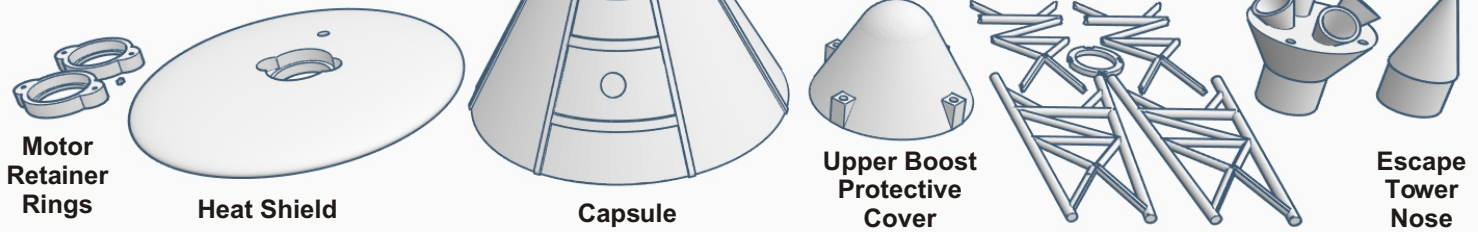


1/27th Scale Apollo Abort Test Capsule

Thank you for purchasing a Boyce Aerospace Hobbies 1/27th Scale Apollo Abort Capsule kit. Please review the drawings and instructions before gluing and assembling your model together. Visit us at: boyceaerospacehobbies.com

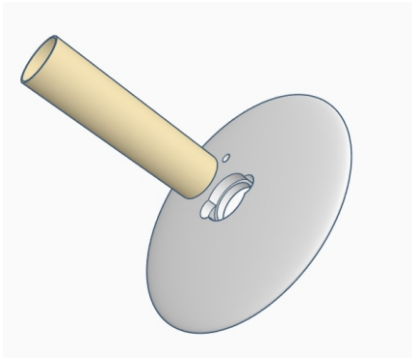
1



Sand all plastic parts with 220 grit sandpaper until smooth to the touch. Finish with wet sanding (400 grit) until the model is ready to primer and paint.

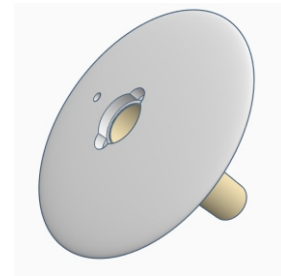
2

Test fit the 100 mm long 24 mm motor tube into the hole in the heat shield. Sand if needed for a good fit.



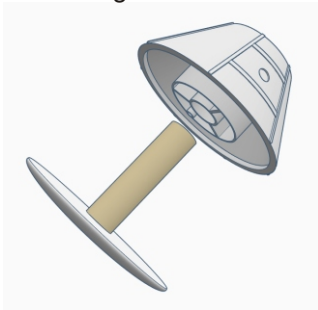
3

Glue the 24 mm motor tube into the heat shield as shown. Make sure the end of the tube is flush with the hole in the base of the heat shield as shown. Also make sure the tube is glued perpendicular to the heat shield.



4

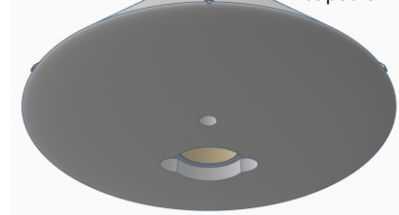
Test fit the 24 mm tube into the capsule. Sand the inside motor tube holder if needed for a good slide fit.



5

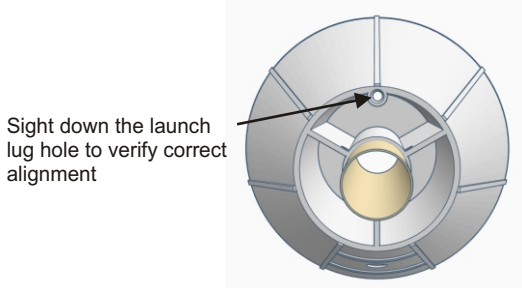
Rotate the heat shield on the capsule until the small molded tab on the shield is centered with the raised rib that is directly opposite the hatch/porthole on the capsule.

