



# Banner AG4 Series Safety Laser Scanner

## Quick-Reference User Guide



In the United States, the functions that the Banner AG4 Series Safety Laser Scanner is intended to perform are regulated by the Occupational Safety and Health Administration (OSHA). Outside of the United States, these functions are regulated by other agencies, organizations, and governments. Whether or not any particular Safety Laser Scanner installation meets all applicable requirements depends upon factors that are beyond the control of Banner Engineering Corp. These factors include the way in which the Safety Laser Scanner is applied, installed, wired, operated, and maintained. **It is the responsibility of the purchaser and user to apply this Safety Laser Scanner in full compliance with all relevant applicable regulations and standards.**

### **Important!**

**Read and understand the entire User Manual (p/n 144924, found on the enclosed CD) before attempting to install and use this product.**

## Safety Standards Applicable to Use of this Product

See inside back cover of the User Manual for information pertaining to applicable U.S. and International standards, and where to acquire copies.



Shown at left: AG4-4E Scanner, AG4-CPD15-xx machine interface cordset, AG4-PCD9-xx PC connection cordset and optional safety module; cordsets and safety module are sold separately. Visit <http://www.bannerengineering.com> for more information.

### In the Box You'll Find:

Model	Description	
AG4-4E	<ul style="list-style-type: none"> <li>Laser Scanner,</li> <li>a 9-pin X2 plug, and</li> <li>a software CD that includes both hardware and software manuals (see table below)</li> </ul> Cordsets and bracket not included. <b>AG4-CPD15-..</b> machine interface cordset and <b>AG4-PCD9-..</b> PC connection cordset required for use; see User Manual.	4 m max. range
AG4-6E		6.25 m max. range

### On the CD-ROM You'll Find:

Document Title	Document Content	Source
<b>AG4 Series Safety Laser Scanner Quick-Reference User Guide (this document)</b>	General product information	P/N 145034, included with the product in print and on CD-ROM
<b>AG4soft Program</b>	Configuration and diagnostic software	AG4soft, included with the product on CD-ROM
<b>AG4 Series Safety Laser Scanner User Manual</b>	AG4 operation and installation, for the machine designer, installer and end user	P/N 144924, included with the product on CD-ROM
<b>AG4 Software Manual</b>	How to set and manage configurations, access diagnostics	P/N 144923, included with the product on CD-ROM
<b>AG4 Series Safety Laser Scanner Applications Guide</b>	Application examples intended to give additional guidance in applying the Scanner	P/N 147900, included with the product on CD-ROM
<b>AG4 Series Safety Laser Scanner Checkout Cards</b>	Instructions for daily and semi-annual checkouts of Scanner installation	P/N 147899, included with the product on CD-ROM, to print as needed and post near the guarded equipment

## About this Document

The information for applying and configuring the Banner AG4 Safety Laser Scanner (the Scanner) is covered in several documents to simplify access to information. The other documents and configuration program for the Scanner are on the CD that comes with the product. The current software version and all PDF documents can also be downloaded from the Banner website <http://www.bannerengineering.com>.

**Print out the relevant instructions to simplify reading and handling the documents.**

## PC Requirements

**Software:** Microsoft® Windows 95/98/NT®/2000/XP® /7

**Hardware:** Intel® processor class, Pentium® or higher (or compatible), 64 MB RAM, CD drive, 50 MB free memory (or more, if configurations will be stored), mouse, RS 232 or RS 422 serial interface, compatible printer.

## Proper Use and Intended Purpose of the Scanner

**Carefully read, understand and follow the Instruction Manuals before using or installing this Scanner.** The literature is contained within the software Help menu or can be downloaded at [www.bannerengineering.com](http://www.bannerengineering.com).

- The Scanner is intended for safeguarding machine hazards and collision avoidance on mobile vehicles.
- The user is responsible for satisfying all local, state, and national laws, rules, codes, or regulations relating to the installation and use of this control system in any particular application. Take extreme care to meet all legal requirements and follow all installation and maintenance instructions contained in this manual.
- The user has the sole responsibility to ensure that the Scanner is appropriate for the application, and is installed and interfaced by Qualified Persons in accordance with this manual and applicable safety regulations.
- The Scanner must be integrated into the machine's control system in such a way that an activation of the safety function safely stops or interrupts the dangerous process before a person can be endangered.
- The Scanner may NOT be used with any machine that cannot be stopped immediately after a stop signal is issued, such as single-stroke (or "full-revolution") clutched machinery, or any machine with inadequate or inconsistent machine response time and stopping performance.



### **WARNING . . . PROPER USE**

The AG4 Scanner is for use only on machinery that can be stopped immediately after a stop signal is issued at any point in the machine's stroke or cycle. Under no circumstances may the Scanner be used on full-revolution clutched machinery or in unsuitable applications as those listed in Section 1.11.

**Allow only Qualified Persons to install and maintain the Scanner (see Section 1.6). Shift/Daily checkout procedure must be performed at every power-up, shift change, and machine setup.** Refer to the instruction manuals and other reference materials (located in the Help menu) for all installation details, wiring diagrams, operating instructions, shift/daily/periodic checkout procedures, and warnings.

**If there is any doubt about whether or not your machinery is compatible with the Scanner, contact Banner's Application Engineers at the factory. Failure to follow all instructions and warnings could lead to serious bodily injury or death.**



<p><b>For more information:</b>  <b>Contact your local Banner representative</b>  <b>or</b>  <b>Banner Corporate Offices</b>  <b>around the world.</b></p>	<p><b>Corporate Headquarters</b>  <b>Banner Engineering Corp.</b>            9714 Tenth Ave. North            Mpls., MN 55441            Tel: 763-544-3164            www.bannerengineering.com            sensors@bannerengineering.com</p>	<p><b>Europe</b>  <b>Banner Engineering Europe</b>            Park Lane            Culliganlaan 2F            Diegem B-1831 BELGIUM            Tel: 32-2 456 07 80            Fax: 32-2 456 07 89            www.bannereurope.com            mail@bannereurope.com</p>	<p><b>Latin America</b>            Contact Banner Engineering Corp.            (US) or e-mail  <b>Mexico:</b>            mexico@bannerengineering.com  <b>Brazil:</b>            brasil@bannerengineering.com</p>
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**WARRANTY:** Banner Engineering Corp. warrants its products to be free from defects for one year. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture found to be defective at the time it is returned to the factory during the warranty period. This warranty does not cover damage or liability for the improper application of Banner products. This warranty is in lieu of any other warranty either expressed or implied.