## Canopy Assembly Instructions

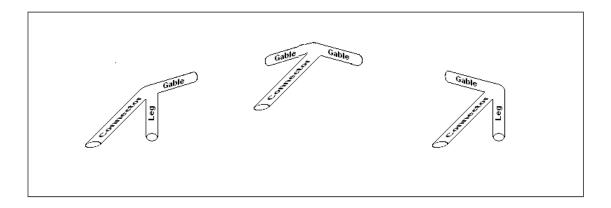
## 6' X 8' blue canopy

Assemble 4 legs, each having three 27" pipes: Bottom piece #4, middle piece #3A, top piece #3.

Assemble two gables, each having four 24" pipes and three plastic elbows:
Start at the peak with an elbow labeled "GABLE - GABLE".
Attach a piece #1 and a piece #2B on each GABLE side of the elbow.
Attach the GABLE end of a "GABLE - LEG" elbow on each end.

Arrange the assemblies so that the free ends of the elbows on one assembly point to the free ends of the elbows on the other assembly.

If they don't point to each other, switch the GABLE - LEG elbows.



Assemble 3 horizontal connectors, each having three 24" pipes: Each connector has piece #1, piece #1A, and piece #1

Attach the connectors to the gable assemblies, one at the peak and one at each eave.

Now attach the legs to the LEG end of each GABLE - LEG elbow.

Pull the plastic canopy over the structure and hook the ends to the legs.

## Canopy Assembly Instructions

# 7' X 8' green canopy

Assemble 4 legs

Bottom piece #4, middle piece #2, top piece #2A.

Assemble two gables, each having four 25" pipes and three plastic elbows:

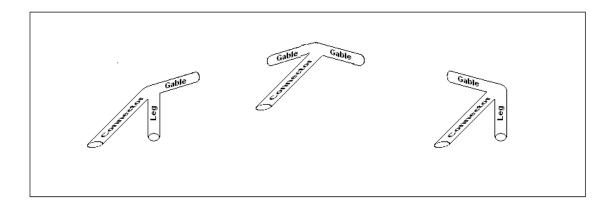
Start at the peak with an elbow labeled "GABLE - GABLE".

Attach a piece #1 and a piece #1B on each GABLE side of the elbow.

Attach the GABLE end of a "GABLE - LEG" elbow on each end.

Arrange the assemblies so that the free ends of the elbows on one assembly point to the free ends of the elbows on the other assembly.

If they don't point to each other, switch the GABLE - LEG elbows.



Assemble 3 horizontal connectors, each having three pipes:

The peak connector has piece #2, piece #3A, and piece #2

Each eave connector has piece #3, piece #3A, and piece #3

Attach the connectors to the gable assemblies, one at the peak and one at each eave.

Now attach the legs to the LEG end of each GABLE - LEG elbow.

Pull the plastic canopy over the structure and hook the ends to the legs.

### Canopy Assembly Instructions

# 16' diameter red hexagonal canopy

This assembly requires legs to be buried in the ground and helpers to lift the top onto those legs.

#### Pieces:

1 long bolt with nut and washers

6 shorter bolts with nuts and washers

6 roof spokes (double bend at one end)

6 eave struts (flattened on both ends0

6 leg tops (40" with PVC insert on the lower end)

6 leg bottoms (36" with no inserts)

Red nylon canopy

Loosely connect the six spokes at the peak. The spokes are the 8' poles that are bent at the ends. The single bend goes at the peak. The double bend will rest on the ground with the end vertical. Use the long bolt and two washers to connect the spokes at the peak. Arrange the spokes so that they are roughly equidistant apart. Throw the nylon canopy skin over the structure.

For each of the six sides, slide an eave pole (the 8' straight ones) through the hem pocket on the perimeter of the canopy skin and loosely bolt the eave pole to the bent part of the spokes. There will be two eave poles attached to each spoke. The lower ends of the spokes will point down so they can fit into the legs.

Tighten all seven bolts and position the structure where you want it.

For each of the roof spokes, lift the spoke and insert it into the upper end of an upper leg piece (40" with PVC insert at the bottom), raising the canopy part way. Make sure the bent spoke ends are vertical, bending them to make them vertical if necessary.

Now dig a 10" hole right next to each spoke where it rests on the ground. Insert a short (36") bottom leg pole into each hole. Tamp around each leg pole lightly. It's easier to dig the holes if you move the structure away temporarily.

Lift the canopy and the upper leg poles onto the bottom leg poles that have been embedded in the ground and tamp firmly around each leg so they are nice and secure. This is a heavy structure and we don't want it to tilt over.

