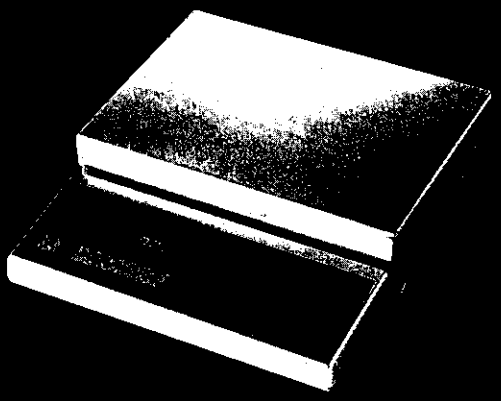
OHAUS®

This series of balances is no longer sold or supported by Ohaus

IP Series
High Capacity
Precision Toploaders

MODELS
IP8KS, IP12KS and IP15KS

Instruction Manual



WARNING: THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE INTERFERENCE TO RADIO COMMUNICATIONS. IT HAS BEEN TESTED AND FOUND TO COMPLY WITH CLASS "A" REQUIREMENTS IN BOTH PART 15 OF FCC RULES AND THE RADIO INTERFERENCE REGULATION OF THE CANADIAN DOC. THIS EQUIPMENT DOES NOT EXCEED THE LIMITS FOR RADIO NOISE EMISSIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA MAY CAUSE UNACCEPTABLE INTERFERENCE TO RADIO AND TV RECEPTION REQUIRING THE OPERATOR TO TAKE WHATEVER STEPS ARE NECESSARY TO CORRECT THE INTERFERENCE.

LE PRÉSENT APPAREIL NUMÉRIQUE N'EMET PAS DE BRUITS RADIOÉLÉCTRIQUES DEPASSANT LES LIMITES APPLICABLES AUX APPAREILS NUMÉRIQUES DE CLASSE A PRESCRITES DANS LE REGLEMENT SUR LE BROUILLAGE RADIOÉLECTRIQUE EDICTÉ PAR LE MINISTERE DES COMMUNICATIONS DU CANADA.

TABLE OF CONTENTS

PREFACE

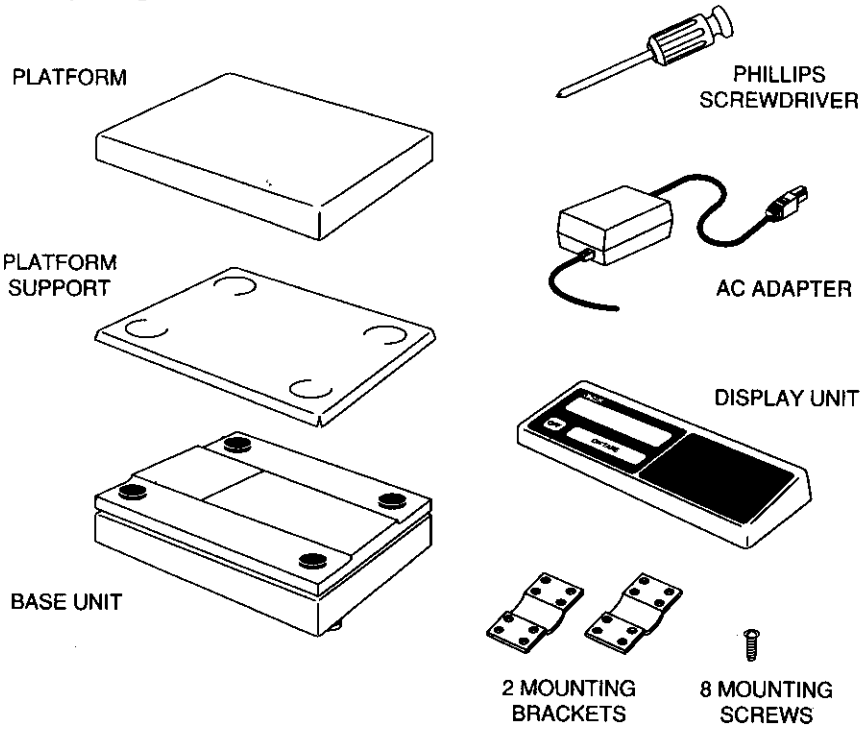
Your OHAUS® IP Series balance is a precision weighing instrument that is designed to be accurate and easy to operate. This manual explains how to use your balance properly and should be read before operation.

UNPACKING

Your IP Series balance was shipped with the following items:

- a base unit
- a display unit
- 2 display mounting brackets and 8 mounting screws
- a platform
- a platform support
- an AC power adapter
- a phillips screwdriver
- this instruction manual
- your warranty card

It is recommended to save the carton and packing material for storing and/or transporting the balance.



INSTALLATION

Environment

The balance should always be used in an environment which is free from excessive air currents, corrosives, vibration, and temperature or humidity extremes. These factors will affect displayed weight readings.

DO NOT install the balance:

- next to open windows or doors causing drafts or rapid temperature changes
- near air conditioning or heat vents
- near vibrating, rotating or reciprocating equipment
- near magnetic fields or equipment that generates magnetic fields
- on an unlevel work surface

Connecting the Display Unit

A phillips screwdriver is provided for this procedure.

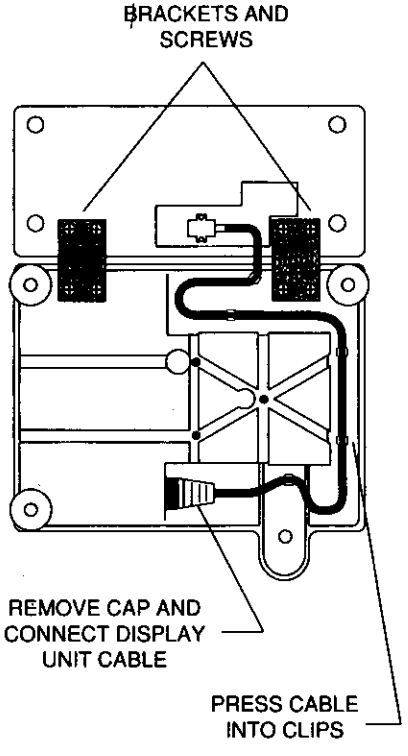
1. Turn the base and display unit over so the bottom faces up.

2. Using the phillips screwdriver, fasten the display unit to the front of the base using the two brackets and eight screws provided.

3. Remove the protective cap from the bottom of the base and connect the display unit cable to the connector.

4. Press the cable into the clips mounted along the recess in the base.

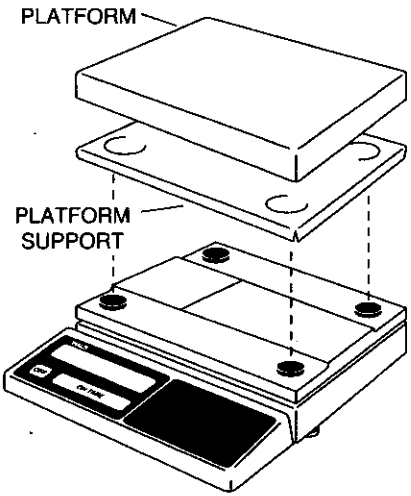
5. Replace the protective cap and turn the balance over.



Platform and Platform Support

1. Place the platform support on the base. Align the four pads on the base unit with the corner markers of the support.

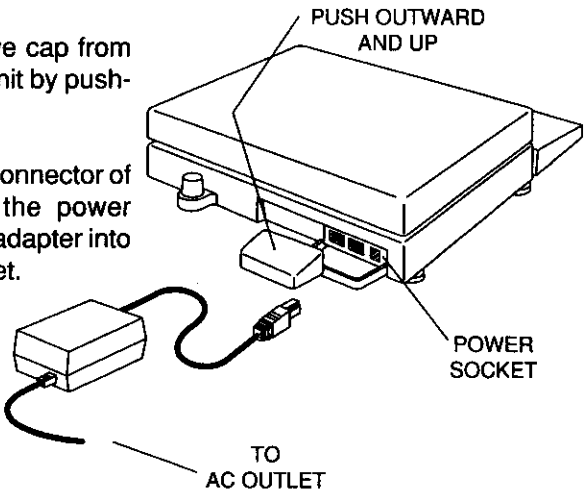
2. Place the platform on the support.



