BUILDING INSTRUCTIONS OF BIBER

Content

About the Biber Computer Kit

Biber is a computer kit for kids to assemble themselves, move on through Raspberry Pi story series and accumulate knowledge in physical engineering and electronics in the game.

Preparation

1. Unpack the kit and check to make sure that all the parts are complete and in good condition, since there might be some damage during shipping. To help you with this, there is a BOM in the box and each part has been labeled according the building procedures.
2. Please contact with our customer service straight away, provide us the NO. , Name, and Qty, if you find any missing or damaged parts.
3. **Read through the whole building process to gain an over-all idea of what is involved and how long it might take to finish the assembly, before you start on the work described. Or you can watch the assembly video HERE.**
4. Before your assembly work, it is advisable to put all the parts in order according to the building instruction. Do not mix them up. In this way, you will find the whole building task interesting, time-saving and worthy of your exploration.
5. The Biber computer kit is recommended for kids aged 8-12. This kit contains tiny parts; please keep them away from kids under 3.
6. Work on a clean and dry table.
7. Ask for help should you run into any problems and we will always try our best to find the suitable solution for you.
8. If you find any problem about the videos, such as the part number is wrong, please refer to this building instruction. Videos are just for reference, and we may do some tiny changes.

Unfold the box and check the package list

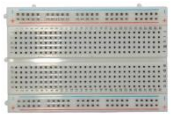
Unfold the package and take all the parts out to check the condition of the items.

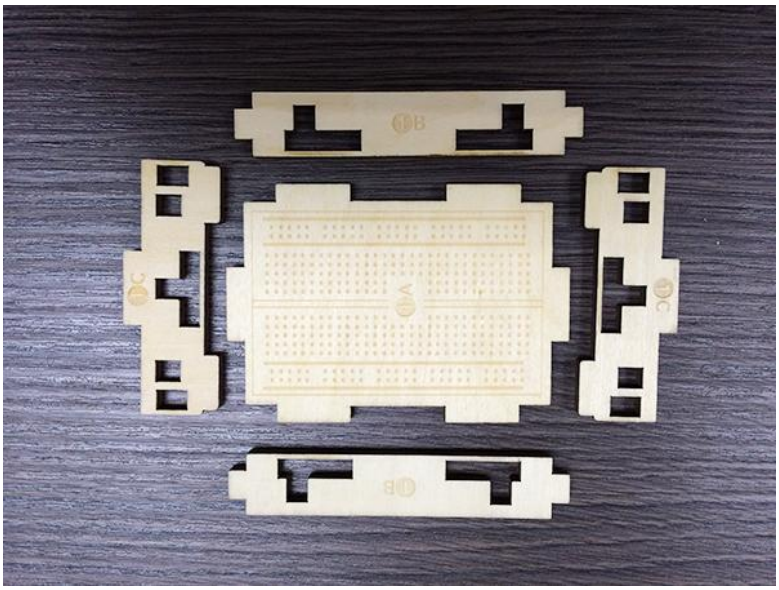
* All the basswood parts are etched with ID numbers.

*The part ID is designed according to the building procedure.

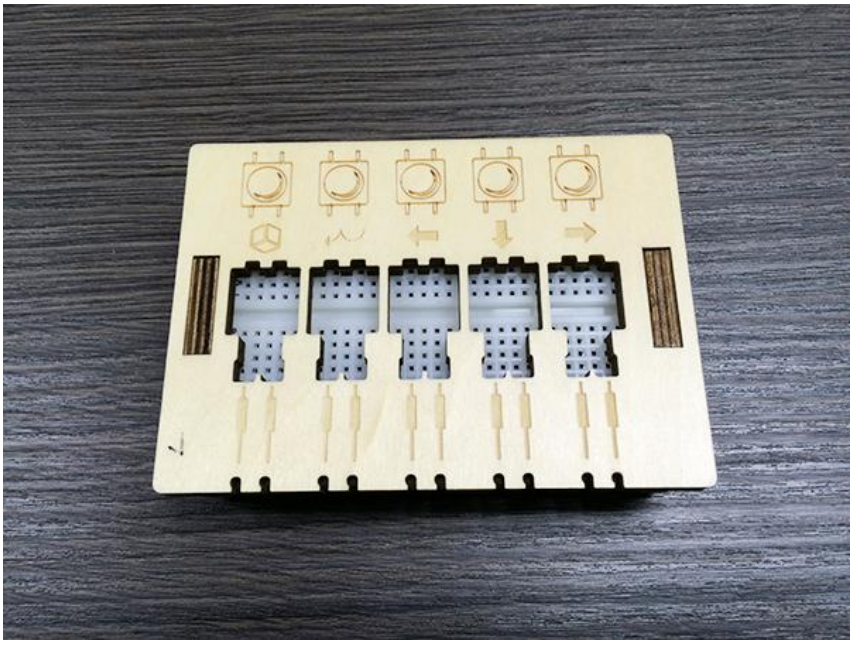
Arrange all the parts in the right order by making reference to the following building steps. It will take about 2 hours to complete the whole building process.

