

# emove®

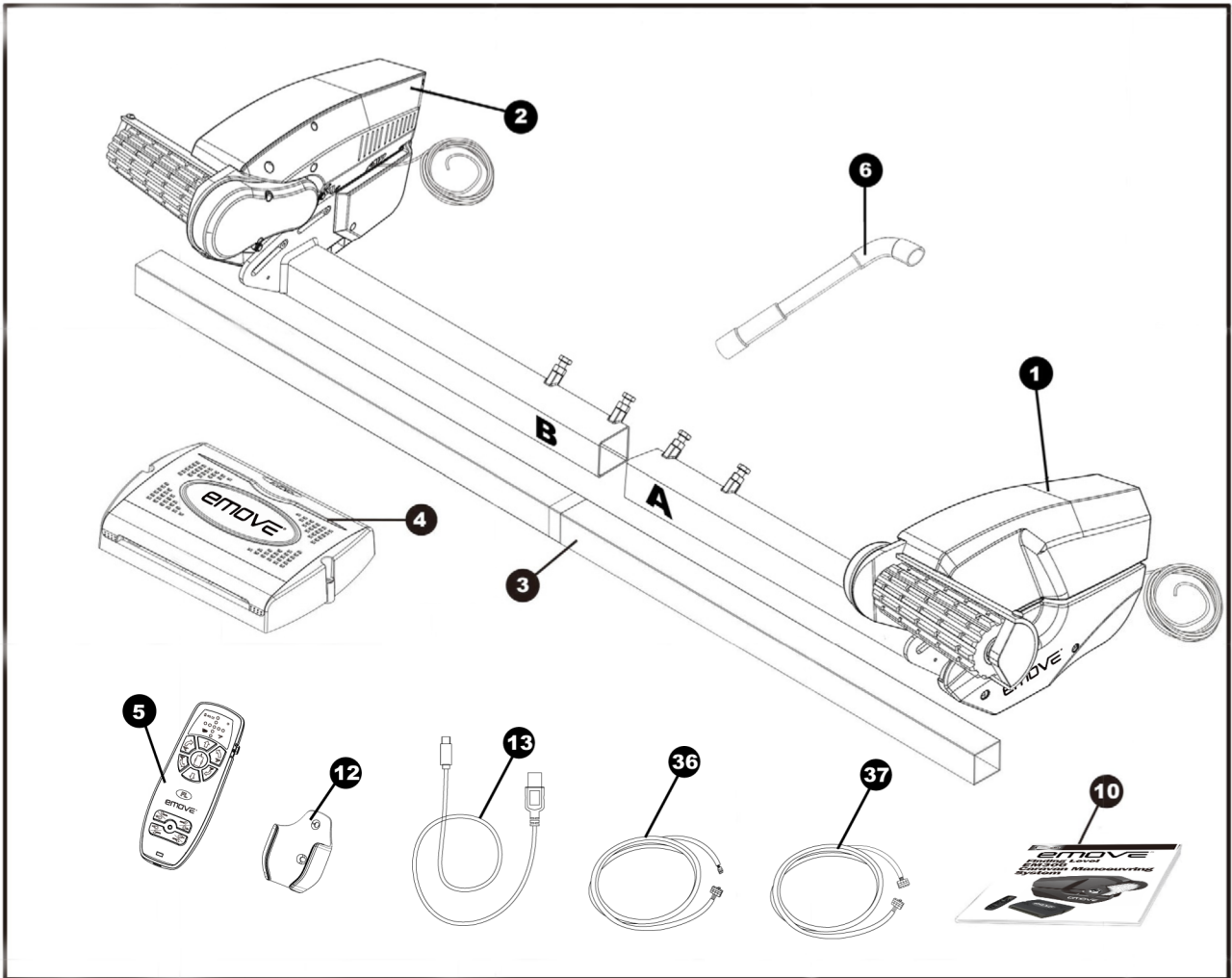
**Finding Level**

**EM306**

**Caravan Manoeuvring  
System**



### Package Contents



<p><b>7</b></p>	<p><b>8</b></p>	<p><b>9</b></p>	<p><b>11</b></p>	<p><b>14</b></p>
<p><b>15</b></p>	<p><b>17</b></p>	<p><b>22</b></p>	<p><b>24</b></p>	<p><b>20</b></p>
<p><b>25</b></p>	<p><b>28</b></p>	<p><b>29</b></p>	<p><b>30</b></p>	<p><b>19</b></p>

