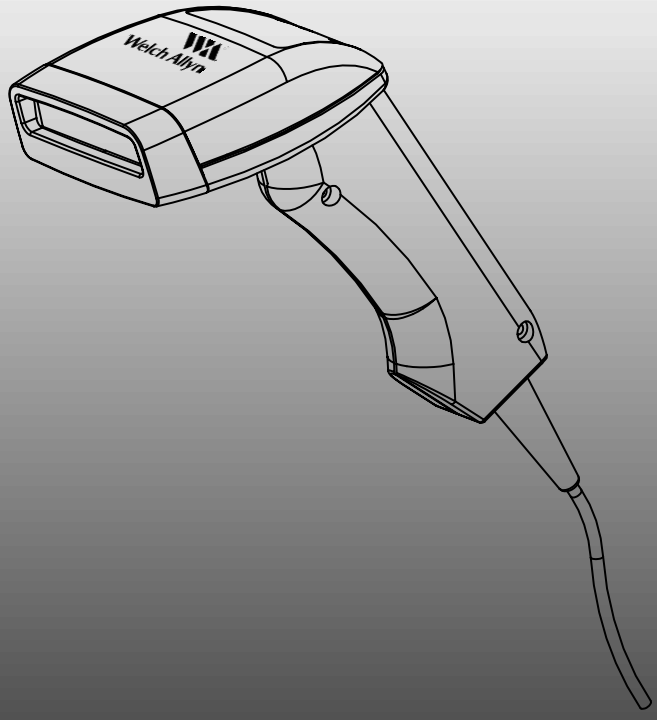
Welch Allyn

SCANTEAM® 3210 CCD

Non-Decoded Output (HHLC)



User's Guide

Input Power Voltage Requirements	
Model	**Input Power Voltage**
3210–X0	5 Volt *ONLY*

Disclaimer

Welch Allyn® reserves the right to make changes in specifications and other information contained in this document without prior notice, and the reader should in all cases consult Welch Allyn to determine whether any such changes have been made. The information in this publication does not represent a commitment on the part of Welch Allyn.

Welch Allyn shall not be liable for technical or editorial errors or omissions contained herein; nor for incidental or consequential damages resulting from the furnishing, performance, or use of this material.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Class B Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Caution: Any changes or modifications made to this device that are not expressly approved by Welch Allyn, Inc. may void the user's authority to operate the equipment.

Note: To maintain compliance with FCC Rules and Regulations, cables connected to this device must be *shielded* cables, in which the cable shield wire(s) have been grounded (tied) to the connector shell.

Canadian Notice

This equipment does not exceed the Class B limits for radio noise emissions as described in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la classe B prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

CE

The CE mark on the product indicates that the system has been tested to and conforms with the provisions noted within the 89/336/EEC Electromagnetic Compatibility Directive and the 73/23/EEC Low Voltage Directive.

Welch Allyn shall not be liable for use of our product with equipment (i.e., power supplies, personal computers, etc.) that is not CE marked and does not comply with the Low Voltage Directive.

TABLE OF CONTENTS

GETTING STARTED

Introduction to the 3210

The SCANTEAM® 3210 Series Hand Held CCD is durable and reliable, easy to hold, and easy to aim. Featuring a unique optics design without moving parts or a glass mirror, the 3210:

- provides superior first read rate
- reads 6 mil code in contact
- scans bar code widths up to 2.3" [60mm].

