OMA-P1100

Security Monitoring Systems

Version 3.20

OMEGA®

An OMEGA Technologies Company

Operator's Manual

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using a second temperature probe. This fourth alert input will function exactly like the other three alert input, except that it requires a 3-second recognition time, as opposed to the 200 millisecond recognition time of the other three inputs.

The P1100 gives you the ability to selectively disable the alert inputs, high temperature, low temperature, high sound, and power failure monitors. When a monitor is disabled, the OMA-P1100 will not dial-out with that alarm.

All monitoring is a continuous process. When a problem arises, the unit will announce the alarm condition locally for 30 seconds. It will then sequentially dial up to four user-programmed telephone numbers with an alarm message. It will state the existing problem, disconnect from the telephone line, then wait for an acknowledging telephone call. The OMA-P1100 will continue dialing-out until its message is properly acknowledged.

You can also call-in to the OMA-P1100 to get a status report on the monitored conditions and listen-in through the provided microphone.

The OMA-P1100 has a programmable keyboard security code, which adds a measure of protection to the settings. When the code keys are pressed, the keyboard locks. No one can change the user-programmed data or turn off the unit without knowing the code to unlock the keyboard.

THE OMA-P1100 OWNERS' MANUAL

This manual describes the features and operation of the OMA-P1100. It provides explanations, illustrations, and examples to simplify its installation and programming.

Read this manual over at least once and experiment with the examples before starting your actual programming.

THE OMA-P1100 SPECIFICATIONS AND STATISTICS

SIZE

2 inches high, 7 1/2 inches wide, 8 1/2 inches deep.

SHIPPING WEIGHT

4 lb. (without batteries).

INTRODUCTION

OMA-P1100 CAPABILITIES

The OMA-P1100 is an electronic watchman. It monitors specific environmental and operating conditions at your business facility or remote property. The OMA-P1100 is equipped with built-in sensors that automatically monitor the following conditions:

- AC electrical power--checks for power failure.
- Temperature--monitors temperature between +0° F and +128° F, checks to see if it exceeds or falls below user-programmed high and low limits, states actual temperature.
- High sound levels--such as smoke or burglar alarms.
- Battery--the condition of its battery back-up.

The OMA-P1100 also has three digital alert inputs. Attachable dry contact sensors (see Appendix C) monitor conditions at the unit's location or other areas, such as:

- Intrusion into premises
- Water leaks or floods
- Temperature in remote areas

The use of each alert input can vary widely. One example is as follows:

- Alert #1--Passive infrared sensor to detect intrusion
- Alert #2--Water sensor for water seepage in a basement
- Alert #3--Magnetic reed switch for a door.

The OMA-P1100 also has an auxiliary terminal. An additional temperature probe can be attached to this terminal to monitor temperature in second location. This second temperature will not cause a dial-out, but will appear in call-in and alarm status reports. Also, the auxiliary terminal can be used a fourth alert input, but only if you are not

BATTERY SYSTEM

Six D-cell alkaline batteries (not included), with approximately 8 - 10 hours of continuous operation when an AC power failure occurs and the unit is ON. Turning the unit OFF disconnects all functions, but if AC power is removed, the batteries will still be drained.

AC CONNECTION

UL-listed Class 2 wall transformer with a six-foot cord. Converts 110 VAC, 60 Hz, 8 Watt input to 9 VAC, 60 Hz, 600 mA output.

TELEPHONE CONNECTION

Standard modular connector (RJ11C) with a six-foot cord.

OPERATING CONDITIONS

The OMA-P1100 should not be operated in temperatures less than +40° F or more than +120° F.

Do not use the OMA-P1100 in an environment where it is exposed to fumes or corrosive vapors. They might damage the unit, causing it to malfunction, and void the warranty.

POWER SURGE PROTECTION

Your OMA-P1100 may be affected by power surges through the telephone line or the 110 VAC power supply. Though the P1100 has built-in surge protection, **we recommend that you obtain additional protection for the P1100, and for any electronic equipment which is attached to your power supply and telephone lines. This is especially important if you live in a lightening-prone area.**

IMPORTANT!

The OMA-P1100 should be periodically checked to ensure proper operation in your particular installation. If you are using external sensors, their operation must be checked periodically as well. **The system with its sensors should be COMPLETELY checked monthly to ensure proper operation.**

Always disconnect all telephone lines from wall outlets before servicing or disassembling this equipment, or replacing batteries.

FCC REQUIREMENTS

PART 68 - The OMA-P1100 complies with Part 68 of the FCC Rules. On the back of the unit is a label that contains, among other information, the FCC Registration Number and the Ringer Equivalence Number (REN). You must, upon request, provide this information to your telephone company.

The REN is useful for determining the quantity of devices that you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most areas, the sum of the RENs of all devices connected to one line should not exceed 5.0. To be certain of the number of devices that you may connect to your telephone line, you should contact your local telephone company.

Should the OMA-P1100 cause harm to the telephone network, the telephone company shall, if possible, notify you that temporary discontinuance of service may be required. However, if such action is necessary and prior written notice is not possible, the telephone company may temporarily discontinue service without notice. The telephone company may make changes in its communications facilities, equipment, and operations procedures, where such action is reasonably required in the operation of its business and is not inconsistent with the rules and regulations of the Federal Communications Commission.

The OMA-P1100 should not be used on coin telephone lines. Connection to party line service is subject to state tariffs.

If trouble is experienced, disconnect the OMA-P1100 from the telephone line to determine if the unit is causing the malfunction. If the OMA-P1100 is determined to be malfunctioning, it should be discontinued until the problem has been corrected. We suggest that you do the following:

1) Refer to Appendices F, **MAINTENANCE**, and G, **TROUBLESHOOTING**.

2) Carefully write down your observations of the OMA-P1100's malfunctioning.

3) Call OMEGA Customer Service at 1-800-622-2378 (1-800-622-BEST) if any instructions are not clear or if you have any questions.

If your OMA-P1100 is programmed to dial to an emergency number (i.e. the police), you must do the following when testing:

1) Remain on the line and briefly explain to the dispatcher the reason for the call before hanging up.

2) Perform such activities in the off-peak hours, such as early morning or late evening.

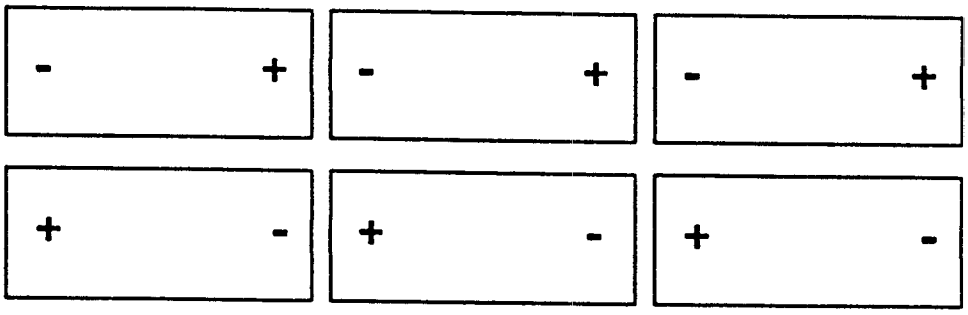
PART 15 - This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CHAPTER 1
INSTALLATION

POWER SUPPLY INSTALLATION AND TELEPHONE LINE CONNECTION

Plug the provided AC transformer into any standard 110 VAC outlet. Next, install the 6 D-cell alkaline batteries (not included). They enable it to continue functioning when AC power is removed.

Before putting the batteries into the unit, be sure that the AC transformer is plugged into an outlet. Remove the battery compartment door on the back of the OMA-P1100. Install the 6 D-cell batteries in accordance with the diagram below:



Replace the battery compartment door. See Figure 1.

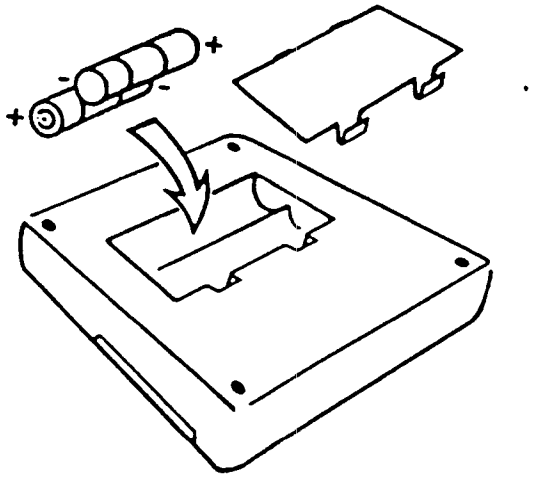


FIGURE 1: BATTERY INSTALLATION

Plug the provided modular telephone jack into any standard modular telephone outlet (RJ11W for wall-mounted phones, RJ11C for other phones) (see Figure 2).

On the back of the OMA-P1100 is a female telephone jack. This is provided so that a telephone may be used on the same line as the unit. It is not necessary to hook up a telephone for the OMA-P1100 to operate.

If you do not have a modular telephone extension at the OMA-P1100's location, contact your local telephone company to have one installed (there is a nominal charge for this service). If you have four-pin jacks, adapters are readily available to convert them to the modular plugs. Contact you local telephone company or electronics parts store.

IMPORTANT!

The OMA-P1100 will operate with all standard telephone systems that accepts pulse or tone dialing.

Certain private telephone systems and public switching equipment may not accept OMA-P1100 dialing or may generate an unacceptable ring signal. In those cases, a dedicated line may be required for the P1100. Consult the supplier of your telephone system if you encounter problems.

The OMA-P1100 cannot be used on an extension line to dial its own telephone number. Also, it may not be installed on a party line or pay telephone line.

You should use power surge suppression devices on both the 110 VAC power supply and the telephone line. Please refer to page 3 of the **INTRODUCTION** for further information.

CAUTION

Never install telephone wiring during a lightning storm. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface. Use caution when installing or modifying telephone lines.

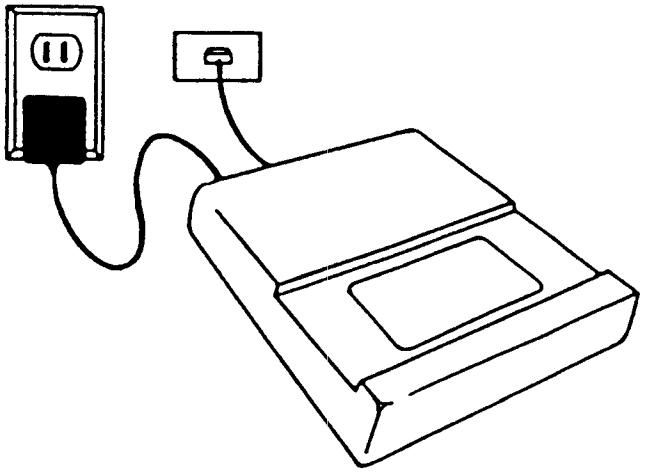


FIGURE 2: PLUGGING IN THE AC TRANSFORMER AND THE TELEPHONE JACK

MOUNTING THE OMA-P1100

The OMA-P1100 can be mounted on a wall with two screws, using the keyholes on the back panel of the unit. Place two screws or bolts 3 13/16" apart at the desired height from the floor. Position the OMA-P1100's keyholes over the screwheads. Slide the unit down towards the floor.

