

Installation Instructions

Aerada 1000 Series Gooseneck Faucet

S53-306	DC Gooseneck with Centershank
S53-307	DC Gooseneck with 4" Trimplate
S53-308	AC Gooseneck with Centershank
S53-309	AC Gooseneck with 4" Trimplate
232-007	Plug-In Transformer for AC Gooseneck



WARNING

Read this entire installation manual to ensure proper installation, then file these instructions with the owner or maintenance department.

Flush all the water supply lines before making connections, then make sure the water supply is turned off before beginning installation.

Do not use pipe dope on faucet and supply connections. Possible solenoid contamination could occur and will void any warranty. Teflon tape is the recommended sealant. Use plumber's putty only to seal the faucet to the deck.

The installation site should have access to an electrical box with 120 volt AC, 60 Hz cycle for input to a transformer. When installing the transformer, the electrical box should be located within six feet of the sink.

The DC faucets are powered by four "AA" factory-installed alkaline batteries.

Product warranties may be found under "Product Information" on our web site at www.bradleycorp.com.

Compliance and conformity to local codes and ordinances is the responsibility of the installer.

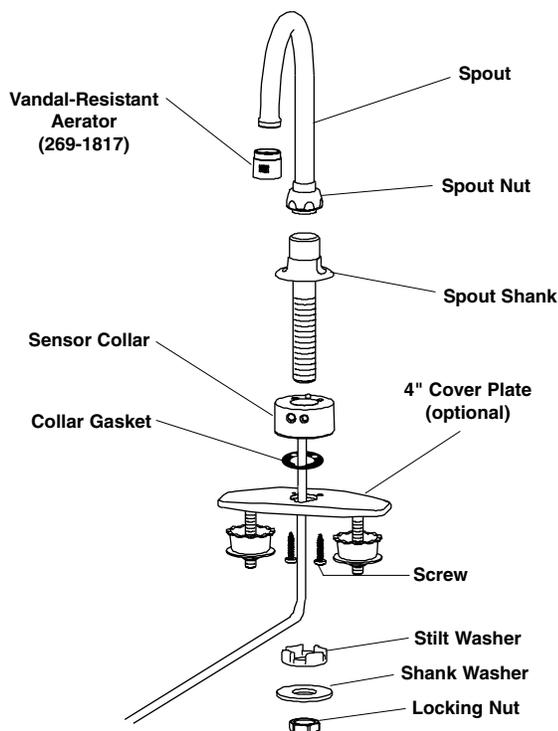
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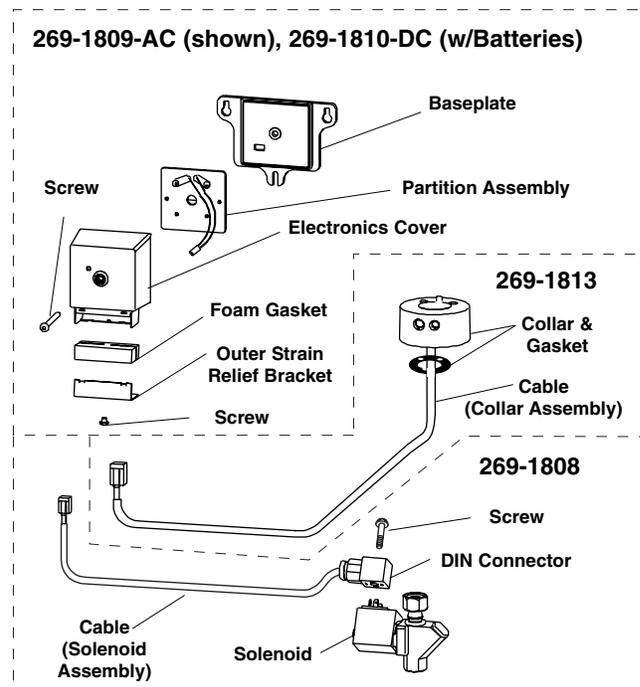
Components for Aerada 1000 Series Faucet

Carefully separate all parts from packaging and check each part with the illustrations below. Make sure all parts are accounted for before discarding any packaging material. If any parts are missing, do not attempt to install your Bradley Faucet until you obtain the missing parts.

1000 Series Faucet (shown w/cover plate)



Electronic Box and Solenoid



Supplies Required for Installation:

- Teflon Tape
- Plumber's Putty (for securing faucet to deck ONLY)
- 1/2" NPT water inlet supply
- Pipe fittings

Installation Instructions - Single Hole and Cover Plate

1 Remove the locknut (1), washer (2), stilt washer (3) from the spout shank (4). Remove shank from cover plate (if supplied).

