

Polaroid

PLAY Smart



User Guide

CONTENTS

■ Introduction	3
■ Safety Instructions	4
■ Box Contents	5
■ Printer Set Up	6
■ Loading and Unloading Filament	8
■ How to Print	9
■ Other LCD functionality	11
■ Installing the Polaroid SmartPrep Software onto your PC	13
■ Polaroid SmartPrep Software	13
■ Desktop Functions	14
■ Technical Specifications	21
■ Cleaning and Maintenance	21
■ Manufacturer's Guarantee	22
■ Certifications and Compliance	23
■ FAQs and Troubleshooting	24

INTRODUCTION

The following User Guide provides you with all of the information you need to get started printing with your Polaroid PlaySmart 3D Printer.

It will guide you through the simple installation of your printer, starting with getting it out of the box, right through to each of the fantastic features of the Polaroid SmartPrep printing software and the easy-to-use touchscreen LCD on the printer itself.

The Polaroid 3D team hope that you have many happy hours printing with your new PlaySmart 3D printer, but if you have any questions at all, please don't hesitate in contacting the team via polaroid3d.com/contact



SAFETY INSTRUCTIONS



WARNING
(Heated surface)

Whilst in operation, the extruder on your Polaroid PlaySmart 3D printer becomes very hot. Always allow time for the extruder to cool down before you reach into the printer for any reason.



WARNING
(Electrical component)

This product is not to be serviced by anyone other than a Polaroid 3D approved engineer. Any unapproved servicing may also void your guarantee.



CAUTION

Polaroid 3D printers include moving parts, which may cause injury if interfered with whilst in use. Never reach into your Polaroid 3D printer whilst it is in use.

Please ensure that the printer is located in an area that is:

- close to the intended power supply and that the socket is easily accessible
- well ventilated
- clean and dry
- a consistent and stable temperature and humidity
- positioned away from any flammable items
- positioned away from any liquids
- a flat and stable surface

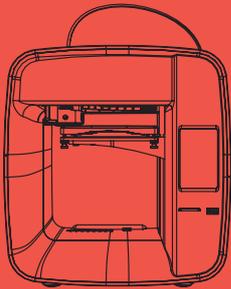
Any damage caused by improper use of the printer or its component and consumable parts, which is in contradiction with this User Guide becomes the full responsibility of the user and will void your guarantee.

This printer is not suitable for children. Anyone under the age of 16 must be supervised by an adult.

Never turn off your Polaroid PlaySmart 3D printer during printing; please wait until the job has completed and the print bed and extruder have returned to the Home Position before turning off the power.

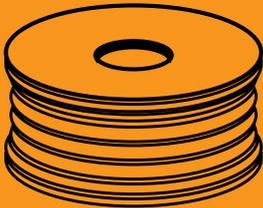
BOX CONTENTS

A



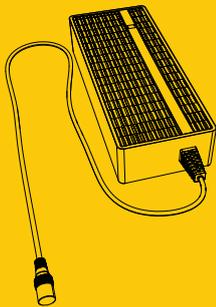
Polaroid PlaySmart 3D Printer

B



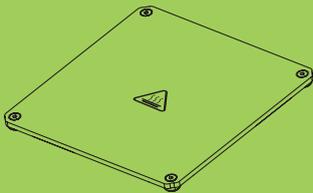
1x 1kg Polaroid Universal Premium PLA Filament

C



Power Cable

D



Heated Print Bed

E



PTFETube

F



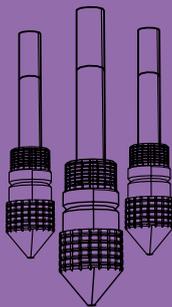
Polaroid Precise Filament Holder & Scale

G



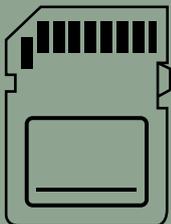
Quick Start Guide

H



3 x replacement nozzles

I



SD Card

PRINTER SET UP

Please follow the steps below to get your Polaroid PlaySmart 3D printer ready for printing. Once removed from the box please ensure that your printer is positioned on a flat and stable surface, this helps to minimise vibration and produce more accurate prints.

1 Open the box and remove the top layer of protective foam. Underneath you will find the following items:

- Polaroid Precise Filament Holder & Scale
- 1 x 1kg Polaroid Universal Premium PLA Filament
- Power Cable
- PTFE Tube
- 3 x replacement nozzles
- SD Card
- Polaroid PlaySmart Quick Start Guide
- Polaroid Precise Filament Holder insert
- Polaroid 3D Filaments insert
- 12 Month Guarantee insert

Please lift the items, including the protective foam tray carefully from the box. Then please remove each of the items from the tray.

TIP: In order to remove the Polaroid Precise Filament Holder & Scale from the protective foam, first please gently remove the protective foam tray from the top of the box. Then gently push the Precise Filament Holder & Scale from underneath where you will find a hole in the foam to allow you to do this. This should allow you to completely remove the Polaroid Precise Filament Holder & Scale upwards from the protective foam.

2 Once you have removed all of the items from the tray, please carefully remove the PlaySmart 3D Printer from the box.

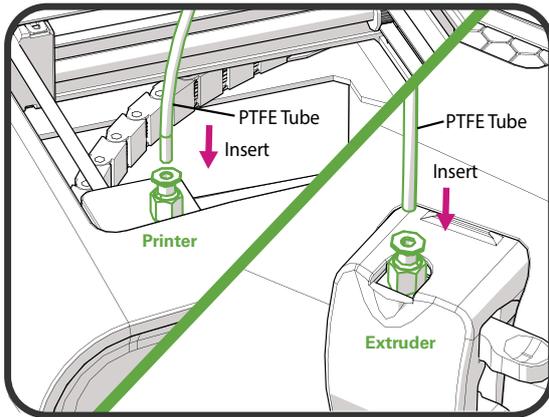
3 Please make a note of your serial number (which can be found on the base of your printer) before placing on a flat and stable surface.

4 Carefully remove the blue tape that is holding the Heated Print Bed in place.

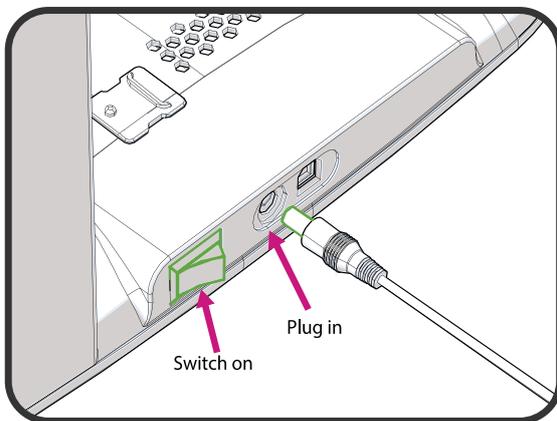
5 Place the Polaroid Precise Filament Holder & Scale on the flat and stable surface to the right-hand side of your Polaroid PlaySmart 3D Printer and make sure that the filament cartridge is sat securely on the Polaroid Precise Filament Holder & Scale.

6 Follow the set-up process for the Polaroid Precise Filament Holder & Scale as outlined in the User Manual found here:
www.polaroid3d.com/sv/support-polaroid-precise/

- 7** Set-up your printer by first attaching the PTFE tube. Place one end into the printer head and the other end into the extruder.

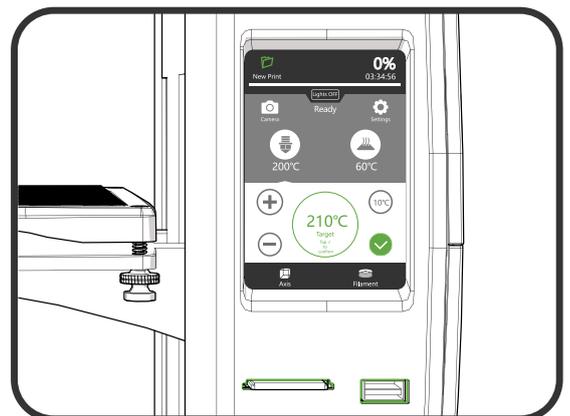
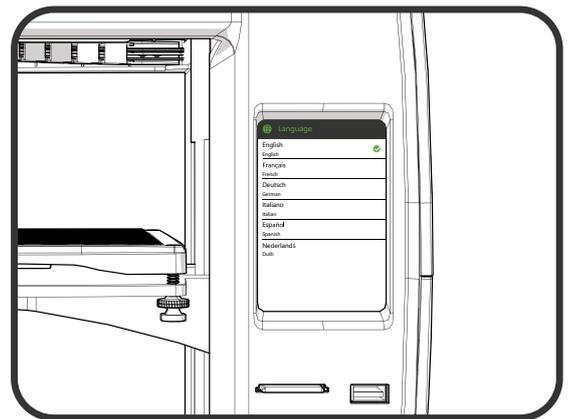


- 8** Connect the power cable to the back of the printer and then to the wall, and turn on the printer using the power switch (also on the back of the printer). Be careful not to damage the cables.



- 9** Follow the instructions on the LCD screen to complete set-up:

1. Select your language.
2. Press 'Start'.
3. Ensure WLAN is turned on (showing green) and then select a Wi-Fi network to connect your Polaroid PlaySmart 3D Printer to (or alternatively skip this step – you can set-up at any point later).
4. Once connected, click 'Next'.
5. Download the Polaroid PlaySmart App to your mobile phone from the App Store or Google Play Store (or alternatively skip this step – you can set-up at any point later).
6. Select 'Next' once installed.
7. Check for firmware updates and ensure that you have the latest version installed.
8. Click 'Finish' to complete the set-up process.