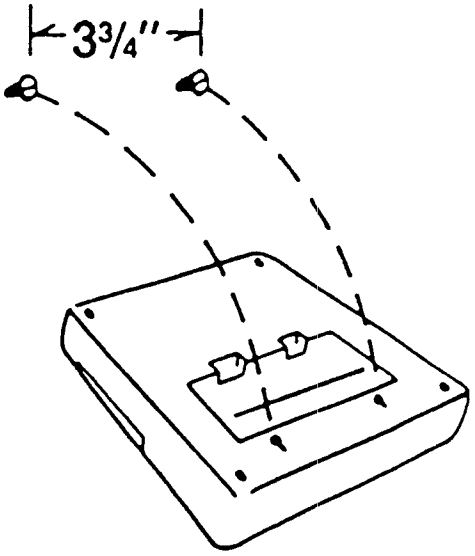


FIGURE 3: MOUNTING THE OMA-P1100

The P1100 can also be placed on top of a desk or any other horizontal surface.

THE TEMPERATURE SENSOR

The OMA-P1100 provides a temperature sensor. It is used to monitor the temperature. The OMA-P1100 will check to see if it exceeds user-programmed high and low limits. The temperature is also given in a status report.

THE ALERT INPUTS

The OMA-P1100 has three digital alert input terminals (see Figure 4). Each input consists of one screw marked "# (1, 2, or 3)." and *GND* The three screws are found under the word **ALERT**. For convenience, this manual will refer to the inputs as Alert #1, Alert #2, and Alert #3.

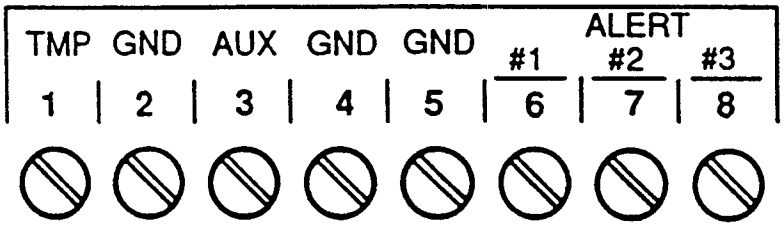


FIGURE 4: TERMINAL STRIP

CONNECTING A SENSOR TO AN ALERT TERMINAL

An alert input can be used with any *normally open* (N.O.) or *normally closed* (N.C.) *dry contact* device. *Open* is when there is no contact and *closed* is when a contact exists. The unit will adapt to N.O. or N.C. sensors when the unit's I.D. number is programmed (see Chapter 2, page 27).

You must determine what type of sensor will be connected to each alert input. For sensors offered by , refer to Appendix C.

After you have selected the sensor, loosen the screw of the alert input and a ground. Two wire leads are used to connect any monitoring sensor. Fasten one lead to *GND* and the other lead to the alert terminal. Tighten both screws. The OMA-P1100 may say "Alert condition (1, 2, 3) exists" as you connect the sensor. If it does, just press any key and it will stop speaking.

NOTE:

Do not use sensors, switches, or relays that supply any voltage or current to the OMA-P1100.

Any N.O. or N.C. sensor can be attached to the OMA-P1100 using 22 gauge wire. The sensor can be several hundred feet from the unit, as long as the total resistance of the circuit is not greater than 50 ohms. Use wire appropriate for the application.

After all of the sensors are wired to the OMA-P1100, and are in a normal (OK) position, the ID number must be programmed. When the ID number is programmed, the OMA-P1100 scans all the alert inputs, and whatever the unit sees at that time is the normal position for the inputs. This will set the normality of all alert inputs. See Chapter 2, page 27.

The OMA-P1100 may have multiple sensors connected to one terminal as long as the *normal* condition of the sensors is the same (either N.O. or N.C.).

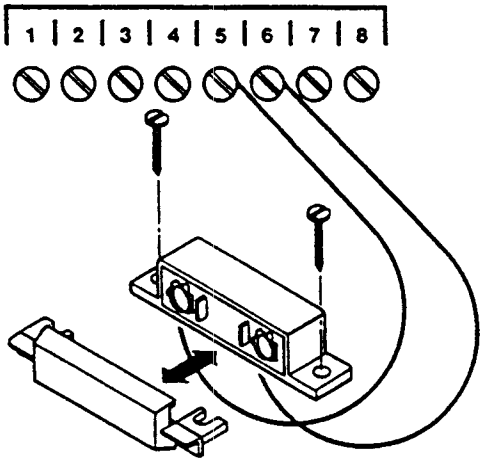


FIGURE 5: CONNECTING A SENSOR TO AN INPUT TERMINAL

MULTIPLE NORMALLY CLOSED SENSORS

To connect multiple *normally closed* sensors to one input, wire them in series. Fasten a lead from the first sensor to *GND*. Connect the other lead from the first sensor to one lead from the next sensor. Continue wiring sensors end-to-end until you have wired all of your sensors. Wire the second lead from your last sensor to the Alert input. Refer to Figure 6.

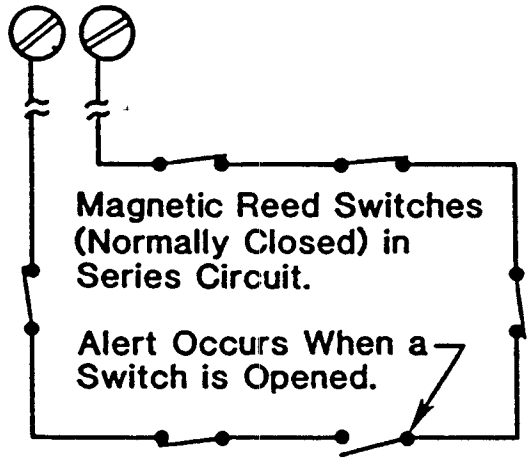


FIGURE 6: CONNECTING MULTIPLE N.C. SENSORS TO ONE INPUT TERMINAL

Multiple N.C. inputs are typically magnetic reed switches to monitor the security of windows and doors.

MULTIPLE NORMALLY OPEN SENSORS

To connect several *normally open* sensors to one input, wire them in parallel. Fasten one lead from each sensor to *GND*. Wire the second lead from each sensor to the corresponding Alert terminal (see Figure 7).

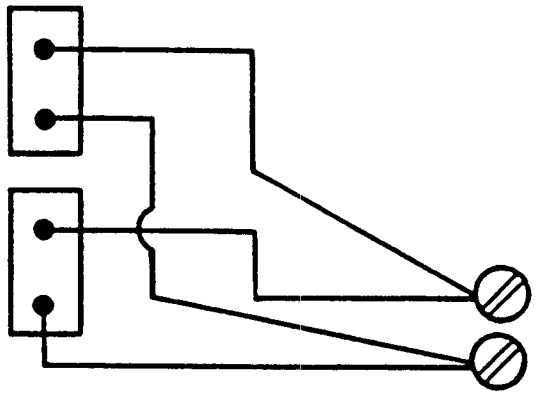


FIGURE 7: CONNECTING MULTIPLE N.O. SENSORS TO ONE INPUT TERMINAL

Multiple N.O. inputs are typically temperature switches to monitor the temperature in several different locations simultaneously.

AUXILIARY TEMPERATURE/ALERT #4 TERMINAL

The auxiliary terminal is a dual purpose terminal. It can function as either a status-only temperature input or a fourth dry contact input. If the AUX input is used as a temperature input, it will not initiate a dial-out process. If the AUX input is used as a fourth dry contact input, it will initiate a dial-out process. The auxiliary temperature/alert sensor is connected to *AUX* and *GND*.

To wire the auxiliary temperature probe (OMA-PX05), fasten one lead of the temperature probe to the *AUX* screw and the other lead to *GND*. The auxiliary temperature is only used in a status report and it will not cause an alarm dial-out. If you use the terminal with an auxiliary temperature sensor, you cannot attach a dry contact sensor.

The terminal can be used as a fourth alert input terminal with a N.O. or N.C. dry contact sensor. If the status of the sensor changes, the unit will dial-out with the message "Alert condition four exists." To attach a dry contact sensor, follow the instructions in the previous sections. If you use the terminal with a fourth dry contact sensor, you cannot attach a temperature probe.

CHAPTER 2
KEYBOARD OPERATIONS

The OMA-P1100 stores the following important programmable information in its memory.

- Time
- Four telephone numbers automatically called in emergencies
- Tone or pulse dialing
- High and low temperature alarm limits
- Disabling the high and/or low temperature alarms
- Number of rings before the OMA-P1100 answers the telephone to give a status report
- Length of the listen-in time
- Disabling the high sound alarm
- AC power failure recognition time
- Disabling the power failure alarm
- Disabling the alert inputs
- Keyboard lock
- The I.D. number and the normality of the Alert inputs
- Silencing the local speaker during dial-out and call-in

Set these parameters using the keyboard on the front of your OMA-P1100 (see Figure 8).

The keys on the OMA-P1100 are mentioned often in this chapter. In text, they will always be symbolized by **BOLDFACED, CAPITALIZED**

letters. The sentence "Press **SET**, then **LOW TEMP.**" is read as "Press the key with the word SET on it, then press the key with the words LOW TEMP. on it."

