



## Lab Manager Bar Coding

### Bar-code Definition

A Bar-code is a self-contained message with information encoded in the widths of bars and spaces in a printed pattern. Since Bar-codes are used with computers, binary code is used. Essentially, the black bars and white spaces represent ones and zeros- the language computers understand. With the proper software drivers and printer, Bar-codes can be printed to represent most any information. The advantage of printing information in the form of a Bar-code is the speed and accuracy in which it can be retrieved. A good example of this is the check out counter at the modern grocery store. Bar-codes can, when used properly, save both time and money.

### Overview

Bar-coding systems have been available for some time now, but some systems we have studied have been only marginally helpful. Bar-coding is not for everyone, nor is it right for every application. Laboratory Systems Group, Inc. has spent over 3 years in active study of the use of Bar-codes in the dental laboratory industry and has identified the areas and procedures that lend themselves best to bar-coding.

Lab Manager currently offers bar-coding to aid in technician production, material inventory control, time-card data collection, and delivery and shipping management. In the future, bar-coding features may be expanded to include quality control, marketing, and case tracking.

We believe that bar-coding is here to stay, and we intend to use this technology to it's fullest.

### Technician Production

This module adds Bar-codes to the work ticket which, when scanned, updates the proper technician production files and notifies the computer which production steps have been completed, by whom, and when. This information, in turn, can be used to print reports which include the Technician Production Summary, Technician Production Detail Report, and the Cases Due, but not yet Finished Report.

### Material Inventory Control (DOS Only)

Using the TW-II Pocket Bar-code Scanner, the user can take inventory by scanning Bar-coded labels placed onto material boxes or bins identifying each billable material and then enter the quantity currently in stock into the Bar-code reader, just as a number is typed into a calculator. After identifying and counting each material in this way, the data is down-loaded to Lab Manager with a couple of key strokes updating the inventory level.

### Shipping and Delivery Management

With Lab Manager's shipping department module and the single station Bar-code reader, Lab Manger can display a list of the cases that need to be delivered or shipped today. As cases are delivered or prepared for shipping, each is scanned marking it delivered or shipped, preventing cases from falling "*through the cracks.*"

### Time Card Data Collection

By using any of our three Bar-code scanners, Lab Manager can collect and report the time employees spend at work, greatly reducing the time spent on that tedious process.

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## Hardware Required

A single or multi-user computer with at least 640k of memory, 24pin dot matrix printer, DOS 3.3 or higher, Lab Manager bar-coding software with appropriate drivers, and bar-coding device of choice.

Lab Manager will support several types of bar-coding devices including hand held wands, laser scanners, and portable pocket size scanners. In the hand held wand category, two major systems are supported; single station and multi-station.

### Single Station Scanner (DOS Only)

This Bar-code reader is typically used with Lab Manager's shipping department module to scan shipped or delivered cases, but can also be used as a single station technician production scanner and/or time card scanner.

The single station reader is conveniently connected between the keyboard and the computer; installation takes only about 30 seconds.

### Multi-station Scanner (DOS Only)

These scanners are used to track technician production and time card information, but can **not** be used with our shipping department module or inventory control.

The first station in a multi-station system connects to one of the computer's serial ports via a protocol adapter. The second station connects to the first via a standard 6 conductor phone cable of any length (not to exceed a total of 2,000 feet). The third

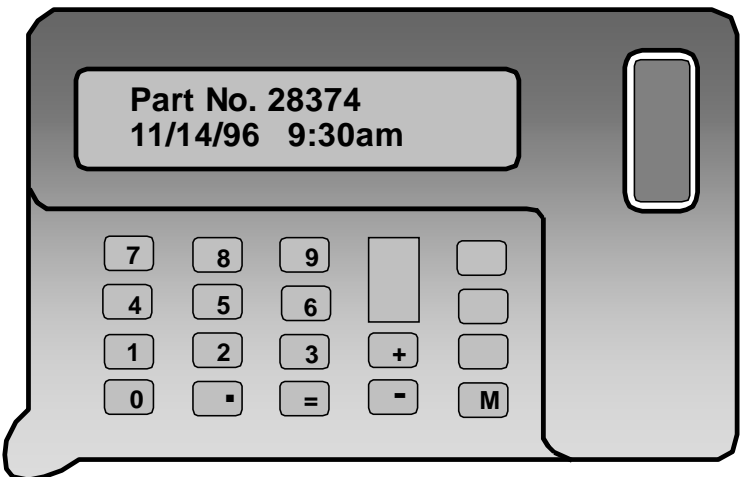
connects to the back of the second, and so on. Up to 32 stations can be connected to one computer in this manner.

The multi-station Bar-code readers support two types of readers; a hand held wand and a gun style laser scanner.

