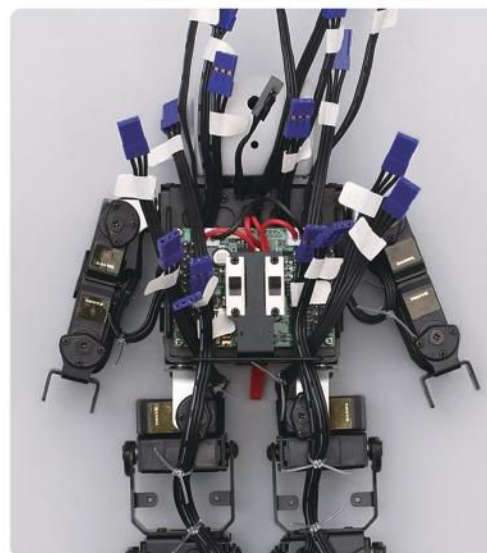
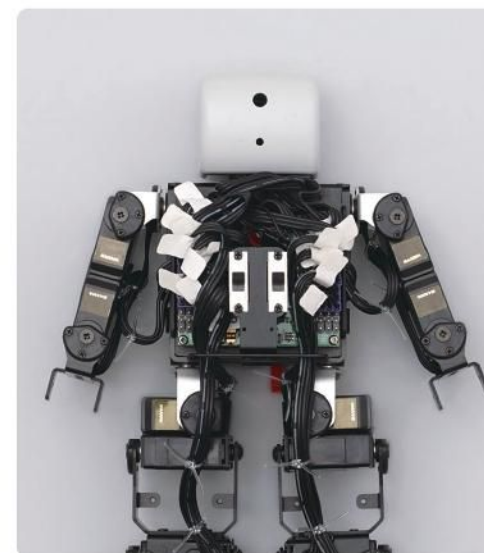


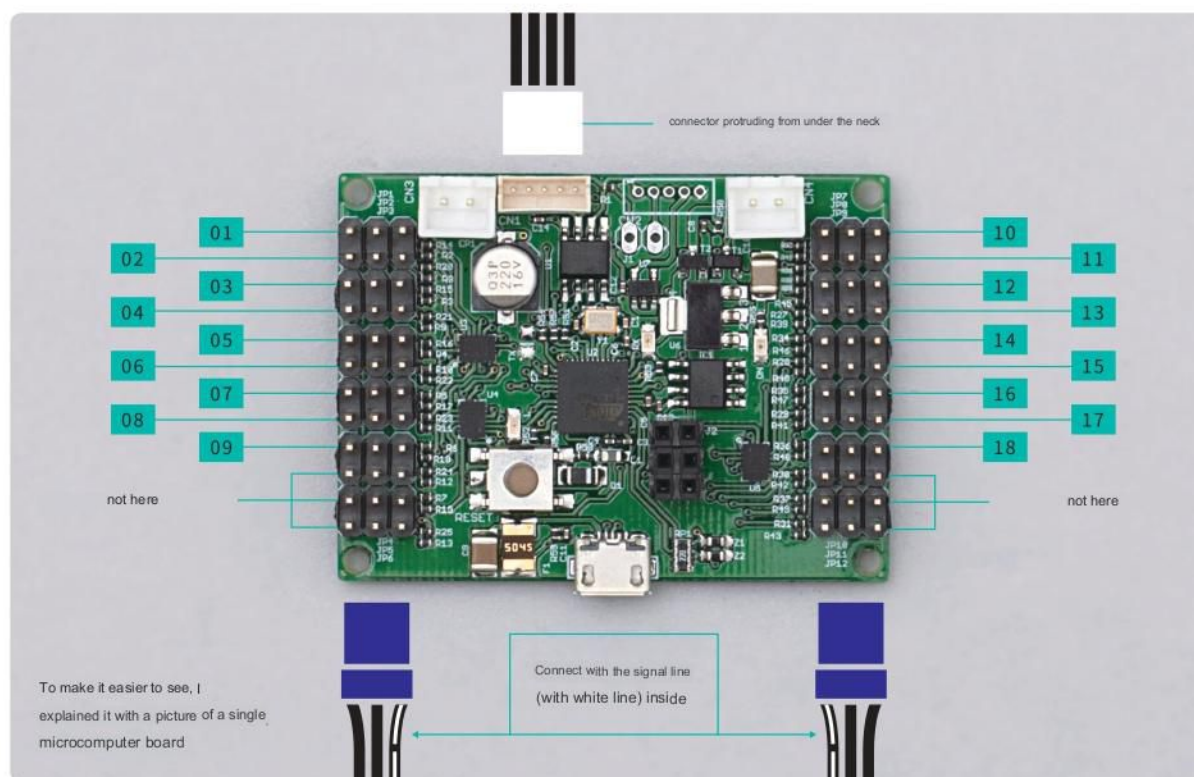
Connector connection



before connection



After connection



Sheath installation

1

required parts



Shin plastic cover R-in [R-in engraved on the back]



