

OPERATING MANUAL

21 CFR TOUCH SCREEN MICROBALANCE

1. Introduction.

The models of the **CM Series** are weighing instruments of special and high accuracy designed for the measurement of mass, covering a range from 60 kg to 500 kg.

CM Series meet the highest requirements on the accuracy and reliability of weighing results through the following features:

- Filtering for unfavorable ambient conditions, such as vibration, drafts, etc.
- Stable and repeatable weighing results
- Excellent readability under any lighting conditions
- Rugged, durable weighing system

These weighing instruments speed up your simple routine applications through following features:

- Extremely fast response times
- Built-in applications
 - Weighing
 - Percent weighing
 - Differential weighing
 - Piece counting
 - Animal weighing
 - Custom Unit
 - Limit check
 - · Peak weighing
 - Statistics
 - Aduit Trail Report

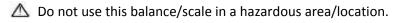
1.1 Warnings and Safety precautions

The balance has been constructed in accordance with the OIML as well as international regulations and standards for operation of electrical equipment, electromagnetic compatibility, and stipulated safety requirements. Improper use or handling, however, can result in damage and/or injury.

To prevent damage to the equipment, please read these operating instructions carefully before using your balance.

Keep these instructions in a safe place.

Follow the instructions below to ensure safe and trouble-free operation of your balance.



If you use electrical equipment in installations and under ambient conditions requiring higher safety standards, you must comply with the provisions as specified in the applicable regulations for installation in your country.

△ Make sure that the voltage rating printed on the AC adapter is identical to your local line voltage.

- The only way to switch the power off completely is to disconnect the AC adapter.
- Connect only Aczet accessories and options, as these are optimally designed for use with your Aczet balances.
- Note on Installation:

The operator shall be responsible for any modifications to the equipment and for any connections of cables or equipment not supplied by us and must check and, if necessary, correct these modifications and connections. On request, Aczet will provide information on the minimum operating specifications

- Protect the DC adapter and the weighing instrument from contact with liquids.
- When cleaning your balance, make sure that no liquid enters the balance housing; use only a slightly moistened cloth to clean the balance.
- Do not open the balance/scale housing. If the seal is broken, this will result in forfeiture of all claims under the manufacturer's warranty.
- If you have any problems with your balance contact your local Aczet Office, dealer or service center

1.2 Getting Started

Storage and Shipping Conditions Do not expose the balance/scale to extreme temperatures, blows, shocks, vibration or moisture. Unpacking the Equipment

After unpacking the balance/scale, check it immediately for any visible damage as a result of rough handling during shipment if you see any sign of damage: Contact your local Aczet Office, dealer or service center.

It is a good idea to save the box and all parts of the packaging until you have successfully installed your balance. Only the original packaging provides the best protection for shipment. Before packing your balance, unplug all connected cables to prevent damage.

Cautionary notes

Micro balances may not be operated in hazardous areas. Before attachment of the DC adapter, check whether the imprinted voltage value matches the local supply voltage.

If it does not, contact your local ACZET dealers. Micro balance may only be used indoor in dry environment.

Accessories supplied

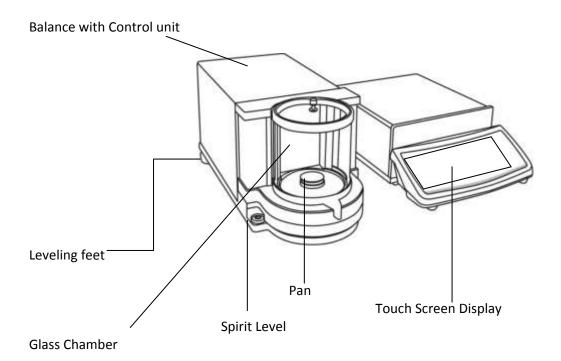
The equipment supplied includes the following:

- 1. Balance with control unit and Touch screen indicator
- 2. Touch screen Module Display with 2 nos serial ports for statistical printer and weighing indicator
- 3. Leveling feet
- 4. Operating Manual
- 5. DC adapter- 12vdc, 2 amp and 13Vdc, 1.5 amp
- 6. Base Plate S.S. (CM)

1.3 Layout:

Model: CM series

- 1. Balance with control unit.
- 2. Touch screen Display
- 3. Glass chamber
- 4. Weighing pan
- 5. Leveling feet
- 6. Spirit Level



2. Setting up the Balance.

2.1 Location

The optimum location

The correct location makes an important contribution to the accuracy of the weighing results of high-resolution analytical and precision balances. Hence ensure a stable, vibration-free position as horizontal as possible.

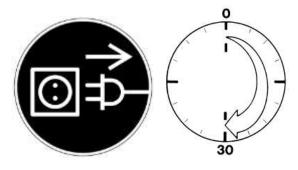
Avoid

- Direct sunlight
- Excessive temperature fluctuations,
- Drafts (Power ----- Air Conditioning System, Fans can also cause drafts)
 The best position is an a stable bench in a corner protected against drafts as far Possible from doors, windows, radiators or the ventilation slots of air conditioners.

2.2 Warm Up

Warm-up Time

To deliver exact results, balance must warm up to operating temperature for as lasted below before the first weighing operation is carried out. Using Verified Balances as Legal Measuring Instruments in the Micro balance must warm up for at least 24 hours after initial connection to DC power.

