

## Key operations (outside of the menus)

Active in **BANKS** mode, handling of data memory banks while measuring. Changing of the calibration table is locked.

Graph with a curve of recent signal

Numeric results and various information and messages

Optional menus, messages and dialogs

**Key 8 is used for turning on/off the averaging of either a single bank (Normal) or a number of previous banks (Batch).**

Allow Bluetooth to communicate

LowPower key for turning the meter to power saving and back to normal

Stat's key for calculating statistics of the selected or recent bank

Key 7 is used for turning on/off the autoranging for the graph display.

Key 4 for browsing up fast in **banks**

Key 1 for browsing down fast in **banks**

Left/Right for switching between Multiple displays and a big Numeric display

Charge LEDs for the battery

Press Save for saving visible data on the graph to a new bank

Logo for Data HOLD

ESC key for backing up in menus

Menu to enter setup menus

Key 6 to switch between three Low-Pass Filters

Keys +/- for turning sampling Autotimer on/off

Up/Down for retrieving a memory bank (from 0 to 819 if available)

Switch between **BANKS** and **TABLES** modes. Text in blue indicates differences between the modes

## Key operations (outside of the menus)

Active in **TABLES** mode, selection of another calibration table while measuring. Data memory bank selection is locked

The diagram shows the keypad and display of the AK30 meter. The display is divided into three sections: a graph on the left, numeric results in the center, and optional menus on the right. The keypad features various function keys and a numeric keypad. Callouts provide detailed explanations for each key's function.

**Graph with a curve of recent signal**

**Numeric results and various information and messages**

**Optional menus, messages and dialogs**

**Key 8 is used for turning on/off the averaging of either a single bank (Normal) or a number of previous banks (Batch).**

**Allow Bluetooth to communicate**

**LowPower key for turning the meter to power saving and back to normal**

**Stat's key for calculating statistics of the recent bank only**

**Key 7 is used for turning on/off the autoranging for the graph display.**

**Key 4 for stepping up fast in calibration tables**

**Key 1 for stepping down fast in calibration tables**

**Left/Right for switching between Multiple displays and a big Numeric display**

**Charge LEDs for the battery**

**Save for saving visible data on the graph to a new bank**

**Logo for Data HOLD**

**ESC key for backing up in menus**

**Menu to enter setup menus**

**Key 6 to switch between three Low-Pass Filters**

**Keys +/- for turning sampling Autotimer on/off**

**Up/Down for changing to another calibration table (of 1...100)**

**Switch between BANKS and TABLES modes. Text in blue indicates differences between the modes**

**Charge**

**BT**

**Save Rec**

**Stat's \***

**Low Pwr**

**VISILAB SIGNAL TECHNOLOGIES**

**7**

**8 Batch/Normal**

**9**

**ESC**

**4**

**5**

**6**

**Menu**

**1**

**2**

**3**

**Enter**

**0**

**Bank Select .**

**Auto OFF -**

**Auto ON +**

**Scale**

**Scale**

**Select**

**Select**

**TABLES**  
32  
6.7%  
43 PAPER

**LOGOHOLD**  
+.=AUTO  
↓↑=TABLE  
0=TIME

## Notes about the keys

As the display suggests, there is an internal date/time clock involved which is not running when the meter is turned off. Therefore it is advised to set its date & time before starting to work with the meter. A time stamp is attached to every memory bank when saved. The data is kept for several years. The same stamp can be seen after downloading a bank from the meter to PC. Press key **0** to set the date and time (submenus with keys 1 and 2). Press ESC a few times after setting it.

You can always press the **LowPower** key to stop the optical engine running and still utilize other features of the meter, like handling of banks or calibration tables, configurations etc.

The **BT** key allows/disables wireless communication. The Bluetooth link may already be established. A Red LED may be visible in that case to the left of the graph display. If the LED is not on, there is no link and attempt to communicate fails. The link is established in the PC. The new Bluetooth-based COM port behaves after that just like any other COM port in the PC. One can also communicate via regular RS232 serial port if your PC has a COM port available.

