DO THE JOB RIGHT.®

Item #31639

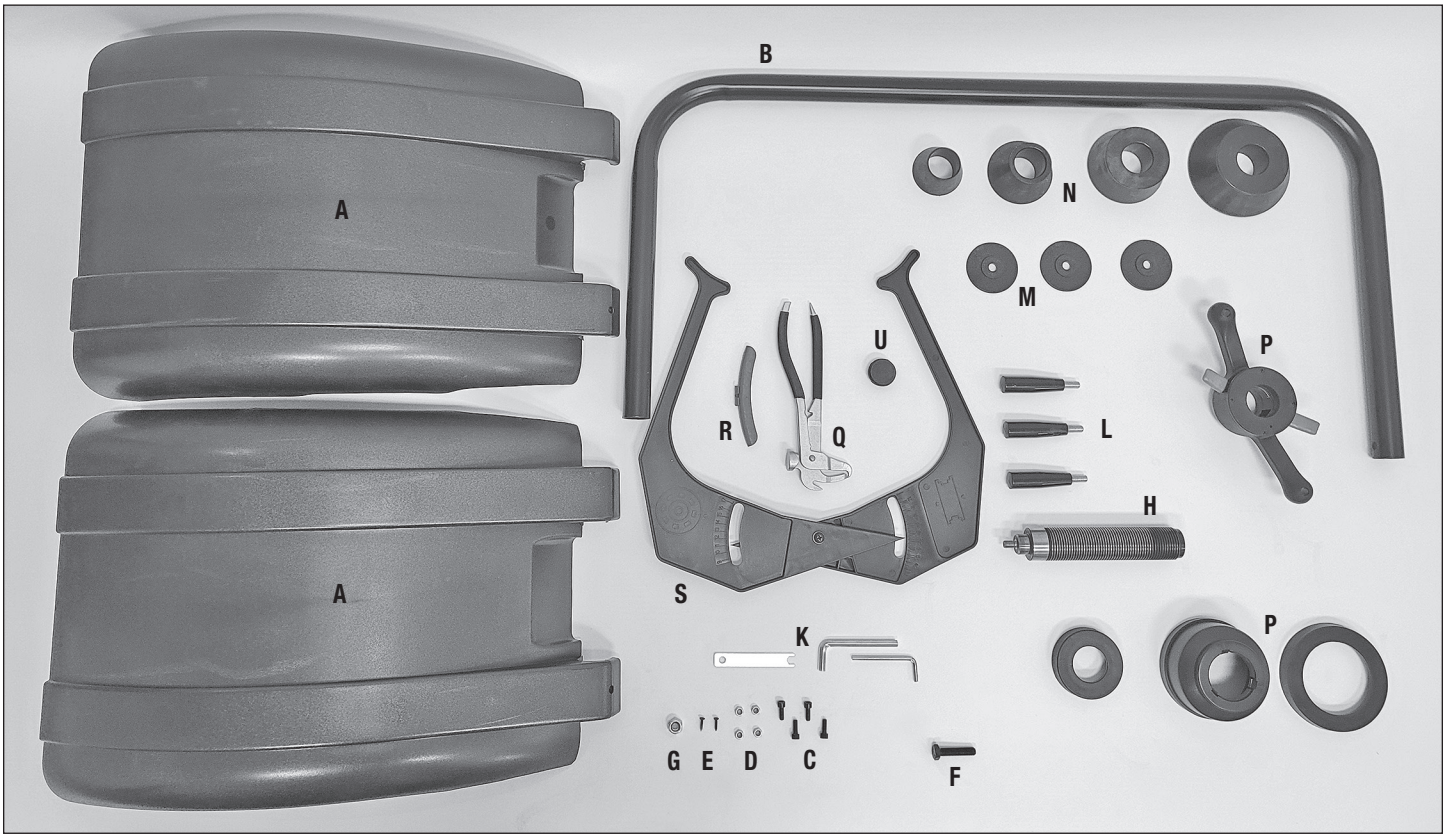
ELECTRONIC WHEEL BALANCER

INSTRUCTIONS

The **EASTWOOD ELECTRONIC WHEEL BALANCER** brings the convenience and economy of a professional, high precision tire and wheel Balancer to the well-equipped DIY or race shop. Allows quick balancing and guidance for applying clip-on or stick-on weights to a variety of wheel types, sizes and materials.

CONTENTS

(2) Guard Halves - [A]
(1) Tubular Steel Guard Frame - [B]
(4) M6 x 25 Bolts - [C]
(4) M6 Nuts - [D]
(2) Phillips Head Screws - [E]
(1) M10 x 45mm Bolt – [F]
(1) M10 Nut – [G]
(1) Main Drive Spindle - [H]
(1) 3 piece Tool Kit: 8mm & 5mm Hex Keys and a 10mm Flat Wrench - [K]
(3) Accessory Storage Posts - [L]
(3) Accessory Storage Post Protective Rings - [M]
(4) Spindle Hub Cones; 2", 2.5" 3" & 4" - [N]
(1) Quick-Release Hub Wing Lock - [P]
(1) Balance Weight Pliers - [Q]
(1) 100 gram Red Calibration Weight - [R]
(1) Wheel Width/Diameter Caliper - [S]
(1) Main Balancer Unit - [T] (not shown)
(1) Tube Plug - [U]



SPECIFICATIONS

Rim Diameter Range:	10" to 24"
Rim Width Range:	1.5" to 20"
Maximum Tire Diameter :	34" [864mm]
Rotating Speed:	200 RPM
Measurement Cycle Time:	8 Seconds
Maximum Out of Balance Range:	0.25 to 35 Oz. [1 to 999 Grams]
Power Requirements:	120 VAC, 60hz.

SAFETY INFORMATION

The following explanations are displayed in this manual, on the labeling, and on all other information provided with this product:

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

CAUTION used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

⚠ NOTICE

NOTICE is used to address practices not related to personal injury.

GENERAL SAFETY RULES

⚠ WARNING

Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term “electrical equipment” in all of the warnings listed below refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

1) WORK AREA SAFETY

a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.

b) Do not operate electrical equipment in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Electrical equipment creates sparks which may ignite the dust or fumes.

c) Keep children and bystanders away while operating electrical equipment. Distractions can cause you to lose control.

2) ELECTRICAL SAFETY

a) Electrical equipment plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) electrical equipment. Unmodified plugs and matching outlets will reduce risk of electric shock.

b) Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.

c) Do not expose electrical equipment to rain or wet conditions. Water entering electrical equipment will increase the risk of electric shock.

d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the electrical equipment. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.

e) When operating electrical equipment outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.

SAFETY INFORMATION

3) PERSONAL SAFETY

a) Stay alert, watch what you are doing and use common sense when operating electrical equipment. Do not use electrical equipment while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating electrical equipment may result in serious personal injury.

b) Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

c) Avoid accidental starting. Ensure the switch is in the off-position before plugging in. Plugging in electrical equipment with the switch in the on position invites accidents.

d) Remove any adjusting key or wrench before turning the electrical equipment on. A wrench or a key left attached to a rotating part of the electrical equipment may result in personal injury.

e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the electrical equipment in unexpected situations.

f) Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.

4) ELECTRICAL EQUIPMENT USE AND CARE

a) Do not force the electrical equipment. Use the correct electrical equipment for your application. The correct electrical equipment will do the job better and safer at the rate for which it was designed.

b) Do not use the electrical equipment if the switch does not turn it on and off. Any electrical equipment that cannot be controlled with the switch is dangerous and must be repaired.

c) Disconnect the plug from the power source before making any adjustments, changing accessories, or storing electrical equipment. Such preventive safety measures reduce the risk of starting the electrical equipment accidentally.

d) Store idle electrical equipment out of the reach of children and do not allow persons unfamiliar with the electrical equipment or these instructions to operate the electrical equipment. Electrical equipment is dangerous in the hands of untrained users.

e) Maintain electrical equipment. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the electrical equipment operation. If damaged, have the electrical equipment repaired before use. Many accidents are caused by poorly maintained electrical equipment.

f) Use the electrical equipment, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of electrical equipment, taking into account the working conditions and the work to be performed. Use of the electrical equipment for operations different from those intended could result in a hazardous situation.