Shin plastic cover L-in [L-in engraved on the back]



Shin plastic cover R-out [R-out engraved on the back]



Shin plastic cover L-out [L-out engraved on the back]



Sole plastic cover (x2) [Common for left and right]

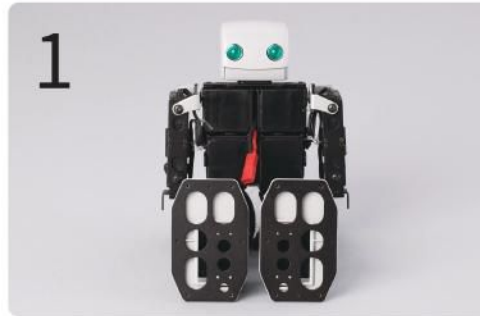


Screw M2x2.5 (4 pieces)



Screw M2x4 (12 pieces)

1



[Caution]
Do not use screw-fastening agent on the parts that fix the plastic extension!

Align the "sole plastic cover" with the sole of the foot

2



Orientation where the letters of PLEN can be read

Screw M2x4 (8 places)

Attach the "sole plastic cover" with "Screw M2 x 4"

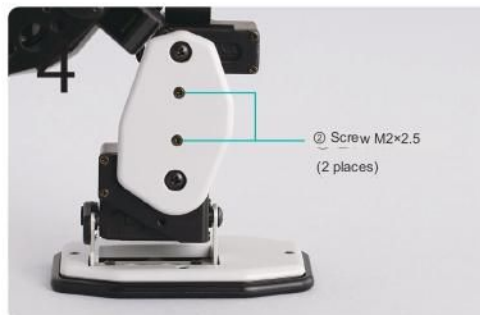
3



Screw M2x2.5 (2 places)

Attach the "shin plastic cover R-in" with "Screw M2x2.5"

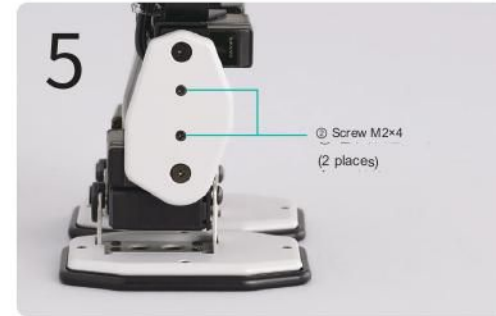
4



Screw M2x2.5 (2 places)

Attach the "shin plastic cover L-in" with "Screw M2x2.5"

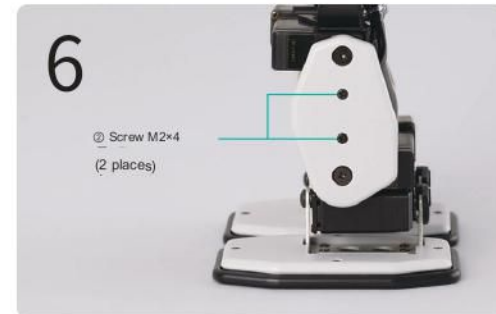
5



Screw M2x4 (2 places)

Attach "shin plastic cover R-out" with "Screw M2x4"

6



Screw M2x4 (2 places)

Attach "shin plastic cover L-out" with "Screw M2x4"

Sheath installation

2

required parts



back plastic cover



Front shin plastic cover (x2) [Common
for left and right]



Thigh plastic cover (x2) [Common
for left and right]



② Screw M2x2.5
(12 pieces)



[Note]

Do not use screw-fastening
agent on the parts
that fix the plastic

external

Keep the cables on
your back as compact
as possible



2

② Screw M2x2.5
(4 places)

※ same for the other side

Cover the "back plastic
cover" and attach
it with ② screws
M2x2.5



3

② Screw M2x2.5
(47) PF)

Attach the "front shin
plastic cover" with "②
screw M2 x 2.5"



4

② Screw M2x2.5
(4 places)

Attach the "Momo
Plastic Cover" with "②
Screw M2 x 2.5"

Sheath installation

3

required parts



Arm Plastic Parts R



Arm Plastic Parts L



Elbow plastic cover (x2) [Common for left and right]



② Screw M2x2.5 (6 pieces)



[Note]
Do not use screw fasteners on the parts that fix the plastic exterior when!

