



Installation Procedure:



CAUTION. Read this note before proceeding

1. Avoid using large amount of pipe putty on pipe joints. Putty is damaging to all automatic flush valves.
2. After installing stop valve and prior to installing flush valve, purge stop valve at high pressure for one minute, (purge into a bucket if available). Purging valve in this way will remove particles that would otherwise find their way into the flush valve causing immediate damage.



NOTE: Do not use sharp tools, that can cause damage to the finish on the flush valves



Please remember the following: Valves are shipped with batteries pre-installed and a cover over the sensor eye. When necessary to remove batteries never attempt to remove batteries by pulling hard on battery wire.

1. Place tube sleeve over supply bib that is present in the wall.
2. Slide supply flange over tube sleeve, press against wall. Using Allen wrench fasten supply flange to tube sleeve.
3. Using plumber's putty, fasten stop to pipe bib.
4. Mount spud coupling (spud flange, rubber washer, thrust washer, spud nut) to urinal or toilet spud. Keep spud nut loose in preparation for step 5.
5. Install flush connection to spud coupling by inserting connection through spud nut. Tighten spud nut
6. Insert vacuum breaker into flush connection as shown in drawing.
7. **Run water through stop valve at high volume for 1-2 minutes in order to clear dirt and debris out of pipes prior to installing flush valve. Use a container to capture running water.**
8. Place flush valve on top of flush connection, mate valve body with stop valve.
9. Hand tightens both connection nut and stop nut a few turns each at a time. This will ensure that the nuts are threaded properly to their prospective male counter parts. (Do not cross thread).
10. Place heavy cloth over nuts in order to protect the finish and tighten using wrench.
11. Loosen the Allen anchors using supplied wrench (1 or 2 turns), align sensor window so it is facing forward and looking over toilet or urinal. Tighten Allen screw (**Do not over-tighten**).
12. Turn water on and check for leaks.
13. Water flow rate is adjusted with flow adjuster screw within stop valve.
14. For urinal application turn water flow rate (DE method).
15. **Remove cover that covers sensor window in order to begin operation.**

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Sensor Range Setup:

Sensor range is factory preset, the sensor can be adjusted the range and the flushing time with optional remote control.

Part Number **A-14060**

Operation:



1. The sensor senses object (body) and begins blinking red light. The object must be present in front of sensor for 8-10 seconds in order to prevent accidental flushing.



2. Once object has left sensor area (toilet urinal stall) a delay of 2-3 seconds may occur after which toilet or urinal will flush.



3. For manual operation depress push button (located atop valve) and release.



Please remember automatic toilets and urinals utilize presence sensors and not motion sensors. Moving object in front of sensor rapidly will only delay or prevent proper flushing.

Battery replacement:



Valve is shipped with 4 AA batteries pre-installed. When necessary to replace batteries:

1. Unfasten upper Allen screw in the back of the valve, pull battery access cap off (have a towel handy to rap top cap with towel. This will prevent damage to valve finish). Pull battery enclosure out of valve and disconnect be **careful not to cut battery wires**.
2. Place batteries in the proper order. It is advisable to use high quality batteries for this task.
3. After batteries have been inserted in their proper order, re-plug battery compartment, place valve cap back on and refasten Allen screw.
4. At this time the sensor will take a few moments to adjust to the room's environment after which the valve will be ready for operation.

Limited Warranty

Mac Faucets warrant this Product to be free of defects for a period of one year from date of purchase. Mac Faucets will replace, free of charge, during this warranty period, parts that prove defective when properly installed and under normal use and service. Damage that occurs as a result of abuse, improper installation, environmental conditions, or improper application will void this warranty. Products must be shipped with postage and handling prepaid, along with dated proof of purchase. This warranty does not cover installation or any other labor charges. it does not cover shipping and handling of both replacement parts and returned defective parts. Products or components that have been altered or in any way modified will not be covered under this warranty. Replacement parts are under warranty only for the remaining period under the initial warranty. Some states do not allow for exclusion of incidental or consequential damage.

Trouble Shooting:

(Always make sure that sensor lens is clean and Duracell Copper Top batteries are fresh)

Valve does not operate, red light does not in response to approaching user:

1. User out of range or not inline with sensor (sensor must be facing user).
2. Batteries need replacing. See battery replacement instructions.
3. Batteries installed improperly in battery pack, battery harness not plugged in properly, see installation instruction, and battery replacement instructions.
4. Sensor wire loose, unplugged, plugged improperly, plug sensor wire properly. Please call MAC Faucets for instructions if necessary.