## Parts Identification & Fitting Diagrams

Fig.1

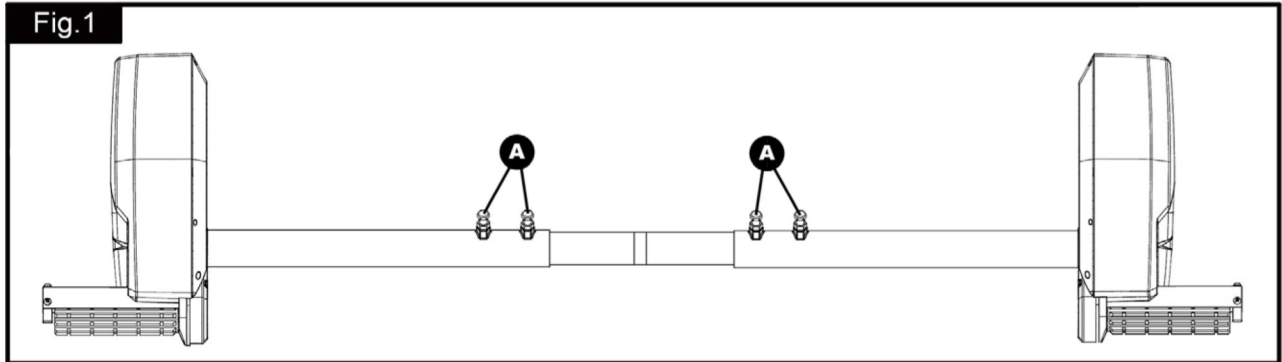


Fig.2

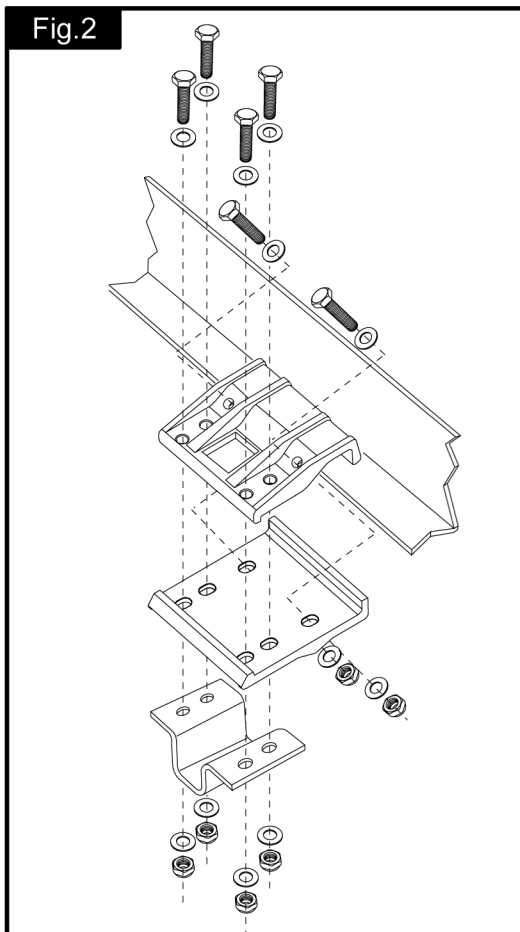


Fig.3

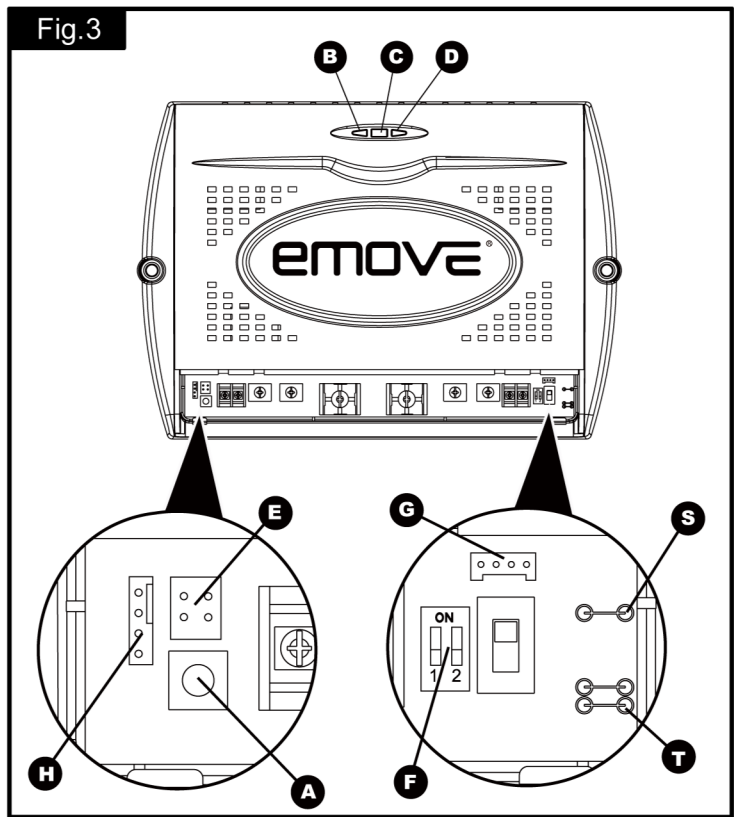


Fig.4

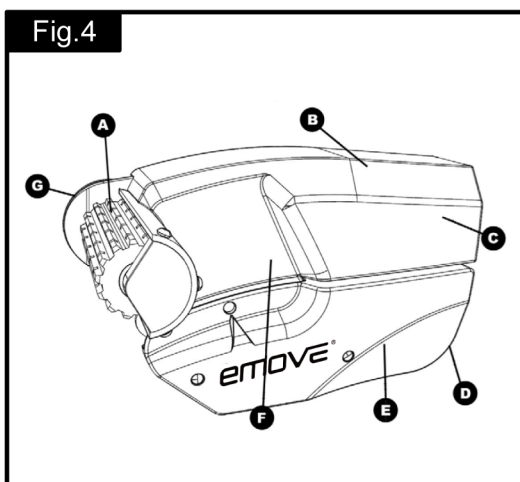
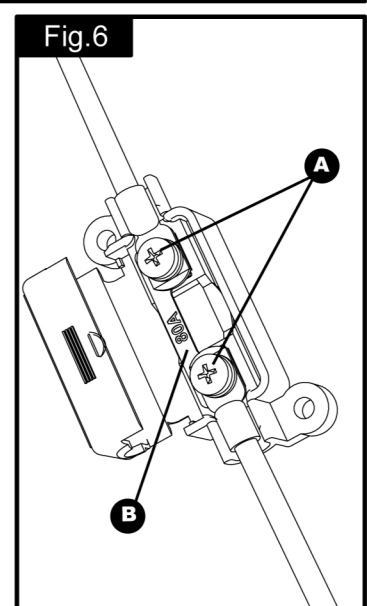


Fig.5



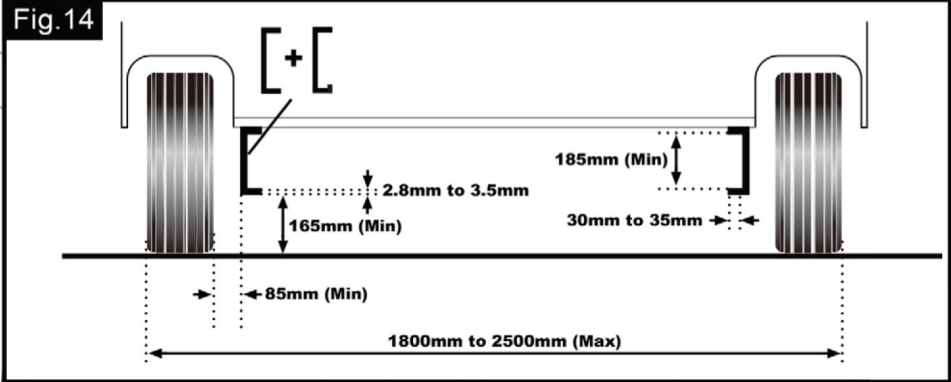
Fig.6



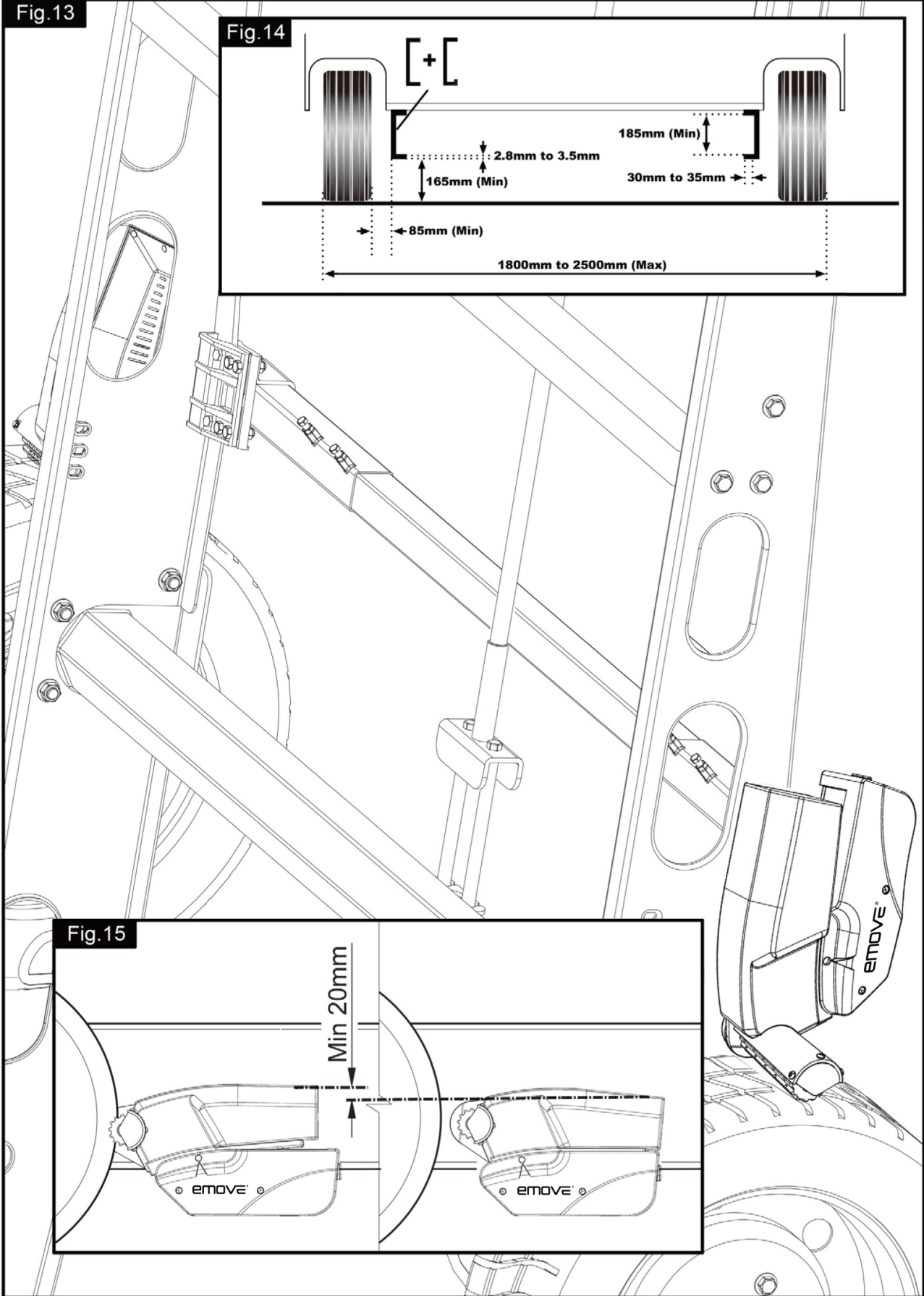
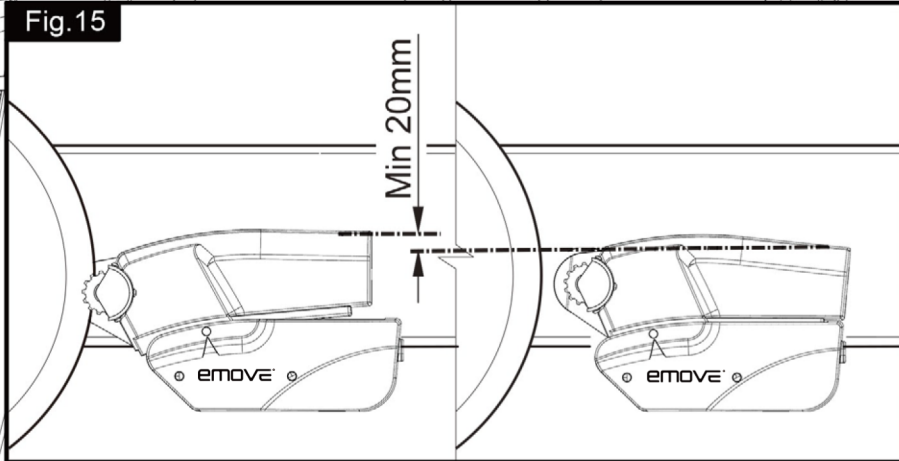
**Parts Identification & Fitting Diagrams**

