Megado Computer Dobby 2.0

Draft version

Installing the Dobby 2.0

Before you can use the Dobby 2.0, it has to be attached to your loom. If your loom has a mechanical dobby system attached, you have to disassemble this system first. Please refer to the user manual of the mechanical dobby and follow the instructions in the reverse order.

Parts included with the Dobby 2.0 are:

1. 1 power cable
2. 1 USB A-B cable (use only this cable)
3. 1 Switch block
4. 2 Threaded ends, with 2 barrel nuts, 6 washers and 4 knurled nuts
5. 1 USB stick with drivers
6. 1 USB to Ethernet adapter

Attaching the Dobby 2.0

Mount the switch block onto the knife (the slanted metal strip that takes the activated dobby hooks down) on the front side of the loom, as shown. The switch block should be facing the dobby unit.

Don't tighten the knurled nuts too much. You want to be able to move the block around until it is properly aligned with the dobby top sensor – after the dobby is attached.

Insert the barrel nut into the hole in the side of the middle section. The slots indicate the direction of the threaded hole in the nuts. Make sure these slots are facing outwards.

Insert the threaded rod into the hole and screw it into the barrel nut. Turn the end by hand until it sits tight.

Slip on a washer, screw a knurled nut on and tighten it firmly onto the washer and place a second washer onto the end.

Repeat this assembly on the other side.

Slide the Dobby 2.0 over the threaded ends, and fasten it with the second knurled nut on each end.

Now you need to check if the switch block is directly in line with the top sensors on the Dobby 2.0.

The distance between the switch block and the Dobby 2.0 sensor needs to be less than 1 mm. You can change this distance by turning the long nut tensioned by a spring, screwing it in or out.
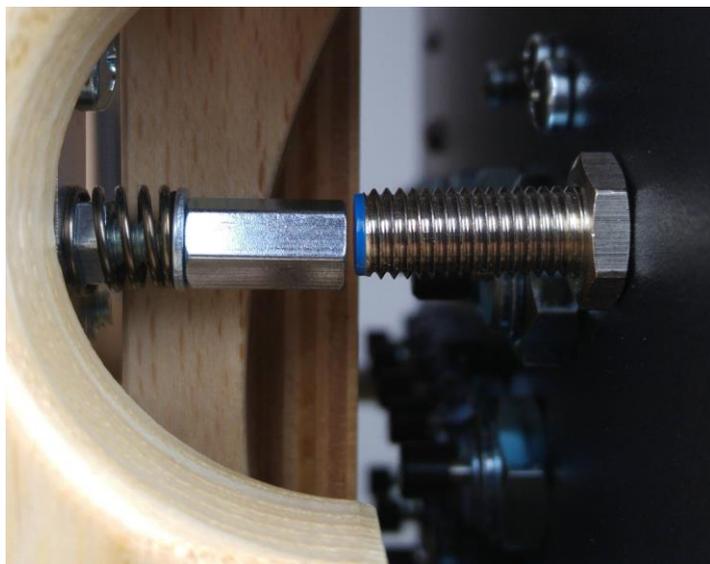
The easiest way to set the switch block is to hold the knife down so the switch block and the sensor are aligned. Tighten the long nut to the front of the sensor. Then turn the nut back two turns. Check if the distance between the switch and lower sensor is also correct.

You can change the height of the switch block on the knife slightly. If the height is still incorrect you can move the entire knife up or down, for this action, see the loom manual.

Is the block positioned correctly, tighten the black knurled nuts on the back of the sensor block.

The Dobby 2.0 comes with a foot rest. You can use the foot rest for your left or right foot.

Connecting the main power supply

First make sure the Dobby 2.0 is switched off by checking the power switch on the front. Connect the Dobby 2.0 with the cable from the power supply. After that connect the power supply to the main power supply. The flat side of the connector should face the wooden case of the dobby.

Turn on the Dobby 2.0 by the on/off switch under the screen. The screen will show "Please Wait" while the computer starts up. This will take about one or two minutes.
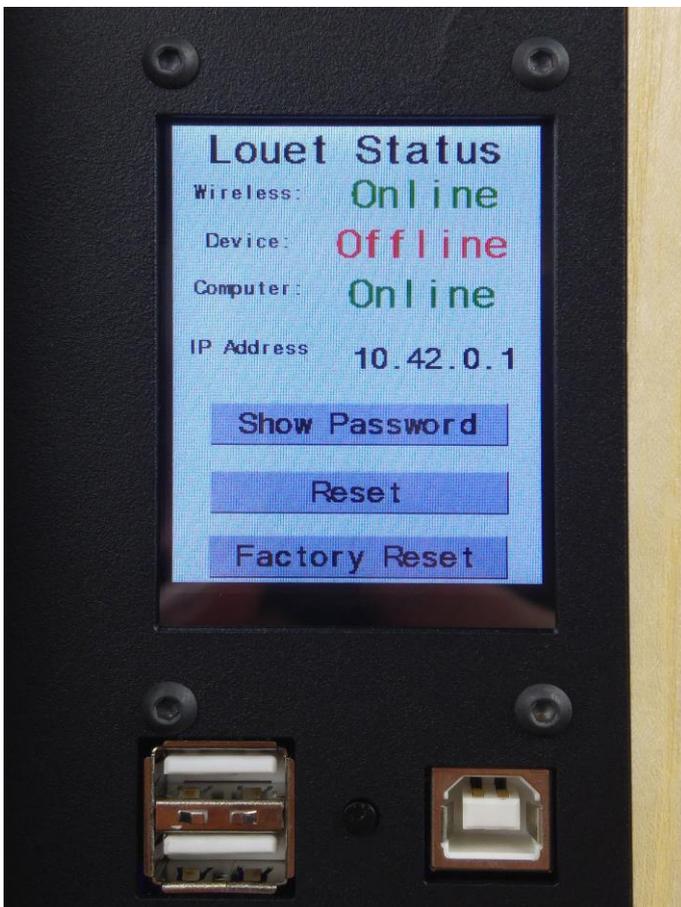
Once the Dobby 2.0 has started up, the status display shows a number of things:

