

MARSDEN

USER MANUAL

MG-4800

Please take time to read these instructions before starting to use the scale



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Thank you for choosing this Marsden hand grip dynamometer. This device has been designed for simple and straightforward use. Please use this document as guidance for most effective use. If you need help with using the MG-4800 and cannot find the information you need in this document, please call Marsden on 01709 364296 or email sales@marsdengroup.co.uk.

Specification

Capacity	80kg (blue) 40kg (green) 20kg (red)
Division	0.1kg/0.2lb
LCD Display	0.5 inch 4 digit LCD
Operating Temperature	5°C / 35°C
Unit	Kg / lb
Dimensions (including handles)	212 x 55 x 101mm
Battery	CR-2450 x 1
Auto Off Time	60 sec
Standard Accessory	Carry Case x1 CR-2450 x 1 Spring Set 80kg x 1 Spring Set 40kg x 1 Spring Set 20kg x 1 MG-4800 x 1

General Information

The Medical Handgrip Dynamometer is a medical device for doctors to evaluate the recovery condition of a patient's impaired hand. The data acquired from the Medical Handgrip Dynamometer could be used as a reference for therapists and physicians to view the rehabilitation progress. The Medical Handgrip Dynamometer provides rehabilitation exercise solutions for patients and physicians.

Safety Instructions

Before putting the device into use, please read through this User Manual carefully. They contain important instructions for installation, proper use and maintenance of the device. The manufacturer shall not be liable for damages caused by failure to heed the following instructions:

- When using electrical components always comply with the appropriate regulations.
- Improper installation will render the warranty null and void.
- Ensure the voltage marked on the power supply unit matches your mains power supply.
- This device is designed for indoor use only.
- Observe the permissible ambient temperatures for use (see Specification).
- The device meets the requirements for electromagnetic compatibility. Do not exceed the maximum values specified in the applicable standards.

Environmental

- The optimum operating temperature for the scale is 5°C to +35°C; although it will operate at higher and lower temperatures the battery life will be adversely affected.
- All batteries contain toxic compounds; disposal of batteries should be delegated to a competent organisation, complying with the deposit of Poisonous Waste Regulation 1972.
- Please do not incinerate batteries.

Cleaning

- Always power off the device before cleaning.
- We would recommend using alcohol-based wipes or similar when cleaning the device.
- Please do not use large amounts of water when cleaning the device as this will cause damage to the device electronics, you should also refrain from using corrosive liquids or high-pressure washers.

Maintenance

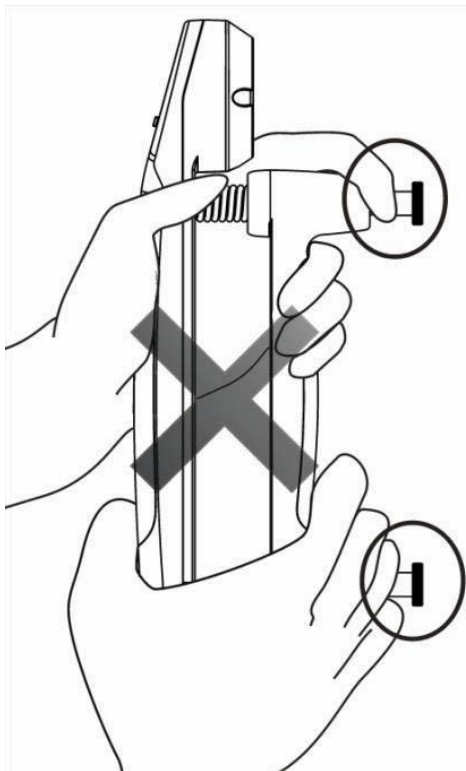
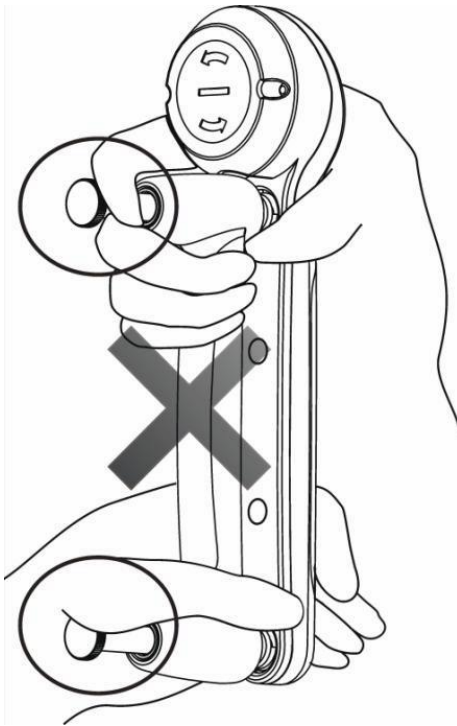
The device does not require any routine maintenance. However, we recommend checking the device's accuracy at regular intervals. The regularity of these checks is dependent on the level of use and the condition of the device. If any inaccuracies occur, please contact your local dealer/service partner, or Marsden directly

