

# NWTS AIO<sub>3</sub> Ozone

with *Nelsen Integrated Enhanced Oxidation Generator*

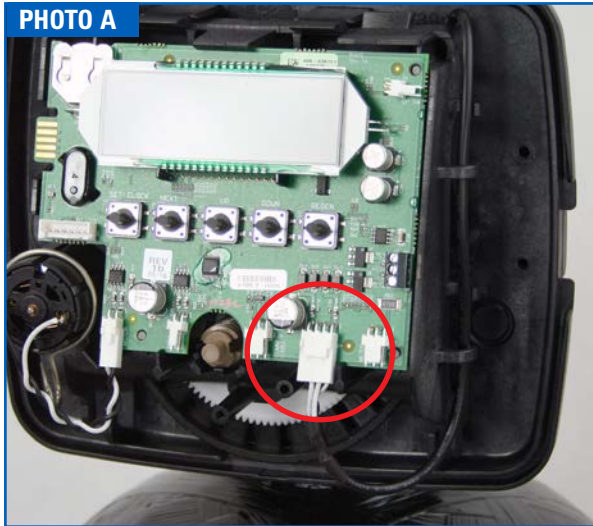


**AIO<sub>3</sub> Ozone Wiring, Installation & Programming Guide**



# Wiring & Installation of the EOG Integrated Wiring Model

**Remove the Cover of the Control Valve** and remove the power cord connection from the control valve as shown in **PHOTO A**.



Unsnap the top of the drive bracket using your thumbs and forefingers to expose the backplate. **PHOTO B**.

Remove the power cord from the wire chase and out through the back of the control. Measure 21" from the end of the power cord connector and make a clean cut.

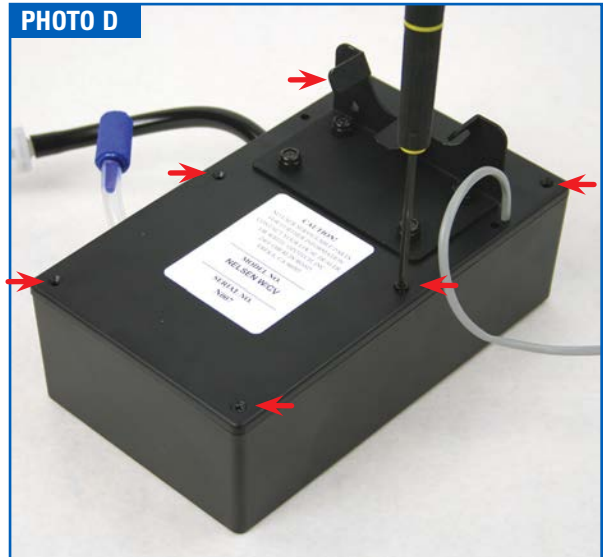


Using the wire strippers and the 12 gauge hole, strip about 1-1/2" of the outer shield from both ends of the power cord. See **PHOTO C**



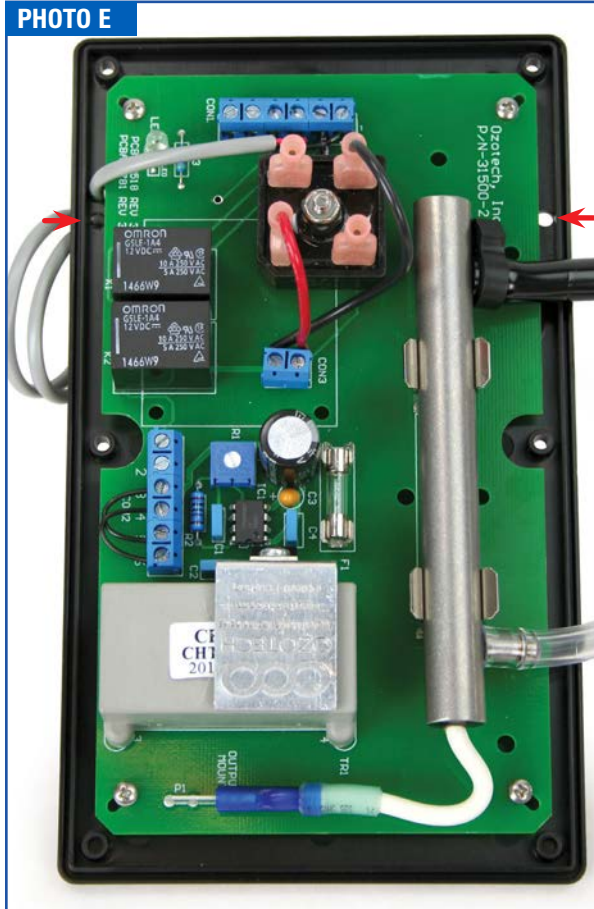
Strip 3/8" shielding from the four ends of white and black wires using the 20 gauge hole in the wire strippers.

