Release Notes NORMA PA FW V1.61

Bug fix for Updated Hardware (Active Color TFT Display):

After a soft-reset of the device (used to restart after a firmware upgrade as well as in production), the new TFT display was not properly detected and showed garbage on the screen. The issue was fixed by adjusting the configuration of the display controller.

Improvement of the integrator function (Energy measurement):

The integrator interval duration was longer than the configured one (set either by a specified length or by the difference between explicit start and stop times). It was fixed by adjusting the integrator interval length in these cases.

Note: Firmware V1.61 supports the following HW configurations:

1. Legacy passive B&W LCD: Standard main digital board, B&W LCD driver board

2. Legacy passive color LCD: Standard main digital board, color LCD driver board

3. Active color TFT display: Modified main digital board (display clock), color TFT driver board

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 Release Notes NORMA PA FW V1.6

Support for Updated Hardware (Active Color TFT Display):

For proper operation of updated hardware of TFT display, this new firmware version V1.6 is required. This version supports both the legacy (passive B&W, passive color) as well as the new TFT display.

A new driver board mounted on the main digital board identifies the new display hardware and the firmware loads the appropriate driver by auto-detection. Additionally, a modification on the main board is required to supply the proper clock for the new display.

Important:

Firmware versions of and before V1.54 will only detect and support the legacy display hardware. Devices with the new display HW must not be down-dated to those versions, otherwise the display will not be functional. However, the emergency firmware upgrade (by pressing & holding the ENTER key during Power-On and updating to V1.6 or higher with FWload PC SW) will still work in such situations.

Firmware V1.6 supports the following HW configurations:

1. *Legacy passive B&W LCD:* Standard main digital board, B&W LCD driver board

2. *Legacy passive color LCD:* Standard main digital board, color LCD driver board

3. *Active color TFT display:* Modified main digital board (display clock), color TFT driver board

Release Notes NORMA PA FW V1.54

Support for Updated Hardware (GPIB/LAN Interface Option IF2):

For proper operation of updated hardware of optional IF2 interface this new firmware version V1.54 is required. This version supports both the original as well as the updated interface hardware and loads the appropriate driver by auto-detection.

The new interface hardware can be identified by the connectivity LEDs integrated into the rear-panel LAN socket.

Firmware versions before V1.53 will only detect and support the GPIB part of the new interface hardware. Users are encouraged to upgrade devices equipped with older firmware versions (both old and new interface HW) to V1.54 to get the full features and fixes as described below.

New Features and Fixes:

1. *Indication of LAN connection status:* The very left field of the status line of the display indicates an active Ethernet TCP/IP connection by a light-blue color (to the left of the "EN" indication for LAN interface type). This feature is available on both original as well as new interface HW.

2. *Automatic detection and disconnect on broken Ethernet connection:* By default, the device sends "Keep Alive" special packets to the other peer of an active TCP/IP connection after 10sec of inactivity (no data transfer) every other 10sec. If the packets are not acknowledged by the other peer (because of broken cable or other connection interruption) the device resets its connection after another 5sec timeout automatically and is ready to accept a new (re-)connection request. This feature is only supported by the new interface hardware and is completely hidden from the application programmer ("Keep Alive" packets are transparently handled on Ethernet driver level); no changes are required for existing application SW (like NormaVIEW).

3. *VNC® server mode operation:* The default color model of VNC server has changed to 16-bit true color mode from previous palette-based mode. But palette-based mode is still supported by the device if requested during connection negotiation with VNC client applications. Wrong colors with 8- and 16-bit big-endian color modes have been fixed.

4. *Fix for bug in Process Interface calculation:* For special negative digital speed values (tavg[sec] * fN[Hz] = 2n, n=8..15) the value was calculated as =0. This issue has been fixed.

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