



# ALPHA-CPD1

## QUICK START GUIDE

\* Please review this entire guide before operating the bio-printer.



**SUNP BIOTECH**

## CUSTOMER SERVICE SUPPORT

Thank you for purchasing the ALPHA-CPD1 3D Bioprinter. We are glad to have you in our extended SunP family!

If you are experiencing any problems with the printer or its operation, please feel free to contact us immediately. Our response time is 24 hours during business days.

### Contact Information:

E-mail: [info@sunpbiotech.com](mailto:info@sunpbiotech.com)

Phone: 1.856.780.0395

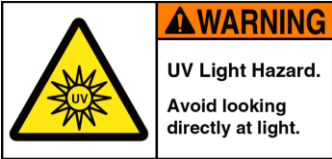

Website: [www.sunpbiotech.com](http://www.sunpbiotech.com)



Thank you and regards,  
*SunP Biotech International, Inc*

## A. Safety Instruction


**MALOPERATION OF THE ALPHA-CPD1 3D BIOPRINTER INSTRUMENT CAN LEAD TO SEVERE AND IRREVERSIBLE INJURIES IF THE PRECAUTIONARY INSTRUCTIONS ARE NOT FOLLOWED. PLEASE TAKE TIME TO CAREFULLY REVIEW THIS SECTION BEFORE HANDLING THE MACHINE**

### SAFETY ALERT SYMBOLS

	<p>The Bioprinter is fitted with a 365nm UV sterilization light. Do not look directly at the light. Always wear protective equipment when operating the system. Always wear safety glasses.</p>
	<p>Never reach into the instrument until all components of the instrument have come to a complete stop. Moving parts can cause serious injuries.</p>

	<p>Before cleaning, inspecting, adjusting, repairing or disassembling the instrument or the dispensing units, stop the instrument and turn off the main switch.</p>
	<p>The bioprinter generates high temperatures. Always turn off the printer and allow the printer to cool down before you reach inside.</p>

## ALERTS AND CAUTIONS

	<p>Alpha-CPD1 is a heavy machine, always carry with caution. It is recommended that two people carry the machine.</p>
	<p>Loud noise may occur while the bioprinter is connected to a power source. This may be caused by the internal cooling fans. It is suggested to turn the bioprinter off when not in use.</p>



Always connect Bioprinter to a grounded socket and always use the voltage provided in the specifications. Not doing this can cause personal injury and damage to printer!

Caution! Always wear protective goggles and gloves while handling hazardous materials that can be absorbed by skin or which are toxic, strike-attractive, corrosive, allergenic, carcinogenic, reproduction-endangering, or mutagenic to humans.

Caution! Always read the material safety data sheets, packing labels, manufacturer, or dealer's catalogue first, and use adequate safety equipment.

## B. Unpacking

*Place the box with the logo on the sides. The box should never sit on the logo.*



*Carefully open the box and remove foam padding on the top to reveal the product.*



*Two individuals should hold the printer by its sides*



## B. Unpacking (Cont'd.)

*Carefully lift the printer out of the box and place it on a smooth, flat surface.*



*The printer will have padding and foam inside to prevent movement of the internal components. Remove any tape or plastic wrap on the outside of the printer in order to access the inside.*



*Remove all foam, padding, tape and packaged accessories.*



## C. Kit Contents



*Heating barrels (x2) &  
barrel tips (x2)*



*Four pin connector heating  
cable for heater barrels (x2)*



*Luer lock tips set*



## C. Kit Contents (Cont'd.)



*Nozzles (x2) + UV nozzle  
(x1- optional)*



*BD syringe (x2)*



*Nozzle screw (x12) &  
Heating barrel screw (x2)*

## C. Kit Contents (Cont'd.)



*SunP flash drive*



*Power cord & USB A-B  
cable*



*SunP ALPHA CPD-1  
bioprinter*

## Content Checklist:

ALPHA-CPD1 bioprinter (x1) .....	<input type="checkbox"/>
Power cord(x1) .....	<input type="checkbox"/>
USB A-B cable(x1) .....	<input type="checkbox"/>
Nozzles (x2) + UV Nozzle (x1- Optional).....	<input type="checkbox"/>
Screws for Nozzle (x12).....	<input type="checkbox"/>
Heating cables (x2).....	<input type="checkbox"/>
Heating barrels (x2).....	<input type="checkbox"/>
Heating barrel tips (x2).....	<input type="checkbox"/>
Heating barrel screws (x2).....	<input type="checkbox"/>
5ml BD syringe or 10ml BD syringe (x2).....	<input type="checkbox"/>
A set of luer-lock syringe tips (various sizes) (x1).....	<input type="checkbox"/>
SunP Flash drive (x1).....	<input type="checkbox"/>
Customer validation sheet (x1).....	<input type="checkbox"/>
User manual (x1).....	<input type="checkbox"/>
Quick Start guide (x1).....	<input type="checkbox"/>
End-user agreement (x1).....	<input type="checkbox"/>
Manufacturer's warranty (x1).....	<input type="checkbox"/>

