MIICRAFT 3D Production System --> An important step in making a better world

Advance Series / Profession Series

Installation Guide

Version 1.0

Specification

MiiCraft Models	Advance 255	Advance 205	Profession 250	Profession 120
Building size (mm)	255x235x190	205x185x190	250x140x190	120x67x190
XY Resolution	125 um	100 um	65 um	30 um
Z-Layer Resolution	6.25 µm to 500 µm			
Type	Dual 1080P	Dual 1080P	4K Ultra HD	4K Ultra HD
Wavelength (LED)	405nm	405nm	405nm/385nm/365nm	405nm/385nm/365nm
I/O	Ethernet / USB / Power in, Adapter: 100~240V AC, 2A, 50Hz/60Hz			
Size and Weight	82x79x200 cm / 305kg			

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Contents :-

1.0 Unpacking & Inspecting the Printer

1.1 Inspecting the Printer package before Unpacking

1) Check for outside box damage if any
2) Check the shock absorber status if it turned its color to red or not

Check If Color turned to Red

3) Determine if box have been opened
4) Check if the shock detectors changed its color to red
   In this scenario, the printer package was not handled properly during the shipment procedure.
   ➢ Photograph the damage
   ➢ Contact the shipping company
   ➢ Contact with regional MiiCraft distributor with details of damage & status of the shock detectors

1.2 Required Tools

1) Power screw driver
2) Cutting pliers
3) Pliers
4) Forklift
5) Hex socket 8mm for power screw driver

1.3 Steps for unpacking the printer

Printer will be provided in following packing format :-

Advance & Profession
Series Packing

1) Remove the outside film by using cutter or scissor
2) Cut the plastic straps surrounding the box using cutter

Plastic Straps
4 Sides
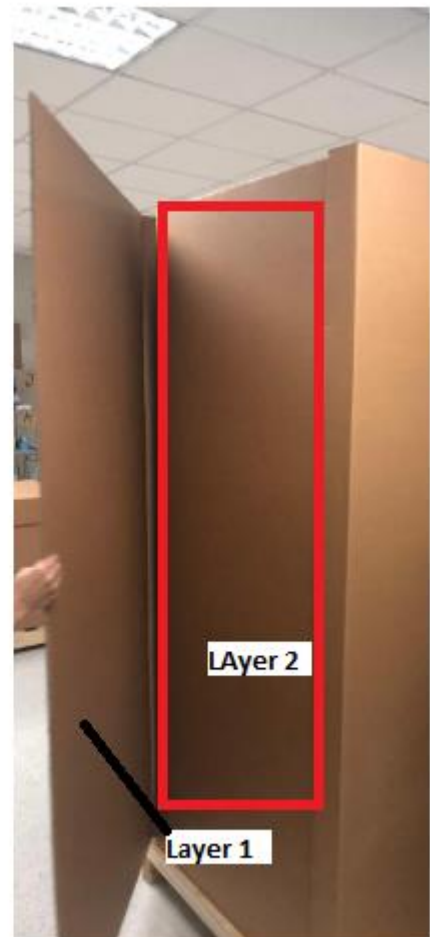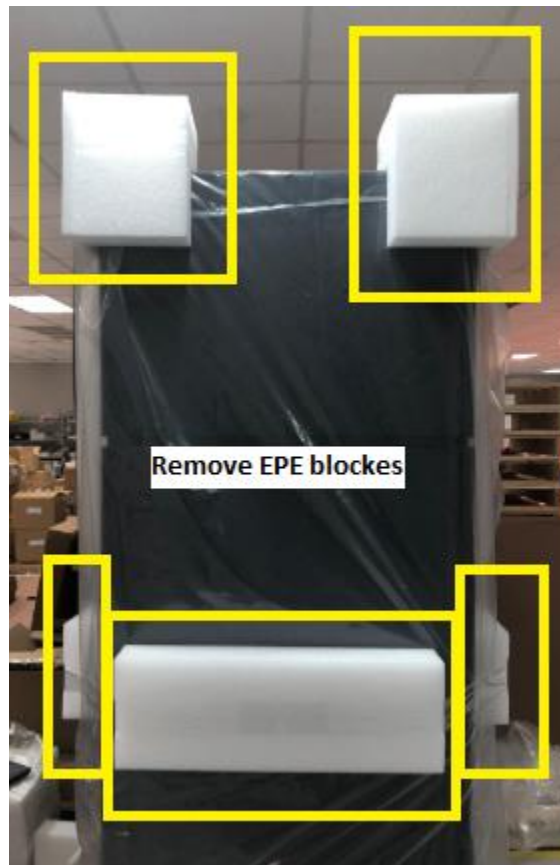
3) Remove the top cover of the box

4) Remove the cardboard packing sheets – 2 layers
   Remove layer 1 followed by layer 2 by detaching Velcro tape strips added on the corner at the end of both sheets

5) Remove the EPE blocks at the printer's top edges & middle section (All Sides)

6) Remove accessory box from front bottom section

7) Remove the plastic bag covering the printer

8) Remove the lock screw using power screw driver with 8mm hex socket

Remove screws from all wooden blocks
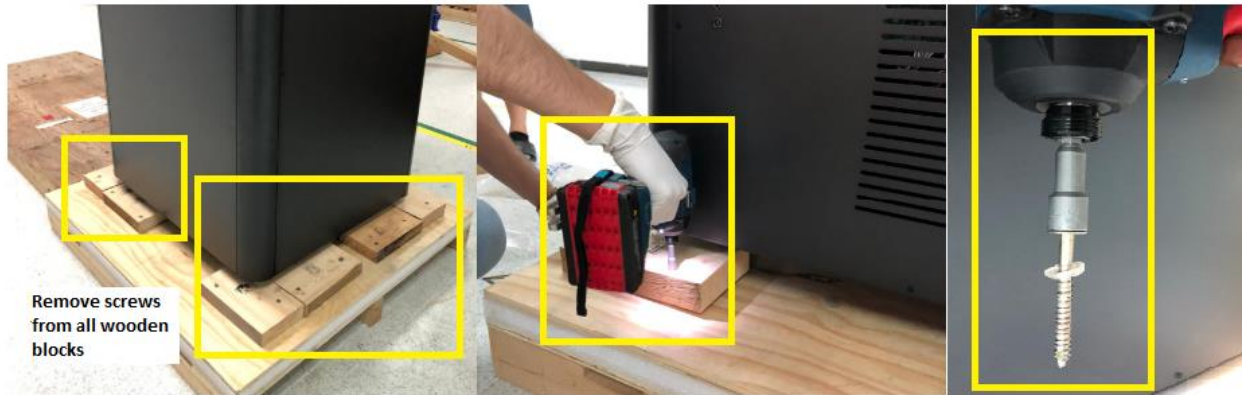
9) Using forklift, move down the 3D printer to required setup place
(Fork lift must be used by professional fork lift operator to avoid serious damage to the printer)

