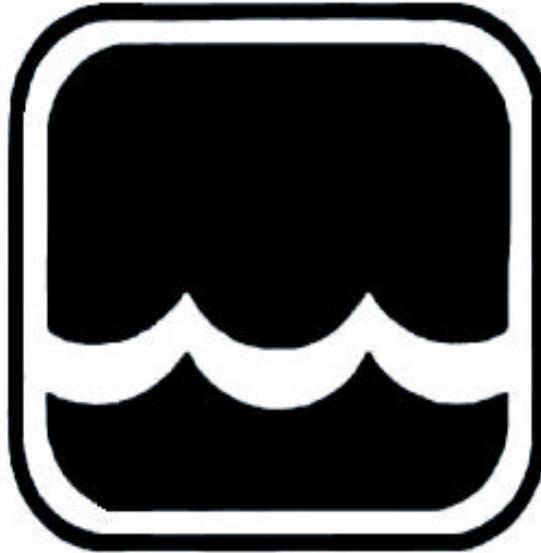




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**Instrumentation, Inc.**

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**Automatic Voice Dialer: AD200-1**



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## ***Congratulations!***

Thank you for purchasing Global Water Instrumentation, Inc. Model AD200-1, the single channel voice dialer that can be incorporated into hard wired or wireless security systems or used as a stand-alone unit. This versatile dialer can be easily expanded to operate in conjunction with an alarm, temperature or water level sensor, or any other sensor that can provide the appropriate trigger. The AD200-1 is compatible with continuous, normally closed (NC) dry contact or voltage sensors. It can be programmed to sequentially dial any combination of four standard telephone, cellular telephones, alpha/voice pagers and/or numeric pagers. The dialer features busy-line and no answer detection to ensure timely transmission of the recorded message of up to 16 seconds. This manual describes how to set up, install and operate the AD200-1. Please read the entire booklet before operating the dialer.

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### I) AD200-1 Checklist

- a) One (1) ea. Model AD200-1 Automatic Voice Dialer
- b) One (1) ea. 7-foot, 2-conductor jacket telephone cable with RJ11 plug attached
- c) One (1) ea. 7-foot jacketed, 4 conductor power/alarm cable
- d) One (1) ea. Instructional Manual

### II) Inspection

- a) Your AD200-1 unit was carefully inspected and certified by our Quality Assurance Team before shipping. If any damage has occurred during shipping, please notify Global Water Instrumentation, Inc. and file a claim with the carrier involved.

Use the checklist to ensure that you have received everything needed to operate the AD200-1.

### III) Product Summary

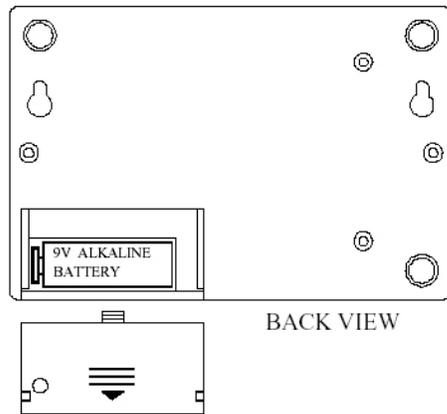
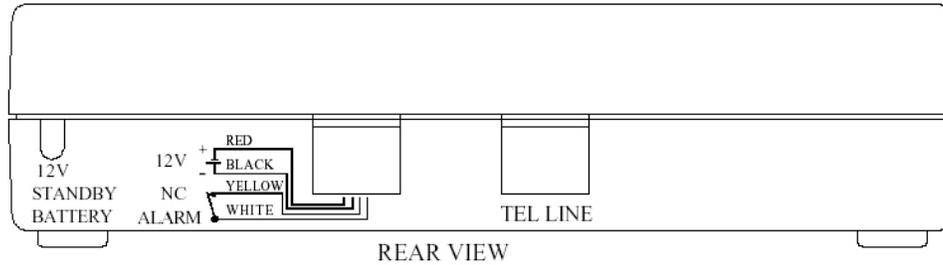
- 1. Non volatile memory for voice message and phone numbers.
- 2. Calls up to 4 phone numbers, any combination of telephones or pagers
- 3. Sends up to 16 second voice message to telephones or numeric code to pagers
- 4. Record your own message in any language
- 5. Easily change message and phone numbers without a programmer
- 6. Voice chip technology (no tape required)
- 7. Ability to program a pause and pound (#) tone in dialing sequence for pagers
- 8. Returns to call unanswered numbers
- 9. 2 X 16 character LCD window
- 10. Internal playback speaker for voice message
- 11. Programmable Exit and Entry delay
- 12. Internal 9V battery backup
- 13. Works with PBX or regular phone system
- 14. Tone or Pulse dialing
- 15. NC or voltage activation



