LW MEASUREMENTS, LLC

Professional Weighing Equipment

MCT SERIES intelligent weighing scale

MID COUNTING SCALE
WITH CHECK-WEIGHING FUNCTION

Operation Manual

Table of Contents

Declaration of Conformity

Declaration of conformity for apparatus with CE mark

We hereby declare that the product to which this declaration refers conforms to the following standards.

Electronic scale: MCT Mid Counting Scales

Imperial version	Metric version
MCT-3	MCT-1500
MCT-7	MCT-3000
MCT-16	MCT-7500
MCT-33	MCT-15000
MCT-66	MCT-30000

Mark applied	EU Directive	Standards
CE	2004/108/EC	EN 61326-1: 2006

Signature:

Boon Lim, R & D Manager

Date: 06. 28. 2016

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Introduction

What you should know about these Operating Instructions:

Tree® Professional Weighing Equipment products are simple to operate.

Nevertheless, you should read through these operating instructions in their entirety, so that you can make optimum use of the full potential and the diverse possibilities of the weighing scale in your daily work.

These operating instructions contain guidance in the form of pictograms and keyboard diagrams, which should help you in finding the required information:

For the labelling of potential hazards and advice, please see Safety below.

Safety

Representations & Symbols

Important instructions, which involve safety, are highlighted with the appropriate mark:

⚠ DANGER

Safety recommendations

When using the weighing equipment in surroundings with increased safety requirements, the corresponding regulations must be observed.

The weighing scale may only be used with the power adapter supplied.
Before connecting the power adapter to the scale, the user must ensure that the operating voltage stated on the power adapter is compliant with the mains voltage.
If not, please contact Customer Service at the address above.

If the power adapter or its cable is damaged, the weighing scale must immediately be disconnected from the electricity supply (pull out the power adapter).

If there should be any reason to believe that it is no longer safe to operate the scale, it should be immediately unplugged from the electricity supply (pull out power adapter) and secured against inadvertent operation.

In carrying out maintenance work, it is essential to follow the recommendations set out in maintenance and servicing.

The weighing scale must not be operated in an area subject to explosion risks.

Care must be taken when weighing liquids to ensure that no liquid is spilled into the inside of the scale or into connections on the rear of the equipment or the power adapter. If liquid is spilled on the scale, it must immediately be unplugged from the main electricity supply (pull out power adapter).

The weighing scale may be operated after it has first been inspected by a service technician.

These operating instructions must be read by each user and should be easily accessible at the workplace at all times.

Weight Scale

The weighing scale consist of certain parts

- Weighing scale body (1)
- The scale-pan (2)
- The adapter (3)
- Operation manual

Figure 2.1 Your weighing scale

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Functions

The MCT Series are high-quality electronic precision weighing scales designed to function as counting scales and check-weights with the following specifications.

Imperial weight unit version

Model number	Capacity	Division	Weighing pan Size
MCT-3	3 lb	0.0001 lb	185 x 255mm
MCT-7	7 lb	0.0002 lb	185 x 255mm
MCT-16	16 lb	0.0005 lb	185 x 255mm
MCT-33	33 lb	0.001 lb	185 x 255mm
MCT-66	66 lb	0.002 lb	185 x 255mm
Package (Standard carton)	27.5×19×21(cm^3)		
Package (Master carton)	4 Units in one box: 64.5×38×36(cm^3)		
Operating Temperature	0-40℃(32-104℉)		
Power source	Rechargeable batteries or AC/DC Adapter 10V/500mA		

