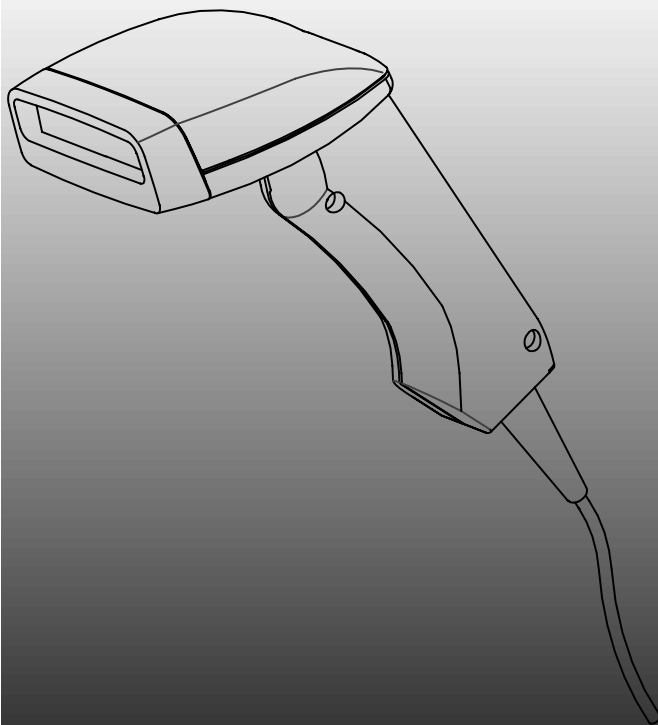


WelchAllyn®

SCANTEAM® 5400/5700

Non-Decoded Output
(HHLC)



User's Guide

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 présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.



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.

CDRH Statement

This product complies with 21 CFR Part 1040. This product is a Class II laser product with a maximum output of 1.0 mW at 680 nanometers and continuous wave.

Disclaimer

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Limited Warranty

Sample Bar Codes (inside back cover)

About Your Hand-Held Non-Decoded Output Laser Scanner

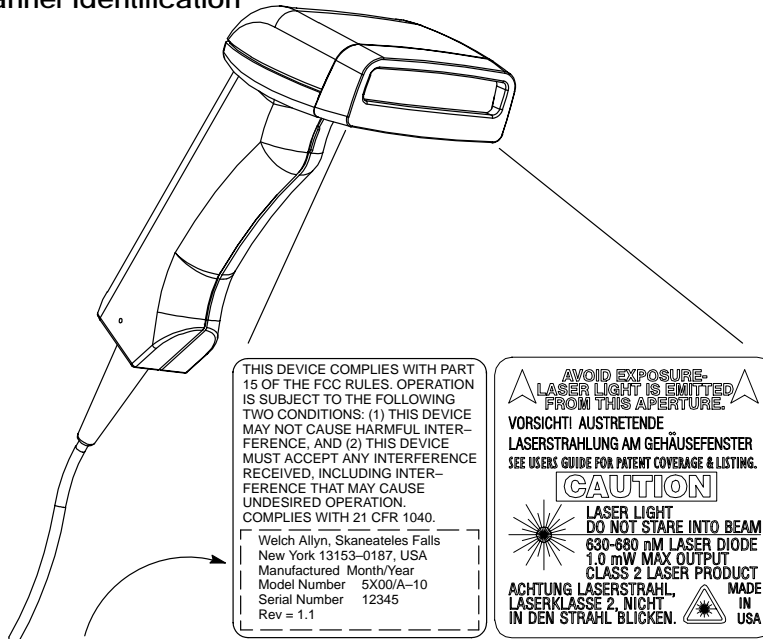
The hand-held laser scanner is an economical, durable solution for a wide variety of bar code data collection applications. This scanner features the following:

- a solid state, visible laser diode for reading a variety of printed bar codes.
- a tough, ergonomic thermoplastic housing for comfort and durability.
- optional automatic triggering for hands free scanning.
- a working scanning distance up to 12 inches for the 5400 and 31 inches for the 5700.
- a scan rate of 36 scans per second
- a field width of 13.8 inches at 12 inches for the 5400 and 20 inches at 31 inches for the 5700.

This user's guide provides installation instructions for the non-decoded output (hand-held laser compatible) scanner. Connector pinouts, product specifications, a troubleshooting guide, warranty, and customer support information are also included.

Getting Started

Scanner Identification



SCANTEAM 5400/5700 Identification Label

Model Number 5X00/A-10

① ②③

Engine Type ①	AutoTrigger Option ②
A = Standard Performance B = Increased Performance HD = High Density LR = Long Range	0 = Hands Free AutoTrigger Feature Not Included 1 = Hands Free AutoTrigger Feature Included

Interface Option ③								
Option	IBM 4683	OCIA OCR	Bar Image Laser Out	Wand Emulation	TTL RS-232	True RS-232	Keyboard Wedge	RS-232 Wedge
0			•					

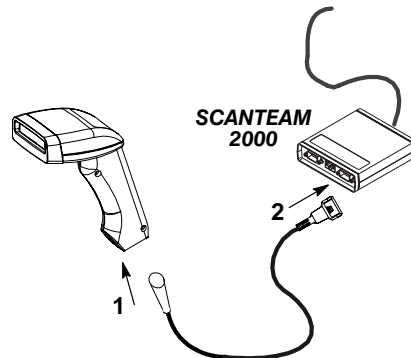
* Operates only from +5V power source for 5400/B and 5700/A.
 ** Operates only from either +5 or +12V power.

