

### Mini Franklin Log, Ember Bed and Burner Assembly

#### Tools:

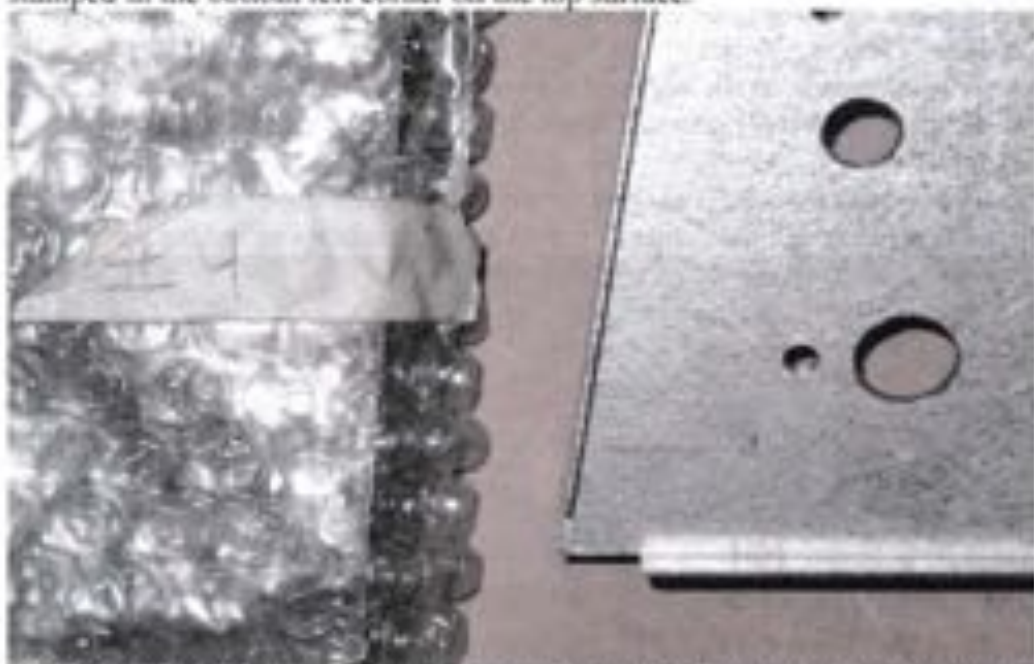
1/16" drill bit  
1/8" drill bit  
3/8" file  
Phillips screwdriver  
Cordless drill  
#4 drill bit  
(4) wooden dowels  
(2) sharpened ceramic pins  
3/8" punch  
6" engineers rule

#### Parts:

Burner plate  
(6) Ceramic pins  
Ember bed  
Small logs (set of 5)  
(4) piece gasket set  
Pyrofix 4 high temp. glue  
1/8" KAWL  
(4) 10-32 X 1" PHMS  
Gold spray paint

*A note before you begin. Log placement on this ember bed is extremely critical to the look of the flame and to the combustion emissions. Any slight deviations could result in flame impingement causing sooting and high Carbon Monoxide output!!!*

1. Find a matching ember bed and burner plate. The plate should have a number stamped in the bottom left corner on the top surface.



2. Look at all of the through holes of the ember bed. If any are blocked, cleaned them out with the 1/16" or 1/8" drill bit.
3. Take a gasket set and separate the parts using the hobby knife.
4. Place the 4 gaskets on the burner plate and put the 3/8" and 1/2" dowels through them.



5. Carefully place the ember bed over the dowels making sure the teardrop shaped gasket doesn't slip out of place.
6. Check for interference on the edges of the ember bed where the edge guards on the pan might hit it when it is tightened down. If needed bend the edge guards on the pan out slightly.
7. Use the 3/8" punch to make 4 gaskets for the screw heads out of 1/8" KAWL. Run the metal scribe through the center of the gaskets to make room for the screw.



8. Take a 10-32 X 1" PHMS and screw it into the hole made by the punch. Don't try to slide the gasket on the screw or it will tear. Screw the gasket all the way to the head. Do this for 4 screws.
9. Place the screws into the ember bed (bottom left first to keep the gasket from slipping) and start to tighten evenly on all 4. Bring the ember bed down to .200" from the plate (on average) all the way around. Do to inconsistencies on the bottom of the ember bed, some spots may be a little more or less than .200". As you tighten some screws others will become loose, so tighten each a little until all 4 are snug and average .200".
10. Use the #4 drill bit to clean out the 4 logs mounting holes so that the ceramic pins will fit into them easily.