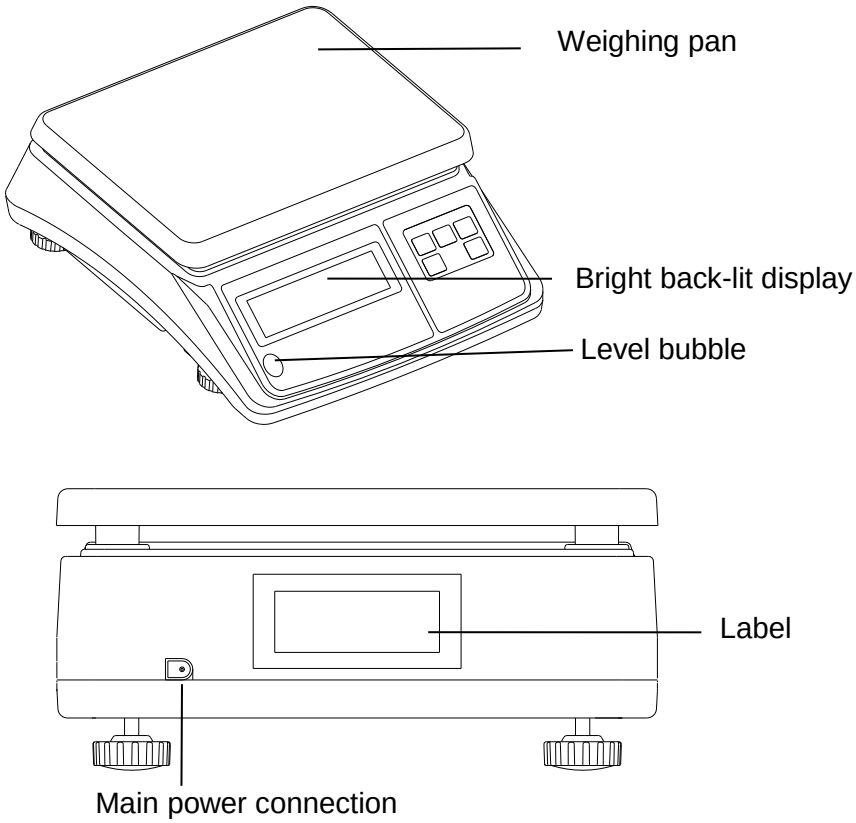
Metric weight unit version

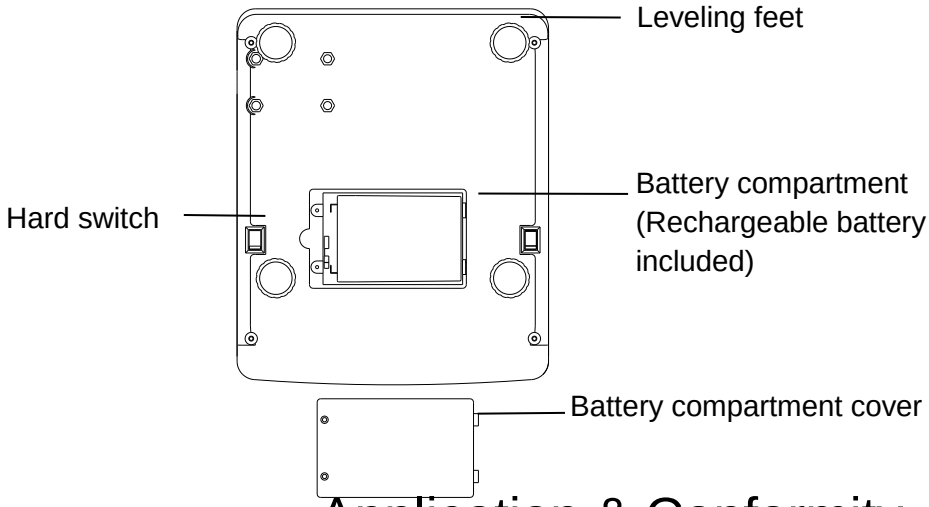
Model number	Capacity	Division	Weighing pan Size
MCT-1500	1500 g	0.05 g	185 x 255mm
MCT-3000	3000 g	0.1 g	185 x 255mm
MCT-7500	7500 g	0.2 g	185 x 255mm
MCT-15k	15 kg	0.0005 kg	185 x 255mm
MCT-30k	30 kg	0.001 kg	185 x 255mm
Package (Standard carton)	27.5×19×21(cm^3)		
Package (Master carton)	4 Units in one box: 64.5×38×36(cm^3)		
Operating Temperature	0-40℃(32-104℉)		
Power source	Rechargeable batteries or AC/DC Adapter 10V/500mA		

