

Honeywell

V4000
Remote Video System

Installation and Setup Guide

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This manual contains information on limitations regarding product use and functionality, as well as the limitations regarding liability of the manufacturer. Please read the entire manual carefully.

Introduction

The V4000 captures and stores video images (ME-JPEG's) for transmission to a central station for visual verification of alarms. Images are transmitted over standard telephone lines using an internal modem. The capture of images is initiated by a zone violation in an associated control panel. Specialized *Control Center Software* allows the user configuration options including pre-trigger/post-trigger on alarm, frame capture rate, and image resolution. Refer to the *Control Center Software* User Guide for additional details.

Basic Operation

Video information from the 4 video inputs is initially formatted into an ME-JPEG format and stored in an on-board buffer. Subsequent video captures store only the difference data required to assemble the frames captured. When the buffer is full, the data is continuously updated by writing the new data over the old data. This process ensures that a recent history is maintained in memory before an alarm event occurs. The buffer allocated to on-going storage is programmable using *Control Center Software*. When an alarm event occurs, the control panel calls the central station to report the alarm and then signals the V4000 via the control panel's keypad (ECP) bus. The remaining video buffer memory is used to capture the event. When the remaining memory is filled, recording of video events ceases. After the central station call is completed, the V4000 takes control of the phone line and calls a previously stored number for the central station that will process the video signal. The completed video clip including the pre-alarm video and the post-alarm video is transmitted to the central station using the internal modem.

Note: Central Station calling and transmission of video by the V4000 is independent of the control panel. If a subsequent alarm event occurs during video transmission, the transmission will be terminated and the control panel will seize the phone line to forward the alarm information to the central station. When the call is completed the V4000 will resume its call to the central station and transfer the video data. Contact your central station to confirm support for OzVision™ video transmission protocol.

Remote Look In

Video data can also be retrieved by accessing the module via telephone with a PC using *Control Center Software* and utilizing the module in a streaming video mode.

Features:

- 4 baseband video inputs (NTSC & PAL compatible)
- PSTN (telephone) connection - Tip, Ring
- Interface to Honeywell Ademco control panels via the panel's keypad (ECP) bus.
- Status LEDs
 - Green - Power On indicator
 - Red - Flashes during self test
- Standard RS232 serial port for Euro ISDN connection, PC, Cellular modem
- Pan/Tilt/Zoom (PTZ) - supports ERNA, VCLTP, Ultrack, Migvan, EscBaz and DynaColor protocols.
- On board modem

Specifications:

Voltage: 12 to 17VDC

Current Draw:

Standby: 370 mA

Transmitting: 490 mA Max.

ECP Bus: 45mA

Operating Temperature Range:

32° to 131°F (0° - 50°C)

Humidity:

25 to 80% Non Condensing

Resolution:

128h x 100v NTSC or PAL

256h x 100v NTSC or PAL

256h x 200v NTSC or PAL

512h x 200v NTSC or PAL

Color Resolution:

16.8 million colors with 256 gray scales.

On-board Frame Storage:

200 Kbytes.

Installing the V4000

Mounting

1. Mount the V4000 unit (on its mounting plate) to the control panel cabinet as shown. Screw the bottom of the mounting plate into the enclosure (using the lower mounting holes) using the screws provided (see Figure 1).
2. Install two AD12612 Power Supplies in the cabinet as shown, using the double-sided tape provided. (One will be used to power the module, and the other to power the cameras.)

