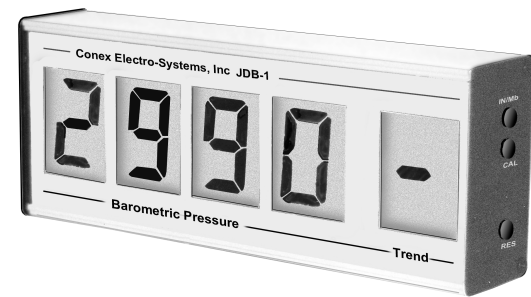


# JDB-1 Jumbo Digital Barometer

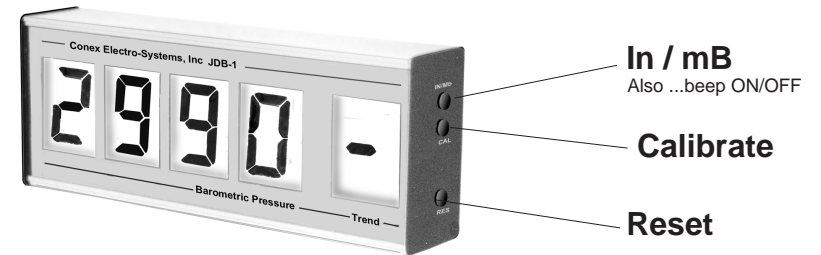


## OPERATING MANUAL

**CONEX** ELECTRO SYSTEMS 

1602 Carolina St PO Box 67 Bellingham WA 98227  
phone: 360.734.4323 fax: 360.876.4822

# JDB-1 DIGITAL BAROMETER



The Conex Electro-Systems JDB-1 Jumbo Digital Barometer has numbers large enough to see at a glance from across the room. The JDB measures the barometric pressure every 15 minutes and displays in inches of mercury (In-Hg), or in Millibars (mB).

The JDB-1 also indicates the pressure trend (see page 2), the best predictor of weather changes. A rising trend generally indicates improving weather, while a drop often means deteriorating weather. A sharp drop in pressure is indicated by a series of beeps.

The JDB may be wall-mounted or set on a shelf, and uses a standard 9-Volt alkaline battery which lasts about a year.

## Setting the JDB-1

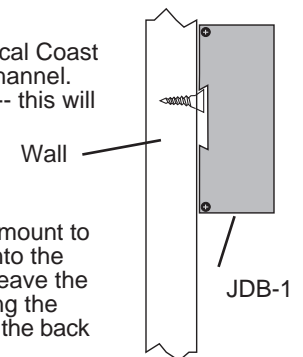
When the battery is initially installed, or when the **RESET** button is pressed, the barometer will go through an initialization routine that takes about 1 minute. You will see the display flash on and off and it will sound short beeps every 10 seconds. This part of the JDB1 self test software. When it is finished, the display will show standard pressure in inches. If you would rather show the pressure in millibars, Press the **In/mB** Button ( the top button on the right side of the barometer ) Pressing the button again will switch back to inches of mercury.

When the barometer displays in the desired units, push and hold the **CAL** Button to set to the local pressure. Releasing the button and pressing and holding it again will change the setting in the opposite direction.

Your local pressure can be obtained by calling the local Coast Guard station, or airport, or checking the Weather Channel. Airports often report the pressure as the "altimeter" -- this will be the same as the barometer setting in In-Hg.

## Mounting the JDB-1

The JDB may be wall-mounted, or set on a shelf. To mount to the wall, simply install two #4 - #8 flathead screws into the wall about 6 inches apart and on a horizontal line. Leave the screw heads protruding from the wall 1/8". Then hang the barometer from the screw heads, using the groove on the back surface.

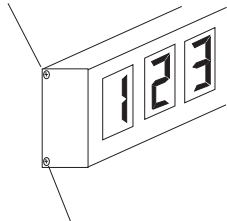


## Changing the Battery

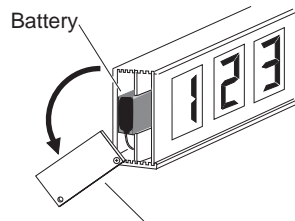
The JDB-1 uses a standard 9 Volt Alkaline battery, which should last at least one year. When the battery nears the end of its lifetime, the horizontal bar on the right-hand (trend) display will go off, revealing the word "BAT" on the clear plastic window.

The battery is replaced by opening the left-hand side panel (side opposite from the push buttons) from the enclosure by means of two phillips-head screws. Loosen one screw, and remove the other screw. The panel can then be pivoted out of the way. The battery should then be gently pulled from its slot and detached from the red and black-wired clip. Snap the clip onto the new battery, and slide the battery back into the slot (with the clip toward the outside). Replace the end panel, making sure that the battery wires will not be pinched.

Remove this screw



Loosen this screw



Battery  
Swing door down to expose battery

## Trend Indicator

The right-hand display shows the barometric pressure trend.



