INGRID

InGrid Home Protection System Brinks Keypad Model BK410

> Installation Instructions June 2005 PRELIMINARY

PRODUCT DESCRIPTION

The Brinks Keypad is an InGrid Grid Controller that can operate alone or with other Grid Controllers to create a security system for monitoring a residential home or small office. The Keypad receives radio signals from other Grid Controllers and from wireless Sensors. One or more Keypads can be registered in a single InGrid system.



Each Keypad contains a Liquid Crystal Display (LCD) and a piezo siren that each provide a variety of user feedback. When operated as a local only system, the Keypad will emit a loud siren if an alarm condition occurs. When operated in conjunction with an alarm monitoring service, the Keypad may communicate with another Grid Controller such as a Signal Extender which is then used to provide a communications link to a central monitoring station. The Keypad is a supervised device that is regular communications with other Grid Controllers.

INSTALLATION

This section describes guidelines for installing, programming, mounting, and testing the Keypad.

Installation Guidelines

- The Keypad will typically communicate at a range of up to 500 feet from other Grid Controllers.
- Do NOT use an outlet that is controlled by a switch.

> Mounting

Note: You must be free of static electricity before handling the Keypad. Touch a bare metal surface or wear a grounding strap to discharge yourself.

- 1) Select a location on a convenient and accessible wall.
- Remove back cover using screwdriver. If present, the battery must be first removed. The front of the Keypad contains static sensitive printed circuit boards. Set the front of the Keypad on the static protected packing material until needed for the mounting steps below.

- 3) Mount at height convenient for use, typically 55 to 60 inches above the floor. A wire must be run from the Keypad to the Power Supply, so choose the location wisely to minimize the difficulty of running the wire. The Keypad is designed to be mounted on drywall or wood. Mounting on metal studs, or any type of brick, stone, or concrete block will likely reduce the wireless range of the Keypad.
- 4) Hold back plate level up to the wall where the Keypad will be mounted and mark area for wires to run through wall
- 5) Make hole in wall. Run wires (recommended 18 gauge stranded wire) from the mounting location of Keypad to the outlet where Power Supply will be mounted.
- 6) Mount the Keypad back plate to the wall using 2 drywall screws.
- 7) Attach the wires to the power terminals of the Keypad. If the wire is color coded, note the attachment color used for the positive terminal of the Keypad. This same color wire should connect to the positive terminal of the Power Supply. The Keypad has a protection circuit in case the wires are connected with the wrong polarity. Later, when the Power Supply is mounted, if the Keypad does not receive power from the Power Supply, switch the polarity of the wire connections on the Power Supply.
- 8) Snap the front of the Keypad, contained the printed circuit boards onto the back plate, first hooking the top of the Keypad on the top of the back plate, and then rotating the bottom of the Keypad into position. The rotating action should be relatively free and require a minimum of force. If any pressure or difficulty is encountered, do not apply force. Investigate the routing of the wires and the alignment of the plastics and components and then re-try the rotating action. The Keypad will snap at the bottom to lock its mounting.

Note: You must be free of static electricity before handling the Power Supply. Touch a bare metal surface or wear a grounding strap to discharge yourself.

- 1) Select an outlet on which to mount the Power Supply. Choose an outlet that is preferably close to the location where the Keypad is mounted.
- 2) Find the circuit breaker or fuse controlling the outlet to which the Power Supply will be mounted and disconnect power to the outlet by turning the circuit breaker off or removing the fuse.
- 3) Remove the center screw attaching the outlet cover to the outlet.
- 4) Attach the wires to the Power Supply terminals, noting the polarity of the wire colors (if any). The Power Supply generates a polarity sensitive +5 volts DC. If the Keypad does not receive power from the Power Supply, switch the polarity of the wire connections on the Power Supply.
- 5) The Power Supply contains a tab that protrudes above the Power Supply. The Power Supply must be mounted so that the hole in the tab is aligned with the center screw hole of the outlet cover. This may require changing the vertical orientation of the Power Supply in order to find the direction which permits the hole in the tab to align with the center screw hole of the outlet cover.
- 6) Insert the outlet screw through both the tab and the center screw hole of the outlet cover, and tighten as necessary. The tab and the cover should be snug against the outlet, but not so tight that it causes flexing or stress on either the tab or the outlet cover.
- 7) Reconnect power to the outlet by turning the circuit breaker on or replacing the fuse.