Power Adapter

1. Remove the protective cap from the rear of the base unit by pushing it outward and up.

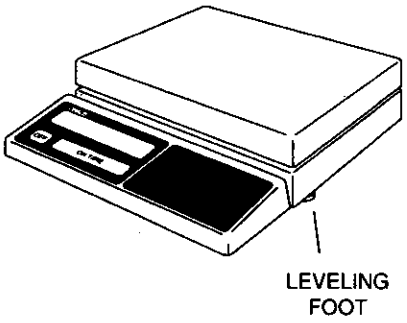
2. Connect the molded connector of the AC Adapter to the power socket, then plug the adapter into a convenient AC outlet.



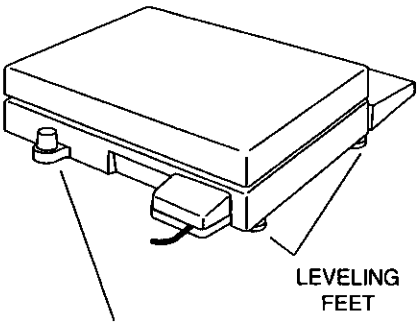
3. Replace the protective cap.

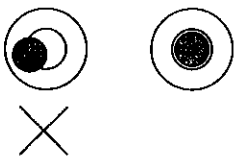
Leveling the Balance

The balance is equipped with a level indicator at the rear of the base unit, and three adjustable leveling feet. IP Series balances should be levelled whenever they are moved.



Adjust the leveling feet until the bubble is centered in the indicator. Screw the feet **clockwise** to lower the balance and **counterclockwise** to raise it.

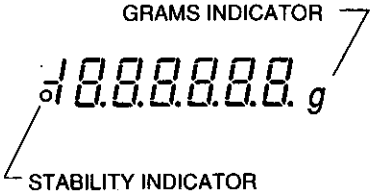




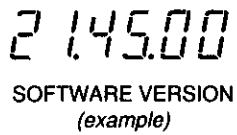
Turning the Balance ON

With no load on the platform, switch the balance ON by pressing ON/TARE.

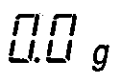
When first switched ON, all segments of the display should be on as shown in the illustration.



This "display check" will be displayed briefly, followed by the balance software version, then zero will be displayed.



When zero is displayed, the balance is ready for use.



To turn the balance off, press OFF.

CALIBRATION

The balance should be calibrated before use. Although it has been calibrated before shipment, calibration could be influenced by factors such as:

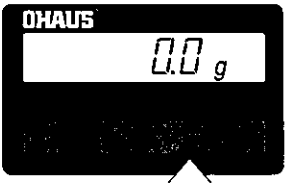
- variations in the earth's gravitational field at different latitudes of the world
- rough handling
- changes in work location

A 4000 g weight is required to calibrate the balance.

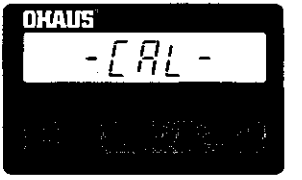
Before beginning, allow the balance to warm up for at least 30 minutes.

Procedure:

1. With NO LOAD on the platform, press and hold ON/TARE until "- CAL -" is displayed, then release it.



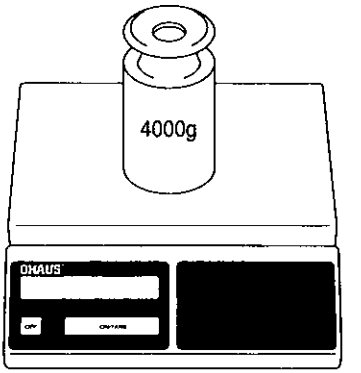
Press and Hold



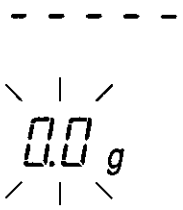
Release

The display will show "- - - - - -" briefly, then begin flashing the calibration weight that must be placed on the platform (4000 g).

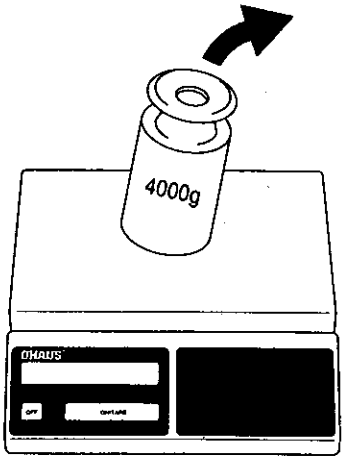
2. Place the weight on the platform.



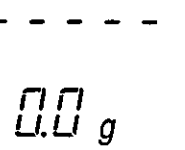
The display will show "- - - - - -" briefly, then begin flashing "0.0 g" indicating that NO LOAD should be on the platform.



3. Remove the weight from the platform.



The display will show "- - - - - -", and then "0.0g".



Calibration is completed when "0.0g" is displayed.

OPERATION

Once the balance is calibrated, it may be used for weighing. However, by setting the Stability Range and Averaging Level as explained in the next two sections, you can customize the balance for your environment and weighing requirements.

Stability Range

Stability Range specifies how much a displayed weight may change while the stability indicator remains OFF. When displayed weight changes beyond the allowable range, the stability indicator turns ON indicating an unstable condition. IP Series balances permit you to select one of four stability ranges as shown in the adjacent table.

STABILITY RANGE

-1- largest range: stability indicator is OFF even though displayed weight changes slightly

-2- normal range

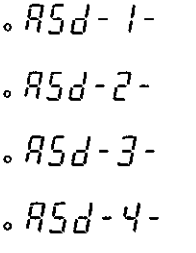
-3- reduced range

-4- smallest range: stability indicator is OFF only when displayed weight is extremely stable.

To view or change the current stability range:

1. Press and hold ON/TARE until "ASd" is displayed along with the current setting, then release it. DO NOT release ON/TARE when "-CAL-" is displayed. This will begin calibration.

2. To change the displayed setting, repeatedly press ON/TARE until the desired setting is displayed. You must press ON/TARE within 3 seconds or the balance will return to the weighing mode.



3. To accept the displayed setting, wait approximately 3 seconds until the balance returns to the weighing mode (0.0g will be displayed).

   NOTE: You may proceed directly to Step 2 of Averaging Level by pressing and holding ON/TARE before the balance returns to the weighing mode.

Averaging Level

Averaging level compensates for vibration or excessive air currents on the platform. During operation, the balance continually takes weight readings from the load cell. Successive readings are then digitally processed to achieve a stabilized display.

Select one of three averaging levels using the adjacent table as a guide.

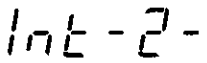
NOTE: Averaging level does not affect balance accuracy.

AVERAGING LEVEL	
-1-	minimum processing, fastest stabilization time
-2-	normal processing, normal stabilization time
-3-	maximum processing, slowest stabilization time

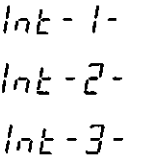
To view or change the current averaging level:

1. Press and hold ON/TARE until "Int" is displayed along with the current setting, then release it.

   First "-CAL-" will be displayed, then "ASd", then "Int". DO NOT release ON/TARE when "-CAL-" is displayed. This will begin calibration.



2. To change the displayed setting, repeatedly press ON/TARE until the desired setting is displayed. You must press ON/TARE within 3 seconds or the balance will return to the weighing mode.



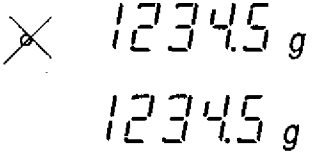
3. To accept the displayed setting, wait approximately 3 seconds until the balance returns to the weighing mode (0.0g will be displayed).

Weighing

1. Press ON/TARE to rezero the display.

2. Place the object(s) or material to be weighed on the platform.

3. Wait for the stability indicator to turn OFF before reading the weight.

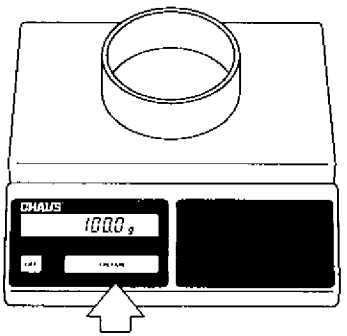


Taring

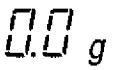
When weighing material or objects that must be held in a container, taring stores the container weight in the balance's memory, and subtracts it from the total weight on the platform.