FEATURES

- Auto zero tracking
- Intelligent applications: weight unit conversion, parts counting
- Low battery indication
- Large bright backlit LCD
- Large heavy gauge stainless steel square pan
- Stability indication
- Auto calibration
- Selectable auto back light
- Selectable auto shut off
- Unit switching kg ,g, lb, oz, lb:oz
- Variable kg or lb reference weight calibration software
- Pieces counting
- 1.3 million internal resolution
- 30,000 display resolution
- 24 bit A/D processor
- Highest quality sensor used

Figure 2.2 Details of your weighing scale





Application & Conformity

The Following are instructions of how to correctly use the weight scale:

The weighing scale may only be used for the weighing of solid-materials and of liquids filled into secure containers.

The maximum capacity load of the weighing scale must never be exceeded, otherwise the weighing scale may be damaged.

In using the weighing scale in combination with other devices as well as with devices produced by other manufacturers, the appropriate regulations for the safe use of the relevant attachments and their application in accordance with instructions must be observed.

The weighing scale has been manufactured and tested in accordance with the standards and recommendations set out in the declaration of conformity.

The power adapter supplied for the weighing scale complies with the appropriate electrical protection class.

The following applies to all MCT series weighing scales
Power supply:
Input: 110V or 230V AC (+/-15-20%); 50Hz to 60Hz
Output: 10v DC 500mA
Allowable ambient conditions
Temperature: 0°C - 40°C
Relative humidity: 25% - 85%, non-condensing

If you have any questions on the technical data or require detailed technical information on your balance, please contact your technical representative.

Getting Started

The scale is packaged in an environmentally-friendly carton, which provides optimum protection for the balance during transportation.

We suggest that you keep the original packaging in order to avoid damage if you are shipping or transporting the scale to a different location. It is also the best way to keep it in the best conditions if it will not be used for an extended period of time.

In order to avoid damage, please follow the instructions provided below, when unpacking the scale:

- Unpack the scale carefully.
- When outside temperatures are very low, the scale should be stored for a couple hours and kept in its box in a dry room at normal temperature, so that no condensation settles on the unit when opening the box.
- Check the scale immediately after unpacking for any external visual damage. If there is any damage on scale, contact customer service immediately.
- If the scale is not to be used immediately after purchase, it should be stored in a dry place where fluctuations in temperature are low. (Reference pg.15).
- Read through these operating instruction, before you work with the unit and pay attention to the Safety recommendations (reference Safety pg. 6).

Delivery

Inspect delivery for completeness immediately on unpacking all components.

Checklist for complete delivery

	Component delivered present yes / no
Weighing unit body	
Weighing pan	
Power adapter	
Operating manual	

Assembly & Installation

The weighing scale is delivered in a partly dismantled condition. Assemble the individual components in the following sequence:

- Place your machine on a level, clean, and dry surface to obtain accurate readings.
- Place the plastic platter on top of the scale, flat side facing up so the platter sits firmly on the machine with the four “legs” inserted into the corresponding four receptacles.
- Place the stainless steel platter on top of the plastic platter with the flat side facing up.

Connecting the AC Adapter

The following Safety recommendations must be observed when connecting the balance

⚠ DANGER

The Scale should only be connected to the mains voltage socket with the power adapter supplied. Check before connecting the power adapter to the mains socket, that the operating voltage stated on the power adapter complies with the local mains voltage. If the operating voltage is not the same as the mains voltage, the power adapter must not be connected to the mains socket and contact customer service.

Placement of Scale

The location in which the scale is placed is very important in order for the scale to work to its full potential. Certain conditions can affect the capabilities of the scale, conditions like: the presence of air flow, variations in temperature, and direct sunlight. Please follow the recommendations given below in choosing a location to place your scale.