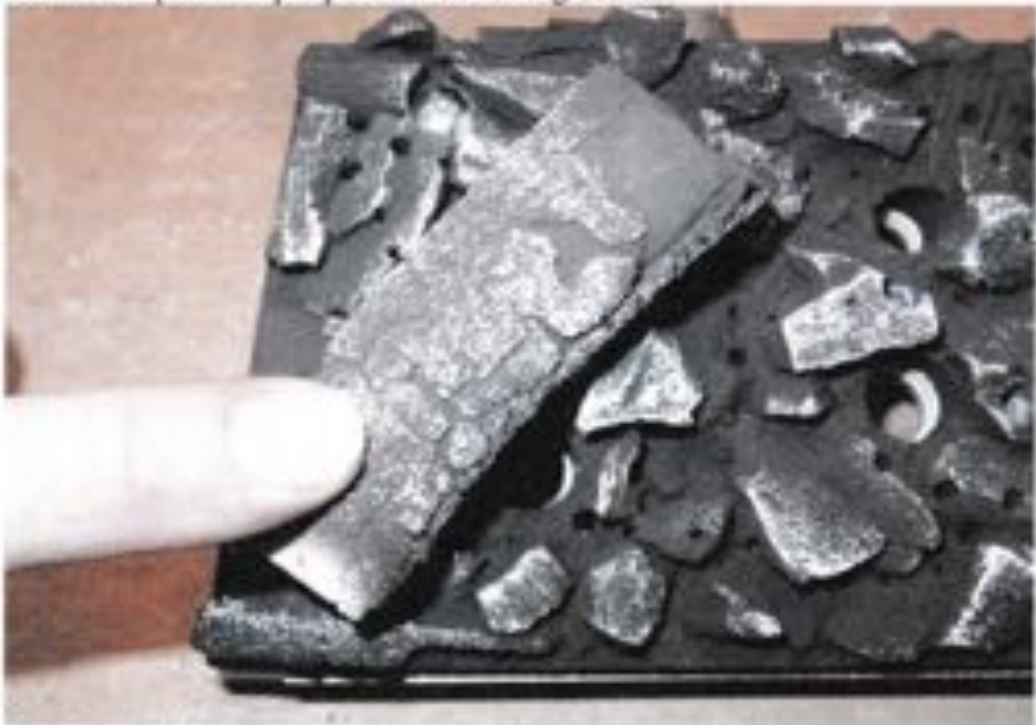




11. Place the 2 ceramic pins with gold paint on them into the 2 log mounting holes on the left side of the ember bed.



12. Spray some gold paint onto a piece of cardboard and using a Q-tip, dab some paint onto the head of the gold pins
13. Place log #1 (number on rear of log) over these 2 pins Exactly as shown below. Press down to imprint the pin position on the log bottom.



14. Use the #4 drill bit and the cordless drill to make the holes in the log bottom for the ceramic pins. Make sure and drill the holes at 90° from the bottom flat surface of the log. Drill the holes deep enough for the pins to not cause the log to sit in the air above

the ember bed, but not so deep as to not allow good pin penetration into the ember bed.

