SUPERNOVA®

DV-40 | DIGITAL VACUUM GAUGE
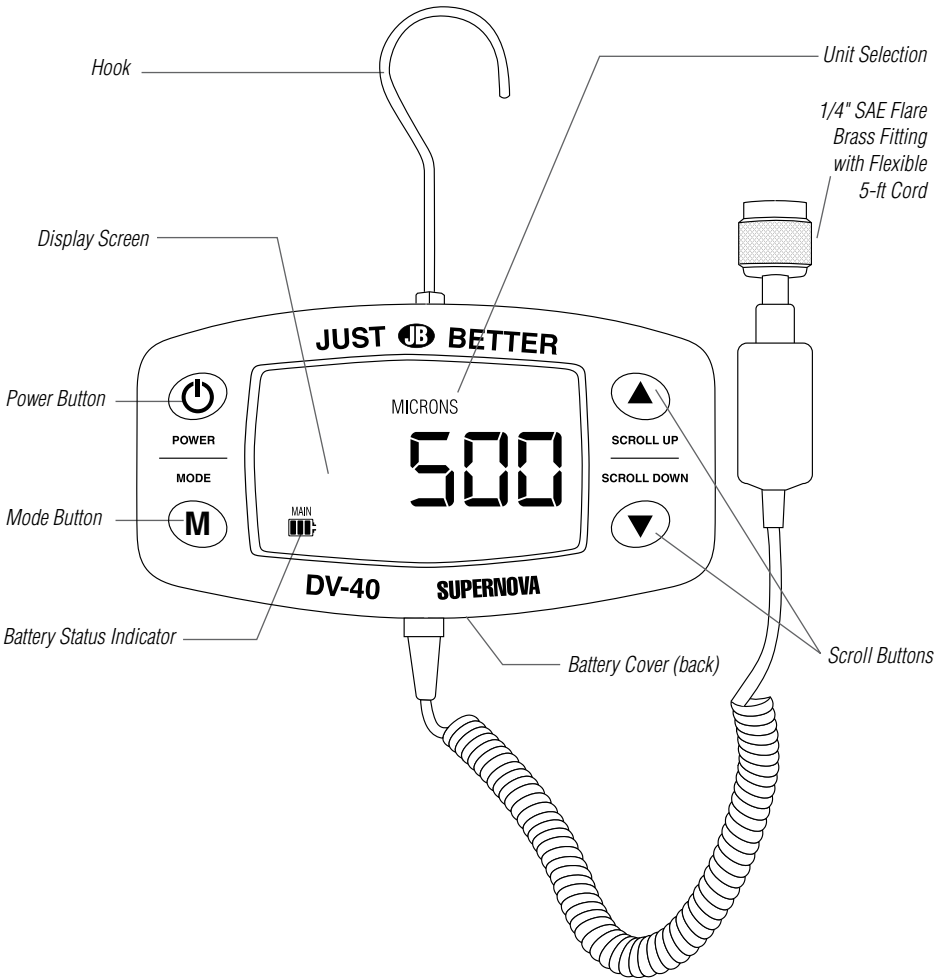
JUST **JB** BETTER

MICRONS

500

MAIN

POWER

MODE

SCROLL UP

SCROLL DOWN

DV-40 SUPERNOVA

JB

JUST BETTER®

OPERATING MANUAL

SPECIFICATIONS

Vacuum Reading Range	12,000 to 10 microns
Power Supply	AC adapter (included) or three AA alkaline batteries
Dimensions	DV-41: 13" length x 11" width x 3.5" depth
Shipping Weight	2.7 lbs (1.2 kg)
Warranty	12 months

FEATURES

Hook

Unit Selection

1/4" SAE Flare Brass Fitting with Flexible 5-ft Cord

Display Screen

Power Button

POWER

MODE

Mode Button

Battery Status Indicator

MICRONS

500

MAIN

SCROLL UP

SCROLL DOWN

DV-40 SUPERNOVA

Battery Cover (back)

Scroll Buttons

JUST JB BETTER

OPERATING INSTRUCTIONS

Power Settings

To power on, press the POWER button once.

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

Main Menu Settings

To access the main menu user settings, press and hold MODE button for four seconds.

Alarm Settings

To enable the High Limit Alarm, hold the MODE button and press SCROLL UP.