- Place the scale on a solid, firm and preferably vibration-proof, horizontal base
- Make sure that the weighing machine cannot be shaken or knocked over
- Protect from direct solar radiation
- Avoid drafts and excessive temperature fluctuations
- Avoid placing the scale near or on any magnetic surfaces.

The scale is fitted with one bubble level, and adjustable feet for level-control that allow for small height differences or any unevenness in the surface on which the balance is placed.

The screw feet must be adjusted so that the air bubble is precisely in the center of the sight glass of the bubble level (see Fig. 1)

Place the scale horizontally and keep the bubble inside the bubble level aligned with the circle (Fig.1). In order to get exact measurements, the balance must be carefully leveled after each re-location.

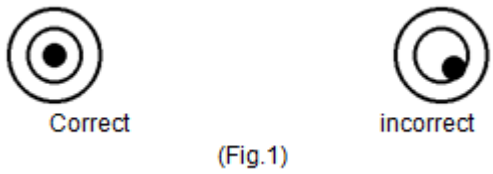
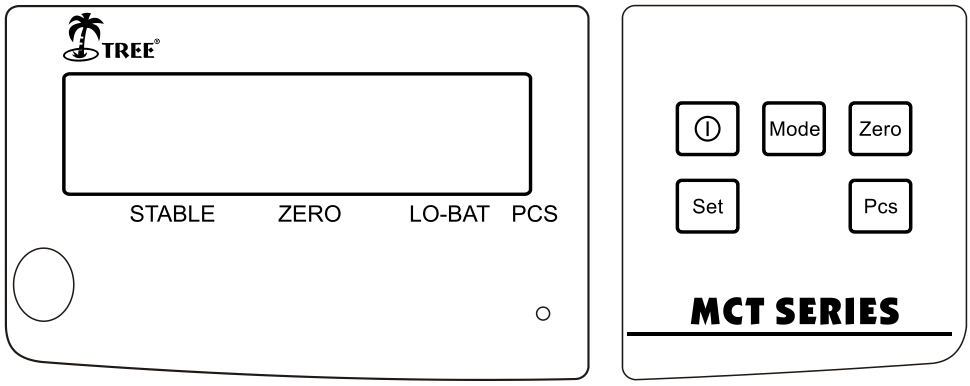


Fig. 1 Correct leveling with the aid of the bubble level and adjusting feet.

Application Menu



Display messages

- The STABLE icon indicates when the readings stabled.
- The ZERO icon indicates when the weights tared to zero.
- The LO-BAT icon indicates when running out of battery.
- The PCS icon indicates when pieces counting function applied.

Key Functions

- On/Off (icon) key turns the weighing scale on or off
- MODE key changes the weight units, kg, g, lb, oz, lb:oz
- ZERO key sets display to zero or subtract the container weight
- SET key for function settings

- PCS key for pieces counting function

Program Options

Pieces counting

- Press the On/Off key to turn on the scale
- Wait for "0" to appear on the display.
- If necessary, press “Zero” key to set the display to “0”
- Press the “PCS” key to enter “PCS” mode, the display will show P=X X
- Press “Mode” key to select XX value (10, 20, 50, and 100)
- Place a given number of samples on the pan (Samples should be 10, 20, 50 or 100 pieces).
- Press “PCS” key to confirm sample quantity.
- Start counting by adding weight on the scale
- Press “Mode” key to return to the weighing mode.

Auto shut off

Press and hold the “Mode” key, and then press the “On/Off” key to turn on the scale, the display will show A_ON or A_OFF. Press the “Zero” key to select A_ON (that will activate the auto shut off function) or A_OFF (that will deactivate the auto shut off function).

Auto backlight

Press and hold the “Mode” key, and then press the “On/Off” (icon) key to turn on the scale, the display will show A_ON or A_OFF. Press “Mode” key, the display will show L_ON or L_OFF, press the “Zero” key to select L_ON, L_OFF or L_AU (auto).