> Install The Battery

Note: To avoid risk of shock or fire, install only IG180 battery

Install the IG180 rechargeable battery pack into the Keypad and allow to charge for at least 15-20 hours before using without AC power.

- 1) Use a coin to gently pry open the battery cover. Lift the battery cover out and to the right to remove.
- 2) Turn the battery pack so that the connector with the red and black wires is near the jack inside the battery compartment. Match the connector's polarity to the Keypad polarity in the battery compartment (the connector notches fit into the grooves of the jack only one way). Push the battery pack connector into the jack until it clicks into place.
- 3) Make sure you have a good connection by gently pulling on the battery wires. If the connection is secure, the battery jack will remain in place.
- 4) Be careful to route the battery wires in a manner that will not conflict with the battery cover. Place the battery cover back on the Keypad by inserting the bottom tab into the Keypad back plate and rotating the cover towards the front of the Keypad until it snaps into place. The battery cover does not require much force to reinstall. If resistance is encountered, investigate the cause and reroute any wires as necessary to permit closure with minimal force.

> Programming

The Keypad is used only with the alarm monitoring service provided by Brinks Home Security. An InGrid Home Protection System monitored by Brinks requires special programming that sets many parameters to be compatible with the Brinks central monitoring station. These parameters may only be loaded by a Brinks installer using an InGrid Programmer.

OPERATING THE SYSTEM

> User Codes

When the system is installed, you select a code number to turn the system on and off. This is your master user code, and it may be three or four digits long. You can create a separate auxiliary user code for anyone who needs access to your home. You can change or delete the auxiliary code whenever you like.

> Entering and Exiting

Designated Doors

The designated entry/exit doors are those doors that you must use to enter and leave your home while the system is on. These doors may be equipped with the wireless door Sensors. If you use a different door to enter your home, an alarm may sound.

Entry Delay

When you enter your home while the security system is on, the Keypad beeps. This beeping reminds you to turn the system off. You must enter your user code before the beeping stops. In most systems, the entry delay is 40 seconds. If you do not enter your code before the delay ends, an alarm is triggered.

Exit Delay

When you turn the system on in normal mode, you must exit the building and close the door before the exit delay ends. For most systems, the exit delay is 80 seconds. That number may vary, however, if local agency or regulator restrictions apply. Once that delay has ended, you will trigger an alarm if you open a protected door or window, or move past a motion detector.

> Turning the System On

The Four "On" Modes

You can arm the Brink's Home Security system in four different ways:

- 1) Normal Mode
- 2) Motion Off
- 3) Motions Off With Delay Doors Instant
- 4) Delay Doors Instant

Turning the System On in Normal Mode

- 1) Close all of the doors and windows and make sure that the message window displays READY.
- 2) Press the ON key. The ON light begins to blink, telling you that the system is on and that the exit delay has begun. The Keypad displays the number of seconds left in the exit delay.
- 3) Exit promptly. You must leave the building before the delay ends. The standard delay is 80 seconds. If the ON light stops blinking and is steadily lit, the exit delay has ended. If you open a door now, you will cause an alarm. Turn the system off by entering your user code, then start over.

Turning the System On with Motions Turned Off Mode

- 1) Close all of the doors and windows and make sure that the message window displays READY.
- 2) Press the ON key.
- 3) Press the MOTION OFF key. (You must press the MOTION OFF key no more than 20 seconds after you press the ON key.) The ON light blinks. The Keypad displays ON, MOTION OFF.

Turning the System On with Motions Turned Off / Instant Mode

- 1) Close all of the doors and windows and make sure that the message window displays READY.
- 2) Press the ON key.
- 3) Press the MOTION OFF key.
- 4) Press the INSTANT key. The ON light turns on. The Keypad displays ON, MOTION OFF, and INSTANT.

Do not leave the building or open any protected windows without first turning the system off.

