

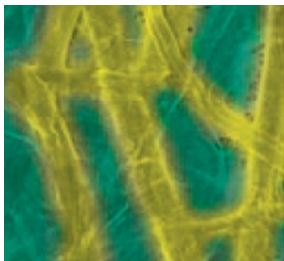
Method for Counterfeiting Current Issue United States Currency

\$100 BILL

By: the Doctor

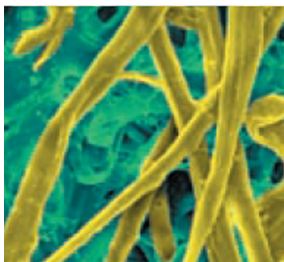
This guide is to serve as a general purpose manual for those familiarising themselves with counterfeiting methods. **THE AUTHOR IN NO WAY CONDONES THE USE OF THESE METHODS FOR ILLEGAL ACTIVITIES.** While the author may or may not support the ideals motivating such activities, any claim that references content from this manual to support any claim against the author for aiding, inciting, conspiring, or participation in any illegal activities is taken out of context and is thus wrong and unlawful. THIS MANUAL IS FOR **EDUCATIONAL PURPOSES ONLY**, and the **THE AUTHOR STRONGLY ADVISES THE READER AGAINST PERSUING ANY ILLEGAL ACTIVITIES.** Please check your National, and local laws regarding the use and application of this information for whatever reason. COUNTERFEITING AND RELATED ACTIVITIES ARE CONSIDERED **HIGHLY ILLEGAL** IN MOST JURISDICTIONS.

The current issue US \$100 bill (2.61" x 6.14" x 0.0043") is printed on bond paper stock which the Federal Reserve obtains from Crane & Co. in Boston. Currently they are using what they call Marathon High Durability substrate. This substrate consists of a paper made from two sheets of a proprietary blend of cotton flax and linen. Red and Blue silk fibers are added, however these can be simulated easily by pre-printing them before printing anything else.

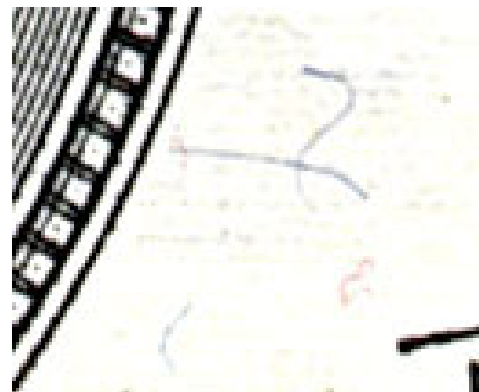


**CRANE & CO'S
MARATHON BOND PAPER**

UNDER A MICROSCOPE

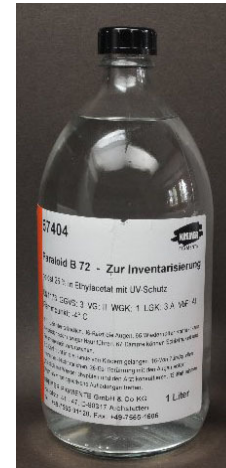


REGULAR FIBRE PAPER



RED & BLUE FIBRES

The final sheets of bond paper are made from two layers of 0.0022 inches thick (or in paper weights 11.5 pounds) which are laminate while damp with a weak glue and treated front and back with a proprietary solution consisting of a solution of lanolin, (which is used in soap making) and grain alcohol.



Additional additives such as UV inhibitors (to dampen UV reaction of the paper), and PH balancing agents (which aide counterfeit detection pens) can also be added to this solution. Once final sheets are ready they are compressed while damp, cleaned and allowed to air dry resulting in the final bond stock with embedded security features which is 0.0043 inches (in paper weights about 21.5 or 22 pounds) thick. The compressing process diminishes the thickness from 0.0044 by .0001 to a final appropriate thickness of 0.0043. Compression also impregnates the lanolin-solution more deeply into the paper.

The Result of this coating is a sort of water-proofing that prevents ink from actually bleeding into the fibres of the paper. When a counterfeit detection pen is used, the ink never actually gets to the paper, and so it doesn't change colour. When these pens are used on untreated paper, the ink bleeds into the actual fibers of the paper and changes color.

