

Kiln Corner

Firing Glass Visually

by Arnold Howard

Photography Courtesy of Paragon Industries, LP.

Though Arnold Howard works for Paragon Industries, L.P., the information here applies to all brands of glass kilns. Feel free to send questions for this column no matter what brand of kiln you own.

The Romans and Egyptians fired glass and pottery thousands of years ago. By observing the color of the kiln's firing chamber, ancient artists knew when to adjust the temperature.

Today's kilns simplify the firing process so you can concentrate more on creating and less on the technical details. Nevertheless, just as in ancient times, even firing a digital kiln requires knowledge of the firing stages of glass. You can gain that knowledge by learning to fire visually.

A firing schedule is a set of temperatures and rates needed to fire a particular project in a kiln. As you gain experience, you will understand that the times and temperatures listed in a firing schedule are not exact, but rather only general guidelines. Every kiln model is different. People who own several types of kilns alter their firing schedules to suit each kiln. As you gain confidence, you will alter firing schedules the way a cook alters recipes.

You can fine-tune a firing schedule by visually checking the glass. Watch the glass inside the kiln through a peephole or window, or by raising the lid an inch or so. Crack the lid or door just enough to see inside the kiln. Only look for several seconds at a time and wear green #3 firing safety glasses and protective gloves.

Each time you check the kiln, look at the edges of the glass. When the kiln interior begins to turn orange, the glass will gradually begin to sag and soften, and the edges will round. At that point, look at the glass every few minutes. When the glass has fused to the degree that you want, write down the temperature shown in the digital display window. Program that temperature the next time you fire that particular firing schedule.

Once you have a good firing schedule, you can duplicate results from one firing to the next. If you need a suggested starting point, you can obtain recommended firing schedules from friends, online glass discussion forums, and the websites of glass manufacturers.

Whether you check the ware visually as the ancients did or use a digital controller, the kiln is only a tool. No matter what type of control system you use, ultimately the results will depend upon your creative judgment.

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Arnold Howard writes instruction manuals and advertisements for Paragon Industries, L.P. His hobbies are glass fusing and karate. He also enjoys studying history and watching classic movies. You can reach Arnold at ahoward@paragonweb.com with questions for future columns. Sign up for his kiln newsletter at www.paragonweb.com.



A mirror placed near a peephole sometimes aids in visually checking the kiln. Be sure to wear green #3 firing safety glasses when looking into the kiln.



You can conveniently check the glass through a kiln window. In this photo, the glass has not yet reached tack fuse. The edges are still sharp.

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