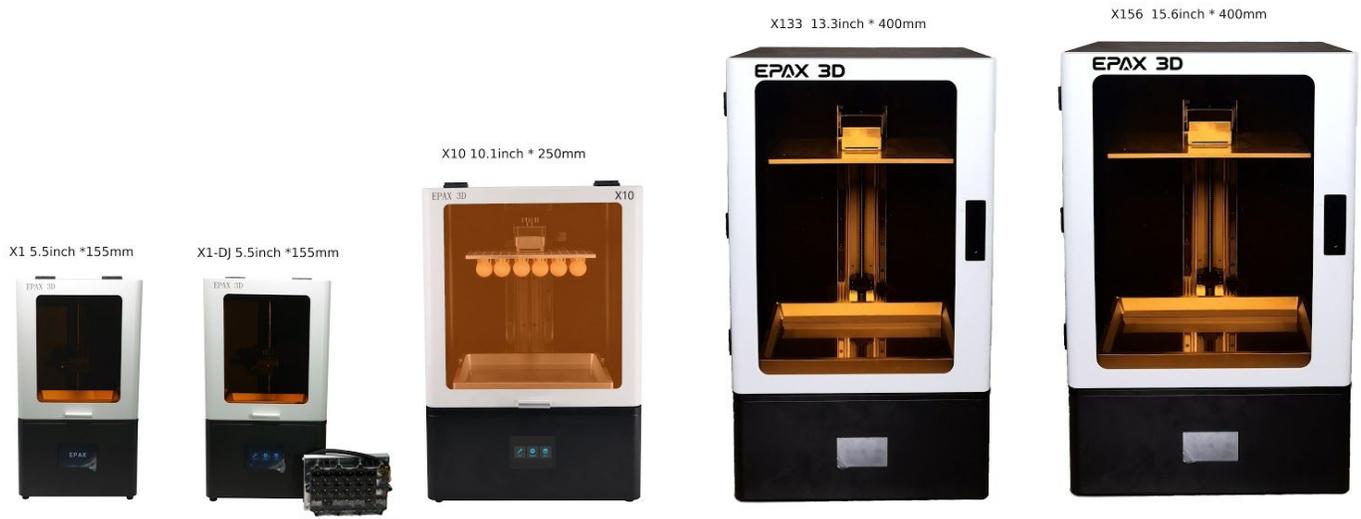


# EPAX 3D



## EPAX LCD Resin 3D Printer User Manual

Read the User Manual before operating the product, and keep it at a convenient place near the printer.

**It is strongly recommended that you watch our tutorial videos before operating your printer for the first time.**

For additional instructions, videos, and resources, please visit [www.epax3d.com](http://www.epax3d.com) and visit the Support section.

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# 1. Technical Specifications

|   |  |   |  |   |  |  |   |
|---|--|---|--|---|--|--|---|
|  |  |   |  |   |  |  |   |
|   | <b>Name</b>  | <b>EPAX X1-N 5.5" 2K COLOR</b>              | <b>EPAX X1-N-DJ 5.5" 2K COLOR w/Parallel Light</b> | <b>EPAX X1-N-DJ 5.9" 2K MONO w/Parallel Light</b>     | <b>EPAX X10 10.1 INCH 2K COLOR</b>                   | <b>EPAX X10 8.9 INCH 4K MONO</b>             | <b>EPAX X133 13.3 INCH 4K MONO</b>  |
| <b>Max Built Size (W x D x H)</b>   | 115mm (L) *65mm (W) *155mm (H) build volume  | 115mm (L) *65mm (W) *155mm (H) build volume | 128mm (L) *81mm (W) *155mm (H) build volume        | 10.1 2K: 216mm (L) *135mm (W) *250mm (H) build volume | 8.9 4K: 192mm (L) *120mm (W) *250mm (H) build volume | 293mm (L) *165mm (W) *400mm (H) build volume | 15.6 color: 345mm (L) *194mm (W) *400mm (H)<br>14 mono: 309mm (L) *174mm (W) *400mm (H)<br>13.3 mono: 293mm (L) *165mm (W) *400mm (H) |
| <b>Print Technology</b>   | LCD  | LCD   | LCD  | LCD   | LCD  | LCD  | LCD   |
| <b>Material</b>   | Resin  | Resin                                       | Resin  | Resin   | Resin  | Resin  | Resin   |
| <b>Resolution</b>   | 2560*1440 (2k color)   | 2560*1440 (2k color)                        | 2560*1620 (2k mono)                                | 2560*1600 (2k color)                                  | 3840*2160 (4k mono)                                  | 3840*2160 (4k mono)                          | 3840*2160 (4k color)  |
| <b>Layer Thickness</b>  | 0.01 ~ 0.2 mm  | 0.01 ~ 0.2 mm                               | 0.01 ~ 0.2 mm                                      | 0.01 ~ 0.2 mm   | 0.01 ~ 0.2 mm  | 0.01 ~ 0.2 mm                                | 0.01 ~ 0.2 mm   |
| <b>Connectivity</b>   | USB Flash Drive, Ethernet  | USB Flash Drive, Ethernet                   | USB Flash Drive, Ethernet                          | USB Flash Drive, Ethernet                             | USB Flash Drive, Ethernet                            | USB Flash Drive, Ethernet                    | USB Flash Drive, Ethernet   |
| <b>Wi-Fi</b>  | No   | No  | No   | No  | No   | No   | No  |
| <b>Product Size (W x D x H)</b>   | 9.5 x 10 x 17 inches   | 9.5 x 10 x 17 inches                        | 9.5 x 10 x 17 inches                               | 14.5 x 15 x 21 inches                                 | 14.5 x 15 x 21 inches                                | 18 x 15 x 31 inches                          | 20 x 17 x 31 inches   |
| <b>Gross Weight</b>   | 23lbs  | 24lbs                                       | 24lbs  | 48lbs   | 48lbs  | 90lbs  | 100lbs  |
| <b>Platform</b>   | Soft Aluminum Platform   | Soft Aluminum Platform                      | Soft Aluminum Platform                             | Soft Aluminum   | Soft Aluminum  | Soft Aluminum Platform                       | Soft Aluminum Platform  |
| <b>Slicer</b>   | ChiTuBox   | ChiTuBox                                    | ChiTuBox   | ChiTuBox  | ChiTuBox   | ChiTuBox                                     | ChiTuBox  |
| <b>Light Source</b>   | 40W 5x10 LED array   | 30W Parallel LED Light                      | 30W Parallel LED Light                             | Special Parallel LED Light                            | Special Parallel LED Light                           | Special Parallel LED Light                   | Special Parallel LED Light  |
| <b>Film</b>   | nFEP Film  | nFEP Film                                   | nFEP Film  | nFEP Film   | nFEP Film  | nFEP Film                                    | nFEP Film   |
| <b>Touch Screen Size</b>  | 3.5 inch   | 3.5 inch                                    | 3.5 inch   | 3.5 inch  | 3.5 inch   | 3.5 inch                                     | 3.5 inch  |