Fork Lift

Use fork lift to place the printer at required place

Gap to insert forklift jaws
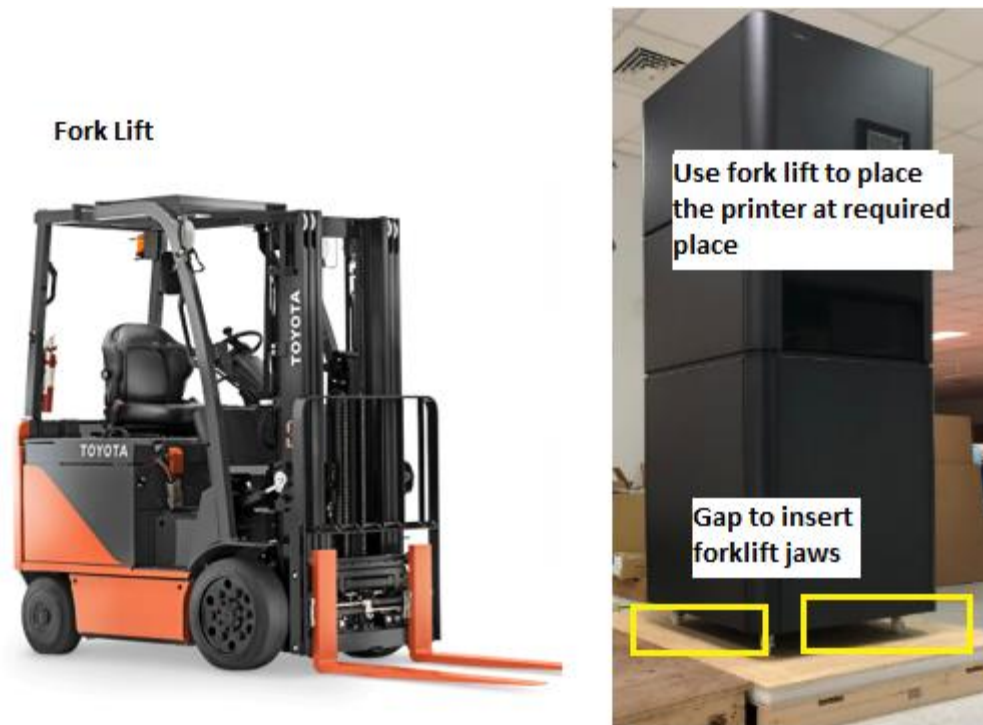
Once the packing material is removed, examine the printer.
If the printer is damaged —
  ➢ Photograph the damage, if there's any
  ➢ Contact regional MiiCraft distributor office with details of the damage.
If the damage prevents the printer from working safely or efficiently, stop and wait for instructions from the regional MiiCraft distributors office.

