1876, 1876- 4 Faucet
intelligent™ Electronic Gooseneck Faucet

Product Description
- Solid brass electronic faucet
- Designer Series, gooseneck spout
- Computer based micro controller w/specially designed infra red sensors to detect within a required distance
- Auto shut-off - 1 minute
- Modular design to accept optional equipment
- e/w plug-in adapter 120/24vac

Features
- Sealed waterproof electronics
- Vandal Proof / Tamper cycle
- Remote control re-programmable
- Smooth flow non-splash laminar nozzle

Certification
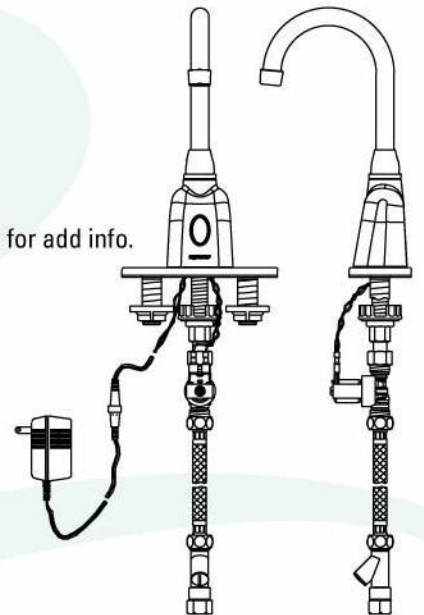cUPC IAPMO
ADA / ANSI Compliant

Model Choice :
1876
1876M
1876-4 or-8
1876-4M or-8M
1876-4M2 or-8M2
1876-4M3 or-8M3
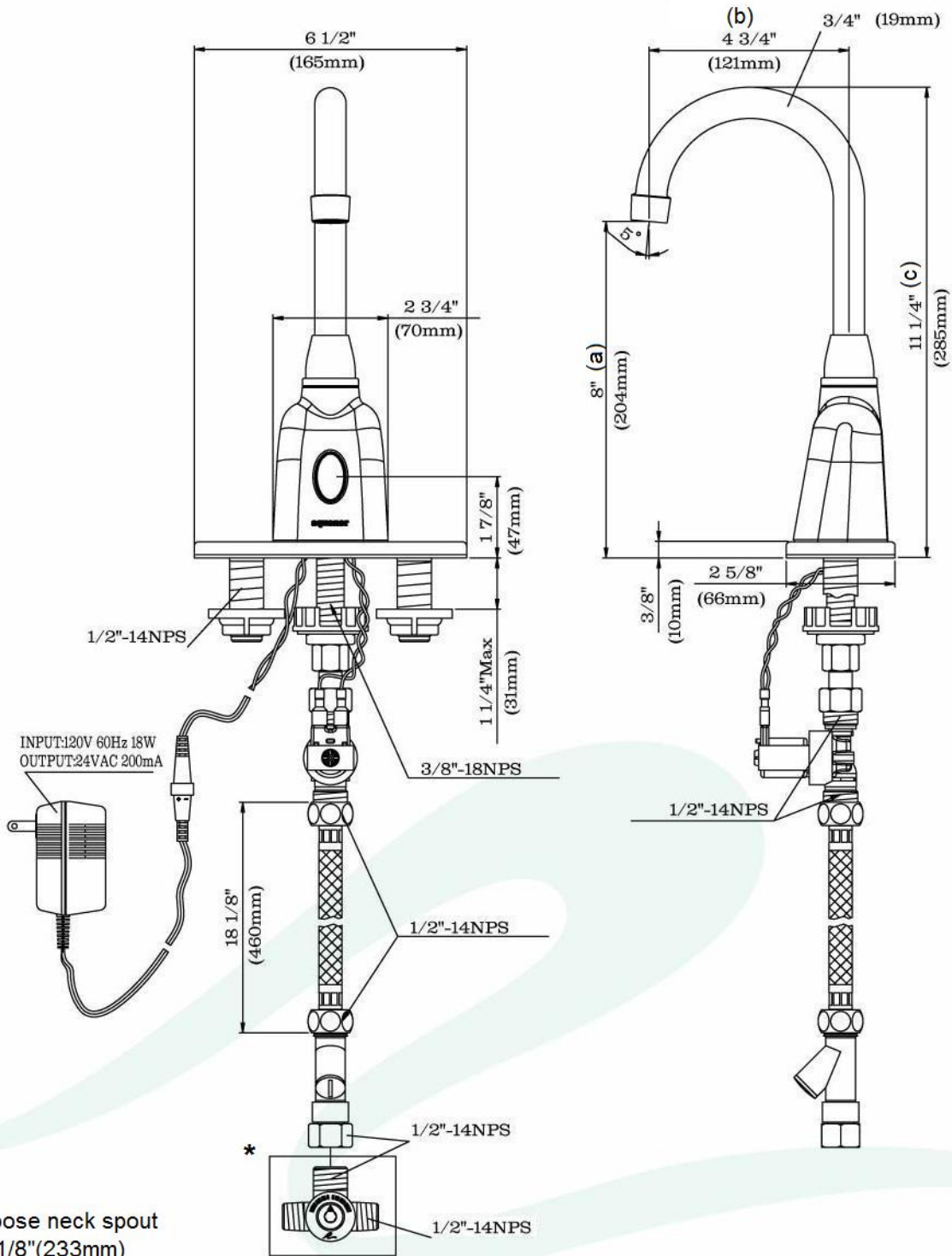M = MP1 mechanical mixer
4 = 4" deck plate
8 = 8" deck plate

