

# Appion<sup>®</sup>

# AV 760

Full-Range Vacuum Gauge<sup>™</sup>



**⚠ WARNING** TO REDUCE THE RISK OF INJURY OR PRODUCT DAMAGE,  
READ OPERATION MANUAL PRIOR TO OPERATING PRODUCT.

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# Introduction

AC/R system operating efficiency depends on proper evacuation. Proper evacuation depends on a reliable vacuum gauge capable of monitoring the entire evacuation process.

The AV760 accurately displays measurements from atmosphere (760,000 microns) all the way to deep vacuum (10 microns), so you can be sure your system is clean, dry, and tight.

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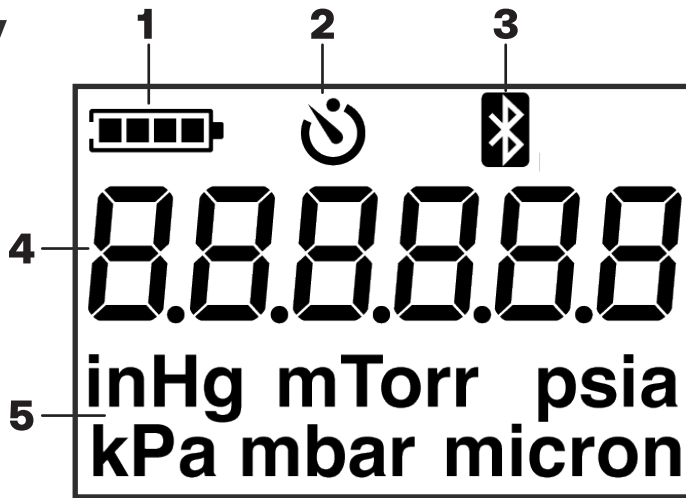
# Safety

- Do not connect to systems under pressure.
- Do not use leaky or damaged batteries.
- Use only specified batteries and cleaning agents.
- Battery operating temperatures may vary by manufacturer. The batteries supplied with this unit are for storage and operating between 32°F - 104°F (0°C - 40°C)
- Dispose of batteries in accordance with any applicable local laws and regulations.
- Do not dispose of the product or battery in a fire or heat above 100°C.

# Package Contents

- (1) Full-Range Measurement Wireless Vacuum Gauge
- (1) Digital Gauge Carrying Case
- (1) 1/4in F Flare to 1/4in F Flare Connector
- (1) 1/4in MegaSeal Flare Cap with Strap
- (5) Oil Catch Filters
- (3) AA Batteries
- (1) Quick Start Guide
- (1) 10-Point Vacuum-Verification Certificate

# Display



1 Battery Indicator

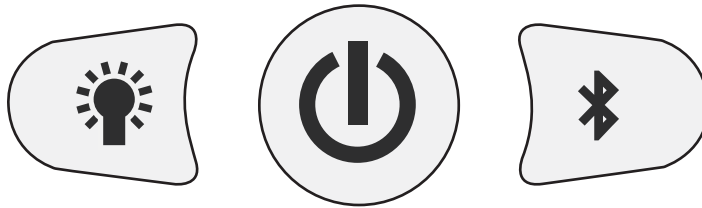
2 Auto Power Off

3 Bluetooth Status

4 Measurement

5 Units

# Controls



<b>Press</b>	Backlight	Power ON	Toggle Resolution
<b>Hold</b>	Units	Power OFF	Connect BT
<b>Both</b>	Toggle APO Timer		

1. **PRESS** a button for the “press” function

2. **HOLD** a button for 2 seconds for the “Hold” function

3. Press **BOTH** Backlight and Power to toggle Auto Power Off (APO) timer feature.

# Using the AV760

**CAUTION:** Do NOT connect the AV760 to systems under high pressure. While the AV760 is designed to withstand accidental exposure to positive pressures, continued exposure may cause permanent damage.

1. Using the Appion Swivel Vacuum Connector (included), connect the AV760 to an available service port furthest from the vacuum pump.
2. Hand-tighten the connections to ensure a tight connection. *Never tool tighten a knurled fitting.*
3. Press the Power button to turn on the AV760. A countdown will display while the AV760 starts up and performs self testing.
4. Press and hold the Units button for 2 seconds to cycle the displayed Units (optional).

