



## **Building a 1/48th Scale Endo-Exo Transatmospheric Interstellar Space Cargo Vehicle (ISSCV)**

The ISSCV was one of the spacecraft featured in the TV show *Space: Above and Beyond*. It was used for Cargo, troop movement, and on rescue/recovery missions. The center modules are removable depending on the type of mission it was tasked for.

This model is designed for beginning and intermediate modelers using cardstock. More experienced modelers might want to use other media. It can be built in different configurations with optional parts supplied where needed. Each piece is a model in its own, so it is up to the modeler which configuration they prefer.

Patterns should be printed on either white or grey cardstock. This can be purchased at office supply stores or at craft centers. I found printing on an inkjet printer produced the best results.

Tools needed for construction: White glue or similar glue (I use Elmer's), Scissors, Straight edge for scoring seams, broad head tweezers, hole punch, sharp knife or single-edge razor blade, black magic marker, and a scribing tool for scoring seams. If you don't have a scribing tool, one can be made by inserting a large sewing needle into a dowel point first about halfway, then gluing it in place.

### **General Hints**

The biggest thing is don't rush, take your time. Paper is an unforgiving media. Study the sheet patterns and instructions and be patient. Dry fit the parts before gluing.

Score the seams before cutting any patterns from the sheet. You'll find it will be much easier to work with the smaller parts by doing this. Use the tweezers to bend the smaller parts and glue tabs. Fingers will get in the way when gluing up the detail pieces. If you have glue marks (finger smudges, don't worry it only adds to the overall appearance).

Let parts either setup or dry before proceeding with the different assemblies. My experience with Elmer's glue is it sets fairly quickly, so take your time gluing the parts.

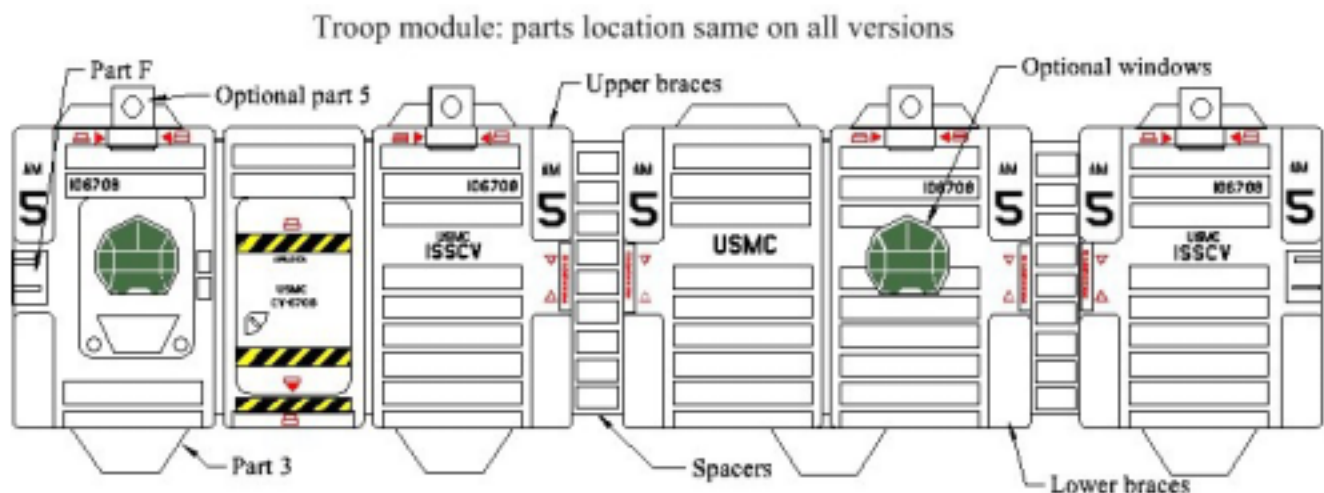
## Construction

### Main body

#### Modules

Modules can be constructed in three different versions; Cargo, Rescue, or Troop. All three modules are the same basic configuration, only the window detail parts change from each version.