Before Use

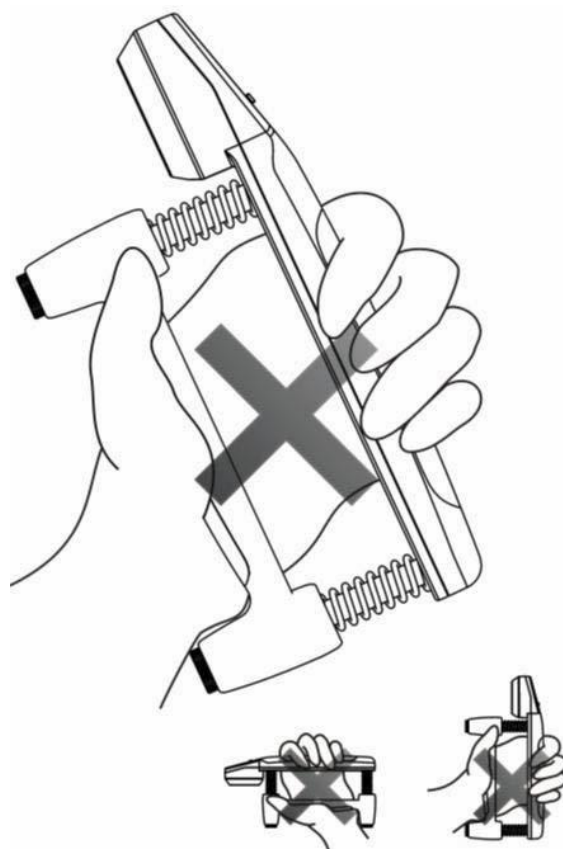
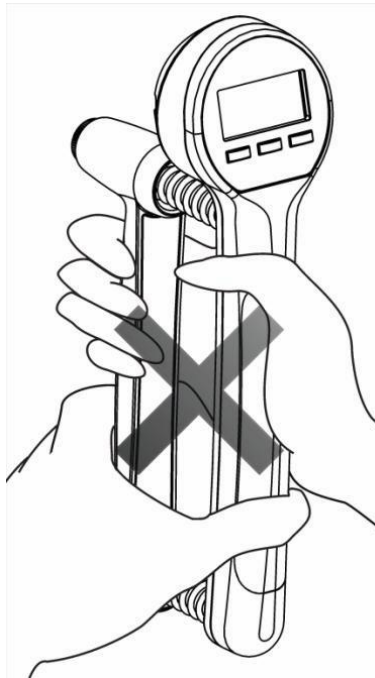
Before reading the detailed instructions on how to use all the measuring functions that are built into your device, please read the following important guidelines:

- Always be sure that the display shows 'Zero' before use, if it does not then please press the ZERO key.
- The Medical Handgrip Dynamometer is designed to detect when a stable force is achieved, the indicator will emit an audible 'beep' to indicate a stable force value, your reading should be taken at this point.

