ATLAS WB42
WHEEL BALANCER

OWNER'S MANUAL

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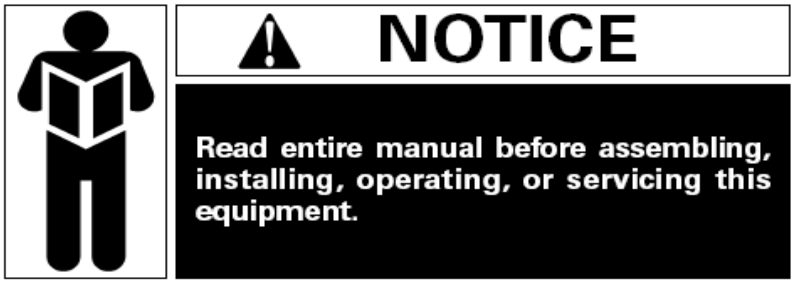
TECHNICAL SPECIFICATIONS

Item	Description
Electrical Requirements	110 VAC 60Hz
Product Compatibility	For Most Passenger Car And Light Truck Wheels
Maximum Tire Diameter Capacity	31.5”/800mm
Maximum Tire Width Capacity	20”
Minimum/ Maximum Rim Diameter Capacity	10″-24″
Minimum/ Maximum Rim Width Capacity	1.5″-20″
Maximum Tire/ Rim Weight Capacity	143Pounds/ 65KG
Balancing Speed	200RPM
Tire/ Rim Balancing Modes	Normal, ALU1, ALU2, ALU3, ALU-S, Static
Cycle Time	10 Seconds
Type of Data Entry	Keypad w/L.E.D. Display Indicators
Self –Calibrating Function	Semi-Automatic ,User – Assisted Data Entry
Automatic Start Feature	Starts When Safety Guard is Closed
Brake Type	Automatic Electronic Braking
Wheel Stops	At Top
Weight /Length Selections	Ounce And Gram / Inch And Millimeter
Balancing Accuracy	.035 Ounce (1Gram)
Overall Dimensions	52″Wx40″Lx65″H(Safety Guard Open) 52″Wx38″Lx50-1/4″H(Safety Guard Closed)

THE MANUFACTURER RESERVES THE RIGHT TO CHANGE PRODUCT SPECIFICATIONS WITHOUT NOTICE.

PICTURES OF PRODUCTS IN PICTORIAL GUIDE MAY NOT BE PICTURES OF THE ACTUAL PRODUCT RECEIVED. GENERAL OUTLINED ASSEMBLY PROCEDURES ARE ACCURATE.

SAFETY INSTRUCTIONS



OPERATOR PROTECTIVE EQUIPMENT

Personal protective equipment helps make tire servicing safer. However, safety equipment does not take the place of safe operating practices. Always wear durable work clothing during tire service activity. Loose fitting clothing should be avoided. Tight fitting leather gloves are recommended to protect operator's hands when handling worn tires and wheels. Sturdy leather work shoes with steel toes and oil resistant soles should be used by tire service personnel to help prevent injury in typical shop activities. Eye protection is essential during tire service activity. Safety glasses with side shields, goggles, or face shields are strongly recommended.

Owner's Responsibility

Failure to follow danger, warning, and caution instructions may lead to serious personal injury or death to operator or bystander or damage to property. Do not asemble or operate this machine until you read and understand all the dangers, warnings and cautions in this manual.

To maintain machine and user safety, the responsibility of the owner is to read and follow these instructions:

- Follow all assembly and installation instructions completely.
- Make sure the installation conforms to all applicable Local, State, and Federal Codes, Rules, and Regulations; such as State and Federal OSHA Regulations and Electrical Codes.
- Carefully check the unit before each use.
- Read and follow the assembly and operating instructions. Keep them readily available for quick reference.
- Make certain all operators are properly trained, know how to safely and correctly operate the equipment, and are properly supervised.
- Allow the equipment to be operated only with all parts in place and working correctly.
- Carefully inspect the unit on a regular basis and perform all maintenance as required.
- Service and maintain the unit only with authorized replacement parts.
- Keep all instructions permanently with the unit and all decals/labels/notices on the unit clean and visible.
- Do not override safety features.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

- **KEEP WORK AREA CLEAN AND DRY.**
  Cluttered, damp, or wet work areas invite injuries.
- **KEEP CHILDREN AWAY FROM WORK AREA.**
  Do not allow children to handle this product.
- **STORE IDLE EQUIPMENT.**
  When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment, and keep out of reach of children.
- **DO NOT USE THIS PRODUCT IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.**
  Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.
- **USE EYE PROTECTION.**
  Wear ANSI approved safety impact eyeglasses when assembling and using this product.
- **DRESS SAFELY.**
  Do not wear loose clothing or jewelry, as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts. If wearing a long-sleeve shirt, roll sleeves up above elbows.
- **DO NOT OVERREACH.**
  Keep proper footing and balance at all times to prevent injury.
- **INDUSTRIAL APPLICATIONS MUST FOLLOW OSHA REQUIREMENTS.**
- **STAY ALERT.**
  Watch what you are doing at all times. Use common sense. Do not assemble or use this product when you are tired or distracted from the job at hand.
- **CHECK FOR DAMAGED PARTS.**
  Before using this product, carefully check that it will operate properly. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.
- **REPLACEMENT PARTS AND ACCESSORIES:**
  When servicing, use only identical replacement parts. Only use accessories intended for use with this product. Approved accessories are available from Greg Smith Equipment Sales.
- **MAINTAIN THIS PRODUCT WITH CARE.**
  Keep this product clean and dry for better and safer performance.
- **MAINTENANCE:**
  For your safety, service and maintenance should be performed regularly by a qualified technician or other competent person.
- **USE THE RIGHT TOOL FOR THE JOB.**
  Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this unit was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this machine, and do not use this machine for a purpose for which it was not intended.
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The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors, which cannot be built into this product, but must be supplied by the operator.

SPECIFIC PRODUCT WARNINGS AND PRECAUTIONS

- Make sure this machine is used on a dry, flat, level, oil/grease free, concrete surface capable of supporting the weight of the Wheel Balancer, the tire being balanced, and any additional tools and equipment.
- Before each use, always examine the wheel balancer for structural cracks and bends, damage to the safety guard and electrical wiring, and any other condition that may affect the safe operation of the machine**.** Do not use the Wheel Balancer even if minor damage appears.
- Maintain a safe working environment. Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use the Wheel Balancer in a damp or wet location. Do not use the Wheel Balancer in areas near flammable chemicals, dusts, and vapors.
- This wheel balancer is designed for use with most passenger car and light duty truck wheels. Do not attempt to exceed this machine's maximum wheel diameter capacity of 31-1/2" or the maximum wheel width capacity of 20".
- Prior to beginning a job, make sure the safety guard is in the proper lowered position. Do not raise the safety guard until the spinning wheel comes to a complete stop**.**
- Always keep hands, fingers, and feet away from the moving parts of the wheel balancer while the machine is in use. Remain clear of the spinning wheel while it is being balanced.
- Never leave the wheel balancer unattended when it is running. After completing a wheel balancing job (and the wheel assembly is stopped); turn the Power Switch to "OFF" position.
- Make sure to read and understand all instructions and safety precautions as outlined in the wheel manufacturer's manual for any unusual mounting procedures.
- Before operating the machine, make sure work area is free from clutter and the floor is dry.
- Operator or observer should NEVER stand in line with the spinning wheel.
- This machine is wired for 110 volt service. To comply with the National Electric Code, (and to provide additional protection) the Power Plug should only be connected to a 110 Volt, 3-hole electrical outlet that is protected by a Ground Fault Circuit Interrupter.
- Do not use an extension cord with this balancer. The power cord should be connected directly to the wall outlet.
- Always unplug the wheel balancer from its electrical supply source before performing any inspection, maintenance, or cleaning procedures.

WARNING: This product contains or produces a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code 25249.5 et seq.)

WARNING: People with pacemakers should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

CIRCUIT BREAKER SELECTION GUIDE

Single phase motor	Capacity of circuit breaker
110V to 120V	25A
220V to 240V	16A

3 Phase motor	Capacity of circuit breaker
220V to 230V	16A
380V to 415V	10A

UNPACKING

The machine weighs approximately 320 lbs. You must use a forklift, pallet jack, or other machinery to unload or move this heavy package.

The wheel balancer is shipped in a palletized wooden box with easy opening tabs. (See photo) Please use the easy opening tabs when uncrating the machine; rather than destroying the box and possibly damaging the wheel balancer.