Turning the System On in Instant Mode

- 1) Close all of the doors and windows and make sure that the message window displays READY.
- 2) Press the ON key.
- 3) Press the INSTANT key. The ON light turns on. The Keypad displays ALL ON, INSTANT.

Do not leave the building open any protected windows, or move in front of the motion detector without first turning the system off.

Turning the System On When It Is Not Ready

If the system is not ready to turn on, the message window of your Keypad displays NOT READY. This message could mean, for example, that one of the protected windows in your house is open. If you press the ON key when the system is not ready to turn on, the Keypad sounds an error tone and the system does not turn on. To make the system ready to arm and to turn it on, do the following:

- 1) Observe the number displayed in the message window. This is the zone that needs to be corrected before the system will turn on. (There may be more than one, if so, the numbers are shown one at a time.)
- 2) Refer to the Pop Up Grid Identification Card to verify the zone's location.
- 3) If the zone is a door or window, make sure that it is securely closed.
- 4) If the message window displays READY, turn the system on.
- 5) If the message window displays NOT READY, see the Frequently Asked Questions information.
- 6) To turn the system on, you must first turn off the zone that is not ready to arm. Press the OPTIONS key until the message window displays: BYPASS, ENTER ZONE #.
- 7) Enter the number of the not-ready zone, the same number that appeared in the message window. CAUTION: If you bypass a zone, it will not be protected. The Keypad beeps. The message window displays READY, BYPASS and the number of the bypassed zone is momentarily displayed.
- 8) Turn the system on.

> Turning the System Off

Turning the System Off When No Alarms Are In Progress

- 1) Enter through a designated entry door. The Keypad sounds a tone to remind you to turn the system off. The ON light blinks.
- 2) Turn the system off by entering your code. To prevent an alarm, you must enter your code before the entry delay ends. The standard delay is 40 seconds. Once the system is off, the ON light goes out.

Turning the System Off and Canceling an Alarm

Follow these instructions if you caused an alarm accidentally.

- 1) Enter through a designated entry door. The siren is sounding and the ON light blinks. The Keypad's message window displays ALARM.
- 2) Enter your user code. The Keypad beeps. The Keypad's message window displays ALARM MEMORY.
- Press the CANCEL key. (You must press the CANCEL key within 20 seconds of entering your code.) The Keypad beeps. You will not receive a call from Brink's. The Keypad's message window displays ALARM CANCELED.

Note: If you press the CANCEL key before entering your code, the result is the same.

Turning the System Off Without Canceling an Alarm

Follow these instructions if you wish to turn off the system and report an alarm to Brink's.

- 1) Enter the building through a designated entry door. The Keypad's message window displays ALARM. The siren is sounding and the ON light is lit.
- 2) Enter your user code. The Keypad beeps. Wait for Brink's to call. Be prepared to give the Brink's operator your code word. Do not use the telephone if you intend to cancel the alarm. If your telephone line is busy, Brink's may dispatch emergency personnel to your home, which could result in a false alarm fine.

Turning the System Off After an Alarm in Your Absence

Follow these instructions if there was an alarm at your house while you were away and the sirens are no longer sounding.

- 1) Enter the building through a designated entry door. The ON light blinks. The sirens and speakers are silent. The Keypad shows the numbers of the zones in alarm and its message window displays ALARM MEMORY.
- 2) Enter your user code to turn the system off. The Keypad beeps for one second. The Keypad shows the numbers of the zones that were in alarm and displays ALARM MEMORY.
- 3) Refer to the Pop-Up Grid Identification Card to verify the location of the zones that were in alarm.
- 4) To silence the Keypad's beeping and clear Alarm Memory, press the CANCEL key.
- 5) If you do not know what caused the alarm, review the system's alarm.

> System Options

The system has five options:

- 1) Bypass
- 2) Door Chime
- 3) Auxiliary Codes
- 4) Alarm Memory
- 5) Test

How to Bypass a Zone

When you bypass a zone, the system ignores it. Use this whenever you want to turn the system on, but leave a particular Sensor off. The bypass is automatically canceled when you turn the system off. To bypass a zone, do the following:

- 1) Press the OPTIONS key until the message window displays: BYPASS, ENTER ZONE #.
- 2) Enter the number of the zone you wish to bypass. The Keypad beeps. The message window displays READY, BYPASS. The number of the bypassed zone lights momentarily.