## D. Specifications

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<b>Power Input</b>	AC 10V-220V 50/60Hz
<b>Net Weight</b>	34 kgs (75 lbs.)
<b>Width</b>	560mm/22in
<b>Height</b>	359mm/14.1in
<b>Depth</b>	425mm/16.7in
<b>Filter Class</b>	HEPA
<b>Bio-Inks</b>	Gelatin, Sodium Alginate, GelMA Matrigel, other cellular Bio-Inks, etc.
<b>Nozzle Type</b>	SunP Screw-Driver & SunP Photo-Cure
<b>Nozzle Temperature</b>	Room Temperature to 50°C
<b>Printing Resolution</b>	100 $\mu$ m (viscosity/material dependent)

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## D. Specifications (Cont'd.)

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Working Temperature	Room Temperature
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Number of Nozzles	1 - 4
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Print Size	285mm x 170mm x 70mm
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Platform Temperature	Room Temperature to 70°C
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## E. Setting up Printer

DISCLAIMER: The power cable and USB cable must be connected and powered in order for the printer to function and operate properly.

*Connect power cable to the power socket located on the back of the printer.*

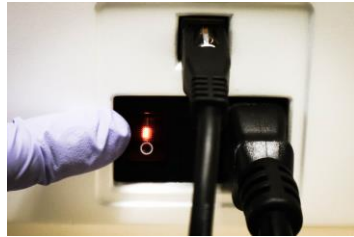


## E. Setting up Printer (Cont'd.)

*Connect the USB cable to the USB port located on the back of the printer.*



*Switch on the printer using the power button that is located on the back of the printer.*



*Press the printer's power button and allow it to boot.*



## E. Setting up Printer (Cont'd.)

*In order to sterilize the printer, press the UV button below the power button.*



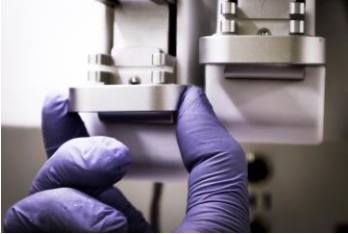
*Press the fan button below the UV button. Suggested time for effective sterilization is 30 minutes. Press the same buttons to turn off UV and fan.*



*Use the LED button at the bottom to turn on the printers light for your convenience.*



## F. Loading the Syringe



*Remove the nozzle bracket from the nozzle.*



*Insert the syringe into the nozzle.*



*Once the syringe has been properly aligned and inserted, use the nozzle bracket to secure the syringe in place.*



## G. Installing the Heating Barrel

*Connect one end of the heating cable to the heating barrel.*



*Be sure to secure the heating cable with the included fastener.*



*Example of a secured heating cable with a heating barrel.*



## G. Installing the Heating Barrel (Cont'd.)

*Locate the connectors in the inside wall of the printer. They are marked as H1 and H2*



*Connect the other end of the heating cable to the connector. Be sure to secure the heating cable with the included fastener.*



*Example of a secured heating cable with a connector.*

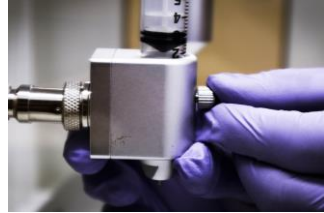


## G. Installing the Heating Barrel (Cont'd.)

*Cover the end of the syringe with the heating barrel.*



*Secure the heating barrel in place with the included screw.*



*Example of an installed heating barrel on a syringe.*



You are now ready to use the printer. Please review the User manual and Software manual for more information.



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## CHECK OUT OUR OTHER PRODUCTS

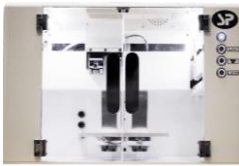
ALPHA-CPT1



ALPHA-BP11



ALPHA-CPM1



BIO-INKS



### CONTACT INFORMATION:

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