

# **M·TECH**

Electric Trolley Instruction Manual

(EN)



www.motocaddy.com/warranty



Distance Measurement Device (DMD) features are legal to use when local USGA and R&A rule 14-3 is in effect. Always check local and competition rules prior to commencing play



Visit www.motocaddy.com/instructions for other Motocaddy instructions including translations

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# Locating your Serial Number

The serial number for your M-TECH is located on the trolley underside next to the motor (fig. 1). This number is required when registering your warranty online and should be kept handy for future use.

The same number should also be on the box received with your M-TECH. Please ensure you keep hold of the packaging in case you need to return your trolley for any reason. A proof of purchase must also be kept in case your trolley requires servicing during its warranty period.

# Please keep a record of your trolley serial number here for future reference





# Safety Cut-out

This M-TECH trolley is fitted with a timed safety cut-out feature. Once started the trolley will automatically cut power to the motor after ten minutes to prevent any possible damage to the trolley. Pressing the 'On/Off' button will restart the trolley.

## Safe Use of your Trolley

This Motocaddy trolley is designed for the transportation of golf bags and clubs contained within. Using the trolley for any other purpose may cause damage to the trolley and cause harm to the user.

- Do not attempt to transport any other equipment
- The trolley is not designed for the transportation of people
- Do not use the trolley to assist you when going up hills
- Submerging the trolley in water (e.g. a lake) is likely to cause damage to the trolley
- Do not operate the trolley whilst under the influence of drugs or excessive amounts of alcohol
- All batteries must be disconnected from the trolley before transporting

# Caring for your Trolley

Although your Motocaddy trolley has been weatherproofed, please follow these simple guidelines to help protect your trolley:

- Do not store your trolley outside
- Try to minimise exposure to rain as much as possible with an umbrella during heavy rainfall
- Wipe excess water from the trolley prior to storage
- Never use a pressure washer to clean your trolley. To prevent water damage, wipe down with a damp cloth
- Avoid using high pressure air hoses near moving components

This M-TECH trolley is designed to require very little maintenance. We do however recommend regular checks to ensure:

- There is no build up of excess mud and dirt
- The front wheel nut is on tightly and quick release lever is clamped down
- The front wheel is not clogged up and turns freely

Only original Motocaddy parts should be used when repairing your trolley.

## Battery Care and Advice

All batteries must be charged as soon as possible after each use. Leaving batteries discharged for long periods of time will affect the battery life.

Please ensure that only batteries supplied by Motocaddy are charged with Motocaddy chargers. Cyclic battery chargers are designed specifically in accordance with the battery manufacturer's requirements. The Lithium battery charger MUST NOT be used to charge any other battery and is designed for use with Motocaddy NCM Lithium batteries only.

The charger should only be connected to an earthed socket outlet; the battery charger should only be opened and maintained by authorised personnel. Unauthorised opening will invalidate your warranty.

The battery must be stored and charged on a dry non-carpeted surface and charged at temperatures ranging between 10°C and 30°C. Charging above or below these temperatures is not recommended as it can reduce the battery capacity.

When connecting your battery to the trolley, please ensure that the connections match up black to black and grey to grey.

# Charging your Lithium Battery

- 1. Unplug the Lithium battery from the trolley. This should always be performed before folding the trolley to avoid damage to the battery and/or trolley
- 2. Plug the charger into your mains supply
- 3. Attach the battery cable to the charger matching the black and grey connections
- 4. When the charging LED indicator has turned green, the battery is fully charged and ready to be used



RED - Battery charging

GREEN - Battery fully charged and ready to be disconnected

- 5. The charging process will take between 3 to 5 hours depending on the depth of discharge (please be aware that this may take longer for the first few charges)
- 6. Once charging is complete please disconnect the charger from the mains power supply
- 7. Finally disconnect the charger from the battery

# Caring for your Lithium Battery

- Try to avoid getting the battery too wet (i.e. do not submerge the battery, avoid deep puddles and do not clean your trolley whilst the battery is still in the battery tray)
- Dropping the battery may cause damage to the internal cells
- Do not lift or carry the battery by the cable
- Use a damp cloth to clean off any dirt

#### Recommendations for the Hibernation of Lithium batteries During Winter Months

If for any reason your Lithium battery is not going to be used for lengthy periods, e.g. 3 months over the winter, it is advised to store the battery half charged. To do this simply use the battery for a round of golf as usual and charge it for 1.5 hours at the end of the round. Before the battery is used again, recharge it (top it up) prior to use. We recognise that extended absences are not always planned in advance, however when it is likely that you will not be using your battery for a period of time it is good practice to follow these steps to extend the life of your Lithium battery. Please ensure that the charger is ALWAYS disconnected from the battery after charging.