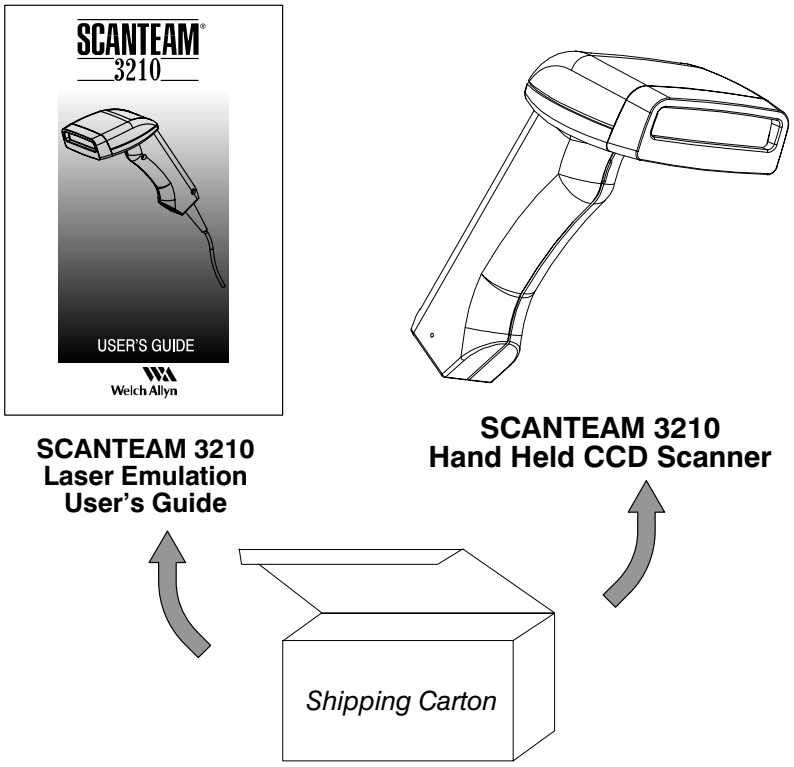
The 3210 also offers low current consumption to extend the battery life of portable data terminals.

❖ About This Manual

This user's guide provides installation instructions for the Laser Emulation SCANTEAM 3210. Connector pinouts, product specifications, a troubleshooting guide, warranty and customer support information are also included.

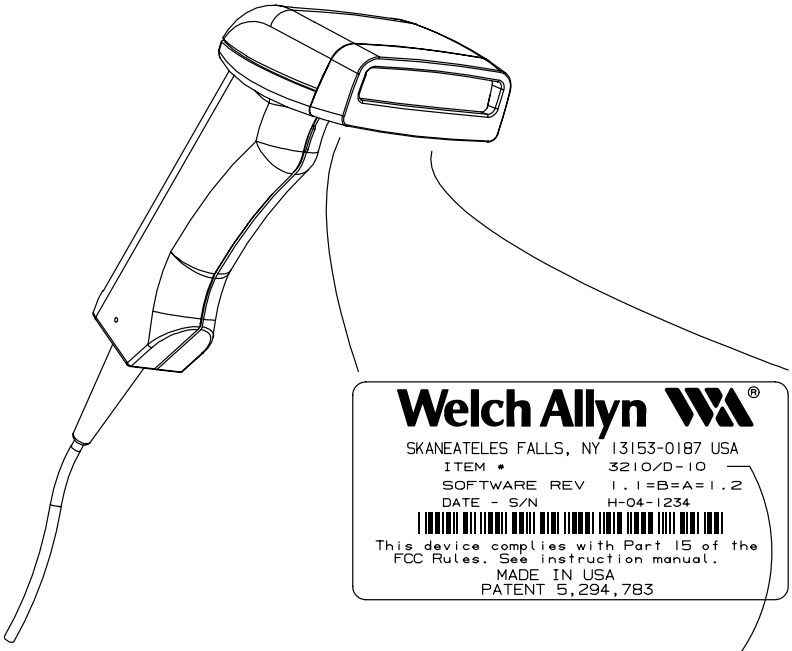
Unpacking the Scanner

Open the carton. The shipping carton should contain:

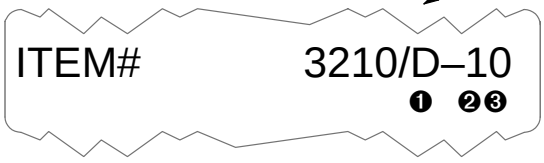


- Check to make sure everything you ordered is present.
- *Keep the shipping carton to return the scanner for servicing.*
- Check for damage during shipment. Report damage immediately to the carrier who delivered the carton.

