TEPTRON

# User manual

MOVE- Bluetooth controlled motor for indoor blinds and shades

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# 1 Warnings and general precautions for safety

Read these warnings carefully before you continue installing, connecting and using MOVE hereinafter called the product. It is very important that you follow the safety and warning instructions written in this manual to ensure a safe use of the product. Keep these instructions. Heed all warnings. Only use the product as described in these instructions.

**WARNING: Failure to follow these safety instructions could result in fire, electric shock, or other injury or damage to the product or other property.**

**1.1 Installation warnings**
The product installation, collection programming and maintenance operations must be carried out exclusively by a qualified adult in observance of the instructions in this manual.

Before starting installation make sure the product can be retrofitted to your type of indoor blinds and shades. If not suitable do NOT proceed with installation. Make sure the product is able to run without risks of entangling, also make sure that anything in the vicinity is within such risk.

The product installation and maintenance operations must be performed with all power sources disconnected from MOVE.

Install the product out of reach for children. The product shall not and cannot replace the purpose of a child safety product for indoor blinds and shades. The product and its accessories may contain small parts. Keep them away from small children.

It is very important NOT to use the product with battery power if it must be placed in direct sunlight or near other heat sources, in high temperatures batteries can be dangerous. In these conditions always remove the batteries and use a suitable USB power adapter to power the product. Exact specification for the USB power adapter can be found in this manual. Read all safety instructions for any other products and/or accessories before using with the product. Teptron AB is not responsible for the operation of, or any damage caused by, third-party accessories or their compliance with safety and regulatory standards.

During installation, handle the product with care - avoid crushing, impact, dropping or contact with liquids - never place the product near sources of heat or expose to naked flames. All these actions could damage the product and cause malfunctions or dangerous situations.

Pay attention to your personal safety in regards to proper use of ladders. Be careful when handling tools from an extended height, do not drop them. Do not drop the product. If dropped or damaged do not install it. Be aware of that a dropped product may not have visibly detectable damage.

Be very careful when handling knifes, scissors or similar sharp cutting tools.

Do not install the product to outdoor shading products, its only intended to be applied to indoor blinds and shades.

Do not dismantle the product other than described in this manual. Do not make any changes to any part of the product except those indicated in this manual. Do not insert anything in the product except what's described in this manual. The manufacturer declines all liability for damage caused by makeshift modifications to the product.

Before connecting a power adapter, batteries or blinds and shades to the product, carefully read the warnings and the product manuals of those products, and it's important to only use approved certified products.

When connecting a power adapter to the product do not use a damaged power cord or plug and do not use loose or damaged power outlets. Unplug power adapter during lightning storms or when unused for long periods of time.

Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

**1.2 Use warnings**
Do not operate the product when jobs are being performed in the vicinity i.e. window cleaning, maintenance jobs, etc. Disconnect the all power supplies to the product before starting such jobs. Be aware of operating the product when your window is open. Outside circumstances may cause damage to the product and the surroundings.

Keep the product out of reach for children. The product may attract attention of children and animals. During operation children and animals should be kept away from the device.

Do not pull the cord, cord loop or bead chain when the product is attached to and installed in active or passive mode.

Wash yourself immediately if exposed to battery acid.

Always shield the product from direct sunlight regardless of power source.

Make sure that your burglar alarm does not trigger because of movement from your blinds or shades

After commissioning, the batteries are trickle-charged by electrical energy generated by the solar panel. The energy produced by the solar panel is stored in Li-iron batteries. It is normal for the battery to gain more energy in summer as compared to winter. The solar panel converts the intensity of light to energy when available.

If the motor does not operate due to an excessively diminished battery, the battery pack may require a full recharge by battery charger that is approved by manufacture. If the battery no longer provides adequate power to operate the motor, new rechargeable battery pack should be installed.
Always read instructions on how to install and remove Battery pack on MOVE unit.

Never force a connector into a port when using connectors and ports. Check for obstructions on the port. If the connector and port don't join with reasonable ease, they probably don't match. Make sure that the connector matches the port and that you have positioned the connector correctly in relation to the port.

Refer all servicing to qualified service personnel. Service is required when the apparatus has been damaged in any way, such as when the solar panel cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, dose not operate normally, or has been dropped.

