



MCT SERIES

Mid Counting Scale



MCT 3 / MCT 7 / MCT 16 / MCT 33 / MCT 66

Operating Manual

Professional Weighing Equipment

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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

Available Models

MCT 3

MCT 7

MCT 16

MCT 33

MCT 66

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

Signature:



Boon Lim, R & D Manager

Date: 06. 28. 2016

LW Measurements, LLC, 620 Carlson Court, Rohnert Park, CA 94928

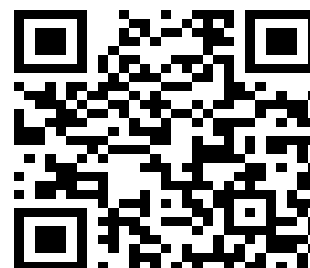
Customer Service

USA

LW Measurements LLC,
620 Carlson Court
Rohnert Park, CA 94928

USA
Tel: (707) 542-2185

<http://www.lwmeasurements.com>



Scan to Contact Us

Introduction

What you should know about this Operation Manual:

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 of the weighing scale in your daily work activities.

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

For the labeling of potential hazards, please refer to the safety proportion of this operation manual.

Safety

Representations & Symbols

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



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 (unplug 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 (unplug power adapter) and secured against inadvertent operation.

During 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 inside the scale, 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 (unplug 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 always be easily accessible at the workplace.

Weight Scale

Construction & Functions

The weighing scale consists of certain parts.

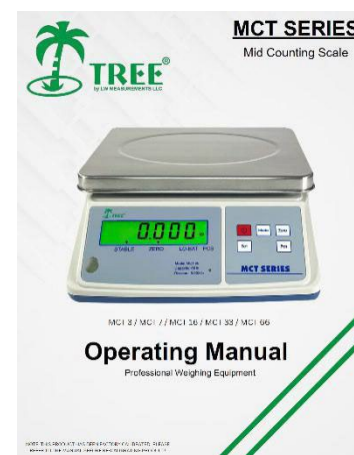
1. Weighing Scale Body
2. The Scale Pan
3. The Adapter
4. Operation Manual

2



1

4



3



Functions

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

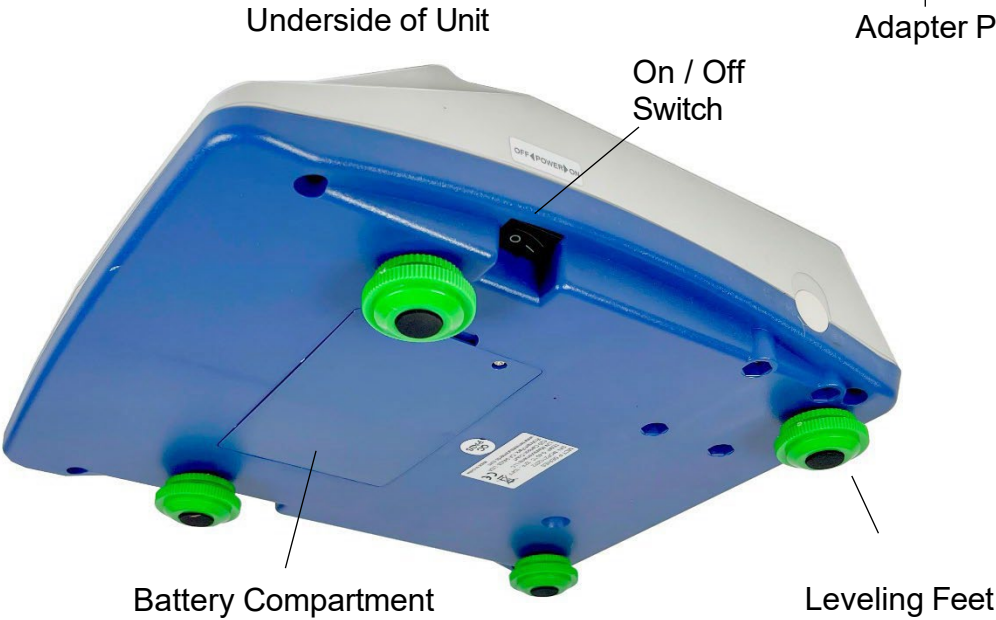
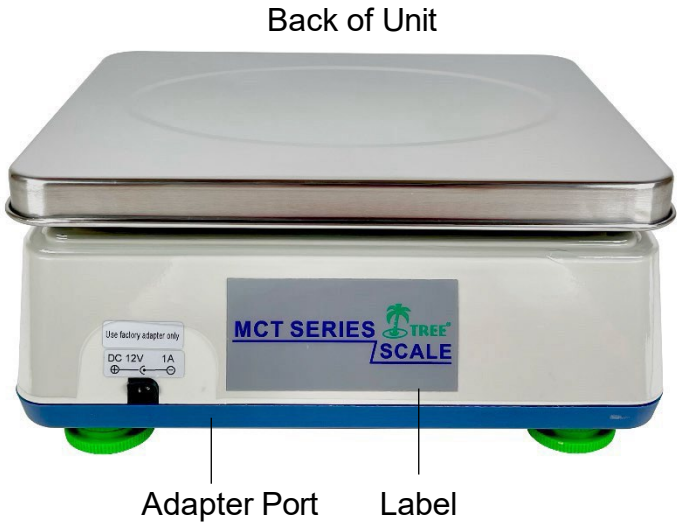
Specifications:

