

# VOICE ONLY CELLULAR SYSTEM

DoorKing Part Number  
**1801-080**

The **VOICE ONLY Cellular System** operates on DoorKing's cellular network that is hosted on the AT&T 4G LTE network where available. This system provides voice communication **ONLY** (phone line) to specific DoorKing 1800 series telephone entry systems. There is **NO** programming (data) service with this system. If VOICE and DATA are required, then the VOICE and DATA cellular system should be used (P/N 1800-080 sold separately).

The **VOICE ONLY Cellular System** is designed to be used with specific **DoorKing 1800 series** telephone entry systems:

- **1802, 1803, 1808, and 1810 Standard** entry systems using circuit board 1862-010.
- **1812 Classic** entry system using circuit board 1871-010.
- **1812 Plus** entry system using circuit board 1971-010.

**This cellular device cannot be used for 911 calls.**

The **Voice ONLY** cellular system **MUST** be wired to the entry system's **phone line** (voice).

The **Voice Only** cellular system will work with **TWO** 1800 entry systems connected to it. These are designated as **System A** and **System B**.

**System Operating Temperature Range:** -10F (-23C) to 125F (52C).

## Prior to Installation:

**An existing cellular phone will be needed to test the signal strength of DoorKing's cellular network in the desired installation location.**

**Analog modems (Dial-Up) DO NOT work on a cellular network.**

**BEFORE** the cellular system can be installed, the installation location **MUST BE TESTED** for good cellular signal strength for reliable communication. **TEST** this location using an existing active cellular phone with **AT&T** phone service.

**Note:** Other cellular phone services use different networks and will not work for testing signal strength of the cellular system.

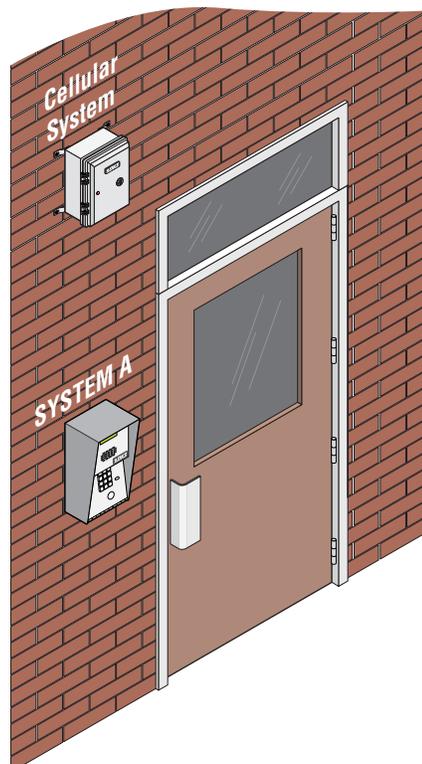
Activate the phone near the position where you want the plastic enclosure to be installed. 3-4 bars of signal strength should be indicated on the phone for a reliable signal. If 3-4 bars are not achievable in that specific location, then try moving the phone around and see if at least 3-4 bars can be achieved and maintained in a nearby location. **DO NOT install the enclosure in a WEAK or NO signal area.** DoorKing offers an exterior 3G cellular antenna that can help in areas with weak cellular service (P/N 1514-014 Sold separately). Generally, the higher the enclosure is mounted, the better the reception. This also helps protect against vandalism. The enclosure should be located to minimize the wire runs to "**SYSTEM A**" 1800 telephone entry system. Keep the wire run between the two devices as short as possible, maximum 100 feet. This allows less chance for lightning surges or other electrical interference to disrupt the cellular signal. **Keep the enclosure away from any metal.** This can also disrupt the signal. After the 3-4 bar signal strength has been confirmed the installation can begin.



## Installation Steps:

1. Install and wire cellular system to 1800(s) (pages 2&3).
2. Power up cellular system (page 4).
3. Register cellular system (and 1800(s)) online, this can be done before or after cellular system has been installed (page 4).
4. Test cellular system (page 4).
5. Troubleshoot cellular system if necessary (page 5).

