

USER'S MANUAL

COMPUTERIZED WHEEL BALANCER

MODEL:JH-B90

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1. PREFACE

WARNING

There will be one year of warranty period on the condition that the machine including the operation system , tools and accessories are used properly and/or without damage. During this period, the manufacturer will repair or replace the parts returned or the machine itself, sustaining the costs but not accepting responsibility for normal wear and tear, incorrect use or transportation, or failure to carry out maintenance. The manufacturer will not inform the customer about any improvements to the products or the upgrading of the production line.

INTRODUCTION

The purpose of this manual is to provide the owner and operator of this machine with a set of safe and practical instructions for the use and maintenance of the wheel balancer.

If such instructions are carefully followed, the machine will offer you the levels of efficiency and duration.

The following paragraphs define the levels of danger regarding the machine.



DANGER: Refers to immediate danger with the risk of serious injury or death.



WARNING: Dangers or unsafe procedures that can cause serious injury or death.

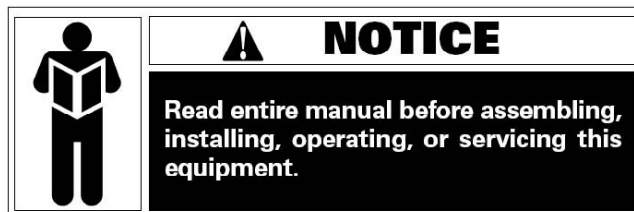


ATTENTION: Dangers or unsafe procedures that can cause minor injuries or damage to property.

Read these instructions carefully before using the machine. Keep this manual and the illustrated materials supplied with the equipment in a folder near the place of operation

so as to allow the machine operators to consult the documentation at any time.

The manual is only to be considered valid for the machine serial number and model stated on the attached nameplate.



The instructions and information described in this manual must always be complied with: the operator will be held responsible for any operation not specially described and authorized in this manual.

Some of the illustrations contained in this booklet have been taken from pictures of prototypes: standard production machines may differ slightly in certain respects. These instructions are for the attention of personnel with basic mechanical skills. We have therefore condensed the descriptions of each operation by omitting detailed instructions regarding, for example, how to loosen or tighten the fixing devices. Do not attempt to perform operations unless properly qualified or with suitable experience. If necessary, please contact an authorized Service Centre for assistance.

INSTALLATION



Take the utmost care when unpacking, assembling, lifting and setting up the machine as indicated below.

Failure to observe these instructions can damage the machine and compromise the operator's safety.

Remove the original packing materials after positioning them as indicated on the packaging.



All regulations in force concerning safety at work must be complied with when choosing the installation position.

In particular, the machine must only be installed and operated in protected environments where there is no risk of exposure to dripping.

IMPORTANT: for the correct and safe operation of the machine, the lighting level in the place of use should be at least 300 lux.

Environmental operating conditions must comply with the following requirements:

- Relative humidity ranging from 30% to 80% (without condensation);
- Temperatures ranging from 0° to +50°C.



The floor must be strong enough to support a load equal to the weight of the equipment plus the maximum load allowed.



The machine must not be operated in potentially explosive atmospheres.

SAFETY REGULATIONS



Failure to comply with the instructions and danger warnings can cause serious injuries to the operator or other persons.

Do not operate the machine until you have read and understood all the danger/warning notices in this manual.

The correct use of this machine requires a qualified and authorized operator. This operator must be able to understand the manufacturer's written instructions, be suitably trained and be familiar with the safety procedures and regulations. Operators are forbidden to use the machine under the influence of alcohol or drugs that could affect his/her physical and mental capacity.

The following conditions are essential:

- Read and understand the information and instructions described in this manual;
- Have a thorough knowledge of the features and characteristics of the machine;
- Keep unauthorized persons well clear of the working area;
- Make sure that the machine has been installed in compliance with all relevant standards and regulations in force;
- Make sure that all machine operators are suitably trained, that they are capable of using the machine correctly and safely and that they are adequately supervised during work;
- Do not touch power lines or the inside of electric motors or any other electrical equipment before making sure that they have been powered off;
- Read this booklet carefully and learn how to use the machine correctly and safely;
- Always keep this user manual in a place where it can be readily consulted and do not fail to refer to it.



Do not remove or deface the DANGER, CAUTION, WARNING or INSTRUCTION decals. Replace any missing or illegible decals. If any decals have become detached or damaged, it is possible to obtain them from your nearest reseller.

- Observe the unified industrial accident prevention regulations relating to high voltages and rotating machinery whenever the machine is in use or being serviced.
- Any unauthorized changes or modifications made to the machine automatically release the manufacturer from any liability in the case of damage or accidents resulting from such changes or modifications .





WEAR PROTECTIVE GLOVE



READ OPERATION MANUAL



WEAR PROTECTIVE GLASSES



POWER OFF THE ELECTRICAL SOURCE OF THE MACHINE DURING MAINTANCE

DECAL LOCATION DIAGRAM

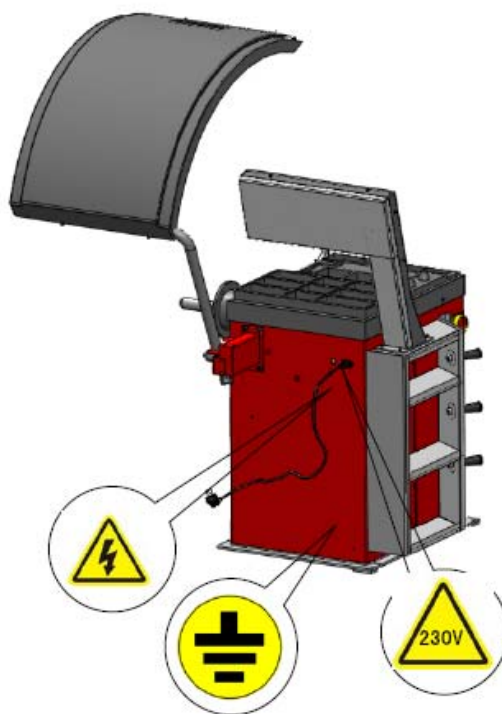


Fig. 1

Meaning of the decals

(including the one indicating caution)



Lightning symbol

This decal, positioned on the back of the machine, indicates where to insert the power supply cable and warns the user to pay attention to his safety.