2 Install faucet assembly into deck hole. **Use plumbers putty to seal faucet to deck.**

Be careful not to nick or cut the sensor cable during installation.

3 Install stilt washer (1) all the way up onto shank, crown side up. Position sensor cable (2) through one of the rounded slots in the stilt washer (1).

4 Install the shank washer (1) and locknut (2) onto faucet shank. Tighten locknut securely to prevent collar and spout from rotating. If necessary, support spout base from above to prevent twisting.

5 If faucet was installed with cover plate, secure cover plate with basin washers (1), flat washers (2) and locknuts (3).

6 Install spout nut (1) onto the spout.

For swivel mount, only install two plastic split washers (2).

For rigid mount, only install 1/8" thick plastic washer (3).

Mount the spout completely into the base and securely tighten the spout nut (1).

7a **CAUTION:** Flush water lines before beginning this step.

Attach the outlet assembly (1) and aerator gasket (2) to the spout. The outlet assembly is equipped from the factory with a 0.5 GPM cartridge (white screen). To configure the outlet with the 2.2 GPM cartridge (yellow screen) refer to step 8.

IMPORTANT: If 0.5 GPM spout is to be used, skip Step 8 and proceed directly to *Installation - Solenoid and Optional Valves, page 4.*

7b **IMPORTANT:** Flow rates exceeding the 0.5 GPM maximum limit for public lavatories set by ASME A112.18.1 negate the UPC certification of this faucet for public use applications.

For applications requiring laminar flow without an aerator, refer to the instructions below.

Attach the plain spray ring (1) to the spout. Insert the laminar flow control insert (2) into the spout.

IMPORTANT: If laminar flow is to be used, skip Step 8 and proceed directly to *Solenoid and Optional Valves, page 4.*

8 **IMPORTANT:** Flow rates exceeding the 0.5 GPM maximum limit for public lavatories set by ASME A112.18.1 negate the UPC certification of this faucet for public use applications.

To convert outlet assembly to 2.2 GPM:

1. Disassemble outlet assembly using key (1).
2. Remove the 0.5 GPM cartridge (white screen) and replace it with the 2.2 GPM cartridge (2).
3. Install the rubber washer (3), adapter (4) and aerator gasket (5).

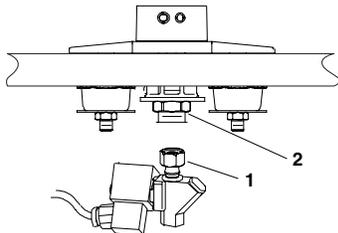
IMPORTANT: Proceed directly to *Installation - Solenoid and Optional Valves, page 4.*

Installation Instructions - Solenoid Valves and Electronic Box (AC)

Models S53-308 and S53-309

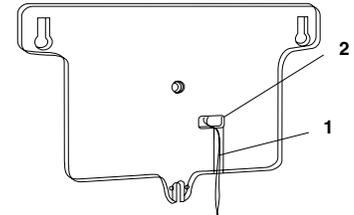
1 Thread the union nut (1) of the solenoid assembly to the faucet shank (2). Use **Teflon tape** on the threads to ensure a leak-free joint. Make sure the solenoid is positioned for easy access. Tighten the union nut.

CAUTION:
Do not use pipe dope on threads. The solenoid could become contaminated and will void any warranty.

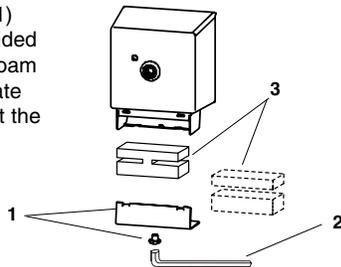


2 When installing the transformer, make sure the electrical box is located within 6' of the sink. Install the baseplate and mount the electronic box to the desired wall location. The baseplate must be mounted either level with or above the solenoid valve, and within 12" of the solenoid valve. Make sure the transformer wires (1) are positioned in the baseplate channel (2) before mounting the unit.

NOTE: When positioning baseplate, make sure there is enough room for drip loops in final installation. See Note in step 7.

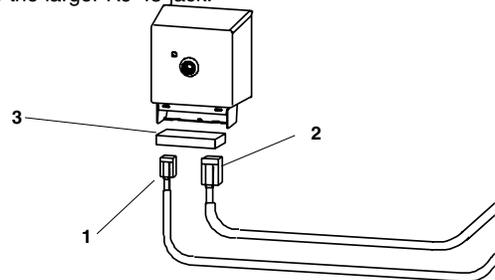


3 Remove the strain relief cover and screw (1) using hex key provided (2). Remove both foam gaskets (3). Separate the foam gaskets at the perforation.

