ZONESTAR

Z9V5Pro FDM 3D Printer
(Z9V5Pro-MK5)

User Manual

!! ATTENTION !!

◆ Please put the printer away from kids.

◆ Must be guided by adults when children are installed or used.

◆ Hot end and hot bed may be very hot even if the 3d printer stop working.

◆ Keep well-ventilated condition! Melted printing filaments may produce harmful gases or dust.

◆ Please strictly follow the standard operation when installation.

◆ Do not let the wind directly blow onto the hot bed, as it may cause the hot bed to fail to heat to the specified temperature.

◆ **Before turning on the machine power, carefully check if all wires are connected properly.**

◆ **Must load filaments to all of the extruders even if you print one color 3D object.**

◆ **When loading the filaments into the hot end, ensure that the filament has fully reached to the bottom of the hot end. Starting printing without properly loading the filaments may cause blockage at the hot end.**

IMPOTANT TIPS

After installation, you can browse more detailed online user guide, printing test files, video tutorials, upgrade features and download the latest firmware from the LCD screen menu.
Menu: Info>>View User Guide
*Menu: Info>> View Update News*

Specifications

Building mode	FFF/FDM	Extruder number	4
Nozzle diameter	0.4mm	Layer thickness	0.1~0.36mm
AC Power voltage	100V~240V	Print speed	40~100 mm/s
Support file format	gcode	Build Volume	Max 300x300x400mm
Hotbed power	24V 250W +-10%	Hotbed temperature	115℃ max
Recommand filament	PLA, PLA+	Rated power	360W Max
Net Weight	15KG	Gross Weight	16.2KG
Machine Size	60x60x65cm	Package Size	63cmx61cmx22cm

Parts List
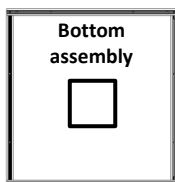
Bottom assembly
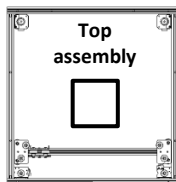
Top assembly

Aluminum heating platform

Magnetic hotbed sticker

Profiles cover

Testing filament

AC power cord
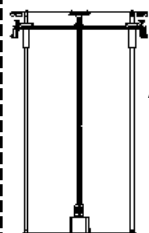
Z carrier Assembly Left

Hot end assembly

Filament holder

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Control panel
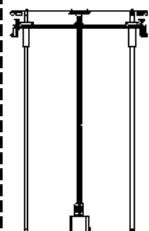
USB Cable

Z carrier Assembly Right
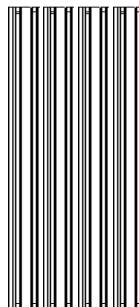
Z-axis profiles

Hotbed bracket
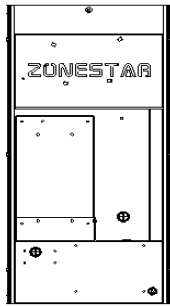
Controller assembly

Tools

Screws

Type A *5
Type B *18
Type C *5

Type A: M4x36
Type B: M5x22
Type C: M4x18
Note: Screws are more than actually needed.

