

# SMARTWEIGHT ELITE®

High capacity wheel balancer

## OPERATIONS MANUAL



Operations Manual



Standard Operation Video

Form: BM07900-00  
06/21/2024  
Supersedes 11-22



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# 1. Owner Information Form - Balancers

Customer Name: \_\_\_\_\_ Installation Date: \_\_\_\_\_  
 Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_  
 Order Number: \_\_\_\_\_ Software Number: \_\_\_\_\_  
 Sales Representative Name and Number: \_\_\_\_\_  
 Sales Representative Phone: \_\_\_\_\_  
 Service and Parts Representative Name & Number: \_\_\_\_\_  
 Service and Parts Representative Phone: \_\_\_\_\_

## Hunter Wheel Balancer - Equipment Training Report

Technicians Trained: *Please Print*

Technician 1: \_\_\_\_\_ Technician 2: \_\_\_\_\_  
 Technician 3: \_\_\_\_\_ Technician 4: \_\_\_\_\_

Please have trained technicians initial each training item:

Balancer Training Task	Tech 1	Tech 2	Tech 3	Tech 4
Safety Precautions, Power On/Off Procedures	_____	_____	_____	_____
Overview of Display, Dataset Arms, Spindle Pedal and Wheel Lift	_____	_____	_____	_____
Inflation Station and Bar Code Operation (if applicable)	_____	_____	_____	_____
Mounting Methods (Front-Cone, Back-Cone, Flange Plate)	_____	_____	_____	_____
Clamping (Quick Thread/Auto Clamp) Operation	_____	_____	_____	_____
Centering Check Procedures	_____	_____	_____	_____
Balance Mode Selection (Balance Only, Road Force, Straight Trak)	_____	_____	_____	_____
Weight Location Entry (Clip-Clip, Clip-Tape, Tape-Tape, Split-Spoke)	_____	_____	_____	_____
Installation of Wheel Weights (Servo-stop, Hammerhead, BDC Laser)	_____	_____	_____	_____
Recalling TPMS Reset Procedures	_____	_____	_____	_____
Performing a Balancer Calibration/Calibration Check	_____	_____	_____	_____
Rim Runout Measurement (Rim with Tire, Bare Rim)	_____	_____	_____	_____
Match Mounting	_____	_____	_____	_____
Tire Stack Operation	_____	_____	_____	_____
Printout Selection	_____	_____	_____	_____

**Installation & Training Acknowledgement:** I, the undersigned, do hereby acknowledge that my Hunter Engineering Wheel Balancer has been installed & is operational. I also acknowledge that the above technicians have been trained to my satisfaction in those areas of safety & operation as indicated above.

Management Name (print): \_\_\_\_\_ Date: \_\_\_\_\_

Management Signature: \_\_\_\_\_

## 2. Getting Started

This manual provides operation instructions and information required to operate the .

Read and become familiar with the contents of this manual prior to operating the equipment. The owner of this equipment is solely responsible for arranging technical training.

The is to be operated only by qualified trained technicians. Maintaining records of personnel trained is solely the responsibility of the owner and management. This manual assumes the technician has already been trained in basic balancing procedures.

### 2.1. Corporate Information

Hunter Engineering Company

Addr:	11250 Hunter Drive, Bridgeton, MO 63044 USA
Ph:	314-731-3020
Web:	<a href="http://www.hunter.com">www.hunter.com</a>

### 2.2. For Your Safety

#### 2.2.1. 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.

#### 2.2.2. 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 , 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.

### **2.2.3. 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 recommended accessories.

Use equipment only as described in this manual. Never stand on the . Wear non-slip safety footwear when operating the . 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.

### **2.2.4. Important Safety Instruction - Balancers**

Keep the safety hood and its safety interlock system in good working order.

Do not place any tools, weights, or other objects on the safety hood while operating the balancer.

Verify that the wheel is mounted properly and that the wing nut is firmly tightened before spinning the wheel.

The safety hood must be closed before touching the green "**START**" button, to spin the wheel.