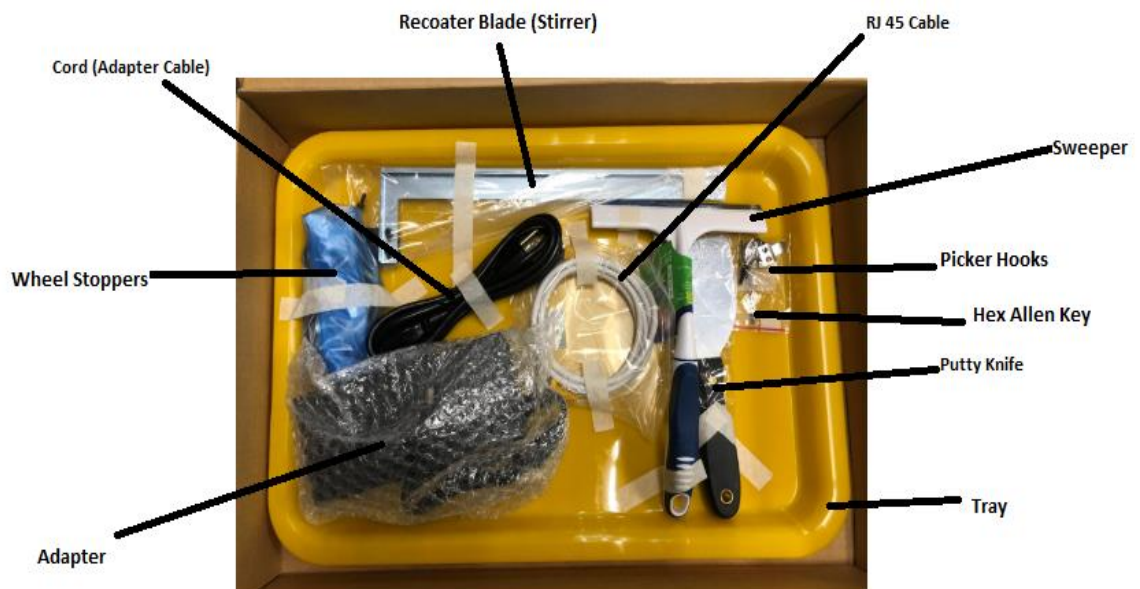**1.4 Package Contents**

1) Accessory box
2) Printer

1.4.1 Accessory Box

1) RJ 45 cable
2) Cord
3) Adapter
4) Putty Knife
5) Tray
6) Sweeper
7) Recoater Blade (Stirrer)
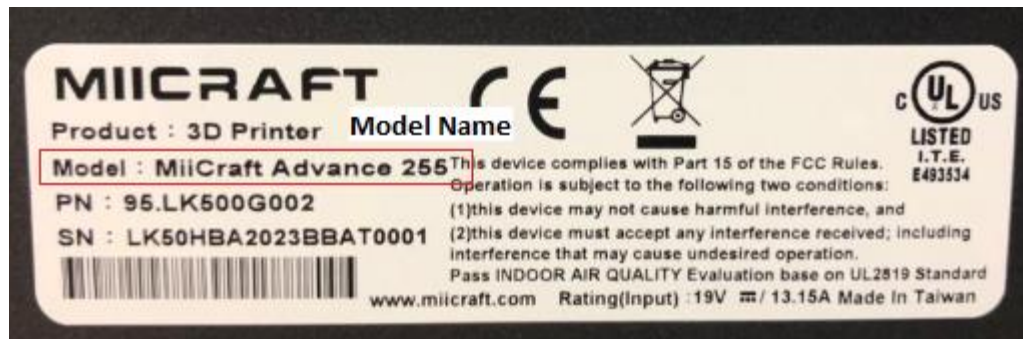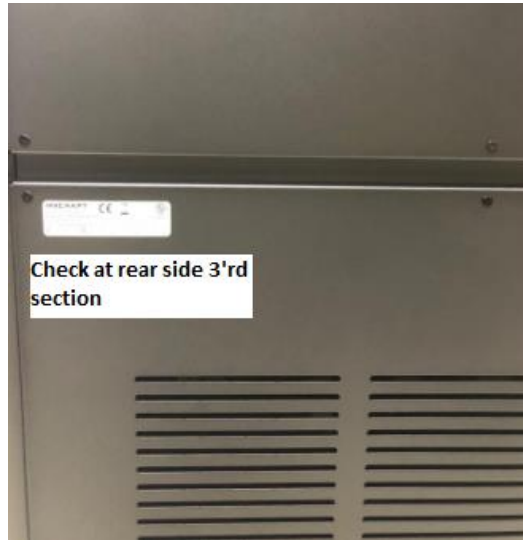8) Picker Hook
9) Wheel Stopper
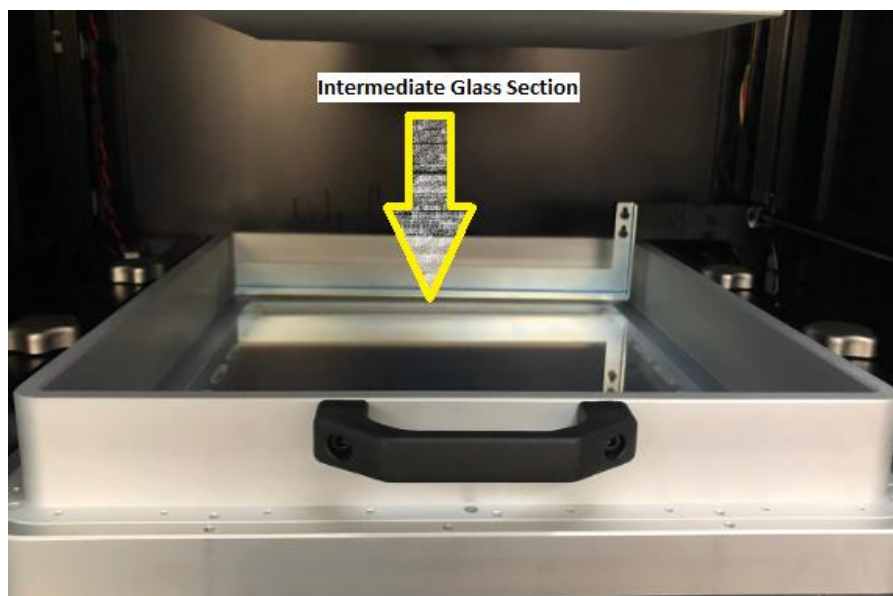10) Hex Allen Key 3mm

Please refer following image for more details

1.4.2   Printer

➢ Check the model name of printer at rear end sticker as shown in the image

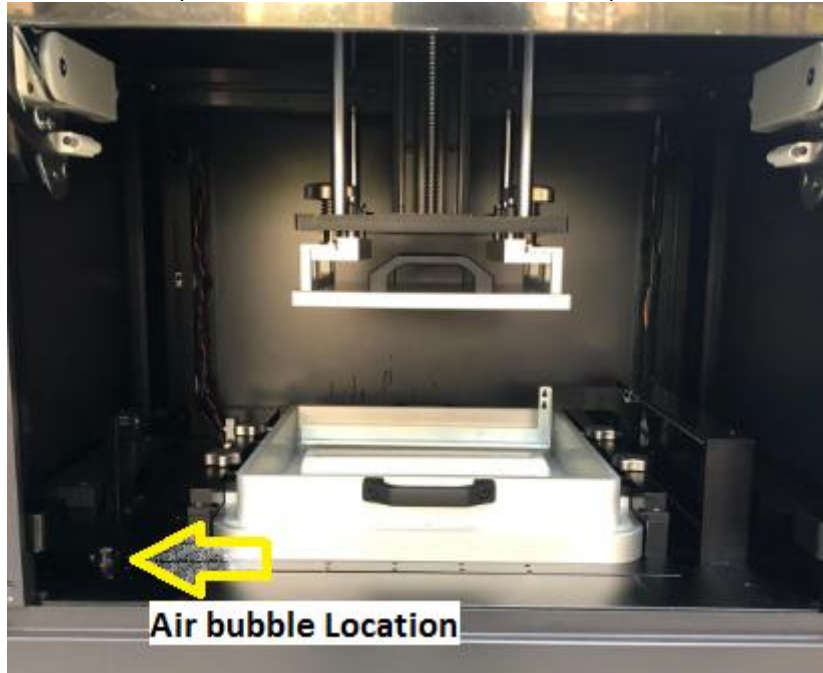➢ Check intermediate glass if it has been damaged while transportation

2.0 Leveling the Printer

After rolling the printer to its installation location, there's need to level the printer.

Procedure
- ➢ Open the front door of the printer.
- ➢ The level indicator for the printer is located on the left side of the printer, near the camera module

Air bubble Location

- ➢ Level indicator in the printer

Air Bubble should be in center

➢ Take out the 4 screws (Wheel Stoppers) from the accessory box & assemble it on the printer's bottom side.

Screws From Accessory Box

➢ Lift up the printer using forklift and fix the 4 screw carefully near printer's wheel module

Original State

Lift up the printer & add Screw for leveling the printer by adjusting screw height

Upside down near 4 wheel area

➢ If the air bubble of the level is not centered, use 14 mm wrench to raise or lower the printer's feet until the printer is leveled.

