



USER MANUAL

# Skriware 2



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# Skriware 2 User Manual

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# Read before proceeding



## Children supervision

We made Skriware 2 easily accesible but due to the possible hazards listed below children should only use it under adult's supervision.



## Risk of burns

Skriware 2 itself operates in a safe temperature spectrum but some of its parts can get extremely hot (up to 280°C/536°F). Never touch the hotend, extruder, or printing platform and their vicinities while you can see the red ! symbol on the display. These parts can stay hot for up to 30 minutes after the 3D printer finishes operating.



## Moving mechanical elements

Never reach into the Skriware 2 work area, and be careful around it, while it operates. Extruders' gantry system uses engines that may pull in a piece of clothing or clip a body part.



## Risk of electrocution

Skriware 2 requires electric power to operate. Always connect the power cable to a grounded power socket. Never perform any maintenance while the printer is connected to a power socket, unless it is explicitly stated otherwise.



## Dangerous vapours

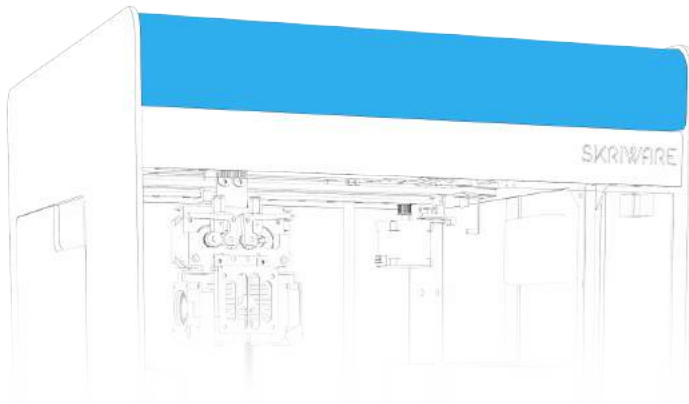
It is advised to use your Skriware 2 in a well ventilated area. Depending on a type of filament, some dangerous vapours can be released during a print process.




## Electromagnetic and radio interference

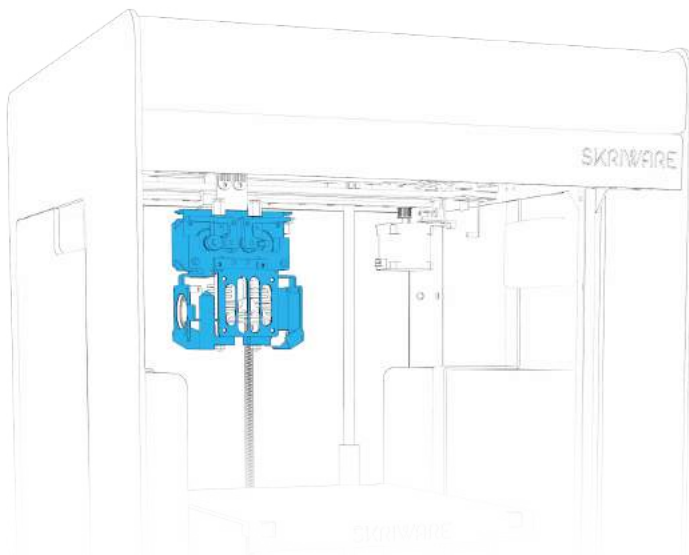
Skriware 2 3D Printer is an electronic device and may cause radio and television interference. It also utilizes Wi-Fi radio which may cause disruptions in certain environments.

## Warning stickers



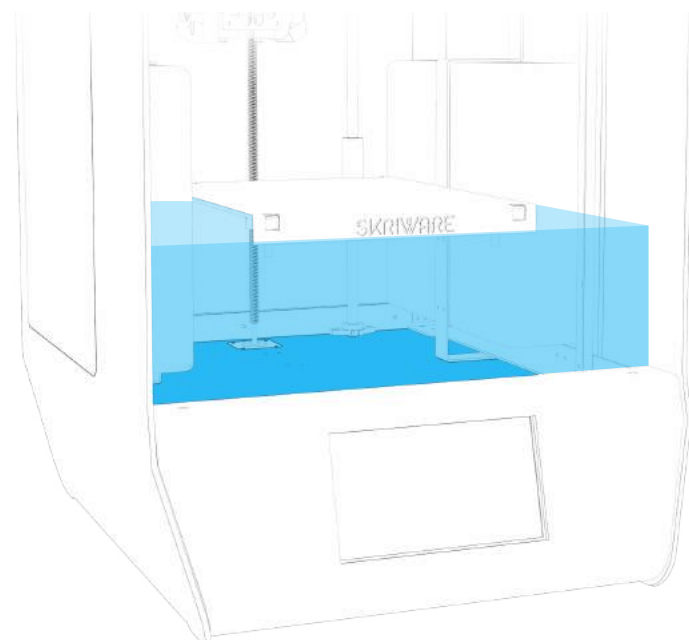
  
**MOVING PARTS. Be careful!**  
Keep the lid closed during operation!


Make sure to keep the lid closed during the printing process! There are moving parts that may cause harm!



  
**HOT SURFACE. Do not touch!**

Do not touch the gantry during the printing process! The parts may be hot and cause burns!



  
**WORKING AREA.**  
Be careful!

Keep your hands away during the printing process! The moving platform may cause harm!