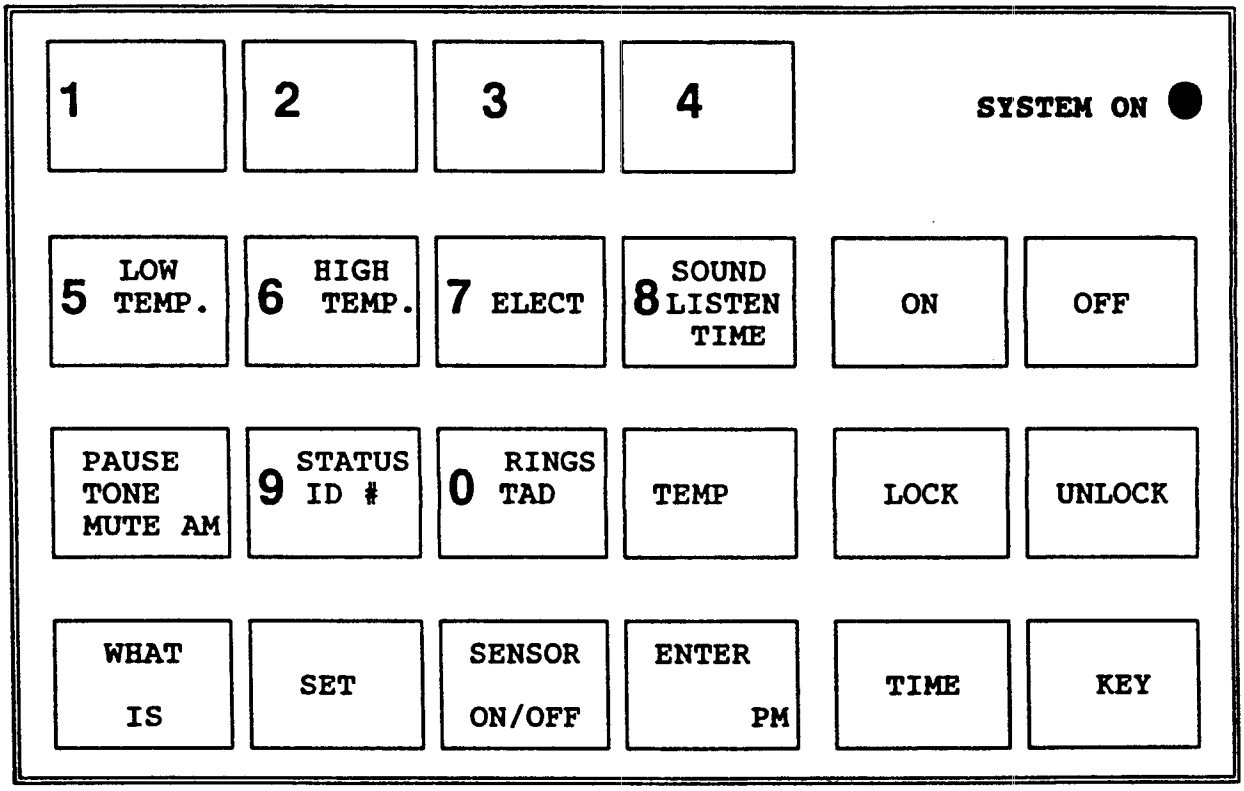
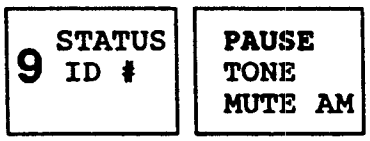


FIGURE 8: THE OMA-P1100 KEYBOARD

Several of the keys are multifunctional. In programming instructions, only the word for the specific parameter being programmed will be used. For example, the sentence "Press **9**, then **PAUSE.**" is read as "Press the key with 9/STATUS/I.D.# on it, then press the key with PAUSE/TONE/MUTE/AM on it." The specific parameter will also be **boldfaced** in the illustration. For example, "Press **9**, then **PAUSE.**" would be shown as follows:



Every time a key is pressed to begin programming or interrogation, the unit will beep. As data is being entered, the OMA-P1100 will repeat the number of the key pressed.

To begin programming your unit, make sure that the unit is installed and **ON**.

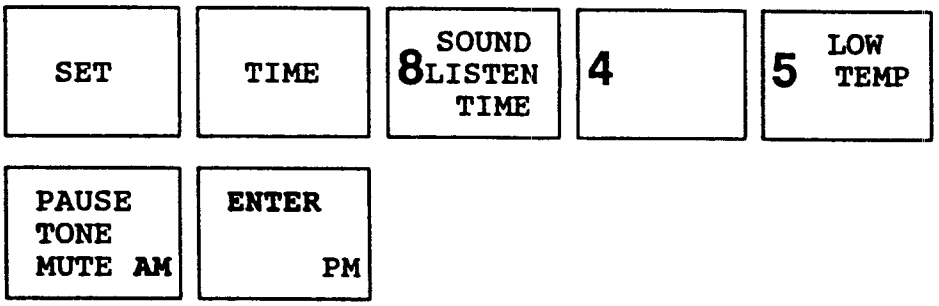
THE TIME

The OMA-P1100 has a built-in clock. When you first power-up the unit, the time will be 12 AM. The clock will keep time from 12 AM, until you program the current time. Then it will keep time from that moment. If the AC fails, the clock will continue to keep time until the battery back-up fails. When both the power and the battery back-up fail, the clock will reset to 12 AM. An incorrect time is a good indication that the power had failed.

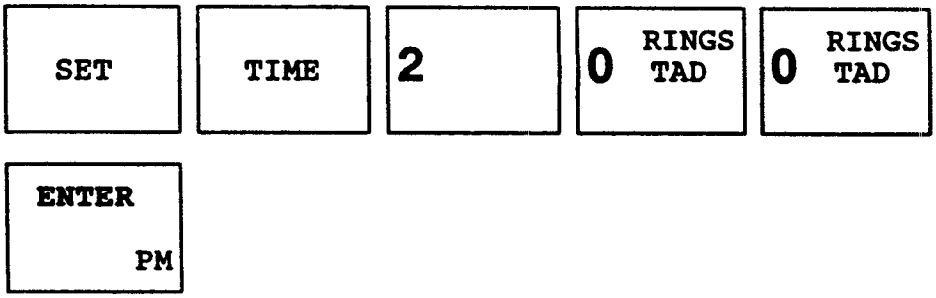
SETTING THE TIME

To set the time, press **SET**, followed by **TIME**. Enter the numbers for the correct time. If the time is AM, press **AM**, then **ENTER**. If the time is PM, just press **ENTER**.

For example, to set the time to be 8:45 AM, press the following keys:

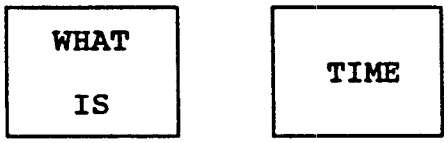


To set the time to be 2:00 PM, press the following keys:



CHECKING THE TIME

To check the time, press **WHAT IS**, then **TIME**. The unit will say "The time is (number, AM or PM).



Referring to the two previous examples, the unit should respond with "The time is 8:45 AM" and "The time is 2:00 PM," respectively.

THE TELEPHONE NUMBERS

The OMA-P1100 has the capability to store up to four, 16-digit (or smaller) telephone numbers in its memory. These telephone numbers are the alarm dial-out telephone numbers. They are known as Phones 1, 2, 3, and 4. The telephone numbers are programmed in the sequence in which you want to have them called. Therefore, the number to be called first would be Phone 1, the number to be called second would be Phone 2, et cetera. You can also program the OMA-P1100 to dial the Phone numbers using pulse (rotary) or tone dialing.

IMPORTANT!

Do not set the OMA-P1100 to *dial-out* to telephone numbers that will be answered by a telephone answering device, such as a modem or an answering machine.

Instruct key people at each telephone number about the OMA-P1100 and about what actions they should take if called with an alarm. If necessary, instruct switchboard operators to handle alarm and acknowledgement calls. Do not have the alarm call answered by a person who is unable to acknowledge the alarm or to take prompt, effective action to deal with the situation. If appropriate, conduct periodic drills to familiarize personnel with the operation of the unit.

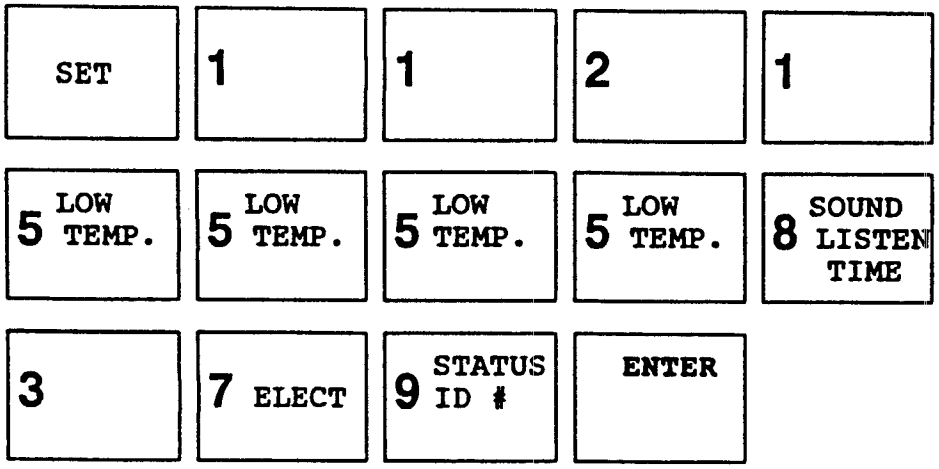
In some areas, municipal services (i.e. police, fire, medical) will not respond to automatic voice messages. Check with your local municipal services.

SETTING A DIAL-OUT TELEPHONE NUMBER

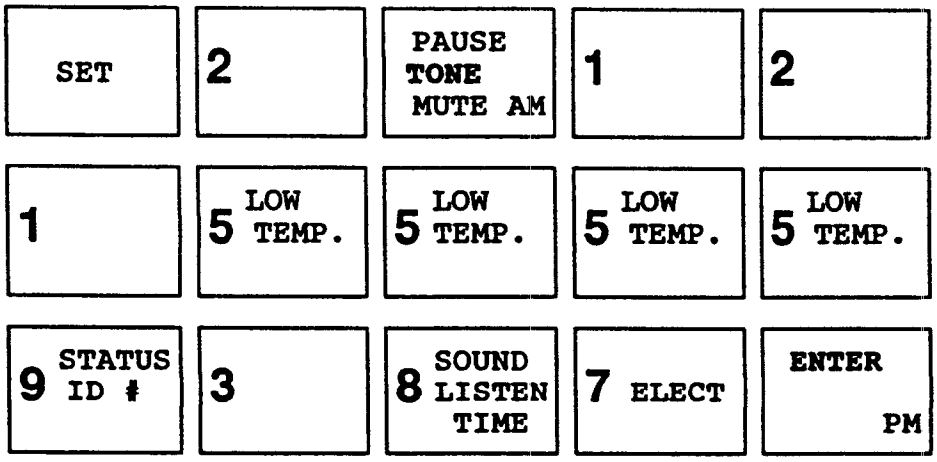
The OMA-P1100 can dial out using pulse dialing or touch-tones. It will normally dial-out with pulse, but can be switched to touch-tones by inserting **TONE** as the first digit of the telephone number. The PAUSE/TONE/MUTE/AM key will only indicate tone dialing when it is the first key of a telephone number. If **PAUSE** is inserted in the middle of a telephone number, it produces a 4-second pause during dial-out.

To set a telephone number, press **SET**, then the Phone number (**1**, **2**, **3**, or **4**). Press **TONE** if the number should be tone-dialed. Press the keys corresponding to the digits of the telephone number. Finally, press **ENTER**.