Raise safety hood only after wheel has come to a complete stop. If safety hood is raised before the spin is completed, the weight values will not be displayed.

The red "**STOP**" button, can be used for emergency stops.

### **2.2.5. Decal Information & Placement - SWE**

- Decal 128-1244-2 cautions the operator that spindle rotation may occur with foot pedal depression and to keep clear of clamping components during shaft rotation.
- Decal gives the maximum wheel diameter and maximum wheel weight for the SW Elite.
- EN/IEC Class 3R Laser Product Certification is shown on Decal 128-2016-2-08. This label shows the EN/IEC standards for a Class 3R Laser Product.
- An explanation of FDA compliance standards is shown on Decal 128-2016-2-08. FDA performance standards compliance is shown on the decal.
- For units with TDC Laser, FDA standards for Class 2M laser compliance are shown on Decal 128-1155-2.
- Decal 128-381-2 warns the operator not to remove the covered of the SW Elite because of the risk of the electrical shock and not to use below garage floor level.
- ETL certification standards are outlined on Decal 128-1120-2. Users are cautioned not to use the balancer below garage level.
- A manufacturer's identification is also on the rear of the balancer.

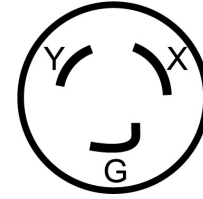
## 2.2.6. Balancer Power Source Precaution

The is intended to operate from a power source that will apply 230VAC +10% / -15%, 1 phase, 10 amp 50/60 Hz power.

The power cable includes NEMA 20 amp plug, L6-20P, between the supply conductors of the power cord.

Short-circuit current rating (SCCR ) of the electrical equipment is 5 kA

The power cord supplied utilizes a twist lock connector.



### CAUTION

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



### NOTE

For information on converting from single phase NEMA L6-20P plug to a three phase NEMA L15-20P plug refer to [Form 5350-T](#)

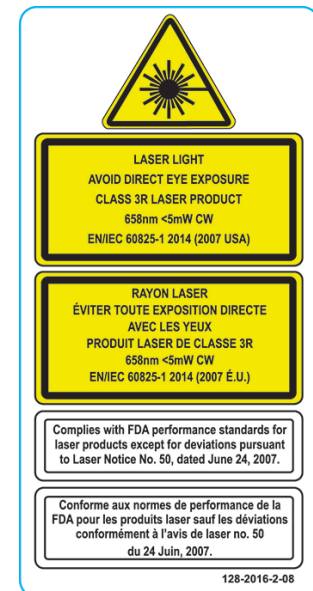
## 2.2.7. Optical Scan Laser Precaution

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:**  
**128-2016-2-08**

Wavelength:	658nm
Laser Power for Classification:	<5mW
Emission Type:	CW
Divergence:	3.0 mRad
Beam Diameter:	8.5 mm at aperture
Fan Angle:	57°

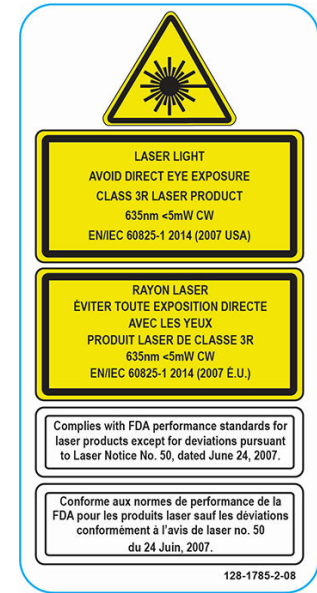


The Optical Scan Laser is a Class 3R laser designed to measure the profile of wheel assemblies.

The laser is not a field serviceable part.