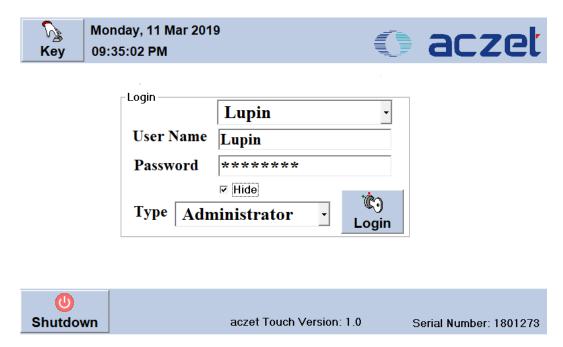


3 Operating procedure:

3.1 Power ON

Connect DC Adaptors of Touch screen module and Micro balance power plug, then switch ON the power

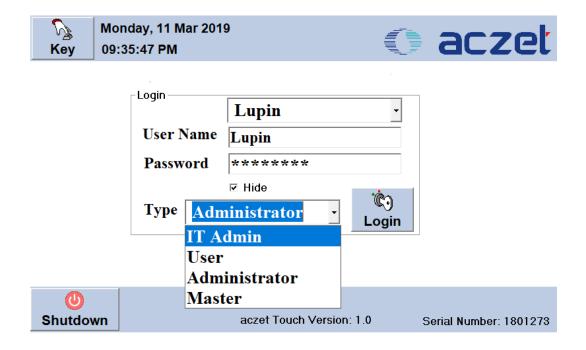
- Screen we show no signal for few seconds and the display will show as below:
- It will display version number for software



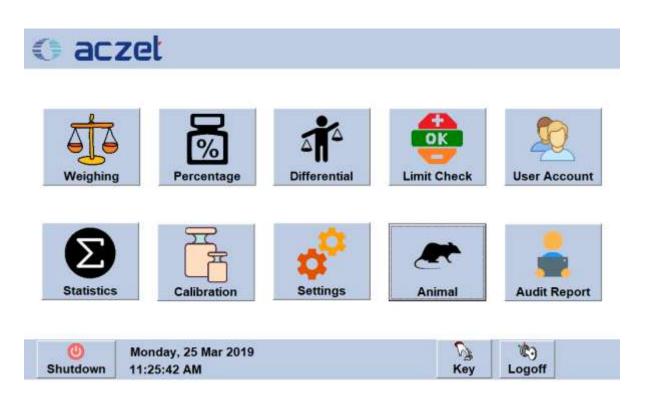
3.2 Login Menu

Following login type are available:

- i) <u>Administrator-</u> Administrator login has complete access of weigh application, create user Id , change password, Backup & Restore etc . Expect master login.
 - Can create password
- ii) <u>IT Admin-</u> IT Administrator login has complete access of create user Id , change password ,Backup & Restore . Expect master login.
- iii) <u>User L</u>ogin has complete access of weigh application, calibration check, View & print Audit trail report. Any number of users can be created.
- iv) <u>Master-</u> Master Login is factory mode for parameter setting. To be operated by only manufacturer.



To Login select the Type and user Name, enter password and click Login. After Sucessful Login, below screen appears



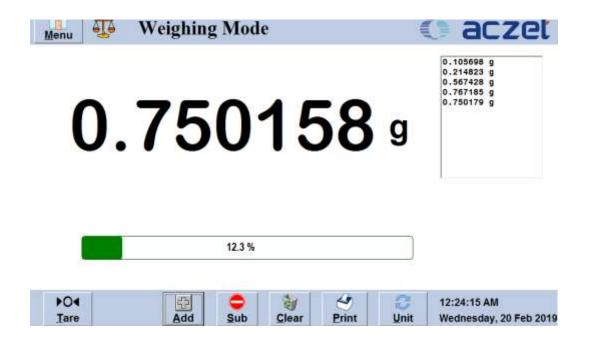
4 WORKING MODES – GENERAL INFORMATION

Weighing	Weighing Means of operation: weight of a load is determined through an indirect measurement. A balance measures gravitational force which attracts the load. An obtained result is processed to a digital format and displayed in a form of measurement result.
% Percentage	Percent Weighing Means of operation: control of percent ratio of a sample in relation to a standard (reference). Obtained data provides percent ratio on how test sample differs from the accepted standard (reference). Display shows Percentage weight in %
Differential	Differential Weighing Means of operation: is one of Weighing application functions. It allows analysis of sample weight variation occurring in the course of a technological process. Display shows Differential weight in grams.
OK Limit Check	Limit Check Means of operation: control of sample mass with applied thresholds. A user should specify the value of min threshold <lo> and max threshold <hi>. Display shows graph in 3 colors yellow for LOW, Green for accept, Red for High</hi></lo>
Statistics	Statistics Means of operation: carried out measurements are used to calculate statistical data, such as Min, Max, deviation, etc.
	Calibration TO perform Calibration - Internal and External calibration .
Animal	Animal Weighing Means of operation: Mass measurement takes place with application of filters dampening animal moves on a weighing pan, thus enabling obtaining a correct measurement Threshold weight result.
Audit Report	Audit report Can View /Print audit reports Can filter User Type & record specify period
User Account	User Account Can View, Add user , Modify password and disable user.
Settings	Setting Factory setting parameter. To be operated by manufacturer or service engineer
Logoff	Log off Switches back to Login menu screen

4.1 WEIGHING



icon for weighing mode. Following display appears on screen



Purpose

The basic weighing function is always accessible and can be used alone or in combination with an application program.

Features

- Tare: To clear the value to make display zero.
- ADD: To add the weights one by one
- SUB: To subtract the weight reading one by one
- Clear: To clear the added weights. Once the Clear button is press all memorized data will be cleared.
- Print: to print current weighment.
- Unit: to toggle unit.