For example, to set Phone 1 as 1-215-555-8379, press **SET**, then **1**. Press the keys corresponding to the digits of the telephone number. Finally, press **ENTER**.



To set Phone 2 as 1-215-555-9387 and tone-dialed, press **SET**, **2**, then **TONE**. Press the keys corresponding to the digits of the telephone number. Finally, press **ENTER**.

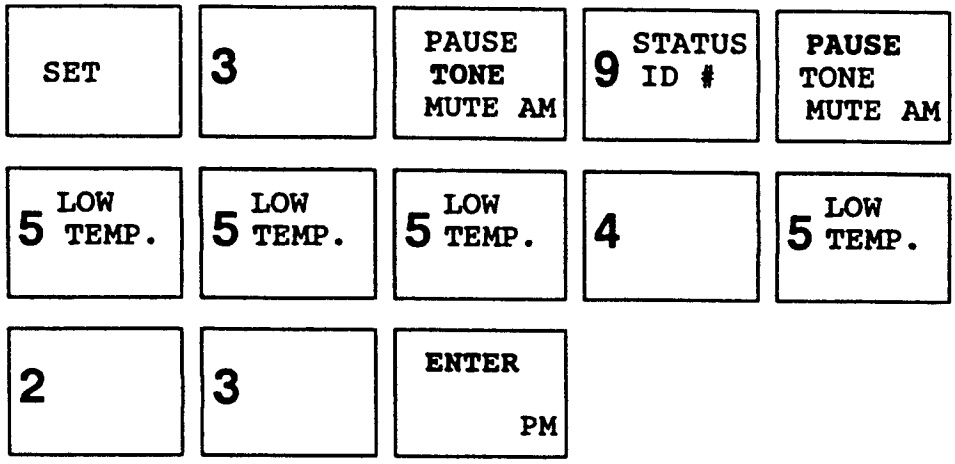


USING PAUSE

With some telephone systems, you must first dial an access number to reach an outside line, then pause for the connection before dialing a regular telephone number. The OMA-P1100 also has this capability.

The 4-second pause can be programmed as part of the telephone number. To do so, press **SET**, and the Phone number (**1**, **2**, **3**, or **4**). For a tone-dialed number, press **TONE**. Next, press the keys corresponding to the digit(s) of the access number, then press **PAUSE**. Now press the keys corresponding to the digits of the regular telephone number. Finally, press **ENTER**.

For example, to set Phone 3 so that the OMA-P1100 will tone-dial 9 to access an outside line, wait 2 seconds for the dial tone, then tone-dial 555-4523, press the following keys:



USING A POUND AND ASTERISK

When calling some phone systems or beeper systems, a pound tone or asterisk tone may be required. To incorporate a pound tone within the dial-out phone number, press **SET** at the appropriate position within the phone number. To incorporate an asterisk tone within the dial-out phone number, press **WHAT** within the phone number.

DELETING A PHONE NUMBER

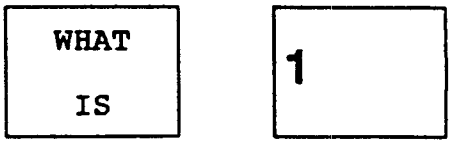
To delete a telephone number from memory, press **SET**, the Phone number, then **ENTER**.

For example, to delete Phone 4 from memory, press the following keys:

CHECKING A DIAL-OUT TELEPHONE NUMBER

To check a telephone number, press **WHAT IS**, then the Phone number you want to check. The OMA-P1100 will state the telephone number.

For example, to check Phone 1, press the following keys:



The unit will say "One, two, one, five, five, five, five, eight, three, seven, nine."

When you check a telephone number that is tone-dialed or has a programmed pause, the OMA-P1100 will beep where the PAUSE/TONE key was pressed. For example, to check Phone 2 in SETTING A DIAL-OUT TELEPHONE NUMBER, press **WHAT IS** then 2. The OMA-P1100 will beep, then say "One, two, one, five, five, five, five, nine, three, eight, seven." Another example is checking Phone 3 from USING THE PAUSE KEY. Press **WHAT IS**, then 3. The OMA-P1100 will beep, say "Nine," beep again, then say "One, two, one, five, five, five, five, four, five, two, three."

If there is no dial-out telephone number in the unit's memory, it will say "No number. For example, to check Phone 4 after it has been deleted, press **WHAT IS**, then 4. The OMA-P1100 will say "No number."

When you check a telephone number, you will also be told if the corresponding Alert input is disabled (see page 25). That is, when you press **WHAT IS**, then 1, the OMA-P1100 will say "Off" if Alert #1 is disabled, then state Phone 1. If Alert #1 is enabled, the P1100 will just state the Phone number.

THE TEMPERATURE LIMITS AND ALARMS

The temperature limits are the high and low readings at the temperature sensor which will cause the OMA-P1100 to automatically dial-out with an alarm message. The range of the temperature probe is +0° F to +128° F.

HINT:

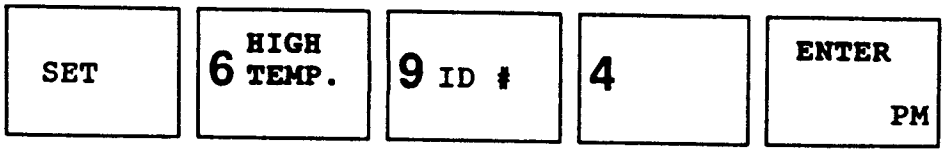
Do not set the limits too close to the normal room temperature. Minor changes in temperature would cause frequent and unnecessary alarm dial-outs.

PROGRAMMING THE HIGH TEMPERATURE LIMIT

The high temperature limit is the high reading at the temperature probe that will cause a dial-out. The OMA-P1100's alarm message is "The temperature is high." Until you program in your own value, the unit has a high limit of +100° F.

To program the high temperature limit, press **SET**, then **HIGH TEMP.** Next, press the keys for temperature limit, then **ENTER.**

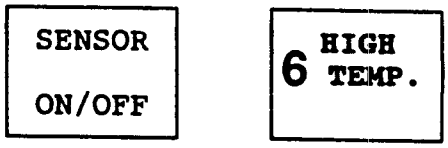
For example, to program the high temperature limit to be 94° F, sequentially press the following keys:



THE HIGH TEMPERATURE ALARM

The high temperature alarm causes the OMA-P1100 to dial-out when the temperature exceeds the high temperature limit. It is automatically enabled when the unit is initially activated.

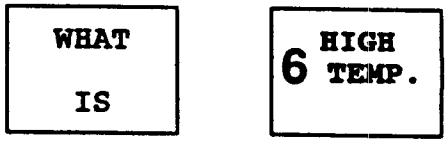
To disable the high temperature alarm, press **SENSOR ON/OFF** and **HIGH TEMP.** The OMA-P1100 will say "Off."



To re-enable the high temperature alarm, press **SENSOR ON/OFF,** then **HIGH TEMP.** The unit will say "On."

CHECKING HIGH TEMPERATURE LIMIT AND ALARM STATUS

Check the programmed value of the high temperature limit and the status of the alarm by pressing **WHAT IS,** then **HIGH TEMP.**



If the alarm has been disabled, the OMA-P1100 will say "Off," then state the programmed high temperature limit. If the alarm is enabled, the unit will just state the high temperature limit.

Referring to the example in PROGRAMMING THE HIGH TEMPERATURE LIMIT, the OMA-P1100 will say "Ninety-four degrees."

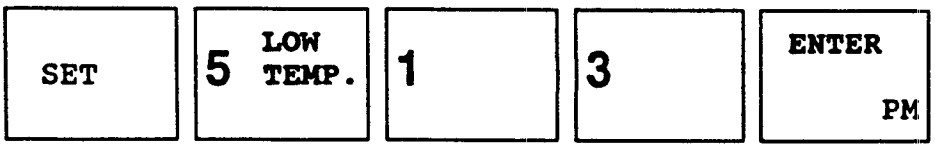
PROGRAMMING LOW TEMPERATURE LIMIT

The low temperature limit is the low reading at the temperature probe that will cause a dial-out. The OMA-P1100's alarm message is "The

temperature is low." Until you program in your own value, the unit has a low temperature limit of +10° F.

To program the low temperature limit, press **SET**, then **LOW TEMP.** Next, press the keys for the temperature limit, then press **ENTER.**

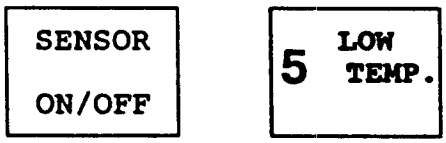
For example, to set the low temperature limit to be 13° F, press the following keys:



LOW TEMPERATURE ALARM

The low temperature alarm causes the OMA-P1100 to dial-out when the temperature exceeds the low temperature limit. It is automatically enabled when the unit is initially activated.

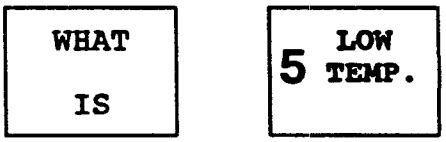
To disable the low temperature alarm, press **SENSOR ON/OFF** and **LOW TEMP.** The OMA-P1100 will say "Off."



To re-enable the low temperature alarm, press **SENSOR ON/OFF,** then **LOW TEMP.** The unit will say "On."

CHECKING LOW TEMPERATURE LIMIT AND ALARM STATUS

Check the programmed value of the low temperature limit and the status of the alarm by pressing **WHAT IS,** then **LOW TEMP.**

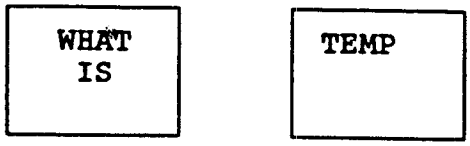


If the alarm is disabled , the OMA-P1100 will say "Off," then state the programmed low temperature limit. Otherwise, the unit will just state the low temperature limit.

For example, to check the low temperature limit programmed in PROGRAMMING THE LOW TEMPERATURE LIMIT, press **WHAT IS,** the **LOW TEMP.** The unit will say "Thirteen degrees."

OBTAINING A CURRENT TEMPERATURE REPORT

By pressing **WHAT IS**, then **TEMP.**, you can find out the current temperature at the temperature probe's location. It is automatically updated by the OMA-P1100 as conditions change.



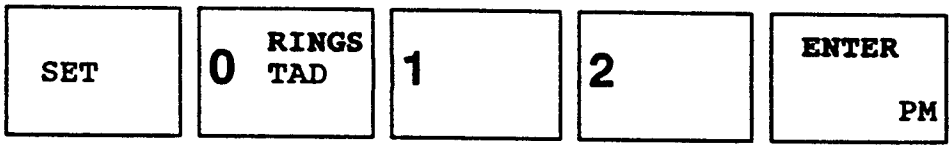
THE RINGS UNTIL ANSWER AND TAD COMPATIBILITY

The *Rings Until Answer* are the number of rings that must occur before the OMA-P1100 will answer the telephone in response to a call-in. The number of rings can be from 1 to 199. Until you program your own value, the *Rings Until Answer* is set to 4.

