

com.tom GRAPHIC 4.11 Getting Started



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1 Introduction

This document will help you get started with com.tom GRAPHIC and SpiderControl™ MicroBrowser. The SpiderControl™ MicroBrowser is able to run Web-HMI's that are directly loaded from an embedded Web-server on a PLC or another controller device.

2 Scope

Currently the com.tom GRAPHIC software is known to run with the following devices:

- CoDeSys v 2.x
- CoDeSys v 3.x
- SpiderControl Wago
- SpiderControl Siemens S7-200/300 (mit integriertem Webserver)
- SpiderControl Panasonic
- SpiderControl Beckhoff SpiderControl™ editor, or compatible OEM versions

3 System start-up

3.1 What do we need to get started?

The following components are among others included within the com.tom Starter Kits:

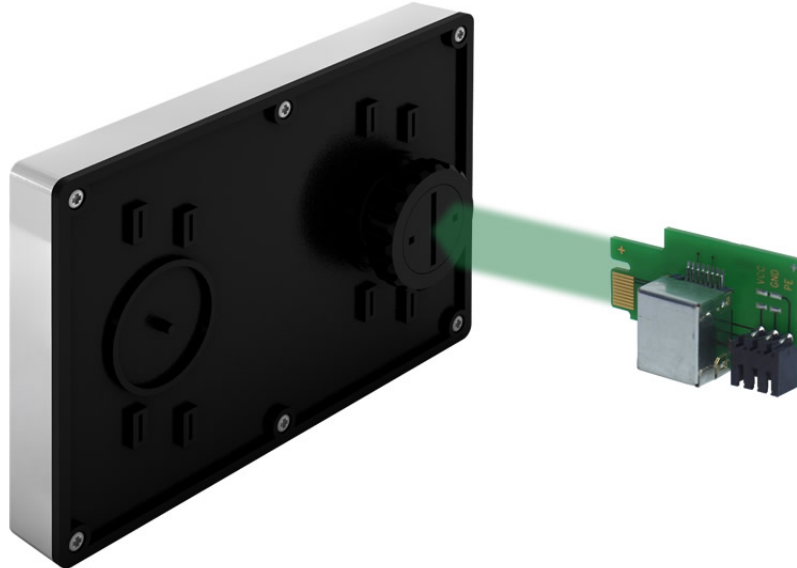
- com.tom GRAPHIC 4.11
- com.tom GRAPHIC ETH-01 (or a equivalent com.tom GRAPHIC ETH-0x)
- Power supply unit
- Ethernet cable

Furthermore you need:

- A running WEB Server on a PLC or another controller device (as mentioned above)

3.2 Step 1 – Cable and the com.tom GRAPHIC

Insert the com.tom GRAPHIC ETH-01 adaptor and look it with the screw.