## Geodesic Dome Four Tier Assembly Instructions May, 2012

#### First tier:

- Start with a blue (five pointed) hub.
- Insert and screw one blue-tipped strut to each point of the hub.
- Orient this "spider" with the hub up.
- Take five red, white and blue (RWB) hubs and insert the blue point of each into the end of one of the blue-tipped struts.
- Orient the RWB hubs with the points pointing down.
- Connect the RWB hubs by sliding a white strut onto each white point.
- Screw all struts to the hubs.
- Turn the entire structure so that one of the blue-tipped struts points to where you want the doorway to be.



#### Second tier:

- At this point it would be helpful to mount the entire structure on top of a tall step ladder to ease the pressure on the struts when lifting them.
- Stick a red-tipped strut to each red point of each RWB hub, ten in all.
- Stick a white strut onto the white point of each RWB hub, five in all.
- Where the free ends of two red-tipped struts meet, attach and screw a red hub with the points pointing down.
- Attach a RWB hub to the free end of each white strut, with the blue point pointing away from the center of the dome and with the points pointing down.
- Insert a red-tipped strut between red hub and the closest red point of the closest RW hub.

Screw all struts to the hubs.



#### Third tier:

- Attach a red-tipped strut to every exposed point on the red hubs and to every exposed red point on the RWB hubs.
- Connect the free ends of these red-tipped struts with RWB hubs so that the blue point points away from the center of the dome.
- Attach a blue-tipped strut to each blue point on each RW hub except for where you want the doorway(s) to be.
- On the free end of each of these blue-tipped struts attach a blue hub.
- Now complete the third tier by inserting struts according to the color of the points on each hub.
- Screw all struts to the hubs.



### Fourth Tier:

- Attach a strut to each exposed point of each hub according to the color of the hub points.
- Where two red-tipped struts meet attach a red hub.
- Where two blue-tipped struts meet attach a blue hub.
- Where two struts of differing colors meet attach a RWB hub.
- Leave one or more pentagons open for the doorway(s).
- Screw all struts to the hubs.
- There are wooden thresholds to go over the struts under the doorways to keep people from stepping directly in the struts and possibly tripping.



### **Locomotive Assembly Instructions**

#### Needed:

Locomotive body	. 18 lb.
Smoke stack with 9/16" nuts and washers	. 8
Cow catcher with 9/16" nuts and washers	9
Bell with 1/2" nut and washer	3
Headlamp with nut and washers	4
Cockpit with 9/16" nuts and washers	5
	47 lb

Two bungee cords
Wrench with ½", and 9/16" sockets
Pliers as needed
Rubber band for the bell
Cord to go from bell to cockpit.
Train whistle and engineer's hat

This locomotive is fragile, made mostly of paper. Please handle carefully.

With its nose up, fasten the cow catcher, smoke stack, headlamp and bell to the locomotive body.

Set the body, with attachments, onto the lawn tractor.

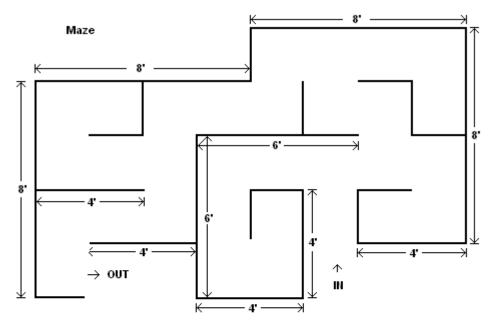
Attach the cockpit to the locomotive body and secure the whole thing with the two bungee cords, one on each side of the cockpit, using the hooks located on the sides of the inside of the cockpit.

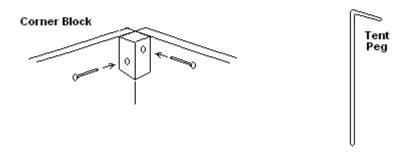
Tie down the bell clapper with a rubber band to the hook at the bottom of the bell structure to keep the bell from ringing when riding over rough ground. Attach a cord from the bell to the cockpit to ring the bell when you want to.

Touch up with Rustoleum Painter's Touch Ultra Cover gloss apple red.

# Maze Assembly Instructions

The maze is 10' X 16' and must be set up on a level area.





Needed: 4 of 4' X 8' panels

2 of 4' X 6' panels

5 of 4' X 4' panels

12 of 4' X 2' panels

21 corner blocks with bolts (wherever 2 panels meet).

9 tent pegs (use where needed to secure it to the ground).