#### Battery Management System (BMS)

Motocaddy Lithium batteries are fitted with a comprehensive battery management system (BMS) to protect the battery from excessive abuse, high currents, deep discharge and overcharge. When the battery is delivered there may be no output as the BMS is designed to maximize safety whilst shipping. Please ensure that the battery is fully charged prior to connecting it to your trolley as this will activate the BMS and effectively 'switch-on' the battery. From time to time, at deep discharge or long term storage the BMS may switch-off the battery. A full battery charge will rectify this problem.

Motocaddy golf trolleys are designed to work with the BMS system installed in the Lithium batteries and the voltage meter is also synchronised to work in conjunction with the battery. If for any reason the voltage on the battery falls below the low battery warning on the trolley, then the BMS may disable the battery to protect it. Again if this occurs please recharge fully. Please be aware that Lithium batteries tend to 'drop off' quickly at the end of the cycle so it is not advisable to attempt to play excessive holes as the BMS will activate for protection purposes.

## Attaching the Wheels

To attach the wheels follow these simple steps:

- 1. Push the quick release button in towards the centre of the wheel
- 2. Slide the wheel on as far as it will go (onto the inner groove)
- 3. Once in place, release the button and pull the wheel outwards slightly to lock in place
- 4. A small click will confirm they are in the correct position

The outer groove can be used as a "free-wheel" option if you run out of battery power.

## Inverting the Wheels

The wheels can be inverted to reduce the trolley width for transportation and storage.

- 1. Push and hold the quick release button while sliding the wheel off the axle
- 2. Flip the wheel over, push and hold the button, then slide onto the axle as far as possible
- 3. Release the button and pull wheel out slightly until it engages with the free wheel groove



# Adjusting the Front Wheel Alignment

In the unlikely event that your trolley is not tracking in a straight line, the alignment of the front wheel can be adjusted to rectify the fault. This problem can be caused by a number of factors including a slightly loose bag support or an unevenly packed golf bag. Should you wish to alter the alignment of the front wheel, follow these simple steps:

- 1. Lift the quick release lever positioned on the front wheel housing and loosen the wheel nut (fig. 1)
- 2. There are two small metal dials on either side of the housing that are used to realign the wheel (fig. 2)
- 3. If your trolley is veering to the right, you will need to turn the left hand dial clockwise and the right hand dial anti-clockwise
- 4. If your trolley is veering to the left, you will need to turn the right hand dial clockwise and the left hand dial anti-clockwise
- 5. Tighten the wheel nut and push down the lever to lock the wheel back into place (fig. 3)

This procedure can be carried out until you are happy the trolley is moving in a straight line (please note you may only need to adjust one dial at a time).

## NB : These instructions are based on positioning yourself in front of the trolley looking at the wheel.





Fig 2



# Unfolding your Trolley

We recommend unfolding your trolley once the wheels have been un-inverted and reattached (see pg 8).

