HUNTER Engineering Company

HUNTER 3 Year Warranty hunter.com/warranty

MADE IN USA
USING THE FINEST US & GLOBAL MATERIALS

ULTIMATE ADAS®

World-class wheel alignment and ADAS in one!

OPERATIONS MANUAL

Form: AM08074-00
12/19/2024
Supersedes 06-24

Standard Operation Video

Table of Contents

1. Getting Started

This manual provides operation instructions and information required to operate the Ultimate ADAS™ with WinAlign® software version 16.x or higher. The owner of the aligner is solely responsible for arranging technical training. Only a qualified trained technician should operate the aligner. Maintaining records of personnel trained on this equipment is solely the responsibility of the owner and management. Read and become familiar with all the contents of these instructions.

The owner of the aligner is solely responsible for arranging technical training. Only a qualified, trained technician should operate the aligner. Maintaining records of personnel trained is solely the responsibility of the owner and management.

SYSTEM REQUIREMENTS (Included)

HW2 Series PC or higher, with 4GB of RAM or higher, running Windows® 10 or higher with ACER EB1 Series 32" LED Monitor. WinAlign® software version 17.x is a 64-bit program. Iogear 4K wireless HD TV connection kit and wireless keyboard and mouse combo (GKM552RB). HP OfficeJet Pro 8210 Printer and CyberPower battery backup (CP850AVRLCD).

> *WinAlign Quick Start Guide*

> *WinAlign Full Operations Manual 17.x*

1.1. Corporate Information

Hunter Engineering Company

Addr:	11250 Hunter Drive, Bridgeton, MO 63044 USA
Ph:	314-731-3020
Web:	*www.hunter.com*

1.2. For Your Safety

1.2.1. Hazard Definitions

Watch for these symbols:

CAUTION
Hazards or unsafe practices, which could result in minor personal injury or product or property damage.

WARNING
Hazards or unsafe practices, which could result in severe personal injury or death.

DANGER
Immediate hazards, which will result in severe personal injury or death.

These symbols identify situations that could be detrimental to your safety and or cause equipment damage.

1.2.2. Important Safety Instructions - Electrical

Do not operate equipment with a damaged cord or equipment that has been dropped or damaged until examined by a Hunter Service Representative.

If an extension cord is necessary, it must have a current rating equal to or more than that of the equipment. Cords rated for less may overheat. Arrange the cord so that it will not be tripped over or pulled.

Never use the cord to pull the plug from the outlet. Do not let cord hang over any edge or contact fan blades or hot manifolds.

Verify that the electrical supply circuit and the receptacle are properly grounded.

To reduce the risk of electrical shock, do not use on wet surfaces or expose to rain.

Verify the appropriate electrical supply circuit is the same voltage and amperage ratings as marked on the equipment before operating.

WARNING
DO NOT ALTER THE ELECTRICAL PLUG. Plugging the electrical plug into an unsuitable supply circuit will damage the equipment and may result in personal injury.

When servicing the Hunter equipment, power must be disconnected by removing the power cord from the electrical outlet. Ensure that the power switch is in the off position ("O" position) before plugging the power cord into the electrical power outlet.

Wireless connection between PC and monitor will provide product communication after installation is complete.

WARNING
NOT FOR USE IN A COMPUTER ROOM AS DEFINED IN THE STANDARD FOR PROTECTION OF ELECTRONIC COMPUTER/DATA PROCESSING EQUIPMENT, ANSI/NFPA 75.

DANGER
This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instruction manual, it may cause interference with electronic devices. Operation of this equipment in a residential area may cause interference in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

1.2.3. Important Safety Instructions - Operation

To reduce the risk of fire, do not operate equipment near open containers of flammable liquids (gasoline). Read and follow all caution and warning labels affixed to your equipment and tools. Misuse of this equipment can cause personal injury and shorten the life of the equipment. Keep all instructions permanently with the unit. Keep all decals, labels, and notices clean and visible. To prevent accidents and/or damage to the equipment use recommended accessories.

Use Hunter equipment only as described in this manual. Never stand on the equipment. Wear non-slip safety footwear when operating the equipment. Keep hair, loose clothing, neckties, jewelry, fingers, and all parts of body away from all moving parts. ALWAYS WEAR OSHA APPROVED SAFETY GLASSES. Eyeglasses that have only impact resistant lenses are NOT safety glasses. Adequate ventilation should be provided when working on operating internal combustion engines.

Never stand on the aligner.

WARNING
Adequate ventilation should be provided when working on operating internal combustion engines.

DANGER
Do not turn the power off when the disk drive is operating. The disk can be damaged.

1.3. Precautions for Systems Equipped with HFSS, XF and XF2 Cordless Sensors

The following precautions apply to the HFSS, XF and XF2transceivers installed in the aligner console and the alignment sensors as part of the HFSS, XF and XF2 cordless sensor option.

DANGER
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

DANGER
Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

WARNING
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

1.4. Specific Precautions / Power Source

NORTH AMERICAN

The PC aligner is intended to operate from a power source that will apply 120 VAC (nominal) 50/60 Hz between the supply conductors of the power cordset.

INTERNATIONAL

The PC aligner is intended to operate from a power source that will apply 230 VAC (nominal) 50/60 Hz between the supply conductors of the power cordset. The power supply cordset, supplied with this equipment, may need modification to allow connection to the power supply mains. Your Hunter service representative will install the proper plug for your location.

WARNING
A protective ground connection, through the grounding conductor in the power cord, is essential for safe operation. Use only a power cord that is in good condition.

FUSING: To avoid fire hazard, use only the fuse specified for your product.

EQUIPMENT SERVICE: This equipment contains no user serviceable parts. All repairs must be referred to a qualified Hunter Service Representative.

PROVISIONS FOR LIFTING AND CARRYING: No provision has been made for lifting or carrying this equipment. The unit must be moved by rolling it on its casters.

UPS (Battery Backup): The Battery's state of charge and amp draw will dictate the length of time. There is an audible beep, and the cadence of the beep increases as the time gets lower. The faster the beep the quicker it will need plugged back in. With state of charge and amp draw in mind expect 5-15 minutes.

1.5. Specific Precautions / Lasers

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

NOTE
Lasers are controlled by software and only the position of the unit is controlled by the operator.

WARNING
Laser Radiation: Avoid Direct Eye Exposure.

The Optical Scan Laser is a Class 3R laser designed to measure the profile of wheel assemblies. The laser is not a field serviceable part. No maintenance is to be performed on the laser. (New 3R Laser)

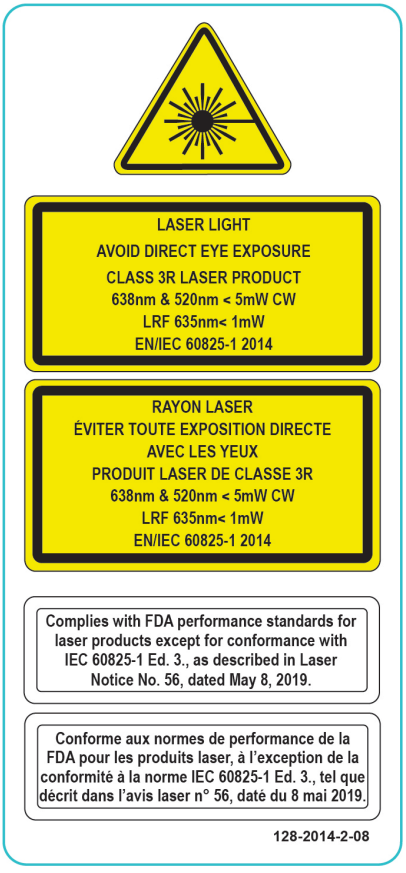
Decal: 128-2014-2-08

Wavelength:	520nm
Laser Power for Classification:	<5mW
Emission Type:	CW
Divergence:	0.6 mRad
Beam Diameter:	3.5 mm at aperture
Fan Angle:	60°

The Optical Scan Laser is a Class 2 laser designed to measure the profile of wheel assemblies. The laser is not a field serviceable part. No maintenance is to be performed on the laser. (New 3R Laser)