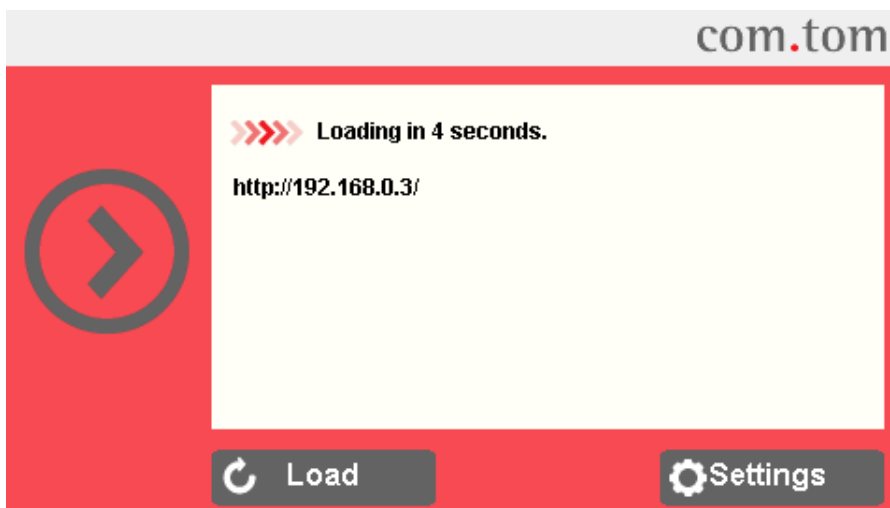


Use an Ethernet cable to connect the com.tom GRAPHIC to your embedded Web-server or the PLC. If you have an existing network infrastructure, use a patch cable to connect the com.tom GRAPHIC to your hub or switch. If not, use a crossover cable to directly connect the com.tom's GRAPHIC Ethernet jack to your embedded Web-server or the PLC Ethernet jack. Now connect the power supply unit to the com.tom GRAPHIC/ETH01 power supply jack to power the device.

Right after the device is powered on a view appears to calibrate the touch-screen. Press the screen to start the touch-screen calibration routine.

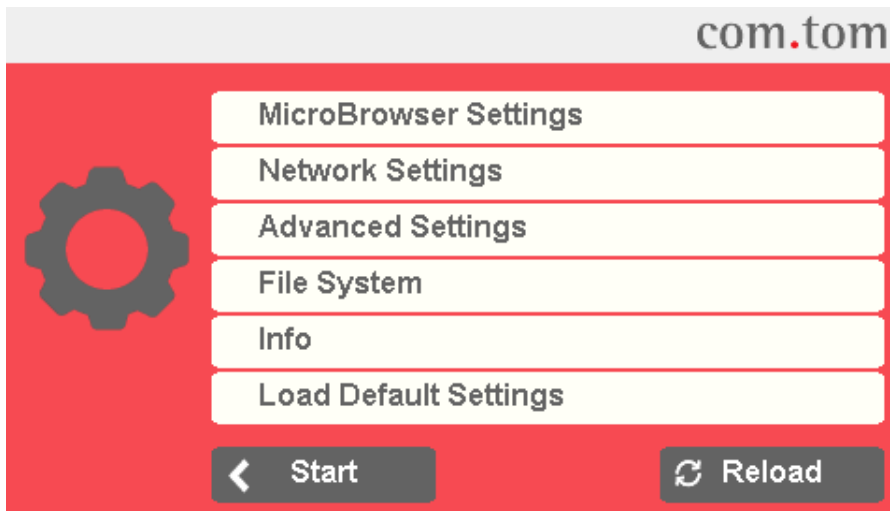
After the touch-screen calibration is finished the view "Starting Ethernet, please wait" appears.

Shortly after the next view appears:



Press on **Settings** to access the configuration menu of the com.tom GRAPHIC.

If no action is taken, the panel will automatically continue by loading the URL that has been previously configured. If this URL cannot be found, this page will be shown again and the system will try to reconnect again.



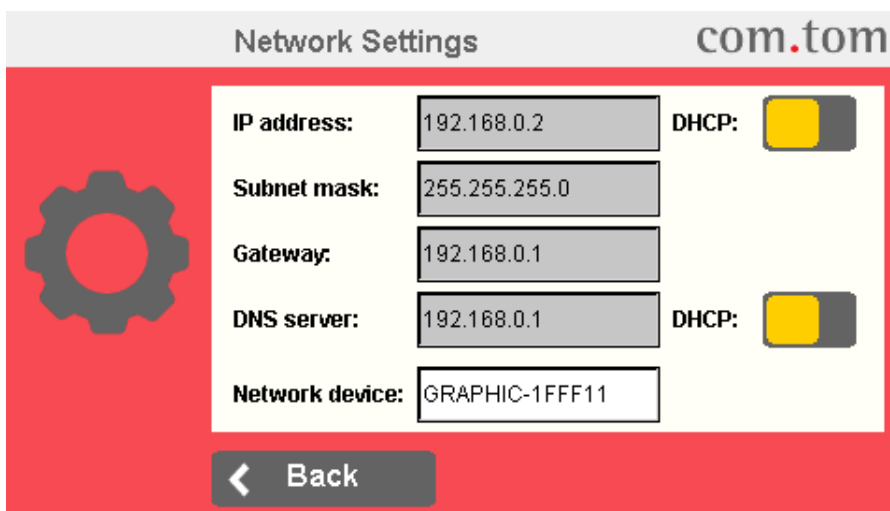
Now you are in the "Setting" Menu and can go ahead with the next step.