## Complies with the European Directives

**2001/95/WE** General Product Safety  
and harmonized standards:  
**PN-EN 60950-1:2007/A12:2011**

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**2014/35/UE** Low Voltage  
and harmonized standards:  
**PN-EN 60335-1:1999**  
**PN-EN 60950-1:2007/A2:2014-05**

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**2014/30/UE** Electromagnetic Compatibility  
and harmonized standards:  
**PN-EN 55014-1:2012**  
**127 PN-EN 61000-6-1:2008**  
**PN-EN 61000-6-3:2008**

This is confirmed by the sign



placed on the device

## General conditions

The warranty is granted for a period of 12 months from the date of sale.

The printer must only be used in accordance with the following user manual.

Any use of the printer in violation of the manufacturer's guidelines contained in the following user manual, results in the loss of the warranty.

During the warranty period, any defects originating from manufacturing process will be removed free of charge.

Warranty repair request will only be considered in a written form containing a detailed description of the problem and its cause. A form can be requested after contacting [support@skriware.com](mailto:support@skriware.com).

Any warranty claim must first be recognized as justified by Skriware or its Reseller.

In the event of a justified warranty repair, the costs of transportation to the service centre are covered by the User and the return journey by the Guarantor. In the event of unjustified warranty repair, the User will be charged for the costs of transportation to and back from the service centre as well as any repair costs.

The warranty period is extended by the time of repair and transportation.

The warranty excludes:

- mechanical damage caused by improper use;
- thermal damage;
- chemical damage;
- damage caused by surges in the power network, or any other random events;
- parts that are subject to wear during normal operation: extruder head (nozzle, hot end, heater, plastic insulator, thermistor), filament, replaceable beds;
- surface damages (discolouration, scratches, abrasions) caused by errors in storage or use of the product;
- damage caused by operation under conditions that do not meet the specifications;
- cables, buttons, sockets and other components exposed to intentional or accidental damages;
- changes or temporary limitation of functionality as part of software upgrades;
- limitations or lack of connection with Skriware online services.

# Hello, I'm Skriware 2

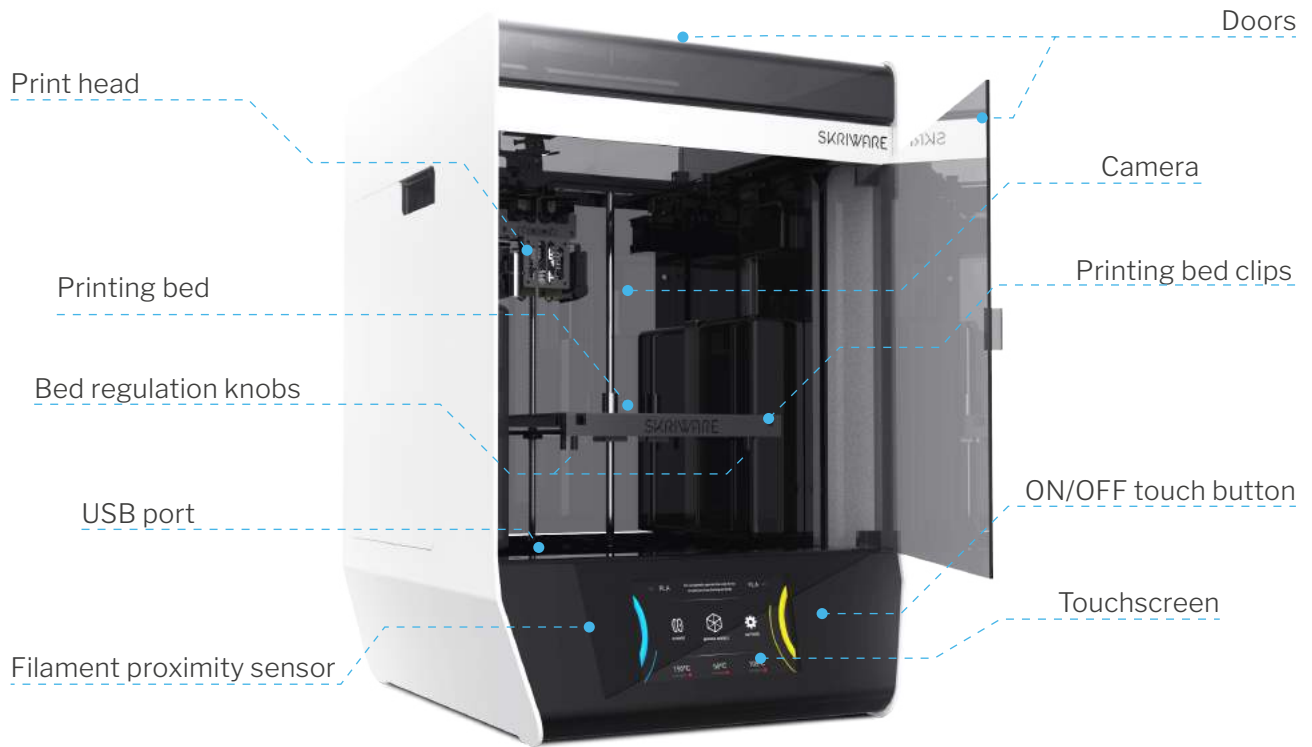
Without further ado, welcome to Skriware. Enjoy your experience!

