

CRT380R 8-CCD Wireless Four-Wheel Aligner

What is 8-CCD?

Power is supplied to the measurement sensors by built-in rechargeable batteries. The alignment values are determined with optical measurement using CCD line cameras (Charge-Coupled Devices) and 4 infrared light sources in each measurement sensor. There is a camera in the main housing, a second on the boom. Each CCD camera is illuminated alternately by 2 IR light sources; this requires a skewed position of the CCD lines in the cameras by 45° with respect to both light beams. One light source inside the camera beams directly from above onto the CCD line. This light source is built into a pendulum and handles the measurement of camber and steering axis inclination. The second light beam falls from the opposite measurement sensor in the horizontal direction onto the same CCD line and handles the measurement of the toe angle. The CCD camera line is divided into 024 adjacent segments. From the beam intensity on the different segments, it is possible to calculate the beam deflection and thus the corresponding angle. Here an upstream lens that reduces the point-shaped light beam to a line and the ability of the downstream camera electronics to detect the lightest area of the light line achieve high precision. The individual control procedures and data streams are transmitted between the measurement sensor and the receiver in the equipment cabinet via infrared.

What is Bluetooth?



Bluetooth® is a completely different way to form connections between the wheel sensors and the aligner computer. You can think of it as a cable-replacement technology that uses the 2.4 GHz (ISM) band. With Bluetooth you don't need to do anything special to initiate communications – the devices find each other automatically and start conversing without user input.

Signals are omni-directional and can even pass through walls. The devices don't need to be perfectly aligned and don't need an unobstructed line of sight. Bluetooth devices use a combination of the Personal Identification Number (PIN) and a Bluetooth address to identify other Bluetooth devices. The transmission scheme (FHSS) provides another level of security in itself. Instead of transmitting over one frequency within the 2.4 GHz band, Bluetooth radio transmission uses fast frequency-hopping spread spectrum (FHSS) technology, allowing only synchronized receivers to access the transmitted data so that interference from other RF sources is highly unlikely. Both Bluetooth and WLAN can co-exist within the same environment.



CRT380R User-Friendly Time-Saving Features

- Superior screen graphics with vibrant animation and displays that deliver a dazzling visual and instructional experience
- Alignment functions and measurements are controlled via the wheel sensors, mouse and/or keyboard
- Self-explanatory graphic user surface provides simple understanding
- Compatible with low ride-height vehicles or those with ground-effects
- Self-centering adaptors cover an extended range of vehicles
- Cordless Bluetooth® sensors remove hassle of connecting cables
- Technician has the option to customize alignment units of measure, accuracy, language, etc.
- Technician has a choice of rolling or lifted runout modes
- Features self-diagnostic help screen and system information
- On-sensor controls permits users to operate selective computer software functions from any wheel location eliminating the need for countless return trips to the console
- Continuous checking ensures accurate toe measurements
- On-screen display indicates if sensor leveling is required
- Vehicle adjustment illustrations and multiple adjustment bar graphs
- Adjustment illustrations provide illustrated diagrams and instructional information of recommended OEM adjustment methods
- Valuable customer information can be conveniently stored in the database allowing shop personnel to quickly reference previous alignment work orders
- Convenient "spoiler setting" adjustments on the wheel-clamps for accommodating blocked front or rear line-of-sight of the sensors and provides accurate toe measurements
- "Before" and "after" measurements can be printed in full-color to explain service and record work performed

Standard Equipment

- Comfortable USB Keyboard provides user-friendly control of all alignment procedures
- (▲▲) Dell® OptiPlex® 360 PC with powerful Intel® Pentium Dual Core 2.50 Ghz processor provides high-powered processing with low-power consumption
- Genuine Windows® Vista SP1 Operating System
- Integrated Video Card
- 8 USB Ports (2 front, 6 back)
- (▲▲) Dell 17" E170S Flat Panel LCD Monitor (19" and 22" optional) designed for complete comfort and convenience for sharp and brilliant images of text and graphics.
- Mobile rolling cabinet with integrated storage
- 80GB SATA hard drive
- (▲) Dell® V1105 color printer with USB cable
- 2-Button computer mouse with scroll wheel
- Mouse pad
- Current year domestic and foreign car vehicle specifications

(▲) Comparable unit will be supplied if unavailable at time of purchase
 (▲) All supported by round-the clock Dell Technical Support

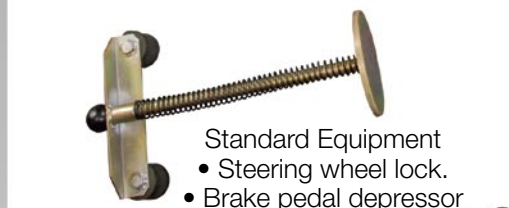
Nickel Metal Hydride (NiMH) is the next generation of rechargeable batteries that emerged after NiCd (Nickel-Cadmium Battery). They use hydrogen absorbing alloys in their negative electrode (anode) and nickel oxide in their positive electrode (cathode). NiMH batteries are more environmentally friendly than NiCd, and offer much greater battery capacity per volume than NiCd. Another major advantage of NiMH over NiCd is their ability to accept a charge at any time without suffering from "memory effect".