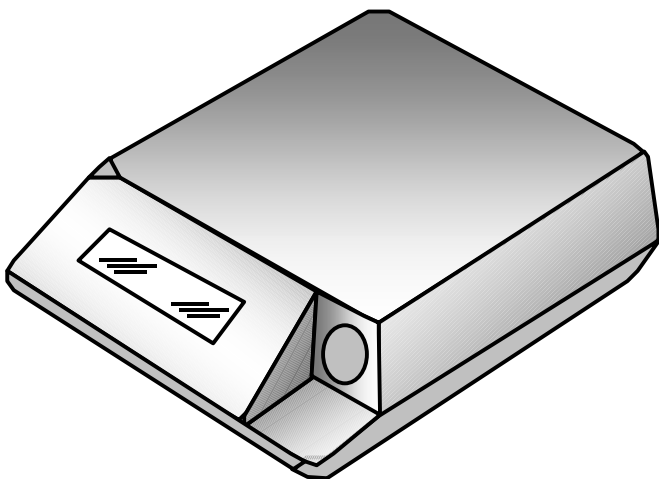
### Pocket Sized Scanner

The pocket size scanner looks much like a hand-held calculator, with a two line alpha-numeric display and a keyboard and is typically used to scan technician production, inventory control and/or time card data collection.

To scan a Bar-code, simply press the large rectangular button on the keyboard and slide the pointed edge of the pocket scanner across the Bar-code. The Bar-code information is displayed in plain English on the display of the scanner. Hundreds of Bar-codes can be scanned in this way, each stored in the hand held device. To transfer the data in the



hand held scanner to the computer, place the scanner into the down-loader/charger, select the appropriate Lab Manager function and the information is sent to the computer updating the proper files.



# Bar-code Software & Hardware

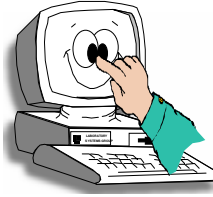
Each Total

<p><b>Barcoding with the MR-320 Multi-station Bar-code Readers</b>                  These scanners are used to track technician production and time card information but can not be used with our shipping department module or inventory control.</p> <p>The first station in a multi-station system connects to one of the computer's serial ports via a protocol adapter and a junction box. The second station connects to the main cable via another junction box and so on up to 32 stations. The 4 conductor, shielded cable can be up to a total of 2,000 feet.</p> <p>The multi-station Bar-code readers support two types of readers; a hand held wand and a gun style laser scanner (shown below).</p>			
<p><b>MR-320 Multi-station Bar-code Reader</b>                  Up to 32 of these bar-code stations can be daisy-chained together with the first station connected to a computer using the protocol converter (required) listed below. This bar-code device, along with the laser gun or hand held wand, can be used to capture technician production and time-card information.</p>		<p><b>449.00</b></p>	<p><b>(3 units) 1347.00</b></p>
<p><b>Protocol Converter</b>                  Connects the first of up to 32 MR-320 bar-code stations to a computer's RS232 port. Only one protocol converter is required to connect up to 32 bar-code readers to a computer.</p>		<p><b>249.00</b></p>	<p><b>249.00</b></p>
<p><b>Junction Box</b>                  The Junction Box is used to connect each MR-320 to the bar-code network. It has input and output connectors for the 4 conductor wire and a standard 9 pin serial jack used to connect the MR-320 to the Junction Box.</p>		<p><b>49.00</b></p>	<p><b>147.00</b></p>
<p><b>Laser Gun QS6000 or similar</b>                  Hand-held laser gun can be used instead of the hand-held wand shown below. The gun is easier to use; just point and shoot.</p>		<p><b>529.00</b></p>	<p><b>(3 units) 1587.00</b></p>
<p><b>Hand Held Wand</b>                  Hand-held wand can be used in place of the Laser Gun shown above.</p>		<p><b>105.00</b></p>	<p><b>(3 units) 315.00</b></p>
<p><b>Bar-code Printing Driver (for DOS installation only, not required for Windows)</b>                  Required software driver to print bar-codes on a 24pin dot matrix or Laser printer. Only 1 driver is required to support all Lab Manager's bar-code applications.  <i>For use with the DOS Lab Manager only.</i></p>		<p><b>239.00</b></p>	<p><b>239.00</b></p>
<p><b>Total for a typical 3 station Windows installation using hand held wands</b></p>			<p><b>2058.00</b></p>

<p><b>Barcoding with the TW-2 portable reader</b>                  The pocket size scanner looks much like a hand-held calculator, with a two line alpha-numeric display and a keyboard and is typically used to scan technician production, inventory control and/or time card data collection.</p>			
<p><b>TW-2 portable bar-code reader with charger/downloader</b>                  This credit card size bar-code reader can store up to 200 scans of information before needing to download the scanned information to a computer system using the charger/downloader. This bar-code device can be used to capture technician production, time-card information, and perform material inventory control. <i>The bar-code printing driver is only required when used with DOS Lab Manager.</i></p>		<p><b>949.00</b></p>	<p><b>949.00</b></p>
<p><b>Bar-code Printing Driver (for DOS installation only, not required for Windows)</b>                  Required software driver to print bar-codes on a 24 pin dot matrix or Laser printer.  <i>For use with the DOS Lab Manager only.</i></p>		<p><b>239.00</b></p>	<p><b>239.00</b></p>
<p><b>Total for a typical portable reader installation</b></p>			<p><b>1188.00</b></p>



1718 E. Rose Lane Phoenix, Arizona 85016 (602) 264-5913



The power of touch is yours when you use one of our touch monitors.