Do not use the product in rain, or near washbasins or other wet locations and avoiding water and wet locations. Take care not to spill any food or liquid on the product. In case the product gets wet, unplug all cables and remove the battery before cleaning, and allow it to dry thoroughly before turning it on again. Do not attempt to dry the product with an external heat source, such as a microwave oven or hair dryer. Damage to the product caused by contact with liquid is not covered by the manufacturer.

# 2 Regulatory and safety notices

Model name: M1703

## FCC warnings:

**FCC Statement:**
Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

**FCC Radiation Exposure Statement:**
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .The device has been evaluated to meet general RF exposure requirement.

## ISED RSS Warning/ISED RF Exposure Statement:

**ISED RSS Warning:**
This device complies with Innovation, Science and Economic Development Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

**ISED RF exposure statement:**
This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment.The device has been evaluated to meet general RF exposure requirement.

Le matériel est conforme aux limites de dose d'exposition aux rayonnements énoncés pour fac un autre environnement.ce dispositif a été évalué à satisfaire l'exigence générale de l'exposition aux rf.

## 3 Product description and intended use

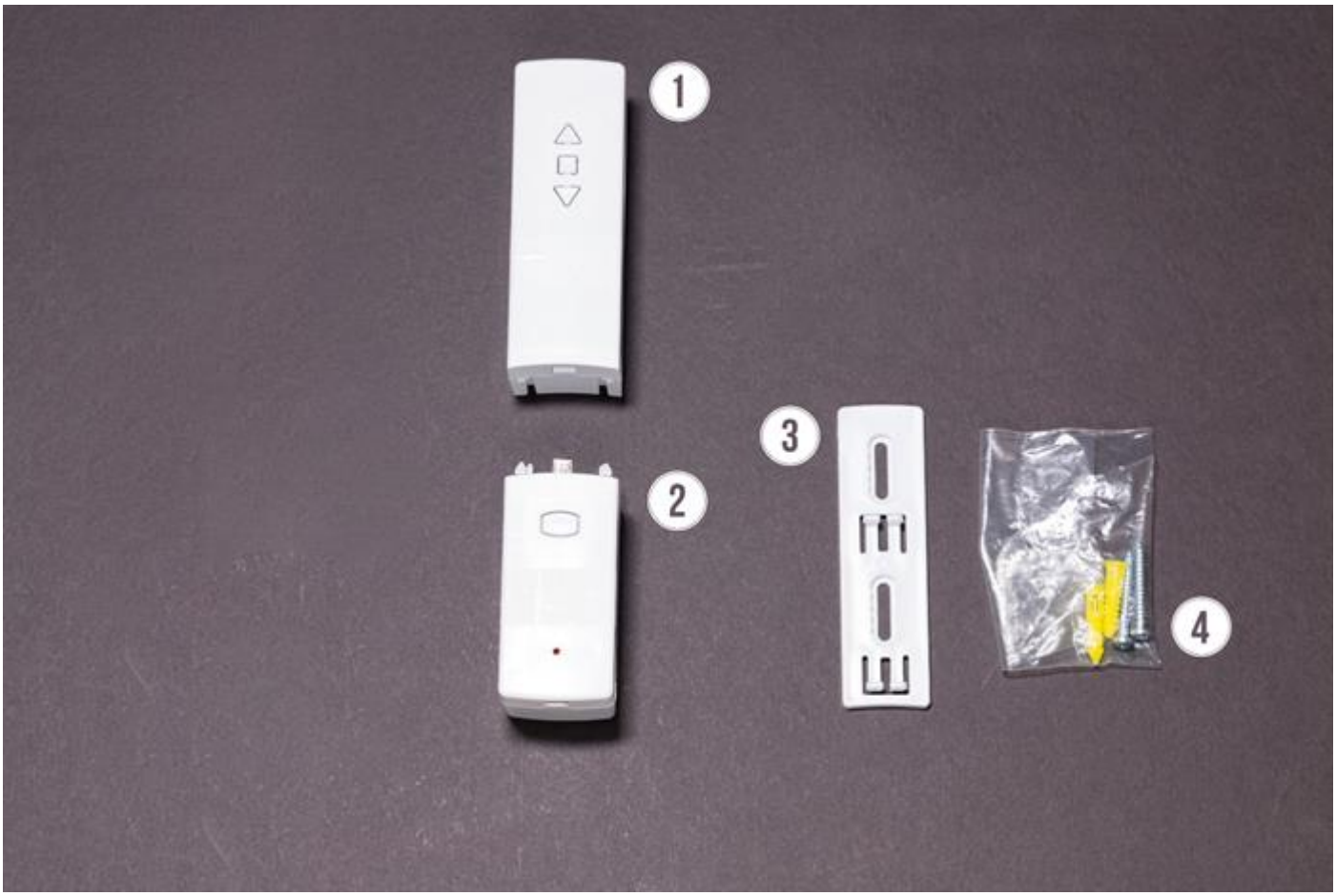
Note: MOVE is intended exclusively for the automation of various types of indoor blinds and shades. Any other use is absolutely prohibited! The manufacturer is not liable for damage resulting from any use of the product other than the intended use specified in this manual.