The Security thread of current issue notes contains two parts. The first part is the red UV background. This is a stripe (pictured below) that fluoresces under ultraviolet light. The second part of the security thread is the metallic print. Across the middle of the red UV background, “USA 100” repeats in metallic, slightly magnetic ink. This magnetic ink is opaque, allowing it to be seen when back-lit, it's magnetic properties are what allow most large-bill automatic bill changers to determine different currency values, as the stripes are placed in different areas depending on value. The security thread is placed on the inside face of the bottom sheet of paper before being laminated. Also printed along this face is the watermark portrait in the right hand side. The back of this (shown below) will be the independence hall side of the final bill.



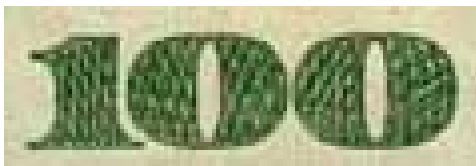
above is the “bottom” half of the paper embedded with watermark portrait and security thread Shown under black-light.



Here we see the security thread before it is applied. It consists of metallic print and a UV reactive red background. The stripe can be replicated by stenciling directly to the inside face when making counterfeits

The inks and intaglio printing method used to make real US currency allows for the unprinted sheets to be treated with the lanolin solution (essentially a waterproof coating) before printing. In counterfeiting, a simulation of this coating is applied after the printing is done but after the optically variable ink portions are printed and before compressing and cutting the sheets into individual bills.

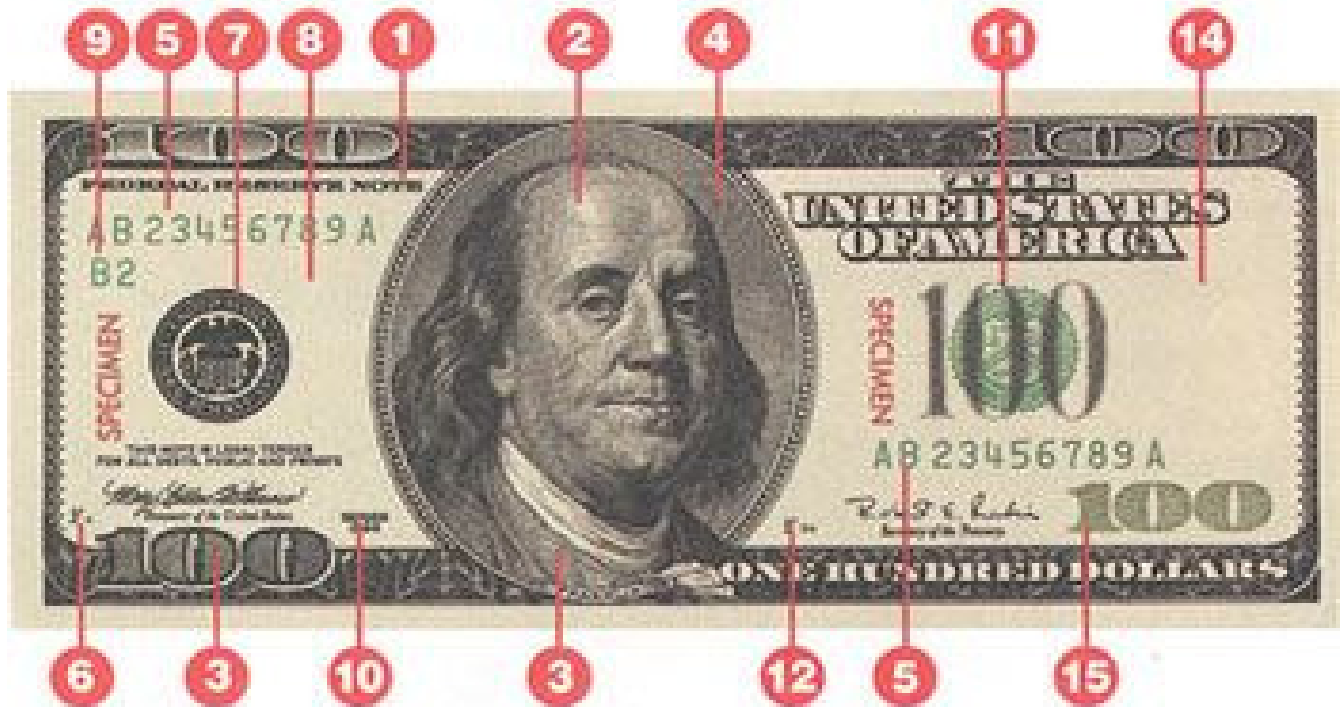
Another Security Feature present on current issue bills is an optically variable portion, in this case the number 100 printed in the lower right hand corner. The closest approximation of this feature is to apply dual-tone green-gold pigment powder to print the number, and then apply interference gold mixed with sparkle gold (10-1 ratio) in the lacey pattern over this. This application can be done in a variety of ways, be it screen-printing, air-brushing or rubber stamping. Screen-printing and rubber-stamping methods will be discussed later in the guide.