Weighing

- Place weighing sample on the weighing platform/pan.
- Read the result.
- % Bar will glow according to weight kept on the PAN.



Tare

- Place empty container on the balance.
- The weight is displayed.
- Press <Tare> key, the balance displays zero
- Add weighing sample to container, the net weight is displayed.
- If the container is removed from the balance, the tare weight will be shown as negative value.



In case if stability is not achieved & user presses stability is achieved.

<TARE> key, display will shows "0.000000 g" until

"Display then shows "0.000 kg"



Switching of weight units

Weighing Scale can display weight values in different weight units. The **factory setting** for (g , mg , μ g),

4.2 CALIBRATION

Calibration is one of the primary processes used to maintain instrument accuracy. Calibration is the process of configuring an instrument to provide a result for a sample within an acceptable range. Eliminating or minimizing factors that cause inaccurate measurements is a fundamental aspect of instrumentation design.

To obtain weighing results, the balance must be matched to the acceleration due to gravity at its location.

Calibration is necessary

- Before the balance is used for the first time.
- At regular intervals during weighing operation.
- After a change in location.

4.2.1 Procedure for Internal Auto calibration:

To obtain accurate results, the balance must be connected to the power supply and allowed to warm up to the operating temperature as described Ensure that the weighing pan is unloaded and close the doors of the draft shield (if used). Balance should be Zero before calibration.

Press <Calibration> key on Main menu display, below screen will display:

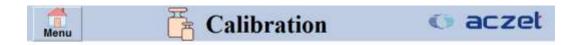


 0.000081_{g}



For Internal Auto Calibration, press icon "Internal Cal"

- <Internal Cal> Icon glows green color.
- Display will shows "Calibration initiated"



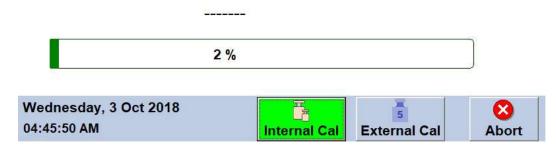
Calibration Initiated



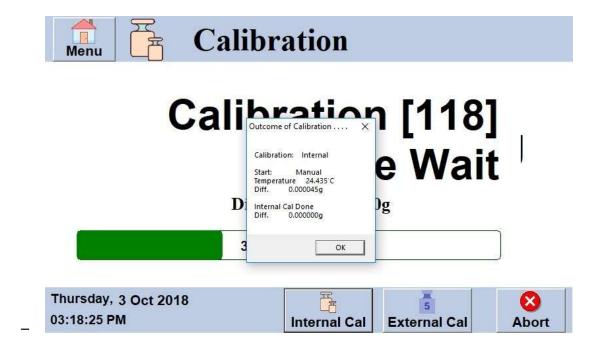
Calibration in process..



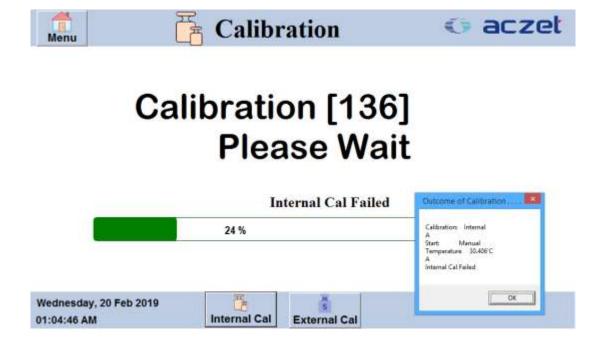
Calibration [176] Please Wait



Once the calibration is done display will show "CAL DONE", then press "OK". The balance will go into the weighing mode and ready for operation.



If the calibration process is terminated because of any technical issue, the display will show "Internal Cal Failed" Press OK on screen and the balance will again into the weighing mode.

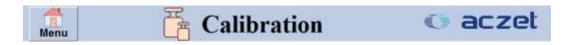


Repeat above procedure again to re-calibrate.

4.2.2. Procedure for External calibration:

For External Calibration by weight, press icon "External Cal"

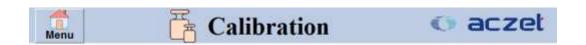
- <External Cal> Icon glows green color.
- Display will shows "External Calibration initiated"



External Calibration Initiated



Calibration in process..