3.3 Step 2 – Configure the Network Settings of the com.tom GRAPHIC

Press on '**Network Settings**', the Page to enter the network configuration of the com.tom GRAPHIC. DHCP for IP and DNS server is activated by default settings.

Alternative you can configure a static IP address, DHCP, subnet mask and gateway.

Therefore press the DHCP button, the change is displayed by the button. In that case you have to touch in the `field` IP address and enter your static IP with the appearing Key-Pad. In the same way you have to configure the Subnet mask and the Gateway.



'DNS via DHCP' is activated by default settings.

Alternative you can configure the DNS server, if there a server is in your network.

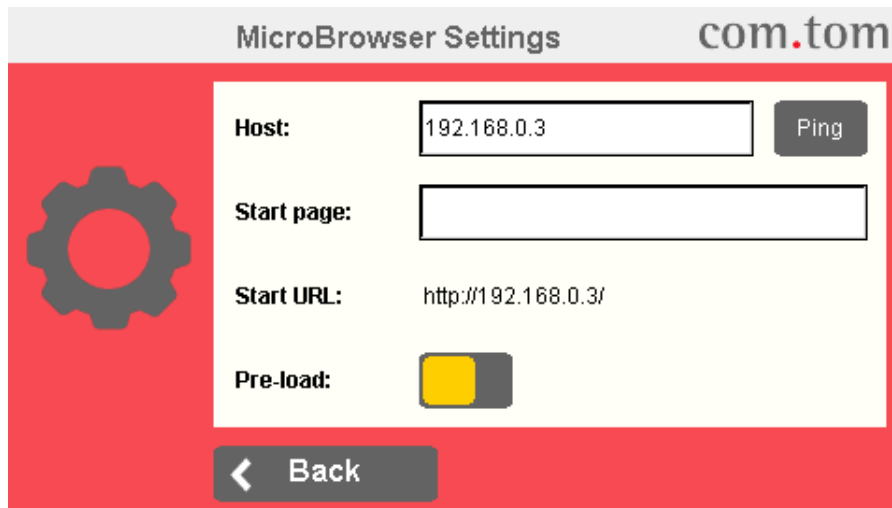
Therefore press the DHCP/DNS server button , the change is displayed by the button.

In that case you have to touch in the `field` DNS server and enter your static IP with the appearing Key-Pad.

Press the Button to go back to the “Setting” Menu.

3.4 Step 3 – Configure the MicroBrowser Settings of the com.tom GRAPHIC

Press the *‘MicroBrowser Settings’* to access the configuration menu.



The entry `Host` is for the IP-Address of the host with the located HMI. By default settings the preset is `192.168.0.3`.

Touch in the `field` with the IP-Address **192.168.0.3** and enter the IP-Address of the WEB-Server of your PLC (as mentioned in Chapter 2) with the appearing Num-Pad.

Now check the reachability of your configured PLC by pressing the button. Then answer on the ping request fade the button green

If you have no success of the ping test, the button fades to red , check your network.

The 'Start Page' field contain the HTML-file name of the HMI. In the default setting the entry is blank. Touch in the blank `field` and enter the HTML-file name of the HMI with the appearing Key-Pad e.g. “webvisu.html”.