5) SERVICE

a) Have your electrical equipment serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the electrical equipment is maintained.

SAFETY INFORMATION

⚠ WARNING PINCH AND CRUSH HAZARD!

- Keep fingers and hands away from moving parts when operating.

⚠ WARNING CUT HAZARD!

- Metal edges on wheels can cause serious cuts. Wear thick, well-fitting work gloves to prevent cuts from handling wheels & tires.

⚠ WARNING INJURY HAZARD!

- This tool can quickly start up while connected to an electrical supply causing serious personal injury. Always disconnect the Wheel Balancer from the electrical supply before mounting/dis-mounting wheels or performing maintenance.
- The Wheel Balancer involves the mounting/dismounting of large, heavy wheel/tire combinations which can present serious injuries if dropped. The use of safety shoes is strongly recommended.

⚠ WARNING EYE INJURY HAZARD!

- Rapidly rotating wheel/tire assemblies can eject metal particles, dirt and debris at high velocity. Always wear ANSI approved eye protection when operating this tool.

⚠ WARNING

- The Balancer was specifically designed to be operated by one person only. Never have one person operate the Control Panel while another handles the wheel mounting/dismounting or serious injury could occur.

⚠ CAUTION INJURY HAZARD!

- The Wheel Balancer consists of large moving components which can present a hand/finger pinch hazard injuries if dropped. Avoid pinching hands while handling parts during assembly and/or operation.

⚠ CAUTION

- Inspect rim and tire before mounting for previous damage or bent conditions. Attempting to spin a damaged rim and or tire can result in serious injury and severe Balancer damage.

⚠ NOTICE

- Wheels and tires **MUST** be clean and free of all mud, grit or other debris as they will cause an inaccurate balance reading.
- All tire pressures **MUST** be set to specific vehicle or tire manufactures specifications or inaccurate balance readings will result.

BALANCER SAFETY FEATURE

⚠ NOTICE

- **Should a malfunction occur during the operation of the Balancer, Depressing the "STOP" Key will stop wheel rotation immediately.**
- **If the Guard is in the up position and the "START" Key is pressed, the Spin Cycle will not begin and "Err-5" will appear in the display. NOTE: This function can be changed as outlined in the "Settings" section of these instructions.**
- **While in operation, if the Guard is opened, wheel rotation will stop immediately.**

INSTALLATION LOCATION

- The Balancer **MUST** be installed on a solid and level concrete or similar surface for proper operation, accuracy and safety.
- There **MUST** be a minimum of 4 ft. of open space surrounding the Balancer.
- The Balancer **MUST** be firmly attached to the floor with suitable concrete anchors or similar hardware (not included).

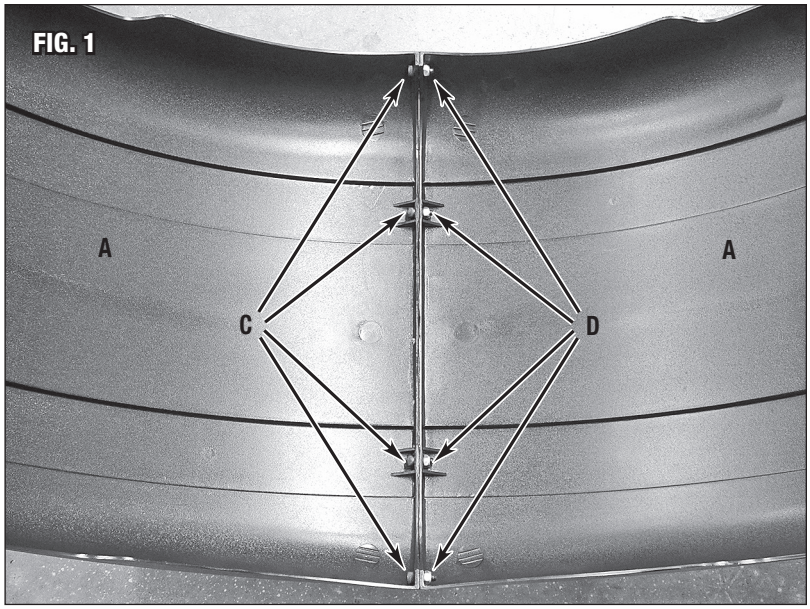
ASSEMBLY

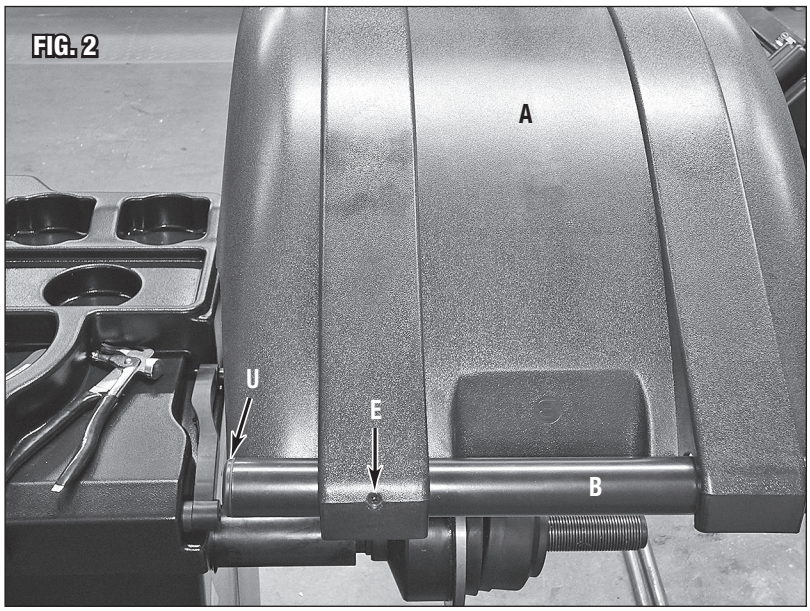
GUARD ASSEMBLY

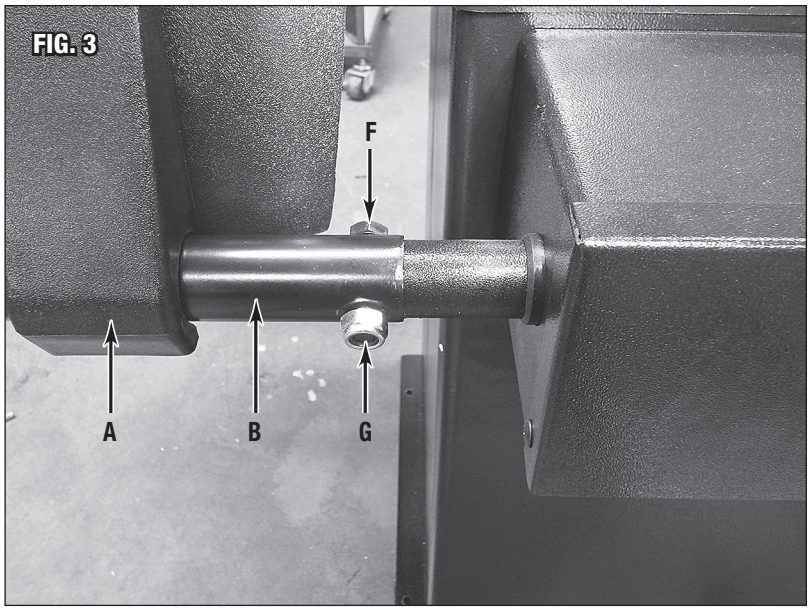
- Using the included 5mm Hex Key and 10mm Flat Wrench **[K]**, Assemble the 2 halves of the molded plastic Guard **[A]** with (4) M6 x 25mm Bolts **[C]** & Nuts **[D] (FIG 1)**.
- Screw the assembled plastic Guard **[A]** to the Tubular Steel Guard Frame **[B]** with (2) Phillips Head Screws **[E] (FIG 2)**.
- Insert Tube Plug **[U]** into the end of the Tubular Steel Guard Frame **[B] (FIG 2)**.

