

ORBIT GOBBLER

A hand-cranked space creature with a moon that travels around a visible orbit, disappears through its mouth, and comes back again.



MOON

ALL-PRINTABLE • NO PURCHASED HARDWARE

A little care keeps the moon in orbit

Small parts + moving gaps

Keep loose clips and washers away from young children and pets. Keep fingers, hair, and clothing clear of the gears, cam, moon path, and mouth while turning. Adult help is recommended for snap-fit assembly.

- ✓ Use on a level, stable desktop. Hold the base—not the moon, orbit ring, mouth, or crank—to steady or move it.
- ✓ Turn the crank slowly by hand. If anything binds, stop. Do not force it or spin it at speed.
- ✓ Before each use, check that every clip sits in its groove and no printed part is cracked, bent, or loose.
- ✓ Take a damaged part out of service. Replace it before operating the mechanism again.

190 mm

OVERALL WIDTH

80.7 mm

OVERALL DEPTH

200 mm

OVERALL HEIGHT

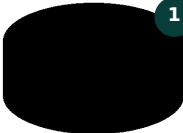
Before assembly

Lay all 23 printed pieces on a clear surface. Match them to the inventory. No screws, bearings, glue, or other purchased hardware are required.

The design has been checked digitally. Actual snap fit, friction, crank effort, wear, and long-term life depend on the printed parts and have not been established by a physical playtest.

INVENTORY

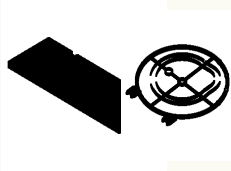
19 part types • 23 pieces

 1 Base	 1 Rear frame + cam	 2 Rear brace	 2 Frame key
 1 Central axle	 1 Carrier + 40T gear	 1 Lunar slider	 1 Follower axle
 1 Follower roller	 1 Moon	 2 Small washer	 2 Small snap clip
 1 Eye guard	 1 Pinion + spindle	 1 Crank arm	 1 Pinion washer
 1 Pinion snap clip	 1 Grip	 1 C-mouth bezel	COUNT CHECK

The two small washers and two small clips serve the central axle and grip. The wider pinion washer and pinion clip are distinct.

Build the orbit carrier

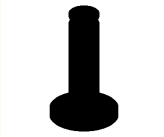
1



Lock the frame to the base.

Seat the rear frame in its matching base socket. Insert both frame keys. Slide both rear braces fully into their stopped seats.

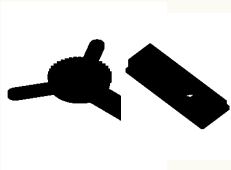
2



Insert the central axle.

Push it into the center of the upright frame until fully seated.

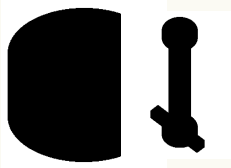
3



Load the lunar slider.

Before fitting the carrier to the frame, slide the lunar slider into the channel on the carrier's front face. It must travel freely.

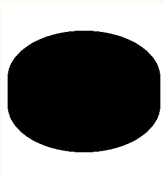
4



Add the cam follower.

Place the roller at the slider's D-shaped opening. Press the follower axle's snap collar through the roller and opening until retained.

5



Quarter-turn the moon into place.

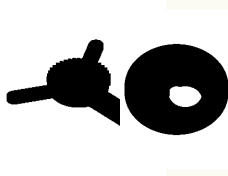
Match its two unequal round lugs to the slider, press on, then rotate one quarter turn to lock. Stop if the lugs do not align.

Checkpoint

Tilt the carrier gently. The slider should remain captured, the roller should stay on its axle, and the moon should stay locked to the slider.

Seat, drive, and finish

6



Seat the carrier.

Guide it onto the central axle, large gear toward the rear frame. Keep the follower roller against the fixed cam. Add the eye guard at the front.

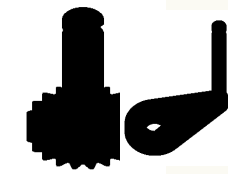
7



Retain the center.