If the host provide the startpage in a subfolder include the path information. Use ` / ` as separator (Examples: “plc/webvisu.html”)

The Start URL is read-only, the composed URL is shown (e.g.:http://192.168.0.3/webvisu.html)

By changing the default disabled Pre-load option to enable , by pressing the button, all views and image files are pre-loaded. This will increase the loading time, but reduce the time between page jumps.

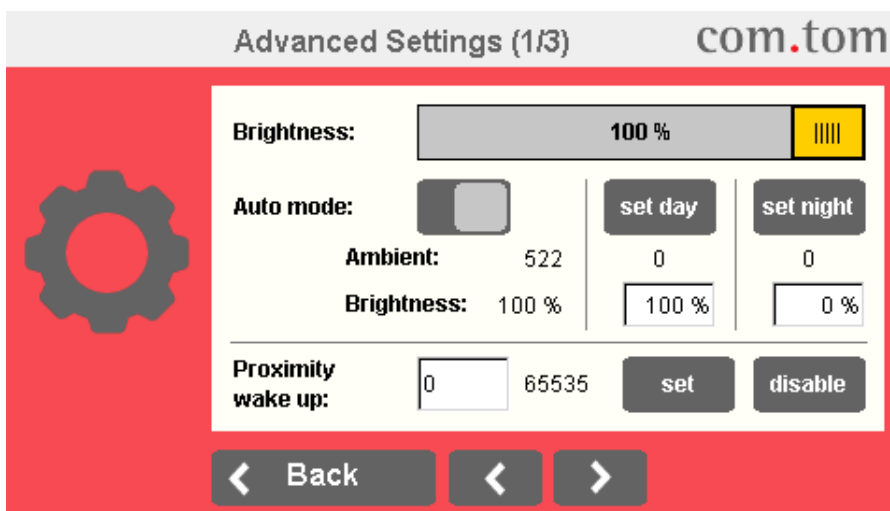
Press the Button to go back to the “Setting” Menu.

3.5 Step 4 – Advanced Settings of the com.tom GRAPHIC

The advanced settings are represented on three pages. The default settings are set to use the com GRAPHIC without changes.

Press the '**Advanced Settings**' to access the configuration menu.

3.5.1 Advanced Settings / Page 1



With the '**Brightness fader**' change the screen brightness to your needs. Press the fader and move it to your favoured attitude. Please consider with a Brightness of 0% the Display could be complete dark.

This value is not used when the "**Auto mode**" is set.

The '**Auto mode**' is disabled by default.

In the '**Auto mode**' the screen brightness is set automatically according to the ambient brightness. To change into 'Auto mode' you have at first to set with "day" and "night" ambient brightness value. The measured Brightness is read-only displayed with "Ambient".

Make sure that your ambient is 'day' (consider that an average value is used – it takes a minute after changing the ambient) and press the button

By default the "day Brightness" is 100%, to change this touch in the '% field' below "set day" and set it with the appearing Key-Pad to another value, e.g. "90%".

Now set your ambient to night – for test we simulate it with a piece of normal white paper we place over the sensor.



After a minute the Ambient value is reduced clearly and we press the button

Change Brightness value by touch in the '% field' below "set night" and set it with the appearing Key-Pad to "20%" (please consider with a Brightness of 0% the display could be complete dark).