Rear raised rib Tab on heat shield aligned with rear raised rib on capsule.



6

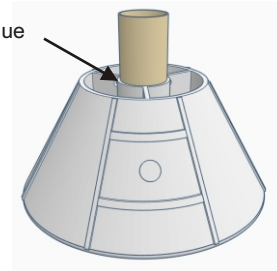
If you lined up the capsule and heat shield correctly you will be able to see that the internal launch lugs are lined up correctly.



7

Use super glue gel or epoxy formulated for plastic to glue the heat shield to the capsule base. Also apply a bead of glue around area where the motor tube exits the capsule. Check for launch lug internal alignment and allow to dry.

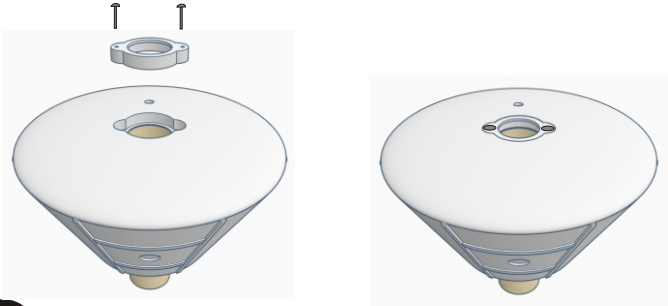
Apply a bead of super glue gel or epoxy to the joint between the motor tube and the capsule.



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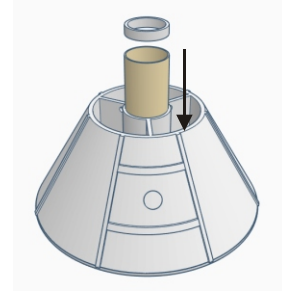
8

Place the motor retainer ring on the bottom of the heat shield and screw in place.



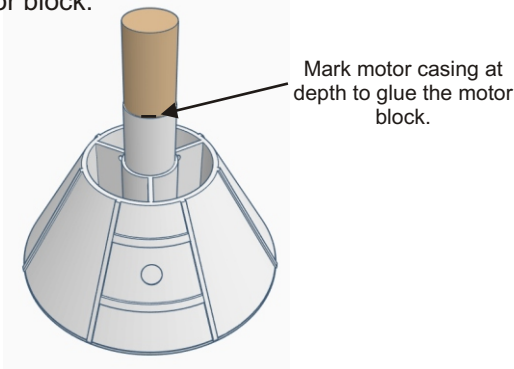
9

From the top of the capsule slide a 24mm motor into the motor tube until it rests against the motor retention ring. Slide the motor block into the tube above the motor.



10

Slide a spent 24 mm rocket motor casing into the top of the motor tube. Place a mark on the casing to indicate the proper depth for the motor block.



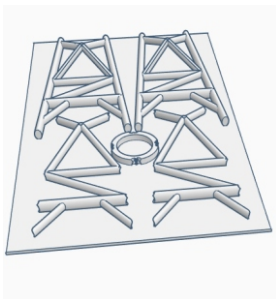
11

Flip the capsule over and remove the motor block and motor casing. Apply glue with a q-tip or dowel at the proper depth for the motor block. Insert the motor block then insert the spent motor casing and slide the motor block into position. Turn the capsule onto its side and remove the motor casing. Allow to dry.



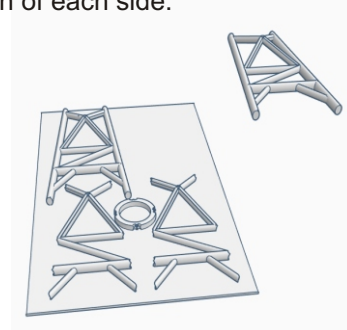
12

The escape tower parts are 3D printed on a flat surface called a "raft" and will need to be removed. This can be done by flexing the raft and/or using a razor blade under the parts.