Scanner Identification



SCANTEAM 3210 Identification Label



Scan Rate ❶
D = 50 Scans/Second

Trigger Option ❷
0 = Auto Trigger
1 = Manual Trigger

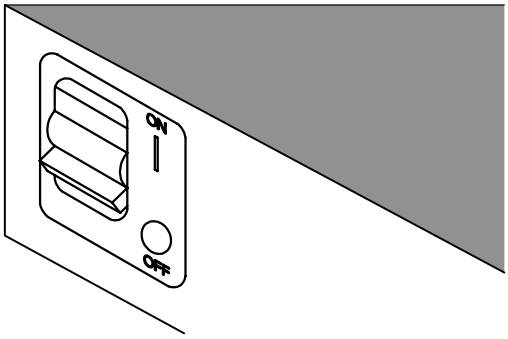
Interface Option ❸								
Option	IBM 4683	OCIA OCR	Bar Image Laser Out	Wand Emulation	TTL RS–232	True RS–232	Keyboard Wedge	RS–232 Wedge
0			•					

Connecting the Scanner

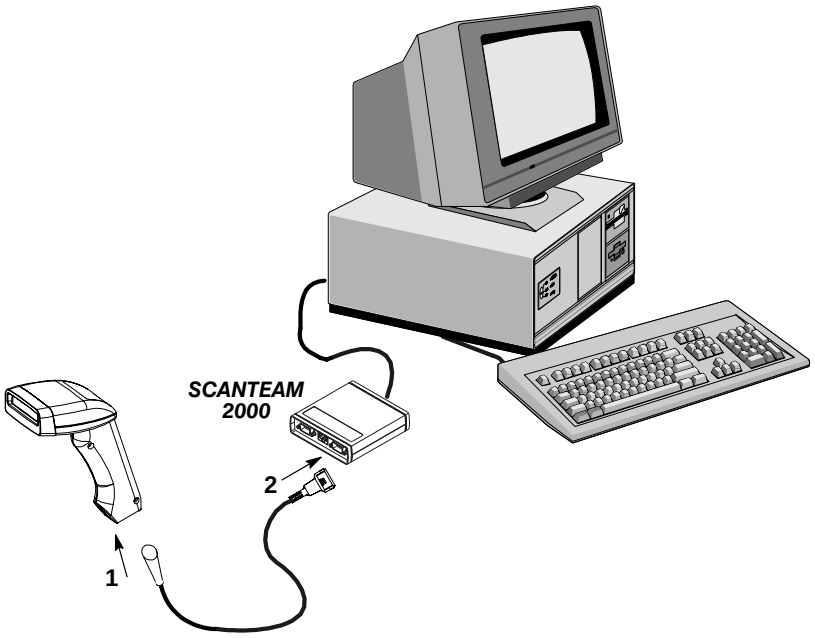
Install the scanner by following the steps shown below:

❶ Disconnect power to the terminal/computer by turning the host system power switch to the “OFF” position.

Power OFF



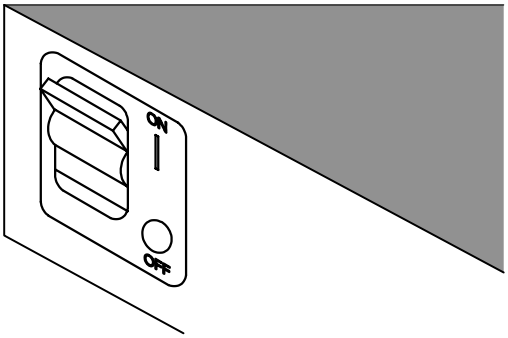
❷ Connect the interface cable to the scanner and to the decoder unit attached to your terminal/computer.