1. Build the controller box

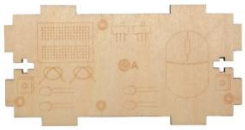
No.	Name	Qty	Picture
1	Controller box bottom (1A)	1	
2	Controller box front/back (1B)	2	
3	Controller box right/left (1C)	2	
4	Controller box top (1D)	1	
37	Big breadboard	1	

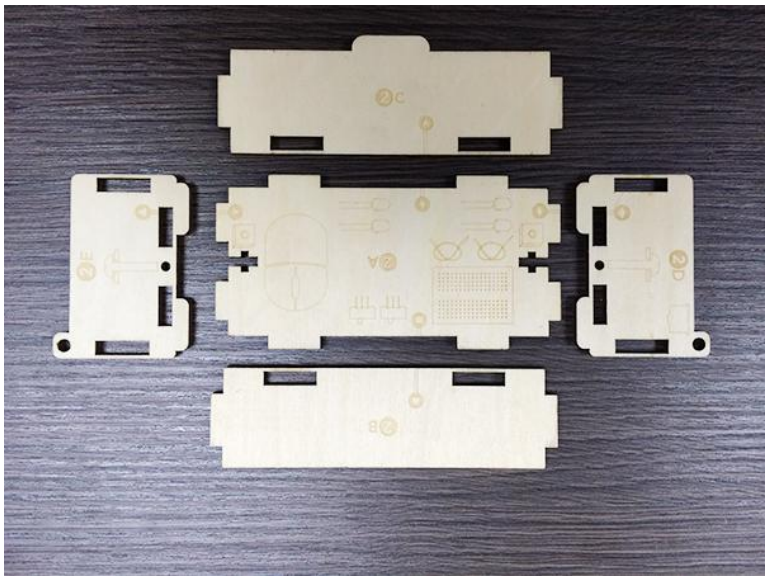


a. Put 1A, 1B(x2), 1C(x2), 1D in order;
b. Attach the big bread board to1A;
c. Join 1A and 1B(x2) together, and then embed 1C(x2) into 1A and 1B(x2);
d. Put 1D on the top as a lid of the controller box, making sure that the arrows on 1D are in the right direction.
e. With the above four steps, your controller box is completed.



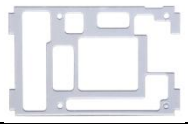
2. Build the storage chest

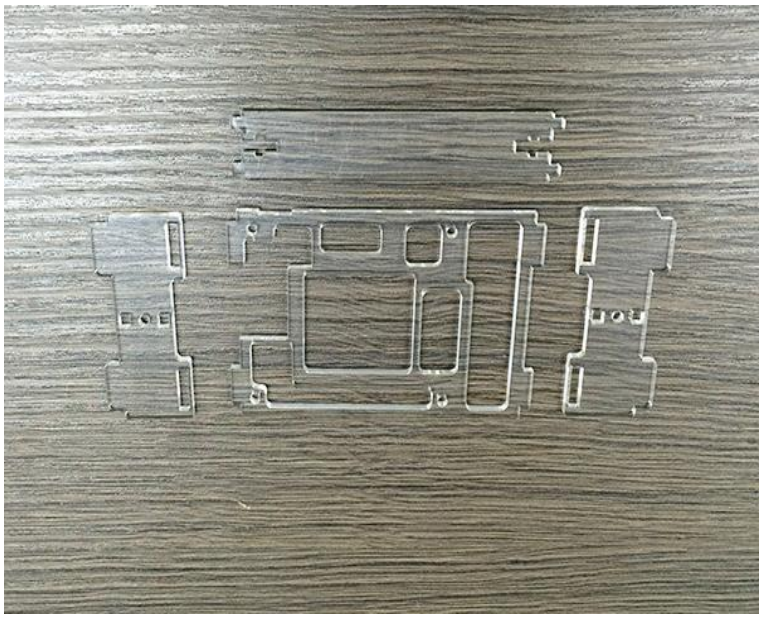
No.	Name	Qty	Picture
5	Storage chest bottom (2A)	1	
6	storage chest back (2B)	1	
7	storage chest front (2C)	1	
8	storage chest side left (2D)	1	
9	storage chest side left (2E)	1	
10	Storage chest lid (2F)	1	
50	Screws (M3.5*16mm)	2	
47	Square nuts (M3.5)	2	