## 2. Touchscreen Menu Structure

### MAIN MENU



The EPAX touchscreen menu has many features. These are the main ones you will use.

### TOOL



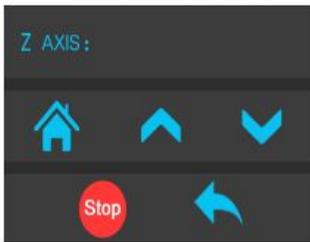
### SYSTEM



### PRINT



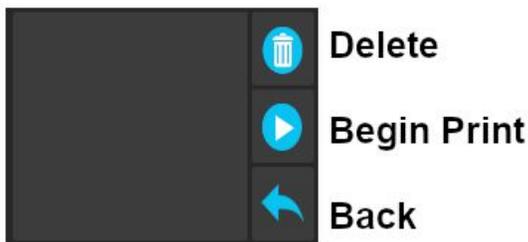
### MANUAL



This allows you to manually move your Z-axis up and down.

 **Auto-Home:**  
move Z to Home position

After selecting a file to print it will be previewed here:



When you begin printing you will see a layer preview here:



Below you can see information about your print such as percentage complete and time to completion.

### 3. Slicing Software - ChiTuBox

#### Installation

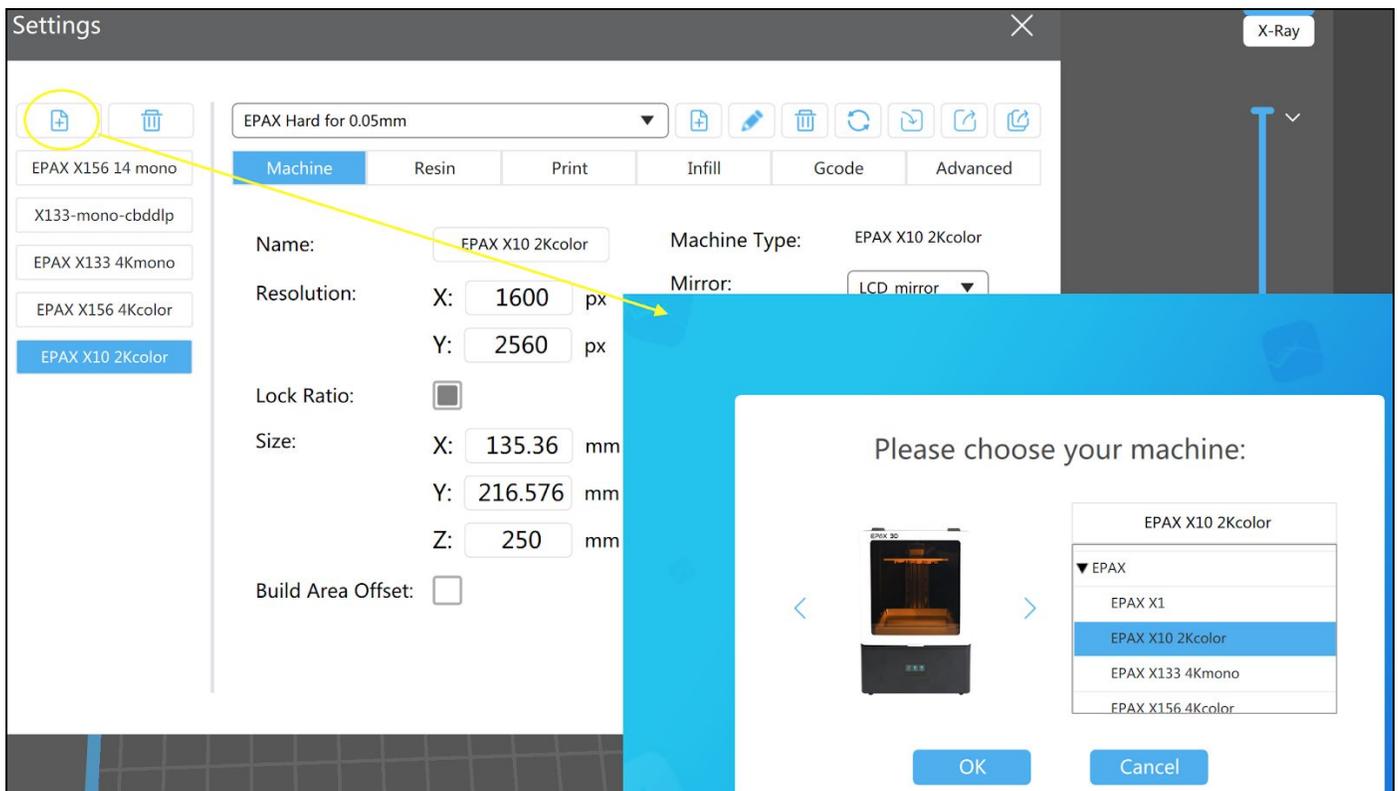
For the latest slicer download, please visit: <https://www.chitubox.com/download.html>