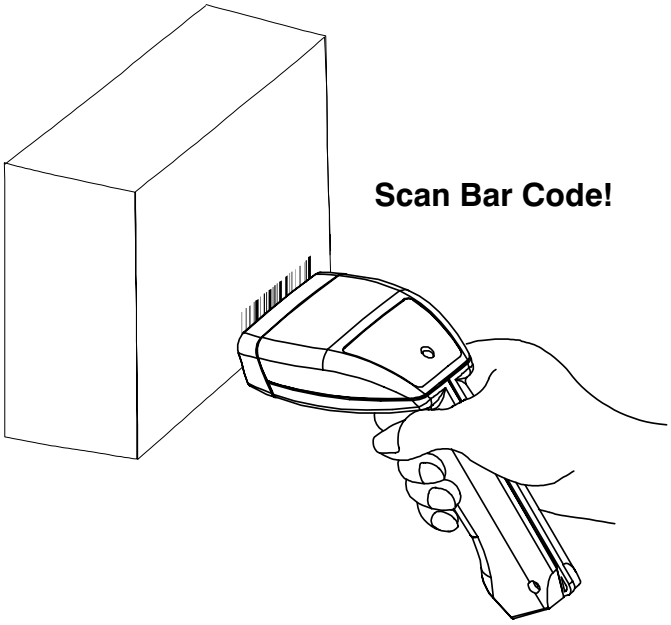
(Cable, Keyboard, and Terminal will vary.)

❸ Once the scanner has been fully connected, restore power to the terminal/computer by turning the host system power switch to the “ON” position.

Power ON



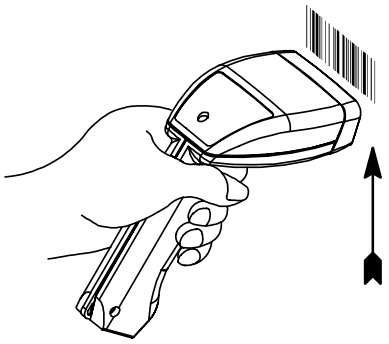
❹ The 3210 is ready to scan bar code for your application.



Scanning Techniques

The scanning technique for a single bar code (on a page or an object) is shown below.

❶

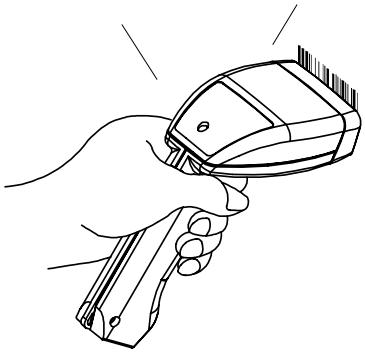


Single Bar Codes:

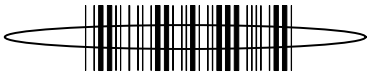
Move the 3210 Vertically

BEEP!

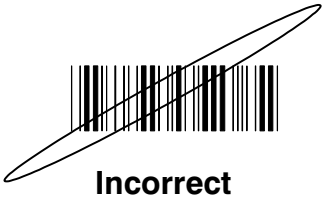
❷



The illustration below shows where to aim the red illuminated beam over the bar code for a good read.