LOADING AND UNLOADING FILAMENT

Before you can print you must install a filament cartridge.

In order to do this you must either use the menu on the touchscreen LCD (on the front of the printer), or the Polaroid PlaySmart mobile App (which can be downloaded from the App Store or Google Play).

When using the LCD screen on the printer, please follow the process below:

1 Firstly, ensure that the Polaroid Precise Filament Holder & Scale is positioned next to the printer on the right hand side, and with the filament cartridge securely in place.

2 Find the end of the filament on the reel and twist around until it breaks.

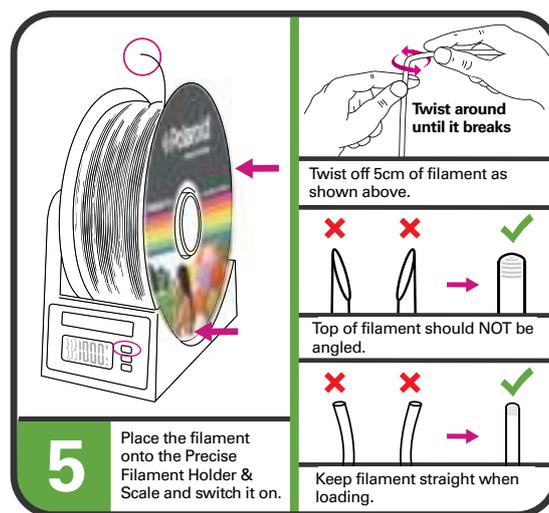
3 While keeping the filament straight, slightly squeeze the levers on the side of the extruder together and slide the filament up from the bottom until approximately 2cm is visible in the PTFE tube.

4 Press 'Filament' and then 'Load' on the LCD screen. Once the target temperatures are reached the filament will automatically be pulled through the PTFE tube into the extruder. (You can cancel this process whilst the target temperatures are being reached by pressing the 'X' on the LCD screen). You should see the filament appear from the extruder, if you do not, please press the '10mm more' button. Continue until filament is extruded from the nozzle. If changing a cartridge (as opposed to installing for the first time) please ensure that the previous colour or filament is completely extruded and the new filament is flowing freely before completing the process. Complete the process by pressing 'Confirm' on the LCD.

NOTE: If filament is not flowing freely from the nozzle at this point, please press 'Confirm' and then 'Unload' to uninstall the filament. Please completely remove the filament from the printer, cut off the end of the filament again at an angle and then re-insert. Follow the installation process again and this time you should see the filament extruding correctly. If this is not the case please contact our support team at polaroid3d.com/contact for further advice.

5 To unload filament, please select 'Filament' from the home screen on the LCD followed by 'Unload'. Once the target temperatures have been reached the filament will automatically unload. Once completed, please click 'Finish' and remove the filament from the printer by squeezing the levers on the side of the extruder and gently pulling the filament from the bottom.

NOTE: Part-used cartridges should be stored in a cool and dry environment whilst not in use.



HOW TO PRINT

There are two different ways in which you can print via your Polaroid PlaySmart 3D Printer; either via the LCD screen or via the Polaroid PlaySmart Mobile App.

NOTE: You must first have the file of your model that has been sliced and is ready for printing. For instructions on how to do this, please see below: **'Polaroid SmartPrep Software'**.

1 Printing via the LCD screen

1. Ensure your model is saved to either SD card or USB and then insert into the corresponding slot on the front of the printer.
2. Select 'New Print' from the top left corner of the LCD screen.
3. Next, select SD card or USB depending on where your file is saved.
4. Select the model that you wish to print.
5. Select 'Confirm' to verify you have selected the correct model and wish to start printing.
6. The printer will then begin automatically. The print bed will rise towards the top of the printer and the print head will position itself in its home position (towards the front left corner of the printer). The nozzle and bed temperature will then start to increase and printing will begin once the target temperatures have been reached. **NOTE:** This may take a few minutes so please be patient; you can watch the progress of the temperatures via the LCD screen.

NOTE: You can monitor the progress of your print via the green progress bar at the top of the screen which shows the percentage (%) of printing that has passed and the remaining time in minutes and seconds.

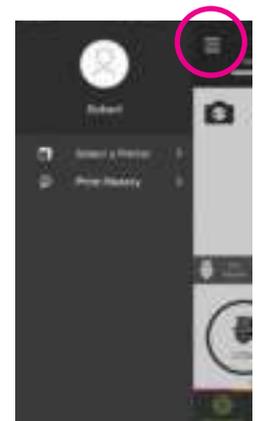
2 Printing via the Polaroid PlaySmart Mobile App

NOTE: Before printing via the Mobile App you must first pair your printer with your phone. To do this, press the menu button  in the top left corner of the screen in the App and choose 'Select a printer'. Any previously paired printers will appear here. To add a new printer, click the '+ Add printer' button at the bottom. You will be asked for your serial number or to scan the QR Code which can be found via the LCD screen on the printer, under 'Settings' and 'Pair the Printer'. When completed please click 'Confirm' to complete the process.

Your Wi-Fi must be turned on and connected for the pairing to complete. Please do so by selecting 'WLAN' from 'Settings' on the home screen of your printer LCD and then selecting your network.

After following the process above, please follow the steps below to print via the Mobile App:

1. Whilst in the 'Workspace'  screen on your mobile, select 'New Print' from the top left-hand corner.
2. You can then choose a model from the SD Card, USB or Mobile Library. Selecting SD Card or USB will show the models available on those devices if installed. Selecting Model Library will open up our online catalogue of models to choose from.



OTHER LCD FUNCTIONALITY

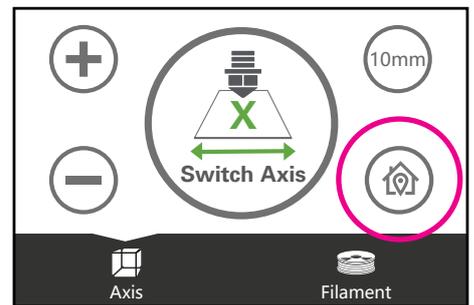
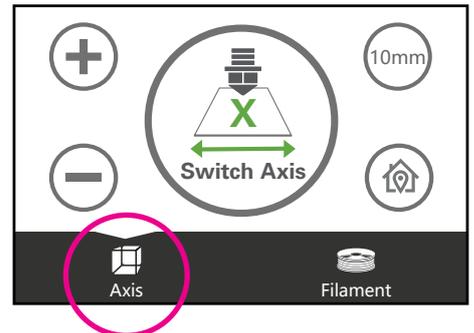
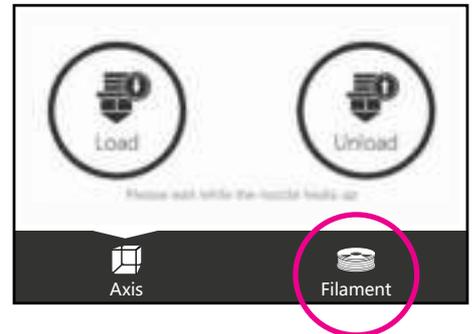
From the Home Screen of the LCD you have several options.

Whilst on the 'Filament' screen you have the option of Loading and Unloading your filament which have been detailed above along with the New Print functionality and the print progress bar.

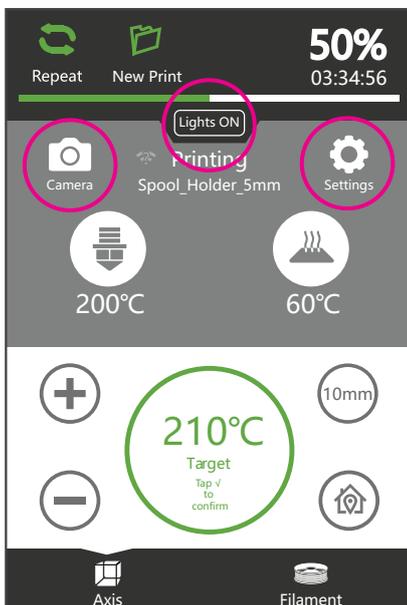
Next to 'Filament' you have the 'Axis' button (bottom left of the screen). Selecting this will bring up the ability for you to manually move the printhead across the X or Y axis and also the Heated Print Bed across the Z axis. Depending which Axis is selected on the illustration in the middle circle will depend which of these arrows will move, and in which direction. To switch between the different axes, simply tap the circle. You will see image in the middle of the circle change as well as the arrows to the left-hand side. By selecting one of the arrows you will see the Print Head or Heated Print Bed move in the selected direction. The default distance for each movement is 5mm; you can change this to 10mm by clicking the small circle on the right-hand side that says '5mm'.

The button in the bottom right-hand corner of the screen returns the Print Head and Heated Print Bed to their 'Home' positions, which are the Print Head in the front, left-hand corner and the Heated Print Bed to the bottom of the printer.

The top half of the LCD screen shows the current nozzle and bed temperatures. These values will change depending on the current operation. **NOTE:** These remain on screen on both the 'Axis' and 'Filament' screens.