ACCESSORIES

The balancer will come with the following accessories:

NOTE: For additional references to the parts listed, refer to the **Assembly Diagrams.**

To Determine The Proper Location For The Wheel Balancer:

WARNING: Make sure this machine is used on a dry, oil/grease free, flat, level **CONCRETE** surface, capable of supporting the weight of the Wheel Balancer, the wheel being balanced, and any additional tools and equipment.

2. The Wheel Balancer is designed for indoor use only. Do not install or use the Wheel Balancer outdoors, or in damp or wet locations.
3. Make sure to check the desired location for possible obstructions such as a low ceiling, adequate working area, access ways, and exits. The Wheel Balancer should be located in an area free of flammable materials and liquids.

Mounting The Wheel Balancer to the Floor (if needed):

WHEEL BALANCERS DO NOT NEED TO BE MOUNTED TO THE FLOOR. MOUNTING TO THE FLOOR IS RECOMMENDED IF THE BALANCER "WALKS" DURING OPERATION; OR IF THE FLOOR IS NOT LEVEL.

IF THE FLOOR IS NOT LEVEL, THEN SHIMS MAY BE USED UNDER THE ANCHOR POINTS TO "LEVEL" THE MACHINE.

STEP 1: With assistance, move the Wheel Balancer (in its upright position) to the desired work location. Use the three, 1/2" machine mounting holes located at the base of the Body as a template to mark the points where three floor anchor holes will be drilled in the floor surface. Then remove the Wheel Balancer. **(See Figure B)**

STEP 2: Where previously marked on the concrete floor surface, drill three 1/2" diameter, minimum 4" deep, anchor holes.

NOTE: Be sure to blow out the cement dust from the drilled holes. Install the anchors, and bolt the balancer down.

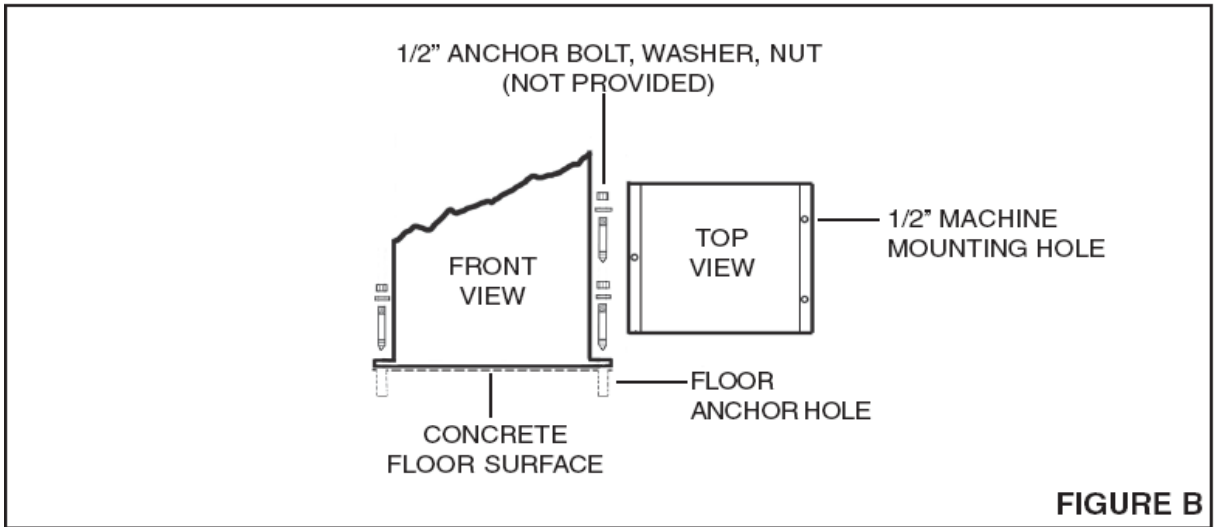


FIGURE B

WHEEL BALANCERS DO NOT NEED TO BE MOUNTED TO THE FLOOR. MOUNTING TO THE FLOOR IS RECOMMENDED IF THE BALANCER "WALKS" DURING OPERATION; OR IF THE FLOOR IS NOT LEVEL.

IF THE FLOOR IS NOT LEVEL, THEN SHIMS MAY BE USED UNDER THE ANCHOR POINTS TO "LEVEL" THE MACHINE.

ASSEMBLY INSTRUCTIONS
FOR WHEEL BALANCER SAFETY GUARD

Your new wheel balancer is equipped with a two piece safety guard. You must install this guard before attempting to operate the balancer. To assemble and install the guard, follow the instructions below:

STEP 1: Remove the wheel guard from the balancer packaging.
The packaging will contain a front panel, rear panel, and bracket.

STEP 2: Remove the two chrome bolts from the rear panel and save them.
They will be reused later. Remove the two black bolts from the front panel.
They will be used in the next step.

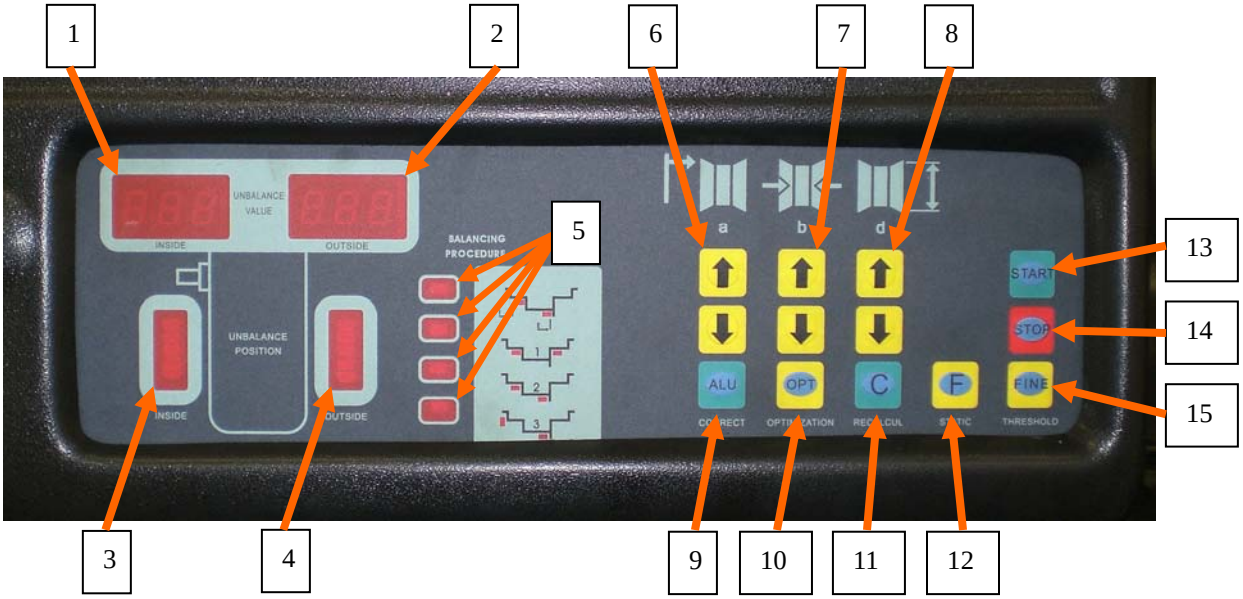
STEP 3: Press the front panel and rear panel together as shown.
Reinstall the two black bolts to hold the two pieces together.

STEP 4: Make sure before you insert the bracket into the front and rear panels, the holes will align correctly (see arrows). Carefully push the bracket into the panels. Install the chrome screws you saved from step# 2 through the rear panel and into the bracket.

STEP 5: Remove the bolt, washer and nut from the hardware kit supplied with the balancer (inside the cardboard box). Slide the wheel guard onto the shaft at the rear of the balancer, and line up the mounting hole. Install the bolt, nut and washer to mount the guard to the balancer.

STEP 6: Your wheel guard is now assembled and installed. The guard should fit the machine as shown in the above picture.

CONTROL PANEL



DISPLAY FUNCTIONS

1. **INNER side display window**, indicates readings of balancing weight to be attached on the inner side of the wheel.
2. **OUTER side display window**, indicates readings of balancing weight to be attached on the outer side of the wheel.
3. **Weight Position LEDs for INNER side**- Full LEDs flash when correct weight position is at top-dead-center (12 o' clock).
4. **Weight Position LEDs for OUTER side**- Full LEDs flash when correct weight position is at top-dead-center (12 o' clock).
5. **Mode display window**-indicates balancing modes.
6. **Wheel offset enter keys** ("a" dimension) –press to enter wheel offset (The distance between the inner rim flange and the edge of the balancer.)
7. **Wheel Width enter keys** ("b" dimension) –press to enter wheel width
8. **Wheel diameter enter keys** ("d" dimension) –press to enter wheel diameter.
9. **ALU Key**-Press to select
10. **OPT Key**-press to optimize weight to be attached to the wheel.
11. **C Key**- Press to recalculate weight amount to be attached to the wheel; Also used during calibration (See the calibration section for directions).
12. **F key**- press to select static or dynamic balancing mode.
13. **Start Button** - Press to start a spin cycle.
14. **Stop button**- Press to interrupt operating cycle.
15. **FINE key**- Press to indicate weight amount reading below 5gram (0.3oz), applicable only after spinning stops.

