

Linn's Stamp News



\$175
U.S.

SEPTEMBER 28, 1992

WORLD'S LARGEST WEEKLY STAMP NEWS AND MARKETPLACE

VOL. 65 ISSUE 3334

Pitney Bowes' experiments with tagging detailed in recent discovery of essays

By Wayne L. Youngblood

After more than 30 years, a group of historically significant luminescent tagging essays, related material and notes has turned up in private hands. This material will add much to the knowledge base of the history of postal mechanization.

The material, a sampling of which is shown in full color under both normal and longwave ultraviolet light, covers a broad spectrum between United States and foreign adhesive stamps, postal stationery, meter imprints and penalty envelopes overprinted or printed with fluorescent ink. Little of this material was previously known by collectors to exist.

When discovered, the experimental material belonged to William McDonough, who was a research chemist for a number of years with Pitney Bowes, in the Applied Research Department. He had kept the luminescent material in a folder as a form of personal diary of experimental projects he had worked on.

Most of these experiments took place between 1959-61, well before the 1963 experimental implementation of tagged U.S. stamps.

Most collectors' awareness of tagged U.S. stamps begins with the Aug. 1 experimental release of tagged 8¢ airmail stamps, Scott C64a. But the story begins much earlier.

On Monday, Feb. 25, 1963, Postmaster General J. Edward Day made the first public disclosure of a postally significant change when he announced to a small luncheon group that an experimental field test of luminescent airmail stamps would begin in July that year (the test was delayed until Aug. 1).

Day mentioned that the primary purpose of the test stamps was to speed the handling of airmail, and that the experimental stamps would be recognized and separated by special equipment.

On Feb. 26, Day's office released further information noting that the stamps would be coated with an inorganic phosphorescent compound

that would be activated by ultraviolet light.

By April 1 of that year, Day disclosed the following: "We have every confidence this field data will lead to an extension of this system of stamp identification and cancellation to all of our postage stamps within the next few years." If anything, Day's disclosure was an understatement of the extent to which luminescence has been used to speed the processing of mail.

What has not previously been known is the extent to which tests had already been performed, under contract with the U.S. Post Office Department, by Pitney Bowes, National Cash Register, Stanford Research Institute and others. Thus the source of McDonough's material.

During the 1950s, the USPOD began to realize, by nearly annual double-digit increases in mail volume, that new mail systems would have to be devised to keep pace with those increases. As a result, several research and development contracts



This grouping of U.S. and foreign tagging essays, photographed under longwave ultraviolet light, shows a wide range of experimental tagging patterns and types. These essays plus others were discovered in the hands of a former researcher who worked for Pitney Bowes.

were let to private companies.

The basis for much of this new testing was the existence of several experimental models of facer-cancelers, devised by Dutch inventor F. van Marle between 1938-55.

Van Marle's facer-cancelers were based on the premise that the common location of postage, in the upper-right corner of the envelope, be used as the basis of orienting and separating loose mail into different categories to be canceled and processed.

One of van Marle's machines, a facer-canceler designed to detect stamps containing metal foil, was shipped to Stamford, Conn., home of Pitney Bowes, in 1956. Serious testing of all sorts then began — including luminescent tests.

By 1957, when McDonough joined Pitney Bowes, many types of testing for both stamps and meters was well under way.

Among some of McDonough's first tests from which he saved material were fluorescent mail-sorting bar code markings applied to the backs of envelopes, and very early phosphorescent meter inks. The letter-sorting marks, tested by McDonough Dec. 22, 1959, were later exposed (Please turn to page 16)



The same stamps as shown in the top-most illustration, but photographed under normal lighting rather than longwave ultraviolet light to show the differences the tagging makes.



These blocks of experimental facsimile stamps were printed on Lumogen and Helecon fluorescent-coated papers.

USPS carrier cancels currently being tested

By Fred W. Baumann

The long-awaited United States Postal Service pilot project to test the use of small, self-inking devices to enable mail carriers to collectibly cancel skipped U.S. stamps is finally under way.