PROGRAMMING THE RINGS UNTIL ANSWER

To program this number, press **SET**, then **RINGS**. Press the key(s) corresponding to the number of rings desired, then press **ENTER**.

For example, to program the number of rings to be 12, press **SET**, then **RINGS**, **1**, **2**, then **ENTER**.



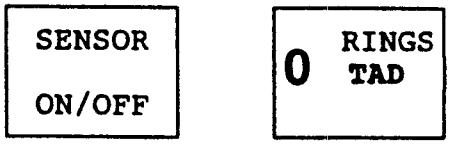
TELEPHONE ANSWERING DEVICE COMPATIBILITY

The OMA-P1100 can be used on the same telephone line with a telephone answering device (TAD), such as an answering machine or modem.

HOW TO SET TAD

Program the number of rings until answer on the OMA-P1100 higher than that on your answering device. For example, set the OMA-P1100 rings for 6 and the answering device rings for 4.

Set the TAD feature on. To enable the TAD, press SENSOR ON/OFF and then TAD. The OMA-P1100 will say "On."



This function is automatically disabled when the unit is initially activated. If the unit is not going to be operated on the same phone line with another answering device, there is no need to program the TAD.

To disable the TAD, just repeat the above procedure so that the OMA-P1100 says "Off."

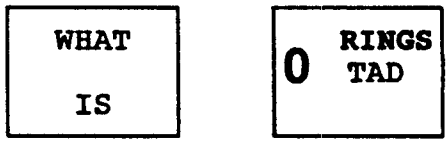
HOW TAD WORKS

When calling in for a status report, your answering device will answer the phone first, bypassing the OMA-P1100. When you hang up and call again within the next three minutes, the OMA-P1100 will answer on the first or second ring, bypassing the answering device.

When acknowledging an alarm by calling back, the OMA-P1100 will answer on the first or second ring.

CHECKING RINGS UNTIL ANSWERED AND TAD COMPATIBILITY

To check the number of *Rings Until Answer*, press **WHAT IS**, then **RINGS**.



If TAD is disabled, the OMA-P1100 will say "Off," then state the *Rings Until Answer*. If the TAD compatibility is enabled, the unit will just state the *Rings Until Answer*.

Referring to the example in PROGRAMMING THE RINGS UNTIL ANSWER, OMA-P1100 will say "Off. Twelve."

MONITORING SOUND

The **SOUND/LISTEN TIME** key has two functions. It is used to program the amount of time you can *listen-in* through the microphone probe. It is also used to disable the high sound alarm.

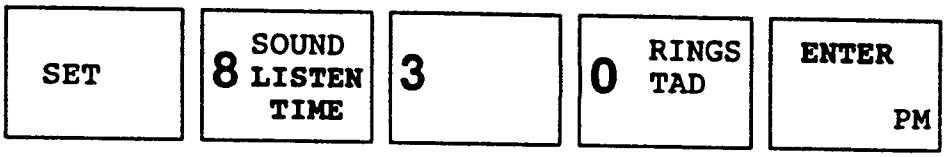
THE LISTEN-IN TIME

Listen-in time is the amount of time you can listen to the activities at the microphone's location. The range is from 1 to 199 seconds. Until you set the *listen-in time*, it will be 10 seconds.

PROGRAMMING LISTEN-IN TIME

Program the *listen-in time* by pressing **SET**, then **LISTEN TIME**. Next, sequentially press the keys corresponding to the number of seconds of *listen-in time*. Finally, press **ENTER**.

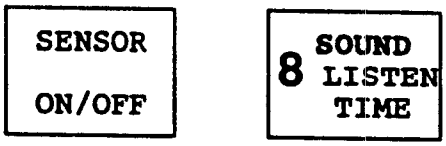
For example, to program the *listen-in time* to be 30 seconds, you would sequentially press the following keys:



THE HIGH SOUND ALARM

The high sound alarm causes the OMA-P1100 to dial-out when the current sound level suddenly exceeds the normal sound level. This increased sound level must exist for at least ten seconds. The alarm is automatically enabled when the unit is initially activated.

To disable this function, press **SENSOR ON/OFF**, then **SOUND**. The unit will say "Off."

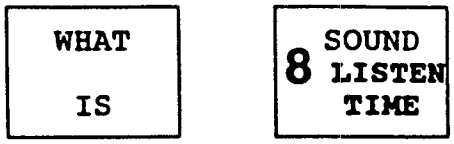


To re-enable the high sound alarm, press **SENSOR ON/OFF**, then **SOUND**. The OMA-P1100 will say "On."

Disabling the high sound alarm <u>will not</u> affect the OMA-P1100's listen-in function.

CHECKING LISTEN-IN TIME AND HIGH SOUND ALARM

To check the duration of *listen-in time* and the status of the high sound alarm, press **WHAT IS**, then **LISTEN TIME**.



If the alarm is enabled, the OMA-P1100 will say "Off," then state the *listen-in time*. If the alarm is enabled, the unit will just state the *listen-in time*.

Referring to the example in PROGRAMMING LISTEN-IN TIME, the OMA-P1100 will say "Thirty seconds."

AC POWER FAILURE

The **ELECT** key has two functions. It is used to program the amount of continuous time a power failure must exist before causing an alarm dial-out. It is also used to change the on/off status of the power failure alarm.

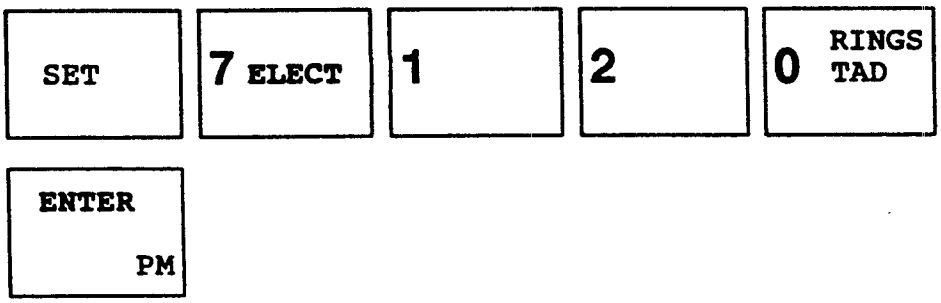
AC POWER FAILURE RECOGNITION TIME

The *recognition time* is the amount of continuous time (in seconds) that a power failure must exist before causing an alarm dial-out. It can be from 1 to 199 seconds.

PROGRAMMING THE RECOGNITION TIME

To program the *recognition time*, press **SET**, then **ELECT**. Sequentially press the keys corresponding to the number of continuous seconds an AC power failure should exist before a power failure dial-out. Finally, press **ENTER**.

For example, to set the *recognition time* to be 120 seconds, sequentially press the following keys:

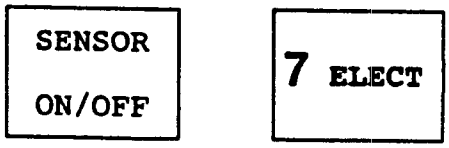


If you do not program a *recognition time*, the OMA-P1100 will automatically set it to be 100 seconds.

AC POWER FAILURE ALARM

The power failure alarm causes the OMA-P1100 to dial-out when the AC power fails for a user-programmed period of time (see AC POWER FAILURE RECOGNITION TIME). It is automatically enabled when the unit is initially activated.

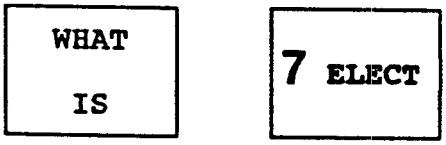
To disable the power failure alarm, press **SENSOR ON/OFF**, then **ELECT.** The unit will say "Off."



To re-enable the AC power failure alarm, press **SENSOR ON/OFF**, then **ELECT.** The OMA-P1100 will say "On."

CHECKING RECOGNITION TIME AND ALARM STATUS

Check the *recognition time* and the power failure alarm status by pressing **WHAT IS**, then **ELECT.** If the alarm is disabled, the OMA-P1100 will say "Off," then state the *recognition time*. Otherwise, the P1100 will just state the *recognition time*.

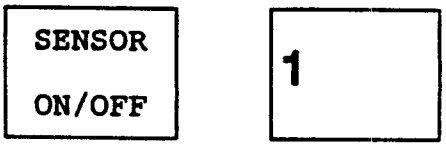


Referring to the example in PROGRAMMING THE RECOGNITION TIME, the unit will say "One hundred-twenty seconds."

DISABLING/ENABLING THE ALERT INPUTS

An alert input alarm causes the OMA-P1100 to dial-out when the status of Alerts #1, #2, or #3 changes for at least 200 milliseconds or when the status of Alert #4 changes for at least 3 seconds. The alert input monitoring is automatically enabled when the unit is initially activated.

To disable an alert input alarm, press **SENSOR ON/OFF**, then the input number (1, 2, 3, or 4). The unit will say "Off." For example, to disable Alert #1, press the following keys:



The OMA-P1100 will say "Off."

To re-enable an alert input alarm, press **SENSOR ON/OFF**, then the input number (1, 2, 3, or 4). The OMA-P1100 will say "On."

Please note that if you disable Alert #4 when an auxiliary temperature probe is attached to the terminal, the function of the probe will not be affected.

When you check a telephone number, you will also be told if the corresponding Alert input is off. That is, when you press **WHAT IS**, then 1, the OMA-P1100 will say "Off" if Alert #1 is disabled, then state Phone 1. If Alert #1 is enabled, the P1100 will just state the Phone number.

THE SECURITY CODE

The OMA-P1100 has a programmable security code. It ensures that unauthorized personnel cannot readily tamper with the unit's programming or turn off the unit. The security code can be any number from 1 to 9999.

LOCKING THE KEYBOARD

To set the security code, press **LOCK**, then **KEY**. The P1100 will say "Enter security code." Next, sequentially press the keys corresponding to the security code. Finally, press **ENTER**.

For example, to set the security code to be 33, press **LOCK, KEY, 3, 3,** then **ENTER**.

The keyboard will now be locked. Only someone who knows the security code will be able to unlock the keyboard. Anyone who tries to change any of the programming or tries to turn the unit off will receive the "Error 2" message.

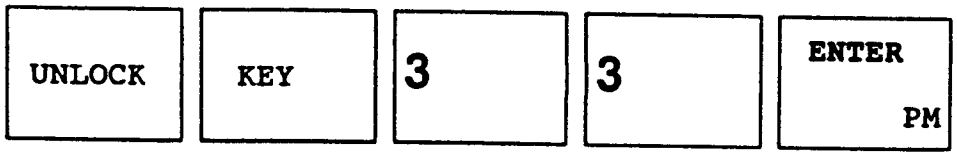
IMPORTANT!