Valve does not operate, red light blinks in response to approaching user:

1. No water, very low water pressure in supply pipes, supply valves closed.
2. Water pressure very high, well above 115 PSI.
3. Screen filter severely clogged up (V3 valves with screen filter located in tail pipe).
4. Batteries low or defective, replace batteries.
5. Sensor range has become short. Replace Sensor.

Valve operates on and off “by itself”:

1. Sensor range adjusted too long, and must be adjusted for shorter range. Please call MAC Faucets for instructions.
2. Objects (such as toilet lid) may be present in close proximity to sensor.
3. Manual button defective. Replace manual button.

Valve leaks, drips:

Constant leaks or drips indicate defective cluster valve, or particulates which are wedged under piston. Clean piston valve seat, send valve for repair or contact a plumbing professional.

Loud thud noise when valve flushes.

This is an issue commonly associated with diaphragm/piston type valves such as washing machine valves, dishwasher valves, etc. The noise is generally present in the piping system. Clear winner remedies are to:

1. Lower water flow rate (see flow rate adjustment section of this manual).
2. Install “hammer arrestors” in close proximity to your valve. Please consult a plumbing professional for this task.

Runaway flush valve, water runs out of valve continuously, does not stop.

1. Make sure batteries are installed properly (flush valve will stay open even when batteries are completely spent).
2. Make sure that 2 wire plugs inside valve are plugged in properly.
3. (Rare) Sensor might have become defective in mid flush. There is not a viable field test for this phenomenon.
4. Cluster valve might have become defective, or particulates are wedged under piston seat. Remove cluster from valve to check for dirt under piston seat, If no dirt is found, replace cluster.

ATV-2 and AUV-2 Breakdown Drawings

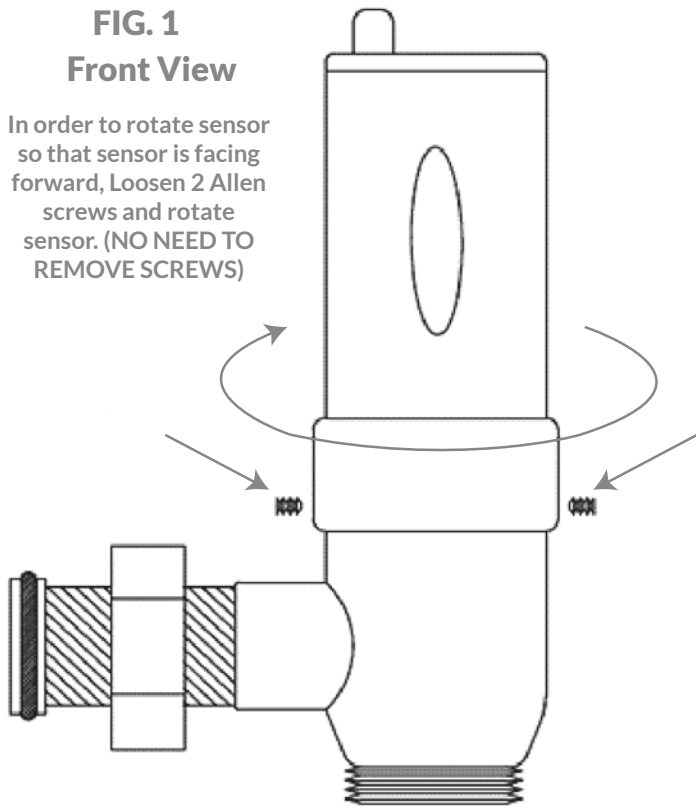
Hardware style might differ from drawings