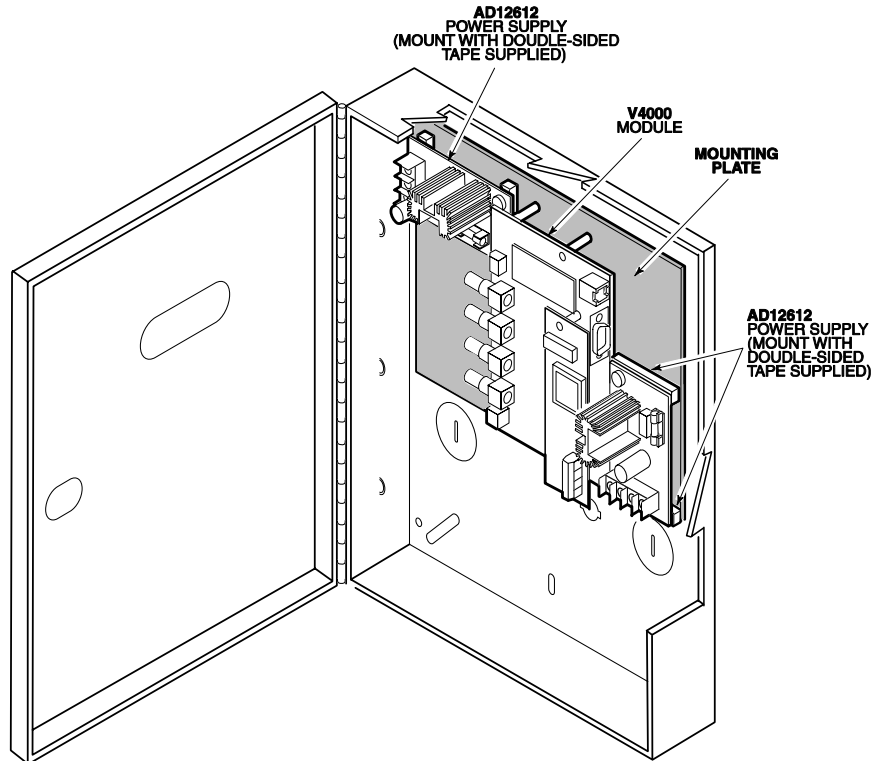


Figure 1: Mounting the V4000 and Power Supplies

Wiring

Once all components are mounted, wire the unit as follows, referring to Figure 2.

1. Connect Handset side Tip and Ring on the Control panel to the V4000 Tip and Ring terminals as shown in Figure 2.

Note: Ensure that all plugs and jacks meet the dimension, tolerance and plating requirements of 47 C.F.R. Part 68, Subpart F. For proper operation there must not be any additional equipment connected between the control panel and the telephone company facilities (e.g., fax machines).

2. Connect the video cables from the CCTV cameras to the BNC connectors.

Notes: ✓ The DIP switches on the V4000 are set for direct connection of CCTV cameras to the unit (down). If the CCTV cameras are connected in parallel

to other devices (e.g. VCR/Monitors), set the associated DIP switch to the **UP** position to ensure correct termination.

✓ The DIP switches on the interface board are not used.

3. Ensure that the designated trigger zones on the control panel are installed
4. Connect the Keybus terminals of the V4000 module to the control panel's keypad (ECP) bus using 22AWG (5mm), quad, twisted two-pair wire.
5. Connect an ADEMCO AD12612, 12VDC, 1A power supply to the Power In terminals on the V4000.

Caution: Ensure that the correct polarity is observed when connecting to the power source.

Caution: Ensure that the negative power input, negative power output, circuit common, and unit chassis are tied together in the V4000 Video Module.

