

Cheap Barcode Scanners

by Tom Davies, 04/07/2016

At the last INFOhio Roundtable, I presented some information about cheap barcode scanners. Here is a more in depth look at that information, including links and some tips & tricks.

Cutting to the Chase:

For those with little time on their hands, here's the quick answers you're looking for:

Recommended Cheap Bluetooth Scanner:

HAMSWAN CT10 - \$56.99 <http://amzn.com/B00HY9WXBO>

Pros: Price

Comes with USB Bluetooth dongle for PC

Worked with every device I could test it with, including iPads, iPhones, Android phones and tablets, laptops, and PCs, even a Microsoft Surface Pro. Yes, the Amazon page says it doesn't work with iPhones and iPads, but it does. I've tested it. It just requires a few setup scans from the manual.

Stayed charged while not in use for months at a time and stayed charged for a whole day of inventory.

Cons: Some quirks pairing – had to factory reset before pairing each time

There are some extra steps to pair with Apple devices, but once paired it works fine

Was not quite as good at scanning bad/poor/damaged/smudged barcodes as a more expensive scanner. For example: I scanned about 500 items and ran across 8 items that wouldn't scan. When I scanned those same 5 items with a Metrologic Voyager scanner, 6 of the 8 scanned OK, and 2 were unscannable with either scanner.



Recommended Cheap USB Scanner without Stand:

Esky ES005 \$25.99 <http://amzn.com/B00D6D85C8>

Pros: Price

Lots of config options, but it just works right out of the box.

Scans well and is preconfigured to scan just about any barcode.

Decent and legible manual

Cons: Doesn't read bad/blurry/damaged barcodes as well as expensive scanner, but

we're talking about 1 or 2 out of 100 scans, but this really depends on the condition of your barcode labels

Doesn't come with a stand.



Recommended Cheap USB Scanner with Stand:

TaoTronics TT-BS003 \$35.99 <http://amzn.com/B006LVO56W>

This is the EXACT SAME scanner as the Esky unit above. The only difference is that it comes with a stand and has a TaoTronics label on it. Apparently the stand adds \$10 to the price above the Esky units.



More Detailed Info:

Background:

Usually our libraries pay \$100 or more for a brand name USB barcode scanner, and \$200 or more for a brand name Bluetooth or wireless scanner. But there are many scanners on the market for a lot less. I wanted to find out if any of them would be suitable for use in our libraries and save people money. With the help of my director, I purchased several cheap barcode scanners. The wired scanners were all under \$40 each, one as cheap as \$19. The Bluetooth scanner was \$63. I tried to pick items/brands that would have some longevity – meaning that you would still be able to find the same brand/item 5 years from now. Also, I wanted to order them from a source that any school could use. I finally decided on Amazon.com as the source for two reasons: 1) more schools are being flexible about purchasing online and not as tied down to the contract/purchase-order process. 2) Amazon is ubiquitous.

Each scanner I picked had to meet several minimum standards:

- 1) Must read Code 39, Codabar and EAN barcodes right out of the box (no additional configuration)
- 2) Must be hand-held or cradle-mounted.
- 3) Must be able to "wake up and scan" without having to press any buttons or triggers
- 4) Must have a range of at least 6 inches, preferably more.
- 5) Must emit a light (a red line) to indicate where it was scanning and have at least two different beeps to indicate good and bad scans.
- 6) Must be USB (no keyboard wedge or serial port shenanigans)
- 7) Must work with Windows PCs via USB (Sorry, no Macs were harmed or tested in this round-up)
- 8) Must work with WorkFlows.
- 9) Should be able to be configured to use trigger or not, to be able to be in a stand or not.
- 10) Should be durable enough to survive a school environment.
- 11) Should be a brand and model that is identifiable so that repeat purchases can be made.
- 12) Should be readily available in the marketplace - such as from prominent online vendors such as Amazon.

When evaluating these scanners, I am directly comparing them to a Honeywell Metrologic Voyager MS9520. I chose that scanner because it is the most popular scanner in my service area and everyone seems to love it. (Also because I had one on my desk!) They're durable, reliable and easy to use. I was doubtful that these cheap scanners would be just as good as the Voyager, but I was betting that they would be good enough.

For testing purposes I knew that just about any scanner would scan a newly printed pristine barcode, but the challenge would come when trying to scan old, damaged, wrinkled, blurred, or smeared barcodes. So I asked my librarians to send me items with bad barcodes on them. I got several good examples, both with and without label protectors.

The scan testing was remarkably disappointing. There was very little difference between the units, even the Voyager. They scanned and read all of my test barcodes except one. That one barcode was unscannable by ANY of the scanners, including the Voyager. Even speed-wise, the scanners were all very similar. The Voyager was marginally faster than the cheap scanners. Only the Neewer and Vktech scanners were noticeably slower than the others and that was only on hard to read labels. Because of that, I cannot recommend the Neewer or Vktech scanners.