#### Slicer Settings

The settings for your printer can be found online at:

<https://epax3d.com/pages/slicer-settings-chitubox>

Latest ChiTuBox also has settings pre-configured for some models. See below example.



The settings include the Machine Settings (machine volume size, resolution, etc.) as well as basic Print Settings (print layer height, bottom layers, bottom exposure time and regular exposure time, etc.) for resin under average printing conditions. **If your model is not shown up in ChiTuBox's presets, you can create a generic profile and enter the values yourself.** Below are the settings for your reference.

## Machine Settings

X1/X1-N and X1-DJ/X1-N-DJ with 5.5” 2K COLOR:

| Machine     | Resin                                | Print                                  | Infill        | Gcode                                     | Advanced |
|-------------|--------------------------------------|--|---------------|---|----------|
| Name:       | <input type="text" value="Default"/> |  | Machine Type: | <input type="text" value="default"/>      |          |
| Resolution: | X:                                   | <input type="text" value="1440"/> px   | Mirror:       | <input type="text" value="LCD_mirror"/> ▼ |          |
|             | Y:                                   | <input type="text" value="2560"/> px   |               |   |          |
| Lock Ratio: | <input type="checkbox"/>             |  |               |   |          |
| Size:       | X:                                   | <input type="text" value="68.04"/> mm  |               |   |          |
|             | Y:                                   | <input type="text" value="120.96"/> mm |               |   |          |
|             | Z:                                   | <input type="text" value="155"/> mm    |               |   |          |

X1-K with 6” 2K MONO:

| Machine            | Resin                                       | Print                                  | Infill        | Gcode                                     | Advanced |
|--------------------|---|--|---------------|---|----------|
| Name:              | <input type="text" value="EPAX X1-K-mono"/> |  | Machine Type: | <input type="text" value="EPAX X1"/>      |          |
| Resolution:        | X:  | <input type="text" value="1620"/> px   | Mirror:       | <input type="text" value="LCD_mirror"/> ▼ |          |
|                    | Y:  | <input type="text" value="2560"/> px   |               |   |          |
| Lock Ratio:        | <input type="checkbox"/>                    |  |               |   |          |
| Size:              | X:  | <input type="text" value="82.62"/> mm  |               |   |          |
|                    | Y:  | <input type="text" value="130.56"/> mm |               |   |          |
|                    | Z:  | <input type="text" value="155"/> mm    |               |   |          |
| Build Area Offset: | <input type="checkbox"/>                    |  |               |   |          |

X10-2Kcolor with 10.1” 2K COLOR:

| Machine     | Resin                                | Print                                   | Infill        | Gcode                                     | Advanced |
|-------------|--------------------------------------|---|---------------|---|----------|
| Name:       | <input type="text" value="Default"/> |   | Machine Type: | <input type="text" value="default"/>      |          |
| Resolution: | X:                                   | <input type="text" value="1600"/> px    | Mirror:       | <input type="text" value="LCD_mirror"/> ▼ |          |
|             | Y:                                   | <input type="text" value="2560"/> px    |               |   |          |
| Lock Ratio: | <input type="checkbox"/>             |   |               |   |          |
| Size:       | X:                                   | <input type="text" value="135.36"/> mm  |               |   |          |
|             | Y:                                   | <input type="text" value="216.576"/> mm |               |   |          |
|             | Z:                                   | <input type="text" value="250"/> mm     |               |   |          |

X10-4Kmono with 8.9" 4K MONO:

| Machine            | Resin                    | Print   | Infill        | Gcode        | Advanced |
|--------------------|--------------------------|---------|---------------|--------------|----------|
| Name:              | EPAX X10 4K mono CTB     |         | Machine Type: | default      |          |
| Resolution:        | X:                       | 3840 px | Mirror:       | LCD_mirror ▼ |          |
|                    | Y:                       | 2400 px |               |              |          |
| Lock Ratio:        | <input type="checkbox"/> |         |               |              |          |
| Size:              | X:                       | 192 mm  |               |              |          |
|                    | Y:                       | 120 mm  |               |              |          |
|                    | Z:                       | 250 mm  |               |              |          |
| Build Area Offset: | <input type="checkbox"/> |         |               |              |          |