P. L. L. L.

## Head of Hardware Development



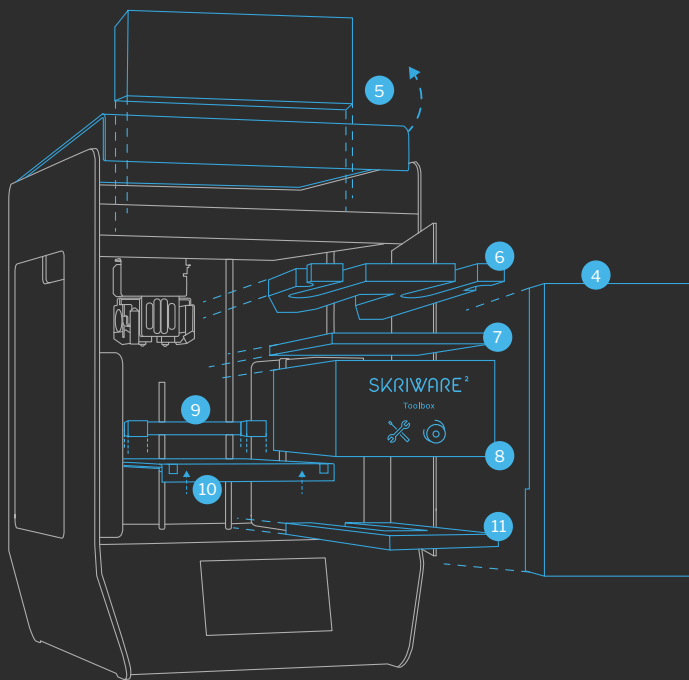
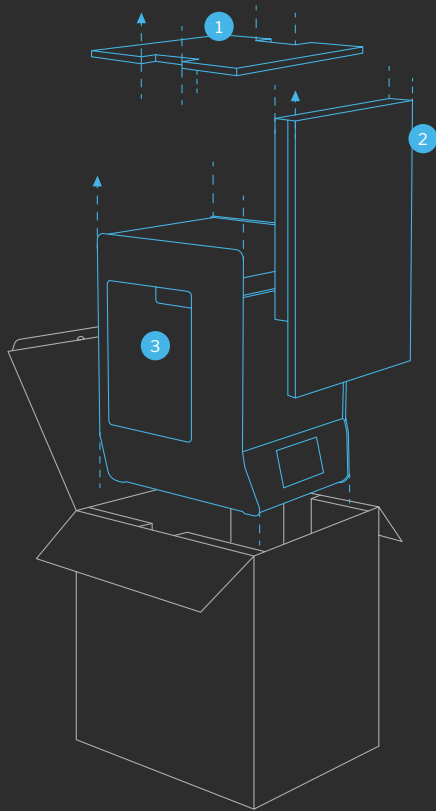
## Components overview





## Setting up the 3D printer

To securely take your new Skriware 2 3D printer out of the box, remove the top panel first (1) and then both front panels (2). Your 3D printer comes in a foil bag. Open it by removing the sticker on the top. You will find handles on both sides (3) by which you can lift Skriware 2. Place it on the designated working surface. Make sure it is stable and level. Use the adjustable feet on the bottom of the printer to adjust its level. Remove the tape securing the moving parts.



Gently push the front see-through panel of your Skriware 2 3D printer to open it, and start removing securing elements:

**4) front door foam**

**5) cover foam (open the printer's top lid)**

**6) gantry system's foam**

**7) extruders' foam**

**8) toolbox**

**9) printing platform's foam**

**10) raise the printing platform gently by pulling up by the platform's back edge (not the front!).**

**11) bottom printing platform's foam**

Plug the **power cable** into the **3D printer's power** socket on its back and into a grounded power socket, and then set the **power switch** on the back to **1 (ON)** position. Optionally plug ethernet cable in the **ethernet port**.