Options
04- 105   Nozzle, 0.5 gpm
MP4   Mixer 1/2"
MP6   Mixer 3/8"

note;   see mixer section for add info.

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TECHNICAL SPECIFICATIONS

6 1/2"
(165mm)

2 3/4"
(70mm)

1 7/8"
(47mm)

1 1/4"Max
(31mm)

1/2"-14NPS

3/8"-18NPS

INPUT:120V 60Hz 18W
OUTPUT:24VAC 200mA

18 1/8"
(460mm)

1/2"-14NPS

1/2"-14NPS

*

1/2"-14NPS

(b)

4 3/4"
(121mm)

3/4" (19mm)

5°

8" (a)
(204mm)

11 1/4" (c)
(285mm)

2 5/8"
(66mm)

3/8"
(10mm)

1/2"-14NPS

*   option

**   large goose neck spout
     (a) - 9 1/8"(233mm)
     (b) - 8 3/8"(214mm)
     (c) -13 5/8"(345mm)

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PRODUCT DESCRIPTION

Function:

The electronic module detects the presence of the user. A computer based micro-processor with specially designed infra-red sensors is programmed to detect a user within a required distance.

Packaging:

The entire unit is constructed of non-corrosive materials. The faucet is a forged solid brass body to withstand abuse and a chrome polish finish to ensure years of quality appearance. The comfort 'soft-flow' laminar nozzle highly reduces splash and is equipped with a flow regulator. The electronic module is a single compact unit with the emitter, receiver and micro-controller circuit as a one piece and sealed unit within the faucet body. There are no unnecessary separate circuits and related wiring. Simplicity at its best. There are no electro-mechanical devices (for adjustments) to hinder sealing or which may require troublesome disassembly.

Note : The faucet is also available with a 4" deck plate as an anti-rotational setup to eliminate vandalism.

Adjustments:

Adjustments are pre-set by the factory for normal-usage; reprogramming the control unit to suit special conditions is possible with an optional remote reprogrammer module. This user-friendly module permits easy function changes in the distance and time cycles, for example:

*Non-interrupt cycle:	1 - 15 seconds
*Detection delay:	0 - 14 seconds
*Cold-start:	2 - 30 seconds
*Sensitivity (detect range):	level 1 to level 15
*Address (Detect Frequency)	Frequency 1 to 4
Tamper cycle:	1 minute auto-stop
(*re-programmable)	

Technical Specifications:

Electrical requirements:	24 Vac 15 V.A.
Electro-mechanical valve:	24 Vac 50/60 Hz
Operating water pressure:	15 to 150 psi
Water flow rate:	2.2 gpm regulated
Water connection:	1/2" NPS