CAUTION: Press the keys with fingers only. NEVER use hard objects to press keys.

FUNCTION SWITCHING KEYS

NOTE: The following function settings will be saved to memory and stored after the balancer is powered off:

GRAM - OZ UNIT SWITCHING:

After the wheel has been spun in the balance cycle,

Press then F and 

at the same time.

TO ENABLE THE AUTO SPIN FUNCTION

The wheel balancer will spin automatically when the protective cover is pulled down.

Press and hold F then press STOP

NOTE: The following function settings will not be saved to memory after the balancer is powered off. The function settings are used for specific wheels.

INCH/MM UNIT SWITCHING:

NOTE: the factory setting at balancer start up is inches.

For wheel width [b], press and hold the F key, then 

For wheel diameter [d], press and hold the F key, then 

MODE SWITCHING:

Press the F key to toggle between modes: Dynamic and Static

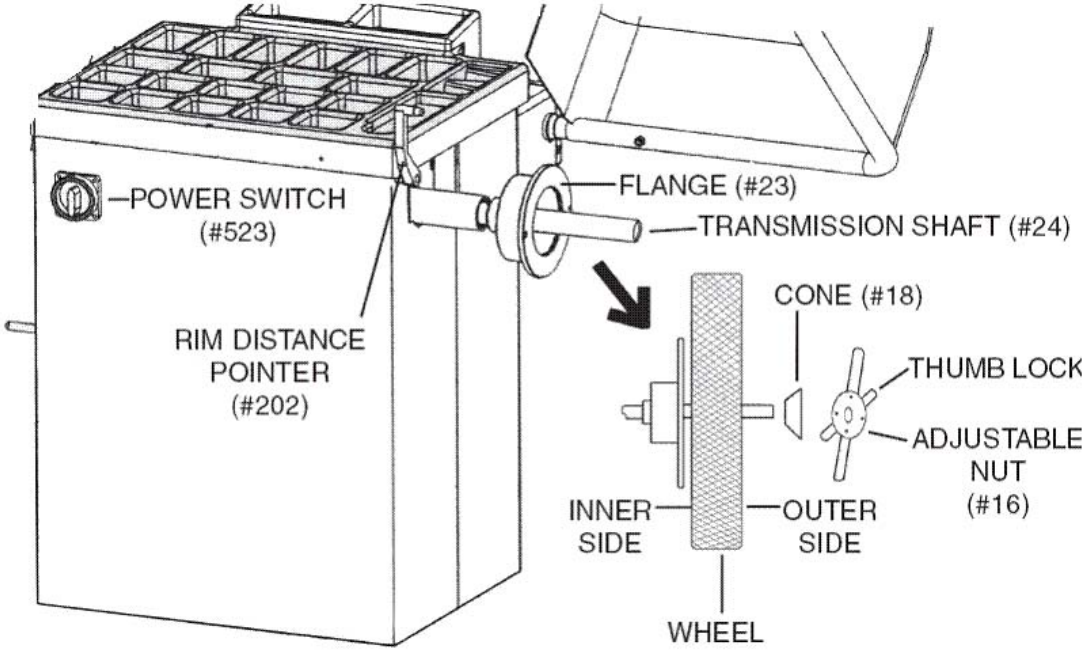
Press the ALU key to toggle between modes: ALU-s, ALU-1, ALU-2, ALU-3, and ALU-s

CALIBRATION:

To begin calibration,

Press and hold the C key, then press F

WHEEL MOUNTING



TO MOUNT A WHEEL ONTO THE BALANCER

STEP 1: Connect the Plug of the Power Cord into a properly grounded, 3-hole, electrical receptacle.

STEP 2: Raise the Wheel Safety Guard to its full "UP" position.

STEP 3: Insert the center hole of the wheel rim (not provided) onto the Threaded shaft (part #24). Make sure to position the inner side of the wheel rim against the Flange (part #23).

NOTE: With some types of wheel, it may be necessary to place the cone on first, facing the inside of the wheel.

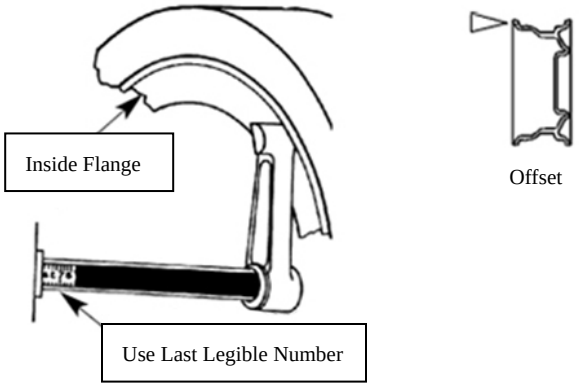
STEP 4: Select the proper size Cone diameter (part #18) that will ensure the wheel rim is tightly secured (no wheel wobble) to the Threaded Shaft. Insert the Cone onto the Threaded Shaft and partially through the center hole of the wheel rim.

STEP 5: Hold the Adjustable Nut (part #16) with both hands. While doing so, use your thumb to move the Thumb Lock on the Adjustable Nut to the right. While holding the Thumb Lock in the open position, slide the Adjustable Nut onto the Threaded Shaft (part #24) and firmly against the Cone (part #18). Then, release the Thumb Lock and tighten the Adjustable Nut to lock the wheel in place on the Threaded Shaft.

DO NOT overtighten the Adjustable Nut; damage to the nut will occur if excessive force is applied. DO NOT use a hammer or mallet to tighten the Adjustable Nut.

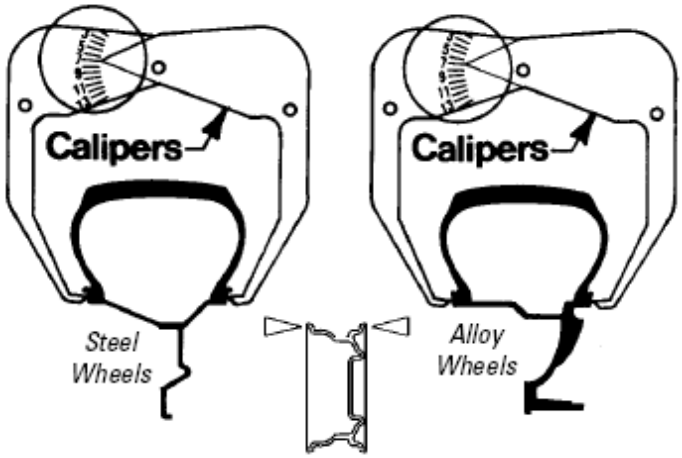
To enter wheel offset “a”

As shown in the figure below, pull the rim distance pointer out from the side of the balancer. Rotate it until the pointed end of the handle contacts the inner wheel flange. Hold the pointer against the wheel flange and read the measurement on the gauge. Use the “a” arrow buttons on the keypad to enter the measurement. (with each pressing of the arrow key, 0.5 cm will be added or deducted)



To enter wheel width “b”

Open the calipers wide enough to reach around the tire. Close the calipers so both tips contact the wheel flanges. Read the wheel width on the calipers. (See picture below) Enter the wheel width by using the “b” arrow keys to enter the measurement. (with each pressing of the arrow key, the measurement entry will increase or decrease a fraction of an inch. Use the chart below to assist you)



Value variation for rim width b.

Interval Value variation on display window	Actual rim width variation (inches)
0.2	1/4
0.5	1/2
0.7	3/4

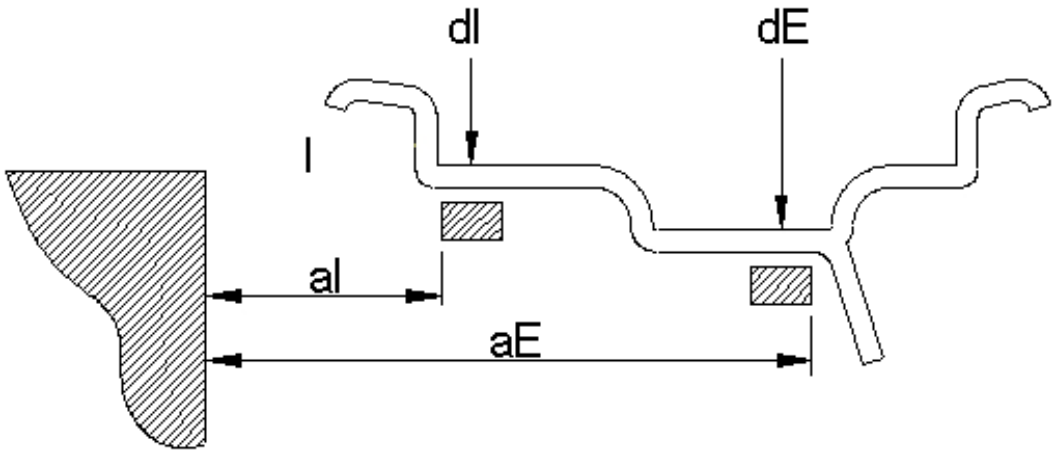
Enter wheel diameter “d”

The wheel diameter is indicated on the tire side wall. Enter the wheel diameter “d” by pressing the “d” arrow keys (with each pressing of the arrow key, the measurement will be changed by 0.5 inch.).