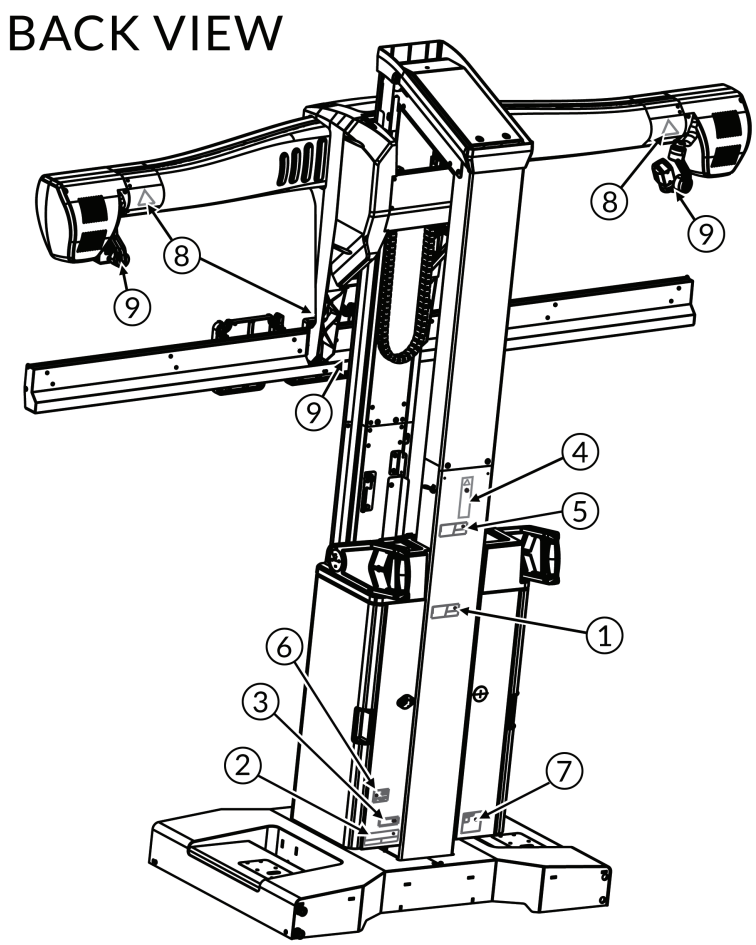
Decal: 128-2014-2-08

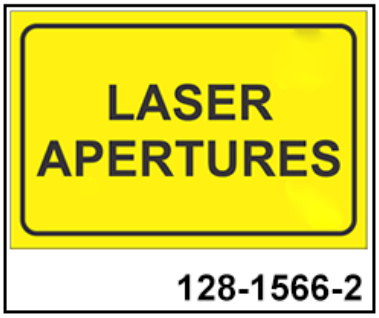
Wavelength:	635nm
Laser Power for Classification:	<0.95mW
Emission Type:	Pulse
Divergence:	0.16 mrad x 0.46 mrad
Beam Diameter:	4 mm x 2 mm (exit aperture)



The Optical Scan Laser is a Class 3R laser designed to measure the profile of wheel assemblies. The laser is not a field serviceable part. No maintenance is to be performed on the laser. (New 3R Laser) Decal: 128-2014-2-08	
Wavelength:	635nm
Laser Power for Classification:	<3mW
Emission Type:	CW
Divergence:	0.6 mRad
Beam Diameter:	6 mm at aperture

1.6. Decal Labels and Placement





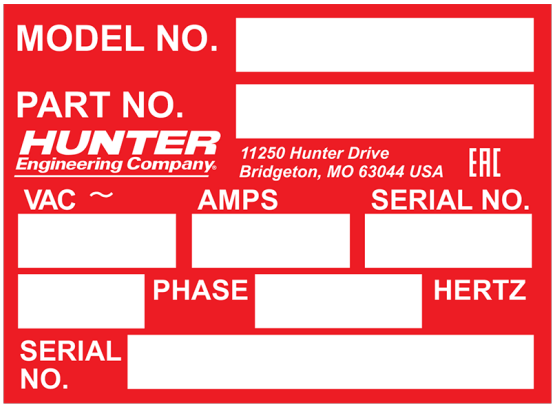
Label #	Part #	Decal Description
1	128-381-2-08	Decal - Not Serviceable Warning
2	128-1010-3	Decal - Composite R/S811
3	128-1696-2	Decal - XF2 HIPWR Approval
4	128-2014-2-08	Decal - Laser Explanatory U ADAS
5	128-381-2	Decal - Not Serviceable Warning
6	24-51-2	Decal - Nameplate-Hunter Model and Part (Serial Plate)

Label #	Part #	Decal Description
7	24-190-2	Decal - Nameplate-Hunter Patents
8	128-2015-2	Decal - Laser Warning
9	128-1566-2	Decal - Laser Aperature

1.6.1. Explanation of Symbols

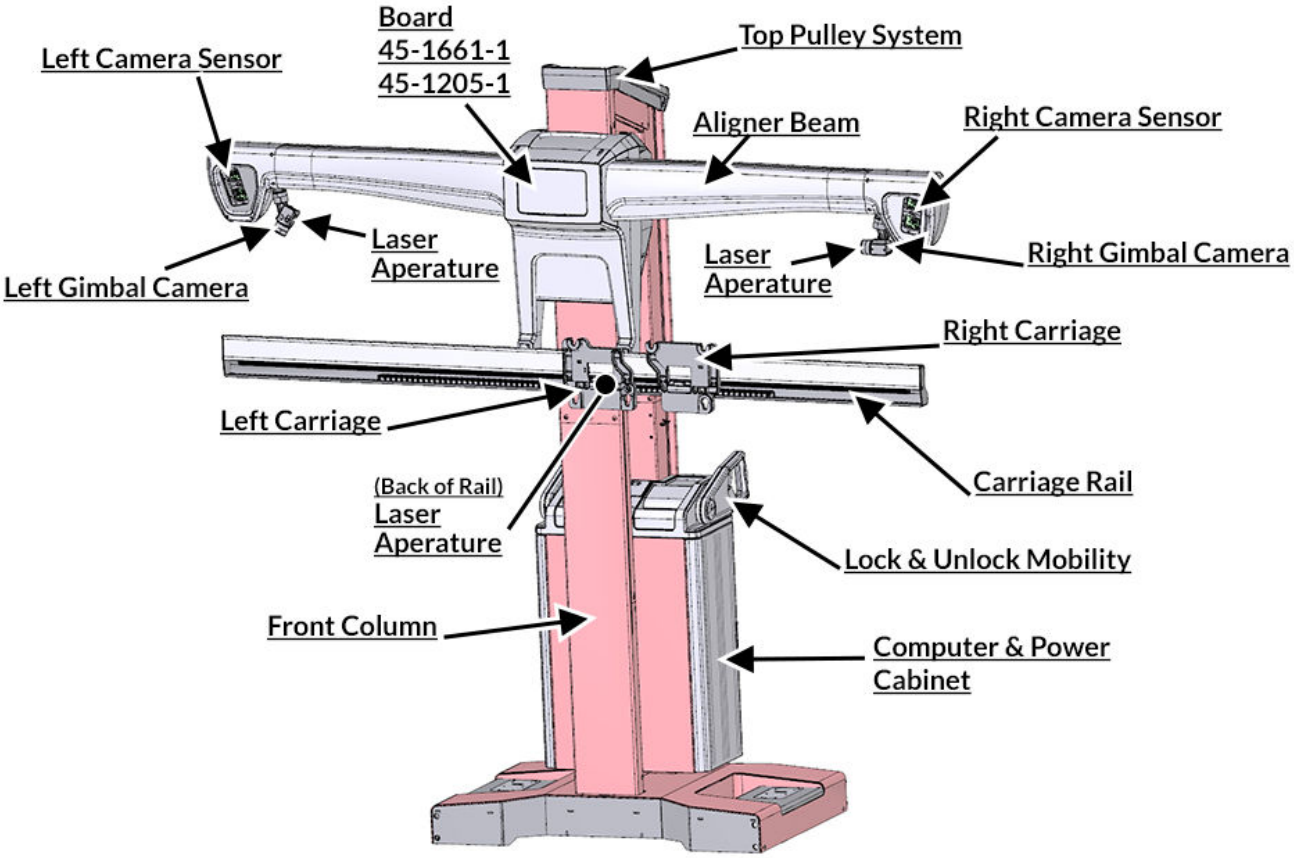
	Alternating Current
	Earth ground terminal
	Protective conductor terminal
	ON / OFF (Supply) condition
	Risk of electrical shock
	Stand-by Switch
	Not intended for connection to public network