Model Number	Capacity	Division	Weighing Pan Size
MCT 3	3 lb	0.0001 lb	7.5 x 10 inches
MCT 7	7 lb	0.0002 lb	7.5 x 10 inches
MCT 16	16 lb	0.0005 lb	7.5 x 10 inches
MCT 33	33 lb	0.001 lb	7.5 x 10 inches
MCT 66	66 lb	0.002 lb	7.5 x 10 inches
Package (Standard Carton)	14 x 13 x 7 inches		
Package (Master Carton)	4 units in one box: 26 x 15 x 15 inches		
Operating Temperature	0-40°C (32-104°F)		
Power Source	Rechargeable batteries or AC/DC Adapter 12v 1A		

Features

- 1.** Auto zero tracking
- 2.** Intelligent applications: weight unit conversion, parts counting
- 3.** Low battery indication
- 4.** Large bright backlit LCD
- 5.** Large heavy gauge stainless steel square pan
- 6.** Stability indication
- 7.** Auto calibration
- 8.** Selectable auto back light
- 9.** Selectable auto shut off
- 10.** Unit switching kg, lb.
- 11.** Variable kg or lb. reference weight calibration software
- 12.** Pieces counting
- 13.** 1.3 million internal resolutions
- 14.** 30,000 display resolutions
- 15.** 24-bit A/D processor
- 16.** Highest quality sensor used
- 17.** Die-cast aluminum sub support, bottom sensor support and steel thread footing

Details of your weighing scale



Application & Conformity

The following are instructions on how to correctly use the weight scale:

The weighing scale may only be used for the weighing of solid materials and of liquids contained in 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 including those 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: 12v DC 1000mA

All Tree scales use AC Adapters that have a negative polarity.



Allowable ambient conditions

Temperature: 32 - 104°F / 0°C - 40°C

Relative humidity:

25% - 85%, non-condensing

*****NOTE: 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 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 condition if it will not be used for an extended period.

To avoid damage, please follow the instructions provided below, when unpacking the scale:

1. Unpack the scale carefully.
2. When outside temperatures are very low, the scale should be stored for a couple hours in its box in a dry room at normal temperature. This prevents condensation from settling on the unit when opening the box.
3. Check the scale immediately after unpacking for any external visual damage. If there is any damage on the scale, contact customer service immediately.
4. 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. 20).
5. Read through these operating instructions before you work with the unit and pay attention to the safety recommendations (reference Safety pg. 5).

Delivery

Inspect delivery for completeness immediately on unpacking all components.

Checklist for complete delivery

Component	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 stainless-steel platter flat side facing up.