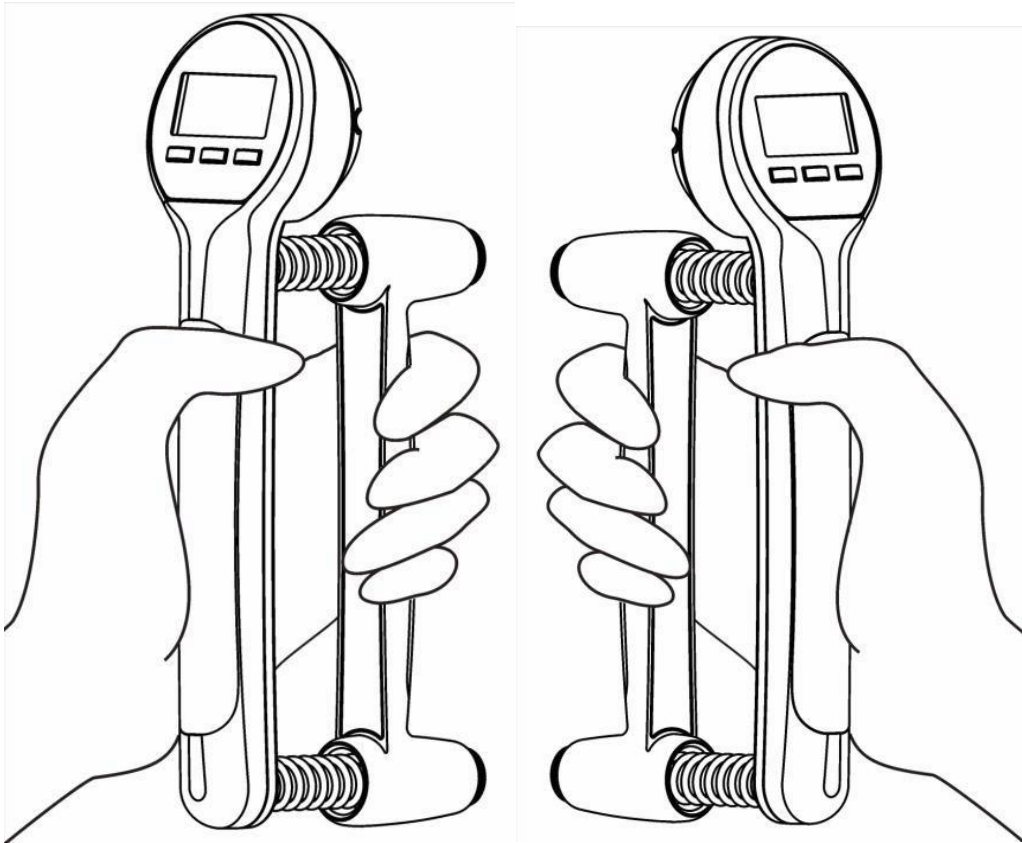
Incorrect Gripping Posture -1



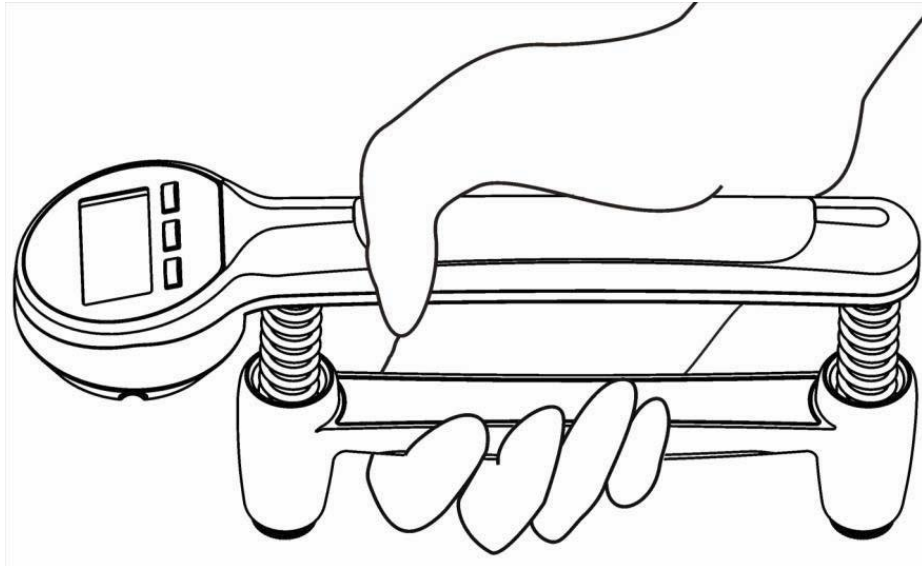
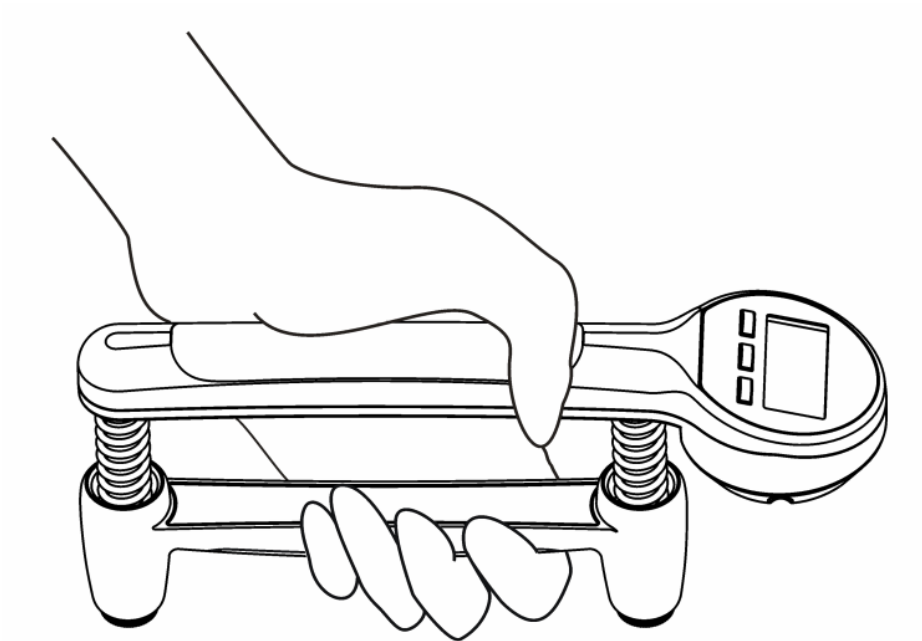
Incorrect Gripping Posture -2



