Steora CITY

Installation manual

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Contents

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a. Bolts necessary for bench assembly (included in the packaging)

No.	Bolts and nuts	Quantity
1	Fischer bolt anchor FBN II 8, Zn	4
2	M8 hexagon nut (DIN934), Zn	4
3	Plain washers A8 (DIN125), Zn	4
4	Split lock washers A8 (DIN127), Zn	4
5	M6 x 16 bolt (DIN 912), SS	8
6	NBR rubber (only for LED display variant)	0,02 m^2
7	M3×35 wood screw (DIN7505A), Zn	34
8	Ø6×80 hanger screw (DIN 99065), Zn	4
9	A6 Washer (DIN9021), Zn	4
10	M6 Wingnut (DIN315), Zn	4

b. Bench installation tools

Tools	Quantity	Size
Combination wrench	1	13
Hex key (included)	1	5
Torx key (included)	1	T10
Flat screwdriver	1	-
Crosshead screwdriver	1	-
Wire strippers	1	-
Socket wrench with joint extension and hex bit (only for LED display variant)	1	5

1. Unpacking the bench

1) Steora City bench is transported in suitable wooden packaging (crate) in order to remain protected during transport. When the bench is delivered, please visually check the condition of the crate and the existence of the lead and wire seal, the lack of which indicates the box was opened during transit.

2) The wooden crate contains a movable top panel and side panel that need to be removed in order to take out the bench. It is recommended to remove the panels of the box only on a flat surface near the place of installation of the bench. To remove the panels of the box, it is recommended to use a cordless drill/crosshead screwdriver.

3) Remove the panels of the wooden crate in the following order:

    a. Remove all screws from the top panel of the crate, and then remove the top panel
    b. Remove all screws from the side panel of the crate (only one side has screws), and then remove the side panel

4) The flooring of the crate on which the bench stands contains anchor bolts that ensure the stability of the bench during transport. The legs of the bench are mounted on screws and fastened with a wingnut. In order to separate the bench from the crate, it is necessary to remove the wingnut and then carefully raise the bench above the anchor bolts and take it out of the crate.
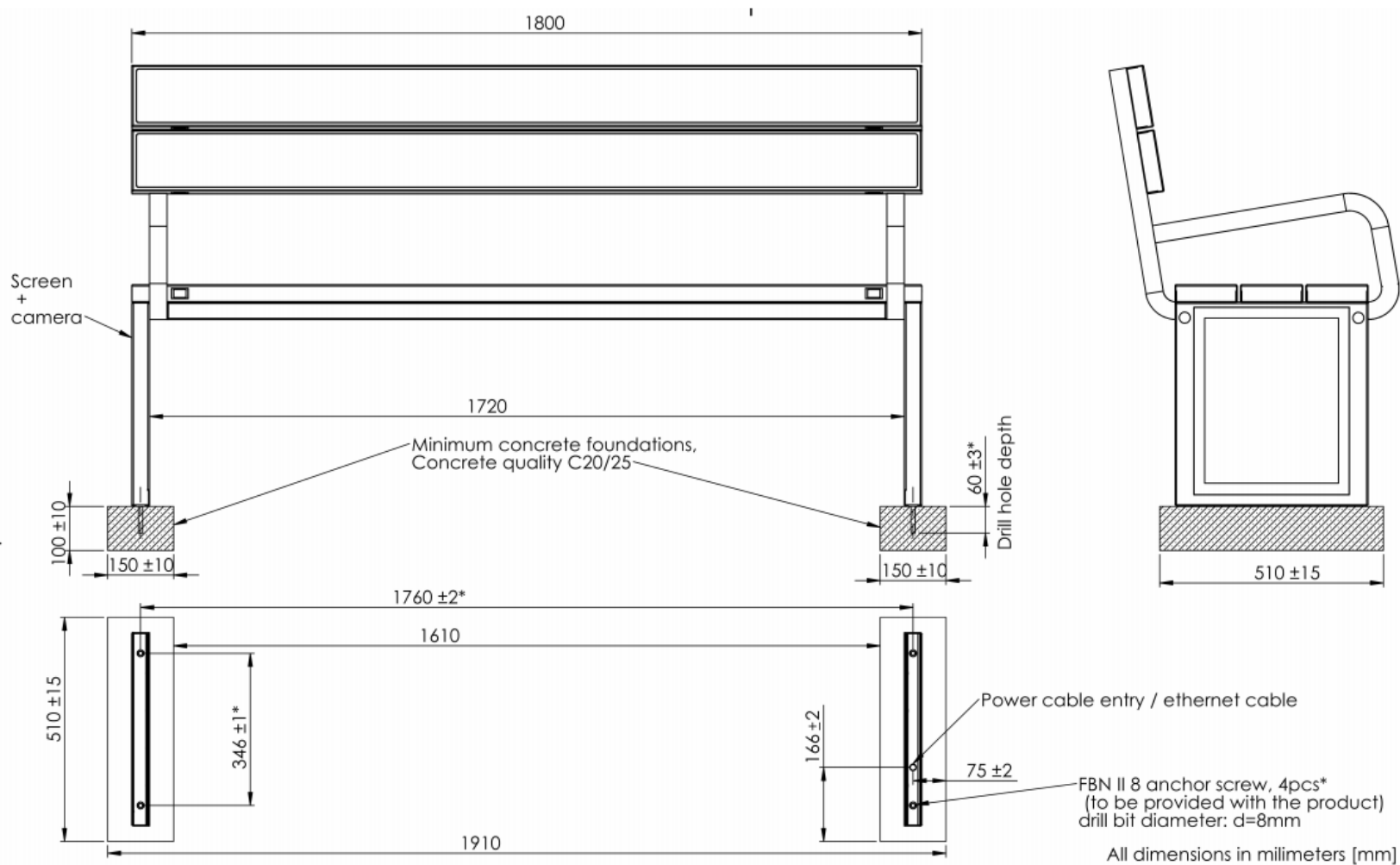
2. Preparing the base for installation procedure