- 1. Lift the upper bag support slightly and release the upper latch (fig. 1)
- 2. Unfold the handle and re-secure the latch (fig. 2)
- 3. Release the lower latch (fig. 3)
- 4. Lift the trolley handle up into position (fig. 4). The front wheel will automatically unfold
- 5. Re-secure the lower latch and ensure the auto-open stand is folded away (fig. 5)











Fig 1

Fig 2

Fig 3

Fig 4

# Folding your Trolley

- 1. Release the lower latch (fig. 1). The auto-open stand will also be activated
- 2. Fold the frame forward until fully extended (fig. 2). The front wheel will automatically fold underneath
- 3. Release the upper latch and fold the handle back until the trolley is fully folded (fig. 3)
- 4. Re-secure both latches. If you wish to stand the trolley upright, leave auto-open stand out. Remember to ensure the auto-open stand is pushed down if not being used (fig. 4)
- 5. The wheels can be inverted to reduce the trolley width for transportation and storage (fig. 5). See pg 8 for details

#### NB : Please ensure the auto-open stand is folded away when not in use to prevent damage.













Fig 2

Fig 3

Fig 4

# Using the Upper Bag Supports

The upper bag support straps are secured using the following steps:

- 1. Stretch the elasticated strap around the bag & loop the rounded bar underneath the hook (fig. 1)
- 2. Position the two placement straps centrally on your golf bag (fig. 2)

# Using the Lower Bag Supports

This Motocaddy trolley is fitted with the EASILOCK<sup>™</sup> bag attachment system. If you are using an EASILOCK<sup>™</sup> compatible golf bag please follow these simple instructions:

- 1. Remove the two pre-fitted lower bag straps by depressing the rear button and sliding (fig. 3)
- 2. Match up the indicating line on the golf bag with the line on the lower bag support
- 3. Lower the bag until the pins lock in position. You should hear a small click

If you are using a non-EASILOCK<sup>™</sup> golf bag, please use the following instructions:

- 1. Stretch the lower bag strap around the bag base & loop the rounded bar underneath the hook
- 2. Position the two placement straps centrally on the base of your golf bag

#### Please ensure all straps are hooked securely before releasing. Failure to do so could result in injury.



Fig 1



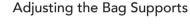
Fig 2



# Adjusting the Bag Supports



#### Fig 1



The bag support straps are manufactured from elasticated material to allow your golf bag to be held tightly in place.

The strap should be adjusted to be reasonably tight around the golf bag:

- 1. Unclip the elasticated straps from the housing by pulling outwards in the direction shown (fig. 1)
- 2. Move the bar as required to tighten or loosen the strap fitting. Pulling the bar downwards will tighten, pushing it upwards will loosen (fig. 2)
- 3. Ensure that the straps are clipped back into the housing before use (fig. 3)





# **Equipment Overview**

- 1. Digital Control Panel
- 2. Upper Bag Support
- 3. Upper Release Latch
- 4. Rear Wheels
- 5. Rear Wheel Release Button
- 6. EASILOCK<sup>™</sup> Lower Bag Support
- 7. Battery
- 8. Battery Tray
- 9. Motor (under Battery Tray)
- 10. Front Wheel
- 11. Front Wheel Alignment Adjusters
- 12. Battery Connector
- 13. USB Charging Port (under handle)

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- 14. Auto-Open Stand
- 15. Lower Release Latch



#### **Digital Control Panel**

- 1. Speed Setting
- 2. Clock
- 3. Round Timer
- 4. Battery Meter
- 5. Distance Readings
- 6. Left Button
- 7. Speed Controller & On/Off
- 8. Right Button
- 9. USB Charging Port (under handle)

#### **Operating the Digital Functions**

To activate the control panel simply connect the battery to the trolley. Once activated the screen will display the speed setting the trolley will set off at when started. The lime chevrons will flash when moving.

The trolley is designed to protect your battery from being fully discharged; should your battery voltage drop too low the trolley

MUIRCHOP Received a second a

will cut the power to the motor. If this should happen you will see the battery meter flashing on screen.

NB : Please be aware that certain moisture, temperature and humidity conditions can result in localised misting within the display screen. This will not affect the trolley functionality, nor cause any damage and will return to normal when adverse conditions subside.

## Starting, Stopping and Changing the Speed of your Trolley

The speed can be adjusted while the trolley is stationary or in motion. Rotate the 'On/Off' button clockwise to increase the speed setting and anti-clockwise to decrease. You will see the number in the centre of the screen changing accordingly. The settings range from 1 (slowest) to 9 (fastest). To start the trolley, simply press the button. To stop it, press the button again - there is no need to decrease the speed before stopping as it is designed to smoothly accelerate back to the required speed. You will notice the lime chevrons will start flashing when you press the button, this indicates that the trolley has been started.