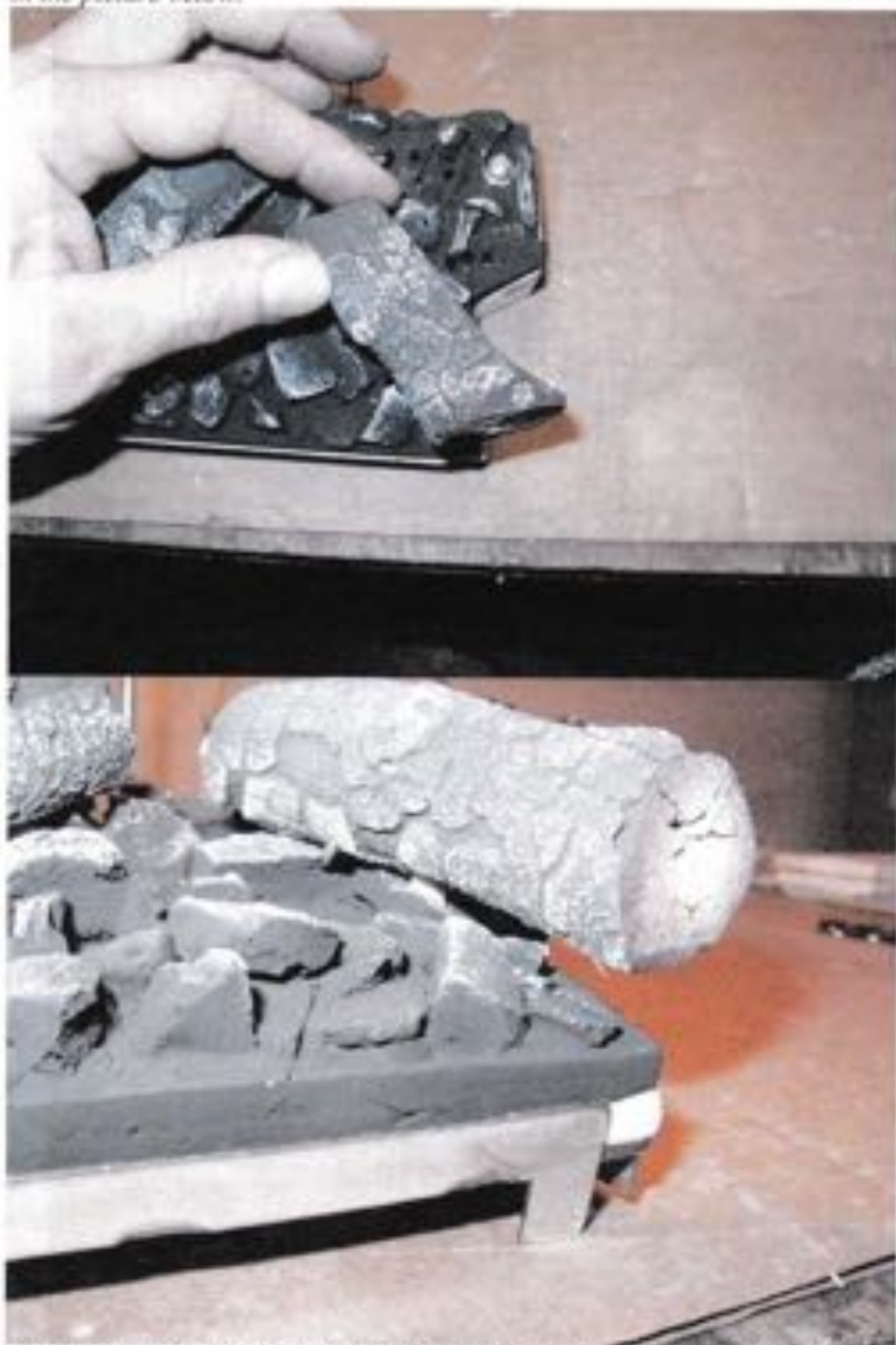


15. Cut a Q-Tip in half and use the stick end to apply Pyrofix glue to the drilled holes. Push the pins into the glue and clean up any excess glue with the fuzzy end of the Q-Tip.



16. Place the log into position on the ember bed so the glue will set up with the pins in their proper position.

17. Repeat this process with log #2. Note: Log #2 will sit in mid-air somewhat as shown in the picture below.



18. Look at the under side of log #3. Notice the 2 grooves notched into it. The groove on the left (when the log is upside-down and #3 is pointing away from you) is in the



wrong spot. Place the log on the ember bed Exactly as shown below.



19. Notice where log #2 contacts log #3. You need to file a new groove in that spot to allow it to rest firmly in place. Mark log 3 with the scribe as shown below to know where the new groove is needed.



20. Use the 3/8" file to make a new groove. Make it just deep enough to allow a good fit.



21. Set log #4 in place as shown below. It should be in the left rear corner of the ember bed, laying across log #1, and touching log #3.







22. Hold the scribe on log #4 and imagine it passing through the log and making contact with log #1 below it.



23. Move the log and stick the scribe into the log under it at the point you imagined before. Move the scribe around to make a drill hole.