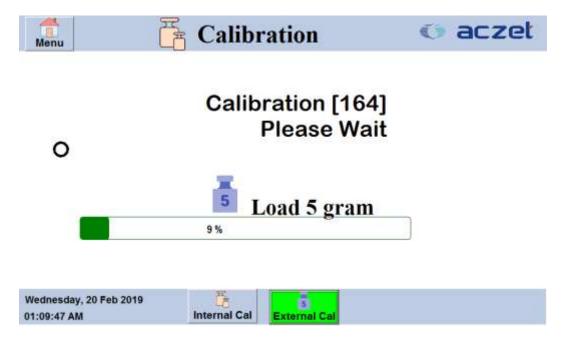


Calibration [150] Please Wait



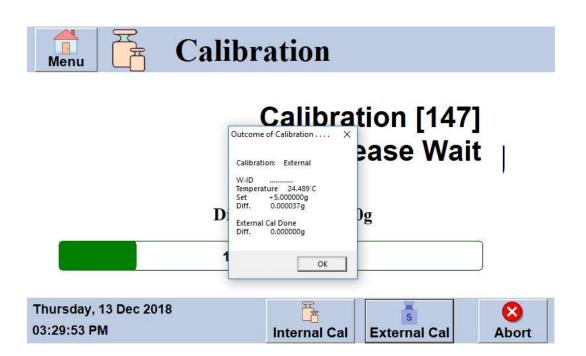


After few seconds display show "Load 5 gram" as below

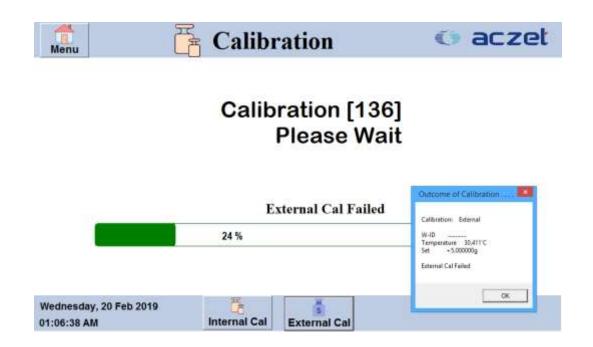


Now put standard weight of **5 gram** on weighing pan , Balance will perform external calibration automatically.

Once the calibration is done display will show "CAL DONE", then press " \mathbf{OK} ". The balance will go into the weighing mode and ready for operation



If the calibration process is terminated because of any technical issue, the display will show "External Cal Failed



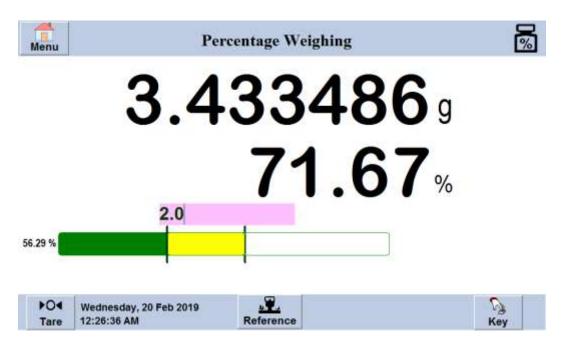
Press **OK key** and Repeat above procedure again to re-calibrate.

4.3 PERCENT WEIGHING

Percent weighing>is a working mode for comparison of a measured sample with the reference mass. The result is expressed in [%].

Procedure for activation of Percent Weighing mode

Select < Percent > mode, home screen featuring percent weighing pictogram in a top bar is automatically displayed.



PROCEDURE 1 – determining reference mass manually

- Press <KEY> button. On-screen Internal keyboard will display
- Using an on-screen keyboard of a displayed window, enter reference mass value and press < Reference > button for confirmation.

Mass of all weighed products is compared to reference mass the weight difference is displayed in [%].

PROCEDURE 2 – accepting currently loaded mass as reference mass

- Put the sample on a weighing pan and press <Reference >Icon
- On measurement result stabilization, press < Determine reference mass (set as 100%)> button, dialog bar with prompts is displayed at the bottom, follow the prompts. Load the part to be weighed and upon measurement stabilization press button for confirmation,
- •100.000% indication is displayed, loaded part weight is accepted as a reference mass, and it is automatically recorded and displayed in reference mass field.
- Remove the sample form the weighing pan.
- All samples weighed afterwards are compared with the reference mass, and the display indicates the difference, expressed in [%], for each weighed sample in relation to the reference mass.

4.4 DIFFERENTIAL WEIGHING



PROCEDURE 1 – determining reference mass manually

- Press < KEY > button. On-screen Internal keyboard will display
- Using an on-screen keyboard of a displayed window, enter reference mass value and press <> button for confirmation.

Mass of all weighed products is compared to reference mass the weight difference is displayed in [%].

PROCEDURE 2 – accepting currently loaded mass as reference mass

- Put the sample on a weighing pan.
- On measurement result stabilization, press <Reference > button, dialog bar with prompts is displayed at the bottom, follow the prompts. Load the part to be weighed and upon measurement stabilization press button for confirmation,
- •Reference indication is displayed, loaded part weight is accepted as a reference mass, and it is automatically recorded and displayed in reference mass field.
- Remove the sample form the weighing pan.
- All samples weighed afterwards are compared with the reference mass, and the display indicates the difference, expressed in [gm.], for each weighed sample in relation to the reference mass.

4.5 LIMIT CHECK

This feature is used to check whether a sample corresponds to a preset target or is with a specific Tolerance range.

The check weighing procedure will always be carried out in unit 'g'.

- •Set the Lower and Higher limit weight as required.
- Press < KEY > button. On-screen Internal keyboard will display
- Using an on-screen keyboard of a displayed window, enter Low value and High value .

Now place the sample on the weighing pan, display will show weight of the sample and percentage with color On bar







4.6 Animal weighing

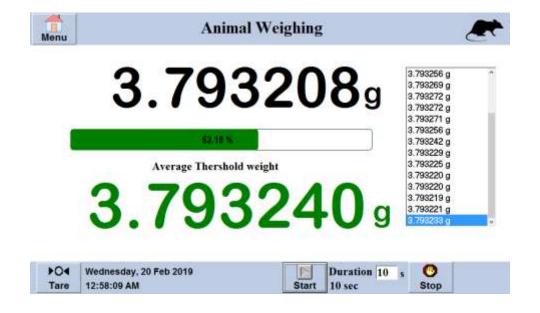
Any type of movement can prevent a scale from registering a stable weight. That's why weighing scale manufacturers have developed specialist weighing equipment that is well-suited for weighing all types of animals /livestock cattle and liquid etc. For the most accurate results, it's important to use a weighing scale with an animal/dynamic weighing function. This means the scale has the ability to provide an average Threshold weight based on the force exerted by the animal or liquid over an extended period of time. Once the scale completes the internal calculation, it displays an Average Threshold weight.