Functional characteristics of the product:
-MOVE is a motor for existing indoor blinds and shades.
-It is built to fit as many different manually controlled indoor blinds and shades as possible.

This is why the motor can be retrofitted to nearly all different manually controlled indoor blinds and shades. No matter if its continuous cord loops, bead chain loop, bead chin with connectors or just reeling in a cord MOVE will be able to operate it. MOVE is installed enclosed wall bracket.

MOVE uses a CSR 1024 chip with the radio protocol Bluetooth Smart 4.0, the chip have CSRmesh radio which is a mesh protocol running over Bluetooth Smart. This means multiple units can communicate with each other forwarding transmissions making the radio coverage better. This also makes it possible to link units together making them act as one. To ensure its function even under heavy load MOVE has a custom metal gearbox and the gears are made of metal. The electronics controlling the motor has a force limiting safety feature making it safe to use.

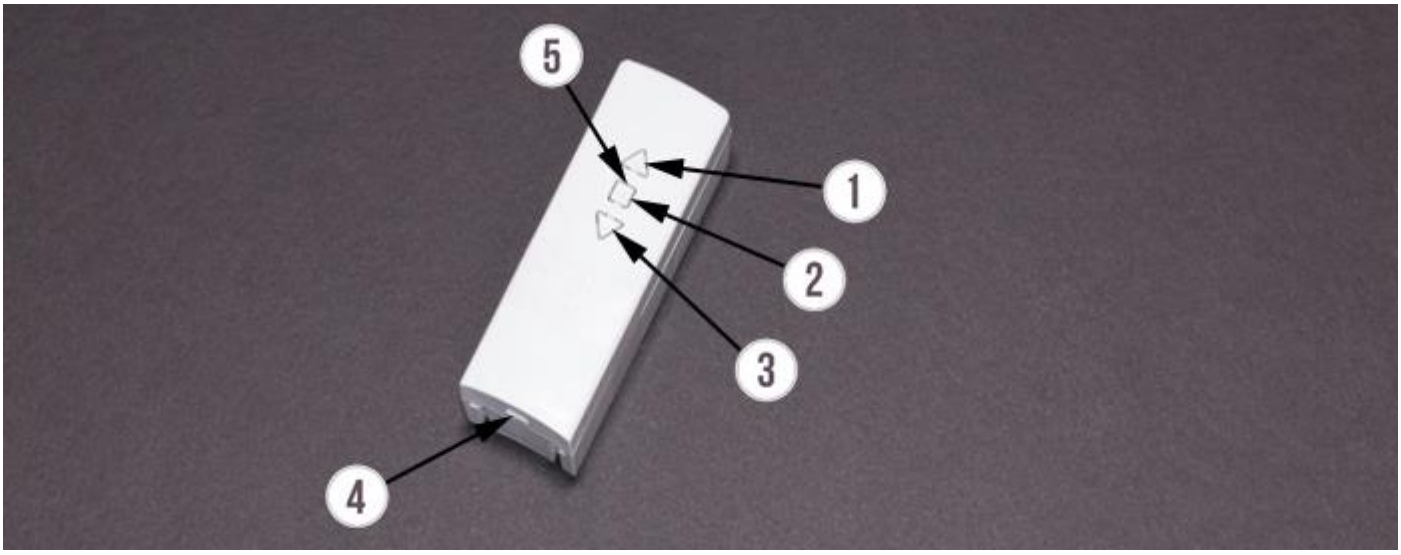
### Pic 1, all included parts




1. MOVE device*
2. Battery device**
3. Mounting plate
4. Screw and anchor

*can also be powered with only a power supply connected to the mains power
**can be charged with regular USB adapter or a solar panel