Battery Charging Station Console



Convenient Mouse Tray



Standard Equipment
 • Steering wheel lock.
 • Brake pedal depressor



Dell Color Printer



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CRT380R

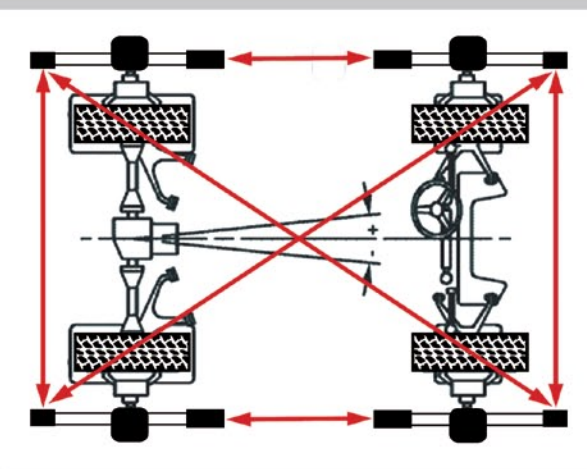
8-CCD
 4-Wheel
 Wireless Alignment System



Instantaneous Data Transfer

ProSpec® Software

Domestic / Foreign



Cordless Bluetooth® Sensors Remove Hassle of Connecting Cables

The 8-CCD wireless measuring sensor system consists of 8-CCD cameras which are fitted within the horizontal sensors (toe) and vertical sensors (camber and angle of steering inclination). As shown above, the 8 sensors form an enclosed 360° measurement field.

Optional

- Sensor calibration fixture

Equipment Specifications

Cabinet: 40" Width x 27" Depth x 50" Height
 Power Requirements: 115V / 1Ph, 50/60 Hz
 8 amp - 230V / 1Ph, 50/60 Hz / 8 amp

Specifications and equipment design are subject to change without notice.

CRT380R 8-CCD Wireless Four-Wheel Computerized Alignment System

The Ranger® CRT380R Alignment System is a highly accurate, four-wheel, wireless alignment system for domestic and foreign cars and trucks. It features 8-CCD technology, Bluetooth® data transfer and our refined ProSpec® Alignment software that was designed for simplicity and speed. All alignment steps from start-to-finish are clearly shown with vibrant animation and graphics providing a faster, more profitable and far easier to understand alignment procedure. This unique combination of user-friendly functionality and ease-of-use enables any business owner interested in providing alignment service as an additional profit source to do so with a minimal investment and training. ProSpec® software includes the essential software tools to perform fast, accurate alignments with factory results. It's easy to use, consistent and precisely-measurable, and requires minimal supervision. Technicians proceed easily and receive

immediate feedback and correction. Simplistic read results enable you to also identify potential problem areas specifically related to suspension components.

ProSpec® software was designed to give your wheel alignment service the best possible efficiency. It gives you the option of selecting the most effective measuring routines before starting wheel alignment procedures. Standard option for a program-guided routine with initial and final measurements - rapid procedure for measurements without caster steering angle and/or runout compensation or free measurement for checking individual values as required.

The Ranger CRT380R aligner combined with ProSpec® results-driven software guarantees:

- Increase in bottom line revenue
- 30 percent average increase in read-rate accuracy
- Fewer costly re-reads and investigations
- Decline in come-backs and customer complaints

8-CCD Wireless Bluetooth® Sensors

- Cordless Bluetooth® sensors remove hassle of connecting cables
- On-sensor controls permits users to operate selective computer software functions from any wheel location eliminating the need for countless return trips to the console
- Greater speed, improved range and accuracy and quick, precise measurement readings
- Instantaneous wireless data transfer as far away as 200-feet between sensors and CRT380R aligner
- Tough polymer casings and sturdy construction reduces potential damage to sensitive sensor components
- Contamination-proof touch-pad controls
- Improved ball-bearing actuators for precise pendulum movement
- Automatic battery-charging docking stations built right on the cabinet sides keeps sensors charged and ready at all times
- Sleep-mode function during vehicle adjustment periods to preserve battery life
- On-screen displays alert alignment technician of possible sensor adjustments required for precise, accurate readings
- Long-life 7.2 volt NiMH* batteries provide a full day of continuous operation

26" Capacity Wheel Clamps

- Aluminum alloy for light weight handling
- Heavy duty chrome rods with nickel-plated screw
- Extended 4-point clamping tips with thin profiles that fit a variety of custom wheel profiles
- Rugged construction



Compatible With Ground-Effects

Spoiler setting adjustments on the wheel-clamps accommodate blocked front or rear line-of-sight.



Dell® OptiPlex® 330 PC with powerful Intel® Pentium Dual Core 1.60 Ghz processor provides high-powered processing with low-power consumption.



ProSpec® Software / Screen Displays

- Front axle readings
- Rear axle readings
- Front & rear setback, SAI & thrust angle, included angle
- Super-Toe (Toe Out On Turns)
- Front Caster (-28° to +28°)
- Front & Rear Camber (-15° to +15°)
- Front & Rear Toe
- Elevated or rolling runout compensation
- Individual caster, toe and camber
- Individual zoom readings allows operators to clearly see screen and software function from any wheel position
- Elevated adjustments
- Help menu
- Visual vehicle adjustment help
 - Customer database with customer notes and comments
 - Before and after adjustment readings
 - Shop information
 - Large live measured-value displays make suspension adjustments easier
 - ProSpec® software is available in multiple languages. Check for current language availability.
 - Optional yearly specification and software updates are PC network available or by simply installing a new program cartridge.

Automatic Battery-Charging

Docking stations built right on the cabinet sides keeps sensors charged and ready at all times.