## Whats in the toolbox?



Power cable



2 Filaments



2 spare nozzles



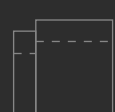
Spatula



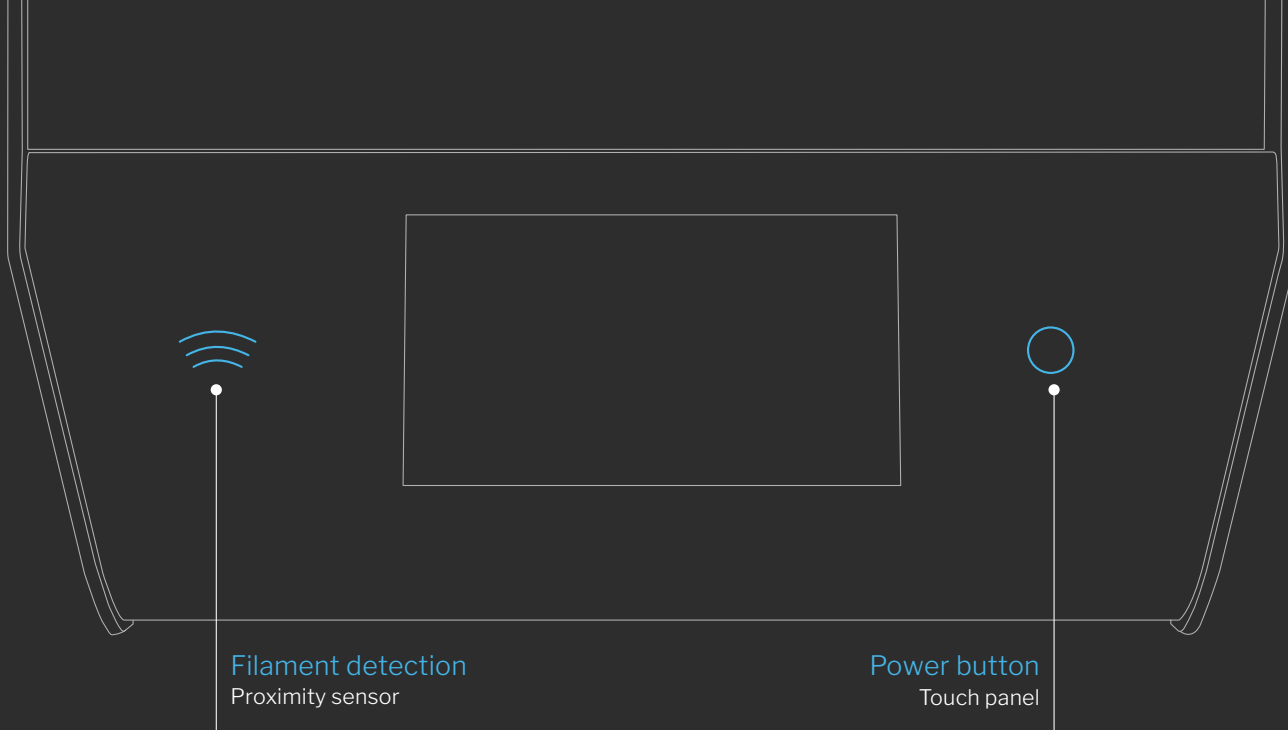
Hex keys 2mm, 2,5mm, 3mm, 4mm & 7mm spanner



Tweezers & needle



2 zipper bags with dessicant



## LET'S START

### First set up

**Touch** the **Power** button on the front of your Skriware 2 3D printer to turn it on. If this is your first time, you will be guided through the set up wizard to:

- connect to a network,
- pair your 3D printer with your existing or new **Skriware account**,
- learn about the functionalities of the **dashboard**.

## CALIBRATION

### Levelling the printing platform

The **printing platform** comes pre-levelled. However, it is possible that it has moved during the delivery and needs alignment. Go to **SETTINGS** -> **Maintenance**, press **CALIBRATE**, and follow the on-screen instructions.

Advanced printing platform calibration. If you have replaced the nozzle or made any other physical changes to your extruder, go through the **ADVANCED** calibration.



# Filaments

Skriware 2 has been created with Skriware branded filaments in mind. This way we can assure the best possible print quality. Our filament spools are equipped with Automatic Filament Detection System that allows Skriware 2 to recognize the material and color of the filament currently in use.



It is highly advised to store all unboxed filaments in attached bags with desiccants to improve their shelf life time.



As a part of our effort to reduce ecological footprint we are proud to be able to say that all our filament spools are made of fully recyclable cardboard instead of industry-standard hard-to-recycle polystyrene. Additionally, starting with PET, we are making an effort to offer some of our filaments in a variant made from high-quality recycled material. Keep an ear out for more environmental-friendly announcements!

## An overview of Skriware filaments:



### PLA

Tough, easy to use high grade filament. Ideal for everyday printing. PLA is biodegradable plastic made from renewable natural resources.



### PET-G

Strong, high clarity, odor neutral and easy to print filament. Its high impact strength, excellent flexibility and practically no shrinkage makes PET-G an excellent material which combines the advantages of both PLA and ABS.



### ABS+

Extra strong impact-resistant filament with zero warp. Advantages over normal ABS include improved interlayer and bed adhesion. Used for more technical applications.



### PLA+

Industrial, high performance PLA. Matching mechanical properties of ABS.



### TPU

Flexible filament that features an exceptionally high heat resistance and can be stretched as far as 450% before reaching its breaking point.

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### WOOD

Modified PLA-based type of filament, that smells and feels like wood.

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### PC-ABS

Incredibly strong filament with polycarbonate additive and an even higher impact resistance than regular ABS.

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### GLASSBEND

Crystal clear, strong, flexible and easy to print filament. High degree of gloss, very low water absorption, practically no shrinkage or warping and great interlayer adhesion.

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### PVA+

Water-soluble, supporting material. Allows to print support material in hard to reach places. Bonds well with PLA, ABS+ and PET-G filaments.

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### rePET

Pure PET filament made 100% from recycled bottles. Has positive properties of PET-G such as strength while giving plastic bottles a second life!

# Dashboard



## Change

Lets you start the process of changing filaments from a chosen filament chamber (**Change L** - left chamber, **Change R** - right chamber). The process of changing filament consists of heating up a chosen print head and following the on-screen directions.

When loading a new Skriware filament, you will be asked to scan the tag placed under the sticker on the filament spool. To perform the scan you have to place the sticker on the spool close to the Filament proximity sensor placed about 5cm to the left from the screen.