6. Power-up the system.

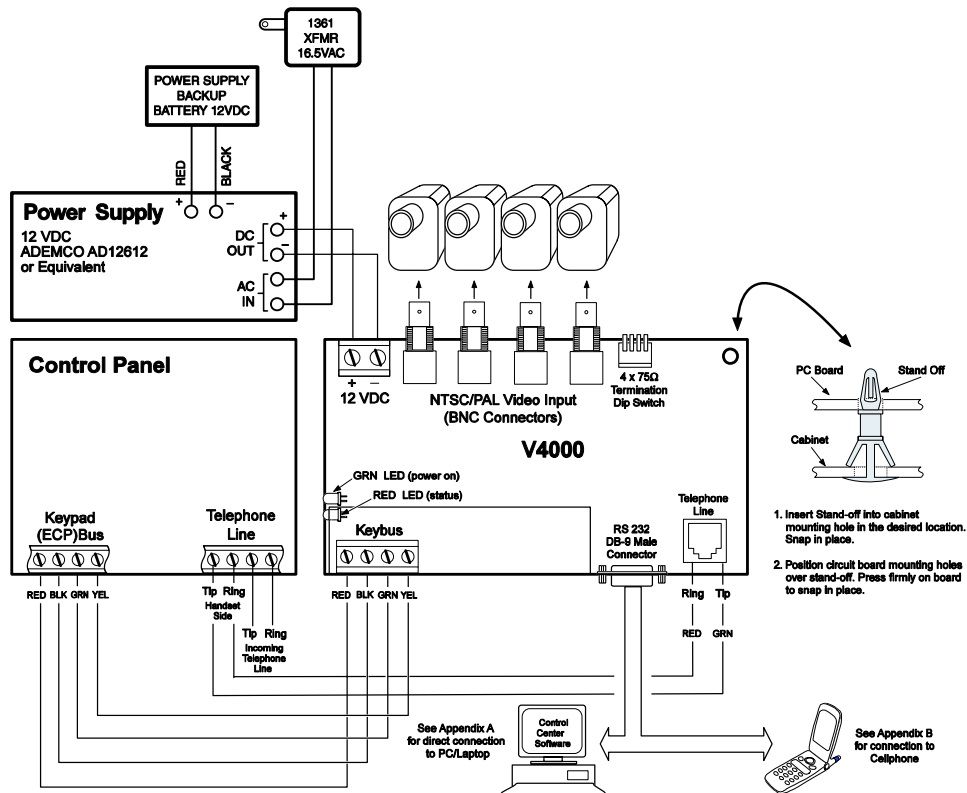


Figure 2: System Wiring

Programming the Control Panel

Setup Considerations

Cameras connected to the V4000 can be triggered by system events from a Honeywell Vista control panel.

The cameras are turned on using Output (relay) Programming commands in the control panel, although no relay module is actually used. To accomplish this, do the following:

1. Enable a 4204 Relay Module in the system's Device Programming Mode as Device Address 12.
2. Program up to four logical relays to be triggered by different alarm conditions you would like to turn cameras on with, and program each to "pulse for 2 seconds" when triggered. Cameras are turned on through the ECP (Data In and Data Out) connections (see the control panel's Programming Guide for information on how to program output relays).
3. Program Relay 4 to trip upon "kissoff" of the control panel's message to the central station. This relay will cause the V4000 to call the central station number programmed inside of it and transmit the video information of the triggered output's camera.

IMPORTANT: If four actual cameras are desired, one of the first three relays must be programmed to trigger on two different events (two "logical" outputs which point to the same "physical" relay must be programmed). One of those outputs must be programmed to "continuous pulse" when it turns on, so that the V4000 can differentiate between the messages. See the example below.

4204 Output Command (4204 on ECP Address 12)	Function
Relay 1: Turn ON for 2 seconds when zone 1 goes into alarm	Captures Video on Camera 1
Relay 2: Turn ON for 2 seconds when zone 4 goes into alarm	Captures Video on Camera 2
Relay 3: Turn ON for 2 seconds when system is disarmed	Captures Video on Camera 3
Relay 1: Continuous Pulse when zone 8 goes into alarm	Captures Video on Camera 4
Relay 4: Turn ON for 2 seconds upon kissoff from central station	Causes V4000 to dial out to video central station

Notes: The linking of outputs to specific cameras is performed by *Control Center Software*.

Only conditions that cause a central station report to be sent can be used to trigger camera transmissions (e.g., alarms).