# Pic 2, MOVE device overview




1. Run clockwise button
2. Stop button
3. Run counter clockwise button
4. USB connector
5. LED indicator

The LED indicator can have the following states:

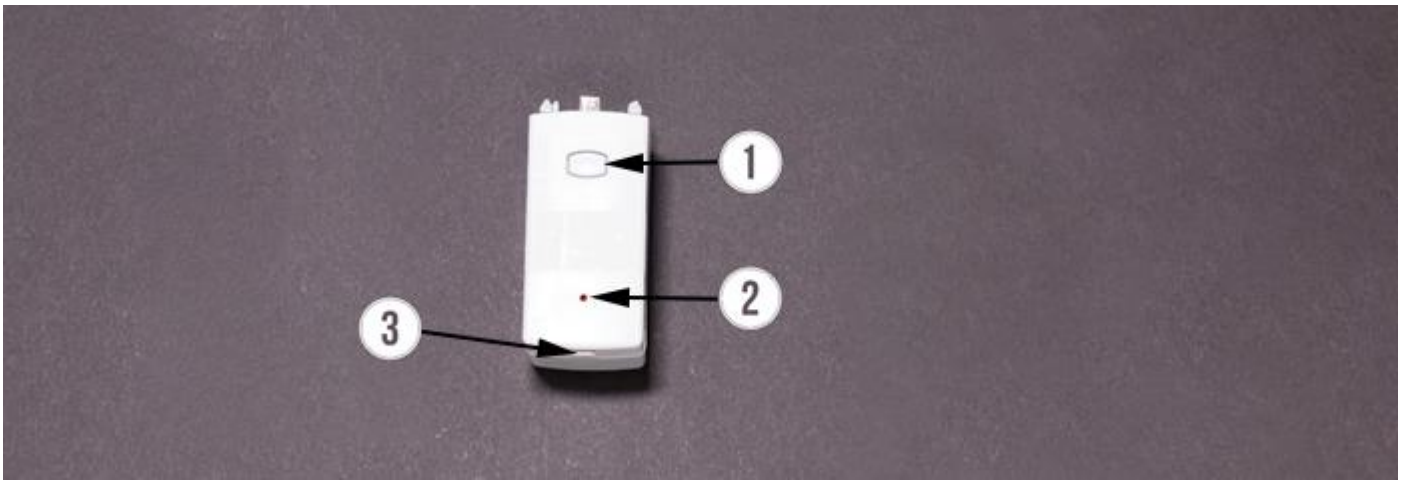
One quick blink when the battery device or USB power adapter is installed: Bootup
Continuously green blink: Paring mode
Constant illumination: Factory reset performed
Continuously green slow blink: Calibration “home” mode
Continuously green rapid blink: Calibration “end” mode
Continuously red rapid blink: Safety stop

Before calibration MOVE will only run for as long as any one of the two buttons “run clockwise” or “run counter clockwise” is pushed down. After calibration it will be possible to click on either the “run clockwise” or the “run counter clockwise” button to make MOVE go to the respective end positions.

MOVE can always be stopped by clicking the “stop” button on the unit. This is true no matter if the initial run command originates from the push/click of buttons “run clockwise” or “run counter clockwise” or from the app.

The output axel can run with different speeds, the speed is adjusted in the app.

# Pic 3, Battery device overview




1. Release button
2. LED indicator
3. USB connector

The release button is used when detaching the battery from the MOVE device.

The LED indicator can have the following states:
Continuously slow blink: Charging
Continuously rapid blink: Error indication

The battery device can be charged with any USB power adapter.

Charging begins as soon as the USB power connector is attached to the battery device. The battery device will terminate the charging by itself when the battery is fully charged.

# 4 Bead chain

## 4.1 Mount bead chain to pulley

The bead chain needs to be taut enough, so the bead chain doesn’t skip metal pulley.

