Honeywell 7000 Solid State Alarm System

APPLICATION

The Honeywell 7000 is a solid state fire/burglary and home health care alarm system designed to protect a wide range of private residences. This UL-listed system is easily expandable and can be customized to meet the demanding needs of homeowners.

FEATURES

- Can display up to 96 points of protection.
- Eight hardwire zones built into the control panel.
- Optional RF and hardwired expansion on Hbus.
- Supports keypads with custom text displays.
- Mode-based operation for simple error-free control.
- Date and time stamped event log.
- Up to 24 fully programmable outputs.
SPECIFICATIONS

System 7000 Specifications

Electrical Ratings:

System Power:
115 Vac; 60 Hz, 0.5A.

Low voltage Input to Control Panel
24 Vac, 2A (50 VA, UL-listed, fused Class II Transformer)

NOTE: 24 AC Power wiring is limited to 20 feet of No. 18 AWG wire.

Outputs:
- No. 1 (Bell/Horn): 1A maximum at 13.8 Vdc.
- No. 2 (AUX): 100 mA maximum at 13.8 Vdc.

Fusing:
- Hbus: +13.8 Vdc, current limited at 2A.
- AUX Horn: +13.8 Vdc, current limited at 2A.

Battery Charging Output:
800 mA maximum at 13.8 Vdc.

Power Consumption (at 13.8 Vdc):
- Keypad 120 mA.
- Point Expansion Module (PEM), 60 mA (120 mA when both relays are on).
- RF Expansion Module (RFEM), 60 mA.
- Ademco Receiver, 50 mA.
- Ademco Transmitters (see individual Ademco specification sheet with each type of transmitter).

Battery Backup:
7AH Minimum, 28 AH Maximum at 12 to 13.8 Vdc.

Fuses:
One 2A, AGA2 fuse: F3 = AC.

Digital Communicator (Located on Control Panel)
- Format: Modem 2E.
- Line Seizure: Double Pole.
- Ringer Equivalence: 1.0 B.
- FCC Registration No.: B7FUSA-30171-AL-E.
- Connection: RJ31X Type.

Circuit wiring:
- Fire Circuit (Loop 8):
  1000 feet, No. 18 AWG wire, 50 mA maximum, for 10 two-wire smoke detectors.
- Burglary circuits (Loop 1-7):
  1000 feet maximum, No. 22 AWG wire.
- End of Line Resistors (EOLR):
  Inputs 1 through 7: 3.3 kilohm.
  Input 8: 5.1 kilohm.
- Four Wire HBus Interface (Cable No. 10-6608, 22 AWG)
  Red: Power 13.8 VDC 1.0 amps maximum load.
  Black: ground.
  Yellow: (+) Data high.
  Green: (-) Data low.
  120 Ohm 5% 1/4 Watt end-of-line (EOL) resistor at end of last bus device.
  250 feet home run 22 AWG, 500 feet home run 18 AWG.

Environmental Ratings:
- Ambient Temperature: 32°F (0°C) to 120°F (49°C).
- Humidity: Less than 85% relative humidity, continuous, noncondensing.

Dimensions:
- Control Panel:
  12-1/2 in. x 12-1/2 in. x 3-1/8 in.
- Keypad, LCD Two Line:
  6-13/32 in. x 5-11/32 in. x 29/32 in.
- Point Expansion Module:
  6-1/2 in. x 4-5/16 in. x 1-13/32 in.
- RF Point Expansion Module:
  6-1/2 in. x 4-5/16 in. x 1-13/32 in.
- RF Receiver
  7-3/8 in. x 4-3/8 in. x 1-7/16 in. (with antenna 10-7/8 in. high).
- Transmitters:
  See individual Ademco specification sheet with each type transmitter.

ORDERING INFORMATION

When purchasing replacement and modernization products refer to the price sheets for complete ordering number.

If you have additional questions, need further information, or would like to comment on our products or services, please write or phone:
1. Your local Home and Building Control Sales Office (check white pages of your phone directory).
2. Home and Building Control Customer Logistics
   Honeywell Inc., 1885 Douglas Drive North
   Minneapolis, Minnesota 55422-4386 (612) 951-1000

In Canada—Honeywell Limited/Honeywell Limitée, 155 Gordon Baker Road, North York, Ontario M2H 3N7.
International Sales and Service Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A.
INSTALLATION

When Installing this Product...

1. Read these instructions carefully. Failure to follow them can damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and marked on the product to make sure the product is suitable for the application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out the product operation as provided in these instructions.

Overview

This section provides a general overview of the system (Fig. 1) and installation and hookup instructions for the following equipment:

1. Control Panel:
   a. Enclosure.
   b. Circuit Board.
   c. Transformer.
2. Point Expansion Module.
3. RF Expansion Module.
4. RF Receiver.
5. RF Transmitter.

Control Panel

The control panel performs the main functions of the system. The following can be found inside the control panel enclosure:

a. Control Panel Circuit Board.
b. Batteries.

Fig. 1. General overview of Honeywell System 7000.
Location

Locate the control panel enclosure in an area that is dry and not subject to temperature extremes. Prolonged exposure to temperatures below 32°F (0°C) or above 120°F (50°C) can adversely affect the battery and some system circuits.

The location selected should be well inside the secured area and accessible for testing and reprogramming. Allow for routing wire runs. Locate the control panel enclosure and any accessory equipment, such as the PEM or RFEM in:

a. Interior closet.
b. Interior wall in an untravelled area.

NOTE: If a cement, brick or cinderblock wall is to be used as a mounting location, use an appropriately sized piece of 3/4 in. (19 mm) plywood attached to the wall with wall anchors as a base for the system.

Mounting (Fig. 2 and 3)

Determine what equipment will be mounted on the wall with the control panel box, approximate location of each device, and probable wiring runs. This can be a rough sketch, with approximate dimensions of the devices (see Specifications). Based on this information, cut the 3/4 in. (19 mm) plywood, if necessary, to the appropriate dimensions and mount the plywood on the selected wall using wall anchors or expansion plugs.

IMPORTANT

For RF installations, mount the RF Receiver at least 25 feet away from any other sources of RF interference, such as garage door opener receivers. Avoid mirrors and reflecting surfaces such as metal heating and cooling ducts. If insufficient RF strength is noted, move the receiver.

Fig. 2. Mounting the control panel enclosure on drywall.
Fig. 3. Mounting the control panel enclosure on plywood.

Place the empty control panel box in the correct location on the plywood and mark the location of the mounting holes on the plywood. If necessary, drill pilot holes at these locations.

Mount the control panel box using properly sized screw anchors (not supplied) or other secure mounting techniques. See Fig. 2 and 3.

⚠️ CAUTION

Equipment Damage Hazard.
Static discharge can damage circuit board.
Follow ESD safety procedures when installing or handling circuit board.

Circuit Board Installation

Mount the control panel printed circuit board in the metal control panel box on the four standoffs and guides, using the four screws and four lockwashers supplied.

Circuit Board Wiring

The control panel circuit board is the central wiring point for most of the system. Connections are available for:

a. Loop wiring.
b. Smoke detector wiring.
c. Backup batteries.
d. External bell/horn.
e. Ac connections.
f. Earth ground.
g. Telephone interface connection.
h. HBus devices (keypad, PEM, RFEM, etc.).

Wiring instructions for each of these connections or devices are provided in the appropriate section.

⚠️ WARNING

Electrical Shock Hazard
Can cause serious injury or death.
Disconnect power before wiring

General

1. Protect all wiring entering the control panel box with strain relief and bushings.
2. Use adhesive-backed cable tie mounts and cable ties to secure the wiring to a convenient point inside the control panel box.
3. Use two No. 6 screws to secure the control panel box lid after wiring is completed.

See Fig. 4 for general information on circuit board wiring.
HONEYWELL 7000 SOLID STATE ALARM SYSTEM

SYSTEM 7000
HOME CONTROL SYSTEM

HOME AND BUILDING CONTROL
MINNEAPOLIS, MINNESOTA

HOUSEHOLD FIRE AND BURGLARY WARNING SYSTEM.
U.L. HOME HEALTHCARE SIGNALING SYSTEM.
HOUSEHOLD BURGLARY U.L. GRADE A WHEN USED
WITH EXTERNAL AUDIBLE.