X133-4Kmono with 13.3" 4K MONO:

| Machine            | Resin                    | Print     | Infill        | Gcode            | Advanced |
|--------------------|--------------------------|-----------|---------------|------------------|----------|
| Name:              | EPAX X133 4Kmono         |           | Machine Type: | EPAX X133 4Kmono |          |
| Resolution:        | X:                       | 3840 px   | Mirror:       | LCD_mirror ▼     |          |
|                    | Y:                       | 2160 px   |               |                  |          |
| Lock Ratio:        | <input type="checkbox"/> |           |               |                  |          |
| Size:              | X:                       | 293.76 mm |               |                  |          |
|                    | Y:                       | 165.24 mm |               |                  |          |
|                    | Z:                       | 400 mm    |               |                  |          |
| Build Area Offset: | <input type="checkbox"/> |           |               |                  |          |

X156-4Kcolor with 15.6" 4K Color:

| Machine            | Resin                    | Print    | Infill        | Gcode             | Advanced |
|--------------------|--------------------------|----------|---------------|-------------------|----------|
| Name:              | EPAX X156 4Kcolor        |          | Machine Type: | EPAX X156 4Kcolor |          |
| Resolution:        | X:                       | 3840 px  | Mirror:       | LCD_mirror ▼      |          |
|                    | Y:                       | 2160 px  |               |                   |          |
| Lock Ratio:        | <input type="checkbox"/> |          |               |                   |          |
| Size:              | X:                       | 345.6 mm |               |                   |          |
|                    | Y:                       | 194.4 mm |               |                   |          |
|                    | Z:                       | 400 mm   |               |                   |          |
| Build Area Offset: | <input type="checkbox"/> |          |               |                   |          |

X156-4Kmono-14 with 14" Mono:

| Machine            | Resin                    | Print      | Infill        | Gcode        | Advanced |
|--------------------|--------------------------|------------|---------------|--------------|----------|
| Name:              | EPAX X156 14 mono        |            | Machine Type: | default      |          |
| Resolution:        | X:                       | 3840 px    | Mirror:       | LCD_mirror ▼ |          |
|                    | Y:                       | 2160 px    |               |              |          |
| Lock Ratio:        | <input type="checkbox"/> |            |               |              |          |
| Size:              | X:                       | 309.312 mm |               |              |          |
|                    | Y:                       | 173.988 mm |               |              |          |
|                    | Z:                       | 400 mm     |               |              |          |
| Build Area Offset: | <input type="checkbox"/> |            |               |              |          |

X156 with 13.3" Mono:

Please use X133's settings for this scenario.

**Resin settings are very different between color screen and mono screen. In general, a mono screen only needs 1/4th of a color screen's normal exposure time. Below are settings for EPAX hard resin.**

EPAX hard resin settings for EPAX X1/X1-N/X1-DJ/X1-N-DJ **color** screen:

| Machine  | Resin | Print | Infill | Gcode | Advanced |
|--|-------|-------|--------|-------|----------|
| <div style="display: flex; justify-content: space-between; align-items: center;"> <div> <p>EPAX X156 14 mono</p> <p>X133-mono-cbddl</p> <p>EPAX X133 4Kmono</p> <p>EPAX X156 4Kcolor</p> <p>EPAX X10 2Kcolor</p> <p>EPAX X1-DJ 5.9mono</p> <p>EPAX X10 4Kmono</p> <p style="background-color: #007bff; color: white; padding: 2px;">EPAX X1/X1-DJ</p> </div> <div style="border: 1px solid #ccc; padding: 5px;"> <p>EPAX Hard for 0.05mm</p> <p>Layer Height: <input type="text" value="0.05"/> mm</p> <p>Bottom Layer Count: <input type="text" value="4"/></p> <p>Exposure Time: <input type="text" value="8"/> s</p> <p>Bottom Exposure Time: <input type="text" value="50"/> s</p> <p>Light-off Delay: <input type="text" value="0"/> s</p> <p>Bottom Light-off Delay: <input type="text" value="0"/> s</p> </div> <div> <p>Bottom Lift Distance: <input type="text" value="5"/> mm</p> <p>Lifting Distance: <input type="text" value="5"/> mm</p> <p>Bottom Lift Speed: <input type="text" value="40"/> mm/min</p> <p>Lifting Speed: <input type="text" value="60"/> mm/min</p> <p>Retract Speed: <input type="text" value="150"/> mm/min</p> </div> </div> |       |       |        |       |          |

EPAX hard resin settings for EPAX X1-K 2K **mono** screen:

| EPAX Hard for 0.05mm  |       |       |        |       |          |  |
|-----------------------|-------|--|--------|-------|----------|--|
| Machine               | Resin | Print  | Infill | Gcode | Advanced |  |
| EPAX X156 14 mono     |       |  |        |       |          |  |
| X133-mono-cbddlpl     |       |  |        |       |          |  |
| EPAX X133 4Kmono      |       |  |        |       |          |  |
| EPAX X10 2Kcolor      |       |  |        |       |          |  |
| <b>EPAX X1-K-mono</b> |       |  |        |       |          |  |
| EPAX X10 4Kmono       |       |  |        |       |          |  |
| EPAX X1/X1-DJ         |       |  |        |       |          |  |
| EPAX X10 4K mono CTB  |       |  |        |       |          |  |
| EPAX X1               |       |  |        |       |          |  |
| EPAX X156 4Kcolor     |       |  |        |       |          |  |