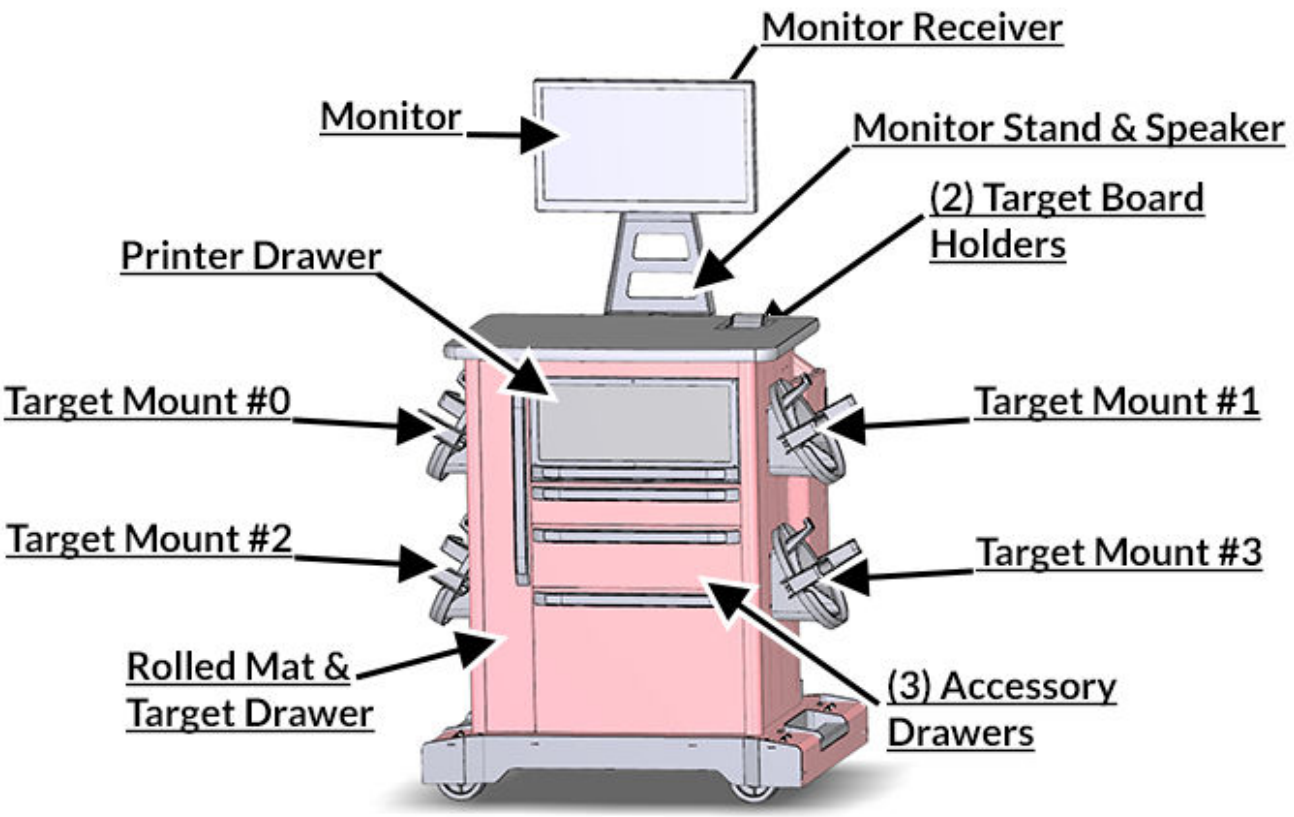
A manufacturer's identification label is on the bottom rear of the tower and the back of the ADAS rail. 24-51-2 Decal - Name Plate - Hunter Model & Part (Serial Plate).



1.7. *Ultimate ADAS Specifications Form AS08085-00*

1.8. Equipment Component Diagram





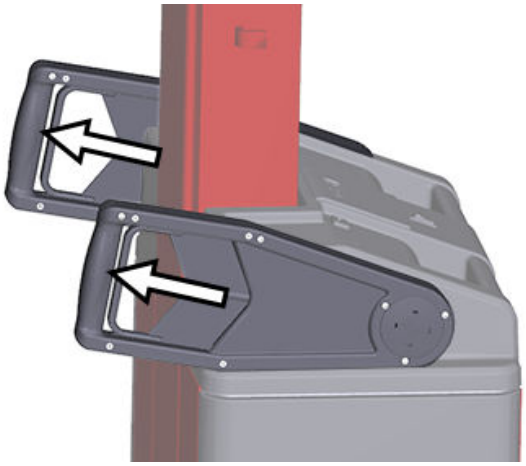
2. Basic Operation

2.1. Moving and locking the Unit in place

The unit has 4 wheels on the bottom and can be rolled to a specific location and then locked.

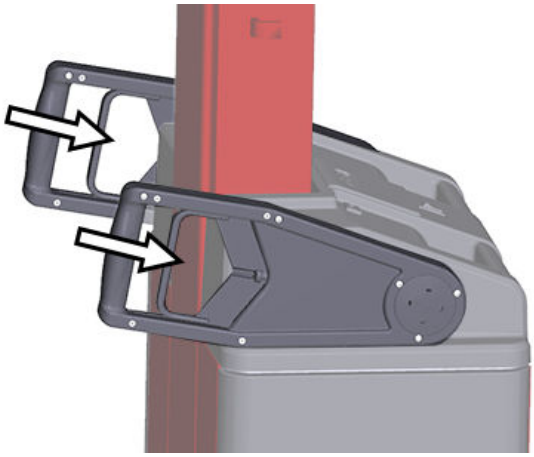
MOBILE POSITION (Unlocked)

To move unit, squeeze and hold triggers on both arms as show below. While holding triggers, begin pushing or pulling unit slowly to desired location.



IMMOBILE POSITION (Locked)

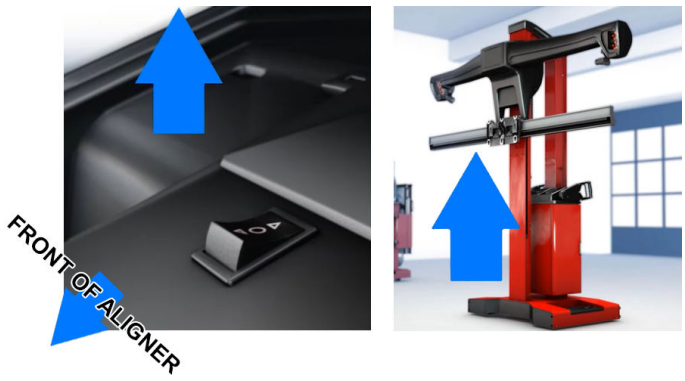
To lock unit, let go of triggers so they retract back into locked position. Do not attempt to push or pull unit while in locked position.



2.2. Crossbeam controls

Press and Hold the DOWN arrow to move the crossbeam downward.

Press and Hold the UP arrow to move the crossbeam upward.



WARNING
Keep Cabinet doors fully closed while lowering and raising crossbeam.

3. Operating the Console

Individual consoles will vary due to specific model number and production date.

TURNING MAIN TOWER UNIT POWER ON: Ensure unit is plugged into power. Turn the Battery unit on from the inside of the cabinet.

TURNING PC CONSOLE POWER ON: Turn the Computer power “On”, the IOgear transmitter & monitor receiver "On", and then turn the monitor power "On".

The “Logo” screen will appear and indicate that the unit is ready for use. This will take approximately 1.5 minutes.

TURNING CONSOLE POWER OFF

To turn off the aligner power, do the following:

1. Press “Exit Aligner”. A “Confirmation” pop-up screen will ask if you are sure you want to exit the aligner. Press “Yes”.
2. Wait for the aligner program to end. The aligner will shutdown automatically.
3. Windows > Power > Shutdown

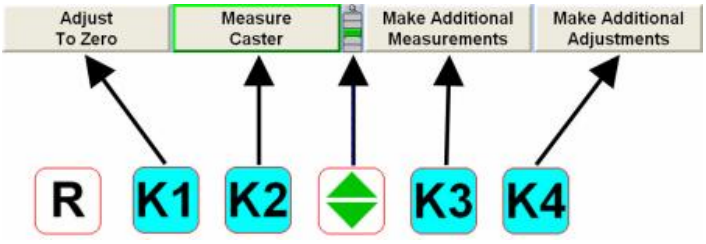
WARNING
Do not turn off the power while information is being written to the disk drive. This occurs during console setup and when specifications are being stored. This can result in corrupt disk drive files.

USING THE SOFTKEYS (Keyboard)

The softkeys, located on the keyboard, provide operator control of the program. These keys are identified as:

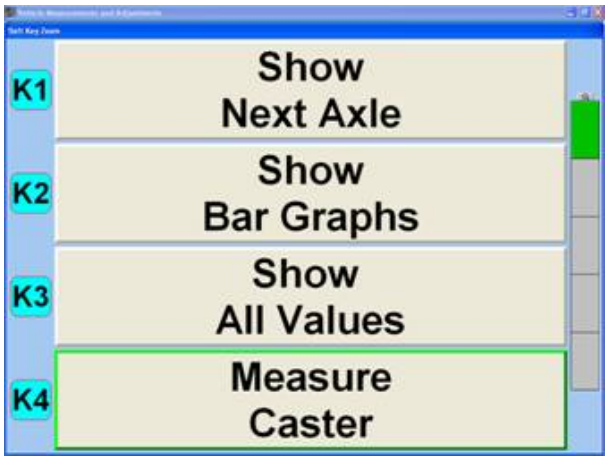
K1	K1 key		Forward key
K2	K2 key		Backward key
K3	K3 key		Zoom key (keyboard)
K4	K4 key		Zoom softkey (screen display)
	Menu shift key	R	Reset key

The four labels that appear at the bottom of each screen are referred to as the softkey labels. These labels indicate the action that the program will take when the corresponding K1, K2, K3, K4 or key is pressed.