1) The base needs to be flat and hard. Concrete with strength class C20/25 should be used as a reference. With regard to base, the condition is met by an equivalent asphalt or stone surface, while earth surfaces are unsuitable for installation.

2) The minimum space required for mounting the bench is 190 cm in length and 51 cm in width. The minimum required base depth is 10 cm.

3) If a hybrid module or LED display (additional options) is purchased with the bench (additional option), it is necessary to prior set (pre-install) a 230/110V power cable in the base. A PGP cable 3x1.5 mm2 is suitable, installed so that it protrudes from the base at a length of 20 cm. The power cable must be precisely installed in the base so that during the installation of the bench it is placed in the leg of the bench marked with number 1 in the following figure:

4) If a Wi-Fi module or LED display (additional options) that communicates via ethernet cable is purchased with the bench, it is necessary to prior set (pre-install) the ethernet cable in the base. The appropriate ethernet cable is a 26AWG ethernet cable, installed so that it protrudes from the base at a length of 20 cm. Note: RJ45 connector is installed after the bench installation. The ethernet cable must be precisely installed in the base so that during the installation of the bench it is placed in the leg of the bench marked with number 2 in the following figure:

5) The exact positions and dimensions for the preparation of the power or ethernet cable in the base can be found on the next page in chapter 2.1. Foundation dimensions and cables positions. The cables should be installed so that they protrude from the base at least 20 centimetres.

6) Before installation, be sure to unplug the power cable to prevent electric shock. The installation is to be executed by an experienced electrician.

2.1. Foundation dimensions and cables positions

1800

Screen
+
camera

1720

Minimum concrete foundations,
Concrete quality C20/25

60 ±3*

Drill hole depth

100 ±10

150 ±10

150 ±10

510 ±15

1760 ±2*

1610

510 ±15

346 ±1*

166 ±2

Power cable entry / ethernet cable

75 ±2

FBN II 8 anchor screw, 4pcs*
(to be provided with the product)
drill bit diameter: d=8mm

1910

All dimensions in milimeters [mm]

*anchor holes in concrete to be drilled during bench installation process

3. Bench installation

3.1. Bench installation without a power or ethernet cable

The following instructions describe the installation of a Steora City bench without the hybrid module (which requires a 230/110V power cable), Wi-Fi module and/or LED display module that communicates via ethernet cable.