|                         |                                   |    |                       |                                  |        |
|-------------------------|-----------------------------------|----|-----------------------|----------------------------------|--------|
| Layer Height:           | <input type="text" value="0.05"/> | mm | Bottom Lift Distance: | <input type="text" value="5"/>   | mm     |
| Bottom Layer Count:     | <input type="text" value="4"/>    |    | Lifting Distance:     | <input type="text" value="5"/>   | mm     |
| Exposure Time:          | <input type="text" value="3"/>    | s  | Bottom Lift Speed:    | <input type="text" value="40"/>  | mm/min |
| Bottom Exposure Time:   | <input type="text" value="25"/>   | s  | Lifting Speed:        | <input type="text" value="60"/>  | mm/min |
| Light-off Delay:        | <input type="text" value="0"/>    | s  | Retract Speed:        | <input type="text" value="150"/> | mm/min |
| Bottom Light-off Delay: | <input type="text" value="0"/>    | s  |                       |                                  |        |

EPAX hard resin settings for EPAX X10 2K **color** screen:

| EPAX Hard for 0.05mm    |       |       |        |       |          |  |
|-------------------------|-------|--|--------|-------|----------|--|
| Machine                 | Resin | Print  | Infill | Gcode | Advanced |  |
| EPAX X156 14 mono       |       |  |        |       |          |  |
| X133-mono-cbddlpl       |       |  |        |       |          |  |
| EPAX X133 4Kmono        |       |  |        |       |          |  |
| EPAX X156 4Kcolor       |       |  |        |       |          |  |
| <b>EPAX X10 2Kcolor</b> |       |  |        |       |          |  |
| EPAX X1-DJ 5.9mono      |       |  |        |       |          |  |
| EPAX X10 4Kmono         |       |  |        |       |          |  |
| EPAX X1/X1-DJ           |       |  |        |       |          |  |

|                         |                                   |    |                       |                                  |        |
|-------------------------|-----------------------------------|----|-----------------------|----------------------------------|--------|
| Layer Height:           | <input type="text" value="0.05"/> | mm | Bottom Lift Distance: | <input type="text" value="7"/>   | mm     |
| Bottom Layer Count:     | <input type="text" value="6"/>    |    | Lifting Distance:     | <input type="text" value="7"/>   | mm     |
| Exposure Time:          | <input type="text" value="8"/>    | s  | Bottom Lift Speed:    | <input type="text" value="40"/>  | mm/min |
| Bottom Exposure Time:   | <input type="text" value="50"/>   | s  | Lifting Speed:        | <input type="text" value="60"/>  | mm/min |
| Light-off Delay:        | <input type="text" value="0"/>    | s  | Retract Speed:        | <input type="text" value="150"/> | mm/min |
| Bottom Light-off Delay: | <input type="text" value="0"/>    | s  |                       |                                  |        |

### EPAX hard resin settings for EPAX X10 4K mono screen:

EPAX Hard for 0.05mm

Machine    Resin    **Print**    Infill    Gcode    Advanced

Layer Height: 0.05 mm    Bottom Lift Distance: 7 mm

Bottom Layer Count: 6    Lifting Distance: 7 mm

Exposure Time: 3 s    Bottom Lift Speed: 40 mm/min

Bottom Exposure Time: 25 s    Lifting Speed: 60 mm/min

Light-off Delay: 0 s    Retract Speed: 150 mm/min

Bottom Light-off Delay: 0 s

### EPAX hard resin settings for EPAX X133 4K mono screen:

EPAX Hard

Machine    Resin    **Print**    Infill    Gcode    Advanced

Layer Height: 0.05 mm    Bottom Lift Distance: 15 mm

Bottom Layer Count: 6    Lifting Distance: 12 mm

Exposure Time: 3 s    Bottom Lift Speed: 40 mm/min

Bottom Exposure Time: 25 s    Lifting Speed: 40 mm/min

Light-off Delay: 0 s    Retract Speed: 150 mm/min

Bottom Light-off Delay: 0 s

EPAX hard resin settings for EPAX X156 4K **color** screen:

| Machine                  | Resin | Print | Infill | Gcode | Advanced |
|--------------------------|-------|-------|--------|-------|----------|
| EPAX X156 14 mono        |       |       |        |       |          |
| X133-mono-cbddlpl        |       |       |        |       |          |
| EPAX X133 4Kmono         |       |       |        |       |          |
| <b>EPAX X156 4Kcolor</b> |       |       |        |       |          |
| EPAX X10 2Kcolor         |       |       |        |       |          |
| EPAX X1-DJ 5.9mono       |       |       |        |       |          |
| EPAX X10 4Kmono          |       |       |        |       |          |
| EPAX X1/X1-DJ            |       |       |        |       |          |

|                         |      |    |                       |     |        |
|-------------------------|------|----|-----------------------|-----|--------|
| Layer Height:           | 0.05 | mm | Bottom Lift Distance: | 15  | mm     |
| Bottom Layer Count:     | 6    |    | Lifting Distance:     | 12  | mm     |
| Exposure Time:          | 8    | s  | Bottom Lift Speed:    | 40  | mm/min |
| Bottom Exposure Time:   | 50   | s  | Lifting Speed:        | 40  | mm/min |
| Light-off Delay:        | 0    | s  | Retract Speed:        | 150 | mm/min |
| Bottom Light-off Delay: | 0    | s  |                       |     |        |

EPAX hard resin settings for EPAX X156 with 4K 13.3” **mono** or 14” **mono** screen:

Please use X133’s 4K mono screen resin settings.