Pic 4.1.1

## 4.2 Bead chain with a connector

**Important! If the bead chain has a connector make sure that the bead chain connector is running smoothly with metal pulley.**

Many different sizes of bead chain and connectors exist and MOVE is designed to fit as many as possible, but compatibility to make sure MOVE fits the product it’s about to be installed on need to be established before installation.

Pic 4.2.1

## 5 Cord loop

When installing the cord loop it’s important to make sure the center hole in the spool lines up correctly with the hole on the motor output axel. The metal pieces that are bent around the cord loop center hole should grip the motor output axel.

The cord need to be taut enough, so the cord doesn’t slip in the cord loop spool.

Pic 5.1.1

Pic 5.1.2

# 6 Cords

## 6.1 Prepare the cord

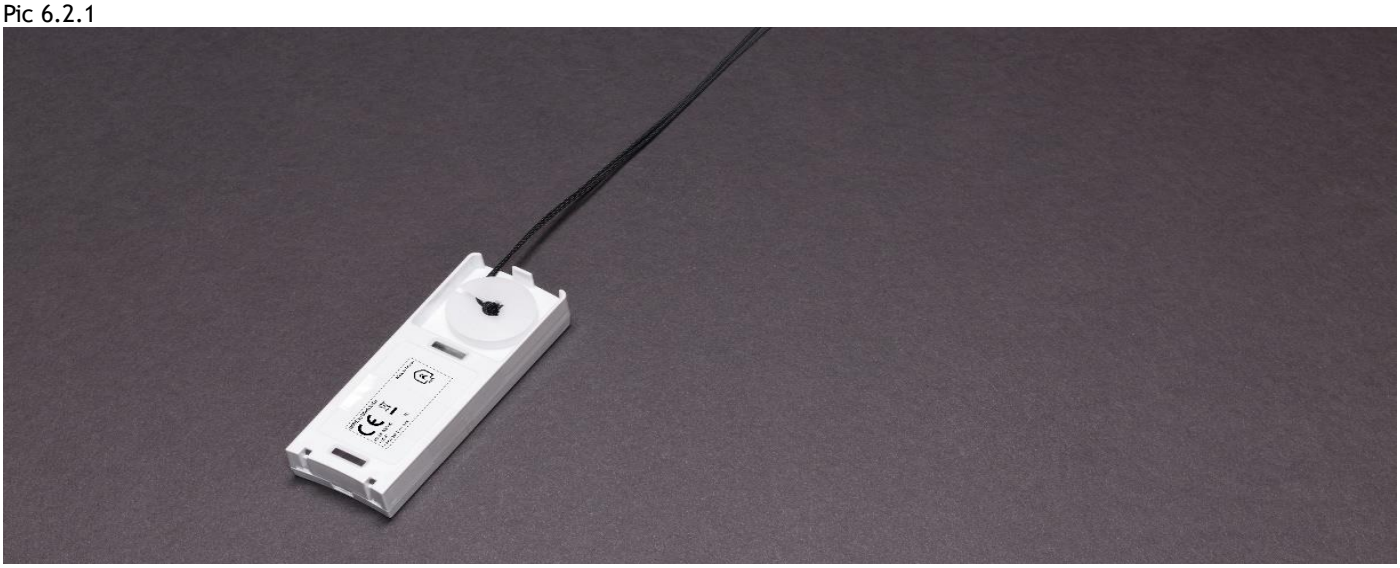
Products that are operated by just pulling a cord need some preparation in order for MOVE to operate them.

1. Remove all plastic parts from the cord
2. After removing the plastic parts make a knot on the end of the cord

Pic 6.1.1

## 6.2 Attached cord to pulley

Pic 6.2.1



Pic 6.2.2

# 7 Ways to install

## 7.1 Mounting Plate

Option 1
Use the Template to mark up the location for the unit.