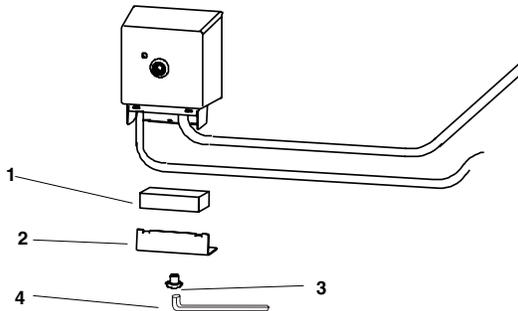


CAUTION: Do not attempt to operate multiple faucets using a single transformer.

4 Insert smaller foam gasket (3) into strain relief. Install solenoid cable plug (1) into the smaller, telephone-style jack in the electronic box. Install faucet sensor cable plug (2) into the larger RJ-45 jack.

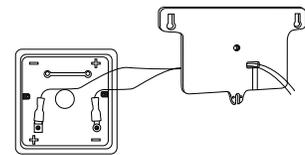


5 Insert larger foam gasket (1). Attach strain relief cover (2) with screw (3) using hex key provided (4).



6 Feed the wires from the transformer through the baseplate. Connect the 1/4" spade terminal to the positive (+) terminal and connect the 3/16" spade terminal to the negative (-) terminal. Terminals are two different sizes and match corresponding terminal clips from transformer.

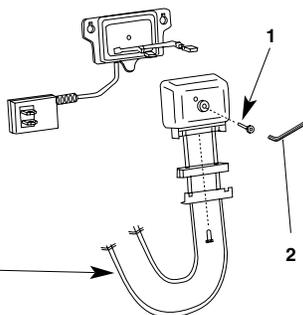
NOTE: The faucet will automatically calibrate when sensor cable is connected and power is supplied. Refer to step 8.



CAUTION: Faucet will automatically calibrate when sensor cable is connected and power is supplied. DO NOT place objects in front of collar sensor for first 30 seconds after power-up.

7 Re-attach the electronic box to the baseplate location using screw(1) and hex key provided (2).

NOTE: To ensure the electronic box is level with or above the solenoid valve, the cables should create a drip loop. The electronic box is designed with the wire connectors facing downward to ensure proper drip loops.



8 **CAUTION:** DO NOT turn on water supply until all electrical connections are made.

Plug the transformer into the applicable electrical receptacle. Wait at least 30 seconds, then turn on the water supply.

NOTE: When power is initially supplied, the LED on the electronic box will blink and an audible indicator chirps twice per second whenever hand presence is detected. This will continue for 8 minutes and then stop.

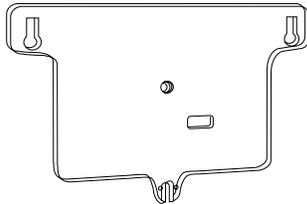
Proceed to Faucet Operation, page 6.

Installation Instructions - Electronic Battery Box (DC)

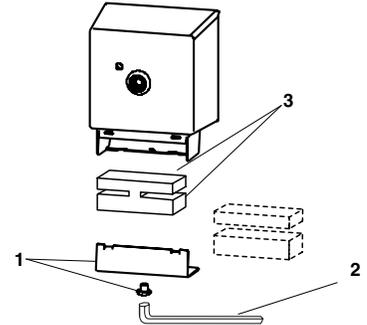
Models S53-306 and S53-307

- 1** Install the baseplate and mount the electronic box to the desired wall location. The baseplate must be mounted either level with or above solenoid valve, and within 12" of the solenoid valve.

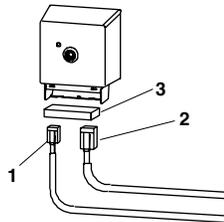
NOTE: When positioning the baseplate, make sure there is enough room for drip loops in the final installation. Refer to Note in step 6.



- 2** Remove the strain relief cover and screw (1) using hex key provided (2). Remove foam gasket (3). Separate the foam gasket at the perforation.

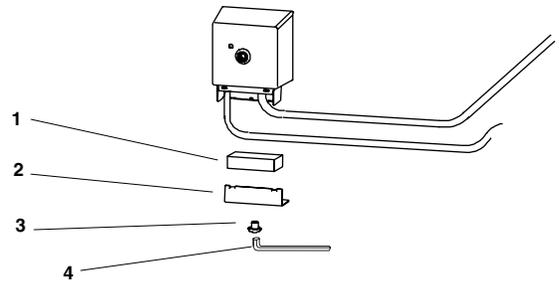


- 3** Insert smaller foam gasket (3) into the strain relief. Install solenoid cable plug (1) into the smaller, telephone-style jack in the transformer. Install faucet sensor cable plug (2) into the larger RJ-45 jack.