As you can see, the major difference between different sizes of printers and color/mono screens are:

Normal Exposure Time -- Usually mono screen requires only 1/4th of color screen value

Bottom Exposure Time -- Mono screen value can be similar to color screen value

Bottom Lift Distance -- Larger printer requires higher lifting distance

Lifting Distance -- Larger printer requires higher lifting distance

**EPAX hard resin is specially formulated for large printers. The resin can absorb more background light without being cured prematurely. It is our default recommended resin for printers large or small.**

## EPAX Resins

EPAX developed below resins for our customers. They have been printed continuously in our factory for our printer R&D and testing needs.

| <b>EPAX</b>                        |  <p style="text-align: right; font-size: small;">*Some pictures courtesy from our fans*</p> |  |   |   |  |  |  |
|------------------------------------|---|--|---|---|--|--|--|
| Resin Name                         | General Purpose Rapid Resin   | Hard Resin designed for large printers   | Hard and Tough Resin  | Porcelain-like Resin  | Dental Model Resin   | Water Washable Resin   | Jewelry Castable Resin                               |
| Description                        | Everyday all purpose resin with good hardness. Fast curing speed. Low cost.   | Designed for large printers. Very stable. Can sustain long time background exposure light without cured. High hardness and scratch resistant. High printing precision. Great for miniature printing. | High Toughness<br>High Hardness<br>Impact Resistant<br>High Mechanical Properties | Very low shrinkage rate and very high hardness. Suitable for dental model printing and any similar needs where low shrinkage rate and high hardness are required. | Very low shrinkage rate and very good hardness level. Suitable for making dental models. | Print can be cleaned up using room temperature water instead of isopropyl alcohol, avoiding the odor associated with IPA. Resin itself also has low-odor. This resin allows for faster printing speeds than most general purpose resins without sacrificing print quality. | Wax based resin<br>Designed for Jewelry Casting      |
| Print Technology                   | LCD 405nm   | LCD 405nm  | LCD 405nm   | LCD 405nm   | LCD 405nm  | LCD 405nm  | LCD 405nm  |
| Colors Available                   | Black, Grey, Clear, White, Skin   | Black, Grey, Clear, White, Skin  | Black, Grey, Clear, White   | White   | Orange   | Black, Grey, Clear, White, Skin  | Green  |
| Applications                       | Miniature, sculpture, prototype, education  | Miniature, sculpture, prototype, education   | Miniature, sculpture, prototype, education  | Sculpture, dental, Education  | Dental   | Miniature, sculpture, prototype, education   | Jewelry  |
| Cost                               | Low   | Medium   | Medium to High  | Medium to High  | Medium to High   | High   | Very High  |
| Printers recommended for the resin | EPAX X1, X10 and any similar LCD printers on market.  | Suitable for all LCD printers large or small, including EPAX X1, X10, X133 and X156.   | EPAX X1, X10 and any similar LCD printers on market.                              | EPAX X1, X10 and any similar LCD printers on market.  | EPAX X1, X10 and any similar LCD printers on market.                                     | EPAX X1, X10 and any similar LCD printers on market.   | EPAX X1, X10 and any similar LCD printers on market. |

## Print Settings

The correct Print Settings are critical for successful and detailed prints, but there is an acceptable range for most types of resin. Some resins are also impacted by the temperature in the printing environment and you will need to adjust your settings accordingly.

You can find the most up-to-date resin settings for a number of popular resins here:

<https://epax3d.com/pages/resin-settings>

For additional instructions and recommended support settings etc. you may also visit:

<https://epax3d.com/pages/slicer-settings-chitubox>

For live help any time please visit our Facebook group. Many of our users are very active and give advice on the page, including slicer settings for specific resins. Request to join at the link below:

<https://www.facebook.com/groups/epax3d>

We also answer questions during our business hours Monday through Friday, 9am to 5pm EST USA.

## **Slicer Operations**

There are many useful operations in the ChiTuBox slicer. If you need additional assistance, remember that our Facebook page is a great resource. You can also email or phone EPAX directly and we will be glad to help. Here is more information about the most important setting recommendations/ranges:

### **1. Print Settings**

Layer Height: 0.05mm is recommended (range: 0.01- 0.2mm).

- The thicker the layer height, the longer the exposure time per layer needed.

Exposure Time: For color screen, 6s -15s depending upon resin used and layer thickness.

- If using mono LCD screen, the time can be as low as 1.5 seconds.

Bottom Exposure Time: Setting range: 35s - 60s based on resin and printing environment.

- The longer the bottom exposure time, the better the bottom layer will stick to the plate. Longer exposure times decrease the lifespan of your film and LCD screen.
- If using mono LCD screen, the bottom exposure can be as low as 20 seconds.

Bottom Layer Count: 4s - 8s, depending on the model

Lifting Speed/Bottom Lift Speed: 60 for best performance for most resins, 120 for fast printing

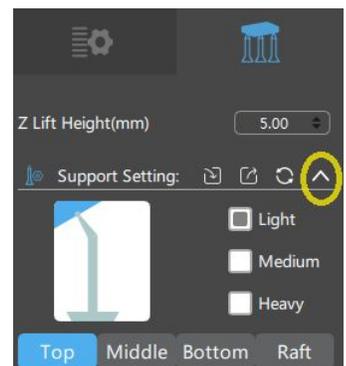
Retraction Speed: 120-150

### **2. Supports**

Many complex designs/models will need additional posts while printing. (All parts of your design will need to connect with the foundation for success.