To enable the Low Limit Alarm, hold the MODE button and press SCROLL DOWN.

To disable alarm, press POWER button once.

When alarm is sounding, press any button to turn off alarm.

Display Screen Start Up

Press POWER button once to power gauge on. If unit display does not light up, check for correct battery installation. Startup display will show "JB", "JUST BETTER", a loading menu, followed by either the micron value or the over range indicator "oooooo."

The center bars in the loading menu move to indicate 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 12,000 microns. This indicates an over range condition. When the pressure is at or below 12,000 microns, the gauge will display the value.

Note: The DV-40 is factory calibrated, field calibration is not required.
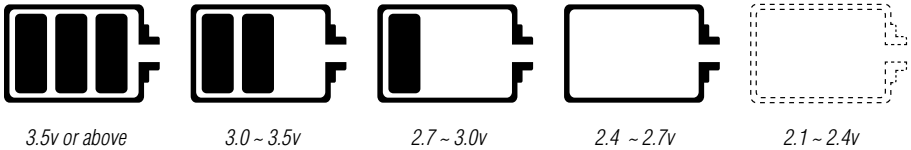

Loading Menu – Warm up mode   *Atmospheric Pressure – Normal operation mode*

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 status indicator is not visible if the DV-40 is connected to external power source (AC adapter).

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-40 will beep once and power off. If power is restored during this time, shutdown is canceled.

MENU SETTINGS

Accessing Main Menu and Sub Menu Settings

1. Press and hold MODE button for four seconds to access main menu settings.

2. Press SCROLL UP and SCROLL DOWN buttons to cycle through all available main menu options:
   - "UNIT"
   - "AL--LO"
   - "AL--HI"
   - "BEEP"
   - "HI RES"
   - "AU-OFF"
   - "B-LITE"
   - "VER ID"

3. To select a menu option, press the MODE button to access sub menu. Press the SCROLL UP and SCROLL DOWN buttons to cycle through the sub menu options.

4. To select and store a sub menu option, press and hold the MODE button. Unit will display "STORED", save your selection and return to menu. Each time the DV-40 powers on, previously stored user settings will be retrieved.

5. Press POWER button once to return to the main menu.

6. To exit 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)

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

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

Factory default setting is "MICRONS".

To scroll the selection, use the SCROLL UP and SCROLL DOWN buttons.

To cancel, press the POWER button.

To select and store the setting shown, press the MODE button. When a setting is stored, you will be returned to main menu selections. Press POWER to return to normal operation mode.

Low Alarm Setting (AL--LO)

The Low Alarm setting sets the pressure level where an alarm will be sounded. Setting a specific alarm level selection DOES NOT make the alarm active; it specifies the pressure level BELOW which the alarm will sound once the user enables the Low Limit Alarm (press MODE and SCROLL DOWN buttons to enable).

Available settings are: 50, 100, 250, 500, 1000, 1250, 1500, or 2000 microns.

Factory default setting is "500" microns.

Default values are listed in microns, however values will be displayed in the current units selected. For example, if the user defined Unit Selection setting is Pascals, units displayed will be: 7, 14, 33, 66, 133, 166, 200, and 266 (The Pascal conversion of the 50 – 2000 micron values).

The "ALARM", "LOW" icon will be displayed to indicate you are setting up the Low Limit Alarm.

To scroll the selection, use the SCROLL UP and SCROLL DOWN buttons.

To cancel, press the POWER button.

To select and store the setting shown, press the MODE button. When a setting is stored, you will be returned to main menu selections. Press POWER to return to normal operation mode.

Low Limit Alarm

MODE and SCROLL DOWN buttons enable the Low Limit Alarm.

Low Limit Alarm can be enabled in all cases including when the pressure is in OVER RANGE except for when the sensor is not connected.

An enabled Low Limit Alarm will display the "LOW", "ALARM" icon on the main display screen, and will disable the High Alarm setting.

If Low Limit Alarm is enabled and the pressure is less than or equal to the preset, user defined Low Alarm setting limit value, the alarm will alert with a beep sound every second and "ALARM", "LOW" icon will flash. Beeping and flashing will continue even if the pressure rises above the Low Limit Alarm setting. Press any button to turn off the alarm.