Other elements of the Home Screen include:



Camera: You can take a photograph or video of your prints. From here you can also access the history of your prints, as well as an album of any previous videos that have been created.

Lights On/Off: This button allows you to switch on or off the LCD lights around the inside of the printer.

Settings: Within the 'Settings' screen you have the following sub-categories:

- **WLAN:** This identifies the available Wi-Fi networks and allows you to connect to your chosen one. The 'Refresh' button in the bottom right-hand corner allows you to refresh the list of available networks if yours isn't visible.

• **Bed Levelling:** The on-screen instructions here provide you with guidance on how to ensure that your print bed is level prior to printing (this is very important in order to achieve a successful print). Simply follow the step-by-step instructions to adjust each corner of the bed, see below:

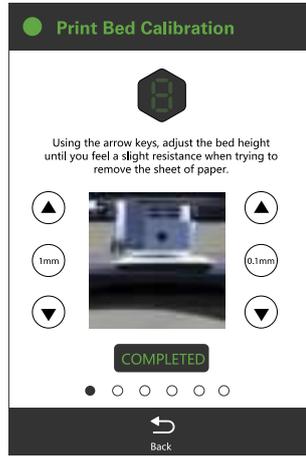
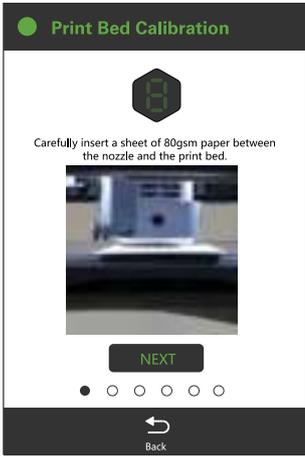
The instructional screens for bed levelling are as follows:

- Check Connection:** Ensure the Heated Print Bed and the Polaroid PlaySmart 3D printer are properly connected. Refer to the image for Port 1 and Port 2 connections.
- Loosen nuts:** Loosen the 4 Screw Nuts under each corner of the Print Bed. Leave a 2-3 mm gap between the Screw Nuts and the Levelling Nuts.
- Bottom left:** Adjusting the Levelling Nuts. To widen the gap, tighten the Levelling Nuts by turning anti-clockwise. To reduce the gap, loosen the Levelling Nuts by turning clockwise.
- Upper left:** Adjusting the Levelling Nuts. To widen the gap, tighten the Levelling Nuts by turning anti-clockwise. To reduce the gap, loosen the Levelling Nuts by turning clockwise.
- Upper right:** Adjusting the Levelling Nuts. To widen the gap, tighten the Levelling Nuts by turning anti-clockwise. To reduce the gap, loosen the Levelling Nuts by turning clockwise.
- Bottom right:** Adjusting the Levelling Nuts. To widen the gap, tighten the Levelling Nuts by turning anti-clockwise. To reduce the gap, loosen the Levelling Nuts by turning clockwise.
- Tighten Nuts:** Hold the Levelling Nut in place while you hand-tighten the Screw Nuts on each of the 4 corners.

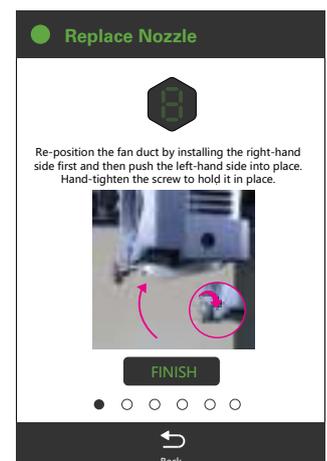
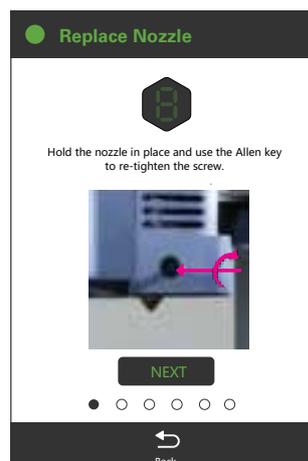
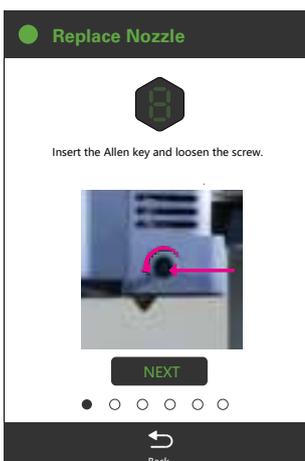
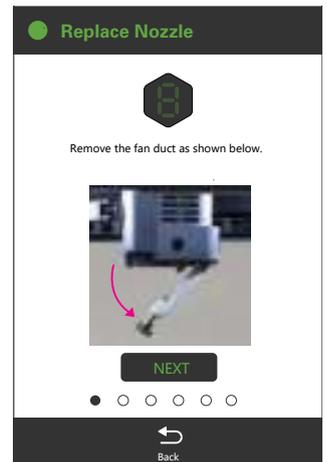
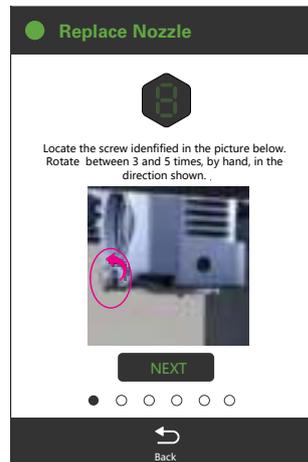
• **Print Bed Calibration:** The on-screen instructions here provide you with guidance on how to adjust the distance between the nozzle and the Heated Print Bed to ensure that your model prints correctly. The smaller the distance, the more 'squashed' the filament will be to the bed, whereas a larger gap may cause the filament not to adhere to the bed correctly. Follow these step-by-step instructions to see how to make this adjustment for a successful print:

The instructional screens for print bed calibration are as follows:

- Print Bed Calibration:** Follow these steps to optimise the clearance between the nozzle and the print bed to help improve the quality of your prints.
- Print Bed Calibration:** Wait for the nozzle temperature to cool down to below 50°C. (Temperature shown: 22°C)
- Print Bed Calibration:** Please carefully remove the residual filament.
- Print Bed Calibration:** Adjusting the bed height. Please wait...



• **Replace Nozzle:** Whilst the printer has been built to be robust, given the nature of melting and hardening material in order to extrude through the print head, and by using multiple materials, there may sometimes be a small blockage in the nozzle. The PlaySmart 3D printer comes with 3 replacement nozzles and a very easy step-by-step process to swap one for another. Simply follow the on-screen instructions for how to do this; see below:



• **Language:** The PlaySmart 3D Printer comes with a number of available languages. You select your language of choice during initial set-up of the printer. However, you can change this at any time by accessing this menu under 'Settings' and selecting your new language.

- **Pair the Printer:** This is where you pair your printer to your mobile phone to enable you to use the PlaySmart App. Once you have downloaded the App from the App Store or Google Play you must input the serial number of your printer, or alternatively you can scan the QR Code that you find on this screen. Once this process has been completed you will be able to print remotely from your mobile phone to your PlaySmart 3D printer.
- **Firmware Update:** This screen tells you which version of Firmware your printer is currently operating. Selecting the 'Check for updates' button will enable you to see if there is a later version available.
- **Reset:** By selecting 'Reset' and pressing 'confirm' it will delete any data that has been stored on the printer, such as videos and print history. Please only confirm if you wish to delete all of this data.

INSTALLING THE POLAROID SMARTPREP SOFTWARE ONTO YOUR PC

NOTE: *Polaroid SmartPrep software is currently available for Windows operating systems only. If using a Mac operating system we recommend using third party slicing software, Cura.*

To install the Polaroid SmartPrep software onto your Windows PC, please visit:

polaroid3d.com/software

You will need to insert your serial number and email address to download the software.

Your serial number can be found on the base of your printer. Please ensure your printer is switched off and unplugged before carefully lifting your printer to make a note of your serial number.

Once you have downloaded the software and double clicked on the installer, the installation process will then begin. Please follow the on-screen messages to complete installation.