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FUNCTION INFORMATION

A)	**Non-Interrupt Cycle (Run Time)**	**1 to 15 seconds**
B)	**Detect Delay (Detect Time)**	**0 to 14 seconds**
C)	**Cold start (Warm-Up)**	**2 to 30 seconds**
D)	**Sensitivity (Detect Range)**	**level 1 to level 15**
E)	**Address (Detect Frequency)**	**Frequency 1 to 4**
F)	**Tamper cycle**	**1 min. Auto-stop pre-set**

A) Non-Interrupt Cycle (Run Time)

The user may momentarily be out of detection range, therefore a 2 second non-interrupt cycle is factory-programmed to accommodate such absences and allow continuous water flow
* The non-interrupt cycle is re-programmable from 1-15 seconds.

B) Detect Delay (Detect Time)

The detection delay is set at 0 second. (Instantaneous)
*The detect delay cycle is re-programmable from 0-14 seconds

C) Cold start (Warm-Up)

This *intelligent*™ feature allows warm water to arrive at the faucet. Activate the faucet and as soon as the water flows, remove hand. The faucet runs by itself for the 6 sec. period, or an allotted time if you wish to re-program for your building application.
NOTE : To conserve water, the cold start cycle is automatically available only once in a 30-minute period.
* The cold start cycle is re-programmable from 2-30 seconds.

D) Sensitivity (Detect Range)

The detection range is adjustable through re-programming and detects up to 7". Factory-programmed detection range is set at level 15
 • To increase range, re-program sensitivity from level 9 to 15. (15 for a longer range)
 • To decrease range, re-program sensitivity from level 7 to 1. (1for a shorter range)
* The sensitivity cycle is re-programmable from level 1 to 15.

Function Feedback

Upon activation, when the faucet detects a user or object, a light appears on the detection. This confirms detection and also used in adjustments for different detections distances to accomodate various types of sinks and use.

E) Address - Detect Frequency

This *intelligent*™ feature eliminates possible problems of oppositely (face to face) mounted systems. Such installation can trigger oppositely mounted units unnecessarily. With the remote, change of frequency, address 1 to 4, makes it impossible for one unit to be inadvertently triggered by another.
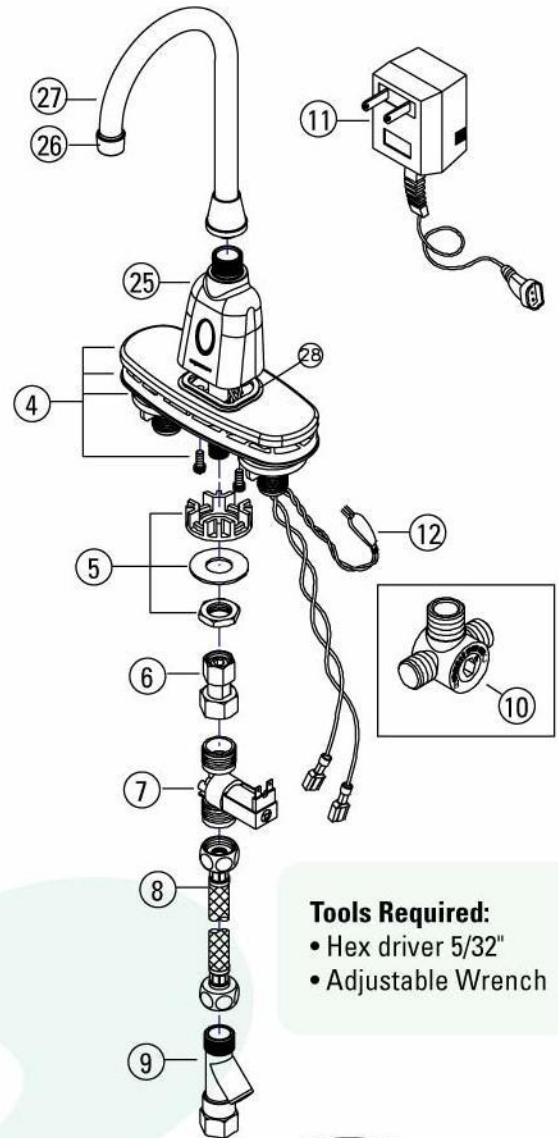**The address frequency is factory programmed at 1 and is reprogrammable from 1 to 4.*

F) Tamper cycle

To prevent tampering (for example, if for some reason an object is permanently placed in the detect range to simulate a user) the faucet will run, but for a maximum time of 1 minute. The tamper cycle is not adjustable. The unit will shut off and the control will return to its regular operation only when the object is removed.