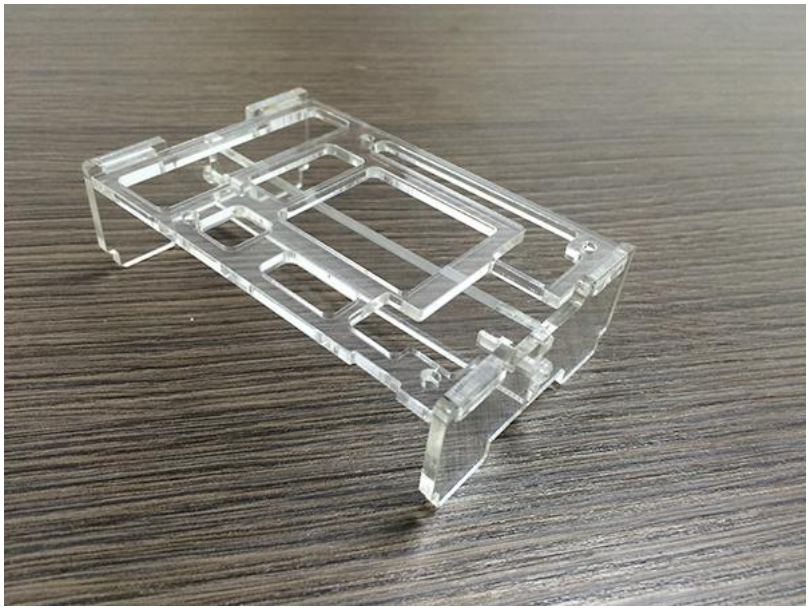
a. Arrange 2A, 2B, 2C, 2D, 2E, 2F in the right order;
b. Put 2A, 2B and 2C together (Make reference to the assembly video);
c. Join 2D together with 2A, 2B and 2C;
d. Embed 2F --- the acrylic plate (with the logo “BIBER”) into the small hole in 2D;
e. Then join 2E and the rest of the storage chest together;
f. Tighten the chest with 2x16mm screws and 2 square nuts on the side of 2D and 2E;
g. In the end, your storage chest is nicely done. This little chest will accommodate your small mouse, LED lights, a yellow bread board, jumper wires and some other parts.

3. Build the Raspberry Pi Base (plastic pieces)

No.	Name	Qty	Picture
26	Acrylic Pi case base	1	
27	Acrylic Pi case bar	1	
28	Acrylic Pi case foot	2	
52	Acrylic screws	2	
53	Acrylic nuts	2	



Arrange these plastic pieces in a correct order. Then put them together and use 2x16mm screws and 2 square nuts to strengthen the base.



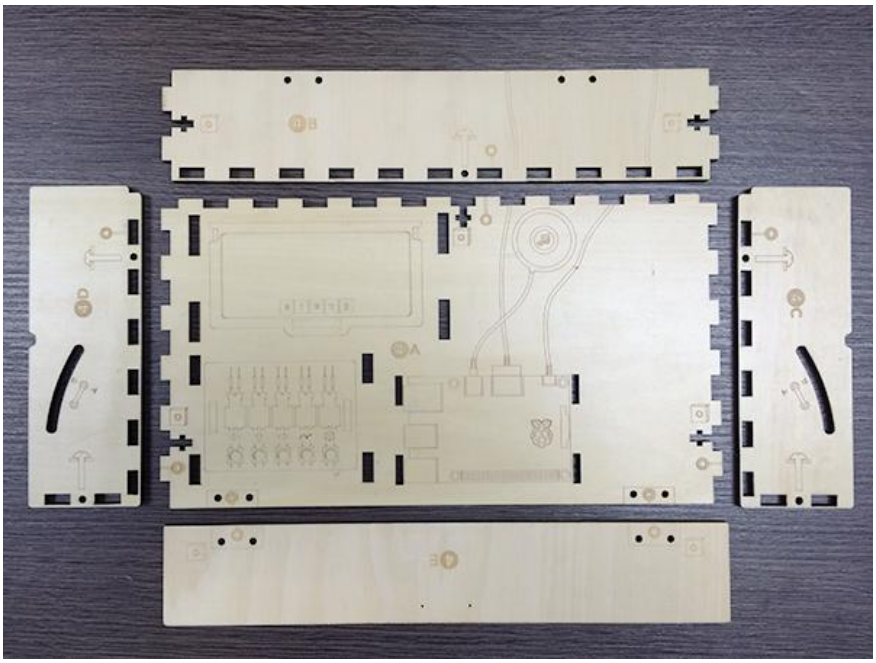
4. Mount the Raspberry Pi computer chip on the base

No.	Name	Qty	Picture
31	Raspberry Pi 3	1	
52	Acrylic screws	4	
53	Acrylic nuts	4	

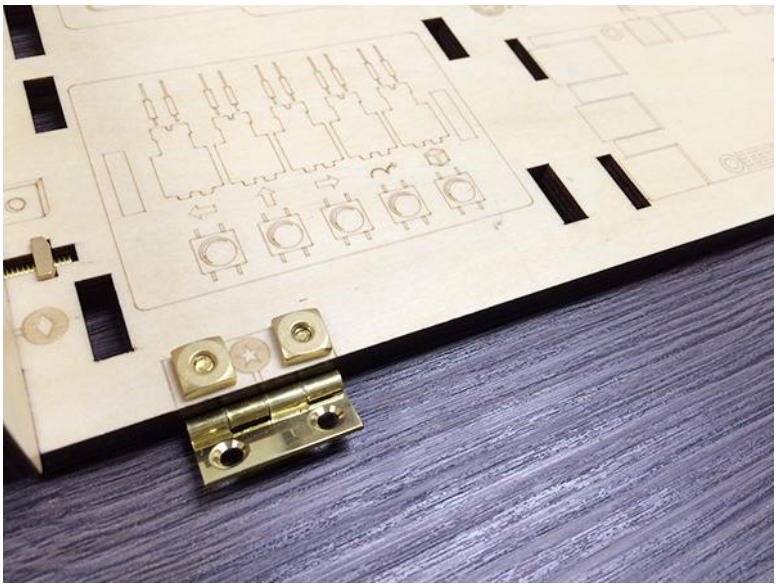
Mount the Raspberry Pi 3 chip on the base assembled in the above step. Use 4 acrylic screws and 4 acrylic nuts to fix the two parts together. Insert the SD card on the right side of the chip.

