

# SLOAN<sup>®</sup>

## OPTIMA<sup>®</sup>

*i.q.*

EAF-100/150 I.I. — Rev. 0a (11/02)  
Code No. 0816542

### INSTALLATION INSTRUCTIONS ELECTRONIC, SENSOR OPERATED LAVATORY FAUCETS

#### EAF-150 Series

Battery Powered  
Sensor Operated  
Lavatory Faucets

#### EAF-100 Series

Plug-in Transformer Powered  
Sensor Operated  
Lavatory Faucets



### The new Optima *i.q.* faucet — Bringing intelligence to water

Sloan's new Optima *i.q.* EAF-100/150 Series electronic hand washing faucets operate by means of a dual infrared sensor and microprocessor based logic. The modular design of the faucet simplifies installation and maintenance by incorporating all of the operating components above the sink within the die-cast metal spout.

ISM models feature an integral temperature control lever to allow the user to adjust water temperature. The faucet can also be adjusted to a fixed setting. Faucets ordered without the ISM variation must be connected to a single, pre-tempered water supply.

The faucet is also available with the *i.q.* - Click feature. This feature allows the user to set faucet modes, including "continuous run" and "temporary off" simply by pressing a button on the spout. This feature is recommended only in installations where users have a regular familiarity with the faucet (i.e., executive and non-public rest rooms). Models furnished with the *i.q.* - Click feature are also available with a Drain Pop Up.

Optima *i.q.* EAF-150 series faucets include a 6 VDC lithium battery. Battery life is approximately three (3) years. EAF-100 series faucets are hard wired and include a plug-in transformer.

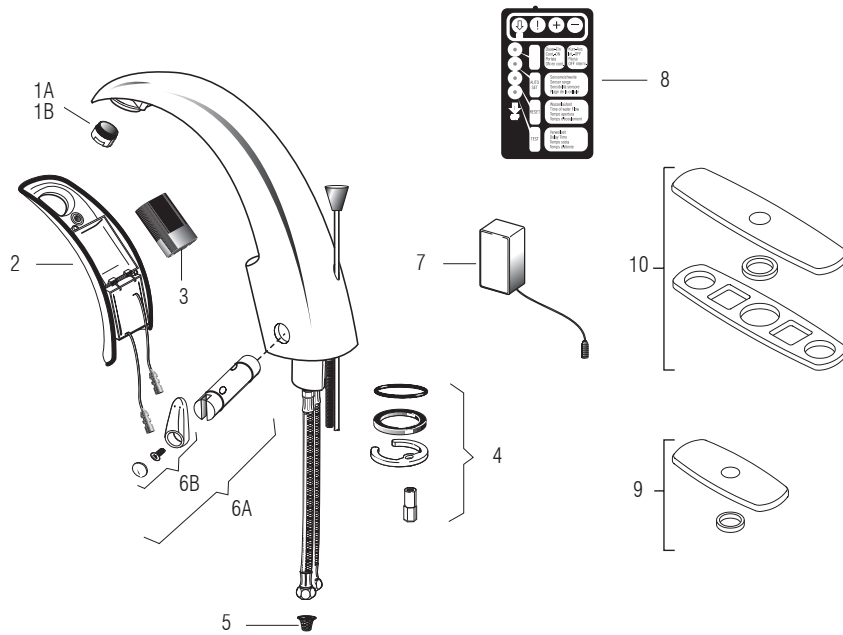
ADA Compliant



#### LIMITED WARRANTY

Sloan Valve Company warrants its Optima and Optima Plus EAF-100/150 Series Electronic Hand Washing Faucet to be made of first class materials, free from defects of material or workmanship under normal use and to perform the service for which it is intended in a thoroughly reliable and efficient manner when properly installed and serviced, for a period of three years from date of purchase. During this period, Sloan Valve Company will, at its option, repair or replace any part or parts which prove to be thus defective if returned to Sloan Valve Company, at customer's cost, and this shall be the sole remedy available under this warranty. No claims will be allowed for labor, transportation or other incidental costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale. This warranty does not cover the life of the battery.

**THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.**



#### PARTS LIST

Item No.	Part No.	Description
1A	EAF-10	2.2 gpm (8.3 Lpm) Aerator Spray Head
1B	EAF-12	0.5 gpm (1.9 Lpm) Spray Head
2A	EAF-3-A	Throat Plate Assembly (Battery Models)
2B	EAF-6-A	Throat Plate Assembly (Plug-in Transformer Models)
2C	EAF-4-A	Throat Plate Assembly with <i>i.q.</i> - Click (Battery Model)
2D	EAF-7-A	Throat Plate Assembly with <i>i.q.</i> - Click (Plug-in Transformer Model)
3	EAF-1000	Battery Replacement Kit
4	EAF-1	Faucet Mounting Kit
5	EAF-9	Strainer (Filter)
6A	EAF-1001	Mixer Handle Assembly and Cartridge
6B	EAF-1002	Handle Repair Kit
7	EAF-11	Transformer
8	EAF-5	Remote Control
9	ETF-607-A	Trim Plate for 4" Center-set Sink
10	ETF-608-A	Trim Plate for 8" Center-set Sink

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SLOAN VALVE COMPANY • 10500 Seymour Avenue • Franklin Park, IL 60131  
Phone: 1-800-9-VALVE-9 or 1-847-671-4300 • Fax: 1-800-447-8329 or 1-847-671-4380  
<http://www.sloanvalve.com>  
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## ROUGH-IN — Figure 1

MODELS EAF-100/150  
2.2 gpm (8.3 Lpm) Max. Flow Aerator  
Faucets with Single Line Water Supply

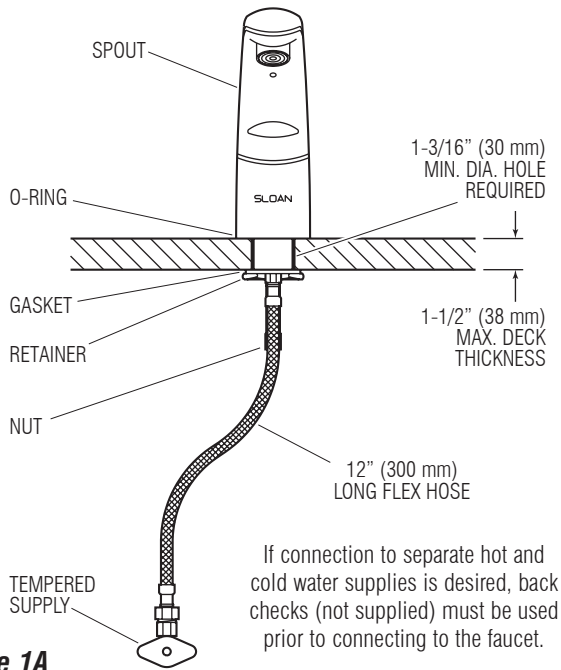


Figure 1A

## FAUCET SPOUT DIMENSIONS AND POP UP DETAILS

POP UP —  
MODELS EAF-100/150-ISM-DPU-IC ONLY

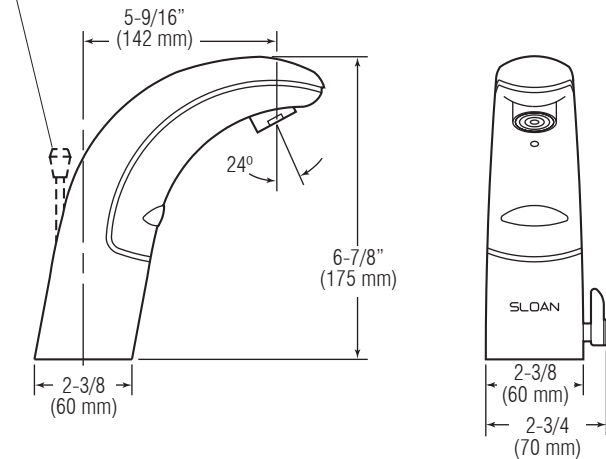


Figure 1C

When the EAF faucet is installed on a sink that has three (3) hole punchings, a trim plate should be used.

**Trim Plates must be specified and ordered separately:**

**ETF-607-A**

Trim Plate for 4" (102 mm) Center-set Sink

**ETF-608-A**

Trim Plate for 8" (204 mm) Center-set Sink

When installing the faucet on a three (3) hole sink make sure that the center hole is large enough to accommodate the faucet shank.

A 1-3/16" (30 mm) minimum diameter hole is required. (A 1-7/32" (31 mm) Diameter hole is required if the deck is greater than 1/2" (13 mm) thick.)