## Browse models



**Skrimarket** – models from the Skrimarket, displayed are only featured models. Other available models can be browsed through the search window located in the top right corner of the screen



**Creator** – models created by the logged-in user, created in the Playground 3D available here: <https://skrimarket.com/my/playground/new>



**Recent** – 10 recently printed models



**My Models** – personalised list of models

- Models printed by the user from the Skrimarket.com
- Models uploaded to the Skrimarket.com by the user
- Models saved from a pendrive



**USB** - activated when a pendrive is inserted. Displays .gcode and .stl files found on the inserted pendrive

Before an .stl file is ready to print, it has to be prepared. When prompted, choose a model orientation and scale. In the next window you can choose to print with or without **Supports**.



## Settings

**Network** – lets you turn WiFi connection **on** and **off**. When turned on, a list of available networks is shown. **CONNECT** button is used to connect to a selected network. **STATS** displays a status of the established connection with a network

**Profile** – lets you pair your Skriware 2 with your *Skrimarket.com* account. You can do that in two ways:

- Use a 4-digit SkriCode generated through Skrimarket.com
- Use your Skrimarket.com login credentials

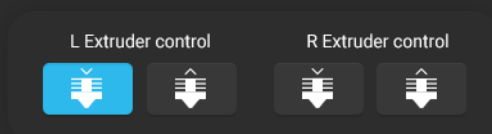
**Screen saver** – lets you change screen saver settings and set up a screen lock code. The screen lock allows to block access to the printers screen after set time

**Filaments** – lets you change print parameters of loaded filaments

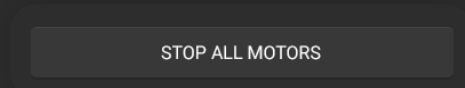
**Manual control** – allows you to move the printhead in order to clean it or perform maintenance actions. **CAUTION!** Features available in this section should not be used by an inexperienced user as it can lead to damaging the 3D printer



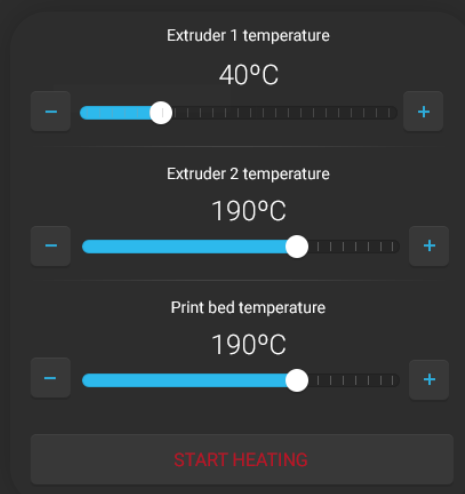
This section lets you manually move the print head and home their position



Controls Left and Right Extruder. The nozzle has to heat up to at least 170°C for the buttons to work



Releases all motors allowing you to move the print head and printing bed by hand

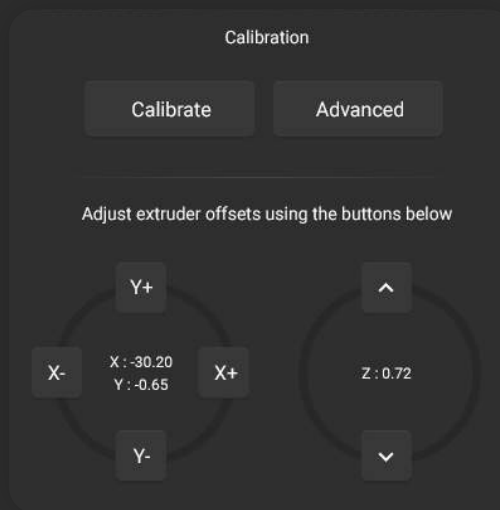


This section lets you set each nozzle and bed temperature

**LED** – lets you turn on and off LED illumination and change its colour

**Maintenance** – settings used during 3D printer calibration. **CALIBRATE** button goes through the basic calibration. **ADVANCED** button starts the complete calibration. This one is only needed if you have replaced the nozzle or made any other physical changes to your extruder. **CAUTION!** Features available in this section should not be used by an inexperienced user as it can lead to damaging the 3D printer.

- XY calibration is used for dual extruder prints. The value represents the distance from the right nozzle to the left. Changing those values will adjust the offset of the right nozzle
- Z calibration represents the distance between the nozzles and the printing platform. Changing this value will adjust the distance of the printing bed from the nozzles. You can modify this value to adjust the Z offset without the need of recalibrating the printing bed



**Statistics** – displays statistics of your printer and its unique identification number

**Factory reset** – lets you reset all settings to its default values. Removes profile info, disconnects with wifi networks and removes the print history

**Update** – initializes the software update process



## Printing

**Cancel** – Cancels your print.

**Pause** – Pauses your print.

**Filament** – Opens a menu to change filament during print.

**Lock icon** – Turns off the screen and PIN locks it (if set up), left top icon

**Advanced** – Menu to control some print parameters: temperature, speed, flow, cooling, and turn on/off the Filament Sensor



## Skrimarket

### Operating Skriware 2 through Skrimarket online platform

The online platform is available at <https://skrimarket.com>. It is required to have internet connection on both devices you are using – Skriware 2 and the one you are accessing Skrimarket on.

### Account registration / logging in

To fully benefit from all the features available on Skrimarket.com it is required to register an account on the platform.