GUARD INSTALLATION

- Attach the assembled Guard to the Balancer by sliding the Tubular Steel Guard Frame **[B]** over the Guard Mounting Shaft at the rear of the Main Balancer Unit **[T].** Fasten with the M10 x 45mm Bolt **[F]** & Nut **[G] (FIG 3)**.







MAIN DRIVE SPINDLE INSTALLATION

- Thread the Main Drive Spindle **[H]** onto the Stub Shaft.
- Tighten securely with the 8mm Hex Key included with the Tool Kit **(K)**.

ACCESSORY STORAGE POST INSTALLATION

- Thread the three Accessory Storage Posts **[L]** with Protective Rings **[M]** into the threaded holes on the left side of the Main Balancer Unit Cabinet **[T] (FIG 5)**.

FIG. 4

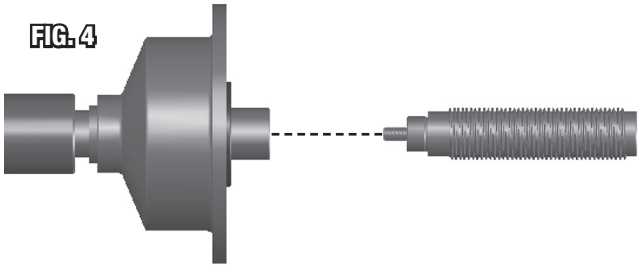
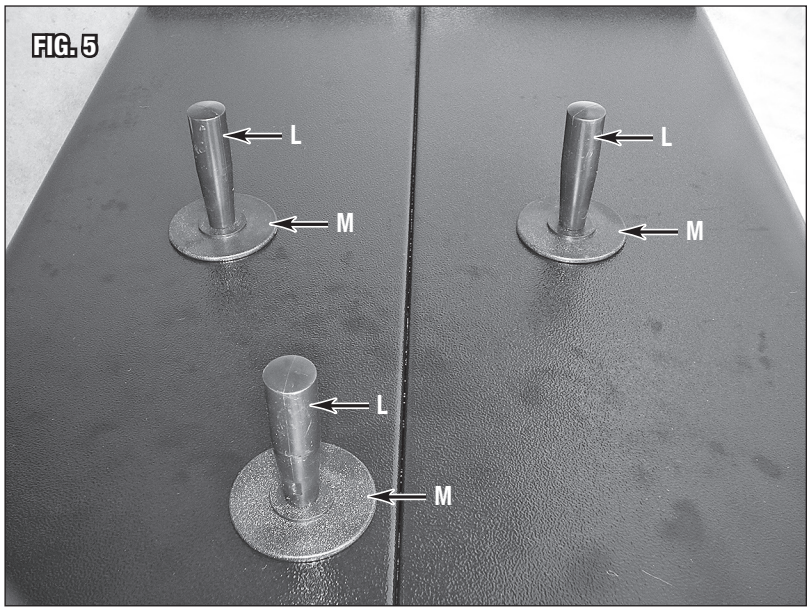


FIG. 5



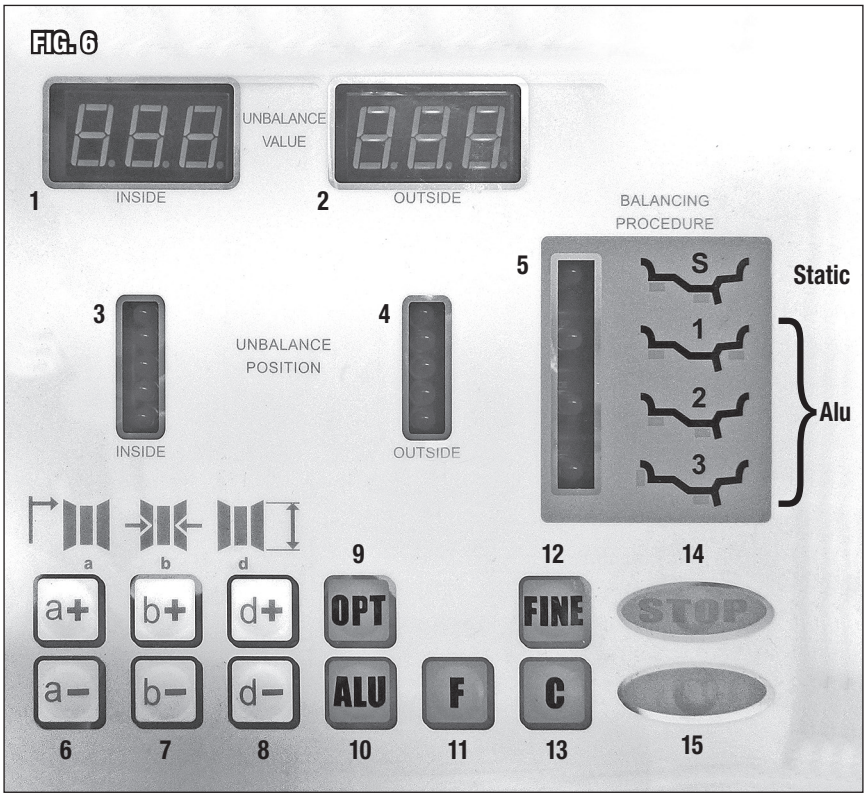
CONTROL PANEL LED DISPLAY AND FUNCTION KEYS

⚠ NOTICE

Depress all Keys with fingers only! Do not use tools or other objects or permanent keypad damage will occur.

1. Amount of *Inside* Imbalance in oz. or g.
2. Amount of *Outside* Imbalance in oz. or g.
3. Position of *Inside* Imbalance.
4. Position of *Outside* Imbalance.
5. "**ALU**" Correction Mode Selection Indicator (Use Key #10, "**ALU**" to select.)
6. Manual DISTANCE Setting Keys **(a+ or a-)** to manually enter distance of rim outer edge to machine.
7. Manual WIDTH Setting Keys **(b+ or b-)** to manually enter width of rim at bead.
8. Manual DIAMETER Setting Keys **(d+ or d-)** to manually enter diameter of rim at bead.
9. Selection Key for Optimization of Imbalance.
10. Selection Key to choose "**ALU**" Mode (See #5 for indication).
11. Selection Key to choose from "**STATIC**" or "**DYNAMIC**" functions.
12. Selection Key to display imbalance amount (Display #'s 1 & 2).
13. Selection Key to recalculate amount of imbalance.
14. EMERGENCY "**STOP**" Key.
15. "**START**" Key (Begins Spin Cycle, Guard must be in down position).

FIG. 6



FUNCTION KEY COMBINATIONS

Depress the listed Keys in the described combinations concurrently to achieve the desired functions:
NOTE: The following combinations are listed in this location for quick reference only. They are described in much greater detail further along in these instructions.

F + **STOP** = Guard Switch function setting

F + **a–** + **a+** = Toggle between ounce or gram settings

STOP + **C** = Begin sequence for changing Balancer Settings

F + **C** = Balancer calibration

F + **FINE** = Balancer function checks

OPERATION

⚠ WARNING **PINCH AND CRUSH HAZARD!**
Keep fingers and hands away from moving parts when operating.

⚠ WARNING **CUT HAZARD!**
Metal edges on wheels can cause serious cuts. Wear thick, well-fitting work gloves to prevent cuts from handling wheels & tires.