MODELS EAF-100/150-ISM  
MODELS EAF-100/150-ISM-DPU-IC  
2.2 gpm (8.3 Lpm) Max. Flow Aerator  
Faucets with Hot and Cold Water Supply

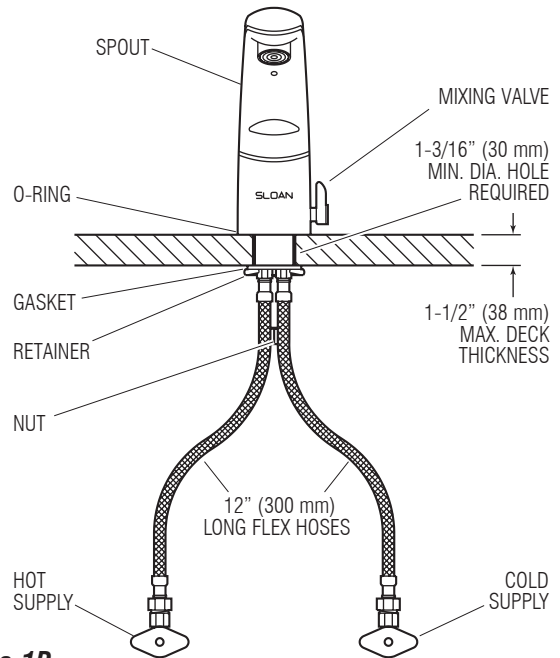


Figure 1B

## FAUCET VARIATIONS

- ISM Integral Spout Mixer
- IC *l.g.-Click* Feature
- DPU Drain Pop Up
- P Plug-in Transformer (EAF-100 Series only)

## PRIOR TO INSTALLATION

Prior to installing the Sloan Optima or Optima Plus EAF-100/150 Series faucet, install the items listed below. Also, refer to Figures 1A thru 1C.

- Lavatory/sink
- Drain line
- Hot and cold water supply lines or pre-tempered water supply line

### IMPORTANT:

- *ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.*
- *FLUSH ALL WATER LINES PRIOR TO MAKING CONNECTIONS.*

## Trim Plates

When the EAF faucet is installed on a sink that has three (3) hole punchings, a Trim Plate should be used. **Trim Plates must be specified and ordered separately.**

ETF-607-A Trim Plate for 4" (102 mm) Center-set Sink

ETF-608-A Trim Plate for 8" (204 mm) Center-set Sink

## TOOLS REQUIRED FOR INSTALLATION

- 13 mm open end wrench for male end of flex hose
- 13 mm open end wrench or nut driver for faucet retainer nut
- 3/4" open end wrench for female end of flex hose

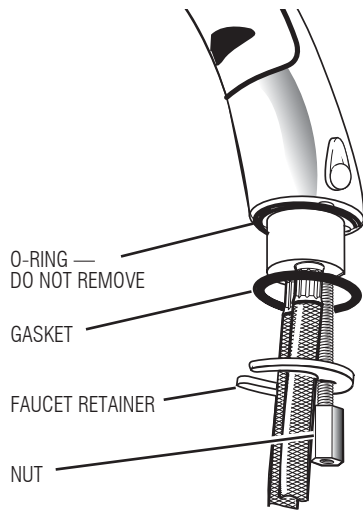
# FAUCET INSTALLATION

## Step 1

Remove all Mounting Hardware:

- Nut
- Faucet Retainer
- Gasket

Do Not remove the O-ring from base of faucet.

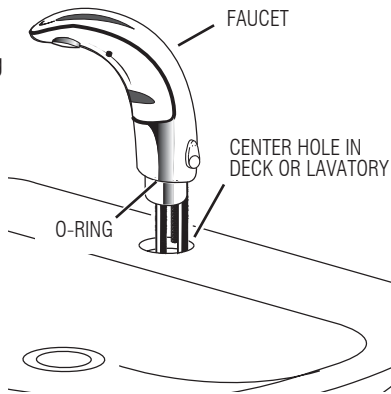


## Step 2

Install Faucet with O-ring into the center hole in deck or lavatory —

1-3/16" (30 mm) min. hole required.