3) Place the bench on the base position where it will be permanently installed and mark drilling hole positions (hole positions are described on the previous page in Chapter 2.1) through the holes on each leg with a pencil.
4) After marking the position of the drilling holes on the base, move the bench aside in order to drill the holes for the anchor bolts
5) Drill four holes 60 mm deep in the marked positions using a Ø8 mm drill bit
6) Insert the FBN 8 anchor bolts into the drilled holes so that the lower part of the bolt fits entirely into the previously drilled hole. Use a hammer in order to get the bolt to enter the hole and achieve an interference fit.
7) Inside of each Steora City bench leg, there is one M6 x 16 bolt connecting the leg with the metal base. Remove the bolts from both legs and lift up the bench, so the metal base can be detached from the bench leg. Move the bench aside and take two metal bases that have detached from the legs.
8) Set the metal base on the previously installed anchor bolts. When the metal base is correctly positioned, install the plain washer, followed by the split lock washer, and finally the nut M8.
9) Using a 13 mm combination wrench, tighten the nut so that the bench metal base cannot be detached from the ground.

1) After tightening all four nuts, take the bench and set it on the metal bases.
2) Insert four M6 x 16 bolts in each leg and tighten them with a hex key. After tightening all bolts check the bench stability.
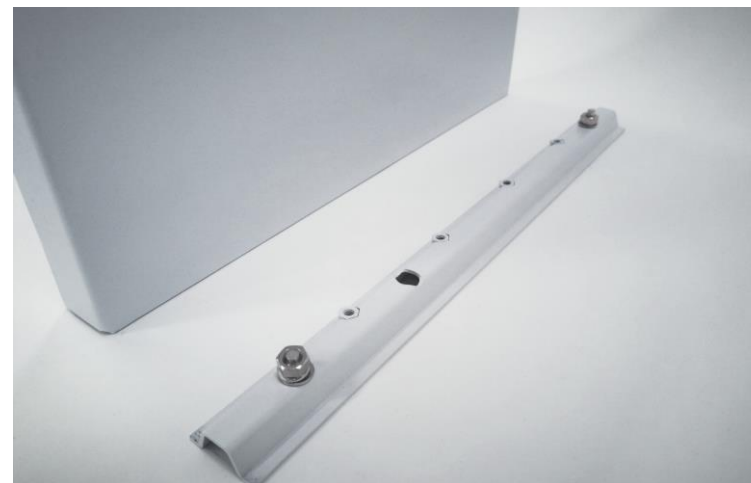
NOTE: The photo shows how the metal base should look like after being installed in the ground with anchor bolts.

Necessary bolts (included in the packaging)
- FBN || 8 fischer bolt anchor
- M8 hexagon nut (DIN934), Zn
- Plain washers A8 (DIN125), Zn
- Split lock washers A8 (DIN127), Zn
- M6 x 16 bolt (DIN 912), SS

3.2. Bench installation with power and/or ethernet cable

The following instructions describe the installation of Steora City bench with purchased hybrid module (which requires a 230/110V power cable), Wi-Fi module and/or LED display module that communicates via the ethernet.

1) Place the bench on the base position where it will be permanently installed by running the cables through the correct legs, marked in Chapter 2. Preparing the base for bench installation, and mark drilling hole positions (described on the previous page in Chapter 2.1) through the holes on each leg with a pencil.
2) After marking the position of the drilling holes on the base, carefully pull the cables out of the leg and move the bench aside in order to drill the holes for the anchor bolts
3) Drill four holes 60 mm deep in the marked positions using a ∅8 mm drill bit
4) Insert the FBN 8 anchor bolts into the drilled holes so that the lower part of the bolt fits entirely into the previously drilled hole. Use a hammer in order to get the bolt to enter the hole and achieve an interference fit.
5) Inside of each Steora City bench leg, there is one M6 x 16 bolt connecting the leg with the metal base. Remove the bolts from both legs and lift up the bench, so the metal base can be detached from the bench leg. Move the bench aside and take two metal bases that have detached from the legs
6) Set the metal base on the previously installed anchor bolts. Carefully run the cables through one metal base hole. When the metal base is correctly positioned, install the plain washer, followed by the split lock washer, and finally the nut M8.
7) Using a 13 mm combination wrench, tighten the nut so that the bench metal base cannot be detached from the ground.
8) After tightening all four nuts, take the bench and set it on the metal bases. At the same time, carefully run the cables through the hole in the bench leg that matches the hole in the metal base.