⚠ WARNING **INJURY HAZARD!**
This tool can quickly start up while connected to an electrical supply causing serious personal injury. Always disconnect the Wheel Balancer from the electrical supply before mounting/dis-mounting wheels or performing maintenance.

⚠ WARNING **EYE INJURY HAZARD!**
Rapidly rotating wheel/tire assemblies can eject metal particles, dirt and debris at high velocity. Always wear ANSI approved eye protection when operating this tool.

⚠ WARNING **INJURY HAZARD!**
The Wheel Balancer involves the mounting/dismounting of large, heavy wheel/tire combinations which can present serious injuries if dropped. The use of safety shoes is strongly recommended.

⚠ WARNING
The Balancer was specifically designed to be operated by one person only. Never have one person operate the Control Panel while another handles the wheel mounting/dismounting or serious injury could occur.

⚠ CAUTION **INJURY HAZARD!**
The Wheel Balancer consists of large moving components which can present a hand/finger pinch hazard injuries if dropped. Avoid pinching hands while handling parts during assembly and/or operation.

⚠ CAUTION
Inspect rim and tire before mounting for previous damage or bent conditions. Attempting to spin a damaged rim and or tire can result in serious injury and severe Balancer damage.

⚠ NOTICE
Wheels and tires MUST be clean and free of all mud, grit or other debris as they will cause an inaccurate balance reading.

⚠ NOTICE
All tire pressures MUST be set to specific vehicle or tire manufactures specifications or inaccurate balance readings will result.

MOUNTING WHEELS ON BALANCER

⚠ CAUTION

Inspect rim and tire before mounting for previous damage or bent conditions. Attempting to spin a damaged rim and or tire can result in serious injury and severe Balancer damage.

⚠ NOTICE

Wheels and tires MUST be clean and free of all mud, grit or other debris as they will cause an inaccurate balance reading.

⚠ NOTICE

All tire pressures MUST be set to specific vehicle or tire manufactures specifications or inaccurate balance readings will result.

⚠ NOTICE

Do not slide wheel/tire over the Main Drive Spindle when mounting or dis-mounting to avoid damage to Main Drive Spindle.

BALANCER SAFETY FEATURES

⚠ NOTICE

Should a malfunction occur during the operation of the Balancer, Depressing the "STOP" Key will stop wheel rotation immediately.

⚠ NOTICE

If the Guard is in the up position and the "START" Key is pressed, the Spin Cycle will not begin and "Err-5" will appear in the display. NOTE: This function can be changed as outlined in the "Settings" section of these instructions.

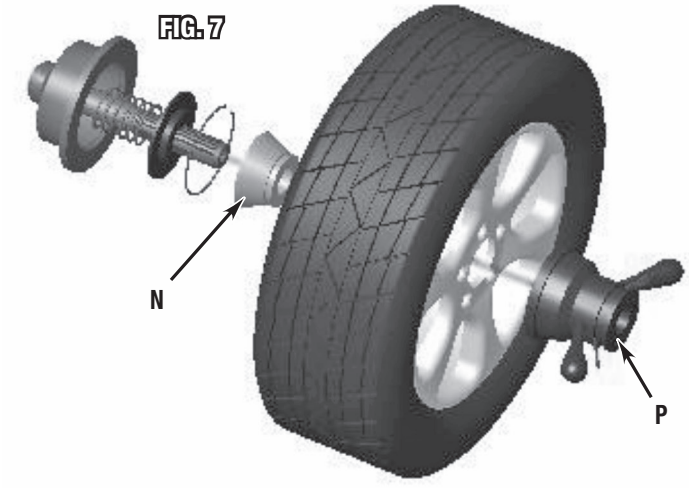
⚠ NOTICE

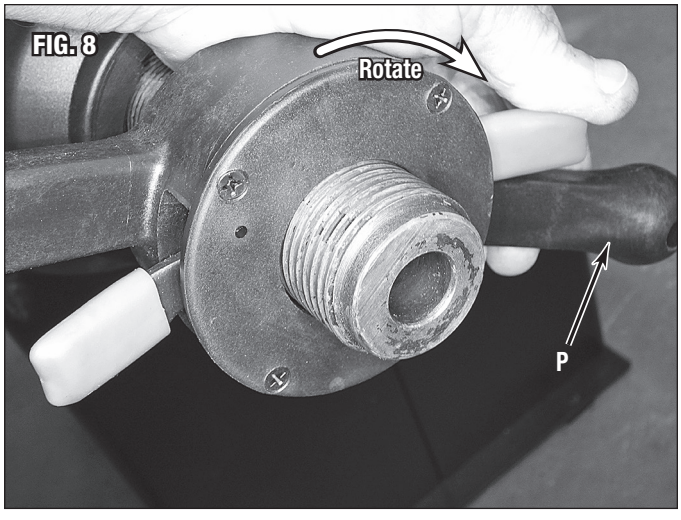
While in operation, if the Guard is opened, wheel rotation will stop immediately.

- Select the Spindle Hub Cone **[N]** that best fits the center hole of the wheel.
- Mount Spindle Hub Cone with the conical end outward **(FIG 7)**.
- Mount the wheel/tire on to the Main Drive Spindle with the center hole over the conical portion of the Spindle Hub Cone **(FIG 7)**.
- Place the Quick-Release Hub Wing Lock **[P]** on the Main Drive Spindle by spinning inward to tighten wheel/tire in place or by rotating the Spring-Loaded Quick-Release Ears in a Clockwise direction while sliding onto threaded shaft **(FIG 8)**.

⚠ NOTICE

Apply moderate hand pressure to keep the wheel/tire from spinning while tightening the Hub Wing Lock.





POWER ON AND INITIALIZATION

- The "**POWER**" Switch is located on the left side of the cabinet, at the upper, rear corner. Switch it to the "**ON**" position.
- After the machine is powered on, it starts initialization automatically. The initialization completes after two seconds. The Balancer then enters normal Dynamic Balance Mode automatically, ready for the input of diameter, width and offset wheel data **(FIG 9)**.

INPUTTING OFFSET, WIDTH AND DIAMETER WHEEL RIM DATA

- **Enter Wheel Rim Offset** – The built-in Wheel Measurement Scale is located at the front, upper edge of the Cabinet **(FIGS 10 & 11)**. Pull it out and apply the roller to the inner edge of the wheel rim. Observe and record the Offset dimension which is Value "**a**". Press "**a-**" or "**a+**" Keys to enter Value "**a**".
- **Enter Wheel Rim Width** – Using the included Wheel Width/Diameter Caliper **[S]**, observe and record the Width dimension which is Value "**b**". Press "**b-**" or "**b+**" Keys to enter Value "**b**".
- Enter Wheel Rim Diameter – Using the included Wheel Width/Diameter Caliper **[S]**, observe and record the Diameter dimension which is Value "**d**". Press "**d-**" or "**d+**" Keys to enter Value "**d"**.