Later, I took several of these scanners to a library and with the help of the staff there, we used several of them for inventory. While we did inventory, I did discover one difference between the name brand expensive scanners and the cheap ones: you'll get more unscannable barcodes with a cheap scanner. We scanned a library of about 6,000 volumes. We came across about 25-30 items that would not scan with the cheap scanners, so we set them aside to have the labels replaced. Out of curiosity, I tried scanning those same items with the Metrologic Voyager scanner at the circ desk and most of the "bad" barcodes scanned just fine! We ended up with only 3 or 4 truly bad barcodes that needed the

labels replaced. So, the cheap scanners don't do as well with old/blurry/damaged labels as an expensive scanner, but is 20 items out of 6,000 a big enough deal to justify the price difference? I don't think that it is.

While evaluating these scanners, I found that there is a lot of rebranding in the cheap scanner market. By that, I mean that many scanners are the same exact devices only with different brand name stickers on them. So it pays to look around and look for the exact accessories that you want, such as a stand or what color it is. Of the scanners that I purchased and tested, three of them were identical – exactly the same – the only differences being what brand name was on the sticker. I even checked them down to the hardware level. The hardware identifiers were identical (VIDs and PIDs).

Identical scanners:

Esky ES005 = Esky ES006 = Esky ES001 = TaoTronics TT-BS003 – same scanner, some come with stand, some without.
AGPtek Rapid Portable Handheld Scanner = Yokome YJM-888T – same scanners
Newer 4209 = Vktech MJ2808 – same scanners

Bluetooth Scanner:

HAMSWAN CT10 \$56.99 <http://amzn.com/B00HY9WXBO>

Interface: Bluetooth – comes with USB dongle for PC (probably works with Mac, but not tested)

Range: approx. 12 inches

Speed: as fast as I could pull the trigger

Accessories: includes a USB Bluetooth dongle to use with PC or laptop that doesn't already have Bluetooth, which is significant if you want to use it with your circ desk PC. (Most PCs don't come with Bluetooth); also included a USB A to B cable for charging and a charger.

Manual: the "manual" was a folded oversize single sheet of paper with English on one side and Chinese on the other. However, it has a lot on it for such a small manual, including instructions for use with Apple devices and Windows XP and 7. For Apple devices and for Windows XP and 7 there are some addition steps to pair the device compared with Win8 or 10 or Android. (More on that below.)

Charging: A USB A to B cable is included along with a small charger. The charger is a standard USB charger that you might use with any phone or tablet. You don't have to use the supplied charger, you can plug the device into any USB port and it will charge. There is no battery or charge indicator on the device, so you can't tell if it is charged or how much charge it has left, but that doesn't seem to be important. I charged it once for about 4 hours using the original cable and charger. After that, I used it for testing for an hour or so, then it sat for months before I needed it again. I didn't charge it, just used it and it was fine. Then it was stored again for a couple months, and I used it again for 4 or 5 hours helping a library do inventory. It worked fine without having charged it in months. I charged it before helping with another inventory and it worked all day without a hitch. So I have no idea how long it would last without charging it, but whatever that limit is, it seems far past what I might need it for.

Pairing with ANY device: This scanner is a little quirky when it comes to pairing. It does not like to disconnect from devices, and it does not like to change devices. That's OK because there is a simple workaround. The biggest thing to remember with this scanner is to perform a factory reset on the scanner before you try to pair. Do that every time and you'll have no trouble.

Doing a factory reset is very simple. There are three barcodes in the manual to scan: 1) Enter Setup 2) Factory Reset – pause for a few seconds while the scanner resets – 3) Exit with Save. That's it, and the scanner is ready to pair. On your device – Apple / Android / Whatever – if you have paired with this device before, select the HAMSWAN CT10 scanner and delete/forget the pairing/connection. This way you are starting fresh every time and you'll have no trouble.

Pairing with Android Devices: pairing with android devices was quick and easy. Simply turn on Bluetooth on the phone/tablet and scan for devices. Tap the trigger of the scanner to wake it up, and momentarily the scanner will show up on your phone/tablet as an available keyboard. It will be named CT10 followed by some numbers, probably the serial number of the scanner. For example: CT108363863524. Tap the name and your phone/tablet will prompt you for a pairing code. The code is 10010, which is odd. Most simple Bluetooth devices pair with either 0000 or 1234. But that's OK as long as you remember that code. It is listed in the manual, but not that easy to find, so I wrote it on the box so I wouldn't forget.

Pairing with Apple devices: pairing with Apple devices is a little quirky compared to Android. Before trying to pair, you need to change the scanner's Bluetooth setup. There are three barcodes in the manual to scan under the "Pairing with iOS" section. 1) Enter Setup 2) One-click iOS connection Setup 3) Exit with Save. Scan those in order and you're ready to connect to your Apple device.