BEFORE INSTALLING, READ HONEYWELL SYSTEM 7000
INSTALLATION MANUAL, 69-1192 REV. 9/98.
BEFORE OPERATING, READ HONEYWELL SYSTEM 7000
OWNERS MANUAL.

THIS EQUIPMENT SHOULD BE INSTALLED IN
ACCORDANCE WITH CHAPTER 2 OF NFPA STANDARD 72.
NATIONAL FIRE PROTECTION ASSOCIATION,
BATTERYMARCH PARK, QUINCY, MA 02269

PRINTED INFORMATION DESCRIBING PROPER
INSTALLATION, OPERATION, TESTING, MAINTENANCE,
EVACUATION, PLANNING, AND REPAIR IS TO BE
PROVIDED WITH THIS EQUIPMENT.

THE SYSTEM IS U.L. LISTED FOR LIMITED ENERGY
INSTALLATIONS PER NEC ARTICLE 760.
USE ONLY U.L. RECOGNIZED LIMITED ENERGY CABLE.
SYSTEM SHOULD BE CHECKED BY A QUALIFIED
TECHNICIAN AT LEAST EVERY THREE YEARS.
STANDBY BATTERIES SHOULD BE REPLACED
EVERY FIVE YEARS.

DISCONNECT AC LINES AND TELEPHONE WIRES
BEFORE SERVICING.

WARNING:
OWNERS INSTRUCTION NOTICE NOT TO BE
REMOVED BY ANYONE EXCEPT OCCUPANT.

MAXIMUM OF 10 2-WIRE
SMOKE DETECTORS. REFER TO
INSTALLATION INSTRUCTIONS
69-1192 FOR A LIST OF
APPROVED DETECTORS.
SMOKE DETECTOR COMPATIBILITY
IDENTIFIER IS 7K8.
P8 MAY BE WIRED FOR 2-WIRE FIRE
OR 4-WIRE FIRE OR BURGLARY.
2-WIRE FIRE IS SHOWN. FOR
4-WIRE FIRE AND BURGLARY
WIRING, SEE INSTALLATION
INSTRUCTIONS.

WARNING: LEAVING THE POWER SWITCH
IN THE OFF POSITION RENDERS THE SYSTEM
7000 CONTROL PANEL INOPERABLE.
WARNING: FOR CONTINUED PROTECTION
AGAINST FIRE, REPLACE FUSE WITH SAME
TYPE AND RATING (AGA 2).

CONNECT TO EARTH GROUND

WARNING
OWNERS INSTRUCTION NOTICE NOT TO BE
REMOVED BY ANYONE EXCEPT OCCUPANT.
Connect loop wiring but do not run wiring within 12 in. (305 mm) of house ac wiring.

**IMPORTANT**

Do not run any wires or cabling behind or across the control panel printed circuit board.

**Point Expansion Module (PEM) Installation**

The PEM provides additional hardwire points for the Honeywell 7000 System and can be used in place of, or in conjunction with, the RF transmitters and receivers. The PEM can support normally open (NO) or normally closed (NC) sensor contacts. The PEM has eight hardwire point connections and two relay output connections.

Mount the PEM plastic box within 250 feet (76 meters) of the control panel if using 22 AWG wire or 500 feet (152 meters) if using 18 AWG wire.

Remove the PEM circuit board from the PEM plastic box (if installed) and use the PEM plastic box to mark the mounting screw locations on the wall or plywood. Use two screws (not supplied) to mount the PEM plastic box. Insert the PEM circuit board into the PEM plastic box. See Fig. 5.

![Diagram of PEM installation](image_url)

**Fig. 5. Installing the PEM plastic box.**
PEM Wiring

1. Use four-conductor AK4500A cable to connect the PEM to other HBus devices.
2. Connect the PEM wires to the control panel according to the wiring diagram with the unit. See Fig. 6.

Each PEM has a unique, four digit, address. Fig. 6 lists the PEM address number and switch settings. The Honeywell 7000 System can support up to 11 PEM.

RFEM Installation

The RFEM provides additional rf protection points for the Honeywell 7000 System. Only one RFEM can be used per system.

Mount the RFEM plastic box within 250 feet (76 meters) of the control panel if using 22 AWG wire or 500 feet (152 meters) if using 18 AWG wire.

Remove the RFEM circuit board from the RFEM plastic box (if installed) and use the RFEM plastic box to mark the mounting screw locations on the wall or plywood. Use two screws to mount the RFEM plastic box. Insert the RFEM circuit board into the RFEM plastic box. See Fig. 7.

Fig. 6. PEM wiring diagram.
RFEM Wiring

1. Use four-conductor AK4500A cable to connect the PEM to other HBus devices.
2. Connect the RFEM wires to the control panel according to the wiring diagram with the unit. See Fig. 8.

RF Receiver Installation

The RF Receiver receives messages from the RF Transmitters, demodulates and transfers the data to the RFEM for decoding. A maximum of two receivers can be connected to an RFEM.

Perform the following steps:
1. Remove the cover from the RF Receiver (use a thin-bladed screwdriver to release the cover).
2. Place the open receiver on the wall in the desired location, leaving room for the two antennas.
3. Use a pencil or other marking device to mark the two screw locations for the receiver.
4. Install the two screws (not supplied), leaving enough room to hang the receiver on the screws.
5. Install the antennas in the slots as shown in Fig. 9. The antennas go in the right-hand slot of each set.
6. Set the receiver switches as shown in Table 1.
RF Receiver Wiring

**IMPORTANT**
No two receivers can have the same address settings. Only address 1 or 2 can be used.

**CAUTION**
Equipment Damage Hazard.
Incorrect connections can damage hardware.

Wire the RF Receiver according to Fig. 8.

Keypad Installation (Fig. 9)

The keypad is used by the homeowner to operate the Honeywell 7000 System. The two-line display provides information about what is happening and the locations of any problems. The display will automatically prompt the user with help instructions after eight seconds of inactivity.

Locate the keypad no further than 250 feet from the control panel if using 22 AWG cable or 500 feet if using 18 AWG cable. Do not route keypad wiring parallel to ac wiring or within 12 in. of ac wiring.

NOTE: A maximum of 11 keypads can be installed on one Honeywell 7000 System. The control panel can supply power for up to four keypads. Additional keypads must be powered by an external 12V power source with backup batteries.

A standard plastic base is provided. To mount the keypad:
1. Secure the base to the wall.
2. Attach the wires to the keypad.
3. Fasten the keypad to the base.
4. Attach the trim ring to the keypad.

Keypad Wiring

Honeywell 7000 System keypads are connected to each other and to the control panel via the HBus. Follow these wiring practices:
1. Use four-conductor AK4500A cable to connect the keypad to other HBus devices.
2. Keep maximum distance for the data line from the control panel to the farthest device under 3000 feet.
3. Keep the maximum distance from the power source to the farthest keypad under 250 feet.

**IMPORTANT**
No more than four keypads can share the same power wiring pair.

NOTE: Separate power sources are required when the distance exceeds 250 feet. Use Altronix Model All100 or ALARM SAF Model PS-FMC-12/10-BFS/UL 3/4A power supplies when UL-approved equipment is required.

4. Always use 120 ohm end-of-line resistors (provided with keypad) to terminate the ends of the HBus line as shown in Fig. 10 through 13.
5. Connect the keypad cable to the control panel four-conductor cable using wirenuts.

6. Use adhesive-backed cable tie mounts to secure the keypad cable to the back of the keypad for strain relief.

NOTE: If power to the keypad is lost, the bell will chirp as an audible supervision signal.
**Hardwired Detection Circuits**

The Honeywell 7000 System control panel and each PEM has eight fully supervised hardwired input loops that can be used for zoning groups of sensors or identifying individual points of protection. These input loops can be programmed to respond as the point types listed in Table 2.

