

# PETS

## Assembly manual

- PETS is made of MDF (medium density fiberboard), a yielding composite wood. Please be careful not to harm your fingers. To wear the gloves is recommended.
- Each MDF has no direction, however, please make sure to have the right direction for each part.
- Movies of all assembly steps are up on YouTube. Please check them especially the complicated ones.  
(<https://www.youtube.com/channel/UCbw-JCjOwLwsO0zA74yGw5g>)

**Before you begin** - You have already opened the box and see all the parts organized in boxes and bundles.

### 【Bundles】

- MDF boards A-G : Total 7pcs
- Power Switch x 1
- Battery Enclosure x 1
- Color Sensor x 1
- Main PCB board x 1
- Interface board x 1
- Flat cable x 1
- Start Switch x 1
- Screw and Nut x 2
- Motor x 2
- Gum Tire x 2
- Acrylic Tire spacer x 2
- Steel Ball x 2

### 【Tools to prepare】

- Wood glue for MDF
- Driver (use to assemble the Start Switch)
- Tweezers (nice to have for detailed assembly)
- Gloves (to prevent harming your hands)


### 【Time required for Assembly】

Approximately 1.5h for an adult

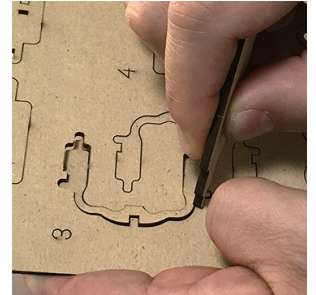
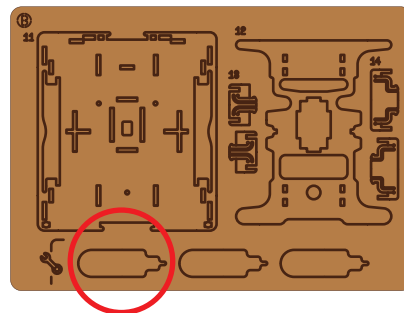
### a Before you begin

Check out all the parts and bundles are in the box, and prepare the tools. Pick out the parts remover tool from MDF board B.

 Remover tool x 3 (2 are backups)

 Parts with the [!] mark are backups. (Please keep it attached on the MDF)


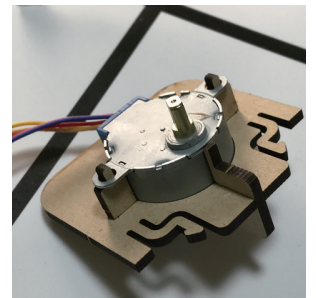
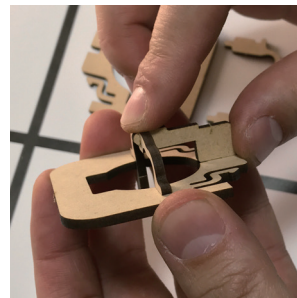
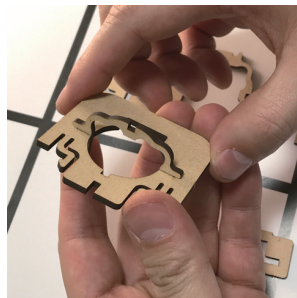
Find the identifier from A to G on left-up side of each MDF board.



