# Instructions for Haymeter PC-software

1. Index

2. Installation

Haymeter PC-software is compatible with Windows Vista and later releases. Microsoft .net framework version 3.5 or higher is required.

2.1 Software Installation

Find and start the installation package that was downloaded from the webpage (current version at the time of writing this manual was Haymeterv1-r35-setup.exe). Internet browsers typically place downloaded files to "Downloads"-folder or to the desktop. Follow the instructions in the installer carefully and after installation go to start menu, folder named Haymeter and start the Haymeter program.

2.2 First Use
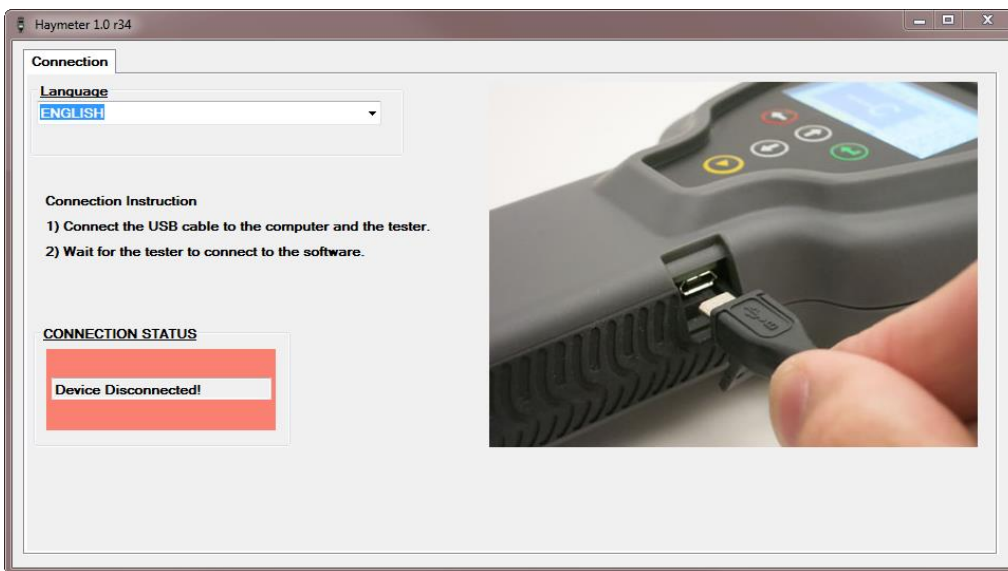
Illustration 1 Meter connection view

Connect the supplied USB cable to a computer and pull out the rubber plug from the right side of the meter to expose the Micro USB port. Connect the USB cable to the exposed Micro USB port as indicated in the connection tab photo (Illustration 1) on the PC program. Select the language to use with the PC program.
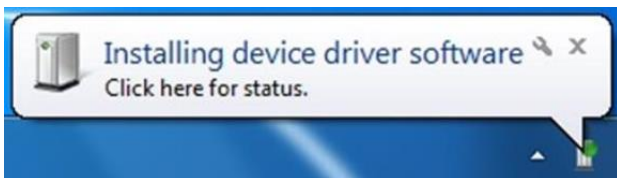
Illustration 2 Windows is installing driver