Control Center Software Installation

Minimum System Requirements

- CPU: Intel Pentium III 800 MHZ or higher processor.
- Memory: 128MB of RAM
- Free Space: 5MB of available hard disk space.
- Modem: 33.6/56K
- Operating System: Windows 98/ME/2000 professional/ NT4/XP.
- Minimum screen resolution: 800X600, 24 true-bit colors

Recommended System Requirements

- CPU: Intel Pentium IV 1.6 GHZ .
- Memory: 128MB of RAM
- Free Space: 5MB of available hard disk space.
- Modem: 33.6/56K
- Operating System: Windows ME/2000 professional/ NT4/XP.
- Minimum screen resolution: 800X600, 24 true-bit colors

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Windows is a registered trademark of the Microsoft Corporation**

Software Installation

Insert the *Control Center Software* CD and perform the steps indicated in the Installation Wizard, or:

1. Click the **Start** button at the bottom left corner of the windows screen.
2. Select **Settings > Control Panel > Add/Remove Programs** from the menu.
3. Click **Install** to begin the installation.
4. Insert the *Control Center CD* in the CD drive.
5. Click **Next**. The Windows installation program searches the disc for the Control Center installation program and displays it in the 'Command line for installation program' edit box.
6. Click **End**.
7. When the *Control Center* installation screen appears, select **Next**.
8. The *Choose Destination Location* window will appear. This screen will determine the directory in which *Control Center Software* is installed. Honeywell recommends installation in the default directory. After the destination folder has been chosen, click **Next** to continue.
9. Repeat Step 8 for the location of the data files.
10. After copying all files to your computer, the **Select Components** screen will appear. Two check boxes will be displayed:
 - Select **Create a Shortcut** to create a shortcut on your desktop.
 - Select **Run Control Center Automatically upon Startup** if you want Control Center to load on startup.
11. Click on **Next** to continue the installation. An Information screen will appear confirming a successful installation.
12. Click **Finish**.

Setting Screen Resolution and Color Palette

1. **Right-click** on an empty spot on the desktop (the Windows™ background).
2. Select **Properties** from the menu. The **Display Properties** screen will appear.
3. Select **Settings** (located at the top right of the screen).
4. Set the display area to 800 x 600 or higher.
5. Set **Color Palette** to **24 bit True Color**.
6. Set **Font Size** to **Large Fonts**.
7. Click **OK** to confirm the new settings.
8. Restart the computer to activate settings if required.

Initial Control Center Operation

1. Verify that the modem functions under the WINDOWS operating system and that it is connected to the telephone line.
2. Double click the **Control Center** shortcut.
3. A white frame will appear at the bottom left corner of the screen with the message **Waiting for Call** (if this does not occur, refer to the '**Control Center Software User Guide**' for additional information).

Entering and Connecting to a New Site

1. Click **Site & System Setup** – the Remote Site List window will be displayed.
2. Click on **Edit > New**
3. Enter the Name, Telephone Number and Contact data for the site in the **Site Details** Dialog Box.
4. Click **OK**.
5. Click **Save**.
6. Click **Call Site**.
7. Click on the **Site Name**.
8. Click **Connect**.
9. On the first connection, you must enter a Password.
10. A New Site message will appear; click **OK**.
11. Video from the site will appear on screen.
12. Select the **Tuning** Icon on the toolbar. The Remote Setup dialogue box will appear. In this box, set the following:
 - Set Screen Resolution
 - Set Mode – Black & White or Color
13. Select the General Tab
 - Program Alarm Phone #1, Phone #2
 - Select NTSC
14. Select the Advanced Tab
 - Set Buffer Size
15. Select Sensor (Zone) Tab
 - Select appropriate zones (1-6) and assign Cameras (1-4) as required
 - Set Functionality to Alarm
16. Click Upload to Program the V4000 module.

Note: Refer to the *Control Center Software User Guide* for detailed programming information.

System Checkout

1. **Operation:** Verify the following:
 - Green LED - **ON** indicates power is ON.
 - Red LED - **Flashing** indicates self-test on power up (approx 20 seconds)
2. **Power Input:** Verify that the Power Input Voltage is 9 - 15 VDC between 12VDC & GND on the V4000 module.