**Tip:** Connect to the Side Access Port on a Vacuum-Rated Valve Core Removal Tool with the Appion Swivel Vacuum Connector. Make sure the core depressor side is attached to the Valve Core Removal Tool.

**Tip:** Make sure the AV760 is vertical, with the fitting pointed downward. This will help minimize contamination from any oil that may be pulled out of the system during evacuation.

**Tip:** Add the use of a secondary Valve Core Removal Tool or a Core Control Tool™ to isolate the gauge prior to introducing a positive pressure.

# Appion Central™ Bluetooth Operation

**Note:** Bluetooth communication requires a compatible device running the Appion Central™ App. Development of the Appion Central™ App is ongoing, and any information presented in this manual about the Appion Central™ App may not be up to date. Visit [Appion-Tools.com](http://Appion-Tools.com) or your device's App Store for the latest Appion Central™ App and additional information.

1. With the AV760 powered on, press and hold the “SYNC” button for a few seconds, until the Bluetooth symbol begins flashing on the AV760 screen.
2. In the Appion Central™ App, “Scan” for devices, and connect as shown in the Appion Central™ App. When using multiple Appion gauges, it may be easiest to connect all of the gauges first, then disconnect if needed.
3. If the connection is lost due to exceeding the Bluetooth range, or due to loss of power, repeat Step 1, then “Reconnect” the AV760 through the Appion Central™ App interface.

**Note:** Bluetooth range may vary due to obstructions or interference. The Appion Central™ App will indicate when communication is lost.

**Note:** The AV760 will continue to operate normally even if Bluetooth communication is lost.

# Appion Central™ App

Scan to download app and access user guide.



# General Maintenance & Care

The AV760 is a precision instrument that must be maintained to ensure proper function. The knurled fitting can be removed to enable easy inspection of the sensor housing components if you suspect the AV760 sensors are dirty and no longer reading correctly.

1. Remove the knurled fitting with o-ring and the oil catch filter from the sensor housing.

**WARNING:** Do NOT remove the protective screen covering the sensors.

**WARNING:** Do NOT touch or insert any objects into the sensor ports. Doing so may permanently damage the sensors.

2. Inspect the knurled fitting and o-ring for damage or excessive wear. Replace the o-ring if damage is suspected. If the knurled fitting is damaged, please contact Appion for additional support.
3. Inspect the fitting tip for debris buildup and ensure the ball check valve within the knurled fitting moves freely and is clear of obstructions by shaking the fitting and listening for a rattling noise. If the fitting tip has debris buildup or the ball check valve is not moving freely, use quick-dry electronics cleaner to clean the fitting.



## General Maintenance & Care (cont.)

4. Inspect the oil catch filter for oil by blotting it on a clean paper towel. If any oil remnants appear, discard the oil catch filter and replace with a new one.
5. Apply a small amount of vacuum grease to the knurled fitting o-ring and hand-tighten the fitting onto the sensor housing. NEVER tool-tighten a knurled fitting.
6. Connect the AV760 to a vacuum pump. Then, run the pump until the gauge display reads 100 microns or less.
7. If necessary, perform an isolation test to ensure the fittings and sensor housing are not leaking.

# Advanced Cleaning

**Warning:** Please follow the General Maintenance and Care procedures outlined previously *BEFORE* attempting the advanced cleaning procedures.

1. Remove the knurled fitting with o-ring, then the oil catch filter from the sensor housing.

**Warning:** Do *NOT* touch or insert any objects into the sensor ports. Doing so may permanently damage the sensors.

2. Pour quick dry electronics cleaner into the sensor housing. Cover the sensor housing to trap the cleaner inside. Next, GENTLY shake the gauge for 5-10 seconds.
3. Dump the remaining cleaner from the sensor housing and let the gauge sit right-side-up for 15 minutes.
4. Apply a small amount of vacuum grease to the o-ring on the knurled fitting. Then, reinstall a new oil catch filter and hand-tighten the knurled fitting onto the sensor housing. Never tool-tighten a knurled fitting.
5. Connect the AV760 to a vacuum pump, and run the pump until the gauge display reads 100 microns or less.
6. If necessary, perform an isolation test to ensure the fittings and sensor housing are not leaking.