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#### IV) Panel Displays

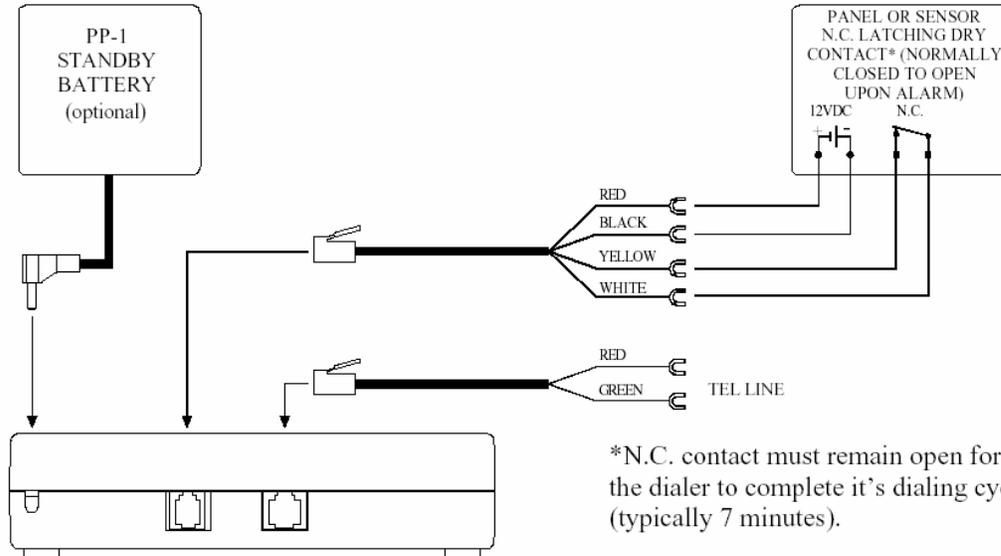




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## V) N.C. Dry Contact Installation Hookup



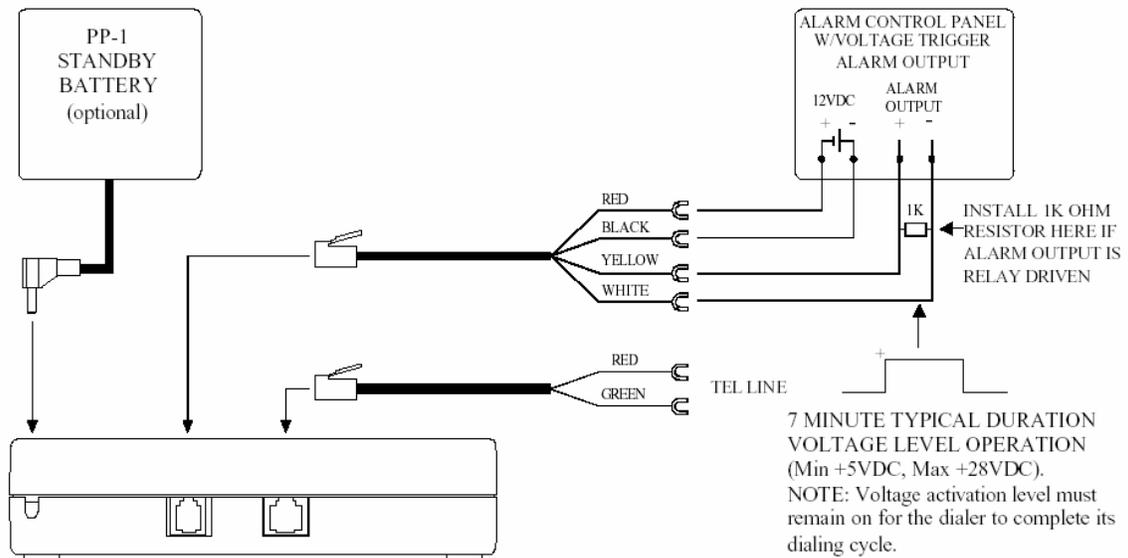
Make sure unit is set to "OFF" prior to wiring and phone line hook-up.