Aluminum (Alloy) Wheels

Rim data entry for ALU-s mode.

The ALU-s mode is for rims with a special profile, requiring stick-on (tape) weights. Press the “ALU” key to toggle the balancing modes, the corresponding LED for the ALU-s mode will light up on the control panel.

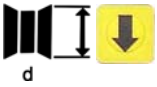


Refer to the above figure, take a measurement of each distance,
then enter the wheel data according to the following procedure:

Press the  or  keys to change the **aI** value.

Press the  or  keys to change the **aE** value.

Press the  or  keys to change the **dI** value.

Press and hold the  key, then press the  or  key to change the **dE** value.

CALIBRATION

STEP 1: Mount a 14 or 15 inch STEEL wheel on the balancer

STEP 2: Begin by selecting a cone which will fit the center hole of the rim. (cone should sized to be inserted into center hole of wheel; but not go through) Place the cone on the shaft and then the wheel on the shaft. Tighten the Haweka Quick-Nut against the wheel, so that the wheel assembly is firmly mounted. Wheel assembly should NOT turn on shaft.

CAUTION: Over-tightening the quick nut will cause damage to wheel and nut.

STEP 3: Manually enter the:

"A" (DISTANCE OF RIM FROM THE MACHINE),

"B" (WIDTH OF THE RIM),

"D" (DIAMETER OF RIM)

ENTER SELF CALIBRATION MODE USING THE FOLLOWING STEPS:

STEP 1: Press and ***hold*** the f & c keys at the same time. The weight position led's on the display will read cal-cal and when the led's stop flashing, release the f & c keys.

STEP 2: Close the hood and press the start key.
(the machine will spin through a complete cycle for around 20 seconds and then come to a complete stop.)
The display will read:
Add-100g or Add 3.50oz (100g = 3.5oz)

Next, raise the hood and attach the included calibration weight (100 gram/3.5 oz) to the ***outside*** of the rim in any position.

100 GRAM/3.5 OUNCE
CALIBRATION WEIGHT

STEP 3: Close the hood and press the start key. (The machine will spin through another complete cycle for around 20 seconds and then come to a complete stop.)

THE DISPLAY WILL READ:
End-CAL

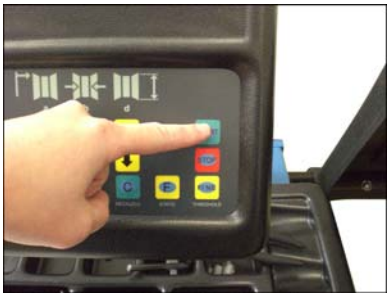
CHECKING THE CALIBRATION

STEP 1: OPEN THE HOOD

STEP 2: CLOSE THE HOOD

STEP 3: PRESS "START"

The balancer will spin through a normal balancing cycle.



STEP 4: When the balancer stops, it should ask for (approximately) 100g/3.5oz at the 12 O'clock position on the wheel, with the calibration weight at the 6 o'clock position.

6 o' clock

STEP 5: Remove the calibration weight (100 gram/3.5 oz.) And wheel.
The balancer is now calibrated and ready for use.

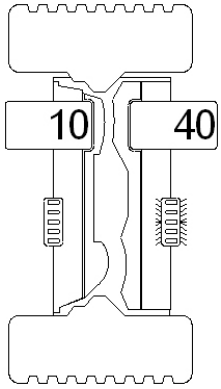
WHEEL BALANCING

Balancing Procedure for most passenger car and light truck wheels:

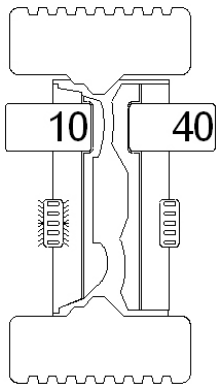
STEP 1: Turn on the power switch and properly mount the wheel.
Enter the wheel data ("a", "b", and "c" dimensions).

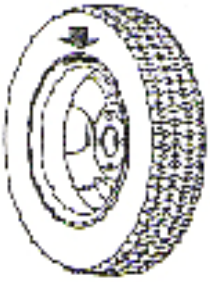
STEP 2: Lower the protective cover, and press the "START" key. The wheel will spin.
After the spin has ended, the amount of weight needed on the wheel will be displayed on the INNER and OUTER display windows.
(Select the weights to be used according to the values on the display.)

STEP 3: Slowly rotate the wheel counterclockwise, you will see the Weight Position LEDs for the OUTER side change- All of the LEDs will light up when the position where the weight will be added to is at top-dead-center (12 O'clock) (as shown in the following figure). Attach the balance weight at the outside 12 O' clock position of the rim.



STEP 4: Slowly rotate the wheel counterclockwise again, you will see the Weight Position LEDs for the INNER side change- All of the LEDs will light up when the position that the weight will be added to is at top-dead-center (12 O'clock) (as shown in the following figure). Attach the balance weight at the inside 12 O'clock position of the rim.





STEP 5: Put down the protective cover; press the "START" key. The wheel will spin again. After the spin has ended, the display window should read: "00" "00".If it does, the wheel is completely balanced. If the display shows another value, add the weight amount indicated according to the instructions above, and spin the wheel again. Most wheels will require 3 or fewer cycles to successfully balance. Many will be balanced on the first cycle. Practice makes perfect!

Weight Recalculation

This function can be used to correct a mistake made when entering the wheel data, after the wheel has been spun. Re-enter the wheel data, without spinning the wheel again. Press the “C” Key. The recalculated balancing weights are displayed on the windows.

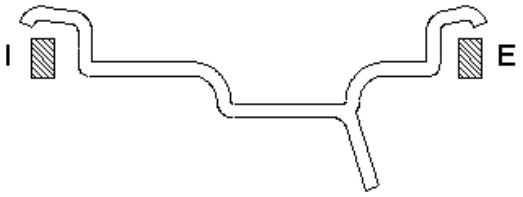
To display imbalance weights less than 5 grams

For normal wheel balancing, the weight values are displayed in 5 gram increments (while in grams mode). This accuracy level is sufficient to balance virtually all wheels correctly. If desired, weight differences less than 5 grams can be displayed by pressing the “FINE” key.

Balancing modes

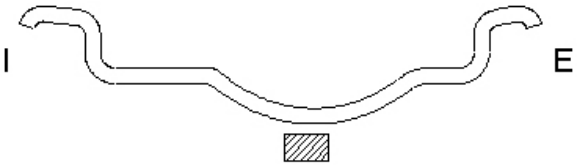
Press the “ALU” or “F” key to select the desired balance mode. The corresponding LED for the selected mode will be lighted on the control panel. The following (cutaway) pictures explain the weight locations (as placed on the wheel) for each mode:

Normal mode: the weights will be attached (clipped on) at the edge of the wheel on both sides. (shown in photo to right)



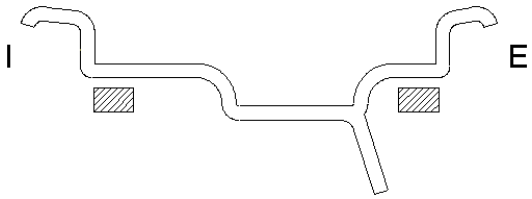
Normal mode

Static mode: (Tape weights must be used) This mode is for Motorcycle wheels, or when the wheel will not be balanced with weights attached on both sides. (shown in photo to right)



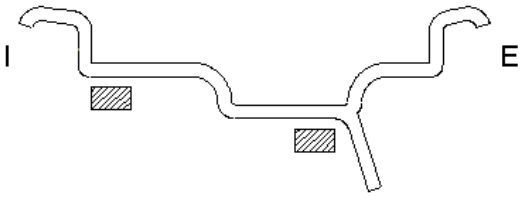
Static Mode

ALU-1 mode: (Tape weights must be used) The weights will be attached (taped on) to the inside and outside of the wheel, inboard of the edges. (shown in photo to right)