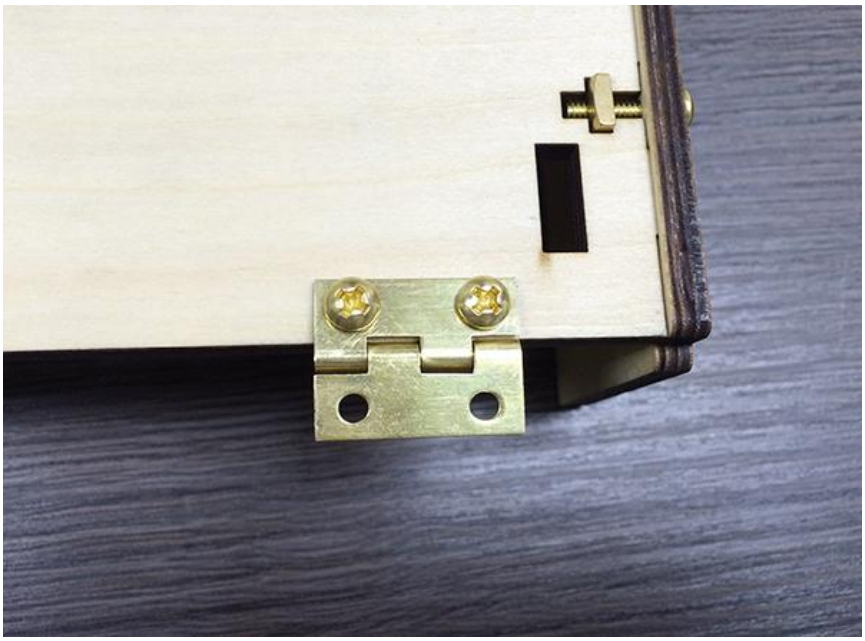
5. Build the base plate

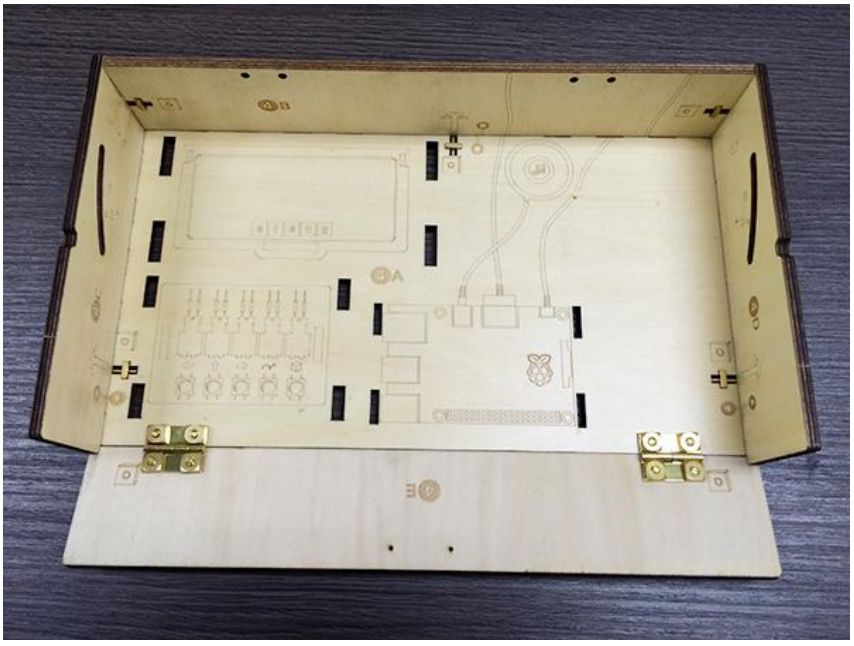
No.	Name	Qty	Picture
11	Base plate bottom (4A)	1	
12	Base plate back (4B)	1	
13	Base plate side left (4C)	1	
14	Base plate side right (4D)	1	
15	Base plate front (4E)	1	
50	Screws (M3.5*16mm)	5	
54	Hinges	2	
51	Screws (M3.5*8mm)	8	
47	Square nuts (M3.5)	13	