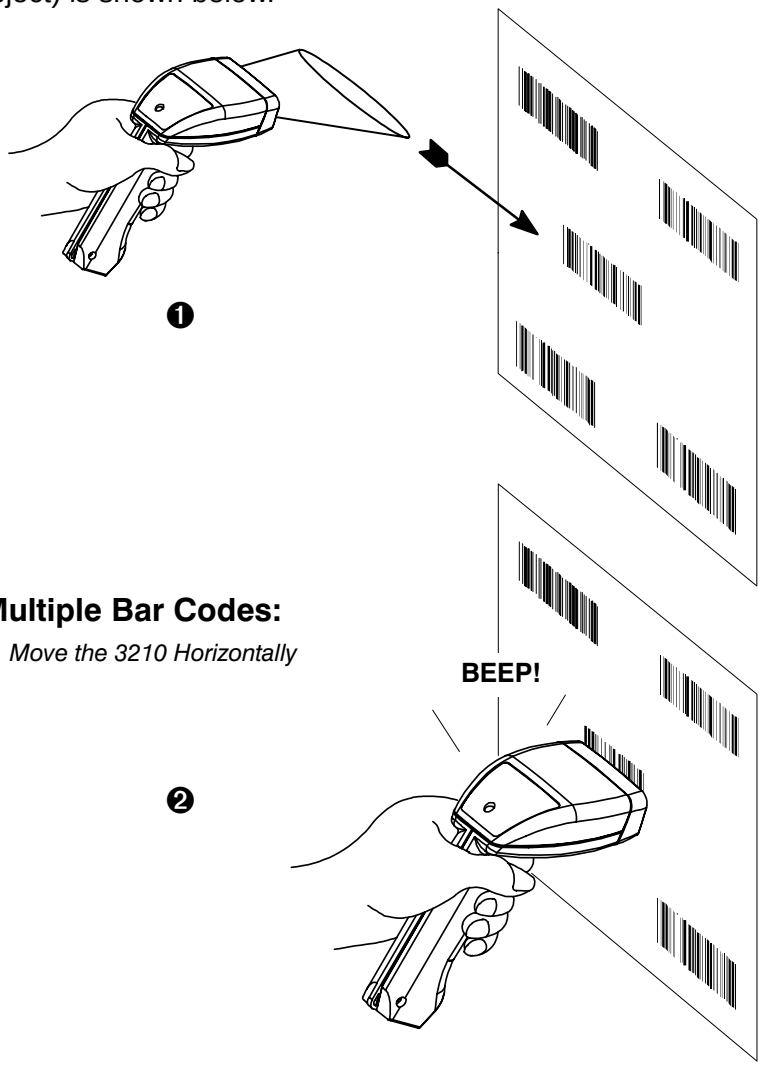


Correct



Incorrect

The scanning technique for multiple bar codes (on a page or object) is shown below.



Note: *The techniques shown are for a 3210 with automatic trigger. To scan with a manual trigger, aim the 3210 at a bar code and press the trigger (like step 2).*

PRODUCT SPECIFICATIONS AND PINOUTS

Environmental Specifications

parameter	*specification*
Operating Temperature Storage Temperature	32° F to 122° F [0°C to 50°C] –40° F to 158° F [–40°C to 70°C]
Humidity	0% to 95% RH noncondensing
Barometric Pressure	101,000 to 69,000 Pascals [Sea level to 3,000 meters]
Mechanical Shock	Functional after ten 5ft. [1.5m] drops
ESD Sensitivity	Functional after 15KV discharge
Ambient Illumination	3,000 lux (in contact with bar code)
Modular Connector Life	750 insertions/disconnections

Electrical Specifications

parameter	*specification*
Operating Voltage	5 VDC ±10%
5VDC Input *only* Current Draw	**50 Scans/Sec** 100mA
Standby Current	less than 3mA
In–Rush Current	400mA maximum
Power Supply Noise Rejection	100mV peak to peak, from 10 to 100KHz
Acquisition Time (Trigger to Output)	100msec maximum
Mean Time Between Failure (MTBF)	50,000 hours (for ground benign)

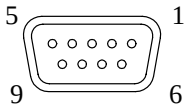
Scanner Performance

parameter	*specification*
Pitch Angle	±7 degrees
Skew Angle	±30 degrees
Minimum Reflective Difference (MRD)	45%
Scan Rate	50 scans per second
Field Width	2.3 in [60mm] at contact
Horizontal Scan Velocity	0 to 5 inches [127mm] per second
Illumination	660 nm Visible Red Light Emitting Diodes (LED) with focusing reflector
Resolution	6 mil [0.1 52mm] code density minimum

