# AUTOMATE.

#### MOTOR PROGRAMMING INSTRUCTIONS

# Li-ion & DC Motor

















SOFT STOP

ELECTRONIC LIMIT

SELECTABLE SPEED

433 MHZ BI-DIRECTIONAL

POSITION

BATTERY CHECK

USB CHARGE (Only for Li-ion Motor)





SOLAR OPTION LEVEL CONTROL







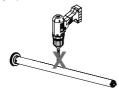


#### **SAFETY INSTRUCTIONS**

#### WARNING: Important safety instructions to be read before installation.

Incorrect installation can lead to serious injury and will void manufacturer's liability and warranty.







WARNING: Important safety instructions to be read before installation and use.

It is important for the safety of persons to follow the enclosed instructions. Save these instructions for future reference.

#### WARNING: Incorrect installation or use can lead to serious injury and will void manufacturer's liability and warranty.

- Read and follow all installation and safety instructions.
- This manual is also available on the website.
- Do not expose to water, moisture, humid and damp environments or extreme temperatures.
- Use or modification outside the scope of this instruction manual will void warranty.
- This appliance can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the hazards involved. Children should not play with the appliance. Cleaning and user maintenance should not be performed by children without supervision.
- Do not allow children to play with fixed controls. Keep appliance and remote controls away from children.
- Assembly, installation and programming must be performed by a suitably qualified installer.
- For use with motorized shading devices.
- Frequently inspect the installation for improper operation, signs
  of wear, imbalance or damage to cables or springs. Do not use if
  repair or adjustment is necessary.
- The appliance must be disconnected from its power source during cleaning, maintenance or when replacing parts.
   Maintenance and parts replacement should be performed by a suitably qualified installer/technician.
- The A-weighted emission sound pressure level of the appliance is less than or equal to 70dB(A).
- The appliance is for indoor use only.
- Disconnect the appliance from power or switch off automatic controls when maintenance, such as window cleaning, is being carried out in the vicinity.
- The appliance must be supplied only the safe, extra-low voltage corresponding to the marking on the appliance.
- Keep clear of the appliance when in operation.
- There are no user serviceable parts or batteries inside the appliance.
- Remote batteries should be replaced with the correctly specified type only.
- The mass and dimensions of the driven part must be compatible with the rated torque and rated operating time of the appliance.
- The driven part must be compatible with the rated torque and operating time of the appliance as follows:

For 0.5Nm motor series (MT01-1320-069001 and similar): Rated torque of 0.5Nm, rated operating time of 12 minutes and minimum tube diameter of ø20mm. For 1.1Nm motor series (MT01-1325-069002, MT01-1225-069002 and similar): Rated torque of 1.1Nm, rated operating time of 12 minutes and minimum tube diameter of ø25mm.

For 2.0Nm motor series (MT01-1328-069001, MT01-1228-069002 and similar): Rated torque of 2.0Nm, rated operating time of 12 minutes and minimum tube diameter of ø28mm.

- Fixed controls have to be clearly visible after installation.
- The appliance is intended to be installed at a height of at least 2.5m above the floor or any other accessible level surface.
- Before installing the appliance, remove any unnecessary cords or components and disable any equipment not needed for powered operation.

#### COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules / Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

[2] this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada 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.

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To satisfy FCC / IC RF exposure requirements, a separation distance of 20 cm or more should be maintained

between the antenna of this device and persons during device

To ensure compliance, operations at closer than this distance is not recommended

Les antennes installées doivent être situées de facon à ce que la population ne puisse y être exposée à une distance de moin de 20 cm. Installer les antennes de facon à ce que le personnel ne puisse approcher à 20 cm ou moins de la position centrale de l'antenne.

La FCC des éltats-unis stipule que cet appareil doit être en tout temps éloigné d'au moins 20 cm des personnes pendant son functionnement.



Do not dispose of in general waste. Please recycle batteries and damaged electrical products appropriately.