You can always remove them from your final product.)

The Supports menu is located on the top right beside the Settings icon. The types of support that can be configured are Light, Medium, Heavy



and Raft. Each choice has corresponding parameter settings.

Light: Contact area between the support and model is small, easy to remove the support.

Heavy: Support contact with the model area is large, solid.

- It is recommended to try “medium” first, and use the default settings.

Raft: Adding the raft will make the bottom stick better to the build platform

- The parameters can be changed according to your own unique model needs.

### 3. Slicing and Saving the files

Slicing the file will create the .cbddlp file or .CTB file, which you can then save to the USB stick and it is ready for printing. Here are some tips:

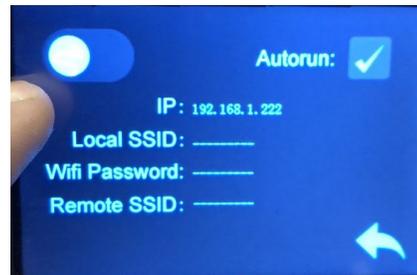
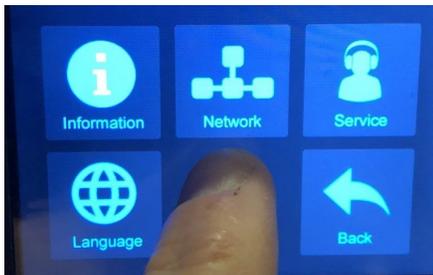
- Make sure not to remove the USB until your file is completely exported. If ejected before being 100% saved, your model will be incomplete when printed.
- If you are printing the EPAX test file provided on the USB, you do not need to slice it first. It is ready to print.

### 4. Ethernet/Network Printing

To set this up, first install the latest firmware located here:

<https://epax3d.com/pages/firmware>

1. Plug the Ethernet cable into your printer and the other end into the router/switch.
2. Using the front panel control, enter the network setup area by pressing System>Network:

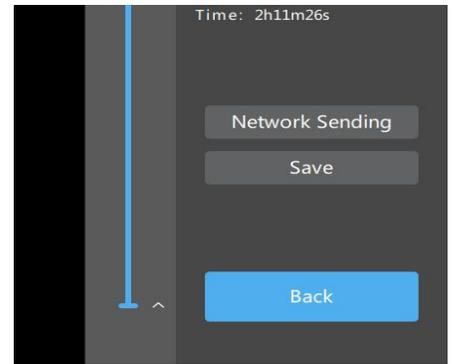


Now toggle the network type. (While WiFi is shown as an option, there is no WiFi hardware inside the printer, so you must use an ethernet cable.) Push the switch in the upper left of the touch-screen to enable the ethernet connection. If you see an IP address

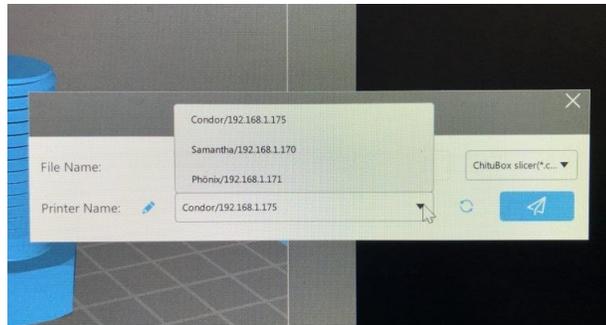
fill in, it is working. A green LED should now be illuminated where the cable is plugged in.

3. Load the latest version of ChiTuBox, and slice a file.

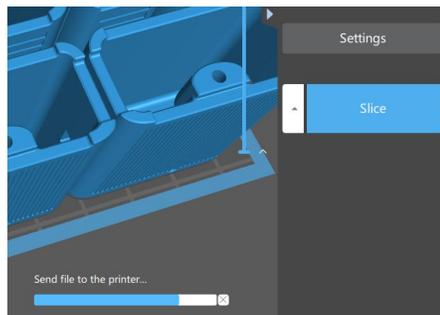
You will be presented with the option to save or send the file to the network. Select “Network Sending,” and you should see all of the EPAX printers that are connected to your network. If this is your first time, you may need to select the refresh icon.



\* Note that you can click on the pencil icon and rename what each IP address is called.



Now press the send button. You should see it showing the progress where it says “Send file to the printer...”



4. When the sending is complete, it will ask if you would like to print the file. If you select “OK” it will start printing. If you hit “Cancel” it will not print. However the file will still be on the printer’s SD USB memory card, where you will be able to manually start from the printer’s touch screen.

## 4. First Printing

Make sure your machine is placed on a stable, flat surface.

### 1. Install the Build Platform

Install the build platform into the Z-axis platform bracket. Make sure you slide the platform plate right under the black screw knob (do not unscrew it all the way off). The arrow should be facing towards the printer. Turn the fasten knob in a clockwise rotation to secure the platform.



Turn on the printer and complete an “Auto Home”. Go to Tools > Manual > Home icon.