**Burglary Circuit Wiring**

1. Use only UL-listed switches and sensors.
2. Use UL-listed wire, 22 AWG minimum.
3. Loop lengths are not to exceed 1000 feet.
4. Each circuit must be terminate with a 3.3K ohm, 1/4 watt EOLR (provided).
5. Make all connections according to the loop diagrams that follow.
6. Program loops for type as well as NC or NO contact operation.
Table 2. Input loop point types.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perimeter</td>
<td>A burglary circuit that instantly alarms on cross or break when violated.</td>
</tr>
<tr>
<td>Entry/Exit 1</td>
<td>A burglary circuit that signals a warning for time period 1 before alarming.</td>
</tr>
<tr>
<td>Entry/Exit 2</td>
<td>A burglary circuit that signals a warning for time period 2 before alarming.</td>
</tr>
<tr>
<td>Interior</td>
<td>A burglary circuit that is ignored during the exit and entry delay periods.</td>
</tr>
<tr>
<td>Interior Delay</td>
<td>A burglary circuit that signals a warning for time period 2 when violated and is ignored during the normal exit and entry delay periods.</td>
</tr>
<tr>
<td>Tamper</td>
<td>A burglary circuit that is always on. Violation of this point will be reported but the local audible alarm can be optioned to be silenced.</td>
</tr>
<tr>
<td>Police</td>
<td>A burglary alarm that instantly alarms on cross or break when violated. The audible alarm is selectable separately.</td>
</tr>
<tr>
<td>Fire</td>
<td>A fire circuit that instantly alarms on cross and signals a trouble on break.</td>
</tr>
<tr>
<td>Medical/Special</td>
<td>A circuit that instantly alarms with a separate audible sound.</td>
</tr>
<tr>
<td>Equipment Supervisory</td>
<td>A circuit that instantly alarms with a separate audible sound.</td>
</tr>
<tr>
<td>Strategy (Mode):</td>
<td>An input that invokes a specified security mode.</td>
</tr>
<tr>
<td>Smart</td>
<td>A burglary point or zone that can be part of the complete security as well as operated separately by Special Protection Modes. Used for protecting an isolated door (to let pets out, for example), as well as protection for the home office, bar, gun rack, workshop, etc. This point alarms instantly when occupants are away and sounds a warning for time period 2 when persons are at home.</td>
</tr>
<tr>
<td>Pool</td>
<td>Violation of the point causes the keypad audible to sound throughout the house for 30 seconds when occupants are home and the keypads, bell or siren to sound for 30 seconds when occupants are away. Requires a separate device to be installed to delay the audible on entry or briefly bypass the audible on exit by an adult. Available from Safeguard Innovations: (612) 784-7786.</td>
</tr>
</tbody>
</table>

Fire Circuits

The Honeywell 7000 System directly supports certain specified two-wire fire detectors. Four-wire detectors require special wiring and programming arrangements for resetting smoke detectors.

Two-Wire Smoke Detector Circuit

The Honeywell 7000 System directly supports one two-wire fire circuit (loop 8 on the control panel). Use the following approved smoke detector models and refer Fire Marshals to the compatibility ID shown in Table 3. The compatibility ID for the Honeywell 7000 System is 7K8.

Table 3. Two-wire smoke detectors and compatibility ID.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Compatibility ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentrol</td>
<td>429A, 429AT</td>
<td>S10A</td>
</tr>
<tr>
<td>Detection Systems</td>
<td>DS250, DS250TH, DS50HD Detectors</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>MB2W, MB2WL Bases</td>
<td>A</td>
</tr>
</tbody>
</table>

Two-Wire Fire Circuit Installation

1. Install smoke and heat detectors in accordance with manufacturer instructions.
2. Use UL-listed 18 AWG energy limited cable (Signal Cable Co. No. 98804, for example) to wire a maximum of 10 two-wire smoke detectors within 200 feet of the control panel.
3. Attach the 5.1 Kiloohm, 1/4 watt EOLR (provided) at the last smoke detector.
4. Wire detectors as shown in Fig. 15.

Fig. 15. Wiring diagram for two-wire smoke detectors.
Four-Wire Smoke Detector Circuit

Loop 8 of the Honeywell 7000 System control panel can supervise four-wire smoke detectors with the wiring arrangements shown in Fig. 19. Use the approved equipment listed in Table 4.

Table 4. Approved four-wire smoke detection devices.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentrol</td>
<td>449CT Detector</td>
</tr>
<tr>
<td>Detection Systems</td>
<td>DS250, DS240TH Detectors; MB4W, MB4WL Bases</td>
</tr>
<tr>
<td>Honeywell</td>
<td>EM100 End-of-Line Module</td>
</tr>
<tr>
<td>AlarmSaf Relay</td>
<td>AS/BRK-624 Reset Relay</td>
</tr>
</tbody>
</table>

Four-Wire Circuit Installation

1. Use 18 AWG FPL cable such as Honeywell AK4704ARE.
2. Secure the smoke alarm reset relay module in the bottom of the Honeywell 7000 System metal box as shown in Fig. 19 with double-sided tape (provided).
3. Install smoke and heat detectors in accordance with manufacturer instructions.
4. Wire the circuit as shown in Fig. 16.

**IMPORTANT**
Do not exceed the +13.8V total current draw with all detectors in alarm.

5. Connect the End-Of-Line Module at the last smoke detector. All wire leads must be insulated with a minimum of 0.013 in. insulation or wire nuts that cover all exposed leads.
6. Make sure that all wire is contained within the base of the smoke detector.
7. Program a Special Mode with the name FIRE RESET to operate the fire reset relay from a programmable output.

Four-Wire Circuit Reset Operation (Fig. 17).

Reset four-wire smoke detectors from the keypad by entering the disarm code and pressing the FIRE RESET mode numeric key.

The reset period is approximately 60 seconds, after which the Fire loop is returned to service. During the 60 seconds, the power is removed and the Fire loop is disabled. At the end of the 60 seconds, the alarm condition will repeat if the detector still detects smoke.
RF Wireless Sensors

The Honeywell 7000 System will work with a broad line of Series 5800 RF security and fire sensors when connected to a 5800HK Receiver/RFEM. The system first must be programmed to recognize the unique serial identification code of each sensor and to bind these codes to logical 7000 System input point numbers. After the RFEM has been connected to the HBus and a 5881H Receiver connected to the RFEM, proceed as follows:

1. Specify the number of receivers present on the site in the programmer database for this site (either one or two under the UNITS: ACCOUNT INFO menu). This will enable further programming of RF points and tell the system to regularly poll and thereby supervise the presence of the receivers.
2. Examine all of the RF transmitters and note the serial numbers stamped under the barcodes. Ignore the alpha letter (date code) and program the numeric serial numbers in the POINTS: HOW CONNECTED menu.
3. Identify the transmitter type and select how the inputs (loops) are used from Table 5.

Outputs

Honeywell 7000 System supports two solid state outputs on the main control panel and two relay outputs on each PEM. All but the HORN output are fully programmable for maintained or momentary operation. They can be:

a. activated by events (Burglar Alarm, Fire Alarm, Equipment Alarm, Police Alarm, Medical/Special Alarm, System Ready, On Watch, Interior Siren, Exterior Siren);
b. be programmed to follow the activities of any security points, and
c. be operated by selected modes.

Control Panel Output Wiring

1. Connect the external siren to the HORN output. Use sounding devices that draw less than 950 mA.
2. Wire a secondary output device drawing no more than 100 mA to the AUX output. When operating a relay, connect a recirculating diode across the relay coil.

PEM Output Wiring

1. Each device has two programmable outputs that are form C relay configurations (a NC as well as NO contact with a shared common side).
2. Each contact is rated for operating a maximum of 1A for a 24V load. Use the contact to drive a relay with contacts rated for higher loads and power when required.

External Bell/Horn Installation

The HORN output can power a 950 mA bell or siren with a built-in driver. The control panel supervises the wiring to the sounding device for a wire break or ground condition. In the event of a wiring fault, HORN FAILURE is displayed on the keypad screen. This condition must be acknowledged by entering a valid passcode to silence the keypad audible. When UL-approved equipment is required, use the devices listed in Table 6.

Table 5. RF wireless sensors.