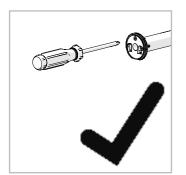
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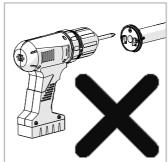
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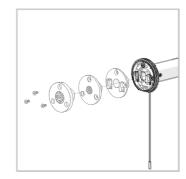
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# **ASSEMBLY**

#### ZERO HEAD ADAPTER

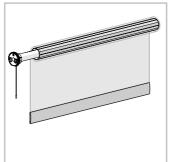






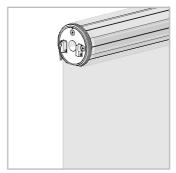
#### GENERIC CROWN, DRIVE & TUBE ASSEMBLY





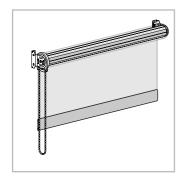
#### ZERO HEAD ANTENNA WRAP

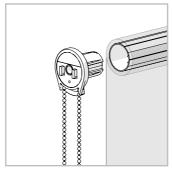


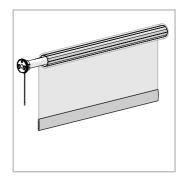


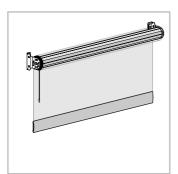
# 2 RETROFIT INSTALLATION

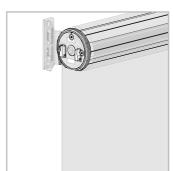
#### (1.1Nm & 2.0Nm MOTOR ONLY)

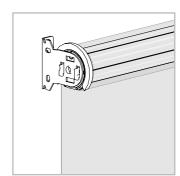






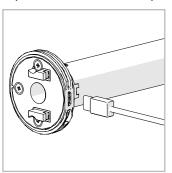




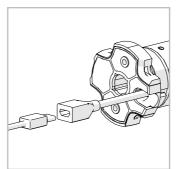


# 3 CHARGING/POWER SUPPLY

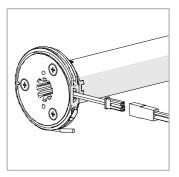
(LI-ION 1.1Nm & 2.0Nm ONLY)



(LI-ION 3.0Nm & 10.0Nm ONLY)



(DC 1.1Nm & 2.0Nm ONLY)



Requries a continuous 12V DC Power Source.

### 4 P1 BUTTON FUNCTIONS

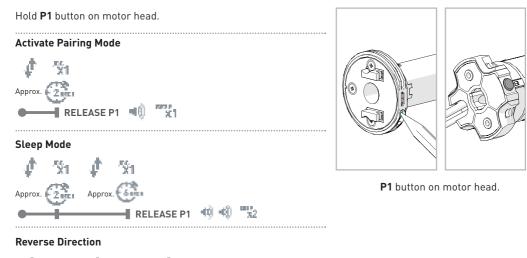
#### 4.1 Motor state test

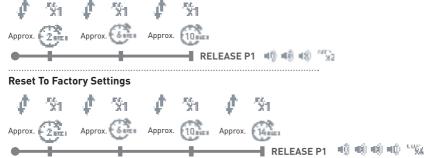
This table describes the function of a short **P1** Button press/release (<2 seconds) depending on current motor configuration.

P1 Press	Condition	Function Achieved	Visual Feedback	Audible Feedback	Function Described
	If limit is NOT set	None	No Action	None	No Action
Short Press	If limits are set	Operational control of motor, run to limit. Stop if running	Motor Runs	None	Operational control of motor after pairing and limit setting is completed first time
	If motor is in "Sleep Mode" & limits are set	Wake and control	Motor wakes and runs in a direction	None	Motor is restored from Sleep Mode and RF control is active

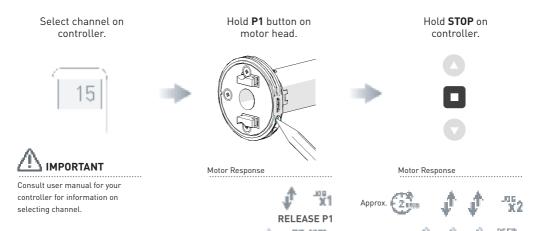
# 4.2 Motor configuration options

The  ${\bf P1}$  Button is utilized to administer motor configurations as described below.





#### 5.1 Pair motor with controller





Motor is now in step mode and ready for setting limits

#### 5.2 Check motor direction

To check travel direction of shade, press **UP** or **DOWN** on controller.



Quick Press = Step Long Press = Continuous Travel To reverse shade direction, hold both  $\boldsymbol{\mathsf{UP}}$  and  $\boldsymbol{\mathsf{DOWN}}.$ 

Until the motor responds.



Motor Response





Damage to shade may occur when operating motor prior to setting limits. Attention should be given.



IMPORTANT

#### **Set Limits** 5.3



Cycle shade up and down prior to setting limits to settle fabric

Move shade to the desired highest or lowest position by pressing the UP or DOWN buttons on controller.