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INSTALLATION STEPS

1 - Place black rubber base gasket # 28 on the faucet body # 25.

2 - Install the faucet on the sink by passing the brass shank and electrical wires thru the center hole.

3 - With faucet in position, below the deck slip thru the brass shank, the plastic wire washer, metal washer and brass nut # 5 .

4 - Note. The plastic clearance washer is design to allow passage of the wires. Insert properly to avoid pinching wires. Position carefully the wire washer, slip up the flat washer and screw brass nut until snug. Verify again for correct wire clearance and tighten nut as required.

5 - Install the gooseneck spout on the faucey body and hand tighten screw collar.

6 - Screw the brass connector # 6 onto the faucet shank.

7 - Screw on the solenoid valve # 7 to the connector # 6. (observe 'arrow symbol' water direction on solenoid) Do not apply sealant. O-ring allows low tightening pressure.

8 - Attach the braided ss hose # 8 to the solenoid valve.

9 - Attach the braided ss hose to the Y filter # 9.

10 - Connect the Y filter to a tempered water source or to the top (outlet side) of the optional MP1 #10 mixer.

11 - Electrical connection
   a- The two wires with insulated terminal tabs connect to the solenoid valve. No polarity is required.
   b- The paired cable with the 2 pin plug connects to the 120/24Vac adapter. Insert the 'plug-in' adapter to an appropriate 120Vac electrical outlet.
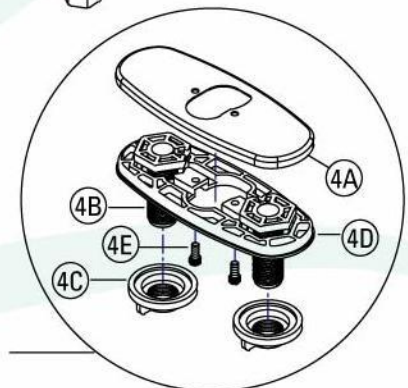
1a For the 1876 - 4 (equipped with 4' deck plate)
Place the two threaded plastic shanks # 4B into the black gasket Base # 4D. Insert the black gasket into the chrome deck plate # 4A. With the 2 Hex Socket screws # 4E, attach the assembled deck plate to the faucet body. Install the faucet on the sink by passing the electrical wires thru the center hole and the two threaded shanks thru the other holes. Screw on the black plastic thumb nuts #4C, carefully positioning the faucet centered in the sink, and tighten. Hand tightening will suffice.