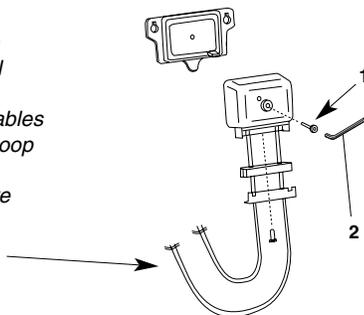
CAUTION: Faucet will automatically calibrate when sensor cable is connected. **DO NOT** place objects in front of collar sensor for first 30 seconds after power-up.

- 4** Insert larger foam gasket (1). Attach strain relief cover (2) and screw (3) using hex key provided (4).



- 5** Mount the electronic box to the wall location using screw (1) and hex key provided (2).

NOTE: To ensure the electronic box is level with or above the solenoid valve, the cables should create a drip loop. The electronic box is designed with the wire connectors facing downward to ensure proper drip loops.



- 6** **CAUTION:** **DO NOT** turn on water supply until all electrical connections are made.

Turn on the water supply.

NOTE: When power is initially supplied, the LED on the electronic box will blink and an audible indicator chirps twice per second whenever hand presence is detected. This will continue for 8 minutes and then stop.

Proceed to Faucet Operation, page 6.

Faucet Operation

Operating Modes

- Normal Motion Detecting Mode: water flows within 1/4 second after activating sensor (i.e., putting hands in front of collar) and continues to stay on as long as motion is detected. Maximum time is 45 seconds (factory default setting).
- Scrub Mode: water continues to flow for 60 seconds (default) after deactivating the sensor (removing hands).
- Metered Mode: water flows for 10 seconds (default) from first hand detection.

- Water Saver Mode: water flows for a maximum of 5 seconds starting from first hand detection and immediately turns off when hands are removed.

Additional Operating Features

- 12-second, no-motion turn off in normal mode
- “Low battery” indication
- Battery life up to one year depending on frequency of use.

Changing Faucet Operation

In order to change any faucet option, the DIPswitch must be used (located inside the electronics cover assembly, see illustration this page).

Checking/Changing DIPswitch Settings

1. Remove the electronics cover (1) from the baseplate (2).
2. Lift the partition (3) out to expose the circuit board and DIPswitch.
3. To change a DIPswitch setting, use a small pointed object to move the appropriate DIPswitch to ON or OFF.

Faucet range and mode settings along with their corresponding DIPswitch settings are outlined in Table 1 and Table 2

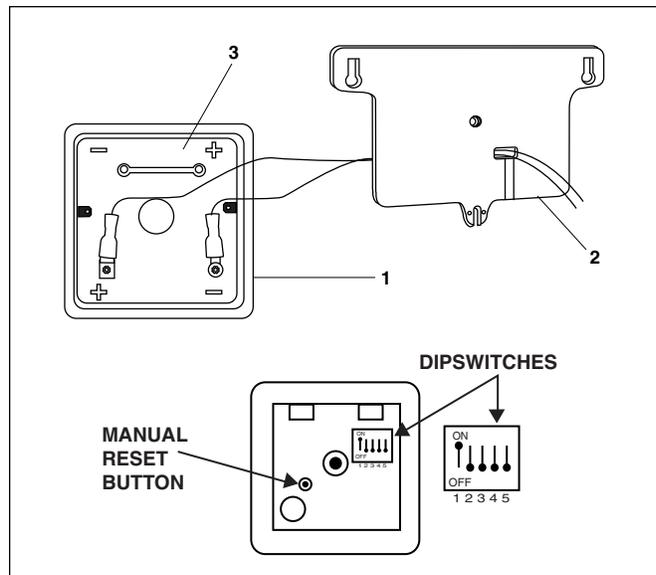
Resetting Faucet Electronics

In order to reset the faucet electronics, a reset button located inside the electronics cover assembly must be pushed in (see illustration this page).

To reset faucet electronics:

1. Remove hex screw holding the electronics cover to the baseplate and remove cover.
2. Lift the partition out to expose the circuit board and reset button.
3. Make sure there are no objects in front of the collar sensor, then push the button to reset.
4. Wait 30 seconds for faucet to automatically calibrate to the environment.
5. Activate water flow by placing your hand in front of the sensor.
6. Place partition into the electronics cover.
7. Place the electronics cover onto the baseplate and secure with the hex screw.

