



Installation and Operation Manual

Wheel Balancer

PWB - 1535A



ATTENTION - Please read the instruction before using this product. Failure to follow the instructions may result in serious injury. Keep the instruction for reference by operators.

Phoenix Auto Equipment

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- **Website:** <https://www.phoenixautoequipment.com>

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1. Safety Instructions

a. Owner's Responsibility

In order to maintain your product properly and to ensure operator safety, it is the responsibility of the owner to read and follow these instructions:

- All operators should be properly trained.
- All operators should not wear loose clothing or jewelry. These things may become entangled with the wheel or turntable while using the changer and could cause serious injury.
- All operators should wear protective eye gear. Safety glasses with side shields, goggles, or face shields are acceptable
- All operators recommend wear sturdy leather work shoes with steel toes and oil resistant soles, to prevent injury in typical shop activities.
- Safety guard should be used to avoid injury.
- The wheel balancer contains electronics and should be kept indoors and in a dry environment. Exposure to water can cause damage and is not covered under any warranty.
- Exposure to extreme heat can damage internal parts of the wheel balancer.
- The wheel balancer does not have an electrical surge protector. The user should supply a surge protector to avoid damage to the wheel balancer in the event of an electrical surge or storm.
- Do not use the wheel balancer beyond its measurement or weight range. Using the wheel balancer beyond its measurement or weight range could cause damage to the wheel balancer and does not ensure a precise balance of the wheel.

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- Other safety regulations may be in place according to OSHA or your local city and county. These should all be followed in addition to the instructions in this manual.
- Keep all instructions permanently with the unit and all labels and notices are clean and visible

b. Intended Use

- The balance will automatically enter the distance of the wheel from machine and the diameter of the rim. You only have to enter the width. Standard balancers require you to enter all three parameters manually, but this 1535A model makes the process quick and easy.
- The wheel Balancer has been designed and manufactured exclusively for balance tires.
- Manufacturer cannot be held responsible for any damage caused through the use of the Wheel Balancer for purposes other than the specified in this manual.

c. Precaution

- Any tampering or modification to the equipment carried out without the manufacturer's prior authorization will free Manufacturer from all responsibility for damage caused directly or indirectly by the above actions.

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2. Product Specification

- Rim Diameter 10"-28"
- Rim Width 1.5"-20"
- Maximum wheel weight 155 lbs.
- Cycle Time 8 seconds
- Power supply 110v/1ph
- + or - 1 gram of accuracy
- Oz/Gram switch
- Standard Dynamic Mode, Static Mode, ALU 1-3 Mode, ALUS Mode, Motorcycle Mode.
- Self -calibrate function and Easy maintenance
- includes free truck cone adapter set
- includes plastic hood and quick release wing nuts
- includes all accessories shown in the pictures
- Gray power coat finish
- Oversize 40mm Shaft and laser guide device indicated spot where the weight attached on.

3. Product Installation

- Remove Wheel Balancer from shipping crate and pallet.
- Place Wheel Balancer on flat and stable floor.
- Install the Safety hood.
- Install threaded rod to spin rod extruding from side of the machine using the hex bolt.
- If Wheel Balancer shakes or moves while spinning the wheel, it needs to be bolted to the ground to ensure proper function.
- Electrical plug is preinstalled to fit North American 110 volt electrical socket. Plug into proper electrical socket. Do not hard wire directly to your electrical source. There is no power