Cable tie

Bellows holder

Hotbed screws /nuts

Spare parts & Gift
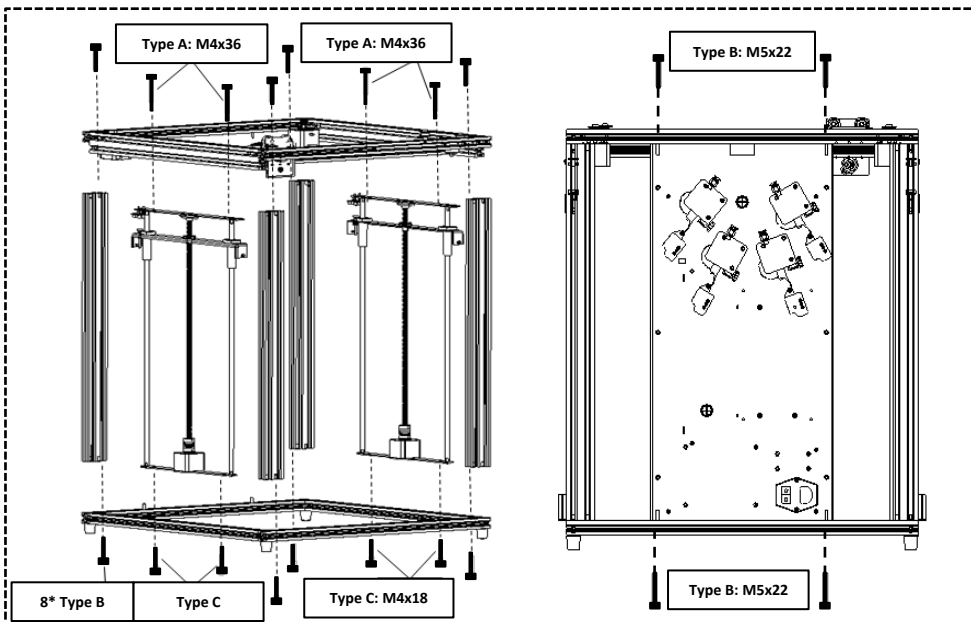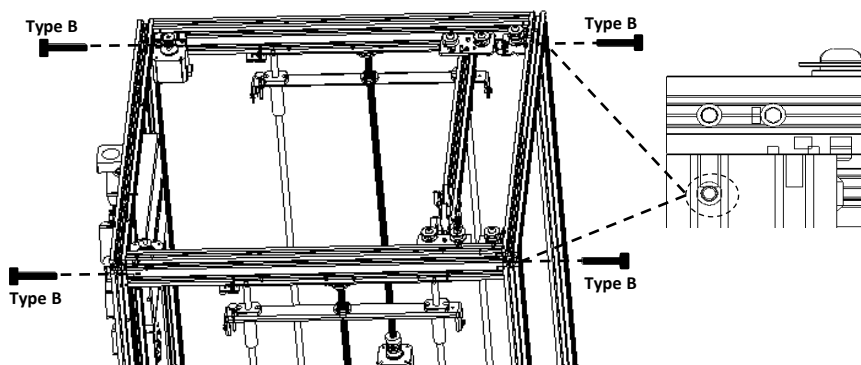
Nozzle   Wheel

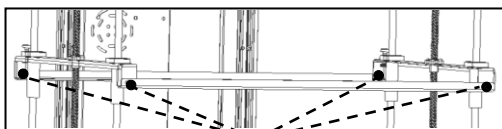**Bowden Tube Coupling & Clamp**

Z ENDSTOP

Micro-SD card（Gift*）

Installation

Type A: M4x36 Type A: M4x36   Type B: M5x22

8* Type B Type C Type C: M4x18   Type B: M5x22

Fix the top assembly with the Z axis profiles.

Type B   Type B

Type B   Type B

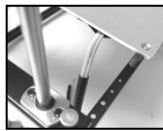***NOTE**: Keep the **y-axis aluminum profiles** aligned with the **z-axis aluminum profiles.**

Install the hotbed bracket on the Z-axis carriers.
Note: take down M4x8 screws on the Z-axis carriers first and then tighten them.
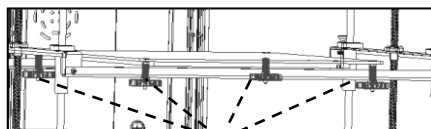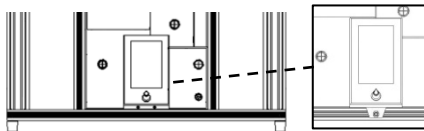
Install hotbed on the bracket, put the springs between hotbed and bracket, fix by M4x35 screws and hand nuts.
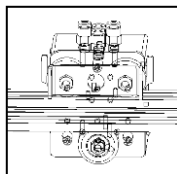
4

The cable of the hot bed should be placed in the rear/right corner of the machine.

Install the control panel on the front/bottom profile, fix this screw.

Use a wrench to adjust the eccentric column on the X carrier, let it can move smoothly and without shaking.

