

DNB HANDHELD CALIBRATOR OPERATING MANUAL



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DNB HANDHELD CALIBRATOR MANUAL

1. Operation of the DNB Handheld Calibrator

Connect the handheld Calibrator to the Connector Module using the calibrator cable. The level (in cm) of the first tank (Channel 1) will appear on the display.

2. RUN Mode

When the Calibrator is first connected, it is by default in **RUN** mode. **RUN** mode is used to view the level of the selected tank or channel. To view another channel or to make calibration changes switch to calibration mode (**CAL**).

3. Calibration Mode (CAL)

Calibration Mode is used for the following:

- To change to a different channel - see *Set Channel*
- To set **SPAN**, **LEVEL** or **ZERO** - see *Initial Calibration*
- To view the calibration number, serial number, or DAC output

Note:

Before starting the initial calibration of a tank, ensure the correct channel is selected on the calibrator and that it corresponds to the channel number of the tank, which is set at the DNB Transmitter using the DIP switches on the circuit board.

CHANNEL	DIP 1	DIP 2	DIP 3	DIP 4
1	ON	ON	ON	OFF
2	OFF	ON	ON	OFF
3	ON	OFF	ON	OFF
4	OFF	OFF	ON	OFF
5	ON	ON	OFF	OFF
6	OFF	ON	OFF	OFF
7	ON	OFF	OFF	OFF
8	OFF	OFF	OFF	OFF

DIP Switch Settings for Multiple Channels

SET Channel

- Press **RUN/CAL** switch
- Press **FUNC** switch to view the channel
- Move the selector knob to the desired channel
- Press **SET** switch

INITIAL CALIBRATION

Upon installation of a DNB Transmitter, the **SPAN**, **LEVEL** and **ZERO** of the tank must be defined. This is called the initial calibration and consists of three steps:

1. Setting the **SPAN** (upper tank level) of the tank.
2. Setting the **LEVEL** (current tank level) of liquid within the tank, as measured manually at this time.
3. Setting the **ZERO** (lowest tank level) of the tank (normally left at zero)

Note:

The **ZERO** and **SPAN** are entered partly for the purpose of setting the 4-20mA output range. Whatever is entered as **ZERO** will be equivalent to 4mA. Whatever is entered as **SPAN** will be the equivalent of 20mA.

To Set SPAN

- Press **RUN/CAL** switch
- Press **SPAN** to display current span
- Move the selector knob to the desired value
- Once the desired value is reached, press the **SET** switch to save it to the Transmitter

To Set LEVEL

- Press **RUN/CAL** switch
- Press **LEVEL** to display current level
- Move the selector knob to the desired value
- To increment the value more quickly, press the **LEVEL** key again and the value will increment by a factor of one when the knob is turned
- To increment more slowly, press the **LEVEL** key again and the value will decrement by a factor of one tenth when the knob is turned
- Once the desired value is reached, press the **SET** switch to save it to the Transmitter.

To Set ZERO

- Press **RUN/CAL** switch
- Press **ZERO** to display current zero
- Move the selector knob to the desired value
- Once the desired value is reached, press the **SET** switch to save it to the Transmitter