A mail carrier in Schaumburg, Ill., a northeastern Chicago suburb with a population of 69,000, reported on the first phase of a test of three cancelers that began there Aug. 12.

He also sent this illustration of a 1¢ Margaret Mitchell stamp canceled by all three of the different devices

that he received Aug. 11.

All three are printed in black and read "601/USPS," 601 being the first digits of Schaumburg's ZIP code.

The first of these hand-stamps, shown on the left, is applied by a round canceler attached to a key chain. It is the smallest of the three, an 11-millimeter circle.

The top right postmark is applied by a pocket-sized red and black device that opens when it is squeezed. The circle measures 13mm, and the seven wavy lines in the killer portion of the marking measure almost 27mm.

The third cancel, shown on the bottom right, is made by what the USPS calls a "vehicle 'Kwik' stamp (for use on mounted routes only)." It, too, has a 13mm circle, but the wavy lines measure between 25.5mm and 26mm.

Along with cancelers, carriers receive a "Carrier Cancellation Device Comment Form" to let them take part "in choosing which device the USPS might purchase, and what changes, if any, might make them better."

According to the evaluation form, "The purpose of the device(s) is to cancel stamps on 1st CLASS MAIL which have avoided machine cancellation." (The USPS presumably used italics to remind carriers that there is no need to cancel the many uncanceled service-inscribed stamps in the mailstream these days, which the USPS regards as precancels.)

Carriers are invited to try one of the devices for at least two weeks and told, "At (Please turn to page 11)



A 1¢ stamp with strikes from three self-inking cancellation devices now being tested in Schaumburg, Ill., mail carriers.

Contents on page 3

PRINTED ENTIRELY ON RECYCLED PAPER
PAID CIRCULATION: 70,846 MAILED: SEPTEMBER 18
POSTMASTER: Address changes to Box 29, Sidney, Ohio 45365

Pitney Bowes' U.S. and foreign tagging essays

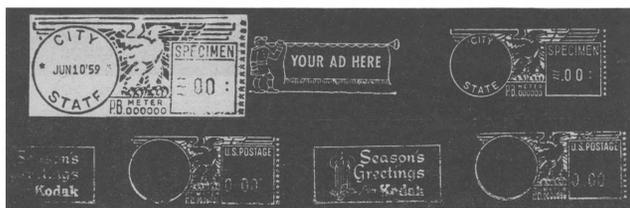
(Continued from page 1)
 perimentally tested on live mail in Cincinnati, Ohio in 1970 (by LTV Electrosystems). This encoding of information into bar-coded fashion later developed into the present black-ink bar-coding system on the fronts of envelopes.

McDonough's phosphorescent meter ink experiments were printed first in green ink that faintly glows under shortwave UV light. Subsequent experiments were printed in brownish-red and red inks that glow a bright yellow green under shortwave UV light.

McDonough told *Linn's* that experiments of phosphorescent meter inks was abandoned and later adapted to fluorescent meter inks. Much later, on July 1, 1973, all meter inks were required to be fluorescent.

The reason phosphorescent meter inks were abandoned early on, McDonough told *Linn's*, was because of the abrasive nature of the inorganic phosphorescent silicate particles. If ground too finely, the particles lost their phosphorescent quality. If left larger, the particles quickly wore down the zinc meter dies. McDonough had an example of a Feb. 26, 1960, fluorescent meter impression.

Most of McDonough's stamp experiments took place in 1960-61.



Early experiments with phosphorescent meter inks were tried, but dropped in favor of fluorescent. These phosphorescent specimens were created as tests. All but the 1959 example were photographed under shortwave UV light.

During that time period, he experimented with phosphorescent and fluorescent overprints and coated papers. Some of these experiments included fluorescent inks that were mixed with pigmented inks for use on stamped envelopes. Dummy test envelopes in various colors were created in the lab to test responsiveness of those inks.

McDonough looked at the possible use of phosphorescent and fluorescent coated papers — an idea that is now in use in the United States.

Two specific papers that McDonough worked with were Lumogen- and Helecon-coated papers. Both have been used by postal administrations. Helecon No. 3336 was created by the U.S. Radium Co.