How to Turn the Door Chime On or Off

When you turn the door chime on, the Keypad beeps if a protected door or window is opened while the system is turned off. To turn the chime on or off, do the following:

- 1) Press the OPTIONS key until the message window displays: DOOR CHIME, ENTER CODE
- 2) Enter your code. The Keypad beeps. The message window displays READY, DOOR CHIME.

How to Add an Auxiliary Code

You can assign an auxiliary user code to the members of your family, or to people who need temporary access to your home. Housekeepers, guests, and housesitters can all be given auxiliary codes. You can assign as many as 8 codes, but for your security, you should limit the number of auxiliary codes you assign, and delete any codes that are not in use. To assign an auxiliary code, do the following:

- 1) Press the OPTIONS key until the message window displays: AUXILIARY CODES, ENTER MASTER CODE.
- 2) Enter the master user code. The Keypad beeps. The message window displays: ENTER USER #.
- 3) Enter the number of the user to whom you want to assign a code (1 to 8). The Keypad beeps. The message window displays: ENTER NEW CODE.
- 4) Enter the new code. The Keypad beeps.
- 5) Test the new code by turning the system on, then using the code to turn the system off.

How to View Alarm Memory

You can use alarm memory to determine which zones were in alarm.

- 1) Press the OPTIONS key until the message window displays: ALARM MEMORY, ENTER CODE.
- 2) Enter your user code. The Keypad beeps. The message window shows which zones were in alarm.

How to Delete an Auxiliary Code

If you wish to delete an auxiliary user code, do the following:

- 1) Press the OPTIONS key until the message window displays: AUXILIARY CODES, ENTER MASTER CODE.
- 2) Enter the master user code. The Keypad beeps. The message window displays: ENTER USER #.
- 3) Enter the number of the user whose code you wish to delete. The Keypad beeps. The window displays: ENTER NEW CODE.
- 4) Do not enter the user's code. Instead, press the CANCEL key. The Keypad beeps.
- 5) Test that the code has been deleted by attempting to turn the system on and off, using the deleted code.

> System Testing

You can test the components of the system—the sirens, the telephone hookup, and the Sensors—without causing a false alarm. This section describes how you can be sure that the system is functioning properly.

Siren and Transmission Test

This test helps to ensure that the system's siren is working properly, and that the system is able to send an alarm signal to the Brink's Monitoring Center. You will not receive a call from Brink's. To test the system's siren and transmission, do the following:

- 1) Press the OPTIONS key until the message window displays: TEST, ENTER CODE.
- 2) Enter your code. The message window displays: TEST. A test signal is sent to Brink's. If it is received, the Keypad siren sounds briefly.
- 3) If you do not hear the beep or blast, and the Keypad message window displays CP TROUBLE, the test failed.

Testing All Sensors

This test helps to ensure that the system's burglary Sensors are working properly. No alarm signal is sent to the Brink's Monitoring Center.

- 1) Make sure there is nothing moving near the motion detector and that the message window displays READY.
- 2) Press the OPTIONS key until the message window displays DOOR CHIME.
- 3) Press 2, 4. Then, press and hold the 7 key for three seconds.* The message window displays READY DOOR CHIME TEST.
- 4) Open each protected door and window. Listen for the Keypad to sound the alarm. Close the door or window.
- 5) Walk in front of the motion detector (if any). The siren blasts each time the motion detector detects your movements.
- 6) If you do not hear the siren blast, call Brink's at 1-800-445-0872.
- 7) When you have finished, press the CANCEL key.

*Note: If the system has four-digit codes, press 2,4,7, then press and hold the 0 key for three seconds.