PROCEDURE

- Press the <Animal > key on main menu on the screen,
- Put the animal on weighing pan, then Press Start key animal weighing will start as shown in below figures
- Default time for animal weighing is set to 10 seconds.

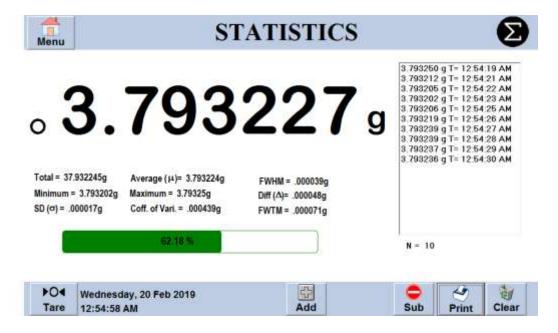


 Once it is completed the above reading will show you the normal weighing reading and the bellow reading will freeze animal average Threshold weight reading.



4.7 STATISTICS

Press Statistic Icon on main menu, below screen will appear.



PROCEDURE

- Place sample on the weighing Pan.
- Press <Add > key to record the sample weight. Display will show weight of first sample in right corner
 of the screen .
- Similarly add number of samples you desire to know statistics .Display will result as Total weight, Average weight, Min. weight, maximum weight etc.
- Press**<Sub>** key to remove the recorded weight reading.
- To Print Statistics report, **press <Print >** icon.
- Clear button to clear the recorded weight.

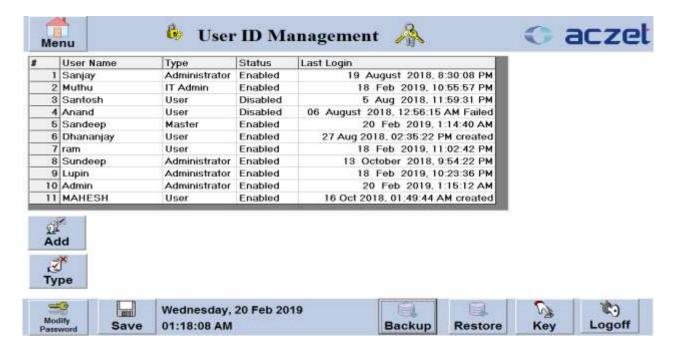
To return back to main menu, press < Menu > icon.

4.8 USER ACCOUNT



icon, following display screen appears on screen.

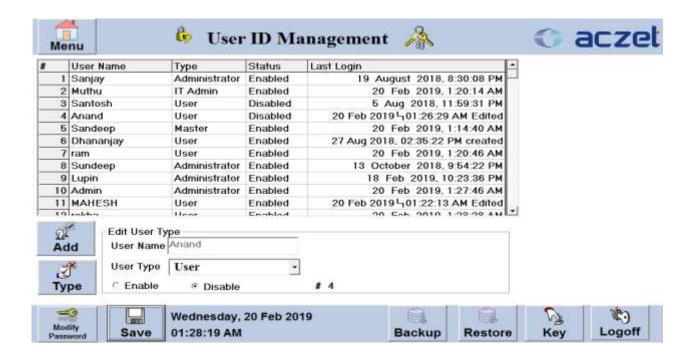
These function you can View, Add user, Modify password and disable user.



Press <Type>

This function is used to select User type.

Then select User name to Enable or Disable the User ID

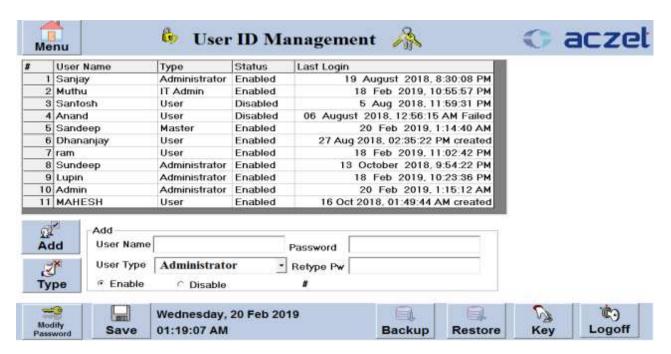


Press < Modify Password>

These function is used to modify password

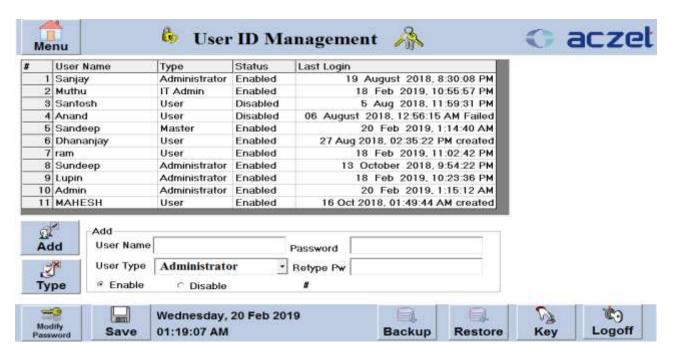
First Select Type and then User Name, then enter Password and retype password.