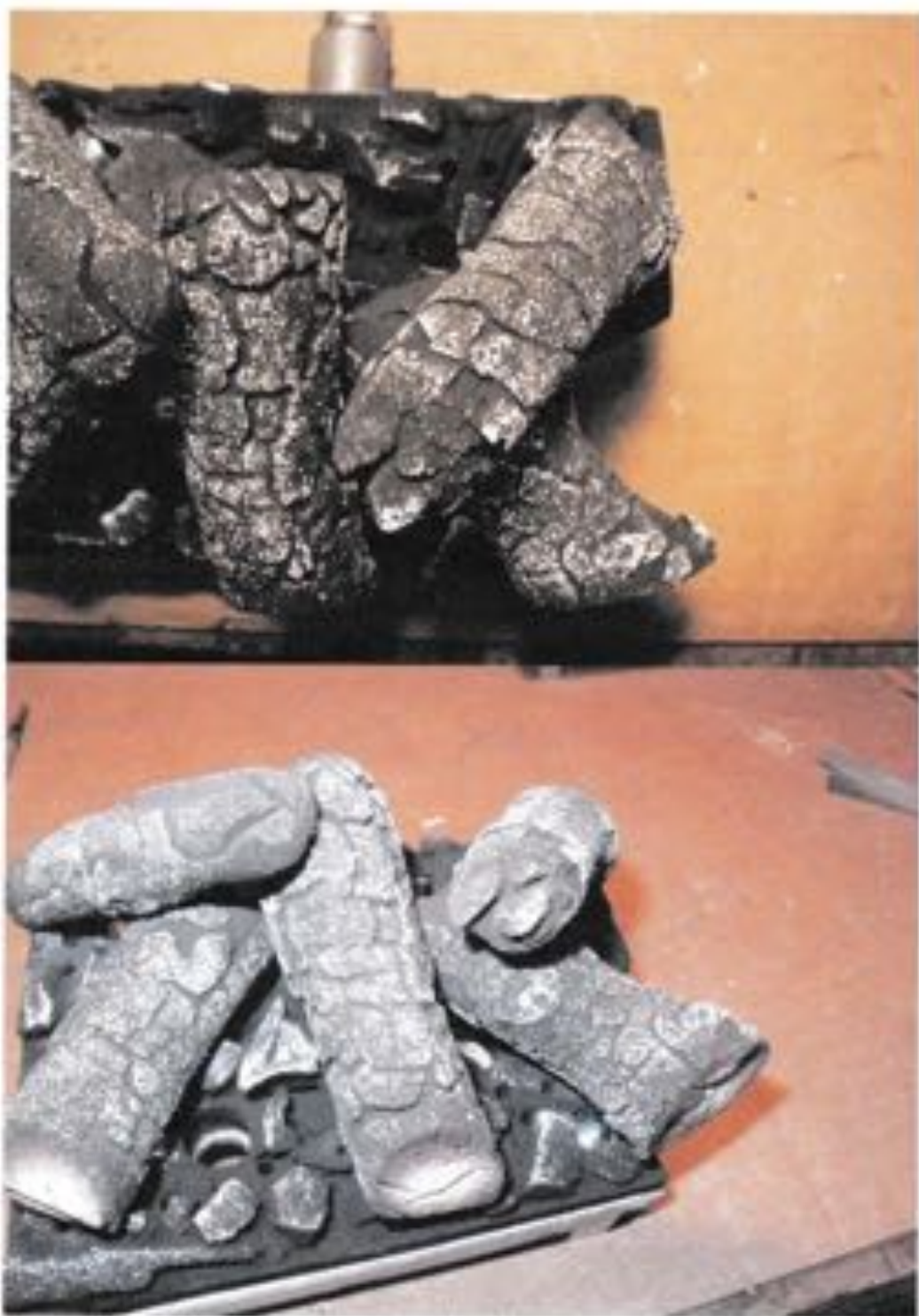


24. Drill the hole deep enough to get half of the pin into it. Don't forget to dump out the drillings.
25. Place the sharpened pin in the hole. Place log #4 back in its' place and wiggle it around on the sharp pin to make a hole.
26. Drill a hole in log #4 at that spot and make it deep enough to take the rest of the pin. Also make it oblong top to bottom as shown below.



27. Glue a pin in log #1 wiping off any excess glue. Place log #4 into position.
28. Place log #5 into position as show below.





29. As you did for log #4, position the scribe, imagine a point in log #2, remove log #5, stick log #2 with the scribe and make a small hole.
30. Drill the hole deep enough for half of the pin, remove the drillings and put the sharpened pin in the hole.
31. Place log #5 back in position, wiggle it on the sharpened pin and drill the hole as before, deep enough for half of the pin and oblong top to bottom.
32. Remove the sharpened pin and glue a pin into the hole on log #2.
33. Place log #5 across log #2 as shown above. ■