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**FIG. 1
Front View**

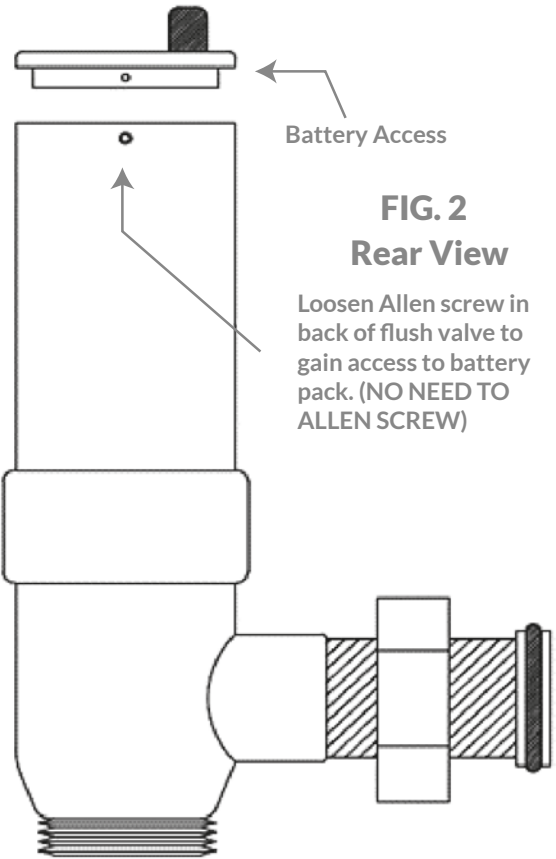
In order to rotate sensor so that sensor is facing forward, Loosen 2 Allen screws and rotate sensor. (NO NEED TO REMOVE SCREWS)



Battery Access

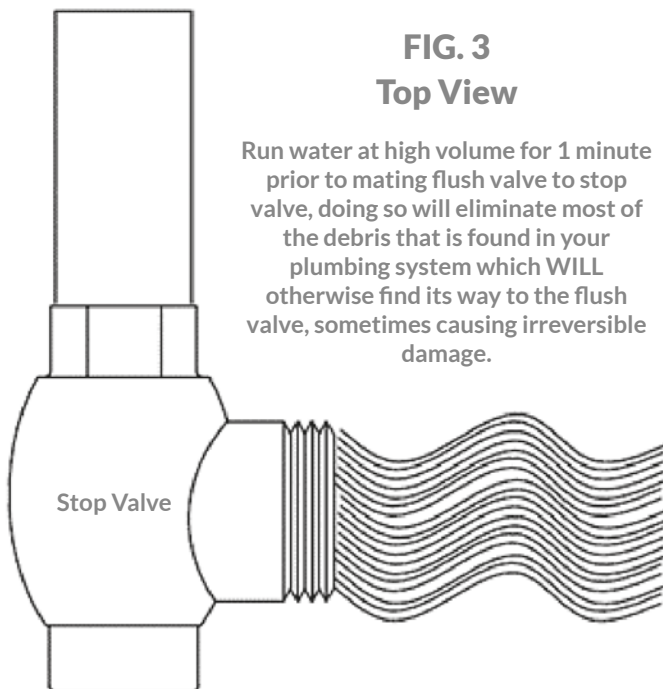
**FIG. 2
Rear View**

Loosen Allen screw in back of flush valve to gain access to battery pack. (NO NEED TO ALLEN SCREW)



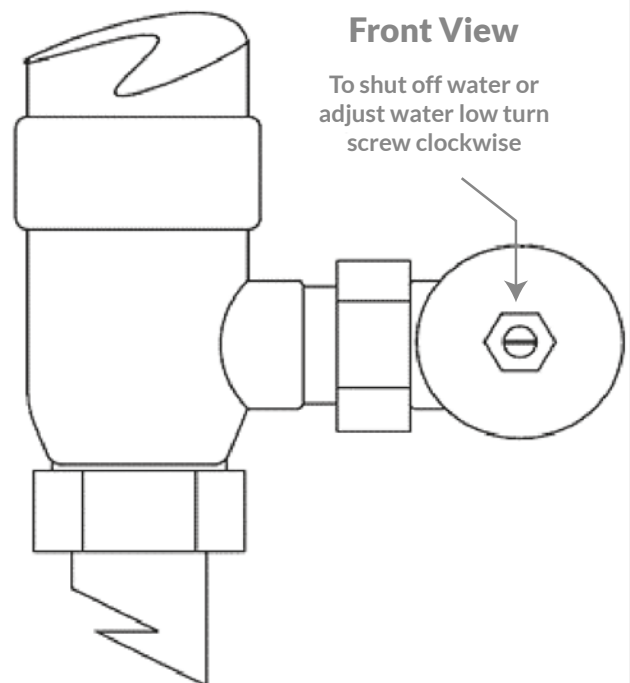
**FIG. 3
Top View**

Run water at high volume for 1 minute prior to mating flush valve to stop valve, doing so will eliminate most of the debris that is found in your plumbing system which WILL otherwise find its way to the flush valve, sometimes causing irreversible damage.