Warning for rotating machine part

This decal, positioned next to the balancing shaft, reminds the user that this is a rotating part and is therefore dangerous and should not be touched with the hands. The arrow indicates the rotation direction.



Grounding symbol

This decal, positioned on the rear left side of the machine, indicates where to connect the ground wire.

2. INSTALLATION AND OPERATION

Before installation and use of the wheel balancer, you should carefully read this installation and operation manual. And keep this manual in hand for reference at any time. You should be sure that all the operators have read this manual to guarantee the most perfect functions of the machine and meanwhile the safety.

2.1 PROTECTIVE HOOD INSTALLATION

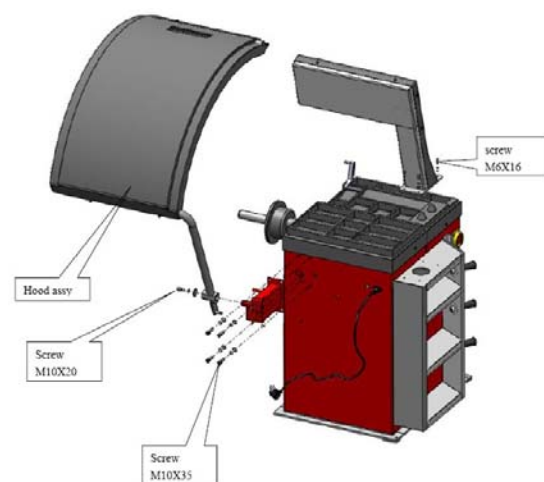


Fig. 2

2.2 MAIN SHAFT INSTALLATION

MAINSHAFT INSTALLATION: Before installation, use the ethyl alcohol and compressed air to clean up the center hole of the shaft and connect part. Use spanner and screw to fix the thread shaft on the balance shaft (Fig 3).

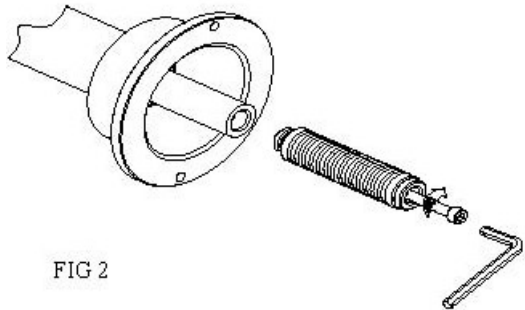


Fig. 3

2.3 CONFIGURATE POWER SUPPLY

According to the label on the connect between power cable and body, the power cable connect socket must be grounded with the reliable earth wire.

All the electrical devices installation must be done by the qualified staff. Before installation, please check If the power system is comply with the technical parameter marked on the nameplate of the machine. The wiring of the machine must have the fuse and the perfect ground protection. And install the electrical Leakage automatic controls switch in the power source. And recommend the application of the stabilizer if the voltage of installation site is unstable.



- *Any electrical connect in the workshop is only done by the qualified technical staffs and it should meet the enforced regulation.*
- *Any electrical connect must be according to the following:*
 - ◆ *Power on the data plate on the machine;*
 - ◆ *Voltage decrease can not exceed 4% of the rated voltage on the data plate when full load (10% when start).*

- *Operators must:*
 - ◆ *Install the plug;*
 - ◆ *Install 30ma circuit breaker;*
 - ◆ *Install power cable fuse;*
 - ◆ *Provide with effective workshop electrical connect to ground;*
- *Prevent the authorized operation and pull out the plug to prolong the working life when not use the machine.*
- *If the machine directly connected to the power source through the power board not the plug, we should use the qualified staffs to operate.*



Perfect ground is necessary for the correct operation. Do not connect the machine with air pipe, water pipe, telephone line and the other unsuitable objects.

3. TECHNICAL FEATURES

3.1 FEATURES

- Adopts quality computer with the feature of high intelligence and high stable;
- Mechanical main shaft adopts high precision bearing driven, wear-resistant, low noise;
- Press stop key to realize the emergency stop;
- Full automatic dynamic/static balance check;
- Balance 3 ALU rim and 1 motorcycle tire;
- Self-calibration and full automatic trouble diagnosis.

3.2 MAIN TECHNICAL SPECIFICATION

- Rated voltage: 220V/110V (selectable) 50/60HZ
- Power: 250W

- Speed: 7S (if the weight of the wheel is about 20Kg)
- Accuracy: $\pm 1g$
- Noise: $\leq 69dB$
- Rim diameter: 10"~24"
- Maximum wheel weight: 65kg
- Rim width: 1.5~20"
- Net weight: 130 kg
- Max wheel diameter: 44inch
- Working environment:
- ◆ Temperature: 0°C-50°C
- ◆ RH: 30%—80% (no condense)

3.3 WORK PRINCIPLE

The micro CPU will provide the normal information if it checks each unit in the normal situation. And the operators can execute the balance operation. When balancing, MCPU can control the rotation of the balancer tester main shaft through the drive interface. The unbalance signal sensed by balance sensor is sent to the micro-processor port through A/D converter. CPU will integrated analyze the unbalance signal and angle signal to calculate the unbalance value and display the value through the LED unit. We can realize the man-machine talk through keyboard and LED.

