

# How to Detect Counterfeit US Money

**Feel the texture of the bill.** People who handle money many times, such as cashiers, can identify a lower-quality fake bill instantly just by touching it. You may not have that much experience, but just about everybody has handled enough money that they can detect many counterfeits simply by feeling the texture, and paying attention (the paper that bank notes are printed on is not sold commercially; furthermore, the composition of the paper and ink is confidential). Genuine currency has slightly raised ink. You should be able to feel the texture of this ink, especially if you are holding a new dollar bill.

**Compare the bill with another of the same denomination and series.** If the bill feels all right, or if you are a little suspicious but unsure, hold the bill side by side with another bill. Different denominations, obviously, look different, so get a note of the same amount. Also, all denominations, except the \$1 and \$2, have been redesigned at least once since 1990, so it is best to compare the suspect bill to one in the same series, or date.

**Notice the relative flatness and lack of detail on the fake bill. Look carefully at the printing quality.** Real U.S. bills are printed using techniques that regular offset printing and digital printing (the most popular tools for all but the most sophisticated counterfeiters) cannot replicate. Look for blurry areas, especially in fine details such as around the borders--real bills have clear, unbroken borders--and on the Federal Reserve and Treasury seals, where the saw tooth points should be sharp and well-defined in genuine bills. Portraits in fake bills may appear dull, blurred, and flat, while in real currency, the portraits are sharp and contain very fine detailing.

**Look for colored fibers in the paper.** All U.S. bills have tiny red and blue fibers embedded in the paper. Counterfeiters sometimes try to reproduce these by printing or drawing these fibers onto the paper, but close inspection reveals, however, that on the counterfeit note you will see that they are printed on, rather than being part of the paper itself.

**Examine the serial numbers.** Make sure that the serial numbers on a bill match, and look at them carefully. Fake bills may have serial numbers that are not evenly spaced or that are not perfectly aligned in a row. If you received multiple suspicious bills, see if the serial numbers are the same on both bills. If they are the same, then they are counterfeit notes.

**Look for security features in all denominations, except the \$1 and \$2.** The easiest way to spot a fake \$5, \$10, \$20, \$50 or \$100 bill is to look for the following security features, all of which are very difficult to fake.

- Look for a security thread (a plastic strip) running from top to bottom. Beginning in 1990, an embedded (not printed) security thread was added to all bills except the \$1 and \$2 bills. If you hold the bill up to the light, you will see the strip and printing on it. The printing will say "USA" followed by the denomination of the bill, which is spelled out for \$5, \$10, and \$20 bills but presented in numerals on the \$50 and \$100 bills. These threads are placed in different places on each denomination to prevent lower-denomination bills being bleached and reprinted as higher denominations. Compare a genuine bill of the same denomination, to make sure that the position of the thread is correct. If it is not, the bill is not genuine.
  - The \$5 bill has "USA FIVE" written on the thread, the \$10 bill has "USA TEN" written on the thread; the \$20 bill has "USA TWENTY" written on the security thread; the \$50 bill has "USA 50" written on the thread; and the \$100 bill has the words "USA 100" written on the security thread. Micro-printing can be found around the portrait as well as on the security threads.
  - Hold the bill up to a black light. If authentic, the security thread in the bills will glow: the \$5 bill glows blue, the \$10 bill glows orange, the \$20 bill glows green, the \$50 bill glows yellow and the \$100 bill glows pink.
- Hold the bill up to a light to check for a watermark. A watermark bearing the image of the person whose portrait is on the bill can be found on all \$10, \$20, \$50, and \$100 bills series 1996 and later, and on \$5 bills series 1999 and later. The **watermark** is embedded in the paper to the right of the portrait, and it can be seen from both sides of the bill.
- Tilt the bill to examine the color-shifting ink. Color-shifting ink (ink that appears to change color when the bill is tilted) can be found on 100, 50 and 20 dollar bills series 1996 and later, and on 10 dollar bills series 1999 and later; \$5 and lower bills do not yet have this feature. The color originally appeared to change from green to black, but it goes from copper to green in recent redesigns of the bills.
- **Use a magnifying glass** to examine micro-printing. Beginning in 1990, very tiny printing was added to certain places (which have periodically been changed since then) on \$5 and higher denomination bills. The exact location of the micro-printing is not generally an issue. Rather, counterfeits will often have either no micro-printing or very blurred micro-printing. On a genuine bill, the micro-printing will be crisp and clear.
- Run your fingernail over the portrait's vest of the bill. You should feel distinctive ridges, printers cannot reproduce this.

Look for differences, not similarities. Counterfeit bills, if they're any good at all, will be similar to real ones in many ways, but if a bill differs in just one way, it's probably fake.



An example of a EURion constellation on a U.S. \$20 bill.

Beginning with Series 2004, \$10, \$20 and \$50 bills received a redesign with several changes to their overall look, notably the addition of more colors (see the picture of the \$20 bill above). Probably the most important new security feature is the addition of EURion Constellations, a distinct arrangement of symbols (in this case, numbers) which triggers many color photocopiers to refuse to copy the bill.

As the steps above explain, the \$1 and \$2 bills have fewer security features than other denominations. This is seldom a problem because counterfeiters rarely try to make these bills.

It's a common misconception that if the ink smears when you rub the bill on something, the bill is not genuine. This is not necessarily true, but ink that does not smear does not mean that the bill is genuine.

The Secret Service and U.S. Treasury do not recommend relying solely on a counterfeit-detection pen of the kind that you often see clerks use in stores. These pens can only indicate whether the note is printed on the wrong kind of paper (they simply react to the presence of starch). As such, they will catch some counterfeits, but they won't detect more sophisticated fakes and will give false-negatives on real money that is been through the wash.

"Raised bills" are a very simple type of counterfeit in which numerals are glued onto a low denomination bill to make it look like it is a higher denomination. You can easily spot these fakes by comparing the numbers in the corners to the denomination printed in letters at the bottom of the bill. If you are still not sure, compare the bill to another bill of the same denomination.

The ink used in U.S. currency is actually magnetic, but this is not a method for detecting counterfeits. The strength is extremely low and is useful only for automated currency counters. If you have a small but strong magnet, such as a neodymium magnet, you can lift a genuine bill. Although you cannot lift the bill off of a table, you can certainly tell that it is magnetic