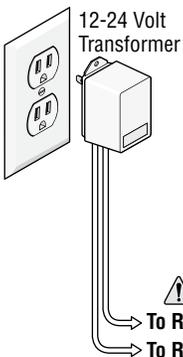
Be sure the antenna, coax shield and F connector are completely isolated from the ground.

- | | |
|---|--|
| #1 - Input Power Common (Negative) | |
| (Red Wire) #2 - Input Power 12-24 Volt AC, 12-24 Volt DC (Positive) | |
| #3 - Relay N.O. Normally Open | |
| #4 - Relay N.C. Normally Closed | DO NOT use. |
| #5 - Relay Common | |
| (Black Wire) #6 - Wiegand Common | 26, 30 or 31-Bit Wiegand Access Controller connection. |
| (Green Wire) #7 - Wiegand Data 0 | |
| (White Wire) #8 - Wiegand Data 1 | |

Wiegand Access Controller Wiring:

Receiver terminal #2 is **INPUT POWER** (12-24 V).
 Receiver terminal #6 is wiegand input power **COMMON**.
 Receiver terminal #7 is wiegand **DATA 0**.
 Receiver terminal #8 is wiegand **DATA 1**.
 Use 22 AWG **shielded** wire, maximum **200 feet**, for wiegand access controller wiring. Connect these terminals to the corresponding terminals on the wiegand access controller. Refer a DoorKing wiegand access controller installation manual for specific wiring information.

Power



Separate Power Source: Connect 12 - 24 Volt AC or DC power to terminals #1 and #2. Use minimum 18 AWG wire to power the receiver.

- If DC power is used (Transformer): Terminal #1 is **NEGATIVE** and terminal #2 is **POSITIVE**.
- Power can be supplied to the receiver by the wiegand access controller instead of a separate power source.

⚠ DC Polarity Matters!
 To Receiver Terminal #1 (Neg.)
 To Receiver Terminal #2 (Pos.)

DKS
DOOR KING
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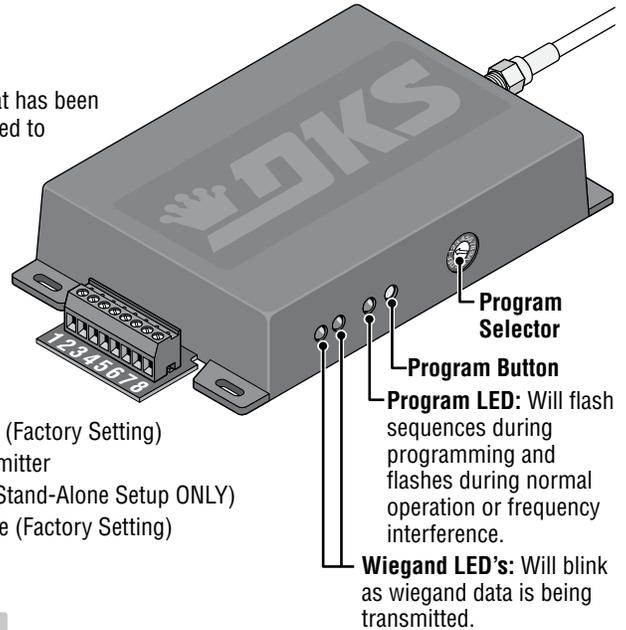
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How Receiver Functions

The 8040-090 receiver responds to a compatible transmitter's "Facility Code" that has been assigned to it. Multiple button transmitters have a **DIFFERENT** facility code assigned to **EACH** button and the receiver **MUST** match the assigned facility code before it will activate.

In wiegand output mode (Program selector setting 2, 3 or 4), you have the option of having the receiver **MATCH** (Program selector setting 5) or **IGNORE** (Program selector setting 6) the facility code to allow the receiver to activate. Multiple button transmitters **MUST MATCH** the facility codes to operate.

One receiver can be programmed to respond to a specific facility code while another receiver can be programmed for a different facility code, using only one multiple button transmitter to operate both receivers.