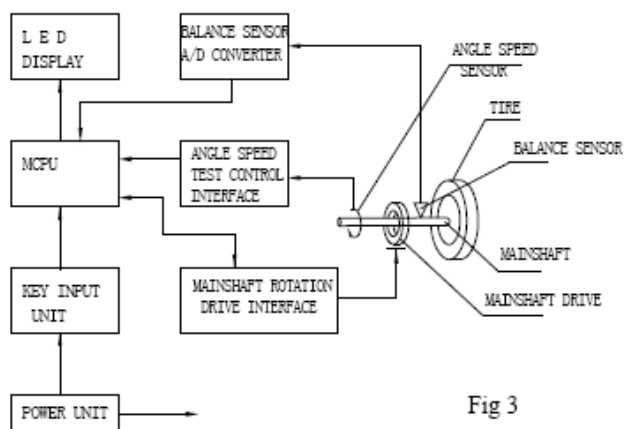


Fig 3

Fig. 4

4. TRANSPORTATION & INSTALLATION

4.1 TRANSPORTATION

- Place, carry and store the machine according to the indication of the label on the package carton.
- Store environment: RH: 20%-95% Temperature: -10°C-+60°C
- When transport and use the machine, do not pull the rotation shaft, or it will cause the permanent damage.

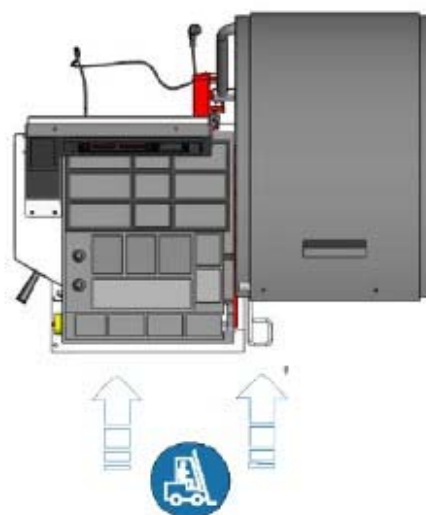


Fig. 5



Do not lift the machine at any other position.

4.1.1 After being sure that the package of your machine is perfect, you can carry the wheel balancer to the installation site. (Fig. 6). The choice of the installation should comply with the following requirements. The ambient temperature is 0°C-50°C and the RH ≤85%. And the installation site as shown in Fig. 7.

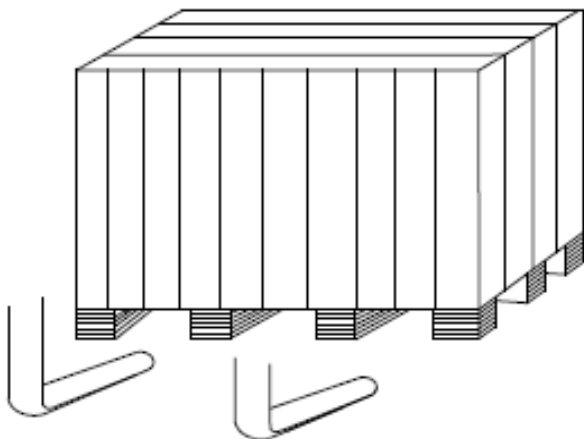


Fig. 6

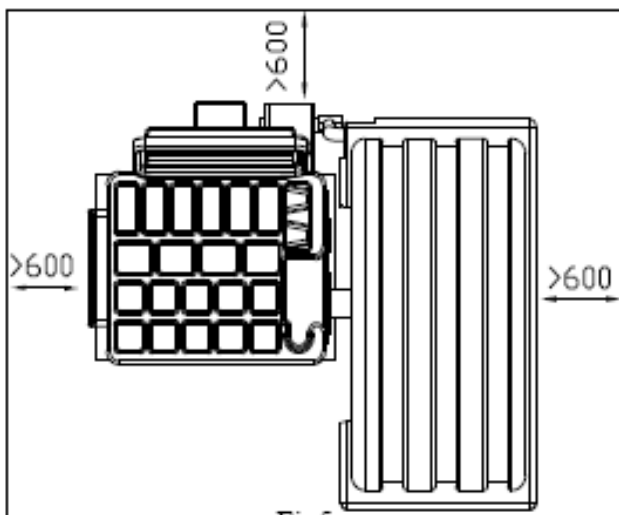


Fig. 7

4.1.2 Remove the upper cover of the package carton and check and confirm the wheel balancer, spare parts and documents you purchased according to the packing list. If you have any question, please contact with the dealer.

Package materials such as plastic, PBV, nail, screw, timber and carton must be placed into a scrap bin to treat

according to the local regulation.

4.2 INSTALLATION

Remove the connect bolt. And carry down the wheel balancer to place it on the flat and solid floor. We should store it indoor to avoid it from being exposed to the sunlight for long time and the moisture.

5. SAFETY PRECAUTIONS

5.1 Before operation, please confirm that you have read the entire warning label and the instruction manual. Not according with the safety instruction can cause the injuries to the operators & bystanders.

5.2 Keep hands removed and loose clothing and jewelry and stand clear of all moving parts of the machine when in use. Inspect the machine before use for any damage. In the event of any damage, the machine must not be used until repaired or replacement of the fault part. Do not wear long hair, necklace or loose clothing. The operators should stand beside the machine to ensure the unauthorized personnel are kept clear from the area.

5.3 In emergency situation, if the tire not fixed, you should press “STOP” to stop the rotation of the wheels. Adopts high strength protective cover to prevent the tire from flying in any direction and can only fall on the ground to protect the safety of the operators.

5.4 Before balancing, operators should check all the tires and wheels to find the possible faults. Do not balance the tires and wheels with fault.

5.5 Do not exceed the load capability of the wheel balancer and do not attempt to balance the wheel bigger than the designed dimension.