**Fig.13**

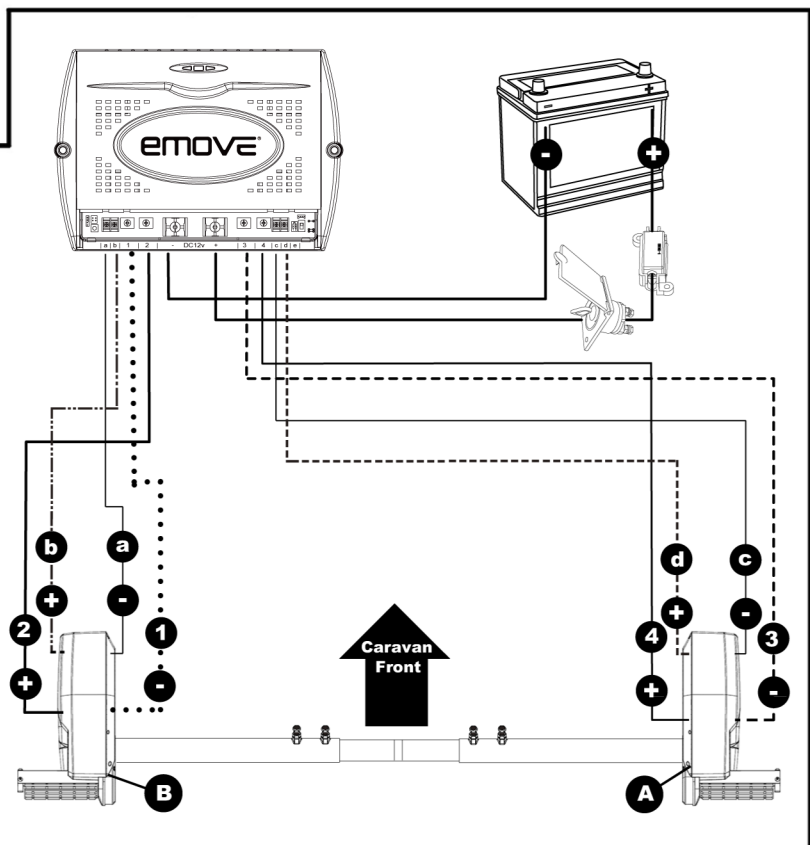
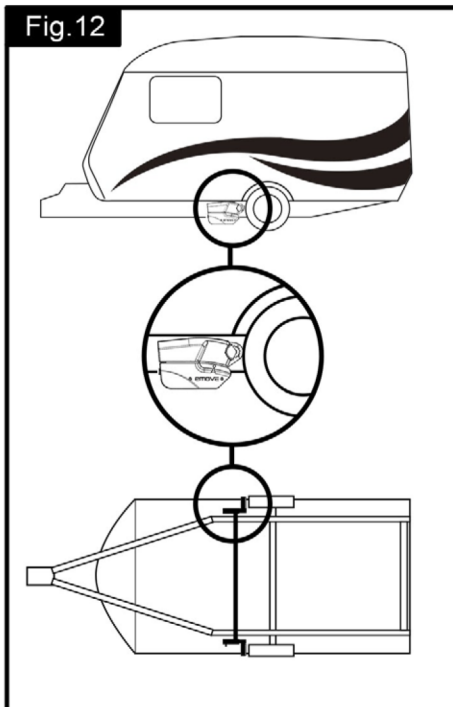
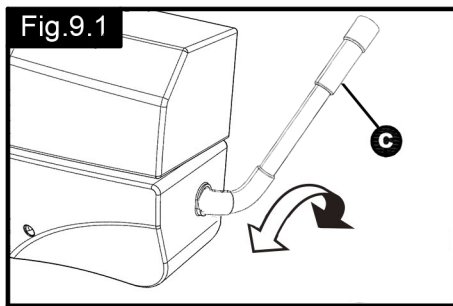
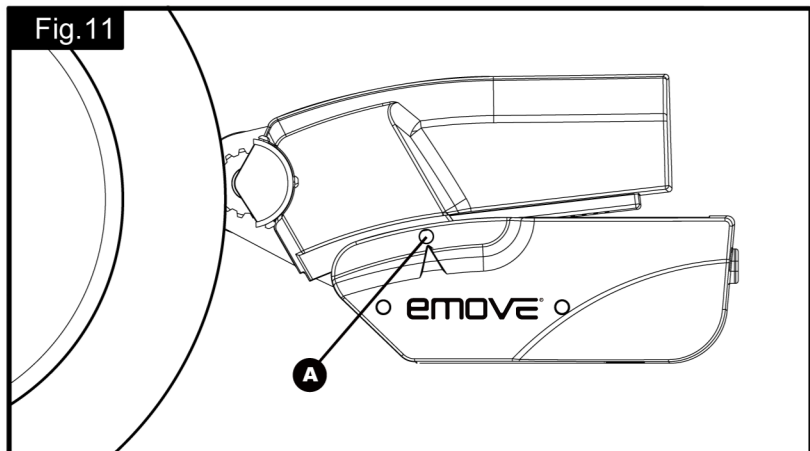
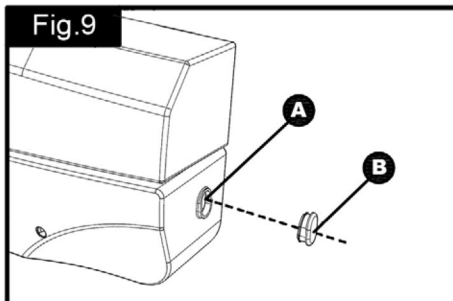
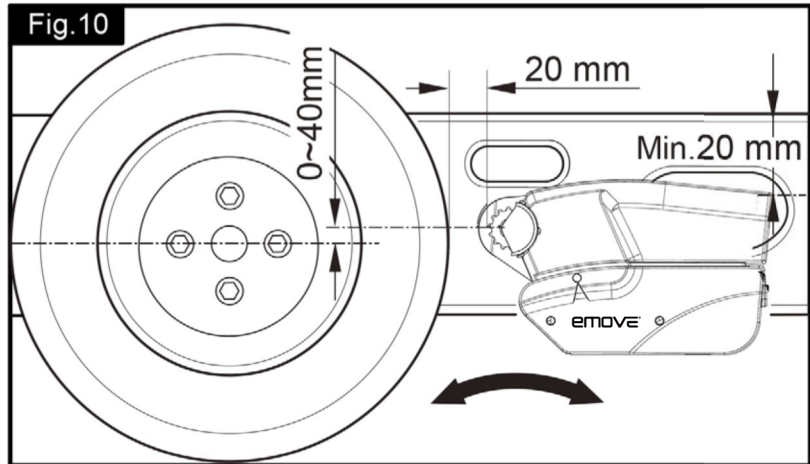
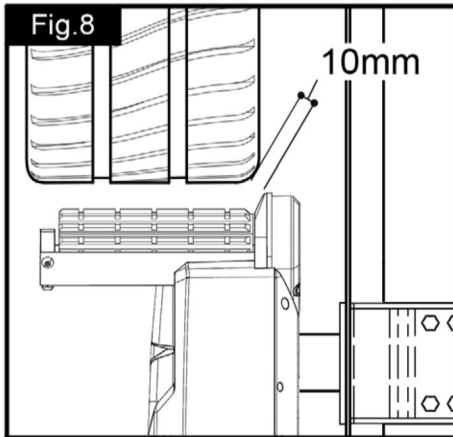
**Fig.14**



**Fig.15**



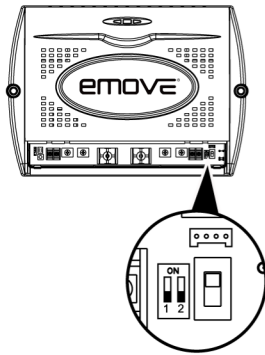
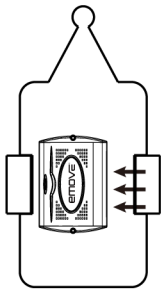
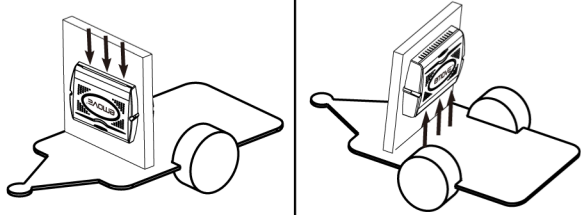
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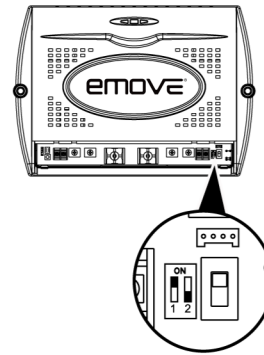
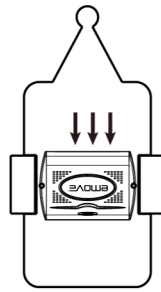
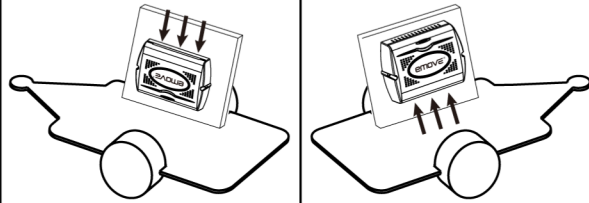
## Parts Identification & Fitting Diagrams

Fig. 16

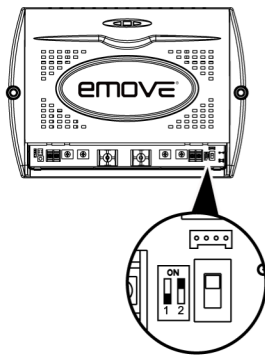
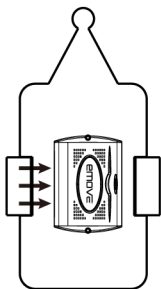
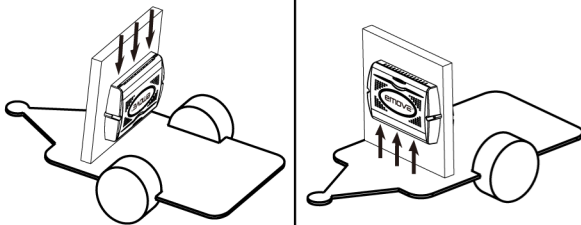
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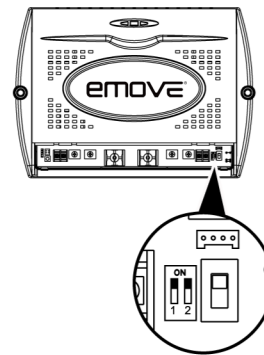
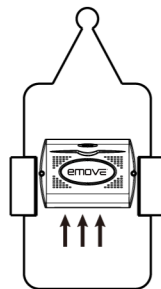
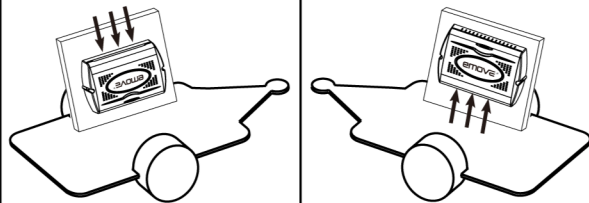
2