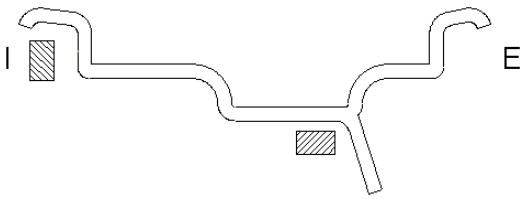
ALU-1 mode

ALU-2 mode: (Tape weights must be used) The weights will be attached inside the wheel, (near the inner edge), and behind the spoke area (near the center). (shown in photo to right)



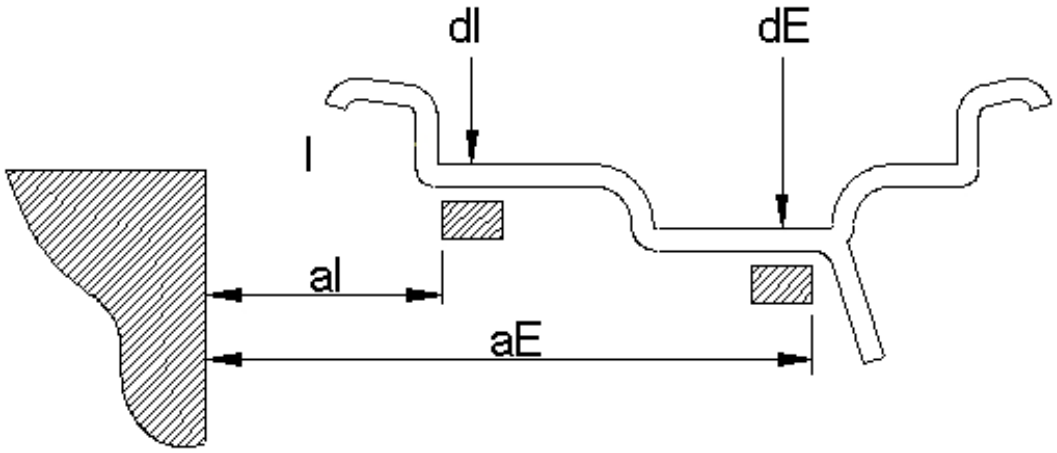
ALU-2 mode

ALU-3 mode: (Both tape and clip on weights can be used) The INNER weights will be attached (clipped on) onto the edge of the rim, and the OUTER weights will be attached inside the rim (near the center). (shown in photo to right)



ALU-3 mode

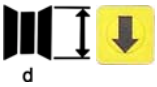
ALU-s mode: Rim data entry for ALU-s mode.
The ALU-s mode is for rims with a special profile, requiring stick-on (tape) weights. Press the “ALU” key to toggle the balancing modes, the corresponding LED for the ALU-s mode will light up on the control panel.



Refer to the above figure, take a measurement of each distance,
then enter the wheel data according to the following procedure:

Press the  or  keys to change the **aI** value.

Press the  or  keys to change the **aE** value.

Press the  or  keys to change the **dI** value.

Press and hold the  key, then press the  or  key to change the **dE** value.

Use the following instructions to make the measurement more accurate:

STEP 1: Press the “START” key to begin the wheel spin, follow the procedure described in the wheel balancing section to find out the weight’s radial position. Then, find out the axial positions where the weight will be attached as follows:

STEP 2: Pull out the distance pointer to the distance of **aI**, hold the pointer position, and locate the balance weight with the pointer. Then attach the weight at the position where the Left LED fully flashes.

STEP 3: Pull out the distance pointer to the distance of **aE**, hold the pointer position, and locate the balance weight with the pointer. Then attach the weight at the position where the Right LED fully flashes.

STEP 4: Press [START] key, to spin the wheel again. When the remaining weight values are less than 5 grams, the wheel is balanced.

OPTIMIZE BALANCING FUNCTION

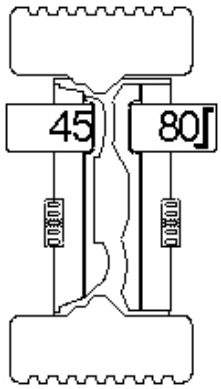
This function is recommended only when the static balancing values are over 30 grams.
Use this function to optimize the balancing accuracy and reduce amount of weight to be added.
To get the best results, follow the following procedure carefully:

STEP 1: Press key [OPT], the display will read:[OPT] [ ].

STEP 2: 2) Press [START] to activate a spin cycle. When the spin is finished, the will display read: [I] [180]. The “180” displayed in the middle means the tire needs to be remounted with the tire rotated 180 degrees from its current position on the wheel. Mark the wheel and the balancer cone so that the same mounting position on the balancer can be used in later steps.

STEP 3: Use a tire changer to re-mount the tire on the wheel, with the tire rotated 180 degrees on the rim. Inflate the tire fully. Use the marks made earlier on the cone and wheel to align the wheel and re-mount the wheel on the balancer.

STEP 4: Press [START]. After one spin cycle is completed, the display will read:[#] [80⌐┘]. The right window will indicate the static balance weight reduction rate after re-mounting tire. This number is a percentage (“⌐┘”= %).
The left window will indicate the weight to be added. See the example below:



In this example, 45 grams will be added. Add the weight indicated,
and perform a spin cycle to verify the wheel is balanced.

TROUBLESHOOTING

Machine malfunctions can be detected and identified by the system, and display on the windows with Error codes. The following table indicates the Error code and the code definitions:

ERR code	Definition
Err 1	Rotation signal failure. Possible causes: 1) Motor failure 2) Position sensor location error 3) Sensor broken 4) Connector contact error 5) Computer board failure.
Err 2	Wheel spin speed under speed of 60rpm Possible causes : 1) Wheel not mounted correctly. 2) Transmission belt improperly mounted.
Err 3	Calculation error or the imbalance is outside of the measurable range.
Err 4	Possible causes: 1) Spin rotation reversed. 2) Possible position sensor failure.
Err 5	Protective cover in the open position when the [START] key was pressed.
Err 7	Calibration error or calibration data loss, recalibrate the system.
Err 8	Calibration error, possible causes: 1) 100 gram weight not added on the wheel during calibration procedure; 2) Pickup sensor cable broken or connector failure.

ROUTINE MAINTENANCE

CAUTION: Always turn the Power Switch to its "OFF" position and unplug the Power Cord from its electrical outlet before performing any inspection, maintenance, or cleaning.

BEFORE EACH USE

Inspect the general condition of the Wheel Balancer. Check for loose screws, loose floor bolts, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. Do not use damaged equipment.

PERIODICALLY

Use a small amount of premium quality, lightweight oil to lubricate all moving parts.

TO TIGHTEN OR REPLACE THE PULLEY BELT:

Periodically, it may be necessary to tighten the tension or replace the Pulley Belt.

STEP 1: To do so, remove the two Screws on the front and two Screws on the back of the Tool Tray.
Empty the Tool Tray of all weights, tools, etc, and remove the Tool Tray from the rest of the machine.

STEP 2: Loosen the four Nuts so that the Motor may be moved horizontally forward and backward. To tighten the tension, move the Motor backward until the Pulley Belt is tight to the touch and retighten the four Nuts. DO NOT overtighten the belt.

STEP 3: To replace the Pulley Belt, move the Motor forward toward the Pulley. Remove the Pulley Belt from the Motor and Pulley, and replace it with a new Pulley Belt. Then, move the Motor backward until the Pulley Belt is tight to the touch and retighten the four Nuts.

STEP 4: Attach the tool tray back onto the machine, and secure it in place with the two screws previously removed on the front and two screws previously removed on the back of the tool tray.

TO REPLACE THE FUSES:

If it becomes necessary to replace the two electrical circuit Fuses,

STEP 1: Remove the two Screws on the front and two Screws on the back of the Tool Tray. Empty the Tool Tray of all weights, tools, etc., and remove the Tool Tray from the rest of the machine.

STEP 2: Remove the two Fuses from the Power Board and replace them with two new Fuses.

NOTE: Even if only one Fuse is defective, it is recommended to always replace both Fuses at the same time.

CLEANING:

With a soft brush, cloth, or vacuum, remove all debris from the Wheel Balancer regularly.