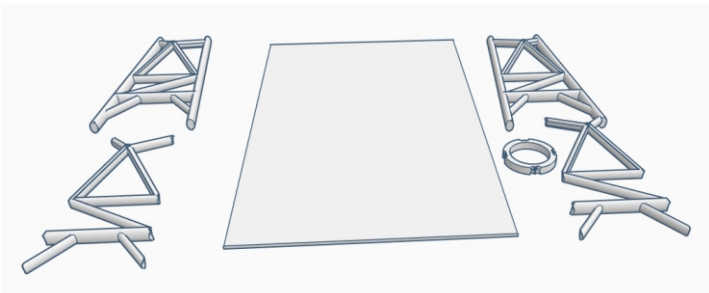
13

Carefully remove each side of the escape tower truss work from the raft. Then cut away the "support material" under the raised section of each side.



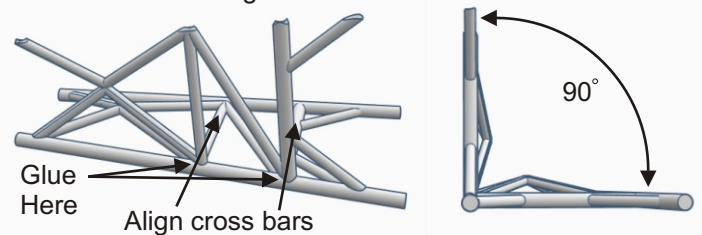
14

After all four sides of the escape tower truss work are removed from the raft, the raft can be disposed of. Carefully sand the truss work parts until smooth.



15

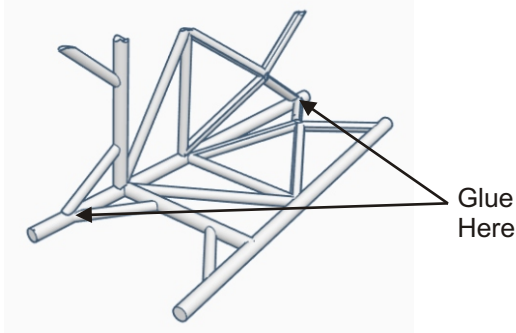
Start construction of the tower truss work by gluing together two sides of the truss work. One side with outboard legs and a side without legs. Use super glue gel (to allow some working time) and start by gluing the two points shown below. Make sure each cross bar is aligned with each other and that the sides are 90 degrees to each other.



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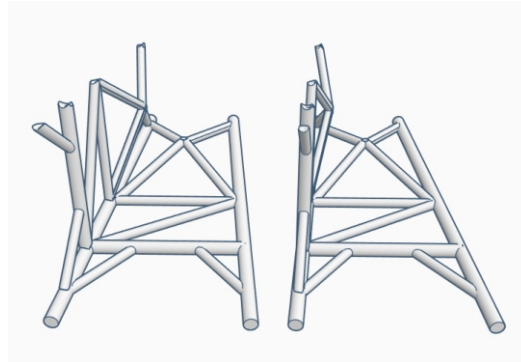
16

When the super glue gel sets up apply a drop of regular super glue to the other two connection points.



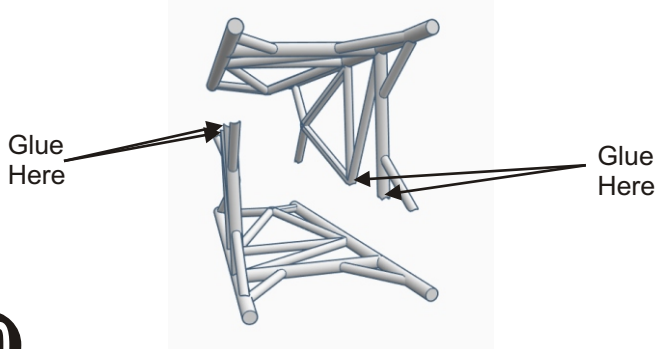
17

Repeat steps 15 and 16 with the other two sides of the escape tower.