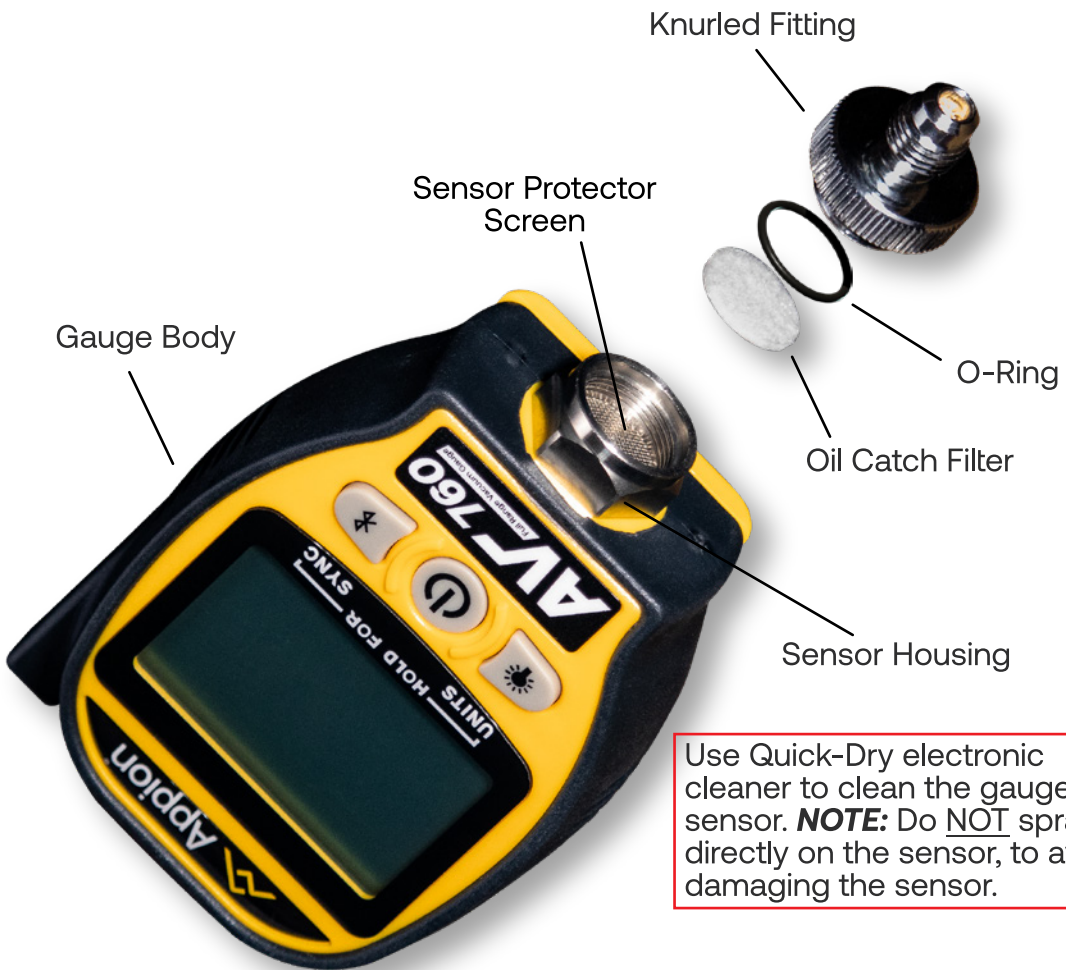
# AV760 Cleaning Video



**Scan to view video**

## NOTICE

Do not insert any objects into the sensor ports of the sensor housing. Doing so may permanently damage the sensors.



Use Quick-Dry electronic cleaner to clean the gauge sensor. **NOTE:** Do NOT spray directly on the sensor, to avoid damaging the sensor.