### b Assembly 2 motors

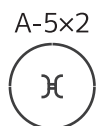
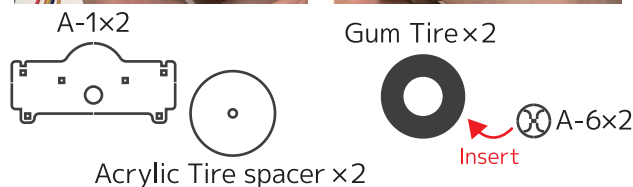
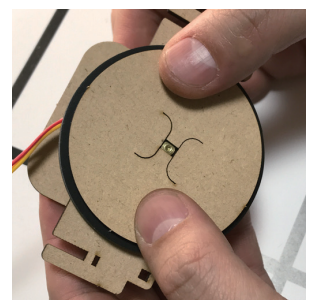
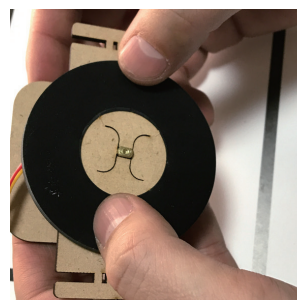
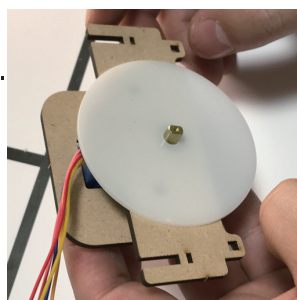
Detach parts 2, 3, 4 from MDF board A. Insert A-2 to A-3, followed by inserting A-4 to it. And put the motor on it.

Motor x2    A-2x2    A-3x2    A-4x2

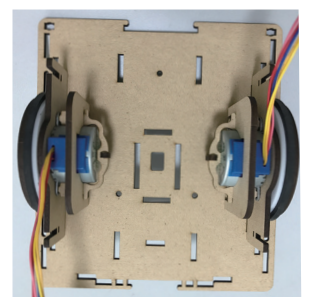
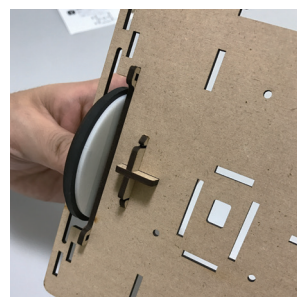
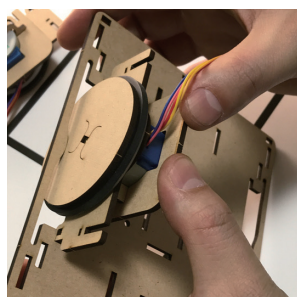
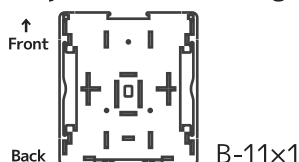
### c Attach the tire on motor

Detach parts 1, 5, 6 from MDF board A. Attach the following parts in order of A-1, Acrylic tire spacer, and Gum tire with A-6, to Motor assembly from step (b), with aligning them to the rectangular head of the motor shaft. This step completes the 2 tires.



### d Attaching motors to the basement-①

Detach parts B-11, and insert the tires from step (c). Make sure to fix the parts steadily to hear the clicking sound.





## Attaching motors to the basement-②

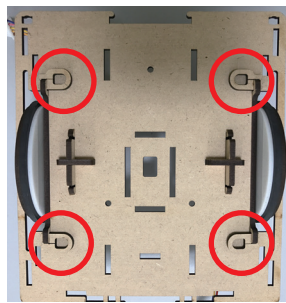
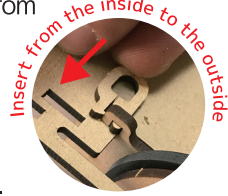


Detach parts A-7. Insert 4 of them to the slits of the tire holder of step (c) from the backside of the basement. Next, insert another 4 of them to the slits of the tire holder from the topside of the basement.

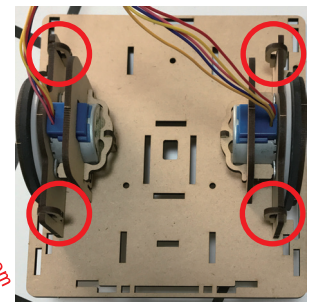


A-7  
x8

Remark) A-7 is similar to A-10. Make sure not to take them wrong.



(d) backside of the basement



(d) topside of the basement

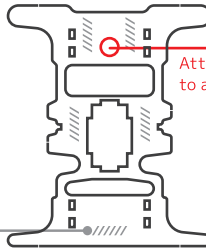
Insert A-7 so that the flat side faces outward.