No maintenance is to be performed on the laser. **(Original 3R Laser) Decal: 128-1785-2-08**

Wavelength:	635nm
Laser Power for Classification:	<5mW
Emission Type:	CW
Divergence	1.1 mRad
Beam Diameter:	6.5 mm at aperture
Laser Beam spot size at 10m:	<10mm

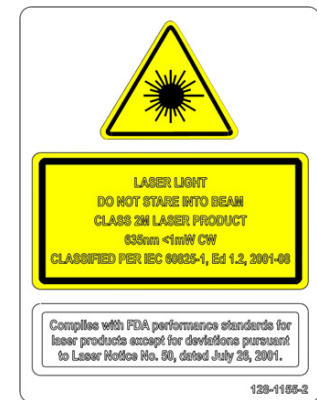


### 2.2.8. HammerHead TDC Laser Precaution (optional equipment)

The TDC (Top Dead Center) Laser Indicator is a class 2M laser designed to aid in applying clip-on weights. The laser is not a field serviceable or adjustable part. Use caution in regard to reflective materials around the laser and never look into the laser beam.

**LASER RADIATION - DO NOT STARE INTO THE BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.**

Viewing the laser output with magnifiers or related optical instruments within a distance of 100mm from the laser aperture may pose an eye hazard.



### 2.2.9. Turning Power ON / OFF

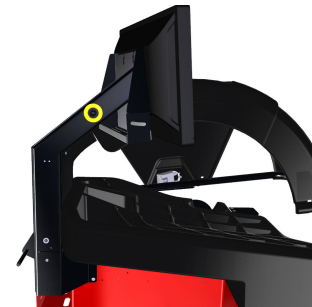
#### PUSH BUTTON SWITCH

The balancer is equipped with a push button power switch located on the left side of the LCD support. Use this switch for normal shut down and restarting procedures.

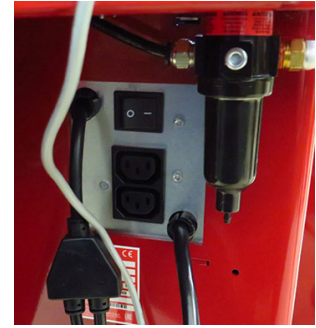


#### CAUTION

Always use the power button on the LCD support turn on/off in order to prevent data loss.







**MAIN POWER SWITCH**

The main power ON/OFF switch is located on the back of the balancer cabinet.

To power the balancer “ON,” press the “I” side of the ON/OFF switch. To turn all power the balancer “OFF,” press the “O” side of the ON/OFF switch.