<table>
<thead>
<tr>
<th>Device</th>
<th>Description</th>
<th>Loop 1</th>
<th>Loop 2</th>
<th>Loop 3</th>
<th>Loop 4</th>
<th>RF Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>5801</td>
<td>Tabletop Transmitter</td>
<td>Lower Right</td>
<td>Upper Right</td>
<td>UpperLeft</td>
<td>Lower Left</td>
<td>UR</td>
</tr>
<tr>
<td>5802</td>
<td>Panic Button</td>
<td>Button</td>
<td>——</td>
<td>——</td>
<td>——</td>
<td>UR</td>
</tr>
<tr>
<td>5804</td>
<td>Wireless Key (4)</td>
<td>Lower Right</td>
<td>Upper Right</td>
<td>Upper Left</td>
<td>Lower Left</td>
<td>BR</td>
</tr>
<tr>
<td>5808</td>
<td>Wireless Smoke Detector</td>
<td>Detector</td>
<td>Alarm</td>
<td>——</td>
<td>——</td>
<td>——</td>
</tr>
<tr>
<td>5816NM</td>
<td>2-Point Door/Window</td>
<td>Terminals</td>
<td>Reed Switch</td>
<td>——</td>
<td>Tamper</td>
<td>RF</td>
</tr>
<tr>
<td>5817</td>
<td>3-Point Door/Window</td>
<td>TB1 1-2</td>
<td>TB1 3-4</td>
<td>TB1 5-6</td>
<td>——</td>
<td>Tamper</td>
</tr>
<tr>
<td>5818</td>
<td>Recessed Door/Window</td>
<td>Reed Switch</td>
<td>——</td>
<td>——</td>
<td>——</td>
<td>RF</td>
</tr>
<tr>
<td>5849</td>
<td>Glass Break Detector</td>
<td>Sound</td>
<td>——</td>
<td>——</td>
<td>Tamper</td>
<td>RF</td>
</tr>
<tr>
<td>5890</td>
<td>Passive Infrared Detector</td>
<td>IR Detector</td>
<td>Walk Test</td>
<td>——</td>
<td>Tamper</td>
<td>RF</td>
</tr>
</tbody>
</table>
Table 6. Approved external sound devices.

<table>
<thead>
<tr>
<th>Siren Manufacturer</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ademco</td>
<td>747UL</td>
</tr>
<tr>
<td>Revere</td>
<td>R44SSD</td>
</tr>
</tbody>
</table>

The following are general instructions for the bell or horn installation. Follow the instructions specified for the device to be used.
1. Use UL-listed 18 AWG wire.
2. Locate bell or horn within 200 ft of panel.
3. Install bell or horn following manufacturer instructions.
4. Connect a 3.3K ohm, 1/4 watt, resistor across HORN terminal (TB1-18) and +13.8V (TB1-20) when no external sounding device is used.

For tamper-protection of a bell or siren enclosure wire, wire two leads from the external device NC tamper switch contacts to a loop programmed as a tamper loop.

Plug one end into J1 on the control panel board and the other end into the RJ-31X Phone Terminal Block. See Fig. 19.

Transformer Installation

The Honeywell 7000 System is powered by a 120 Vac to 24 Vac, 50A, plug-in transformer. Install the transformer as follows:
1. Locate the control panel within 25 ft of a non-switched power receptacle.
2. Make sure that S1, the control panel power switch, is off.
3. Use UL-listed two-conductor twisted pair 18 AWG wire to connect the transformer to the AC IN connectors (TB1-21 and TB1-22) on the control panel.
4. Secure the transformer to the outlet with the faceplate screw.

Battery Installation

The control panel has room for two 7 Ampere-Hour (AH) batteries in the enclosure and can recharge up to 28AH of battery capacity when longer standby is required. The system supervises for the presence of battery and tests the operation of the battery and charging system every two hours when ac is present (every three minutes when ac is lost). A disconnected, shorted or defective battery will indicate SYS LOW BATTERY on the keypad display and must be acknowledged by the user to silence the trouble audible. Replace defective batteries.

Install the battery as follows:
1. Use 12 volt, rechargeable, gel-cell batteries rated for the appropriate AH necessary to deliver the prescribed standby for the installation. See the battery table and load calculations that follow.
2. Make sure that S1, the control panel power switch, is off.
3. Connect the control panel leads to the appropriate battery terminals.

**IMPORTANT**

Observe battery polarity (red to positive [+], black to negative [-]).

Standby Battery

The Honeywell 7000 System uses 7 AH gel-cell lead-acid batteries for standby power. UL installations require 24 hour of standby power. This section shows how to determine the number of batteries needed for the system being installed. One or two batteries can be installed in the system control panel enclosure. If three or four batteries are needed, they must be installed in a separate enclosure. The wiring between these remote batteries and the control panel must be enclosed in electrical conduit.

Telephone Wiring

This connection is required for monitored installations or whenever remote programming is desired. Proceed as follows:
1. Install the RJ-31X Phone Terminal Block within 25 ft of the control panel.
2. Use UL-listed 26 AWG wire or larger.
3. Connect in accordance with Fig. 11 and 12.
4. Program the Digital Receiver telephone number in the Honeywell 7000 System panel only after all installation and checkout has been completed, to avoid jamming the panel buffer with repeated retries.

Modular Telephone Coupler Cord

This standard eight-conductor telephone cord is used to connect the Honeywell 7000 System to the RJ-31X Phone Terminal Block. See Fig. 19.

If not provided by the phone company, install the RF-31X Phone Terminal Block in accordance with the wiring diagrams in Fig. 19.
Battery Calculations

The Honeywell 7000 System can have from one to four 7AH standby batteries. The number of batteries needed is a function of the size of the system. The formula used to calculate battery capacity is:

Normal current (Amps) x 24 hours + Alarm current (Amps) x 1/15 hours + 10% = Capacity needed (AH)

Divide the ampere-hour result by seven to obtain the number of 7AH batteries needed for the system.

Table 8 gives current usage, normal and alarm, for the devices in the system. Adding the normal and alarm currents of the system and using the above formula, determine the number of batteries needed.

Table 7. Current use of Honeywell 7000 System devices.

<table>
<thead>
<tr>
<th>Device</th>
<th>Normal Current (mA)</th>
<th>Alarm Current (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Panel with 8 Points</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Keypad</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>PEM</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>RFEM</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>RF Receiver</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Horn</td>
<td>0</td>
<td>950</td>
</tr>
<tr>
<td>2-Wire Smoke Detectors</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Miscellaneous/AUX Devices</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

*Miscellaneous/AUX devices can be relays, IR, etc. from the AUX terminal, additional HBus devices (HSP, PEM, etc.), or four-wire smoke detectors. Use the manufacturer current ratings for this calculation.
HONEYWELL 7000 SOLID STATE ALARM SYSTEM

IMPORTANT
The following limits must not be exceeded:
1. Maximum normal total current: 1.05A.
2. Maximum alarm current on TB1-18 (HORN): 950 mA.
3. Maximum alarm current on TB1-17 (AUX): 100 mA.
5. Total current drawn from TB1-20 (+13.8 Vdc): 1.0A.

Minimum System

The minimum UL system is:
1. One control panel.
2. One keypad.
3. Up to 10 two-wire smoke detectors (or equivalent four-wire smoke detectors).
4. One siren (950 mA model).

Table 8 summarizes the power calculations for this system.

Using the battery calculation formula:
\[(0.210A \times 24\text{ hours}) + (1.185A \times 1/15\text{ hour}) + 10\% = 5.64\text{ AH}.

This configuration requires one 7AH battery.

Maximum System

The maximum system is any configuration that requires 28AH of standby battery power.

Sample Configurations

Table 9 lists sample configurations. Any of these configurations can be downsized (less modules or components) and still meet the battery standby times for that configuration. Installation per these guidelines will meet the California State Fire Marshal (CFSM) 24-hour battery backup requirement.

Earth Wire Grounding

An earth ground can be a cold water pipe, a ground rod, the metal framework of a building, or the reinforcing rod (concrete rebar) of a building as shown in Fig 20. The third wire ground in building electrical wiring should not be used as earth ground as it is difficult to establish reliability as an earth ground.

Table 8. Power calculations.

<table>
<thead>
<tr>
<th>Device</th>
<th>Quantity</th>
<th>Normal Current Each</th>
<th>Normal Current Total</th>
<th>Alarm Current Each</th>
<th>Alarm Current Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Panel with 8 Points</td>
<td>1</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Keypad</td>
<td>1</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>PEM</td>
<td>0</td>
<td>60</td>
<td>0</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>RFEM</td>
<td>0</td>
<td>60</td>
<td>0</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>5881 RF Receiver</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Horn</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>950</td>
<td>950</td>
</tr>
<tr>
<td>Smoke Detectors</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Miscellaneous/AUX Devices</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTALS</td>
<td></td>
<td>210</td>
<td></td>
<td>1185</td>
<td></td>
</tr>
</tbody>
</table>

Table 9. Sample system configurations.