9) Insert four M6 x 16 bolts in each leg and tighten them with hex key. After tightening all bolts check the bench stability.

ADDITIONAL OPTION: Installing NPR rubber for LED display
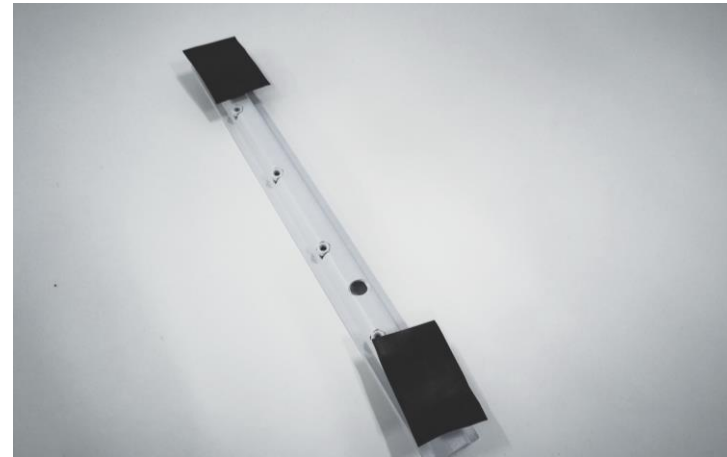
10) If Steora City is equipped with an LED display, in the leg with the display it is necessary to install two NPR rubbers (included in the packing) over the anchor bolts after they are firmly tightened to the metal base.
11) After the NPR rubber is installed, you can set the bench on the metal base and NPR rubber will create waterproof insulation in the leg with the display.
12) Carefully insert and tighten four M6 x 16 bolts in the leg with the LED display, by using a special Socket wrench with joint extension and hex bit.

Necessary bolts (included in the packaging)
- FBN || 8 fischer bolt anchor
- M8 hexagon nut (DIN934), Zn
- Plain washers A8 (DIN125), Zn
- Split lock washers A8 (DIN127), Zn
- M6 x 16 bolt (DIN 912), SS

4. Connecting the cables (additional option)

4.1. Connecting the 230/110V power cable

NOTE: The power cable is installed in the base and connected to the bench only if a Hybrid module or LED display is purchased with the bench

Connecting of the power cable is to be executed by an experienced electrician

1) The power cable is to be connected after the bench is attached to the base, and the cable carefully routed through the bench leg to the outer opening in the leg, as described in Chapter 3.2. Bench installation with power cable
2) Disassemble the power connector and first install the clamping nut on the cable protruding from the base through the bench leg
3) After placing the clamping nut, place the rest of the power connector's waterproof case on the cable

NOTE: The photo shows how cables should look like after the bench is installed in the ground.

4) Remove around 2 cm of the external (grey) insulation from the PGP power cable 3 × 1.5mm2
5) Remove 1 cm of insulation from each wire

NOTE: The photo presents a power cable assembly on the Steora Classic smart bench. The same assembly principle is applied to Steora City smart bench.

6) Using a Phillips screwdriver, loosen the screws from the power connector for the wires, which will allow you to easily install the wires in the power connector

7) Connecting the wires to the power connector is done as follows:

    a. L is for Line (usually brown)
    b. N is for Neutral (usually blue)
    c. G is for Ground (usually green-yellow)

**NOTE: The colours of the wires may vary depending on the country
to which the bench is delivered.**

The installation is to be executed by an experienced technician

8) After the installation is completed according to the previous instructions, it is necessary to tighten the screws to obtain a firm position of the wires in the slots of the power connector

9) After having placed the wires in the power connector correctly, pull the waterproof case over the connector, and then the clamping nut that needs to be tightened by hand, while minding not to disconnect the cable from the power connector

NOTE: The picture shows how the 230/110 V power cable and network cable should look inside Steora City bench leg after the installation.