Pinouts

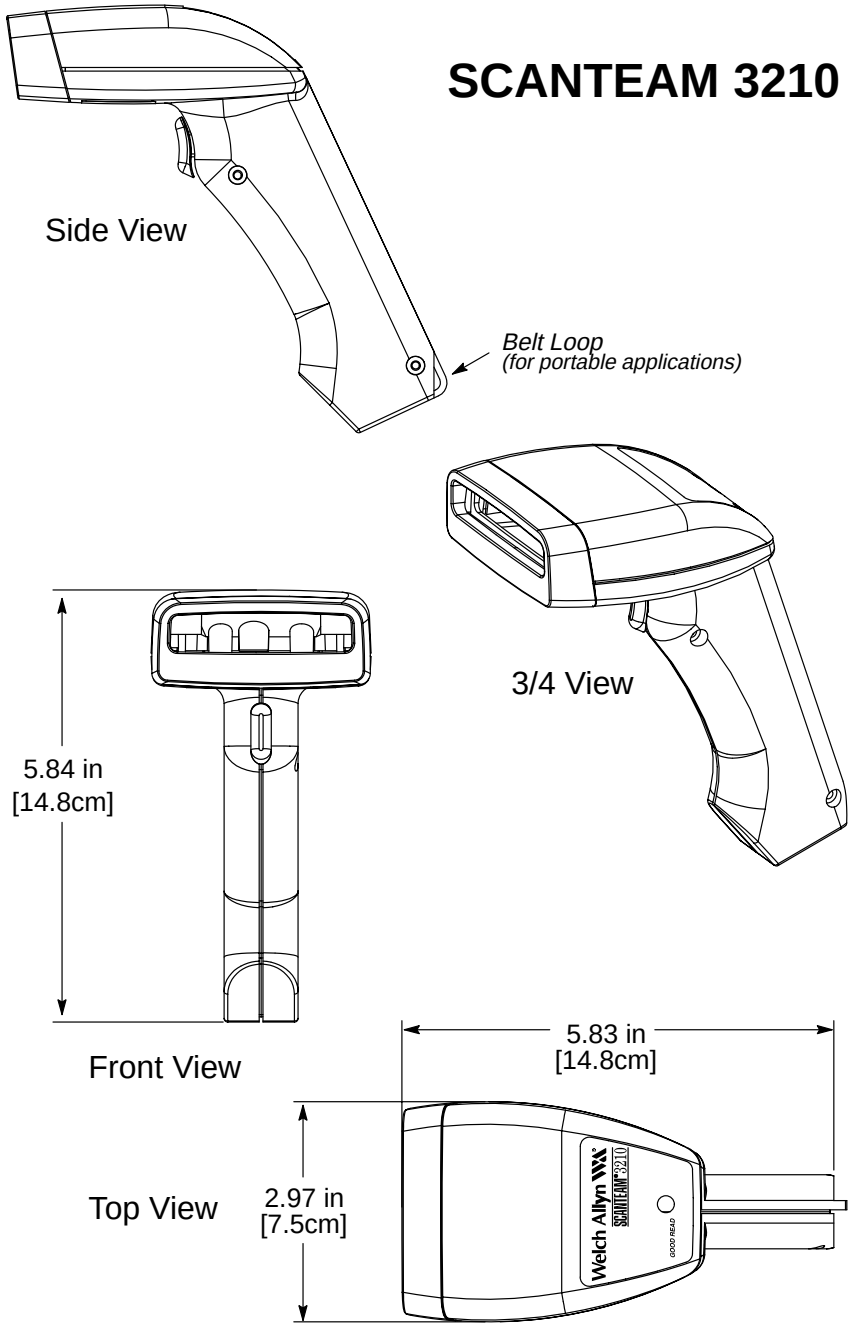
❖ Standard Laser Cable: for 3210–X0

Terminating Connector:
Standard 9 Pin (Type D)
Squeeze–to–Release Connector
(compatible with Welch Allyn terminals)



Pin	*Standard Welch Allyn Color Code*	*Signal*	*Function*
1	Grey	SOS	Start of Scan
2	Green	Data	Digital Bar Code Signal Output
3	Orange	ACK	Acknowledge – Good Read to Scanner
4	Red	+5VDC	Power to Scanner
5	White	Trigger	Trigger to Ground
6	Blue	Laser ON	Scan Enable
7	Black	GRND	Ground
8	Drain	Shield	Cord Shield Only
9	Red	no connection	Power to Scanner