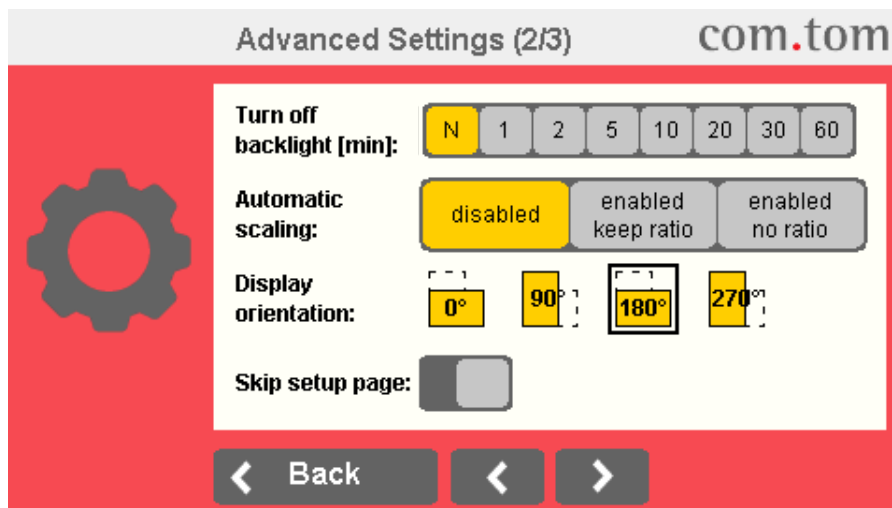
Now switch the "Auto mode" on, by pressing the button. The display will reduce the Brightness after a short time.

After removing the small piece of paper from the sensor the display becomes brighter after a short time.

Proximity wake up is not supported right now, leave it "disabled".


Press the Button  for the Advanced Settings / Page 2.

3.5.2 Advanced Settings / Page 2



The **'Turn off backlight'** entry sets a time constant, after which the backlight is automatically switched off if the display is not in use (no touch events are registered).

This setting is set in minutes. 'N' means never / disabled. By factory default its set to "N".

We change it to 1 minute by pressing on the button .

Now we wait 1 minute without touching the display/touch and the Backlight switches off, the display is "dark". By touching the display/touch the Backlight switch on.


The **'Automatic scaling'** entry offers setups for scaling/ omit. The best result is given with the default 'disabled'. The HMI is drawn 1:1 (scale factor 1) on the com.tom GRAPHIC. Elements positioned outside the screen resolution are omitted.

If necessary you can change the setting by pressing the according button.


'enabled, keep ratio' scales the HMI to the screen resolution. The view will be stretched or shrunk and the ratio is kept.

'enabled, don't keep ratio' scales the HMI to the screen resolution. The view will be stretched or shrunk and the ratio is not kept.

'Display orientation'


With the four buttons **'Display orientation'** you can rotate the presentation. For a short test we rotate it from the default of 180° to 0° orientation by pressing the button .

For the 90° and 270° "Portrait Mode" you should consider that the HMI Design should prepared for.

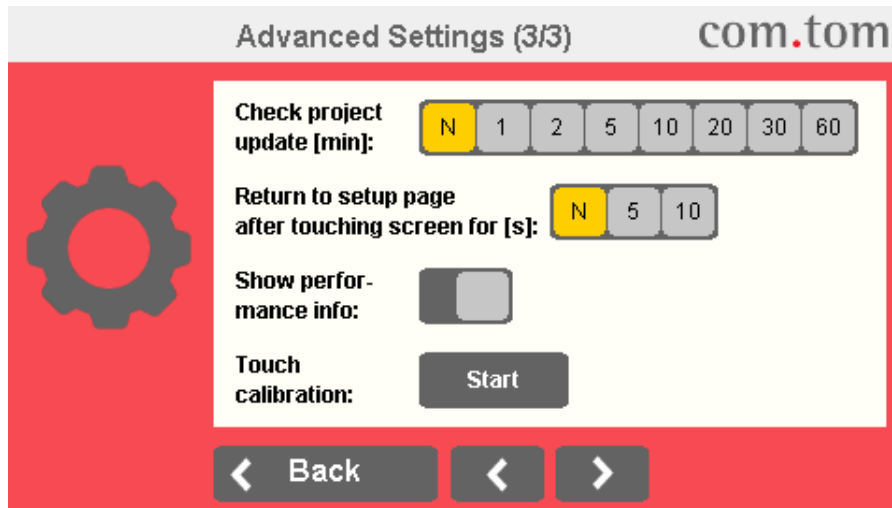
Bei pressing the  button we go back to the default orientation.