3



4



Parts Identification & Fitting Diagrams

Fig.19

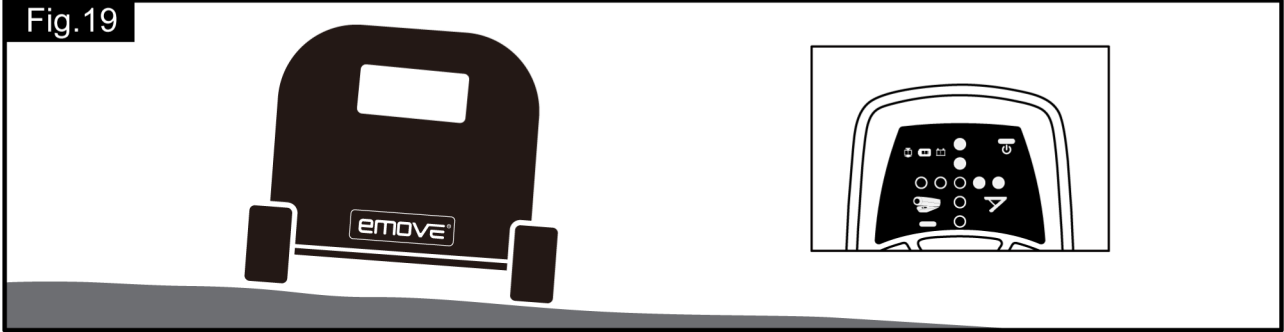


Fig.20

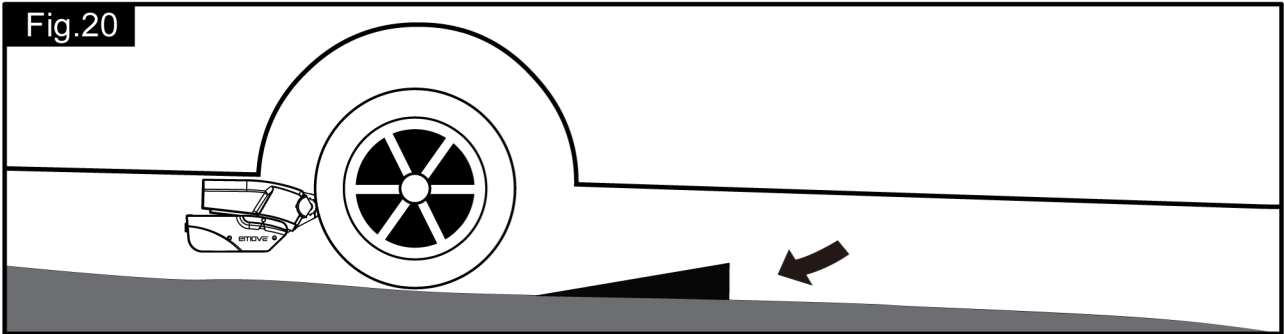


Fig.21

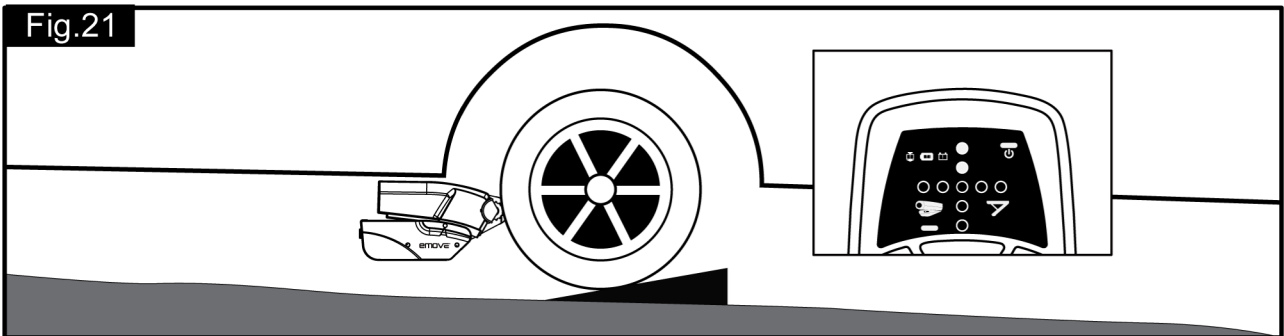


Fig.22

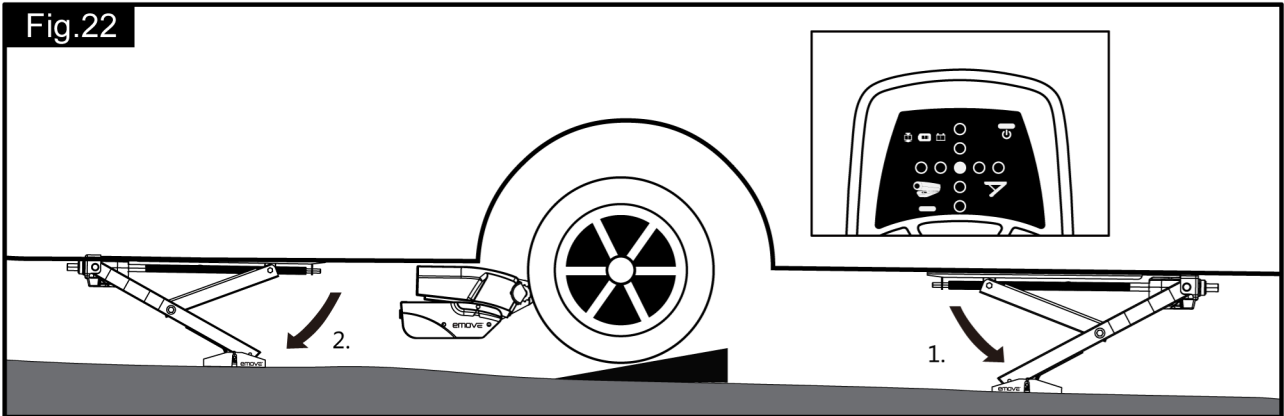
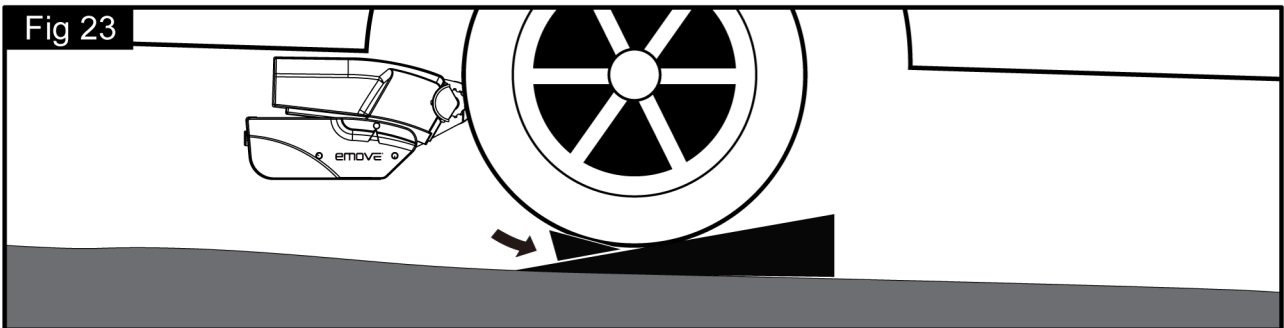