Please note that unauthorized personnel are stopped from changing any of the OMA-P1100's programmable parameters. They are **not** stopped from using **WHAT IS** to find out any information. Additional protection may be necessary.

UNLOCKING THE KEYBOARD

To unlock the keyboard, press **UNLOCK**, then **KEY**. The P1100 will say "Enter security code." Next, sequentially press the keys corresponding to the security code. Finally, press **ENTER**. The unit will say "Okay."

Continuing with the example above, you would unlock the keyboard by pressing the following keys:



The OMA-P1100 will say "Okay."

NOTE:

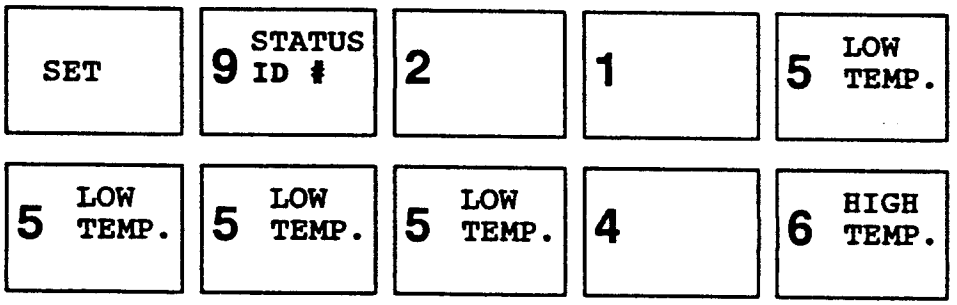
If you enter the wrong security code, the unit will say "Error 2" after you press **ENTER**. If you forget your security code, unplug the AC transformer and disconnect the battery. Next, reconnect the battery and plug the AC transformer back into the outlet. You will have to reprogram all parameters.

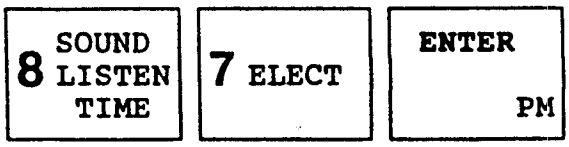
THE ID NUMBER

The unit's ID number can be from 1 to 16 digits long. It is usually the telephone number where the unit is located. The ID number should be programmed after all sensors are wired to the P1100 in their normal state. This establishes the normal condition of the alert input in the OMA-P1100's memory.

SETTING THE ID NUMBER

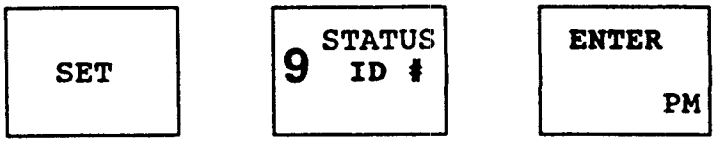
To set the ID number, press **SET**, then **ID #**. Next, press the keys corresponding to the digits of the ID number. Finally, press **ENTER**. For example, to set the unit's ID number to be 215-555-4687, press the following keys:





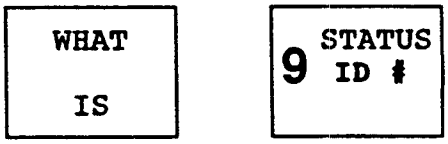
DELETING THE ID NUMBER

To delete the ID number from memory, press **SET**, **ID #**, then **ENTER**.



CHECKING THE I.D. NUMBER

To check the identification number, press **WHAT IS**, then **ID #**.



The unit will repeat its ID number, as well as give you a status report, which follows:

STATEMENT	COMMENT
Hello	
This is telephone number _____	(the ID number)
The time is _____	(current time)
Alert condition _____	OKAY 1 EXISTS 2 EXISTS 3 EXISTS 4 EXISTS
The temperature is _____ degrees	(temp. at the unit)
(temperature alarm condition)	OKAY THE TEMPERATURE IS HIGH THE TEMPERATURE IS LOW
Two*	
The temperature is _____ degrees*	(temp. at the auxiliary probe)
The electricity is _____	ON OFF
(back-up battery condition)	OKAY BATTERY CONDITION LOW REPLACE BATTERIES
Sound level _____	OK HIGH
	NO NUMBER**

* *only if the optional second temperature probe is attached.*
** *only if no dial-out telephone numbers programmed*

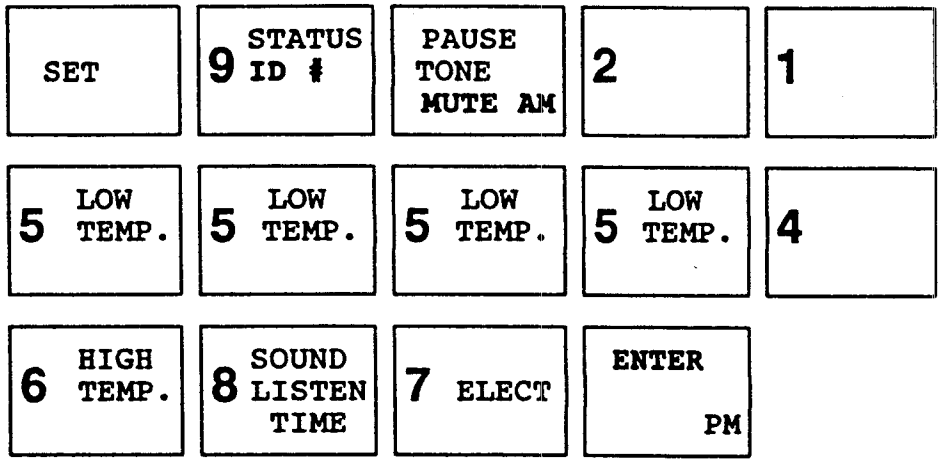
Referring to the example in SETTING THE ID NUMBER, the OMA-P1100 would say "Hello. This is telephone number two, one, five, five, five, five, four, six, eight, seven," then give the rest of the status report.

If there is no ID number programmed, the unit will say "No number" after the phrase "This is telephone number."

MUTING THE OMA-P1100 DURING DIAL-OUT AND CALL-IN

The OMA-P1100 has a programmable mute as a security feature. The mute will only be in effect during dial-out and call-in; in other words, it will not affect programming the unit. The mute turns off the local speaker when the OMA-P1100 is dialing out with an alarm or accepting an incoming phone call.

To program the mute, press **MUTE** before you program the ID number. For example, to mute the speaker while programming the ID number to be 215-555-4687, press the following keys:



When you check the ID number, the OMA-P1100 will say "Hello. This is telephone number," beep to indicate that the mute is programmed, then continue on with the rest of the status report.

HINT:

Sometimes, people need use the OMA-P1100 to monitor doors and/or windows. They find that they cannot leave the OMA-P1100's location without tripping an alert condition. To leave the OMA-P1100's location, press **WHAT IS**, then **ID #**. The OMA-P1100 will begin giving the status report, which takes 30 seconds. During those 30 seconds, the P1100 will not sense any changes in the alert inputs, though it will still acknowledge high/low temperature and AC power failure. This gives you 30 seconds to leave the building without tripping an alert condition.

CHAPTER 3
OPERATING FUNCTIONS

ON AND OFF KEYS

The last two keys in the second row of the P1100's keyboard are ON and OFF. They are used to activate and deactivate the OMA-P1100.

When you press ON, the *SYSTEM ON* light will begin to glow. The unit will say "Hello" or beep if it is already on.

This state enables the OMA-P1100 to receive incoming calls and automatically dial-out in the event of the failure of a monitored condition. The red light will always glow while the OMA-P1100 is in the activation state.

When you press OFF, the OMA-P1100 will say "Have a good day." and the *SYSTEM ON* light will stop glowing. All functions, except battery back-up, are disabled. The batteries will still recharge if the AC transformer is plugged into 110 VAC outlet.

It is recommended that you do not press OFF unless it is absolutely necessary. Full power is still consumed by the unit, though it cannot be programmed or interrogated. Also, the unit cannot dial-out with an alarm.

MICROPHONE PROBE

The built-in microphone has three important functions:

- ♠ It will continuously listen for a high sound level that increases 10 decibels over the normal sound level at a frequency of 1000 Hertz or more. If this sound level exists for 10 consecutive seconds or longer (such as a smoke alarm or burglar alarm), then the OMA-P1100 will dial-out with an alarm message.

- ♠ During an automatic dial-out, the microphone allows four 4-second intervals to *listen-in* to the OMA-P1100's location.

- ♠ During a call-in, the microphone allows a *listen-in* for a user-programmed interval from 1 to 199 seconds.

The location of the audible alarm in relation to the microphone is extremely important. Normally, the P1100 and the audible alarm must be in the same room. The maximum distance can vary considerably depending on the alarm, the acoustics, and the size of the room.

ALARM CHECK

After the microphone probe and the alarm have been positioned, activate the alarm for 10 seconds. The unit should say "Sound level high" and start its dial-out procedure. Stop the alarm dial-out by pressing any key.

If the OMA-P1100 fails to respond, the microphone probe and the alarm must be moved closer together. **You should wait 60 seconds between tests.**

IMPORTANT!

The ability of the unit to react to an audible alarm must be checked upon installation and periodically verified!

Please note that short duration or intermittent alarm signals **may not** trigger the alarm dial-out.

THE CALL-IN STATUS REPORT

You can call-in to the OMA-P1100 anytime to get a status report. The unit will answer the call-in after the number of rings programmed as *Rings Until Answer*. The unit will say the following:

STATEMENT	COMMENT
Hello	
This is telephone number _____	(the ID number)
The time is _____	(current time)
Alert condition _____	OKAY 1 EXISTS 2 EXISTS 3 EXISTS 4 EXISTS
The temperature is _____ degrees	(temp. at probe)
(temperature alarm condition)	OKAY THE TEMPERATURE IS HIGH THE TEMPERATURE IS LOW
Two*	
The temperature is _____ degrees*	(temp. at auxiliary probe)
The electricity is _____	ON OFF
(back-up battery condition)	OKAY BATTERY CONDITION LOW REPLACE BATTERY
Sound level _____	OK HIGH NO NUMBER**
Listen to the sound level for _____ seconds.	(listen-in for user-programmed time)

* *only if the optional second temperature probe is attached.*
** *only if no dial-out telephone numbers programmed*

After the listen-in, the OMA-P1100 will repeat the status report once more. At the end of the report, the OMA-P1100 will say "Have a good day," then disconnect from the telephone line.