#### Using the USB Charging Port

The M-TECH features a USB charging port designed to charge GPS devices during your round, should your device require a top up.

Simply remove the covering cap and plug a USB cable into the charging port located on the underside of the handle. The device will continue charging for the duration of time that the cable is attached and the battery is connected.

It is important to note that the rate of charge will be lower than that of a mains AC charger and similar to plugging the device into a PC. The USB charger takes power from the main trolley battery and continuous charging will reduce the battery capacity between charges. The trolley is designed to disable the USB port when the battery capacity reaches a preset level.

#### Setting the Time

- 1. Press and hold the right button for three seconds until the minutes start flashing
- 2. Set the minutes by pressing the left button, each press will increase the time by one minute
- 3. To toggle to the hour press the right button again
- 4. Set the hour in the same way as the minutes
- 5. Once the time is correct, press and hold the right button for three seconds to confirm

#### Using the Round Timer

The round timer will automatically start counting when you connect the battery to the trolley. To reset the round timer at the start of your round, press and hold both the left and right buttons together for 1 second, you will see the round timer flash, release the buttons and the timer will be reset (fig. 1).



# Using the Adjustable Distance Control

- 1. Whilst stationary, select the speed at which you wish the trolley to start
- 2. Hold down the 'On/Off' button for 2 seconds
- 3. The Distance Display will change to indicate '05' (5 yards or metres) and the letters "ADC" will appear under the speed setting
- 4. Rotate the 'On/Off' button clockwise to increase the distance and anti-clockwise to decrease (fig. 1)
- 5. Press the button down once to set the trolley off in motion
- 6. The distance will count down in increments of 1 yard/metre until the desired distance is reached. The trolley can be stopped at any stage by pressing the central button once



Fig 1





In the unlikely event that your trolley fails to register distance whilst in ADC mode, the trolley will cut power to the motor to prevent the trolley from travelling too far. The trolley screen will flash "dist" to indicate that this safety feature has been activated (fig. 2).

The trolley can be reset by pressing the 'On/Off' button once, thereby allowing you to continue to use the trolley with ADC disabled until you are able to contact our technical support team.

## **Distance Readouts**

There are three different distance readouts – "Drive", "Round" and "Lifetime". You can toggle through these at any time by pressing the left button. To reset the reading, press the right button (this must be done whilst the display shows "Drive" or "Round"). To get an accurate reading turn on your trolley and walk directly to your golf ball. We appreciate that you will not always be able to walk directly to your golf ball - however when you can it's great fun to see how far you've hit it. You can change the distance readings from yards to metres (or vice versa) by pressing and holding the left button for 3 seconds.

Please note the trolley will only measure distance whilst it is switched on and the motor is running (i.e. if you push the trolley along when it is switched off the distance readings will not increase). The measurements are taken from the revolutions of the axle, so please be aware that if you let your trolley run off down a hill on its own the readings will not be 100% accurate. We recommend you always walk within a few steps of your trolley and do not let it run off ahead of you.

The "Lifetime" reading cannot be reset, even if you unplug the battery. This shows how far the trolley has travelled in its lifetime. You can toggle to it by pressing the left button. This reading is displayed in miles or kilometres. Toggle between miles or kilometres by holding down the left button for 3 seconds.

#### Using the Competition Mode

It is possible to temporarily disable the distance measuring functions using the competition mode should competition rules dictate. It is recommended that you always check competition rules before using your trolley with distance readings enabled.

To enable the competition mode the trolley must be stationary. Hold down the left and right buttons together for 3 seconds. The round timer will start flashing, keep pressing the buttons until the distance readings are removed from the screen and the words "COMP MODE" appear (fig. 1). To return your trolley to normal mode, simply perform the procedure again.