Among the items contained in that grouping are facsimile stamps printed on both papers and a group of four sample un gummed Australian postage stamp proofs that were printed on Helecon

paper supplied to the Australian government by Pitney Bowes. Australia later printed numerous stamp issues on Helecon paper.

Other foreign tagged stamps in the grouping included a number of French and Netherlands stamps with various types of bar and overall fluorescent tagging.

Some of the most interesting tagging essays included U.S. stamps and postal stationery, including stamps from the Presidential, Liberty and Champions of Liberty series, as well as individual com-

memoratives, such as Boy Scouts and Dental Health, as well as others.

The tagging applied to these stamps has visual characteristics similar to both zinc orthosilicate (which glows a bright yellow green) and calcium silicate (which glows orange red). The biggest difference is that unlike the later-adopted phosphorescent chemical compounds, which glow only under shortwave UV light, these stamps glow under longwave light as well, making them fluorescent tagging essays. One of the compounds used even glows an intense pink.

The existence of a few of these tagging essays was discovered during the 1970s by tagging pioneer John Stark. Stark located and photographed a few of the stamps (3¢ and 4¢ Liberty series and Boy Scout commemoratives), which had been held by the German postal administration. It is not known what



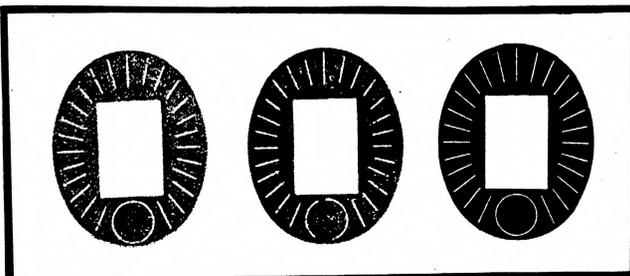
These Dental Health and Credo stamps are two of several different types of experimentally tagged stamps that were never tagged for production.

later became of those stamps.