5.6 Wear suitable clothing such as suitable safety suit such as glove, glasses and working suit. Not wear necktie, long hair, loose clothing. The operators should stand beside the machine when operation the machine. Keep from the unauthorized personnel.

5.7 Before balancing, you must confirm the installation of the wheel suitable. Before rotation, be sure the nut turn 4turns around the thread shaft and firmly locked on the main shaft.

GENERAL CONDITIONS OF USE



The wheel balancers described in this manual must be used exclusively to measure the extent and position of car wheel unbalances, within the limits specified in the technical data section. Furthermore, models equipped with motors must be provided with a suitable guard.



Any use other than those described in this manual is to be considered improper and unreasonable.



Do not start the machine without the wheel locking equipment.



Protective hood plays the role of prevention and safety.



Do not clean or wash the wheels mounted on the machine with compressed air or jets of water.



Get to know your machine. The best way to prevent accidents and obtain top performance from the machine is to ensure that all operators know how the machine works.



Learn the function and location of all the controls.



Carefully check that all controls on the machine are working properly.



The machine must be installed properly, operated correctly and serviced regularly in order to prevent accidents and injuries.

6. CONFIGURATION & OPERATION

6.1 CONFIGURATION

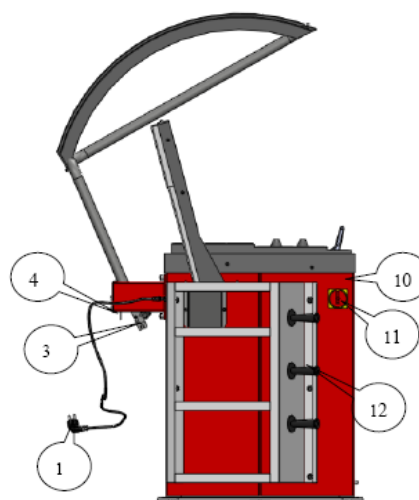
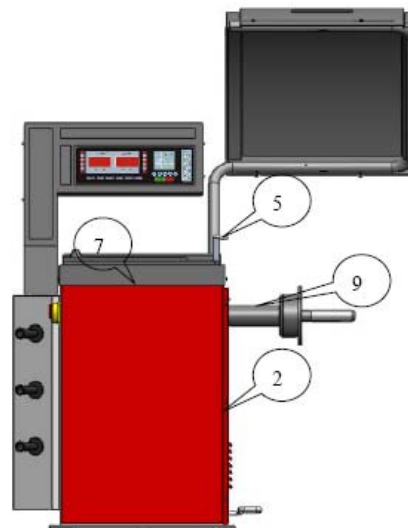


Fig. 8

- | | |
|------------------|-------------------------|
| 1. Power Plug | 2. Side Panel |
| 3. Return Spring | 4. Main Switch |
| 5. Scale | 6. Control Panel |
| 7. Weight Tray | 8. Protective Cover |
| 9. Balance Shaft | 10. Body |
| 11. Power Switch | 12. Cone Storage Handle |

6.2 CONTROL PANEL

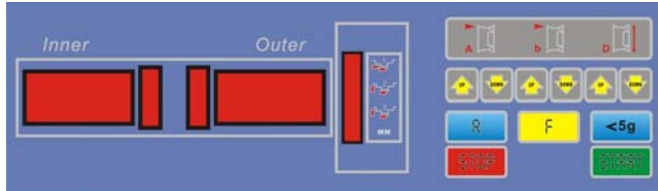


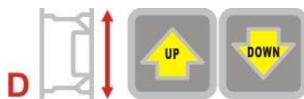
Fig. 9



(1) In the state of parameter input, it is the distance from wheel to balancer input key. You can change the Br set value of the window by press the up/down key.



(2) **Br value input key** You can change the Br set value of the window by press the up/down key.



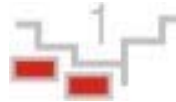
(3) In the state of parameter input, it is the diameter of the rim input key. You can change the D set value of the window by press the up/down key.



High accuracy balance press key When the display is “00”, press this key will display 5g of residual unbalance value.



STA/ALU mode selection key



ALU1 mode



ALU2 mode



ALU3 mode



Emergency stop key



Start key

Inner

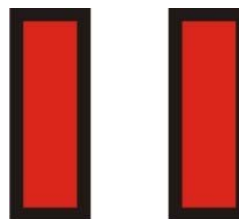


Inner unbalance value and parameter of the tire display

Outer



Outside unbalance value and tire parameter display



Unbalance position lamp

6.3 BASIC OPERATION

6.3.1 Switch on the main switch on the left side of the machine, the display will display “CB2” and then “0”, “0”.

6.3.2 MOUNT WHEEL

Preparation before test: Check and clean the dust and mud and if there are foreign bodies, such as metal and stone, clipped on the surface of the tire. And also check the air pressure of the tire is according with the specified value. Check if there are deformation on the rim positioning surface and installation hole. Check if there are any foreign bodies in the tire. Take off the original weight.

The installation methods of the wheel: Positive positioning, negative positioning & flange disk when handling the middle and big sizes of tires. You can select the methods according to the different conditions.

6.3.2.1 SMALL CAR WHEEL POSITIVE POSITION

Positive positioning is the normal method. It is featured with simple and quick operation. It is mainly suitable to the common steel rim and aluminum alloy rim with small deformation.