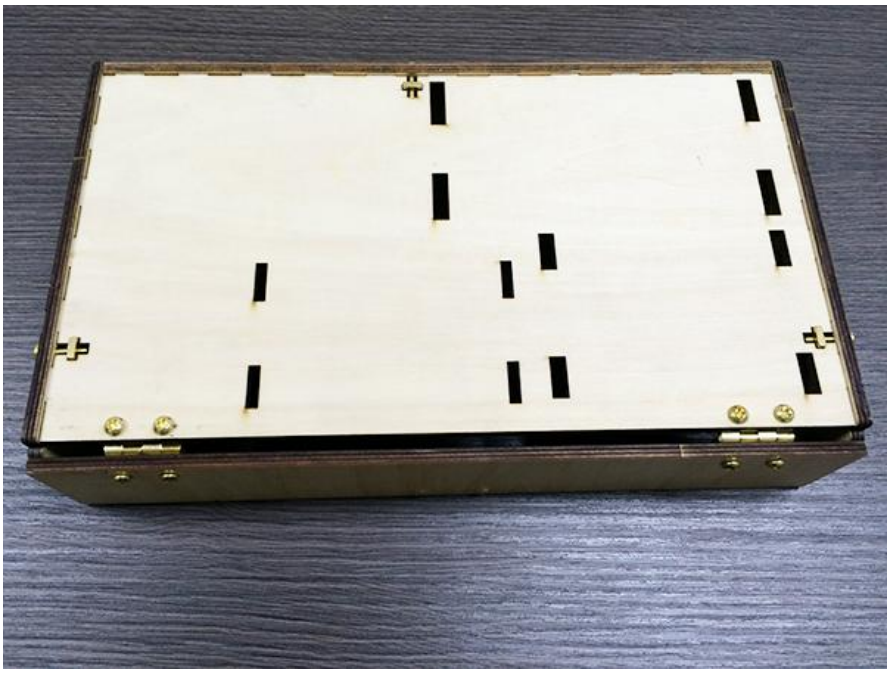


a. Put 4A, 4B, 4C, 4D and 4E in order as shown in the picture.
b. Join 4A and 4B together, and then come 4C and 4D;
c. Use 5x16mm screws and 5 square nuts to tighten the base plate from the side of 4B, 4C and 4D respectively;
d. Attach 4E to this unfinished base plate with two hinges, and use 8x8mm screws and 8 square nuts to tighten the whole structure.



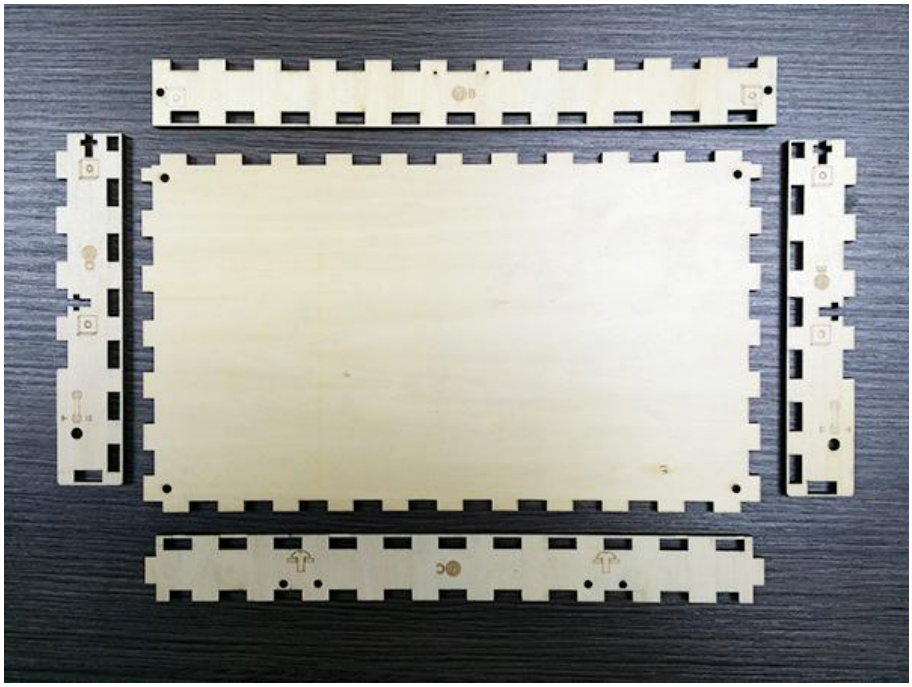






6. Build the screen lid

No.	Name	Qty	Picture
16	Case top (5A)	1	
17	Screen lid top (5B)	1	
18	Screen lid bottom (5C)	1	
19	Screen lid side right (5D)	1	
20	Screen lid side left (5E)	1	
25	Screen lid cover	1	
50	Screws (M3.5*16mm)	6	
47	Square nuts (M3.5)	6	



a. Arrange 5A, 5B, 5C, 5D and 5E in the correct order;
b. Embed 5A, 5B and 5C into each other, and then follow 5D and 5E;
c. Fasten the lid with 2x16mm screws and 2 square nuts from the outside of 5B;
d. Use 4x16mm screws and 4 square nuts to fix the screen lid cover on the exterior of 5A.