Correct Gripping Posture -1

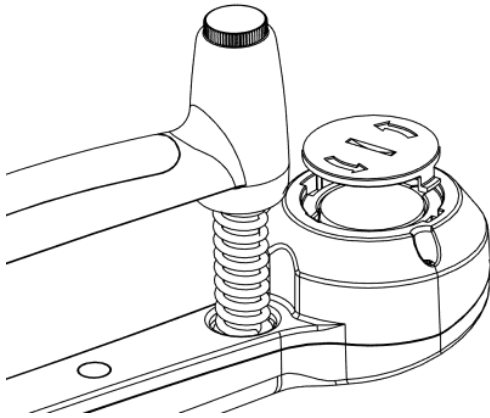


Correct Gripping Posture -2

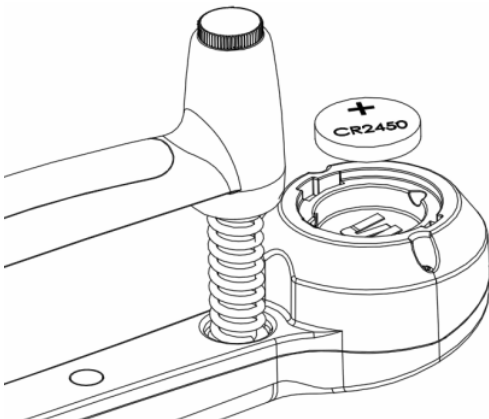


Instruction for Battery Installation

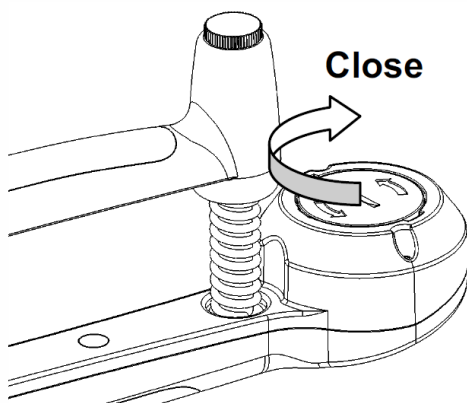
MG-4800 uses a CR-2450 lithium battery. Please read the following instruction before replacing the battery.



1) Remove the battery cover by turning anticlockwise.



2) Install the new CR-2450 lithium battery.




3) Lock the battery cover by turning clockwise.

LCD Display



Key Functions



 /ZERO : Power on / Power Off / Zero
Press to Power On, hold for 3 seconds to Power Off.

 Press to ZERO the value.

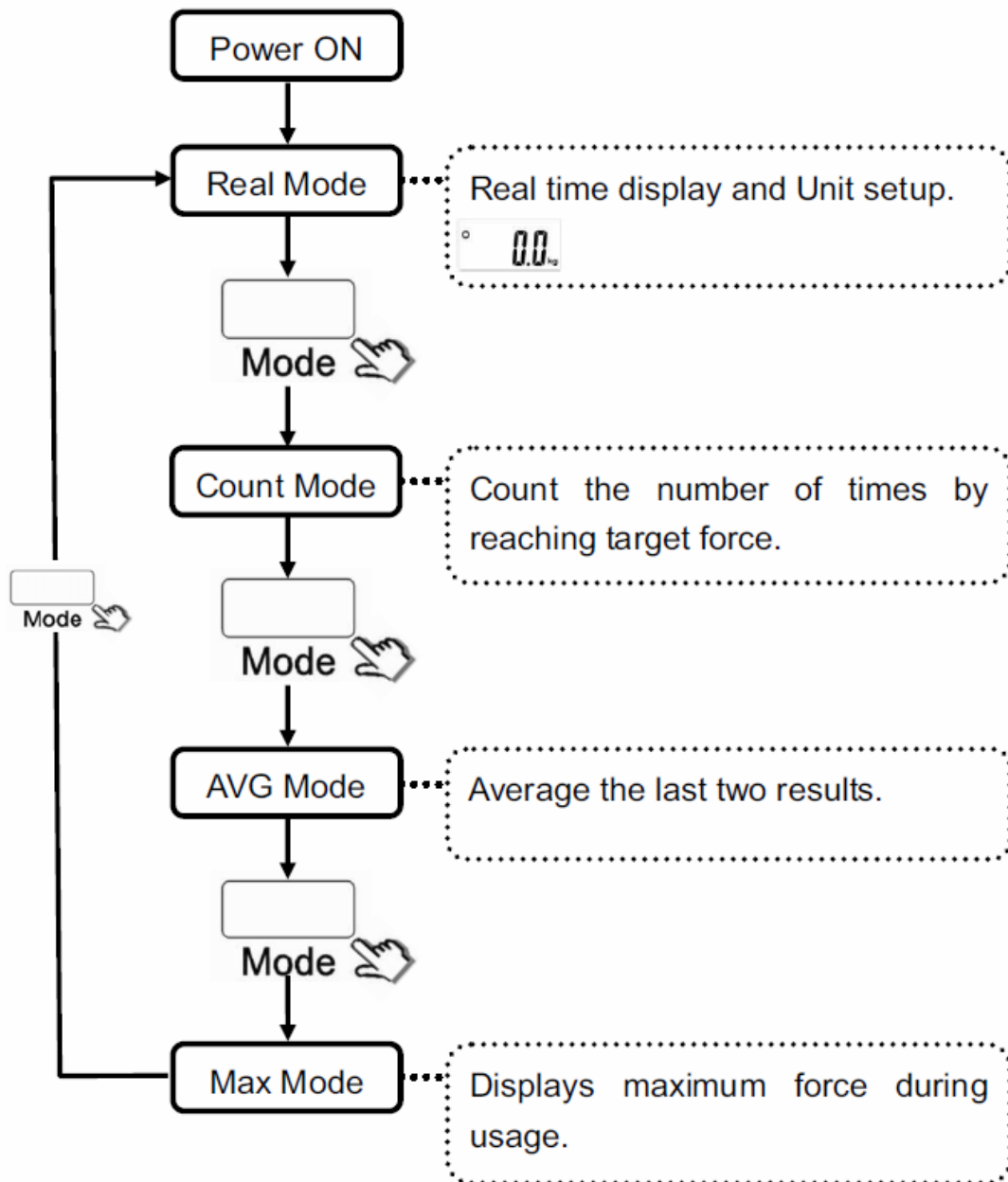
Mode: Mode selection.