If the LED display is purchased as a part of Steora City smart bench hybrid module must be connected and available before the bench is switched ON or permanently activated. The hybrid module needs to have 24/7 grid power available without any exceptions. In case grid power is not available at all times this can affect the LED display controller and make its software corrupt.

If the bench is switched ON or permanently activated without a hybrid module connected to a grid power Include won't take any responsibility for possible LED display controller software corruption. This will be treated as damage outside of the warranty.

4.2. Connecting ethernet (network) cable

NOTE: The ethernet cable is installed in the base and connected to the bench only if a Wi-Fi module or LED display (which communicates via ethernet cable) is purchased with the bench
The installation is to be executed by an experienced electrician familiar with networking hardware

1) The ethernet cable is installed after the bench is attached to the base and the cable is carefully routed through the bench leg to the outer opening in the leg
2) After installing the bench in the base, strip, crimp and test RJ45 connector to the ethernet cable coming from the base

NOTE: The photo presents network cable assembly on the Steora Classic smart bench. The same assembly principle is applied to Steora City smart bench.

3) Inside the Steora City bench leg there is ethernet cable adapter already connected to the bench master controller. Carefully remove the clamping nut, waterproof rubber, and protective case from adapter

4) Place a clamping nut on the cable protruding from the base, followed by the waterproof rubber, and finally the protective case
5) Connect the ethernet cable coming out of the base to the available adapter connector

NOTE: The photo presents network cable assembly on the Steora Classic smart bench. The same assembly principle is applied to Steora City smart bench.

6) Put the protective case on the adapter, then carefully push the waterproof rubber into the upper part of the case
7) Tighten the clamping nut to make the connection complete. A completely connected cable should look like as shown in the picture on the previous page in section 4.1. Connecting the 230/110 V power cable.

5. Installing the cover on the service hatch of the leg

1) Each leg of the Steora City bench has an external service hatch through which the anchor bolts are tightened and the power and/or ethernet cable is connected (additional option). The bench comes with two covers (metal doors) that are installed on the service hatches after the bench is installed at the final location and put into operation

2) After placing the bench in the base, take the metal doors and carefully put them next to the frame of the service hatch. Lift the doors up and position the lower part of the doors to the frame of the service hatch.

3) Each door have three hooks that should click on the bottom side of the frame once you lower them down.

4) Visually check that the doors are flush with the frame of the service hatch. Make sure that the bottom side of the doors is fitted firmly with the hooks on the frame

5) Carefully place the M6 x 16 bolt (without any washers) on the metal doors and tighten it firmly to the frame of the service hatch by using the hex key.

6) Optional: As additional security (vandal-proof) drip a few drops of super-glue on the bolt thread next to the bolt head. Then tighten the bolt completely.

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6. SIM card installation (additional option)

The procedure of installing the SIM card in Steora City bench is performed only when a Wi-Fi module and/or LED display that communicates via the SIM card is purchased with the bench.

The SIM card is installed in the bench before the bench is turned on. Do not insert the SIM card into the bench if it is already turned on. In this case, read chapter 7. Intermittent and permanent bench activation.

1) An electronics box is attached to the bottom side of the central beam (under the bench). The SIM card cover on the box is to be removed. Unscrew the screws from the cover using the torx key included in the packaging and carefully place the cover on a clean surface where the colour of the cover will not be scratched

2) After removing the cover, carefully pull out the SIM card connector only a few centimetres out from the electronics box and insert the SIM card as shown in the following figure:

3) After having inserted the SIM card correctly, carefully place the connector back to the electronics box, then put the cover back and secure it with the screws using a torx key

4) Once you have put the cover back, you can proceed with turning on the bench according to the instructions in Chapter 7. Intermittent and permanent bench activation

7. Occasional and permanent bench activation

NOTE: If the bench is equipped with a Wi-Fi module and/or LED display that communicates via the SIM card, please read chapters 6. SIM card installation and 8. Wi-Fi settings – APN before switching on the bench.