<table>
<thead>
<tr>
<th>Configuration No.</th>
<th>Standby Battery Hours</th>
<th>Number of Batteries</th>
<th>Total AH</th>
<th>RF PEM + RCVR</th>
<th>PEM</th>
<th>Keypad</th>
<th>2-Wire Smoke Detectors (Maximum)</th>
<th>Aux. Power (mA)</th>
<th>Maximum Normal Current (mA)</th>
<th>Maximum Alarm Current (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24</td>
<td>1</td>
<td>7</td>
<td>No</td>
<td>1</td>
<td>1</td>
<td>10</td>
<td>19</td>
<td>263</td>
<td>1455</td>
</tr>
<tr>
<td>2</td>
<td>24</td>
<td>1</td>
<td>8</td>
<td>No</td>
<td>0</td>
<td>2</td>
<td>10</td>
<td>27</td>
<td>301</td>
<td>1398</td>
</tr>
<tr>
<td>3</td>
<td>24</td>
<td>1</td>
<td>8</td>
<td>Yes</td>
<td>0</td>
<td>1</td>
<td>10</td>
<td>7</td>
<td>301</td>
<td>1405</td>
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<tr>
<td>4</td>
<td>24</td>
<td>2</td>
<td>14</td>
<td>No</td>
<td>1</td>
<td>4</td>
<td>10</td>
<td>13</td>
<td>527</td>
<td>1865</td>
</tr>
<tr>
<td>5</td>
<td>24</td>
<td>2</td>
<td>14</td>
<td>Yes</td>
<td>0</td>
<td>3</td>
<td>10</td>
<td>53</td>
<td>527</td>
<td>1870</td>
</tr>
<tr>
<td>6</td>
<td>24</td>
<td>2</td>
<td>14</td>
<td>Yes</td>
<td>2</td>
<td>2</td>
<td>10</td>
<td>23</td>
<td>527</td>
<td>1870</td>
</tr>
<tr>
<td>*7</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>Yes</td>
<td>4</td>
<td>5</td>
<td>None</td>
<td>10</td>
<td>900</td>
<td>2000</td>
</tr>
<tr>
<td>*8</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>Yes</td>
<td>0</td>
<td>7</td>
<td>None</td>
<td>10</td>
<td>840</td>
<td>2000</td>
</tr>
<tr>
<td>*9</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>No</td>
<td>0</td>
<td>8</td>
<td>None</td>
<td>0</td>
<td>810</td>
<td>2000</td>
</tr>
<tr>
<td>*10</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>No</td>
<td>4</td>
<td>6</td>
<td>None</td>
<td>0</td>
<td>870</td>
<td>2000</td>
</tr>
</tbody>
</table>

*These configurations are for non-fire applications.
PROGRAMMING

The following steps will enable Programming. Refer to Programming Instructions, form 24510169, for details.

Setup

NOTE: The following procedure steps apply to local programming with a PC. If remote programming (Downloading a program from the CSC) is applicable skip steps 2 and 3; complete steps 4 through 7 to enable remote programming. The system will be ready for the CSC to call, and the system will connect, and the CSC program can be downloaded. When complete select option 5 and toggle the programming option to OFF.

1. Disconnect the Telco connection at the Telco jack, J1, on the Control Panel circuit board.
2. Connect the PC (standard telephone) interface cable from the PC Modem to the Telco Jack, J1, on the Control Panel.
3. Enter a valid passcode and verify the system disarmed. Factory default passcode is 1379. Have user select a new master passcode after installation is complete.
4. Press the OPTIONS key and use the arrow keys to scroll down to Option 5 “ALLOW PROGRAM”.
5. Press “5” to allow programming. Enable Programming will last 15 minutes then the system automatically returns to disable local programming.
6. Repeat the above procedure and press OPTIONS 6 to enable the SERVICE Passcode to view EVENT LOG records.
7. Repeat the above steps 1 through 7 and press OPTIONS 8 if RF testing or verification will be required.

Powerup

1. Turn on the PC.
2. Load and execute the System 7000 Programming program.
3. In the program set all customer options and system values per the instructions in the next section.
4. Download the data into the customers premise unit. The panel will display: PROGRAMMING DONE ENTER PASSCODE
5. Enter Passcode and system will reset with the new data base active. The system will come up MASTER ARM. Enter passcode a second time to disarm.
6. Repeat Option 7 to disable RF TEST MODE if applicable.

NOTE: Remote program changes after downloading will only take effect after the passcode resets the system.

Disconnect the PC Interface cable and reconnect the telco line to the RJ31 phone service when finished with programming (see next section).
Customer Data Entry:

The following control panel options are listed as a checklist to make sure customer database information is not left out. Refer to Programming Instructions, form 24510169, for step-by-step instructions with illustrations.

**IMPORTANT**

Do not program the Honeywell 7000 System to call a fire or police station number unless authorized by that fire or police station.

1. Open the customers program or a new one if the program doesn't exist (default program).
2. Establish or verify a customer three-digit ID (account) number.
3. Fill in the Customer information.
4. Proceed to programmer options and fill in the name.
5. Fill in CSC dial out prefix if applicable.
6. Verify or add call-back number 1 to call the Central Station.
7. Verify or add call-back number 2 to call the Central Station.
8. Set city in the database.
9. Select Programmer type - Local or by modem remote.
10. Enter the Comm. port of modem on PC.
11. Verify or select Dial Method Tone or Pulse.
12. Enter Modem Type.
13. Enter R-Dial Type yes or no.
14. Enter Modem speed - 300 or 1200.

**IMPORTANT**

The next step will send the program to the customers Control Panel. Proceed to step 16 unless you are ready to download information to the System 7000.

15. At Transfer Main Menu Programming Information submenu enter the Customer's Phone Number. This is not required for local programming.
16. Enter Customer's Unit Account number - 001-999
17. Enter Passcode length 4, 5, or 6.
19. Select passcode required for MODES yes or no.
20. Enter number of RF receivers - 0-2.
21. Select allow remote programming. Yes or No.
22. Select special Needs - Yes or No.
23. Add the CSC Receiver telephone Number 1
24. Specify delay seconds of report to CSC. - 00 to 99.

**NOTE:** UL Requires this to be set to 0.

25. Set dialing method pulse or tone.
26. Force 6500 Transmission to ZONEX - yes or no. See programming guide for details.
27. Select if RF Troubles will be Reported. Yes or no.
28. Fill in the Callback phone number 1. Number of CSC modem phone line.
29. Fill in the Callback phone number 2. Number of CSC modem phone line. (Optional)
30. Enter the Pick up phone after how many rings. 1 to 15.

**IMPORTANT**

Watch out for other devices on the line such as answering machines, FAX machines and local telephone company options.

31. Enter the FIRE, POLICE, and SPECIAL Keypad point numbers.
32. Enter Fire Audible Shutoff. UL requires this to be set to 4 minutes or greater.
33. Set Police, Special, and Tamper Audibles. Silent or not silent.
34. Set the Entry/ Delay times. 0 to 255 seconds.
35. Pick customer city.
36. If necessary, pick time zone. Previous step should exclude need for this entry.
37. Set daylight savings parameters. See Programming Guide.
38. Set EVENT TRIGGERS OUTPUT for each customer output. See Programming Guide.
39. Set OUTPUT OPTIONS. Continuous or Momentary for 1 to 15 seconds. Bell/Horn output 1 is fixed continuous.
40. Set up the 8 AREA names.
41. Enter the points and how connected on each area/ zone.
42. Define Point Type (Hardwire or RF), Hardwire Use, and Loop Type.
43. Enter each Serial Number for each RF Point Type Transmitter. See marking on transmitter.
44. Enter Loop Number for RF Point Types.
45. Select RF Transmitter Type - Supervised, Non-supp or Button.
46. Attach points to areas and select Point Names for the points.

**IMPORTANT**

Use only Ademco 5800 Series Transmitters on the Honeywell 7000 Control Panel.

