

is picked up by a sensor and used to switch the color signals applied to the gun. No second beam is needed. Why hasn't it been used in large tubes? Probably because there are so many stripes per line that the required switching frequency is too high, or causes RFI problems.

Ultimately, however, there are no failed lights. Any really good idea has a way of turning up again.

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ETCHANT DISPOSAL WARNING

I was alarmed to read the letter from L. Scott Hofer about the disposal of ferric chloride etchant (January 1980 issue). One of the very first rules of chemistry is: *Never pour a base (or water) into a strong acid.*

Sodium carbonate is a fairly strong base; and when it is added "slowly" (Hofer's words) to a strong acid there is a violent reaction (the "foaming" Hofer describes). That reaction generates a lot of heat, as a result of ionization.

A far safer way would be to mix a large quantity of sodium carbonate solution in

cold water. Then slowly pour the relatively smaller volume of ferric chloride into the carbonate solution. The larger volume of carbonate solution will more quickly neutralize the acid and dissipate the heat as well.

If he insists upon using his method, Mr. Hofer had better invest in a rubber apron, rubber gloves, and goggles! Sooner or later, he is going to have a small, but violent, "explosion" of chemicals spattering his clothes, face, and eyes.

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AC OUTLET CHECKER

The "AC Outlet Checker" article (August, 1979) is interesting and provides a circuit that should give a lot of information. However, a much simpler checker for AC outlets can be made by connecting a neon lamp (through a resistor) between the hot terminal of a three-connector plug and the *grounding* terminal.

The neon lamp can be mounted in the base of the three-connector plug. If the lamp goes on, you know that (1) the hot