Place the Ozone unit face down and remove the six screw from the back. **PHOTO D**



# Wiring & Installation of the EOG Integrated Wiring Model

Feed the power cord ends into the pre-drilled holes through the back of the Ozone unit, *the end with the connector needs to go through hole on the same side as the gray wiring coming from the control board.* **PHOTO E**



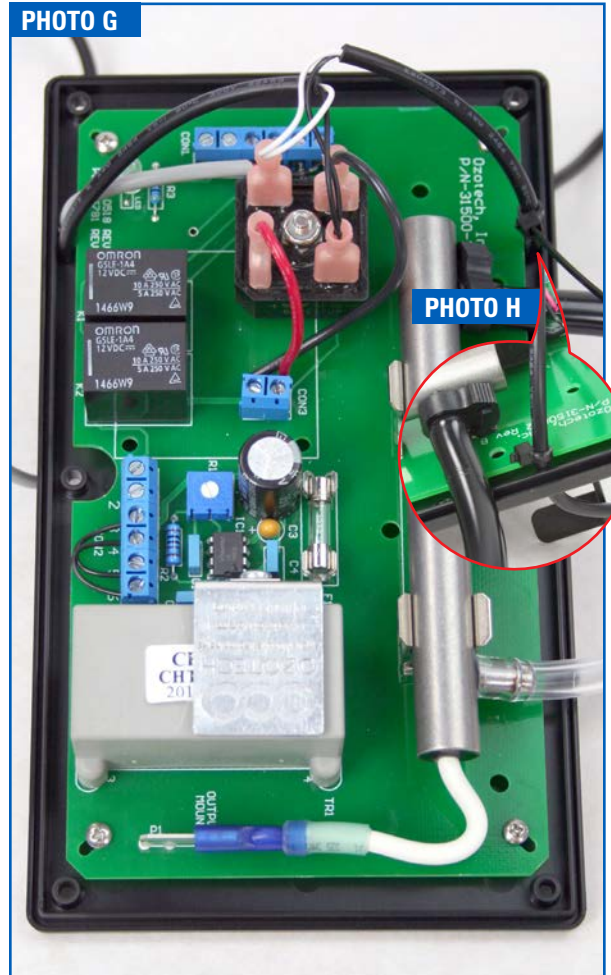
Crimp together both of the white wires into one of the spade connectors and do the same for the black wires. Make sure the bare wire is totally enclosed by the connector. **PHOTO F**



Install the spade connector with the two connected black wires to the lower right terminal and the spade connector with the two connected white wires to the upper left terminal as shown in **PHOTO G**.

Pull excess wire through the back of the unit and tighten a zip tie to the power cords to prevent from being pulled out of the ozone unit as shown in **PHOTO H**.

Re-assemble the ozone cover to the back plate with the six screws removed earlier.



# Wiring & Installation of the EOG Integrated Wiring Model

Install the EOG unit to the Control valve with the SS worm clamp around the injector cap as shown in **PHOTO 1**.