**Note:** Installation steps assume that a good cellular signal has been tested at installation location and the 1800 system(s) has already been setup and functioning including the **master code** and **multiple system programming** if 2 1800s are being used.

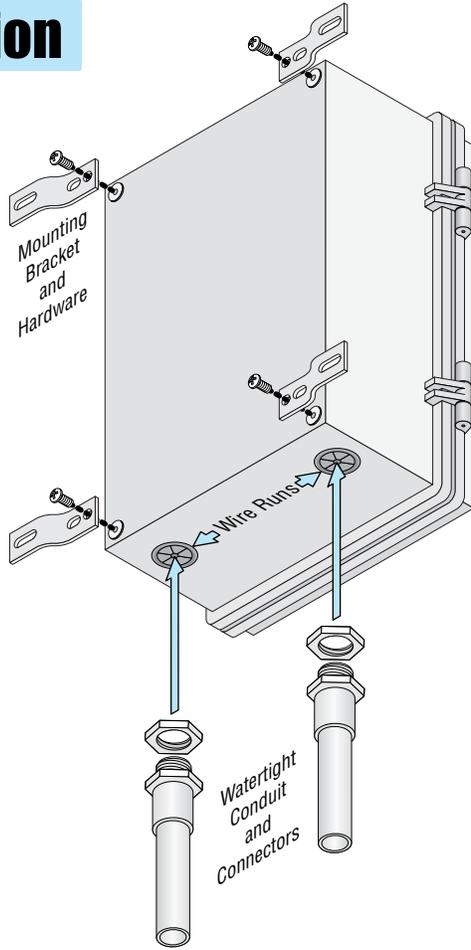


**DKS**  
**DOOR KING**

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# Installation



The plastic enclosure comes with mounting brackets and hardware to mount on enclosure.  
Mount enclosure on surface using appropriate hardware (not included). **IT IS NOT RECOMMENDED DRILLING HOLES IN THE PLASTIC ENCLOSURE!** If holes must be drilled, remove the circuit board before drilling and be sure that mounting bolts/screws **DO NOT** touch the back of the circuit board. **Holes must be sealed to prevent water intrusion.**

If the cellular control box is installed **OUTDOORS**, watertight conduit and connectors **MUST** be used for **ALL** field wiring connections.

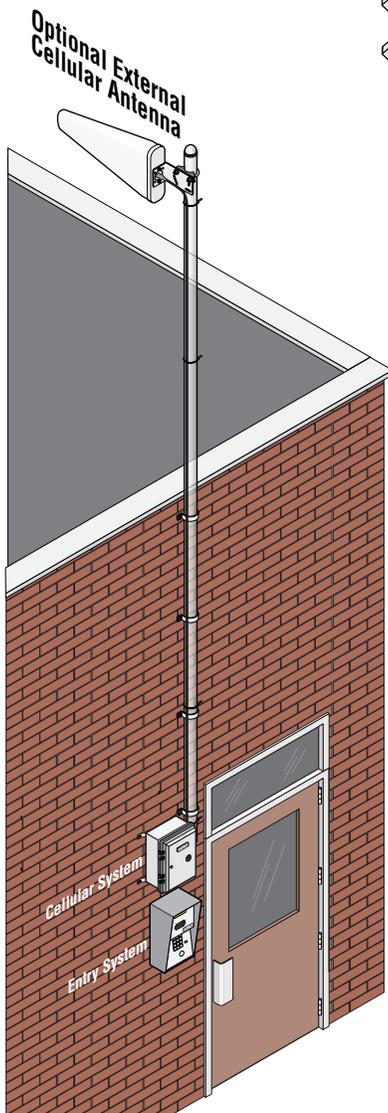
## Wiring methods used shall be in accordance with National Electrical Code, ANSI/NFPA 70.

Permissible wire sizes for the terminals (12-26 AWG).

Type of wiring to be used on ALL external devices:

A) Type CL2, CL2P, CL2R, or CL2X.

B) Other cable with **equivalent** or **better** electrical, mechanical, and flammability ratings.

