

mindwalker 4 (Wooden Box) Meter Instructions V1.13

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Note: This meter has upgradeable *firmware*. These instructions relate only to Version 1.13 firmware. (See section on Firmware Upgrade)

Quick Start Guide

- Turn On** – Press button A
- Turn Off** – Press and hold button B
- Sensitivity** – Turn knob, large LCD momentarily displays sensitivity setting. Also press and hold button C to display sensitivity setting at any time.
- Counter Enable** – Press button C to toggle counter on/off. When off, dots will flash on small LCD display.
- Display Counter** – Press button 1 to display TA Counter on small LCD.
- Zero Counter** – Press and hold button 1
- Display Clock** – Press button 2 to display clock on small LCD.
- Clock/Counter** – Press button 3 for 2 second toggle between Clock and Counter display.
- LEDs** –
 - Green = needle SET in progress
 - Blue = Body Motion detected

Detailed Operation

Turn on sequence

Press button **A**. The green **LED** illuminates and the firmware version displays on the LCDs (F on large LCD, 1.11 on small LCD). After 2 seconds the green LED will extinguish and the needle will SET. The large LCD displays TA position, and the small LCD displays the TA counter. The flashing dots indicate that the counter has not yet been enabled.

Options:

If button **C** is held down while turning on the meter, automatic needle SET will be disabled and the needle must be SET manually.

Holding down button **A** more than 2 seconds at turn on (until the green LED extinguishes) will cause the meter to enter **Setup Mode** (see details below).

Turn off

Hold down button **B** for 2 seconds. The red LED will illuminate briefly and the meter turns off. The meter will also turn itself off if there is no action for 1 hour.

Needle SET

The needle can be SET at any time by pressing button **A** or **B**.

In automatic SET mode, the needle will SET whenever it goes off the dial. There is a deliberate delay before this happens on the right hand side of the dial.

A needle SET is accompanied by the green LED (*or blue LED*, see TA Counter section).

Automatic needle SET can be disabled by holding down button **C** when turning on the meter.

Sensitivity

The rotary knob adjusts the sensitivity from 1 to 40.

Turning the knob will cause the large LCD to display the sensitivity setting. This can also be displayed at any time by holding down button **C**. Note that this is accompanied by a + symbol on the left of the display.

TA Counter

At turn on time the counter is zeroed and disabled, and is the default display on the small LCD. Flashing dots indicate that the counter is disabled. The counter enable/disable can be toggled by pressing button **C**.

Counting is inhibited by the Body Motion Detector. If Body Motion occurs *causing the needle to go off the right hand side of the dial*, the counter will be disabled during the next needle SET. A needle SET is usually accompanied by the green LED, however a needle SET with counter inhibited is accompanied instead by the blue LED.

To permanently display the counter, press button **1**.

To zero the counter, hold down button **1** for 2 seconds.

To temporarily toggle between counter and clock display for 2 seconds, press button **3**.

Clock

The clock can be permanently displayed on the small LCD by pressing button **2**.

To temporarily toggle between counter and clock display for 2 seconds, press button **3**.

Note that the counter disabled flashing dots also occur on the clock display.

Loss of power to the clock (such as battery removal) will cause a permanent time display of 0:00 until the clock is adjusted. To adjust the clock, see **Setup Mode**.

LED

The LED can display red, green or blue. See relevant sections in this document for the meaning of these LED colours.

Note that the brightness of each colour can be adjusted, see **Setup Mode**.

Body Motion Detector

Unnaturally sharp changes in the needle motion are detected as body motion. This is indicated by the blue LED. This feature is useful on automatic meters since the counter will reject body motion, see **TA Counter** section.

Note that a good gentle can squeeze will not trigger the detector, and it can be used as a training exercise for this.

For those who find the blue LED irritating (such as during training drills with coach simulated reads) it can be turned off in **Setup Mode**.

Setup Mode

This mode is entered by holding down button **A** for 2 seconds when turning on the meter. After the green LED goes out, the large LCD will display all segments, and the small LCD will display the clock.

LED Brightness:

Press button **C** to cycle through the LED colours. Use the sensitivity knob to change the brightness for each colour. The LED will show the current brightness setting and save the new setting if the knob is moved while that colour is selected.

Clock:

Button **1** increments clock hours, button **2** increments minutes.

Button **3** toggles between 12 and 24 hour mode. Clock **must** be set to correct time after pressing this button.

To exit **Setup Mode**, press button **A** again.