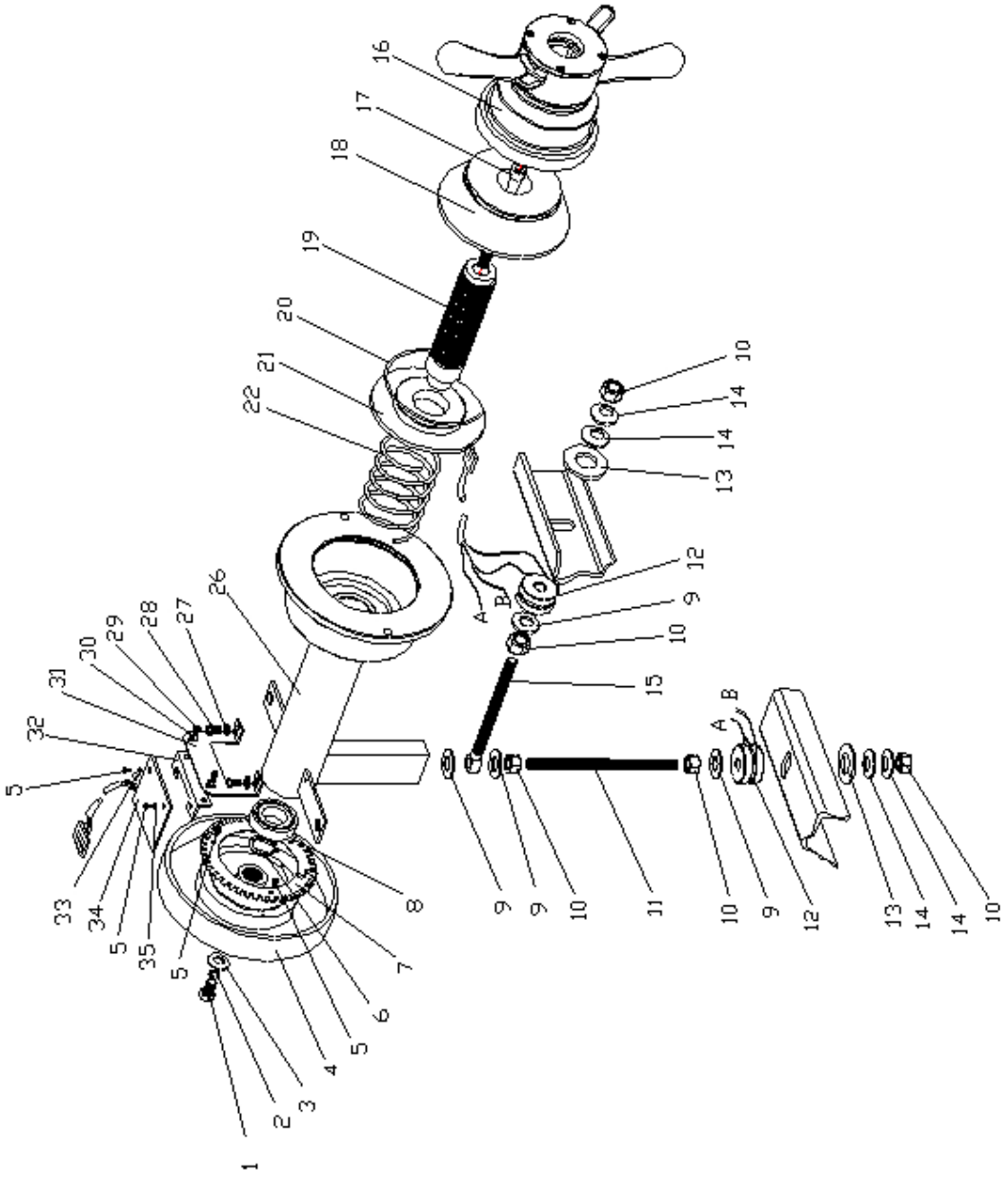
When necessary, use a damp cloth with a mild detergent to keep surface areas clean.

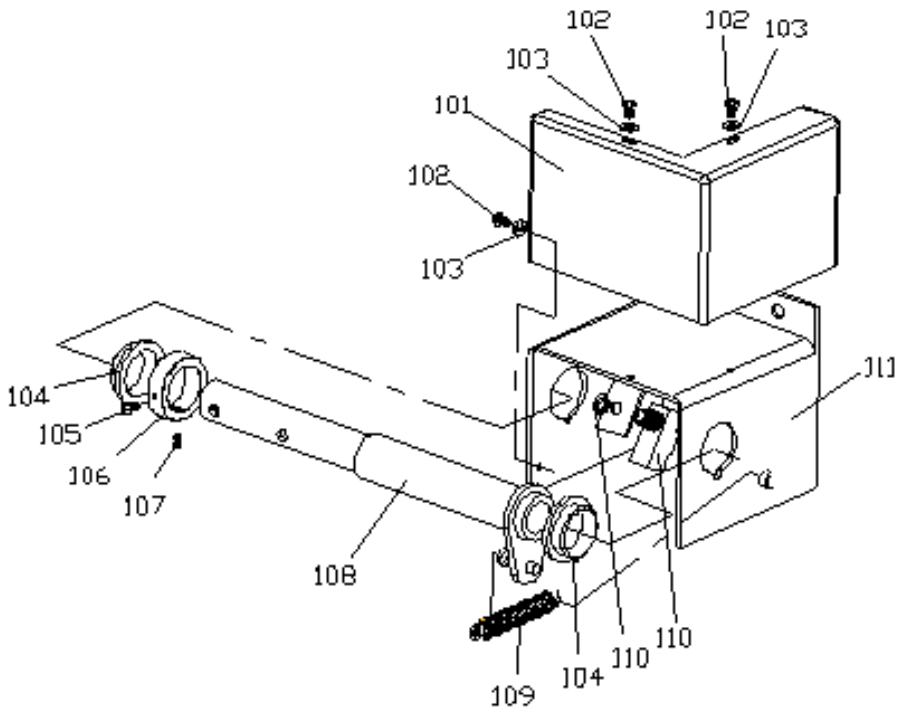
When in storage; your wheel balancer should be covered with a clean drop cloth.

ASSEMBLY DIAGRAMS

PLEASE READ THE FOLLOWING CAREFULLY

The manufacturer and/or distributor have provided the parts list and assembly diagram in this manual as a reference tool only. Neither the manufacturer, nor distributor, makes any representation or warranty of any kind to the buyer that he or she is qualified to make any repairs to the product, or that he or she is qualified to replace any parts of the product. In fact, the manufacturer and/or distributor expressly states that all repairs and parts replacements should be undertaken by competent and experienced persons. The buyer assumes all risk and liability issues that may result from their repairs or installation of replacement parts.