Wireless	Online
Device	Offline
Computer	Online

'Wireless online', means the Wifi in the Dobby 2.0 is on and online. 'Device offline' means the solenoids are not active. 'Computer online' means that the built-in computer is on and has a internet connection. Below the status messages, the current IP address is shown.
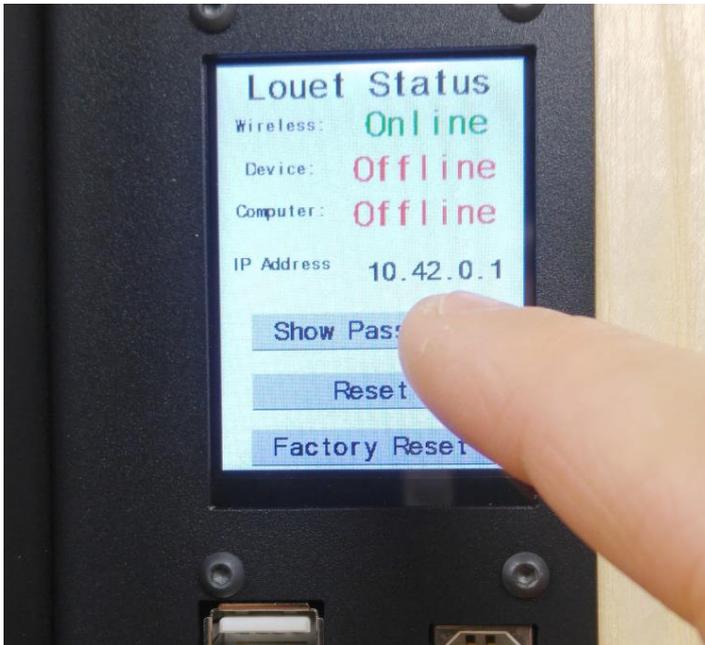
The bottom part of the status screen has three buttons:

-Show Password: toggles the IP address shown with the pasword for the dobby. This password changes when a factory reset has been initated.

-Reset: restarts the internal computer of the dobby. Used when your dobby becomes unresponsive.

-Factory Reset: resets the dobby to a known default state, activates the internal wireless access point and forgets the previous used network. This also generates a new password for the dobby.

To connect to the Dobby 2.0 built-in wireless access point you need its password. Press "Show Password" on the status screen of your Dobby 2.0. The IP address of the Dobby 2.0 will be replaced with the password. This password is used for the internal wireless access point and besides that to be able to control the web interface of the dobby.

Connecting your Dobby 2.0

Setting up a connection between your device and the Dobby 2.0 is a two step process, in which you first setup a direct connection to the build in access point in the Dobby 2.0. You will be able to configure it and then, in a second step, connect the dobby to your home network. (if applicable)
The Dobby 2.0 can only be configured from within the Louët interface web page so doing this first step is mandatory.

The second step is only necessary if you want to be able to use your controlling device to do other things like browsing the web or listen to internet radio at the same time as controlling your Dobby 2.0. This is because a device (laptop, tablet, phone) can only be connected to one wireless network at a time

First step: connecting your device to the Dobby 2.0

Determing the network name, address and password of the Dobby 2.0.

The built-in access point of the Dobby 2.0 has the network name "LouetWifi". This name cannot be changed. The IP address and password can be seen on the status screen of the Dobby 2.0:
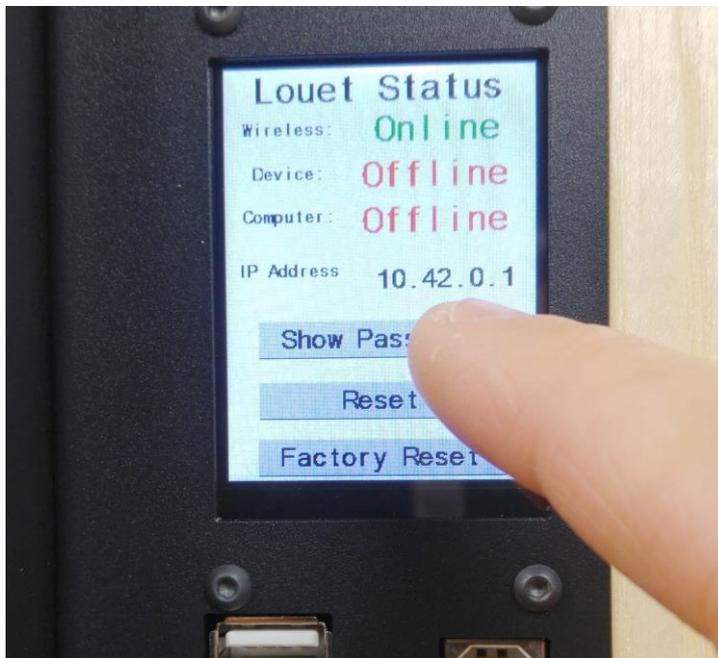
The status screen normally shows the IP address of the dobby 2.0. Out of the box and after a Factory reset, this is 10.42.0.1

Press "Show Password" on the status screen: The IP address of the Dobby 2.0 will be replaced with the password. This password is used for the internal wireless access point and besides that to be able to control the web interface of the dobby. The password starts with a capital L, followed by seven numbers

You need your local network name and password to be able to connect to the Dobby 2.0 to your local network.

Windows PC or laptop

Set up a connection with the built-in wireless access point of your Dobby 2.0.

1. Click on the WiFi-icon ▁▃▅ or 🛜 in the right corner of the system tray.
2. Select 'LouetWifi' in the list of available networks and click 'connect'
3. Enter the password shown on the Dobby 2.0 screen.
   This password appears on the status screen of the Dobby 2.0 when you push the button 'show password'. The password is always a string of seven numbers, preceded by a capital L.
4. Click on 'OK' on your device
5. Follow additional instructions if there are any.

You are now connected with the Dobby 2.0. Under the network name you should see 'connected'. A message can pop up, informing you that a normal Internet connection is not possible. This is expected behavior. If you want to be able to browse the internet with your device during weaving, you should do step two: Connect the Dobby 2.0 to your home network, explained on page 10

Mac OSX

Making a connection with the built in Wireless Access Point of your Dobby 2.0.