#### NB : If you release the buttons before entering or exiting competition mode, the round timer will reset.



# Setting the Security Pin Code

The M-TECH also comes with the option of enabling a security feature, making the trolley unusable for potential thieves. There is no pin-code set when the trolley is manufactured but this can be set using the steps below:

- 1. Press and hold the left button whilst connecting the battery to the trolley, release the button once the screen has illuminated
- 2. Use the 'On/Off' button to choose the first number of your pin code (0-9) (fig. 1). Turn clockwise to increase the number or anti-clockwise to decrease
- 3. Press the right button to confirm your choice
- 4. Repeat step 2 and 3 for each of the four digits
- 5. Once the fourth number has been confirmed, the lime chevrons will illuminate to indicate a valid pin code has been entered (fig. 2)
- 6. Unplug the battery and leave for a few seconds

When you next connect your battery, the trolley will ask you to enter the pin code that has been set. This can be done using the 'On/Off' button to select the number and the right button to confirm.

IMPORTANT : Before pressing the right button for the fourth time, please check that the desired pin code is correct. You may wish to keep a record of this number. If you are unable to enter the correct pin code the trolley will need to be returned to Motocaddy to be reset (this will incur a charge).









## Changing the Pin Code

You can change your pin code at any time using the following steps:

- 1. Press and hold the left button whilst connecting the battery to the trolley, release the button once the screen has illuminated
- 2. Enter your current pin code on the left side of the screen (fig. 1)
- 3. Once entered, you will be able to enter a new pin on the right side of the screen (fig. 2)

#### Disabling the Pin Code

To disable the security feature, follow the procedure for changing your pin code and when you get to the stage of entering a new pin code, enter four zeros as the new code.

Once the fourth zero has been confirmed the lime chevrons will illuminate to indicate the pin code has been accepted. This will return it to its factory setting.



Fig 1



Fig 2

## Introduction to DHC

The letters DHC stand for 'Downhill Control' and mean that your M-TECH trolley will automatically maintain a controlled speed whilst travelling down hills.

Whenever you are looking to move the trolley, even if just to reposition it ready to use, always put it on a low speed setting to make it easier to steer.

## Using the DHC Parking Brake

The M-TECH is fitted with an electronic parking brake. To use this feature, the trolley must be in a stationary position. The parking brake is initiated by rotating the speed dial down to 1 and then rotating one click further.

Once activated, the screen will toggle between 'P' (fig. 1) and number '1' (fig. 2).

The speed setting can be adjusted whilst the parking brake is activated by turning the speed dial.

To release the parking brake, press the 'On/Off' button to start the trolley.







# DECLARATION OF CONFORMITY

ORIGINAL

#### **Business Name and Full Address of Manufacturer**

Motocaddy Ltd - Units 15-18 Stansted Distribution Centre, Start Hill Great Hallingbury

Hertfordshire CM22 7DG

#### Name and Address of Authorised Representative

Name and Address of the Person in Community Authorised to compile the Technical File (If different to above)

#### **Description of product (Commercial Name)**

Motocaddy Electric Trolley

#### Function, Model, Type, Serial Number

Function: Electric Trolley

Type: Motocaddy Digital Range

Model: S1/S1 DHC/S3 PRO/S3 PRO DHC/ S5 CONNECT/S5 CONNECT DHC/S7 REMOTE/ M1/M1 DHC/M3 PRO/M3 PRO DHC/ M5 CONNECT/M5 CONNECT DHC/M5 GPS/ M5 GPS DHC/M-TECH/C-TECH

#### Standards Used

BS EN ISO 12100 2010

#### Place of Declaration

Units 15-18 Stansted Distribution Centre, Start Hill Great Hallingbury

Hertfordshire CM22 7DG

Date of Declaration Tuesday January 01, 2019

#### Declaration

I declare that the machinery fulfils all the relevant provisions of the following Directives:- Low Voltage Directive 2006/95/EC, Electromagnetic Compatibility Directive 2004/108/EC.

#### Person Empowered to Draw Up Declaration

Name: John Helas

Position: Managing Director

Signature:



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We are dedicated to protecting the environment and encourage the recycling of Motocaddy products through a free collection and disposal service. To find out more or to locate your nearest Motocaddy recycling point, please contact us through our website.

EASILOCK™ Patent (GB) - GB2519073 USB Charging Port Patent (GB) - GB2473845 USB Charging Port Patent (AUSTRALIA) - 2010224448

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