**2.2.10. Equipment Specifications**

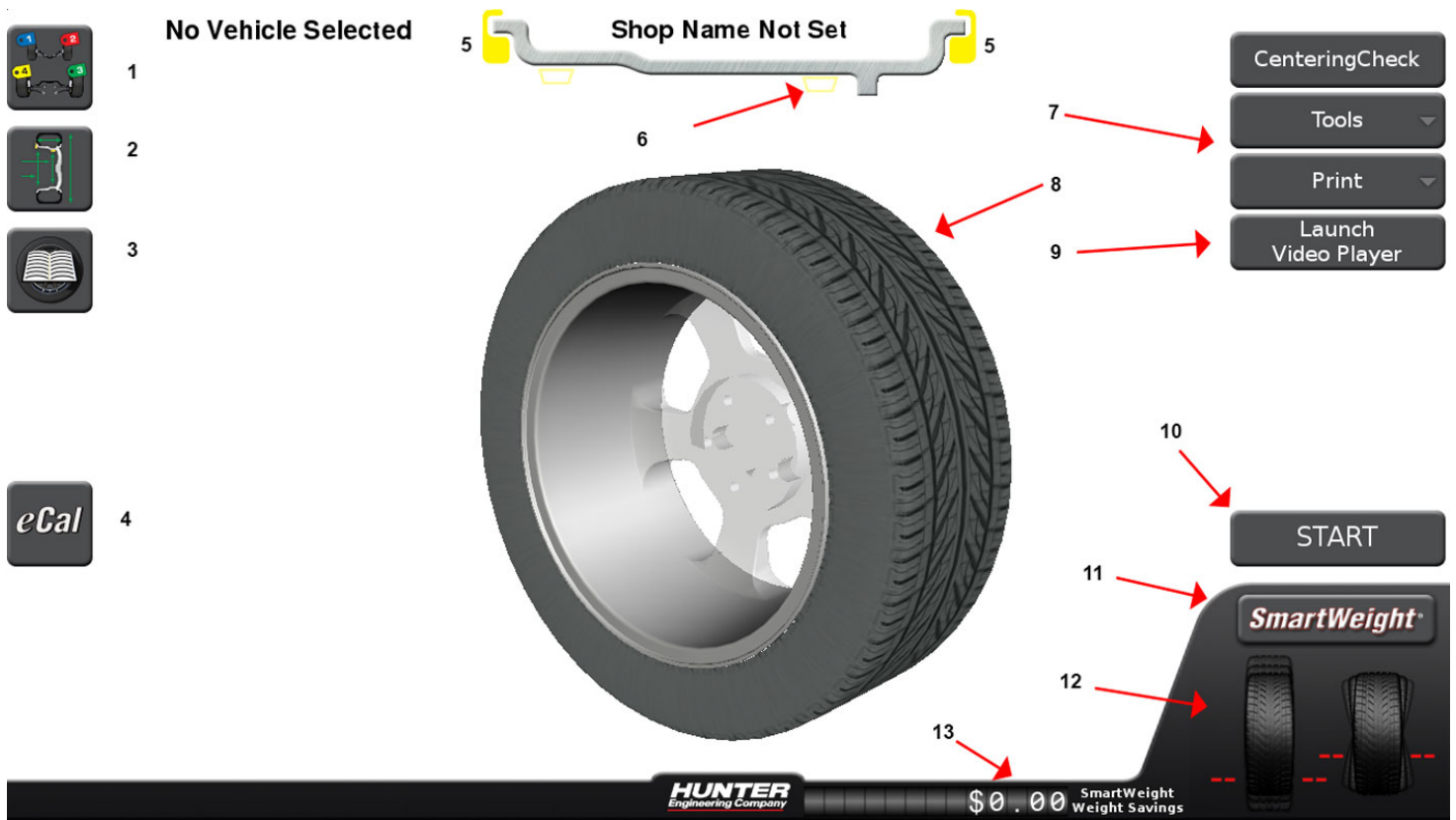
Only a Hunter Factory-Authorized Representative should perform installation. This equipment contains no operator serviceable parts. All maintenance and repairs must be referred to a qualified Hunter Service Representative.

**Table 1. Equipment Specifications**

<b>Electrical</b>	
Voltage:	208-240V, 3 amp, 50/60 Hz, 1 ph (NEMA 20 amp plug, L6-20P)
Amperage:	10 amperes
Wattage:	3450 watts (peak)
<b>Air</b>	
Air Pressure Requirements:	100-175 PSI (7-12 bar)
Approximate Air Consumption:	4 CFM (110 Liters/Minute)
<b>Atmospherics</b>	
Temperature:	+32°F to +122°F (0°C to +50°C)
Relative Humidity:	Up to 95% Non-condensing
Altitude:	Up to 10,000 ft. (3048 m)



### 3. Smart Weight Elite Main Screen Components



**Table 2. Main Component Legend**

Smart Weight Elite Main Screen Components	
1. Tire Stack / Vehicle Plan View Tab	8. Wheel Assembly Display
2. Wheel Dimensions Tab	9. Launch Video Player
3. Spec Lookup	10. Start / Stop Button
4. eCal Button	11. SmartWeight® Menu Button
5. Clip Weight Plane	12. Imbalance and Couple Force Display
6. Tape Weight Plane	13. SmartWeight® Savings Odometer
7. Context Sensitive	

## 4. Balancing Procedures

### 4.1. Getting Wheel On Balancer



#### CAUTION

Use two hands to maintain control of the wheel

Slide proper collet onto spindle shaft. Position wheel lift carriage (“lift”) at the end of the lift rail. Press the foot pedal down to lower lift. Roll wheel onto the lift. Raise foot pedal to raise wheel into position to slide it on spindle. Center wheel on collet and clamp. Keep lift under wheel and close hood. Lift will automatically lower.



#### TIP

Allowing the balancer to lower lift will speed up removal.