\*N.C. contact must remain open for the dialer to complete its dialing cycle (typically 7 minutes).

\*\*Match the power cables colored wires to the corresponding outputs on the alarm panel. Do the same for the telephone cable.

## VI) Voltage Level Activation Hookup

WHEN THE ALARM OUTPUT VOLTAGE IS RELAY DRIVEN, YOU MUST ADD A 1K RESISTOR ACROSS ALARM OUTPUT TERMINALS. HOOK UP DIALER AS SHOWN BELOW.



Make sure unit is set to "OFF" prior to wiring and phone line hook-up.

7 MINUTE TYPICAL DURATION VOLTAGE LEVEL OPERATION (Min +5VDC, Max +28VDC).  
NOTE: Voltage activation level must remain on for the dialer to complete its dialing cycle.

\*\*Match the power cables colored wires to the corresponding outputs on the alarm panel. Do the same for the telephone cable.



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### VII) Programming the Dialer

**IMPORTANT: Before operating the AD200-1, make sure wiring is correct and power is set within specified limits. Recording and data recall can be performed without connection to a telephone line. We strongly recommend that final testing be performed under simulated alarm conditions, and that confirmation of transmission be obtained from the numbers dialed.**

- a) Model AD200-1 stores and dials up to 4 telephone numbers and/or pager numbers. Each number may contain up to 28 digits, total digits include a “pause” for pagers and the ability to program the “pound” tone.

Once a connection is made, the dialer will deliver a recorded voice message of up to 16 seconds or a numeric code to each number stored. The dialer will repeat the voice message two times per call, to ensure that a full message is delivered. If the phone number is busy or not answered within 8 rings, the AD200-1 will automatically dial the next programmed number.

Assuming a continued activation state, the dialer will go through the numbers a second time, and call in an attempt to deliver the message twice to each programmed number. If any numbers are busy or unanswered, the dialer will continue calling (up to 10 times per programmed number) in an attempt to deliver the voice message or until the alarm condition is terminated. During the process, the respective location numbers and telephone numbers will appear in the LCD to show the calls are in process.

**NOTE: If any numbers are used for alpha/voice pager designations that require operator assistance, the pager service should be notified, to ensure proper interpretation of the message.**

b) **How to store phone numbers**

Follow these directions to store up to 4 telephone numbers in the dialer’s memory. Please remember that local ordinances may prohibit automatic dialing of police, fire departments and other emergency agencies.

The AD200-1 will call up to 4 numbers. This can be any combination of regular telephones, cellular telephones or pagers. The 4 numbers being called will be stored in locations 1-4. Any of locations 1-4 can store up to 28 digits and dial a telephone or pager. If dialing less than 4 numbers, simply leave the latter location(s) empty and the unit will automatically skip them.

To program telephone numbers:

1. Supply power to the AD200-1.
2. The AD200-1 has four modes (PROGRAM, TEST, OPERATE, and OFF) indicated in the upper part of the LCD. Make sure the unit is in the



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“PROGRAM” mode. If it is not, press the MODE (“M”) button to change modes.

c) **To store telephone numbers in memory locations 1 through 4 (see page 8 for pagers)**

1. At the “PROGRAM: NUMBERS” prompt, press “1” (YES).
2. Press all the digits of the first number to be dialed. Check the LCD while programming to make sure the correct numbers are pressed.
3. After inputting the entire phone number (1 + area code if needed), press the PROGRAM/PAUSE (“P”) button (momentarily), then the “1” key. This will store the number in location 1.
4. Repeat step 1, then press all the digits for the second number to be dialed. Check the LCD, press the PROGRAM/PAUSE (“P”) button (momentarily), then the “2” key. This will store the number in location 2.
5. Repeat the process, if needed, for locations 3 and 4.

**NOTE: A pause may only be used when dialing a pager. When a pause is in the dialing sequence, the unit will not deliver the voice message.**

**PROGRAMMING THE DIALER**

**Example 1: Store telephone number 1-800-555-1212 in Location 1.**  
 Press: Program/Pause  
(Press momentarily)

1 8 0 0 5 5 5 1 2 1 2 P 1

**Example 2: Store telephone number 555-1212 in Location 2.**  
 Press: Program/Pause  
(Press momentarily)

5 5 5 1 2 1 2 P 2

Follow the steps above to store the desired numbers in Memory Locations 3 and 4.