Set : Real Mode: Unit switches.
Other modes: digit adjusts.

Please release the device before zeroing the value.

Mode Switching

- The following procedure gives you a specific idea of how to use the Medical Handgrip Dynamometer.
- Please note that Real Mode is the default mode. If the device is powered off in any other modes. Next time it will start with the last mode selected prior to being powered off.



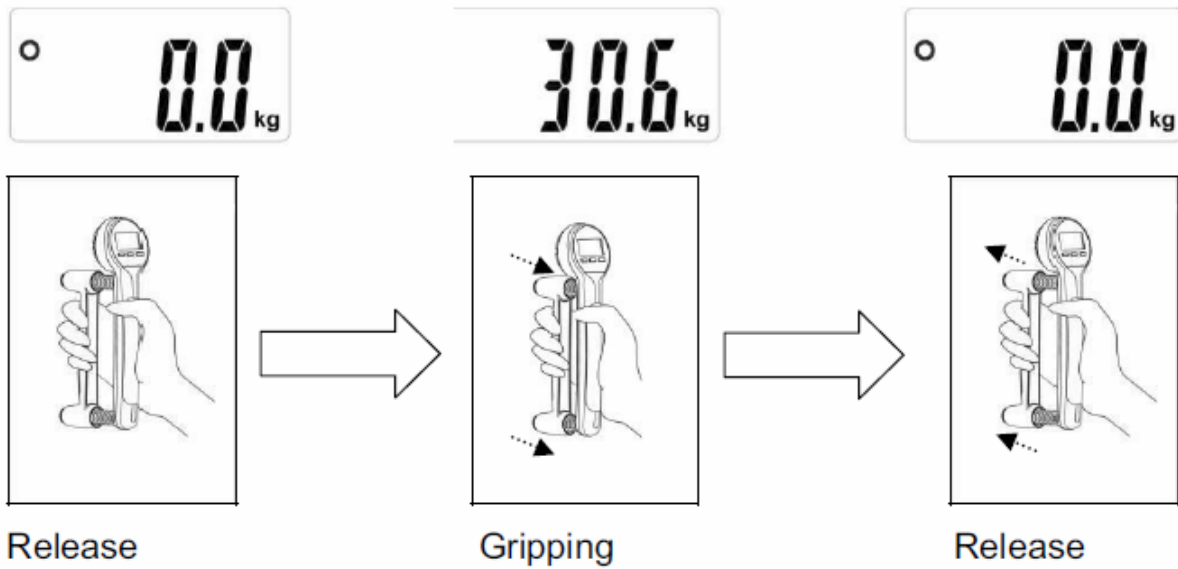