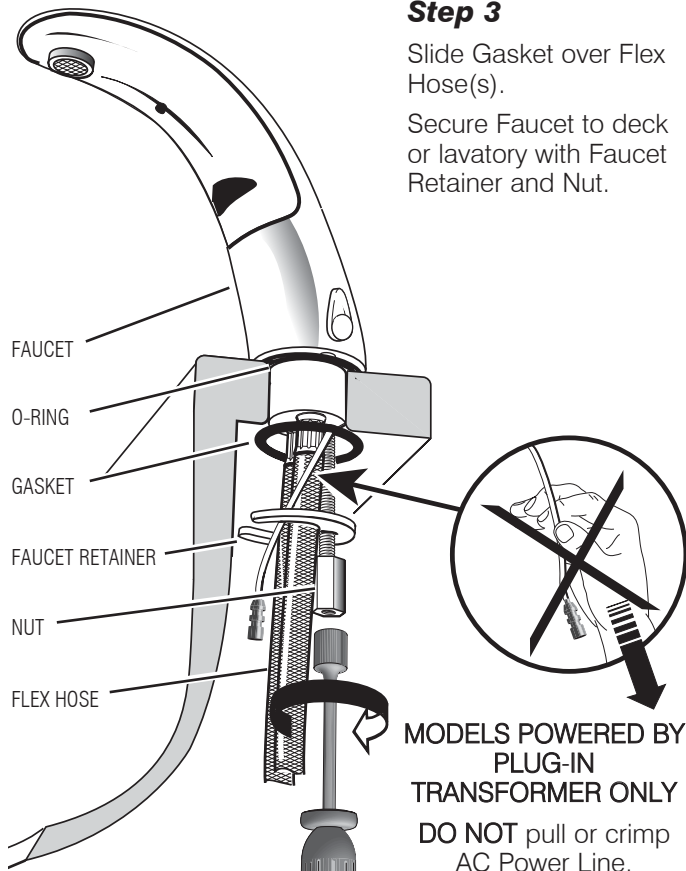
**Note:** If installing the faucet on a three (3) hole sink, a Trim Plate should be installed at this time.



## Step 3

Slide Gasket over Flex Hose(s).

Secure Faucet to deck or lavatory with Faucet Retainer and Nut.



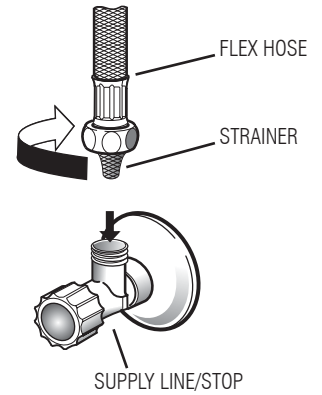
## Step 4

### IMPORTANT:

Flush dirt, debris, and sediment from Supply Line(s) **before** Connecting Flex Hoses.

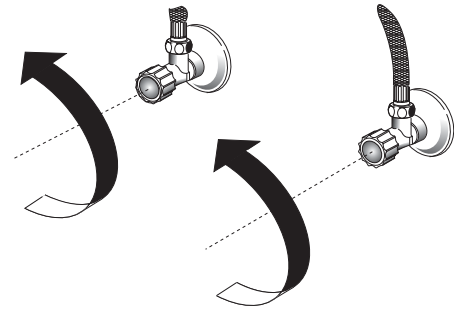
Install Strainer and Flex Hose onto Supply Stop.

Tighten the Flex Hose (with Strainer in place) securely to the Supply.



## Step 5

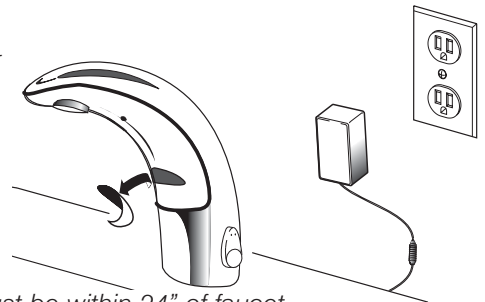
Open Supply Stops.



## Step 6

Remove sticker from sensor.

For EAF 100 Models, Plug Transformer into receptacle.



*Transformer must be within 24" of faucet.*

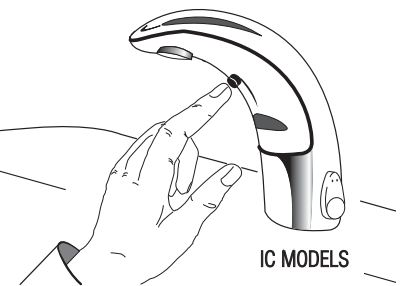
## Step 7

Press button one (1) time.

