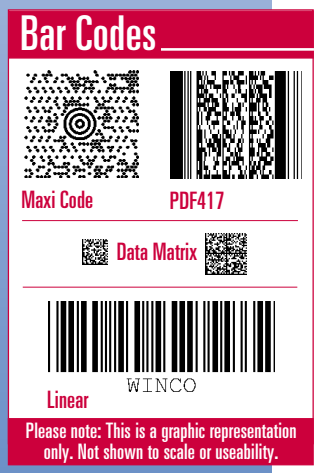
# INNOVATIONS in Labeling & Bar Code Solutions

WINCO Identification Corporation June 1999

## Linear and 2-D Technology

### - What does it mean for you?

Bar codes are printed on products we see everyday. Bar codes are lines, dots and/or squares, which together, represent data. There are several hundred different kinds of bar codes, but only a few with international standardization. Of these each has its own advantages, limitations and specific uses. Here we will look at linear and a few 2-D symbols.




The most common type of bar code we are used to seeing is the linear bar code, frequently used on retail products. Linear bar codes are made up of a series of bars and spaces, varying in width. This symbology is used to capture small amounts of information and is often accompanied by human-readable text. Codes are used to expand data capture and minimize the print space required. Similar to a "license plate," it represents a look-up field and requires a database to translate the codes.

When storing large amounts of data in a restricted space, two-dimensional or 2-D codes offer more. One of the greatest advantages of 2-D is it records dense data in the code without having to profile it against a database for translation. There are many different 2-D symbologies. Here we will look at the most popular; *The Data Matrix, PDF417 and Maxi Code.* Each code has it's own specific purpose.

The Data Matrix Code is ideal for marking on small, hard surface products or components with a wide install base in the electrical and industrial industries. The Data Matrix is scalable, features a high data capacity, error correction and stores binary data.

PDF417 developed by Symbol Technologies, with a high data capacity up to 2,500 characters, and rich error correction, offers the ability to encode binary data to store photographs and other types of data structures. It is ideal for shipping/receiving applications, EDI and tracking. It is gaining popularity in the direct parts marking applications and by the postal service for the ability to store lots of information in a small space.

Maxi Code, developed by UPS, is easily identified by the bullseye symbol and features omni-directional scanning, which eliminates the need to have the code in one specific direction when reading it. Maxi Code offers efficient scanning even on angled or curved surfaces. This makes Maxi Code ideally suited for use in distribution operations.

Each symbology has certain functionality or capabilities that may make it the right solution for your application.

*In our next issue, we will take a look at the scanning technologies that decode the various symbologies.*

*In this Issue:*



WINCO Identification Corp.
237 Main Dunstable Road
Nashua, NH 03062-1904
(603) 598-1553
Outside NH call (800) 325-5260

## Labeling News for Contract Manufacturers

The age of technology brings increasing demands every day to capture more information, and be able to use that information in a real-time fashion. And with the real estate on pc boards and components shrinking, this adds another layer of complexity to parts labeling.

Using 2-D symbologies allows more detailed information on a smaller label. Part and lot numbers, manufacturing data, and other valuable information about the product is available at any time without referring back to a database. This increases efficiency, work in process and reporting capabilities.

Finding the right combination of durable label stock, ink and specialized adhesives, are imperative to avoid the costly effects of labels peeling off during production, inks smudging, and print quality breaking down when exposed to harsh chemical washes and high temperature environments.

And the unseen effects of chemical solvents used to remove solder paste, can leave some contaminants from the manufacturing process behind. If you find boards are shorting out after production and during testing, electro-conductive solder balls may be the hidden and unwelcomed element responsible for costly waste. Winco has a unique laboratory tested material that resists solder ball build-up. A Winco representative can help you avoid this common problem. *Call today.*

For more information, call Winco and ask about our solder resistant labeling material.

APPLICATION

## Permanent Marking Technology

*When is it right for your application?*

The benefits of direct marking or laser etching are highly visible when the properties of standard bar codes are not an option.

Paper labels have their place on shipping cartons, parts marking, and inventory. But don't work well when exposed to the harsh elements of chemicals, grease, oil, high heat, freezing, humidity and constant wear. Even polyester and/or Kapton labels can fail in this environment.

Direct mark on a PC Board

Data obtained during the manufacturing process can be used to track problem sites in production, identify system-wide problems, or identify single parts for recall. When relying on this data, the industry faces a growing challenge to track items with volumes of data that needs to remain intact, accurate, and indestructible throughout the production process and has limited space to use. Companies should look to direct marking.