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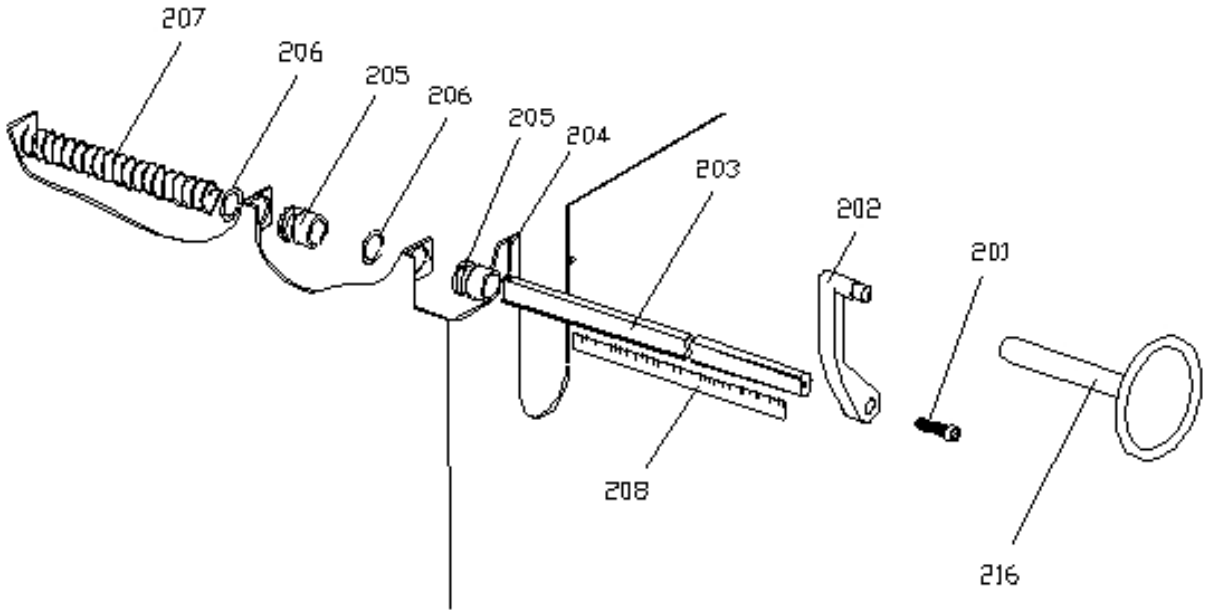
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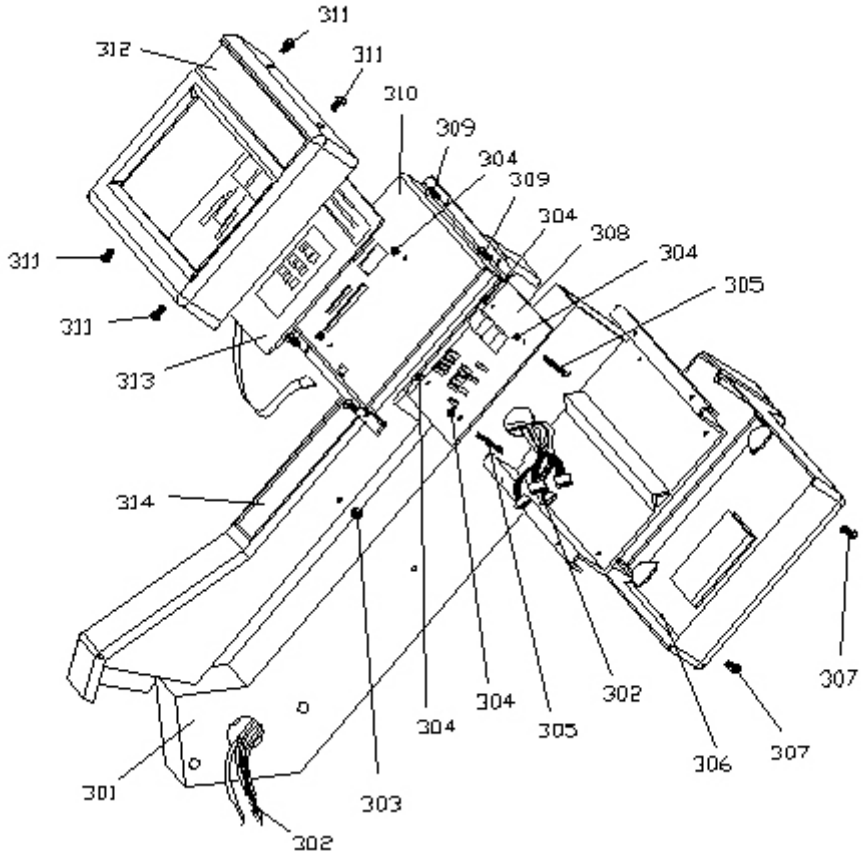
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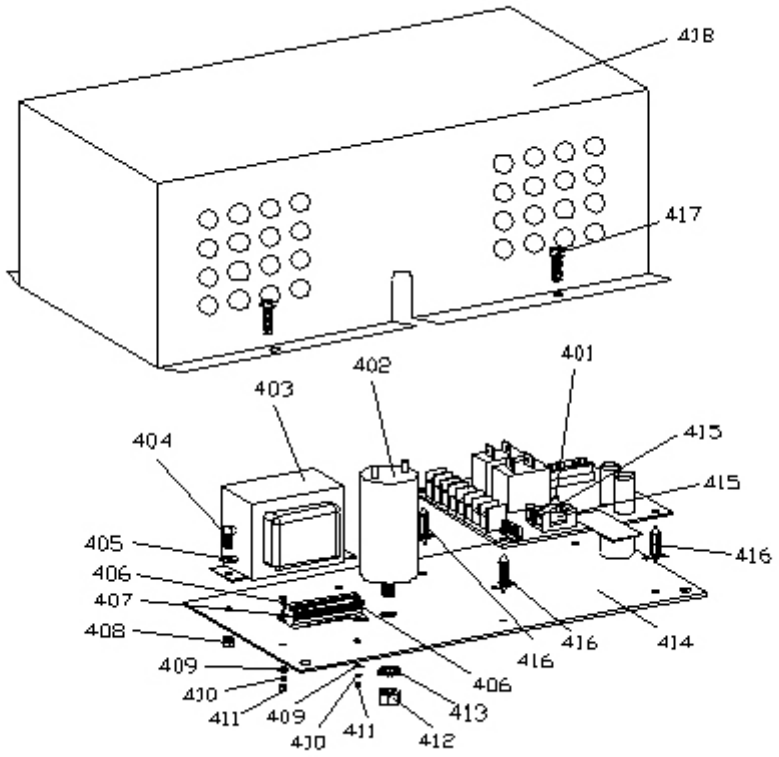
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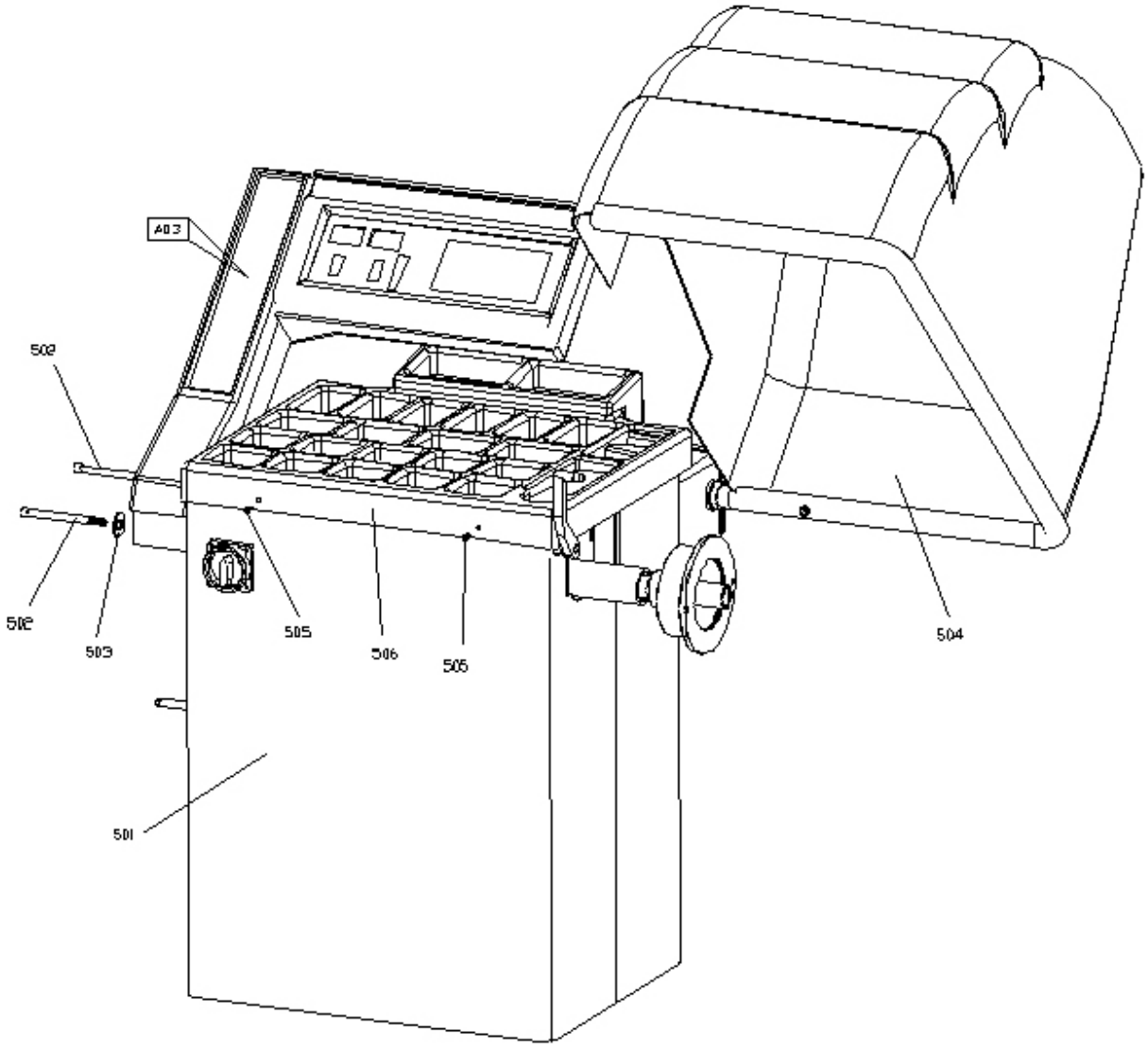
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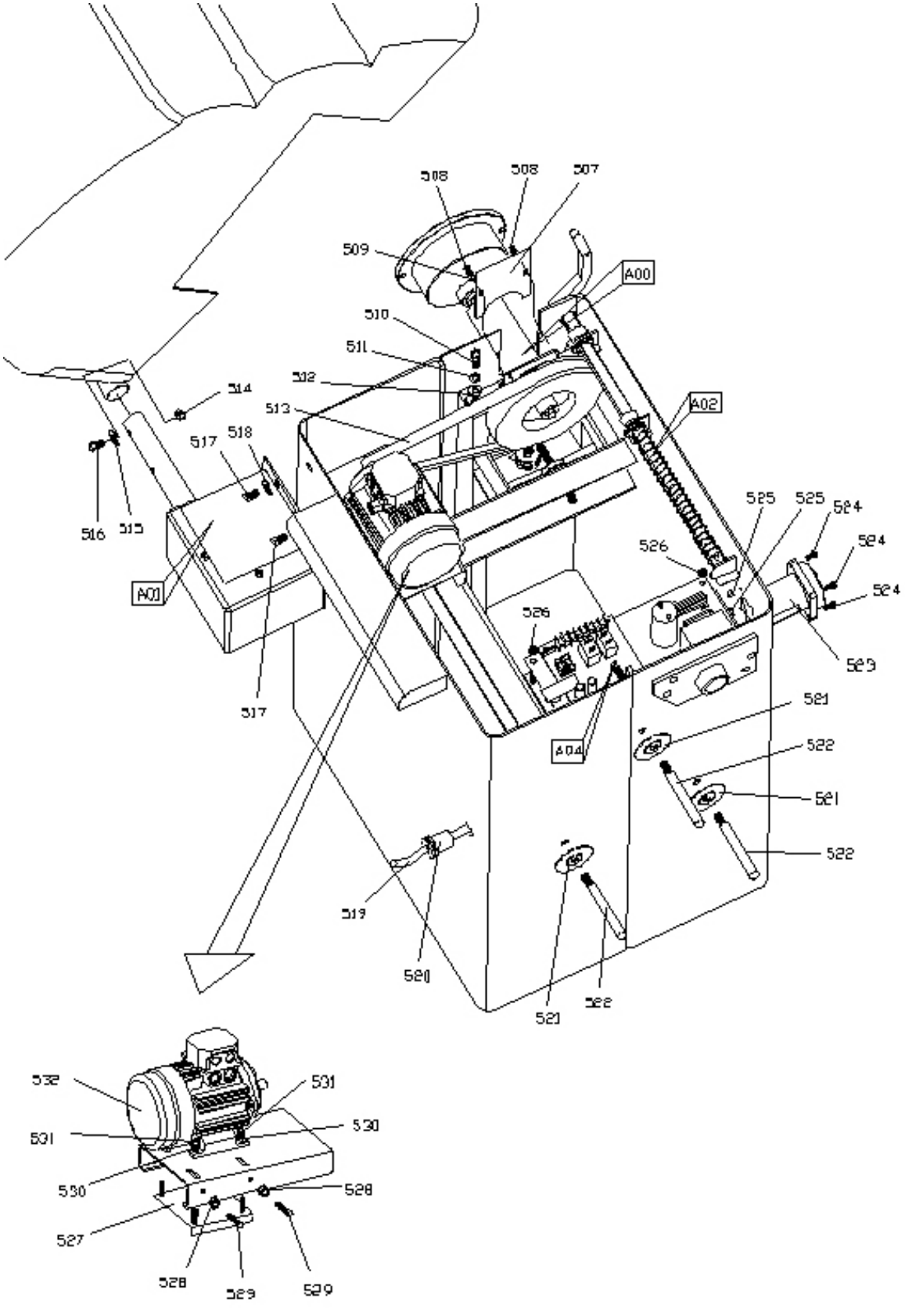
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PARTS LIST