Connecting the AC Adapter

The following safety recommendations must be observed when connecting the balance:



The scale should only be connected to the mains voltage socket with the power adapter supplied. Before connecting the power adapter to the mains socket, check to see 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 for the scale to work to its full potential. Certain conditions can affect the capabilities of the scale, such as presence of air flow, variations in temperature, and direct sunlight. Please follow the recommendations given below when 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)

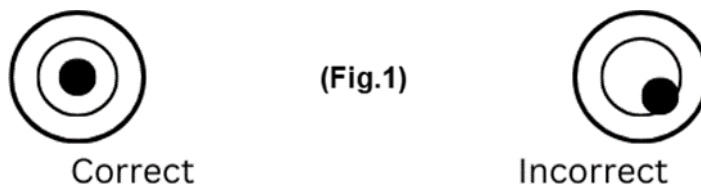
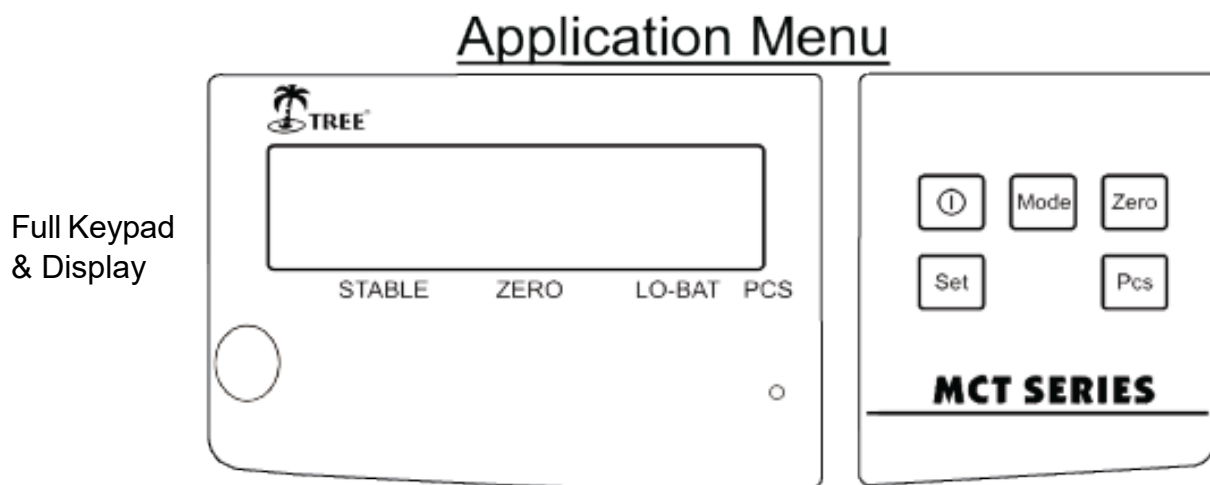


Fig. 1 Correct leveling with the aid of the bubble level and adjusting feet.

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



Display Messages

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

Key Functions

1.  (icon) key turns the weighing scale on or off
2.  key changes the weight units; kg, g, lb, oz, lb:oz
3.  key sets display to zero or subtract the container weight
4.  key for function settings
5.  key for pieces counting function

Program Options

1. Pieces Counting

- Press the  key to turn on the scale
- Wait for "0" to appear on the display.
- If necessary, press  key to set the display to "0"
- Press the  key to enter "PCS" mode, the display will show P=XX
- Press  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  key to confirm sample quantity.
- Start counting by adding weight on the scale
- Press  key to return to the weighing mode.

2. Auto Shut Off

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

3. Auto Backlight

- Press and hold the  key, and then press the  key to turn on the scale.
- The display will show **A_ON** or **A_OFF**.
- Press  key, the display will show **L_ON** or **L_OFF**,
- Press the  key to select **L_ON**, **L_OFF**, or **L_AU (auto)**.
- Press the  key to turn **OFF** the scale and then turn it back **ON** to return to normal operation.

Calibration

Calibration is done in the factory. Don't recalibrate the machine unless it is not accurate. Calibration may be required when the weighing scale is initially installed or if the scale is moved a substantial distance from the original location. The weighing machine should be allowed to warm up for 10 minutes before calibration.