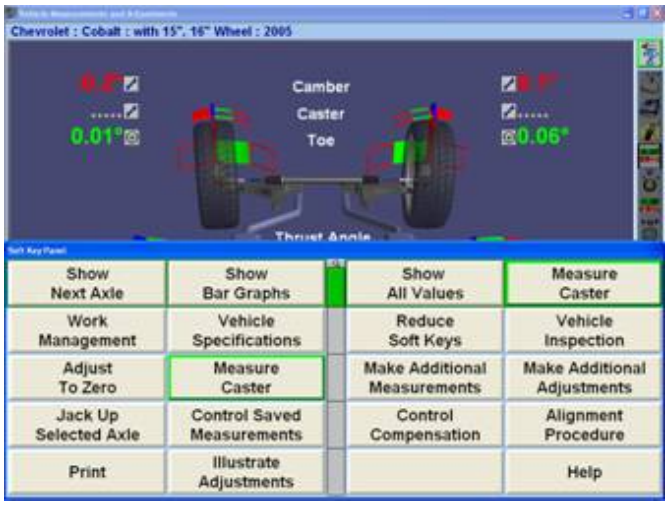
The vertically stacked squares between the “K2” and “K3” labels indicate how many levels of softkeys are available.

The highlighted box indicates the menu level that is currently displayed. The softkey level is changed by pressing the menu shift softkey, . When this key is pressed, the softkey labels will change to the next level down. If the last menu level is currently displayed, the softkey level will be the first softkey level. To go to the next softkey level up, press Shift and .



Pressing Shift and will zoom the current softkey level to a full screen version as seen below. The softkeys associated with the softkey label are shown on the left side of the labels and the softkey level is indicated on the right side of the labels. Pressing again will cause the softkey level to return to the original view.

Pressing , or selecting above the softkey levels, or pressing and holding with a pointing device on the menu level indicator will cause all of the menus available to appear, as seen below.



The green background indicates the active menu level. Pressing again will cause the menu to return to the original perspective.

The number of softkeys displayed may be reduced to only the number of softkeys needed for a typical alignment by enabling Reduce Number of Softkeys in Aligner Setup. Refer to "*Aligner Setup.*"

Throughout this manual, the statement Press "nnnnnnn" indicates the label of the softkey to press. If the required label is not on the current menu, must be pressed to change menu levels until the desired label is displayed.

Some softkeys have a green color. Generally, the softkey with the green color (usually K4) is the appropriate key to press to continue with the procedure being performed, as seen below.

3.1. Powering ON order

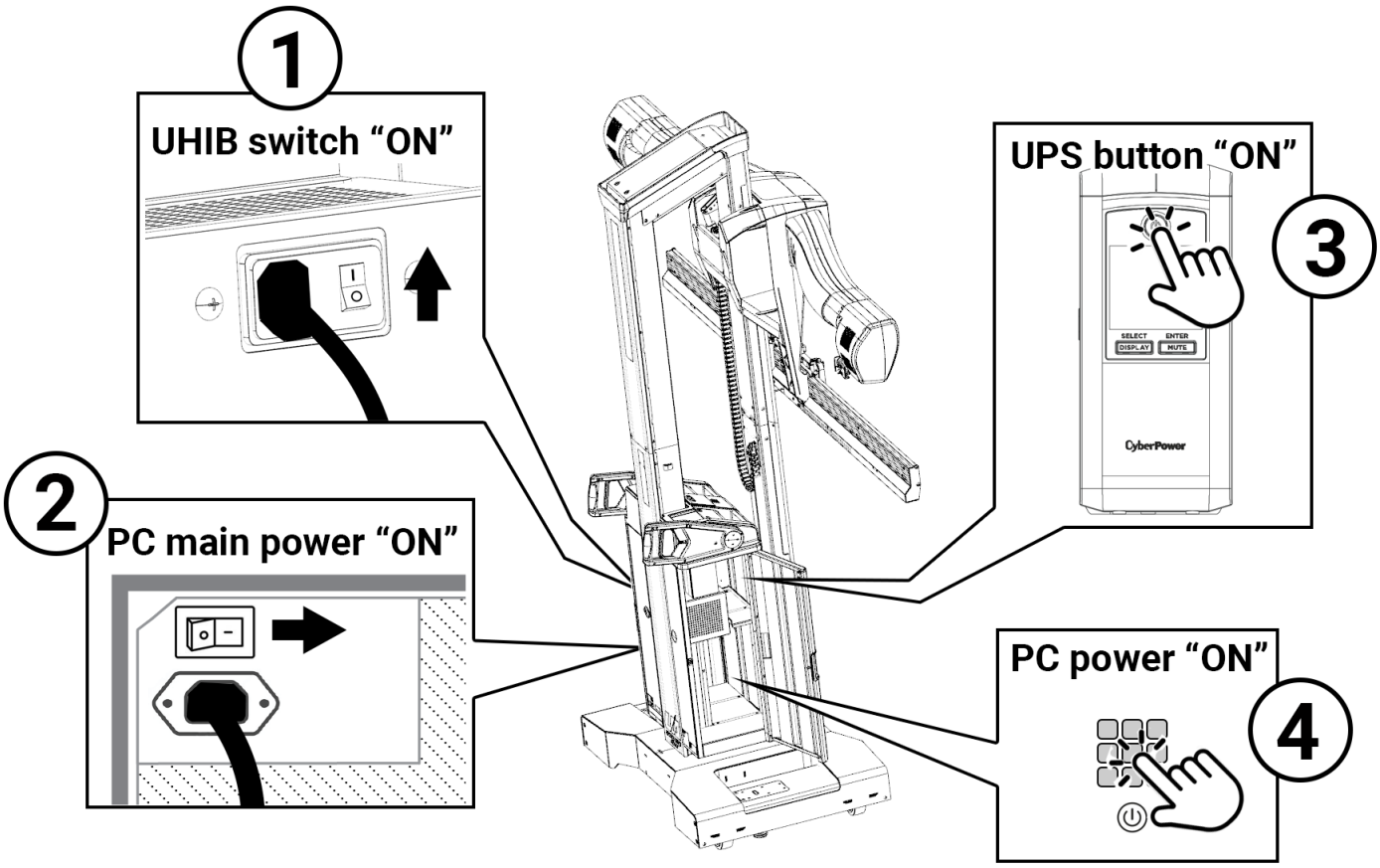
Ensure Rolling console, IOgear & Monitor are powered. Turn the Monitor power on (small button located on the right-underside of the screen)

Ensure Tower Aligner is powered.

1. Turn the UHIB rocker switch "ON".
2. Ensure main PC power switch is "ON"
3. Power "ON" UPS Battery.

> **NOTE**
> UHIB and PC should automatically power on at the same time.

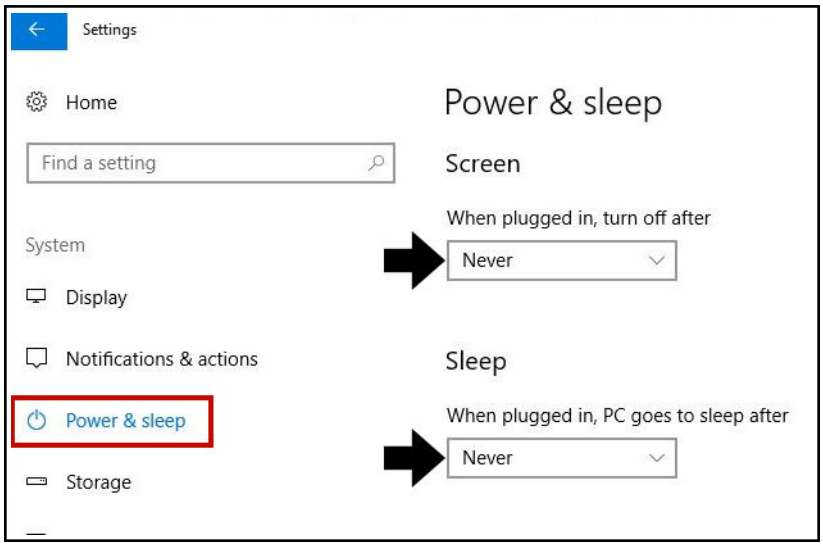
4. If needed, turn the PC "ON" with the push button on the front.



3.2. PC Power & Screen Settings

IMPORTANT
Before usage, Hunter highly recommends changing your PC power & screen settings to **NEVER** shut off and enable the screen saver to **3D Text**.