1. Login and registration on <https://skrimarket.com>.





2. While registering it is required to confirm the creation of the account by clicking on the link that will be sent to the entered email.

## Pairing the printer with an account

Printing features available on <https://skrimarket.com> require a printer paired with an account. You can pair only one printer at the same time with one account. You can always switch an account to which a printer is connected.

1. To start the pairing process, select a printer icon located in the top right corner.



2. You will be presented with an option to choose Skriware 1 or Skriware 2. To connect with Skriware 2, select the **Generate** button which will generate a 4-digit Skricode.

3. Input this code in **SETTINGS** -> **Profile** -> **SKRICODE** on your Skriware 2 on-screen menu. Confirm the code with **LOG IN** button.

4. An icon representing a status of your printer will change to green. This means that your printer is properly paired with your account. As long as your printer is paired the icon will inform you of its status (online, offline, printing).

Online platform <https://skrimarket.com> allows you to:

- print any available model from the library of more than 60,000 models
- add new 3D models to the library
- store your own 3D models and other print files on your profile page
- create simple 3D models through 3D Playground (<https://skrimarket.com/my/playground/new>)

## Printing any available model from the library

On the left side of the online platform <https://skrimarket.com> there is a list of available categories. On the top you will find a search box. When you are satisfied with your 3D model choice, select **Print**.

You will be presented with an online slicer where you can change print parameters:

- placement of the model (up to four positions)
- dimensions in X, Y, and Z axis in millimeters
- scale of the whole model
- support structures which are necessary in models that have elements that would print mid-air

After selecting Print, your settings will be confirmed, sent to your Skriware 2 and the print will begin.

The screenshot shows the 'Print model' window with a 'Basic' tab selected. The interface includes a 3D model view, a settings panel on the left, and a bottom section for material and temperature settings. Annotations point to various features:

- Dimensions of your model.** Leave the "Uniform scaling" unchecked to scale each axis individually. (Points to the Dimensions [mm] section)
- Change the scale of the whole model.** Leave the "Original size" unchecked to change the scale. (Points to the Scale section)
- Print the model with or without supports.** Supports are necessary for models that have elements that would print mid-air. (Points to the Supports checkbox)
- Prints the model with settings set on your Skriware 2.** Unselect this option to change the parameters of the print. (Points to the 'Use printer temperature settings' checkbox)
- Sends the model to your Skriware 3D printer and starts the printing process.** (Points to the 'Print' button)
- Select the material and the temperature you would like to print with.** (Points to the Filament type and Extruder temperature fields)
- 3D Model view.** Click and drag with your mouse in this area to see the model from different angles. (Points to the 3D model view)
- Choose a position for your model.** Different positions can make your print more or less durable. Try to choose a position which will minimize the amount of supports. (Points to the model placement area)

## Advanced controls

Extruder side

Left

Print with either **Left** or **Right** Extruder

Print profile

Precision/Quality

**"Precision/Quality"** for better quality prints  
**"Speed"** for quick prototypes.

Adhesion type

Raft

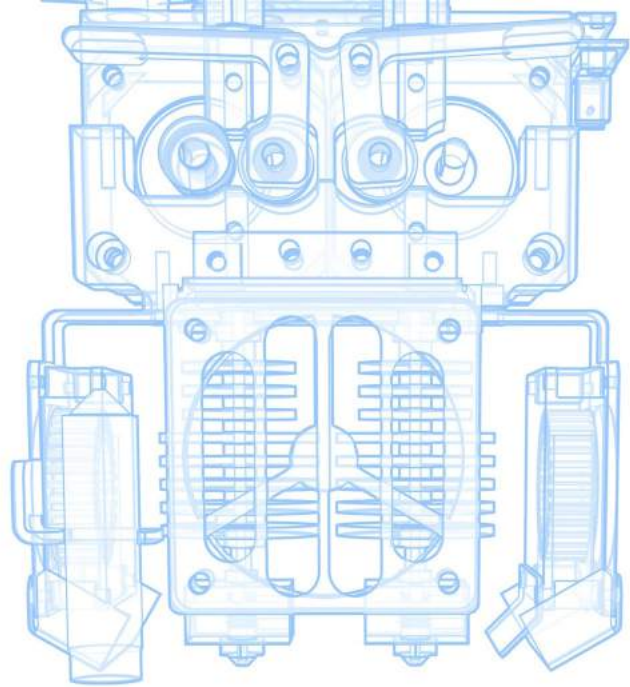
**Raft** - adds a thick layer below your print, helps with adhesion and bed unevenness  
**Brim** - adds a flat layer around your print, helps with adhesion  
**Skirt** - adds a border around your print to make sure the nozzle is primed with filament  
**None** - prints the model as is

## MAINTENANCE

# Taking care of your Skriware 2

Here's a list of maintenance tasks we recommend you perform to keep your Skriware 2 in the best shape possible.

Check out our maintenance videos over at [skriware.com/support](https://www.skriware.com/support)



### Every print

Keep your printer in a dust free, dry and cool environment.

Remove any filament left from previous prints from the printing bed and the chamber. Supplied spatula can help to remove it from the bed.

Clean the top side of the printing bed with clean cloth and rubbing alcohol.

### Weekly

Level the printing platform (also every time you move the printer to a new location or remove the printing bed).

Remove any material stuck on the nozzles. Heat the nozzles to 160°C and using tweezers carefully remove the material.