**DUO-TONE
GREEN-GOLD
PIGMENT
POWDER**

**EXAMPLE BY
MAC MAKEUP
ALSO AVAIL-
ABLE IN
PEARLEX
BRAND**

Security Features in current issue \$100 notes



- | | | | |
|---|----------------------------------|----|------------------------------------|
| 1 | Type of Note | 8 | Inscribed Security Thread |
| 2 | Portrait | 9 | Federal Reserve Letter/Number |
| 3 | Microprinting | 10 | Series |
| 4 | Fine-Line Printing Pattern | 11 | Treasury Seal |
| 5 | Serial Number | 12 | Check Letter and Face Plate Number |
| 6 | Check Letter and Quadrant Number | 13 | Back Plate Number |
| 7 | Federal Reserve Seal | 14 | Watermark |
| | | 15 | Color Shifting Ink |

Materials & Equipment:

11.5lb (0.022" thick) fibrous paper (Sumi rice paper often works and can be found at any art store)
MICR Laser toner or ink-jet cartridge
UV Red Inkjet Cartridge (HP 51645A)
HP 51645A (HP 45) Compatible Black inkjet Printer.
PearlEX, or MAC duo-tone green-gold powdered pigment
Interference Gold powdered pigment
Color laser printer
Water based glue
PhotoEZ Stencils: **100** lacey overlay for 100 texture
Graphic Texture stencil ***optional***
Matte transparent screen-printing medium (for texture stencil) ***optional***
Lanolin
Grain Alcohol
UV inhibitor

Suppliers:

MICR Toner: <http://www.g7ps.com/scripts/toner.asp>
MICR Inkjet: <http://www.g7ps.com/scripts/versaink.asp?step=3&manu=HP&cmbCartridge=45>
Powder Pigments: <http://kremerpigments.com/shopus/index.php>
UV Red Inkjet Cartridges: http://the-perf-shop-part-2.7p.com/red_ink_cartridge.html
HP 45 Cartridge Printer: <http://tinyurl.com/ygwt3o>
SUMI Rice Paper: <http://tinyurl.com/yj6u6ft>
Interference Gold Pigment: <http://kremerpigments.com/shopus/index.php>
Duo-tone Green-Gold Pigment: <http://www.jacquardproducts.com/products/pearlex/>
<http://tinyurl.com/ycg6pdy>
Water Based Glue: <http://tinyurl.com/yahrmp4>
PhotoEZ: <http://www.store.cbridge.com>
Lanolin: <http://tinyurl.com/ycetf3w>
Grain Alcohol: <http://tinyurl.com/yz7ebnx>
Transparent Medium: <http://www.store.cbridge.com>
Alternate transparent medium: <http://www.costumersnetwork.com/product-detail/DD03/mehron-mixing-liquid-4-5-oz/>
UV absorber: <http://kremerpigments.com/shopus/index.php>

Procedure:

1. Cut 8.5 x 11" sheets from your roll of rice-paper.
2. Pre-print red and blue fiber layer of template to one side of two sheets. This will be your outside face on which you print the front and back of the bill. The inside face does not need to be printed.
3. Flip one sheet over so that you will be printing on the inside face (the side that was not printed with the red and blue fibers).
4. Print on the inside face the Water-mark layer of the template. This layer includes a light black image of the print of the security thread, this does not need to be removed as it will help you line up your stencils correctly. If you have MICR Black toner or ink-jet loaded in your printer you may activate the bold security thread text layer and simply print all in one go.
5. Load the Sheet into an HP 51645A (HP 45) compatible inkjet printer so the the inside face with the water-mark is lined up properly.
6. Print the UV background of the security thread layer of the template, using setting set to print black only with the red UV inkjet cartridge in the black slot of the printer.
7. Remove from printer and allow time to dry.