1. Click the Wi-Fi icon (🛜 or ▽) in the menu bar.
2. If Wi-Fi is off, choose "Turn Wi-Fi on
3. Select 'LouetWifi' in the list of available networks.
4. Enter the password shown on the Dobby 2.0 screen.
   This password appears on the status screen of the Dobby 2.0 when you push the button 'show password'. The password is always a string of seven numbers, preceded by a capital L.
5. Click on 'OK'
6. Follow additional instructions if there are any.
7.
8. A message can pop up, informing you that a normal Internet connection is not possible. This is expected behavior. If you want to be able to browse the internet with your device during weaving, you should connect your Dobby 2.0 to your home network, explained on page 10

Ipad / iphone

Making a connection with the built-in Wireless Access Point of your Dobby 2.0. (Make sure your mobile data is turned off.)

1. Go to Settings
2. Choose for 'Wifi'
3. Make sure you turn Wi-Fi on if Wifi is off.
4. Select 'LouetWifi' in the list of available networks.
5. enter the password shown on the Dobby 2.0 screen.
   This password appears on the status screen of the Dobby 2.0 when you push the button 'show password'. The password is always a string of seven numbers, preceded by a capital L.
6. Tap Join.

After you join the network, you'll see ✓ next to the network and 📶 in the upper-left side of your display.

A message can pop up, informing you that a normal Internet connection is not possible. This is expected behavior. If you want to be able to browse the internet with your device during weaving, you should connect your Dobby 2.0 to your home network, explained on page 10

Android

Making a connection with the built-in Wireless Access Point of your Dobby 2.0. (Make sure your mobile data is turned off.)

1. Go to 'Settings'.
2. Tap Network & Internet and 'Wi-Fi'.
   If you have Android 6.0, only choose 'Wi-Fi'.
3. Make sure you turn Wi-Fi on if Wifi is off.
4. Select 'LouetWifi' in the list of available networks.
5. enter the password shown on the Dobby 2.0 screen.
   This password appears on the status screen of the Dobby 2.0 when you push the button 'show password'. The password is always a string of seven numbers, preceded by a capital L.
6. Tap connect.

A message can pop up, informing you that a normal Internet connection is not possible. This is expected behavior. If you want to be able to browse the internet with your device during weaving, you should connect your Dobby 2.0 to your home network, explained on page 10

Using a Network cable

If you have problems with a unsteady wifi connection due to an external source of interference, or you do not want to use a wifi network, it is also possible to connect the Dobby 2.0 with the network using an USB to Ethernet adapter and an Ethernet cable (not included).
The cable should be routed through your working area in such a way as to prevent tripping yourself or others.

Put the USB to Ethernet adapter in one of the USB ports.
Connect the Internet cable with that adapter.
After a few moments, the IP address shown on the status screen changes when the Dobby 2.0 has established a stable connection via the attached cable and adapter.
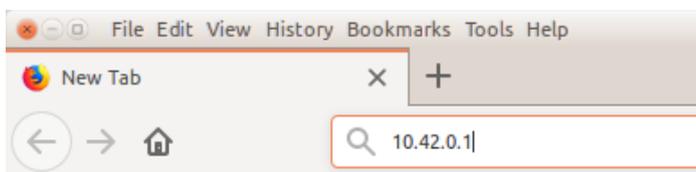
To control the Dobby 2.0 you need to open a web browser like firefox, internet explorer or Safari on your device. Fill in the IP address of the Dobby 2.0 in the address bar. By default and after a factory reset, this will be 10.42.0.1
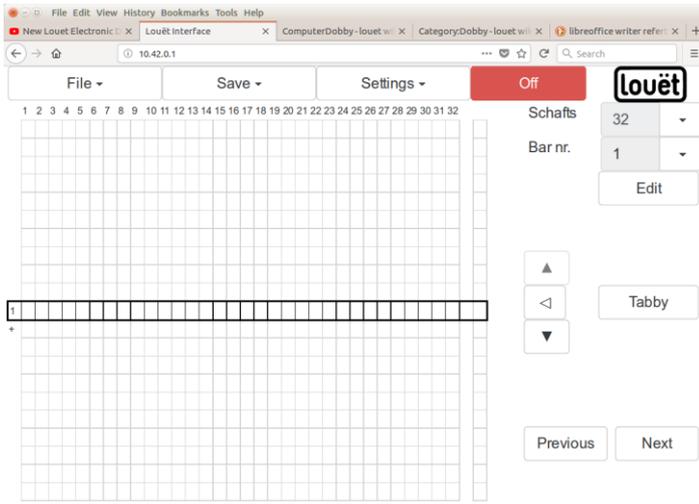
The Louët interface web page to control the Dobby 2.0 will now appear on your screen.

Now the Dobby 2.0 is ready for use or, if you need your device to also connect to the internet, you can configure the Dobby 2.0 to attach to your home network. If you do not need to be able to also use your device for internet use like web browsing or internet radio, refer to "**Weaving**" on page 13

Second step: Connecting the Dobby 2.0 to your network
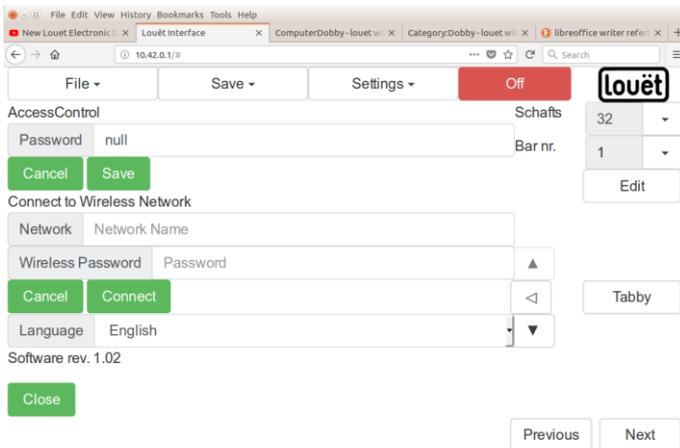
On your device, open the Louët dobby web page: http://10.42.0.1

open the menu Settings and again click Settings. Here you could change your password and connect your Dobby 2.0 to your home network. Fill in the network name and password of your home network.