3.0 Power & Network connection
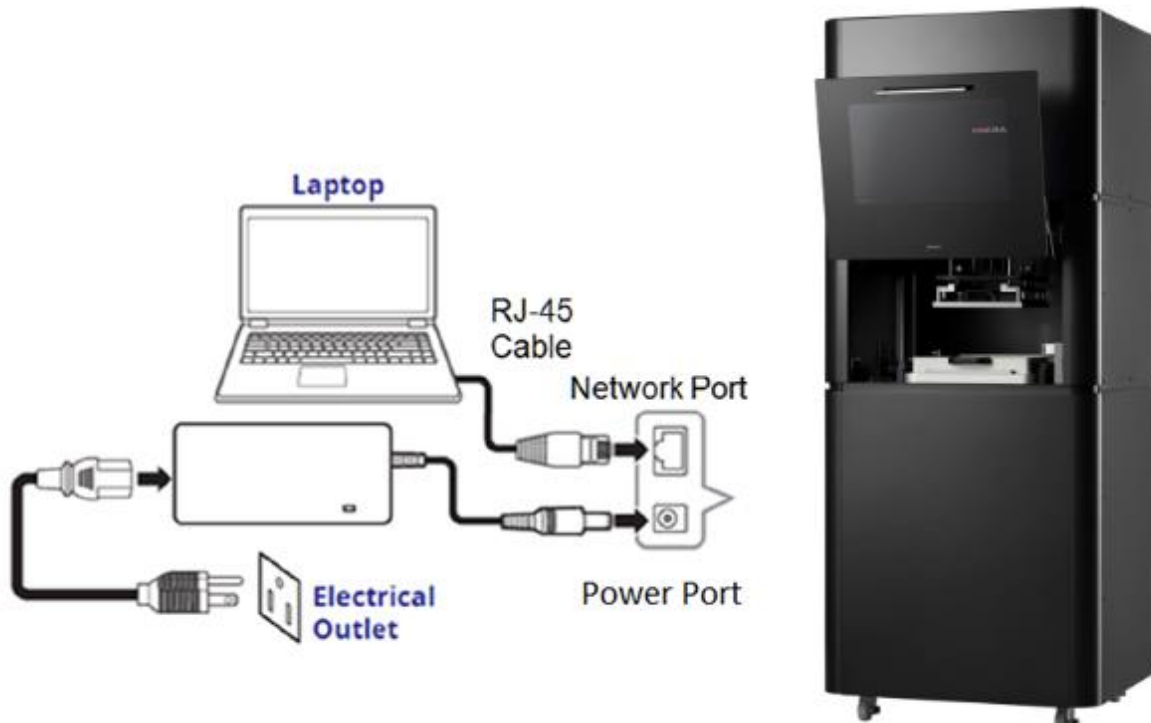
- ➢ Take out power cord & adapter from accessory box & plug into 110v power supply
- ➢ Add other end of the power cord to the printer power supply slot
- ➢ Take out RJ45 cable & add one end to LAN cable port of your laptop & another end to LAN cable port of the printer
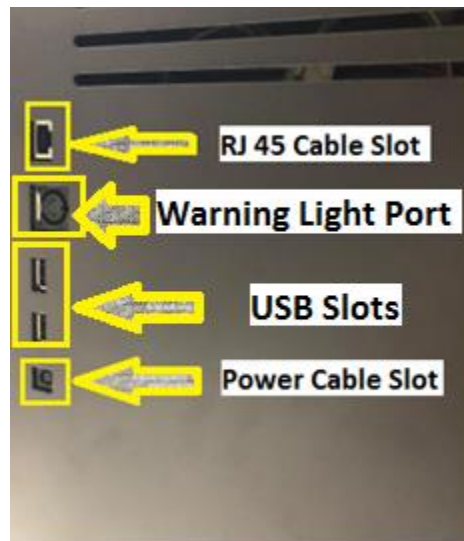
➢ Start the printer by pressing the power button – Process will take about 2 minutes & perform tilt tray calibration by itself _ Please keep your hands out of printer's tilt tray module to avoid serious injury

Power Button

sss

➢ IP address will appear on the touch panel for connecting the printer with computer for further process

6/16
10:48   IP(ethernet): 10.3.16.218   Menu

Print   Camera   Eng. mode   Printer Info.

IP Address
For PC
(10.3.16.218:8080)

4.0 Motor & Projector Operations

For testing internal machine components, use of touch panel will be convenient rather than computer interface

This setting can also be used using the computer interface by inserting LAN IP address in your computer browser & adding :8080 at the end of IP address (Allow computers firewall setting to access the printer's IP setting)

There are 4 main components which must be checked are as follow

4.1 Tilt motor movement

4.2 Z axis motor movement

4.3 Projector Functions

4.4 Camera & Recording

4.1 Tilt Motor movement

➢ Open Eng. Mode menu using touch panel

➢ Open Motor Control

➢ Touch on Cartridge down arrow
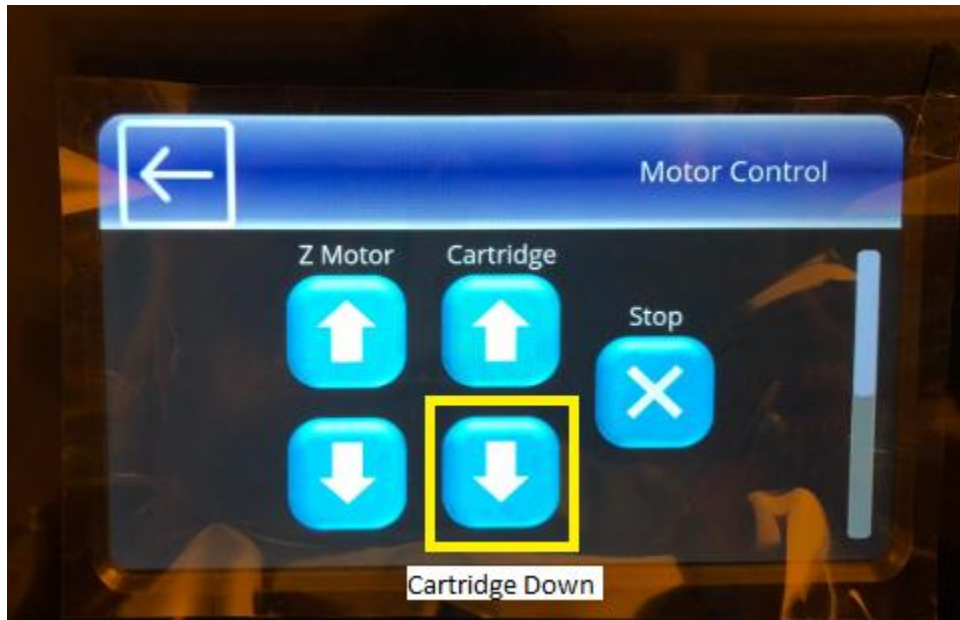
➢ Motor will move downwards