No.	Code	Qt.	Description	No.	Code	Qt.	Description
1	GB/T 5781	1	Screw M10X20	111	C099010302	1	Shaft support
2	GB/T93	1	Elastic washer φ10				
3	GB/T 93	1	Washer φ10	201	GB/T 70	1	Screw M6X15
4	C311010204	1	Pulley	202	C311010402	1	Handle bar
5	GB/T 973	3	Screw M3X5	203	C311010401	1	Rim distance gauge
6	GB/T 893.1	1	Seeger ring φ25	204	GB/T 119	1	Pin
7	C311010205	1	Complete toothed ring	205	C311010403	2	Plastic bush
8	GB/T 276	2	Bearing 6005	206	C311010405	2	Seeger ring
9	GB/T 95	4	Washer φ10	207	C311010404	1	Spring
10	GB/T 41	5	Nut M10	208	C311010406	1	Graduated strip
11	C311010210	1	Through bolt(H)	216	B810010109A	1	Extension rod (optional accessory)
12	C3110203	2	Sensor assembly				
13	GB/T 96	2	Washer φ10	301	C0990107	1	Display panel support
14	GB/T1972	4	Butterfly washer φ10	302	C0990201	1	RVB 300/500 cable
15	C311010211	1	Through bolt(V)	303	GB/T 973	3	Screw M5X16
16	C3110111	1	Complete adjustable Nut	304	GB/T 41	8	Nut M4
17	GB/T 70	1	Screw M10X160	305	GB/T 819	4	Screw M4X28
18	C3110110	1	Set of Cones	306	C099010707	1	plastic coverI
19	C311010212	1	Threaded hub	307	GB/T 973	4	Screw M5X16
20	C311010208	1	Seeger ring φ145	308	C0990207	1	electrotype
21	C311010206	1	Plastic lid	309	GB/T 819	4	Screw M4X15
22	C311010207	1	Spring	310	C099010706	1	Display fixed plate
23				311	GB/T 973	4	Screw M5X16
24				312	C099010708	1	plastic coverII
25				313	C0990208	1	control board
26	C311010202	1		314	C099010709	1	plastic coverIII
27	GB/T 95	2	Washer φ4				
28	GB/T 973	2	Screw M4X10	401	C0990209	1	Power board
29	GB/T 973	2	Screw M3X10	402	C0990211	1	Capacitor 30μF
30	GB/T 95	2	Washer φ3	403	C0990212	1	Transformer 30W
31	C31101020901	1	Support A	404	GB/T 973	2	Screw M4X16
32	C31101020902	1	Support B	405	GB/T 95	2	Washer φ4
33	C311010213	1	cable clamp	406	GB/T 973	2	Screw M3X10
34	C3110202	1	Position pick-up board	407	C0990213	1	Resistor 32Ω50W
35	GB/T 95	1	Washer φ3	408	GB/T 41	2	Nut M4
				409	GB/T 95	2	Washer φ3
101	C099010305	1	Cover	410	GB/T 93	2	Elastic washer φ3
102	GB/T 973	3	Screw M3X10	411	GB/T 41	2	Nut M3

103	GB/T 95	3	Washer φ3	412	GB/T 41	1	Nut M8
104	C311010303	2	Plastic lip	413	GB/T862.2	1	Washer φ8
105	GB/T 973	1	Screw M5X7	414	C0990200	1	Electric board support
106	C311010304	1	Sheath	415	C0990210	2	Fuse DM5X20-2A
107	GB/T73	1	Screw M5X7	416	C3110208	4	Nylon spacer for cards
108	C3110103	1	Shaft	417	GB/T 973	4	Screw
109	C311010306	1	Spring	418	C3110125	1	Electric board cover
110	C3110205	1	Contact switch				
501	C0990101	1	Body	517	GB/T 5781	3	Screw M10X30
502	GB/T5781	2	Screw M12x120	518	GB/T 95	3	Washer φ10
503	GB/T95	2	Washer φ12	519	C0990209	1	Power cable
504	C099010307	1	Plastic guard	520	C0990204	1	Cable circlip
505	GB/T 973	4	Screw M5X15	521	C099010110	3	Plastic washer
506	C099010123	1	Head with tools-tray	522	C099010121	3	Tools hang
507	C099010120	1	Plate	523	C0990207	1	Power switch
508	GB/T 973	2	Screw M5X7	524	GB/T 973	4	Screw M4X15
509	GB/T 95	2	Washer φ5	525	GB/T 41	4	Nut M4
510	GB/T 5781	2	Screw M10X25	526	GB/T 41	6	Nut M6
511	GB/T 93	2	Elastic washer φ10	527	C311010122	1	Adjusting plate with screw
512	GB/T 95	2	Washer φ10	528	GB/T 41	2	Nut M5
513	GB/T 11544	1	Belt 380J	529	GB/T 5781	2	Screw M5X35
514	GB/T 41	1	Nut M10	530	GB/T 93	4	Elastic washer φ6
515	GB/T 95	1	Washer φ10	531	GB/T 41	4	Nut M6
516	GB/T 5781	1	Screw M10X55	532	MY7124	1	Complete Motor
A00	C3110102	1	Spin shaft complete	A03	C0990105	1	Control bar with computer board
A01	C3110103	1	Complete wheel guard	A04	C3110200	1	Power board
A02		1	Measurement device				

WIRING DIAGRAM