

TECHNICAL NOTES FOR USERS - NOTE #031

Questions and Answers about Use of AK30 Portable Moisture Meter

How does one start a measurement at a certain point of time and stop respectively accurately?

If one wants to have a time series of data to a memory bank, to be acquired along a roll side or in CD of a web, do the following. Estimate the time of moving across the side, walking slowly. The meter can acquire five samples/s so if you want to have reliable statistics and cover carefully the whole profile, moving slowly is needed. Lets' assume as an example that the width is 10 m and we are moving at a rate of 0.2m/s or 20cm/s offering a new data point every 0.2s. The interval along the travel is then 4 cm between points. The time for crossing the whole track is then 50 sec and the number of points to be acquired is 250. Press Menu and press "1" to go to setting up BANKS. Press "1" to set the interval to 0.2s. Edit it and return by pressing ESC. The go to the other option with key "2" BATCH. the batch size is there set to 250.

If you want to keep these settings for the future, press the Save button and respond with "1". Press ESC a few times and go to the measuring spot. Place the meter over the paper and wait for one or two seconds for the meter to settle. Press "+" key and start moving at the rate of about 0.2 m/s towards the other end. The meter is acquiring data and the curve is shown on the display. When the preset number of 250 has been collected the Autotimer will stop and a beep is heard. You can now calculate the statistics. The data is in the latest memory bank. The interval affects the curve display too at the same time but the number of points visible is fixed at 64 points when acquiring a trend. When calculating statistics, it will compress all data to the display. It is recommended to set up the date and time clock before starting important measurements; the date&time stamp is associated with each measurement and can be recognized later.

How does one average more than one memory banks?

Press "8" (when not in the menu). Either the text NORMAL appears at the second line of the right display for a moment or a dialog requesting for THE NUMBER OF BANKS TO AVER. offering some value already. Edit it and accept it. Pressing "8" repeatedly will toggle between the NORMAL or the BATCHED type of averaging. The NORMAL averages only the bank selected. The BATCHED averaging allows averaging of up to 64 latest banks. You can also select with arrow keys an interesting old bank and then apply the averaging again. If you want to establish a permanent method of this, go to Menu and press the Save button to keep all settings, responding with "1". In practice, you need to have then the same number of sequential memory banks to be averaged. You can always change this setting again.

How does one clear some of the memory banks?

All memory banks can be cleared when wished. There is no possibility of clearing a single bank but all will be cleared for simplicity. This is done in the service menu "5" and from there "9 = More". The option "5 = ERDATA" will clear all memory banks after responding with "1". **Never apply the "= FACTRY"** since it will clear also the calibration library.

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Is one able to swap the entries of calibrations in the library?

You can tailor the library with AK30, AK30Mini, IRMA7Basic or Advanced programs. On the Library page you can upload/download a single entry to/from the meter. Please note carefully the direction of operation and make a **DOWNLOAD** of the whole library first to avoid losing the library in case something happens. Save also the downloaded library. Edit also the name of the library to separate it from the present name.

How do we get the meter working with the AK30 software? We would like to get the memory bank data shown as curves and also some trend measurements.

AK30 and AK30Mini have the possibilities of:

- get a trend curve (Acquire page) with data saved too
- download a single bank (on Memory banks page)
- download a great number of banks (on Meter status page)
- automatically download any new bank while still measuring at the PM/BM within the range of the Bluetooth

To get the AK30 and AK30Mini programs working, you will need to set up the Bluetooth dongle supplied with the meter. Install the driver according to the leaflet with it and plug in the dongle. The Bluetooth service will be available after that. One needs to start the Bluetooth program to start looking for any Bluetooth devices within the range. It will locate all nearby mobile phones and some computers etc. The AK30 meter will be shown as a mobile phone with an identifier AK30-NNNNN where the NNNNN is the serial number of the meter. Double click the AK30 icon and locate the serial port service. You will be asked of the PIN or security code which is 0000. This makes the pairing in effect and the PC will remember this device for the future and will try to offer the same service to it. Locate the services of the device, being only the serial port. Start using it by clicking. There may be small variation in this depending on the version of the Bluesoleil.

When the serial port service is operational, check to see what is the PORT NUMBER. It may be something like COM10. Enter that port number in the AK30 programs and save the settings there. Then go **ON-LINE** in the program and wait for a few seconds. The Bluetooth is a bit slow at this stage since it needs to establish the full radio link between the devices. The RED LED will be lit on the AK30 meter display when the link is ok. Then you can start using the wireless serial port. Next time you just start the program and go **ON-LINE** (or press the GO AHEAD button) if the meter is running and present and the link will be established automatically within a few seconds.

Go to Meter Status page and Check. You will be able to see the meter serial number and the number of memory banks already in use. Congratulations! You have made it. You can now try various pages in the programs AK30 and AK30Mini (do not, however, use them at the same time). Read more in the Operating manuals.