General Dimensions



MAINTENANCE AND TROUBLESHOOTING GUIDE

Maintenance

The SCANTEAM 3210 provides reliable and efficient operation with a minimum of care. Although specific maintenance is not required, the following periodic checks insure dependable scanner operation:

❖ Cleaning the Scan Window

Scanning performance may degrade if the scan window is not clean. If the window is visibly dirty, or if the 3210 isn't scanning well, *clean the scan window with a soft cloth or facial tissue dampened with water* (or a mild detergent–water solution). If a detergent solution is used, rinse with a clean tissue dampened with water only.

The scanner housing may also be cleaned the same way.

⚠ Caution:

Do not submerge the scanner in water. The scanner's housing is not water–tight.

Do not use abrasive wipers or tissues on the scan window: abrasive wipers may scratch the window.

Never use solvents (alcohol or acetone) on the housing or window: solvents may damage the finish or the window.

❖ Inspecting Cords and Connectors

Inspect the 3210's interface cable and connector for wear or other signs of damage. A badly worn cable or damaged connector may interfere with scanner operation. *Contact your Welch Allyn distributor for information about 3210 repair.*

Troubleshooting

The SCANTEAM 3210 automatically performs self–tests whenever you turn it on. If your scanner is not functioning properly, review the following Troubleshooting Guide to try to isolate the problem.

Troubleshooting Guide

Is the power on? Is the red illuminated beam on?
If the red scan beam on the 3210 isn't illuminated, check that: ❶ the cable is connected properly. ❷ the host system power is on (if external power isn't used). ❸ the trigger works (if the 3210 is equipped with one).

Is the 3210 having trouble reading your bar codes?
If the 3210 isn't reading bar codes well, check that the bar codes: ❶ aren't smeared, rough, scratched, or exhibiting voids. ❷ aren't coated with frost or water droplets on the surface. ❸ are enabled in the decoder the 3210 is connected to.

LIMITED WARRANTY

Welch Allyn warrants its products to be functional and free from manufacturing defects at the time of delivery. Welch Allyn warrants that it will replace or repair, at its option, any SCANTEAM 3210 that fails to perform according to its published specifications during a period of three (3) years from the time of shipment by Welch Allyn (or from a Welch Allyn authorized distributor) to the user.

Any attempt on the part of the user to disassemble or service the scanner will void the warranty.

The warranty does not apply if, in the sole opinion of Welch Allyn, the scanner has been damaged by accident, misuse, neglect, improper shipping and handling. The warranty is valid only if the scanner has not been tampered with or serviced by any party unauthorized by Welch Allyn as a repair facility. The responsibility to protect the scanner from static damage is solely that of the user.

THE WARRANTIES SET FORTH HEREIN ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE BUYER ACKNOWLEDGES THAT NO OTHER REPRESENTATIONS WERE MADE OR RELIED UPON WITH RESPECT TO THE QUALITY AND FUNCTION OF THE PRODUCT HEREIN SOLD.

IN NO EVENT SHALL WELCH ALLYN OR ITS RESELLERS BE LIABLE FOR ANY LOSS, INCONVENIENCE OR DAMAGE WHETHER DIRECT, INCIDENTAL, CONSEQUENTIAL, OR OTHERWISE, AND WHETHER CAUSED BY NEGLIGENCE OR OTHER FAULT RESULTING FROM THE BREACH OF ANY EXPRESS WARRANTY EXCEPT AS SET FORTH HEREIN. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights and you may also have other rights that vary from state to state or country to country.

❖ SAMPLE BAR CODES ❖

Codabar

0013557900

Code 39

TEST–SHEET

Interleaved 2 of 5

1234567890

Code 2 of 5

123456

Code 93

123456–9$

Code 128

CODE 128

EAN 13

9780330290951

UPC–A **5 addenda**

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3210/LC/UG Rev B