➢ Again press Cartridge up arrow
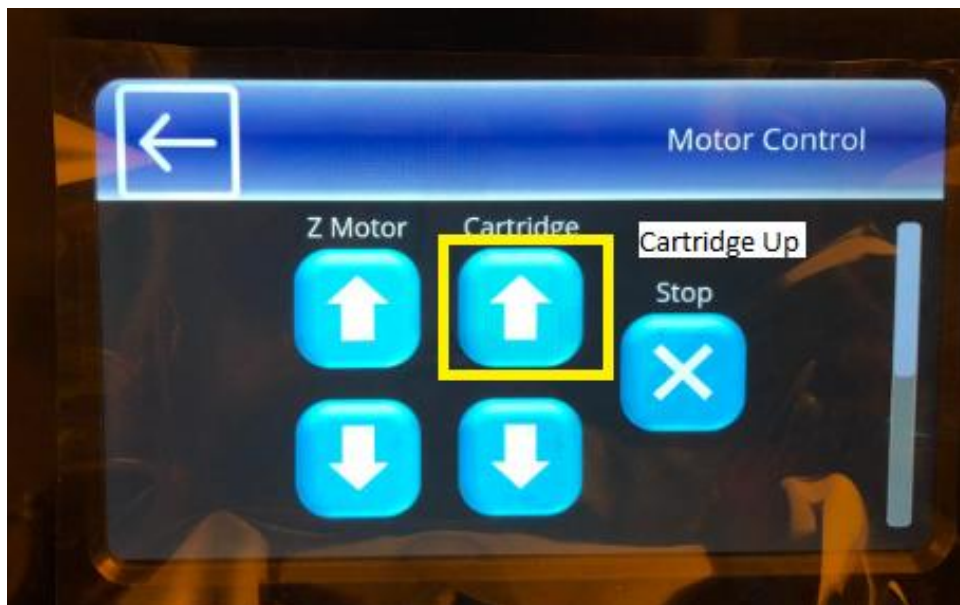
- ➢ Motor will move till upward & stop its movement at stopper

- ➢ Return on main page by pressing reverse arrow on the touch panel
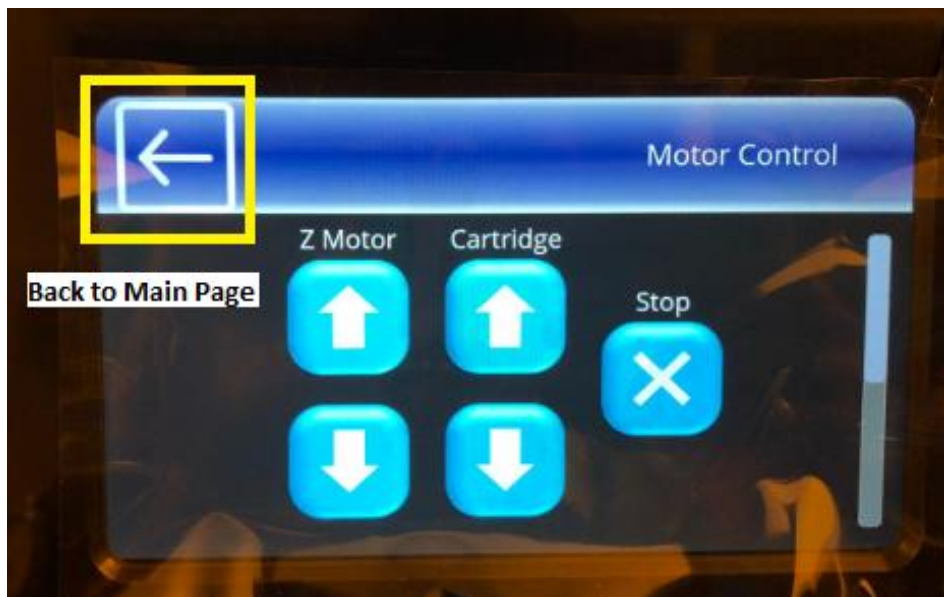
4.2 Z axis motor movement

➢ Open Eng. Mode menu using touch panel

➢ Open Motor Control

➢ Touch on Z motor down arrow
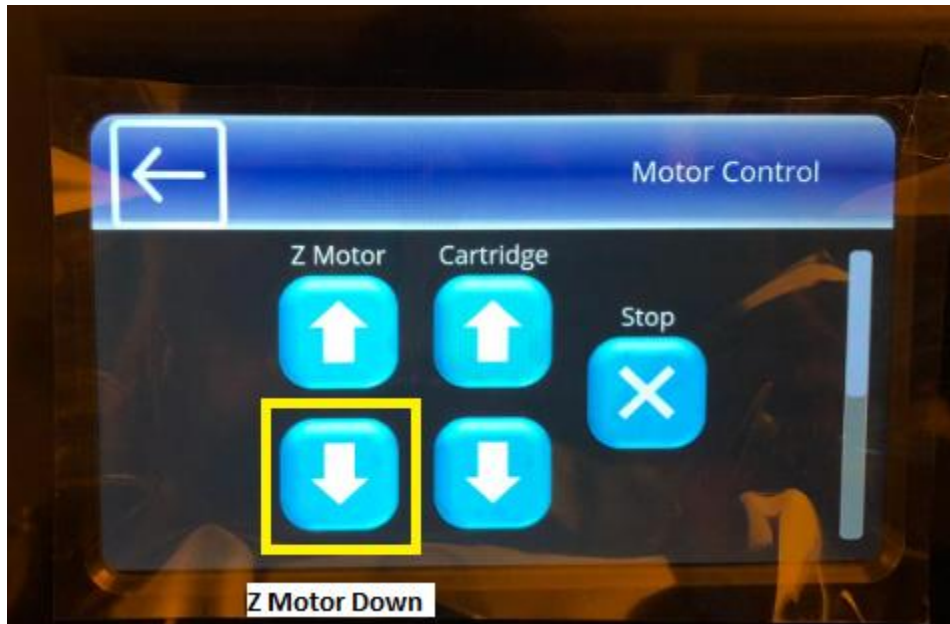


➢ Motor will move downwards & at bottom section tilt tray will go downward & relocate at its original position after Z motor appeared at lower limit sensor

➢ Again press Z motor up arrow
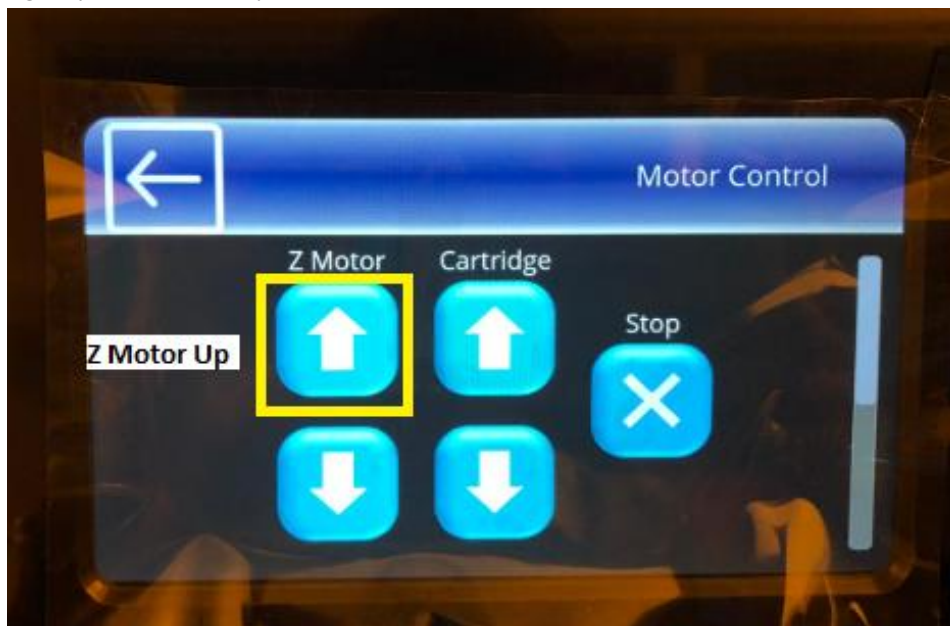
➢ Tilt tray will go downwards & Z motor rise up to top limit sensor