Loosen the 3 PCS M3 screws on the back of hot-end assembly, then mount the hot end to the X carrier and tighten these 3 screws.

x4

45cm

20cm
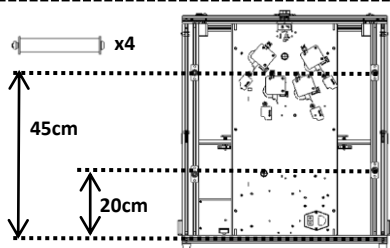
Install 4 PCS filament brackets on the back of the Z axis profiles.
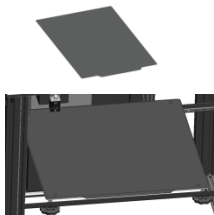
Place magnetic hotbed sticker (A-side) on the hotbed
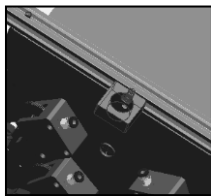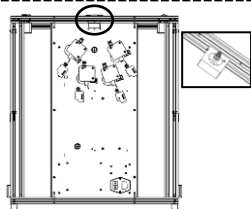
Install the bellows holder to the center of top-back profile, the bellows wrapping the PTFE tubes and the hot end wires will be fixed here.

8mm

Hand Nuts

5mm
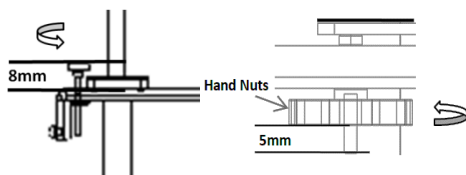
Adjust the height adjustment screws (left and right sides) and the handle nuts (x4) under the hot bed to the height shown in the figure above.

Wiring

X Motor + XSW (X)

ZSW (Z-L)

Y motor + YSW (Y)

ZSW (Z-R)

| Z motor (Z-L) | Control Panel | Heatbed | Z motor (Z-R) |
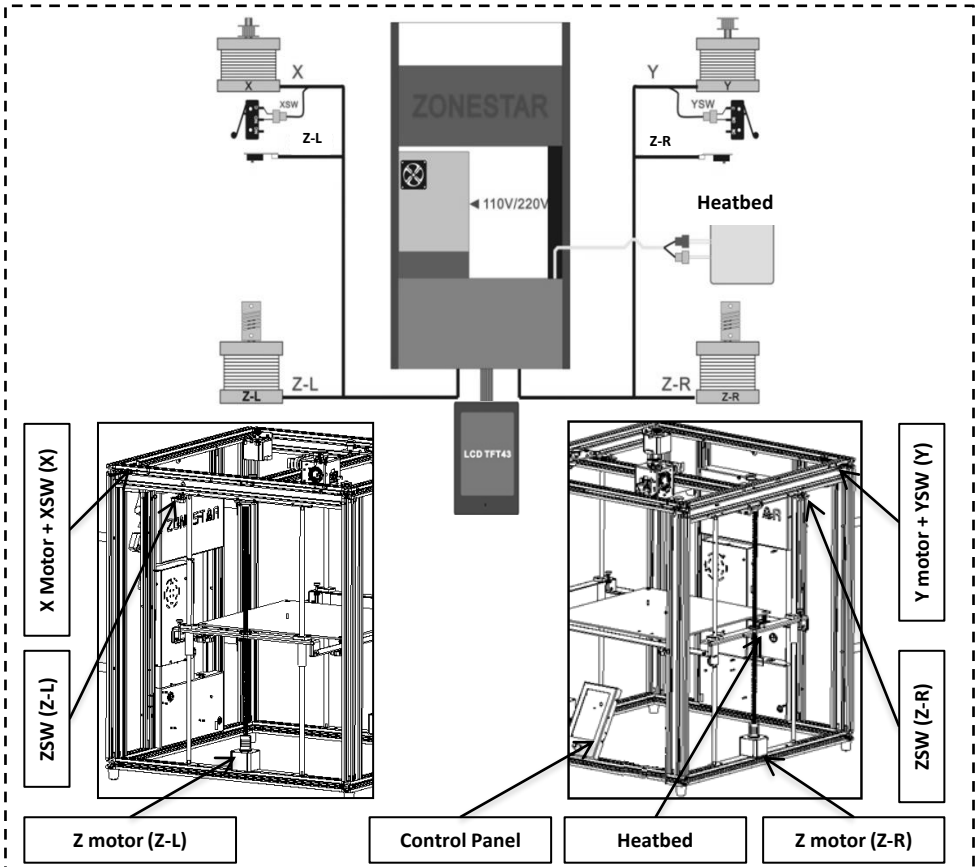
NOTE