Click Connect.
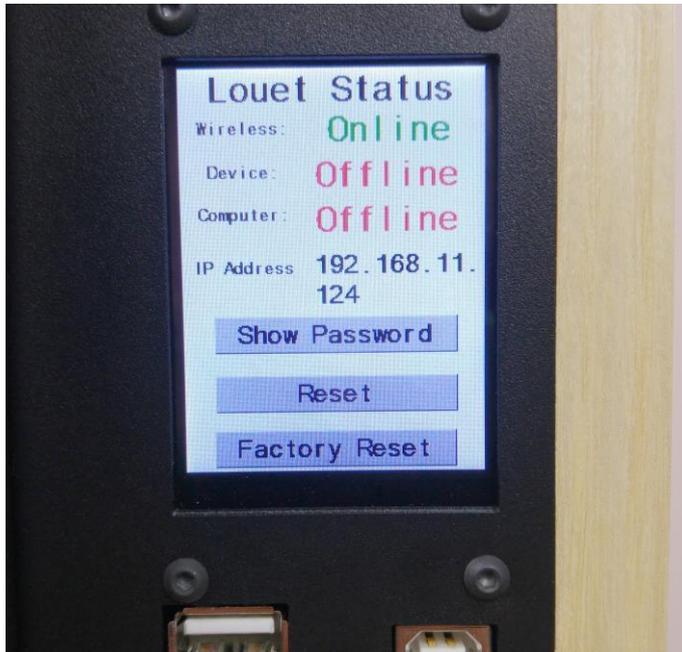
The Dobby 2.0 will reboot after a few seconds, noticeable by the "Rebooting" screen on the dobby. After the status screen reappears, note the different IP address in the status screen of the Dobby 2.0. In most cases this will be an address in the 192.186.x.x range. In the picture, this is 192.168.11.124

Now you can reconnect your device to you home wireless network and notice the "LouetWifi" no longer exists.

If you see the familiar 10.42.0.1 address in stead of the 192.168.x.x address, connecting of the Dobby 2.0 to the home network did fail and the Dobby 2.0 is yet again in the Access Point mode.

You can confirm this by looking for the LouetWifi network. If it exists, the pairing did fail. Connect to the LouetWifi network again, check your credentials and try again. When problems persist, please consult the troubleshooting chapter op page 20.

Operating the loom and Dobby 2.0

Overview of the interface

Lets take a closer look at the interface of the dobby 2.0.
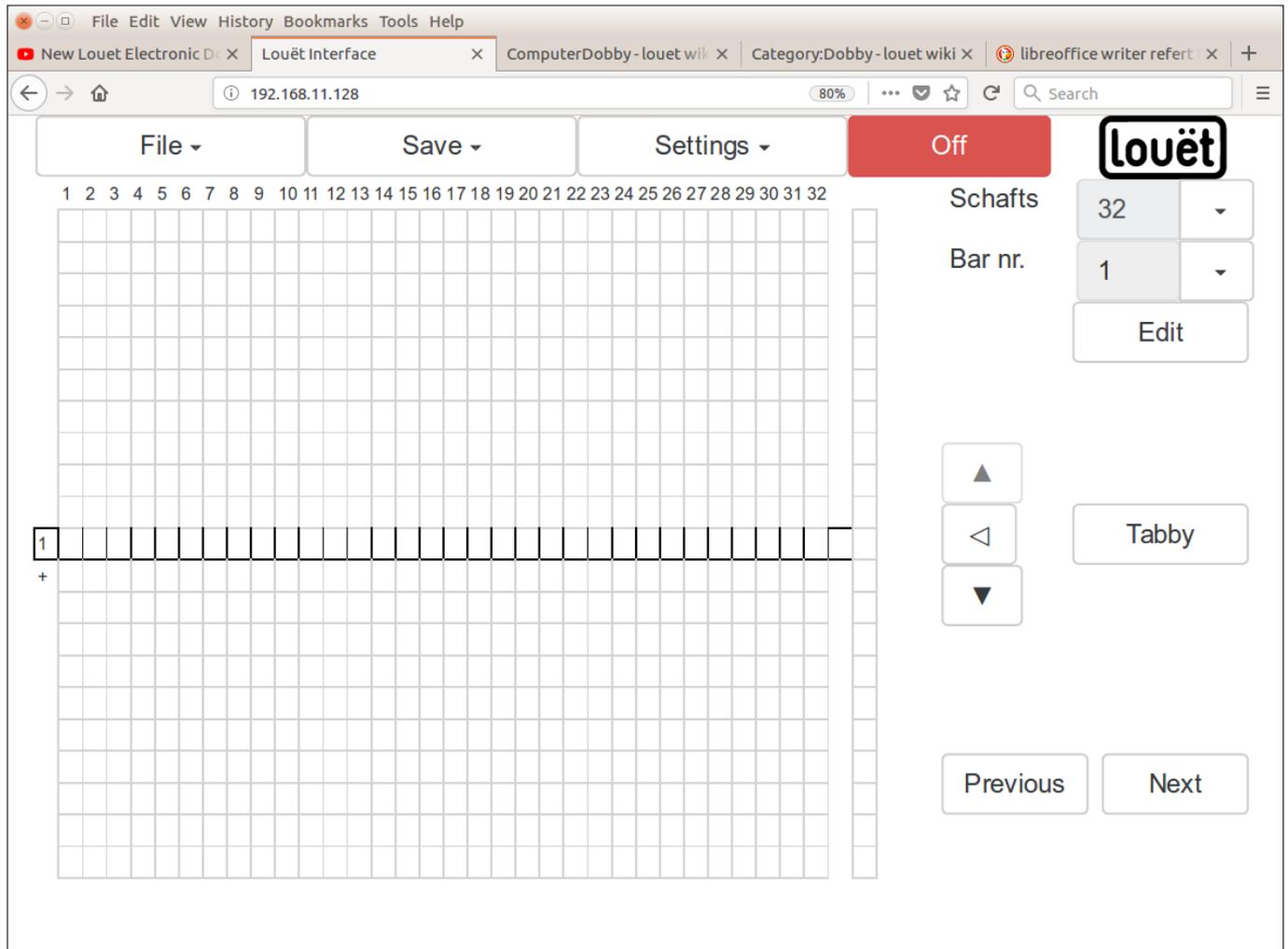
The main part of the screen is reserved for the pattern area. Half way across, the thick lined part is the active pick. The upcoming picks are below, completed picks are shown above this line. Every time you press the treadle, the active pick will be advanced to the next one.