FIG. 9

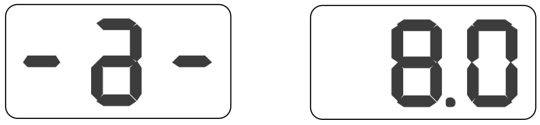


FIG. 10

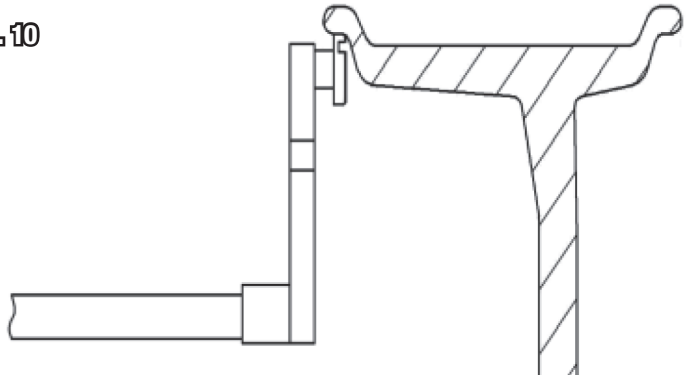
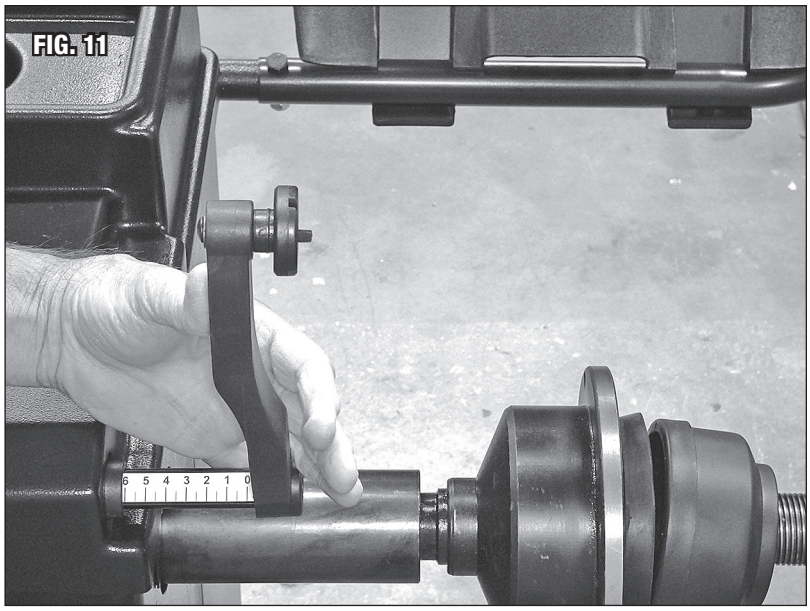


FIG. 11



BASIC DYNAMIC BALANCING PROCESS

⚠ WARNING PINCH AND CRUSH HAZARD!
Keep fingers and hands away from moving parts when operating.

⚠ WARNING CUT HAZARD!
Metal edges on wheels can cause serious cuts. Wear thick, well-fitting work gloves to prevent cuts from handling wheels & tires.

⚠ WARNING INJURY HAZARD!
This tool can quickly start up while connected to an electrical supply causing serious personal injury. Always disconnect the Wheel Balancer from the electrical supply before mounting/dis-mounting wheels or performing maintenance.

⚠ WARNING EYE INJURY HAZARD!
Rapidly rotating wheel/tire assemblies can eject metal particles, dirt and debris at high velocity. Always wear ANSI approved eye protection when operating this tool.

⚠ WARNING INJURY HAZARD!
The Wheel Balancer involves the mounting/dismounting of large, heavy wheel/tire combinations which can present serious injuries if dropped. The use of safety shoes is strongly recommended.

⚠ WARNING
The Balancer was specifically designed to be operated by one person only. Never have one person operate the Control Panel while another handles the wheel mounting/dismounting or serious injury could occur.

⚠ CAUTION INJURY HAZARD!
The Wheel Balancer consists of large moving components which can present a hand/finger pinch hazard injuries if dropped. Avoid pinching hands while handling parts during assembly and/or operation.

⚠ CAUTION
Inspect rim and tire before mounting for previous damage or bent conditions. Attempting to spin a damaged rim and or tire can result in serious injury and severe Balancer damage.

⚠ NOTICE
Wheels and tires MUST be clean and free of all mud, grit or other debris as they will cause an inaccurate balance reading.

⚠ NOTICE
All tire pressures MUST be set to specific vehicle or tire manufactures specifications or inaccurate balance readings will result.

- Lower the Guard over the mounted Wheel.
- Press "**START**" Key to begin Spin Cycle. The Balancer will spin the wheel for 8 seconds then stop.
- After stopping, the LED indicators will display "**Inside**" and "**Outside**" Imbalance Values **(Control Panel Display #'s 1 & 2)**.
- Open Guard.
- Slowly rotate the wheel by hand. When all of the Inside Unbalance Position LED's illuminate **(Control Panel Display #3)**, clip the required weight balance weight to the wheel rim at the 12:00 position on the rim **(FIG 12)**.
- Again slowly rotate the wheel by hand. When all of the Outside Unbalance Position LED's illuminate **(Control Panel Display #4)**, clip the required weight balance weight to the wheel rim at the 12:00 position on the rim **(FIG 13)**.
- Lower Guard and once again press "**START**" Key to begin Spin Cycle.
- After Balancer stops, the Imbalance Condition LED's will display "**0**" and the balancing is complete.

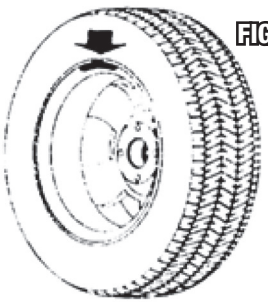


FIG. 12

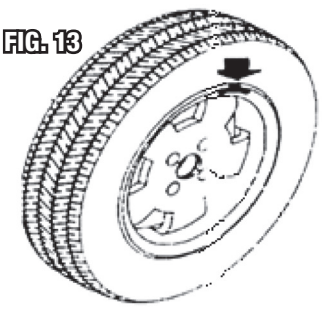


FIG. 13

BALANCING PROCEDURE FUNCTIONS (Control Panel Display #5)

Note that there are four selections shown on the Balancing Procedure Display **(Control Panel Display #5)**. The Balancer operator determines the best location to apply wheel balancing weights and the type of weight to be used based on the particular wheel design as depicted below. These are selected by depressing the "**ALU**" Key **(Control Panel Display #10)** as required.

FIG. 14

S ALU-1 ALU-2 ALU-3

- "**S**" is selected when Static balancing is necessary when conventional Dynamic Balancing is not feasible due to wheel shapes such as motorcycle wheels or other configurations. Use Static when only a center balance weight can be applied to the wheel **(FIG 14)**.

STATIC BALANCING PROCESS

⚠ WARNING **PINCH AND CRUSH HAZARD!**
Keep fingers and hands away from moving parts when operating.

⚠ WARNING **CUT HAZARD!**
Metal edges on wheels can cause serious cuts. Wear thick, well-fitting work gloves to prevent cuts from handling wheels & tires.

⚠ WARNING **INJURY HAZARD!**
This tool can quickly start up while connected to an electrical supply causing serious personal injury. Always disconnect the Wheel Balancer from the electrical supply before mounting/dis-mounting wheels or performing maintenance.

⚠ WARNING **EYE INJURY HAZARD!**
Rapidly rotating wheel/tire assemblies can eject metal particles, dirt and debris at high velocity. Always wear ANSI approved eye protection when operating this tool.

⚠ WARNING **INJURY HAZARD!**
The Wheel Balancer involves the mounting/dismounting of large, heavy wheel/tire combinations which can present serious injuries if dropped. The use of safety shoes is strongly recommended.

⚠ WARNING
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⚠ CAUTION **INJURY HAZARD!**
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⚠ CAUTION
Inspect rim and tire before mounting for previous damage or bent conditions. Attempting to spin a damaged rim and or tire can result in serious injury and severe Balancer damage.

⚠ NOTICE
Wheels and tires MUST be clean and free of all mud, grit or other debris as they will cause an inaccurate balance reading.

⚠ NOTICE
All tire pressures MUST be set to specific vehicle or tire manufactures specifications or inaccurate balance readings will result.

