THE TIME MACHINE

Additional Parts List:

In addition to the cast resin parts enclosed in this kit, there should also be a plastic bag containing the following items needed to complete your time machine scale model:

1. **A small roll of copper wire for constructing the cages around the lights on the dashboard and behind the chair. You will also use this wire to create the coils on the time generator and the straight lengths of wire inside these coils.**

2. **A length of rod for wrapping the wire around to create the above coils.**

3. **Two fixtures for constructing the wire cages around the above mentioned lights.**

4. **A length of rigid rod stock for attaching the head rest to the back of the chair.**

5. **A small clear faceted bead to attach to the key on the control panel.**

6. **Four 8-32 screws, washers, and nuts to attach the time generator to the flat base.**

7. **Short lengths of styrene hex rod stock and 1/16th" diameter rod stock for using to add missing rivets on seam lines and replace any damaged rivets on the model due to casting.**

8. **A short length of 11/32nd" acrylic rod to use to build the vertical shaft above the time generator.**

9. **A small section of 2.25" diameter clear acrylic tubing to create the control panel.**

10. **Four small black screws to attach the arms to the chair.**

11. **Six sheet metal screws for attaching both the chair and the framework of the time machine to the flat base.**

12. **One small screw and washer to attach the movable disk inside the control panel so that the time key can move.**

13. **Two sheets of .030" thick styrene sheet.**

14. **One sheet of .060" thick styrene sheet.**

15. **One small sheet of .080" thick styrene sheet.**

THE Time machine

1/6th Scale Resin Assembly Kit

Instructions:

Note: This model is recommended for builders with experience in resin kit assembly.

Step A. Thoroughly wash all parts with soap and water.
Step B. Carefully trim away casting blocks and sand parts smooth in those areas and along seam lines. (It is advisable to sand all parts with a minimum of 600-grit sandpaper.)
Step C. Assemble all parts using the supplied blue print drawing for reference.
Step D. Use polycyanoacrylate adhesive (super glue) unless otherwise noted.
Step E. Fill any seams and scratches with any good quality modeling putty.
Step F. Prime parts with any good quality modeling primer and we recommend that you mask and paint the various parts as you are assembling the kit to produce a more professional finished product (Sometimes referred to as the "subassembly method" of model-making). It will take more time, but it will be worth it and it will be easier.
Good luck!

The Base:

The base now comes as one cast part Styrene sheet is no longer needed

2.

Step 3. Sand and glue the four legs on the raised styrene parts that you just installed. (Note: Each leg is curved to fit the edge contour at the top so make sure you place them in the correct positions and that you don't sand the tops completely flat.)
Step 4. Find the three printed templates provided in this directions packet that match the profile of the base. Using the same method as you did in creating the previous styrene parts, attach the templates to the three provided styrene sheets and cut out those shapes. Before you do this however, notice that the three larger sheets are not the same thickness (Two .030" thick and one .060" thick) and that the three printed templates are not all the same size. The templates are labeled according to what thickness of plastic they go on. The larger one goes on the .060" piece of styrene and after you cut out this part you will need to round the edge. Also be sure and drill the holes marked on the template at the indicated drill diameters.
Step 5. Glue the above three sheets together making sure they are concentrically aligned in the following order: A thin sheet on the top (.030"), the thicker sheet in the middle (.060"), and the other thin sheet on the bottom (.030"). (Note: Glue only the edges together using styrene solvent to avoid trapped solvent softening and damaging the styrene in the middle.)
Step 6. Align and glue the above set of laminated sheets to the top of the base using styrene solvent around the edges. When it is dry, drill the all the holes indicated on the cut out templates all the way through the base. These will be used later to attach the framework, time generator, and the chair to the surface.
Step 7. Sand the riveted front plate flat and glue into place.

The Time Generator:

Step 8. Find the two halves of the time generator and glue them together. Sand the seam line and using the short length of provided 1/16th styrene dowel, create the missing rivet along the back seam.

Step 9. Find the back panel and attach it to the joined two halves. (Note: You might have to use a heat gun or immersion in warm water to pull some of the bend out of the parts.)

Step 10. Glue the above assembly to the matching contoured base and sand level.

Step 11. Attach the two generator cones to the sides of the generator base.

Step 12. Assemble the "kettle" above the generator base. It comes in three pieces: the curved bottom, the riveted ring, and the sloping top. Glue all of these parts together and then glue the assembly into the hole in the top of the generator base.

Step 13. Drill the hole in the top of this whole assembly to 11/32nd". Find and cut to length the provided 11/32nd" rod and glue it into the hole. (Note: Double check that you have the correct length of rod and it is at the correct height before you glue it in place. Use the blueprint for reference and remember that there is added length for inserting into the "kettle" and the sphere shape on top.)

Step 14. Attach the six small cones onto the generator base and drill a small hole in the center of each (1/32" is best).

Step 15. Carefully trim and glue the two halves of the sphere shape on top together and attach to the top of the 11/32nd" installed rod. (Note: This assemble must be carefully aligned so that the side holes are facing exactly towards the front and the back. Both holes are the same so it will work either way.)