3. **Phone Line Connection:**
 - Verify that the correct phone line is connected to the unit.
 - Call the unit from another phone. The unit should answer after 3-4 rings followed by a series of beeps from the modem.

4. **Video transfer to PC (Control Center):**
 - Enter a new site and telephone number using the *Control Center Software*. After the transmitting unit establishes a connection, the screen shows Modem Connect message. At the first connection, you are requested to enter a password. You can enter a New password or press Cancel. The first video picture appears.

Note:The Transmitting Unit can now be updated with the initial system settings). For more details see the *Control Center Software User Guide*.

5. **Zone activation** - Violate a zone associated with each of the CCTV cameras to verify operation.

Troubleshooting

Unit does not answer:

- Verify the power is on, according to the installation instructions.
- Replace the unit with a telephone and call the site. If the line is functioning, the telephone will ring.

NO VIDEO message appears in video window:

- Check video signal using a monitor.

The Transmitting Unit does not call the VAS:

- Verify that the V4000 module is connected to the control panel Keybus .
- Verify that the correct zones are mapped to the correct CCTV cameras.

The Video image 'rolls'; apparent loss of 'vertical synchronization':

- Change system programming from NTSC to PAL

Appendix A: Direct Connection to PC/Laptop Computer

A **Null Modem** cable (Serial cable) is required to directly connect a PC or Laptop computer to the V4000

1. Connect the Null Modem cable to the RS232 Serial Ports located on the V4000 module and to the PC/Laptop computer.
2. On the PC/Laptop computer perform the following:
 - Select **Start > Settings > Control Panel > System Icon > Device Manager > Modems.**
 - Define a Null Modem Cable as one of the modems.
3. In **Control Center Software** PC/Laptop computer perform the following:
 - Select the **Site & System Icon >** from the main screen
 - Select the **System Button** in the **Remote Site List.**
 - Select the **Communications Tab** in the **System Settings** dialog box.
 - Ensure that **Serial cable on COM1** is selected in the **TAPI Line** section.

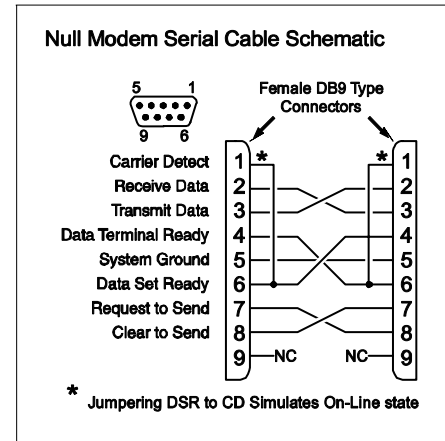


Figure 2: Null Modem Serial Cable

Appendix B: Pan, Tilt & Zoom

RS232 Protocol:

- Connect Dome to Pins 2(Rx) and Pin 3(Tx) of the DB9 Connector that plugs into the male DB9 connector on the V4000 module.

RS485 Protocol:

- The RS485 Protocol requires an RS232 to RS485 adaptor. Contact your vendor for details.
- Connect Dome to TxDA Pin 1(-) and TxDB Pin 2(+) of the DB9 Connector that plugs into the male DB9 connector on the V4000 module.

1. Dial up the V4000 module from **Control Center Software** installed on a PC
2. Select **Tuning icon > Unit Power on parameters > Modems.**
 - Select the required protocol from the list box.
 - Select the required Baud rate using the radio buttons (Typically 2400 - 19200).
3. Click on **Upload.** Disconnect, connect and restart unit.
4. Dial up V4000 from **Control Center Software** to receive Video from the dome.
5. Click on the icon located in the upper left-hand corner of the video screen you wish to control.
6. Select **Unit Peripheral Setup** from the dialog box that appears.
 - Set the speed of the Dome camera.
 - Set the Sweep Mode, Resolution and Quality settings. These settings determine and frame rate and screen quality during dome camera movement.
 - Enter the ID number of the dome camera. The ID Number should be 1-3 digits. Check with vendor for correct dome ID Number.
7. Click **OK** to save settings.

FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class A 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:

- Re-orient 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/television technician for help.

The user may find the following booklet prepared by the FCC useful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock # 004-000-00345-4.

IMPORTANT INFORMATION

This equipment complies with Part 68 of the FCC Rules and the requirements adopted by the ACTA. On this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX.

If requested, this number must be provided to the Telephone Company.

Product identifier: US:AU7MD01BSC56

USOC Jack: RJ-31X

Telephone Connection Requirements

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

Ringer Equivalence Number (REN)

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local Telephone Company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:

AAAEQ##TXXXX. The digits represented by ## are

the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

Incidence of Harm

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the Telephone Company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

Changes in Telephone Company Equipment or Facilities

The Telephone Company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the Telephone Company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

Equipment Maintenance Facility

If trouble is experienced with this equipment, for repair or warranty information, please contact the facility indicated below. If the equipment is causing harm to the telephone network, the Telephone

Company may request that you disconnect the equipment until the problem is solved. This equipment is of a type that is not intended to be repaired by the end user.

Multi-Tech Systems Inc. Moundsview, MN, USA, Tel 1-800-328-9717.

Additional Information

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment does not disable your alarm equipment. If you have questions

about what will disable alarm equipment, consult your telephone company or a qualified installer.

Industry Canada Compliance Statement

This Class B digital apparatus meets all requirements of the Canadian interference-causing equipment regulations.

Cet appareil numérique de la Classe A respecte toutes les exigences de règlement sur le matériel brouilleur du Canada.

LIMITED WARRANTY

Honeywell International Inc., acting through its Security & Custom Electronics business ("Seller") 165 Eileen Way, Syosset, New York 11791, warrants its product(s) to be in conformance with its own plans and specifications and to be free from defects in materials and workmanship under normal use and service for 24 months from the date stamp control on the product(s) or, for product(s) not having a manufacturer's date stamp, for 12 months from date of original purchase unless the installation instructions or catalog sets forth a shorter period, in which case the shorter period shall apply. Seller's obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any product(s) which is proved not in compliance with Seller's specifications or proves defective in materials or workmanship under normal use and service. Seller shall have no obligation under this Limited Warranty or otherwise if the product(s) is altered or improperly repaired or serviced by anyone other than Honeywell factory service. Connection of any device(s) to a communicating bus of a Honeywell security system (e.g., keypad bus, polling loop) other than those manufactured or approved by Honeywell shall void this warranty. For warranty service, return product(s) transportation prepaid, to Honeywell Factory Service, 165 Eileen Way, Syosset, New York 11791.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO CASE SHALL SELLER BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, OR UPON ANY OTHER BASIS OF LIABILITY WHATSOEVER, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE SELLER'S OWN NEGLIGENCE OR FAULT.

Seller does not represent that the product(s) it sells may not be compromised or circumvented; that the product(s) will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; or that the product(s) will in all cases provide adequate warning or protection. Customer understands that a properly installed and maintained alarm system may only reduce the risk of a burglary, robbery, fire, or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss as a result. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE OR OTHER LOSS BASED ON A CLAIM THAT THE PRODUCT(S) FAILED TO GIVE WARNING. HOWEVER, IF SELLER IS HELD LIABLE, WHETHER DIRECTLY OR INDIRECTLY, FOR ANY LOSS OR DAMAGE ARISING UNDER THIS LIMITED WARRANTY OR OTHERWISE, REGARDLESS OF CAUSE OR ORIGIN, SELLER'S MAXIMUM LIABILITY SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE OF THE PRODUCT(S), WHICH SHALL BE THE COMPLETE AND EXCLUSIVE REMEDY AGAINST SELLER.

This warranty replaces any previous warranties and is the only warranty made by Seller on this product(s). No increase or alteration, written or verbal, of the obligations of this Limited Warranty is authorized.

Honeywell

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