POLAROID SMARTPREP SOFTWARE

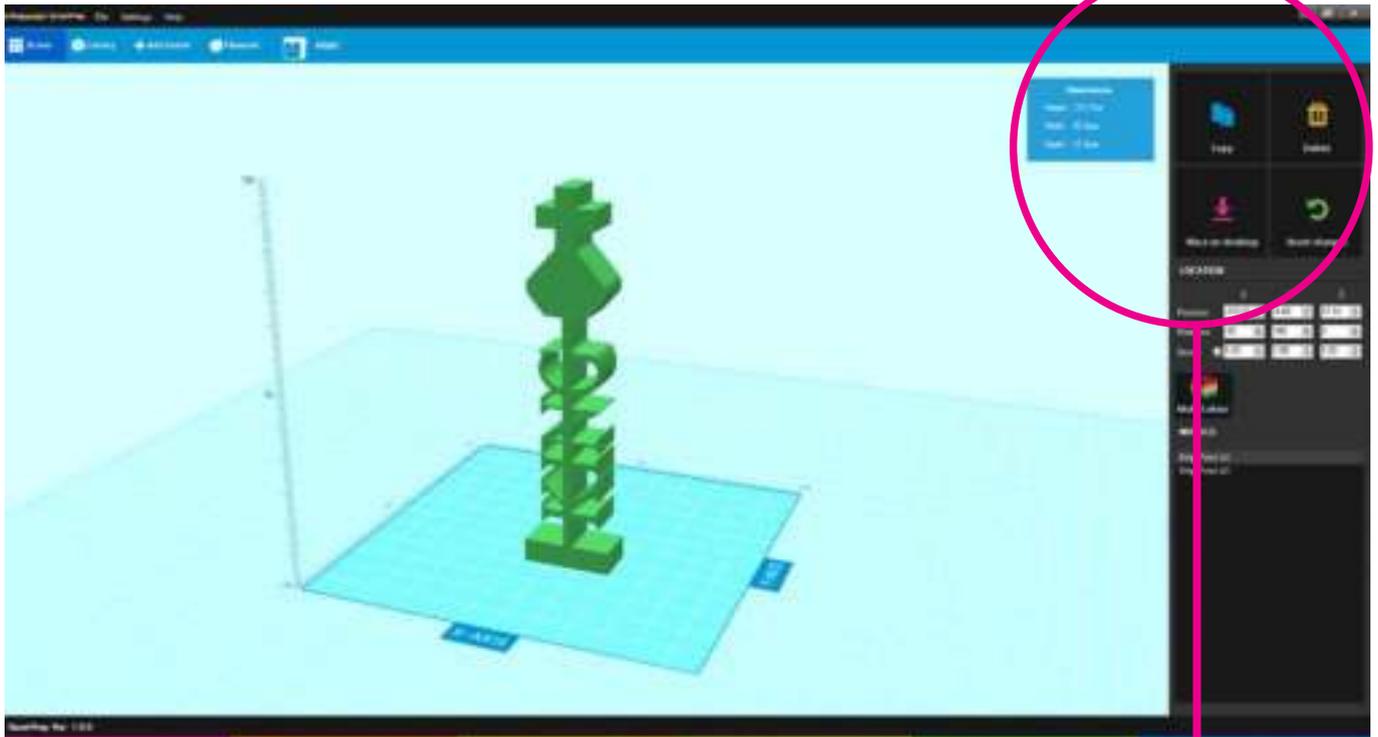
The Polaroid SmartPrep software has been designed to be easy-to-use, even if you have little or even no 3D printer experience.

Printing can be achieved in 2 easy steps:

1. Open the Polaroid SmartPrep Software and select 'Add model' at the top of the screen and locate the .stl file that you wish to print. Your model will then be loaded onto the print bed area.
2. Select 'Print' at the top of the screen, and confirm by pressing 'Print' again on the pop-up dialogue box.

Select to save your file for printing, choose the correct location on your computer and then click save.

DESKTOP FUNCTIONS



Dimensions	
Height: 15mm	This box provides you with the height, width and depth dimensions for the model that you have selected.
Width: 42.3mm	
Depth: 15mm	

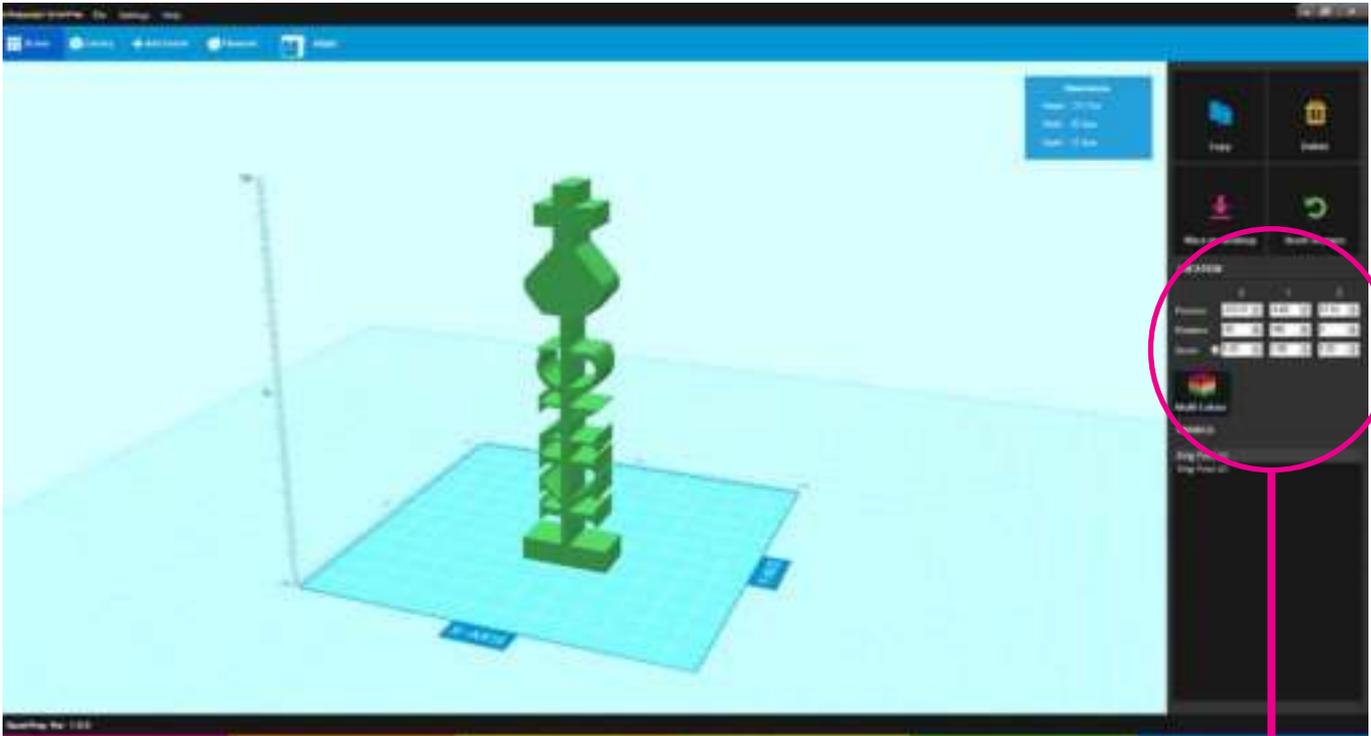
 Copy	This button allows you to make a copy of the model you currently have selected. You can make as many copies as you like.
---	--

 Delete	If you no longer want a model, make sure it is selected and then press this button to delete. You can also delete by pressing delete on your keyboard. Pressing and holding your delete key will delete all of the models, one-by-one.
---	--

 Place on desktop	If you re-position your model whilst editing and it is raised off the print bed then pressing this button will place the model back onto the bed.
---	---

 Reset changes	If at any point you want to revert your models and print area to how it was before you last saved, then this button will reset your changes.
--	--





Position

These boxes provide you with the X,Y and Z position of the selected model on the print bed area. To adjust the model position using these boxes you can either use the arrow buttons, manually type in a new position, or click into the box where the numbers are and use the scroll button on your mouse. Alternatively models can be moved with the mouse by clicking and dragging within the print bed area.

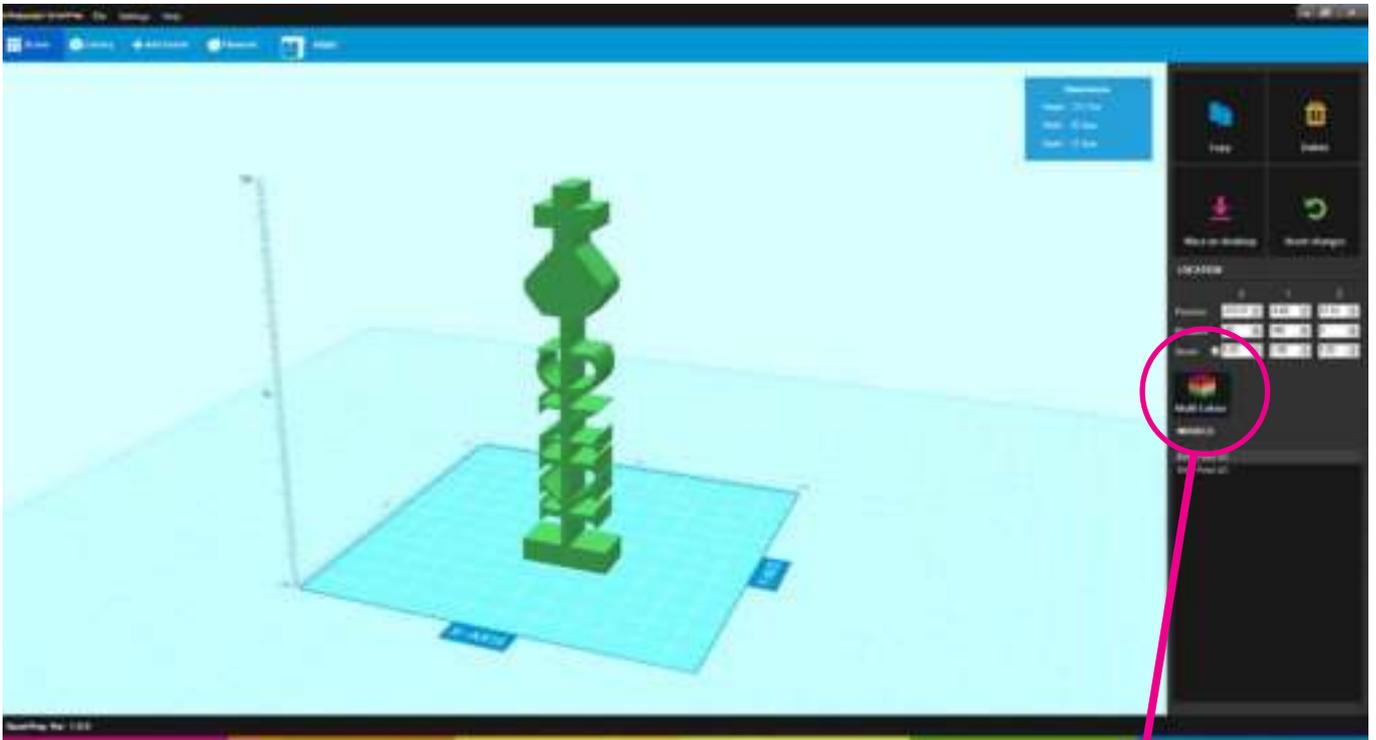
Rotation

These boxes provide you with the angle of the selected model on the print bed area, starting at a zero position when first imported. This then allows you to rotate the position on the bed. To adjust the angle of the selected model using these boxes you can either use the arrow buttons, manually type in a new angle (in degrees), or click into the box where the numbers are and use the scroll button on your mouse.