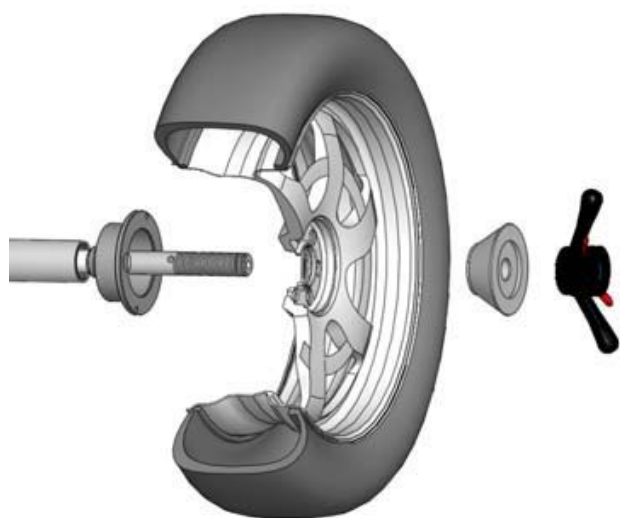


Fig. 8

Main shaft → wheel (direction of the rim installation surface is inside) → cone → quick nut

6.3.2.2 When the deformation of the outside of the wheel, adopt this method to positioning to grantee the accurate positioning of the steel rim inner hole and main shaft. It is suitable to the steel rim, especially the thick ALU.

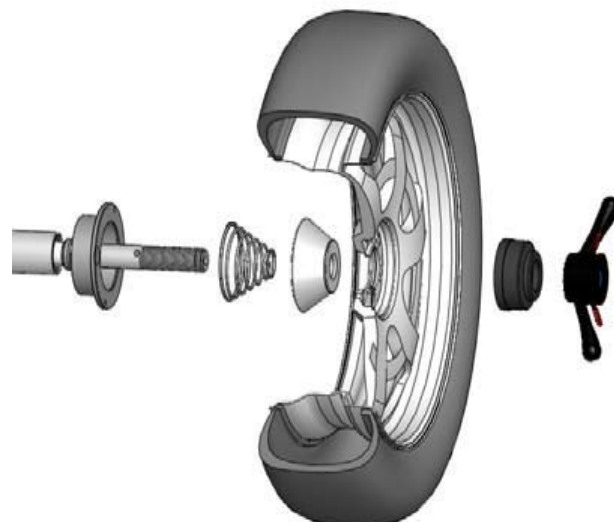


Fig. 9

Main shaft → tower spring ← suitable cone
 → wheel → bowl → quick nut

6.3.2.3 FLANGE DISK POSITIONING (OPTIONAL)

Suitable to the big tire assemble

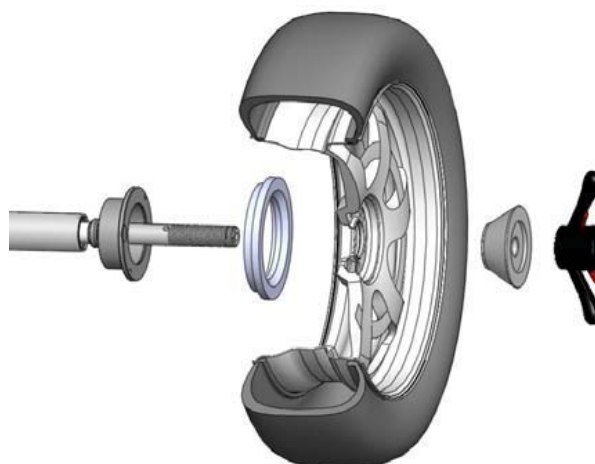


Fig. 10

Main shaft → flange disk (fixed on the main shaft)
 → wheel → cone → quick nut

NOTE: The choice on the cone should be adapted to the rim center hole and pay attention to its direction. Or it will cause the inaccurate measurement.

6.4 INPUT VALUE

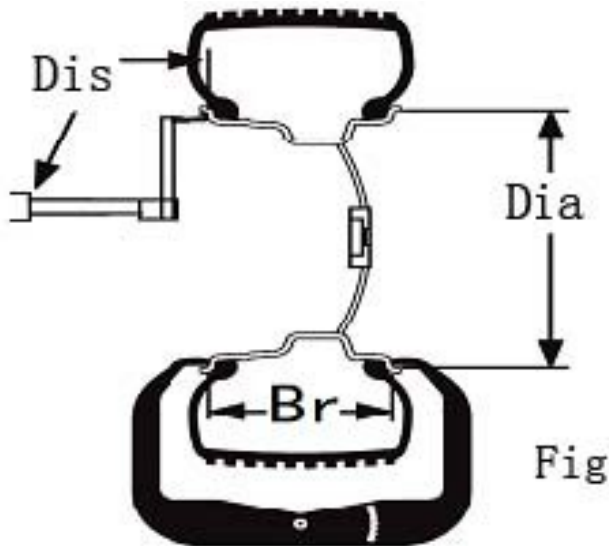


Fig. 11

6.4.1 Input DIS (Distance)

Pull the scale to the inner position to add the weight and press the key “A” “+,-” to input the “A” value into the display. At this moment, the display will display “DIS”: “XX”.

6.4.2 Input Br (RIM Breadth) Value

Use the measurement caliper to measure the “b” value of the rim, press the key “b” “+,-” to input the “b” value into the display. At this moment, the display will display “b”: “XX”.

6.4.3 Input the DIA (Diameter) Tire Diameter Value

After confirming the rim diameter, press the key “D” “+,-” to input the rim diameter into the display. At this moment, the display will display “D”: “XX”.

6.4.4 First the machine should be lowering down the protective hood, then press the “start” key the wheel balancer starts to run. A few seconds later, the machine automatically stops.

6.4.5 DISPLAY UNBALANCE VALUE

When the spin ends, the display will display the inner and outer unbalance value of the rim. Use your hand to pull the wheel. When all the positioning lamps light inside and outside light, the weight adding position will be indicated.

6.4.6 Rotate the wheel, when the left side positioning lamp all light, at this moment, the highest position is the inner unbalance position and when the right side positioning

lamp all light, at this moment, the highest position is the outer unbalance position.