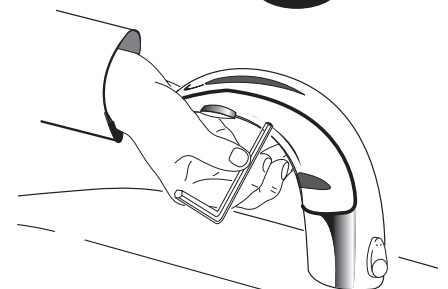
Step away from faucet.

Faucet is ready to use.

If faucet does not function, refer to the Troubleshooting section of this instruction manual.



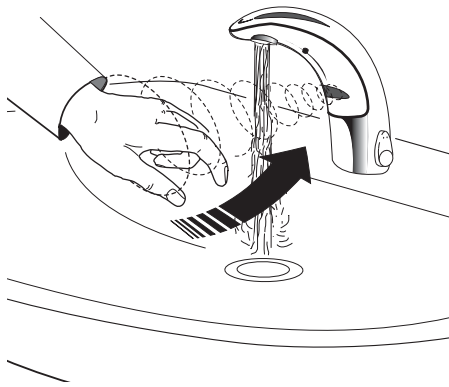
**OR**



### Step 8

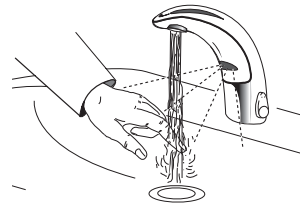
Activate Faucet and check for leaks.

If range is unsatisfactory, refer to the section entitled "Range Adjustment" on this page.



### OPERATION

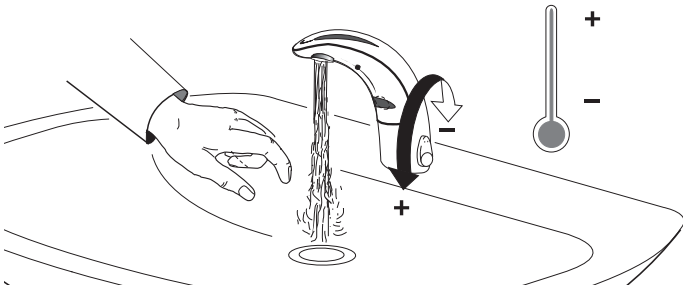
As the user's hands enter the beam's effective range, the beam is reflected back into the sensor receiver and activates the solenoid valve allowing water to flow from the faucet. Water will flow until the hands are removed or until the faucet reaches its automatic time out limit setting.



### Step 9

#### SET TEMPERATURE

ISM Models Only  
Adjust Lever



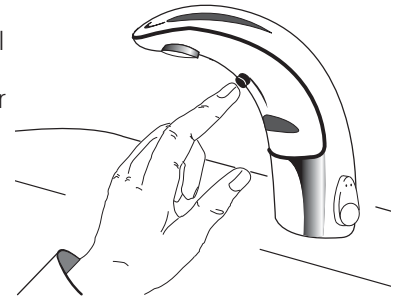
### RANGE ADJUSTMENT

If sensor range is unsatisfactory, refer to the following procedure:

Press button 1 time for 12 seconds. (Faucet will blink 2 times after 6 seconds and again after 12 seconds.)

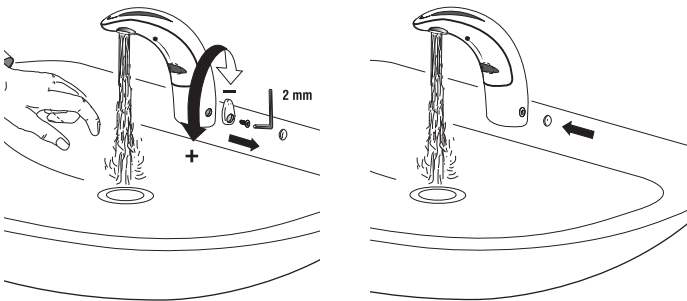
Step away from faucet.

Faucet automatically sets its range. (Water turns on and off several times.)



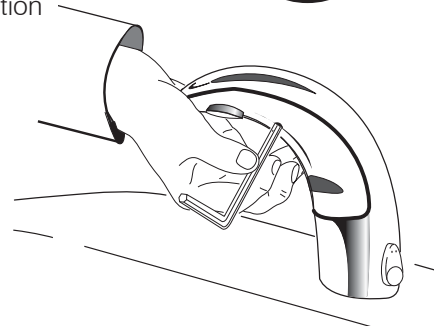
#### TO FIX TEMPERATURE

Set to desired position  
Remove Handle  
Use cap to plug hole



If this does not occur, refer to the Troubleshooting section of this instruction manual.