1. Place an empty container on the platform. Its weight will be displayed.

2. Press ON/TARE.

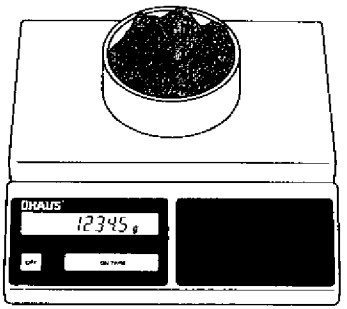


The display will show zero and the container's weight will be stored in memory.



3. Add material to the container. As material is added, its net weight will be displayed.

4. Removing the container and material from the platform will cause the balance to display the container's weight as a negative number.



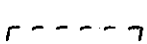
Tared weight remains in balance memory until ON/TARE is pressed again.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE(S)	REMEDY
Unit will not turn on.	Power adapter not plugged in or not properly connected to balance.	Check power adapter connections.
Incorrect weight reading.	Balance was not re-zeroed before weighing.	Press ON/TARE with no weight on the platform, then weigh item.
	Balance not properly calibrated.	Recalibrate correctly.
Stability Indicator will not turn OFF.	Environment may be too harsh (drafts, vibration, etc.)	Rectify environmental conditions. If this is not possible, increase Averaging Level setting.
Random segments displayed or display locks up.	Microprocessor lock-up.	Turn balance off, then turn on again. If condition persists, unit must be serviced.
Display flashes zeroes		Contact Ohaus.

Error Codes

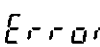
Underload: Platform support or platform not on balance.



Overload: Load on platform exceeds the capacity of the balance.

Calibration not completed. Occurs if an incorrect calibration weight is used or balance is not stable at "-CAL-".

Taring in an overload or underload condition.



This indicates an error condition detected by the internal monitoring system on automatic self-check. Temperature may be outside the permitted range. Switch balance OFF then ON again. If error persists, balance must be serviced.

SPECIFICATIONS

MODEL	IP8KS	IP12KS	IP15KS
Capacity (g)	8,100	12,000	15,000
Readability (g)	0.1	0.1	0.1
Weighing Modes	Grams Only		
Tare	Full Capacity by Subtraction		
Precision/ Reproducibility (g)	0.1	0.1	0.1
Linearity (g)	0.3	0.3	0.3
Sensitivity Drift (10 - 30 °C)	8 ppm / °C		
Display	.6 inch/15 mm Vacuum Fluorescent		
Stabilization Time (sec)	3	3	3
Operating Temperature	32 - 104 °F / 0 - 40 °C		
Power Supply	AC Adapter - 115, 220, 240 VAC, 50/60 Hz		
Calibration	Auto Calibration		
Platform Size (in/mm)	12.8 x 9.1 / 322 x 232		
Housing Size (in/mm)	12.8L x 12.6W x 3.4H / 325L x 310W x 85H		
Net Weight (lb/kg)	16.0 / 7.3		

CARE AND MAINTENANCE

To keep the balance operating properly, the housing and platform should be kept clean and free from foreign material. If necessary, a cloth dampened with a mild detergent may be used. Keep calibration weights in a safe dry place.

REPLACEMENT PARTS

	OHAUS Part No.
AC Adapters:	
110/120 VAC US	90924-02

The parts listed may no longer be available

LIMITED WARRANTY

Ohaus products are warranted against defects in materials and workmanship from the date of delivery through the duration of the warranty period. During the warranty period Ohaus will repair, or, at its option, replace any component(s) that proves to be defective at no charge, provided that the product is returned, freight prepaid, to Ohaus.

This warranty does not apply if the product has been damaged by accident or misuse, exposed to radioactive or corrosive materials, has foreign material penetrating to the inside of the product, or as a result of service or modification by other than Ohaus. In lieu of a properly returned warranty registration card, the warranty period shall begin on the date of shipment to the authorized dealer. No other express or implied warranty is given by Ohaus Corporation. Ohaus Corporation shall not be liable for any consequential damages.

As warranty legislation differs from state to state and country to country, please contact Ohaus or your local Ohaus dealer for further details.

OHAUS

OHAUS CORPORATION

Ohaus Corporation
29 Hanover Road
Florham Park NJ
07932-0900

IP Series
High Capacity
Precision Toploaders
Models IP12KS and IP15KS

Instruction Manual

NOTE: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES.

THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

THIS DIGITAL APPARATUS DOES NOT EXCEED THE CLASS A LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS AS SET OUT IN THE INTERFERENCE-CAUSING EQUIPMENT STANDARD ENTITLED "DIGITAL APPARATUS", ICES-003 OF THE DEPARTMENT OF COMMUNICATIONS.

CET APPAREIL NUMÉRIQUE RESPECTE LES LIMITES DE BRUITS RADIOÉLECTRIQUES APPLICABLES AUX APPAREILS NUMÉRIQUES DE CLASSE A PRESCRITES DANS LA NORMA SUR LE MATÉRIAL BROUILLEUR : "APPAREILS NUMÉRIQUES", NMB-003 ÉDICTÉE PAR LE MINISTRE DES COMMUNICATIONS.

Unauthorized changes or modifications to this equipment are not permitted.

TABLE OF CONTENTS

PREFACE

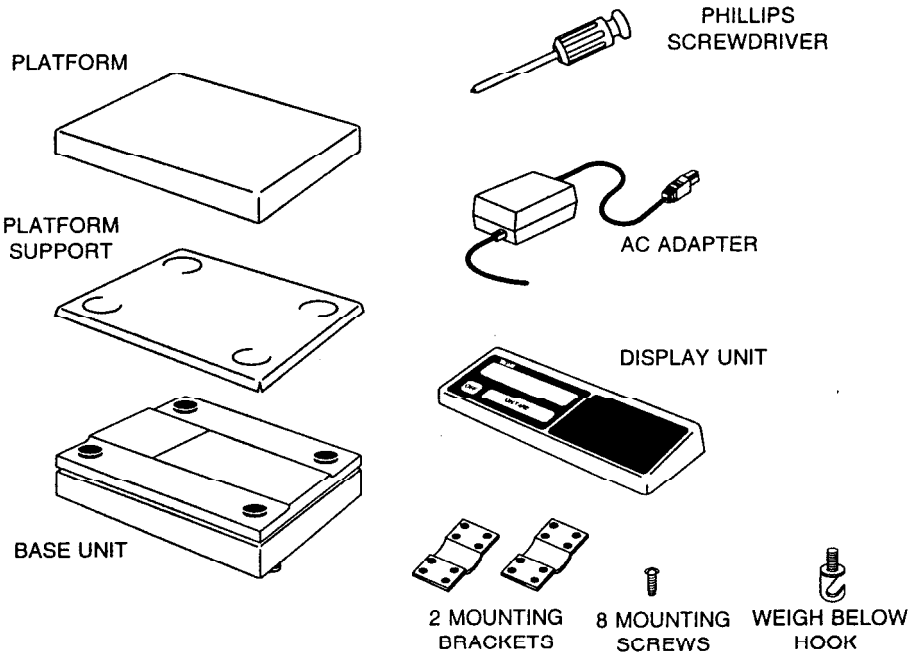
Your OHAUS® IP Series balance is a precision weighing instrument that is designed to be accurate and easy to operate. This manual explains how to use your balance properly and should be read before operation.

UNPACKING

Your IP Series balance was shipped with the following items:

- Base
- Display Terminal
- 2 display mounting brackets and 8 mounting screws
- Platform
- Platform support
- AC power adapter
- Phillips screwdriver
- Weigh below hook
- Instruction Manual
- Warranty card

It is recommended to save the carton and packing material for storing and/or transporting the balance.



INSTALLATION

Environment

The balance should always be used in an environment which is free from excessive air currents, corrosives, vibration, and temperature or humidity extremes. These factors will affect displayed weight readings.

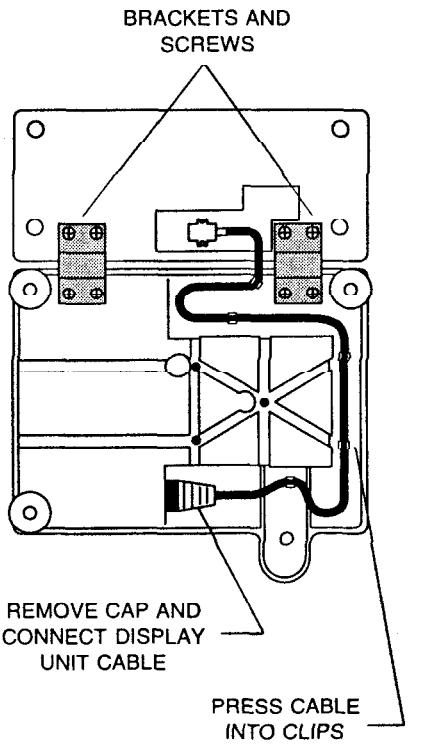
DO NOT install the balance:

- Next to open windows or doors causing drafts or rapid temperature changes.
- Near air conditioning or heat vents.
- Near vibrating, rotating or reciprocating equipment.
- Near magnetic fields or equipment that generates magnetic fields.
- On an unlevel work surface.