Note: If you enter the wrong number or wish to change a programmed number, press the MODE (“M”) button until “PROGRAM: NUMBERS” prompt appears, enter “1” (YES) and enter the number then the location (see example 1 or 2 above).

**To completely erase numbers already stored in memory locations:**

1. Set dialer to “PROGRAM: NUMBERS” prompt.
2. Press “1” (YES).
3. Press PROGRAM/PAUSE (momentarily).
4. Press the number (1,2,3 or 4) for the memory location to be erased.



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### d) To store a pager number and numeric code

1. With the dialer at the “PROGRAM: NUMBERS” prompt, press “1” (YES).
2. Enter all the digits of the pager number to be dialed. Check the LCD to insure the correct numbers are pressed.
3. After inputting the entire pager number (1 + area code if needed), press the PROGRAM/PAUSE (“P”) button and hold it down for about 2 seconds. A “P” will appear in the LCD and this will pause the dialing sequence for 5 seconds.
4. After the pause, input the numeric code to be delivered. This is the code that will be displayed on the pager. (Note: Some pager services require a “#” sign at the end of the numeric message for proper transmission).
5. Press the PROGRAM/PAUSE (“P”) button (momentarily), then the “1” key. This will store the number and the numeric code in location 1.
6. Repeat step 1, then press all the digits for the second pager number to be dialed. Check the LCD, input the pause, input the numeric code, then press the PROGRAM/PAUSE (“P”) button (momentarily) and the “2” key. This will store the number in location 2.
7. Repeat the process, if needed, for locations 3 and 4.
8. You may store pager number and numeric code in any memory location (1-4).
9. When testing the pager operation, it is recommended that the AD200-1 be in the “OPERATE” mode, connected to a phone line and the input triggered.

**NOTE: The pause counts as one digit and is only allowed once in the dialing sequence.**



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## PROGRAMMING THE DIALER

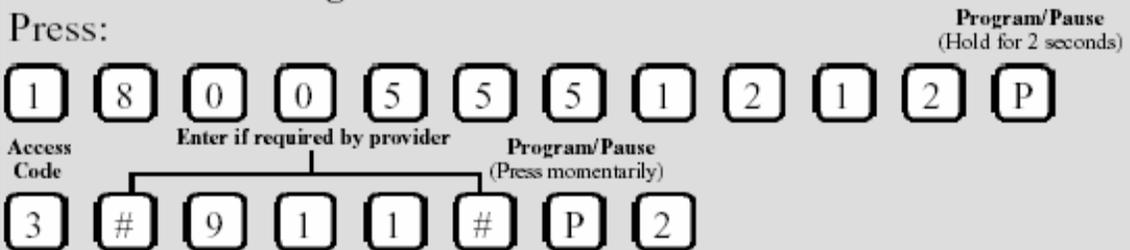
**Example 1: Store pager number 555-1212 and numeric message 911 in Location 1.**

Press:



**Example 2: Store pager number 1-800-555-1212 with access code 3 and numeric message 911 in Location 2.**

Press:



**Note: If you enter the wrong number or wish to change a programmed number, press the MODE button until "PROGRAM: NUMBERS" prompt appears, enter "1" (YES) and enter the number then the location (see example 1 or 2 above).**

### e) Programming Tone/Pulse and PBX

1. Press the "M" key until "PROGRAM: NUMBERS" appears in the LCD, then press "2".
2. Press "1" (YES) at the "PROGRAM: T-LINE" prompt.
3. Press "1" (TONE) for touch tone phone service. Press "2" (PULSE) for pulse (rotary) phone service.
4. After selecting TONE or PULSE, the LCD will display "PROGRAM: PBX".
5. Press "1" (ON) to set for PBX phone system, then enter the PBX digit 0-9 (This will allow the unit to dial the PBX digit, wait for a dial tone, then dial the stored number). Press "2" (OFF) to set for regular phone system (Waits for a dial tone, then dials the stored number).

### f) Programming Exit and Entry Delay

1. Press the "M" key until "PROGRAM: NUMBERS" appears in the LCD, then press "2" three times.



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2. Press “1” (YES) at the “PROGRAM: DELAYS” prompt.
3. Press “1” (ON) for a 60 second Exit delay (This provides a 60 second exit delay, after the AD200-1 is set in the “OPERATE” mode, before the unit will react to a sensor trip, allowing time to exit). Press “2” (OFF) for no Exit delay (This will allow the unit, when set in the “OPERATE” mode, to react immediately to a sensor trip).
4. After selecting the Exit delay, the LCD should display “ENTRY DELAY”.
5. Press “1” (ON) for a 20 second Entry delay (This provides a 20 second entrance delay, after any exit delay time has elapsed, before the unit will react to a sensor trip, allowing time to shut off).
6. Press “2” (OFF) for no Entry delay (This will allow the unit to react immediately to a sensor trip, after any exit delay has elapsed).