With the entry **'Skip setup page'** the HMI is loaded right after the initialization of the Ethernet adapter, skipping the whole setup page.

If neither the HMI nor the settings gives you the possibility to return to the setup page, unplug the Ethernet cable and restart the device. We not change this setting.now.

Press the Button  for the Advanced Settings / Page 3.

3.5.3 Advanced Settings / Page 3




The setting **Check for project update** defines the check, whether a HMI has been updated. In this case the HMI is re-loaded automatically. This sets the interval between the checks. The time must be at least as long as the time needed to upload the whole project. It's no need to change it for this getting started. Remember this option in case you change your HMI on your PLC. You change the update time by pressing one of the buttons.

With enabling **return to setup page** touching the screen for the given value, by pressing the "5" or "10" button the com.tom GRAPHIC jumps back to the setup menu. This setting is set in seconds. 'N' means never / disabled. It's no need to change it for this getting started.

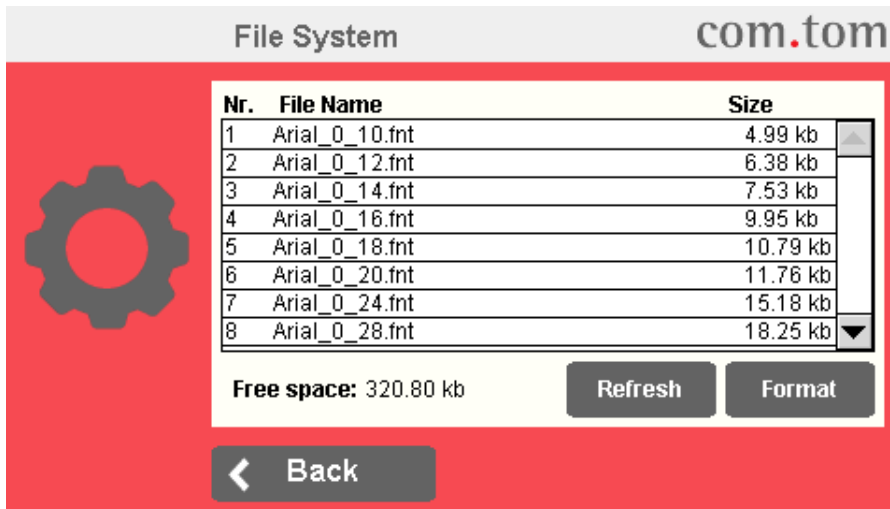
The button **Show performance info** is only for internal use.

By pressing the **Touch calibration** button you can start the calibration routine of the touch-screen.

Press the  Button to go back to the "Setting" Menu.

3.6 Step 5 – File System Settings of the com.tom GRAPHIC

Press on **`File System`**, the Page to see the stored and available loaded Fonts. In default 30 Ariel Fonts are installed.

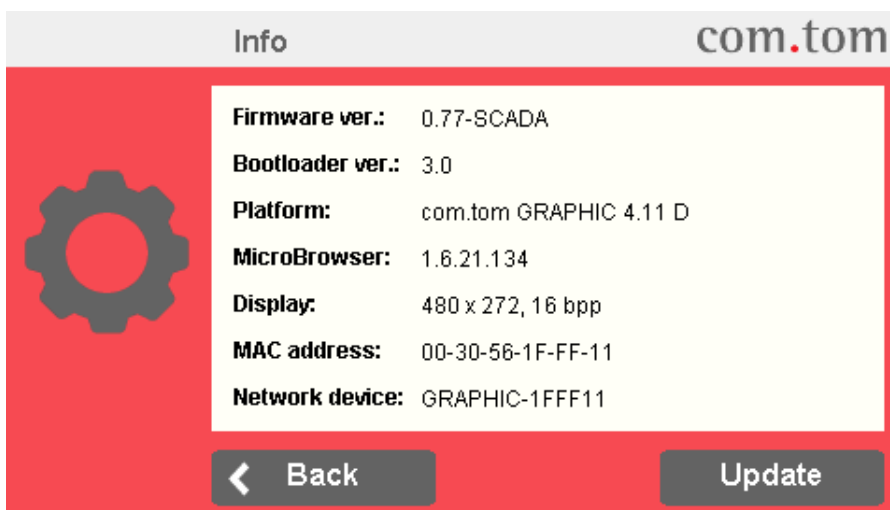


Press the **`Back`** Button.