Programming Selector's 10 positions:

1. Learn Single Transmitter
2. 26-bit Wiegand Mode (Factory Setting)
3. 31-bit Wiegand Mode
4. 30-bit Wiegand Mode
5. Match Facility Code (Multi-button transmitters)
6. Ignore Facility Code (Factory Setting)
7. Learn Master Transmitter
8. Low-Power Mode (Stand-Alone Setup ONLY)
9. Normal-Power Mode (Factory Setting)
- A. Erase ALL Memory
- B-F. Not Used

Program LED: Will flash sequences during programming and flashes during normal operation or frequency interference.

Wiegand LED's: Will blink as wiegand data is being transmitted.

Learn a Single Compatible Transmitter

Only a single compatible transmitter needs to be programmed (Learned) into the receiver memory. All other compatible transmitters that **match the Learned transmitter's Facility Code** will be output in wiegand format to the access controller.

Important: This programming is for wiegand output to an access controller **ONLY** and will **NOT** work when using the Stand-Alone setup (Relay connection). Low power mode can only be used in Stand-Alone setup.

1. Turn the Programming Selector to **Position 1**.
2. Press and **HOLD** Program Button until the Program LED flashes **ONCE** and receiver will BEEP once. Receiver is now in "**Learn Mode**" and will flash and beep for 10 seconds.
3. Press a **specific** button on the desired compatible transmitter to be "**Learned**" within 10 seconds, wait for the receiver to time-out. All desired compatible transmitters with **Matching Facility Code** will now operate the receiver when their button is pressed.

26, 30 or 31-Bit Wiegand Output

The receiver can be changed from the factory set 26-Bit to 30 or 31-Bit wiegand output if desired.

- 1A. Turn the Programming Selector to "**Position 2**" will change to **26-Bit Wiegand** (Factory Setting).
- 1B. Turn the Programming Selector to "**Position 3**" will change to **31-Bit Wiegand**.
- 1C. Turn the Programming Selector to "**Position 4**" will change to **30-Bit Wiegand**.
2. Press and hold Program Button until the Program LED flashes **ONCE** and receiver will BEEP once.
3. Receiver LED will then give a long flash and beep.
4. This indicates receiver is now changed to "**Your Selected Wiegand Bit Size Chosen in Step 1**".

Match or Ignore Facility Code

The receiver can be programmed to **MATCH** or **IGNORE** the Learned transmitter's facility code. Multiple button transmitters **MUST MATCH** the facility code for the receiver to activate. **IGNORE** facility code can only be used with single button transmitters.

- 1A. Turn the Programming Selector to "**Position 5**" will **MATCH** the Learned transmitter's facility code.
- 1B. Turn the Programming Selector to "**Position 6**" will **IGNORE** the Learned transmitter's facility code (Factory Setting).
2. Press and hold Program Button until the Program LED flashes **ONCE** and receiver will BEEP once.
3. Receiver LED will then give a long flash and beep.
4. This indicates receiver is now changed to "**Your Selection in Step 1**".

Learn a Master Compatible Transmitter

The receiver "**Learn Master Transmitter**" will allow you to program a master compatible transmitter for easy future compatible transmitter additions if desired. When a "**Master Transmitter**" is activated, the 8040-082 receiver will **AUTOMATICALLY** go into "**Learn Mode**" allowing additional compatible transmitters to be programmed into the receiver memory without having to go through the normal "Single Compatible Transmitter Programming" process (See above). This is an **easier way** to add additional transmitters to the receiver's memory in the future. A master transmitter is **NOT** required to program regular transmitters. It is **NOT** intended to be used as a regular transmitter and should be labeled and kept in a safe place.

1. Turn the Programming Selector to **Position 7**.
2. Press and **HOLD** Program Button until the Program LED flashes **ONCE** and receiver will BEEP once. Receiver is now in "**Learn Mode**" and will flash and beep for 10 seconds.
3. Press a **specific** button on the desired compatible "MASTER" transmitter to be "**Learned**" within 10 seconds, wait for the receiver to time-out.

NORMAL -Power Mode (Factory Set)

The receiver comes from the factory already set in NORMAL-Power mode. It can be changed from LOW-Power back to NORMAL-Power mode.

1. Turn the Programming Selector to **Position 9**.
2. Press and hold Program Button until the Program LED flashes ONCE and receiver will BEEP once.
3. Receiver LED will then give a long flash and beep.
4. This indicates receiver will be put into NORMAL-Power mode which consumes **MORE** power than LOW-Power mode.