Fig.23



Parts Identification & Fitting Diagrams

Fig. 17

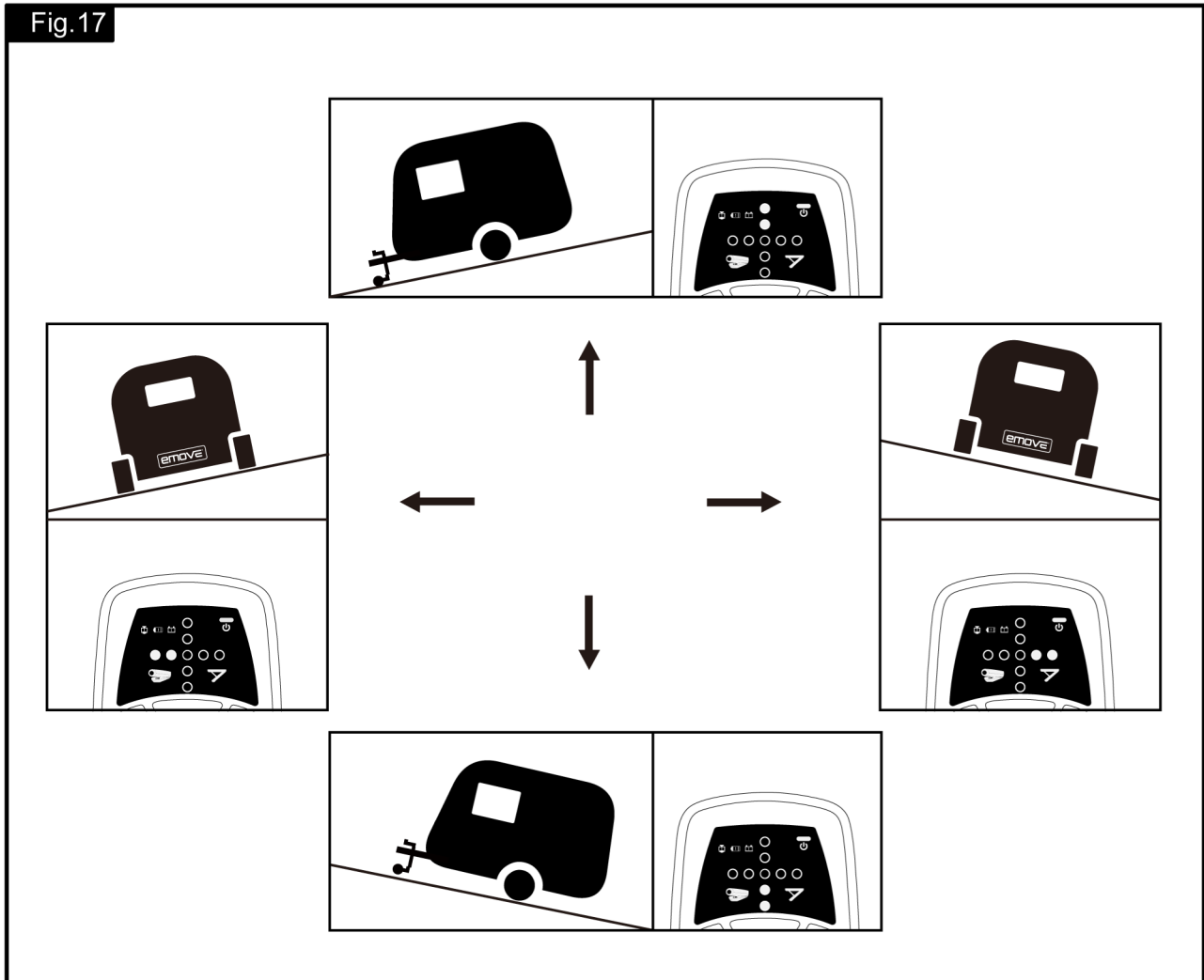
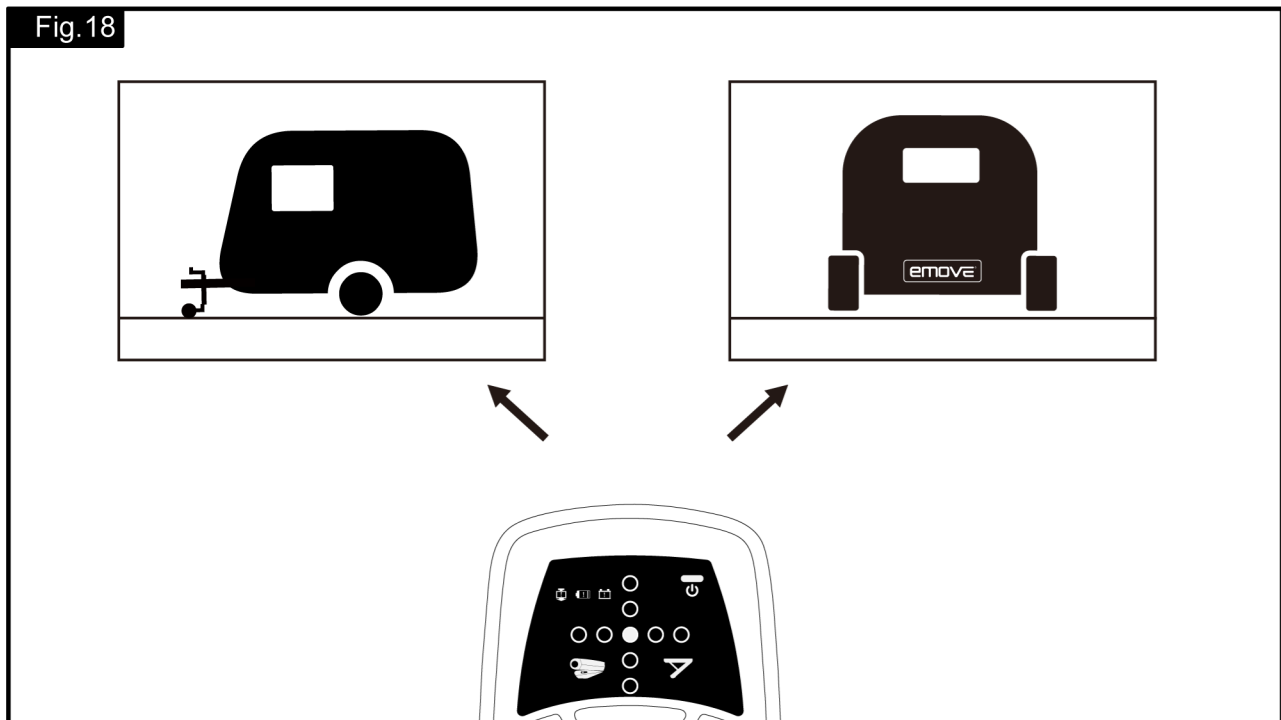


Fig. 18







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## INTRODUCTION

Congratulations on choosing the emove EM306 caravan manoeuvring system. This has been produced according to very high standards and has undergone careful quality control procedures.

Simply by using the remote control handset you can move your caravan effortlessly into any position required within operating guidelines. Soft start and soft stop technology allows you to manoeuvre your caravan even more accurately without any shocks.

The caravan manoeuvring system consists of two 12V motor-power rollers, a 12V electronic control unit and a remote control handset. To function, the motor-powered rollers must be engaged against the tyres of your caravan. The emove EM306 caravan manoeuvring system is provided with an automatic engaging system. By pushing two buttons on the remote control, both motor-powered rollers will be simply pressed on the tyre. Once this is done the manoeuvring system is ready for operation. The remote control will allow you to move your caravan in any direction. You can even rotate the caravan on its own axis without moving forwards or backwards (*this function just can work under the "single-axle function"*).

By the integrated level display, you can see on the remote handset if the caravan is level.

By means of the integrated Finding Level feature, the caravan can be easily leveled on the axle (level necessary, not included). If the manoeuvring system is extended with the autoSteady system, then the corner steadies will also be automatically turned out and the caravan will also be leveled automatically in the longitudinal direction.



**Before proceeding with installation and starting to use the manoeuvring system, please read this manual very carefully and be aware of all the safety instructions! The owner of the caravan will always be responsible for correct use. Keep this manual inside your caravan for future reference.**

## INTENDED USE

The emove EM306 caravan manoeuvring system is suitable for single axle and double axle caravans.

Suitable only for L-profiled and U-profiled chassis with a chassis thickness between min. 2.8mm and max. 3.5mm.

Depending on the weight of the caravan, the manoeuvring system cannot overcome obstructions that are more than about 2cm in height without assistance (please use wedges as a ramp).

The standard installation kit only provides parts for installing the caravan manoeuvring system within the measurements given in Fig. 14.

## SPECIFICATIONS

Designation	emove EM306
Operational voltage	12 Volt DC
Average current consumption	20 Ampere
Maximum current consumption	100 Ampere
Transmitting frequency remote control	868MHz
Internal battery remote handset	3,7V - 1600mAh
Speed	approx. 9cm per sec.
Weight (2 motor set)	approx. 34kg (exclusive battery)
Permissible overall Weight single axle (2 motors)	2250kg hard flat surfaces, 1800kg other surfaces, 1500kg on 18% gradient.
Permissible overall Weight double axle (2 motors)	2250kg hard flat surfaces, 1800kg other surfaces, 1500kg on 18% gradient.
Permissible overall Weight double axle (4 motors)	3500kg hard flat surfaces, 2500kg other surfaces, 1800kg on 18% gradient.
Minimum width (caravan/trailer)	1800mm
Maximum width (caravan/trailer)	2500mm
Maximum tyre width	205mm
Power source (battery)	LiFePO <sub>4</sub> : 12V, 20Ah Lead acid: 12V, 80Ah (min.)

## INSTALLATION - SAFETY GUIDELINES



**Read this user manual carefully before installation and use. Failure to comply with these rules could result in serious injury or damage to property.**



**These symbols identify important safety precautions. They mean CAUTION! WARNING! SAFETY FIRST! IMPORTANT INFORMATION!**

### Before starting installation under the caravan:

Check the towing load of your vehicle and the gross weight of your caravan in order to establish whether they are designed for the additional weight. The manoeuvring system itself has a weight of about 34kg and a traditional lead acid battery has a weight of about 20-25kg .

Check the minimal installation dimensions of the manoeuvring system based on figure 14.

Only use adapters and accessories that are supplied or recommended by the manufacturer.

Check that the caravan is disconnected from the battery supply and the mains electrical supply.

Check that the tyres are not over worn and do have the same size and design (fitting to new or nearly new tyres is the best option).

Make sure that the tyre-pressures are correct to the manufacturer's recommendation.

Make sure the chassis is in good condition without any damage and is free from rust, dirt etc.

Stop work immediately if you are in doubt about the assembly or any procedures and consult one of our engineers (Please refer to contact information on the last page of this manual).

Locate the battery isolation switch to be accessible at all times when parking and moving the caravan.

Do not remove, change or alter any parts of the chassis, axle, suspension or brake mechanism. Any drilling of holes in the chassis is not allowed.

Do not install the unit if you are under the influence of drugs, alcohol or medication that could impair your ability to use the equipment safely.

## INSTALLATION - MECHANICAL COMPONENTS



**FOR PROFESSIONAL INSTALLATION ONLY! These instructions are for general guidance. Installation procedures may vary depending on caravan type.**



**Working under a vehicle without appropriate support is extremely dangerous!**

**Please refer to figure 13 for an overview of the whole assembly fully fitted.**

Place the caravan on a hard, level surface. The use of a lifting ramp or an assembly pit is ideal for access and personal safety.

Unpack all the components and check for the presence of all parts (see package contents list). Write down, on the product warranty registration card, the serial number (this is located on an aluminium plate on the side of one of the motor units . )

Clean the area of your chassis where you need to mount all components to ensure a good fitting.

Make sure the caravan is prepared for installation. Check before installation that important areas, such as drains/spare tyre etc. do not cause any obstruction to the function of the caravan manoeuvring system.

Ensure both rollers are in the DISENGAGED position (Fig. 10), as the unit will not fit correctly otherwise (Note: when fully disengaged, the pointer is positioned in the beginning of the yellow area).

