



Automating with Bar Codes

This document outlines the features and functions of the BarCode Guns offered exclusively by Shop Floor Automations, Inc.

Overview



Anyone who has ever checked out of a grocery store has had at least some experience with bar codes. In the same way that UPC codes have revolutionized the ordering, tracking and selling of items in retail stores, bar codes hold the potential to revolutionize that way information is used and acquired on almost any manufacturing floor. Bar codes can help eliminate manual data entry errors and help speed up and standardize data entry.

Advantages

Bar codes offer a range of advantages for your automation applications including:



Standardize and Simplify Data Entry – By using bar codes for data entry, an intentionally limited set of options are provided to the user, making entry easier and mistakes less likely.

Enforce Rev Control – By using bar codes to initiate activities like loading a data file into a CNC or PLC, automated rev checks can be initiated and loading of incorrect revs can be eliminated.

Multiple Language Support – More often than not, modern manufacturing facilities are a multi-lingual environment. By using bar codes with descriptions in multiple languages, data entry can be done by non-english speakers into systems that may not be written to support their particular dialect.

Issues

Connection Type – Bar code readers come in three general types:

Wired Bar Code Readers – The most standard type of readers, these units are simple to connect, relatively inexpensive, but do require a wired cable infrastructure.

Wireless Bar Code Readers – Wireless bar code readers offer the flexibility of being used anywhere there is wireless coverage, without concern for running new wiring. Most wireless units are either “Bluetooth” (a relatively short range option; 10-50 feet) or Wi-Fi (standard 802.11x: basically unlimited coverage). The two primary issues with wireless readers are; limited battery life (a dead reader collects no data) and costs that are often 3-5 times that of a wired reader.



Batch Bar Code Readers – These units are normally battery powered readers that store scanned data until they are placed back into a “Sync” cradle where their data is then uploaded. Their primary issue with these units is that data is not collected in “real-time”. If a scanner is not sync’d in a timely manner, there will be holes in captured data. These units also suffer from the same battery and cost issues that wireless readers, but to a lesser extent.



Survivability in a manufacturing environment – Standard manufacturing facilities are rarely friendly to any piece of electronics and bar code readers are no exception. Hardened readers are available but are dramatically more expensive than standard units. Depending on the harshness of your facility, periodically replacing standard units may be more cost effective than paying extra for hardened readers.

Recommendations

Guns vs Wands – Wand readers (which look like big pens) are far more vulnerable to damage from being dropped and are significantly more difficult to learn to use than gun readers (which not surprisingly, look like guns).



Hard vs Soft mounting – A hard mounted gun is placed in a holder, set to scan continuously and then the bar code is placed under it to be scanned. A soft mounted gun has a length cord that allows it to be picked up and used at various angles. In general, hard mounting is preferred if the items to scan will work with a single scan angle. Soft mounting is perfectly acceptable, but it does subject the gun to possible damage from being dropped.

Summary

For more information visit our web site at www.shopfloorautomations.com or call us at (619)461-4000.