

DV-22N

DIGITAL VACUUM GAUGE



OPERATING MANUAL

GENERAL OPERATION

Key Operation Overview

1. To power on, press and hold the POWER key for two seconds.
2. To power off, press the POWER key and hold for three seconds.
3. To enable the LOW Limit Alarm, hold the ENTER key for three seconds to enter the menu.
4. Press ENTER key for another three seconds to select.
5. Scroll through available values by pressing the enter button.
6. Press enter key for another 3 seconds to store and enable the alarm.
7. Press power button to back out to main display.
8. When alarm is sounding, press any key to turn it off (automatically disabled).
9. To enter the user settings menu, press the ENTER key and hold it for three seconds.

Power Key



Enter Key

Basic User Setups

Each time the DV-22N powers up, previously stored user settings are retrieved.

Settings include the following items:

- International Standard Units selection, factory default value is “MICRONS”.
- Low Limit Alarm setting “Lo—AL”, factory default value it “500” Microns.
- Key-press feedback (beep POWER), factory default is “ON”.
- Display high resolution (ON/OFF), factory default is “OFF”.
- Auto-shutdown setting, factory default is “30” minutes.
- Backlight persistence, factory default is “30”.

When Powering Up

When the DV-22N powers up, the screen shows greeting message: “JB, “JUST”, “BETTER”

The center bars move to indicate the unit is in initial warm up state. It will take up to 30 seconds for the unit to get into normal operation mode.

The unit should display “000000” 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 read the value.

If “SENSOR” message is displayed on the screen, this means the sensor wire is broken.



Warm Up



Atmospheric Pressure

BATTERY INDICATOR

When the startup sequence is complete, the BATTERY STATUS INDICATOR (in the lower left corner) is updated to show current battery status. While the unit is on, this status is updated once every second. Battery level indication is as follows:

- Three bars Battery voltage is 3.5 or above.
- Two bars Battery voltage is between 3.0 and 3.5 Volts.
- One bar Battery voltage is between 2.7 and 3.0 Volts.
- No bars, battery outline visible Battery voltage is between 2.4 and 2.7 Volts.
- No bars, battery outline flashing Battery voltage is between 2.1 and 2.4 Volts.

Once the battery voltage drops below 2.4 volts and the battery outline starts flashing, the unit will beep once per minute to call attention to the low battery condition. When battery voltage falls below 2.1 volts, a shutdown timer is activated. If voltage stays below 2.1 volts for thirty seconds, the DV-22N will beep once and shut itself off.



CLEANING VACUUM SENSOR

Fill brass sensor fitting with a few drops of rubbing alcohol (Isopropyl). Cover the opening with your finger and gently shake the fitting allowing the alcohol to rinse the sensor. Pour the alcohol out and allow the vacuum sensor to dry for roughly 20 minutes before using the gauge.

USER SETTINGS MENU

This menu uses a standard set of key assignments: the ENTER key scrolls through the selection. In the sub menus, the ENTER key scrolls the setting selection. The ENTER key always acts as the select key by pressing and holding for three seconds on the desired item. At the top layer of the menu, the ENTER key selects a sub menu to access. In the sub menus, the ENTER key causes the current selection to be stored. The POWER key is always the cancel/exit key. Pressing POWER will cancel the current operation and return you to the previous level.

UNITS 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 screen.

Available Unit selections are Microns, Pascals, Bar, InHg, mBar, Torr, Torr.

1. To scroll the selection, use the ENTER key.
2. To cancel, press the POWER key.
3. To select the units shown (and store it as your new setting), press and hold the ENTER key for three seconds.
4. When a setting is stored, you will be returned to menu selections. If you're done, press POWER again to return to normal operation.

LOW ALARM SETTING LO--AL

The (LOW) alarm selection sets the pressure level where an alert will be sounded. Selecting a specific alarm level makes the alarm active.

Available alarm settings are 50, 100, 250, 500, 1000, 1250, 1500, 2000 microns. The factory default value is "500" Microns. The values shown here are listed in microns, but as you scroll through the settings, you will see the values displayed in the current units (see units menu above). For example, if your current units setting is Pascals, you would see: 7, 14, 33, 66, 133, 166, 200, and 266 (The Pascal equivalents of the 50 – 2000 micron values).

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

1. To scroll the selection, use the ENTER key.
2. To cancel, enter the low alarm menu and select "OFF".
3. To select (and store) the displayed setting, press and hold the ENTER key.
4. When a setting is stored, you will need to press the POWER button to return to the menu. If you're done, press POWER again to return to normal operation.

BACKLIGHT PERSISTENCE B-LITE

Backlight 'persistence' sets the number of seconds that the backlight will stay on after the last key activity. Available settings are: OFF, 10, 15, 30, 45, 60, and 90 seconds. OFF simply means that the backlight will always remain off.

1. To scroll the selection, use the ENTER key.
2. To cancel, press the POWER key.
3. To select (and store) the displayed setting, press and hold the ENTER key.
4. When a setting is stored, you will need to press the POWER button to return to the menu.
5. If you're done, Press ON/OFF again to return to normal operation.

Note: While you're in the menu system, the backlight will stay on all of the time unless it has been disabled by selecting "OFF".

KEY-PRESS FEEDBACK BEEP

The key-press feedback menu has only ON and OFF options. When 'beep' is on, the DV-22N will make a sound each time a key is pressed (audible feedback).

1. To change the selection, press the ENTER key to scroll.
2. To cancel, press the POWER key.
3. To select (and store) the setting shown, press the ENTER key for three seconds.
4. When a setting is stored, you will need to press the POWER button to return to the menu. If you're done, press POWER again to return to normal operation.

DISPLAY RESOLUTION HI RES

High resolution display means that pressure is shown as-is, in 1 unit increments. The display resolution menu allows you to select whether pressure will be shown at high resolution. When the setting is OFF, readings are rounded off according to the pressure being displayed. Options are simply ON and OFF.

1. To change the selection, press the ENTER key to scroll.
2. To cancel, press the POWER key.
3. To select (and store) the setting shown, press and hold the ENTER key for three seconds.
4. When a setting is stored, you will need to press the POWER button to return to the menu.
5. If you're done, press POWER again to return to normal operation.

Note: Even when high resolution is ON, pressure values above 1000 microns are always rounded off according to the display pressure.

AUTO-SHUTDOWN SETTING AU-OFF

In order to conserve battery life, the DV-22N will shut itself off after a period of inactivity (no key-press). The number of minutes before auto-shut-down occurs can be set by the user as follows: OFF, 10, 15, 30, 45, 60, or 90 minutes. When auto-shutdown is set to 'OFF', the DV-22N will not shut itself off .

1. To change the selection, press the ENTER key to scroll.
2. To cancel, press the POWER key.
3. To select (and store) the setting shown, press and hold the ENTER key for three seconds.
4. When a setting is stored, you will need to press the POWER button to return to the menu.
5. If you're done, press POWER again to return to normal operation.

Note: Even when auto-shutdown has been deactivated, a low battery condition (less than 2.1 VDC) will still cause the DV-22N to turn itself off.

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 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. Product Warranty Registration, Limited Warranty and OTC Warranty are available online at www.jbind.com.



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