

Decade Box

CDB-10 User Manual

Model CDB-10 from Global Specialties is a hand held Capacitance decade box that creates a specific capacitance value using a combination of switches. Designed with accuracy to meet the needs of industry and education alike.

The CDB-10 is a compact, convenient tool for aiding in engineering design and testing as well as calibration of test equipment.

It offers 5 decades of capacitance ranges, from 100 picoFarads to over 11 microFarads in 100 picoFarad steps. Easy-to-use slide switches allow for straightforward addition and subtraction of capacitor values. CDB-10 is a passive device that requires no power source.

Operation

Binding Post Connections

To connect the CDB-10, connect the positive lead to the RED post and the negative lead to the BLACK post. To make the connection, a banana plug can be inserted directly into the posts. An alternate method is to thread wire through the posts. In order to do this, unscrew the post, thread your wire, and re-tighten the post as necessary. An alligator clip can be attached to the plugs as well. Use alligator clips with caution to avoid wearing down the posts.

Range Selection

The CDB-10 contains 20 switches organized in a 4 x 5 grid. Each row offers 5 decades of capacitance ranges starting at 100pF and ending at 1uF. When a switch is in the **ON** position, the value marked above the switch is added to the total capacitance. For example, to obtain an output capacitance of 7.32 uF, the switches 4 uF, 3 uF, 0.3 uF, and 0.02 uF will be in the **ON** position.

Testing

The CDB-10 can be used for calibration of your test equipment due to its 5% accuracy. For calibration, set the CDB-10 to the desired value and connect the terminals of your test equipment to the output of CDB-10. The readout of the device you are testing should be the selected capacitance value (+ 50 pF residual capacitance – approx). If not, adjust the device you are testing accordingly.



Innovative Training Solutions

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Features

- > Calibrate test equipment with high accuracy of 5%
- > 20 switches organized in a clean 4 x 5 grid for easy use
- > All switches clearly display a visible white dot when in the ON position
- > Includes a protective rubber holster with tilt-stand for ease of use and viewing
- > Ideal for service, prototype and experimental and educational use
- > Set at any capacitance value from 100 pF to over 11 μ F in 100 pF increments
- > Input terminals accept standard banana plugs, bare wires, spade lugs or alligator clips
- > One Year Warranty

Specifications

Capacitance:	100 pF to 11.111 μ F in 100 pF steps
Internal Residual:	50 pF Cap maximum
Voltage limit:	50 VDC (non-polarized capacitors)
Connection:	Two (2) binding posts
Accuracy :	5 % (< 1 μ F: 1 kHz test frequency; > 1 μ F: 100 Hz test frequency)
Operating conditions:	Temp: 32 to 122 oF (0 to 50 oC) Humidity: < 80 %RH
Dimensions:	6" x 3.7" x 1.9"
Weight:	Approx.: 0.95 lbs