Insert the "arm plastic part R" into the "elbow frame"



Attach "Arm Plastic Parts R" with "② Screw M2 x 2.5"



Insert the "arm plastic part L" into the "elbow frame"



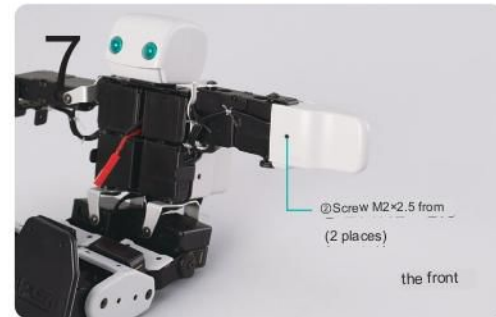
Attach "arm plastic part L" with "② screw M2 x 2.5"



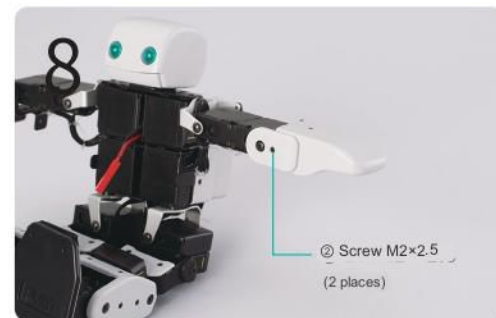
Attach "arm plastic parts R" with "② screw M2 x 2.5"



Attach the "elbow plastic cover" with "② screw M2 x 2.5"



Attach "arm plastic part L" with "② screw M2 x 2.5"



Attach the "elbow plastic cover" with "② screw M2 x 2.5"

Battery pack charging

required parts



Battery Charger



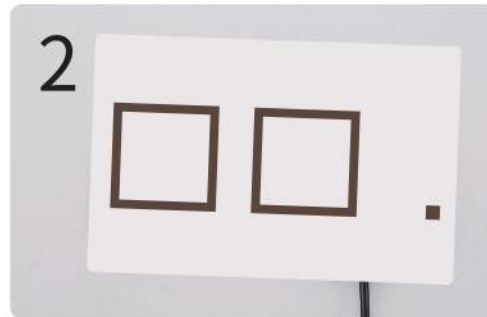
battery pack

1



When the "Battery
Charger" is plugged
in, the light
will turn blue

2



"battery pack"
and the battery
charger are connected, the
lamp lights up in red.
to start charging

3



When the charging is
completed, the lamp lights
up in blue, so please
remove the "battery
pack" immediately.

*Charging takes about
60 minutes.

Installing the battery pack

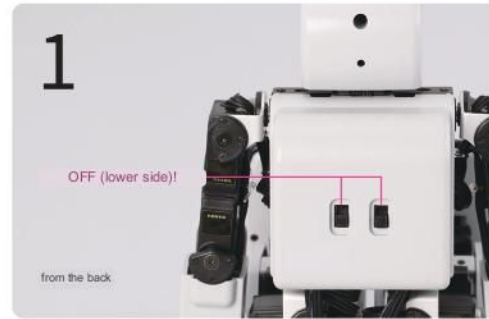
required parts



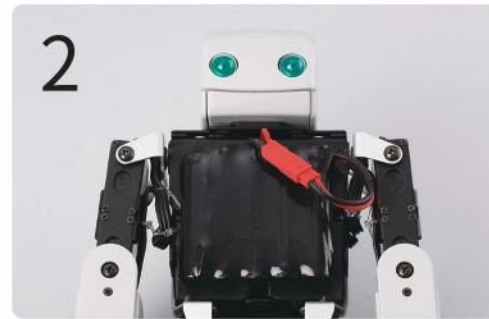
battery pack



belly plastic cover

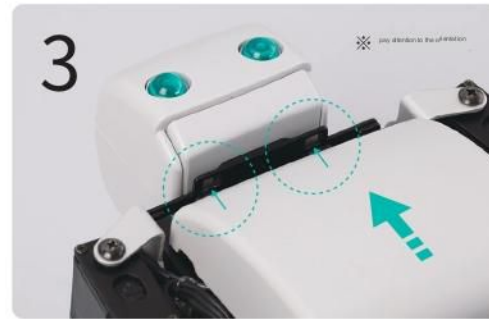


Make sure both
power switches
are OFF (down)



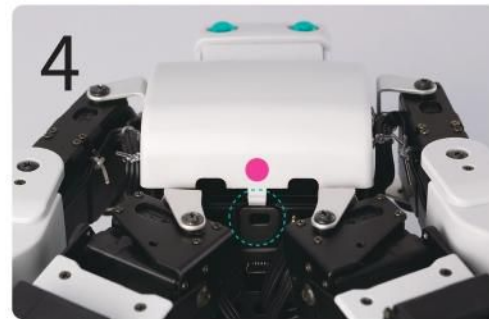
Connect the connector of
the "battery pack" and the
connector of the main unit

Don't move PLEN2
For safety, remove
the battery and
attach only the "belly
plastic cover".