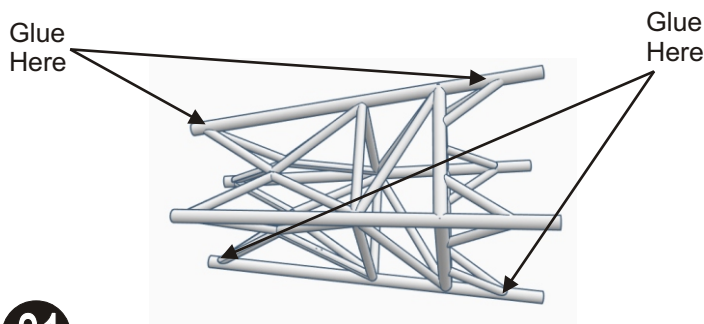
18

Flip one of the sides as shown and again using super glue gel, glue the two halves together at the two center cross bars. Make sure all cross bars are lined up as accurately as possible.



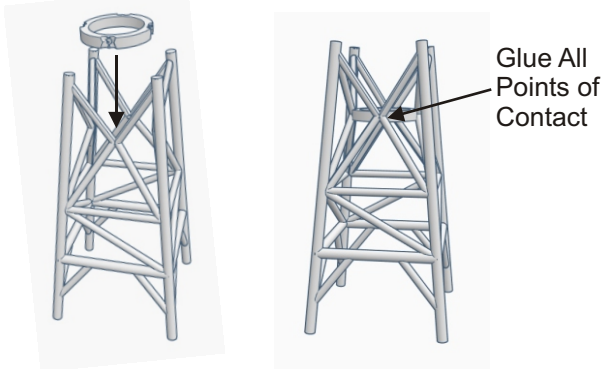
19

After the super glue gel has set apply a drop of regular super glue at all the end points of the tower.



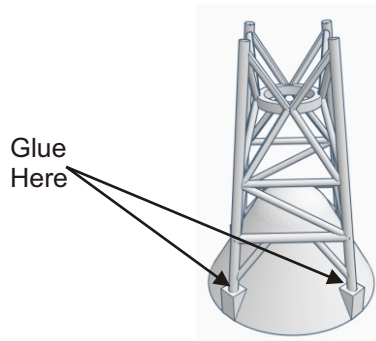
20

When dry, press fit the center tower ring into place using tweezers. When in place, apply a drop of super glue to each contact point.



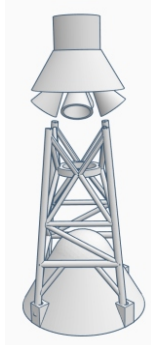
21

Glue the tower truss work into the tower support holes in the boost protective cover.



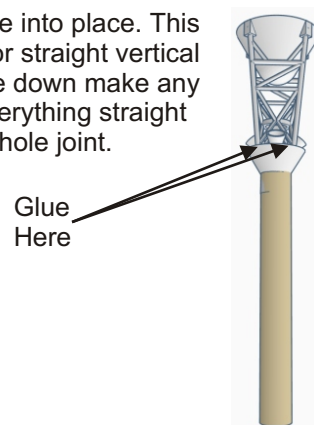
22

When dry, set the escape tower skirt into place. Make sure all four tower leg tops are fully inserted into the holes under the skirt.



23

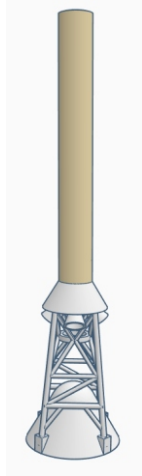
Slide the escape tower body tube into place. This will help you to sight the tower for straight vertical alignment. With the tower upside down make any adjustments needed to make everything straight then apply super glue to the leg/hole joint.



