DV-22N

DIGITAL VACUUM GAUGE



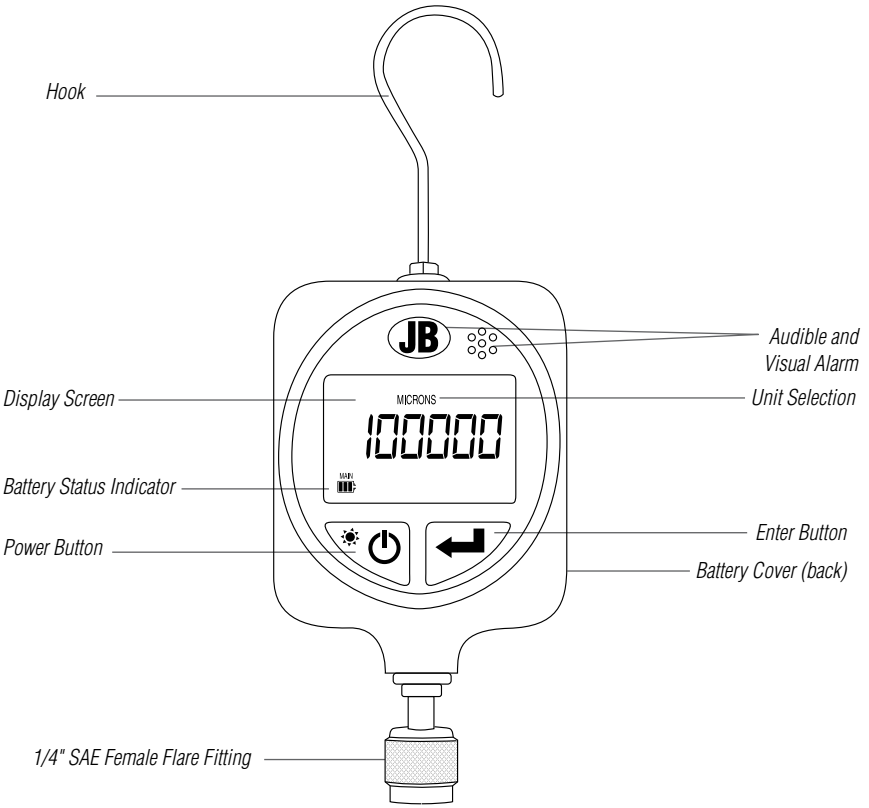
JUST BETTER

OPERATING MANUAL

SPECIFICATIONS

Vacuum Reading Range	100,000 to 10 microns
Working Temperature	+32°F to 120°F (+0°C to 48.9°C)
Power Supply	Three AA batteries
Dimensions	DV-22N: 9" length x 3.25" width x 1.5" depth DV-24N: 10" length x 8.25" width x 2.75" depth
Shipping Weight	DV-22N: .86 lbs (.39 kg) DV-24N: 1.6 lbs (.73 kg)
Warranty	12 months

FEATURES



OPERATING INSTRUCTIONS

Power Settings

To power on, press and hold the POWER button for two seconds.

To power off, press and hold the POWER button for three seconds.

Note: Power save feature will automatically power off the gauge after 30 minutes to conserve battery life.

Main Menu Settings

To access the main menu user settings, press and hold ENTER button for three seconds.

Alarm Settings

To enable the Low Limit Alarm, press and hold the ENTER button for three seconds to access the main menu.

Press and hold ENTER button for an additional three seconds to select the “LO--AL” sub menu options.

Scroll through available sub menu options by pressing the ENTER button.

Press and hold ENTER button for an additional three seconds to store and enable the selected alarm setting.

Press POWER button twice to exit and return to main display screen and normal operation mode.

To silence an active alarm, press any button to disable.

Display Screen Start Up

Press and hold POWER button for two seconds to power gauge on. If unit display does not light up, check for correct battery installation. Startup display will show “JB”, “JUST BETTER”, VER XXX (Version), a loading menu, followed by either the micron value or the over range indicator “oooooo.”

The loading menu indicates the unit is in initial warm up state. It may take up to 30 seconds for the unit to go into normal operation mode.