➢ After Z motor touch down upper limit sensor, tilt tray will relocate at its original position

➢ Return on main page by pressing reverse arrow on the touch panel
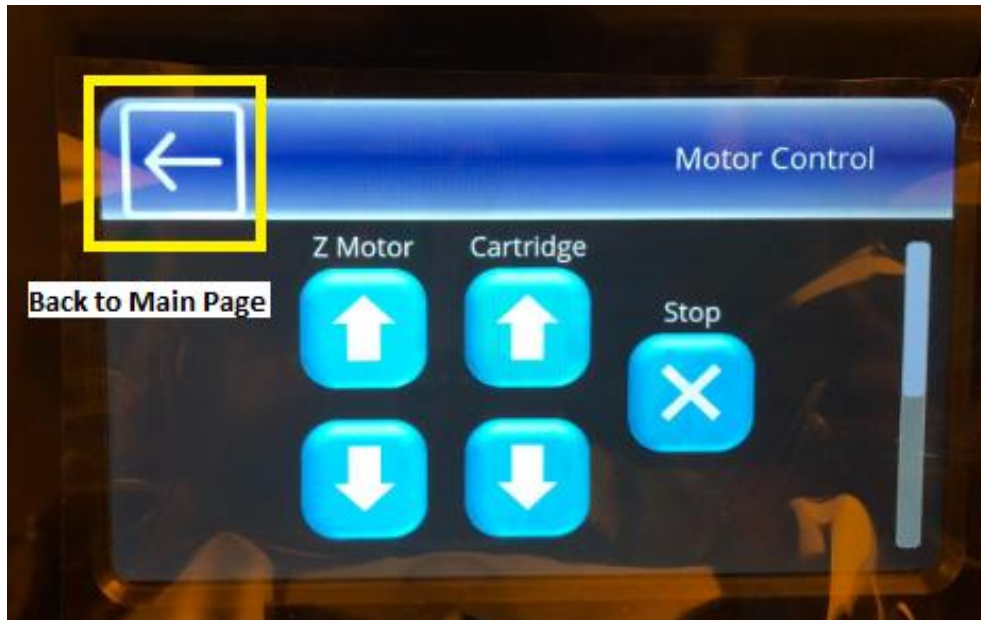
4.3 Projector Functions

➢ Open Engineering Mode menu using touch panel

➢ Open Clean Tank function

➢ Touch on Set Time
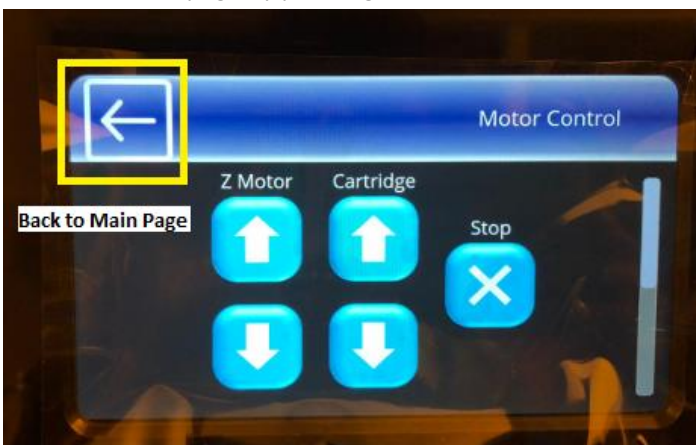

➢ Insert the Time in between 5 to 15 seconds to project the UV light on the platform & touch enter
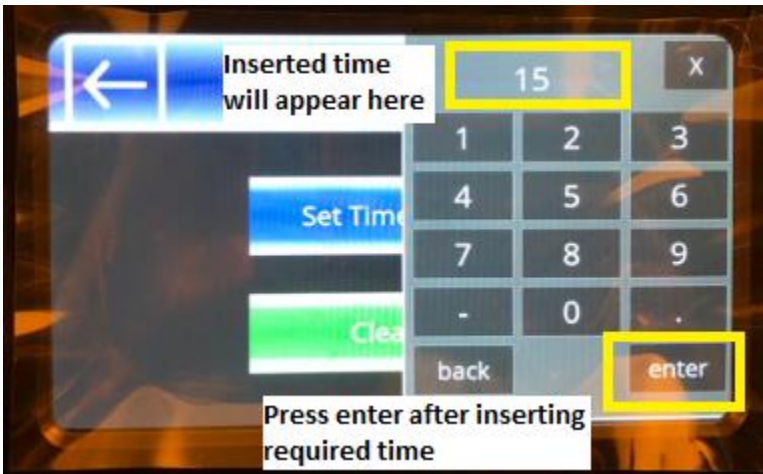
➢ Projector will project UV light on all platform & light will be stopped after 15 seconds automatically