### Quarterly

Dust off the extruder fans carefully (hold the fan blades while dusting them).

Dust off the whole printer.

Lubricate the X/Y axis with Molybdenum Grease.

Lubricate the Z axis screw with Graphite Grease.

For more information regarding maintenance, go to [www.skriware.com/support](https://www.skriware.com/support)

# Technical Specification

## Printer

### Printer control

Full Color 7" Touchscreen

### Supported material

PLA, PET-G, ABS+, PLA+, TPU,  
WOOD, PC-ABS GLASSBEND,  
PVA+ and more

### File transfer

USB & Skrimarket  
(via WiFi or Ethernet)

### Dimensions

410 mm x 470 mm x 630 mm  
16,1 in x 18,5 in x 24,8 in

### Operating temperatures

10-30°C  
50-86°F

### Power requirements

100 - 230 V  
50/60 Hz  
90 W (at peak)

## Print properties

### Printing area\*

210 mm x 260 mm x 210 mm  
8,3 in x 10,2 in x 8,3 in

### Material diameter

1,75 mm  
0,07 in

### Layer height

0,05 - 0,3 mm  
0,002 - 0,012 in

### Nozzle size

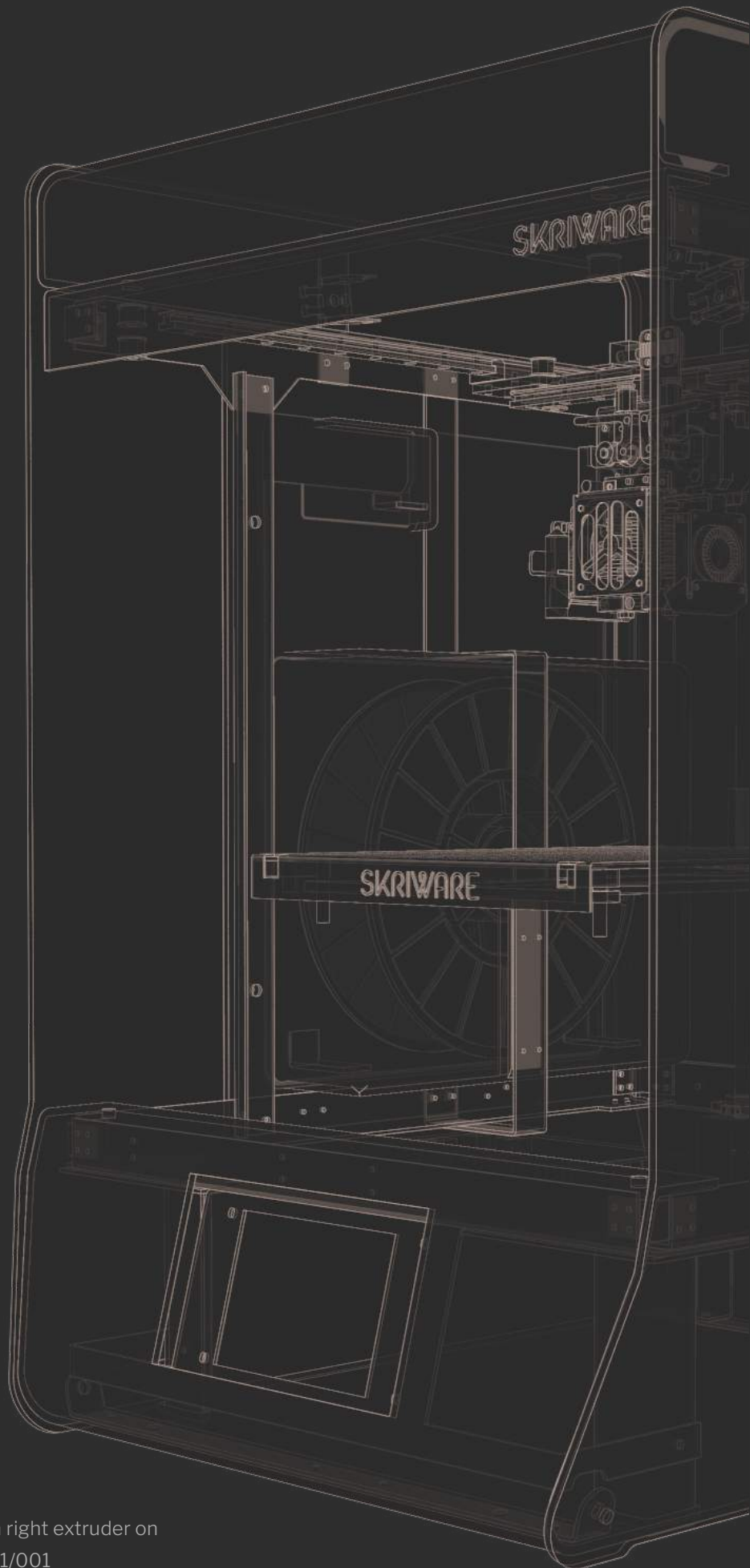
0,4 mm  
0,016 in

### Maximum nozzle temperature

270°C  
518°F

### Maximum bed temperature

90°C  
194°F



\*200 mm x 260 mm x 210 mm for prints with right extruder on  
printers with Serial Number lower than 2/20/1/001