Connecting the Display Terminal

A phillips screwdriver is provided for this procedure.

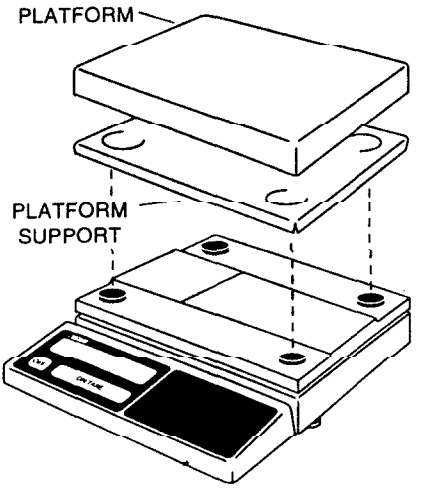
1. Turn the base and display unit over so the bottom faces up.
2. Using the phillips screwdriver, fasten the display unit to the front of the base using the two brackets and eight screws provided.
3. Remove the protective cap from the bottom of the base and connect the display unit cable to the connector.
4. Press the cable into the clips mounted along the recess in the base.
5. Replace the protective cap and turn the balance over.



Platform and Platform Support

1. Place the platform support on the base. Align the four pads on the base unit with the corner markers of the support.

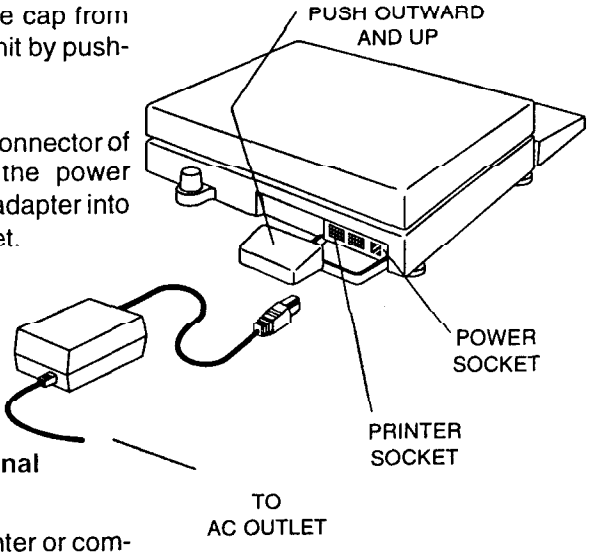
2. Place the platform on the support.



Power Adapter

1. Remove the protective cap from the rear of the base unit by pushing it outward and up.

2. Connect the molded connector of the AC Adapter to the power socket, then plug the adapter into a convenient AC outlet.



Printer Connection (Optional Equipment)

1. When an external printer or computer is to be used with the balance, connect the interface cable to the printer socket located at the rear of the balance.

2. Connect the other end of the cable to the printer or computer.

3. Replace the protective cap.

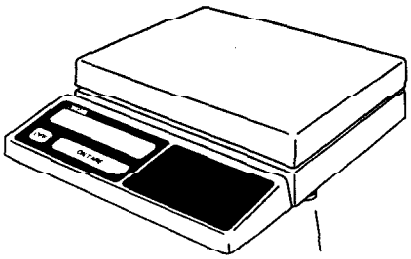
Weigh Below Hook

If the weigh below hook will be used, it may be installed in the bottom of the balance. Remove the protective plug at the bottom of the balance and screw the hook into the threaded hole in the Platform Support which is visible through the access hole in the bottom of the balance. Mount the balance on a suitable surface which allows below weighing

WEIGH BELOW HOOK

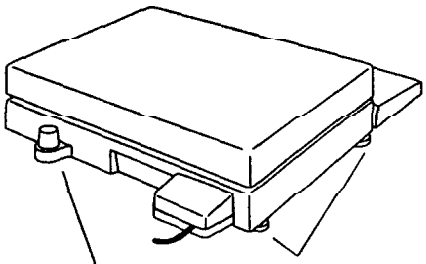
Leveling the Balance

The balance is equipped with a level indicator at the rear of the base unit, and three adjustable leveling feet. IP Series balances should be leveled whenever they are moved.



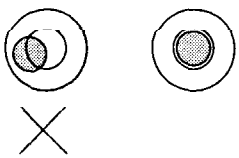
LEVELING FOOT

Adjust the leveling feet until the bubble is centered in the indicator. Screw the feet **clockwise** to lower the balance and **counterclockwise** to raise it.



LEVELING FEET

LEVEL INDICATOR



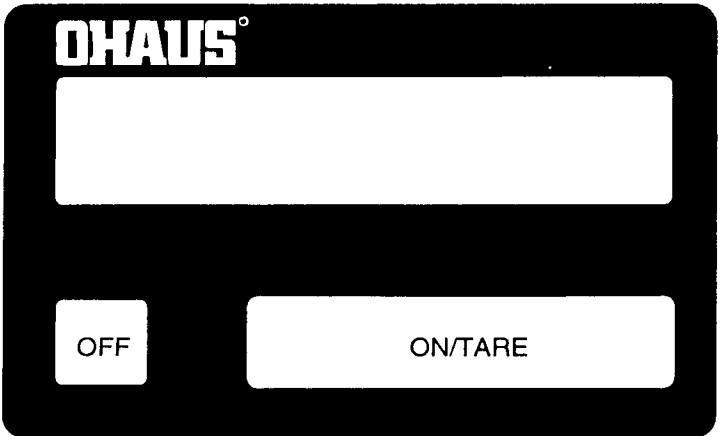
OPERATION

Switch Functions

There are two pushbutton switches located on the front of the balance. The ON/TARE pushbutton switch performs many functions. Please read the following information before pressing either of these switches.

OFF- Pressing this switch when the balance is on turns off the display.

ON/TARE- Turns display on, tares balance, selects either User or Configuration menus and selects individual parameters.

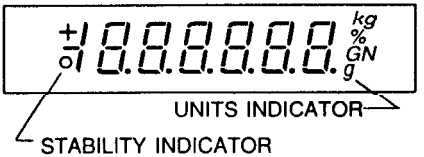


Turning the Balance ON

With no load on the platform, switch the balance ON by pressing ON/TARE.

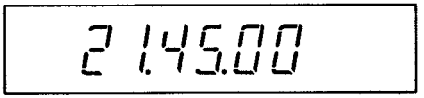
When first switched ON, all segments of the display should be on as shown in the illustration. This display check is displayed briefly, followed by the balance software version, then zero will be displayed. When zero is displayed, the balance is ready for use.

To turn the balance off, press OFF.



UNITS INDICATOR

STABILITY INDICATOR
Turns ON when display is stable.



SOFTWARE VERSION
(example)

Default Settings

When the IP Series Balance is first turned on, there are a number of default settings for each menu. This means that each menu is restricted to certain functions automatically. The default settings can be made in the Configuration Menu by selecting Reset. In order to change the default settings, it is necessary to get into the proper submenu and change the setting manually by using the front panel pushbutton switches. After the submenus have been set to the desired settings, they are retained in memory even after power is removed.

Weighing

1. Press ON/TARE to rezero the display.

2. Place the object(s) or material to be weighed on the platform.

3. Wait for the stability indicator to turn ON before reading the weight.

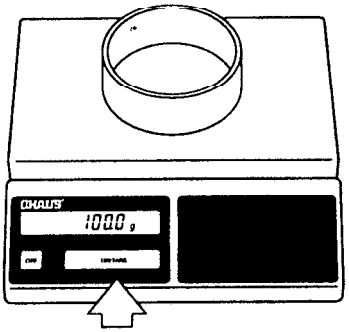
Taring

When weighing material or objects that must be held in a container, taring stores the container weight in the balance's memory, and subtracts it from the total weight on the platform.