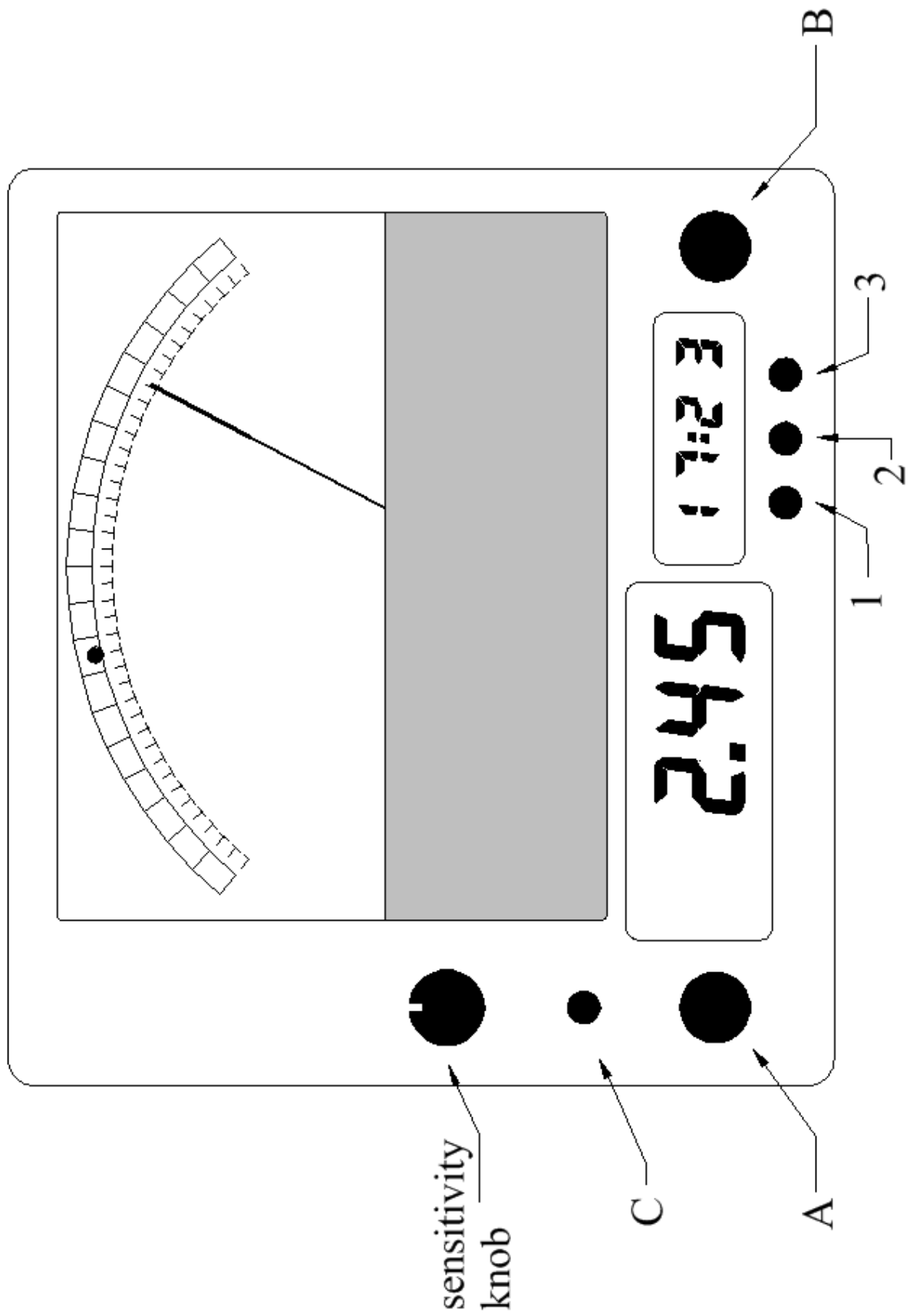
Firmware Upgrade

Like most modern electronic devices, the meter is controlled by a computer chip. This can be re-programmed to change features or operation of the meter. The program is called *firmware* and the version number installed in the meter is displayed on the small LCD at turn on, while "F" is shown on the large LCD. Firmware can be upgraded via a USB cable connected to a computer running Win XP or Vista. A separate instruction document provides details.

Batteries

The meter runs on 2 AA alkaline batteries. A low battery condition is indicated when the meter is turned on by the red LED illuminating and the BAT symbol appearing on the large LCD. To continue using the meter, press button **A**, and replace the batteries at the next opportunity. Batteries should be inserted with positive end towards the removable cap. Always use a suitable sized coin to release the cap, a screwdriver can damage the plastic.

Note that most meter problems are caused by leaking batteries. It is advisable to remove them if the meter is stored for long periods, or change them at least every 2 years.



Changes since last revision

Improved filter

Revision History

V1.12

Added heartbeat filter

V1.11

Fixed Clock hours bug.

Display toggle hold for 2 seconds.

V1.10

Fixed short Turn Off time bug.

V1.09

Fixed Upgrade Bug.

V1.08

Fixed LED brightness setting bug.

Finer control of LED brightness.

Added 12/24 hr clock option.

Reduced Counter Zero button press time.