After entry, press<SAVE> key

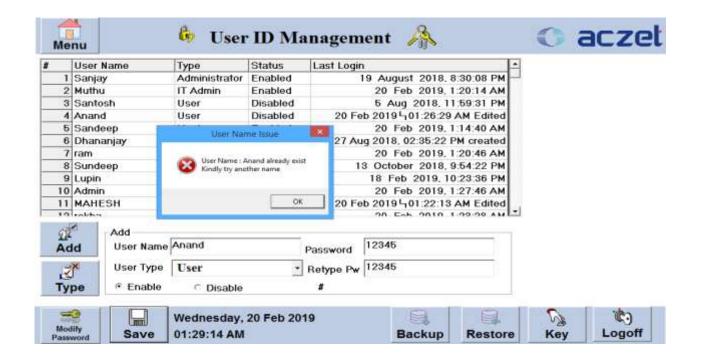


To ADD User Press <ADD>

These function is used to Add user
First Select Type and then User Name , then enter Password and retype password.
After entry , press<SAVE> key



Note: Duplicate User name cannot be craeted. Refer below figure.

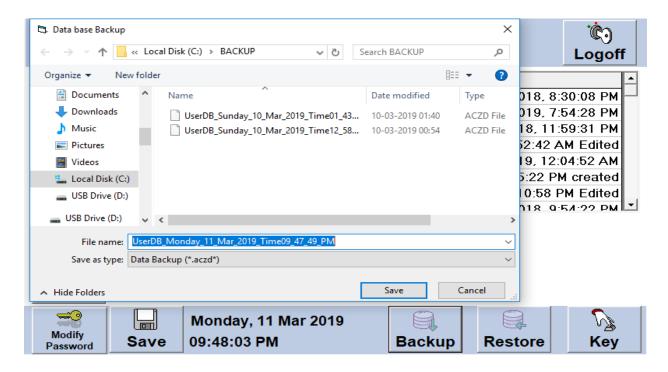


To BACKUP AND RESTORE User Data

Press BACKUP icon to take Back up for user Data, below screen will appear.

Press SAVE button to save the backup data.

These Data will be stored as and in C:/BACKUP/UserDB_date/time.aczd All Data stored will be in Encrypt format type.



After saving the backup, below screen appears

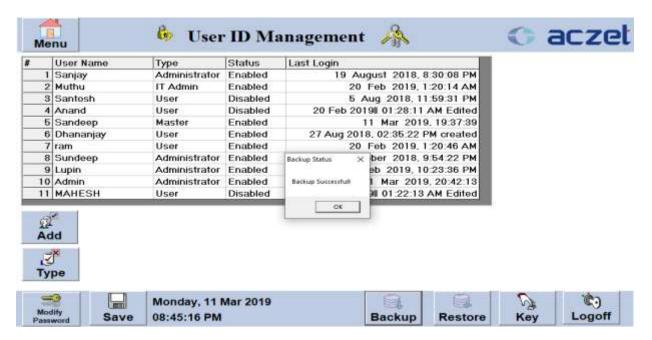
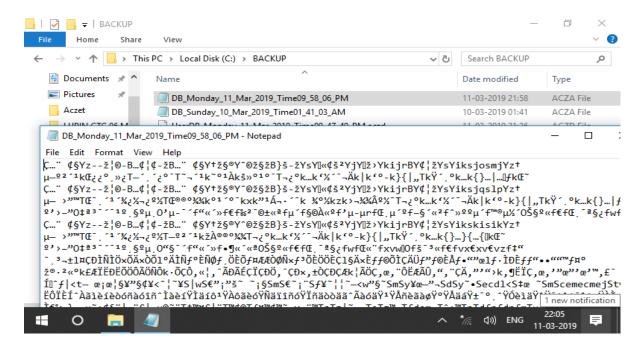


Image of Encrypted data file.

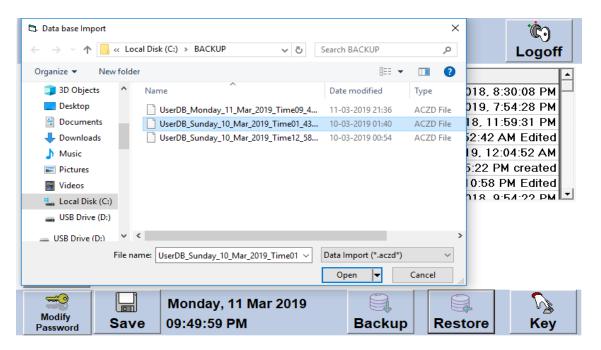


To RESTORE THE BACKUP DATA

Press RESTORE icon to RESTORE user Data, below screen will appear.

Press **Open** button to Restore the backup data.

These Data will be Restored in Current working mode.