STATIC BALANCING PROCESS

FIG. 15

- Press the "**F**" Key to select "**S**".
- **Enter Diameter at weight location** – Using the included Wheel Caliper **[S]**, observe and record the Diameter dimension which is Value "**d**". Press "**d-**" or "**d+**" keys to enter Value "**d**".
  NOTE: dimensions "**a**" & "**b**" are not used and can be at value "**0**".
- Lower the Guard over the mounted Wheel.
- Press "**START**" key to begin Spin Cycle. The Balancer will spin the wheel for 8 seconds then stop.
- After stopping, the left "**inside**" LED indicator will display "**St**" **(FIG 15)** while the right "**outside**" LED indicator will display the Imbalance Value **(Control Panel Display #'s 1 & 2)**.
- Open Guard.
- Slowly rotate the wheel by hand. When all of the Inside Unbalance Position LED's illuminate **(Control Panel Display #3)**, clip the required weight balance weight to the wheel rim at the center/12:00 position on the rim.
- Lower Guard and once again press "**START**" Key to begin Spin Cycle.
- After Balancer stops, the Imbalance Condition LED's will display "**0**" and the balancing is complete.

IMBALANCE OPTIMIZATION

⚠ WARNING PINCH AND CRUSH HAZARD!
Keep fingers and hands away from moving parts when operating.

⚠ WARNING CUT HAZARD!
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The Balancer was specifically designed to be operated by one person only. Never have one person operate the Control Panel while another handles the wheel mounting/dismounting or serious injury could occur.

⚠ CAUTION INJURY HAZARD!
The Wheel Balancer consists of large moving components which can present a hand/finger pinch hazard injuries if dropped. Avoid pinching hands while handling parts during assembly and/or operation.

⚠ CAUTION
Inspect rim and tire before mounting for previous damage or bent conditions. Attempting to spin a damaged rim and or tire can result in serious injury and severe Balancer damage.

⚠ NOTICE
Wheels and tires MUST be clean and free of all mud, grit or other debris as they will cause an inaccurate balance reading.

⚠ NOTICE
All tire pressures MUST be set to specific vehicle or tire manufactures specifications or inaccurate balance readings will result.

IMBALANCE OPTIMIZATION

Imbalance Optimization can be used when the wheel imbalance amount is over 1 oz. Optimization can reduce the weight value of required wheel weights minimizing the amount of weight placed on a wheel.

- Press "**OPT**" Key **(Control Panel Display #9)**. Optimization and 180 will show in LED Display **(FIG 16)**.
- Use chalk (not included) to place a mark on the same point on the rim and tire.
- Remove wheel/tire from Balancer.
- Using a Tire Mounting Machine, dis-mount tire from rim, rotate tire 180° on rim and re-mount tire on rim.
- Re-mount wheel/tire on Balancer, lower Guard and once again press "**START**" Key to begin Spin Cycle.
- After Balancer stops, the left "**inside**" **(Control Panel Display #1)** LED will display the Optimization % Value and the right "**outside**" **(Control Panel Display #2)** LED will display the reduced imbalance weight value.
  Example = If a pre-optimization imbalance weight value is 1.5 oz. and is optimized by 85%, the weight required after optimization will be only 0.25 oz.

NOTE: The Optimization procedure can be ended at this point by adding indicated weight or additional steps may be taken for further Optimization. To continue:

- Slowly rotate the wheel by hand. When only the end LED's of both of the Unbalance Position LED's **(Control Panel Display #'s 3 & 4) (FIG 17)**, are illuminated, mark the side of the Tire only at the 12:00 position using chalk.
- Once again, slowly rotate the wheel by hand. When only the center LED's of both of the Unbalance Position LED's **(Control Panel Display #'s 3 & 4) (FIG 18)**, are illuminated, mark the side of the Rim only at the 12:00 position using chalk.
- Remove wheel/tire from Balancer.
- Using a Tire Mounting Machine, dis-mount tire from rim, rotate tire to align the previous chalk marks placed on the tire and rim and re-mount tire on rim. At this point, total Optimization is achieved.

GRAM TO OUNCE DISPLAY CONVERSION

NOTE: The Balancer default settings will display all weight units in Grams and must be switched to display Ounces if desired. To do so:

- Press "**F**", "**a-**" and "**a+**" Keys to activate Ounce/Gram units setting **(FIG 19)**.
- Press "**b+**" or "**b-**" Keys to toggle units from Grams to Ounces **(FIG 20)**.
- Press "**b+**" or "**b-**" Keys once again to switch units from Ounces to Grams.

GUARD SWITCH FUNCTION SETTING

This setting controls whether the Balancer automatically starts the Spin Cycle upon closing the Guard or if the Start Key must be first pressed. To do so:

- Press "F" Key and "**STOP**" Keys to display current function status.
  Note that "**ON**" denotes the Guard Closed, Automatic Start Function is activated **(FIG 21)**.
- To toggle between "**On**" and "**Off**", press "**b+**" or "**b-**" Keys.
  Press "**a+**" Key to save chosen setting and progress to next setting.

FIG. 16

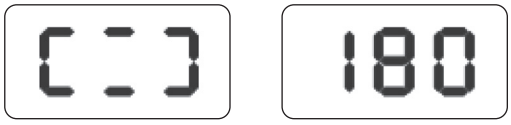


FIG. 17

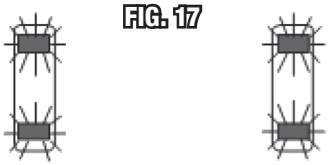


FIG. 18

FIG. 19

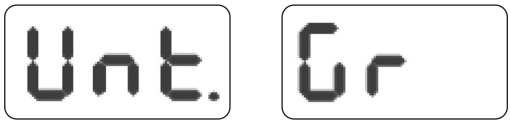


FIG. 20

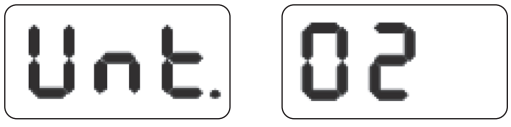
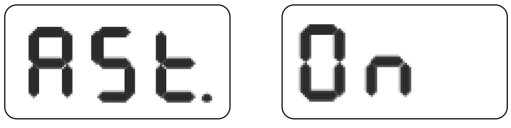


FIG. 21



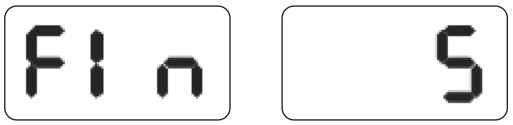
READOUT DISPLAY SETTING ADJUSTMENTS

NOTE: To change one or more of the following Settings, all 4 must be scrolled through in sequence even if no changes are desired. To initiate sequence of settings: Press "**STOP**" and "**C**" Keys.

1) Minimum Weight Value Sensitivity Setting

- The displayed weight value resolution is adjustable between, 1/8 oz., 1/4 oz. and 1/2 oz. [5,10 or 15 grams] **(FIG 22)**.
- Press "FINE" Key to display actual imbalance amount.
- To toggle between the three sensitivity levels", press "**b+**" or "**b-**" Keys.
  Press "**a+**" Key to save chosen setting and progress to next setting.

FIG. 22

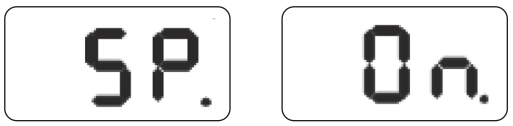


2) Key Press "Beep Tone" Setting

This setting controls whether the a Beep tone is emitted every time a Key is pressed. To do so:

- Press "**a+**" Key to display current function status.
  Note that "**On**" indicates the "**Beep**" feature is "**on**" **(FIG 23)**.
- To toggle between "**On**" and "**Off**", press "**b+**" or "**b-**" Keys.
  Press "**a+**" Key to save chosen setting and progress to next setting.