The Steora City bench allows two working modes, i.e. two modes of activation:

    I.   **Permanent activation** (permanent work mode) intended for permanent activation of the bench after the bench is installed at its final location

    II.   **Intermittent activation** (intermittent work mode) intended for benches used intermittently for trade fairs or presentation purposes

Depending on the method of work, the bench and the Solos platform communicate and exchange data in a different manner.

7.1. Occasional bench activation (intermittent work mode)

To set the bench in intermittent work mode, shortly press the ON/OFF button located on the electronics box attached to the bottom side of the central beam.

As soon as the bench is switched on, the ON/OFF button will light up and the bench will send an information to Solos platform that it is switched to occasional mode, which means that the bench is not monitored.

To switch off the bench shortly press the ON/OFF button, after which the bench switches off all modules.

7.2. Permanent bench activation (permanent work mode)

Permanent activation of the bench must be used when installing the bench in the base at its final location. Permanent activation is enabled by pressing and holding the ON/OFF button for 15 seconds, after which the bench will turn on and the button will flash several times. The ON/OFF button is located on the electronics box attached to the bottom side of the central beam, as is the case for intermittent activation.

After permanent activation of the bench, the ON/OFF button loses function, and it is no longer possible to use it to switch the bench on or off. If you need to turn off the bench, you need to open the MANAGE application via the Solos monitoring platform, select the bench for which you want to deactivate the permanent mode, and uncheck the "permanent work mode" field. The next time the bench is connected to Solos (usually every 30 minutes), the bench will receive deactivation information, and it will be possible to switch the bench off by shortly pressing the ON/OFF button.

8. Wi-Fi settings - APN (additional option)

If you bought a Wi-Fi module and/or LED display that communicates via a SIM card with the Steora City bench, you have to manually set up an access point name (APN) for the system to work properly. Setting up an APN requires using a device with a Wi-Fi access, such as a laptop or mobile device.

To access the APN setting, temporarily turn on the bench according to the instructions in section 7.1. Occasional bench activation (intermittent work mode) and wait approximately 1 minute for the system to activate.

1) Open Wi-Fi settings on your device and turn Wi-Fi on. Select the hidden network access option (depending on the device, this option is called "Add Network" or "Hidden Network" or similar)

2) After the input field appears, fill in the following information:

   a. For network name (SSID) enter the serial number of the bench (serial number of the bench is on the activation key provided with other documentation, and written in the form of "AB012100009" (enter without quotation marks))

   b. For safety choose between "WPA/WPA2 or WPA2/WPA3"

   c. For password use "Steora123" (enter without quotation marks)