Fit one small washer to the axle front, then slide one horseshoe-shaped small clip sideways into the axle groove.

8



Install the crank drive.

Insert the pinion's D-shaped sleeve rearward through the frame bore. Seat the rear crank; add the wider pinion washer and its matching clip.

9



Complete the handle.

Fit the grip so it projects forward from the crank. Add the remaining small washer and small clip to the grip groove.

10



Seat the C-mouth bezel.

Press the single fixed bezel into its matching front seat. Its opening frames the moon's swallow-and-return path.

Do not force clips

A retaining clip is installed only when it sits in the intended groove. Shield it with your other hand while pressing so it cannot spring away.

Turn slowly and watch the handoff

1 HAND POWER

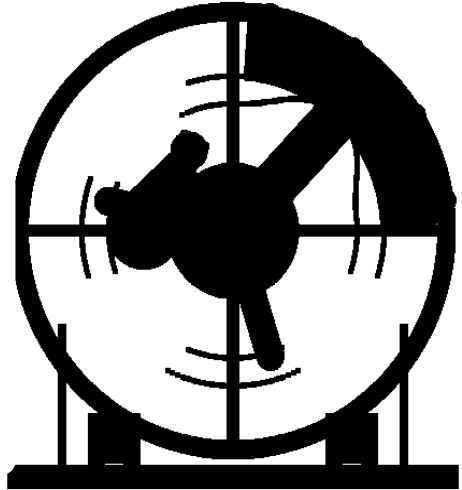
The crank turns the small 20-tooth pinion.

2 HALF-SPEED CARRIER

The pinion drives the large 40-tooth carrier gear.

3 GUIDED MOON

The fixed cam guides the slider inward and outward.



FIRST TURN

Hold the base. Move slowly through one full turn. Watch that the gears remain meshed and the follower stays on the cam.

SECOND TURN

Continue slowly through one more full turn. The carrier completes one orbit and the moon returns to its starting region.

Ready to gobble

After two clear, easy turns, hold the base and crank at a steady hand pace. The moon should pass behind the fixed C-mouth and reappear.

STOP if effort rises sharply, a clip leaves its groove, the moon contacts the bezel, or any part cracks.

Stop first. Then check the path.

The crank binds

Reverse only enough to release pressure. Check the slider is in its channel, the roller is against the cam, both gears are seated, and no debris is in the path. Never push through a jam.

Moon catches at mouth

Confirm the moon completed its quarter-turn lock, the bezel is fully seated, and the carrier is retained squarely. Turn only after interference is cleared.

The carrier wobbles

Stop and reseal the central washer and horseshoe clip in the axle groove. Check that the axle is fully seated and the eye guard is in place.

The frame moves

Press the frame into its base socket. Refit both frame keys and both rear braces. Steady the toy by the base during use.

A snap fit is loose

Take the automaton out of service. Do not substitute wire, metal hardware, or glue in a moving joint. Replace the affected printed part.

Removing a horseshoe clip

Steady the axle, shield the clip with your free hand, and slide it sideways out of its groove. Never pry toward your face.

Keep the orbit clean and unforced

After play

Return the moon to a clear, unstrained position. Wipe dust with a soft, dry cloth. Keep grit, liquids, and sticky residue away



Store

Store upright on the base in a cool, dry place, with space around the crank and moon. Keep away from heat and direct sun. Never stack weight on the orbit ring or bezel.

If disassembled

Keep both small clips, both small washers, the pinion washer, and pinion clip in a labelled closed bag. Support the moon and bezel so they cannot bend.

Before returning

Recheck all snap fits and grooves. Repeat the two-turn first-orbit check after reassembly, transport, a jam, or any part replacement.

The rhythm

HOLD THE BASE
TURN SLOWLY
STOP AT RESISTANCE

Two crank turns = one orbit.

ORBIT GOBBLER

ALL-PRINTABLE DESKTOP AUTOMATON

No physical playtest was run for this release; physical fit and wear should be observed conservatively by the owner.