Keys **+/-**: The Autotimer may be set up for acquiring any number of samples between 1 and 500. The time interval between the samples is adjustable between 0.2 to 32000 sec. These are configured in the menu. When the number of preset samples has been reached sampling is stopped and the number of points is saved to a nonvolatile memory bank with the data. You can stop sampling by pressing the key **-**.

The **Save** key quickly saves the visible data (64 points) on the graph to a new bank just as if you had measured it with the Autotimer.

**Stat's** key will retrieve the latest or the selected bank data, calculate its statistics and show them on the center and right displays. It will also show the graph of the data compressed to the 64 point display.

Press the **Logo** key to stop having more data in general (= **HOLD** key, does not affect the Autotimer). The graph is frozen and also the numeric displays are. You can study the curve and optionally press the Save key to put the data to a bank. Press the **Logo** again to let it continue measuring releasing the HOLD.

Use the keys **Left/Right** (arrows) at the bottom to switch to big numeric display instead of the default multi-display and back.

Key **Bank Select** is used for switching between BANKS and TABLES modes. In BANKS mode you handle the existing data memory banks and the calibration table is locked. In TABLES mode you can switch between tables but the old banks can not be retrieved though you can still start the Autotimer, use the **Save** key and calculate Statistics of the latest bank.

The keys **Up/Down** (arrows) are used for selecting another bank or table according to the mode. The keys **4** and **1** are used for moving forth or back at a pace of 10 banks/tables at a time.

Key **6** toggles between FAST, MEDIUM and SLOW filters to filter out unwanted noise from the signal with a varying power. The filter strength affects the meter's response time.

Key **7** is used for turning on/off the autoranging for the graph. When it is on, the curve is analysed before drawing it and the maximum value determines the upper end of the moisture range and the minimum value the lower end. That's why the curve seems to live a little all the time. If autoranging is off, the range is predetermined in the menu and remains fixed.

Key **8** is used for toggling on/off the averaging of either a single bank (Normal) or a number of previous banks (Batch). Normally you calculate statistics of one bank only. Optionally you can calculate the statistics of a preset number of banks (max 64) acquired before the current bank in use or just acquired. The graph of the last bank only is displayed. The number of banks to be averaged is set right after turning the Batch on, on the rightmost display. Edit and accept with **Enter**. This feature is most useful when a material's two sides need to be measured and averaged (thick papers and boards).

The **Menu** key is used for entering the text-based menus. It is advised that you go there from the multiple displays, not the big numeric display. The measurement continues in the background and you can watch both the curve and the digital display while working in the menus. You can return back to the regular multiple display by pressing a few times the **ESC** key.

When the memory area is full (820 banks) you need to go to the Service menu and further to 9 = More.. to locate the option: 5 = ERDATA. Press key **5** to erase ALL DATA BANKS. **This operation is final and the data is gone.** If important data is contained in the banks, do some Downloading to a PC before attempting to erase.

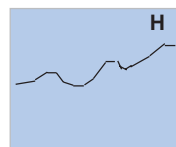
When working with many of the submenus, the **Save** key has a new meaning. It can save the current meter configuration or the calibration table just modified. A simple safety interlock is put into many situations, like:

SURE(1)?

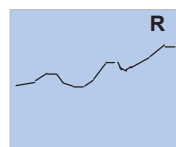
If you respond with key **1**, the saving is completed, else it is cancelled.

**Other pertinent information:**

Graph with a curve of recent signal



HOLD is on, press Logo again to release HOLD



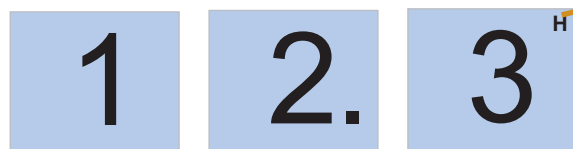
Data is retrieved from a bank

Numeric results and various information and messages

BANK 167  
32  
6.7%  
43 PAPER

- current bank number
- number of points in the current bank
- current moisture value
- calibration table used

**Big numeric display**



HOLD is on, press Logo again to release HOLD

Indicator for being at the top level of the menu system, all special keys are now active

LOGOHOLD  
+ = AUTO  
↓ ↑ = BANK  
0 = TIME