Scale:

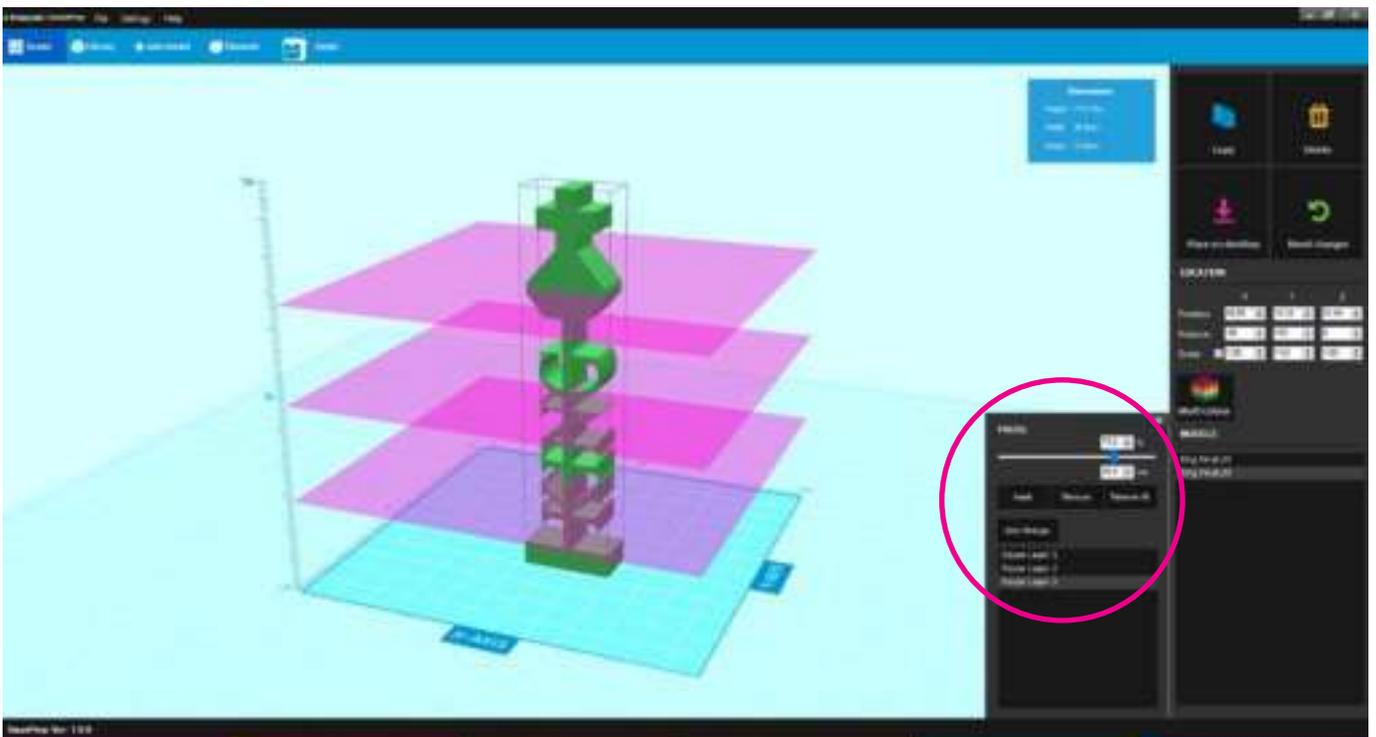
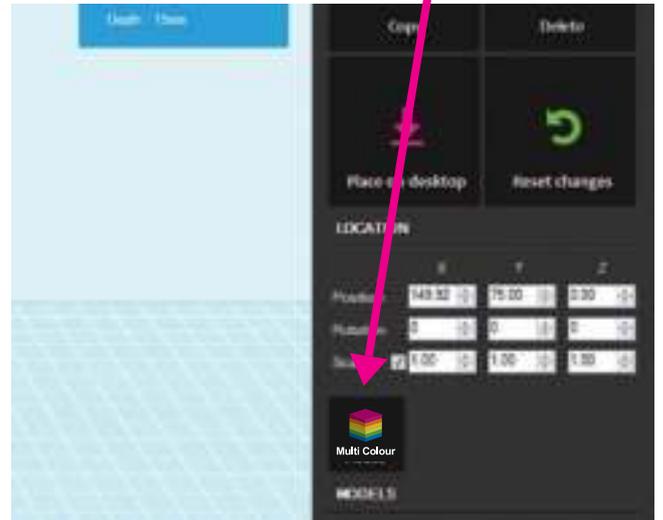
These boxes allow you to adjust the size of your models. Starting at a scale of 1, you can then scale up or down in multiples (i.e. 2 would be twice the size). To adjust the scale of the selected model using these boxes you can either use the arrow buttons, manually type in a new scale, or click into the box where the numbers are and use the scroll button on your mouse. With a tick in the left hand box you can scale your model proportionally; unticking this will allow you to scale along one axis individually.





Although the Polaroid PlaySmart 3D printer has only one extruder, you can easily print models in multiple colours.

By selecting Multi Colour in Polaroid SmartPrep you can pre-set the printer to pause at certain intervals during your print. By clicking Multi Colour it will insert a 'pause' onto your print bed area (seen as a pink layer). You can then move this to where you want it on your model, either by using the slider, or by typing in a position in millimetres (working from the bottom of your model upwards) or even a percentage point. You can set as many pauses in your print as you like. You can also easily space these equally by clicking the Auto Arrange button.

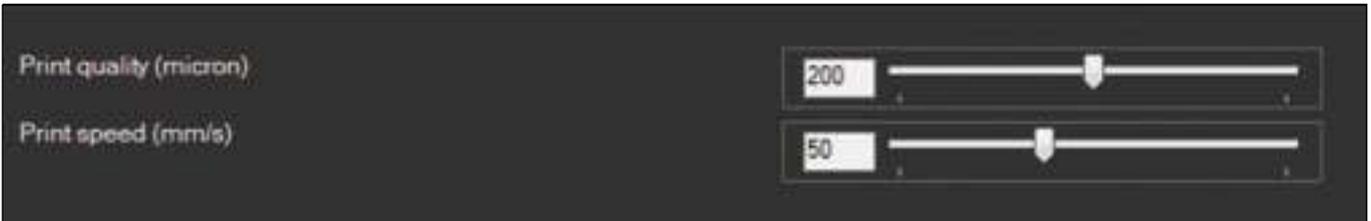


ADVANCED SETTINGS



Print Presets: **Default** Save Preset As... Delete

All Advanced Settings are set to their default position for standard printing. This allows you to just go ahead and print without needing to adjust anything. If however you want to make changes, you can do so easily.



There are two main things that can affect the quality of your print; one is the layer height (measured in microns) and the other is print speed (measured in millimetres per second). Using these sliders here you can adjust both settings. The quality ranges from 50 to 300 microns (0.05mm to 0.30mm) with a default of 200 (0.2mm). The speed ranges from 20mm/s to 100mm/s with a default of 50mm/s. **Note:** the smaller the micron number, the finer the print detail (as you are printing more layers) and the lower the speed, the better quality of print (as there is less vibration whilst printing).

SUPPORTS

Type of support

Lines Grid

Create support from minimum Angle (°)

30

Distance between supports and model in X,Y axis(mm)

0.7

Distance between supports and model in Z axis(mm)

0.1

Density of filament in supports(%)

15

Create supports with direct touch to bed



Support structures can be important in 3D printing as the method of printing one layer on top of another means that if there is an overhang within the model (where the layer being printed has nothing underneath to rest on) then this can cause a print to fail.

To print with supports on the Polaroid PlaySmart is easy; you simply tick the box that says 'Enable Supports' when you click Print. This will turn on the default supports, which places them anywhere on your model that has an overhang that is more than 30° from the vertical.

If you wish to adjust some of the support settings yourself then you can do so under the Advanced Settings. These include being able to adjust the type of support (default is a line support, or if more support is needed you can change to a grid structure), and also adjusting what angle the supports will initially be applied from, as well as other more advanced settings.

PROPERTIES

Shell thickness (mm)

0.8

Fill Density

15

Number of layers at the beginning and at the end of the print

6

Under the Advanced Settings you can also adjust the way that your model is printed.