7. Join the screen lid and the base plate together

No.	Name	Qty	Picture
54	Hinges	2	
21	Swing arm left/right	2	
51	Screws (M3.5*8mm)	8	
47	Square nuts	8	

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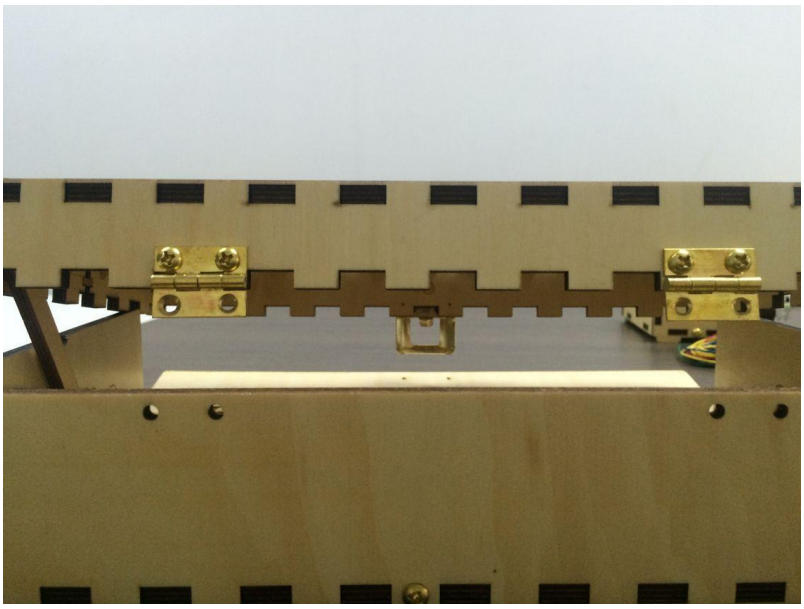
a. First, use 4x8mm screws and 4 square nuts to fix the two hinges on the side of 5C;

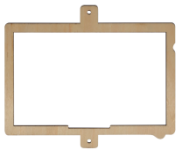
b. Use 4 pairs of binding posts screws and two pieces of swing arms to connect the screen lid and the base plate so that the screen lid could move freely;



c. Finally, tighten the uncompleted hinges on the side of 4B with 4x8mm screws and 4 square nuts.

8. Assemble the LCD screen

No.	Name	Qty	Picture
32	Screen display kit	1	

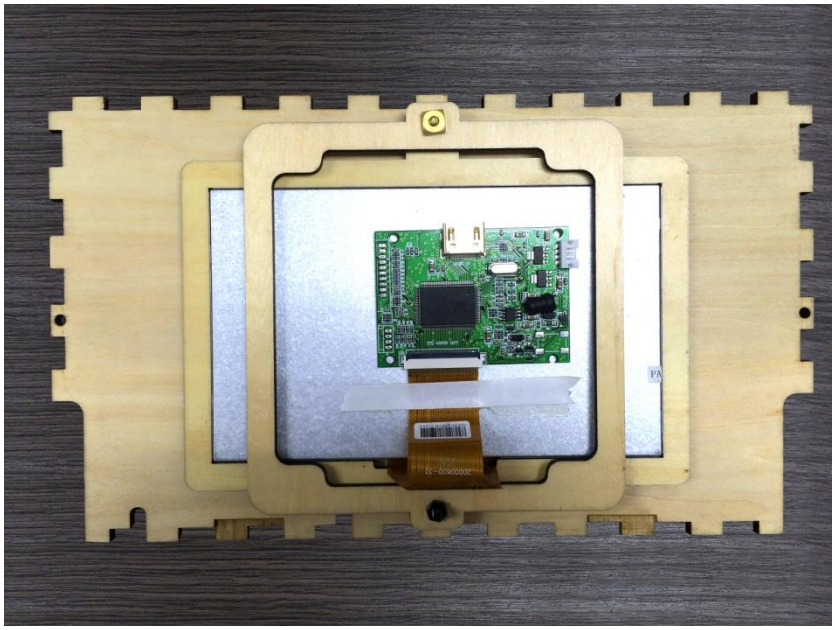
22	Screen main frame (5F)	1	
23	Screen middle frame	1	
24	Screen back frame	1	
33	HDMI cable	1	
35	Molex USB cable	1	
49	Screws (M3.5*20mm)	2	
47	Square nuts	2	

