How to Assemble the Vacuum Formed Plastic 7/8 Scale Lewis Gun

1. Read ALL the instructions before starting assembly.

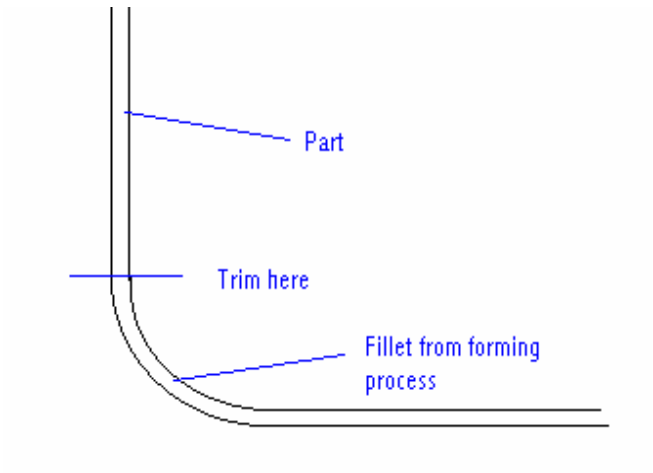
2. Begin assembly by thoroughly washing the inside and outside surfaces of the vacuum formed parts with warm soapy water to remove any traces of mold release. Dish detergent works fine.

3. The next step is to trim the parts. Trimming and removal of excess plastic can be accomplished with an Exacto knife and scissors. Use a straightedge where possible. USE CARE as the 0.060 ABS plastic is relatively tough but it is easy to slip with a knife or scissors, bleed on your parts, and ruin the day! Note you can simply score the plastic with a knife then twist the plastic back and forth until it breaks. The outline of the part will determine the trim method to use.

4. Begin by marking a guideline with a pencil (or score using a scribe or punch) around the periphery of the part to be trimmed. DO NOT TRIM THE PART TOO CLOSELY TO BEGIN WITH. The ABS plastic is not difficult to cut, but it is difficult to add plastic once it is cut off! It is best to rough trim the parts then begin evening up the edges in small increments with scissors and sandpaper. TAKE YOUR TIME. 240-grit sandpaper and a sanding block works well to straighten the edges of the parts once trimmed. Another method is to lay a sheet of sandpaper on a flat surface and rub the trimmed edges of the part over the sandpaper until all edges are even.

5. The ammo drum should be trimmed just below the scallops on the side of the drum and above the fillet created by the forming process. The ammo tray and handle base should be trimmed just above the fillet created by the forming process. The real Lewis ammo drums did not have the scallops (ie, the side of the drums have valleys and troughs from top to bottom), but I trim below the scallops so the bottom of the drum is nice and round to easily accept the ply bottom – your choice! The gun barrel and muzzle brake should be trimmed just above the fillet so you end up with two half circles that when placed together will create a round barrel & muzzle brake.

6. The receiver halves should be trimmed equally to yield a receiver the same width at the back as the handle base is wide. The front of the receiver should be round and the extreme front of the receiver should slip inside the end of the ABS pipe that creates the barrel and cooling shroud. The trimming dimensions ARE NOT CRITICAL. Keeping the edges straight IS CRITICAL to yield a good-looking part and to ensure the gun halves fit together well for gluing and final assembly.



7. Once all the parts are trimmed out, ensure all edges are roughened (not smooth!) to help the glue bond the parts. ABS cement works best. Epoxy or cyanoacrylate (super glue) also works well.

8. The ammo drum can be finished by cutting a round piece of wood (thin plywood, paneling, etc) then epoxying it into the bottom inside of the drum with 5-min epoxy. Expanding spray foam available at most home stores (Wal-Mart, Lowes, Home Depot, Target, etc) can be sprayed inside the drum to stiffen the assembly once the bottom is installed. GO EASY ON THE FOAM. Spray a small amount on some scrap cardboard and watch it to see how much it expands. If you spray in too much, the foam will push the bottom off the ammo drum as it expands!

9. The ammo tray can be installed as-is by notching out the front and back lower edges so the tray mounts flat on the top of the gun's receiver. Another good method is to epoxy in a thin piece of wood cut to the shape of the tray to fill and strengthen it.

10. One method that works well for assembly of the two gun receiver halves is to carefully glue small strips of scrap ABS around the inside periphery of the halves to create a flange (or step) to help align the halves (shown at right).

11. After the gun halves are glued together, expanding foam can be sprayed into small holes cut into the front and rear of the receiver to help fill and strengthen it. Take a quick look at step 16 as at this point you may want to install a ½" wooden dowel to facilitate alignment. Be careful with the amount of foam.

12. Glue the handle base to the aft end of the receiver. A thin piece of wood or aluminum can be glued between the base and the receiver so the gun handle can be mounted with wood or sheet metal screws for strength.

13. The handle loop can be fashioned with a ½" wide aluminum strip. Two sheet metal or wood screws can be used, in addition to epoxy, to attach the handle loop to the receiver. The handle can be made from 5/8" or ¾" dowel as shown and secured to the loop with wood screws.

14. The cooling shroud is made from an 18" length of 2" diameter PVC or ABS plastic pipe (available inexpensively at most home supply stores). Square the ends after cutting. Note that overall length is not that critical.

15. Bevel the inner circumference of the PVC/ABS pipe so it slips over the front end of the receiver snugly and fits with as little seam as possible.

16. Glue the pipe to the receiver ensuring the assembly is kept STRAIGHT until the glue dries. A handy method for aligning the entire assembly is to insert a ½" wooden dowel running lengthwise from the end of the receiver protruding up through the cooling shroud and into the barrel/muzzle brake. Once the expanding foam is sprayed in and set, the dowel helps make a rigid and straight assembly!

17. Glue the barrel / muzzle brake assembly to the INSIDE of the end of the shroud pipe. The barrel exits the shroud toward the top.

18. Using care, trim out the plastic inside the trigger guard area. A dummy trigger can be fashioned from scrap ABS or sheet metal and glued inside the trigger guard.

19. Plastic gun grips available for pistols like a .45 or 9mm can be purchased at sporting goods stores, carved to fit, and epoxied on the Lewis grip to provide a realistic touch.

20. Many different Lewis Gun mounts were used depending on the application. Below are a couple of photos to provide ideas for mounting. The loop on top the ammo can was fashioned from a piece canvas web belt (Army/Navy store) and the bracket from sheet metal.

21. The gun should be painted to add authenticity. Plastic model filler can be used to fill in seams. Lightly roughen surfaces to be painted with 240 to 400 grit sandpaper and clean thoroughly to ensure the paint adheres. Model paints or spray enamels work great. Black or Gun Metal colored paint looks best. The ammo drum can be painted black or olive drab. Flat or satin paints look best. If gloss paints are used, an overcoat of satin clear will cut the gloss.

Have fun and email me if you have any questions or comments at flier@sbcglobal.net. Go as far as you desire on the detailing but remember this is a STAND-OFF SCALE kit which means it ain't exact!

Check the net at http://www.foxflier.com/lewis to download a copy of these instructions in PDF format. I'll also add additional info from time to time including reference materials for detailing.

Regards,
Ted


Receiver Halves
Cooling Shroud
Handle
Base
Feed Tray
Ammo Drum
Barrel / Muzzle
Brake Half