1. Make sure all of the connectors are connected properly before power on.

2. The left **Z Motor**/**ZSW** and right **Z Motor**/**ZSW** are paired. if the z-axis limit switch is triggered but the Z motor doesn't stop when did HOME All(or HOME Z), please try to exchange the wiring of *ZSW(Z-L)* and *ZSW(Z-R)* and check again.
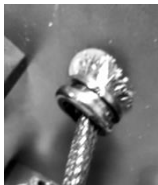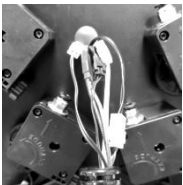
Connect Hot end wires
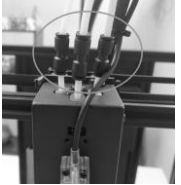
Connet filament guide

Step 1: Following the color of connector to wiring the hotend, and then put the wires into the control box.

Step 2: Insert the filament guide (**PTFE tube**) into the extrusion feeder, and then connect the filament guide to hot end fittings.

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Operation

110/220V is selected by switch
Before power on please check
input voltage avoiding damage.
110V ⟷ 220V
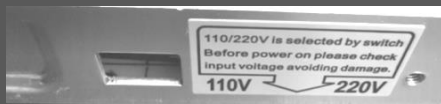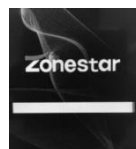
POWER ON

| Plug in AC power cord and turn on the AC power switch | Push and Hold the DC power button 5 seconds until LCD shows "ZONESTAR" Logo |

Zonestar

POWER OFF

Power Outage
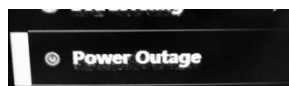
| Do "Power OFF" on LCD screen menu | Wait the LCD screen turn off | Turn OFF AC power switch |

CONTROL PANEL

Zonestar

Print   Prepare

Control   Info

X 0/ 0   ♨ 0/ 0
● 100%   ● 0.00

Title bar

Menu bar

Status bar

Operation knob

Print from SD card

Prepare to print

Configurations

Information of the machine

NOTE
For detailed instructions of the LCD menu, please open the LCD menu "Info>>View User Guide" and scan the QR code to open the online document, find and read the "LCD screen menu description".

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Build your first works

Step1: Bed leveling

1. Tighten the hand nuts under the bed to move the hot bed to the lower position (**Fig 1**). Do **"Prepare>>Auto Home>>Home All"** on control panel, wait the hot end go to the HOME (origin) position.

2. Do **"Prepare>> Bed leveling>> Point 1"** on control panel(**Fig 3**), the nozzle will go to the corners of the bed, rotate the hand nut under the hot bed and let the nozzle almost touch the hotbed (**Fig 4**).

3. Repeat step 2 to do "**Point 2/3/4**", until all 4 corners has been leveled.

4. Repeat step 2 and step 3 **to do 3 rounds** at least to confirm all 4 corners at the same height.

Step2: Load filaments

!! Must load filaments to all of the extruders even if you print one color 3D object.

1. Do **"Prepare>>Auto Home>>Home All"** on control panel and wait for the hot end move to original position.

2. Disconnect the PTFE tubes from the hot end fittings first (Push the ring on the fitting you can pull out the PTFE tube).

3. Do "**Prepare>>Filament>> Preheat nozzle: 200**", and waiting until nozzle temperature is reached (**Fig 5**)**.**

4. Cut off the head of filament (**Fig6**), press the handle of the **extrusion feeder #1 (E1)** and insert filament to the extruder (**Fig 7**), rotate the gear (**Fig 8**) to push the filament until you can see the filament in the PTFE tube (**Fig 9**).

5. Set "**Filament>> Extruder" to "1"** and do "**Filament>> Quickly load"**, **wait the filament** loading to the PTFE, rotate the gear of the **extrusion feeder #1** until the filament run out about 50mm from the PTFE tube. Plug the PTFE tube with filament to the hot end fitting.