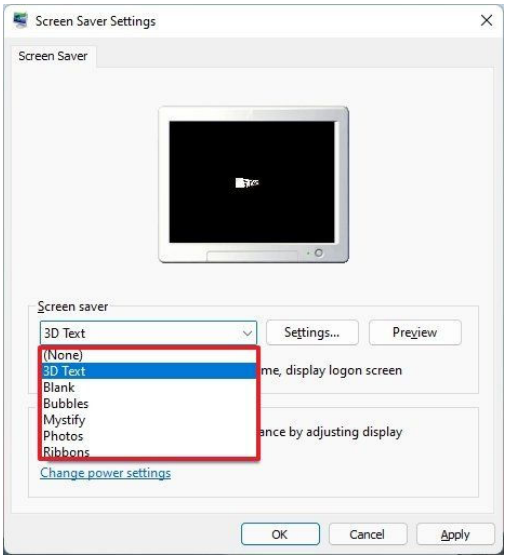
1. From the desktop screen, RIGHT click > Display Settings > Power & Sleep.
2. Drop down menu "When plugged in, turn off after" and select **Never**.
3. Drop down "When plugged in, PC goes to sleep after" and select **Never.**



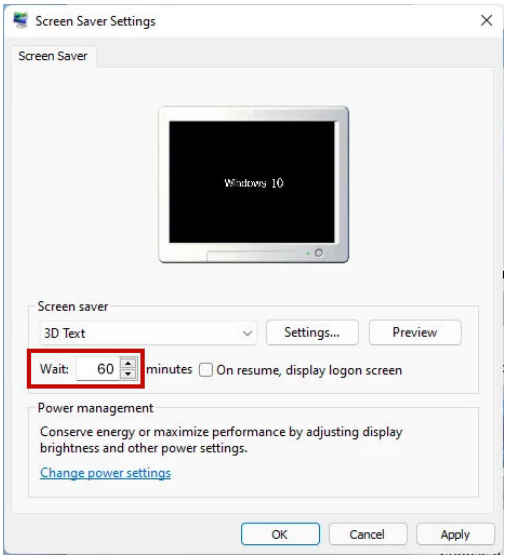
Enable the Screen Saver:

From the desktop screen, RIGHT click > **Personalization** > **Lock screen**, (scroll down) and select **Screen Saver.**

1. Click the drop-down and select "3D Text"



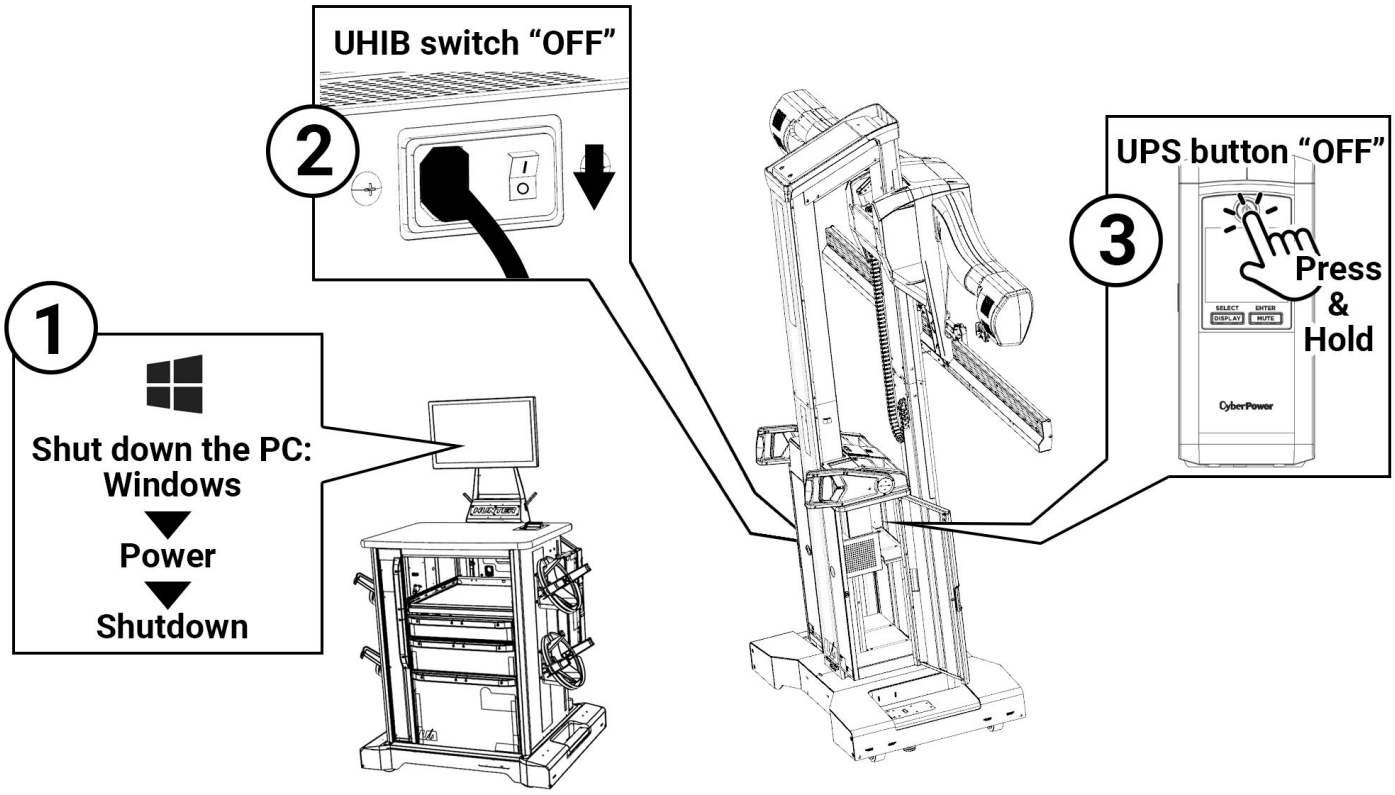
2. Set Wait time to "60" minutes. Click "Apply", then "OK"



3.3. Powering OFF order

In WinAlign, Press "Exit Aligner". A confirmation screen will ask if you are sure you want to exit the aligner. Press 'Yes". Wait for the program to end.

1. Shut down the PC: Windows > Power > Shutdown
2. Turn the UHIB rocker switch "OFF"
3. Power down the UPS Battery by Press and Holding the power button on the front.



WARNING
Do not turn off the power while information is being written to the disk drive. This occurs during console setup and when specifications are being stored. This can result in corrupt disk drive files.

3.4. Alignment Procedure Options

Whether ExpressAlign® is enabled or disabled, a vertical procedure bar appears along the right side of the screen. The Alignment Procedure toolbar displays an icon for each alignment or WinAlign® procedure available or performed. The icons are arranged in order from the first step that you must complete to the last step that you must complete.

After each alignment procedure has been completed, a checkmark will appear in the upper right corner of the corresponding icon. If there are more icons available than space on the screen, the toolbar can be scrolled up or down.

If the triangular area at the top or bottom is gray there are more choices available and can be selected to scroll up or down. If the triangle is blue, no more choices are available in that direction.

When the cursor is placed over an icon, a message appears describing the icon's function, such as ExpressAlign. Selecting an icon from the Alignment Procedure bar will take you to the procedure that the icon represents. Selecting Backward key, or the Forward key, will move the screen backward or forward in the alignment procedure as outlined on the procedure bar.

A Plan View Indicator, located along the right side of the screen, under the procedure bar, shows which axle is being adjusted when a gray background is present.

RESETTING THE PROGRAM

The alignment program may be reset at anytime during an alignment by pressing the key, located at the upper left-hand corner of the keyboard. A confirmation screen will appear to verify that the button was pressed intentionally.

When this screen appears, press "YES" to reset the program or"NO" to continue working. When the aligner is reset, the information collected for the alignment in progress will be erased and the display will return to the "Logo"screen.

3.5. Mounting Targets

TD Target™ alignment reflectors attach to wheels with adaptors for the purpose of indicating individual wheel position and orientation as measured by digital-camera alignment sensors to perform vehicle alignment service. QuickGrip® alignment wheel adaptors quickly and safely attach digital-camera alignment sensor reflectors to vehicle wheels by gripping the treads of tires instead of wheel rim edges, as is typical with other alignment wheel adaptors. TD Target™ alignment reflectors and QuickGrip® adaptors alignment wheel adaptors can only be used with Ultimate ADAS™ and Hunter HawkEye® Elite™ alignment sensors.

Target™ Alignment Reflectors

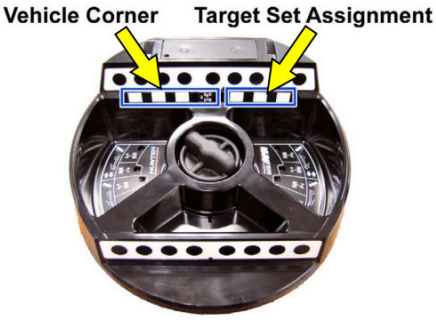
Vehicle Corner

Each TD Target™ alignment reflector is marked by the factory as to which corner of the vehicle it is assigned. The plastic casting of the target is marked 0, 1, 2, or 3 below the reflective surface. A sticker is placed covering one of the reflective blocks, which identifies it as position 0, 1, 2, or 3.

