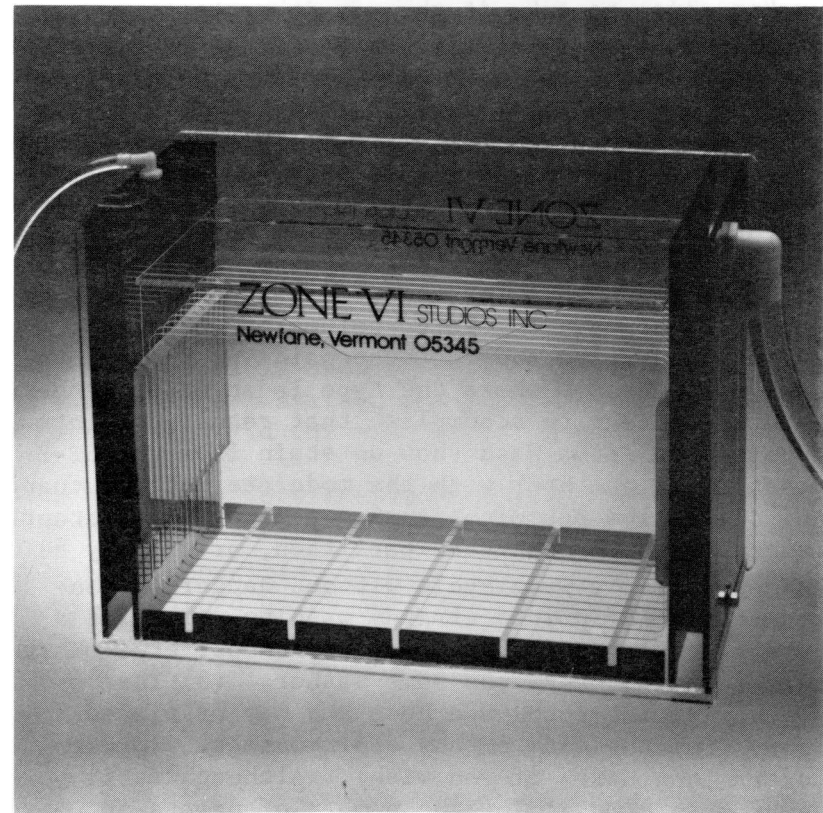


Because of the physical beauties of the state and excellent photographic facilities at both the Putney School and Windham College, we plan to have one week workshops in the Spring and Fall.

Moving to Vermont will enable us to expand the production of our Zone VI products. We need economical space and good craftsman in order to introduce products that should be made available. Costs are soaring in photographic equipment as in all manufactured goods. (A Schneider lens that sold for \$375.00 four years ago is \$1,100.00 now). In addition to material and labor costs, the economics of distribution are largely responsible. For example, our new print washer contains material that costs us almost \$70.00. If we were to market it through normal distribution channels, the retail cost would approximate \$300.00. Through our own manufacturing and direct sales facilities, we can control the quality of our products and cut out the distribution mark-ups.

I think this washer is the best print (and film) washer available. Four years ago I built a plastic print washer that looked somewhat like it, but had several differences in its operation. To begin with, the water injected from the bottom and overflowed at the top which made it necessary to place the washer in a sink. Vegetable dye added to the water showed that forcing water up was very inefficient. Over four times the amount of water to fill the tank was required to effect a complete change of water. (Even more water would be required to drive heavy hypo-laden water up through the prints and over the top). This not only wasted a lot of water, it also lengthened the wash time. Tests proved conclusively that

agitation of the prints was practically meaningless. Agitation is only helpful in separating prints so that the hypo can leach out freely. What is needed is a constant enveloping bath in clean water. (Leitz now recommends four baths in separate tanks of clean water for best film washing. No running water, no agitation!) Archival washing requires time, clean water, and print separation.



PW-1 Print Washer

The final washer design (after four prototypes) provides: (1) A separate compartment for each print. These compartments are twice the width of the compartments of any other stand-up washer. There is, therefore, twice the water volume per print and, in addition, unloading the washer is simplified. (You can get your fingers into the compartments to pick out the prints). Prints do not move, so they cannot be damaged; (2) The water is fed into the washer from the top; the washer drains from the bottom. Since hypo is heavier than water, it makes sense to take it the way it wants to go. There is close to 100% constant replacement of contaminated water with clean water. No water is wasted, washing is speeded up. Risers keep the prints about 1½" above the tank floor and the hypo continuously sinks into this area and out through the bottom drain. A trickle of water is sufficient to operate the washer at full efficiency. The washer is so efficient that with no water added at all, tests show that an archival wash occurs in about 2½ hours. The large volume of water, the print separation and the suspension of the prints above the bottom where the hypo laden water gathers, are sufficient to accomplish that result. Prints treated in Perma Wash show no stain from the HT-2 test after one hour with the moderate water exchange of one gallon per minute. Since water is constantly sucked down through each partition, prints may be added during a wash cycle without danger of contamination of prints already washing. This is a great advantage for schools, workshops, etc. where several people use the same washer; (3) The washer drains through a hose and may be placed away from the sink or any drain outlet. (Order extra long hoses if you wish). Although it is extremely compact for the number of prints it can handle (30 8x10s or 15 11x14s) it takes up

the space of a 15x17 tray. If the washer is placed outside of the sink, the drain hose can be directed into the holding tray so prints can be washing while others are getting a pre-wash in the holding tray. The tank is easily drained for washing if the drain hose is pulled down out of its holder. It should be kept filled with water at all other times to prevent warping of the separators; (4) The separators are removable for cleaning. A swab with a sponge containing household detergent will remove any accumulated slime. The frequency of this treatment varies with local water chemistry, and in White Plains it was necessary twice a year. Two extra half height partitions are included. These replace six or seven full height partitions to provide a mid-tank rest for film on reels. Sixteen 35mm. reels or eight 120mm. reels can be washed at one time. A special rack with separate compartments for each negative is available for 4x5 and 5x7 sheet films. 8x10 films are inserted vertically just like 8x10 prints. Thirty 8x10 negatives are archivally washed in 20 minutes with no possible damage. Films should be removed after washing, but prints come to no harm if left in the washer over night.

We have also developed a roll film washer operating on the same down draft principle.

No hose connection is necessary. The washer is merely placed under the tap, the water flows down through the reels and out around the bottom. The water from the bottom of the tank drains up through an outside water jacket. This jacket insures that the tank will stay filled even if the water volume is reduced.