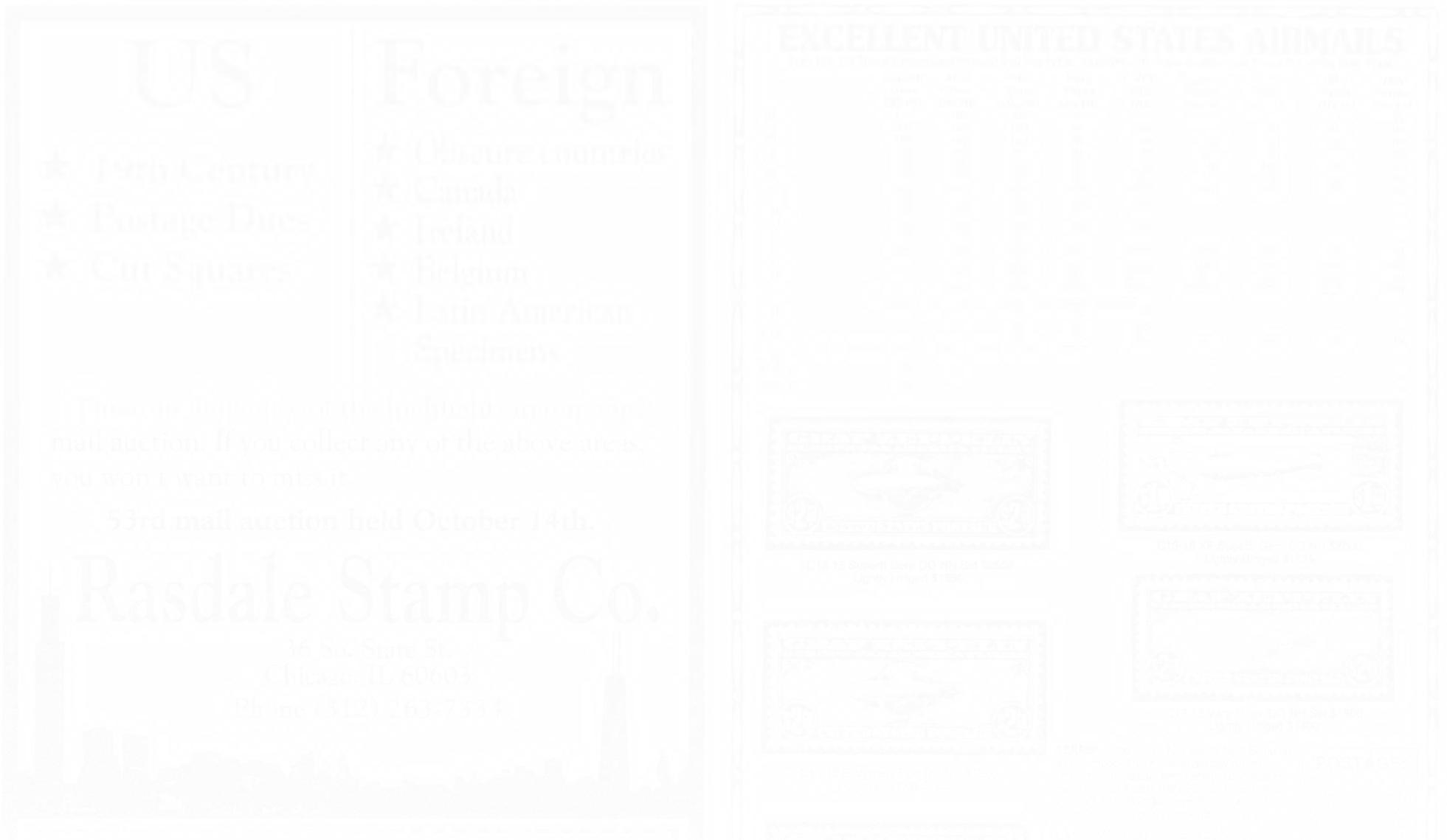
As can be seen in the page 1 color illustration, numerous types of tagging formats, ranging from overall to selective and repetitive bars, were tried. McDonough told *Linn's* that Pitney Bowes was attempting to show the range of tagging types available.

Other stamps also were experimentally tagged, according to McDonough, but he saved only those he had worked with. Perhaps some still exist in the archives of Pitney Bowes.

Further information on these fascinating items will be presented in *Linn's* as they are studied. ■



Pitney Bowes experimented with fluorescent tagging inks mixed with pigmented printing ink. These dummy stamped envelope designs were experimentally printed in a wide range of fluorescent colors.



Computer-related U.S. stamps, stationery

Which stamp shows the most computers on it? The United States commemorative (Scott 2630) issued May 17 for the New York Stock Exchange's 200th an-

The se-tenant 1975 Banking and Commerce issue (177-78) displays the magnetic-ink numerals that are included on checks so that they can be read by machines. The Civil

Commerce issue also is pictured in Figure 2, as is the Chemistry stamp of 1976 (1685). The design of the latter includes computer tape in the background.

first seven binary numbers are 1, 10, 11, 100, 101, 110, and 111.

My favorite U.S. computer-related philatelic item is the 15¢ Literacy postal card

Computers and Stamps

By William F. Sharpe

niversary is the winner. The design of this stamp includes an image of the trading floor with 10 computer screens.

This stamp is shown in Figure 1. You'll probably need a magnifying glass to count all of the computer screens.

The United States has issued a number of postal items related to computers.

The first, issued Oct. 20, 1960, shows the first automated post office, which opened in Providence, R.I. Except for the word "automated" on this stamp (1164), there's nothing to indicate any connection to computers.

A 1965 precanceled 4¢ postal card (UX53) shows a picture of a crowd and Census Bureau punch card.

Eight years elapsed before the next U.S. stamp related to computers appeared. The 6¢ Progress in Electronics issue (1501) depicts transistors and a printed circuit board, both used in main-frame computers of that era. The stamp is illustrated in Figure 2.



Figure 1. The design of the 1992 New York Stock Exchange stamp includes 10 computer screens in the vignette on the right.