   d. After entering data, select "Connect" or "Access" or similar

3) If you have entered the information from the previous step correctly, your device will connect to the Wi-Fi network. Open the Internet browser and enter **192.168.88.1** after which the home page for accessing the Wi-Fi system settings will appear.
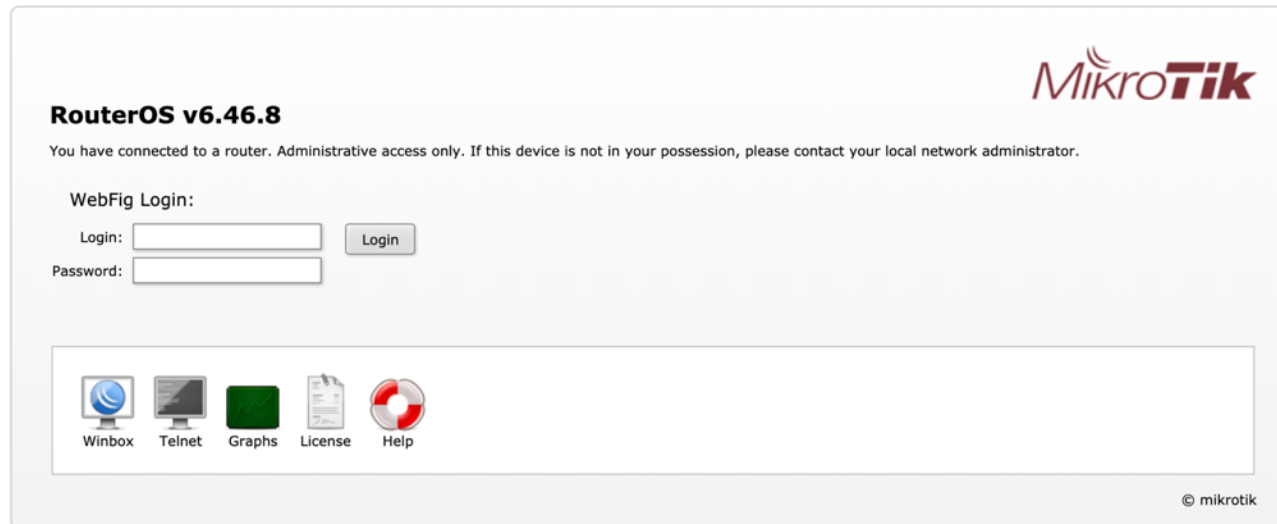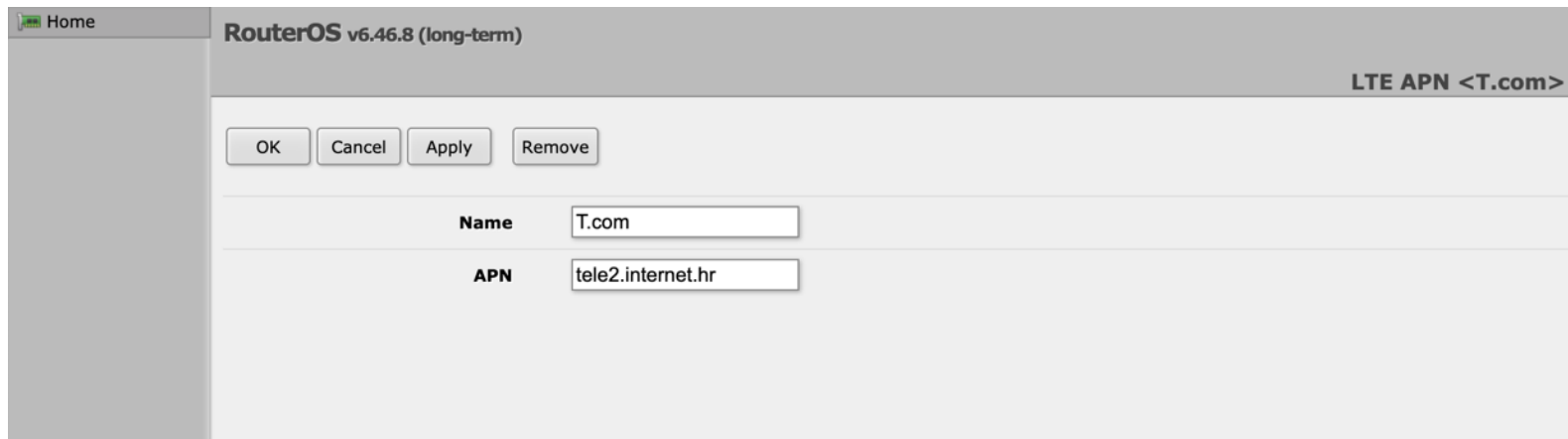

4) Enter the serial number of the bench in the Login field, then enter the activation code provided on the Activation key in the Password field. Then click the Login button