1. Place an empty container on the platform. Its weight will be displayed.

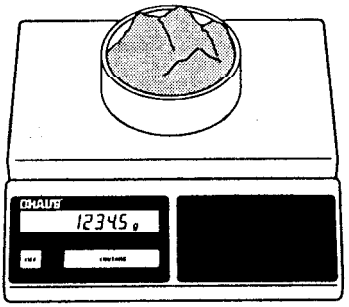
2. Press ON/TARE.

   The display will show zero and the container's weight will be stored in memory.



3. Add material to the container. As material is added, its net weight will be displayed.

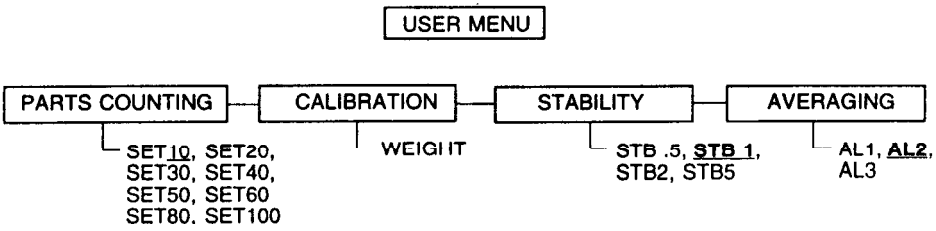
4. Removing the container and material from the platform will cause the balance to display the container's weight as a negative number.

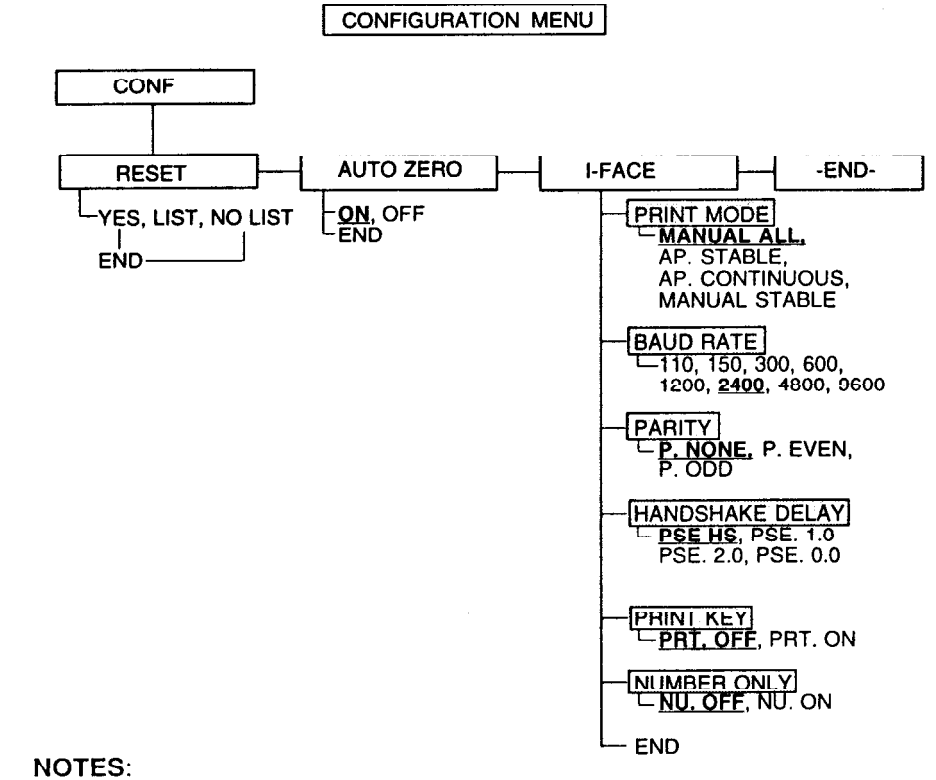


Tared weight remains in balance memory until ON/TARE is pressed again.

FUNCTIONS AND MODES OF OPERATION

Each menu of the IP Balance which includes ***User***, and ***Configuration*** contain numerous selections which can be set for specific operations. To customize the operation of the balance for specific functions and printing, it is necessary to make selections in each menu. The following Illustration identifies the major items in each menu:





NOTES:

1. Items in bold print and underlined are default settings.

2. Shaded headings are not displayed.

Setting The Balance Parameters

When the balance is first turned on and it completes its checks, and is calibrated, it can be used to weigh or tare materials without setting the menus.

There are many features in the IP Series Balance, and it usually is not necessary to address all of the features. Remember, if you do not select a particular function, the balance has built in default settings.

The easiest way to start is to review all of the features in the menus and decide which features are to be activated. Keep a record of your desired settings. The settings will be stored even if the balance is removed from power. The record is used so that you do not have to access the menus to determine the settings. When a printer is connected to the balance, a record of all settings can be printed out.

USER MENU

The User menu is used to set parts counting, calibrate and adapt the balance to environmental conditions. *Parts Counting* enables the balance to be set up with initial sample size of 10 to 100 pieces. *Calibration* is used to calibrate the balance. *Stability* specifies the desired stability range with four settings available. *Averaging Level* specifies the averaging level with three setting available. Settings made in this menu are stored automatically after a time period of three seconds. If no entries are made within approximately three seconds in any of the submenus, the balance automatically returns to the weighing mode.

CALIBRATION

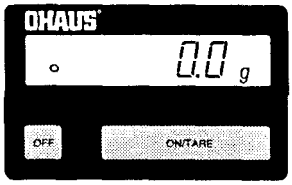
The balance should be calibrated before use. Although it has been calibrated before shipment, calibration could be influenced by factors such as:

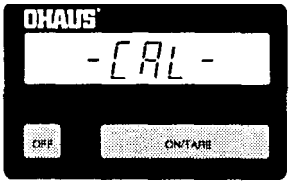
- Variations in the earth's gravitational field at different latitudes of the world.
- Rough handling.
- Changes in work location.

A 4000 g mass which meets or exceeds ASTM Class 1 Tolerance is required to calibrate the balance. Masses are available as accessories.

Procedure:

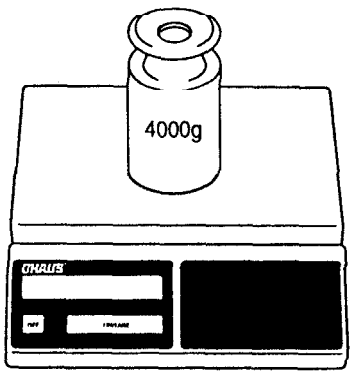
1. With NO LOAD on the platform, press and hold ON/TARE until - CAL - is displayed, then release it.





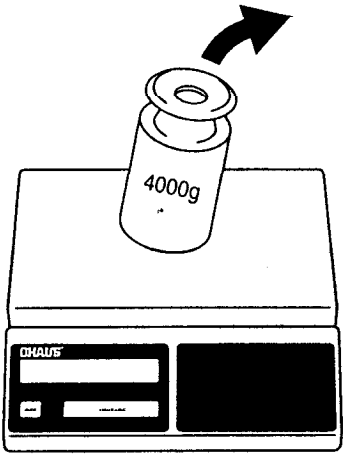
The display will show - - - - - - briefly, then begin flashing the calibration weight that must be placed on the platform (4000 g).

2. Place the weight on the platform.

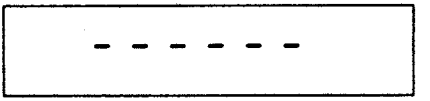


The display will show - - - - - - briefly, then begin flashing 0.0 g indicating that NO LOAD should be on the platform.

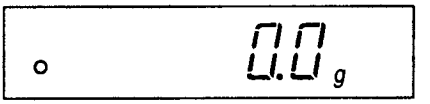
3. Remove the weight from the platform.



The display will show - - - - - -, and then 0.0g.



Calibration is completed when 0.0g is displayed.



Once the balance is calibrated, it may be used for weighing. However. by setting the Stability Range and Averaging Level as explained in the next two sections, you can customize the balance for your environment and weighing requirements.

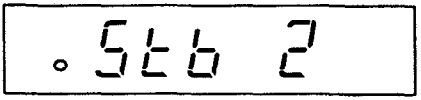
Stability Range

Stability Range specifies how much a displayed weight may change while the stability indicator remains ON. When displayed weight changes beyond the allowable range, the stability indicator turns OFF indicating an unstable condition. IP Series balances permit you to select one of four stability ranges as shown in the adjacent table.