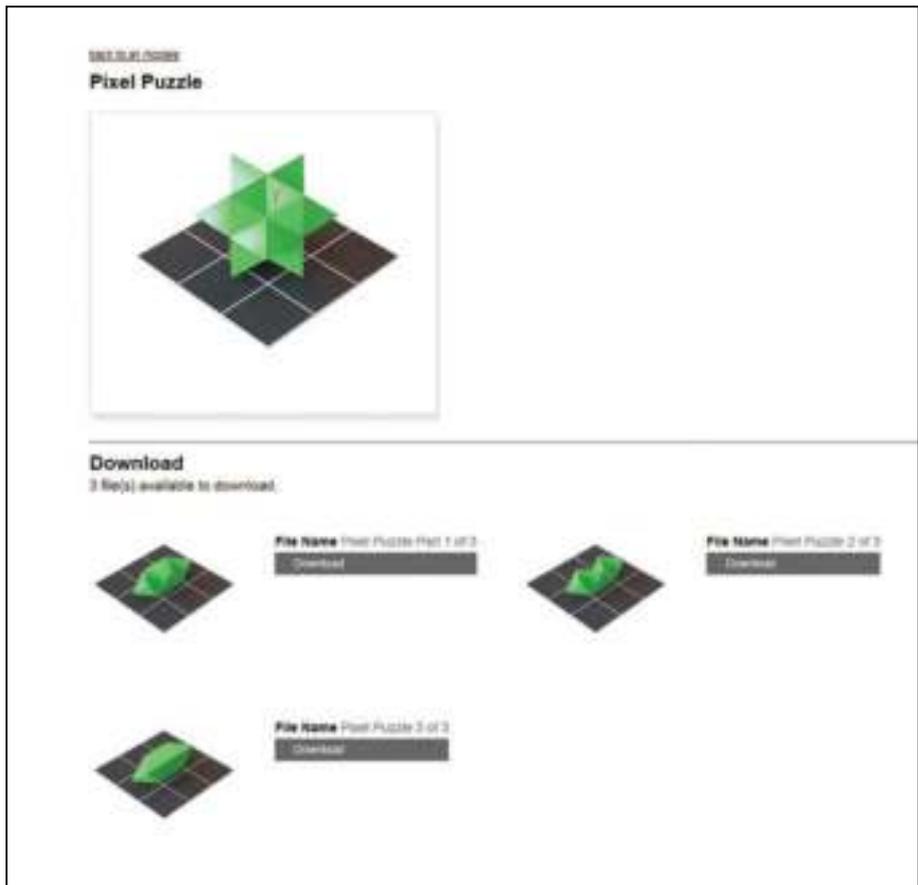
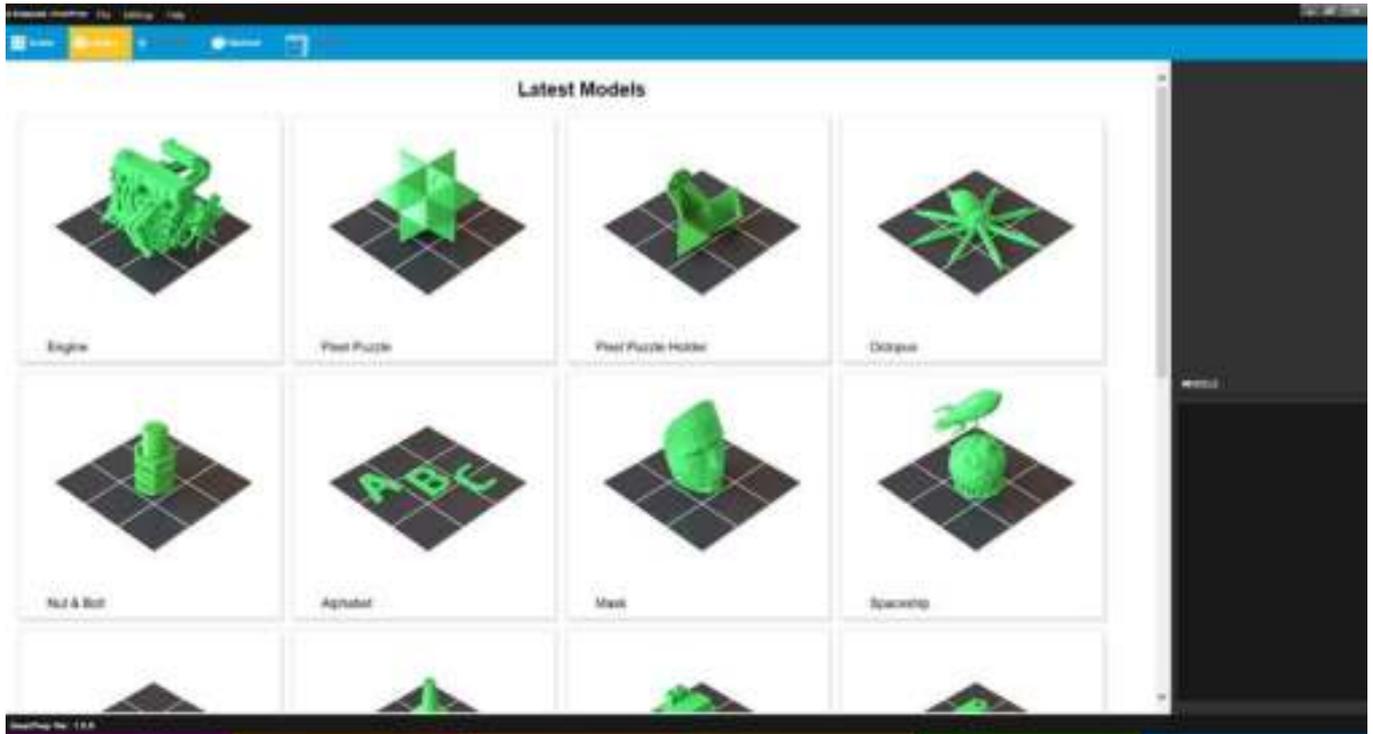
With this form of 3D printing, models are printed with a solid outer wall, surface and base and then a grid infill (i.e. it isn't solid throughout). Under the Properties section of the Advanced Settings you can adjust some of these features.

Shell thickness allows you to adjust how thick the outer walls of your model are in millimetres.

The fill density adjusts the grid inside the model. The default is set to 15% but if you wanted a completely hollow object you can slide this down to 0%, or for a more solid object simply slide the scale up towards 100%.

The other 'Properties' setting is to adjust the number of layers at the beginning and end of each print. This is default at 6 layers but can be adjusted up or down accordingly.

MODEL LIBRARY



The Polaroid PlaySmart 3D printer prints .stl file types; .stl being the industry standard format for 3D printable models.

To print a model you can either design it yourself and import into Polaroid SmartPrep, or download from one of the many existing online model libraries already available (free of charge). Alternatively you can download from the Polaroid Model Library that is built into the Polaroid SmartPrep Software.

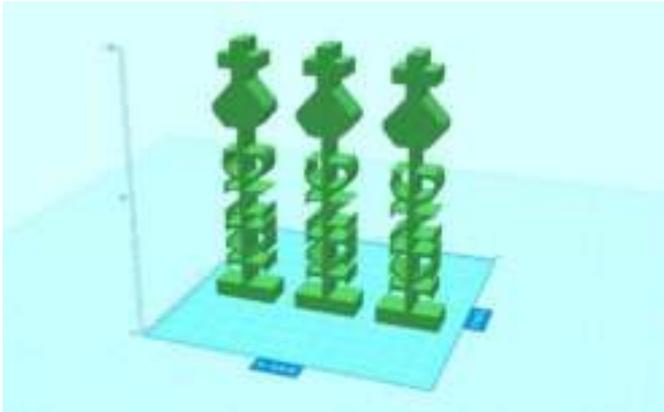
By clicking on the Library button at the top of the screen, it brings up the available models.

Selecting a model will then open up a new screen that provides you with a Download button. Once downloaded you will see the file name of that model appear in the model list on the right hand side of Polaroid

SmartPrep. Clicking on Scene in the top left of the screen will then take you back to your print area ready for printing.

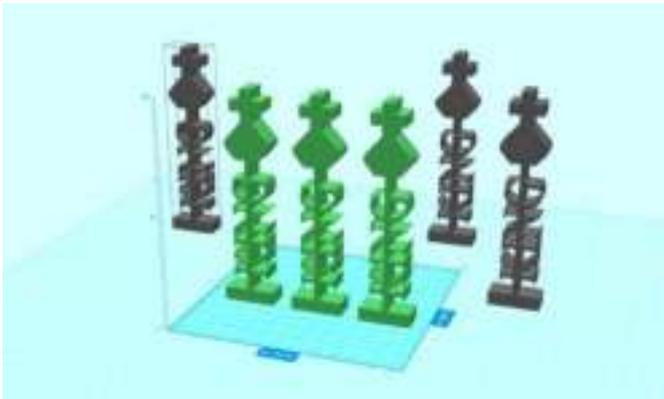
If the model you have selected has multiple parts to it then you will see each of the individual components and can download all of the parts that you need and then click Scene to return to your print area.