### 4.2. Remove Wheel From Balancer

Place lift under wheel and raise it to wheel. Remove wheel clamp. Slide lift with wheel on it to end of lift rail. Use pedal to lower lift.

### 4.3. Centering Check

CenteringCheck® is an inspection or verification of the wheel’s mount to balance to identify possible centering errors, thus recognizing improper measurements. From the main balance screen, touch the “**CenteringCheck**” button.

### 4.4. Print Summary

From the main balance screen, select “Print” → “Vehicle Summary”. The Vehicle Summary screen will be displayed.

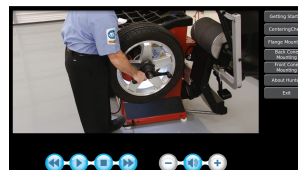
### 4.5. Inflation Station

Inflation Station provides preset tire pressure. Lift inflation hose from cradle and setting screen will pop up. Set target air pressure arrows.



### 4.6. Hunter Help Video Player

On main balancer screen, touch Help → Launch Video Player button. Select balancer topic from video menu.



## 4.7. Maintenance and Calibration

### 4.7.1. Auto Calibration

The balancer utilizes automatic calibration procedure. Once the balancer is calibrated at installation time, no further operator input is required.

### 4.7.2. Cleaning the Console

To maintain a brand new appearance of the display, clean with soft cloth regularly. Please remove stubborn stains with soft cleaner rather than strong cleaners such as diluting agent, benzene or corrosive cleaner as they may damage the display. Armor All wipes are a suitable cleaning product for the touch screen.



#### CAUTION

Do not touch the screen with chemicals or solvents on fingers, i.e. brake cleaner. Doing so will damage the anti-glare protector on the screen.

### 4.7.3. Maintenance Schedule



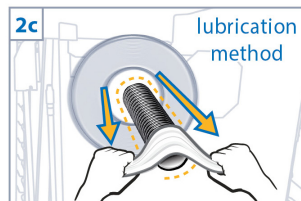
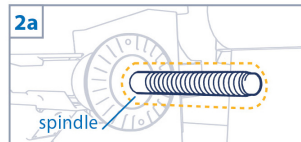
#### Wheel Balancer - Daily Maintenance

- 1 Clean around and under balancer.** Clear all loose weights from floor.



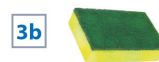
Wheel weights under balancer may cause weight chasing.

- 2 Clean and lube spindle.** Apply 3-in-1 oil to a rag. (*Keep oil from skin.*) Use "Clean Threads" feature to rotate.



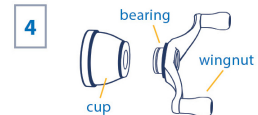
On Hunter balancer menu: **Clean Threads**

- 3 Clean hub face by hand** with Scotch Brite pad. **Do not lube this surface!**

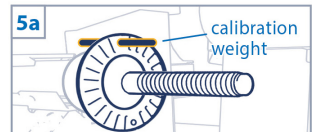


Dry scrub by hand to prevent hub damage. Do not use power tools. **Do NOT use "Clean Threads" to clean hub.**

- 4 Inspect wing-nut and cup.** Gritty bearings, broken knobs and missing handle spacers may cause balance issues.



- 5 Perform 3 Spin Balancer Calibration.**



On Hunter balancer menu: **Tools**, **Advanced**, **Calibration Procedures**, **3 Spin Balancer Calibration**

### 4.7.4. End User License Agreement

Use of equipment and its operating software is acknowledgment of agreement to the terms of the End User Licensing Agreement ("EULA"). The entire [EULA](#) can be found by scanning the QR Code.



## 5. Warranty Information

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. Exceptions to this warranty are listed below:

- Field labor is covered under this warranty for a period of six (6) months.
- ADASLink™ 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.

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.

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:

See our document library at [www.Hunter.com](http://www.Hunter.com) for additional details.

**Hunter Engineering Company | Customer Service Department**

**11250 Hunter Drive, Bridgeton, MO 63044**

**(800) 448-6848**

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