STABILITY RANGE	
.5	Largest range: stability indicator is ON even though displayed weight changes slightly.
1	Normal range.
2	Reduced range.
5	Smallest range: stability indicator is ON only when displayed weight is extremely stable.

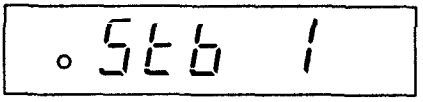
To view or change the current stability range:

1. Press and hold ON/TARE until STB followed by the last number set is displayed , then release it.



2. To change the displayed setting, repeatedly press ON/TARE until the desired setting is displayed.

3. To accept the displayed setting, press and hold until the balance returns to zero or wait approximately 3 seconds until the balance returns to the weighing mode (0.0g will be displayed).



NOTE: The illustration indicates the actual sequence of the displays as they appear on the balance.

Averaging Level

Averaging level compensates for vibration or excessive air currents on the platform. During operation, the balance continually takes weight readings from the load cell. Successive readings are then digitally processed to achieve a stabilized display.

Select one of three averaging levels using the adjacent table as a guide.

NOTE: Averaging level does not affect balance accuracy.

AVERAGING LEVEL

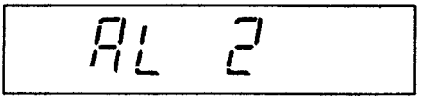
-1- Minimum processing, fastest stabilization time.

-2- Normal processing, normal stabilization time.

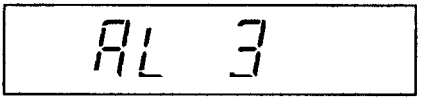
-3- Maximum processing, slowest stabilization time.

To view or change the current averaging level:

1. Press and hold ON/TARE until AL followed by the last number set is displayed, then release it.



2. To change the displayed setting, repeatedly press ON/TARE until the desired setting is displayed.



3. To accept the displayed setting, press and hold until the balance returns to zero or wait approximately 3 seconds until the balance returns to the weighing mode (0.0g will be displayed).

Parts Counting

Parts Counting is enabled only when the Parts Counting Function is selected.

In the parts counting mode, the balance calculates and displays the quantity of parts you place on the platform. Since the balance determines the quantity based on the average weight of a single part, all parts must be reasonably uniform in weight.

Parts Counting Default Setting
Parts Counting ..... Set 10

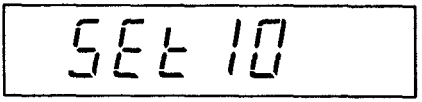
To perform parts counting, use the following procedure:

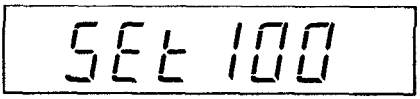
1. To use parts counting, the balance must be ON and in a weighing mode. Place the desired number of samples which are used as a reference for counting on the platform. This can be from 10 pieces to 100 pieces, with a selection of 10, 20, 30, 40, 50, 60, 80, or 100. The samples **MUST BE PLACED** on the platform first, otherwise, an error ERR 3 is displayed and the balance will not function in this mode.

2. Press and hold ON/TARE until the display indicates SET 10, then repeatedly press ON/TARE until the number in the display matches the number of pieces placed on the platform.

NOTE:

A sufficient number of parts must be placed on the platform in order for the balance to accept the data.





3. To count additional pieces, simply add pieces to the platform. The display indicates the actual number of pieces based on their sample size.

NOTE: If the balance is not turned off, the sample weight is stored in memory. You can continue to use the balance to count pieces with the same reference weight.

4. Pressing ON/TARE until Unit g is displayed returns the balance to a weighing mode.

5. When the balance is in the weighing mode and you want to return to the parts counting mode, press ON/TARE until PCS is displayed. The balance can now be used for counting based on the previous sample size settings.

CONFIGURATION MENU

The Configuration menu is used to customize the operation of the balance for your specific requirements. It contains submenus which enable you to turn features on or off, and program balance parameters. *Reset* sets all submenus to original factory default settings. *Auto Zero* sets the automatic zero threshold. *I-Face* (Interface) contains six submenus which are: *Print Mode, Baud Rate, Parity, Handshake Delay, Print Key* and *Number Only.* Each of these submenus contain parameters which can be set to establish communications with an external printer or computer.

To enter the Configuration menu, the balance **must be off.**

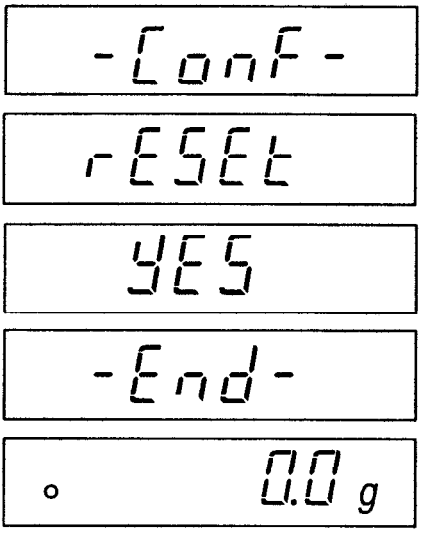
CONFIGURATION MENU FACTORY DEFAULTS	
Auto Zero	ON
Print Mode	Manual All
Baud rate	br 2400
Parity	None
Handshake Delay	PSE HS
Print Key	OFF
Numeric Data Only	OFF

Reset to Factory Defaults

This submenu enables you to reset all Configuration menu selections to the original factory default settings outlined in the adjacent table and also enables entry into the List submenu.

To reset to factory defaults:

1. Turn the balance off.
2. Press ON/TARE and hold until -CONF- is displayed, then release. The display indicates RESET.
3. To reset the balance to the default settings, press and hold ON/TARE until the display indicates YES, then release.
4. Press and hold ON/TARE until -END- is displayed. Keep pressing ON/TARE until the display returns to the weighing mode.



List

This submenu can be used to output a listing of current menu settings via the RS232 interface. When selected, all menu settings for the Configuration menu will be output either to an external printer or computer. To use this feature, your balance **must be** connected to a computer or printer.

1. Turn the balance off.

2. Press ON/TARE and hold until -CONF- is displayed, then release. The display indicates RESET.

3. Press and hold ON/TARE until the display indicates YES, then release.

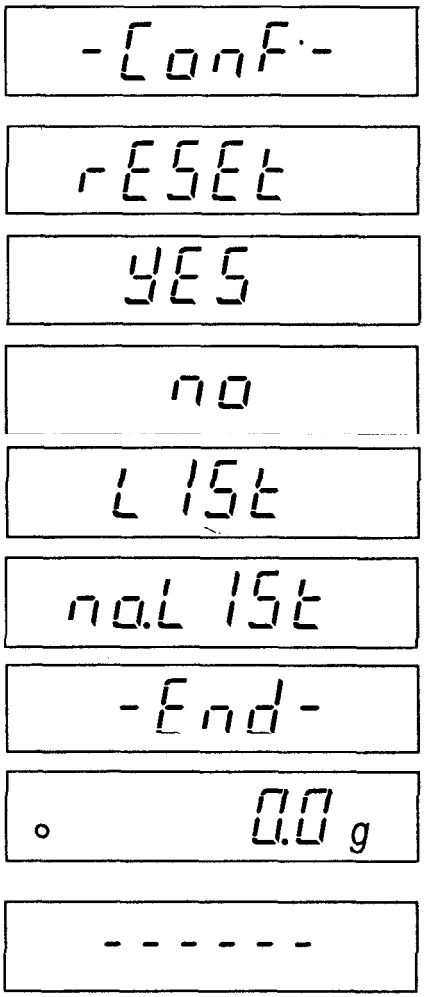
4. Briefly press ON/TARE to select NO.

5. Press and hold ON/TARE until LIST is displayed, then release.

NOTE: Briefly pressing ON/TARE will display NO LIST.

6. Press and hold ON/TARE until -END- is displayed. To accept the displayed setting, press and hold ON/TARE until the display returns to the weighing mode.

NOTE: If the display shows a series of dashes, the communication link between the balance and computer/printer is open or not set properly, if this occurs, the balance will not function. Turn the balance off and correct the problem and try again.



Auto Zero

Auto Zero minimizes the effects of temperature changes and shift on the zero reading. A preset level in divisions has been set in the balance. The balance maintains the zero display until the preset level threshold is exceeded. This submenu permits you to turn the feature ON or OFF. Auto Zero *only functions* when the display reads zero. The default setting is ON.