Companies are moving to this technology - printed, stamped or etched directly onto surfaces making the data stamp virtually permanent. "Marking In Motion" systems mark parts while moving on a conveyor belt. A digital encoder signal sends the speed information and a start signal indicates when a part is in the marking field. Thousands of parts can be marked in an hour, tamper resistant and permanent.

The next step in the decision is justifying the costs of investing in a laser etching system. Some cost savings are easier to identify, such as the cost of consumables, time and labor. Then there are softer savings such as proactive quality control, departmental integration and production enhancements. Winco can walk you through the educational, identification and selection process into the laser etching world. Call and talk to Vin White at (603) 598-1553 X237 for more information.

***Explore a wide range of labeling and marking options. Talk to a Winco representative or send us your tough-to-mark pieces and we'll help you find the system that's right for you.***

## Meet Winco's Service Team

As New England's largest independent supplier of labels and label print systems, we are proud of our Service Team and thought you would like to meet our traveling staff. Shown here from left to right is Gary Light, Ron Rood, Lauren Erickson and Mike Morin.

Winco is proud to announce Lisa Patcheco has joined our team and may be in your area soon. Lisa is a certified technician bringing with her many years of field service. Please join us in welcoming Lisa.

## Scanning the Market for a Solutio

An early warning signal where there is smoke or fire can mean the difference between safe evacuation and fatal consequences. A manufacturer of fire detection devices developed an enhanced state of the art system to monitor any changes in environmental conditions, and send an alarm when changes indicate a cause for action.

As systems and production became more sophisticated, the need to capture more data during the manufacturing process, became critical. As the level of information storage increased, the size of available space to label on some components decreased.

The goals were simple: find a way to store better than 30 characters, in less space, permanently, reliably, and cost effectively.

The first step was to incorporate a 2-D technology - *The Data Matrix Code*. The Data Matrix Code provided the necessary information i numbers, seria work in process each marked co than a 1/4" X 1/4" Matrix Code cou a label or etched which offered co nology, with th choose the righ method at the co

**Winco** provid scanner device w ity to read both li codes, as fixed st hand held, on p laser marked di This manufactur the standard in p can use the infor ity control, produ and order fulfill mation is virtuall tamper-proof of source for finan management de surpassed produ

## Implementing a Successful Radio Frequency System

Companies must control information throughout the entire manufacturing process in order to manage inventory on a "just-in-time" basis and be able to disseminate product information throughout the production process as well as use it for financial reporting, customer service, and quality control.

Radio Frequency Data Collection Systems (RFDC) offer a broad spectrum of benefits...but not without an intimidating road to implementation. Companies must coordinate their computer systems, data flow, and consider how the data will fit into the rest of their business process *before* implementing an RFDC system.

The most important component to success is "don't go it alone." Choose a vendor based on their experience in implementing successful systems. The right partner will know your goals, objectives and be very familiar with all aspects surrounding the proposed RFDC system. A vendor that understands your business, will be able to prompt you to think through an exhaustive planning list. As much as you plan, your needs will change. Make sure the system is flexible to grow with you.

***Winco offers on-site* service to most corners of the New England States. Call Harry Meehan 800-325-5260 X247 for more information.***

WINCO
Identification Corp.
(800) 325-5260

## N SPOTLIGHT

**on**

ncluding part
l numbers and
information for
mponent in less
' space. The Data
ld be printed on
directly on a part
nsistency in tech-
ne flexibility to
nt identification
omponent level.

ded a 2-D image
with the versatil-
near and 2-D bar
ation, in-line and
printed labels or
irectly on parts.
er is keeping with
arts marking and
rmation for qual-
uction, inventory,
ment. The infor-
ly permanent and
fering a reliable
ncial reporting,
ecisions and un-
ct performance.

### PROBLEM STATEMENT

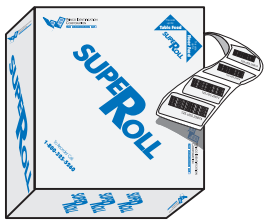
*With shrinking real estate on pc boards or components, and complex, systems requiring more available information, manufacturers are forced to look into alternative solutions.*

### SOLUTION

*Quickly and accurately scanning linear and 2-D bar codes on labels or directly laser etched bar codes using one type of scanner, valuable information is available for product performance and enterprise-wide use.*

**Winco specializes in tough to solve applications. To find out more information about the work we do in your industry, visit our web site at *www.barcode-winco.com.* Call for more information**

## New & Innovative Packaging




*SupeRoll is available by calling Winco today.*

Winco's own product, SupeRoll, combines up to three rolls of 4" paper, Thermal Transfer label material designed to minimize changing multiple rolls of labels during production. This time saver virtually eliminates waste due to roll changes. Labels are kept in a sturdy case to protect them from damage. Call your Customer Service Representative for more information.