Loosely assemble the left hand motor unit (1), right hand motor unit (2) and main cross bar (3) (Fig. 1). The nuts (Fig. 1A), on the cross bar (3) to secure both motor units, must be no more than finger-tight at this stage.

**Note:** In principle, the unit should be fitted in front of the caravan road wheels, but if fitting in this position is not possible because of obstacles or a too high hitch ball weight, it is permissible to fit it to the rear of the wheels by rotating the whole assembly (Fig. 1) by 180° degrees.

Loosely fit the two clamping assemblies (7) to the chassis (Fig. 2 & 13) and attach. Use the bolts M10x60, nuts M10 and washers M10 (8,17,18) and put them in the diagonal positioned holes of the aluminium chassis clamp plates. Nuts must be no more than finger-tight.

Assemble the pre-mounted manoeuvring system on the aluminium chassis clamp plates by using the two U-shaped brackets (9), bolts M10x50, nuts M10 and washers M10 (16,17,18). Nuts must be no more than finger-tight.

Make sure that aluminium drive rollers of the motors are approximately on the same altitude as the centre (axle) of the caravan wheel (0mm~40mm, see Fig. 10). As well make sure that between the top of the motor housing and the floor of the caravan is minimal 20mm space to make sure the motors can move freely (see Fig. 10 & 15). To compensate a possible unevenness (and lower the motors), remove has a set of distance plates available. One set can compensate 15mm. In total three sets can be used so that an altitude of 45mm can be compensated.



**Adequate ground clearance: Please notice that the min. distance between the lowest line of motors and ground is 110mm, no matter what kind of chassis or install situation.**

Make sure that the main cross bar (3) is positioned in the middle of the caravan (the centre of the bar is marked).

With the main assembly is loosely fitted onto the chassis, slide the whole assembly along the chassis until the rollers are 20mm away from the surface of the centre each tyre (Fig. 10). Two 20mm spacers (30) are provided.



**It is vitally important that each roller is at exactly the same distance away from the tyre. The whole assembly must be parallel to the caravan/trailer axle.**



**Slide the motor units in or out of the cross bar (3) accordingly to ensure the roller will have the maximum possible contact with the tread of the tyre. Ensure that the position of each motor unit does not obstruct shock absorbers (if fitted) and that the gear cover (Fig. 8) is not too close to the surface of the tyre/shock absorber. The minimum clearance when the drive units swivelled in is 10mm.**



**Re-check that there is sufficient space available (minimal 20mm) between the top of the motor housing and the floor of the caravan so the motors can move freely (Fig. 15).**

Fully tighten the four bolts (Fig. 1A) on the main cross bar (3) and lock them by the additional nuts.

Fully tighten all the nylon nuts on both clamping assemblies (Fig. 2). First tighten the diagonal placed M10x60 bolts with a 20Nm torque, and then M10x50 bolts to a 40Nm torque.

Re-check the distance of 20mm from the rollers to the tires, the position of the aluminium rollers in addition to the surface of the tire and finally the distance between the gear cover (Fig. 8) and the tires & shock absorbers (>10mm). The weight of the caravan must be on the wheels when doing this. If necessary, loosen the bolts and re-adjust the position of the assembly.



**Re-check that all bolts/nuts have been tightened to the correct torque!**

The main mechanical components have now been installed.

## INSTALLATION - ELECTRICAL/ELECTRONIC COMPONENTS



**Make sure the 12V supply from the battery and any 230V electricity supply are disconnected.**

Remove battery cable terminals and disconnect any external electrical power before starting work.

Find a suitable place for the electronic control unit (4), such as a storage area, under a seat or a bed. Make sure this place is dry and close to the battery (40cm to 60cm). The electronic control unit can be mounted vertically on a side wall or be mounted flat. When mounted vertically, the connections must point downwards to avoid any short-circuits by objects falling into.

Fix the electronic control unit securely into position with two screws M5x40 (35). Note: if the provided screws are not of suitable length or type for the desired location/material please substitute these as appropriate.

Drill a 25mm hole through the floor of the caravan approximately 150mm centrally in front of the control unit (4) terminals.



**Caution! Take extra care to avoid any chassis members, gas pipes and electrical wires!**

Route and connect the motor-cables in accordance with wiring diagram (Fig. 12) (red = positive, black = negative).

The wiring diagram (Fig. 12 + Table. A (see below)) depicts the wiring route when installing the motor units in front of the wheels/axle towards the 'A' frame. Please refer to table B (below) for fitment of the motor units to the rear of the axle.

**Table. A**

**FRONT OF AXLE FITTING**

(4,6mm<sup>2</sup> cables)

Motor unit A Positive (+) cable to terminal 4  
 Motor unit A Negative (-) cable to terminal 3  
 Motor unit B Positive (+) cable to terminal 2  
 Motor unit B Negative (-) cable to terminal 1

Automatic engaging system (1,5mm<sup>2</sup> cables):

Motor unit A: Positive (+) cable to terminal d  
 Motor unit A: Negative (-) cable to terminal c  
 Motor unit B: Positive (+) cable to terminal b  
 Motor unit B: Negative (-) cable to terminal a

**Table. B**

**REAR OF AXLE FITTING**

(4,6mm<sup>2</sup> cables)

Motor A Positive (+) cable to terminal 1  
 Motor A Negative (-) cable to terminal 2  
 Motor B Positive (+) cable to terminal 3  
 Motor B Negative (-) cable to terminal 4

Automatic engaging system (1,5mm<sup>2</sup> cables):

Motor unit A: Positive (+) cable to terminal b  
 Motor unit A: Negative (-) cable to terminal a  
 Motor unit B: Positive (+) cable to terminal d  
 Motor unit B: Negative (-) cable to terminal c

Mark the motor cables for both motor units using the cable markers (25). The cables for the left and the right motor should have the same length. Avoid any loops.

Connect the spade connectors to the motors. Please note that the red cable is connected to the terminal under the moulded '+' symbol on the weatherproof terminal cover.

Remember to leave a small amount of slack cable near the motors to allow for their movement when the drive rollers are engaged.

Route all the cables along the underside of the caravan floor, inside the supplied convoluted trunking (11) (this will protect the electrical cables against sharp edges and dirt) and through the drilled hole.

Secure the cable trunking (11) to the chassis or under body of the caravan by using the P-Clips (20) and screws (19).

Once the all cables are through the drilled hole next to the control unit (4), cut the cables, ensuring that they are the same length. Remove approx. 5mm of the insulation from the ends. Fix the big spade fork connectors (24) to the motor cables and the small spade fork connectors (34) to the automatic-engaging-cables by using crimping pliers. A secure and good quality connection on each cable is essential.

Attach the spade fork connectors to the terminals on the control unit (see wiring diagram Fig. 12) and fix them tightly by the screws. A safe and good quality connection on each cable is again essential.

Find a suitable place for the battery power isolation switch (29) which includes an external holder with hinged cover. **Important: The switch must be mounted onto the exterior body of the caravan and be easily accessible from the outside of the caravan in case of any emergency.** The switch must be mounted close to the location of the battery in order to keep the length of the battery cables to a minimum.

Use the cardboard template to position the hole positions and the drill holes. Mount the switch and the housing with the bolts, washers and nuts, and finally mount it on the caravan with stainless steel screws (19).

Route the positive (+) power cable (including fuse) from the battery to the battery power isolation switch (29) and then further to the control unit (4).

The electronic connections of the battery power isolation switch (29) must be covered by the supplied rubber isolation shells (33).

Route the negative (-) power cable directly to the control unit (4).



**No cables may be routed over the control unit!**

Again it is recommended to use the supplied trunking (11) to protect the cables against sharp edges. Attach the trunking with P-clips (20) and P-clip screws (19).

Cut the cables to an appropriate length and remove approx. 5mm of the insulation from the ends. Fix the battery terminal connectors by using crimping pliers. Two types of battery terminal connector (22 & 23) are provided for use as appropriate. A secure and good quality connection on each cable is essential.

Connect the battery cables (14 & 15) to the control unit (4): Attach the spade fork connectors to the positive (+) and negative (-) terminal of the control box and fix them tightly by the screws.

Connect the battery cables to the existing battery terminals (red = positive, black = negative).



**Caution! Make sure that you do not reverse the Positive (+) and Negative (-) connections. Incorrect connection (reverse polarity) will result in damage to the control unit.**

Seal the 25mm hole in vehicle under body using plastic body sealant.

Now that the control unit is mounted and connected, the level XYZ direction can be defined and the level to be calibrated.

Based on the table below figure 16 determine the position of the two-level switches (Fig. 3F). First put the switches in the correct position (Fig. 16.1 to 16.4) that belongs to the applicable assembly of the control unit. Then make sure you caravan is levelled out in all directions by using a bubble level. The best result is obtained by the use of a bubble level (the longer the better) to put on the caravan floor and to measure the level at the position of the axis (centre caravan). Once the caravan is levelled out, the level of the caravan manoeuvring system should be calibrated.

- Check the electronic installation in accordance with the installation instructions. Ensure that the drive rollers are not engaged, the caravan battery and the remote handset battery are in good condition and fully charged.
- Please ensure that the battery isolation switch is on.
- Activate the remote handset by sliding the slide switch up (Fig. 5A). The green LED (Fig. 5H) and the red LEDs (Fig. 5Q and 5V) on the remote handset will now light up continuously.
- Press simultaneously the four buttons 5E (right forward), 5F (left rear), 5D (left forward) and 5G (right rear) of the remote handset and hold (about 4 seconds). The red LED (Fig. 3D) will light on the control unit.
- After 4 seconds, the buttons can be released and the level calibrated. The green LED in the level display will light up continuously.

Finally find a suitable place for the remote handset wall holder (12) and fix this by the supplied screws (out of reach of children or other unauthorised people). Possibly near a wall outlet for easy to charging the remote handset.