To be able to scroll through your daft, you can use the up and down pointing arrow buttons. With the open left pointing arrow, you return the active bar to the center of the screen.

The Edit button enables or disables editing and prevents accidental changes during weaving. Don't forget to save your changes.

With the Previous and Next buttons, you advance the active pick forward or backward one pick. The Next button works the same as pressing the treadle on your loom.

The File menu is used to load a .wif file into the dobby for weaving or starting a new empty draft for manual editing. The files can reside on a USB stick or on the internal storage. Files must be saved as a lift plan.

The Save Menu gives two ways of saving your draft. One with the name used before and one where you can enter a new name and location.

The red "Off" status button shows power to the solenoids. When the treadle is pressed, the solenoids will activate, the status button will change to a green "On", and on the status screen of the Dobby 2.0 "Device" will switch from offline to online.

The solenoids have a timeout of about a minute to prevent overheating.

The Tabby button will put a "all even" or "all odd" pattern on the solenoids, ignoring the loaded pick and will continue with the pick were it left after disengaging Tabby . This pattern will not be shown in the interface.

The Edit button enables or disables editing and prevents accidental changes during weaving. Don't forget to save your changes.

With the Previous and Next buttons, you advance the active pick one forward or back. The Next button works the same as pressing the treadle on your loom.

Weaving

During weaving, the status screen on the Dobby 2.0 is not used. Interaction between you and the Dobby 2.0 is done soley on the Louët weaving web page.
The files used by the Dobby 2.0 are in the universal .wif format. Most programs are able to export this file format at the time of writing, Fiberworks PCW, PixieLoom, Proweave, Weave it, Weavemaker, WeavePoint and Winweef are known to be able to export .wif files but there may be several more.

Loom Systems

For the .wif files to be usable by the dobby 2.0, the draft should be made in a dobby or liftplan system, as a draft for tie-up cannot be interpreted.
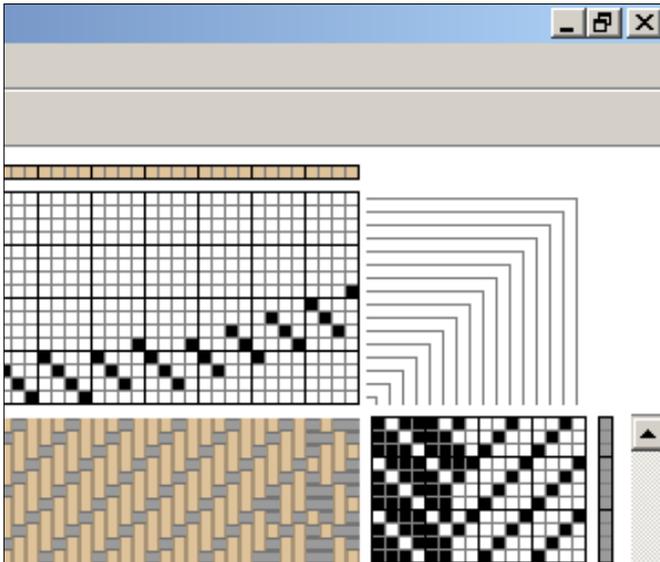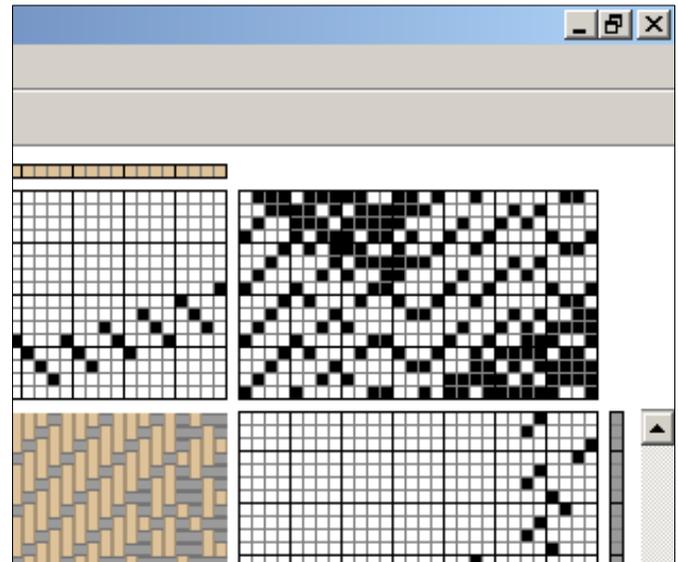
Dobby or Liftplan   Tie-up and Treadling

Is the Bar area of the Louët weaving web page empty after loading a .wif file, the file probably is made for a treadling loom. Please refer to the user guide of the weave design software to change between the two loom systems and how to save the draft into a .wif file.