First time the meter is connected to the computer, it may take up to 15 minutes for Windows automatic driver search to run. Driver search will also happen the first time the software update for the meter is run. During this time a small grey icon with a moving green ball is shown at the bottom right corner of the Windows desktop. Wait for the installation to end, reboot your computer when prompted and restart the Haymeter program.
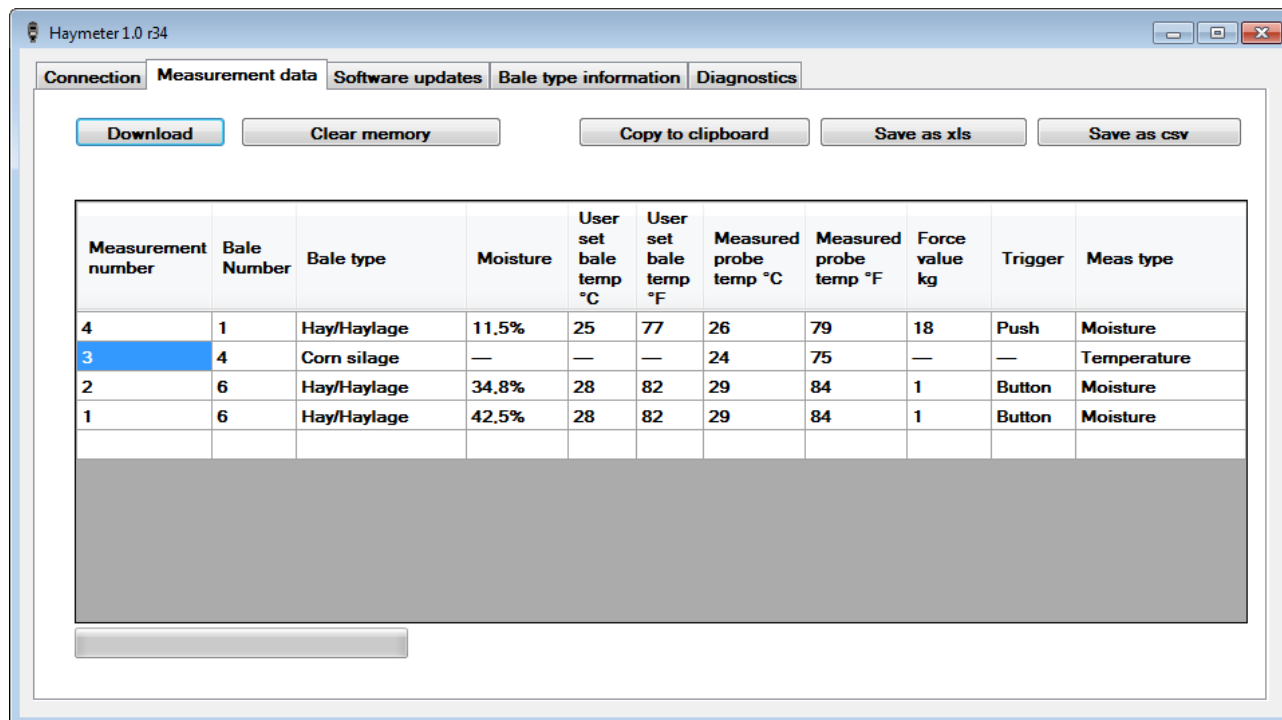
3. Usage

3.1 Measurement Data

Illustration 3 Measurement data view

3.1.1 Actions

3.1.1.1   Download

Download measurement data by pressing "Download"-button. Do not disconnect meter during data downloading. Measurement results will appear on the data grid one by one during the download process. If there are a lot of measurements stored in the memory, this process can take minutes. Download progress is indicated by a progress bar in the bottom left corner of the window.

3.1.1.2   Clear memory

After measurement data is downloaded to program and measurement results are saved, user has option to clear meter memory. Note: This process will clear the entire measurement data memory. All measurements saved in meter will be lost.

3.1.1.3   Copy to clipboard

Press the "Copy to clipboard" button to copy all measurement data from the data grid to the Windows clipboard. This can be used to copy the data e.g. to a spreadsheet application such as MS Excel.

3.1.1.4   Save as xls

Press the "Save as xls" button to save measurement data to MS Excel .xls file. This functionality requires Excel version 2003 or newer to be installed on the computer.

3.1.1.5   Save as csv

By pressing "Save as csv" button, measurement data will be saved as a comma separated (.csv) text file.

3.1.2 Measurement data view

3.1.2.1   Measurement number

Measurement number represents the measurement order in meter's memory. The most recent measurement has the highest number and is shown first in the data grid.

3.1.2.2   Bale number

The bale number indicates which bale memory slot this measurement belongs to. On the meter LCD, this number is shown on the top row with the bale type.

3.1.2.3   Bale type

Bale type is the type of the bale that was measured. Note: bale type must be selected correctly before each measurement for best accuracy.

3.1.2.4   Moisture

Moisture is the moisture measurement result that was saved to the memory. Bale type offset correction is already applied to this result if offset correction has been set in the meter.

3.1.2.5   User set bale temperature

This is the temperature value set or measured by the user for temperature compensation before moisture measurement was made. As such, this is usually not an up to date temperature measurement result.

3.1.2.6   Measured probe temperature

Temperature value of the probe at the time the moisture measurement was made. When meter is in temperature measurement mode, this value is the saved temperature measurement. For moisture measurement, this is often far from actual hay temperature (due to friction and due to slow temperature settling during quick moisture measurement).

3.1.2.7   Force value kg

Maximum push force registered during the measurement, displayed in kilograms.