Tools Required:
• Hex driver 5/32"
• Adjustable Wrench

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MAINTENANCE

Aquanar products are design and engineered with precision and specially chosen components.
Replacement with genuine Aquanar parts are an important factor in product performance.
Non genuine parts may void warranty.
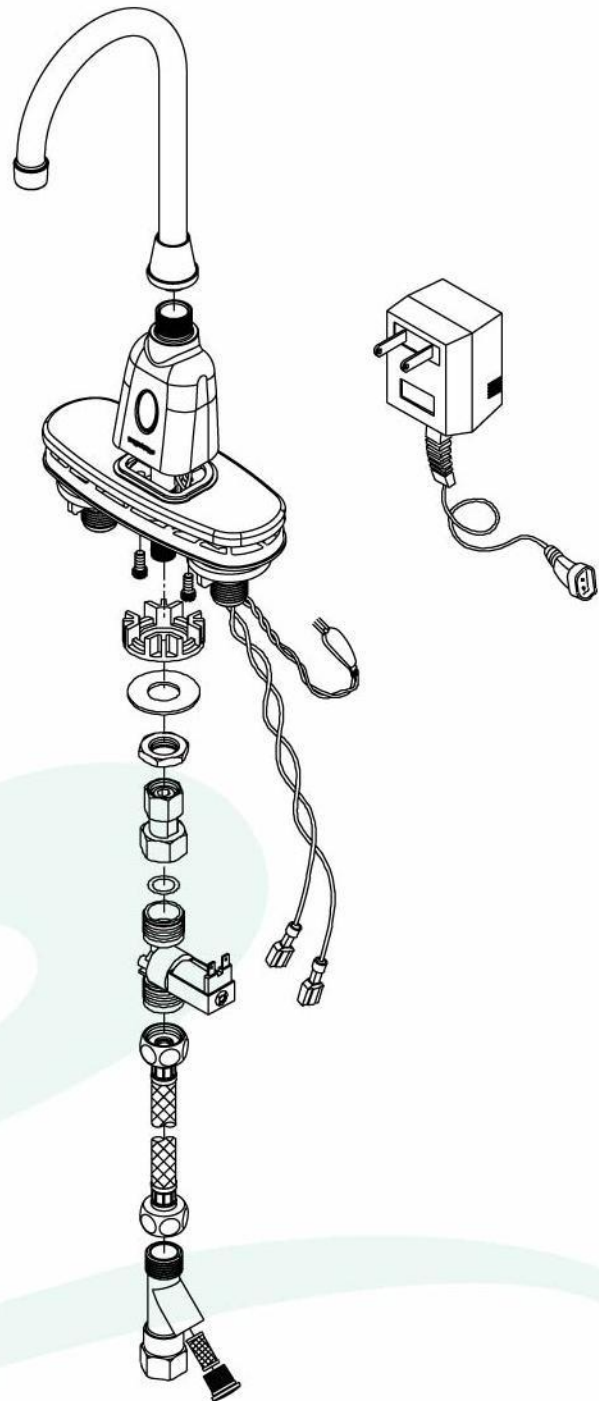
Cleaning the Solenoid valve / filter
• Close water source.
• With flat screwdriver, remove the access 'screw plug' of the 'Y' filter.
• *A small pail can hold dripping water to keep floor clean.*
• Remove barrel mesh filter. Remove debris and rinse thoroughly.

Product Care
Aquanar products are constructed of the highest quality materials. Although durable and robust, abrasives and harsh chemicals can damage surfaces. Clean chrome polish body, plate and lens with a soft damp cloth.
Dry with a soft towel.

Re-assembling
Reinstall the filter and o-ring sealed connector, in reverse of the above steps.
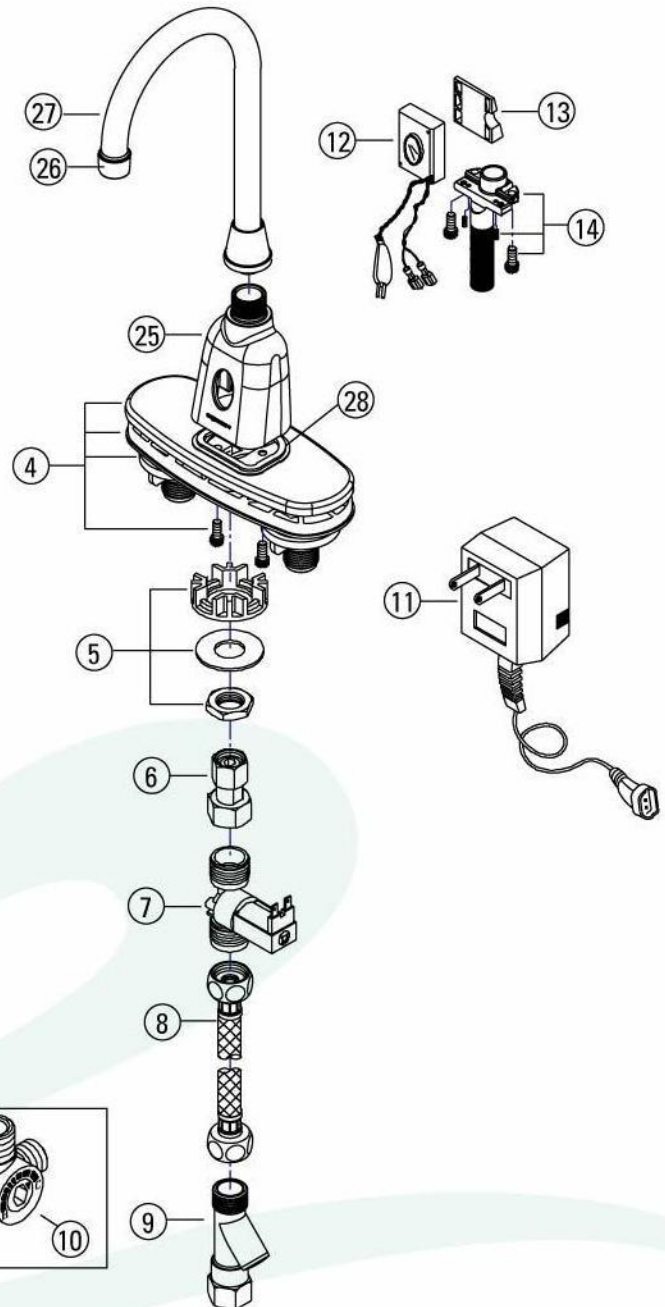
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PARTS LIST