FIG. 23

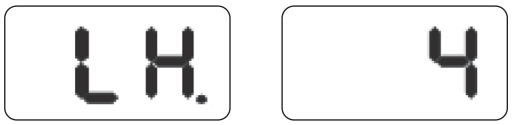


3) LED Readout Display Brightness Setting

The LED Readout Brightness level default setting is 4 with a range of 1 through 8. Right side displays brightness level. Increase or decrease brightness:

- Press "**a+**" Key to display current brightness **(FIG 24)**.
- To increase or decrease brightness, press "**b+**" or "**b-**" Keys.
  Press "**a+**" Key to save chosen brightness setting and progress to next setting.

FIG. 24

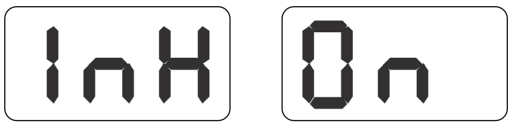


4) Inch to MM Wheel Dimension Setting

Most wheel dimensions are stated in Inches and the Balancer default is set to Inch. If desired, it may be switched to MM. Increase or decrease brightness:

- Press "**a+**" Key to enter the setting **(FIG 25)**.
- To toggle between "**Inch**" and "**MM**", press "**b+**" or "**b-**" Keys.
  Press "**a+**" Key to save chosen setting and exit settings sequence.

FIG. 25



BALANCER CALIBRATION

⚠ WARNING **PINCH AND CRUSH HAZARD!**
Keep fingers and hands away from moving parts when operating.

⚠ WARNING **CUT HAZARD!**
Metal edges on wheels can cause serious cuts. Wear thick, well-fitting work gloves to prevent cuts from handling wheels & tires.

⚠ WARNING **INJURY HAZARD!**
This tool can quickly start up while connected to an electrical supply causing serious personal injury. Always disconnect the Wheel Balancer from the electrical supply before mounting/dis-mounting wheels or performing maintenance.

⚠ WARNING **EYE INJURY HAZARD!**
Rapidly rotating wheel/tire assemblies can eject metal particles, dirt and debris at high velocity. Always wear ANSI approved eye protection when operating this tool.

⚠ WARNING **INJURY HAZARD!**
The Wheel Balancer involves the mounting/dismounting of large, heavy wheel/tire combinations which can present serious injuries if dropped. The use of safety shoes is strongly recommended.

⚠ WARNING
The Balancer was specifically designed to be operated by one person only. Never have one person operate the Control Panel while another handles the wheel mounting/dismounting or serious injury could occur.

⚠ CAUTION **INJURY HAZARD!**
The Wheel Balancer consists of large moving components which can present a hand/finger pinch hazard injuries if dropped. Avoid pinching hands while handling parts during assembly and/or operation.

⚠ CAUTION
Inspect rim and tire before mounting for previous damage or bent conditions. Attempting to spin a damaged rim and or tire can result in serious injury and severe Balancer damage.

⚠ NOTICE
Wheels and tires MUST be clean and free of all mud, grit or other debris as they will cause an inaccurate balance reading.

⚠ NOTICE
All tire pressures MUST be set to specific vehicle or tire manufactures specifications or inaccurate balance readings will result.

The Balancer has been precisely calibrated at the factory however long-term use, transportation and or shocks to the unit can result in loss of calibration.

> **⚠ NOTICE**
>
> **In the calibration process, the wheel dimension data entered MUST be correct and the 100 Gram Calibration Weight MUST be accurate otherwise the Balancer calibration will be off.**

The Balancer may be re-calibrated as follows:

- Turn on Power to Balancer and allow Initialization to complete.
- Select a wheel/tire with a known good balance and that a clip-on balance weight can be installed.
- Input Offset, Width and Diameter Wheel Rim Data as described in greater detail in a previous section of these instructions.
- Press "**F**" and "**C**" Keys, close Guard then press "**START**" Key to Calibrate. CAL should appear in both displays **(FIG 26)**. Press "**STOP**" or "**C**" Key.
- After the Spin Cycle completes and the wheel stops, open the Guard. Clip the 100 gram Red Calibration Weight **[P]** anywhere on the outside of the rim. Close Guard, then press "**START**" Key once again. ADD should appear in left display while 100 should appear in right **(FIG 27)**. Press "**STOP**" or "**C**" Key.
- After the wheel stops, CAL should appear in the left display while End should appear in the right **(FIG 28)**. Remove 100 gram Red Calibration Weight from test wheel and dis-mount wheel from Balancer. The Calibration is completed.

FIG. 26

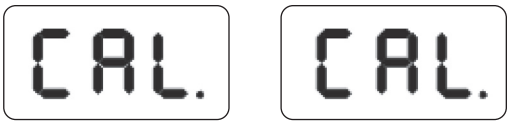


FIG. 27

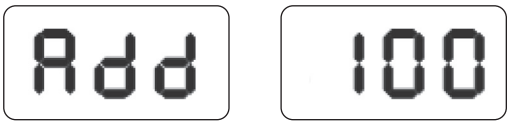


FIG. 28

BALANCER FUNCTION CHECKS

The following sequence of evaluations is intended to verify the proper function of various sensors and indicators. Note: All 3 Checks must be scrolled through in sequence to complete Checking procedure. To initiate sequence of Checks:

Press "**STOP**" and "**C**" Keys.

1) LED INDICATOR CHECK

- Press "**F**" Key and "**FINE**" Key. All LED's and indicators will flash. Press "**C**" Key to exit and progress to Position Sensor Check.

2) POSITION SENSOR CHECK – To verify operation of Position Sensor and internal circuits.

- Slowly rotate Main Shaft and the numeric value on the right side LED display **(Control Panel Display #2)** should change. Value should increase for clockwise turning and decrease with counter-clockwise turning. The normal value range is from 0 to 63.
- Press "**C**" Key to exit and proceed to Piezoelectric Sensor Check.

3 PIEZOELECTRIC SENSOR CHECK – To verify operation of Piezoelectric Sensor and internal circuits.

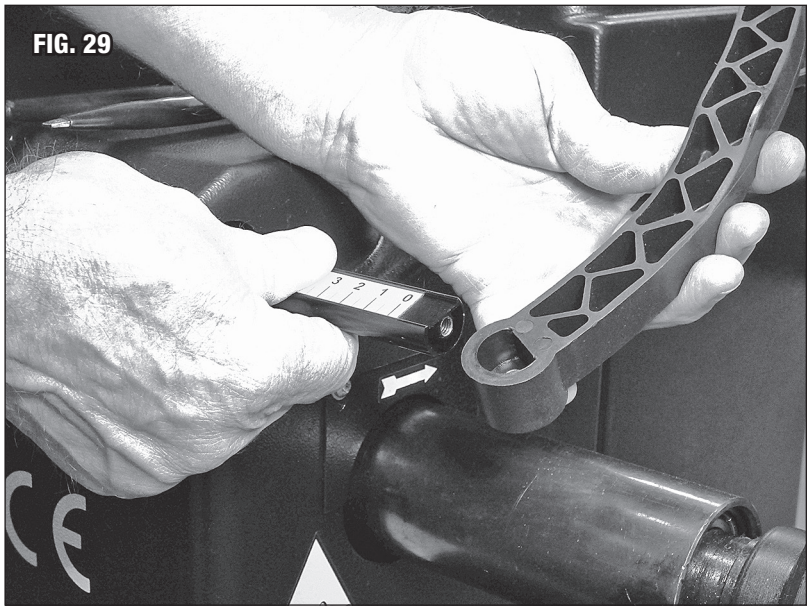
- Press "**ALU**" Key.
- Gently apply a sideways or downward pressure on the Main shaft. Numeric values should change on the LED Displays **(Control Panel Display #'s 1 & 2)**.