Press the “On/Off” key to turn off the scale and then turn it on again to return to normal operation.

Calibration

Using an External Calibration Weight:

Calibration is required when the weighing scale is initially installed or if the scale is moved to a substantial distance from the original location.

- Turn the scale on, let it warm up for about 10 minutes, and then turn the scale off.
- Press and hold the “Set” key, and then press the “On/Off” key to turn on the scale, the display will show “CAPu=”

- Press “Set” key, display will show “CAP”, press “Set” key again, display will show “CALu=”, press “Mode” key to choose the calibration unit kg. or lb.
- Press “Set” key to confirm and the display will show “CALu=” again
- Press “Set” key, display will show “CAL”, press “Mode” key to set the calibration weight, display will show xx with a flashing digit
- Press “Mode” key to move flashing digit to right, press “Zero” key to increase the digit number. (We suggest the calibration weight to be at least 50% or more within the scale capacity to get an accurate weighing)
- Press “Set” key to confirm the setting, display will show “CAL”
- Press “PCS” key to start calibration, the display will show the AD value, and wait for stable indicator displayed, then press “Mode” key, display will show ------ and then the flashing calibration weight
- Place the test weight onto the center of the weighing pan, and wait for stable indicator displayed, press “Mode” key, after stable indicator displayed again, it will show the AD value, and now the calibration is completed
- Remove the test weight and press the “On/Off” key turn off the scale. Turn it on again to see if the weight is accurate, if not, repeat above steps

Maintenance & Service

⚠ DANGER

For maintenance-work, the balance must be disconnected from the power supply (remove power adapter plug from socket). Also ensure that the balance cannot be connected to the power supply during the work by a third party.

Make sure that no liquid spills into the scale while performing maintenance work. If liquid is spilled on the scale, it must be inspected by a service technician.

Regularly perform maintenance to the weighing pan and the weighing pan holder by removing any dirt or dust from under the weighing pan and on the weighing scale housing. Use a soft brush or a soft, lint-free cloth, moistened with a mild soap solution.

⚠ CAUTION

Never use solvents, acids, alkalis, paint thinners, scouring powders or other aggressive or corrosive chemicals for cleaning; these substances can cause damage to the surfaces of the scale housing.

Transport & Storage

Your weighing machine is a precision instrument, treat it carefully. Avoid shaking, severe impacts and vibration during the transportation. Make sure that there are no marked temperature fluctuations during the transportation and that the weighing machine does not become damp (condensation).

If you would like to take the weighing machine out of service for an extended period, disconnect it from the electricity supply, clean it thoroughly (refer to Maintenance & Service) and store it in a place which meets the following conditions:

- No violent shaking, no vibrations
- Minimum temperature fluctuations
- No direct solar radiation
- Minimum moisture

Warranty

The products are under warranty against factory defects for a period of two (2) years from the date of shipment.

For Customers within the lower 48 states of the continental United States. LW Measurements will pay for fright both ways for the first 30 days after purchase. After 30 days expire the customer is responsible for shipping the product back to us. After the product is received we will inspect it and as necessary we will repair or replace and will ship the product back to the customer at our expense.

Any new scales returned for warranty must be properly packaged in the original box. If they are not properly packed an in the original box, the customer pays for shipping cost. If we determine there is a factory defect, we will pay for the shipping back. If we determine that it is not a factory defect, the customer will pay shipping.

For Customers outside the lower 48 States, including Mexico, Canada, Puerto Rico, Hawaii, Alaska and all other countries, customers must pay for shipping.

Our warranty does not cover misuse or neglect including but not limited to battery or water damage, overloading, and chewed or cut wires. If the product is found to have been misused or damaged by the customer, LW measurements is not responsible for the cost of return.

For warranty claims please go online to **lwmeasurements.com** and fill out the warranty submission form or call your customer service representative.