3.1.2.8   Trigger

Trigger will show either "button" or "push" depending what was the triggering event for the moisture measurement. If bale is very light and meter fails to notice the measurement push automatically, user needs to press the measurement button to take the measurement. In this case trigger shows "button". In normal operation where bale measurement is automatically triggered by push detection, the trigger type shown is "push".
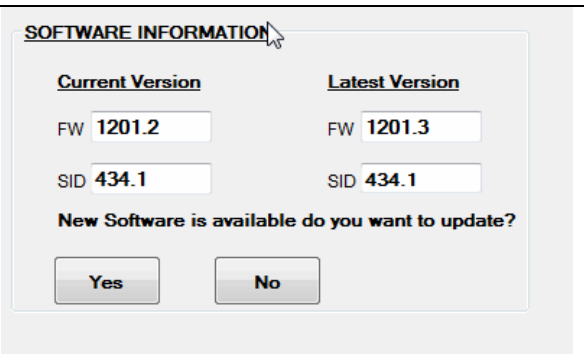
3.1.2.9   Meas type

This column will show the measurement type. Meter can save moisture or temperature measurements for a bale.
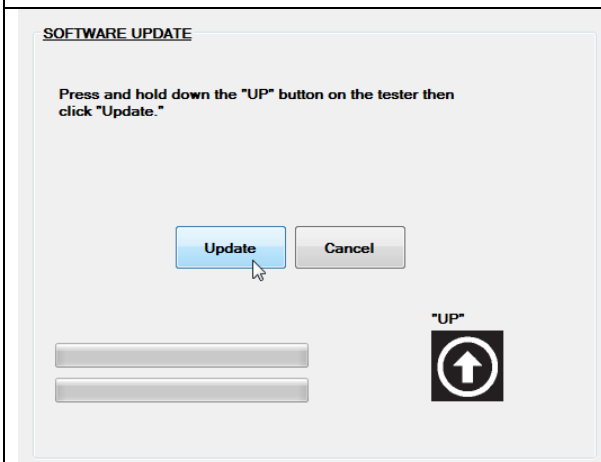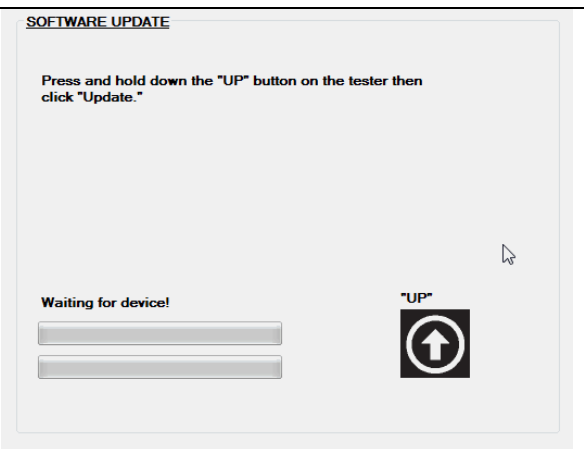
3.2 Software update
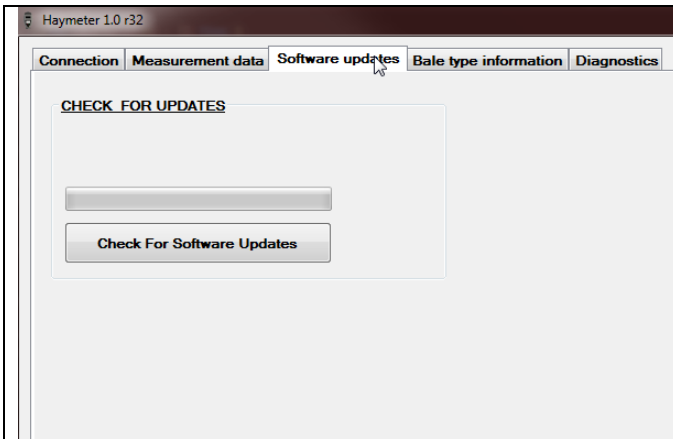
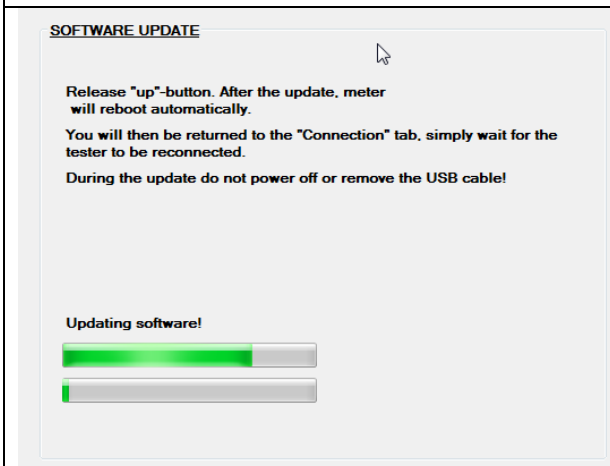**Illustration 4** Start view of software update search