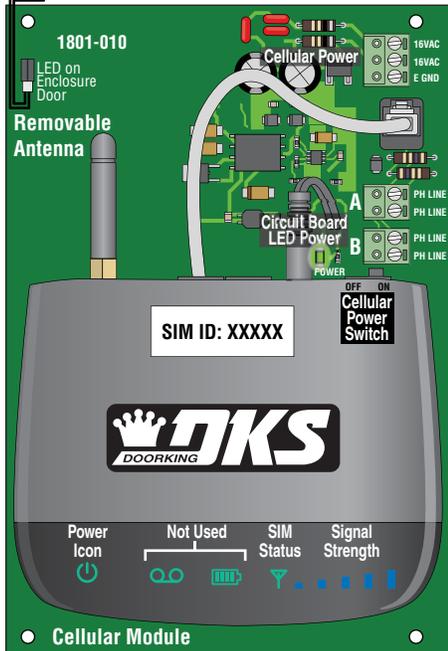


**DoorKing offers an exterior 3G cellular antenna that can help in areas with weak cellular service (P/N 1514-014 Sold separately).**

# Wiring

**DKS Cellular Server**  
hosted by AT&T Cellular network with  
DKS Online Registration Completed

LED on Enclosure Door  
"AC power ON" indicator



## Voice ONLY Cellular System

### CELLULAR MODULE LEDs:

#### Signal Strength Bars:

Blue - More bars, more signal strength.  
Bars only display when call is being made.

**SIM Status** - Red blinking (error, usually NO SIM)

**POWER Icon** - ON (has power)

**Note:** Older Model Circuit Boards can be upgraded for better DTMF tone distortion.

1812 Plus 1971-010 board Rev S or higher.

1812 Classic 1871-010 board Rev AC or higher.

1802/1803/1808/1810 1862-010 board Rev P or higher.

**System B Phone Line Alternate Use**  
- If system B is not being used for a second phone entry system, a phone can be installed and used. It shares the phone line with the System A phone entry system. The phone cannot be used while a transaction is taking place on System A.

Supplied Power Transformer 16.5VAC 40 VA

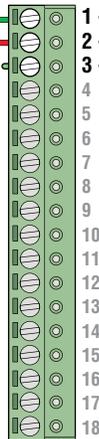
**Do Not Connect Power To A Receptacle Controlled By A ON/OFF Switch.**

Twisted Pair Phone Line **MUST** be used.

- 1 - Phone In (Negative-Ring)
- 2 - Phone In (Positive-Tip)
- 3 - Ground

## 1812 Plus and 1812 Classic Removable Terminal

**SYSTEM A**



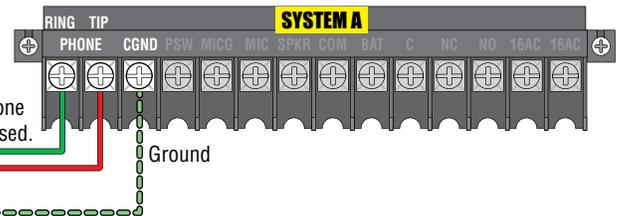
Permissible wire sizes for the terminals (12-26 AWG).

Type of wiring to be used on ALL external devices:  
A) Type CL2, CL2P, CL2R, or CL2X.  
B) Other cable with equivalent or better electrical, mechanical, and flammability ratings.

The **EARTH GROUND** must be connected to a proper ground close by (ground rod, cold water pipe in the ground, existing electrical ground, etc.) indicated by dashed lines.

## Choose Terminal Connection for SYSTEM A 1800

### 1802/1803/1808/1810 Entry System Terminal

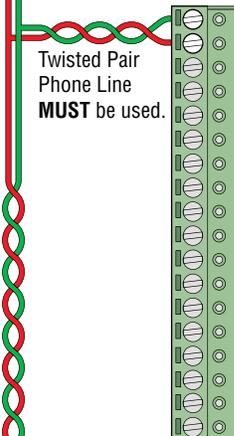


## Choose Terminal Connection for SYSTEM B 1800 "Optional"

- 1 - Phone In (Negative-Ring)
- 2 - Phone In (Positive-Tip)