## Reinforce the Basement

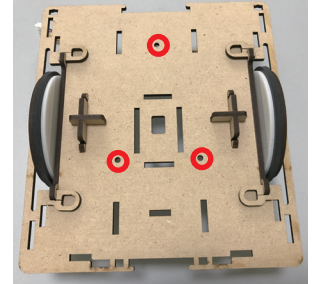
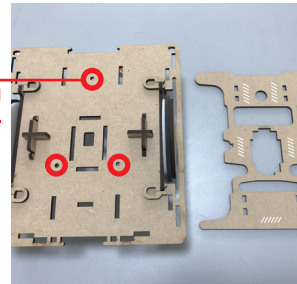
Detach B-12, put wood glue on 5 points as shown in the picture, and attach it to the basement. Make sure not to cover the 3 holes on the basement.

B-12x1



Attach the board to align this hole.

5 points to glue



## Assemble Wooden Casters

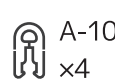
Detach 2 sets of G-31, G-32, A-8, A-9, and 2 of A-10.

A-8x2

A-9x2



Steel ball x2



A-10  
x4



G-31x2



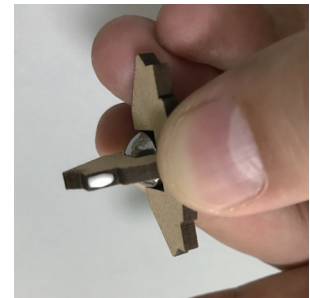
G-32x2



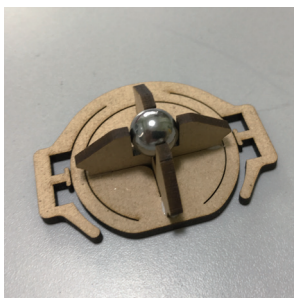
1. Put steel ball to G-31.



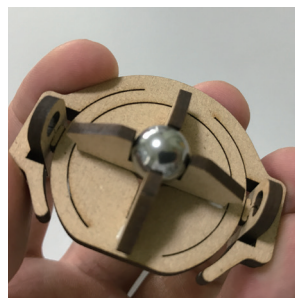
2. Attach G-32.



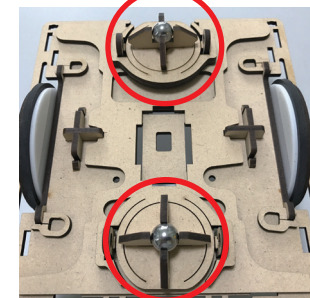
3. Put glue on a part of G-31 and G-32.



4. Attach to A-8.



5. Attach A-9, and insert 2 of A-10 from A-8 side.



6. Make 2 of them, and insert them to the basement.

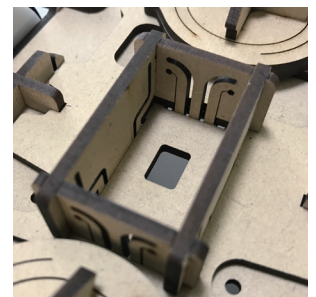
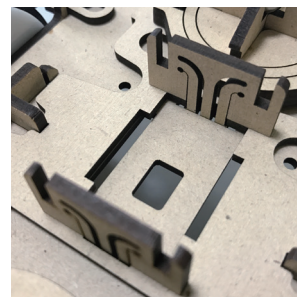
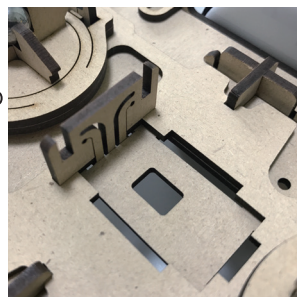


## Assemble the curb of the color sensor

Detach B-13, and B-14. Insert 2 B-13 to the backside of the basement(d) in parallel. Next, insert 2 B-14 from the upside of B-13 orthogonally.

B-13x2

B-14x2

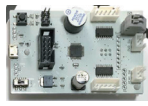




## Attach the Main board



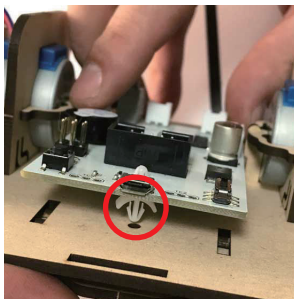
Insert the main board to basement(d) from upside. Insert 2 cables from motors to the connectors on both sides of the main board. Next, connect the color sensor to the main board from the backside of the basement(d).