AUTOMATIC DIAL-OUT

The OMA-P1100 will automatically dial-out to the four telephone numbers you had programmed into its memory when one or more of the following conditions occurs (assuming the alarms are enabled):

- The AC power goes off for the user-programmed interval (1 to 199 seconds). The OMA-P1100 will say "The electricity is off." every 15 seconds for a user-programmed period.

- The temperature varies beyond the high or low limits you have programmed. This will cause the alarm message "The temperature is high" or "The temperature is low," respectively.

- A high sound level occurs whose duration is 10 seconds or longer. The OMA-P1100 will say "Sound level high."

- The status of any of the four attached alert sensors changes for at least 200 milliseconds for Alerts #1, #2,and #3 and for at least 3 seconds for Alert #4. This will cause the alert message "Alert condition (1, 2, 3, or 4) exists."

The OMA-P1100 will announce the detected alarm condition locally through its speaker for thirty seconds, then start its automatic dial-out function. If the OMA-P1100 has been muted, it will still delay for 30 seconds before dialing-out.

The alarm message for AC power failure will be announced locally every 15 seconds for a user-programmed interval (see Chapter 2, page 23) before dial-out occurs. If the AC recognition is 15 seconds or less, you **may** not get a locally spoken message. After the recognition time has elapsed, the OMA-P1100 will instantly dial-out, without waiting 30 seconds.

The OMA-P1100 will dial Phone 1 and say "Hello. This is telephone number (the ID number)." It will state the alarm message, then allow a 4-second listen-in. This sequence will be repeated three more times. **The OMA-P1100 begins talking after the last digit of the Phone number is dialed.** Therefore, when you answer the phone, the OMA-P1100 could be at any point in its four repetitions, depending on how quickly you answer the phone.

After the fourth listen-in, the OMA-P1100 will say "Indicate you have received warning message" and pause for five seconds. During the five second pause, the unit will wait for a Touch-Tone acknowledgement. If the Touch-Tones are not received, the unit will then continue with "Dial telephone number (the I.D. number) within thirty seconds." Finally, the unit will disconnect from the telephone line.

The unit will then wait sixty seconds for an acknowledging call-back. If the alarm is not properly acknowledged, the P1100 will call Phone 2 and go through the same procedure. If there is no call-back, it will call Phone 3 and repeat the procedure. If that call is not acknowledged, the unit will call Phone 4. If there is no acknowledging telephone call, the OMA-P1100 will begin the entire procedure again, starting with Phone 1. If a certain Phone number is not programmed, the OMA-P1100 will skip to the next sequential programmed Phone number without a delay (e.g. if Phone 3 is not programmed, the P1100 will call Phone 4 if it does not receive a call-back from Phone 2).

This cycle can be stopped at any time by pressing any key.

NOTE:

If only one Phone number is in memory, the OMA-P1100 will dial-out to it fifteen times, then stop, in accordance with FCC regulations.

ACKNOWLEDGEMENT CALL-BACK

Locally - At any time during an alarm dial out, the alarm may be acknowledged by hitting any key on the keypad twice. This will stop the dial out procedure and the unit will indicate that the warning message was received by its ID number.

Touch-Tones - At the end of the dial-out alarm message, the unit will say "Indicate you have received warning message" and then pause for five seconds. During those five seconds of silence, you may acknowledge receipt of the alarm by pressing 5, 5, 5 on any Touch-Tone telephone. This will stop the dial-out procedure. When the OMA-P1100 receives the Touch-Tones 5, 5, 5, it will respond by saying "Warning message received by telephone number_____." and will disconnect from the phone line. If the unit does not receive these touch tones, it will continue by stating "Dial telephone number (ID number) within 60 seconds".

Call back - To acknowledge an alarm dial-out, you must call the unit back. The first ring of your call-back must occur within 60 seconds after the OMA-P1100 completes its alarm call and hangs up.

If TAD is enabled, the phone must ring two times. The OMA-P1100 will therefore answer the telephone before the TAD device. **If TAD is disabled**, the phone must ring 10 times. This is a precaution against a miscellaneous acknowledging the alarm.

When the OMA-P1100 answers the call-back, it will give a status report (see CHECKING THE ID NUMBER, page 28), then say "Warning message received by" and state the telephone number that

acknowledged the alarm condition. It will discontinue further dialing-out for this alarm condition.

For example, your unit (ID number 215-555-4086) dials-out with an alert condition 3 that occurred at 3:47 AM. The temperature is 75°. All other conditions are normal. There is no auxiliary temperature sensor connected to the unit. Someone at Phone 1 (1-215-555-4521) calls-in to acknowledge the alert condition. He or she would hear the following message:

Hello.

This is telephone number two, one, five, five, five, five, four, zero, eight, six.

The time is three, forty-seven AM.

Alert condition three exists.

The temperature is 75 degrees.

Okay.

The electricity is on.

Sound level okay.

Warning message received by one, two, one, five, five, five, five, four, five, two, one.

Once an alarm condition has been acknowledged, the OMA-P1100 will return to normal functioning. The only time the OMA-P1100 will dial out again is if that condition disappears and then occurs again, or if any other alarm occurs.

After an alarm has occurred and been acknowledged, "Warning message received by_____." will exist within the status report. This will be present until the alarm condition goes away.

APPENDICES

APPENDIX A: EXPLANATION OF KEYS

KEY	FUNCTION
LOW TEMP.	-When used with **SET**, programs low temperature limit into memory. -When used with **SENSOR ON/OFF**, turns ON/OFF the low temperature alarm. -When used with **WHAT IS**, states low temperature limit and condition of the low temperature alarm.
HIGH TEMP.	-When used with **SET**, programs high temperature limit into memory. -When used with **SENSOR ON/OFF**, turns ON/OFF the high temperature alarm. -When used with **WHAT IS**, states high temperature limit and the condition of the high temperature alarm.
ELECT	-When used with **SET**, programs the amount of time (from 1-199 seconds) the OMA-P1100 will wait before calling out with a power failure alarm. -When used with **SENSOR ON/OFF**, turns ON/OFF the power failure alarm. -When used with **WHAT IS**, states the amount of time programmed and condition of power failure alarm (ON or OFF).
LISTEN TIME	-When used with **SET**, programs the amount of time (from 1-199 seconds) you can listen-in over the microphone probe. -When used with **WHAT IS**, states amount of listen-in time in seconds and the condition of the high sound alarm.
SOUND	-When used with **SENSOR ON/OFF**, turns the high sound alarm ON/OFF.
ON	-Used to activate the OMA-P1100 for all operating functions.
OFF	-Used to deactivate the OMA-P1100 and its operating functions.
PAUSE	-When used while entering a dial-out telephone number, programs the OMA-P1100 to pause while it accesses an outside telephone line.
TONE	-When used as the first digit of a dial-out telephone number, programs the OMA-P1100 to dial-out using touch-tone.

MUTE	-When used as the first digit the I.D. number, programs the OMA-P1100 to mute the speaker during call-in and dial-out.
AM	-When used while programming time, sets the time to be AM.
ID	-When used with **SET**, programs unit's identification number and sets normality of Alert inputs.
STATUS	-When used with **WHAT IS**, gives a full status report.
RINGS	-When used with **SET**, programs the number of rings before the unit answers the telephone. -When used with **WHAT IS**, states the number of rings before the unit will answer the telephone.
TAD	-When used with **SENSOR ON/OFF**, turns ON/OFF units compatibility with a telephone answering device.
TEMP	-When used with **WHAT IS**, states the current temperature.
LOCK	-When used with **KEY**, programs the security code and locks the OMA-P1100.
UNLOCK	-When used with **KEY**, unlocks the OMA-P1100.
WHAT IS	-Used in interrogation of units.
SET	-Used in programming of units.
SENSOR ON/OFF	-Used to turn the various sensors ON or OFF.
ENTER	-Used in programming of units to enter information into OMA-P1100's memory.
PM	-When used while programming time, sets the time to be PM.
TIME	-When used with **SET**, programs the time into the OMA-P1100. -When used with **WHAT IS**, states the current time.
KEY	-When used with LOCK, programs the keyboard lock code and locks the keyboard. -Used with **UNLOCK** to unlock the keyboard.

APPENDIX B: VALID KEYBOARD SEQUENCES

NOTE: The commands in brackets [] are optional.

INTERROGATION COMMAND SEQUENCES

WHAT IS	1	*Phone 1*
WHAT IS	2	*Phone 2*
WHAT IS	3	*Phone 3*
WHAT IS	4	*Phone 4*
WHAT IS	LOW TEMP	*low temp. limit*
WHAT IS	HIGH TEMP	*high temp. limit*
WHAT IS	LISTEN TIME	*listen-in time*
WHAT IS	ELECT	*AC recognition time*
WHAT IS	STATUS	*status report*
WHAT IS	RINGS	*rings until answer*
WHAT IS	TEMP	*temperature*
WHAT IS	TIME	*time*

PROGRAMMING COMMAND SEQUENCES

SET	LOW TEMP		[PAUSE]	(number)	ENTER	*low temp. limit*
SET	HIGH TEMP		[PAUSE]	(number)	ENTER	*high temp. limit*
SET	ELECT	(number)			ENTER	*recognition time*
SET	LISTEN TIME			(number)	ENTER	*listen-in time*
SET	ID #		[MUTE]	(number)	ENTER	*ID, Alert normality*
SET	TIME	(number)	AM		ENTER	*AM time*
SET	TIME	(number)			PM	*PM time*

SET	1	[TONE]	(number)	[PAUSE]	(number)	ENTER	*Phone 1*
SET	2	[TONE]	(number)	[PAUSE]	(number)	ENTER	*Phone 2*
SET	3	[TONE]	(number)	[PAUSE]	(number)	ENTER	*Phone 3*
SET	4	[TONE]	(number)	[PAUSE]	(number)	ENTER	*Phone 4*

ENABLING/DISABLING SENSORS

SENSOR ON/OFF	1	ENTER	*Alert #1 alarm*
SENSOR ON/OFF	2	ENTER	*Alert #2 alarm*
SENSOR ON/OFF	3	ENTER	*Alert #3 alarm*
SENSOR ON/OFF	4	ENTER	*Alert #4 alarm*
SENSOR ON/OFF	LOW TEMP.	ENTER	*low temp. alarm*
SENSOR ON/OFF	HIGH TEMP.	ENTER	*high temp. alarm*
SENSOR ON/OFF	ELECT	ENTER	*AC failure alarm*
SENSOR ON/OFF	SOUND	ENTER	*high sound alarm*
SENSOR ON/OFF	TAD	ENTER	*TAD compatibility*

DELETING PARAMETERS

SET	ID #	ENTER	*ID number*
SET	1	ENTER	*Phone 1*
SET	2	ENTER	*Phone 2*
SET	3	ENTER	*Phone 3*
SET	4	ENTER	*Phone 4*

KEYBOARD SECURITY CODE

LOCK	KEY	(number)	ENTER	*lock keyboard*
UNLOCK	KEY	(number)	ENTER	*unlock keyboard*

APPENDIX C: ACCESSORIES

The sensors listed are the most commonly used input devices. However, there is a virtually unlimited variety of sensor/switch input devices available at commercial or industrial electrical supply houses. They can provide a device to monitor virtually any condition that might be required for your business, industrial or residential needs. Contact OMEGA's Sales department at 1-800-82-66342 (1-800-TC-OMEGA) for more information.