6. Set "**Filament>> Extruder**" to "**2/3/4**" and **repeat the step 5** to load all other 3 filaments to the hot end **.**

7. Set "**Filament>> Extruder**" to "**All" and** do "**Filament>> Slowly load"**, until you can see the filament flowed out from the nozzle(**Fig 10**).

Step3: Build your first works

1. Plug the SD card to the SD card socket on the printer (**Fig 11**).

2. Click "**Print**" on the control panel and choose "**Test gcode\xyz_cube.gcode**" (**Fig 12**), click the knob to start printing.

3. Wait for the hot end and hotbed heating**,** after the temperature are reached to the settings, the hot end will move to above of the hot bed and start feeding filament. Watch the distance from nozzle to bed. Double click the knob on the control panel to open a "**Baby steps**" menu **(Fig 13)** and then rotate knob slowly to fine tune the distance from the nozzle to hot bed**(Fig 14).**

4. Wait the printing finished, you will get your first works **(Fig 15).**

5. Wait the hotbed cool, take off the sticker from the hot bed and remove the prints from the sticker.
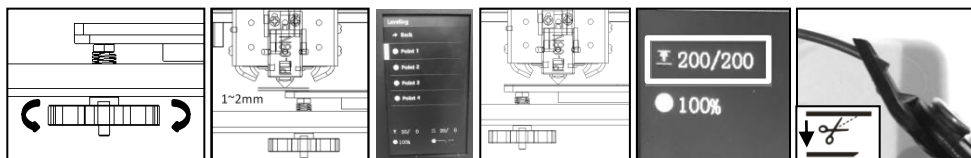
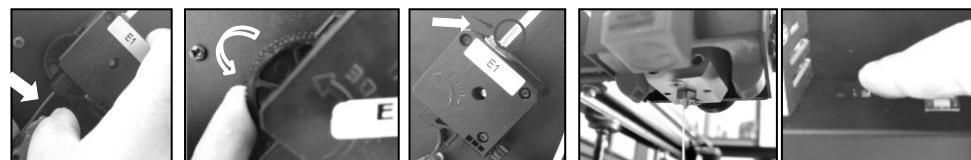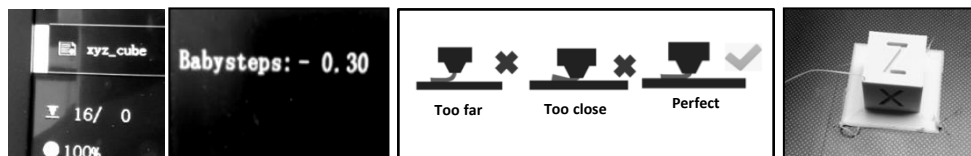|					
Fig 1	Fig 2	Fig 3	Fig 4	Fig 5	Fig 6
Fig 7	Fig 8	Fig 9	Fig 10	Fig 11	
Fig 12	Fig 13	Fig 14	Fig 15		

Slicing

About Slicing

Slicing a 3D drawing translates the 3D drawing into a language that a 3D printer can understand and print. The slicing software is a computer software used in the majority of 3D printing processes for the conversion of a 3D object model to specific instructions for the printer. In particular, the conversion from a model in *STL(Obj, Amf)* format to printer commands in **g-code** format. This machine can use a variety of slicing software to complete slicing.

!ATTENTION PLEASE!
Slicing software is not a part of this product, you can download it for free from the internet, many slicing software can be used to this kit, for example Prusa-Slicer, Cura, etc. **PrusaSlicer is our recommended slicing software.**

Slicing and print process

| Load stl files | Setup settings | Slicing and preview | Save gcode file to SD card | Plug SD card to machine | Print from machine |

Install and Step up slicing software

1. Please open the LCD screen MENU "**Info>>View User Guide**", and then you can find a QR code, Use your phone's browser to scan it to go the document download link. And then you can find a slicing software download link.
2. Download the slicing software to your PC or laptop and unzip it, find PrusaSlicer execute file, click to run it.
3. It will start to work a "**Configuration wiza**rd", choose "**Zonestar FFF**" and "**Z9/0.4mm**", click **"finish".**
4. Choose "**Zonestar Z9 + M4 HOTEND**" on printer settings.
5. For details to use the slicing software, please read the user guide and video tutorial from the slicing software download link.