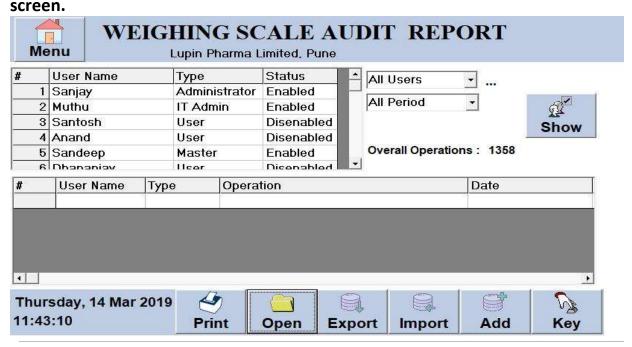


4.9 AUDIT REPORT

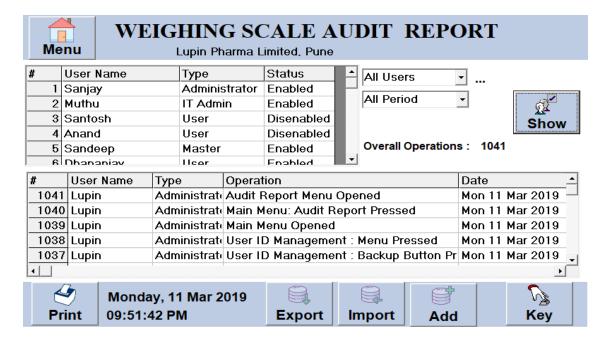


Press Audit Report

icon for peak hold mode, following display screen appears on

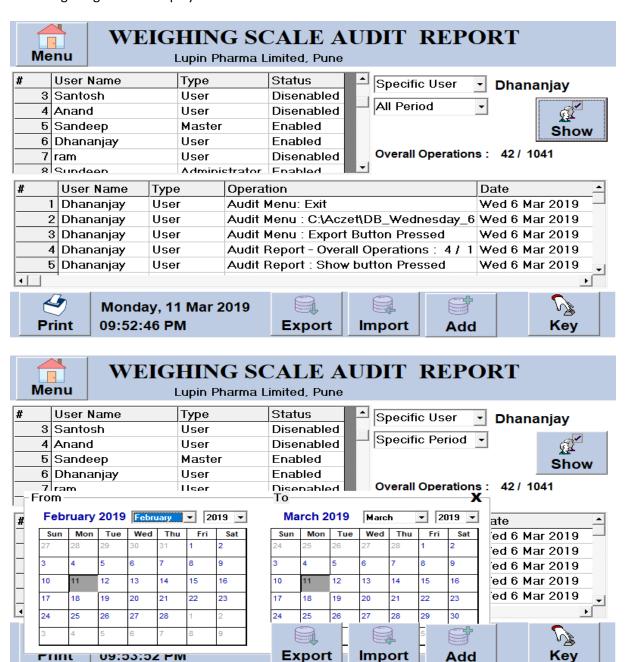


a) To view /print by "User and All Period ", select user name and press <SHOW > key. Following image will be display.



b) To view /print by **User and specific date**, select user name, specify period start date and end date and press **<SHOW** > key.

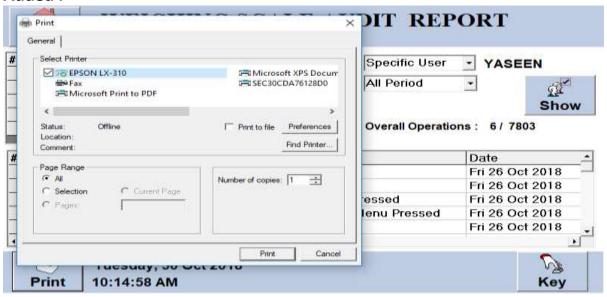
Following image will be display.



To PRINT Aduit report

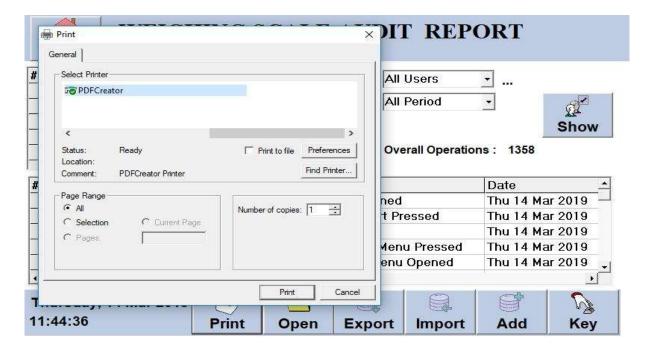
Press <Print> key, below screen appears. Select printer and print the report.

Note: First system should be attached to the Printer and Printer name to be Added.

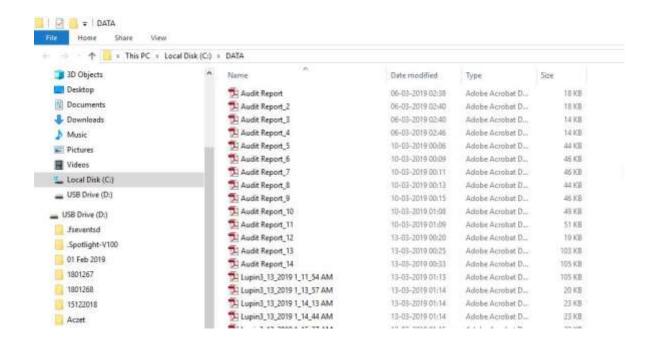


To SAVE Aduit report

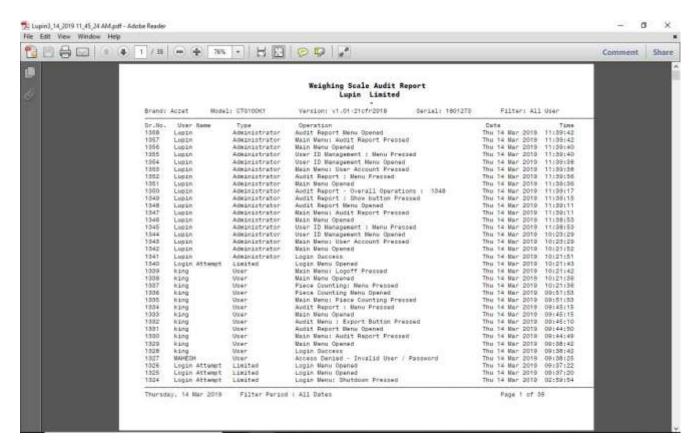
Press < Print > key, below screen appears.