To save upper limit, hold **UP** and **STOP**.







Motor Response











Move shade to the desired highest or lowest

position by pressing the UP or DOWN buttons on controller.





To save lower limit, hold **DOWN** and **STOP**.



Motor Response





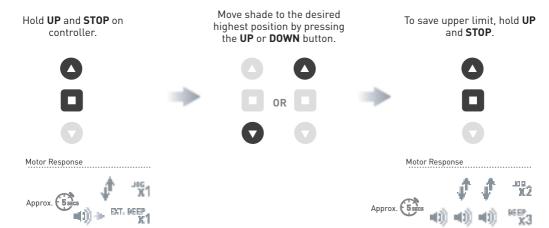




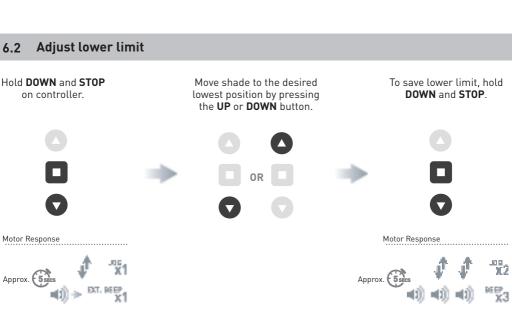
After setting limits, motor will automatically exit from initial set-up mode.

### **ADJUSTING LIMITS**

### Adjust upper limit



#### 6.2





The bottom limit should be set ~ 1.38 in. (35mm) below the Ultra-Lock to disengage the auto lock mechanism when the shade is raised.

# 7 CONTROLLERS AND CHANNELS

# 7.1 Using P2 Button on existing controller to add a new controller or channel

- A = Existing controller or channel (to keep)
- **B** = Controller or channel to add or remove

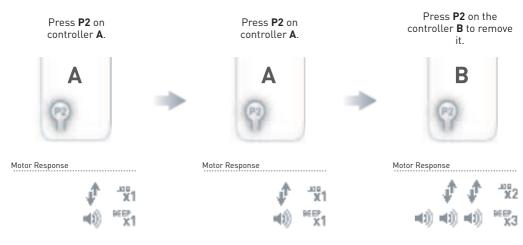




**IMPORTANT** Consult user manual for your controller or sensor

# 7.2 Using a pre-existing controller to add or delete a controller or channel

- A = Existing controller or channel (to keep)
- **B** = Controller or channel to add or remove



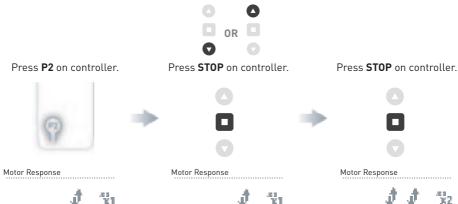


**IMPORTANT** Consult user manual for your controller or sensor

# **FAVORITE POSITIONING**

#### Set a favorite position 8.1

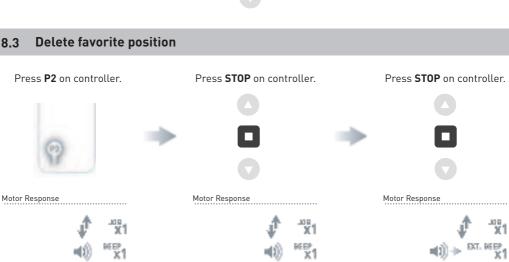
Move shade to the desired position by pressing the UP or DOWN button on the controller.



#### Send shade to favorite position 8.2



### 8.3



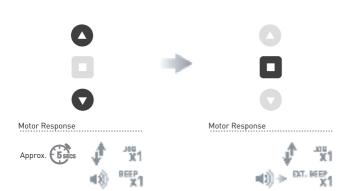
# 9 TILT & ROLLER MODE

### 9.1 Toggle motor to Tilt Mode

Hold UP & DOWN on controller.

Default motor mode is Roller after initial Limits have been set, use following steps to change to Roller Mode.

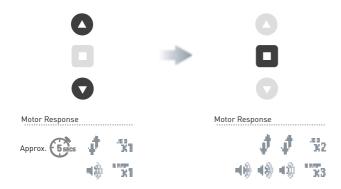
Press STOP on controller.



# 9.2 Toggle Motor to Roller Mode

If motor is in Tilt Mode, use following steps to change to Roller Mode.