➢ Return on main page by pressing reverse arrow on the touch panel

4.4 Camera & Recording

- ➢ Open Camera using Touch Panel

- ➢ Touch panel will show the motor, tank & recoaters real time movements in this function
- ➢ Recording function is only accessible while printing process
- ➢ Recorded file can be stored in USB or PC depending on the printing medium used
- ➢ Using Computer Interface, record printing procedure by clicking Record function while starting printing
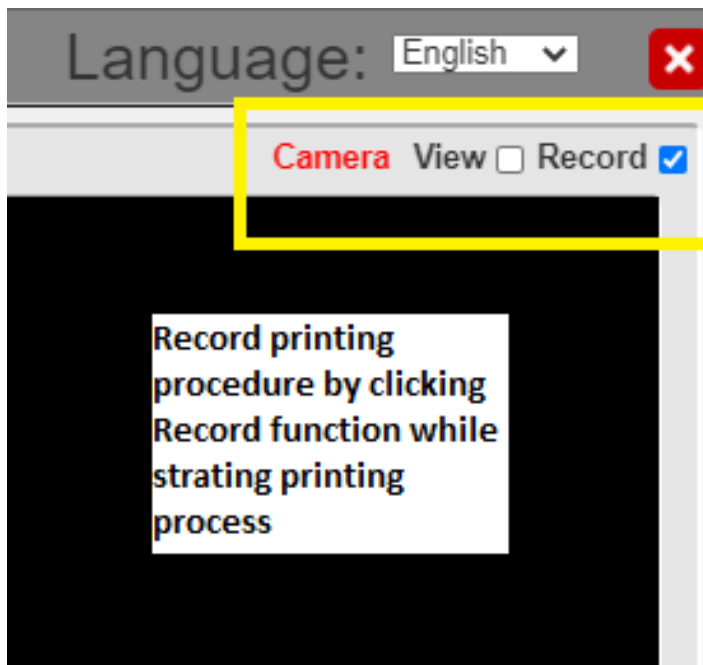
- ➢ While using PC, file will be auto downloaded if user uses recording function

5.0 Test Print

Using clients or distributors (.stl) file printing model will ensure the final Installation process

Please refer utility user guide for preparing the .3dp file to insert in printer using USB or computer interface
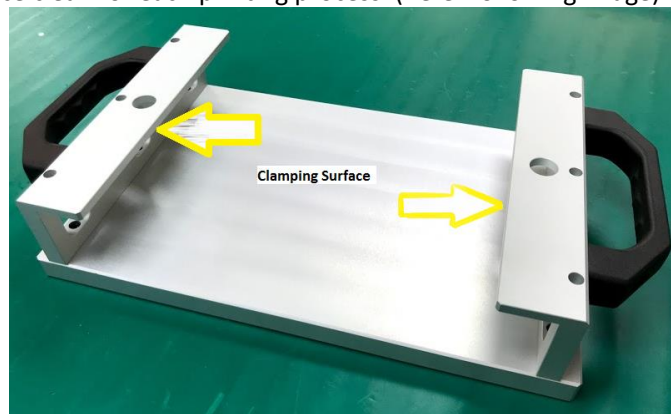
5.1 Printing Requirements
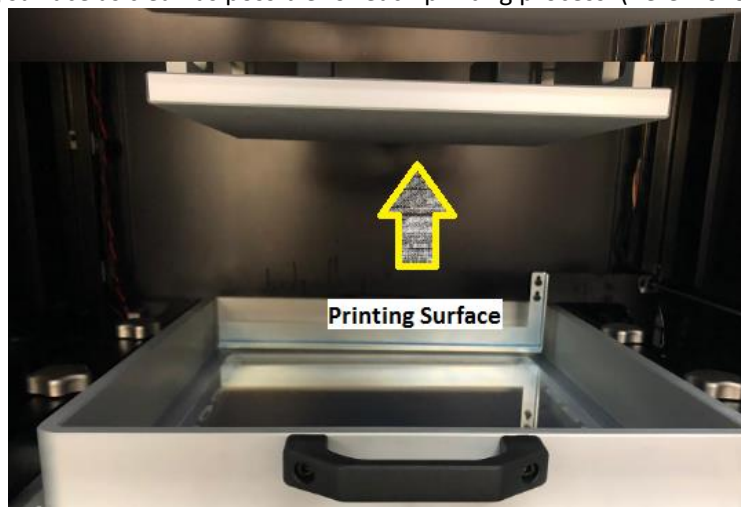
Clean the picker before starting to print

Using alcohol or acetone, clean the picker surface before every printing process.

Picker cleaning must be done as following :-

➢ Keep clamping surface clean for each printing process. (Refer following image)

➢ Keep the printing surface as clean as possible for each printing process. (Refer following image)
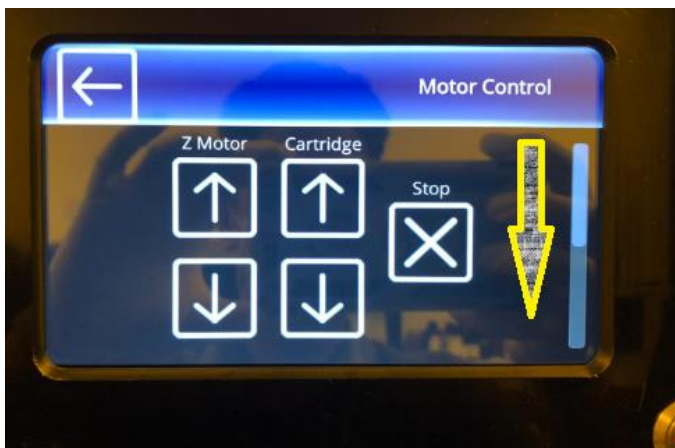
5.2 Recoater (Stirrer Addition on the Printer)

➢ Take out recoater blade, hex Allen key & M4 bolt from the accessory box
➢ Open Engineering Menu using Touch Panel

➢ Open Motor Control menu using touch panel

➢ Slide downward as shown in image
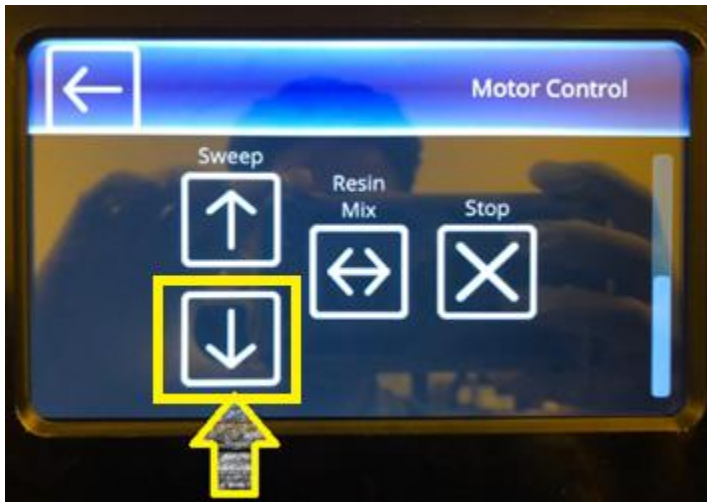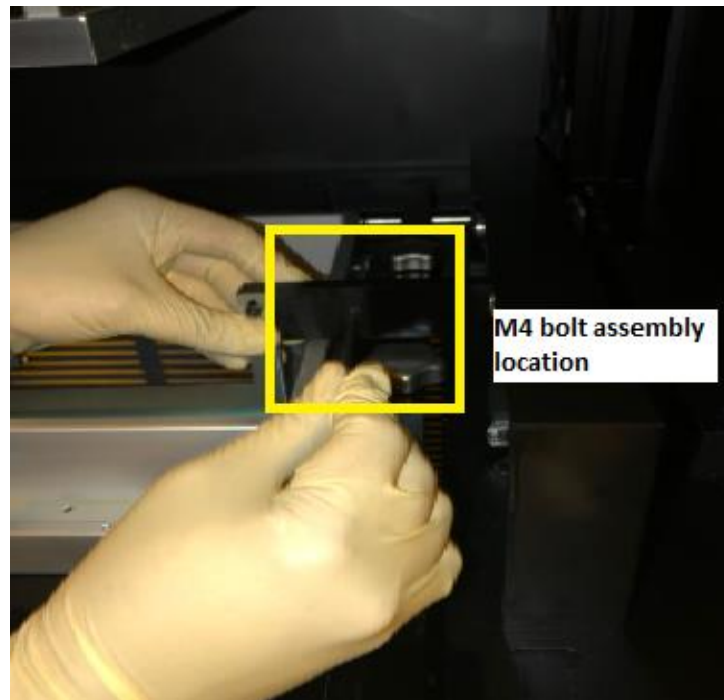
> ➤ Touch on Sweep front button