# Specifications

<b>Range:</b>	760,000 microns to 1 micron
<b>Accuracy:</b>	±5% of reading + 10 microns (1 to 5k) ±5% of reading (5k to ATM)
<b>High-Resolution:</b>	1-micron (1 to 14,999) 50-micron (15,000 to ATM)
<b>Low-Resolution:</b>	1-micron (1 to 499), 5 (500 to 2k), 50 (2k to 5k), 250 (5k to 15k), 1k (15k to ATM)
<b>Units:</b>	microns, mTorr, kPa, psia, mBar, in/Hg
<b>Power:</b>	(3) AA Batteries (Included)
<b>Battery Life:</b>	120 Hours*
<b>Weight:</b>	6.9 oz (196 grams)
<b>Dimensions:</b>	4.65in x 2.75in x 1.2in (118mm x 70mm x 30mm)
<b>Fitting:</b>	1/4in Male Flare
<b>Maximum Overpressure:</b>	400 psi
<b>Operating Temp.:</b>	0° to 140°F (-17.8° to 60°C)

\*Continuous usage with Bluetooth® turned off

# Regulatory Information

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including the interference that may cause undesired operation.

## Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which may be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## **FCC Radiation Exposure Statement**

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## **FCC Caution**

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

## **Industry Canada Radio Equipment**

This device complies with Industry Canada license exempt RSS-210 standard. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference that may cause undesired operation of the device.

### **Équipement radio d'Industrie Canada**

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

# Warranty Information

Appion Inc. (Hereinafter Appion) warrants that this equipment will, under normal and anticipated use, be free from defects in materials and workmanship for a period of one (1) year from the date of purchase by Purchaser from an Appion-authorized distributor.

The complete Manufacturer's Limited Warranty is available online at [AppionTools.com](http://AppionTools.com).

All warranty services must receive Appion Factory Authorization and an RGA number prior to any action. Contact your local Appion authorized distributor to obtain the RGA number and shipping instructions. To help us provide the best service, be sure to have the following information available:

- Serial number of the equipment
- Purchase date of the defective unit
- A detailed description of the problem

Appion offers technical troubleshooting customer support for the lifetime of every product. Regardless of your warranty status, you can always contact us for assistance. Our website includes additional technical information that can help you experience the fullest potential of our products, making your job quicker and easier.



# Appion AV760 Warranty Registration Card

Please complete this card and return it within 10 days of purchase with a copy of your sales receipt.

Your Name	Your Company
Street Address	Phone Number
City	State          Zip
Email Address	Serial Number
Place of Purchase	Date of Purchase

<p>How did you learn about our products? (Please only check one)</p> <p><input type="checkbox"/> Wholesaler _____</p> <p><input type="checkbox"/> Recommended By: _____</p> <p><input type="checkbox"/> Magazine</p> <p><input type="checkbox"/> Newspaper Ad</p> <p><input type="checkbox"/> Internet</p>	<p>Please select your primary line of business. (Check all that apply)</p> <p><input type="checkbox"/> Automotive</p> <p><input type="checkbox"/> Commercial</p> <p><input type="checkbox"/> Residential</p> <p><input type="checkbox"/> Service</p> <p><input type="checkbox"/> Installation</p>
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<p>Register by <u>Mail</u>:</p> <p>Appion Inc. 2800 South Tejon Street Englewood, CO 80110 USA</p> <p>Register by <u>Email</u> or <u>Fax</u>:</p> <p>1. Scan this page AND a copy of your sales receipt. 2. Email to: <a href="mailto:Sales@AppionTools.com">Sales@AppionTools.com</a> or Fax this page and your sales receipt to: 1-303-937-1599</p>	<p>What features most interested you? (Check all that apply)</p> <p><input type="checkbox"/> High Production</p> <p><input type="checkbox"/> Low Cost</p> <p><input type="checkbox"/> Low Maintenance</p> <p><input type="checkbox"/> Portability</p> <p><input type="checkbox"/> Ease of Use</p> <p><input type="checkbox"/> Other: _____</p>
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# QR Code Index



**Appion Central App Download**



**AV760 Cleaning Video**



**Product Registration**



**All AV760 Videos**



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