5) If you have entered the correct access data, the system will redirect you to the home page for setting the APN
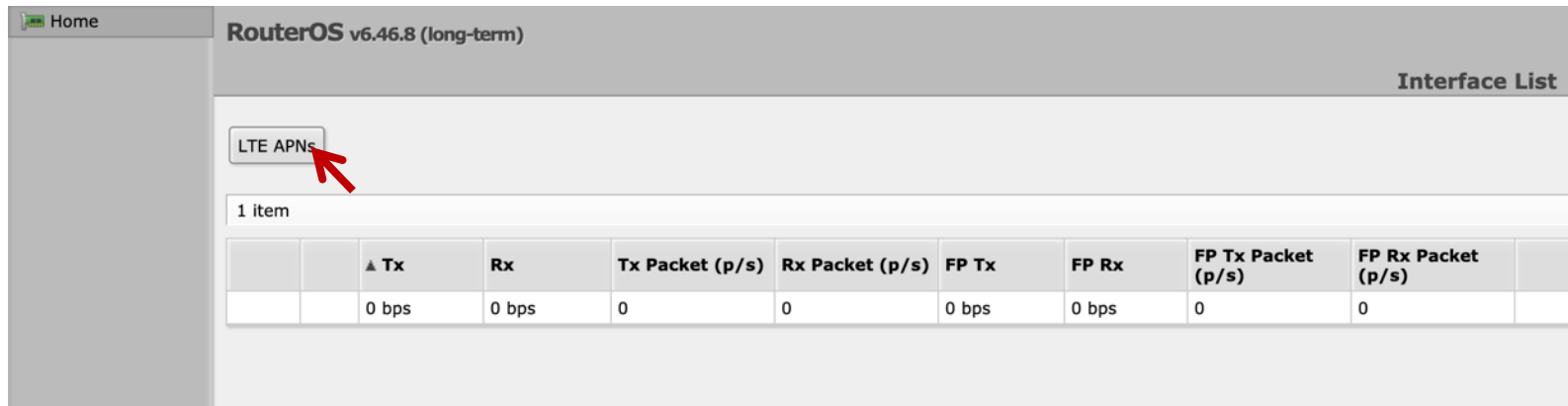
6)   Click on the "LTE APNs" button in the upper left corner of
the screen, after which a new page will open.
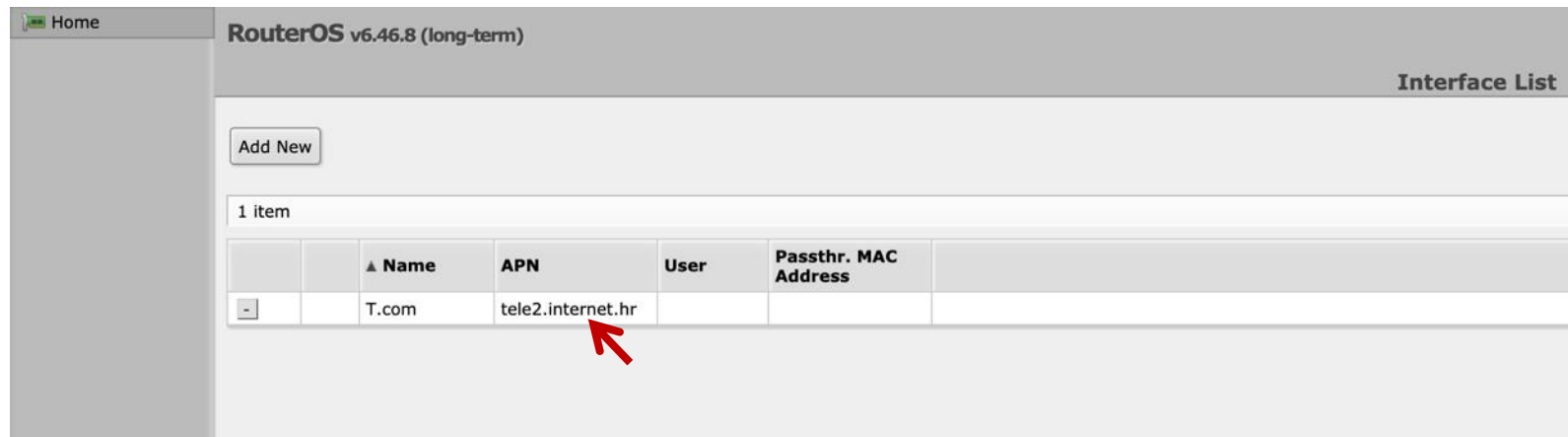
7) Then click on the field in which the APN is entered (in this case, the field reads "tele2.internet.hr"). Clicking on the indicated field will open an editor to change the APN.

8) In the APN field, delete the existing APN and enter the APN according to the instructions of your mobile operator, depending on the SIM card that you installed in the bench according to instructions in Chapter 6. Installing the SIM card. After entering the correct APN, click the "Apply" button and wait ten seconds.

9) After about ten seconds, according to the instructions in chapter 7.1. Occasional bench activation (intermittent work mode)- turn off the bench, then turn it on according to one of the options in Chapter 7. Occasional and permanent bench activation.

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