Brand: Ranger
Model: CRT380R
Description: 8-CCD Wireless Alignment System

Designed to Give Your Wheel Alignment Service the Best Efficiency

The Ranger CRT380R Alignment System is a highly accurate, 4-wheel, wireless alignment system for domestic and imported cars and trucks. Designed for simplicity and speed, this essential system features 8-CCD technology, Bluetooth® data transfer and our refined ProSpec® Alignment software.

All alignment steps from start-to-finish are clearly shown with vibrant animation and graphics to provide a faster, more profitable and easier to understand alignment procedure. This unique combination of easy, user-friendly functionality and technological sophistication enables any business owner to provide superior alignment service with minimal investment and training. The ProSpec® software includes the essential tools for performing fast, accurate alignments with factory results. It's easy to use, consistent, precisely measurable and requires almost no supervision. Technicians proceed easily and receive immediate feedback and correction. Simplistic read results also enable you to identify potential problem areas specifically related to suspension components.

ProSpec® software was designed to give your wheel alignment service the best possible efficiency. With it, you can now select the most effective measuring routines before even starting wheel alignment procedures. Standard programming options include software-guided routines with initial and final measurements; rapid procedures for measurements without caster steering angle and / or runout compensation or "free" measurement for verifying individual values as required.

8-CCD Wheel Sensors

- Cordless Bluetooth® sensors remove hassle of connecting cables
- On-sensor controls permit users to operate selective computer software functions from any wheel location, eliminating the need for countless return trips to the console
- Improved range and accuracy, greater speed, and quick, precise measurement readings
- Instantaneous wireless data can communicate a distance of 200 ft between sensors and aligner unit
- Sturdy construction and tough polymer casings reduce potential damage to delicate sensor components
- Contamination-proof touchpad controls
- Improved ball-bearing actuators for precise pendulum movement
- Automatic battery-charging docking stations built right on the cabinet sides keep sensors charged and ready at all times
- Sleep-mode function during vehicle adjustment periods preserve battery life
- On-screen displays alert alignment technician of possible sensor adjustments required for precise, accurate readings
- Long-life 7.2-V NiMH* batteries provide a full day of continuous operation

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 and 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 1024 adjacent segments. From the beam intensity on the different segments, it is possible to calculate the beam deflection and the corresponding angle. Here, high precision is achieved by an upstream lens that reduces the point-shaped light beam to a line and the downstream camera's detection of the lightest area of the light line. The individual control procedures and data streams are transmitted between the measurement sensor and the receiver in the equipment cabinet via infrared signal.

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

What is Bluetooth?

Bluetooth® is a completely different way to form connections between electronic devices in close proximity. Bluetooth® technology has practically limitless applications and makes traditional data cables obsolete. And it uses the 2.4 GHz Industrial-Scientific-Medical (ISM) band.

Bluetooth® is both wireless and automatic. You don't have to keep track of cables, connectors and connections, and you don't need to do anything special to initiate communications. Devices find each other automatically and start conversing without user input. It works quietly in the background, without troubling the service professional even for a second.

Signals are omni-directional and can pass through walls. Devices don't need to be perfectly aligned or have an unobstructed line of sight. And Bluetooth® is safe and secure for your equipment and private information. Other Bluetooth® devices are identified by both their Personal Identification Numbers (PIN) and a Bluetooth® address. Instead of transmitting over one frequency within the 2.4 GHz band, Bluetooth® radios use a fast frequency-hopping spread spectrum (FHSS) technique, allowing only synchronized receivers to access the transmitted data.

Bluetooth® devices switch frequencies at an incredible pace of 1,600 times per second and the data packets are kept infinitesimal to ensure that interference from other RF sources is extremely improbable. Both Bluetooth and classic WLAN can co-exist without a problem. Since Bluetooth devices use Frequency Hopping and most WLANs use Direct Sequence Spreading techniques, they each merely appear as background noise to the other.

26" Capacity Universal Wheel Clamps

- Aluminum alloy for light weight handling
- Rugged construction
- Heavy-duty chrome rods with nickel-plated screws
- Extended, 4-point clamping tips with thin profiles that fit a variety of custom wheel profiles
- Inside and outside tip positioning

ProSpec® Software / Screen Displays

- Front axle readings
- Rear axle readings
- Front & rear setback
- SAI & thrust angle included
- 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
- Targeted 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, real-time 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 available via PC network or by simply installing a new program cartridge

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
- Compatible with low profile vehicles and those with ground-effects
- Self-centering wheel-clamp adaptors cover an extended range of vehicles
- Cordless Bluetooth® sensors remove the hassle of connecting cables
- Technician has the option to customize units of measurement, 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
- Displays 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 accommodates blocked front or rear sensor line-of-sight and still provides accurate toe measurements
- "Before” and “after” measurements can be printed in full-color to explain service and record work performed

Standard Equipment

- Dell® OptiPlex E2200 PC with powerful Intel® Dual Core 2.20 GHz processor provides high-powered processing with low-power consumption
- Dell® 17” E178FP Flat Panel LCD Monitor (19” and 22” optional) displays brilliantly sharp text and graphics
- Canon® PIXMA iP1800 color printer with USB Cable
- Genuine Windows® Vista operating system
- Integrated video card and sound card
- Internal chassis speaker option
- 8 USB ports
- 80GB SATA hard drive
- USB 2-button optical mouse and pad
- USB keyboard
- Current year domestic and foreign car vehicle specifications
- Mobile rolling storage cabinet
- All supported by round-the clock Dell Technical Support
- Comparable unit will be supplied if unavailable at time of purchase
- Brake pedal depressor

Optional Equipment

- Sensor calibration fixture

Equipment Specifications

- **Cabinet:** 40” x 27” x 50” / 1016 mm x 687 mm x 1270 mm
- **Power Requirements:** 115 V / 1 Ph, 50-60 Hz / 8 amp – 230 V / 1 Ph, 50-60 Hz / 8 amp
- **Shipping weight:** N/A
- **Shipping dimensions:** N/A

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