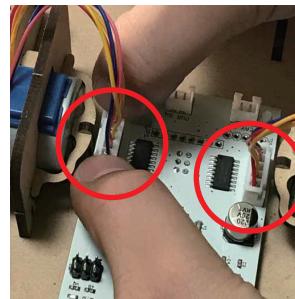
Main PCB boardx1



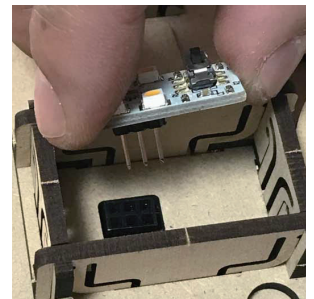
Color Sensorx1



Insert the white nylon hooks of the main board to the three circular holes on the basement(d) from upside.



Insert the cables from motors to main board connectors.

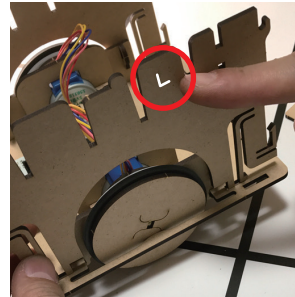
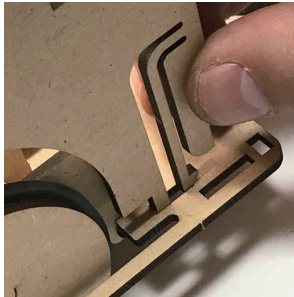
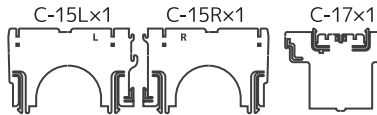


The connector of the main board shows up in the curb(h) on the back side of the basement(d) then attach the color sensor on it.

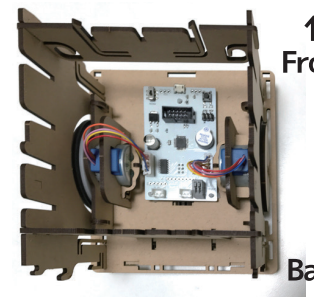


## Attach the side boards

Detach C-15L, C-15R, C-16, and C-17. Insert C-15L and C-15R to the basement step (j) on top of the tires. Check out the direction so that the L and R letters can be readable from the outside. Next, make sure the forward and backward of PETS, and insert C-16 to forward, and C-17 to backward, and C-17 to backward of C-15.



Check out the direction so that the L and R letters from the outside.



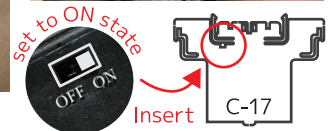
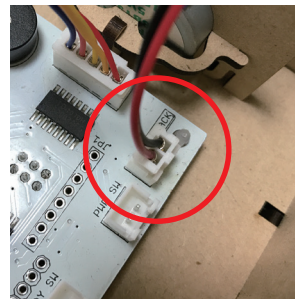
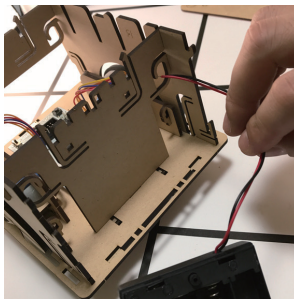
Insert C-16 to forward, and C-17 to backward of C-15.



## Connect the battery enclosure to the main board

Lace the cable of the battery enclosure through the hole of C-17. Insert the cable to the main board connector.

Put the battery enclosure along with C-17 aligning on/off switch to the hole of C-17. (Make sure the switch is set to ON state.)