Getting Started

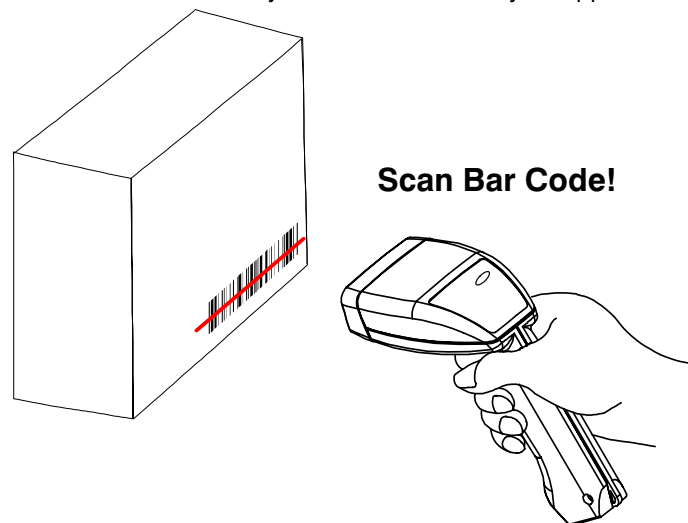
Connecting the Scanner

Install the scanner by following the steps shown below:

- ❶ Disconnect power to the decoder by turning the host system power switch to the "OFF" position.
- ❷ Connect the interface cable to the scanner and to the decoder.



- ❸ Once the scanner has been fully connected, restore power to the decoder by turning the host system power switch to the "ON" position.
- ❹ Your laser scanner is ready to scan bar code for your application.



Getting Started

Scanning Techniques

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



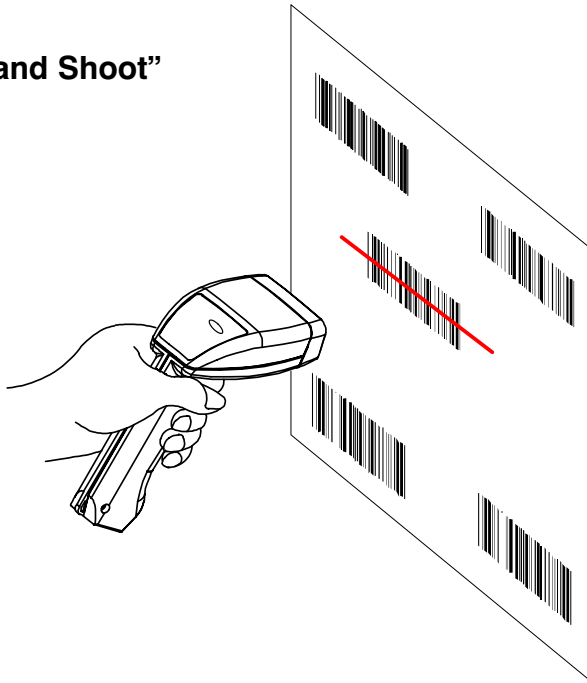
Correct



Incorrect

The scanning technique for single or multiple bar codes (on a page or on an object) is shown below. Just aim the scanner at the bar code and pull the trigger.

Just “Point and Shoot”



SCANTEAM 5400/5700 Product Specifications

<i>Parameter</i>	<i>Specification</i>
Dimensions Weight Length Height Width	7 ounces (198 g) 5.8 inches (14.8 cm) 5.8 inches (14.8 cm) 3.0 inches (7.6 cm)
Light Source	670 nm visible laser diode (VLD); 5700LR = 650nm VLD
Scan Rate	36 ±3 scans per second
Print Contrast	Minimum Reflective Difference = 25% (5400/B, 5700/A); MRD = 40% (5700LR, 5700/HD)
Skew Angle	±65 degrees (from perpendicular) – 5400, 5700/A ±60 degrees (from perpendicular) – 5700/HD, 5700LR
Pitch Angle	±55 degrees (left/right from perpendicular) – 5400, 5700/A ±65 degrees (left/right from perpendicular) – 5700/HD, 5700LR
Operating Voltage Non-Decoded	+4.5 to 5.5 VDC (54/57-04 model only supports +12VDC input with unique cable)
Power Consumption Non-Decoded +5VDC Non-Decoded +12VDC	0.060 mA Idle, 110 mA Scanning; (135mA – 5700LR) 10 mA Idle, 110 mA Scanning; (145mA – 5700LR)
Temperature Ranges	Operating 32° F to +104° F (–0° C to +40° C) Storage –40° F to +140° F (–40° C to +60° C)
Humidity	5 to 95% non-condensing
Mechanical Shock	5 drops from 5 feet (1.5m) to concrete (5400/B, 5700/A/HD/LR)
ESD Sensitivity	15 kV to any external surface
Agency Compliance	FCC Class B, CE, LVD, CDRH Class II

‡ When operated in switched power mode, idle current is less than 0.06 mA.