What you need:

1. Using a calibration or test weight that is **2/3** of the max capacity is strongly recommended for recalibration.
2. If you do not have a test weight or calibration weight. You can use any object of "known weight" to calibrate with our scales **AnyCal** Calibration software.

****NOTE: When calibrating even if you use a "known weight" the more exact the weight is the more precise the calibration will be. ****

Single Segment Calibration (recommended):

- Press and hold the **Set** key, and then press the **⌚** key to turn on the scale, the display will show "XXXXX" with a flashing digit.
- Press **Mode** key to choose the calibration unit **kg, g, lb. or oz.**
- Press **Zero** key to **move** flashing **digit** to **right**, press **Pcs** key to **increase** the **digit value**.
- Press **Set** key to **confirm** the setting, display will show "**CAL**", then the **AD value**, and wait for **stable indicator** displayed.
- Once **stable indicator** is **displayed** press **Mode** key, display will show the **flashing calibration weight**.
- **Place** the **test weight** onto the **center** of the weighing pan, and **wait** for **stable indicator** to be **displayed**,
- Once **stable indicator** is **displayed** press **Mode** key and the scale will return to weighing mode
- **Calibration** is **complete**.
- Turn **OFF** the scale and the settings will be saved. **Remove** the weights and turn **ON** the scale for normal operations.

****NOTE: Turn off the power, then turn it back on, place a weight on the platter to ensure weighing is correct. If not, repeat the above steps. ****

Maintenance & Service



- 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** maintain 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.
- **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.

Transportation & Storage

Your weighing machine is a precision instrument, treat it carefully. Avoid shaking, severe impacts, and vibration during transportation. Make sure that there are no marked temperature fluctuations during 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 that meets the following conditions:

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

The weighing machine should preferably be dispatched and transported in the original packaging to avoid transportation damage.

CAUTIONS

Overcharging will cause permanent damage.

- When the recharging sign “” indicates, please charge the battery for 8 to 10 hours. When the charging is done, the orange light will turn green.
- Only use the charger (adapter) supplied with the indicator.
- After recharging, if the battery does not last long, replace it with a new battery.

Troubleshooting

Error Code	Issue	Troubleshoot	Solution
ERR-O/0	Overload error	Turn scale off, then back on, and try weighing using weight under max capacity to verify the loadcell still functions.	If scale still registers accurate weight refrain from continued over loading. If error continues loadcell may be damaged.
ERR-Z/2	Exceeded zero tracing range when powered on.	Turn scale off and clear weighing platform. Turn scale back on and attempt recalibration.	If the scale was recalibrated successfully then the error is resolved. If error persists, scale may need a linearity calibration or has a damaged loadcell.
ERR-S/5	Scale not stable when powered on.	Make sure scale is stable when powered on. Do not touch, shift, or place anything on the weighing platform until after the countdown.	If error persists, scale may need recalibration. If error continues after recalibration, then loadcell may be damaged.
ERR-C	Calibration weight was not entered during calibration	Enter calibration weight during calibration process.	If error persists, call support.
ERR-P	Counting set error	Place sample before entering counting settings.	If error persists, call support.
ERR-L	Calibration weight was not placed during calibration.	Be sure to place weight when recalibrating.	If error persists, call support.
ERR-E	Software issue	If error persists, call support.	If error persists, call support.
ERR-B/6	Low battery error	Attempt to charge battery.	If error persists, battery will need to be replaced. Make sure to not leave scale with rechargeable battery plugged in constantly.
<u>For any error that is not shown on this list or that persists after troubleshooting you will need to contact support.</u>			



We are genuinely grateful for your recent purchase. Your decision to choose TREE by LW Measurements means a lot to us.

Your support enables us to continue creating and providing high-quality products and services. We hope you enjoy your new scale and that it brings you as much satisfaction as it brings us to serve customers like you.

We would love to know what you think of our TREE products and your experience with us. If you have a chance, please visit www.lwmeasurements.com and leave a review.

Thank you for being a part of the LW Measurements family. We look forward to serving you again in the future.

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