## Assemble the Start Switch, and attach to the main board

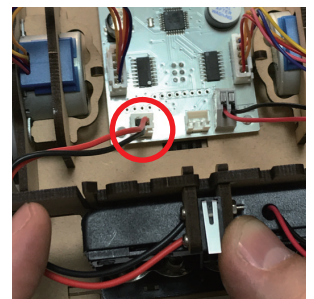
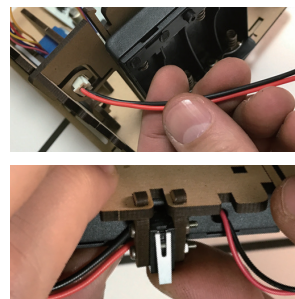
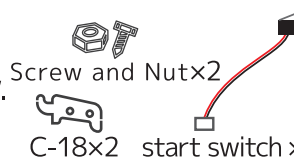
Detach 2 of C-18, and prepare the start switch, screws, and nuts. Screw the switch up with C-18 from the both side.

(Check out the orientation) Lace the start switch cable through the hole of C-17.

Insert the start switch sub-assembly into C-17, using 2 small holes on C-17. Insert the start switch cable into the main board connector labeled PLAY SW.



Check out the orientation.

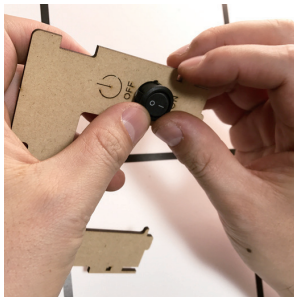


## Connect the Power Switch

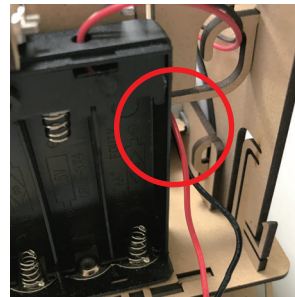
Detach E-25, and put the power switch on it. Lace the power switch cable through the lower-right part of (k) battery enclosure sub-assembly. Insert the power switch cable into the main board connector labeled PWR SW.



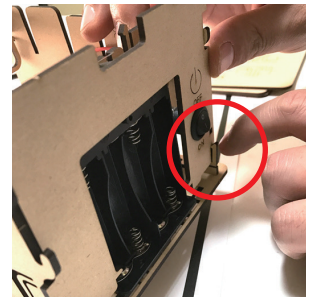
E-25x1



Fix the power switch to have O sign on top (OFF side).



Lace the power switch cable through the space on the right side on the backside of C-17.



Insert the board to have hook on near side.

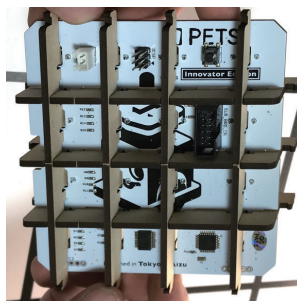
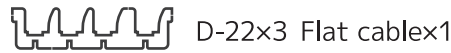
## n Assemble the interface board

recommend



Detach D-21 x 4, and 22 x 3. Insert 3 of D-22s sideways, and 4 of D-21s endways into interface board seeing PETS-kun marking.

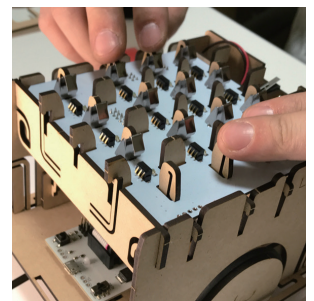
Next, connect the interface board and main board using flat cable and put it on top of the body.



Insert 3 of D-22s first, and 4 of D-21s next.



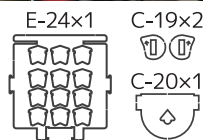
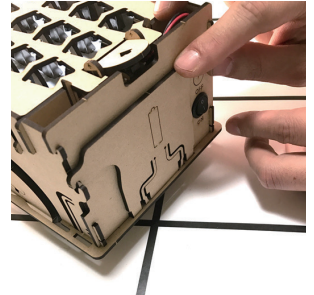
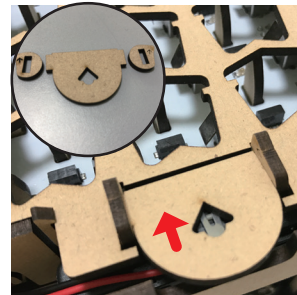
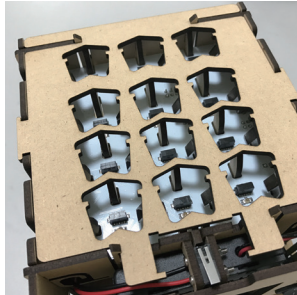
Check out the interface board orientation to have PETS-kun's head on the right side!