Number	Vehicle Corner
0	Driver Front
1	Passenger Front
2	Driver Rear
3	Passenger Rear

Target Set Assignment

To the right of the vehicle corner assignment are target set A, B, or C assignment blocks. The set of targets must be assigned to a target set. This is accomplished by placing the A, B, or C identified decal over the appropriate reflective block. The plastic casting of the target has an A, B, or C marked under the reflective blocks.



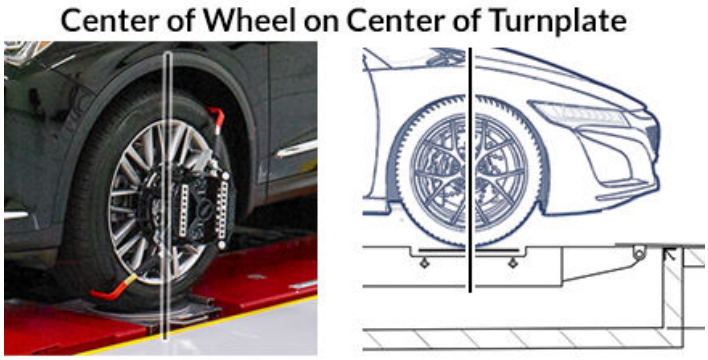
3.6. Standard or QuickComp Target Setup

TD Target™ alignment reflectors are capable of either standard rolling compensation or QuickComp™ roll-forward compensation. A simple adjustment of the target is required depending on which compensation method is used.

Standard Compensation

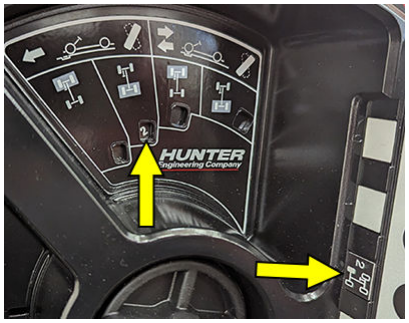
Standard compensation is performed by stopping the center of the vehicle's front wheels in the center of the front turnplates and then rolling the vehicle towards the rear of the rack and then forward again onto the turnplates when performing the compensation procedure.

Loosen knob in center of TD Target.



Rotate TD Target until the number on the vehicle ID decal and the number in the axle specific right-hand window is the same.

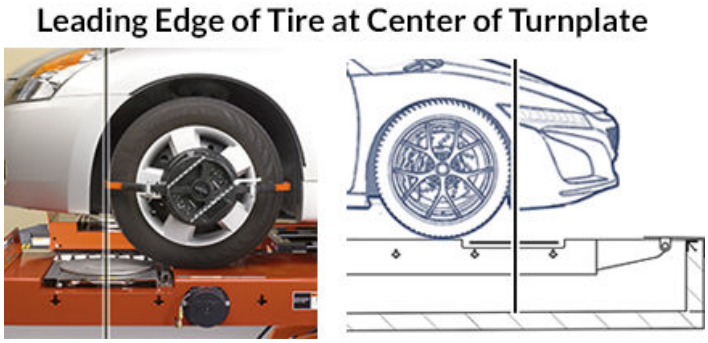
Tighten knob in center of TD Target.



QuickComp™ Roll-Forward Compensation

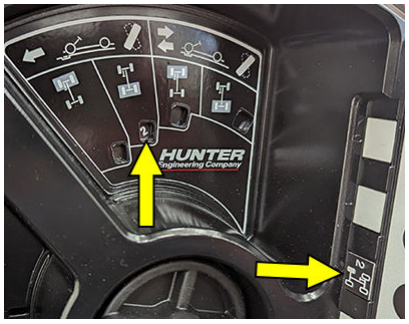
QuickComp™ Roll-forward compensation is performed by stopping the leading edge of the front tires on the centerline of the front turnplates and then rolling the vehicle forward onto the front turnplates when performing the compensation procedure.

Loosen knob in center of TD Target.



Rotate TD Target until the number on the vehicle ID decal and the number in the axle specific left-hand window is the same.

Tighten knob in center of TD Target.



3.7. QuickGrip Adaptor® Tire Hooks

The QuickGrip® Adaptor has three different tire hooks that are easily changed to accommodate different size tire and wheel combinations.

Table 1. Fixed Hook Sizes

		
Small **20" - 26" (50.8 - 66 cm) O.D. Tires**	**Medium** **25" - 32" (63.5 - 81.3 cm) O.D. Tires**	**Large** **29" - 37" (73.7 - 94 cm) O.D. Tires**

Changing Hooks

To change the tire hooks remove the pin securing the tire hook to the QuickGrip® Adaptor and place desired hook on QuickGrip® Adaptor.

Secure with pin.

Typical Wheels

The QuickGrip® Adaptor simply mounts to the wheel by placing the QuickGrip Adaptor on the wheel and using the hooks to grip the tire tread.

Squeeze the clamp on the right-hand side of the QuickGrip® Adaptor to secure the QuickGrip® Adaptor to the wheel.

To remove QuickGrip® Adaptor, release clamp and remove from wheel.

Truck Dually Wheels and Deep Dish Wheels

When mounting on dually truck wheels or other deep dish wheels use the wheel spacers.

Press the QuickGrip® on the spacers.

QuickGrip® Adaptor with spacer mounted on front axle of dually truck wheel.

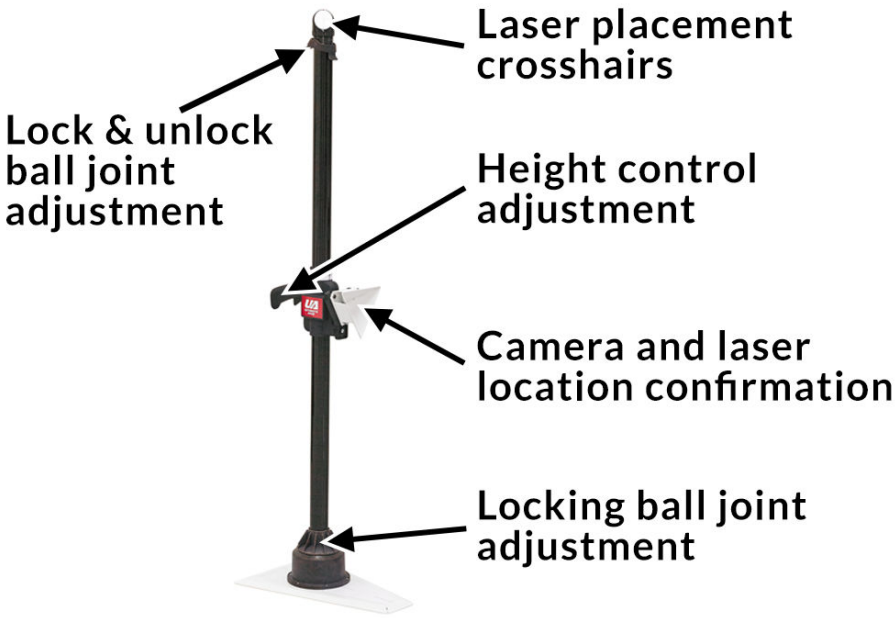
Mounted on rear axle of dually truck or other style deep dish wheel.

3.8. Remote Target Stand

Used for the following procedures:

- Forward-Facing Radar
- Lane Watch
- Blind Sport / Rear Corner Radar

> **NOTE**
> Ensure the remote stand cap is roughly aimed towards the laser during the procedures where the stand is required.



3.9. Compensation

The targets must be compensated to eliminate errors in angle measurements caused by runout of the wheel, wheel adaptor, and target shaft. The default setting for the alignment console can be set for either rolling or jacking compensation. If a target is removed from a wheel, that target must be re-compensated after being reinstalled. The other targets do not need re-compensated. Jacking compensation is the recommended method to re-compensate a single target.

3.9.1. Rolling Compensation

When performing rolling compensation with Hunter Ultimate ADAS™ Sensors (or any alignment sensors), follow these guidelines to obtain the best results. Perform a vehicle inspection before beginning alignment Inspect vehicle for loose or worn parts that may prevent proper alignment.

WinAlign will notify the operator if the vehicle has excessive “total toe” with RollCheck. Excessive “total toe” is a good indication of loose or worn parts.

> **WARNING**
> Do not perform the procedure on a vehicle that has uneven or out-of-round tires.

Changing to “Live Planes” within WinAlign will compensate for uneven tires during the alignment. The vehicle’s on-road performance will still be adversely affected by uneven tires.

Properly set tire pressure before performing procedure.

