CodeFacts

AIDC (Automated Identification and Data Collection) Technical & Informational Documents
Written for Everyone

The Four Most Common Types of Hand-Held Bar Code Scanners

The following is a brief explanation, with accompanying pictures, regarding the four common types of bar code scanners that might be easily utilized in a library application.

Wand

The wand (pen) scanner is the simplest and generally the most economical of all the bar code scanning devices. A good quality wand will be constructed of stainless steel (not plastic) and have a ruby or sapphire tip. Wand scanning is accomplished by moving the tip of the wand across all of the bars and spaces of the bar code symbol at a consistent angle and velocity. This makes it difficult to consistently achieve a high first-pass-read-rate when scanning poor quality bar codes, symbols that have been overlaminated, or those printed on curved, bumpy, or inconsistent surfaces. Wand scanners are best employed when scanning good quality bar codes from hard, horizontal, flat surfaces.

CCD

The acronym CCD stands for *charge coupled device,* which is a photosensitive component, often used in fax machines, page scanners, and video cameras. These scanners are the size, shape and weight of a car windshield ice scraper. They're used much like little vacuum cleaners. To scan, the "nozzle" of the scanner is simply placed on top of the bar code symbol and a trigger on the underside of the scanner is depressed. (Some CCD scanners are "triggerless" and scan the bar code automatically.) The scanning is automatic, although the scanning range is seldom more than an inch or two. Many CCD scanners are cheaply manufactured and will not withstand the rigours of most long-term scanning applications.

Image Reader

These scanners use a component similar to a CCD, except it is longer range and is far more aggressive at scanning. Compared to laser scanners, which utilize moving parts to scan a symbol, image readers have none. In our opinion, image readers represent the current state-of-the-art in hand-held bar code readers and typically provide the best price/performance ratio. They're a bit more expensive than low-end laser readers, but less cost than the high-end lasers.

A hands-free countertop stand is available for most image readers. When the reader is cradled in the stand, pointing down, it becomes triggerless. Any item passed beneath the scanner will automatically activate it without requiring the library clerk to constantly be picking up and putting down the scanner.

Laser Gun

Functioning virtually the same way as image readers, laser scanners are very easy to use in most any application. Pressing a trigger and aiming a laser beam at the bar code is all you need to do. They offer the most in efficiency and can often have their higher cost easily justified by their lower labour operating cost (more scans-per-hour) compared to CCD and wand readers.

Hands-free countertop stands are available for most laser gun readers, giving them even more efficiency in library circulation applications, yet still allowing the gun to easily be used in hand-held mode, if necessary.

These are but four of the most popular hand-held scanners available from AURORA. Contact our library scanning specialist at 1.800.689.7696, ext. 28 for more details.