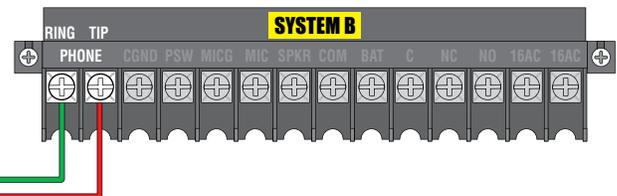
## 1812 Plus and 1812 Classic Removable Terminal

**SYSTEM B**



**TWO Entry Systems** - The Voice ONLY cellular system can supply telephone service for **TWO 1800s** designated as **System A** and **System B**. The telephone line is **SHARED** with both 1800s. Each 1800 **MUST** be programmed for **Multiple Systems**, see specific 1800 Installation/Owner's instruction manual for more information.

### 1802/1803/1808/1810 Entry System Terminal



# Cellular System Information

**Powering Up Cellular System** - The Voice **ONLY** cellular system will **NOT** function until **online registration** has been successfully completed on DoorKing's Cellular website. Within 1 minute of powering up the cellular module, the module lights should turn on. If they don't, check that the cellular power switch is turned ON. Signal strength Bars should be lit **GREEN** indicating good cell reception. **YELLOW** bars indicates poor reception but may still work. **RED** bars indicates no reception. The cellular module's lithium battery needs time to charge. Allow at least ½ hour of charging time before using system. Program a phone number into the 1800 entry system to make a test call.

**Adjusting 1800 Entry System** - When making a test call from the 1800 telephone entry system, adjust the microphone, speaker and feedback on the entry system, See specific 1800 Installation/Owner's instruction manual for more information.

**Using Two 1800 Entry Systems** - Each 1800 must be programmed for **MULTIPLE SYSTEMS**. see specific 1800 Installation/Owner's instruction manual for information to program each 1800.

**TWO 1800 Entry Systems Master Codes** - Each 1800 entry system's Master Code must be **DIFFERENT**. The DKS cellular server identifies each 1800 by its unique master code. This allows separate programming for each 1800.

## Online Registration MUST be Completed

DKS Cellular requires a **SEPARATE** registration from the DKS IM Server. If a customer already has an IM Server account and wants to add a DKS Cellular system, this will require a **SEPARATE** User ID and Registration.

- DKS IM Server includes: **IM Server Modem** and **IM Server Client**.
- DKS Cellular includes: **Cellular Phone** and **Data Transfer**.

Before registering a cellular system on DoorKing's Cellular Server you will need:

- **SIM ID** number located on the cellular module (number is unique for each cellular module).
- Master Code of **System A**.
- Master Code of **System B** if connected, **MUST** be a different master code than System A.

**OPTION 1.** Go to DKS cellular website: <https://dksdb.dksoftware.com/NewUserRegChoice.aspx> to register, follow instructions on website.

**OPTION 2.** Online registration is directly offered when installing the DoorKing Remote Management Software version 6.3.g or later on YOUR internet connected PC.

Create an account and select the **Voice ONLY** account from the options.

- **Voice Only** (Only service available for **Voice ONLY** cellular system)
- Voice and Data (not applicable)
- Data Only (not applicable)

Enter the **SIM ID** number to identify the **Cellular System** to the account created. After the SIM ID number is entered along with the local billing address,

**a local cellular phone number will be assigned** to that cellular device.

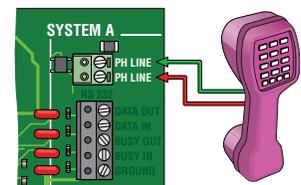
Register the 1800 systems (Master Codes) to the account. The **FIRST 1800 master code** entered will be identified as **System A**. If a second 1800 master code

is entered, it will be identified as **System B**.

## Testing

**Final Testing after the Cellular System has been Registered** - All systems should be tested and final adjustments done. Connect a telephone butt set to the cellular system circuit board **Phone Line** and make sure the line is active and that phone calls may be made and received.