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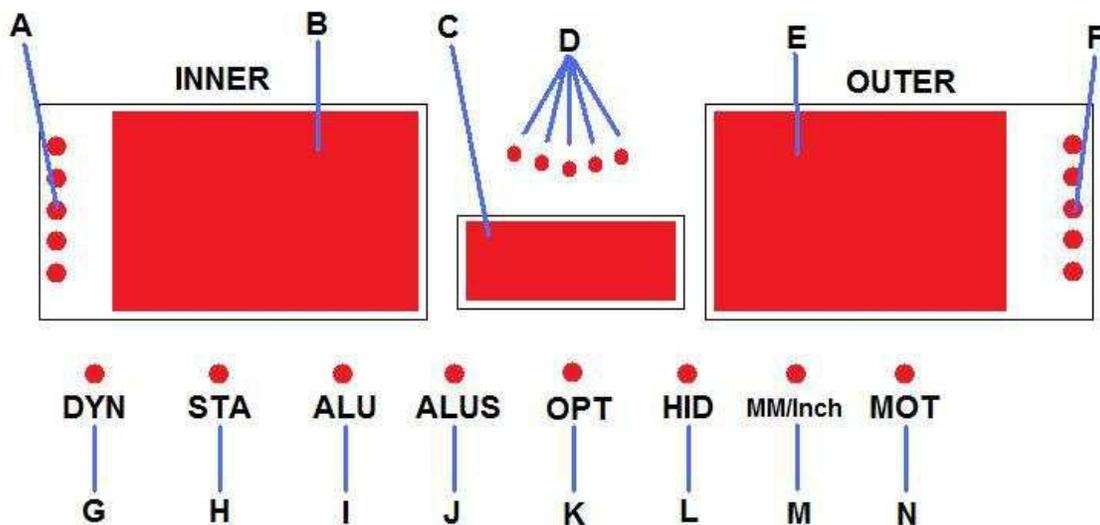
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surge protection on the machine. Please use a power surge protector to ensure your machine is not damaged.

- Install the wheel balancer in a dry and safe environment. Exposure to moisture or extreme heat can damage the components inside the wheel balancer.

4. Control Panel



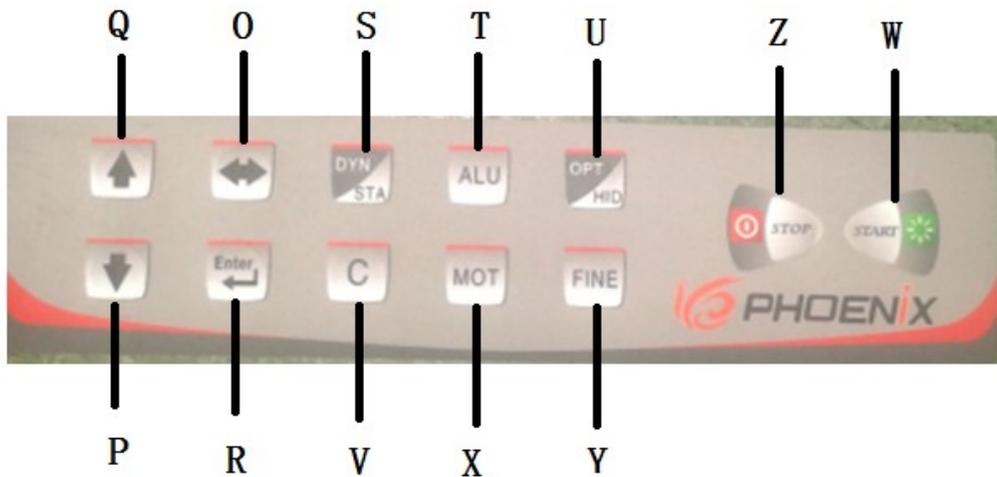
- A. Inside Unbalance Point
- B. Inside Unbalance Display Window
- C. Middle Static Unbalance Display Window
- D. Sticking and Clamping Weight Position Indicator
- E. Outside Unbalance Display Window
- F. Outside Unbalance Point
- G. Standard Dynamic Mode
- H. Static Mode
- I. ALU Mode
- J. ALUS Mode
- K. OPT Mode
- L. Split/Hidden weight indicator
- M. Mm/Inch Indicator
- N. Motorcycle Mode

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- O. Wheel Parameters Input and Shift Key
- P. Down Key
- Q. Up Key
- R. Enter Key
- S. Dynamic/Static Mode Key
- T. ALU Mode Key
- U. OPT/HID Key
- V. Measurement Unit Key
- W. Start Key
- X. Motorcycle Mode Key
- Y. Fine Measurement Key
- Z. Stop Key

This is the beginning screen that will be displayed when you first turn on the machine:

(If set to Grams)



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(If set to Ounces)



- At anytime you may change from Ounces to Grams and back by simply pressing the **C** button.

5. System Setting

This section shows the user how to change the various system settings to meet their needs. You will need to check the settings and adjust them accordingly before balancing a wheel.