Change to LOW -Power Mode

The receiver can be changed from normal-power to LOW-Power mode. LOW-power mode is used in DoorKing solar gate operator applications. Wiegand output will **NOT** work in LOW-Power mode.

1. Turn the Programming Selector to **Position 8**.
2. Press and hold Program Button until the Program LED flashes ONCE and receiver will BEEP once.
3. Receiver LED will then give a long flash and beep.
4. This indicates receiver will be put into LOW-Power mode which consumes **LESS** power than NORMAL-Power mode.

Erase ALL Memory - This CANNOT be UNDONE

1. Turn the Programming Selector to **Position A**.
 2. Press and hold Program Button until the Program LED flashes ONCE and receiver will BEEP once. Press and hold button again, LED will flash and receiver will beep again. Press and hold button a third time, LED will flash and receiver will beep a third time.
 3. The receiver will then emit a long flash and long beep indicating ALL memory, including master transmitters have been erased from memory.
- Note:** If receiver does not emit a continuous beep after pressing the button 3 times, try repeating step 2 faster or slower until it does.

STAND-ALONE RECEIVER SETUP - RELAY CONNECTION

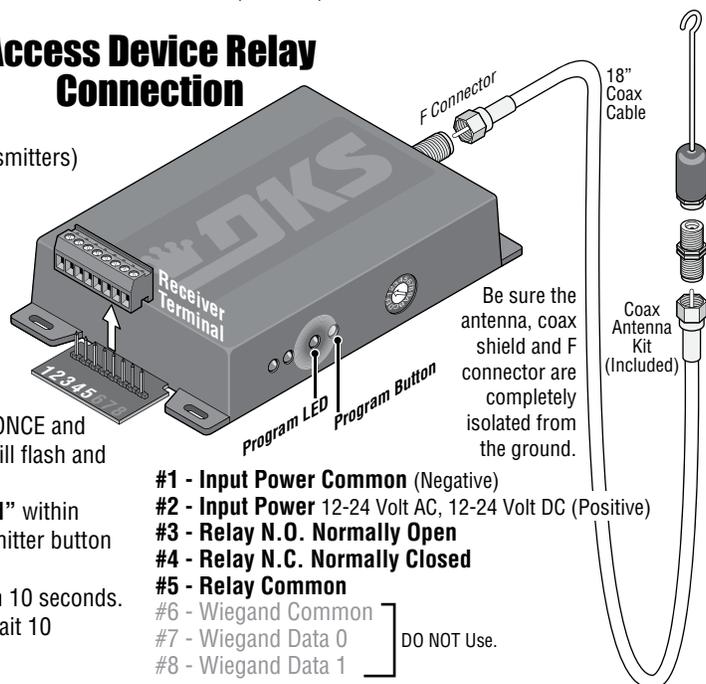
The receiver contains a built-in relay that can operate an access device such as a gate operator or door lock. Connect receiver terminals #3 and #5 to a normally open access device or terminals #4 and #5 to a normally closed access device. **The memory of the receiver can ONLY store 100 compatible transmitters MAXIMUM.** The relay will activate when the correct **Facility Code** (specific button on multiple button transmitter when used) match the facility code that has been stored in the memory from a SINGLE transmitter (Learned).



Programming Selector's 6 positions that can be used:

1. Learn Transmitters (See below)
5. Match Facility Code (Multiple button transmitters)
6. Ignore Facility Code (Factory Setting) (Single button transmitters)
8. Low-Power Mode (Stand-Alone Setup ONLY)
9. Normal-Power Mode (Factory Setting)
- A. Erase ALL Memory

Access Device Relay Connection



Learn Up to 100 Transmitters

1. Turn the Programming Selector to **Position 1**.
2. Press and **HOLD** Program Button until the Program LED flashes ONCE and receiver will BEEP once. Receiver is now in "**Learn Mode**" and will flash and beep every second for 10 seconds.
3. Press a **specific** button on the desired transmitter to be "**Learned**" within 10 seconds. Receiver will reset 10 second timer after each transmitter button has been pressed.
4. Press other desired transmitter buttons to be learned, each within 10 seconds.
5. After all desired transmitters have been learned by the receiver, wait 10 seconds for the receiver to time-out and end programming.