How to Assemble and Use the Mini Strandbeest

Assembly time: Approximately 1.5 hours

[1] Assembling the legs of the Mini Strandbeest

1. Attach the rubber feet to the ends of the lower triangles (A).

Line a rubber foot up with the slit on the end of one of the lower triangles (A), and then use the shaft (short) to push the rubber foot into the hole to attach it. Adjust the position of the rubber foot so that it lines up with the middle of the slit. Do the same for all twelve lower triangles (A) to attach a rubber foot to each.

2. Attach a connecting rod (large) (C) to an upper triangle (B).

Attach the larger joint on (C) to the largest joint on (B), and then rotate it 90° downward.

Line the notches on (C) up with the protrusions on (B) to attach (C) to (B).

3. Attach a connecting rod (small) (D) to an upper triangle (B).

Arrange the joint on (D) and the joint on (B) so that the protrusions and notches line up as shown in the diagram to attach (D) to (B), and then rotate (D) 90° downward.

4. Attach a lower triangle (A) to two connecting rods.

First, attach the joint on (A) with the protrusion to the joint on (D), and then rotate (A) upward to attach the other joint on (A) to the joint on (C) with the protrusion. This completes one leg.

5. Complete all twelve legs.

Complete Steps 2 to 4 a total of twelve times to assemble the twelve sets of legs. Make a total of twelve sets like this:

[2] Attaching the crank to the legs

1. Insert the crankshaft to the frame (G).

Attach the crank to the frame. Make sure that the protrusion on the crankshaft is facing in the same direction as those on the frame. Make two sets like this.

2. Connect the right leg and crank together with a single-action rod (small) (E).

Attach the largest joint on the leg to the joint on the right side of the frame so that the rubber foot on the leg is at the bottom. Attach (E) to the upper joint on the leg so that the protrusion and notch line up, and then push the key part on (E) down onto the crank as shown by the arrow so that it snaps into place.

3. Connect the left leg and crank together with a single-action rod (large) (F).

Attach the largest joint on the leg to the joint on the left side of the frame so that it is opposite from the right side, and then attach (F) to the lower joint on the leg and push it down onto the crank that was attached in Step 2 so that it snaps into place. When completing this step, make sure to position the newly attached rod so that it is in front.

4. Connect the right leg and crank together with a single-action rod (small) (E).

Attach (E) to the lower joint on the right leg, and then push it onto the crank that was attached in Steps 2 and 3 until it snaps into place. Make sure to position the newly attached rod so that it is in front.

5. Connect the left leg and crank together with a single-action rod (small) (E).

Attach (E) to the upper joint on the left leg, and then push it onto the crank that was attached in Steps 2, 3, and 4 until it snaps into place. Make sure to position the newly attached rod so that it is in front.

Once you have attached both legs, check to make sure that the rods attached to the crank are in the order of upper left, lower right, lower left, and upper right, as seen from the front. If the order is different, the legs may not move smoothly.

Things you will need

Scissors, utility knife, etc.

Materials used in this kit:
- Crankshafts, frames, lower triangles, and wind turbine base (beige): ABS
- Connecting rods, single-action rods, upper triangles, cogwheels, cogwheel shaft, shafts (long, 2), roto-bearing, rubber, rubber band: PMMA
- Double-sided tape: PET
- Rotating shaft: PMMA
- Shaft (long, 2), Crank: PMMA
- Flange: Polyethylene
- Blade, Double-sided tape, rotating shaft: PLA
- Cogwheels: Brass
- Frame (8), Lower triangles (12), Upper triangles (12): ABS
- Connecting rods (small, 12), Connecting rods (large, 12): PMMA
- Single-action rods (small, 12), Single-action rods (large, 12): PMMA
- Single-action rods: PMMA
- Cogwheel (small), Cogwheel (large): Brass
- Upper joint, Lower joint: Metal
- Shaft (short): PMMA

Assembly time: Approximately 1.5 hours

Parts in the Kit

At the cut lines one at a time.

[Image 23x305 to 45x327]
[Image 29x546 to 91x607]
[Image 29x401 to 76x537]

Rubber feet (12) * A left over rubber foot is a spare.

Keep this kit out of the reach of small children when not in use. For your safety, be sure to follow the instructions in this manual. In addition, do not use any parts that have become damaged or deformed.

Separate the parts from the plastic trees that they come attached to and arrange them as shown in the picture.
6. Attach the second frame.

Attach the second frame firmly to the first frame, so as to sandwich the legs that you put together in Steps 2 to 5. Line up the three joints on the frames, and position the shaft in the middle of the frame so that it snaps into place on the central axis of the crankshaft.

7. Attach legs to make three sets.

Repeat Steps 2 to 6 until you have assembled three pairs of legs for a total of six legs on four frames, connected to the crankshaft. This completes one half of the body of the Mini Strandbeest.

[Image]

3. Attaching the wind turbine

1. Attach the blades.

Affix two strips of double-sided tape to each of the T-shaped ends on the wind turbine base. Remove the paper on one side of the double-sided tape and affix the tape over the protrusions on the wind turbine base as shown in the diagram below, but leave the paper on the up side remaining for now. You will end up affixing a total of 10 strips of double-sided tape to the wind turbine base.

2. Attach the wind turbine.

Use the shaft (short) to attach the wind turbine to the stopper part on the top of the frame on the side on which the cogwheels are attached. Attach the tube (small) to the end of the shaft (short) to keep the wind turbine in place and prevent it from falling out.

[Image]

4. Attach the wind turbine.

Use the shaft (large) to connect the rotating shaft and flange together. Remove the wind turbine from the Mini Strandbeest as the weight will drag it down, and then insert the flange into the crankshaft. When you turn the rotating shaft, the Mini Strandbeest will start to walk.

[Image]