Changing to “Live Planes” within WinAlign will compensate for improperly set tire pressure during the alignment. The vehicle’s on-road performance will still be adversely affected by improper tire pressure.

Best Practices to Follow:

Have the wheels in the straight-ahead position, as the wheels typically are after driving the vehicle onto the lift.

WinAlign will notify the operator if the vehicle is not steered straight-ahead. Roll-Check™ screen appears and helps the operator straighten the wheels.

Watch for changes in the “steering” direction as the vehicle is rolled. If “steering” direction changes are noticed, re-compensate using a steering wheel holder. On Hunter lifts, position a turnplate bridge, Kit 20-1471-1, within the gap behind each turnplate to create a smooth rolling surface. The alignment lift should be level to place the vehicle’s suspension and steering systems in their neutral positions.

Changing to “Live Planes” within WinAlign will compensate for an alignment lift that is not level.

Roll the vehicle by rotating the left rear tire. Changes in the vehicle’s path and ride height are avoided by moving the vehicle with the left rear tire.

WARNING
Do not push or pull the vehicle by the front (steering axle) tires or wheels during rolling compensation. Do not push or pull on spoilers, fascia moldings, or other “trim” accessories. Do not drive the vehicle to compensate.

ROLLING COMPENSATION PROCEDURE

From the “Compensation Control” popup screen, press “Rolling Compensation.” The “Rolling Compensation” popup screen will appear.

NOTE
“Rolling Compensation using the Virtual View” is also appropriate selection.

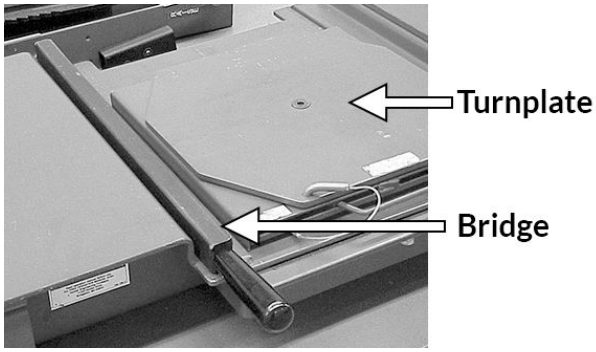
Verify that the pins are in the turnplates and slip plates.

Position a turnplate bridge in each pocket behind the turnplate so the runway surface and the bar surface are flush. Rotate the bridges so they are taller than wide.

Place wheel chocks approximately 15 inches behind rear wheel(s) to limit rearward motion.

Steer ahead.

Mount the targets and wheel adaptors on the wheels



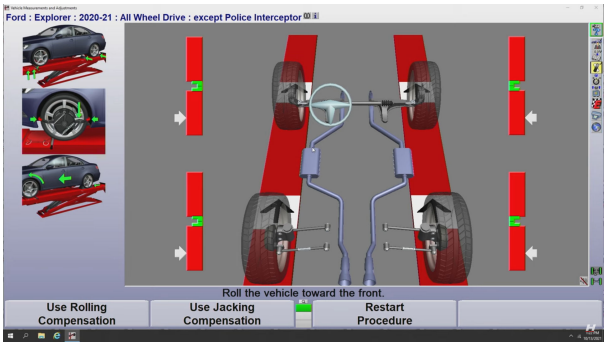
NOTE
Targets should not be re-positioned on the wheel adaptors at any time during the alignment. If the target or wheel adaptor is removed from the wheel during the alignment, the re-installed target will need re-compensated using jacking compensation

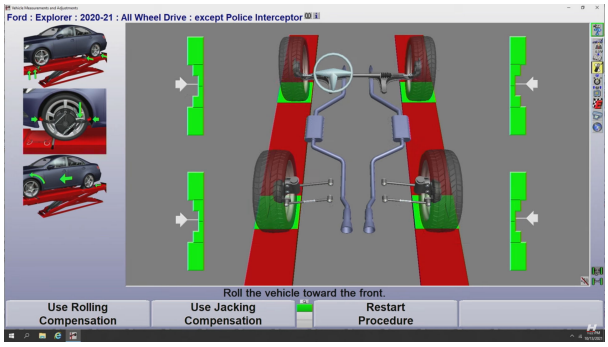
NOTE
Beginning the rolling compensation procedure removes any previous compensation.

The screen instructs you to roll the vehicle toward the rear. Release parking brake and put transmission in neutral. Roll the vehicle rearward until the bar graphs turn green (or arrows turn green when in virtual view).

TIP
A vehicle with 28 inch (71 cm) diameter tires will require approximately 12 – 14 inches (30.5 – 35.6 cm) of movement. Smaller diameter tires will require less movement, while larger diameter tires will require more.

Stop rearward movement of the vehicle. The bar graph (arrow) will disappear for a moment. If a remote indicator is used, indicators for all four wheels will be flashing, indicating to roll forward. When the compensation bar graph (arrow) reappears, roll the vehicle toward the front until the bar graphs are green.





When all four targets have been compensated, apply the vehicle parking brake and place the transmission in park, if applicable. On standard transmission vehicles, the transmission should be placed in neutral. Leave the key in the ignition. Position chocks at the front and rear of the left rear tire to keep the vehicle from rolling.

IMPORTANT
The rolling compensation procedure MUST end with the vehicle in the proper position to check and adjust the alignment. The targets are NOT allowed to rotate after the procedure is performed.

After the targets have been compensated, final compensation instructions will appear.

If not already done, block the wheels, then remove the pins from the turnplates and slip plates. Remove or rotate the turnplate bridges so they are wider than tall.

NOTE
On Hunter lift racks, the turnplate bridges can be stored in the same gap behind the turnplates. Rotate the bridges so they are wider than tall. Rotating the bridges is necessary to prevent interference with turnplate movement

Rolling compensation is complete

3.9.2. Roll Check™

After performing rolling compensation, it is necessary that the vehicle is steered ahead and that “Total Toe” is not excessive. ™Roll-Check verifies that both of these conditions have been met. If either of these conditions has not been met, then a popup screen appears stating that the rolling compensation that has just been performed may not be accurate.

One of the two following messages with options might appear after rolling compensation:

The vehicle is not steered ahead.

Using the Steer Ahead bar graph, steer the vehicle to straight ahead and then press “Restart Procedure” OR press “Use Jacking Compensation.”

Total Toe is larger than the preset tolerances.

Adjust Total Toe and press “Restart Procedure” OR press “Use Jacking Compensation.”

3.10. ADAS Procedures

The following procedures can be done **with or without an Alignment.**

WARNING
Having a target of any type being unstable will cause calibration problems. Floor Mats and Lane Watch will be most vulnerable to air flow. Any source that will cause instability of targets will need to be eliminated during the calibration procedure.

NOTICE
Ensure a Quick Compensation or Rolling Compensation and Gimbal Cal Check has been completed before starting procedures.

- Gimbal Cal Check will happen daily and is prompted each calendar day at 12:01 AM and is normal operation. Must be completed prior to advancing to calibration procedures.
- The cal check can be commanded by the operator at any time from the selected calibration screen. One level down in K Keys and K3 to Select Calibration Check.
- Powering/restart or reboots will not trigger the check.

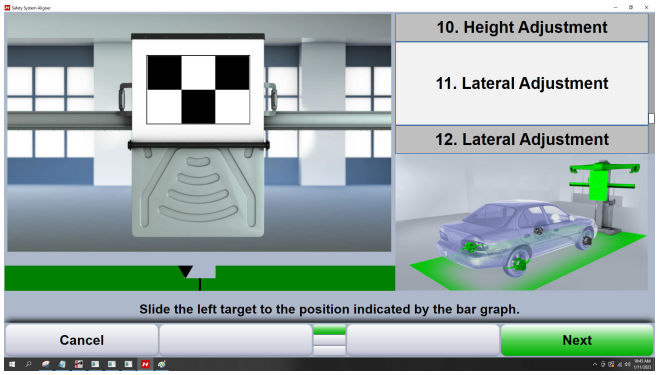
Follow WinAlign® on-screen instructions for each procedure.

3.10.1. ADASLink Integration

IMPORTANT
If using the **ADASLink** for Ultimate ADAS Procedures, please see *form AT08224-00 for guidance*.

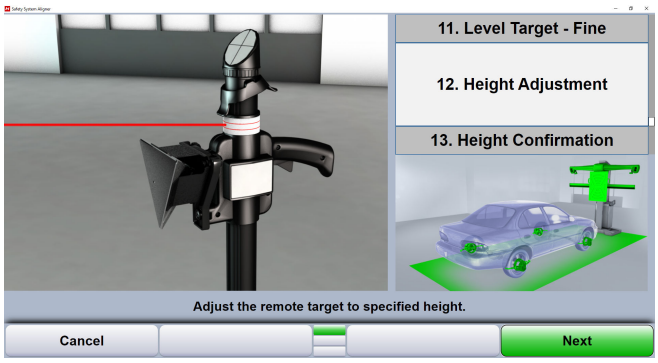
3.10.2. Forward-Facing Camera

Follow on screen instructions and target placement.