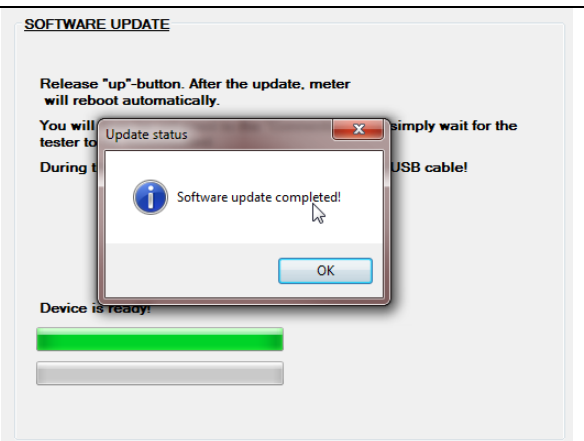**Illustration 5** New software / scale package update was found

Illustration 6 Start view of software update tool

Illustration 7 Meter search in progress

Illustration 8 Software update in progress

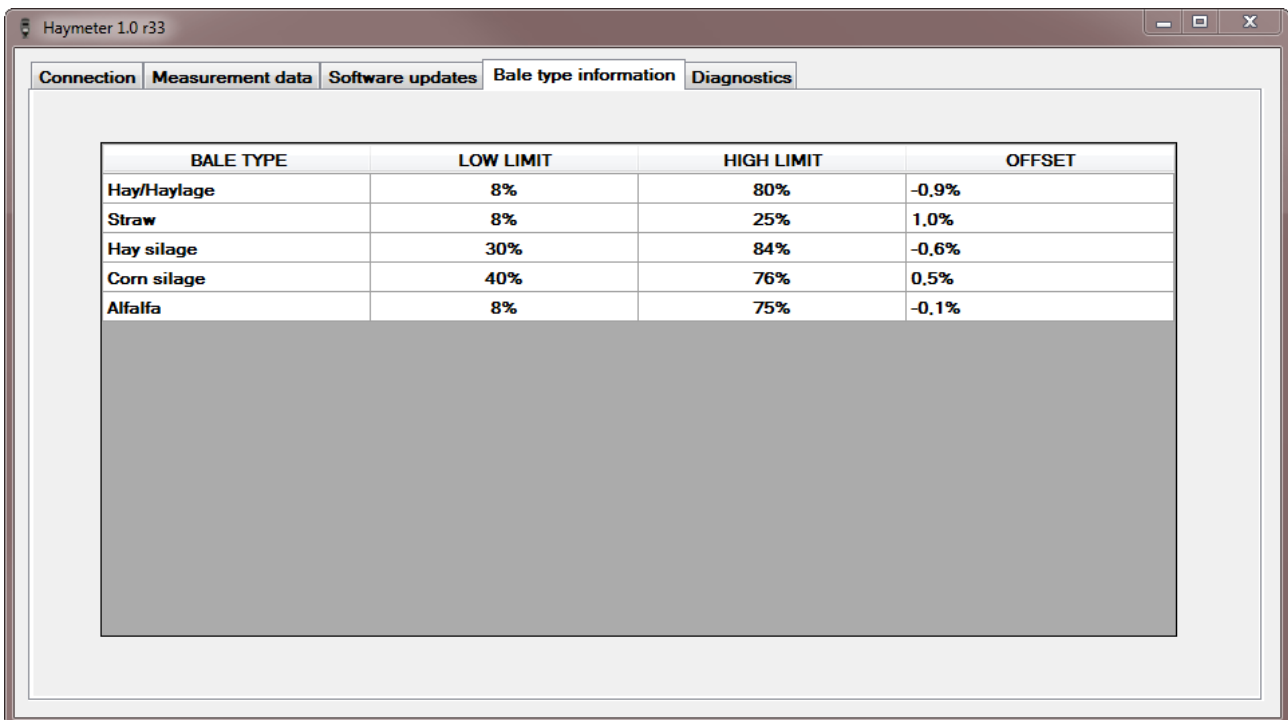**Illustration 9** Software update in progress

Start software update availability check by pressing "Check for software updates"-button (Illustration 4). If at this point computer firewall prompts and asks whether "Haymeter" may access the internet, allow access. Internet connection is needed for update checking and retrieval.