NOTE: Resetting the faucet electronics causes loss of virtual settings and time in use, and will also start the 8-minute timer where the LED on the electronics box will blink and an audible indicator chirps twice per second whenever hand presence is detected.



Electronics Cover Assembly & DIPswitch

Range	Short	Normal	Far	Maximum
Switch 1	off	on	on	off
Switch 2	off	off	on	on

Table 1 - Faucet Range

Modes	Normal Mode	Scrub Mode	Meter Mode	Water Saver Mode
Switch 3	off	on	off	off
Switch 4	off	off	on	off
Switch 5	off	off	off	on

Table 2 - Faucet Mode

Troubleshooting

Whenever new batteries are installed, AC power is applied, or a manual reset button is pressed, the LED on the electronics cover will blink and an audible indicator chirps twice per second whenever hand presence is detected. After 8 minutes, the LED and buzzer function stops.

If an error occurs, the LED will blink and the buzzer will sound every 30 seconds to assist in diagnosing the problem. When corrective action is taken the LED and buzzer will stop.

The following chart provides details concerning the number of beeps and possible errors associated with them .

- 1 Beep:** Indicates low battery.
- 2 Beeps:** Calibration out of range (environment too reflective).
- 3 Beeps:** Room infrared level out of range; too much sunlight, heat lamp present, etc.
- 4 Beeps:** Solenoid short circuit.
- 5 Beeps:** Solenoid unplugged or loose/broken solenoid connection.

Refer to Troubleshooting Chart below and on page 8 for further troubleshooting information.

Problem	Check	Possible Solution
Water runs continuously.	Debris in solenoid (no beeps).	Disassemble solenoid and inspect/clean parts.
	Water pressure too high (no beeps).	Reduce pressure to under 80 PSI.
Faucet turns on by itself (ghosting).	Incorrect range setting for spout type and sink used (2 beeps).	Change range setting using DIPswitch (page 6).
No water flow.	Water not turned on (no beeps).	Turn on water supply.
	Solenoid cable not connected to electronics cover (5 beeps).	Check connection.
	Solenoid short circuit (4 beeps).	Replace electronics cover.
	Sensor cable not connected to electronics cover (no beeps).	Check connection.
	Inoperative sensor (no beeps).	Inspect collar wiring for signs of damage or corrosion. Replace if necessary.
	Inoperative electronics cover assembly (no beeps).	Replace cover assembly.
	Water pressure too high (no beeps).	Reduce pressure to under 80 PSI.
	Low battery voltage (DC only) (1 beep).	Replace batteries (DC only).
	6VDC transformer not properly connected to partition assembly (no beeps).	Use correctly sized terminal clips (page 4).
	Wiring of multiple unit 6VDC transformer (no beeps).	Faucets must be wired in parallel from transformer (transformer to each individual unit), not connected in a series.
Range too short or too long.	Interference during automatic calibration (no beeps).	Remove interference; reset electronics using reset button (page 6). Allow 30 seconds for faucet to automatically re-calibrate.
	Incorrect range setting for type of spout and sink used.	Change range setting using DIPswitch (page 6).
	Lighting environment affecting sensor (3 beeps).	Change range setting using DIPswitch (page 6).

Troubleshooting *continued . . .*

Problem	Check	Possible Solution
Faucet works in reverse.	Solenoid wiring on DIN connector (no beeps).	Replace solenoid.
Faucet turns off too soon.	Faucet operating mode (no beeps) or faucet range setting.	Change mode or range setting using DIPswitch (page 6).
Faucet stays on longer than normal.	Dirty solenoid valve (no beeps).	Clean internal parts or replace solenoid valve.
	Clogged spout outlet.	Clean outlet.
	Faucet in wrong mode (no beeps).	Change mode setting using DIPswitch (page 6).
Faucet stopped working.	Mounting of electronics cover (no beeps).	Electronics cover must be mounted to allow for drip loops for the sensor and solenoid cables (pages 4 & 5).
	Sensor cable connector.	Clean connector.
	No clicking sound from solenoid during hand presence (no beeps).	Reset electronics using reset button (page 6).
	Solenoid valve strainer.	Clogged strainer. Clean if necessary.
	Check if faucet outlet is clogged (no beeps).	Clean faucet outlet.
	Battery voltage (battery operated only).	Replace batteries if below 4.2 volts.
	Incorrect range setting for spout type and sink used (no beeps).	Change range setting using DIPswitch (page 6).