Step 1: Hold down the “ENTER” button until you see:



You are now in the system settings mode.

Step 2: Use the **UP** and **DOWN** keys to navigate the different setting selections. You will see that the display in the **MIDDLE STATIC UNBALANCE DISPLAY WINDOW:**



Will change as each time you press the **UP** or **DOWN** keys.

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Here are the descriptions for each system setting that can be changed:

-  Guard control setting: If set to “On” the machine will not allow a wheel to spin while the safety hood is in the up position. If set to “Off” the machine will ignore the safety hood and will spin when the user presses **START**.
-  Standardization display setting: Set to 1g or 5g if using grams to measure. Set to .10 Oz or .25 Oz if you are using Ounces to measure. This sets the multiple in which the weight will be displayed on the display board.
-  Least unbalance value setting. Set between 1 g-40 g or .1 Oz-1.5 Oz. When the machine spins the wheel, any unbalance amount less than your setting will display as 0.
-  Buzzer switch setting. Change to “On” or “Off” to control the buzzer sound.
-  Width Input setting. Change width input to Grams or Ounces. Grams will display “0.” and Ounces will display “0.0”.
-  Diameter input setting. Change Diameter input to Grams or Ounces. Grams will display “0.” and Ounces will display “0.0”.
-  Unbalance unit of measurement. “Gr” means the unit will display in grams. “OS” means the unit will display in ounces.

Step 3: Once you have found the system setting that you wish to change, press the **ENTER** key. This will then allow you to change the system setting to fit your needs. For example, the display will change to:



To Change this setting to off, push the **UP** or **DOWN** arrow. Once you have the setting correct to fit your needs, press the **ENTER** button to return to the system settings main menu. You can now use the **UP** or **DOWN** arrows to move to the next setting you wish to change.

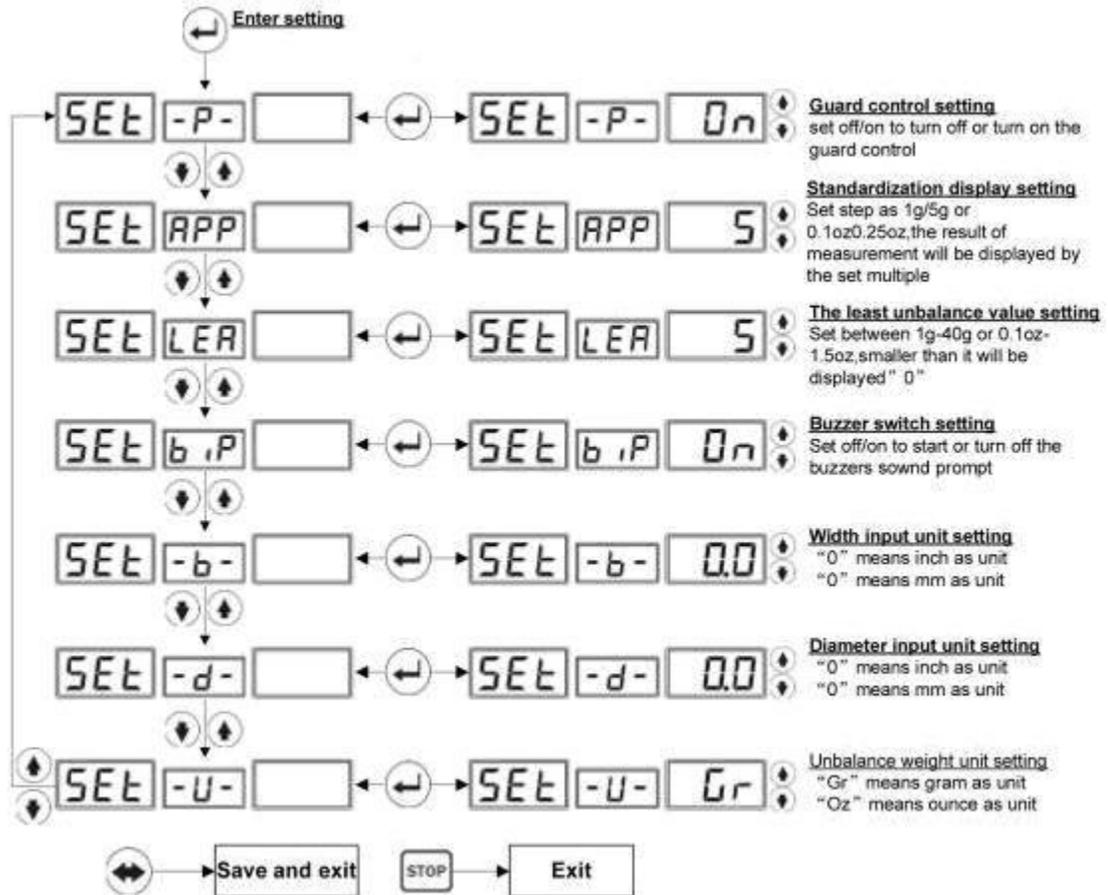
Step 4: Once you have made all the system setting changes you need, press the **WHEEL PARAMETERS INPUT AND SHIFT KEY**