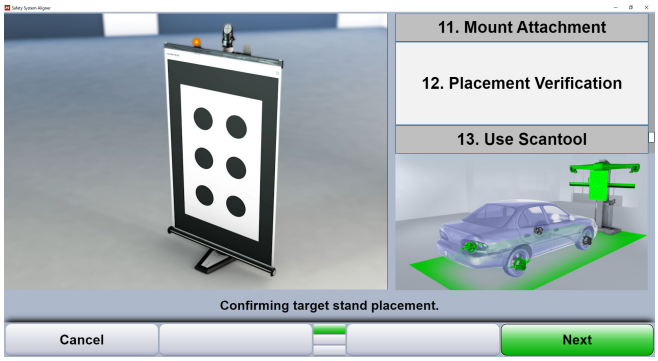
3.10.3. Forward-Facing Radar

Follow on screen instructions and target stand placement.



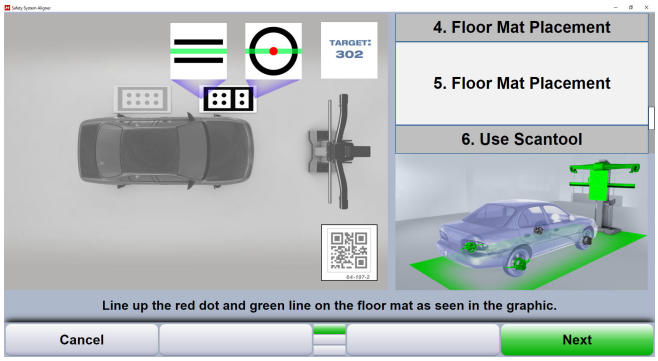
3.10.4. Lane Watch

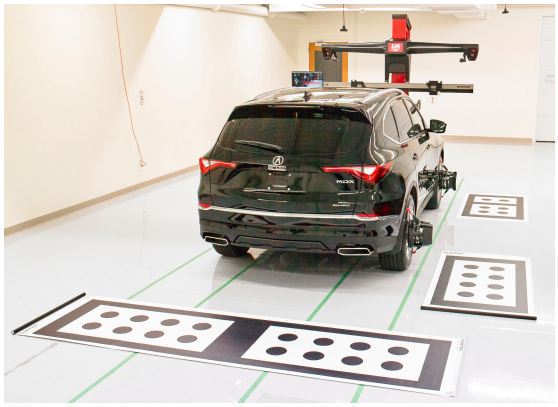
Follow on screen instructions and target stand placement.



3.10.5. Surround View

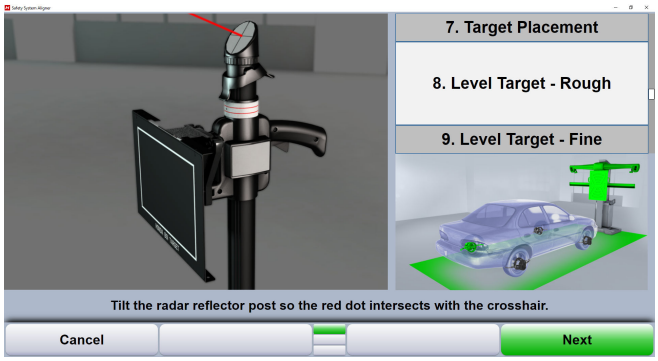
Follow on screen instructions and target mat placement.





3.10.6. Blind Spot / Rear Corner Radar

Follow on screen instructions and target stand placement.



4. Equipment Information

CONVENTIONAL SENSORS

XF Pod (DSP700 and DSP700T Sensors Only)

The DSP700 and DSP700T sensors communicate with the aligner console using Extra High Frequency (XF). Radio waves are transmitted and received from the sensors and the XF Pod. Occasionally the XF Pod may receive interference from electronic devices in the neighborhood (microwaves).

The DSP700 andDSP700T sensors and XF Pod may be configured to use different radio frequencies to minimize interference. The XF system transceiver generates power radio waves in the range of 2.4 GHz. Radio waves at these frequencies reflect off most objects, resulting in an indoor and outdoor range of approximately 100 feet (30 meters).

Interference has occurred when the XF Pod does not receive the radio waves. If this happens, move the mobile cabinet approximately 2 or 3 inches (51 or 76 mm) in any direction.

DANGER

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

DANGER

Changes or modifications not expressly approved by the manufacturer could void the users authority to operate the equipment.

Remote Indicator Models 30-418-1-XF, 30-419-1-X, and 30-421-1-X-XF

The Remote Indicator allows the technician to be mobile in the bay while taking measurements and making adjustments to the vehicle. The Operation Instructions for the Remote Indicator is *Form 5382-T*.

ELECTRONIC KEYS

Included with a shipment are one or more electronic keys that look similar to large watch batteries. These keys are needed to run the WinAlign® program.

5. Maintenance

Noticeable dirt build-up, oil or grease can cause target identification problems. In the sensor status popup screen, either of the two icons (shown below) identifies sensors that possibly need cleaning. The text would appear with the icon above the plan view.

-  (red) "Target not found."
-  (black) "Target is found by camera, but not measured."

When cleaning, use a mild window cleaning solution (Ammonia free) and soft paper towels to wipe off the targets and wheel adaptors. Do NOT spray cleaner directly on the target. When storing floor mats be mindful to remove excess water when present, for longevity.

CAUTION
Do not hose down or submerge the targets in water. This could damage the optical components.

Do NOT use shop towels to clean targets, not even new ones. Keep wheel adaptor rods cleaned and lubricated. Lubricate as needed with a coating of light lubricant such as WD-40.

CAUTION
Do not lubricate the center screw shaft or target shaft hole on the wheel adaptors.

Monthly: Clean TD target faces using included ArmorAll glass cleaning wipes.

Every 6 months: Oil all pins and moving parts in the clamping mechanism.

CAMERA MAINTENANCE

All maintenance of the camera should be referred to an authorized Hunter Service Representative. Keep hands and tools away from the camera lens area.

DO NOT attempt to clean the camera lens with standard window cleaner and a cloth, or by blowing on them with shop air. If cleaning ever becomes necessary, it should be done with special optical cleaning fluid (such as lens cleaner available at camera stores) and/or canned air (available at computer stores).

6. Hunter's 3-Year Warranty

January 1, 2021

Hunter Engineering Company warrants new equipment to be free from defects in material and workmanship under normal conditions of use for a period of three (3) years from the date of installation.

The Details

Exceptions to this warranty are listed below:

- Field labor is covered under this warranty for a period of six (6) months.
- ADASLinkTM units carry a one (1) year warranty and remain under warranty as long as a subscription is maintained there after.
- DAS 3000 units, including electronic circuit boards, carry a one (1) year warranty.
- Printers carry a one (1) year warranty.
- Normal consumables and wear items are not covered. Exception is batteries, which are warranted for a period of six (6) months.
- Product that has been subject to abuse, misuse, alterations, accident, exposure to the elements, tampering, unreasonable use, or not maintained in a reasonable or necessary manner.
- Replacement parts purchased through the Hunter Service Center and no longer covered by machine warranty are warranted for a period of six (6) months.

How do I submit a claim?

In case of any warranty claim, it will be necessary to contact your local authorized Hunter Service Representative. To have an item considered for warranty, it must be returned to Hunter Engineering Company for inspection and evaluation. This must be done on a freight prepaid basis. If after our inspection the product proves to be defective, and is within the time frame specified, we will repair or replace the item at no additional cost.

This is Hunter Engineering Company's only warranty with respect to new equipment. Hunter Engineering Company disclaims all other warranties to the extent permitted by law. This express warranty and any implied warranties of merchantability and fitness for a particular purpose shall not extend beyond the warranty period. Hunter Engineering Company is not responsible for any incidental or consequential damages, including, but not limited to, loss of business.

Can I transfer my warranty?

We do not authorize any person to assume for us any other liabilities with our products. Any remaining warranty may be transferred to subsequent purchasers by forwarding the purchaser's name, address, phone number and equipment serial number to:

Hunter Engineering Company | Customer Service Department
11250 Hunter Drive, Bridgeton, MO 63044
(800) 448-6848

See our document library at *www.Hunter.com* for additional details.

6.1. Copyright

Develop skills and knowledge

EXCEL WITH HUNTER TRAINING

Live On-Site Training

All Hunter Training classes are led by ASE-certified instructors and all training material is kept up-to-date through a rigorous curriculum review process.

YouTube Video Tutorials

Product-focused videos explaining features and processes

Hunter University

Self-driven eLearning courses designed for all student levels

hunter.com/training

Hunter Learning Channel

Because of continuing technological advances, specifications, models and options are subject to change without notice.

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