# Troubleshooting

Category	Warning Message	Reason	What to do
Software updates issues	Upgrading firmware, please wait.	The system detected an older firmware version and the upgrade process has started.	Wait for the process to finish. Do not power off the printer!
	Firmware upgrade failed. The printer will shut down. Reason: Timeout	The upgrading process failed because it could not establish communication with the printer controller. The printer will shut down and try again.	Power off the printer using power switch at the back, wait 30 seconds and start the printer normally.
	Installation of new modules failed. Some features may not work. Make sure you have a stable internet connection and reboot the printer to start again.	The printer sometimes needs to install or update modules after the software update. If the network is unavailable during this process or some unexpected error occurs the process stops and the printer will try again on next system boot.	Make sure the printer has a stable internet connection during an update. Ethernet cable connection is recommended for the update process.
Printings / Filament issues	End of left/right filament detected. CHANGE the filament or IGNORE this warning and continue.	The filament sensor detected that there is no filament in the tube. That means there is either no filament left on the spool or the filament has broken.	Check if there's filament left on the spool, if there is, ignore the message. If the error keeps showing up you can either turn the filament sensor off or contact support.
	Filament jam detected.	The filament sensor detected that the filament in the tube is not moving despite extruder movements.	Make sure the filament is being extruded through the nozzle. If not, try cleaning the nozzle.
	There might be not enough filament in the left/right chamber	When the print starts, the amount of the filament needed for the model is estimated. When the printer detects that there might not be enough of filament left on the spool, the warning is shown.	This is just an estimate, so if you think you can make it, feel free to ignore this message. The printer will automatically pause when the end of the filament is detected.

Printings / Filament issues	Print cancelled, make sure the printing bed is clean.	The warning is shown each time the print is cancelled.	Make sure there is no filament left on the bed. You will not be able to start another print remotely until this window is dismissed.
	The model was downscaled to fit the printing bed.	Sometimes the .stl model is too big for the printing area. The printer will automatically downscale it to the maximum possible size.	If the model you want to print is too big for the printing area, you can try splitting it into several smaller models in a 3D modelling software. Then you can print those one by one.
Hardware issues	Serial port error. Please power cycle the device. If the problem still occurs contact support.	The communication with the printer controller cannot be established.	Power off the printer using the power switch at the back, wait 30 seconds and start the printer normally.
	Camera failure.	The camera module is not responding.	Make sure the cable is attached firmly to the camera located inside, at the top of the printer. Power off the printer using the power switch at the back, wait 30 seconds and start the printer normally.
	Looks like your bed is not perfectly plane. Please check if it's attached firmly. If the problem persists, contact us at: support@skriware.com	The calibration showed that the printing bed is misshaped in a way that it is impossible to finish the calibration.	Make sure that the removable printing bed is properly attached at the back and at the front and restart calibration.
	Caught mks error: Error:Heating failed, system stopped! Heater_ID: X Printer will now shutdown.	The printer detected an error during heating and will now shut down for safety reasons.	Make sure the cables coming out of the back of the heating block are securely attached to the heating block and the control board above the extruder motors.
Server & Network issues	Account not authorized for MyMiniFactory prints. Visit skrimarket.com for your first print.	Your Skrimarket account is not linked to the MyMiniFactory server.	Go to <i>Skrimarket.com</i> and start the same model print in the browser. You will be automatically guided through the authorisation process.



Server & Network issues	Server unavailable, try again later.	The printer couldn't communicate with the server.	Make sure you have a stable internet connection and the latest firmware installed. The server might be not responding during maintenance processes so please wait a few minutes, reboot the printer and try again.
	Account not paired.	In order to access Skrimarket features, you have to link the printer with your Skrimarket account.	Please go to the <i>Skrimarket.com</i> and create an account. Then go through the pairing process on the website.

My prints don't stick to the bed.

Be sure to wipe the printing bed with cleaning alcohol. If you still have issues with first layer adhesion, make sure your printing platform is properly levelled (Settings -> Maintenance).

My filament has broken inside the machine.

If your filament broke inside the white nylon tube you can get it out following these steps. Push down on the coupler just above the extruder and at the same time pull out the white nylon tube from it. You will have easy access to the broken filament. To secure the tube back in place, just push it into the coupler.

Where can I see the camera preview?

The preview from the camera is available on <https://skrimarket.com/my/dashboard> -> You after logging in and pairing the Skriware 2 with an account.

I cannot push the filament into the loading tube.

Cut the end of the filament at an angle so it has a "sharp" tip.

The printer doesn't detect inserted USB flash drive.

Unplug and plug your USB flash drive again. If that doesn't help, restart your printer without USB flash drive inserted. Skriware 2 may not be compatible with USB 3.0 and some higher volumes flash drives.

I cannot see my network when connecting to WiFi.

Make sure that your wireless network is 2.4 GHz, not 5 GHz.

For more information regarding maintenance and videos, go to [www.skriware.com/support](http://www.skriware.com/support)



If you need to contact us in regard to technical or any matter do not hesitate! You can reach us by mail on [info@skriware.com](mailto:info@skriware.com) or message us on Facebook [facebook.com/skriware](https://facebook.com/skriware). For all the technical issues write to [support@skriware.com](mailto:support@skriware.com)

**Enjoy your Skriware 2 3D Printer!**

Yours,  
Skriware Team