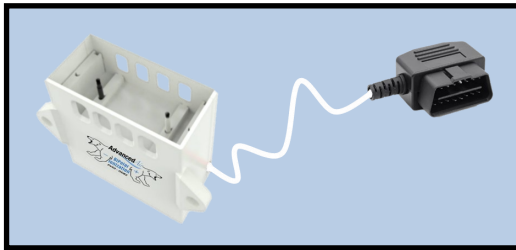




## BiPolar Ionization Air Treatment Systems For Vehicles



BiPolar PV50-ODB2



BiPolar PV50



BiPolar CV80

Advanced Air's Vehicle BiPolar Ionization Systems come in 2 sizes to meet the needs of any sized vehicle. Available in both 12V DC and 24V DC.

## SPECIFICATIONS



	<b>BiPolar PV50-ODB2</b> (ODB2 Plug Connection)	<b>BiPolar PV50</b> (Hardwire Connection)	<b>BiPolar CV80</b> (Hardwire Connection)
<b>Ion Output (+/-)</b>	50 Million ions/cc	50 Million ions/cc	80 Million ions/cc
<b>Vehicle Type</b>	Passenger Vehicles: Car, Truck, SUV, Minivan, Cargo and Transit Vans, etc.	Passenger Vehicles: Car, Truck, SUV, Minivan, Cargo and Transit Vans, etc.	Large Commercial Vehicles: Buses (Public, School, Coach), Planes, Trains, Subway, etc.
<b>Placement</b>	1 Per Vehicle	1 Per Vehicle	1 Unit for every 150ft <sup>2</sup> (every 200ft <sup>2</sup> for planes)
<b>Technology</b>	Needlepoint BiPolar Ionization	Needlepoint BiPolar Ionization	Needlepoint BiPolar Ionization
<b>Size (L. W. H.)</b>	2.25" x 0.9" x 1.5"	1.25" x 0.5" x 1"	1.75" x 1" x 1.25"
<b>Weight (lbs.)</b>	Less than 0.5 lbs.	Less than 0.5 lbs.	Less than 0.5 lbs.
<b>Temp. Range</b>	(-4°F to 140°F) (-20°C to 60°C)	(-4°F to 140°F) (-20°C to 60°C)	(-4°F to 140°F) (-20°C to 60°C)
<b>Warranty</b>	3 Year Warranty	3 Year Warranty	3 Year Warranty
<b>Approvals</b>	UL 867, UL 2998, CSA 22.2 NO 187. 5th Ed. CE, ROHS, REACH (EU)	UL 867, UL 2998, CSA 22.2 NO 187. 5th Ed. CE, ROHS, REACH (EU)	UL 867, UL 2998, CSA 22.2 NO 187. 5th Ed. CE, ROHS, REACH (EU)

# SCIENCE INSPIRED BY NATURE

Ions are naturally created outdoors by energy released from trees, rainfall, rushing water, waterfalls, crashing waves, lightning and even sunlight. Outdoors these naturally occurring ions work continuously to clean the air, and we notice this the most where ions are in their highest concentrations. Places such as: out in nature or a forest, at an ocean beach, near a rushing river or waterfall and after a rain storm. In nature, these ions help reduce airborne pollutants and freshen the air.

In vehicles concentrations of these naturally occurring ions are generally much lower; allowing airborne pollutants to stay suspended in the air and linger for long periods of time.



## BENEFITS

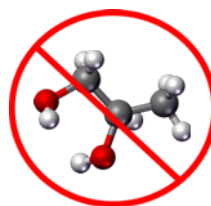
- Advanced Air BiPolar Ionization Systems use a nature based process to improve indoor air quality by creating millions of positively and negatively charged ions. These ions seek to attach themselves to airborne pollutants such as particulates, pathogens and VOC's, removing them from the air; the same way mother nature does outdoors.
- Reduce airborne particles such as dust, pollen, smoke
- Reduce airborne pathogens such as viruses, germs, and bacteria.
- Reduce VOC's which can be found in high concentrations from exhaust from other vehicles and materials used in a vehicles interior.
- No filters to replace or future costs.



Particulates



Pathogens



VOC's



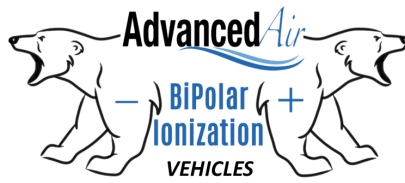
Odors

## APPLICATIONS

- Passenger Vehicles
- School Buses
- Trains & Subway Cars
- Transit Buses
- Airplanes
- Cruise Ships

+ Many More





## HOW IT WORKS

### Ion Production:

Advanced Air BiPolar Ionization Systems for vehicles create millions of positively and negatively charged oxygen ions, which occurs naturally outdoors from trees, rainfall, ocean waves, waterfalls, sunlight and lightning.