Mode Description

Real Mode

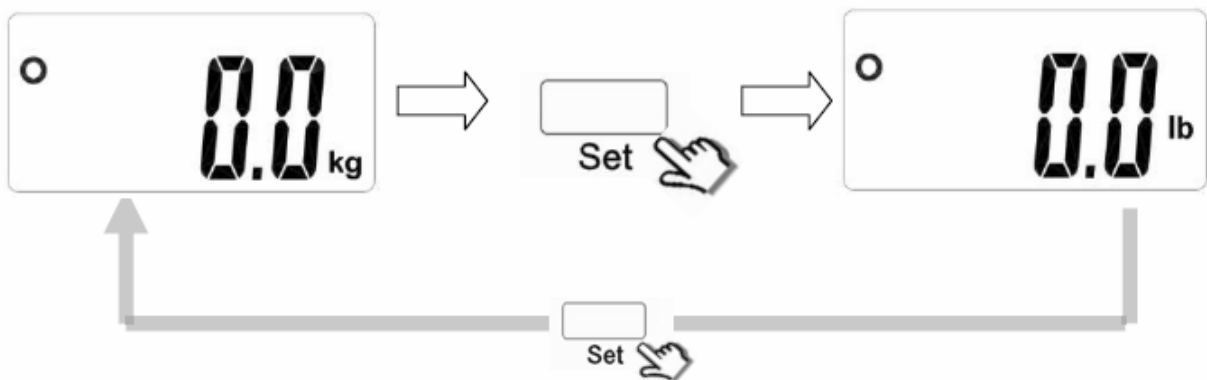
The **Real Mode** is a dynamic mode. The force value fluctuates according to the gripping force during usage.

Real Time Display:

Following is an operation process.



kg & lb SETUP :



Count Mode

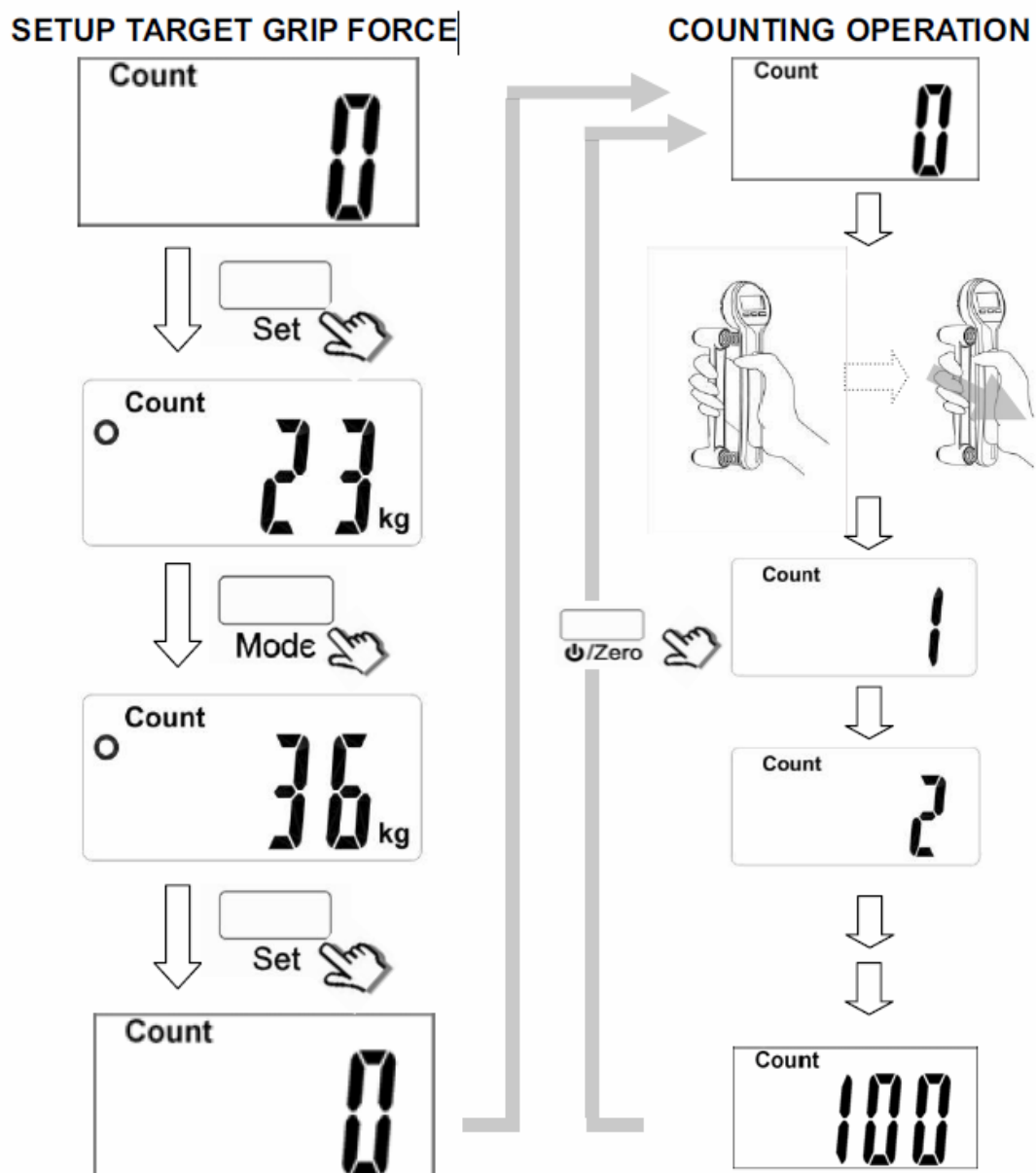
The **Count Mode** is for physician to set up a rehabilitation program for a patient to do rehabilitation exercise with exact force measurement.