The unit will display “oooooo” when it is at atmospheric pressure, or at a pressure over 100,000 microns. This indicates an over range condition. When the pressure is at 100,000 microns or lower, the gauge will display the value.



Loading Menu – Warm up mode



Atmospheric Pressure – Normal operation mode

Battery Status Indicator

When the startup sequence is complete, the BATTERY STATUS INDICATOR will show current battery life status. While the unit is on, the status is updated once every second. Battery voltage status is as follows:



3.5v or above *3.0 ~ 3.5v* *2.7 ~ 3.0v* *2.4 ~ 2.7v* *2.1 ~ 2.4v*

When the battery voltage drops below 2.4 volts, the battery outline will flash and the unit will beep once per minute to alert the low battery condition. When battery voltage falls below 2.1 volts, the shutdown timer is activated. If voltage stays below 2.1 volts for thirty seconds, the DV-22N will beep once and power off.



Battery Replacement

If unit display does not light up after holding POWER button for two seconds, check for correct battery installation.

1. Remove battery cover from back of unit (phillips screwdriver required).
2. Insert three AA alkaline batteries.
3. Replace battery cover.

MENU SETTINGS

Accessing Main Menu and Sub Menu Settings

1. Press and hold ENTER button for three seconds to access main menu settings.
2. Press ENTER button to cycle through all main menu options. Available main menu options:
   - "UNIT"
   - "LO--AL"
   - "B-LITE"
   - "BEEP"
   - "HI RES"
   - "AU-OFF"
3. To select a main menu option, press and hold the ENTER button for three seconds. You are now in the sub menu of your selection. Press the ENTER button to cycle through the sub menu options.
4. To select a sub menu option, press and hold the ENTER button for three seconds to store the selection. Unit will display "STORED" and save your selection. Each time the DV-22N powers on, stored user settings will be retrieved.
5. To exit the sub menu, press the POWER button once to return to the main menu.
6. To exit the main menu and return to normal operation mode, press the POWER button again.

Note: When scrolling through menu settings, the POWER button acts as the cancel/exit button.

Unit Selection (UNIT)

The available unit selections are: Microns, PSIA, inHg, Pascals, Torr, mTorr and mBar.

Factory default setting is "MICRONS".

When the UNIT menu is active, a constant pressure value equivalent to 1000 microns is displayed using the currently selected units (e.g.: 133.31 for Pascals). The current unit selection is shown at the top of the screen.

1. Press the ENTER button to scroll through available options.
2. To select and store an alternate option as a new setting, press and hold the ENTER button for three seconds on the selected option. Unit will display "STORED" and save your selection.
3. Press POWER button once to cancel and return to main menu. Press POWER button twice to exit and return to normal operation mode.

Low Alarm Setting (LO--AL)

The Low Alarm setting determines the pressure level for which an alarm will be sounded.

Available alarm settings: OFF, 50, 100, 250, 500, 1000, 1250, 1500, 2000 microns.

Factory default setting is “500” microns.

The available alarm setting values will be displayed in the current unit selection setting. For example, if your current unit selection setting is in Pascals, your available settings will be: 7, 14, 33, 66, 133, 166, 200, and 266, the Pascal equivalents of the 50 – 2000 micron range values.

The “ALARM”, “LOW” icons will be displayed on the main screen to indicate the Low Alarm setting is active.

From the LO--AL sub menu:

1. Press the ENTER button to scroll through available options.
2. To select and store an alternate option as a new setting, press and hold the ENTER button for three seconds on the selected option. Unit will display “STORED” and save your selection.
3. Press POWER button once to cancel and return to main menu. Press POWER button twice to exit and return to normal operation mode.

Back Light Persistence (B-LITE)

Back Light Persistence determines the number of seconds that the back light will stay on after the last button activity.

Available settings are: OFF, 10, 15, 30, 45, 60, and 90 seconds.

Factory default setting is “30” seconds.

From the B-LITE sub menu:

1. Press the ENTER button to scroll through available options.
2. To select and store an alternate option as a new setting, press and hold the ENTER button for three seconds on the selected option. Unit will display “STORED” and save your selection.
3. Press POWER button once to cancel and return to main menu. Press POWER button twice to exit and return to normal operation mode.