MODEL NUMBER	SENSOR/SWITCH
OMA-PX04	Water Detection Sensor
OMA-PX05	Remote Temperature Sensor
OMA-PX06	Magnetic Reed Switch
OMA-PX22	Temperature Switch

APPENDIX D: APPLICATIONS

There are many ways to apply the OMA-P1100 to your needs. Listed below are some of the ways our customers have used the OMA-P1100, employing the built-in sensors for power failure, high sound level, and temperature, plus the additional sensors listed in Appendix C.

PURPOSE	LOCATION	SENSORS/INPUTS
SECURITY	RESIDENCES VACATION HOMES MOBILE HOMES BUSINESSES OFFICES BUILDINGS	MAGNETIC REED SWITCHES PASSIVE INFRARED MOTION DETECTORS
TEMPERATURE	RESIDENCES OFFICES FACTORIES REFRIGERATORS HVAC SYSTEMS GREENHOUSES ANIMAL BUILDINGS POULTRY BUILDINGS FANS/BLOWERS COMPUTER ROOMS TELECOM ROOMS	REMOTE TEMPERATURE SENSORS TEMPERATURE SWITCH TEMPERATURE SWITCHES POWER FAILURE ALARM
FIRE	RESIDENCES OFFICES FACTORIES REFRIGERATORS HVAC SYSTEMS ANIMAL BUILDINGS POULTRY BUILDINGS COMPUTER ROOMS TELECOM ROOMS	SMOKE/FIRE ALARMS

PURPOSE	LOCATION	SENSORS/INPUTS
HUMIDITY	LABORATORIES TEST CHAMBERS FACTORIES GREENHOUSES	HUMIDISTATS
FUMES/GASES	MINES FACTORIES LABORATORIES BOATS/SHIPS CHEMICAL PLANT FAN VENTILATORS ANIMAL BUILDINGS	FUME/GAS ALARM* POWER FAILURE ALARM
LIQUID LEAKS AND LEVELS	BOATS/SHIPS PUMPS/VALVES BASEMENTS STORAGE TANKS COMPUTER ROOMS WATER TREATMENT FACILITIES	WATER DETECTION SENSOR POWER FAILURE ALARM

* *not available from OMEGA*

APPENDIX E: ERROR MESSAGES

There are two possible error messages that the OMA-P1100 will give you if you make a detectable error in programming.

NUMBER LIMIT	Too many digits entered for that particular memory location.
ERROR 1	Keys pressed in wrong order.
ERROR 2	Wrong keyboard lock code or no code entered.
ERROR HIGH	A value entered was too high.
ERROR LOW	A value entered was too low.

The OMA-P1100 cannot detect all errors, especially ones dependent on your programming. For example, it has no way of knowing whether you have programmed the correct telephone numbers. Work carefully and check each entry by using **WHAT IS**.

APPENDIX F: MAINTENANCE

The following procedure is a condensed version of our factory test. It should be performed upon installation and repeated periodically.

1) Check to verify the correct telephone numbers for automatic dial-out are in memory by pressing **WHAT IS** and the Phone number (1, 2, 3, or 4).

2) Test the dial-out ability of the OMA-P1100 by removing the 110 VAC power supply from the wall outlet, with the batteries installed. The unit should dial-out with its "The electricity is off" alarm message after user-programmed time.

3) Test the alert inputs by changing the status of the sensors connected to each alert terminal for at least 200 milliseconds. To do so, place one end of a small piece of wire on the alert terminal and place the other end on *GND*.

4) Check the high sound alarm by pressing the test button on your smoke alarm until the OMA-P1100 reacts with an automatic dial-out (approximately 10 seconds).

5) After checking the dial-out ability, test the batteries by leaving the AC plug out for at least 5 minutes. After that amount of time has elapsed, press **WHAT IS** and **STATUS** to obtain a status report. If the battery condition is fine, you will just get a regular status report. Otherwise, you will get a status report with a "Battery condition low" alarm message. If the batteries are too low, you will get the "Replace battery" message.

6) Test the call-in feature by calling the unit to get a status report and *listen-in*.

APPENDIX G: TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE
Unit does not talk.	-Unit not ON. -Batteries not installed. -Wall transformer not plugged into a 110 VAC outlet.
Unit does not dial out automatically.	-No telephone numbers entered in Phone 1 through Phone 4. -Unit not ON. -Telephone jack not connected. -Wall transformer not plugged into a 110 VAC outlet.
Unit does not answer incoming calls after the calls after the prescribed number of rings.	-Wall transformer not plugged into 110 VAC outlet. -Incompatibility with telephone system. -Unit not ON. -Telephone jack not connected. -Batteries not installed.
Unit does not function normally.	-Unit programmed or installed incorrectly. -Unit was exposed to power surge through power and/or telephone lines. -Sensors and/or wiring damaged or defective.

Invalid low temperature alert.	-There is a bad or broken temperature connection between the OMA-P1100 and the temperature sensor.

Before sending your OMA-P1100 in for service, do the following:

1) Carefully reread the instruction manual to be certain that all connections and programming were done correctly.

2) Reset the OMA-P1100 using the following procedure:
   a) Remove the AC power supply from the 110 VAC wall outlet and remove the batteries.
   b) Allow the unit to remain unpowered for 1 minute.
   c) Restart and reprogram the OMA-P1100 in accordance with the instructions in this manual.
   d) Retest all functions and sensors.

APPENDIX H: RETURNING YOUR UNITS FOR SERVICE

In the event that your OMA-P1100 does not function properly and you cannot reprogram it, we suggest that you do the following:

1) Refer to Appendix G, **TROUBLESHOOTING.**

2) Carefully write down your observations of the OMA-P1100's malfunctioning.

3) Call OMEGA's Customer Service at 1-800-622-2378 (1-800-622-BEST) if any instructions are not clear or if you have any questions.

If the unit must be sent to us for servicing, do the following:

1) Unplug the AC power supply from the wall outlet, remove the batteries, and disconnect all sensors from the alert inputs.

2) Carefully pack unit into its original container or a sturdy shipping box. Be certain to use sufficient cushioning material to avoid damage in transit.

3) Call OMEGA's Customer Service at 1-800-622-BEST to obtain an authorized return (AR) number. This number should then be marked on the outside of the return package.

4) To avoid processing delays, be sure to include the following:
   a) Your name, address,and phone number
   b) Model and Serial numbers
   c) A letter explaining the P1100's problem

MADE IN USA

WARRANTY/DISCLAIMER

OMEGA warrants this unit to be free of defects in materials and workmanship and to give satisfactory service for a period of **13 months** from date of purchase. OMEGA Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product. If the unit should malfunction, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective it will be repaired or replaced at no charge. However, this WARRANTY is VOID, if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear or which are damaged by misuse are not warranted. These include contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. Nevertheless, OMEGA only warrants that the parts manufactured by it will be as specified and free of defects.

OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY / DISCLAIMER language, and additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA ENGINEERING Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. P.O. number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS OR **CALIBRATION,** consult OMEGA for current repair/calibration charges. Have the following information available BEFORE contacting OMEGA:

1. P.O. number to cover the COST of the repair/calibration,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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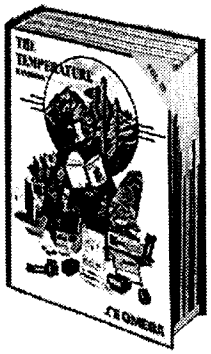
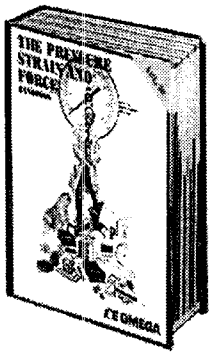


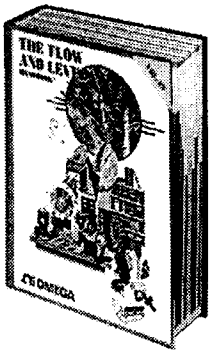
TEMPERATURE

- Thermocouple, RTD & Thermistor Probes, Connectors, Panels & Assemblies
- Wire: Thermocouple, RTD & Thermistor
- Calibrators & Ice Point References
- Recorders, Controllers & Process Monitors
- Infrared Pyrometers



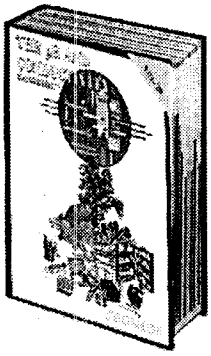
PRESSURE, STRAIN AND FORCE

- Transducers & Strain Gages
- Load Cells & Pressure Gauges
- Displacement Transducers
- Instrumentation & Accessories



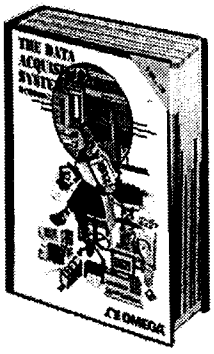
FLOW/LEVEL

- Rotameters, Gas Mass Flowmeters & Flow Computers
- Air Velocity Indicators
- Turbine/Paddlewheel Systems
- Totalizers & Batch Controllers



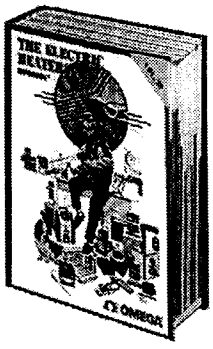
pH/CONDUCTIVITY

- pH Electrodes, Testers & Accessories
- Benchtop/Laboratory Meters
- Controllers, Calibrators, Simulators & Pumps
- Industrial pH & Conductivity Equipment



DATA ACQUISITION

- Data Acquisition and Engineering Software
- Communications-Based Acquisition Systems
- Plug-in Cards for Apple, IBM & Compatibles
- Datalogging Systems
- Recorders, Printers & Plotters



HEATERS

- Heating Cable
- Cartridge & Strip Heaters
- Immersion & Band Heaters
- Flexible Heaters
- Laboratory Heaters

ENVIRONMENTAL MONITORING AND CONTROL

- Metering & Control Instrumentation
- Refractometers
- Pumps & Tubing
- Air, Soil & Water Monitors
- Industrial Water & Wastewater Treatment
- pH, Conductivity & Dissolved Oxygen Instruments

M1049/0396