System 411 Standard PC Hardware
Multimedia Processor
16 MEG RAM
2.8 Gig HDD (or greater)
UVGA Graphic Card
CD ROM Drive
Pointing Device

System 411 Standard Software
WinAlign® Alignment Software
ALLDATA® Undercar (12 month access as available from manufacturer)
Windows® 95

Standard Accessories
(when ordering console and sensors)
Okidata 184 Turbo Printer
PC/AT Keyboard
Steering Wheel Holder
Brake Pedal Depressor
Wireless Remote Control
Passenger Car & Light Truck Turning Angle Gauges

Power Requirements
115V, 1-Ph, 50/60 Hz

Options
Memory Upgrade, 16 to 32 Meg of RAM, 20-1232-1
Multimedia Software (Digital Images), 20-1196-1
Combination CD Photo/CD Video Kit, 20-1392-1
S411 special wiring kit, 20-1288-1
Premium Color Printer Package, 167-77-1
Premium Laser Printer, 167-74-1
External Multi-Drive CD Changer, 20-1262-1
Remote Indicator, LED, 30-328-1
Wireless Remote Control, 20-1371-1

Wheel Adaptor Extension, 20-1097-1
Tire Clamp Adaptor, 20-1108-1
Wheel Kit Software Kit, 20-1313-1
Stainless Steel Turnplates (upgrade on an aligner purchase, 2 turnplates included), 20-1411-1

For detailed information on models, cabinets and accessories, contact your Hunter representative.

WinAlign® software upgrades may require additional and/or upgraded hardware. Because of continuing technological advancements, specifications, models and options are subject to change without notice.

Automatic Bushing Calculator (ABC), Cal-Check, CAMM, ExpressAlign, Level Reminder, PRO-COMP, SHIM-SELECT, WinAlign, WINTOE are marks of Hunter Engineering Company.
The 411’s powerful multimedia processor and Windows ® 95 accelerate operating speed. WinAlign ® Software makes alignment as easy as 1, 2, 3.

1. Select Vehicle Make and Model
Vehicle specifications can be selected two ways:
- Scroll through the specifications list.
- Enter the Vehicle Identification Number (V.I.N.)

2. Measure Angles
After compensation, camber, toe, and thrustline measurements are displayed. Caster, SAI and IA are displayed following caster turn.

3. Adjust Vehicle
Patented bar graph shows the amount and direction of adjustment required. As you make adjustments the arrow moves across the target. The target changes from red to green as the alignment comes within specification.

Measurement and Adjustment Displays
Front and rear measurement and adjustment screens display bar graphs for caster, camber and toe. There’s no need to change from screen to screen. Measurements in red are out of specification, those in green within specification, those in blue have no specification.

Adjustment Photos
Vehicle-specific digital photos* improve productivity by quickly identifying adjustment points. Callouts tell the technician where and how to make adjustments. (Digital photos are optional; illustrations are a standard feature.)

* Patented Feature

Shown on front cover: P411M-17 with 17” UVGA color monitor.
POINT & CLICK FEATURE - (See Form 3964T) Combines vehicle-specific inspection list and digital inspection photos or 3D illustrations on the same screen. Click with pointing device to set inspection status for each part. Use the printout to explain the need for service.†

MOTORIST ASSURANCE PROGRAM UNIFORM INSPECTION COMMUNICATION GUIDELINES - (See Form 3672T) can be instantly accessed from the vehicle inspection program for many steering, suspension, brake and ABS parts specific to the vehicle selected.

LIVE ACTION INSPECTION VIDEOS - (See Form 3701T) Suspension component inspection procedures can be accessed instantly from the WinAlign inspection screen. Procedures comply with “MOTORIST ASSURANCE PROGRAM UNIFORM INSPECTION COMMUNICATION GUIDELINES.” (Videos require optional CD PHOTO/CD VIDEO** Kit #20-1392-1.)