6.4.7 Add the corresponding weight at the unbalance point and start test again until the balance of the tire.



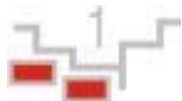
- When start the machine, use hand to pull the wheel to help it start rotation, especially to the relative bigger tire, to prolong the working life of the motor.
- Check if there are any mistakes on the dimension.
- Check if the balance methods meet the configuration of the rim and select the balancer most easily to balance.
- Check if the quick lock nut tight or not.
- When the balance ends, remove the tire. Pay attention to handle it with gentle and avoid knocking the main shaft.
- When clipping the weight. Use the hammer to clip the weight on the rim without too much force.
- Do not knock the main shaft hardly to avoid damaging the sensor. The position to add the Weight should be free from the grease and should be dry.

6.5 RESIDUAL UNBALANCE VALUE DISPLAY

The minimum value of the standard weight is 5g so if the weight you use is less than 5g, the wheel balancer will not display the value and only displays the state of “00”. When you need to display the residual unbalance value, you should press “<5g” and the display will immediately display the inside or outside unbalance value of less than 5g. The maximum residual unbalance value is 4 g.

6.6 BALANCE MODE SELECT

Select the balance mode according to the weight adding position and the balance mode. Press the “F” key to select the balance mode. When you switch on the machine the machine will automatic enter into the dynamic balance mode and no need to select.



ALU1—to balance the light aluminum alloy rim. Adopt clip the weight on the shoulders of the rim.

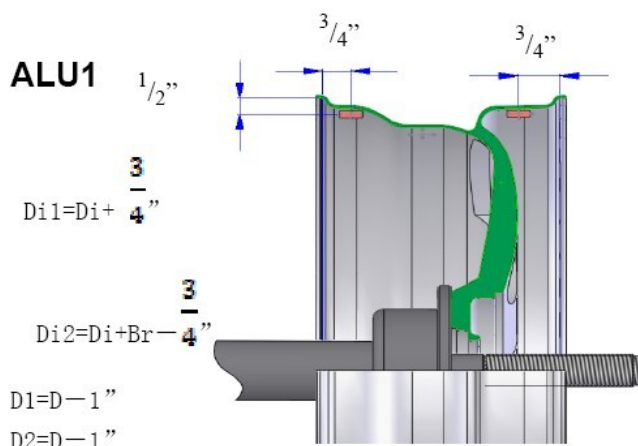


Fig. 12



ALU2—for ALU rim, hidden weight inside.

ALU 2

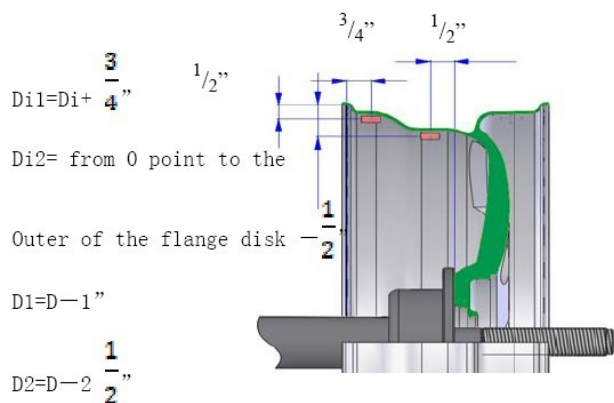


Fig. 13



ALU3—Clip weight inside and stick weight outside (outside position) similar to ALU2

ALU3

$Di1=Di$
 $Di2=$ from 0 point to the Outer of the flange disk $-\frac{1}{2}''$
 $D1=D$
 $D2=D-2 \frac{1}{2}''$

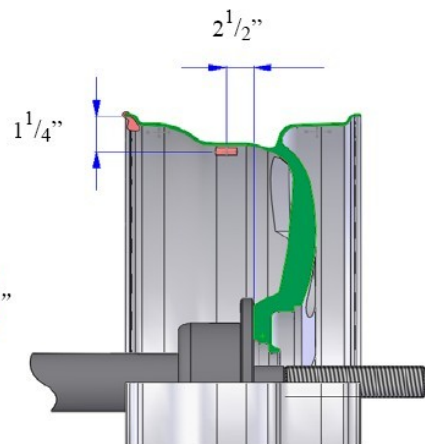


Fig. 14

6.7 SUPPLEMENTARY EXPLANATION

Once switching on, you will see standard dynamic balance mode setup by the computer. When selecting ALU mode and the configuration of the aluminum alloy rim is similar to the above standard ALU1\ALU2\ALU3, you can get relative accurate balance effect. If the section of the tire similar to the one given by the program, you need do some adjustment on the position and weight of the weight. General speaking, 1~2 times of adjustment can reach relative satisfactory balance effect.