After exporting the draft, copy the saved .wif file to an USB stick on your computer and stick it in one of the left USB ports on the Dobby 2.0.
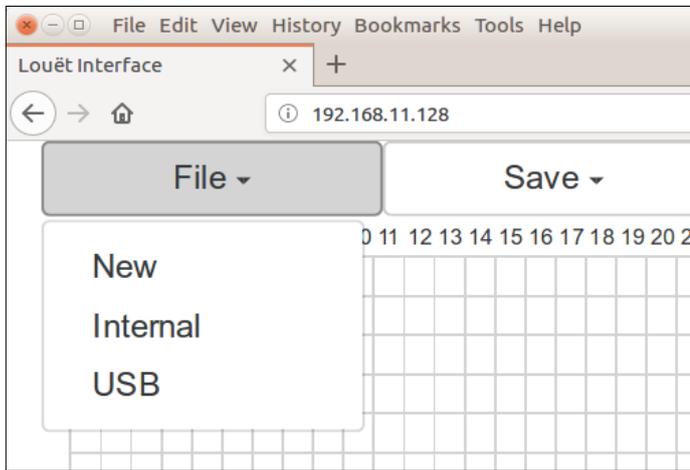
Press the menu File in the Louët weaving web page and select USB
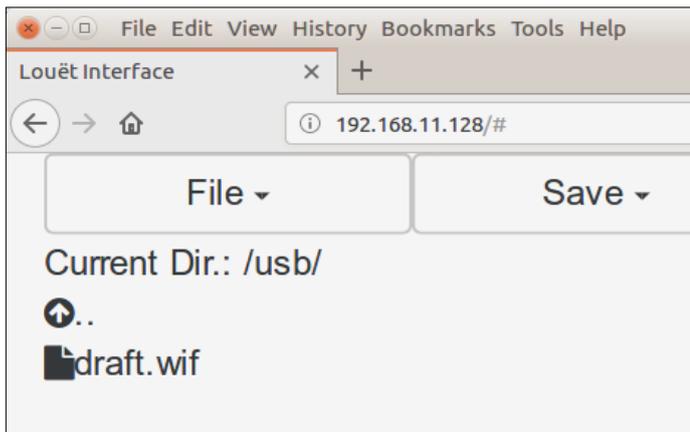
Select the file you just saved from the file list.
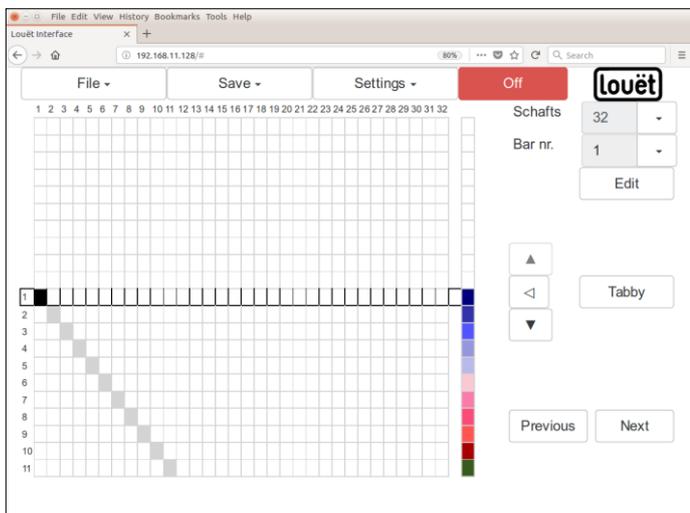
The draft will be loaded into the draft area of the Louët weave web page and the active pick will be on number 1, or if you used this draft before, the last used pick will be in the active bar.
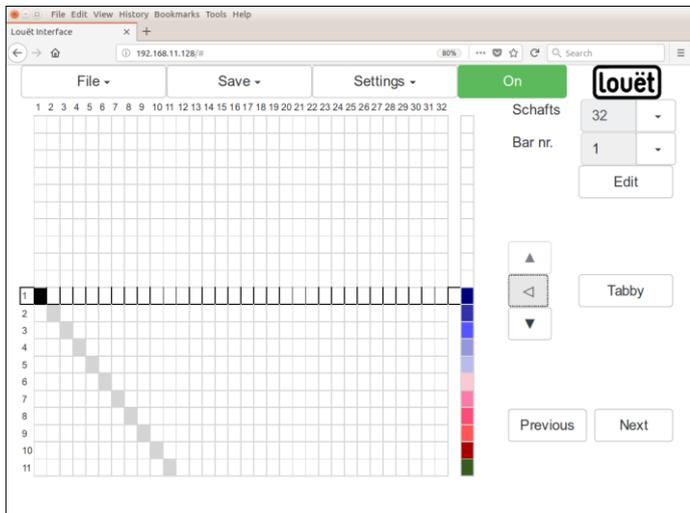
Press the treadle and release. Notice the solenoids will activate after you released the treadle. Bar 1 will be active now. Also notice the red "Off" button switched to a green "On" on the Louët weaving web page.

Press the treadle slowly this time and release. Notice how the solenoids release when you reach the lower most position of the treadle and engage with the next bar after releasing the treadle.

If the solenoid do not behave as expected, the alignment of the sensor block could be off. Please refer to the troubleshoot section.

Repeat treadling a few times to get familiar with the procedure.
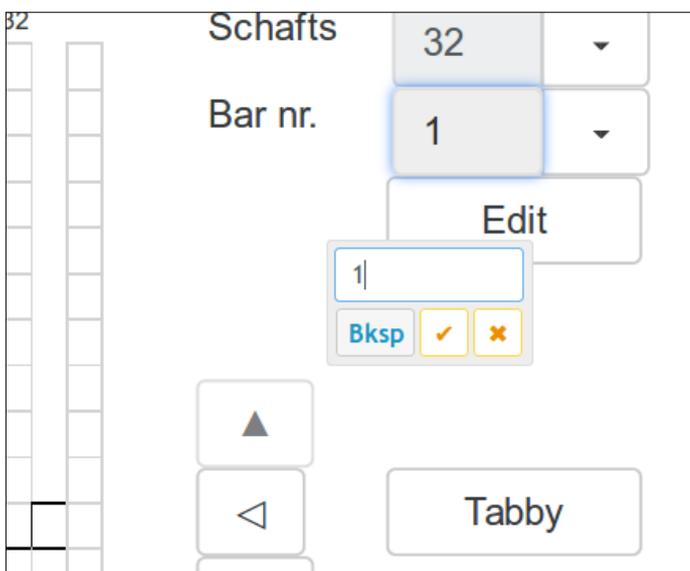
To go to a specific pick, you can use the pick counter in the top left corner to go to a specific pick or, if there are only a few picks in between, use the previous button.
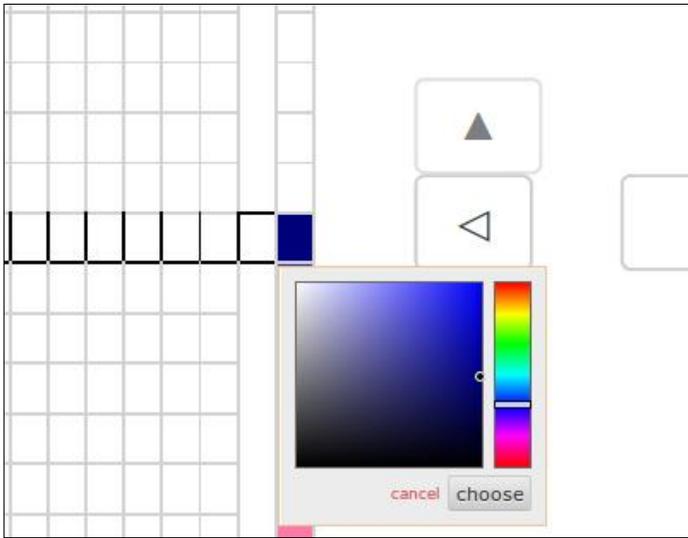
Just left to the draft bar area there is a vertical bar denoting the weft colour used in that specific pick. This helps you remembering what welt to use for this bar. Clicking a colour brings up a colour picker.