1/27th Scale Apollo Abort Test Capsule

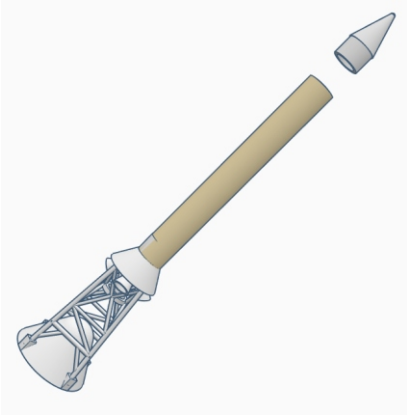
24

Glue the tower body tube in place.



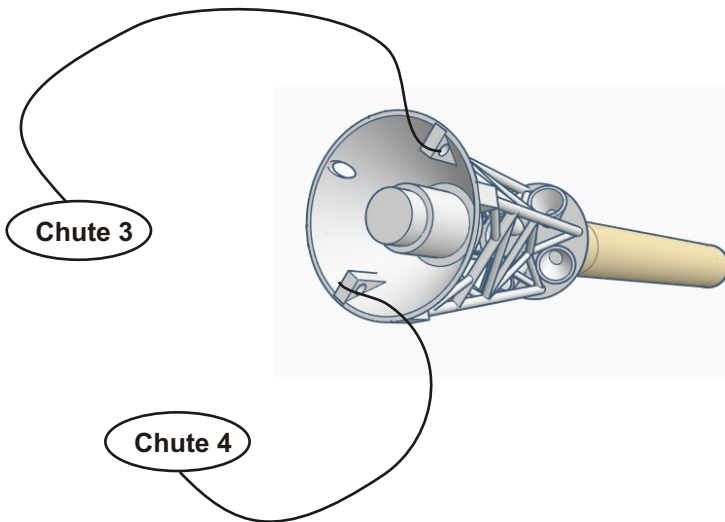
26

Epoxy the escape tower nose cone into place.



28

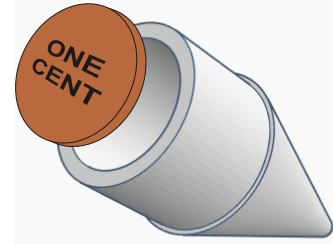
Attach a short piece of elastic shock cord to each side of the escape tower recovery points. Assemble and attach a 12 inch chute to each shock cord.



25

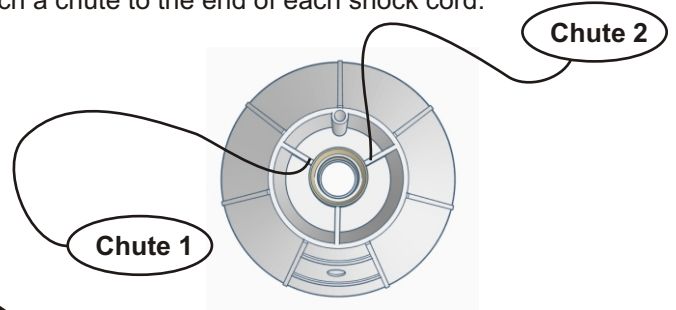
Stack 12 pennies into the hollow space in the nose cone. Mix up a small quantity of five minute epoxy and pour it over the coins to hold them in place.