47. Define Point Type (17 selections) see Programming Guide.
48. Define OUTPUT and MODES for each point. See Programming Guide for details on Modes on points that are Strategy Point Types.
49. Repeat steps above as necessary to enter all points into all zones in the system.
50. In the MODES Menu select the first mode and define it. MODES can be Special or Normal. The following two steps are for Special Points. Skip to step 53 for Normal MODES.
51. Set Mode NAME, TYPE, PASSCODE LEVEL, SPECIAL NEEDS, and OUTPUT ACTIVATION.
52. If Mode is to have a Smart Point select which Smart Point, then select CHANGE POINT and set the point to ARM, DISARM, ON WATCH, or NO CHANGE.
53. Set Normal Mode NAME, TYPE, PASSCODE LEVEL, SPECIAL NEEDS, OUTPUT ACTIVATION, DELAY, OCCUPANCY STATE, CHANGE POINT TO STATUS, and CHANGE POINT STATUS TO.
54. In the Passcodes Menus set up all 10 passcodes plus the inactive or temporary, and attach an authority level. (See Programming Guide for details)
55. Download the Customer Data into the 7000 System by selecting SEND PROGRAM in the TRANSFER MAIN Menu.
56. Wait for the message “PROGRAMMING SUCCESSFUL”.
57. Print out a hard copy of the Customer Data to verify that all the sales options have been entered. Keep this copy for history records. Save the customer data on the PC’s hard disk.
NOTE:
1. Data must be read by an external text reader after it is saved on the hard disk drive.
2. After programming system will require a valid passcode to be entered to activate the new data base.

58. If programming is complete disconnect the PC Programmer and reconnect the Telco connections to the RJ-31X block. See Figure 27.

OPERATION

This section provides general operation instructions for the Honeywell 7000 Solid State Alarm System. All operating procedures can be done from the keypad.

Keypad

The system can include more than one keypad. If so, each keypad operates in conjunction with the others and the system can be controlled from any one of them. Messages and any user requested operation will appear the same way on every two-line display at the same time. The non-alarm sounds can be silenced on selective displays to avoid waking people up when returning home late.

Fig. 21 shows the keypad and the following provides a brief description of the display and key functions.

Fig. 21. Keypad layout.

a. Two-Line Display

Words appear here to offer menu choices and tell you what's happening with the system, including system status and location of alarms, open points or system troubles. More than 2 lines can be displayed by scrolling information 2 lines at a time.

b. Numbered Keys

Used to enter passcodes and make menu selections.

c. Arrow Keys

Used to scroll through menus having more than 2 selections. The Display shows the current mode, and the down arrow, when pressed, will show all points that are not ready. The up arrow key shows the points that are bypassed and the special protection points that are disarmed.

d. Audible Feedback

Each time you press any key, an audible tone will sound to confirm successful entry of a digit or function.

e. LED's

Two LED's between arrow keys. The LED next to the UP arrow, when lit, indicates that some Special Protection is turned off or Security Points have been bypassed. The LED next to the DOWN arrow, when lit, indicates a Point of Protection such as a window or door is open.

FIRE

Press and hold this key for two seconds anytime regardless of mode or security status, and an instant fire alarm is transmitted to the CSC, which will dispatch the fire department and notify the first available person on the call list.

POLICE

Press and hold this key for two seconds anytime regardless of mode or security system status and an immediate alarm is transmitted to the CSC, which will dispatch the police and notify the first available person on the call list. Police can be programmed to be silent, however the Keypad will still display POLICE ALARM.

SPECIAL

The emergency function of the system was determined at the time of installation. When monitoring of this button is included, you need to press and hold this key for two seconds and an immediate alarm is transmitted to the CSC, which will dispatch the pre-determined help and notify the first available person on the call list. The Special button can be programmed to be silent, however the Keypad will still display SPECIAL ALARM.

MODES

Press to display a menu of the modes pre-programmed for the system. Arrow keys allow scrolling up or down to see additional selections. Use the number keys to make the selection.

OPTIONS

Press to display the options menu. Use arrow and number keys to locate and make selections.

OK

Press this key to confirm selections.
CANCEL

Press this key to cancel a menu selection or operation. If you are at a menu selection the cancel key allows you to backup to the previous screen.

CONTEXT SENSITIVE HELP

During any keypad interaction if you pause more than 7 seconds without hitting a key the system assumes that help is appropriate at that time. The Keypad will then provide help for the specific function you are performing. After help is provided the display returns to the current function. Seven seconds later the cycle is repeated and the specific help message is presented two more times. The messages are always pertinent to the area of the system you are currently effecting.

Modes

1. The System 7000 system allows you to manage numerous security appliances with one control. In order to simplify the choices and make the system quick and easy to operate, a group of pre-programmed commands have been organized into modes.

   2. A Security mode activates a particular arrangement of sensors and instructions that tell the security system what to do which you and the Honeywell representative selected when the system was installed. A Special Protection mode changes the protection for special areas or objects such as the home office, safe, workshop, liquor cabinet, gun rack etc. Up to eight security and eight special protection modes are available. Each can be described by 12 character that are convenient for the use.

Examples of possible Security modes are listed in Table 10.

Alarm and Trouble Indications on the Keypad

1. Entry/Exit Delay:
   Pulsed low tone one second ON, 0.1 second OFF for the duration of the programmed Entry 1 or 2, or the Exit delay timer. “EXIT NOW” is displayed on line 1 of the LCD. Audible Increases in speed for the last 10 seconds. Exit audible is silent for home occupancy modes.

2. Burglary Alarm:
   Continuous loud tone, the point alarm description is displayed on line 1, the BURGLARY warning message on line 2. The outside siren is delayed 15 seconds.

Table 10. Examples of Security Modes.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
</table>
| SLEEP      | • All security armed except for bedroom area motion detector.  
            | • Living room motion detector is ON WATCH.  
            | • Special Protection for the home office is turned on. |
| AWAY       | • All perimeter and security is armed.  
            | • Special Protection for the home office is turned on. |
| HOME ALONE | • Interior motion detectors are off.  
            | • Perimeter security is ON WATCH.  
            | • Special Protection for the home office is turned on. |
| ON WATCH   | • All perimeter is ON WATCH and will chime when violated.  
            | • Interior protection is off.  
            | • Special Protection for the home office remains as previously set. |

Examples of Special Protection modes include:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
</table>
| OPEN OFFICE| • Special Protection for the home office is turned off.  
            | • OPEN OFFICE is momentarily displayed on the keypad.  
            | • The LED next to the UP arrow lights.  
            | • The name of the previously selected Security mode is displayed.  
            | • All other security from previously selected Security modes remains in effect. |
| CLOSE OFFICE| • Special Protection for the home office is turned on.  
             | • CLOSE OFFICE is momentarily displayed on the keypad.  
             | • The LED next to the UP arrow goes out.  
             | • The name of the previously selected Security mode is displayed.  
             | • All other security from previously selected Security modes remains in effect. |
3. Fire Alarm:
   Pulsed loud evacuation tone sequence. Three bursts
ON then, OFF for three burst periods, and then repeats.
Outside siren is delayed 15 seconds. The Fire point
description that triggered the alarm is displayed on line
and the FIRE warning message is displayed on line 2.

4. Fire Trouble:
   Pulsed low tone, 0.1 second ON, 0.1 second OFF. Fire
trouble point description is displayed on line 2 with the
FIRE TROUBLE warning message on line 1. There is
no outside siren annunciation.

5. Police Alarm:
   Pulsed loud tone, one second ON, 0.1 second OFF, and
the outside siren is instant (if programmed as an
audible). The police point description is displayed on
line 1 with the POLICE warning message on line 2.

6. Police Duress:
   The duress feature is inactive if there is any keypad
activity 10 seconds prior to pressing the duress digit.
The Duress alarm is available on all Honeywell 7000
Control Panels. The duress digit is a programmable
feature that can be selected at the time of installation.
Pressing the duress digit followed by a valid disarm
code activates the silent duress alarm; however the
system disarms normally. There are no audible or
visible alarm indications at the keypad.

7. Special Alarm:
   Pulsed loud tone, 0.5 second ON, 0.5 second OFF, the
outside siren is instant (if programmed as an audible).
The special point description is displayed on line 1 with
the SPECIAL warning message on line 2.

8. Transmitter In Trouble:
   The Transmitter In Trouble condition is due to the loss
of the supervisory test message sent to the RF
Receiver. The Control Panel dials the CSC if
programmed to do so.

   The system will remember all transmitters in a trouble
condition and display them. For example, the KEYPAD
display will show:
   1. TROUBLE TX.
   2. GROUP NAME.
   3. POINT DESCRIPTION.

   The above display will scroll through several times as
necessary if multiple transmitters are in trouble.