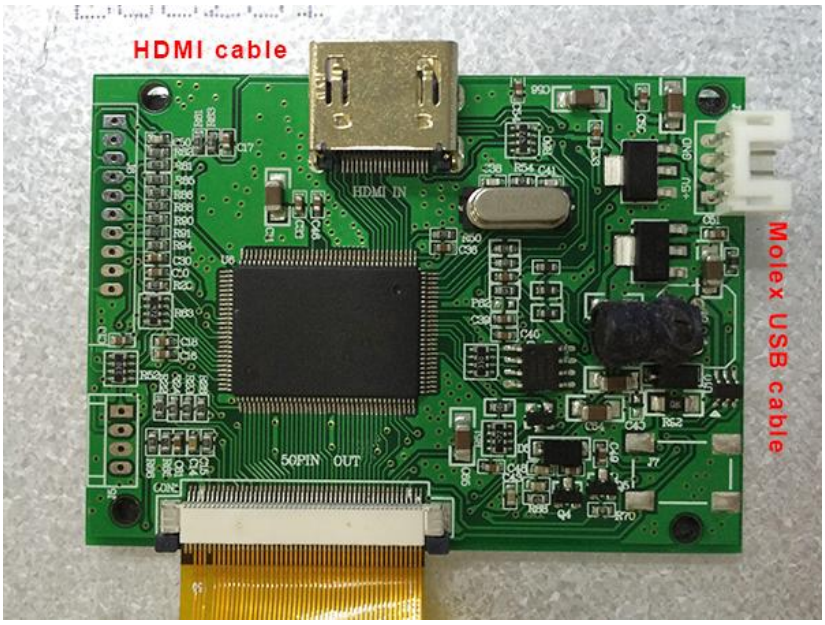
a. Tape the small chip board to the back of the screen;

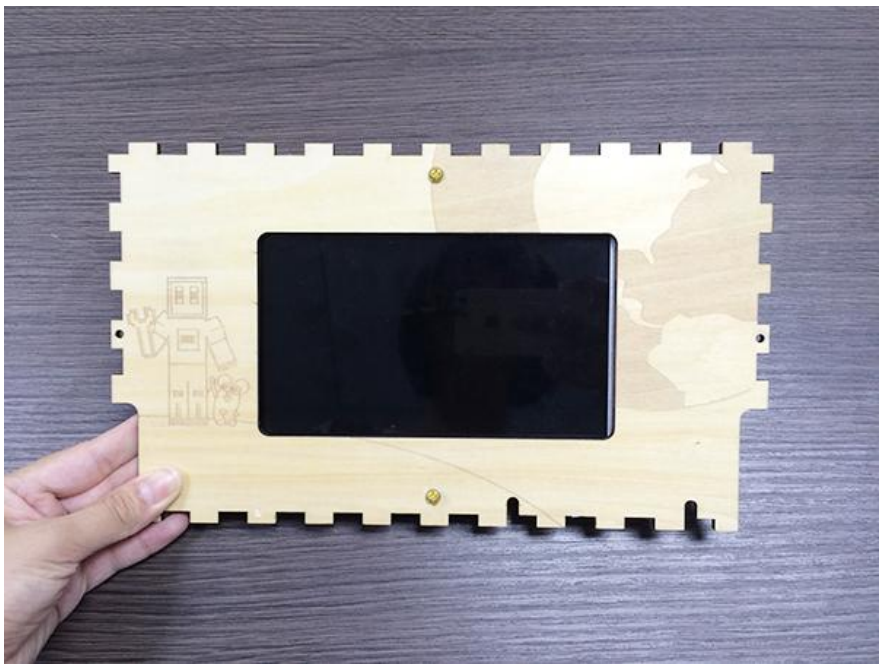
b. Assemble and fix the LCD screen by using 5F and another two pieces of frames (rectangle and square) (make reference to the picture below and the assembly video);

c. Use 2x20mm screws and 2 square nuts to tighten the these four parts together;

d. Connect the Molex USB cable and HDMI cable on the back of the LCD screen;




HDMI cable
HDMI IN
50PIN OUT
Molex USB cable



9. Embed the completed LCD screen into the screen lid

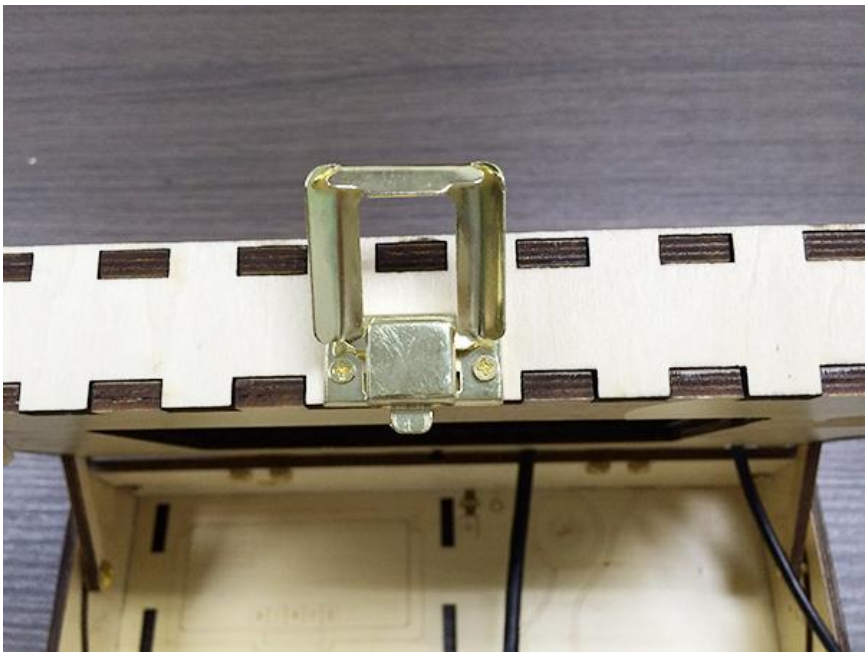
No.	Name	Qty	Picture
50	Screws (M3.5*16mm)	2	
47	Square nuts	2	

Embed the completed LCD screen into the screen lid, and use 2x16mm screws and 2 square nuts to fix them together.