**OR**

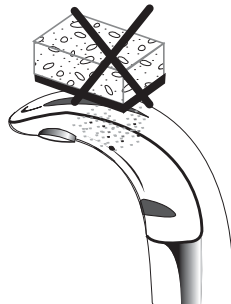


If sensor range is still unsatisfactory, continue with the following procedure:

### CARE AND CLEANING OF CHROME AND SPECIAL FINISHES

DO NOT use abrasive or chemical cleaners (including chlorine bleach) to clean faucets that may dull the luster and attack the chrome or special decorative finishes. Use ONLY soap and water, then wipe dry with clean cloth or towel.

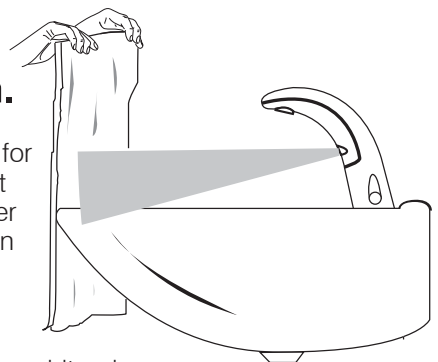
While cleaning the bathroom tile, protect the faucet from any splattering of cleaner. Acids and cleaning fluids will discolor or remove chrome plating.



**1 - 2 Min.**

Press button 1 time for 12 seconds. (Faucet will blink 2 times after 6 seconds and again after 12 seconds.)

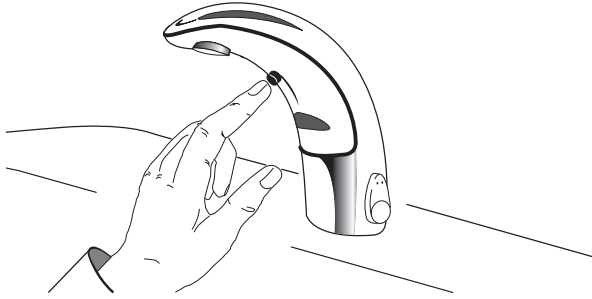
When faucet begins cycling on and off, place a white towel or white piece of paper at the desired range location. Keep the towel or paper in the same location until the faucet stops cycling.



## i.q.-Click FEATURE

The **i.q.-Click** feature is a button on the underside of the faucet spout that allows the user to place the faucet into the following function modes: Continuous Run, Temporary Off, Permanent Off and Auto Set Range Adjustment.

These functions are only applicable to faucets ordered with the **i.q.-Click (IC)** variation (with the exception of the Auto Set Range Adjustment). Pressing the button on a standard faucet will not activate these functions.



## i.q.-Click SETTINGS

Function	Press Button	LED Signal
2 minute Continuous Run	1 time for 2 seconds	5 short flashes
reset:	1 time or will reset automatically after 2 minutes	
Temporary Off	2 times (double click)	periodic flashing
reset:	1 time or will reset automatically after 3 minutes	
Permanent Off	2 times (double click) and then 1 time for 5 seconds	periodic flashing and then 2 long flashes
reset:	1 time	5 short flashes
Auto Set Range Adjustment	1 time for 12 seconds	2 flashes after 6 and 12 seconds

## Continuous Run

Water flows max. 2 minutes constantly — for easy filling of sink, pail, etc.

## Temporary OFF

Water flow is deactivated up to 3 minutes — for convenient cleaning of sink and faucet.

## Permanent OFF

The faucet is totally deactivated for safety and energy saving reasons during long absence.

## Auto Set Range Adjustment

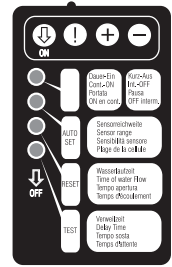
All **i.q.** faucets feature the Auto set function.

The detection area is automatically adapted to the sink where the faucet is installed. Thus reflection is prevented and a maximum of user convenience provided.