   The above message will appear after a transmitter goes into
trouble AND a one second tone (similar to the ON WATCH
tone) will annunciate once every minute. To quite the one
second per minute audible, enter the disarm code. The
display is reset by sending a valid signal from the troubled
transmitter.

9. On Watch:
   The ON WATCH Feature sounds a one second low
tone and hardwire/transmitter point description is
displayed on line 2 for 20 seconds.

10. System Low Battery:
    System Low Battery condition occurs when the control
panel senses the battery voltage drifting through 11.5
volts and resets when the control panel senses the
battery rising through 12.0 volts.

11. Tamper Alarm:
    Continuous loud tone displayed the same as any other
burglary point. This hardwire point is programmed as a
24 hour burglary zone. External Siren is delayed 15
seconds.

12. Transmitter Low Battery:
    A tone will be heard between 8 AM and 8 PM. This
could be up to 12 hours after displaying the message.
The tone delay is to avoid annunciation during sleeping
hours. Each time the transmitter is activated while in a
low battery state (either by the supervisory transmission
or transmitter activation), the control panel will display
this condition and start the 12 hour tone delay. The low
battery condition will occur at a voltage of
approximately 8.0 volts (7.5 +/- 0.4 volts while
transmitting). The KEYPAD display can be cleared from
the KEYPAD by replacing the battery and then entering
the disarm code.

13. Horn Failure:
    A Horn Failure condition occurs when the system
senses that the wiring to the external horn is open or
shorted to ground.

Table 11 provides a listing of keypad LCD and LED
responses to system operation.

**Emergency System Shutoff:***

This procedure will completely disable the entire security
system including the 24 hour protected points, the display
Keypads, and outputs.

Use this procedure only as a last resort if:
1. All efforts to turn off the audible alarms fail, or
2. You cannot disarm the security portion of the system by
   any other means, or
3. You want to turn off the System 7000 System for any
   other reason.

To shut off the system, unlock and open the Control Panel.
Locate the POWER switch near the right end of the circuit
board. Slide the switch to the OFF position.

**IMPORTANT**

*Call the Honeywell Customer Service Center
immediately, provide the passcard number and
describe the problem.*

**Power Failure**

To keep the System 7000 system functioning during a power
failure it is equipped with a rechargeable back-up battery.
This battery will operate for a minimum of four hours (24
hours for fire). While the security system is on battery power,
the security system will function normally. You will see an “AC
POWER OFF” message on the Keypad panels.

If a power failure lasts longer than the charge in the
battery(s), the entire security system including the 24 hour
protected points, the KEYPAD Panels and programmed
outputs will be disabled. Alarms will not sound in the event of
a burglary, fire or intrusion, and the CSC will not receive
signals from the system.

The modes, passcodes and information programmed into the
System 7000 system will not be affected, and once power is
restored the system will begin operation immediately. Open
and close all points protected by RF transmitters once and
the system resets itself and is fully operational. If the
installation does not have any RF transmitters, it will reset
itself automatically.
Table 11. Keypad LCD and LED response to system operation.

<table>
<thead>
<tr>
<th>Keypad Display</th>
<th>Audible</th>
<th>Keypad LED Left</th>
<th>Keypad LED Right</th>
<th>Comments/Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Off</td>
<td>None</td>
<td>Off</td>
<td>Off</td>
<td>System in Standby Mode; 24-Hour Points and Fire active.</td>
</tr>
<tr>
<td>Mode</td>
<td>None</td>
<td>Off</td>
<td>Off</td>
<td>System in selected Mode.</td>
</tr>
<tr>
<td>Alarm</td>
<td>ON</td>
<td>Off</td>
<td>On</td>
<td>System in Alarm Mode; see second line of display for alarm type.</td>
</tr>
<tr>
<td>Fire Alarm</td>
<td>On (External delayed for 15 seconds)</td>
<td>Off</td>
<td>Off</td>
<td>System in Alarm Mode; see second line of display for alarm type.</td>
</tr>
<tr>
<td>Police Alarm</td>
<td>On or Silent</td>
<td>Off</td>
<td>Off</td>
<td>System normal if silent; otherwise in Alarm.</td>
</tr>
<tr>
<td>Special Alarm Message</td>
<td>On or Silent</td>
<td>Off</td>
<td>Off</td>
<td>System displays Alarm; see second line of display for alarm type.</td>
</tr>
<tr>
<td>System Trouble</td>
<td>ON</td>
<td>Off</td>
<td>Off</td>
<td>Message identifies type of trouble; see message.</td>
</tr>
<tr>
<td>Ac Power Failure</td>
<td>None</td>
<td>Off</td>
<td>Off</td>
<td>Problem displayed; resets when power restored.</td>
</tr>
<tr>
<td>Low Battery</td>
<td>Low tone once a minute.</td>
<td>Off</td>
<td>Off</td>
<td>Problem displayed; resets when battery replaced.</td>
</tr>
<tr>
<td>Fire Trouble</td>
<td>Low tone repeating.</td>
<td>Off</td>
<td>Off</td>
<td>Problem displayed until circuit restored.</td>
</tr>
<tr>
<td>Comm CSC Failure</td>
<td>Low tone once a minute.</td>
<td>Off</td>
<td>Off</td>
<td>Problem displayed until message received at CSC.</td>
</tr>
<tr>
<td>RFEM Trouble</td>
<td>Low tone once a minute.</td>
<td>Off</td>
<td>Off</td>
<td>Message displayed until RF service restored.</td>
</tr>
<tr>
<td>ON Watch</td>
<td>Low tone when tripped.</td>
<td>Off</td>
<td>On</td>
<td>Point ID Message on for 10 seconds.</td>
</tr>
<tr>
<td>Pool Point</td>
<td>On for 30 seconds if away</td>
<td>Off</td>
<td>On</td>
<td>Can be ON-WATCH or Armed.</td>
</tr>
<tr>
<td>Horn Failure</td>
<td>Low tone repeating.</td>
<td>Off</td>
<td>Off</td>
<td>Problem displayed; reset when problem resolved and password entered.</td>
</tr>
</tbody>
</table>

Emergency System Shutoff

This procedure will completely disable your entire security system including the 24 hour protected points, the display Keypads, and outputs.

Use this procedure only as a last resort if:
1. All efforts to turn off the audible alarms fail, or
2. You cannot disarm the security portion of the system by any other means, or
3. You want to turn off your System 7000 System for any other reason.

To shut off the system, unlock and open the Control Panel. Locate the POWER switch near the right end of the circuit board. Slide the switch to the OFF position.

IMPORTANT
Call the Honeywell Customer Service Center immediately, provide your passcard number and describe the problem.

CHECKOUT

System Installation Test

Local Test Sequence

NOTE: After performing this test and verifying that the system is working properly, repeat the test with the customer/home-owner to show him how that the system operates as intended.

1. Power up the system and verify the KEYPAD(s) are displaying MASTER ARM and both LED’s are OFF.
2. Verify there were no alarm audibles. (Hardwire points in the alarm state will go into alarm within 45 seconds after power-up. Fire after 20 seconds).
3. With the arrow keys verify that all points are normal. If any are open, correct and proceed.
4. Enter a valid passcode and verify that the System goes into the default Mode (disarmed).
5. Push the MODES key and select a mode with points in ON WATCH. (If some points in this mode are programmed for ALARM, they will go into ALARM.)
6. Exercise each Perimeter point and verify that the correct description is displayed along with a one second tone. When opening the contacts, the right LED lights.

7. Exercise each Entry/Exit point and verify that the correct description is displayed.

8. Exercise each Interior point and verify that the correct description is displayed for the interior zone selected. When opening the contacts, the right LED lights.

9. Exercise each Fire sensor and verify that the correct description is displayed. The only hardwire Fire point is P8. The KEYPAD will alarm locally, immediately and the external siren or bell turns on.

10. Exercise any SPECIAL or POLICE points in the system and verify the correct descriptions. The hardwire Police and Special loops on TB1 display the same description as their respective KEYPAD keys. The READY display on the KEYPAD is replaced with the special or police alarm message. The KEYPAD audible and outside siren are both instant if programmed as audible.

NOTE: After a power outage long enough to fully discharge the battery, or if the Control Panel is turned OFF, the user must test all points of protection to update the status of each RF point in the Control Panel memory.