Step 16. Attach the remaining six small cones onto the outside of the spherical shape and drill the centers the same as before.

Step 17. Trim and install the saucer shaped part in the hole facing towards the back of the chair and the front of the generator.

Step 18. Install the fluted lamp base and the lamp into the top of the spherical shape.

Step 19. Attach the whole time generator assembly to the base using the provided 8-32 round-head bolts, washers, and nuts with the nuts and washers on top.

The Coils:

Step 20. Use the provided copper wire to connect the six small cones on the top of the time generator to the corresponding six small cones on the spherical shape above with straight lengths of wire. (Note: Inside the coils there are straight lengths of wire also.)

Step 21. Using the provided dowel, wrap lengths of copper wire around it to create the energy coils connecting the twelve small cones. Wrap the wire around the rod thirty times for each coil and stretch them to length. Install them by drilling small holes into the side of each small cone. (Again, 1/32nd" is best.)

The Generator Lamp Cage:

Step 22. Use the copper wire to build the wire framework around the lamp on the top of the Time generator assembly using the provided fixture. I recommend bending the

pieces, tacking them into place with glue, cutting away the excess, and coming back and soldering over the glue connections after the part is removed from the fixture. (Note: the cage will have to be made and then bent open a bit to remove it from the fixture and then bent back again.) File if necessary.

Step 23. Glue the cage assembly over the lamp at the top of the time generator assembly**.** Also glue the cast small ornamental detail on the top.

The Framework:

Step 24. Find the left and right side framework parts and line them up with the side of the holes in the cones on the outside of the time generator assembly.

Step 25. Find the two ribbed end caps to the generator cones and insert them through the large holes in the side framework pieces and into the holes in the cones until they are seated. Glue them in place. (Note: Make sure that the raised ribs on these parts match the positioning shown on the blueprint.)

Step 26. Line up the left and right framework parts over the four outside holes and drill part way into the framework using a 7/64th" drill bit. (Note: Be very careful not to go all the way though the framework with the drill.) Using four of the provided six sheet-metal screws, attach the side framework to the base.

Step 27. Attach the remaining framework piece to the raised centers on the generator cone end caps. (Note: The raised centers might need to be sanded down slightly if you notice that they are sticking too far out and distorting the shape of the outside surrounding framework piece. Also be aware that the framework will be hard to align until the control panel and some of the remaining detail parts are installed. It might also be necessary to use a heat gun or warm water immersion to correct more serious

misalignment problems.) Do not glue the front framework intersection point until the control panel is installed.

Step 28. Find the four curled framework details (Two short parts and two long parts) and using a round file, shape the pointed ends to fit snugly to the larger side framework parts. Glue them in place to both the framework and the base.

Step 29. Find and attach the four flat scrollwork details that go between the above parts and the main side framework parts and glue them in place. (Note: Make sure that you put them in the right places. The front and back sets of these parts are different.)

The Control Panel:

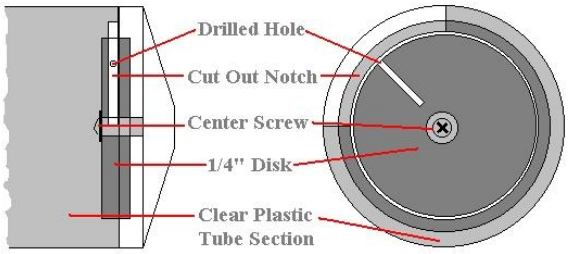
Step 30. Find the provided section of clear plexiglass tube stock. Notice that on one end it has a small notch cut out of a quarter section. Also find the two identical end cap pieces that fit into the ends of this tube section. Glue one of the end caps into the end of the plexiglass tube section without the notch. (Note: Use the provided blueprint to orient the raised ribs on the end caps to the correct position. The drawing below will also help in doing this.)

Step 31. Take the other matching end cap and find the ¼" 1" diameter disk that fits inside it. (Note: It might need to be sanded or need to have the hole in the center bored out to fit into place.) On that disk you will see a small indentation that indicates where you need to drill a 5/64th" hole straight towards the center of the part.

Step 32. After you have drilled the above hole, insert the disk into the side of the unattached

control panel end cap. Now drill a 7/64th" hole into the center of the shaft that the disk spins on and hold it in place using the provided single short sheet-metal screw and ½" washer. (Note: Make sure that the hole in the disk can be seen in the break in the wall on the end cap piece. Also make sure that the disk spins easily inside the control panel side.)

Step 33. Carefully glue the remaining control panel end cap in place without getting any glue on the moving disk inside. Line the notch in the plexiglass tube section up with the cut out wall on the inside of the end cap. The diagram below shows how it should look in cut away:



Step 34. Find and attach the contour fit base to the three lights on the top of the control panel. It should be positioned exactly in the center of the top and level.

Step 35. Glue the three identical lights to the above part using the provided blueprint as your guide for positioning them.

Step 36. Glue the scroll work date display frame to the control panel again using the blueprint as a guide for exact positioning. (Note: You might want to put down the decals that go in the openings before you put this piece on permanently.)