If an update is found, option to install it to meter is presented (Illustration 5). Press "Yes" to continue. Press and hold the "UP" arrow button on the meter keypad and click the "Update" button on the PC software screen (while still holding the "UP" button) to start the update (Illustration 6). When update starts and the progressbar moves, release "UP" button (Illustration 8). Wait until updating is complete. Do not press buttons or unplug the USB cable during the update process.

When the update is complete, program will show an information box (Illustration 9). Press OK. The meter will now reboot and the Haymeter PC application will return to the connection screen. At this point it is safe to unplug the USB cable. In case the meter does not reboot after pressing OK (Illustration 9), press the "POWER" button once to reboot the meter.

3.3 Meter information

3.3.1 Bale type information

Illustration 10 Bale type information view

On the bale type information screen, bale types available for measurement are listed with the following parameters:

- Low moisture measurement limit at 15˚C temperature
- High moisture measurement limit at 15˚C temperature
- Moisture offset correction set by user in the meter for this bale type

3.3.2 Diagnostics
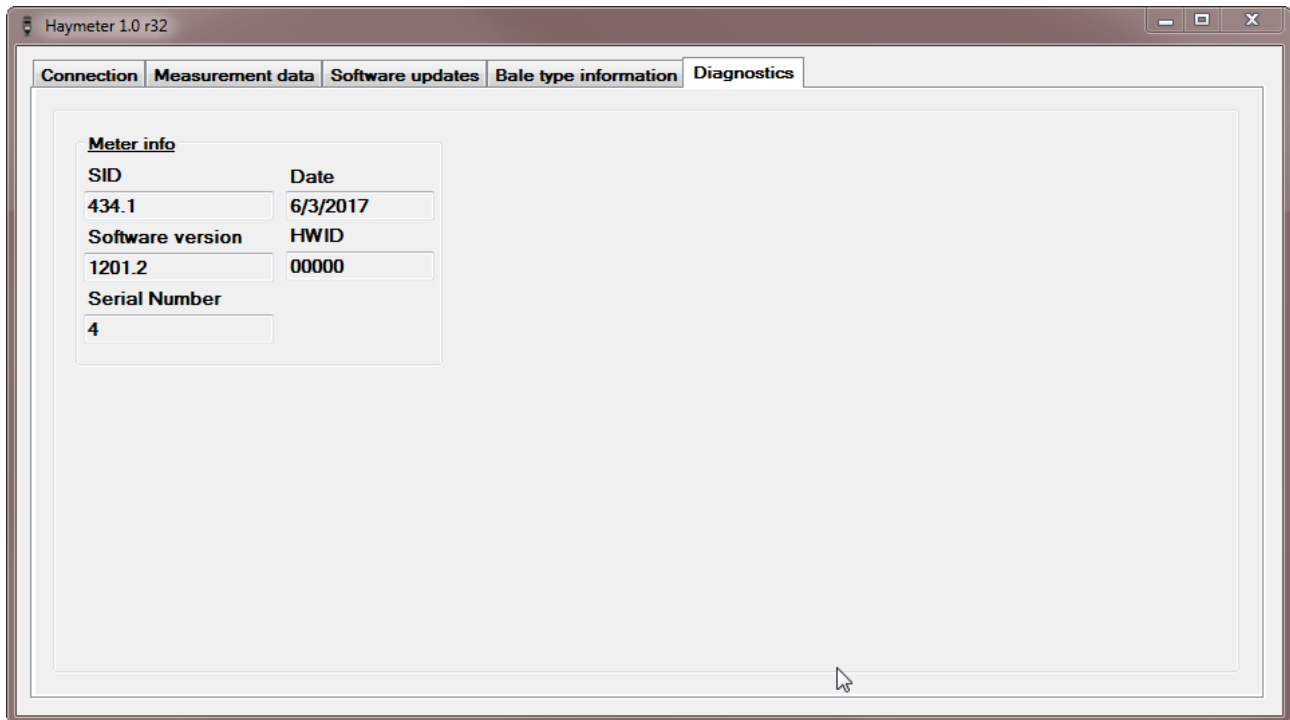
Illustration 11 Diagnostics view

Diagnostics view is mainly for service and customer support purposes. It contains important information which may be needed with communication with customer support:

– Scale ID (SID)
– Production date (Date)
– Software version
– Meter hardware id (HWID)
– Serial number