**FIG. 4
Front View**

To shut off water or adjust water low turn screw clockwise

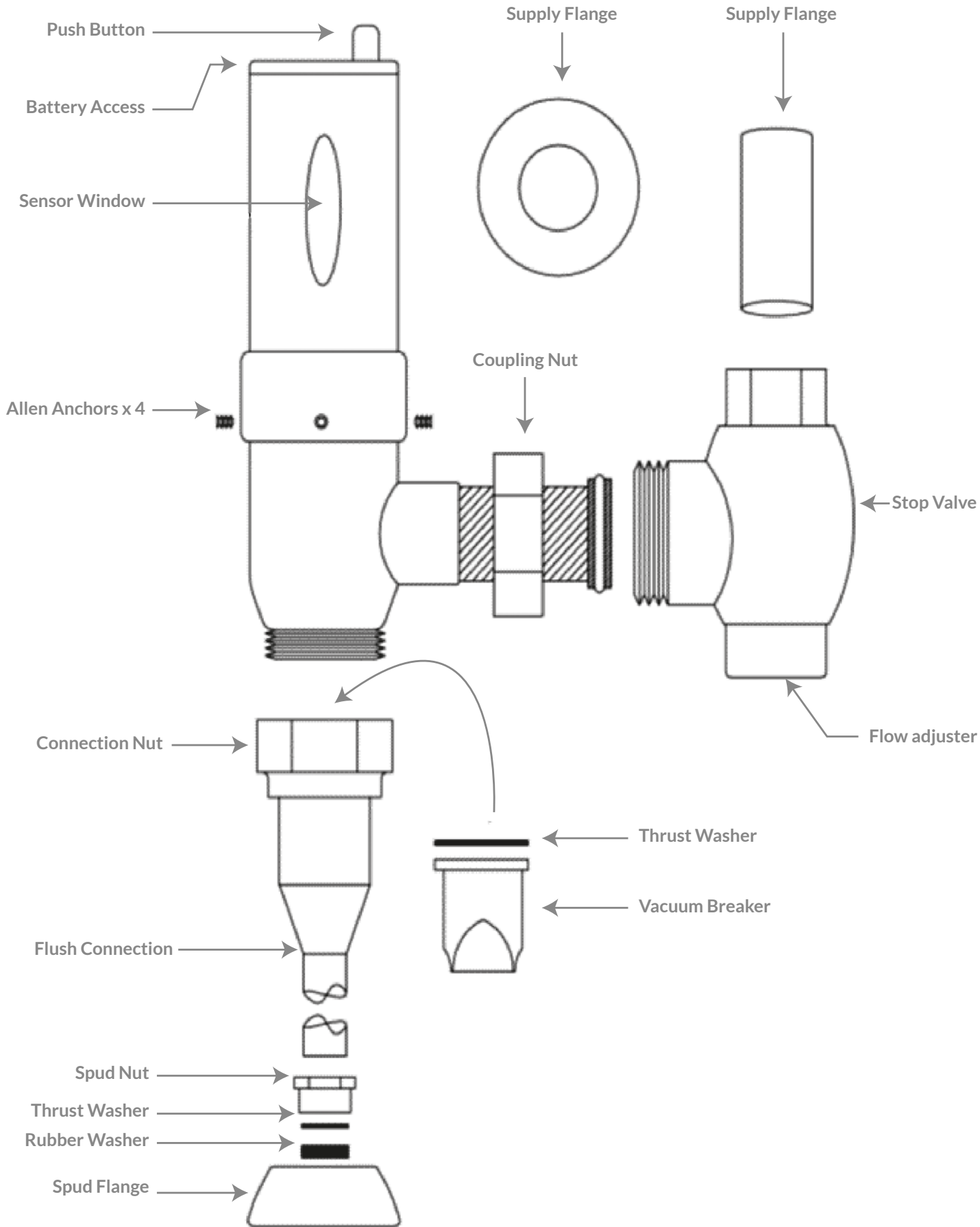


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AUV2- and ATV-2 Parts drawings

Hardware style might differ from drawings



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MTV-1
Toilet Flush Valve



MUV-1
Urinal Flus Valve



TiO-34
Two-in-One Faucet
and Soap Dispenser



TiO-32
Two-in-One Faucet
and Soap Dispenser