ALL AUDIT DATA WILL BE SAVED IN C:/DATA



Press OPEN icon to view Audit trail Report

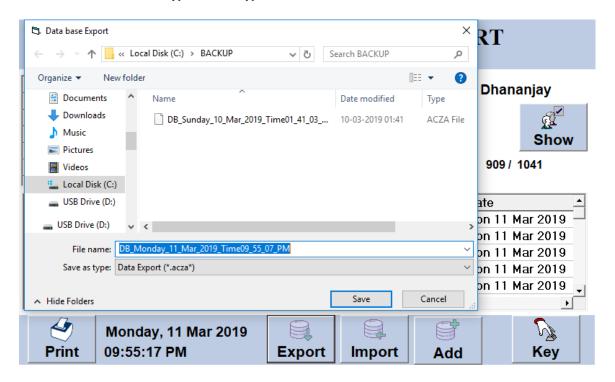


To BACKUP AND RESTORE Audit Trail Data

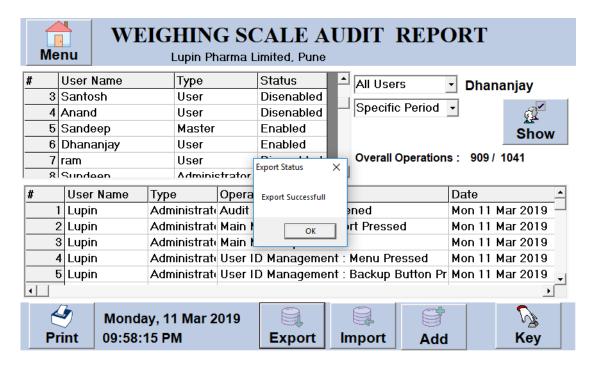
Press BACKUP icon to take Back up for user Data, below screen will appear.

Press SAVE button to save the backup data.

These Data will be stored as and in C:/BACKUP/DB_date/time.acza All Data stored will be in Encrypt format type.



After saving the backup, below screen appears

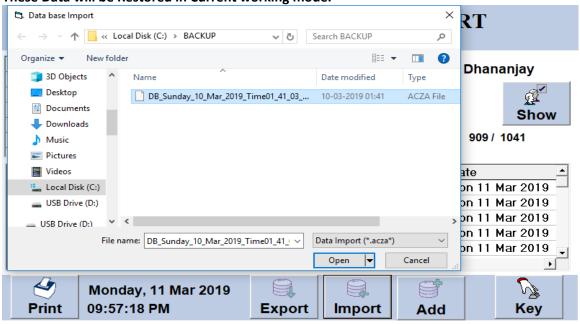


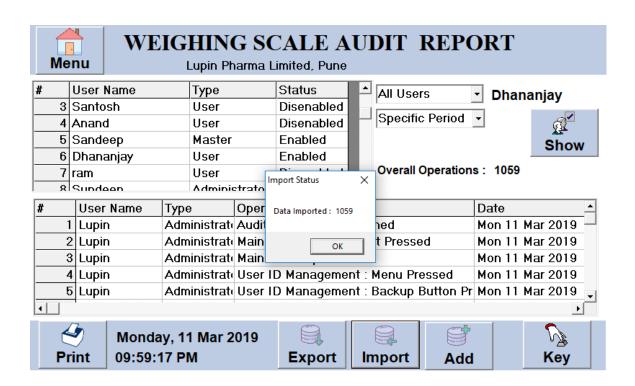
To RESTORE THE Audit Trail Data

Press RESTORE icon to RESTORE user Data, below screen will appear.

Press **Open** button to Restore the backup data.

These Data will be Restored in Current working mode.







Shutdown

- Shutdown key is used to power OFF the machine and this key is present only on Main menu screen of the balance.
- Press this key to switch **OFF** the balance.
- Once the balance is switched **OFF** with the screen, Now **OFF** the main power Supply and Disconnect the Adaptors from the balance and Display.
- Turn OFF the main power Supply and Disconnect the Adaptors .
- Turn OFF the weighing scale and Turn OFF the Mains supply.

Note: 1.DONOT switch OFF the micro balance direct from power source.

- 2.DONOT overload the balance above rated capacity.
- 3. Always keep balance in hard and level surface.
- 4. Avoid direct wind flow or Air flow on the balance.

LIMITED WARRANTY

ACZET 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 Aczet will repair, or, at its option, replace any components that proves to be defective at no charge, provided that the product is returned, freight prepaid, to ACZET.

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 ACZET. 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 Aczet Pvt. Ltd.

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

ACZET service center will repair the product free of charge subject to terms & condition mentioned below.

TERMS & CONDITION

- 1.It covers only Check weigher purchased from authorized channel and does not covers accessories like conveyer belt, Adaptor, tower lamp etc
- 2.It does not cover the product of which model and serial number has been altered, removed or defaced and for is open by unauthorized person and found void sticker has been tampered.
- This warranty is non-transferable and applicable only to first end user purchasing the product from authorized dealer.
- 4. For repair based on this warranty you need to hand over this product or send this product to address mentioned in warranty card in original packing, enclosing copy of this warranty card.
- 5.Aczet Pvt. Ltd. shall not be liable for any consequential damages.

WARRANTY REGISTRATION



ACZET PVT.LTD. E2, Plot No. 15, WICEL Estate, Opp. Seepz Gate No. 1, Andheri (E), Mumbai 400 093 E-mail: service@aczet.com

om 13 7700 43 7800
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nature / Date