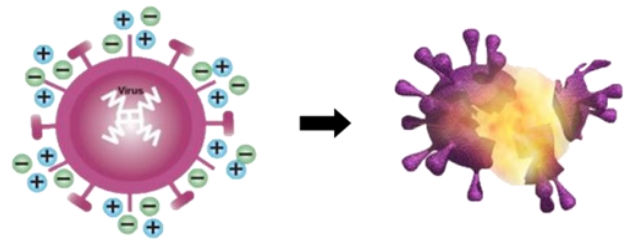
### Distribution:

Using the heating and air conditioning systems airflow, the ions travel through the ducts and are released into the air in the vehicles cabin.



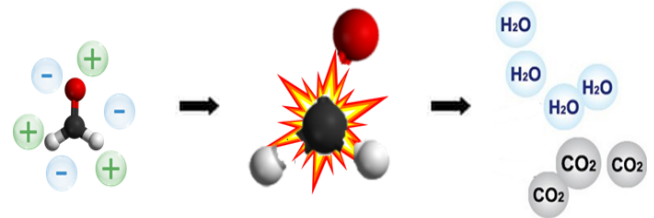
### Result - Pathogens:

Charged ions interact with airborne particles, pathogens and VOC's. Charged ions trigger cell oxidation which inactivates (kills) airborne viruses, germs, bacteria, mold spores and microorganisms.



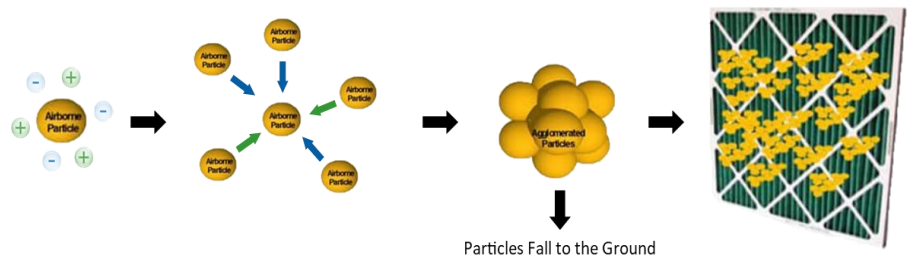
### Result - VOC's:

Charged ions seek and attach to airborne VOC's of an opposite polarity. When this occurs it changes the VOC's chemical structure, rendering them harmless. What remains is harmless water and carbon dioxide molecules.

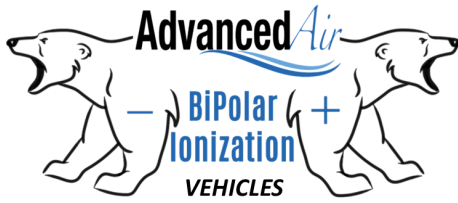


### Result - Particles:

Particles are charged oppositely, causing them to clump together into larger particles (snowball effect). This either makes the particles too heavy to be suspended in air, and they fall to the ground or surfaces where they can be cleaned up. Or, the clumped particles surface area increases where they are easier to catch in a standard air filter and are removed from the air.



Particles Fall to the Ground



Advanced Air BiPolar Ionization Systems have been tested in an independent third-party testing laboratory. Units tested utilize Advanced Air BiPolar Ionization technology to deploy a high concentration of positive and negative ions into the air which reduce pollutants and improve indoor air quality.

## VIRUS TESTING

Specimen	Time	Reduction	Testing Organization
H1N1 Influenza A Virus	60 minutes	53.19%	GZ Institute of Microbiology
H1N1 Influenza A Virus	120 minutes	99.19%	GZ Institute of Microbiology



Pathogens

## BACTERIA TESTING

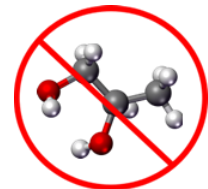
Specimen	Time	Reduction	Testing Organization
Staphylococcus Albus 8032	120 minutes	99.37%	GZ Institute of Microbiology
Staphylococcus Aureus ATCC 6538	120 minutes	99.43%	GZ Institute of Microbiology
Escherichia Coli (E. Coli) 8099	120 minutes	99.73%	GZ Institute of Microbiology



Bacteria

## VOC (CHEMICAL) TESTING

Specimen	Time	Reduction	Testing Organization
Formaldehyde	24 hours	64.40%	GZ Institute of Microbiology
Benzene	24 hours	62.20%	GZ Institute of Microbiology



VOC's

## PARTICLE (PM2.5) TESTING

Specimen	Time	Reduction	Testing Organization
Particulate PM2.5	60 minutes	98.67%	GZ Institute of Microbiology




Particulates

Advanced Air's technology is used in a wide range of applications across diverse environmental conditions. Since locations will vary, clients should evaluate their individual application and environmental conditions when making an assessment regarding the technology's potential benefits.

The use of this technology is not intended to take the place of reasonable precautions to prevent the transmission of disease. It is important to comply with all applicable public health laws and guidelines issued by federal, state, and local governments and health authorities as well as official guidance published by the Centers for Disease Control and Prevention (CDC), including but not limited to social distancing, hand hygiene, cough etiquette, and the use of face masks.

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