## EAF-5 REMOTE CONTROL

The EAF-5 Remote Control may be used with all EAF faucet models. The Remote Control may be used to adjust or reset:

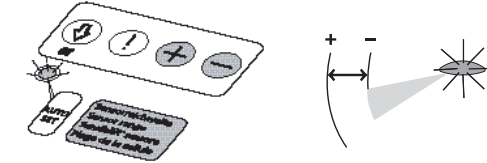
- Sensor Range
- Time Out Delay
- Continuous Run/Temporary Off
- Auto Set Range Adjustment



## Adjustment Instructions

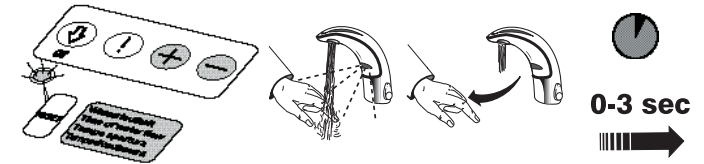
### 1. Sensor Range

Aim Remote at faucet sensor  
Press ON ↓ twice. LED next to Auto Set should be on  
Press + to increase range  
Press - to decrease range  
LED in faucet sensor will flash  
Each time the + or - is pressed, the range changes incrementally



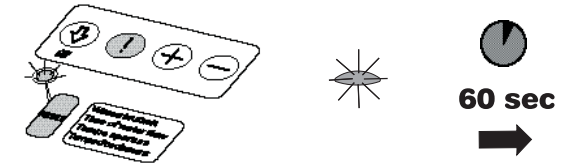
### 2. Time of Water Flow (after hands are removed) Can be set between 0 and 3 seconds

Aim Remote at faucet sensor  
Press ON ↓ three times. LED next to Reset should be on  
Press + to increase range  
Press - decrease range



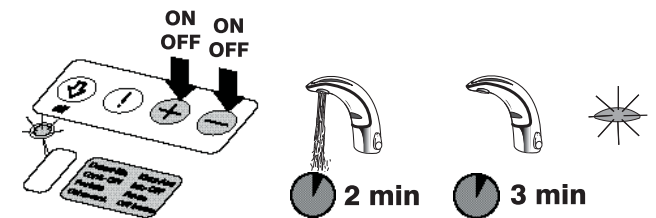
### 3. Reset (to factory set functions)

Aim Remote at faucet sensor  
Press ON ↓ three times. LED next to Reset should be on  
Press ! one time  
LED in faucet sensor will flash for 60 seconds



### 4. Continuous On

Aim Remote at faucet sensor  
Press ON ↓ one time. Top LED should be on.  
Press +. Faucet will run for 2 minutes

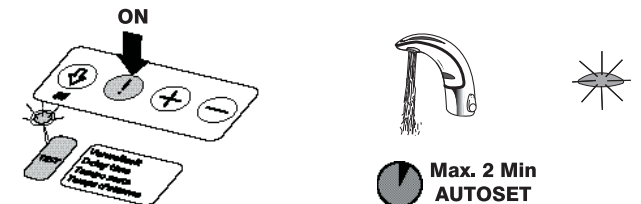


### 5. Temporary OFF

Aim Remote at faucet sensor  
Press ON ↓ one time. Top LED should be on.  
Press -. Faucet will remain off for 3 minutes

### 6. Auto Set Range Adjustment

Aim Remote at faucet sensor  
Press ON ↓ twice. LED next to Auto Set should be on  
Press ! one time  
LED in faucet sensor will flash for up to 2 minutes while the faucet automatically sets the range

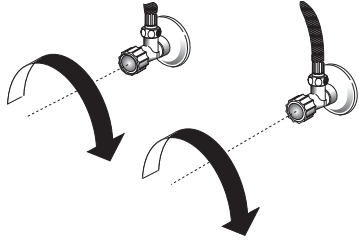


## BATTERY REPLACEMENT

Replace the battery when the red LED indicator flashes each time the faucet is in use or when the faucet stops functioning.

### Step 1

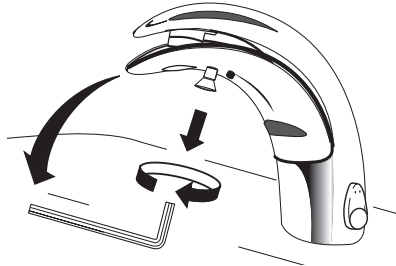
Close Supply Stop(s).



### Step 2

Loosen Screw with hex wrench.

Remove Throat Plate. Disconnect electrical lead at connector if required.



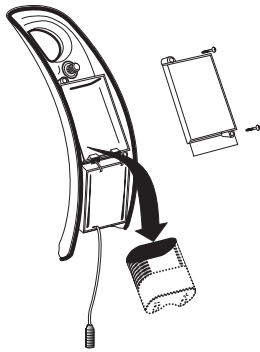
### Step 3

Remove Battery Cover using a No. 1 Phillip's head screwdriver.