Remove the Domed Screen from the Brine Fitting and remove the Brine Fitting from the Control Valve. Remove the white Check Valve from the Brine Fitting and install the Black Ozone Compatible



Check Valve in the fitting as shown in **PHOTOS 4 & 5**.



Route both the black wire with connector and the gray EOG wire through the hole as shown in **PHOTO 2**. Fit both wires into the wire chase and snap the bracket back into place. (*Do Not Press on Control Board, use the bracket to snap into place.*)

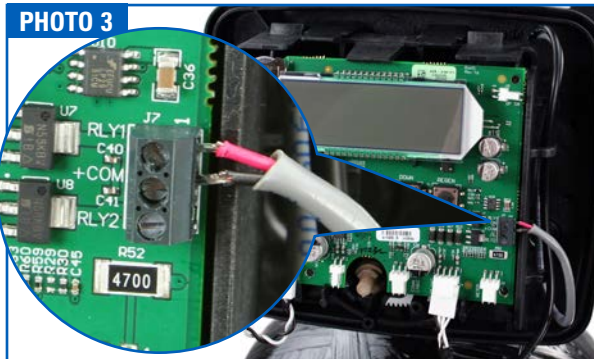


Determine the directional flow of the Barbed Check Valve, there are two arrows pointing in the direction of flow, they are hard to see and are highlighted in **PHOTO 6**. If you cannot see the arrows, blow or suck air through the valve to determine flow.



Next, cut off approximately 1-1/2" off of the end of the black tubing. Insert the short section of tubing on the end of the check valve the arrows point to. Insert the other end of the Barbed Check Valve into the tubing connected to the EOG unit. Re-install the Brine Fitting on the valve and connect the tubing to the Brine Fitting.

Make sure the EOG unit is not plugged in, connect the EOG unit's 2 wire leads to Relay 1 on the control valve. The black wire connects to **COM** and the red wire connects to **RLY1**. See **PHOTO 3** inset.



Power Supply Jack

Connect the power supply to the EOG unit and plug in the EOG and the Control Valve.

# AIO Controller - Ozone Configuration Settings

## Step 1

Press **NEXT** and **DOWN** simultaneously and release.



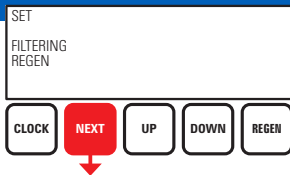
Press **NEXT** and **DOWN** simultaneously for 5 seconds and release. If the screen in **Step 2** does not appear, the lock on the valve is activated.



To unlock, press **DOWN**, **NEXT**, **UP** and **CLOCK** in sequence, then press **NEXT** and **DOWN** simultaneously for 5 seconds and release. Press **NEXT** and **DOWN** simultaneously for 5 seconds and release.

## Step 2

Use **UP** or **DOWN** to select **FILTERING REGEN**.

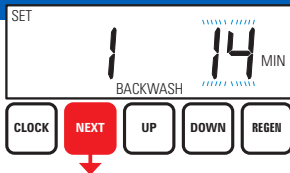


Press **NEXT** to go to **Step 3**.

Press **REGEN** to exit Configuration Settings.

## Step 3

Use **UP** or **DOWN** to adjust backwash time.



Press **NEXT** to go to **Step 4**.

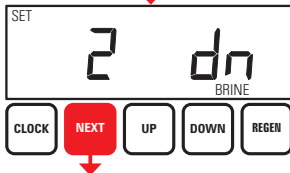
Press **REGEN** to return to *previous step*.

## Step 4

Step 4 alternates between the two displays shown.



Use **UP** or **DOWN** to adjust brine time.



Press **NEXT** to go to **Step 5**.

Press **REGEN** to return to *previous step*.

## Step 5

Use **UP** or **DOWN** to set 2nd backwash to **OFF**.



Press **NEXT** to go to **Step 6**.

Press **REGEN** to return to *previous step*.

## Step 6

Use **UP** or **DOWN** to set **RINSE** to **OFF**.



Press **NEXT** to go to **Step 7**.

Press **REGEN** to return to *previous step*.