A touch monitor is a special computer monitor that looks like an ordinary monitor but has a touch sensitive material applied to the glass portion of the screen. When the monitor is touched with a finger, special circuitry inside the monitor calculates the exact position your finger touched the screen and then passes that information on to a special driver in the computer which, in turn, converts the information into equivalent mouse actions. This means that when you touch a picture of a button on the screen, the computer acts as if you just clicked on the button with a mouse.

For inexperienced computer users, a touch monitor is easier to use than a mouse because it does not require as much hand-eye coordination; simply point and touch.

Although touch monitors can be used with most all software, they are easier to use with programs designed with large buttons to accommodate big fingers. Lab Manager's use of large buttons throughout the program lends itself very nicely to touch monitor use. Further more, Lab Manager has specially designed screens for the shipping department and technician production areas that make them ideal for touch screen use.

Using a touch monitor in these locations makes a lot of sense because there is no need for a mouse or keyboard to get in the way. Dust and other contaminants won't affect a touch monitor like they do to a mouse or keyboard and they require less

training. Simply set up a computer with a touch monitor in that department or area of the lab, connect the computer to your main computer with the appropriate network stuff, install Lab Manager on the computer and you are ready to go.

The following screens show you what a couple of touch screens look like in Lab Manager. Notice the large buttons on the right of each screen. These are the buttons that the technicians will use to select cases for shipping control or technician production use.

CaseNumber	AccountID	Patient	ShipByDate	PanNumber
9807-0097		7 Zippy Zippo		
9807-0098		7 Walla Bingbang		12346
9807-0099		7 Silly Willy		32123
9807-0100		7 Mr. Dudley Dought		111
9807-0101		7 Mueller		
9901-0102		7 Mueller, Tom		
9902-0105		1 Mueller		
9905-0106		18 Mueller, tom	05/27/1999	
9905-0107		16 Mueller		
9905-0109		1 Mueller		
9905-0110		1 Another Mueller		
9905-0111		1 Smith, Martha		
9905-0112		1 mueller, Martha		
9905-0113		1 Mueller		

This screen is for technician production. Technician selects case, step completed, and technician.

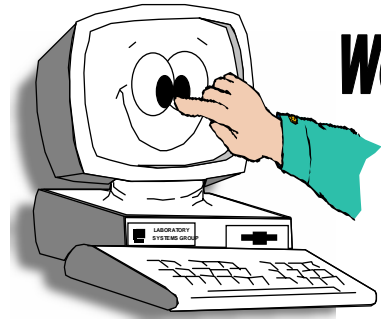
ShipByDate:	ShipByTime:	CaseNumber:	Patient:	PanNumber:	Shipping:
08/15/1997	9AM	9708-0062	WHSMAN		
08/18/1997	1000	9708-0069	PARKER DIANA	WHITE	
08/22/1997	9 AM	9708-0065	MVERS		
08/25/1997	PO	9708-0066	ENSLINGER		25
08/25/1997	12 PM	9708-0060	WALLACE		75
08/25/1997	9 AM	9708-0061	LEWIS		6
08/26/1997	1100	9708-0068	BLAKE		7
08/26/1997	12 PM	9708-0059	record #1 case		19
08/28/1997	10 AM	9708-0064	LUSBY		
08/24/1997		9709-0077	Mueller, Tom		
10/30/1997		9710-0078	Mueller, Tom	123	

This screen is for shipping. Technician selects cases that have been shipped or delivered.

# Power of Touch

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## **Works instantly with ALL Programs! Better than a mouse.... and works five times faster than a mouse.**

The Power of Touch is yours when you use one of our touch monitors or flat panel LCD displays. This technically sophisticated yet easy to use input technology is a great solution for capturing technician production, time card information, shipping control, and scheduling. To use, simply connect the touch monitor to your computer, install the special driver, and begin taking advantage of the touch technology. Works instantly with ALL programs. Better than a mouse ..... and it runs five times faster than a mouse.

***We now offer over 100 different models.  
Choose the one that's right for you!***



**CRT Touch Monitors** in sizes from 14" to 21" and ranging in price from \$495 to \$1550.

**Flat Panel Touch Monitors** in sizes from 15" to 20" and ranging in price from \$640 to \$2600.

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*Depending upon availability, make and model shipped may vary from the units described.  
Prices are subject to change at any time.*

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