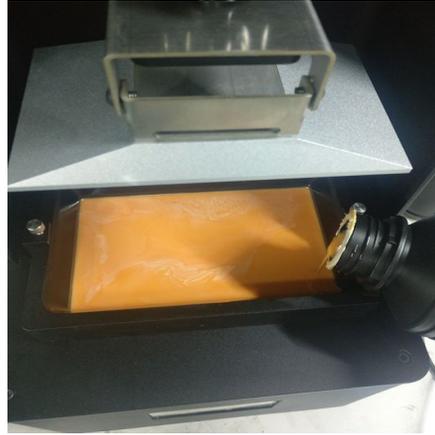
Using the touch screen arrows, raise the platform to the middle of the Z-axis. At this point, you are ready to add resin into your resin vat which is secured by screws on the left and right sides.

***NOTE: our printers are pre-calibrated. You do not need to relevel the platform!***



## 2. Load Resin

You will notice three lines in the vat that are used for measurement purposes. Pour resin into the vat slowly. We recommend starting with the least amount of resin possible for the test print - just above the first measurement line is sufficient. The printer will not stop by itself if vat runs out of resin during a print. If you need a test file for your model, you can visit [www.epax3d.com](http://www.epax3d.com) support section.



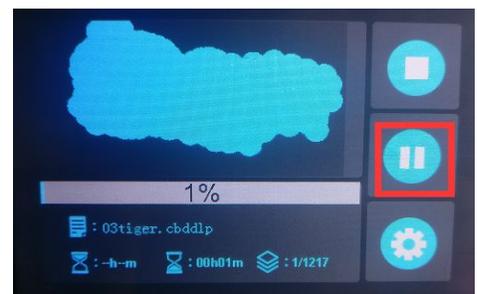
**WARNING: Always wear gloves and goggles and don't touch resin by skin.**

## 3. Choose file to be printed

Insert the USB into the printer. Select a test file (**The file should end with .cbddl or .CTB**). If no test file in your USB, you can download a test file for your model from our website and start printing by pressing the Play button. During the printing process, you must close the top cover to avoid light affecting the curing process.

***It is highly recommended to print a test file as the first file printed with your new printer. The file was already sliced and ready to print. Doing so will establish a good baseline for future support needs and will let you know if you need to make adjustments to your slicer settings.***

If you find the resin is not enough to finish a model during the printing process, do not panic. Click Pause, wait for the build plate to rise up automatically, then slowly add extra resin to the vat as needed. Click Play to resume printing.



For the first print/new model, it is a good idea to pause the printing after around 30 minutes to confirm that the first layers stuck to the build platform.

- Resume printing if it looks good,
- If the print does not stick to build platform, then you need to modify your design by adding more support, changing orientation, or adjusting the first several layers' exposure time. Typically first several layers require at least 35 seconds each more depending on resin and room temperature.



## 5. Post Printing Treatment

When the printing is done, wait until no more residual resin drips from the platform before removing it. Twist the black knob counterclockwise and take off the build platform.

Remove the print by shoveling it off the plate with the metal scraper tool, then clean it by soaking it in 95% isopropyl alcohol (IPA) for

at least three minutes. If your IPA is 91% then soak for 5 minutes. Swirling while soaking will help clean the residual resin residue. You can purchase IPA from any drug store.



After your model is clean, put it in a cool, dry, well-ventilated area. To cure it, you may use a UV light machine or expose it directly to sunlight. After a few hours in the sun (or 20-30 minutes under a machine), the print will become fully dry and solid.



## 6. Troubleshooting

There are many troubleshoot resources available online. You can find a list of error codes and tips here: <https://epax3d.com/pages/troubleshooting>

**You can also join our Facebook Group to get help from other users, especially if you need help tuning slicer settings.** There are many inputs from various users with all kinds of different resins used. Each different resin might need different settings. Each layer height needs different settings too. Each particular model might need special support thickness and positions. These are the experience related questions which we rely on our community to help each other. Most of them are just tuning of slicing settings for the particular scenario. Please don't hesitate to ask questions in the Facebook group:

[www.facebook.com/groups/epax3d](https://www.facebook.com/groups/epax3d)

If you need printer support you can contact us via Facebook messengers (You can use the chat window on epax3d.com page) or email us directly at [support@epax3d.com](mailto:support@epax3d.com). We provide support Monday-Friday 9am to 5pm EST.

## 7. Warnings

1. When you find that a print has failed or there is solid residue in the resin vat, **you must filter the resin in order to protect the LCD curing screen.** Clean the resin in the resin vat by filtering out the solid residue using one of the provided filters or a paint filter from your local hardware store. If there is solid residue in the resin vat, when the build plate dips into the vat, the force of the plate may crush residues, puncture the film and damage the LCD curing screen. This is the costliest mistake.
2. If there is residual resin in the resin vat or on the build plate's outer surface, please clean with a tissue dabbed in IPA to avoid it dropping into the machine and curing inside.
3. **Always wear gloves, a respirator mask and protective goggles!**
4. **Print in a well-ventilated area. It is strongly recommended to use a vent fan drawing air around the printer to the building outside.**

**It is strongly recommended that you watch our tutorial videos before operating your printer for the first time.**

- For printer instructions, videos, firmware updates, and more please visit [www.epax3d.com](http://www.epax3d.com).
- You can also search "EPAX 3D" on Youtube.
- Customer Support Email: **support@epax3d.com**
- Warranty: 1 year US warranty for the printer and parts, except the LCD curing screen, film, vat, build plate and resin.
- For printer replacement parts, supplies and a variety of resin options, visit [www.epax3d.com](http://www.epax3d.com).

**Join us on our Facebook group for active discussions and knowledge-sharing:**

<https://www.facebook.com/groups/epax3d/>