**Pressure Steady**



**Pressure Rising**  
0.02" / 2 Hours



**Pressure Rising Rapidly**  
0.04" / 2 Hours



**Pressure Falling**  
0.02" / 2 Hours



**Pressure Falling Rapidly**  
0.04" / 2 Hours

When the trend changes from steady to rising, a beep will be heard. When the pressure changes from steady to falling, two beeps will be heard. If the pressure drops at a rate of 0.06" in 2 hours, two series of three beeps will be heard.

To disable the beeper, press and hold the **In/mB** (Top) button for 3 seconds. When the beeper is turned off, two beeps will be heard. By pressing and holding the button again, the beeper will be turned on as indicated by 1 beep.

## Appendix

To Convert Millibars to Inches of Mercury, multiply by 0.02953

To Convert Inches of Mercury to millibars, multiply by 33.864

The accuracy of the JDB-1 is approximately  $\pm 0.05"$  of mercury (typically  $\pm 0.02"$ HG) while the resolution is 0.01".

Your correct local barometric pressure may be obtained from various sources -

- The Weather Channel On cable or satellite TV
- NOAA Weather Radio on -
 

162.400 MHz	162.500 MHz
162.425 MHz	162.525 MHz
162.450 MHz	162.550 MHz
162.475 MHz	
- The Internet

Three useful web sites are :

**WeatherNet** : <http://cirrus.sprl.umich.edu/wxnet/>

**NOAA** : <http://www.awc-kc.noaa.gov/index.html>

**Meteorology Guide** : <http://nfis.com/~i4storms/links.html>

To obtain the correct barometric pressure at the nearest airport, call the FAA Automated Flight Service Station at 1-800-992-7433. Follow the recorded instructions, and expect the pressure in Inches of mercury to be given as the "altimeter".

Generally local pressure is "corrected" for elevation, rather than the absolute pressure. Check our web site (conex-electro.com) to download a small Fortran program that we came across, defining the correction process.

The absolute atmospheric pressure decreases with altitude at approximately 1"Hg/1000' of elevation. The JDB-1 will operate to elevations up to 7000'.

## How To Contact Us

### Conex Electro-Systems, Inc.

Phone : 360-734-4323 800-645-1061

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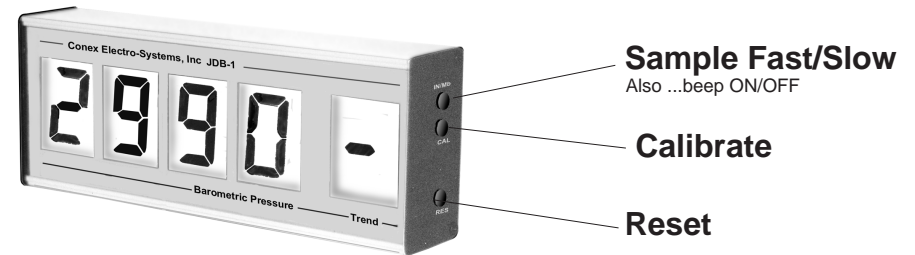
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Mail : P.O. Box 67 Bellingham, WA 98227

Shipping : 1602 Carolina St. Bellingham, WA 98226

# JDB-1 DIGITAL BAROMETER SPECIAL VERSION 1.4



The Conex Electro-Systems JDB-1 Jumbo Digital Barometer has numbers large enough to see at a glance from across the room. The JDB measures the barometric pressure every 15 minutes ( in SLOW mode) and 30 Seconds in FAST mode and displays in inches of mercury (In-Hg),

The JDB-1 also indicates the pressure trend (see page 2), the best predictor of weather changes. A rising trend generally indicates improving weather, while a drop often means deteriorating weather. A sharp drop in pressure is indicated by a series of beeps. NOTE: The trend indicator is only accurate in SLOW mode.

The JDB may be wall-mounted or set on a shelf, and uses a standard 9-Volt alkaline battery which lasts about a year.

## Setting the JDB-1

When the battery is initially installed, or when the **RESET** button is pressed, the barometer will go through an initialization routine that takes about 1 minute. You will see the display flash on and off and it will sound short beeps every 10 seconds. This part of the JDB1 self test software. When it is finished, the display will show standard pressure in inches. To put the JDB1 in FAST mode, press the top button for about a half second. You will hear a short beep indicating it is now in FAST mode. To put it back in SLOW mode, press this button again. You will NOT hear a beep going from FAST to SLOW mode.

When the barometer displays in the desired units, push and hold the **CAL** Button to set to the local pressure. Releasing the button and pressing and holding it again will change the setting in the opposite direction.

Your local pressure can be obtained by calling the local Coast Guard station, or airport, or checking the Weather Channel. Airports often report the pressure as the "altimeter" -- this will be the same as the barometer setting in In-Hg.

## Mounting the JDB-1

The JDB may be wall-mounted, or set on a shelf. To mount to the wall, simply install two #4 - #8 flathead screws into the wall about 6 inches apart and on a horizontal line. Leave the screw heads protruding from the wall 1/8". Then hang the barometer from the screw heads, using the groove on the back surface.