To turn the auto zero on or off, proceed as follows:

1. Turn the balance off.

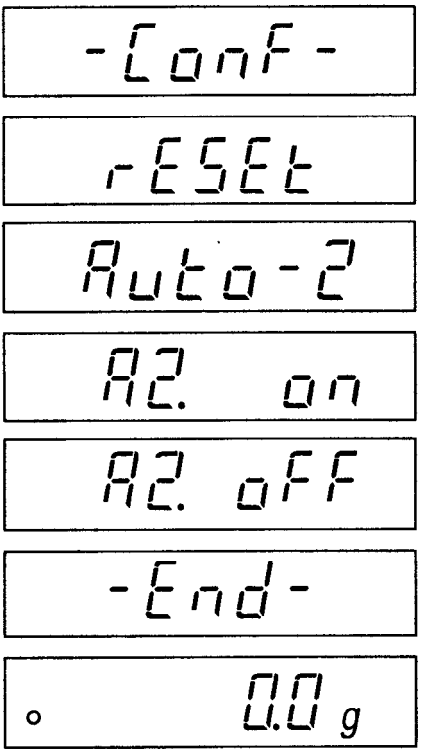
2. Press ON/TARE and hold until -CONF- is displayed, then release. The display indicates RESET.

3. Briefly press ON/TARE until the display indicates AUTO-Z.

4. Press ON/TARE until AZ. ON is displayed.

NOTE: Briefly pressing ON/TARE will display AZ. OFF.

5. Press and hold ON/TARE until -END- is displayed. To accept the displayed setting, press and hold ON/TARE until the display returns to the weighing mode.



Interface

The Interface menu contains submenus which permit the setting of: print modes, baud rates, parity, handshake delay, print key and number only data necessary for communications to an external printer or computer.

Print Mode

This submenu contains printing modes which can be set and include Manual Stable only Data, Manual Printing, Automatic Printing of Stable Data only, and Continuous Printing.

To change any of the above listed options, enter the Print Mode submenu as follows:

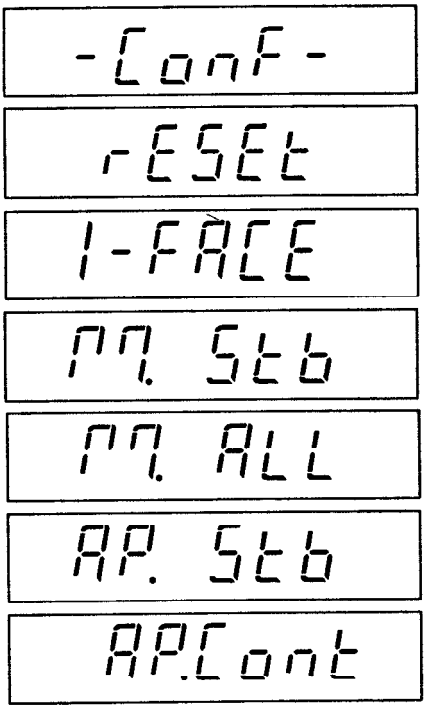
1. Turn the balance off.
2. Press ON/TARE and hold until -CONF- is displayed, then release. The display indicates RESET.
3. Briefly press ON/TARE *two times* until the display indicates I-FACE.
4. Press ON/TARE until M. STB. is displayed. This is Manual Stable Data Only.

NOTE: At this point, you can select any one of the four print modes by repeatedly pressing ON/TARE and stopping at the selected function.

5. To continue setting other interface functions, press and hold ON/TARE until the display indicates BR2400. This is the baud rate and is normally set to 2400.
6. To exit the menu, press ON/TARE until the display returns to a weighing mode.

NOTE:

When either the Manual Stable or Manual All print modes are selected, either (1), the Print Key should be turned on, or (2), the balance should be interfaced with a device which will send an RS232 "P" command back to the balance.



Baud Rate

This submenu is used to select the desired baud rate. There are eight available baud rates to choose from: 110, 150, 300, 600, 1200, 2400, 4800 and 9600. The normal default setting is 2400 baud.

To view or change the baud rate:

1. Access the Baud submenu through the Interface menu to display the current setting.

2. Repeatedly press ON/TARE to change the baud rate setting.

NOTE: At this point, you can select any one of the eight baud rates by repeatedly pressing ON/TARE and stopping at the selected function.

3. To continue setting other interface functions, press and hold ON/TARE until the display indicates P.NONE This is parity and is normally set to none.

4. To exit the menu, press ON/TARE until the display returns to a weighing mode.

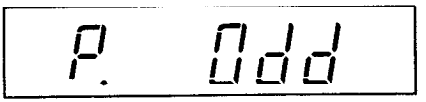
Parity

This submenu is used to select parity. Parity can be set to Odd, Even or None.

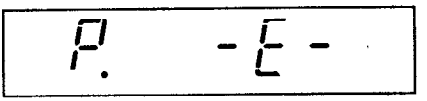
To view or change parity:

1. Access the Parity submenu through the Interface menu to display the current setting.

2. Repeately press ON/TARE to change the parity setting.



NOTE: At this point, you can select any one of the three parity settings by repeatedly pressing ON/TARE and stopping at the selected function.



3. To continue setting other interface functions, press and hold ON/TARE until the display indicates PSE.HS This is handshake delay and is normally set to PSE. HS.

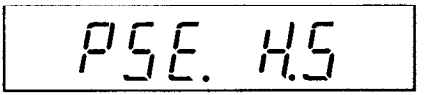
4. To exit the menu, press ON/TARE until the display returns to a weighing mode.

Handshake Delay

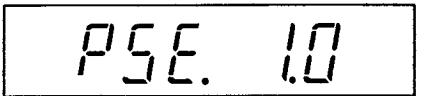
This submenu is used to select the communication handshaking parameter. There are four parameters with the default setting being PSE HS.

To view or change the handshake delay:

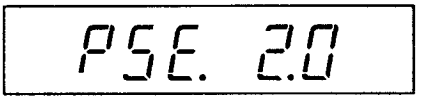
1. Access the Handshake Delay submenu through the Interface menu to display the current setting.

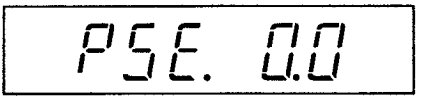


2. Repeately press ON/TARE to change the handshake delay setting.



NOTE: At this point, you can select any one of the four delays by repeatedly pressing ON/TARE and stopping at the selected function.





3. To continue setting other interface functions, press and hold ON/TARE until the display indicates PRT.OFF This is print key and is normally set to off.

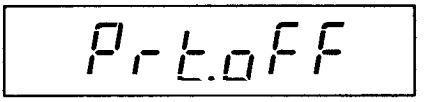
4. To exit the menu, press ON/TARE until the display returns to a weighing mode.

Print Key

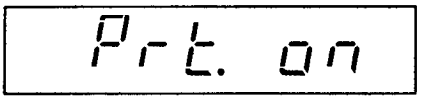
This submenu is used to select a manual printing function. When this function is set on, printing of displayed weight can be initated by pressing the ON/TARE control. Data will be transmitted to an external computer or printer when connected.

To view or change the print key:

1. Access the Print Key submenu through the Interface menu to display the current setting.



2. Repeately press ON/TARE to change the print key setting to either on or off.



3. To continue setting other interface functions, press and hold ON/TARE until the display indicates NU. OFF. This is numbers only and is normally set to off.

4. To exit the menu, press ON/TARE until the display returns to a weighing mode.

Print Numeric Data Only

*This submenu is used to select nu*meric data only, or full display for RS232 output. Set this feature ON to output numeric display data only, or OFF to output full display data as follows:

1. Access the Number Only submenu through the Interface menu to display the current setting.

2. Repeately press ON/TARE to change the number only setting to either on or off.

3. To exit the menu, press and hold ON/TARE until the display returns to a weighing mode.

End

You must use -End- to exit the Interface menu. **Changes you make in the Interface menu are only stored in memory if you use End.**

1. Access the END submenu.

2. To exit the Interface menu and store your settings, press and hold ON/TARE, Display returns to weighing mode.

RS232 INTERFACE

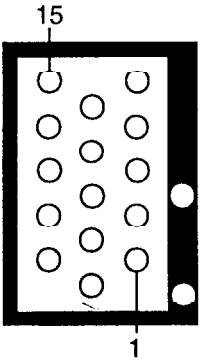
IP Series balances are equipped with a bi-directional RS232 compatible interface for communication with printers and computers. When the balance is connected directly to a printer, displayed data can be output at any time by simply pressing ON/TARE until PRINT is displayed, or by using the Auto Print feature.