## Y2K - Are your Thermal Bar Code Printers ready?

Nearing less than 200 DAYS to the Year 2000, the time is drawing near. Winco makes it easy for you to be sure your Thermal Bar Code Printer(s) are ready. There's no cost to find out. Call Harry Meehan at (603) 598-1553 X247 to learn more about our unique, on-site* evaluation service program. (*in our service area)

## PM Tips... ...for the Life of your Thermal Transfer Printer

Many industries have come to depend on bar code technology for implementing automation in a wide array of applications. Whether you use bar codes in warehousing, asset tracking, parts labeling, packaging and shipping, retail, or medical applications, output and readability must be accurate. Errors can be very costly and in some situations can result in lost business.

To ensure top quality bar code printing, Winco recommends running a "*print test*" and a "*ribbon test*" on your thermal bar code printer before production.

A print test is designed to show the quality of the print head at the time a test is run. By learning how to read the output, you can easily tell if there are burnt-out pixels in the print head indicating the print head may need replacement. Missing information can cause unpredictable scanning results and the data is corrupt.

And there's more to this test. You can also check:

- The firmware version inside your printer. With this information, Winco can determine if you are Y2K compliant.
- The validity of data stored in the printer's ROM memory.
- Some printer tests provide a linear usage read out to let you know how much your printer has been used.

A ribbon test checks the compatibility of your label and ribbon, pin points problems in your bar code output and checks to be sure the temperature setting is correct. All together, these determine the quality of printed output.


Poor Quality Output
fuzzy, inconsistent vertical pattern

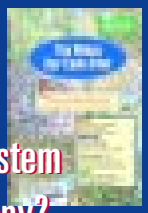
Good Quality Output
clean, crisp, consistent print

*See the Manufacturer's User Manual for instructions to run a print or ribbon test on your machine.*

A Winco service technician can show you what to look for in a print or ribbon test the next time you are scheduled for on-site service. A bar code verification test performed prior to service, can show how the quality of output is enhanced by a grade or better following service.

To measure the quality of printed output , print 5-10 labels on your machine using your data, or type in 1 through 10, using Code 39, 128 (or the code you use.) Send to Winco, Attn: Harry Meehan. Our technicians will evaluate the report and call you with the results. This service is provided free of charge.

## Thinking of Implementing a Bar Code System at your Company?



Send for your free Bar Code Atlas. Get started in bar coding in easy to understand terms. The single biggest reason bar code applications fail is poor implementation. Let Winco be your partner for success. For your free copy, call a Winco Customer Service Representative at **1-800-325-5260** or send e-mail to **info@barcode-winco.com.**

## How would you like to receive our Newsletter

If you would prefer to view our newsletter on line, visit us at **www.barcode-winco.com/info.htm.**

Look to our web site as we continue to add new product information, industry news, details on Winco's service programs and success stories in a wide variety of industries.

If you would like to be added to our mailing list or would like to send your comments about our newsletter, e-mail us at **info@barcode-winco.com.**

WINCO
Identification Corp.
(603) 598-1553

## New Product

### *2-D Scanning for small item identification*

If you are marking small components and or pc boards using 2-D, data matrix codes or digital image capture, and need an easy to use, durable scanning device, consider Symbol's VS1020 Vision System.

The VS1020's ergonomic design and laser penetrating aiming pattern allows you to point and shoot to decode symbols in any orientation within the system's field of view. The VS1020 supports popular matrix codes, PDF417 and delivers excellent performance on linear bar code symbols.

Available by calling Winco's Customer Service at 1-800-325-5260 (In NH: 603-598-1553.)

**description by Symbol Technologies*

### In our next issue:

- Scanning Technologies
- Different Print Systems for Different Applications
- PM Tips: About Your Thermal Printers
- New Product Spotlight
- What's in a Label and how it can effect your business

**Visit our web site at**

**www.barcode-winco.com**



### In this Issue:



Established 1980

Zebra

DATAMAX

SONY

Symbol

To:

237 Main Dunstable Road
Nashua, NH 03062-1904

WINCO IDENTIFICATION CORPORATION
LABELING & BAR CODE SOLUTIONS

BULK RATE
U.S. POSTAGE
PAID
PERMIT NO. 375
NASHUA, NH