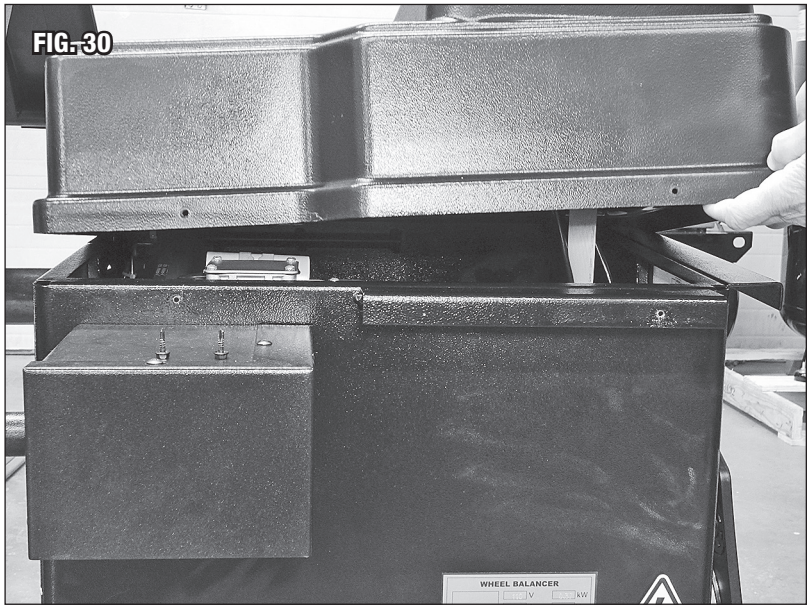
MAINTENANCE

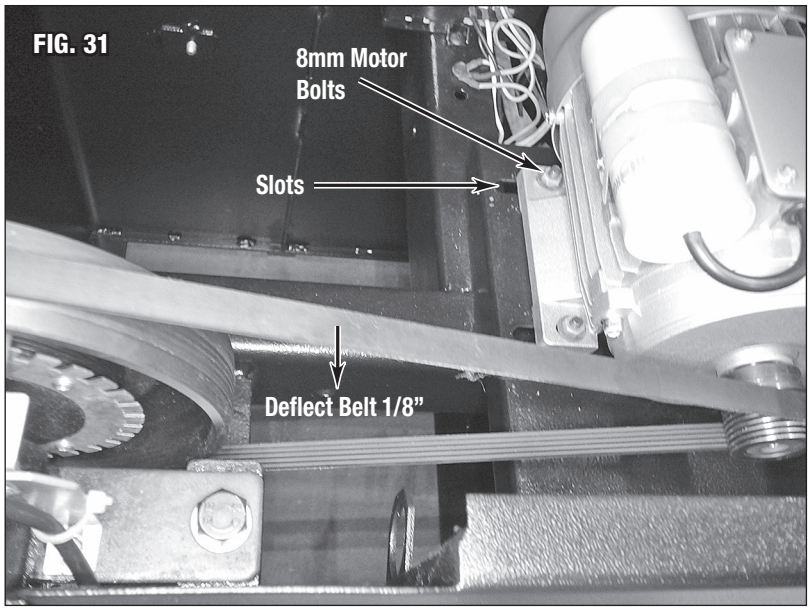
⚠ WARNING

Unplug Balancer from power source before beginning any maintenance.

- Keep external threads of the Main Drive Spindle clean and lightly lubricated at all times.
- Turn Power Switch to the "**OFF**" position and unplug Balancer when not in use.
- If Balancer is to be unused for an extended period, cover with a moisture resistant dust cover before storing.
- Periodically check tightness of Main Drive Spindle bolt with the included 8mm Hex Key **[K]**.
- Every 8 hours of operation, drive belt tension should be checked. To do so:
  - Using the included 5mm Hex Key **[K]**, loosen and remove the retractable, built-in Wheel Measurement Scale by pulling it from its shaft at the right front of the cabinet **(FIG 29)**.
  - Using an 8mm wrench (not included), Remove 4 retaining screws and the formed plastic Top Cover **(FIG 30)**.
  - Check tension by depressing the belt at mid-point between both pulleys. It should deflect by 1/8" [4mm].
  - To tighten, loosen 4 motor mounting bolts using the included 10mm Flat Wrench **[K]**, push motor rearward while tightening mounting bolts.
  - Re-check tension and re-adjust if necessary **(FIG 31)**.
  - Replace cover and Wheel Measurement Scale.







TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTION
Poor Balancer Performance	Wheel not properly mounted	Follow wheel mounting procedure and re-mount wheel.
	Improper Wheel Balancing Weights being used	Use proper Wheel Balancing Weights for application.
	Incorrect “ALU” option selected for type or location of Wheel Balancing Weights being used	Follow “Balancing Procedure Functions” section of these Instructions.
	Wheel not sufficiently tightened on Main Shaft	Tighten wheel on Main shaft.
	Dirt, grease, or foreign matter on wheel and/or tire	Clean wheel and tire.
	Damaged wheel or tire	Inspect wheel and/or tire for bent or otherwise damaged condition and reject.
	Balancer not securely attached to floor	Securely fasten Balancer to floor.
Excessive or Unusual Noise and Vibration	Wheel not properly mounted	Follow wheel mounting procedure and re-mount wheel.
	Wheel not sufficiently tightened on Main Shaft	Tighten wheel on Main shaft.
	Damaged wheel or tire	Inspect wheel and/or tire for bent or otherwise damaged condition and reject.
	Balancer not securely attached to floor	Securely fasten Balancer to floor.
Spin Cycle Slow to Spool Up or Won’t Reach Full 200 RPM Speed	Wheel not properly mounted	Follow wheel mounting procedure and re-mount wheel.
	Wheel not sufficiently tightened on Main Shaft	Tighten wheel on Main shaft.
	Belt Drive slipping	Tighten Drive Belt per Maintenance instructions
Wheel Doesn’t Stop Immediately at End of Spin Cycle or When STOP Key is Pressed	Wheel not properly mounted	Follow wheel mounting procedure and re-mount wheel.
	Wheel not sufficiently tightened on Main Shaft	Tighten wheel on Main shaft.
	Belt Drive slipping	Tighten Drive Belt per Maintenance instructions
Accuracy of Balancer is Diminished or in Question	Balancer out of calibration	Follow Calibration Instructions

LED DISPLAY ERROR CODES

CODE	Problem	Cause	Solution
ERR 1	Main Shaft fails to rotate, Balancer won't start.	Internal fault	Contact Eastwood Tech @ 1-800-343-9353
ERR 2	Spin Cycle Rotation Speed too slow	Wheel not installed tightly	Re-install wheel tightly
		Wheel too light for Balancer	Unable to balance wheel
		Drive Belt too loose or too tight	Adjust Drive Belt per procedure
		Internal fault	Contact Eastwood Tech @ 1-800-343-9353
ERR 3	Failure to provide imbalance numeric value	Imbalance amount beyond Balancer range	Refer to Optimization Procedure
		Internal fault	Contact Eastwood Tech @ 1-800-343-9353
ERR 4	Main Shaft rotates backwards	Internal fault	Contact Eastwood Tech @ 1-800-343-9353
ERR 5	Guard not fully closed	Initialization not fully completed	Follow correct Start and Initialization Procedure
		Internal fault	Contact Eastwood Tech @ 1-800-343-9353
ERR 6	Sensor malfunction	Internal fault	Contact Eastwood Tech @ 1-800-343-9353
ERR 7	Loss of Initialization Data	Out of calibration	Perform Calibration Procedure
		Internal fault	Contact Eastwood Tech @ 1-800-343-9353
ERR 8	Calibration Procedure failure	100 Gram. RED Calibration Weight not properly used	Re-perform Calibration Procedure using only supplied 100 Gram, RED Calibration Weight
		Internal fault	Contact Eastwood Tech @ 1-800-343-9353

NOTES

NOTES

If you have any questions about the use of this product, please contact

The Eastwood Technical Assistance Service Department: 800.343.9353 >> email: tech@eastwood.com

PDF version of this manual is available at eastwood.com

The Eastwood Company 263 Shoemaker Road, Pottstown, PA 19464, USA 800.343.9353 eastwood.com