**NOTE: When using the AD200-1 with an alarm panel that already has Exit/Entry delays programmed, EXIT and ENTRY should be programmed for “OFF” unless an additional delay is needed.**

g) **How to record outgoing voice message**

An outgoing message (OGM) of up to 16 seconds may be programmed into the AD200-1. Once recorded, this message will be repeated during activation 2 times, in sequence (starting with Location 1), to each number designation. For best results, the OGM should be written down, practiced and timed before recording.

1. Press the “M” key until “PROGRAM: NUMBERS” appears in the LCD, then press “2” twice.
2. Press “1” at the “PROGRAM: OGM” prompt.
3. Locate the microphone on the lower left corner of the AD200-1. For best results when recording, speak about 12 inches from the microphone in a clear and normal voice.
4. Press “\*” key to initiate the recording process. “RECORDING” will appear in the LCD when recording. The “\*” key must be held down for the entire time of recording.
5. When the “\*” key is released the message will be stored. Once the 16 seconds have elapsed, “DONE” will appear in the LCD.



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6. If you wish to change the OGM, repeat the preceding steps. The new OGM will automatically replace the previous message.

### VIII) Testing Your System

#### a) To verify telephone numbers and OGM without phone line connection

Follow these directions to ensure the correct telephone numbers have been properly stored and the recorded message satisfactory.

1. Press the “M” key until “TEST: T-LINE” appears.
2. Press “1” (YES). The LCD will display the T-LINE configuration.
3. Press “1” (YES) at the “TEST: CHANNEL” prompt. The LCD will display the Delay configuration, then the number stored in Location 1 followed by either the OGM or pager code.
4. This process will be repeated for each stored Location. Any empty Location will be skipped.
5. Press the “M” key three times to return to the program mode.

#### b) To verify telephone numbers and OGM with phone line connection

**NOTE: A complete test should be performed in the “OPERATE” mode to ensure proper operation.**

1. Before conducting an actual test under “OPERATE” mode, contact each of the designated emergency numbers (Locations 1 through 4) to advise people that you are conducting a test. After the test, verify that they received the message.
2. Apply power to the unit.
3. Press the “M” key until “OFF” appears in the LCD.
4. Connect the AD200-1 to an active phone line.
5. Make sure the sensor is in a non-alarm condition.
6. Press “M” until “OPERATE” appears in the LCD.
7. Trigger the sensor to simulate an alarm condition. If there are any delays programmed, the AD200-1 will wait until they elapse before activating and dialing.



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8. The AD200-1 will sequentially dial the programmed Locations (1-4). If there is no number stored in a location, it will be skipped. The OGM will be delivered when the AD200-1 receives an answer. (The OGM will not be played through the speaker.) For pager numbers, the pager code will be transmitted instead of an OGM.
  9. The AD200-1 will automatically go through the next programmed location repeating the same process.
- c) **The AD200-1 is now ready for operation.**  
Utilizing the EEPROM and CPU memory cell components, the AD200-1 will retain its' memory in the event of a power loss. The internal 9-volt battery will provide stand by power for approximately 4 hours of operation. If more battery backup is needed, an optional rechargeable power pack (GLOBAL WATER part# PP- 1) is available and plugs into the AD200-1, providing up to 24 hours of stand by power.



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## IX) Specifications

### a) Dimensions

Power source:	9-18VDC
Current draw (OPERATE mode - Stand By):	28mA
Current draw (OPERATE mode - Alarm):	100mA
Activation:	1) N/C Activation: N/C to “open” latch input. Dialer resets with close. 2) Voltage Activation: Min. +5VDC. Max. +28VDC. Dialer resets with loss of activation voltage.
Max. digits for outgoing number:	28
Operating temperature range:	-18 to 55 C (0 to 130 deg F)
Dimensions (inches):	6.0 x 4.0 x 1.5
Weight (ounces):	10 oz
Mounting:	Wall or Flat Surface
Case Material:	ABS
Color:	White
Warranty:	1 Year

**Note:** Design and specifications subject to change without notice.

## X) Dialer Accessories

**WIRELESS: AD200-1/W** - Wireless version AD200-1. Dialer includes wireless pendant transmitter.

**24V APPLICATION: AD200-1/F** - For this option the dialer is configured to operate at 24VDC to 32VDC max. All other specifications apply.