which looks like: .

This will save your changes and return you to the original balancing screen. To exit the system settings without saving your changes, press the **STOP** key.

If the above system settings instructions are not understandable, refer to following diagram:

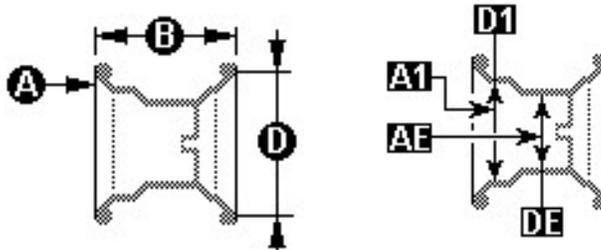


6. Wheel Parameters Input

Unlike ALUS which needs 4 parameters, other modes need 3 parameters.

Parameter values are shown below.

(Dynamic and static modes, ALU1-3 mode, motorcycle mode)



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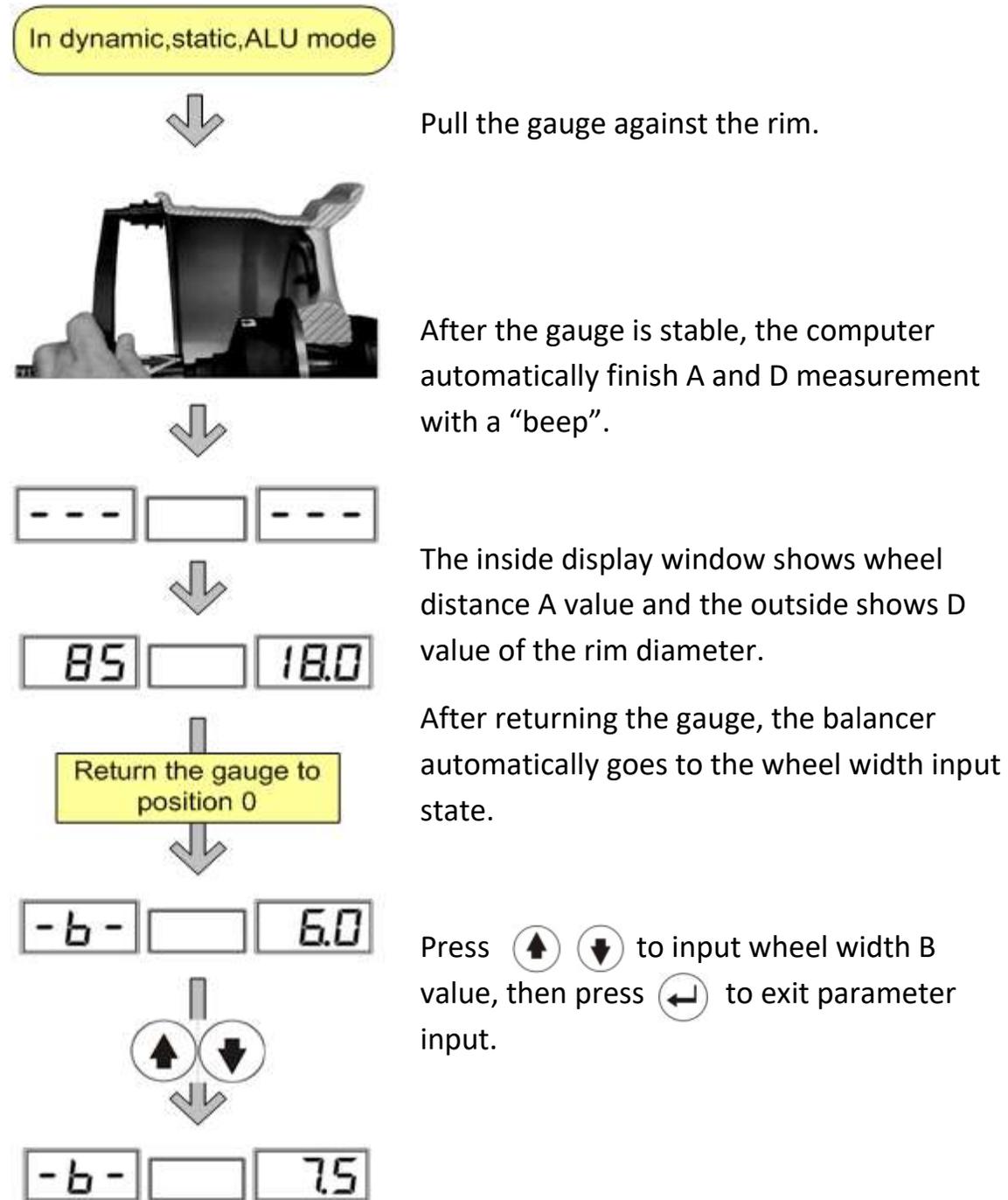
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6.1 Input 3 Parameters of Wheel with Automatic Gauge