PREPARING, PRINTING AND SAVING YOUR SCENE



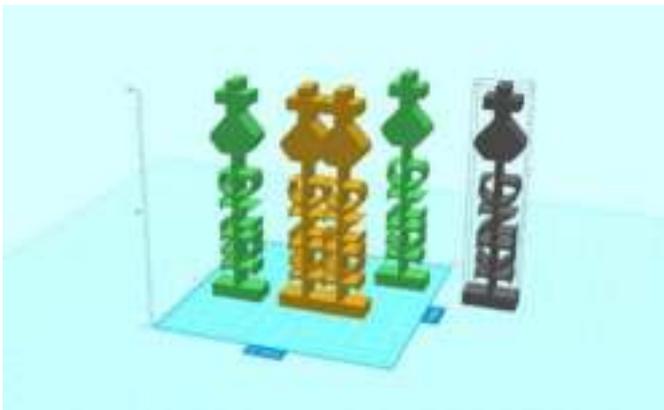
If copying an object when you first open Polaroid SmartPrep, it will copy one object behind another (as shown in the first image), allowing you to then arrange the items on the print bed as you wish. You will notice that this even keeps copying objects outside of the print bed area (the model shown in grey).

Alternatively, if you click on Settings at the top left of the screen you will be able to select Auto Arrange. This will then place objects into the optimum print position (to minimise the movement of the printhead) when copying objects (as shown in the second image).



If you see an image in grey within your workspace it means that it is partially or wholly outside of the print bed area. If you choose to print at this point, the object in grey will simply be ignored.

If you happen to overlap one model with another, you will see that they turn orange (as seen in the third image). This is to identify to you that they have overlapped, however the software will allow you to continue printing and the overlapped objects will print as they appear, i.e. merged into one new model.



If you have multiple objects to print but not all at one time, then you can simply place the models you want to print later off the print bed but within the workspace area (shown in light blue) and then select File and Save Scene from the headers at the top left corner of the screen. You can then return to this scene at any point in the future to continue printing the other models from the workspace area.

TECHNICAL SPECIFICATIONS

Polaroid PlaySmart 3D Printer			
Printer dimensions	290 (w) x 330 (h) x 270 (d) mm	PLA	✓
Max Model Size	120 (w) x 120 (h) x 120 (d) mm	PETG	✓
Printer Weight	5KG	P-Wood	✓
Resolution	50 - 300 microns	Wi-Fi Camera	✓
Speed	80 mm/s	One Click Print	✓
Nozzle Diameter	0.4mm	Mobile App	✓
Filament size	1.75mm	360° Fan Duct	✓
Data Transfer	SD Card, USB, Mobile App (Wi-Fi)	Heated Bed	✓
Guarantee	12 month manufacture's guarantee (this may differ by state/country according to minimum statutory requirements)	Auto Support Generation	✓

CLEANING AND MAINTENANCE

It is important that your Polaroid 3D printer is kept clean at all times in order to ensure continued consistency in your prints. Please follow the simple points below to help maintain your printer.



Keep the exterior of your printer clean by using a damp cloth to remove any dust or dirt. Ensure that the printer is switched off before you clean and be careful not to get water near any of the electrical components. Please take extra care if wiping down the LCD screen as too much pressure or water in the display could cause damage to the touchscreen functionality.

It is important to ensure that the extruder remains clean and free from any residual filament prior to each print otherwise the nozzle could get blocked and the print may not be successful.

Please ensure that you do not leave any item, model or residual material underneath or around the print bed, or anywhere inside the printer when printing as these could obstruct the movement of the extruder and print bed which could possibly result in an unsuccessful print.



To clean the glass print bed, firstly, please ensure that the bed is completely cool and that your model and any remnants of filament material have been removed, and then carefully wipe the bed with a clean cloth and warm water or specific glass cleaning solution. Please then ensure that the bed is completely dry before sending your next print.

NOTE: The bed can be removed to help with this process if required. If doing so, please disconnect the cable first and then remove extremely carefully. Please replace and ensure it is correctly reconnected before your next print.

POLAROID 3D PRINTER GUARANTEE

12 MONTH GUARANTEE

The manufacturer guarantees this printer against any defects in both material and workmanship for a period of 12 months (unless minimum statutory requirements otherwise) from the date of purchase. It does not include wear and tear, and is based on fair use with regular maintenance.

Should any defect(s) be discovered, please first visit our online troubleshooting support page at polaroid3d.com/support. However, if a problem occurs during the 12 month period that cannot be rectified remotely or on site by the manufacturer's technical team then you may be requested to return the printer. The information below outlines the process you must follow in order to return your printer for repair.

Your serial number and proof of purchase will be required in order to process your claim.

Please ensure you include a copy of your sales receipt when you return the product.

A SIMPLE RETURN PROCESS

1. Contact the manufacturer's customer service team by visiting polaroid3d.com/contact. You will be provided with a Returns Transfer Number (RTN) or advised to return to point of purchase.
2. Clearly write the RTN on the outside of the box or packaging, next to the shipping label (where applicable). The manufacturer will not be responsible for non-traceable packages or packages sent without a valid RTN on the outside of the packaging.

This guarantee is not valid if the product has been damaged by accident, electrical fault, through misuse, abuse, or failure to provide reasonable care as outlined within this User Guide. If the product has been altered without written authorisation from the technical team then the guarantee will not be valid.

All implied guarantees, including any implied guarantee of fitness for any particular purpose, are limited in duration to 12 months from the date of original purchase. In no event will the manufacturer be responsible for consequential damages resulting from the use of this product.

The above limitation or exclusion may not apply to you to the extent that applicable law may not allow the limitation or exclusion of liability for incidental or consequential damages.

Using third party software applications or using non-Polaroid filament may invalidate this guarantee in the event of damage subsequently being caused to the printer.

Tampering with the printer in any way may invalidate the guarantee. Please contact the manufacturer's team if you have any technical enquiries via polaroid3d.com/contact.

AFTER SALES SUPPORT: The manufacturer has a dedicated team of 3D printing specialists that are available to help with any problem or question you may have regarding your 3D printer. Please contact our team at **polaroid3d.com/contact**.

MAINTENANCE: It is important that your Polaroid 3D printer is kept clean at all times. For best print output it is recommended to keep the extruder nozzle(s) clean, and check regularly for any residual filament build up, as these may cause subsequent unsuccessful prints. Please contact **polaroid3d.com/contact** for guidance on how to remove any such build up.

CERTIFICATIONS AND COMPLIANCE

CERTIFICATION

The Polaroid PlaySmart 3D printer is compliant under the following applicable EU certifications:

- **WEEE Directive:** As both manufacturer and distributor, the Polaroid 3D printer team is WEEE compliant in all applicable EU countries in which the product is supplied. This ensures that our responsibilities are fulfilled in regards to the electronic waste that is generated through the sale of the Polaroid 3D printers and consumables.
- **Radio Equipment Directive (RED) 2014/53/EU:** This Directive allows electrical equipment to be approved by any EU member country, by provision of a set of common broad objectives, covering specific regulations that the product is tested against. The Polaroid PlaySmart 3D printers are tested and approved under this Directive.
- **RoHS Directive 2015/863/EU:** This is the Restriction of Hazardous Substances Directive. Its purpose is to restrict the use of hazardous materials in the manufacture of various types of electronic and electrical equipment. Each individual component of the equipment has been tested in order to ensure that the Polaroid PlaySmart 3D printers are approved under this Directive.
- **Green Dot Packaging Waste Directive - 94/62/EC:** This directive ensures that manufacturers whose products use packaging are responsible for either recovering their own packaging waste, or contributing to the cost of recovery and recycling of such waste. The Polaroid 3D team is registered and compliant against this directive across the applicable European countries.
- **CE Marking:** Following all of the above required legislation and certification enables each of the Polaroid PlaySmart 3D printers to proudly carry the CE Mark which confirms that they have been approved under each of these Directives.
- **FCC:** The **FCC Declaration of Conformity** or the **FCC mark** is a certification mark employed on electronic products manufactured or sold in the United States which certifies that the electromagnetic interference from the product is under limits approved by the Federal Communications Commission.
- **Proposition 65:** (Safe Drinking Water and Toxic Enforcement Act of 1986) requires products to be clearly marked with warning signs if they include any chemicals which have been deemed to potentially cause cancer, birth defects or other reproductive harm. This product has been tested and does not contain any chemicals which require this warning mark.



RoHS

CE

FCC



FAQs AND TROUBLESHOOTING

We hope that you have happy and trouble-free printing. But should you have any questions about anything, take a look at our FAQs and Troubleshooting questions below or visit our website at **polaroid3d.com/support** to see if we can help. If you still do not find a solution, please feel free to contact our team via **polaroid3d.com/contact**.

I can't get the printer to extrude any filament.

If you are trying to print but no filament is being extruded, please follow the 'Load' process via the LCD screen. This will start the extrusion process and hopefully filament should be released from the nozzle.

Should this not resolve the problem, please carefully remove the plastic tubing from the top of the push-fitting on top of the printhead (to do this, push the push-fitting downwards whilst gently pulling the tube upwards).

Please then repeat the extrusion process as above, but this time gently apply pressure by pushing the filament downwards into the top of the printhead. This should then allow the filament to free-flow and extrude correctly.

Should the above process not resolve the problem please contact our team via **polaroid3d.com/contact**.

I can't unload the filament from the extruder.

To unload the filament from the printer, please select 'Filament' and then 'Unload' on the LCD.

If this does not successfully unload the filament, please carefully remove the plastic tubing from the top of the push-fitting on top of the printhead (to do this, push the push-fitting downwards whilst gently pulling the tube upwards).