After reaching the last pick of your draft, the active bar will return to the first pick for you to repeat the draft.

If you shut down the Dobby 2.0 at the end of the day, you can resume weaving the next time you turn on the dobby and load your file. It will recognize the file and jump to the right pick for immediate continuation.

Making a new draft or Editing a draft

If you want to use the Dobby 2.0 without the assistance of a computer weave design program, you can enter your draft by hand into a file on the Dobby 2.0 where bars and weft colours can be entered and saved on the dobby for later use.
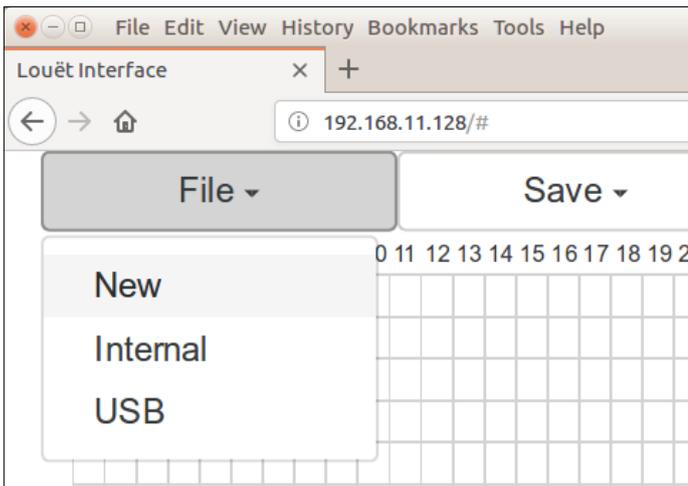
To start a new draft, open File on the Louët weaving web page and click New. The draft area will be cleared.
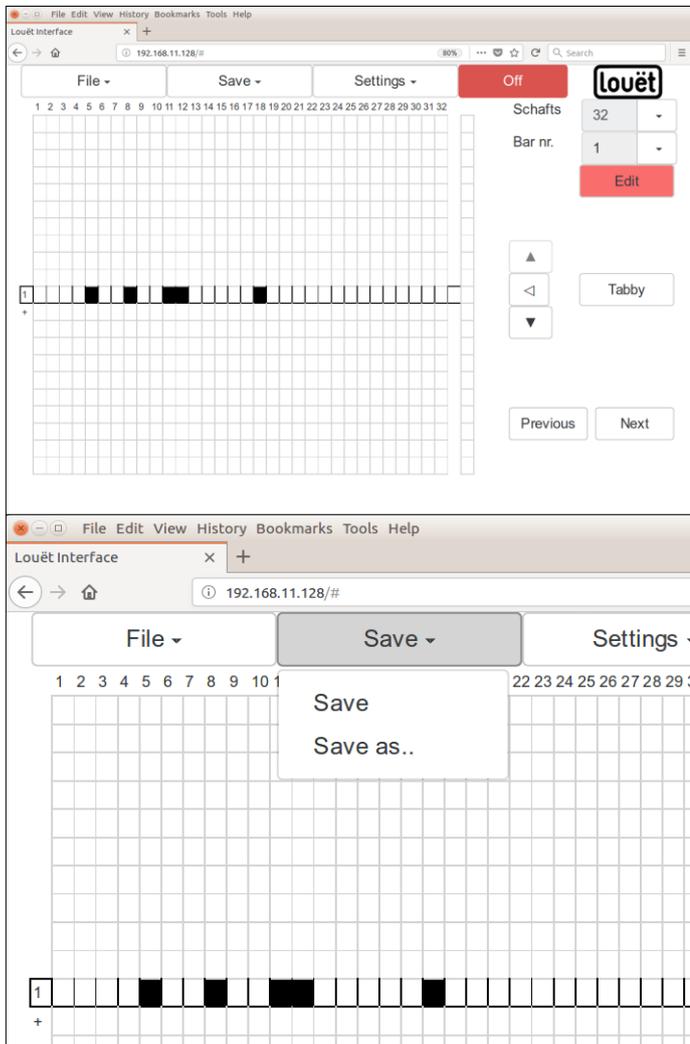
Press Edit so it lights red and following your paper draft, click the apropiate solenoid cells. To add another pick, just click a solenoid cell below the active bar. To change the color of the weft, click its corresponding color cell on the right of the bar and choose the color from the color picker

After entering your draft into the Louet weaving web page of the Dobby 2.0 press edit again to disable it and save the draft by pressing the Save button and choosing Save.

Please refer to the heading "Weaving" on page 13 about loading this saved file.

Controlling the loom with Dobby 2.0 and USB cable

Controlling the Dobby 2.0 with a USB cable is the second way to control a loom. For this you need third party software, depending on the operating system of your computer a device driver and the correct USB cable.

Third party software

Since the introduction of our first electronic dobby loom, we have worked with several weaving software companies. By now, the following companies have developed drivers for our Dobby 2.0: Fiberworks PCW, PixieLoom, Proweave, Weave it, Weavemaker, WeavePoint and Winweef.

Computer installation

The computer requirements for the Dobby 2.0 and most weaving software are very modest, so both new and older computers can be used. The only requirement is the computer supports USB connectors.
The Dobby 2.0 works with various operating systems like windows and Mac OS X, but we only support installations on Windows 8 and 10.

You might need to install a driver for the dobby. In case your computer doesn't have an internet connection or it can't find the appropriate drivers, we have included an USB stick with these drivers. In the troubleshooting you find the instruction for the installation for the supported operating systems.

Connect the Dobby 2.0 to the power brick and connect the power brick to the mains (in that order). Connect the Dobby 2.0 with the included USB A-B cable to your computer or laptop

Warning!!

Always use the supplied USB A-B cable. This is the only cable that can control the Dobby 2.0 with third party software. When you use an USB A-A cable from the older Louët interface as shown in the picture, the USB port of the Dobby 2.0 or the laptop may break.