Service issue of 1983 (2053) also includes these characters.

The 1975 Banking and

It takes a little explaining to demonstrate that the Girl Scouts 75th Anniversary stamp (2251), shown in Figure 3, is indeed related to computers.

The second merit badge in the left column of the stamp is for computer fun. The binary numbers "00111" and "10011" are the equivalents of 7 and 19 in the decimal system. "G" is the seventh letter of the alphabet and "S" is the 19th.

You count using binary notation just like you do with decimals, except you can only use these two digits. The



Figure 3. The second merit badge in the left column of this Girl Scout stamp is for computer fun. The badge shows the binary numbers "00111" (7) and "10011" (19).

(UX146) issued in 1990. It is illustrated in Figure 4. This card was designed to heighten public awareness of literacy. The card includes a stylized computer screen and keyboard in the lower-left corner.

There's some disagreement as to whether the space station hologram stamped envelope issued in 1989 should be considered to be computer related.

The "USA" lettering and

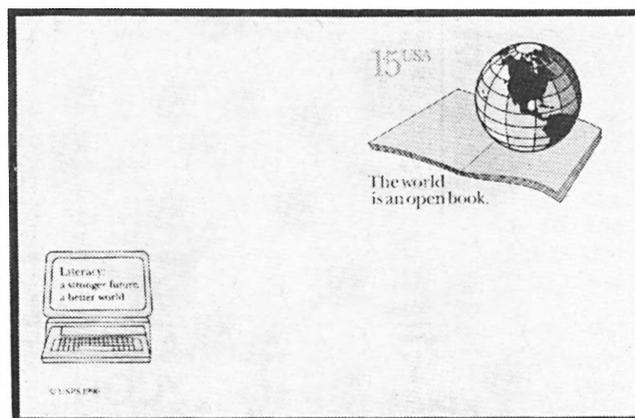


Figure 4. A stylized computer screen and keyboard are shown in the lower-left corner of the Literacy postal card.

denomination are in the liquid-crystal-display format usually found on calculators, not computers. The holographic image is recorded in a photographic process with multiplex exposures using laser beams. The image is then reproduced through a precise form of embossing on metallic foil.

Just what constitutes a computer-related stamp is a subjective opinion. The items mentioned here by no means exhaust the list of U.S. issues related to computers.

The checklist issued periodically by the Mathematical Study Unit proved helpful in finding the items that I have mentioned.

This list is not limited to computers or to the United States. Worldwide stamps with any relationship to

mathematics or mathematicians are included on the list.

MSU publishes *Philamath*, a quarterly journal that covers the subject of mathematics, including computers, on stamps. The membership fee is \$5 per year. The checklist is available for a separate charge, although updates are included with most issues of the newsletter.

Contact Estelle A. Buccino, Secretary-Treasurer, 2727 29th St. N.W., No. 737, Washington, DC 20008, to join MSU or for more information. If you just want information, be sure to enclose a return envelope with postage. ■

Greek scenes

Greece will issue six stamps Oct. 12 picturing scenes from county seats.



Figure 2. These three United States issues, honoring electronics, chemistry and banking, are all computer related.

New! 1992 Minkus Master & Supreme Global Supplements
Due October 1. Your Cost Only \$34.65 each.
This offer good for first 2 million orders. Limited to 100 per person. HURRY!

MINKUS ACCESSORIES 2-POST		
	Retail	Your Cost
2 1/2" Maroon Binder	\$22.50	\$14.03
2 1/2" Maroon Slipsheet	\$16.00	\$10.40
Blank Pages Pack of 20	\$5.75	\$4.03
Quadrate Pages Pack of 20	\$5.75	\$4.03
Glassine Interleaving	\$6.00	\$4.20
Labels	\$2.00	\$1.40

MINKUS ACCESSORIES 3-POST		
	Retail	Your Cost
1 1/2" Maroon Binder	\$16.50	\$12.03
Blank Pages Pack of 20	\$5.75	\$4.03
Quadrate Pages Pack of 20	\$5.75	\$4.03
Titled Blank Pages Available for U.S. Reg. Issue, U.S. Commem., U.S. Plate Block, U.S. Zip, Canada, Ireland, Israel, U.N. or Vatican in Packs of 20 Pages		
	\$5.75	\$4.03
Glassine Interleaving	\$6.00	\$4.20