Testing the Doors and Windows Only

This test identifies whether the Sensors on your home's protected doors and windows are operating properly. You may prefer to conduct this test if you find it distracting to hear the siren blast each time you pass the motion detector during the test. *No alarm signals are sent to the Brink's Monitoring Center*. To test the system's door and window Sensors, follow the instructions on the next page. **NOTE:** If the system's chime feature is on, skip steps 2 and 3 of the Keypad instructions. When the chime feature is on, the Keypad beeps if configured to do so and the Signal Extender can beep if configured when prompted using the door chime feature if a protected door or window is opened while the system is off.

- 1) Close all doors and windows. Make sure the message window displays READY.
- 2) Press the OPTIONS key until the message window displays: DOOR CHIME.

- 3) Enter your code. The message window displays READY DOOR CHIME
- 4) Open each protected door and window, listen for the Keypad and Signal Extender to beep.
- 5) If you do not hear the Keypad beep, note the zone number and call Customer Care at 1-800-445-0872.
- 6) When you have finished testing, end the test by repeating steps 2 and 3.

Testing With Not Ready Zones

If the system is not ready to test, the message window displays NOT READY. Do the following:

- 1) Observe which zone number is displayed. This is the zone that is not ready.
- 2) Refer to the Pop-Up Grid Identification Card to verify the location of the zone.
- 3) If the zone is a door or window, make sure that it is securely closed.
- 4) If the message window now displays READY conduct the test.
- 5) If the message window still displays NOT READY, call Customer Care at 1-800-445-0872 for assistance.

> Setting the Clock

The numeric display of your Keypad may show the time of day. You do not need to set the clock; if you subscribe to Brinks monitoring service, it adjusts itself automatically every few months. However, if the time is incorrect, you can correct it by pressing and holding the 0 key for ten seconds. The Keypad's message window goes blank for ten seconds, and then the system makes a brief telephone call to Brink's, obtains the actual time, and resets the clock. While the system is making this short call, you will not be able to use your telephone.

Emergency Buttons

If you subscribe to Brinks monitoring service, the emergency buttons will perform the following functions:

- Fire The siren sounds and a signal is sent to the Brinks monitoring center. Brinks calls the fire department and then calls you to verify the alarm
- Medical The keypad beeps and a signal is sent to the Brinks monitoring center. Brinks calls you to verify the alarm. If for any reason, you do not answer that call, Brinks call emergency personnel.
- Police The siren sounds and a signal is sent to the Brinks monitoring center. Brinks call you to verify the alarm. If for any reason, you do not answer that call, Brinks call emergency personnel.

TROUBLESHOOTING

Observe which of the Keypad's icons, numbers or words are displayed, and note any letters that may appear in the numeric display. Match the Keypad's message to the table below, then turn to the section listed in the table's second column for further information and instructions.

CALL 800-445-0872	Call Brink's Indication
CF TROUBLE	Component Failure Indication
CP TROUBLE	Communication Problem Indication
CS TROUBLE	Siren Failure Indication
CH TROUBLE	Upload/Download Failure
LINE CUT	Line Cut Indication (optional feature)
LOW BATT	Low Battery Indication
NO AC	No AC Power Indication
TROUBLE Zone # (Beeping)	Zone Trouble Indication
TROUBLE OP (Beeping)	Zone Trouble Indication

No AC Power Indication

What it means: When "NO AC" is displayed on the Keypad's message window, it means the electrical power to the system has been interrupted, and the system is drawing power from one or more of its backup batteries. This can happen if the power is off to your home. It can also happen if one or more of the system components (the keypads or Signal Extenders) are without electrical power. The batteries can provide power to the system for up to 24 hours.

1) If you have no power to your home, wait for the electrical power to be restored. Once this happens, the system automatically switches back to its electrical source. The backup batteries recharge for the next 24 hours.

- 2) If you have power to your home, check the power supply to ensure that it is properly plugged in. If this solves the problem, stop. Otherwise, continue to the next step.
- 3) Unplug the power supply. It may be screwed in place; if so, remove the screw. Plug a small appliance into the outlet to verify the outlet is working properly. If it is, continue to the next step.
- 4) Look for a ground-fault circuit interrupter (GFCI) on the outlet, or on a nearby outlet. If the red reset button juts out from the outlet, push it back into place. If this solves the problem, stop. Otherwise, continue to the next step.
- 5) Check the breaker box. If any breakers associated with any room's power outlet in which a Keypad or Signal Extender is plugged into is in the OFF position, move the breaker switch to ON. If this solves the problem, stop. Otherwise, continue to the next step.
- 6) If none of these steps resolve the problem, call Brink's Customer Care at 1-800–445-0872.