Once the plastic tubing has been removed, please follow the 'Unload' process again to retract the filament, whilst gently pulling the filament (by hand) from the top of the printhead. Try this process a maximum of two times should the first time be unsuccessful.

If the second retraction still hasn't freed the filament, please follow the 'Load' process instead. This will start the extrusion process (rather than retraction) which will hopefully loosen and free the filament.

Once you see filament being extruded (please only try this process a maximum of two times), please try the retraction process once again. The filament should now be loose and unload successfully.

If the above process is not successful please contact us via **polaroid3d.com/contact** and one of our team will guide you through a resolution.

Please remember to re-attach the plastic tubing into the push-fitting before commencing your next print.

I am having problems removing my model from the print bed.

Please allow the model to cool completely before trying to remove from the print bed. By doing so the model should release itself from the bed automatically as the filament cools down, allowing you to simply pick up the model from the bed. Please do not try to remove the model from the bed whilst the bed is still hot. The LCD screen will tell you the current temperature of the bed.

I have items missing/damaged when unpacking my printer for the first time.

Please get in touch with one of our team via polaroid3d.com/contact and let us know what is missing or damaged. Please note that you will need to provide us with your serial number and proof of purchase for the printer so that we can follow this up for you.

Why did the printhead extrude a different colour filament from what is installed on the very first extrusion?

Before the Polaroid PlaySmart 3D printers are despatched to you, they undergo quality control testing to ensure that they are performing perfectly for you. Part of this test is to print a test model on the printer to confirm that the quality output matches our pre-determined standard.

If you are seeing a small amount of a different colour filament extruded on the very first time you print with your printer it is because a different colour filament was used during this testing phase.

When loading your new filament, after the first section of extrusion you will be asked to either 'Confirm' or extrude '10mm more'. Select '10mm more' until you no longer see the previous colour. Once your new colour is running through, please select 'confirm' on the LCD.

NOTE: Please follow this same process when changing colours or materials.

My prints are warped across the base.

If you are seeing a slight warping across the base of your model when completed, (meaning that the model you have printed does not sit flat) please firstly double check your settings when saving your print file and ensure that you have selected the correct print material when saving the file as this will ensure that the extruder is heated to the correct temperature.

If you have confirmed that your settings are correct and you are still experiencing some warping then please check that you have the 'brim' function selected within the Advanced Settings within Polaroid SmartPrep (note that this is selected as the default in the software).

This will print a small amount of filament as a 'brim' around the external diameter of your model. The purpose of this is to retain heat at the base of the model to allow the filament to adhere to the bed and remain at a temperature that means it will not contract too quickly (which causes the warping) while the remaining print is completed.

A brim is especially recommended for models with large, flat bases where a large quantity of material is placed down at the start of a print and the level nature of the bottom of the model is particularly important.

When should I use a brim on my model?

A brim can be used on any model. However, it is especially recommended when printing models with large, flat bases as this helps to retain heat around the base of the model whilst it completes printing, ensuring that it doesn't cool too quickly as this is what could cause warping on your print.

If printing a model that has a complicated outline to it, a brim could be quite difficult to remove, particularly depending on the Print Bed Calibration. For example, if your nozzle is quite close to the bed then the filament will be more 'squashed down' when printing. This could mean that removing the brim may be more difficult. In order to adjust this, please print with a slightly increased gap between the nozzle and the print bed (but not too far that the first layer doesn't adhere properly to the bed). This should make the connection between the brim and the model less rigid and therefore easier to remove. This adjustment of the calibration is something that you will very quickly learn, including how and when to adjust based upon what you are printing.

I am trying to print a model that is the maximum size of the print area, with a brim, but it isn't printing successfully.

If printing with a brim, the brim must be included within the maximum print area. This will mean that your model must be slightly smaller than the print area to allow for the brim.

Please note that the brim itself needs 5mm around the entire perimeter of your model so please reduce any model that is the maximum print size by this amount on each side.

I am trying to download Polaroid SmartPrep Software but it is not recognising my serial number.

Firstly, please double check that you have entered the serial number correctly.

If you have confirmed this and you are still experiencing problems then please get in touch with one of our team via polaroid3d.com/contact and we will help to rectify the problem for you or alternatively provide you with a temporary serial number as an alternative.

Please do note however that you will need to provide us with proof of purchase for the printer relating to the serial number that you are experiencing difficulties with.

If I pause my print why does it carry on printing for a few seconds after I have pressed pause?

The printer will continue printing until it has finished the last command it has received, which may include several movements of the printhead. Once it has completed this set of commands the printhead will stop and the bed will lower slightly and the head will move to the front left corner of the printer. Please do not reach into the printer until the head and bed have finished moving. Even then please be aware that the nozzle and print bed will still be very hot.

I am trying to install a cartridge and I can hear a knocking sound from the printer.

Do not worry if you hear a brief knocking sound when loading new filament, this is because the motor that pulls through the filament into the printhead runs at a slightly faster speed when loading filament than it does when printing therefore what you hear is the working of this motor.

Should this knocking sound continue whilst printing, please try unloading and reloading your filament, whilst gently applying pressure where the filament enters the push-fitting (see *'I can't get the printer to extrude filament'* for more information). This should enable the filament to flow freely from the nozzle. However, if you have tried this and are still hearing the same noise, please contact our team via **polaroid3d.com/contact** and they will guide you through a solution.

Is Polaroid SmartPrep compatible with both Windows and Mac?

Polaroid SmartPrep is currently compatible with Windows 7, 8 and 10. A Mac version will be released soon.

In the meantime, in order to slice your models when using a Mac, we recommend using third party software, Cura. This will allow you to save your model as Gcode and then print on your Polaroid PlaySmart 3D printer.

My print bed doesn't seem to be heating up before each print.

If you are trying to print but your print bed doesn't seem to be heating, please turn off your printer, disconnect the cable from the back of the print bed, and leave for a minimum of 30 seconds before reconnecting and turning your printer back on. This time the bed should heat correctly.

If this does not solve the problem, please contact our team via **polaroid3d.com/contact** and they will guide you through a solution.

My model doesn't seem to be printing correctly on the first few layers; one side looks more squashed to the bed than the other.

If this is happening it could mean that you need to readjust the bed levelling and/or nozzle calibration. You can do this by selecting 'Settings' on the LCD and then following the 'Bed Levelling' or 'Print Bed Calibration' processes. This will ensure that your bed is level before printing and that the nozzle is the correct distance from the print bed before printing.

I am using the Multi Colour function from Polaroid SmartPrep but the new colour isn't extruding from the nozzle when I am trying to load it.

To load new filament, please follow the 'Load' process via the LCD screen. This will start the extrusion process and hopefully filament should be released from the nozzle.

Should this not be the case, please carefully remove the plastic tubing from the top of the push-fitting on top of the printhead (to do this, push the push-fitting downwards whilst gently pulling the tube upwards).

Please then repeat the extrusion process as above, but this time gently apply pressure by pushing the filament downwards into the top of the printhead. This should then allow the filament to free-flow and extrude correctly.

Should the above process not resolve the problem please contact our team via **polaroid3d.com/contact**.

I am trying to adjust the temperature of my nozzle/print bed via the LCD screen however it doesn't seem to be changing.

As the nozzle and bed temperatures are pre-set in the Gcode when you sliced your model, you will need to allow the first few layers of your model to print before trying to adjust manually on the LCD screen. Trying to adjust too early will not take effect as the Gcode will simply override your changes. Once the first few layers have printed you may adjust via the LCD screen.

I am trying to print a V-Shaped model but it keeps failing as it gets near to the top. Is there something I can do to stop this?

This could be happening because of the contraction of the material as it cools. Because the model you are trying to print is V-Shaped, as it contracts it may bend inwards slightly at the top. This bend actually means that the model is actually slightly taller than it should be and therefore it could cause the nozzle to catch as it passes the top of the model. If this is the case then it could cause the model to fail.

If this happens then please try adjusting the layer height when slicing. This should give you a larger gap between the top of your model and the nozzle, allowing for free pass of the nozzle as it moves over the top of the printed model.

I can't seem to get my SD card into the slot on the front of the printer

Please ensure that the metal connectors on the SD card are facing upwards as you insert it into the printer. If this does not resolve the problem, please contact the team at **polaroid3d.com/contact**.

For any points not answered in this User Guide, or on our website, please contact our team at **polaroid3d.com/contact** detailing your enquiry and one of the team will be in touch.



CONTACT DETAILS

EBP Group Ltd. (Polaroid 3D)
26 Chase Road, Park Royal, London, NW10 6BB

Sales

enquiries@polaroid3d.com

Support

polaroid3d.com/support

Customer Service

+44 (0)20 8838 6888

polaroid3d.com

This product is manufactured, distributed and sold by Environmental Business Products Ltd. *Polaroid*, *Polaroid & Pixel*, *Polaroid Color Spectrum*, and *Polaroid Classic Border Logo* are trademarks of PLR IP Holdings, LLC, used under license. PLR IP Holdings, LLC does not manufacture this product or provide any Manufacturer's Warranty or support. ©2019 All Rights Reserved.



Instantly recognizable. Instantly reassuring. The Polaroid Classic Border and Polaroid Color Spectrum logos let you know you've purchased a product that exemplifies the best qualities of our brand and that contribute to our rich heritage of quality and innovation.