Option 2

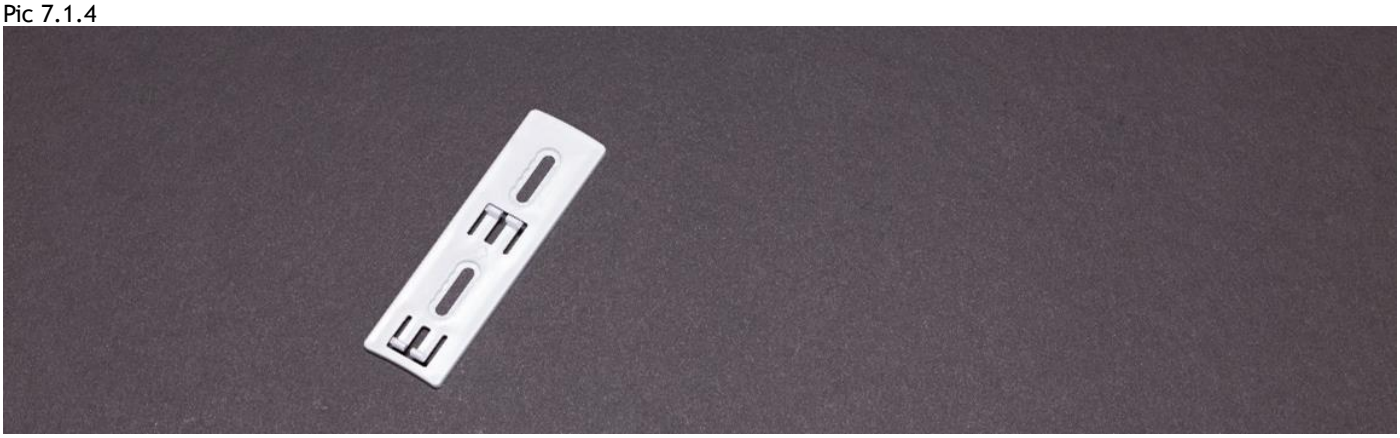
Use the Mounting plate to mark up the location of the Unit.

Use screws and anchor to attach mounting plate to wall.

Pic 7.1.3

The wall mounting plate

Pic 7.1.4



# 8 Install Unit

## 8.1 Install the Mounting Plate

Locate the Mounting plate on previous locate position and use Philips screw driver or drill to install it.

Pic 8.1.1

## 8.2 Attached Main unit to mounting plate

Attach the Bead chain to main unit pulley as shown on pic and aline mounting Plate to main unit.

Pic 8.2.1

## 8.3 fix Main unit to mounting plate

Push main unit towards the mounting plate and secure main unit.

Pic 8.3.1

Pic 8.3.2

# 9 Battery Pack

9.1 Install Battery Pack
Alien battery pack unit to main unit and push it from underneath. Battery unit connection should line up with main unit connection

Pic 9.1.1

9.2 Secure Battery pack with Main unit

Pic 9.2.1

# 11 Installation of the motor and the accessories

Check the condition of MOVE upon unpacking it, do not install if damaged.
Check if MOVE is compatible with the product you intend to install it on before installing, do not install if it's not compatible.
Make sure the product you intend to install MOVE on is working correct and don't have any defects, do not install if there are any defects.
The motor inside MOVE has a torque of about 1Nm and incorrect installation and/or usage can be dangerous.
Make sure that the cord or bead chain of the product you intend to install MOVE on is compatible, do not install if it does not fit.
Before installing MOVE make sure that there is enough free space in the window for MOVE to operate freely, do not install if there is a possibility that things can get caught and tangled in by the motor motion.
Only mount MOVE according to instructions in this manual.

**Warning! - Before starting, carefully read the warnings under section 1. It is important that you install MOVE as described in this manual to ensure safe use of the motor.**

## 11.1 Mounting MOVE

**Important! MOVE should only be installed indoors.**
Before you proceed read section 7. The installation options. You must use mounting plate to install the main unit.

### 11.1.1 Roller blinds installation

#### 11.1.1.1 Attaching MOVE to bead chain

1. Insert the bead chain according to section 4 and pic 4.1.1 (read section 4.2 if the bead chain has a connector)
**Important! If the bead chain has a connector make sure that the bead chain connector is running in the metal pulley, See section 4.2.**
**Important! Make sure the Bead Chain is taut before fasten the screws**
2. Mount the Mounting plate with correct screws as described in section 7
3. Attach the Move device to mounting plate as described in section 8.2 and pic 8.2.1
4. Attach the Battery device according to section 9 and pic 9.2.1

### 11.1.2 Vertical blinds installation

#### 11.1.2.1 Attaching MOVE to bead chain

This is the same procedure as installing MOVE on a roller blind, read section 11.1.1 for more information.