Key-press Feedback (BEEP)

Key-press Feedback determines whether an audible sound is heard each time a button is pressed.

Available settings are: ON, OFF.

Factory default setting is “ON”.

From the BEEP sub menu:

1. Press the ENTER button to scroll through available options.
2. To select and store an alternate option as a new setting, press and hold the ENTER button for three seconds on the selected option. Unit will display “STORED” and save your selection.
3. Press POWER button once to cancel and return to main menu. Press POWER button twice to exit and return to normal operation mode.

Display Resolution (HI RES)

The Display Resolution menu determines whether pressure will be shown at high resolution. High resolution means that pressure is shown as-is, in one unit increments. When the setting is OFF, the reading display is rounded.

Available settings are: ON, OFF.

Factory default setting is “OFF”.

From the HI RES sub menu:

1. Press the ENTER button to scroll through available options.
2. To select and store an alternate option as a new setting, press and hold the ENTER button for three seconds on the selected option. Unit will display “STORED” and save your selection.
3. Press POWER button once to cancel and return to main menu. Press POWER button twice to exit and return to normal operation mode.

Note: Even if high resolution display is selected ON, pressure values above 1000 microns will be rounded off according to the current display pressure.

Auto Shutdown (AU-0FF)

To conserve battery life, the DV-22N will power off automatically after 30 minutes of inactivity.

Available settings are: OFF, 10, 15, 30, 45, 60, or 90 minutes.

Factory default setting is “30” minutes.

From the AU--OFF sub menu:

1. Press the ENTER button to scroll through available options.
2. To select and store an alternate option as a new setting, press and hold the ENTER button for three seconds on the selected option. Unit will display “STORED” and save your selection.
3. Press POWER button once to cancel and return to main menu. Press POWER button twice to exit and return to normal operation mode.

Note: Even if auto-shutdown has been deactivated, a low battery condition will power off the DV-22N.

Connection Instructions

It is recommended to connect the DV-22N gauge hose directly to either the high or low side of the system for the most accurate reading.

To check for a leak using the vacuum pump blank-off valve: a metal hose, o-ring coupler or copper tubing must be used. Standard hoses permeate and will not hold a vacuum. The gauge reading will increase naturally due to equalization of pressure. Reading should hold for a minimum of five minutes—a continual increase may indicate a leak within the system.

MAINTENANCE

Cleaning Vacuum Sensor

1. Fill brass sensor fitting with a few drops of isopropyl alcohol.
2. Cover the opening with a finger and gently shake to allow alcohol to rinse the sensor.
3. Pour out alcohol and allow sensor to dry for 20 minutes before using gauge.

PARTS LIST

PART NO.	DESCRIPTION
DV-22N	Digital vacuum gauge
DV-24N	DV-22N with carrying case
DV-27N	Carrying case for DV-22N (models after July 2017)

RETURN FOR REPAIR

Every effort has been made to provide reliable, superior quality products. However, in the event your instrument requires repair, please contact JB Customer Service Department to obtain a Return Goods Authorization (RGA) number. Ensure that all returned products are packed to avoid any damage in shipment. Paperwork should be placed in a separate plastic bag and should include JB's assigned RGA number, a description of the problem and any customer assigned repair or purchase order number, if applicable.

Contact Customer Service for RGA number:

800.323.0811 Toll
800.552.5593 Toll Fax

Products should be shipped with freight prepaid to:

JB Industries
RGA#_____
601 N. Farnsworth Ave.
Aurora, IL 60505
630.851.9444 Tel
630.851.9448 Fax

WARRANTY

DV-22N Digital Vacuum Gauges are warrantied against defects in materials and workmanship for 12 months from date of purchase. JB products are guaranteed when used in accordance with our guidelines and recommendations. Warranty is limited to the repair, replacement, or credit at invoice price, (our option) of products which in our opinion are defective due to workmanship and/or materials. In no case will we allow charges for labor, expense or consequential damage. Repairs performed on items out of warranty will be invoiced on a nominal basis; contact wholesaler for details. Additional product information available online at www.jbind.com.

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