If the phone line is not active, something went wrong during the registration which must be corrected. If still having problems, call DoorKing tech support. Attach a label to the inside of the cellular enclosure listing the local phone number that was assigned during registration.



**Voice Testing** - Program a phone number into the memory of the 1800 using the 1800 keypad. Then call that programmed number on the 1800. Have the call recipient press "9" on their phone to open the door. Verify the 9 tone is detected (door will open). The feedback on the 1800 **MUST** be adjusted for the cellular network. This adjustment is **VERY** important for DTMF detection. See specific 1800 Installation/Owner's instruction manual for programming and adjustment information. Note: The 1812 Plus **automatically** adjusts feedback and needs no adjustment.

**IMPORTANT Note:** Factory set **Tone Open** numbers: "9" TONE activates Relay 1. "0" TONE activates Relay 0. "5" TONE activates Relay 2. For cellular, change the tone open number for Relay 2 to "8" TONE. Leave Relay 1 and Relay 0 tone open numbers the same.

# Troubleshooting

**IMPORTANT:** The cellular network **distorts DTMF tones** received by the entry system. Update older entry system boards (see below) for better DTMF tone detection. The **greatest** distortion exists for keys 1-2-3-4-5-6. Keys 7-8-9-0-∗-# work better. Because of this, **ONLY** the latter keys should be used for **TONE OPEN** numbers and the **MASTER CODE**. The entry system will perform better if keys 7-8-9-0-∗-# are used **AND** the feedback adjustment on the 1800 entry system has been **adjusted** for the **cellular network** (see “Voice Testing” on page 4).

**Note:** The Master Code can only be programmed using numbers and not the “∗” or “#” keys.

**Note:** An older 1800 entry system may need to have the circuit board upgraded to be able to handle the distorted DTMF tones from the **cellular network**:

Upgrade 1812 Plus 1971-010 board to Rev S or higher.

Upgrade 1812 Classic 1871-010 board to Rev AC or higher.

Upgrade 1802/1803/1808/1810 1862-010 board to Rev P or higher.

## System Not working:

Are the lights on the cellular module ON? If not, make sure cellular power switch on cellular module is ON.

Is the circuit board power LED ON? If not, check the 16.5VAC power transformer wires. Power transformer **MUST NOT** be connected to a receptacle controlled by a switch.

Poor cellular reception. Look for cellular module “Blue Signal Strength Bars” to be all lit up. If 1-2 or no bars are lit, poor or no reception is occurring.

Registration is not complete OR DATA ONLY has been selected. Service suspended because of past due bill. Contact DoorKing for support.

# FCC Regulations

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

# RF Exposure Information

This device meets the government’s requirements for exposure to radio waves.

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment.

# Glossary for UL 294 Compliance

**ACCESS CONTROL SYSTEM:** A collection of means, measures and specific practices that when combined, form or compose a systematic approach, which enables an authority to control access to areas and resources in a given physical facility. An access control system, within the field of physical security, is generally seen as the second layer in the security of a physical structure.

**ALARM:** A condition indicating a state of alert or tamper detection.

**ALARM SIGNAL:** A transmission of an alarm condition or alarm report.

**CONTROLLED AREA:** A room, office, building, facility, premises, or grounds to which access is monitored, limited, or controlled.

**EQUIPMENT:** Any part of an electronic access control system, such as access control units, reader interface modules, access point actuators, access point sensors, keypads, and the like.

**PROTECTED AREA:** A room, office, building, facility, premise or grounds to which access is monitored, and limited and/or controlled, whereby the authorized person of the Access Control System may grant access to non-authorized persons.

**RESTRICTED AREA:** A room, office, building, facility, premise or grounds to which access is monitored, and limited and strictly controlled, whereby only the administrator of the Access Control System shall issue credentials that will lead to access.

## PERFORMANCE LEVELS:

<b>Destructive Attack:</b>	<b>Level I</b>
<b>Line Security:</b>	<b>Level I</b>
<b>Endurance:</b>	<b>Level IV</b>
<b>Standby Power:</b>	<b>Level I</b>
<b>Single Point Locking Device:</b>	<b>Level I</b>



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