> ➤ Recoater assembly will get near to the door after pressing the sweep front button thrice

> ➤ Using hex allen key & M4 bolt, assemble the recoater blade on the holder as shown in following image

➢ Depending on the resin viscosity, the height of stirrer need to be adjusted
  Please refer following images for detail looks
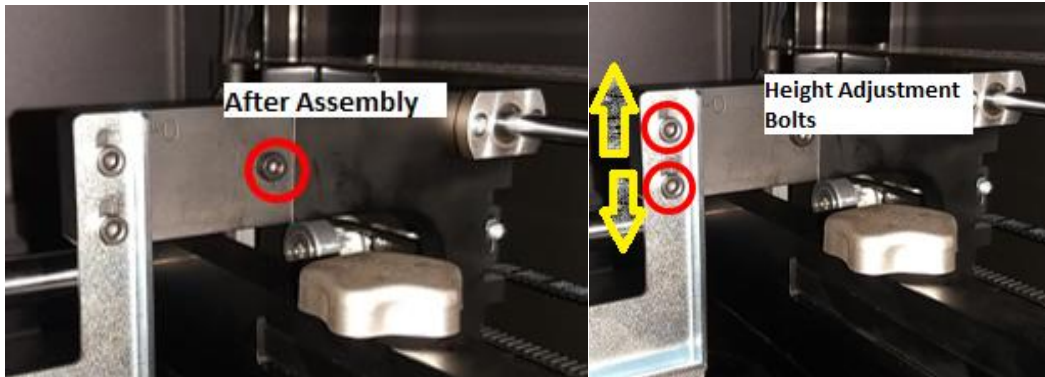
➢ Touch on recoater backward button thrice, it will go back to its original position with stirrer

➢ Return on main page by pressing reverse arrow on the touch panel

5.3 Printing

Please refer user guide for understanding the printing procedure in details

5.4 Post Processing

➢ Ultrasonic Cleaning & Post Curing machines won't be provided by MiiCraft
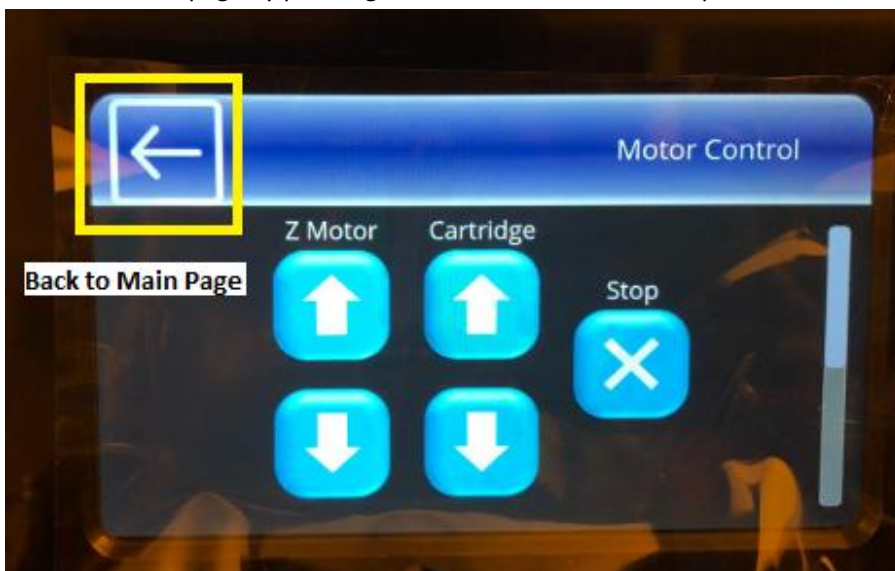
➢ MiiCraft Suggest POLYCURE Post Curing Box for post curing process of printed models using Profession & Advance Series Printers

➢ Contact MiiCraft Distributor for inquiry of POLYCURE post curing box

POLYCURE post curing box (Optional)

An easy to use curing box for Advance/Profession series printer. The curing space can contain the largest printing size of Advance/Profession series printer. It offers three light frequencies for a wide variety of materials with durable high-performance LEDs. Turntable inside, ensure optimum curing quality.

- Curing space (DxH) : Turntable diameter 40cm, height 33cm
- Machine dimension (LxWxH) : 62x56x57cm
- Wavelength : 385-390 / 405-410 / 465-470 nm
- Voltage : 230 V/50-60 Hz
- Current consumption : 100 Watts

➢ MiiCraft distributors can suggest the ultrasonic cleaner & post curing machines to the end user or clients can easily find both of them for their specific post processing purpose in an open market

6.0 Installation Checklist

- ☐ Check shock absorber status if it is turned red

- ☐ Inspect the printer package has any damage

- ☐ Check Accessory Box has all of the mentioned parts

- ☐ Ensure that Teflon & Glass aren't damaged while transportation

- ☐ Check if picker is provided with printer

- ☐ Check if touch panel is working properly

- ☐ Check power connection cable & LAN cable connection are working fine

- ☐ Check Tilt motor movement

- ☐ Check Z axis motor movement

- ☐ Check if projector is working fine

- ☐ Check for recoaters front & rear movements

- ☐ Check for Camera is working fine

- ☐ Test Print using client's or distributors model

- ☐ Explain contents & training to the end user or operator

- ☐ Fill out the installation form

- ☐ Fill out service details

Thanks for reading carefully,
Team MiiCraft.