11. Enter a mode with points armed and exercise a point.

12. Verify the External Bell and output options function as programmed.

To Verify Or Test RF Points And Descriptions

1. Press the MODES key, scroll and select number 8, the RF TEST Option. Press 0, then OK, to put the System into RF Test (receiver sensitivity reduced 12 dB).

   NOTE: If the next step does not occur in three minutes, the system will automatically return to the Default mode.

2. Trip the RF Transmitter to be tested twice within 8 seconds. The Transmitter Point ID description will appear, and the KEYPAD will annunciate a one second tone.

IMPORTANT

Use only Ademco 5800 transmitters on the Honeywell 7000 System control panel.

Customer Service Center (CSC) Test

1. Call the CSC to coordinate testing of the system.

2. Reconnect the telephone cord from the Control Panel to the RJ-31X jack.

3. Press the MODES key and arm the system.

4. Cause a point to alarm, and enter the disarm code.

NOTE: After the first disarm, the Control Panel sends the restore message to the CSC.

Testing The Duress Code

1. Put the system into the AWAY mode as described in the “User Guide”.

2. Wait 10 seconds in between any KEYPAD activity before trying the duress code.

3. Enter the duress digit followed by the master disarm code. Verify the control panel seizes the phone line and dials out the police alarm and that the Honeywell 7000 does not send in a restore message to the CSC.

4. Call the CSC and confirm correct reception of all alarms and restore messages that should have been received.

Testing Local Telephone Connections

1. While the dialer communication is in progress, all of the telephones in the house are seized by the Control Panel. To verify that the RJ-31X jack is wired correctly, go to each telephone, pick up the receiver and listen. No dial tone or other dialing sound should be heard.

2. Unplug the telephone cord from the RJ-31X module and ensure that the house phones work properly.

Final Configuration Form

Help the customer fill out the configuration form in the User Manual.

TROUBLESHOOTING

The security portion of the Honeywell 7000 System is constantly checking itself and will report problems the Keypad display.

The system test should be performed locally, and then a CSC communication test should be performed.

Your system may or may not include radio frequency transmitters. If it does not, the RF transmitter information below does not apply.

NOTE: Disconnect the phone cord from the RJ-31X phone jack until local testing is completed.

Table 12 lists trouble messages, indications and possible solutions. Follow the What You Should Do instructions in order.
Table 12. Troubleshooting guide.

<table>
<thead>
<tr>
<th>What You See</th>
<th>What is Wrong</th>
<th>What You Should Do</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOME NOT READY FORCE ARM? These Points not ready.</td>
<td>1. A protected point is open and/or: 2. A transmitter cover is open.</td>
<td>1. Press the right arrow button to look at open points. 2. Open and close the named door or window and leave it closed. 3. If your system includes rf transmitters, check the transmitter at the named location and make sure the cover is tightly closed.</td>
</tr>
<tr>
<td>HOME FIRE TROUBLE SMOKE DETECTOR (NOTE: A warning tone will also sound.)</td>
<td>Wire to fire sensors is damaged.</td>
<td>1. Check for signs of fire. If none: 2. Enter your passcode to silence the warning tone. 3. Call Honeywell for service.</td>
</tr>
<tr>
<td>HOME TROUBLE TX GUEST WINDOW</td>
<td>1. Defective battery. 2. Loose battery lead(s). 3. Transmitter malfunction. 4. Receiver malfunction.</td>
<td>1. Clean the battery connections. If this fails, replace the battery. 2. Tighten the battery and the battery clip. Reconnect the battery and test the system. 3. If replacing the transmitter battery does not solve the problem, call Honeywell for service. 4. If the keypad display indicates that all points are in trouble, the receiver may be defective. Call Honeywell for service.</td>
</tr>
<tr>
<td>HOME AC POWER FAIL</td>
<td>1. The low voltage ac transformer is loose or unplugged. 2. Power failure.</td>
<td>1. Check the low voltage transformer usually located near the control panel. 2. Restore house power. If there has not been a power failure, call Honeywell for service.</td>
</tr>
<tr>
<td>HOME SYS LOW BATTERY</td>
<td>The Control Panel system backup battery is defective or weakened after extended ac failure.*</td>
<td>Call Honeywell for service.</td>
</tr>
<tr>
<td>No display is showing.</td>
<td>There is no ac or backup battery power to the system.</td>
<td>1. If only some lights are out in your home, check house circuit breakers or fuses and restore as necessary. 2. Make sure the low voltage transformer near the Control Panel is securely plugged into an ac outlet. 3. Call Honeywell for service.</td>
</tr>
</tbody>
</table>

*NOTE: The CSC receives a signal from your system when low battery problems occur, and notifies the first available person on your call list.

**Telephone Problems**

In the event of telephone problems, disconnect the control panel by removing the plug from the RJ31X (CA38A in Canada) wall jack. This should leave the rest of the House phones in service if the problem is with the security equipment. Do not disconnect the phone connection inside the control panel or the local phones will be out of service. If the telephone service is still out after disconnecting the security system the problem is with the phone system and they should be contacted for service. If the phones service returns when the security system is disconnected then Honeywell should be contacted for service.

**REGULATORY AGENCY STATEMENTS**

**UL Installation Requirements**

The following installation requirements apply to UL - 1023 - Grade A Household Burglar Alarm, for UL 985 Household Fire, and UL 1635 - Digital Burglar Alarm Communicator System Units, and UL 1637 Home Health Care Signaling:

1. All wiring and interconnections must be owned and managed by the same person(s).
2. All wiring and interconnections must be located at one address.
3. At least one audible alarm device must be placed where it can be heard at the installation location.  
4. Per NFPA72, Battery backup capabilities must be provided for 24 hours of normal service followed by at least 4 minutes of File Alarm signaling.
5. The maximum Ampere Hour Battery load for System 7000 is 28 AG without a Listed Auxiliary Power Supply.
6. The minimum Ampere Hour Battery is 7 AH and current load is restricted to 210 milliams normal standby and 1.185 amperes of alarm for 4 minutes for 24 hours of battery backup.
7. Use ALARM-SAF AP/PS5BF 12-UL when auxiliary power is required.
California State Fire Marshal (CSFM) Requirements

24 hour battery back-up:

1. Per NFPA72, Battery backup capabilities must be provided for 24 hours of normal service followed by at least 4 minutes of File Alarm signaling.
2. The maximum Ampere Hour Battery load for System 7000 is 28 AH without a Listed Auxiliary Power Supply.
3. The minimum Ampere Hour Battery is 7 AH and current load is restricted to 210 milliamps normal standby and 1.185 amperes of alarm for 4 minutes for 24 hours of battery backup.
4. Use ALARM-SAF AP/PSSBF12-UL when auxiliary power is required.
5. Use ADEMCO 747UL Sirens for audible requirements.

Federal Communications Commission (FCC) Statement

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer’s instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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:

1. If using an indoor antenna, have a quality outdoor antenna installed.
2. Reorient the receiving antenna until interference is reduced or eliminated.
3. Move the receiver away from the control/communicator.
4. Move the antenna leads away from antenna wire runs to the control/communicator.
5. Plug the control/communicator into a different power outlet so that it and the receiver are on different branch circuits.
6. If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User’s Manual. Unauthorized changes or modifications could void the user’s authority to operate the equipment.

This equipment complies with Part 68 of the FCC rules. On the front cover of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

The REN is needed to determine the quantity of devices that may be connected to the telephone line. Excessive REN on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the REN should not exceed five (5). To be certain of the number of REN that may be connected to your telephone line, add up the REN on your line and call the local telephone company and verify that you are below the maximum limit for your area.

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. 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 necessary.

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 the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment, please contact the manufacturer for repair and warranty information.

If the trouble is causing harm to the telephone network, the telephone company may request you to remove the equipment from the network until the problem is resolved.

This equipment uses a RJ31X to connect the System 7000 to the telephone network.

There are no user serviceable components in this product, and all necessary repairs must be made by the manufacturer. Other repair methods may invalidate the FCC registration on this product.

This equipment cannot be used on telephone company-provided coin service. Connection to Party Line Service is subject to state tariffs.

This equipment is hearing-aid compatible.

When programming or making test calls to an emergency number, prior to initiating alarms, briefly explain to the Monitoring dispatcher the reason for the call. Perform such test activities in the off-peak hours; such as early morning or late evening.