7. GENERAL TROUBLESHOOTING & SOLUTION

DESCRIPTION	CAUSE	SOLUTION
Start the machine but not display.	<ol style="list-style-type: none"> 1. Check the circuit of 220V is normal or not. 2. power board fault 3. The cable between the power board and computer loose 4. computer board fault 	<ol style="list-style-type: none"> 1. Check and connect the external power source. 2. Changer the power board 3. Check the plug cable 4. Change the computer board
Display is normal but the start button and input push button not working.	<ol style="list-style-type: none"> 1. contact switch not good 2. machine breakdown 	<ol style="list-style-type: none"> 1. Open the housing of the machine and plug in and tight the contact switch plug. 2. Start the machine again
Display is normal but not braking after start.	<ol style="list-style-type: none"> 1. The cable between the power board and computer loose 2. power board fault 3. computer board fault 	<ol style="list-style-type: none"> 1. Plug in and tight the cable between the computer board and power board. 2. Change the power board 3. Change the computer board
Balance is not accurate & difficult to reach "00"	<ol style="list-style-type: none"> 1. sensor lead connect or contact no good 2. memory value lost 	<ol style="list-style-type: none"> 1. Connect again 2. Correct the memory value according to the manual.
Each spin, the change of the value will not exceed 5g.	<ol style="list-style-type: none"> 1. There are foreign body on the rim or the assemble surface in the rim center deformation 2. sensor damp or quick nut not tightly clamped 3. The external power voltage or the air pressure not enough. The flange dick not locked. 	<ol style="list-style-type: none"> 1. Change the wheel 2. Oven, recalibrate the sensor. 3. Fix the anchor bolt.
Each spin, the range of the change of value will be 20-90g.	<ol style="list-style-type: none"> 1. There are foreign bodies on the wheel or the unbalance of the wheel value too big. 2. sensor damage 3. external power source voltage too low 	<ol style="list-style-type: none"> 1. Change the wheel 2. Check the sensor and wiring. 3. Check power source and assemble stabilizer.
Balance is not accurate & difficult to reach "00"	<ol style="list-style-type: none"> 1. Sensor damp or damage 2. Program chore 	<ol style="list-style-type: none"> 1. Calibrate again, oven and then self-calibration or change. 2. Self-calibration again
When second mount & demount, the error will exceed 10g.	<ol style="list-style-type: none"> 1. Wheel internal hole irregular 2. Flange disk assemble not properly 	<ol style="list-style-type: none"> 1. Change the wheel 2. Check the assemble surface and try again.

8. MAINTENANCE



WARNING

The manufacturer will not bear any responsibility in the event of claims resulting from the use of non-original spare parts or accessories.



WARNING

Unplug the machine from the socket and make sure that all moving parts have been locked before performing any adjustment or maintenance operation.



WARNING

Do not remove or modify any part of the machine (except for service interventions).



CAUTION

Keep the work area clean.

Never use compressed air and/or jets of water to remove dirt or residues from the machine. Take all possible measures to prevent dust from building up or rising during cleaning operations. Keep the wheel balancer shaft, the securing ring nut, the centering cones and flange clean. These components can be cleaned using a brush previously dipped in environmentally friendly solvents. Handle cones and flanges carefully so as to avoid accidental dropping and subsequent damage that would affect centering accuracy. After use, store cones and flanges in a place where they are suitably protected from dust and dirt. If necessary, use ethyl alcohol to clean the display panel. Perform the calibration procedure at least once every six months.

USING THE GREASE

Greasing the wheel balancer

The only rotating parts of the wheel balancer are the motor and balance shaft. These parts must be periodically

lubricated by the operators. If the machine is used very frequently, more than 2hours per day, we should annually check the bearing. And we will check once a year if the machine is used less than 2hours a day. When test, do not open up the bearing so you need insert a screwdriver to test the noise. Due to the function of the bearing is to clamp and support and not suitable to change or remove the grease. In addition, the speed of it is not too fast compared to the machine so no need to change the grease. If you note the run of the bearing abnormal or there is noise, change the bearing. If the customer confirms the bearing is not changed, you only need change the grease. Disassemble the bearing and open up the sealing ring and fill the XHP103 grease. These operation should be guided by the profession personnel and calibrate the machine after changing the grease. If the change of the grease not correctly, it will influence the accuracy of the machine. On this condition, you need to reinstall the sealing ring and assemble the machine and adjust again.

Technical safety card for using grease in the wheel balancer.

Mobilgrease XHP

NLGI degree

Type of thickener

Colour, appearance

Penetration on the processed item 25°, ASTM D 217, mm/10

Dropping point, °C, ASTM D 2265

Viscosity oil base, ASTM D 445, cSt @ 40°C

Change of penetration consistency, ASMT D 1831 (established upon the rolling of the greases), mm/10

4 spheres test, impression diam., ASTM D 2266, mm

4 spheres test, welding load, ASTM D 2509, kg

Test Timken OK load, ASTM D 2509, lb

Stability of oxidisation bomb method, ASTM D 942, pressure drop at 100 hours, kPa Corrosion prevention, ASTM D 1743

Emcor rust, IP 220, wash away with acid water

Rust protection, IP 220-mod, wash away with distilled water

Corrosion on copper, ASTM D 4048 1A


Wash away with water, ASMT D 1264, loss (weight%), @ 79°C 5

SCRAPPING

If the machine is to be scrapped, separate all electrical, electronic, plastic and ferrous components and dispose of them separately, as provided for by local regulations in force.

If the machines have the crossed-out bin symbol on their



data plate  , the following disposal procedure must be applied to. This product may contain substances that can be hazardous to the environment and to human health if it is not disposed of properly.

Electrical and electronic equipment must never be disposed of in the usual municipal waste but must be separately collected for their proper treatment.



The crossed-out bin symbol , placed on the product and on this page, reminds the user that the product must be disposed of properly at the end of its life.

Thus, the hazardous consequences that non-specific treatments of the substances contained in these products, or improper use of parts of them, may have on the environment or on human health are prevented. Furthermore, this helps to recover, recycle and reuse many of the materials contained in these products.

Electrical and electronic manufacturers and distributors set up proper collection and treatment systems for these products for this purpose.

Contact your local distributor to obtain information on the collection procedures at the end of the life of your product.

When purchasing this product, your distributor will also inform you of the possibility to return another end-of-life piece of equipment free of charge as long as it is of equivalent type and had the same functions as the purchased product.

Any disposal of the product performed in a different way from that described above will be liable to the penalties provided for by the national regulations in force in the country where the product is disposed of.

Further measures for environmental protection are recommended: recycling of the internal and external packaging of the product and proper disposal of used batteries (only if contained in the product).