3.7 Step 6 – Info of com.tom GRAPHIC

Press on **`Info`** Button to enter the page with information to the main components and parameters.

3.7.1 Info / Page 1

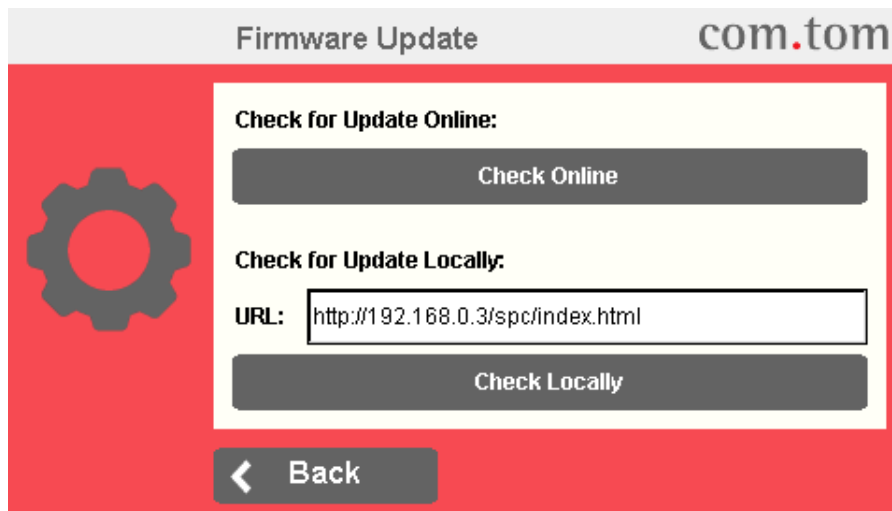


A Read-only page, with information to the main components and parameters.

Read out your current Firmware and check if a new Firmware is available. Therefore refer Chapter 4.2 Updates, tools, documentation.

If a newer Firmware is available press the Button **Update** for the Update Page, otherwise continue with 3.8 "Load default Settings of com.tom GRAPHIC"

3.7.2 Info / Page 2 – Firmware Update



By pressing the button **Check Online** the com.tom GRAPHIC will look on the internet if a new firmware is available.

Requirements: The com.tom GRAPHIC is connected to the internet and a DNS server is configured. A possibly present firewall must not block this access.

With the section “Check for Update Locally” you can force a local update. The com.tom GRAPHIC will look on a specified host (Web-Server) if a new firmware is available. The Host could be the device for the HMI by itself (embedded Web-server or the PLC), or any other accessible WEB-Server (could also your PC – with the eWebServer)

For the tools please refer Chapter 4.2 Updates, tools, documentation.

With the eWebServer from the package "GRAPHIC_Updater_PC.ZIP" the procedure is as followed:

1. Unpack all files from "GRAPHIC_Updater_PC.ZIP" to your PC (e.g: create the subdir \GRAPHIC in your Temp directory).
2. Unpack all files from "GRAPHIC4.11_FW_x.xx-MB.ZIP" in the same directory.
3. Start the eWebServer "eWebServer.exe". If the default port "80" is in use (e.g message "Error ... Unable .. port 80 ...") stop the eWebServer (Strg+C).

```
Q:\Temporaer\dip\com.tom_GRAPHIC_eWebserver\eWebServer.exe
Start eWebServer (XP) on port 80
Version: 1.11
(c) 2013 iniNet Solutions GmbH, CH-4132 Muttenz
http://www.spidercontrol.net

Error 10048: Unable to bind address using port 80, retry in 10 sec.
Error 10048: Unable to bind address using port 80, retry in 10 sec.
```