Low Battery Indication

When "LOW BATT" is displayed on the Keypad message window, you will need to replace the battery in either the keypads, Signal Extenders, or Sensors. You also may hear a beeping sound. The screen will display the grid Zone number corresponding to the location of the device with a low battery

What it means: The battery in one of your system components is low. If there has not been a power outage at your home recently, call Brink's Customer Care at 1-800-445-0872 for assistance. Or you can replace the battery yourself on the Keypad. If there has been a recent power failure, follow the instructions below.

What to do:

- 1) If you wish to silence the Keypad's beeping, press the CANCEL key.
- 2) Once power to your home is restored, wait 24 hours for the battery to recharge.
- 3) If the trouble condition returns after 24 hours, the battery is not recharging properly.

To Replace The Battery In The Signal Extender

See the user manual for the Signal Extender.

To Replace The Battery In The Keypad

See the instructions above under "Under The Battery".

Communication Problem Indication

What it means: The system was unable to send an alarm or test signal to the Brink's Monitoring Center.

What you'll notice: The Keypad beeps four times per minute. The message window displays CP TROUBLE, CALL 800-445-0872.

What to do:

- 1) To silence the Keypad's beeping, press the CANCEL key.
- 2) Check your telephone for a dial tone. If there is no dial tone, remove the dialer cable from the telephone jack leading to the Signal Extender. This disconnects the system from the telephone line. It will not be able to send an alarm signal to the Brink's Monitoring Center.
- 3) Check your telephone for a dial tone. If the dial tone returns, call Brink's Customer Care at 1-800-445-0872 for assistance.
- 4) If there is no dial tone, **plug the dialer cable back into the telephone jack**. Contact your telephone company for service. Until the telephone service is repaired, no alarm signals will be sent to Brink's. However, the system should still work within your home. For your protection, it is very important that you resolve this problem quickly.

Upload/Download Failure

A problem occurred when Brink's attempted to change or read your system's programming over the telephone line

Zone Trouble Indication

What it means: A trouble on a zone condition would arise if, for example, a smoke detector is dirty or is in need of adjustment. It could also occur if a Sensor has a defective part.

What to do:

- 1) To silence the Keypad's beeping, press the CANCEL key.
- 2) Wait 30 minutes for the system to reset.
- 3) If the detector has not reset after 30 minutes, the trouble message returns and the Keypad beeps.

Component Failure

One of the system's devices is not operating properly

Call Brink's Indication

If you receive this trouble message, call Brink's Customer Care at 1-800-445-0872 for assistance.

SPECIFICATIONS

Compatibility:	InGrid Grid Controllers, InGrid Wireless Sensors, Ademco Wireless Sensors
Wireless Range	
Backup Battery Source:	Use Only IG180 Battery
Storage Temperature:	-30° F to 140° F (-34° C to 60° C)
Operating Temperature:	
Maximum Humidity:	
Dimensions:	
US Patents 6,888,459 and others pend	ling

Note: The Keypad contains a backup battery. The battery must be replaced within 7 days when a low battery condition occurs to ensure that system events can be reported in the event of a power outage. Replace only with an InGrid IG180 battery. There is a risk of explosion if an incorrect type of battery is installed.

NOTICES

FCC Part 15 Information

Changes or modifications not expressly approved by InGrid, Inc. can void the user's authority to operate the equipment. This equipment 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 interference in a residential installation.

FCC RF Radiation Exposure Statement: This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

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 equipment or the receiving antenna.

- Increase the separation between the equipment and receiver.
- Connect the affected equipment and the panel receiver to separate outlets, on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Part 15 ID No. S9PBK410

Declaration of Conformity (DoC)

InGrid, Inc. declares that the model no. BK410 is in conformity with Part 15 of the FCC Rules. Operation of this product 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.

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