Your help is crucial to reduce the amount of natural resources used for manufacturing electrical and electronic equipment, minimize the use of landfills for product disposal and improve the quality of life, preventing potentially hazardous substances from being released in the environment.

FIREFIGHTING MEANS TO BE USED

Consult the following table to choose the most suitable fire extinguisher.

Dry materials

Water YES

Foam YES

Powder YES*

CO2 YES*

YES* Use only if more appropriate extinguishers are not at hand or when the fire is small.

Flammable liquids

Water NO

Foam YES

Powder YES

O2 YES

Electrical equipment

Water NO

Foam NO

Powder YES

CO2 YES

**Warning**

This table contains general instructions to be used as guidelines for users. All the applications of each type of extinguisher must be obtained from the relevant manufacturer.

9. DETAILED MACHINE OPERATION

9.1 HOW TO BALANCE A TIRE?

- Switch on the power source
- Select the cone according to the tire. Assemble the tire on the main shaft of the wheel balancer and firmly lock it.
- Input the tire parameter.

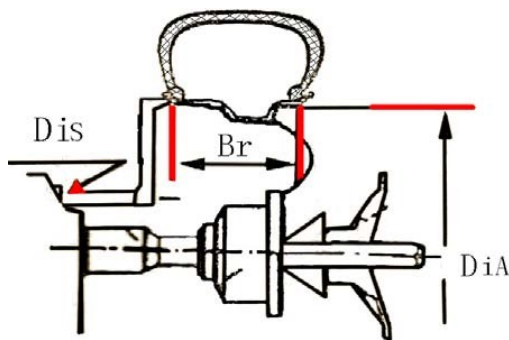


Fig. 16

- ◆ Pull out the scale of the balancer to measure the “A” value which means the distance from the insides of the tire to the body. According to measured reading, press “A” “+,-” to adjust the value to make the value displayed in the right side window to be the measured value.
- ◆ Use the width measurement scale to measure the “b” value means the rim distance. Press “b” “+,-” to input the Br value which is the implied value with the unit of inch.
- ◆ Check the “D” value, which means the diameter of the rim, marked on the tire. Press “D” “+,-” to adjust the displayed in the right side display window until the displayed value to be the rim diameter value.

- ◆ Lower down the protective cover and press the start key. After the machine start, rotate and test, it will automatically stop. In the left/right window, the corresponding values will be displayed. Rotate the tire, when all the position indication lamps light. Please add the weight corresponding to the value displayed in the window in the 12 o'clock position inside/outside. Once again, start the machine to test. The window will display the unbalance value. The balance process will be completed until reaching the balance range you required.

9.2 CUSTOMER SELF-CALIBRATION

When there is doubt in the precision of the measured value this function can be used. Don't shut down the detector during the operation, because it may cause the inputting of the wrong value. (Don't arbitrarily use this function.)

Procedures in operation:

1. Mount the balanced tire.
2. Press down the “R” button, after about half a second, press the start key. The indicators show “CAL”-“CAL” the positioning lamp of unbalance will flash several seconds, and then went out automatically.
3. (1) Put down the cover, press START button, the balancer will rotate automatically, seconds later, stop automatically, indicators show “Add” “100”, then lift the cover, add a balance weight of 100g at any point of external of the rim, put down the cover again, the wheel will rotate show “End”-“CAL”, the calibration is finished.
- (2) For the balancer with the protection cover, but the customer do not use the cover, at this time, the user should put down the cover during the calibration, and disconnect the lines for the stroke switch, which cover, then press the START button to start the work, for this situation, press the START button to start the machine.
- (3) For the balance without the cover, press the START button after the above 1, 2 procedure, seconds later, stop automatically, indicators show “Add”-“100”, Add a balance weight of 100g at any point of external side of the rim, press the START button, the wheel will rotate, indicators show “END”-“CAL”, the calibration is finished.

9.3 SELF-DIAGNOSIS CODE

Err-1: Trouble in phase generator or power plate, replace it.

Err-2: Rotation speed is too low or wheel hasn't been mounted (with tire).

Err-3: Too big unbalance, try other wheel.

Err-4: Errors in power system, rotational direction is not right.







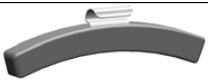

Err-5: Nonsense.

Err-6: Memory damaged or signal lost, calibrate again or relocate.

Err-7: The procedure of calibration is not appropriate or computer plate or sensor damaged.

10. ACCESSARIES

OPTIONAL ACCESSORY			
Accessory	Description	Accessory	Description
	HOOD		4-POSITION ADAPTOR
	LARGE CONE		FLANGE DISK
	WEIGHT STICK SCALE		CENTERLESS RIM CALIP
	DK-W-1		DK-W-2
	MJ-I		MJ-II

STANDARD ACCESSORY		
Accessory	Description	Quantity
	CONE	1 SET
	PLIER	1 PIECE
	QUICK NUT	1 PIECE
	BOWL	1 PIECE
	BR SCALER	1 PIECE
	THREAD SHAFT	1 PIECE
	WEIGHT	1 PIECE
	BOWL CASE	1 PIECE

WARRANTY

The wheel balancer is warranted for one year from the date of goods delivery to the original purchaser, to be free of defects in material and workmanship.

The manufacturer shall repair or replace at their option for this period those parts returned to the factory freight prepaid which prove after inspection to be defective.

This warranty only applies to the original purchaser of the equipment. This warranty does not extend to defects caused by ordinary wear, abuse, misuse, shipping damage, or damage as the result of improper maintenance.

This warranty is exclusive and in lieu of all other warranties expressed or implied.

In no event shall the manufacturer be liable for special, consequential or incidental damages for the breach or delay in performance of the warranty.

The manufacturer reserves the right to make design changes or add improvements to its product line without incurring any obligation to make such changes on product sold previously.