Connecting the balance to a computer enables you to operate the balance from the computer, as well as receive data such as displayed weight, weighing mode, stability status, etc.

The following sections describe the hardware and software provided with the balance.

Hardware

On the rear of the balance, a 15-pin connector is provided for interfacing to other devices. The pinout and pin connections are shown in the adjacent illustration with the active pin connections shown in the adjacent table.



Pin Connections	
2	Rx data
3	Handshake (CTS)
12	Tx data
13	Ground

Output Formats

Data output can be initiated in one of three ways: 1) By pressing ON/TARE until PRINT is displayed; 2) Using the Auto Print feature; 3) Sending a print command ("P") from a computer.

The output format is illustrated in the RS232 command table which follows.

RS232 Commands

All communication is accomplished using standard ASCII format. Only the characters shown in the following table are acknowledged by the balance. Any other commands, control characters or spaces are ignored. Commands sent to the balance must be terminated with a carriage return-line line feed (CRLF). For example, a tare command should appear as shown in the adjacent diagram. Data output by the balance is always terminated with a carriage return - line feed (CRLF).

TARE COMMAND

Field:	T	CR	LF
Length:	1	1	1

RS232 COMMAND TABLE

Command Character	Description
?	Print current mode
nnnA	Set Auto Print feature to "nnn" (see table).
C	Begin span calibration
xD	Set 1 second print delay (set x = 0 for OFF, or x = 1 for ON)
xI	Set Averaging Level to "x", where x = 0 to 3 (see table).

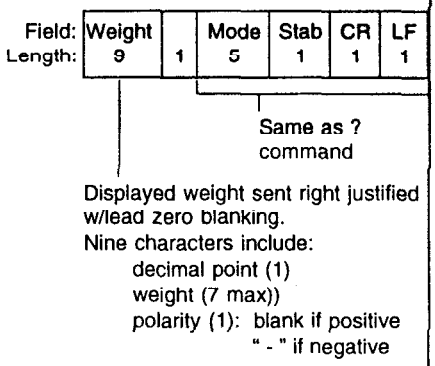
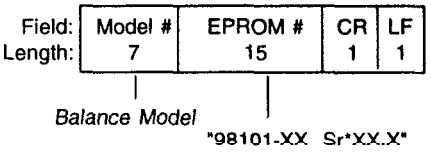
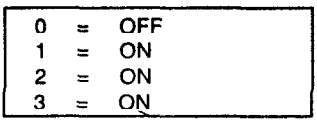
Field:	Mode	Stab	CR	LF
Length:	5	1	1	1

blank if stable
" ? " if unstable

Grams	Momme
Pennyweight	Pounds
Carats	Pounds:ounces
Avoidupois ounces	Custom unit
Troy ounces	Parts counting
Grains	Percent weighing
Taels	Error

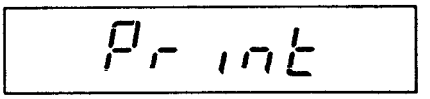
nnn = 0	Turns feature OFF
nnn = S	Output on stability
nnn = C	Output is continuous

0	=	minimum level
1	=	
2	=	
3	=	maximum level

Command Character	Description
P	Print display data When "numeric only" display data is selected for output in the RS232 menu, the Mode field is not output. 
xS	Set stable data only printing (set x = 0 for OFF, or x = 1 for ON).
T	Same effect as pressing rezero button
V	Print EPROM version 
xZ	Set Auto Zero to "x", where x = 0 to 3 (see table). 

PRINTING DATA

IP Series balances, offers a printing option. Normally, when a printer or computer is connected to the balance and all parameters are properly set, pressing ON/TARE outputs whatever is displayed on the balance.



When the print key function has been selected ON in the Interface menu, pressing and holding ON/TARE with the balance on, the display will show PRINT. The balance will then transmit the current weight value to the printer or computer. Each time ON/TARE is pressed and held until PRINT is displayed, a new output to the external device will be made.

CARE AND MAINTENANCE

To keep the balance operating properly, the housing and platform should be kept clean and free from foreign material. If necessary, a cloth dampened with a mild detergent may be used. Keep calibration weights in a safe dry place.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE(S)	REMEDY
Unit will not turn on.	Power adapter not plugged in or not properly connected to balance.	Check power adapter connections.
Incorrect weight reading.	Balance was not re-zeroed before weighing. Balance not properly calibrated.	Press ON/TARE with no weight on the platform, then weigh item. Recalibrate correctly.
Stability Indicator will not turn OFF.	Environment may be too harsh (drafts, vibration, etc.)	Rectify environmental conditions. If this is not possible, increase Averaging Level setting.
Random segments displayed or display locks up.	Microprocessor lock-up.	Turn balance off, then turn on again. If condition persists, unit must be serviced.
Display flashes zeroes		Contact Ohaus.

Error Codes

L - - - - J	Underload: Platform support or platform not on balance.
r - - - - ٦	Overload: Load on platform exceeds the capacity of the balance.
Err 1	Calibration not completed. Occurs if an incorrect calibration weight is used or balance is not stable at -CAL-.
Err2	Taring in an overload or underload condition.
Err3	Parts counting error.
Error	This indicates an error condition detected by the internal monitoring system on automatic self-check. Temperature may be outside the permitted range. Switch balance OFF then ON again. If error persists, balance must be serviced.

SERVICE INFORMATION

If the Troubleshooting section does not resolve or describe your problem, you will need to contact an authorized Ohaus Service Agent. For Service assistance in the United States, please call Ohaus Corporation toll-free at (800) 526-0659, an Ohaus Product Service Specialist will be available to help you.

SPECIFICATIONS

MODEL	IP12KS	IP15KS
Capacity (g)	12,000	15,000
Readability (g)	0.1	
Weighing mode(s)	Grams, parts counting	
Repeatability (Std. dev.) (g)	0.1	
Linearity (g)	±0.3	
Tare range	Full capacity by subtraction	
Stabilization time	3 seconds	
Sensitivity drift (10° - 30°C)	8 ppm / °C	
Operating temperature	32° to 104 °F / 0°to 40 °C	
Calibration	Auto-calibration	
Power requirements	AC Adapter - 110, 120, 220, 240 V ac, 50/60 Hz	
Display (in/cm)	Vacuum fluorescent (0.6/1.5 high)	
Platform size (in/cm)	12.8 x 9.1 / 32.2 x 23.2	
Dimensions (W x H x D) (in/cm)	12.8 x 3.4 x 12.6 / 32.5 x 8.5 x 31	
Net weight (lb/kg)	15/6.8	
Shipping weight (lb/kg)	20.7/9.4	

PARTS INFORMATION

If you require replacement parts or would like to purchase accessories, please call Ohaus Corporation toll-free at (800) 526-0659, an Ohaus Product Parts Specialist will be available to help you.

REPLACEMENT PARTS

	OHAUS Part No.
AC Adapters:	
110/120 V ac US	90924-02
220/240 V ac Europe	90924-03
220/240 V ac UK	90924-04
220/240 V ac Australia	90924-05
Platform	9774-06
Weigh Below Hook	77605-01

ACCESSORIES

Tower Mount Kit	77610-01
RS232 Cable Kit	77609-01
Calibration Mass - ASTM Class 1 Tolerance 4000g	49046-11

LIMITED WARRANTY

Ohaus products are warranted against defects in materials and workmanship from the date of delivery through the duration of the warranty period. During the warranty period Ohaus will repair, or, at its option, replace any component(s) that proves to be defective at no charge, provided that the product is returned, freight prepaid, to Ohaus.

This warranty does not apply if the product has been damaged by accident or misuse, exposed to radioactive or corrosive materials, has foreign material penetrating to the inside of the product, or as a result of service or modification by other than Ohaus. The warranty period shall begin at the date of installation, or three months from shipment to the buyer, whichever occurs first. A properly completed Warranty Registration Card must be received by Ohaus within 30 days from date of purchase to initiate coverage under the warranty. No other express or implied warranty is given by Ohaus Corporation. Ohaus Corporation shall not be liable for any consequential damages.

As warranty legislation differs from state to state and country to country, please contact Ohaus or your local Ohaus dealer for further details.

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