Cover the "belly
plastic cover" over the
"battery pack"

Just slide it up and insert
the hooks of the "belly
plastic cover bar" into the
two holes under the neck.
to watch



the red circle part of the photo
Remove the "belly plastic cover"
while pressing it with your thumb.
attach

(The claws of the "belly plastic
cover" will hang on the hole indicated
by the dotted line.)

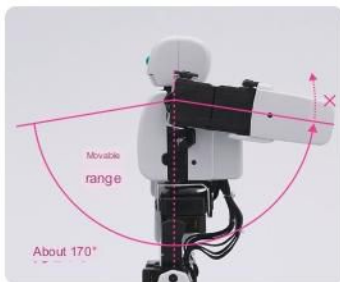
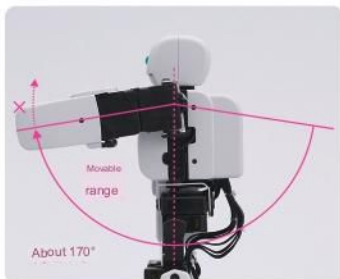
Remove the "belly plastic cover"
When removing, reverse the procedure
and remove while pressing the
red circled part with your thumb.

Complete

Precautions regarding

the operating range of the servo motor

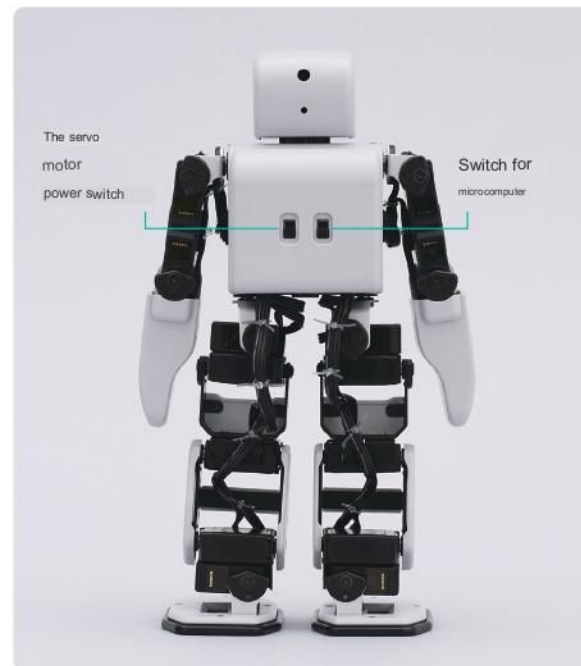
The servo motors used in PLEN's joints have a movable range of about 170 degrees.



*If you try to move it manually beyond its movable range, the motor will break, so be careful when handling it when the power is off.



Allow slack
in leg cables
さい



How to assemble roller skates

* Please refer to the separate "Assembly of Roller Skates" manual.

How to operate on iPhone

* Please refer to the separate sheet "How to operate from various apps iPhone version".

How to operate on Android

* Please refer to the separate sheet "Operating methods from various apps for Android".

if you thought it was a malfunction

① Power does not turn on



The battery may be dead. Be sure to charge the "battery pack" until the "battery charger" light turns blue.

(2) Falling frequently / Feeling weak



The battery may be dead. Charge the "battery pack".

③

When the switch is turned on, even if you are not doing anything
A high-pitched squealing sound is heard intermittently



This sound is unique to digital servo motors. This is not a malfunction.

④ Something like oil comes out of the servo motor



The grease inside the case of the servo motor is seeping out. This is not a malfunction, but please wipe it off with a cloth.

⑤ Do not walk straight



A robot that walks on two legs cannot go perfectly straight. If it bends too much, please contact our support center.

⑥ Joints are stiff and do not move

it

It may be moving to a position beyond the movable range of the servo motor. Don't try to force
-> turn on the power. At that time, if an abnormal sound is emitted or the servo motor does not
move, immediately turn off the power and contact the support center.

*Repair is charged

⑦ Shaky joints / idling



The servo motor stopper may be damaged. Please contact the support center.

*Repair is charged

⑧ I dropped it



If you find any abnormalities in operation, please contact the support center as soon as possible. *Repair is charged

Main Specifications

specification		accessories	
CPU	Arduino compatible	Complete PLEND assembly kit	
number of joints	18 axes	charger	
communication port	USB	ball	
radio equipment	Bluetooth	box (paper craft)	
Operating time	About 25 minutes (fully charged battery)	Phillips screwdriver (1)	
size	height 250mm		
	Width 130mm		
	Depth 70mm		
weight	700 g		

DMM.make ROBOTS