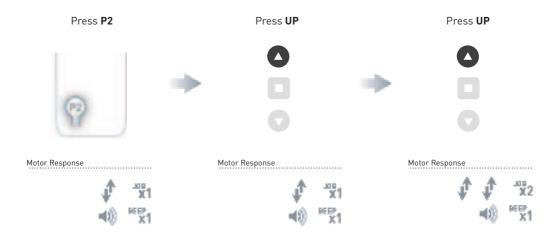
Hold **UP** & **DOWN** on controller. Press **STOP** on controller.



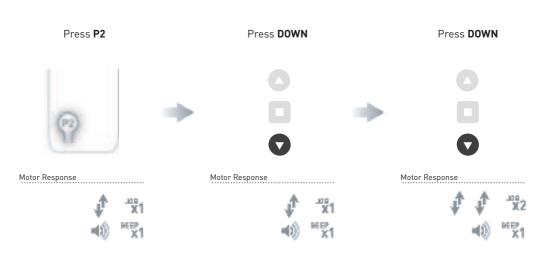
# 10 ADJUSTING SPEED

# 10.1 Increase Motor Speed

Default motor mode is the slowest speed.



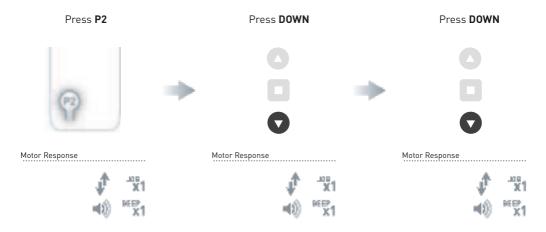
# 10.2 Decrease Motor Speed



# 11 SOFT STOP CONFIGURATION

# 11.1 Turn Soft Stop OFF

Motor must be in slowest speed to turn Soft Stop OFF.



# 11.2 Turn Soft Stop ON

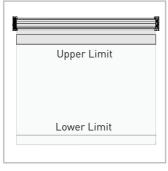
Motor must be in fastest speed to turn Soft Stop ON.

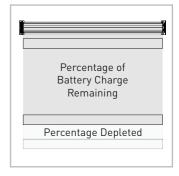


#### **BATTERY CHECK FUNCTION**

#### 12.1 Send Shade to battery charge level

Shade must be at Upper Limit. Hold **UP** Motor Response





Shade must be at Upper Limit Hold **UP** for Approx. 5s

Shade moves to percentage of battery charge remaining

NOTE: This feature is can only be used with a DC motor when it is using a Barrery Pack as its power source.

#### **CHARGING LED** 13

(ONLY FOR LI-ION MOTORS)

Approx. 5 secs

### 13.1 Turn Charging LED ON/OFF

Motor must be at Lower Limit.



#### **CHARGING LED STATUS**



SOLID GREEN Motor is fully charged



**BLINKING GREEN** Motor is charging. Battery is greater than 50%.





**BLINKING GREEN & RED** Motor is charging. Battery is lower than 50%.

#### **SLEEP MODE** 14

If multiple motors are grouped on a single channel, Sleep Mode may be used to put all but 1 motor to sleep, allowing programming of just the one motor that remains "Awake". See page 6 for detailed P1 functions.

#### Enter Sleep Mode

Sleep mode is utilized to prevent a motor from incorrect configuration during other motor setup.

Hold P1 button on the motor head

Motor Response





 $\{(\hat{0}, -\hat{0})\} = \{(\hat{0}, -\hat{0})\}$ 

#### Exit Sleep Mode: Method 1

Exit sleep mode once the shade is ready.

Press and release P1 button on the motor head

Motor Response



Exit Sleep Mode: Method 2

Remove power and then re-power the motor.

Problem	Cause	Remedy
Motor is not responding	Battery in motor is depleted or Power Supply is not working	Recharge with a compatible charger
	Insufficient charging from solar PV panel	Check connection and orientation of PV panel
	Transmitter battery is discharged	Replace battery
	Battery is inserted incorrectly into transmitter	Check battery polarity
	Radio interference/shielding	Ensure transmitter is positioned away from metal objects and the aerial on motor or receiver is kept straight and away from metal
	Receiver distance is too far from transmitter	Move transmitter to a closer position
	Charging failure	Check power supply to motor is connected and active
Motor beeps x10 when in use	Battery voltage is low	Recharge with a compatible charger
Cannot program a single motor (multiple motors respond)	Multiple motors are paired to the same channel	Always reserve an individual channel for programming functions. Use Sleep Mode to program individual motors.

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16 NOTES	
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