Installation of the caravan manoeuvring system is now complete.

## INSTALLATION – TWIN AXLE

This manual describes the general installation and use of the manoeuvring system for single axle caravans.

When you use the manoeuvring system for a twin axle caravan, please check the following:

Permissible overall weight twin axle (2 motors)	1800kg (1500kg on 18% gradient)
Permissible overall weight twin axle (4 motors)	2500kg (1800kg on 18% gradient)

### **2 motors:**

The procedure for installing a 2 motors manoeuvring system on a twin axle caravan is the same as for a single axle caravan. The electronic control unit (4) only must be prepared for twin axle use:

Turn off the battery power isolation switch and move the single/twin axle function switch (Fig 3S/T) on the control unit to the twin axle position (Fig. 3T), so that the manoeuvring system can be used for a twin axle caravan. In the twin axle function when making curves, all wheels will drive but at a different speed.

### **4 motors:**

The procedure for installing a 4 motors manoeuvring system on a twin axle caravan is similar than for a single axle caravan but then with two sets of manoeuvring system.

Follow the procedure for **installing the mechanical components** twice: one time for the manoeuvring set mounted in front of the twin axle and one time for the manoeuvring set mounted behind the twin axle.

Follow the procedure for **installing the electrical/electronic components** twice: one time for the manoeuvring set mounted in front of the twin axle and one time for the manoeuvring set mounted behind the twin axle.

**Note:** When installing the four motors it will be necessary to use **one** higher capacity battery to supply both sets of manoeuvring system (including two electronic control units and two of battery power isolation switches). Do not use two separate batteries for a 4 motors manoeuvring system on a twin axle caravan.

Then connect the twin axle communication cable (37) to the twin axle communication cable socket (Fig. 14H) of the two control units. This allows both control units to communicate with each other.

Now **both** electronic control units (4) must be prepared for twin axle use:

Turn off the battery power isolation switch and move the single/twin axle function switch (Fig 3S/T) on the control unit to the twin axle position (Fig. 3T), so that the manoeuvring system can be used for a twin axle caravan. In the twin axle function when making curves, all wheels will drive but at a different speed.

Now that both control units are connected with each other and are set in the twin axle mode, the manoeuvring system be operated via the main (master) control unit remote handset. The second control unit (slave) will follow the commands of the main control unit. Also the level display will be controlled on the situation of the main control unit.

The remote handset and the control unit are synchronised with each other in the factory. If the control unit or the remote handset is replaced, they must be re-synchronised as described below:

- Check the electronic installation in accordance with the installation instructions. Ensure that the drive rollers are not engaged, the caravan battery and the remote handset battery are in good condition and fully charged.
- Please ensure that both battery isolation switches are on.
- Activate the remote handset by sliding the slide switch up (Fig. 5A). The green LED (Fig. 5H) and the red LED (Fig. 5Q) on the remote handset will now light up continuously.
- Press the reset button (Fig. 3A) on the control unit. All three LED's on the control unit (Fig. 3B, 3C & 3D) will flash slowly.
- Press both forwards (Fig. 5B) and reverse (Fig. 5C) button on the remote handset for about 3 seconds. Then the handset buzzer will give a short beep to confirm that the synchronisation is complete.
- After successful synchronisation, the green LED on the control unit (Fig. 3B) and on the remote handset (Fig. 5H) will illuminate continuously.
- Turn the remote handset "Off" and then "On" again so both control units will be activated.

The installation of the caravan manoeuvring system for twin axle use is now complete. For details of the operation, use and all the LED and button functions, please refer to the standard chapters of this manual.

## INSTALLATION – FINDING LEVEL (INCL. AUTOSTEADY)

This manual describes the general installation and use of the manoeuvring system for single axle caravan. If you are using the manoeuvring system in combination with the emove autoSteady system, then both systems still have to be connected.

First switch off the battery power isolation switch of the manoeuvring system and the autoSteady system.

Connect the Finding Level communication cable (36) to the Finding Level connection (Fig. 3G) of the manoeuvring system control unit and the communication connection of the autoSteady system control unit. This allows both control boxes to communicate with each other.

The remote handset and the EM306 control unit are already synchronized at the factory. If, however, the remote handset or the control unit has been replaced, they must be synchronized again (as described in chapter **OPERATION – CONTROL UNIT**).

The control unit of the autoSteady system must also be synchronized with the control unit of the manoeuvring system:

- Turn on the battery power isolation switch of both systems.
- Press the reset button on the autoSteady control unit (see operating instructions for the autoSteady system). The autoSteady control unit will automatically synchronize with the manoeuvring system control unit and the green communication LED of the autoSteady control unit will continuously light up.

After the successful synchronization between the manoeuvring system control unit and the autoSteady control unit, the leveling system has to be calibrated (if not already done during the electrical installation):

- Please make sure you caravan is levelled out in all directions by using a bubble level. The best result is obtained by the use of a bubble level (the longer the better) to put on the caravan floor and to measure the level at the position of the axis (centre caravan). Once the caravan is levelled out, the level of the caravan manoeuvring system should be calibrated.
- Check the electronic installation in accordance with the installation instructions. Ensure that the drive rollers are not engaged, the caravan battery and the remote handset battery are in good condition and fully charged.
- Please ensure that the battery isolation switch is on.
- Activate the remote handset by sliding the slide switch up (Fig. 5A). The green LED (Fig. 5H) and the red LEDs (Fig. 5Q and 5V) on the remote handset will now light up continuously.
- Press simultaneously the four buttons 5E (right forward), 5F (left rear), 5D (left forward) and 5G (right rear) of the remote handset and hold (about 4 seconds). The red LED (Fig. 3D) will light on the control unit.
- After 4 seconds, the buttons can be released and the level calibrated. The green LED in the level display will light up continuously.

Installation of the Finding Level system including the autoSteady system is now complete.

## OPERATION - SAFETY GUIDELINES

Practice operating the manoeuvring system in an open area before using for the first time. This is to fully familiarise yourself with the handset / manoeuvring system operation.



Before use, always check the caravan manoeuvring system for any damage.



When towing or moving the caravan please be aware, at all times, that ground clearance is reduced when the manoeuvring system has been fitted.



Always ensure that children and pets are kept well out of the way during operation.



When operating the system, ensure that no hairs, fingers or other body parts, clothing or any other objects carried on the body can become trapped by moving or rotating parts (e.g. drive rollers).



In the event of malfunctions, pull on the handbrake immediately and turn off the main isolation power switch.



To maintain signal strength, always make sure that, during manoeuvring, the distance between the remote control and the caravan does not exceed 5 metres.



Due to the nature of a radio signal, it can get corrupted by external terrain or objects. So there may be small areas around the caravan where the quality of reception reduces, hence the manoeuvring system may stop momentarily.



Always be aware that the manoeuvring system increases the weight of your caravan or trailer. So this reduces the payload of the caravan.



Do not exceed the total safe working load of 1800kg laden weight (caravan including load) when 2 motors are used and 2500kg laden weight (caravan including load) when 4 motors (twin axle) are used.



Always make sure that the rollers are fully disengaged from the tyres when the manoeuvring system is not in use. This is better for the tyres and for the system.



Always make sure that the rollers are fully disengaged before towing/moving the caravan by vehicle or manpower. This can damage the tyres, manoeuvring system and the towing vehicle.



Always make sure that after you have finished using the manoeuvring system, the battery power isolation switch (29) is switched off and the key is removed and stored in a safe place (out of reach of children or other unauthorised people). If you don't switch off, the battery will be discharged by the small "standby" current.



Always make sure that the remote control handset is switched off and stored (in the wall holder) in a safe place (out of reach of children or other unauthorised people). If you don't switch off, the battery will be discharged by the small "standby" current.



Do not rely on the manoeuvring system to act as a brake.



Always apply the handbrake after manoeuvring, before disengaging the drive rollers from the tyres.



Do not use the manoeuvring system as a support when jacking up the caravan, since this can damage the drive unit.



Depending on the weight of the caravan, the manoeuvring system cannot overcome all obstructions without assistance. Please use wedges as a ramp.



All wheels and tyres on the caravan must be of the same size and design. If tyres are worn or new tyres are fitted, the distance between the drive rollers and the tyres may need readjusting (see "Installation - Mechanical Components").



Sensitive objects such as cameras, DVD-Players etc. Must not be kept in the stowage box near the control unit or the motor cable. They can be damaged by the electromagnetic fields.



Do not make any modifications on the caravan manoeuvring system (mechanical or electronically). This can be very dangerous! No warranty claim will be accepted and we cannot guarantee the function of the system if any modifications are made. We will not be liable for any damage whatsoever caused as a result of incorrect installation, operation or modification.





## OPERATION - MOTOR UNITS

The manoeuvring system has two motor units (1 & 2). In general they are mounted in front of the axle of the caravan. Both units are identical but cannot be switched.

### Fig. 4

- A. Aluminium drive roller
- B. 12V Motor
- C. Motor connection terminals (+ and -)
- D. Motor for automatic engaging system
- E. Base unit
- F. Drive unit
- G. Gear

### Traction indicator label:

The yellow-green-red traction indicator label (Fig. 11A), on the side of each motor unit indicates if the roller is depressing the tyre sufficiently to provide adequate traction.

- If the pointer is in the yellow area – Rollers are not touching or depressing the tyre sufficiently.
- If the pointer is in the green area – Rollers should be connecting correctly to the tyre (margin of 15mm).
- If the pointer is in the red area – Rollers are connected to the tyre but in an extreme position. It could be that the tyre of the caravan has insufficient air pressure or the drive unit has been knocked out of position and a visit to a workshop is required to reposition the assembly.