#	Description	Part Number
4	4" plate assembly	01-103
5	Nut, Washer & Wire washer	01-088
6	Pipe assembly, taper base	01-019
7	Magnetic valve 24Vac	04-025
8	Flexible hose 18" 1/2" x1/2"	04-058
9	"Y" Filter	01-027
10	Mechanical mixer	AQN-MP1
11	Plug in adapter 120/24Vac	04-059
12	Electronic Module	AQN-1870-2
13	Wedge block	02-070
14	Mounting block with screw	01-089
25	Solid brass body c.p.	02-143
26	Laminar nozzle	04-100
27	Spout assy. GN c.p.	01-074
28	Gasket, body	02-144

large goose neck:

#	Description	Part Number
26	Laminar nozzle	04-158L
27	Spout assy. GN c.p.	01-134

1800 Series
intelligent™ Electronic Faucets AC
Simple Guide to troubleshooting

Unit not functioning-Verify power source.
If power source is known, turn off momentarily and turn back on. You now have the 'sensitivity' distance adjustment feature 'indicator light' that appears in the center of the lens area when it detects persons or objects. This feature allows you to observe when the control detects an object.

Detection not occurring.
Disconnect input 24VAC wires and check if there is power, 24VAC, to the input wires of the control.
When 24VAC is present, turn power source off, [ie. Circuit breaker, switch etc.]
Make sure that the twisted wire connection are clean and free of corrosion.
[**Note :** It has been noted an occasion that a wire can be unintentionally twisted around the insulated part of the wire and cause a temporary or miss-connection. Twist the two metal strands of wire first to ensure a solid connection and complete with the wire twists. Turn power back on.

Detection OK and unit functions properly. - Unit is automatically reset and resumes normal function.

Detection OK but unit functions erratically
Aquanar Electronic Controls are computers and because they have Micro-controllers, it allows them to analyze, make decisions and are specifically designed to react for human responses. But, there are things microprocessors do not like ...[ie....Arcing during connection when twisting wires with power '**ON**' may make the microprocessor "goofy'] This arcing is actually a rapid succession of 'off' and 'on' and should be avoided. It is not dangerous for the unit but it may cause improper function of the micro-controller........If so, turn power '**OFF**' from the main source for five to ten seconds, and then turn it back '**ON**'. This allows the microprocessor to re-initialize and the unit will then function normally.

Detection and indicator lamp is still not functioning.
Return unit to factory for verification and/or repair.

Indicator light stays on constantly after restoring power.
If no person is in the detection zone and the indicator light is on, the control is detecting a wall or other object. If an object is constantly detected for a period of 1 minute, the unit automatically shuts off until the object is removed. At this time, the control appears to be not functioning. (Shut down mode.) Do not forget that if the control continuously detects a constant object like a wall, whether you are placing yourself in front of this control and remove yourself, the control has you or the wall as a constant detection and will not react.
[It is constantly in the detection mode and shuts off after this 1 minute time span.]
Reprogram the adjustment 'sensitivity' level to a shorter distance, to eliminate the detection of this constant object. The unit will now function normally.

Note : Understanding how the electronic control functions, including the detection 'feed back' features, makes servicing easy and rapid. Experience and past observations have resulted in a rapid adjustment in a few minutes for 95% of cases.