**WIRELESS AND 24VDC APPLICATIONS: AD200-1/W/F** - Incorporates both the wireless feature and the 24V application.

**TC-1 TIMER CONTROL MODULE** - Accepts a momentary N/C, N/O or voltage trigger and holds the dialer on for about 6 minutes.

**PP-1 BACKUP BATTERY PACK** - Plugs into PP-1 port on all dialers. Contains rechargeable batteries along with recharging circuit. Provides up to 24 hours of backup stand by power.

**AC-1 AC/DC ADAPTOR** - Plugs into regular 110 volt AC outlet to provide the dialer with the required 12 volt DC primary power. Can be manually wired to the power leads from the dialer or plugged into the PP-1 port.

**AVD-RTO REMOTE TURN OFF MODULE** - Allows the receiving party to turn off the dialer by pressing the star (\*) key.

**IR-1 ISOLATION RELAY** - Converts alarm output voltage to N/C to provide clean input trigger to dialer.

**SR-1 LINE SEIZURE RELAY** - Allows the dialer, when activated, to have priority over any other telephone on the line.



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### XI) Important Information/Maintenance

a) **Location**

Place the dialer on a flat level surface or mount the unit on the wall, away from extreme cold or heat, direct sunlight, excessive humidity and away from equipment that generates a strong magnetic field. Avoid placing near large metal objects and areas that produce smoke, dust or mechanical vibrations.

b) **Care**

Clean the housing with a soft cloth lightly moistened with water or mild detergent solution. Never use solvents such as alcohol or thinner. Do not allow liquids to spill into the unit.

c) **Optional Backup**

To ensure continuous operation during power outages, hookup to a 12VDC backup battery pack as recommended.

d) **Caution**

Do not use the dialer if a gas leak is suspected or during lightning.

e) **Problems**

If liquid or a foreign object penetrates the unit, disconnect it immediately and contact your installer or other qualified technician. Before calling Global Water, please make sure:

1. You have read this manual and understood how to operate the dialer.
2. Your phone line is working.
3. You check out the entire system.

**Other Issues:**

- f) Call us for tech support: 800-876-1172 or 916-638-3429 (many problems can be solved over the phone). Fax: 916-638-3270 or Email: [globalw@globalw.com](mailto:globalw@globalw.com).

Be prepared to describe the problem you are experiencing including specific details of the application and installation and any additional pertinent information.

In the event that the equipment needs to be returned to the factory for any reason, please call to obtain an RMA# (Return Material Authorization). Do not return items without an RMA# displayed on the outside of the package.

Include a written statement describing the problems.

Send the package with shipping prepaid to our factory address. Insure your shipment, as the warranty does not cover damage incurred during transit.



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g) When calling for tech support, please have the following information ready;

1. Model #.
2. Unit serial number.
3. P.O.# the equipment was purchased on.
4. Our sales number or the invoice number.
5. Repair instructions and/or specific problems relating to the product.

h) **Federal Communications Commission Radio And Television Interference Statement For A Class 'B' Device**

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 a Class 'B' computing device in accordance with the specifications in Subpart B of FCC Rules and Regulations (as outlined in the Code of Federal Regulation, Title 47), which are designed to provide reasonable protection against such interference in a residential installation.

i) **User Instructions**

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off, then on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate radio or television.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into a different outlet so that the equipment and receiver are on different branch circuits.
4. Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by Global Water Instrumentation, Inc. could void the user's authority to operate the equipment.



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### **XII) Warranty**

- a) Global Water Instrumentation, Inc. warrants that its products are free from defects in material and workmanship under normal use and service for a period of one year from date of shipment from factory. Global Water's obligations under this warranty are limited to, at Global Water's option: (I) replacing or (II) repairing; any products determined to be defective. In no case shall Global Water's liability exceed the products original purchase price. This warranty does not apply to any equipment that has been repaired or altered, except by Global Water Instrumentation, Inc., or which has been subject to misuse, negligence or accident. It is expressly agreed that this warranty will be in lieu of all warranties of fitness and in lieu of the warranty of merchantability.
  
- b) The one (1) year warranty begins on the date of your invoice.