## Step 7

Use **UP** or **DOWN** to set **FILL** to **OFF**.



Press **NEXT** to go to **Step 8**.

Press **REGEN** to return to *previous step*.

## Step 8

Use **UP** or **DOWN** to set **REGEN** to **OFF**.



Press **NEXT** to go to **Step 9**.

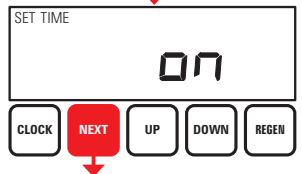
Press **REGEN** to return to *previous step*.

## Step 9

Step 9 alternates between the two displays shown.



Use **UP** or **DOWN** to set **RELAY 1** to **ON**.



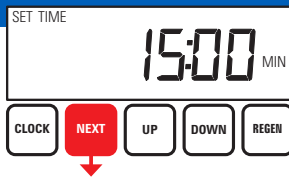
Press **NEXT** to go to **Step 10**.

Press **REGEN** to return to *previous step*.

# AIO Controller - Ozone Configuration Settings

## Step 10

Step 10 sets Relay Actuation Time, when the EOG unit turns on.



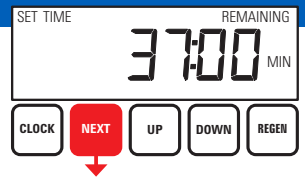
Relay activates after the beginning of regeneration cycle and then deactivates after a set period of time. The start of the regeneration is defined as the first backwash cycle or DN brine cycle, whichever comes first.

Set for 15 minutes or 1 minute after the time set in Step 3. This means the relay will turn on the EOG unit 1 minute after the air/ozone draw starts.

Use **UP** or **DOWN** to set RELAY 1 to 15. Press **NEXT** to go to Step 11. Press **REGEN** to return to previous step.

## Step 11

Step 11 indicates the length of time the EOG unit is activated.

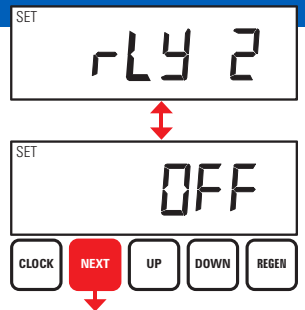


Use **UP** or **DOWN** to adjust the amount of time to 37:00 minutes.

Press **NEXT** to go to Step 12. Press **REGEN** to return to previous step.

## Step 12

Step 12 alternates between the two displays shown.



Use **UP** or **DOWN** to set RELAY 2 to OFF. Press **NEXT** to EXIT Configuration Settings. Press **REGEN** to return to previous step.

## Maintaining the EOG Unit

The EOG ozone generator is delivered factory tested, calibrated, and adjusted for maximum efficiency and long life. Simple maintenance and appropriate operating conditions are the only requirements to keep the unit functioning within manufacturer's specifications.

The EOG CD (Corona Discharge) cell should be cleaned every 12 months. Refer to the Ozotech Service Manual for in-depth instructions for proper cleaning. A cleaning kit is also available.

**Check Valves** - Both check valves, OZONE-BARB CV and OZONE-BRINE CV, need to be changed every 12 months. Failure to do so increases chances of a check valve failing and possible water leakage.

## Maintenance Parts

**OZONE-BARB CV** ..... Ozone 3/16" X 3/16" Barb Check Valve

**OZONE-BRINE CV** ..... Ozone Brine Check Valve

**OZONE-CLEANING KIT** ..... Ozone CD Cell Cleaning Kit

## EOG Important Safeguards



**WARNING - DO NOT** install the EOG unit on any system using Birm® filter media. Ozone will strip the properties from the media rendering it useless.



**WARNING - DO NOT** install the EOG unit on any other control valve other than specialty Clack based controls. Internal components may not be compatible with Ozone.



**CAUTION** - When re-installing electronic control board in the valve, make sure the wiring is fully seated in the wire chase. Wires that are not fully seated will prevent control board bracket from seating in the valve and covers not fitting correctly.