Advance Features

Z9V5Pro support more advance features, included "*Filament run out detection*", "*Power loss recovery*", "*Power auto shut down*", "*Bed auto leveling*", etc.. For details, please see the online use guide from the LCD screen menu "*Info>>View User Guide*"**.**

By upgrading some accessories, you can also get more functions, such as WiFi wireless control, Direct drive extruder, etc. For details, please see the online use guide from the LCD screen menu "*Info>>View Update news*"**.**

Warranty Conditions

IT IS RECOMMENDED THAT YOU KEEP THE ORIGINAL PACKAGE OF THE PRODUCT IN ORDER TO OBTAIN A PROPER WARRANTY SERVICE.

The warranty obligations for this product are limited to the terms set forth below: ZONESTAR Innovation Tech., Co., Ltd.("ZONESTAR"), warrants this product against defects in material and workmanship for a period of 12 months from the date of original purchase ("Warranty Period"). If a defect arises and a valid claim is received within the Warranty Period, ZONESTAR will, at its option, 1) repair the product by using new or refurbished replacement parts, 2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product, or 3) exchange the product with a product that is new and upgraded model which has at least equivalent or upgraded function to the original product.

Replacement will be offered at ZONESTAR's discretion and the warranty will continue from the date of original purchase. When a product or part is exchanged, any replacement item becomes your property and the removed item becomes ZONESTAR's property and non-returnable.

Warranty service handling instructions:
Please have the serial number ready before contact our support team.
We may provide warranty services in the following ways:
1. Mail the replacement to you, and we will provide replacement instructions and guidance.
2. You are required to send the whole machine back to our maintenance center for maintenance, and then deliver the product to you completely.

NOTE:
In case of the above situation, the warranty period will be extended for 12 months after the delivery time of the repaired parts (or products). Before you deliver your product for warranty service it is your responsibility to prepare a proper packaging by using the original package (or equivalent). Inside the package you must include the defect product and all accessories (cash-receipt, invoices or equivalent document) to the our Services Center. After the repairing service is completed, we will deliver the product to you.

Any product left for repair not reclaimed by the customer within 30 calendar days from the date of collection notice issued by ZONESTAR may be handled or disposed by ZONESTAR in any way whatsoever without prior notice to the customer and ZONESTAR shall not be liable or responsible to the customer for such product or for any losses or damages whatsoever incurred in such event.

Exclusions and Limitations:
This warranty does not apply:
a) to any consumable parts such as nozzle, hotbed sticker or glass, filament guide, etc.; b) to damage caused by accident, misuse, neglect, fire, water, lightning or other acts of nature, unauthorized modification or failure to follow instructions supplied with the product; c) to repair or attempted repair by anyone not authorized by iRobot;
d) in case of unintended usage or bad maintenance including but not limited to cleaning of the product; e) if any serial number has been removed or defaced; f) the warranty does not cover of any damage of cosmetic nature; g) the product does not function properly because it was not originally designed, manufactured, approved and / or uthorized for the country where you used the product, which might occur in instances where the product has been purchased in another country or region than that of its intended used; h) extreme or external causes beyond our reasonable control including, but not limited to, breakdowns, fluctuations, or interruptions in electric power

ZONESTAR makes no guarantee to replace any spare parts of the products that is damaged, broken or malfunctioned such as but not limited to in situations where the affected spare parts of which are not available to Homertek for any reason whatsoever.
Your statutory rights are not affected by the terms of warranty.

Others:
1) In case of dispute relating to the warranty, the maintenance service and / or any information contained herein, ZONESTAR's decision shall be final. The terms and conditions contained here in are for general reference only and are subjected to change without notice.
2) The warranty begins on the date of purchase shown on the purchase voucher (cash-receipt, invoices or equivalent document).

Troubleshooting :
1)If you have any question on installation and using, please view the troubleshooting online document from the info menu of the LCD screen "*Info>>View Troubleshooting*" first.
2)If you can't find the solution to fix your question from the troubleshooting guide, please contact our technology support team by email, you can find an email address on the bottom of the troubleshooting online document.