NOTE: steps 8-11 are optional, as a heavy printing of MICR toner or inkjet will suffice for the security thread's purpose.
8. Line up the stencil for the text portion of the security thread.
9. Mix glue and Sparkle silver pigment at a ratio of 9:1
10. Apply silver mixture to inside face over stencil.
11. Remove stencil and allow time to dry.
12. Dampen inside face using a sponge roller

13. Dampen inside face of second sheet, set aside
14. Mix Elmer's School Glue and distilled water at a ratio of 20:1
15. Apply glue mixture to inside face of the first (printed) sheet.
16. Line second sheet with first so that the inside faces meet. The middle of the second sheet should be lowered first and a spatula used to gently press out air bubbles as both sheets are glued to each other.
17. Clean up any excess glue and blot gently until barely damp. Allow time to dry.
18. Once dry, Stick sheet in a carrier envelope and run through a lamination machine at medium heat. This will ensure the glue is cured and also compress the sheets making the finished thickness correct.
19. Load the paper into the printer so that when you print the front of the bills the water-mark and security thread are aligned properly.
20. Print the front of the template, making sure the serial number layer is adjusted so that each bill has a unique number.
21. Flip the page in the printer and print the back of the bills.
22. Mix duo-tone green-gold pigment powder and transparent medium in a ratio 1:6 or so that it is opaque.
23. Line up your 100 stencil to the lower right of the front of the bills. The front template printed a faded image of the 100 to guide your stencil placement.
24. Apply the duo-tone mixture to the front of the bills over the stencil.

25. Remove the stencil and allow time to dry.
26. Mix Interference gold, sparkle gold, and transparent medium in a ratio of 2:1:6
27. Line up your lacey overlay stencil to the 100 you just printed.
28. Apply gold mixture to the front of the bills over the stencil.
29. Remove the stencil and allow time to dry.
30. Mix Lanolin, Grain alcohol, and UV absorber in a ratio of 2:10:1
31. Apply mixture to front and back of bills ensuring the entire sheet is saturated completely while remaining damp allow to dry and repeat until test piece results in negative from counterfeit pen
32. Cut out individual bills using a rotary paper cutter.

Troubleshooting:

Q: I saturate my bills with lanolin mixture and the counterfeit pens keep detecting my bills.

A: Increase the amount of lanolin in your solution. Running your sheets through a lamina tor at medium heat after the lanolin solution has dried will sort of melt the lanolin into all of the fibers better waterproofing them. If this does not solve your problem try spraying with a light dusting of canvas sealant after you run through a lamination machine and allow time to dry.

Q: The colors aren't coming out right I print.

A: Go into the color layers and adjust the lightness, color balance, brightness, saturation etc. until you have a perfect result. Only save these changes when you have obtained a consistently perfect result with the changed settings. This is the reason for the structure of layer groups in the template included with this guide. Not all printers print colors at the same settings so adjustments have to be made.

Q: I'm lazy, can't I just print all my bills with the same number or in a series of numbers, or just use the same random numbers over and over, as long as I'm using them at different places?

A: NO! As soon as good counterfeits are finally detected (and they will) the first thing the Secret Service does is create a new file for that area,

cataloging the new counterfeits. The first thing they look for is repeated numbers and direct lines of numbers in order. Once they find these they can narrow the search area and they will eventually catch up to you, especially since they can lift fingerprints off of bills. If you keep your numbers completely random with NO REPEATS, as well as your mixture ratios just a little shoddy, and you keep your prints off of them and stay away from cameras you'll stay about as safe as possible.

Q: How do I keep my prints off my bills? Won't I have to handle them sometime?

A: During the making you should be wearing powder free gloves. If you have to handle them in public, you can make a simple set of false prints by obtaining a latex paint color matched to your finger area. Apply this to your fingers with a paintbrush and allow it to dry enough to be tacky. When it is tacky enough but not quite dry, press different parts of your hand, different fingers etc across the painted areas firmly enough that an impression is made. Allow this to dry completely. Since the new prints are reversed from random parts of your own hand, it's impossible to track. Once this is dry treat with makeup foundation or blender to better simulate the look of skin. Once this is done on all your fingers and palm areas you will need to stick your head over some steam until you start sweating, blot this sweat to your fake prints and you should now be leaving fake prints until you remove them. These will stay for about 3-4 hours.

Q: My prints are coming out blurry.

A: Adjust your ink volume settings. If this doesn't work you may need to switch to a tighter weave paper, or a durabrite ink-jet, or a color laser printer. Note, there is a huge difference between a color laser-jet printer and a color laser printer. The former is basically an ink-jet printer that uses a laser printer head to print black. The latter is a true color laser printer using colored laser toner. Color laser printers are most highly recommended for this application.