For Example:

Set up target grip force before use.

NOTE: Only if the force reaches the target is counted one times.

Setup Target Grip Force:



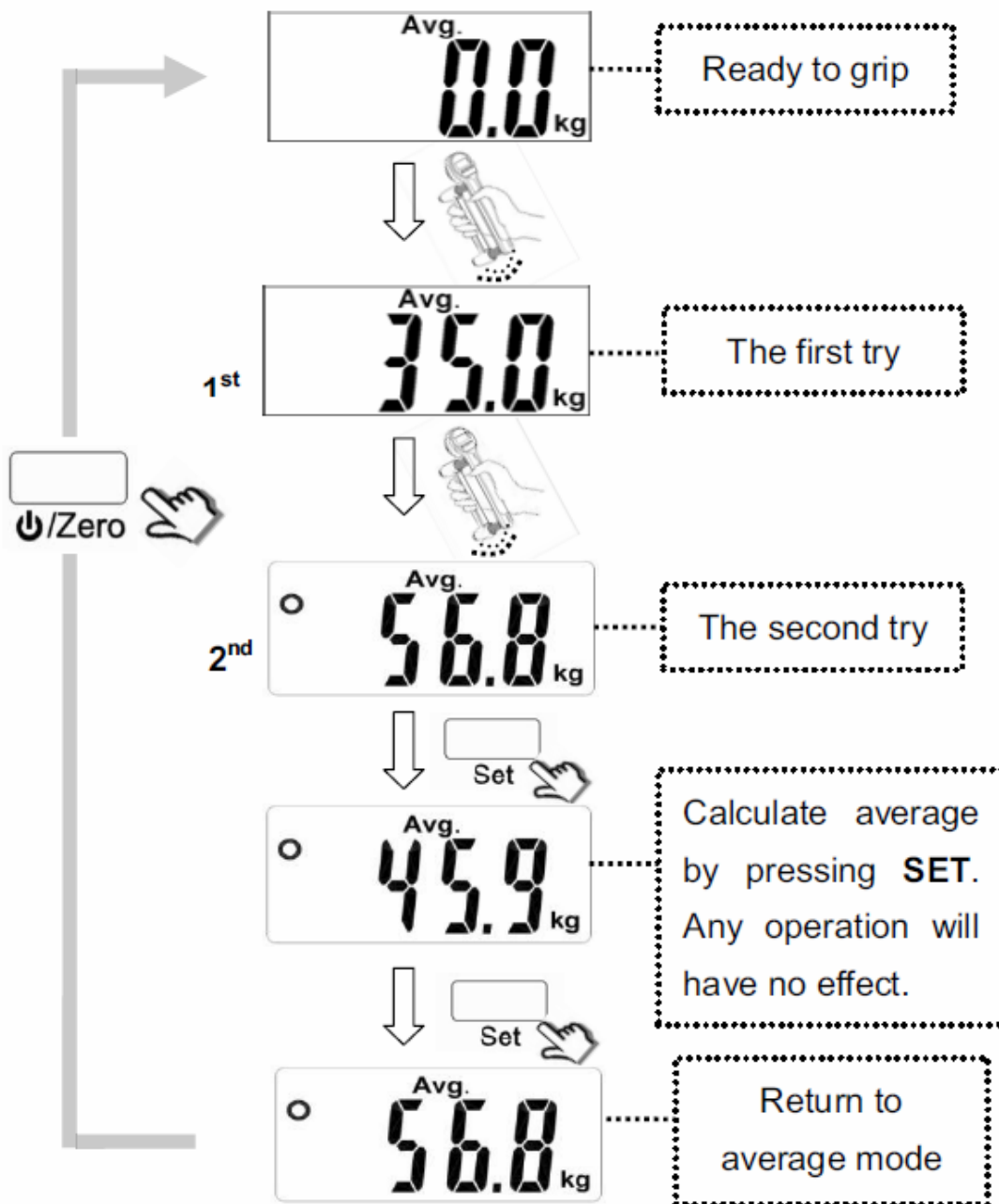
AVG Mode

The **AVG Mode** is for physician to evaluate the average of both hand's force.

For example:

Grip once individually with right and left hand, then press **SET** to calculate average value of last two grips.