High Alarm Setting (AL--HI)

The High Alarm setting sets the pressure level where an alarm will be sounded. Setting a specific alarm level selection DOES NOT make the alarm active; it specifies the pressure level ABOVE which the alarm will sound once the user enables the High Limit Alarm (press MODE and SCROLL UP buttons to enable).

Available settings are: 50, 100, 250, 500, 1000, 1250, 1500, or 2000 microns.

Factory default setting is "2000" microns.

The default values are listed in microns, however values will be displayed in the current units selected. For example, if the user defined Unit Selection setting is Pascals, units displayed will be: 7, 14, 33, 66, 133, 166, 200, and 266 (The Pascal conversion of the 50 – 2000 micron values).

The "ALARM", "HIGH" icon will be displayed to indicate you are setting up the High Limit Alarm.

To scroll the selection, use the SCROLL UP and SCROLL DOWN buttons.

To cancel, press the POWER button.

To select and store the setting shown, press the MODE button. When a setting is stored, you will be returned to main menu selections. Press POWER to return to normal operation mode.

High Limit Alarm

MODE and SCROLL UP buttons will enable the High Limit Alarm ONLY IF the existing pressure is below the preset, user defined High Alarm setting. If the existing pressure is higher than the preset, user defined High Alarm Limit, the High Limit Alarm cannot be enabled. If the Low Limit Alarm is currently enabled, setting the High Limit Alarm will disable the Low Limit Alarm even if the High Limit Alarm fails due to pressure readings above the High Limit Alarm setting. An enabled High Limit Alarm will display the "HIGH", "ALARM" icon on the main display screen, and will disable the Low Alarm setting.

If High Limit Alarm is enabled and the pressure is greater than or equal to the preset, user defined High Alarm setting limit value, the alarm will alert with a beep sound every second and the "ALARM", "HIGH" icon will flash. Beeping and flashing will continue even if the pressure drops below the High Limit Alarm setting. Press any button to turn off the alarm.

Button-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".

To change the selection, use the SCROLL UP or SCROLL DOWN button. To cancel, press the POWER button.

To select and store the setting shown, press the MODE button. When a setting is stored, you will be returned to main menu selections. Press POWER to return to normal operation mode.

Display Resolution (HI RES)

The display resolution menu allows you to select whether pressure will be shown at high resolution. High resolution means that pressure is shown as-is, in one unit increments.

Available settings are: ON, OFF. Factory default setting is "OFF".

When the setting is OFF, the reading display is rounded.

To change the selection, use the SCROLL UP or SCROLL DOWN button.

To cancel, press the POWER button.

To select and store the setting shown, press the MODE button. When a setting is stored, you will be returned to main menu selections. Press POWER to return to normal operation mode.

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

Auto Shutdown (AU-OFF)

To conserve battery life, the DV-40 will power off after a period of inactivity (no button-press).

Available settings are: OFF, 10, 15, 30, 45, 60, or 90 minutes. Factory default setting is "30" minutes.

When Auto Shutdown is set to "OFF", the DV-40 will not automatically power off.

To change the selection, use the SCROLL UP or SCROLL DOWN button.

To cancel, press the POWER button.

To select and store the setting shown, press the MODE button. When a setting is stored, you will be returned to main menu selections. Press POWER to return to normal operation mode.

Note: Even if auto shutdown has been deactivated, a low battery condition will power off the DV-40.

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, or 90 seconds. Factory default setting is "10".

To change the selection, use the SCROLL UP and SCROLL DOWN buttons.

To cancel, press the POWER button.

To select and store the setting shown, press the MODE button. When a setting is stored, you will be returned to main menu selections. Press POWER to return to normal operation mode.

Note: While in the menu system, the back light will remain on unless it has been disabled by selecting "OFF".

Version Information (VER ID)

The VER ID menu provides details regarding serial number and product/sensor firmware release versions. The main CPU Firmware release version (EG: "Fr 1.87") displays initially. Pressing SCROLL DOWN will display the serial number (EG: "n12345"), and sensor CPU Firmware release version (EG: "Sr 6.45"). The POWER or MODE button will return to menu selection.

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-41	DV-40 digital vacuum gauge with AC adapter and carrying case
DV-40C	AC adapter and carrying case only
DV-40AC	AC adapter only
DV-40HK	Hanging hook replacement
A34000D	1/4" QC x 1/4" access tee w/depressor
P90009	O-ring replacement (10 pack)

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-40 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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