In that case restart with eWebServer_port81.bat.

```
C:\Windows\system32\cmd.exe
u:\GRAPHIC\GRAPHIC Updater PC>eWebServer.exe 81
Start eWebServer (XP) on port 81
Version: 1.11
(c) 2013 iniNet Solutions GmbH, CH-4132 Muttenz
http://www.spidercontrol.net

Ready on port 81
```

The eWebServer must be reachable for the com.tom GRAPHIC
Check it with a "Ping" as described in Chapter 3.4 "Step 3 Configure the MicroBrowser Settings of the com.tom GRAPHIC" (the "Host" is now your PC - touch in the `field` with the IP-Address `192.168.0.3` and enter the IP-Address of your PC. By success go ahead, otherwise check all network settings.

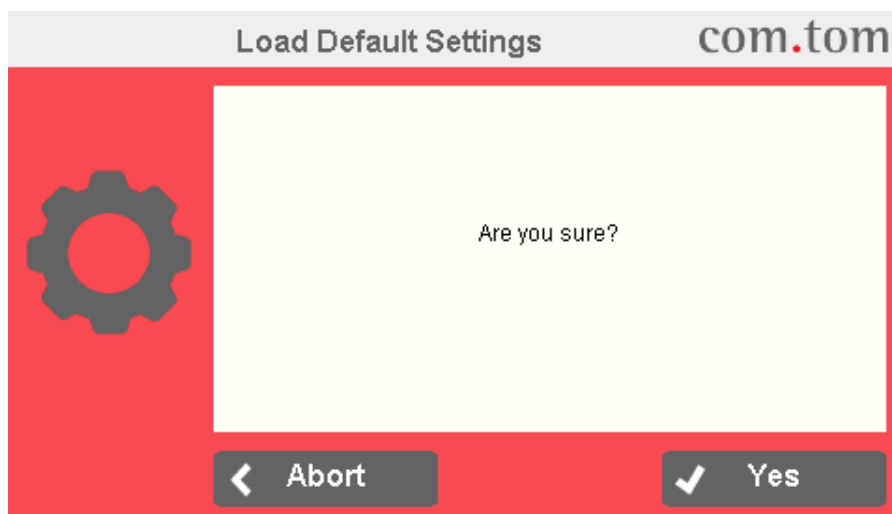
Touch in the field URL, below “Check for Update Locally” and enter the the URL of your running eWebServer (http://IP/index.html - the IP is the one of your PC) with the appearing Num-Pad.

It should be like “http://192.168.0.99/index.html” or “http://192.168.0.99:81/index.html” [in case of using Port 81].

By pressing `Check Locally` a screen “Loading” is shown a short time. Then the Screen “Firmware Updater” occurs. This page informs you if a new Firmware is available – if so press the `Update` Button.

After the update the restart to the start view takes place.

3.8 Load default Settings of com.tom GRAPHIC



This can be used to restore the default settings. You may need to re-calibrate the touch screen after that.

4 Where to get further information

4.1 Getting Started

All software referred to in this document can be downloaded from the Getting Started website at <http://www.com-tom.de/start>

4.2 Updates, tools, documentation

Regularly check out the com.beck website at <http://www.com-tom.de> for

- Firmware updates
- Useful tools
- Further documentation

4.3 Support

If you need support please...

1. Check our support website at <http://www.beck-ipc.com/support>.
2. Visit our forum at <http://forum.beck-ipc.com> . Here you will find a lot of answers to customer problems and you can also add your own ideas and questions.
3. Contact our support at support@beck-ipc.com. Of course you may also contact us by phone. But please use email if possible. This not only reduces the time you spend on the phone, it also allows us to easily manage the questions and identify problem areas.

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