10. Fix the latch on the computer kit

No.	Name	Qty	Picture
55	latch	1	

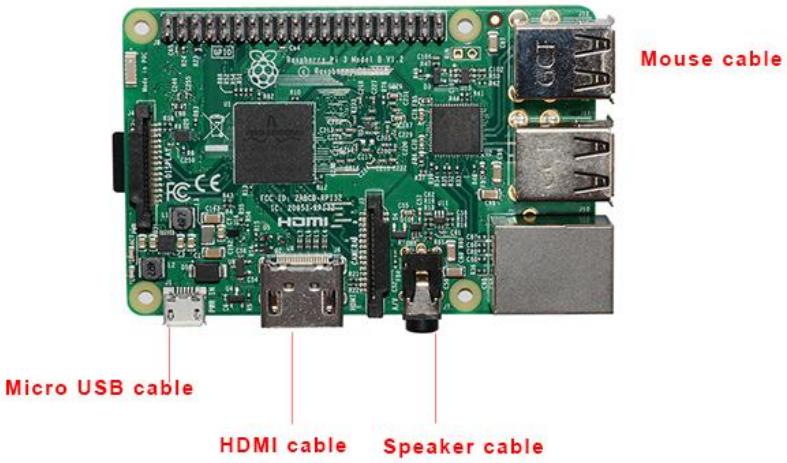
Fix the latch on the side of 5B and 4E with four tiny screws.

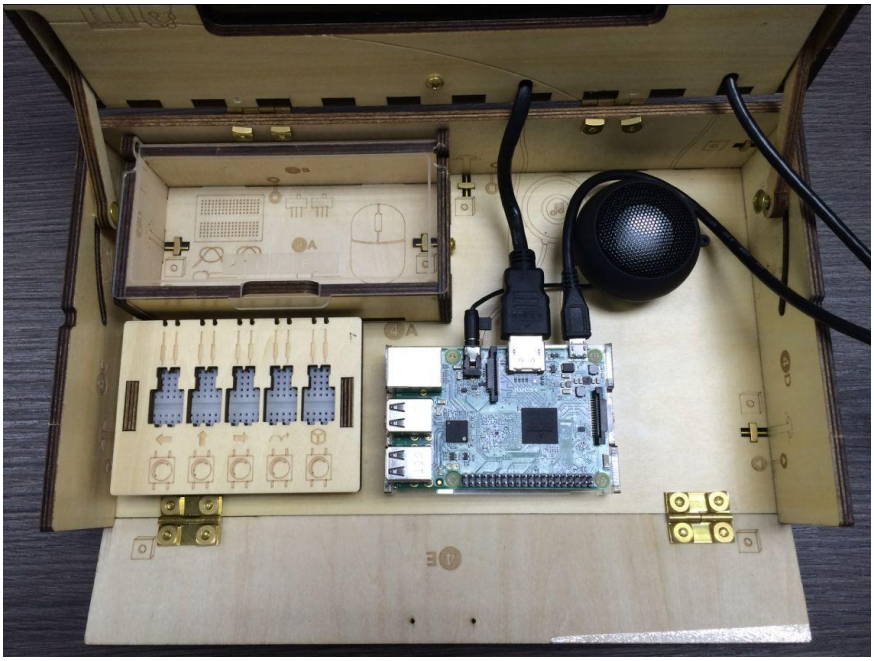


11.Connect the wires

a. Connect the other end of the HDMI cable to the port of the the Raspberry Pi 3 chip;

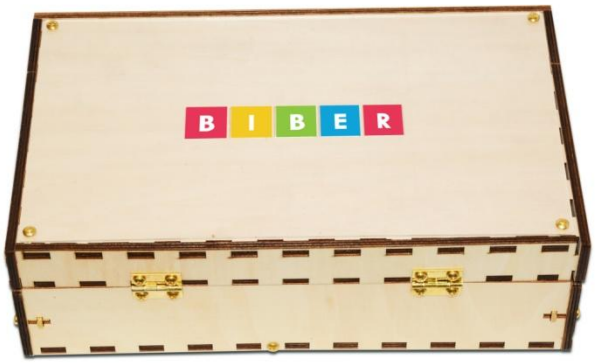
b. Connect the other end of the USB cord to the adapter, and power the computer chip up by connecting it to the adapter;





c. Wire the small mouse and the speaker to the Raspberry Pi 3 chip.

When all the wires are ready, you could power up the computer kit to embark on Biberbot exploration journey.


B I B E R


B I B E R
STORY MODE
CREATIVE MODE