CRADLE INSPECTION - (See Form 3298T) Illustrations and digital photos provide a quick guide for inspection and correction of cradle-to-body alignment based on factory recommended procedures.†

TOOLS & KITS DATABASE - (See Form 3943T) Helps the technician make the right selection for the specific vehicle and adjustment angle. Displays hand tools, special tools and correction kits.

CAMM™ - (Control Arm Movement Monitor)* - (See Form 3873T) Cuts adjustment time in half on vehicles with front shim, dual cam or dual slot adjustments. Adjustment can be made first time - no trial and error. (32% of vehicles on the road today use this type of adjustment.)

WINTOE® Procedure* - (See Form 3877T) Eliminates need to readjust toe on one side because of movement on the opposite side. Use on any vehicle with adjustable “individual toe” - works with all passenger cars and light trucks on the road today.

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** Patent Pending
† Digital photo versions shown require optional Multimedia Software Kit.

- Patent Feature

* Patent Feature
ExpressAlign®* - (See Form 4210T) Each job is analyzed by the computer and reduced to the minimum steps required to align the car. No unnecessary steps.

ELECTRONIC RIDE HEIGHT* MEASUREMENT - (See Form 3693T) Reduces measurement time to seconds per wheel. Instantly compares measurements to specifications. Provides quick diagnosis of sagging springs. (Optional)

ADJUSTMENT PHOTOS* - (See Form 3505T) Over 2000 vehicle specific digital photos increase productivity by quickly identifying suspension parts and adjustments. Callouts show the technician where and how to make adjustments. (Optional)

ADJUSTMENT VIDEOS - (See Form 3701T) See and hear live video adjustment demonstrations for the angle and type of vehicle being aligned. Includes the use of special tools and kits. (Videos require optional CD PHOTO and CD VIDEO** Kit # 20-1392-1.)

SBDA - Suspension Body Dimension Audit** (See Form 4239T) Provides a quick screening to determine if the vehicle is alignable, identifies need for body shop procedures. Ride height and body offset measurements are quickly taken using a special tool. (SBDA is a standard feature of WinAlign® 3.0 Software. Requires DSP 300 Sensors Electronic Ride Height Measurement option.)

ELECTRONIC ADJUSTMENT PHOTOS - (See Form 3505T) Over 2000 vehicle specific digital photos increase productivity by quickly identifying suspension parts and adjustments. Callouts show the technician where and how to make adjustments. (Optional)

ALIGNMENT PROCEDURE BAR - (See Form 3929T) The bar is a floating toolbar that displays an icon for each alignment procedure. The icons are arranged in order from the first step you must complete to the last step. A check mark will appear when the procedure has been completed. When an icon is selected, the corresponding procedure screen will appear.

Automatic Bushing Calculator™** (ABC) - (See Form 4249T) Bushings adjustment display shows required bushing and position to make desired change in caster and camber on twin I-beam trucks. Cuts adjustment time in half.

ALLDATA® Undercar is a subset of the popular ALLDATA® Diagnostic and Repair system. (See Form 4237T) It provides thousands of pages of vehicle-specific undercar repair information for passenger cars and light trucks.

** Patent Pending
* Patented Feature
** Patent Pending

Digital photo versions shown require optional Multimedia Software Kit.
Training

OPERATION VIDEOS - can be accessed for every step of the alignment – including equipment operation and procedures, mounting and compensation of wheel sensors and electronic ride height measurement. Just-In-Time and On-The-Job Training also included. (Videos require optional CD PHOTO/CD VIDEO** Kit #20-1392-1.)

INSPECTION & ADJUSTMENT VIDEOS - Just-In-Time Training lets the technician access context sensitive videos on proper inspection and adjustment procedures specific to the vehicle on the lift. (Videos require optional CD PHOTO/CD VIDEO** Kit #20-1392-1.)

On-The-Job Training segments help the novice learn inspection and adjustment procedures for specific types of vehicles. (Videos require optional CD PHOTO/CD VIDEO** Kit #20-1392-1.)