1993 Scott Volume One, Two, Three & Four Catalogues
\$23.95 each

Minkus Master & Supreme GLOBAL SUPPLEMENTS					
PRICES LISTED UNDER YOUR COST ARE 30% OFF RETAIL					
	Retail	Your Cost		Retail	Your Cost
1960-1970	\$175.00	\$122.50	1981	\$29.95	\$20.97
1971	—	—	1982	\$29.95	\$20.97
1972	—	—	1983	\$29.95	\$20.97
1973	\$29.95	\$20.97	1984	\$29.95	\$20.97
1974	\$29.95	\$20.97	1985	\$29.95	\$20.97
1975	\$29.95	\$20.97	1986	\$29.95	\$20.97
1976	\$29.95	\$20.97	1987	\$32.95	\$23.07
1977	\$24.95	\$17.47	1988	\$49.50	\$34.65
1978	—	—	1989	\$46.75	\$32.73
1979	\$29.95	\$20.97	1990	\$49.50	\$34.65
1980	\$42.50	\$29.75	1991	\$49.50	\$34.65

Minkus Master & Supreme BINDERS, ACCESSORIES & SLIPCASES					
MASTER & SUPREME BINDERS			ACCESSORIES		
	Retail	Your Cost		Retail	Your Cost
Master Global	\$25.00	\$17.50	Blank Pages	\$5.75	\$4.03
Supreme Global	\$25.00	\$17.50	Quad Pages	\$5.75	\$4.03
SLIPCASES					
	Retail	Your Cost		Retail	Your Cost
For Old Master & Supreme Binders with Round Spine & Wire Pins	\$17.00	\$11.95	For New Master & Supreme Binder Flat Spine	\$17.00	\$11.95

Super Safe
Cover Albums & Mint Sheet Albums — Here's One Reason It's Called Super Safe
Both Cover & Mint Sheet Album Pages are made of 100% inert archival poly film formulated to Museum Specifications and no PVC'S.

SUPERSAFE DELUX MINT SHEET ALBUM			SUPERSAFE STOCKBOOKS 30% OFF		
	Retail	Your Cost		Retail	Your Cost
Gold embossed grained vinyl binder			Super Safe No Snag 9x12 10 White Pages	\$10.99	\$7.69 ea.
100 sheet capacity			Super Safe No Snag 9x12 10 Black Pages	\$15.99	\$11.19 ea.
Lies perfectly flat when open			Super Safe No Snag 9x12 32 White Pages	\$17.99	\$12.59 ea.
3 Double "D" Rings Make page turning easy	\$26.99	\$18.89 ea.	Super Safe No Snag 9x12 32 Black Pages	\$26.99	\$18.89 ea.
SUPERSAFE MINT SHEET FILES					
	Retail	Your Cost		Retail	Your Cost
24 Sheet Capacity	\$7.99	\$5.59 ea.	Super Safe No Snag 9x12 64 Black Pages, Deluxe Padded Cover	\$59.99	\$41.99 ea.
48 Sheet Capacity	\$13.99	\$9.79 ea.			

SERVICE CHARGE: East of the Mississippi \$3 on orders over \$25 NET; \$4 on orders under. West of the same river \$4 if over \$25 NET; \$5 if under. PAYMENT: NJ residents add 7% sales tax. Money orders, Personal Checks, VISA or MasterCard only. Allow 12 days for personal check to clear. SHIPPING: We need a street address. Ship by UPS only. No orders sent outside the 48 states. QUESTIONS: We gladly answer questions, when a large self-addressed stamped envelope is enclosed. FOR A COMPLETE LIST of Showgard Scott or Award Mounts send a SASE. PRICES subject to change without notice.

CLENS 2-BIT SUPPLY STORE
P.O. Box 401, Clementon, NJ 08021