12 x



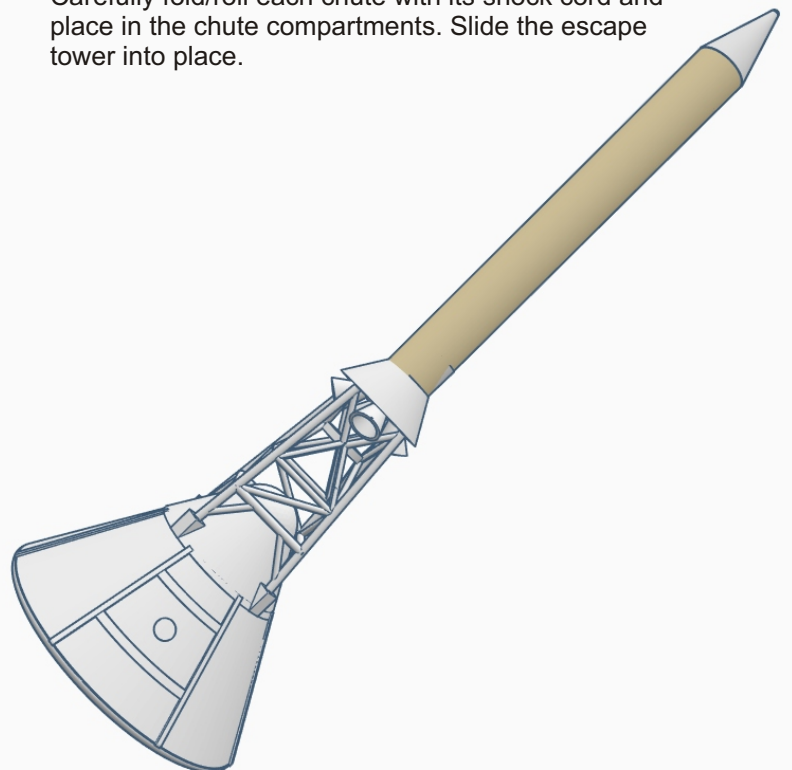
27

Acquire and assemble two 12 inch parachutes. Tie a short length of elastic shock cord on to the attachment points at the top of the capsule recovery compartment as shown. Attach a chute to the end of each shock cord.



29

Carefully fold/roll each chute with its shock cord and place in the chute compartments. Slide the escape tower into place.



1/27th Scale Apollo Abort Test Capsule



Finishing your model:

Primer your model with gray sandable automobile primer paint. When dry sand with 400 grit sandpaper. Spray and sand a second coat of primer on the model

When dry, clean the model with a tack cloth. Spray the model with a semi-gloss white paint. When dry, spray on a second coat. Allow to dry.

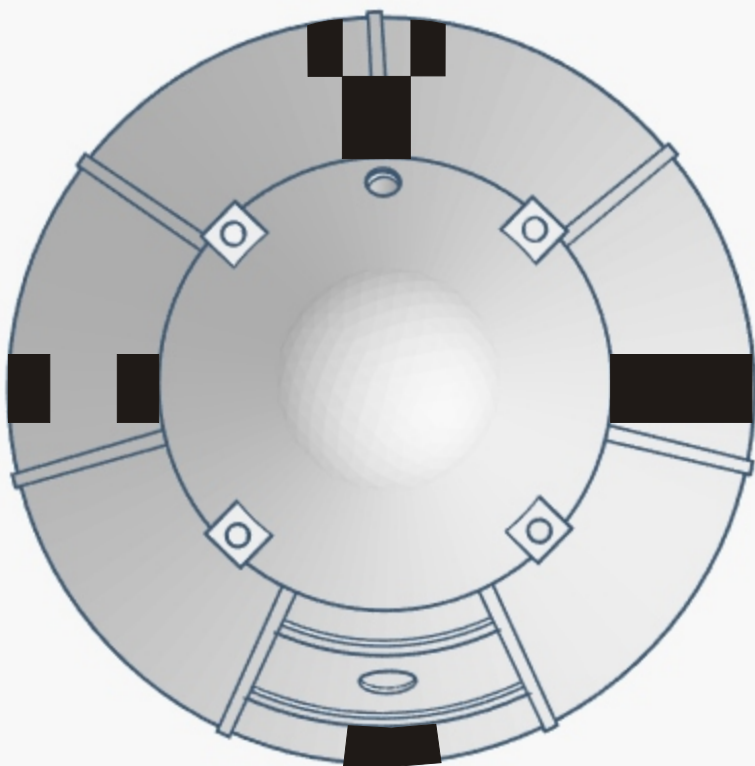
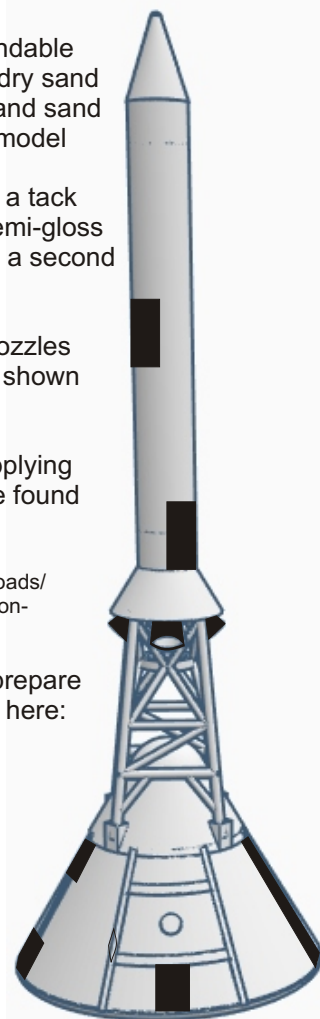
Paint the escape tower motor nozzles black. Apply the vinyl decals as shown in the drawings.