As is shown in figure 13, pull the gauge against the rim keeping it in position for 2 seconds, the computer will automatically input A and D values.

Press   to input B value, then press  to exit parameter input.



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6.2 Input 4 Parameters of Wheel with Automatic Gauge

In ALUS mode

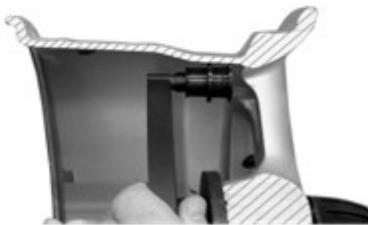


In ALUS mode, pull the gauge against the chosen correction plane on the inside of the rim, press  to automatically input.



105 ---

Now A1 value is displayed on the left of the screen



Do not return the gauge and keep pulling the gauge until it is against the chosen correction plane on the outside of the rim, waiting.....



105 255

Now AE value is displayed on the right side of the screen.



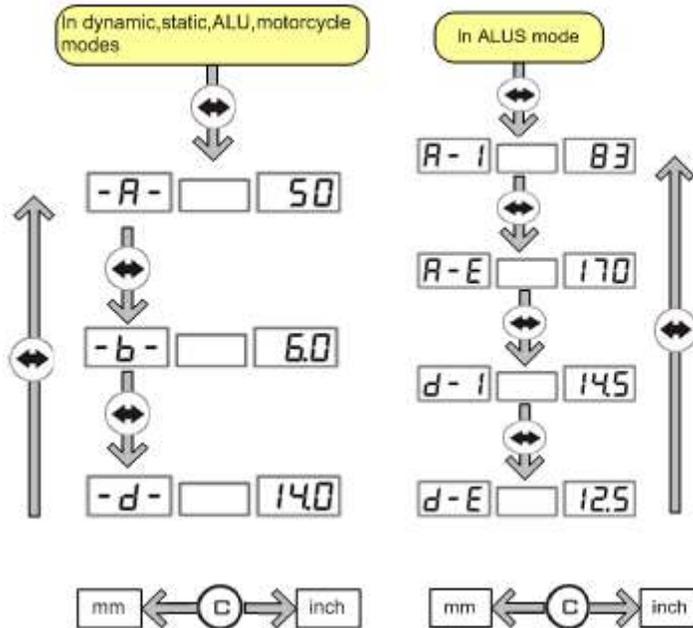
Return the gauge to position 0

After the outside measurement, return the gauge to position 0 and ALUS parameters input finished.