First turn on your computer. With the power cord and USB cord hooked up, turn on the power switch of the Dobby 2.0. The status screen will show a "Please wait" message and after a minute from a brief status screen display to a "PC connected" screen.

Start the weaving program on the computer and select a pattern. Now activate the dobby control part of the weaving design software. This is different on the various weave design programs and is beyond the scope of

this user manual. As long as the USB A-B cable is connected to a powered up computer, the built-in computer in the Dobby 2.0 is completely ignored by the solenoids.

During weaving with a connected computer using a weave design program, data for the active bar will go from the computer to the Dobby 2.0, activating the selected solenoids. Push down the treadle to raise the selected shafts. You will notice that after you have pushed down the treadle, the solenoids will deactivate. When the treadle is returned to the rest position, a new bar will be activated.

Software Updates

As with all things computer based, our software is also actively in development and improvements and bug fixes are implemented at a regullar basis.

Trouble shooting

The Dobby 2.0 cannot connect to the home network

This problem can have several causes:

- The credentials are not entered correctly
  Double check your credentials and watch for caps, especially as some devices auto-capitalize the first character.The credentials are incorrect. Check if the credentials are the right ones for the network you want to join.
- The wireless signal is not strong enough.
  If the Dobby 2.0 is close to the edge of the wireless zone, the signal may be too weak to be able to properly connect to it. Detach the Dobby 2.0 and place it close to the access point and repeat the pairing procedure.

There is no IP address visible in the status screen.

The dobby may be previously paired with a network which it cannot longer find. This could be due to a weak access point signal or the dobby has been moved to another room or house. Perform a factory reset.

Factory Reset

To reset the Dobby 2.0 to a known default state, press the "Factory Reset" button on the status screen and press "Yes". This will erase all network settings, generate a new password and reenable the built-in wireless access point. Drafts and saved bars are untouched. After a factory reset, you have

to pair your Dobby 2.0 again. Please refer to the heading "Connecting your Dobby 2.0" on page 6.

The Dobby 2.0 does not react to a command of the computer

Possible solutions:
* Time-out
  There is an automatic time-out function build-into the Dobby 2.0. This limits how long the solenoids can be activated. If this time-out occurs, just activate the Dobby 2.0 again in your weaving software or pres the treadle.
* Run the self-test
  Pressing the small black button between the two usb connectors engages the selftest. When the first solenoid activates, you can let go of the red button. The Dobby 2.0 will cycle through all 16 or 32 solenoids, and then it will repeat. With a 16 shaft Megado there will be a time lag before it repeats the process. This test shows the circuit board is working properly. You can stop the self-test by pressing it again.
* Determine whether the Dobby 2.0 communicates with the computer
  With the Dobby 2.0 taken off of the loom, switch on the power, select a pattern in the weaving software and tell the software to "WEAVE". Hold a metal part like a screwdriver against the plastic top of the top sensor switch. The first "pick" should activate. Slide the screwdriver down to the bottom sensor. You should see all solenoids de-activate. Slide the screwdriver back to the top sensor, where the next pick will activate. This mimics the action of the sensor block on the loom. The top sensor selects the next pick. The bottom sensor de-activates the solenoids.
  If the solenoids activate according to the signals of the computer, while manipulating the screwdriver, the problem is the location of the switch block on the knife.
  Solution: You need to re-adjust the location of the switch block a bit on the knife or you can adjust the position of the knife bar itself(see adjusting the knife bar in the loom instructions).
  If the solenoids do not activate, there is no communication between the computer and the Dobby 2.0. Check that the USB cable is connected properly. Try another USB A-B cable to verify the cable is not faulty.

There are irregularities in advancing to the next pick

Probable cause:
* Misalignment of the switch block
  You need to re-adjust the location of the switch block a bit on the knife or you can adjust the position of the knife bar (see adjusting the knife bar in the loom instructions).

The solenoids seem to have not enough power

The Dobby 2.0 could be too close or too far away from the loom. The solenoids produce the most power when completely extended. Check the movement of the dobby bars while a solenoid is activated.
Use the test button for this, located between the two USB connectors. Press the button for at least one second to activate the test mode. If you get the feeling that the dobby bars are extended all the way but fall back a little after the initial burst, the solenoids are too close to the loom. Release the knurled nuts of the dobby mount a little.

If the bars move properly but the knife does not catch the screws of the dobby bars, unscrew the screw heads that protrude at the inside of the dobby hooks half a turn. Otherwise, remove a washer from the dobby mount assembly at both sides. This will position the box closer to the dobby hooks.

Manually installing drivers

Windows 8

Installing the driver

Hook up the power cord and USB cord and turn on the power switch. Windows will search for the driver automatically. Unfortunately Windows will not find these automatically, but unfortunately windows will not find the driver.

To install the drivers manually, using the supplied USB stick, follow the next steps:
● click "Start"
● click on the down arrow - "All programs"
● go to "System" and click "Control panel"
● go to "Hardware and sound" and click "Device manager"
● in the list with "Unknown device" there is an exclamation mark at "Weave ctr", right-click "Weave ctr"
● click "Update driver software"
● click the last option "Browse my computer for driver software" and go to the USB stick
● click "Next" and the driver will be installed

When the driver is installed you will see a new unknown device at "Device manager" "USB Serial Port". Follow the steps above again to install the second driver. The Dobby 2.0 is ready for use.

Com-port

The weaving programs that are currently on the market use a simulated com-port to communicate with the Dobby 2.0. In "Device manager" of your computer you can check on which com-port the Dobby 2.0 is installed, so you can set this number in your weaving software.

- click "Start"
- click on the down arrow - "All programs"
- go to "System" and click "Control panel"
- go to "Hardware and sound" and click "Device manager"
- doubleclick "Ports (Com & LPT)"
- behind the name "USB Serial Port" the number of the com-port reserved for the Dobby 2.0 is listed

Changing the com-port

If the com-port number reserved for the Dobby 2.0 is too high for the weaving software, it can be changed in the following way:

- doubleclick "USB Serial Port"
- click the tab "Port settings"
- click "Advanced"
- select a com-port that will work with your weaving software and click OK

Warranty and contact

Louët has a standard warranty of 2 years for the electronic Dobby 2.0. If you still have a problem after reading this section, please contact your dealer or us directly.

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