A great set of instructions for applying the provided vinyl decals can be found at:

<https://locprecision.com/wp-content/uploads/LOC-PRECISION-Vinyl-Decal-Application-Instructions-1.pdf>

Another great video on how to prepare 3D prints for paint can be found here:

<https://www.youtube.com/watch?v=0vgynnYzo08&t=9s>



1/27th Scale Apollo Abort Test Capsule

Prepping your "Apollo Abort Test Capsule" for flight:

Step 1 - Install an Estes D12-3 model rocket motor in the capsule base.

Step 2 - Slide the motor retention ring over the end of the motor and secure with two small screws.

Step 3 - Pack your parachutes as shown below.

A) Stretch out the two 12 inch parachutes attached to the escape tower.

B) Stretch out the two 12 inch capsule parachutes and lay each one over an escape tower chute.

C) Fold each set of chutes (capsule chute inside tower chute) until they will fit inside one of the capsule chute compartments.

D) Wrap the shroud lines and then part of the shock cord around each chute bundle.

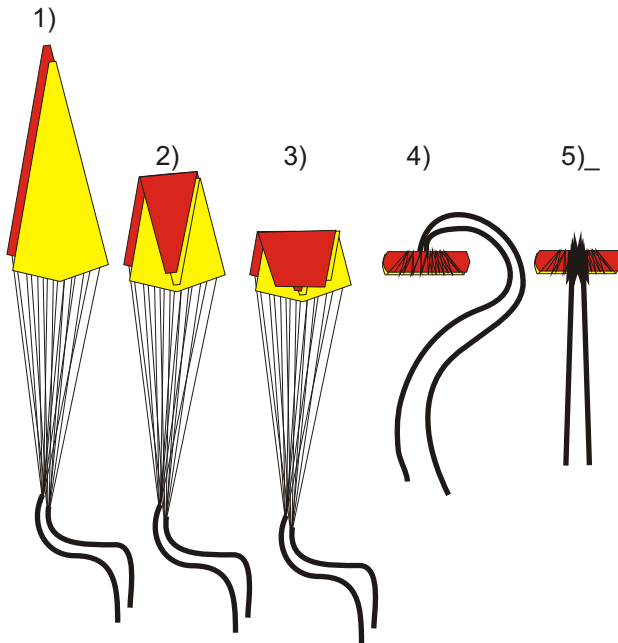
E) Place each chute bundle into its respective compartment as shown.

F) Tuck the remaining shock cord into the back compartment in the capsule.

Step 4 - Slide the tower assembly onto the capsule. Make sure the fit is just slightly snug as you want the tower assembly to eject with enough force to pull the chute bundle from the capsule chute compartments. Use small pieces of masking tape to adjust the fit of the escape tower shoulder into the capsules motor tube.

Step 5 - Install the motors ignitor per the manufacturers instructions.

Parachute bundle folding sequence



Tower chute under the capsule chute. Both chutes then folded and wrapped together with the shroud lines and shock cords.

Read and follow the NAR safety code during all your model rocket activities.

This model kit is provided free of any warranty.

Boyce Aerospace Hobbies cannot be held liable for damage to persons or property caused by the use, abuse, misuse, failure to comply with instructions or improper storage of this product.

Parachute bundle and shock cord placement in capsule