On your iPhone/iPad, turn on Bluetooth and scan for available devices. Tap the scanner trigger to make sure that it is awake, and momentarily the scanner will appear on the device list as CT10 followed by some numbers, such as CT1083474632. Tap it on the list to pair and it will pop-up with a pairing code that you have to enter ON THE SCANNER. You have to scan the matching numbered barcodes from the manual and then scan the Confirm barcode to enter that pairing code. For example: my iPad tells me to enter "6801" on the scanner. So I scan the 6 barcode, then the 8 barcode, then the 0 barcode, then the 1 barcode, then the Confirm barcode and then the iPad says it is paired and the scanner beeps to confirm the pairing.

Pairing with Windows XP, 7, 8 and 10: there are two ways to pair with Windows. The first goes just like you would expect: turn on Bluetooth on your PC, search for available devices, click on it to pair, enter the pairing code 10010, and the scanner is paired. Easy peasy.

The second method is a little more complicated, but the scanner will work faster. (I tried both ways, and did not notice a difference.) You scan the three configuration barcodes for Windows from the manual: 1) Enter Setup 2) Enable HID 3) Exit with Save. Then turn on Bluetooth on your PC and scan for available devices. Select the CT10 when it shows on the list and it will ask for a pairing code. Enter 10010 and the devices are paired.

Notes: Once the scanner is paired, it works as expected, which is great. The battery life is great and it seems to be just as fast as a wired scanner on a PC. But there's a couple things to remember with this scanner:

- 1) Don't lose the manual with the config barcodes in it!
- 2) Factory reset the scanner before you pair it – every time.
- 3) On your device, tell it to forget any previous pairings it had with this scanner and start fresh each time.

As long as you do those simple things, you'll like this scanner.

Wired Scanners:

Esky ES005 \$25.99 <http://amzn.com/B00D6D85C8>

Interface: USB

Range: 8 to 12 inches

Speed: as quick as I could pull the trigger

Accessories included: none

Manual: a quality manual, nicely printed and including a lot of configuration options.

Recommendation: this is a good scanner, especially for the price. It is identical to the ES006 (which is beige instead of black) and the ES001 (which includes a stand). I had no problems with this scanner and would recommend it to one of my libraries. It can be configured to not use the trigger and to be "automatic" similar to the Voyager MS9250.

Esky ES006 \$?? Could no longer find this item for a good price on Amazon

This is the same exact scanner as the Esky ES005. The only difference is the color. The 5 is black and the 6 is beige.

TaoTronics TT-BS003 \$35.99 <http://amzn.com/B006LVO56W>

This is the exact same scanner as the Esky ES005 except that this one includes a stand. The manuals are different, but contain the same information and configuration options. If anything, the TaoTronics brand seemed to be a little better attention to detail and quality in the packaging and manual. The scanner itself is identical to the Esky ES005.

AGPtEK Rapid Portable Handheld Scanner \$?? Could no longer find this item on Amazon

There were similar looking scanners from AGPtEK on Amazon, but none matched close enough that I could be sure that it was the same one I have. Regardless, I could not recommend this scanner. It just wasn't as good as the TaoTronics/Esky scanners. It did not come with a stand and could not be configured to be used in a stand.

Yokome YJM-888T \$?? Could no longer find this item on Amazon

This scanner is identical to the AGPtEK scanner above. Again, I cannot recommend this scanner. It just wasn't as good as the TaoTronics/Esky scanners and was the same price.

Neewer 4209 \$15.99 <http://amzn.com/B0085707Z8>

This scanner was probably the worst of the lot that I tested. That's not to say that it was terrible or bad, it just was last place on the list. It was slower than the others. It had more trouble reading bad/blurry/damaged barcodes. The manual was brief and not entirely in English – or at least understandable English. That said, it worked. It just wasn't as good as the others, especially not as good as the Esky and TaoTronics models.

Conclusions:

From my testing, I concluded that cheap barcode scanners are a real possibility as replacements for expensive \$100 and \$200 units. I did not find a single cheap scanner that wouldn't work for scanning INFOhio barcodes – even the units that I didn't recommend. Price did not seem to be an indicator, except when you dropped below the \$25 mark. Those devices seemed to have cut too many corners and were not worth it. I can't say with certainty that all \$25-and-up scanners are great, but I certainly found that there are a lot of workable units in that price range. I don't want to imply that the more expensive scanners from brands we know and love (like Honeywell/Metrologic, Opticon, Code, Datalogic, etc.) are the same as the cheap ones. They're not. The expensive ones are better. The real question is: how much better and are they worth the extra money? I'm not sure they are worth it. The cheap scanners listed above will all serve our purposes in a school library.

I can't really speak to the long-term durability of these scanners. They're not old enough for anyone to know. Most have only been on the market a year or two. But I am much more willing to take a chance on something that costs \$25 than \$125.

When it comes to Bluetooth scanners, I only got to test one. And I think I got lucky with it, as it was one of the cheapest Bluetooth scanners I could find. It has some quirks, but it is a worthy scanner for under \$60, especially when the competition is over \$200.