6.3 Input Parameters Manually

Users can choose to finish parameters input manually

It is not advisable to input manually if the automatic gauge is enabled



Press  to choose parameter, and press   to modify parameter value. After inputting the parameter press  to save and enter next parameter input state. In the state of D value input, press  to convert mm and inch.

7. Calibration

Calibration must be performed before machine will balance a wheel. If you move your balancer, calibration must be performed again. If you unplug or lose power to your balancer, calibration must be performed again. You do not have to leave the balancer power on, but do not unplug it from the electricity. Please remember to use a power surge protector to prevent damage to the electronics.

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To begin, you must have a **15 or 14 inch steel rim with tire**. If you don't use a 15 or 14 inch steel rim, the machine will not balance correctly. Install this on the machine.

First, enter the wheel parameters then return to the initial balancing screen.

To enter the calibration process, do the following:

- Push and hold down the FINE button for 3 seconds. The following screen should appear:



- Now close the plastic hood and spin the wheel. If you have the guard control setting to "On" then the wheel will spin when the hood is closed. If you have the guard control setting is set to "Off" then you must push the **START** button to spin the wheel.
- Let the wheel spin and come to a complete stop before opening the plastic hood. The screen will then show the following:



- Use your hand to rotate the tire until all 5 of the lights in the **OUTSIDE UNBALANCE POINT** are on, as shown here:



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- Then place the 100gram or 3.5 Ounce weight that came with the machine at 12 O'clock on the outside of the rim using the provided wheel hammer. 100 grams = 3.5 ounces so either weight is ok. Remember that at anytime you can switch from Grams to Ounces and back by just pushing the **C** button.
- After placing the weight, close the hood and spin the wheel. The following screen will appear:



- Remove the weight from the outside of the rim. Use your hand to rotate the tire until all 5 of the lights in the **INSIDE UNBALANCE POINT** are on, as shown here:



- Then place the 100gram or 3.5 Ounce weight that came with the machine at 12 O'clock on the inside of the rim using the provided wheel hammer. 100 grams = 3.5 ounces so either weight is ok. Remember that at anytime you can switch from Grams to Ounces and back by just pushing the **C** button.

- After placing the weight, close the hood and spin the wheel. The machine will beep and you will see the following screen for a short time:



- After showing this screen, the machine will automatically return to the initial balancing screen. You have successfully calibrated the machine and the data was saved automatically.
- Please note that if you do not put a wheel weight on the rim, the machine will not calibrate. You will cause the machine to “chase itself to infinity” when trying to calculate the calibration. The resulting screen will look like this:



- If you see this screen, you did not calibrate it correctly. Turn off the machine and try again.

8. Standard Dynamic Mode

After completing the steps above, you are now ready to balance.

Standard Dynamic mode is for balancing steel wheels by placing clip on

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weights on both the inside and outside of the rim. It is not for using aluminum wheels or stick on weights.

This is an example of balancing a steel wheel:

Start by placing the wheel on the machine and entering the parameters.

Close the hood and spin the wheel. You will see:

- Use your hand to rotate the tire until all 5 of the lights in the **OUTSIDE UNBALANCE POINT** are on, as shown here:



- Then place the 2.25 Ounce weight that came with the machine at 12 O'clock on the outside of the rim using the provided wheel hammer. After placing the weight, close the hood and spin the wheel. The following screen will appear:



- You have now zeroed out the balance for the outside of the rim.
- Use your hand to rotate the tire until all 5 of the lights in the **INSIDE UNBALANCE POINT** are on, as shown here:



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- Now place the 3.00 Ounce weight that came with the machine at 12 O'clock on the outside of the rim using the provided wheel hammer. After placing the weight, close the hood and spin the wheel. The following screen will appear:



- You zeroed out both sides and successfully balanced the wheel.
- Please note that the machine is showing the wheel is balanced within the parameters you set in the system settings, specifically the “least unbalance value setting”. In the above balancing example, my “least unbalance value setting” was set to .70 ounces. After spinning the wheel and placing the weight, any unbalance value remaining that was less than .70 ounces was ignored and instead the machine showed it zeroed out.
- This is where the **FINE** button comes into function. At anytime while balancing, you can press the **FINE** button to show the exact unbalance value. The most accurate values are
- 1 gram or .10 Ounce using the **FINE** button. Please see the following screen. This is the remaining unbalance value after the balancing example shown above was performed.



