# Digital Differential Counter

## Instruction Manual

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|---|---|
| **A** | Individual Count Display |
| **B** | Total Count Display |
| **C** | Counting Key |
| **D** | Cell Picture |
| **E** | +/- Button |
| **F** | Function Button |
| **G** | Reset Button |
| **H** | % Button |
| **I** | Battery Compartment |
| **J** | DC Power Jack |
| **K** | ON/OFF Power Switch |
| **L** | Auto-Switching Power Adapter |

## Inspection

**1**   Inspect packaging for any apparent physical damage.
**2**   Open carton, remove digital counter, and place on a dry, level surface.
**3**   Ensure unit is clean and there are no scratches on the surface of your counter.
**4**   If your counter is not in ideal working condition, please follow the warranty procedure.

## Warranty

LW Scientific instruments have a one (1) year limited warranty. This warranty is not valid on normal wear and tear, cosmetic damages caused by chemicals, solvents, and/or cleaning solutions, as well as acts of God.

Please register your product online at: www.lwscientific.com/warranty_form.
**Important**: Warranty information must be completed within 30 days of purchase.

## Specifications

- 8 buttons – 8 named cells
- Pictures and names of blood cells next to each button
- 8 3-digit LCD windows plus 1 TOTAL 3-digit window
- 4 function buttons: (+/-, %, RESET, FUN.)
- Accessory included: one 3.3V/1.2A power adapter
- Power supply: 110v/240v 50/60Hz or 2 AA battery (batteries not included)

**1** Plug the 3.3V / 1.2A auto-switching adapter into the DC power jack, and the other end into a properly grounded outlet. If using batteries, open the battery compartment and insert two AA batteries. Place the ON/OFF power switch to ON position.

**2** Each of the keys on the counter represents a type of leukocyte, according to the Schilling classification, and is labeled accordingly. As you observe and identify each type of leukocyte in the sample, press the button for the appropriate cell type. Each button has a corresponding digital window to show the count. At each one hundred increment of the total amount (such as 100, 200,…., 900), a short beeping sound is heard. If any window reaches 999, two short beeps will sound, and the counter will stop counting.

**3** If any button has not been touched for 4 minutes, a beeping sound will be heard and the counter will go to sleep mode. By touching any button, a beeping sound will be heard and the counter will go back to working mode.

**4** <u>**Function buttons: when function buttons are pushed, a beeping sound is heard.**</u>

**+/- Button**: This function button can set the counter to increase (+) or decrease (-) mode. Under decrease (-) mode, the LCD display will show the following:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | total |
|---|---|---|---|---|---|---|---|-------|
| -1 | -2 | -3 | -4 | -5 | -6 | -7 | -89 | -117 |

By touching one button, the corresponding window will deduct one (total amount will also deduct one). Push +/- button again to go back to increase mode.

**% Button**: Press this button at any time to calculate the percentage. Push again to go back to the original counts.

**RESET Button:** Press this button to clear the counts.

**FUN. Button:** Press this button to adjust the contrast of LCD display and monitor the battery level.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | total |
|---|---|---|---|---|---|---|---|-------|
| | | | | | | ACC | dEC | 80 |

- **Contrast**: Press button 7 to increase the contrast, press button 8 to decrease the contrast. Press FUN. button again to go back to the original count.

- **Battery Life**: The total window shows the % of battery life. When the battery level drops to 10%, the display will flash. If using the power cord, the battery level will show 100%. Press FUN. button again to go back to the original count.

**Caution: If not using the counter for long periods of time, please take out the batteries.**

## Troubleshooting

Always disconnect the power cord before troubleshooting.

| PROBLEM | CAUSE | REMEDY |
|---------|-------|--------|
| Instrument inoperative | Dead power outlet | Change to different outlet |
| | Power adapter is broken | Replace with a new one |
| | Battery level is 0 | Replace batteries or use a power adapter |
| | PC board is broken | Replace PC board |
| Function buttons do not work | PC board is broken | Replace PC board |
| Calculation is not correct | Pushing two buttons at once, or not pushing button down completely | Push a single button all the way down |

MKT-7.5.3-L-191 | Rev 0