Step 37. Glue the whole above control panel assembly to the framework using the tabs on the framework and the corresponding indentations in the sides of the control panel end caps as a guide.

Step 38. Find and attach the scrollwork brace that spans both the left and right framework parts beneath the control panel.

The Control Panel Light Cages:

Step 39. Use one of the molded control panel lights enclosed in the kit as a fixture for bending the provided copper wire into the correct shape to fit over all the lights on the control panel. Use the exact same method of construction that you used when making the cage around the light above the time generator. When you are finished with the three identical cages, glue them into place.

The Time Key:

Step 40. Carefully trim the body of the time key being careful not to lose the 1/16th" molded shaft at the base. This shaft will fit into the hole that you drilled into the moving disk inside the notch on the control panel. Glue the provided clear faceted bead onto the top of the time key and insert ,<u>but do not glue</u> it into its spot on the control panel. (Note: Fill the hole in the center of the bead with two part epoxy.)

The Dish:

Step 41. Examine the dish to see if any of the 365 rivets are missing or damaged. If so, then use the provided short length of styrene hex rod to repair it. Find the steel rod reinforced center shaft piece and glue the flat end to the exact center of the inside of the dish.

Step 42. Choose the position that you want the dish to be in on your finished model and insert the center shaft into the remaining hole in spherical shape on the top of the time generator. Glue it in place.

The Chair:

Step 43. Find the four legged base to the chair and the three scalloped detail pieces that will become the back and sides. (Note: These three parts are mostly identical except that the back piece has no vertical lathe turned details on the ends.) Glue the end piece on first by centering the slot on the base in the groove on the part. (Note: This part is designed to fit exactly into the lathe turned contours on the side pieces, so alignment is very important here.)

Step 44. Now glue the side pieces on making sure that the lathe turned details on the ends of these parts with the round details removed are facing forward. These were cut off of the original chair to allow it to have clearance above the framework on the base.

Step 45. Attach the two identical "swan" details to the left and right of the inside of the above pieces. Use the provided blueprint for exact location.

Step 46. Now glue on the flat curved edge front piece exactly between the two "swans".

Step 47. Find and carefully trim the six carved ornamentation details and glue them to the back and side lathe turned details as shown in the blueprint.

Step 48. Carefully trim and glue the left and right side rails to the top of the left and right side pieces on the base. The flat sides should, of course, be facing inwards and the lower ends of these two pieces are to face towards the front of the chair.

Step 49. Glue the bottom seat cushion piece into the hollow cavity in the center of the chair with the riveted edge facing forward.

Step 50. Glue the back of the chair in place attaching it to the flat inside sides of the left and right side rails. Make sure that you glue it at the correct angle as shown in the blueprint views.

Step 51. Find the two chair arms and glue the small cast support brackets to the underside of each. The two identical short ones are centered in the back of each arm with the rounded end facing toward the rear of the chair. The brackets in the front of the arms are left and right parts which allow the arms to align with the holes in the top of the heads of the left and right "swans". (Note: The alignment of these parts is very exact and should be tested out before gluing the parts permanently.)

Step 52. Glue the left and right chair arms in place. Drill small 1/16th" through holes into the points in which the chair arm brackets attach to the chair rails and "swans". Find the four provided small screws and very carefully screw them into the holes you just drilled. (Note: These screws are just for looks and not to act as real pivot points for the two arms. See the blueprint for the details of this connection point.)

Step 53. Drill two 1/16th" holes into the top of the back of the chair. These hole locations are indicated by two small divots in the surface of the cast part. Also drill two more small holes into the back of the chair headrest which are also indicated by divots in the cast

part.

Step 54. Cut the provided 1/16th" diameter wire into two short lengths and insert them into the holes in the back of the chair. Then install the headrest into the exposed ends of wire to complete the chair. Again, use the blueprint as a guide.

Step 55. Attach the chair to the base using the two remaining sheet metal screws inserted from the bottom through the two remaining holes in the base. It will be necessary to drill two 7/64th" holes part way into the bottom of the back legs on the chair to accommodate the attaching screws.

Step 56. Apply the decals to the entire model.

Additional Information:

Painting: Please refer to the color art supplied for final painting. Use any good quality model paint. We also recommend that you watch the movie again to refresh yourself with the details of the machine. It is your decision whether or not to weather the finished model.

Decals: There is pin-striping on the framework of the time machine and to create this we recommend Chartpak BG3104 green graphics tape. As you can see, the decal sheet offers you a choice as to what date and year you want showing on the control panel. Apply decals as you would any traditional waterslide decal. We suggest using Microscale Decal Film and following the instructions on the bottle. Use the provided artwork and blueprints to determine exact decal locations.

Legal: Masterpiece Models assumes no responsibility for alterations in the time continuum should any of these kits actually work.

If you have any questions or comments regarding this kit, please feel free to e-mail us at:

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Thank you for purchasing The Time Machine.

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Special thanks to John Geigle and Matt Kilwein for the idea , coordinating, & mold-making, Robert Willard for the masters and media, Chris Perrotta for the drawings & blueprints, and Don Coleman for the decals.