- Score all sheets at seams before cutting patterns, then cut out parts.
- Form Part 3 into the landing skids, then glue to locations on section 1, 3, and 6. Set remaining part 3's aside.
- Score, cut, bend, and glue upper and lower corner braces, then set aside. Upper braces are marked for which section they will be glued to.
- Bend and glue each section. When gluing sections, carefully align the edges. Set aside to setup or dry
- Glue upper and lower braces to appropriate sections.
- Score, cut, and glue 2 spacers. Spacers go between section at rear of section 3 and 5. Align with red rectangle, then compress together until set.
- To assemble sections 3 to 4 and 5 to 6 together. Place on landing skids, then press together and hold to set.



#### Module: Optional parts

- Optional parts are provided for the windows to give a 3d effect to the model. If choose to use them, attach when attaching part 3
- Optional parts 4 and 5 are supplied if displaying module separately from the main frame assembly. Part 4 will be attached with part 3. Part 5 will be attached at end of assembly.
- Part 5 consists of 4 layers of cardstock. Using scrap cardstock, glue pattern and 3 scrap pieces together. Punch a hole as you add layers. Punch hole in pattern, add layer, punch hole, continue until you have 4 layers.

#### Front/Nose Section

- Score all seams, then cut out parts
- Glue Landing pad and Sensor pod into shape, then glue to Part C
- Glue parts A, B, C, and D into shape.
- Once glue has set, attach part A to part B . Glue side vents to part C and set aside to dry.



- Assemble the gun turret. This is a delicate assembly, so take your time. Two have been provide in case a mistake is made.
- Glue assembled part A/B to top of part C aligning rear of A/B and C.
- Carefully glue on part E into corner of part A and B. It is best to dry fit first so you can see out it aligns.
- Glue on Gun Turret

**Note: Front/ Nose Section and Rear Section:** If **not** attaching pod to mainframe, set aside for later. If attaching module to main frame , glue Front/Nose assembly to front of Section 1 and rear assembly to section 6 Place each on landing skids, then press together. **Hold until set.** Attach part F as shown in illustration on each side.

## Rear Section and Engines

### Rear Section

- Score all seams before cutting patterns, then cut out parts
- Glue section 7a and 7b together at tab, let setup.
- Glue part 1 and 3 into shape. Extra pieces are supplied for part 1. As you see, no tabs are on part 1, I found by holding in shape with your hand and placing a drop of glue in the corner and holding it until it sets up seals the joint.
- After part 1 and 3 sets up, glue to section 7b in marked spots.
- Glue combined sections 7a and 7b into shape. Let dry.

### Engines

- Score parts A, B, C, and D. On part D **DO NOT** score the end tab
- Score tabs on parts A1 and C1
- Using your scribing handle or other round object (pen) roll parts A, B, C, D, and D1 into rounded shapes.
- Starting on one edge glue the tab seam on A1 so it aligns with the tab seam on part A and let dry. Once dry, put glue on tabs and align opposite seams together. Align edges. Repeat this procedure for parts C and C1.
- Glue D1 dark side out to the inside of D aligning edge of part D1 with the tab seam on part D. **Do Not** glue the last 1/4" of part D1 to part D, this will become apparent later. Set aside to dry. Once dry blacken edge with magic marker. Put glue on both sides of tab and insert between part D and D1. Let dry.
- Take inside piece and blacken edges. Place part D/D1 on table with tabs against table, put black circle piece inside with black face showing . press into tabs to seal,. set aside to dry.
- Take part B and as before align tab seam with tab seam on A and working slowly glue around bottom of part A. Repeat this procedure with part C around bottom. Set aside to dry. Once dry glue the two tabs together on part B. This will give the general shape.
- Glue to part C the exhaust nozzle. Align edge of nozzle with edge of part C. Hold tight until glue sets.
- Bend tabs to inside of engine, then glue completed engines to section 7b in aligning nozzles within the half round circles on bottom of section 7b. Do one engine at a time and check for alignment. If it is lopsided either direction adjust as necessary, then hold until glue sets
- Attach part A1 to top of engine
- Glue this assembly to rear of section 6.

### Spine

- Score and cut front and rear spine, optional inside piece is available to add support
- Glue together at tab
- Once set glue into shape
- Glue to assembly with slanted section over top of front/nose piece

**Spine Outriggers:** attach to sections 1,3, 5, and 6

- Score, cut, and glue into shape.
- Align with squares on modules sections and glue. Hold down until set
- Glue part F into position both sides at front section 1 and rear section 6.

**Congratulations, you have completed the main body assembly**