NOTE: The force must be greater than 2kg

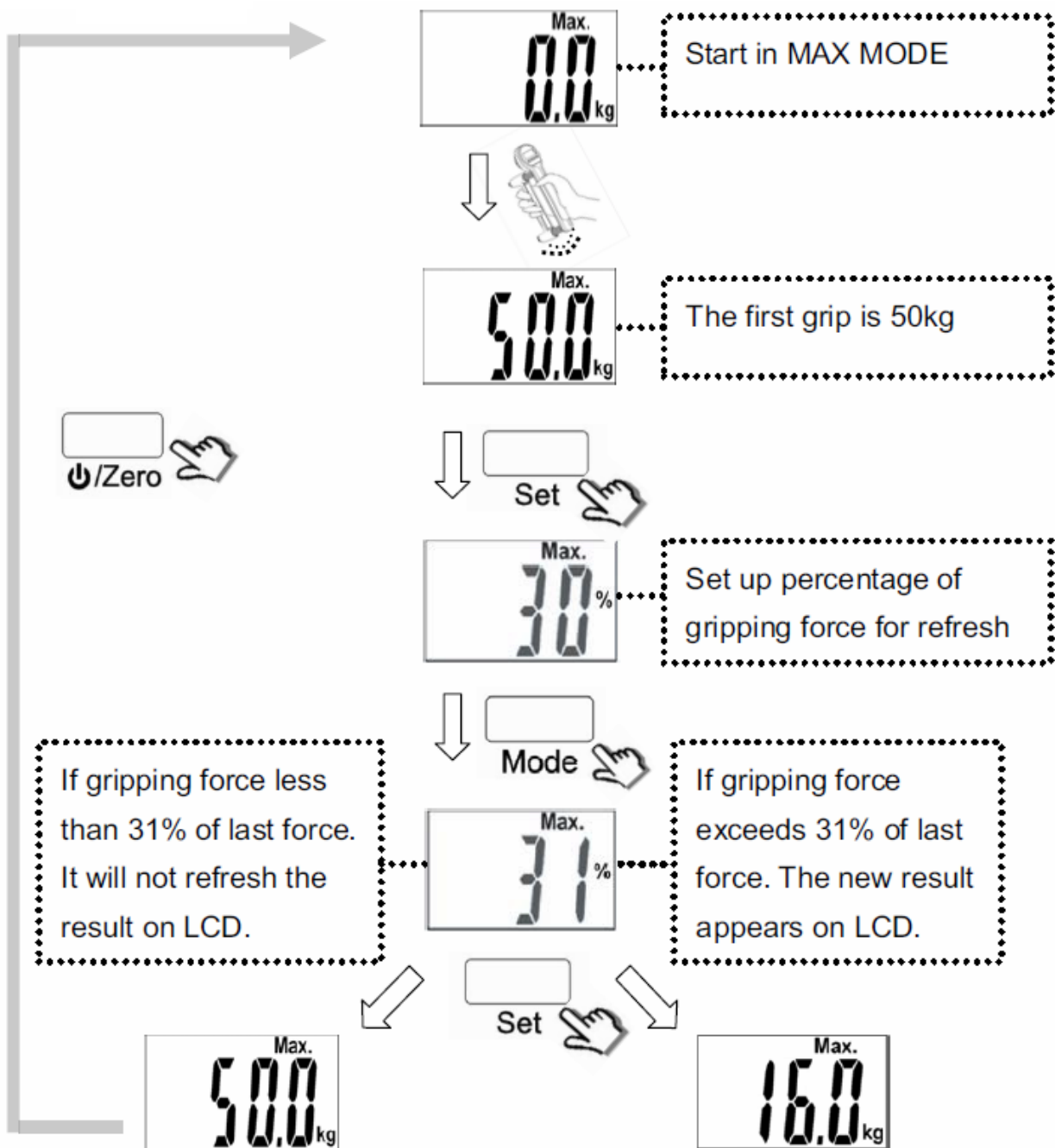


Max Mode

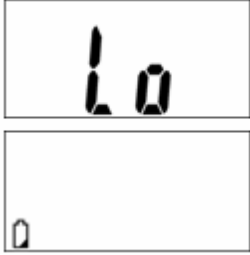




The **MAX Mode** presents the maximum force of an impaired hand.

Medical professions can evaluate the condition of patient's impaired hand through the results.

For example:



Error Messages

<p>Low Battery Indication This warning will show that the voltage of the battery is too low for operation, please replace the battery.</p>	
<p>Force Under Zero The force is under zero when power on; press the ZERO key and try again.</p>	
<p>Force Over Zero or Counting Error The force is over limit when power on, please reduce the force and power on again. If the problem still exists, please contact Marsden.</p>	
<p>Counting Error (Too Low) The force is lower than the limit when power on, please increase the force and power on again. If the problem still exists, please contact Marsden.</p>	
<p>EEPROM Error The device has encountered internal error; please contact Marsden.</p>	



Manufacturer's Declaration of Conformity

This product has been manufactured in accordance with the harmonized European standards, following the provisions of the below stated directives:

Electro Magnetic Compatibility Directive
Low Voltage Directive

only Medical Approval Scale is in conformity with
Medical Directive 93/42/EEC

FCC CLASS B Declaration of Conformity

This device complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules

Patent Number List:

Japan Patent: 1314405
RCD Patent: 000702592-0001
US Patent: D564382



Accuracy Assured

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