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- As you can see, the wheel is still technically out of balance by .20 Ounces on both sides. However, because I had the “least unbalance value setting” on .70 Ounces, the machine ignored the remaining .20 ounces because it was less than .70 ounces.
- .20 Ounces may or may not make a significant difference depending on the size of the wheel and rim.
- The **FINE** button function can be used in any of the balancing modes.

9. Static Mode

Press the **DYNAMIC/STATIC MODE KEY** to switch between Static and Dynamic mode. In static mode, everything functions the same as in Dynamic mode. However in Static mode you are only balancing the wheel by placing weight on the outside of the rim instead of on both sides.

10. ALU1-3 modes

This mode is used for Rims that do not accept clip on weights on one side or both sides. All parameters will be entered the same as in Dynamic mode. Please refer to the **STICKING AND CLAMPING WEIGHT POSITION INDICATOR** on the display screen as wheel as the following diagram to show where to place the weights on the rim.

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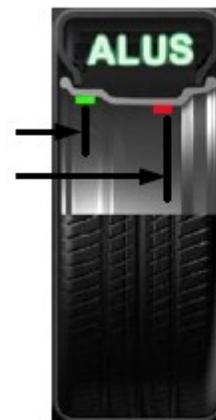
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11. ALUS Mode

ALUS requires the user to enter 4 parameters as mentioned in the parameter entry instructions. As a result, ALUS will be the most accurate mode when using stick on weights. Please refer to the **STICKING AND CLAMPING WEIGHT POSITION INDICATOR** on the display screen and the following diagram when placing the weights on the rim.

The process is the same as the dynamic and static modes. The only difference is the parameter input and the position where weights will be put.



12. OPT Mode

Please refer to the tire manufacture for instructions on how to match tires to the correct rim.

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13. Motorcycle Mode

Motorcycle mode requires a special motorcycle adapter to mount the wheel to the machine. This adapter can be purchased separately as it is not included with the wheel balancer.

To balance a motorcycle wheel, enter the 3 parameters and complete the balance process just like in dynamic mode.

14. Errors and Trouble Shooting

Error	Meaning	Solution
ccc ccc	The result of measurement is beyond the range.	The user did one of the following: the user attempted to calibrate machine but did not add wheel weights. The user placed a wheel that is either too light or too heavy for the machine.
OFF OFF	Machine gives this prompt when the STOP button is pressed while a wheel is spinning	
Err 01	The guard was not closed when attempting to spin a wheel or the user raised the guard while	Use the system settings to turn guard control to OFF. Do not raise or lower the guard while wheel is spinning.

	the wheel is spinning.	
Err 02	Rotating speed is too low for machine to work.	Tighten the drive belt. Check to make sure the spin shaft is tight and properly spinning. Check to make sure the motor is functioning properly. Put a heavier wheel. The machine is for balancing full size car and truck tires, not TV or smaller tires.
Err 03	The rotation is in the wrong direction.	Occurs when using a 3 phase motor. Adjust the three phase wires.
ERR CAL	The machine is not calibrated	Follow the calibration steps.
ERS CAL	Factory Maintenance Error	Contact the manufacturer
Machines Continues to ask for more weight	Machine is not properly calibrated, wheel parameters where parameters where not entered correctly, or weight sensor board is defective	Calibrate the machine properly. Enter wheel parameters correctly (remember that when the machine is turned off, the wheel parameters are not saved). Check weight sensor board for broken parts or loose wires.
Machines trips electrical breaker	Transformer or Power Board are defective	Replace the power board or transformer
Machines seems to overheat and shut down automatically	Transformer is overheating or power board is defective	Check temperature of transformer at the time the machine shuts

		down. If transformer is extremely hot, then it must be replaced. If transformer is not hot, then power board need to be replaced
Machine does not turn on	Error in electrical wiring	Check on/off switch. Check the connection of all wires. Trace electrical current.