CD VIDEO Option

- Just-In-Time Training for the experienced technician.
- On-The-Job Training for the novice.

Additional WinAlign Training Resources

- Complete On-Line Information Manual allows the technician to access detailed operation procedures.
- Step-by-step “Getting Started” HELP program provides information on specific topics or procedures at the touch of a softkey.
- MOOG Ball Joint Specification HELP Information
- ALLDATA® Under-Car
- Motorist Assurance Program, Uniform Inspection and Communication Guidelines

** Patent Pending

Merchandising

PRINTOUTS OF POINT & CLICK INSPECTION PHOTOS - may be used to explain needed parts and repairs, including use of aftermarket kits. Printout combines a vehicle-specific digital photo with an inspection list. The technician can set the status for each part.

PRINTING ALIGNMENT RESULTS - (See Form 4011T) Measurement may be printed to show the need for alignment and assure the vehicle owner the work was done correctly.

WORK MANAGEMENT FEATURES - (See Form 3869T) Recall saved alignment jobs for reference. Database provides an easy way to store valuable customer information. Use for customized mailers to generate alignment service. Create charts for management reports.
**DSP400 Sensors**

DSP400 Sensors are designed to be used with Hunter’s patented WinAlign® Software which includes the most comprehensive alignment information database in the industry. (See Form 4240T)

- DSP400 Sensors provide the same high-speed screen updates as conventional sensors.
- Targets do not require calibration. No electronics or cables at the wheel.
- Four digital video cameras continuously monitor targets and automatically calculate and display live alignment readings.
- DSP400 Sensors are compatible with any Hunter Series 411 Aligner using WinAlign 3.1 or greater, or Series 211 that has been upgraded to a 411.
- Like other Hunter Sensors, DSP400 Sensors allow for the alignment rack to be raised for vehicle adjustment.
- Uses rolling or jacking compensation.

**DSP300 Sensors**

DSP306 and DSP308 Sensors feature a Digital Signal Processor that acquires measurements and actually processes data at the sensor, speeding display of alignment information. (See Form 4079T)

**HFSS Cordless® Sensors**

Available 306-HFSS and 308-HFSS Cordless Sensors feature a High Frequency transmitter in the sensor that sends data to a receiver mounted on the console. No cables to connect. Signal is virtually uninterruptable, even by solid objects. Low-cost lead acid batteries provide approximately 8 hours of continuous operation. Docking Station® recharges sensors between jobs.

**PRO-COMP®** For easy, precise runout compensation. Make one trip around the car, compensating each sensor as it is mounted. Continuous compensation means that if the wheel then rotates, the sensor will continue to read accurate alignment angles.

**Level Reminder®** Standard on front DSP306 Sensors and all four DSP308 Sensors. On-screen display indicates if leveling is required.

**DSP308 Sensors With Cal-Check®** Sensors feature rear toe arms for total around car calibration checking. Continuous check insures accurate toe calibration. An on-screen display alerts the technician if calibration is required.

**Optional Equipment & Software**

**PREMIUM COLOR PRINTER** - May be used to print color alignment summaries, inspection & adjustment photos.

**LASER PRINTER** - Faster printouts at 4 pages per minute and 300 dpi printing. May be used to print inspection and adjustment photographs.

**WHEEL ADAPTOR EXTENSION** - Increases maximum wheel size that the self-centering adaptor will fit from 18 in. (457 mm) to 20 in. (508 mm).

**TIRE CLAMP ADAPTOR** - Grips onto tire tread, protects alloy wheels from damage. Ideal for wheels with no rim lip, tires equipped with a flange guard, or when space between tire rim is limited.

**ALLDATA® Complete Diagnostic and Repair System.** Optional features include Underhood Information, Parts and Labor estimating, Multi-Machine License, etc..

Available under several subscription plans.

**LED REMOTE INDICATOR** - Provides complete control while making vehicle adjustments. View a measurement at the touch of a key. Display provides graphic indication of the wheels, live measurement indicator.

* Patented Feature