Remove old Battery.

Dispose of properly.

Replace with 6 Volt Type 2CR5 Lithium Battery.



### Step 4

Wait three (3) minutes before inserting new battery.



### Step 5

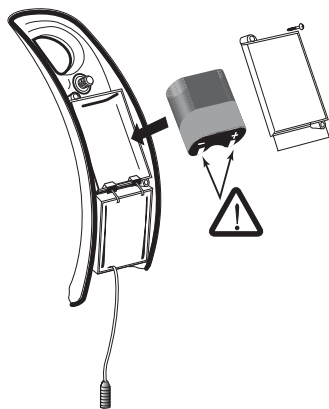
Insert a new battery. The red LED will flash for one (1) minute.

Reinstall Battery Cover.

Reconnect electrical lead at connector if previously disconnected. Reinstall Throat Plate.

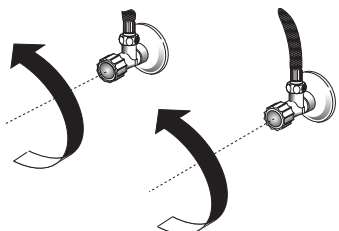
If LED doesn't flash or if it just lights up, remove the battery and reinsert it after a few minutes.

If water flows continuously after inserting the new battery, adjust the faucet's RANGE as instructed on Page 4.



### Step 6

Open Supply Stops.



## TROUBLESHOOTING GUIDE

### 1. Problem: Faucet does not function.

*Cause:* Adhesive packaging label affixed over sensor eye

*Solution:* Remove adhesive label from sensor eye

*Cause:* "Permanent Off" activated

*Solution:* Press button on faucet throat one time

### 2. Problem: Faucet delivers water in an uncontrolled manner.

*Cause:* Sensor is picking up reflections from fixture or other object.

*Solution:* Start "Auto set" (refer to Range Adjustment on Page 4)

### 3. Problem: Faucet does not deliver any water when Sensor is activated.

*Indicator:* Solenoid valve produces an audible "CLICK."

*Cause:* Water supply stop(s) closed

*Solution:* Open water supply stop(s)

*Cause:* Water supply stop strainer(s) clogged

*Solution:* Clean water supply stop strainer(s)

*Indicator:* Solenoid valve DOES NOT produce an audible "CLICK."

*Cause:* Battery low (EAF-150 Models)

*Solution:* Replace battery (refer to Battery Replacement on this page)

*Cause:* Power failure (EAF-100 Models)

*Solution:* Check power supply

### 4. Problem: Faucet delivers only a slow flow or dribble when Sensor is activated.

*Cause:* Water supply stop(s) are partially closed

*Solution:* Completely open water supply stop(s)

*Cause:* Water supply stop strainer(s) clogged

*Solution:* Remove, clean, and reinstall water supply stop strainer(s). Replace strainer(s) if required.

*Cause:* Aerator is clogged

*Solution:* Remove, clean, and reinstall Aerator. Replace Aerator if required.

*Cause:* Valve is defective.

*Solution:* Contact the Sloan Valve Company Installation Engineering Department at 1-888-SLOAN-14 (1-888-756-2614).

### 5. Problem: Faucet does not stop delivering water or continues to drip after user is no longer detected.

*Cause:* Valve is defective.

*Solution:* Contact the Sloan Valve Company Installation Engineering Department at 1-888-SLOAN-14 (1-888-756-2614).

### 6. Problem: LED indicator blinks when faucet is in use.

*Cause:* Battery low

*Solution:* Replace battery (refer to Battery Replacement on this page)

### 7. Problem: *iq* - Click doesn't function (-IC models only)

*Cause:* Button is defective

*Solution:* Contact the Sloan Valve Company Installation Engineering Department at 1-888-SLOAN-14 (1-888-756-2614).

### 8. Problem: The water temperature is too hot or too cold on a faucet connected to hot and cold supply lines.

*CAUSE:* Supply Stops are not adjusted properly.

*SOLUTION:* Adjust Supply Stops.

*CAUSE:* For models with integral mixing valve — Mixing valve is set improperly for the water temperature desired.

*SOLUTION:* Rotate mixing valve handle clockwise to decrease water temperature or counterclockwise to increase water temperature.

If further assistance is required, please contact the Sloan Valve Company Installation Engineering Department at 1-888-SLOAN-14 (1-888-756-2614).