#### 11.1.2.2 Attaching MOVE to cord loop

1. Insert the cord in the cord loop according to section 5 and pic 5.1.1
**Important! Make sure the cord is taut before fasten the screws.**
2. Mount the Mounting plate with correct screws as described in section 7
3. Attach the Move device to mounting plate as described in section 8.2 and pic 8.2.1
4. Attach the Battery device according to section 9 and pic 9.2.1

### 11.1.3 Pleated blinds installation

1. Insert the cord according to section 6.2 and pic 6.2.1 or pic 6.2.2
**Important! Make sure to install MOVE in such way that the cord always will run with in tension.**
2. Mount the Mounting plate with correct screws as described in section 7
3. Attach the Move device to mounting plate as described in section 8.2 and pic 8.2.1
4. Attach the Battery device according to section 9 and pic 9.2.1

### 11.1.4 Venetian blinds installation

1. Insert the cord according to section 6.2 and pic 6.2.1 or pic 6.2.2
**Important! Make sure to install MOVE in such way that the cord always will run with in tension.**
2. Mount the Mounting plate with correct screws as described in section 7
3. Attach the Move device to mounting plate as described in section 8.2 and pic 8.2.1
4. Attach the Battery device according to section 9 and pic 9.2.1

## 11.2 Calibration

MOVE can be calibrated either through the app or through the physical buttons (section 3, pic 2, positions 1, 2, 3). Because MOVE can be installed in many different ways the buttons “run clockwise” and “run counter clockwise” can make the product on which MOVE is installed on run in different directions depending on installation.

Before calibration MOVE will only run for as long as any one of the two buttons “run clockwise” or “run counter clockwise” is pushed down. After calibration it will be possible to click on either the “run clockwise” or the “run counter clockwise” button to go to the respective end positions.

**Calibration of “home” (position 0**). This is the maximum open position.

1. Push and hold down the “stop” button
2. With the “stop” button pushed down, push and hold down the “run clockwise” button
3. Let go of both buttons. The LED indicator will then blink slow to indicate that the unit is in calibration “home” mode. Use the “run clockwise” and “run counter clockwise” buttons to set the maximum open position. The open position is the position when the product on which MOVE is installed on doesn’t cover the window.
4. When the desired open position is found push and hold down “stop”
5. With the “stop” button pushed down, push down “run clockwise”
6. Let go of both buttons. The position will now be saved

**Calibration of “end” (position 100).** This is the maximum closed position.

1. Push and hold down the “stop” button
2. With the “stop” button pushed down, push and hold down the “run counter clockwise” button
3. Let go of both buttons. The LED indicator will then blink rapid to indicate that the unit is in calibration “end” mode. Use the “run clockwise” and “run counter clockwise” buttons to set the maximum closed position. The closed position is the position when the product on which MOVE is installed on cover the window.
4. When the desired closed position is found push and hold down “stop”
5. With the “stop” button pushed down, push down “run counter clockwise”
6. Let go of both buttons. The position will now be saved

## 11.3 Pairing and controlling with a smart phone app

MOVE can be controlled through a smart phone app after the app and MOVE have paired with each other. First the app should be placed in paring mode. The first step to do this is to click “add new unit” in the application. The second step is to choose the type of function the new unit should perform, after that the app will be in pairing mode.

1. When the app is in paring mode the physical “stop” button on the MOVE unit should be pushed down for 10 seconds, the LED indicator will blink when MOVE is paring mode. MOVE will be in pairing mode for 2 minutes and if no connection is made MOVE will exit the pairing mode.

The steps that follow when adding a unit to an app will be described in the app.

## 11.4 Electrical connections

The main power source for MOVE is the detachable battery device. Inside the battery device is 2pcs Li-ion rechargeable batteries. The alternative power source that can be used is an AC to DC 5-9V, switch mode power supply with output regulated to 5-9V and a micro USB type B connector. The batteries inside the battery device can be charge either by energy from the solar panel or by energy from a USB power supply. MOVE can also be powered from only the power adapter without the battery device.