Insert the angled end connector of the cable to the black connector on the main board. And insert the other end of the cable to the connector on the backside of the interface board.

## o Start Switch and Block Holder

Detach E-24 and put it on the body. Detach C-19 x 2, and C-20 put C-19s on the side of C-20 to have the bump (on C-19 with small allow markings) on foreside of C-20. And put them on E-24 near side space on top of the start switch. (It is okay just to put it and it is going to be fixed in the next step.) Detach D-23, and put it on the battery enclosure as the cover.



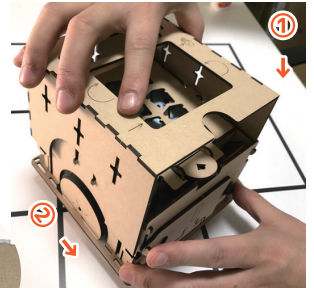
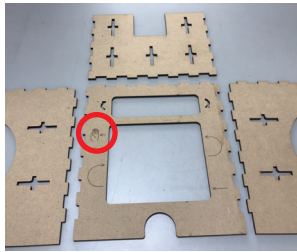
Set C-19s and C-20 to have the allow towards the front.

## p Assemble the outer body

recommend



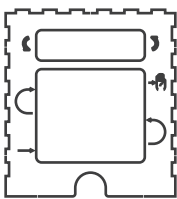
Detach E-26, F-27 x 2, G-28, and layout these 4 parts as shown in the picture. Put the wood glue on bumps on the each part, and fix them. When the glue dries enough, insert it into the body and slide it to nearside to be fixed. And detach G-30 and put it on the front of the body.



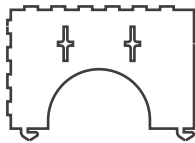
Check out the orientation! Put G-28 on upside down, to have (Hand Sign (👉) on the left.

Fixed the outer body using the wood glue on bumps on the each part. In case the glue got out of the parts, use tissues to rub away.

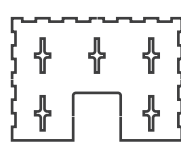
G-28x1



F-27x2



E-26x1



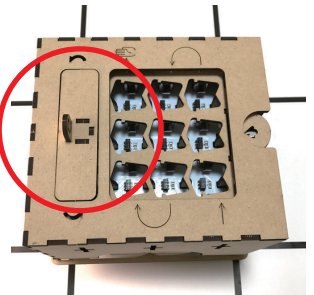
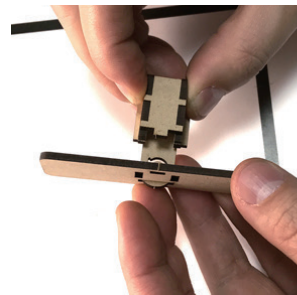
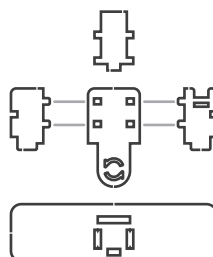
G-30x1



## q Assemble the loop are cover

Detach the set of G-29s, and put them together. Use the loop area cover when you are in the begging part of the basic curriculum.

G-29



Congrats!! This is it!!  
In case you break the parts, please use the backups on each MDF boards.

for Our Kids Inc.

**[Contact]** Please use PETS forum for questions. Check out our YouTube channel for the assembly guidance movie.

PET Forum on Facebook (You can join upon approval)

<https://www.facebook.com/groups/petsforum4ok/>

PETS information

<http://4ok.jp/pets/en/>



Assembly Guidance movie

YouTube