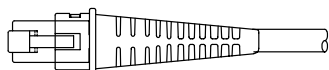
Standard Cable Pinouts

Laser Output 5400/5700-X0

Conventional laser data format is provided at the modular connector in the scanner handle.

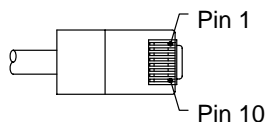
Interface cables normally supplied with scanner model 5400/5700-X0 are terminated with an 10 pin modular plug (P1) and a 9 pin Type D (Squeeze-to-release) connector (P2) that is compatible with all Welch Allyn decoders and terminals. See chart below.

P1

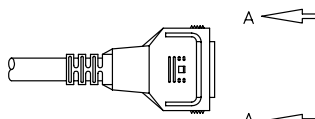


10 Pin Modular Plug

P1 connects to the scanner handle.

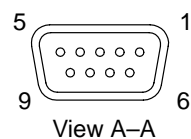


P2



9 Pin Type D Female

P2 connects to your terminal.



P1	Signal	Function	P2
9	SOS	Start of Scan	1
6	Data	Digital Bar Code Data Output	2
5	Good Read	Turn on Good Read LED or Beeper	3
7	+5VDC or +12VDC [†]	5 Volt Power Connection ♦	9
8	Trigger	Trigger Signal to Decoder	5
3	Enable	Laser Enable	6
4	Ground	Supply Ground	7
2	Braid	Cord Shield	8
		N/C ♦	4

[†] 12VDC on 5400 only.

♦ Pins 4 and 9 are populated depending on power supply voltage option.

Maintenance

The Hand-Held Laser Emulation Scanner 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 scanner 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 scanner'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 cable replacement. Cable replacement instructions below....

Examining the Scanner Housing

Routinely examine the scanner housing for signs of damage. A damaged housing may cause the internal components to move and may result in a malfunctioning scanner.

Maintenance & Troubleshooting

Replacing the Interface Cable

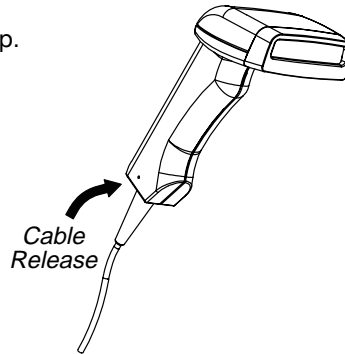
The standard interface cable is attached to the scanner with an 8-pin modular connector. When properly seated, the connector is held in the scanner handle by a flexible retention tab. The cable's designed to be field replaceable.

Notes:

- Order replacement cables from Welch Allyn or from an authorized distributor.
- When ordering a replacement cable, specify the cable part number of the original interface cable.

To Replace the Interface Cable:

- ❶ Turn the power to the host system OFF.
- ❷ Disconnect the scanner cable from the decoder.
- ❸ Locate the small hole on the side of the scanner handle near the base (see *Figure below*).
- ❹ Straighten one end of a paper clip.
- ❺ Insert the end of the paper clip into the small hole and press in. This depresses the retention tab, releasing the connector. Pull the connector out of the scanner handle while maintaining pressure on the paper clip.
- ❻ Replace with the new cable. Insert the connector into the opening at the base of the scanner handle. Press firmly. The connector is "keyed" to go in only one way, and will click into place.



Maintenance & Troubleshooting

Troubleshooting

The Hand-Held Laser Emulation scanner 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 scanner isn't illuminated, check that:

- ❶ the cable is connected properly.
- ❷ the host system power is on (if external power isn't used).

Is the scanner having trouble reading your bar codes?

If the scanner 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 symbology is enabled in the decoder the scanner is connected to.

Limited Warranty

Welch Allyn, Inc., hereby warrants its products to be functional and free from manufacturing defects at the time of delivery. Welch Allyn, Inc. further warrants that it will replace or repair, at its option, any unit that fails to perform according to Welch Allyn's published specifications during a period of two (2) years from the time of shipment by Welch Allyn, Inc. to the user at the time it is purchased from any of Welch Allyn Inc.'s Authorized Distributors. Any attempt on the part of the user to disassemble or service the equipment shall void the warranty.

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

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 BOARD AND SCANNER HEREIN SOLD.

In no event shall Welch Allyn, Inc. 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 which vary from state to state or country to country.

Sample Bar Codes

Code 39



TEST-SHEET

Matrix 2 of 5



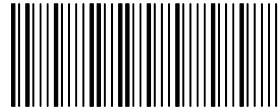
6543210

Code 128



CODE 128

MSI



44332211

Codabar



0013557900

Plessey



9876

Code 11



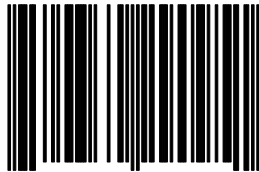
11223344

Code 93



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Code 2 of 5



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54/57/LC/UG Rev C

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