### 11.4.2 Solar panel

The solar panel must always be installed indoors.
1. Insert the cable from the solar panel to the battery device USB connector (section 3, pic 3, position 3).

### 11.4.3 Micro USB

Any 5-9VDC power adapter with micro USB type B connector can be used to power MOVE or be used to charge the battery pack.
1. Use the power adapter (section 3, pic 1, position 5)
2. Insert the micro USB type B connector from the USB power supply to MOVE USB connector (section 3, pic 2, position 4) to power MOVE. Or insert the micro USB type B connector from the USB power supply to the battery pack (section 3, pic 3, position 3) to charge the battery.
3. Connect the USB power supply to a power outlet.

## 11.5 Factory reset

In order to clear all settings and go back to the default state of a MOVE unit a factory reset can be performed.
To do this:

1. Remove the battery device and disconnect USB power supply if present
2. Push and hold down the “stop” button
3. With the “stop” button pushed down put back the battery device or connect the USB power supply and keep the “stop” button pushed down for 20 seconds.

# 12 Technical specifications

Main power source: Rechargeable Battery pack
Alternate power source: AC to DC 5-9V 1300mA, switch mode power supply with output regulated to 5-9V and a micro USB type B connector
Radio protocol: Bluetooth Smart
Motor torque: ≈1Nm (lift/pull capacity: 10kg/22lb)
Size MOVE device: Length 110mm, width 38mm, height 49mm
Size Battery device: Length 78mm, width 38mm, height 49mm
Size solar panel: Length 238mm, Width 55mm
Weight: 350

## 13 Disposal and recycling information

You must dispose of MOVE properly according to local laws and regulations. Because MOVE contains electronic components, MOVE must be disposed of separately from household waste. When MOVE reaches its end of life, contact local authorities to learn about disposal and recycling options, or simply drop it off at your local Teptron retail store or return it to Teptron. MOVE packaging materials must be disposed of in full compliance with local regulations.

European Union—Disposal Information
The symbol above means that according to local laws and regulations your product and/or its battery shall be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product and/or its battery at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

Union Européenne—informations sur l'élimination: Le symbole ci-dessus signifie que, conformément aux lois et réglementations locales, vous devez jeter votre produit et/ou sa batterie séparément des ordures ménagères. Lorsque ce produit arrive en fin de vie, apportez-le à un point de collecte désigné par les autorités locales. La collecte séparée et le recyclage de votre produit et/ou de sa batterie lors de sa mise au rebut aideront à préserver les ressources naturelles et à s'assurer qu'il est recyclé de manière à protéger la santé humaine et l'environnement.

Europaïsche Union—Informationen zur Entsorgung: Das oben aufgeführte Symbol weist darauf hin, dass dieses Produkt und/oder die damit verwendete Batterie den geltenden gesetzlichen Vorschriften entsprechend und vom Hausmüll getrennt entsorgt werden muss. Geben Sie dieses Produkt zur Entsorgung bei einer offiziellen Sammelstelle ab. Durch getrenntes Sammeln und Recycling werden die Rohstoffreserven geschont und es ist sichergestellt, dass beim Recycling des Produkts und/oder der Batterie alle Bestimmungen zum Schutz von Gesundheit und Umwelt eingehalten werden.

Unione Europea—informazioni per lo smaltimento: Il simbolo qui sopra significa che, in base alle leggi e alle normative locali, il prodotto e/o la sua batteria dovrebbero essere riciclati separatamente dai rifiuti domestici. Quando il prodotto diventa inutilizzabile, portalo nel punto di raccolta stabilito dalle autorità locali. La raccolta separata e il riciclaggio del prodotto e/o della sua batteria al momento dello smaltimento aiutano a conservare le risorse naturali e assicurano che il riciclaggio avvenga nel rispetto della salute umana e dell'ambiente.

Europeiska unionen—information om kassering: Symbolen ovan betyder att produkten och/eller dess batteri enligt lokala lagar och bestämmelser inte får kastas tillsammans med hushållsavfallet. När produkten har tjänat ut måste den tas till en återvinningsstation som utsetts av lokala myndigheter. Genom att låta den uttjänta produkten och/eller dess batteri tas om hand för återvinning hjälper du till att spara naturresurser och skydda hälsa och miljö.