### Disconnect the motor powered rollers in case of emergency:

In the case that the caravan battery is discharged to far to automatically take of the motor powered rollers of the tyre, or there is a defect, you can also do this manually. See figures 9 & 9.1.

Take the plastic cap (Fig. 9B) at the rear side of the housing of the motor for the automatic engaging system. If necessary use a screwdriver. Place the emergency key (6) on the emergency socket in the motor unit (Fig.9A & 9.1C) and turn it until the motor unit including motor powered rollers are in the beginning position. Repeat this also on the motor unit on the other side. Put the plastic caps back on the motor housing.

As soon as the battery is charged again, or the problem is solved, the motor powered rollers automatically work again.

## OPERATION - REMOTE CONTROL HANDSET

The remote handset (5) is activated by moving the slide switch up (Fig. 5A). Once activated the power LED (Fig. 5Q), the manoeuvring system LED (Fig. 5V) and the communication LED (Fig. 5H) will illuminate and the directional controls can now be used to manoeuvre your caravan.

### Fig. 5

- A. Handset power switch: slide switch
- B. Caravan forwards: both wheels rotate in forwards direction
- C. Caravan reverse: both wheels rotate in reverse direction
- D. Caravan left forwards: right wheel rotates in forwards direction
- E. Caravan right forwards: left wheel rotates in forwards direction
- F. Caravan left reverse: right wheel rotates in reverse direction
- G. Caravan right reverse: left wheel rotates in reverse direction
- H. Communication LED (green): reflects the communication status between the remote handset and caravan manoeuvring system
- I. Two handed service for automatic engaging of the motor powered rollers to the tyre
- J. Two handed service for automatic disengaging of the motor powered rollers from the tyre
- K. Engaging system LED (blue): reflects status of the automatic engaging system
- L. Overload LED (red): Amp overload protection is activated. Wait about 60 seconds and try again
- M. Remote handset battery LED (blue): The internal battery of handset is near empty and needs to be recharged
- N. Caravan battery LED: Caravan battery voltage too low or too high
- O. Level Display: Indicates whether the caravan is level by means LED's
- P. Charging LED (red/green) indicates the status of the charging of the internal battery of the remote handset
- Q. Power LED (red)
- R. Mini USB connector for charging the internal battery
- S. Finding Level LED: Finding Level function is active
- T. Activate Finding Level function
- U. autoSteady selection LED: remote handset is set to autoSteady control
- V. Maneuvering system selection LED: remote handset is set to maneuvering system control

When you drive straight forwards or reverse (press button B or C), it is also possible to adjust the direction by additional pressing button D or E (when driving forwards) or button F or G (when driving reverse).

In addition, the 'right forward' (E) and 'left reverse' (F) buttons or 'left forward' (D) and 'right reverse' (G) buttons may be pressed at the same time to turn the caravan around on its own axis without moving forward or backward (*this function just can work under the "single-axle function"*).

When you switch within 2 seconds from forward driving to reverse driving (and the other way around), a small delay of 1 second will appear to protect the electronics and the motors



**The slide switch (Fig. 5A) also acts as an "Emergency stop".**

#### **The automatic engaging system:**

To activate the automatic engaging system of the motor powered rollers on the tyre, press the two buttons for engaging (Fig. 5I) or disengaging (Fig. 5J) for at least three seconds. The blue LED (Fig. 5K) will blink fast during these three seconds and every second there will be a beep. This warns you that the system will be activated!

Engaging: After these three seconds the motor powered rollers will be pressed against the tyre, and the blue LED will illuminate constant. Now you can release the two buttons. When the motor powered rollers are pressed on the tyre strongly enough you hear a short beep, the blue LED will switch off and the system is ready to use.

Disengaging: after these three seconds the motor powered rollers will be released from the tyre, and the blue LED will illuminate constant. Now you can release the two buttons. When the motor powered rollers are completely disengaged you hear a short beep, the blue LED will switch off and is the system ready for transport.

#### **The level display:**

The emove EM306 is provided with a level display on the remote handset (Fig. 5O, 17 & 18). During manoeuvring you can already see if your caravan is level.

The display shows by orange and red LEDs which side is the lowest. This is made visible in the longitudinal direction (front/rear) and in the width direction (left/right). With the aid of the jockey wheel, the "longitudinal direction" level to be adjusted, and with the help of, for example, a drive block or leveller under the wheel, the "width direction" level can be adjusted. If the caravan is level (approximate) only the green centre LED will light up.

#### **The remote handset switches off:**

- After 3 minutes, if no button is pressed: After 2 minutes the buzzer will beep for 5 times with a repetition after 3 minutes. Then the system switches in the "stand-by" modes.
- After 6 minutes, if one of the movement buttons is permanently held down: After 5 minutes the buzzer will beep for 5 times with a repetition after 6 minutes. Then the system switches in the "stand-by" modes. The power LED (Fig. 5Q), the manoeuvring system LED (Fig. 5V) and the communication LED (Fig. 5H) turn off and the remote handset is in the "stand-by" modes which means that there always will be used some current which causes the battery to go down. So always make sure the remote handset is turned off by the slide switch. To reactivate the remote handset, move slide switch down and after approximately 1 second up again.

#### **Error messages via the remote handset:**

- Communication LED (Fig. 5H) off, no buzzer: remote handset is turned off and also system is not activated
- Communication LED (Fig. 5H) continue on, no buzzer: remote handset is turned on and system is activated and ready to use.
- Communication LED (Fig. 5H) is blinking, no buzzer: no communication between handset and control unit. This could be because of too much distance between remote handset and control unit, or the battery isolation switch for manoeuvring system is not turned on or that there is a distortion signal disturbing the communication. As soon as connection is good again the green LED will be continue on and the system is ready to use.
- Caravan battery LED (Fig. 5N) is blinking in combination with buzzer (2 times blinking, break, 2 times blinking, break etc.): Battery voltage too low (<10V). Battery needs to be recharged.
- Caravan battery LED (Fig. 5N) is blinking in combination with buzzer (4 times blinking, break, 4 times blinking, break etc.): Battery Voltage too high (over charged). Try to discharge the battery by turning on a user (for example a lamp or water-pump).
- Overload LED (Fig. 5L) is blinking in combination with buzzer (6 times blinking, break, 6 times blinking, break etc.): Amp overload protection is activated. Wait about 60 seconds and try again.
- Remote handset battery LED (Fig. 5M) is blinking, no buzzer: The internal battery is near empty and needs to be recharged.

#### **Charging battery in the remote handset:**

When the battery is empty (Remote handset battery LED (Fig. 5M) is blinking), it needs to be recharged.

- Connect the USB cable to the mini USB port on the remote handset (Fig. 5R).
- Connect the other end of the cable into a USB charger (not included, minimal output 1A).

- While charging the battery, the charging LED (Fig. 5P) will light red.
- If the internal battery is charged, the charging LED (Fig. 5P) will light green.
- Disconnect the USB cable from the remote handset and USB charger.
- The remote handset is ready for use.

Always make sure that the internal battery of the remote handset is charged so that it is always ready for use!

## OPERATION – CONTROL UNIT

The control unit (4), which is mounted inside your caravan, is responsible for controlling the manoeuvring system.

The control unit (Fig. 3):

**Communication LED (green)** (Fig. 3B): Communication LED continuously illuminated when system is activated (battery isolation switch is on and system is turned on via the remote handset). If the handset far away from the control unit, beyond the available distance, this LED will go out.

**Caravan battery LED (blue)** (Fig. 3C): Error message LED concerning caravan battery: Blue LED is blinking (2 times blinking, break, 2 times blinking, break etc.): Battery voltage too low (<10V). Battery needs to be recharged.

Blue LED is blinking (4 times blinking, break, 4 times blinking, break etc.): Battery Voltage too high (over charged). Try to discharge the battery by turning on a user (for example a lamp or water-pump).

**Overload LED (red)** (Fig. 3D) is blinking (6 times blinking, break, 6 times blinking, break etc.): Amp overload protection is activated. Wait about 60 seconds and try again.

In general all error messages will reset automatically after one minute. If this is not the case, reset the electronics of the manoeuvring system by switching off the system via the isolation switch and the remote handset for at least 15 seconds and then turning it on again.

**The Reset Button** (Fig. 3A): The remote handset and the control unit are synchronised with each other in the factory. If the control unit or the remote handset is replaced, they must be re-synchronised as described below:

- Check the electronic installation in accordance with the installation instructions. Ensure that the drive rollers are not engaged, the caravan battery and the remote handset battery are in good condition and fully charged.
- Please ensure that the battery isolation switch is on.
- Activate the remote handset by sliding the slide switch up (Fig. 5A). The green LED (Fig. 5H) on the remote handset starts to flash slowly.
- Press the reset button (Fig. 3A) on the control unit. All three LED's on the control unit (Fig. 3B, 3C & 3D) will flash slowly.
- Press both forwards (Fig. 5B) and reverse (Fig. 5C) button on the remote handset for about 3 seconds. Then the handset buzzer will give a short beep to confirm that the synchronisation is complete.
- After successful synchronisation, the green LED on the control unit (Fig. 3B) and on the remote handset (Fig. 5H) will illuminate continuously.

**Levelling XYZ switches** (Fig. 3F):

The emove EM306 manoeuvring system is equipped with a level display. In order to ensure that the display shows the correct XYZ values, the position of the control unit can be defined with the two small slide switches. For the complete overview see Fig. 16. While setting the switches, the battery power isolation switch must be turned off.

**Bluetooth adapter connector** (Fig. 3E):

The emove EM306 manoeuvring system can be expanded with an optional Bluetooth adapter for controlling the manoeuvring system with a smartphone or tablet. When connecting the cable, the battery power isolation switch must be turned off.

**autoSteady communication cable connector (Fig. 3G):**

The emove EM306 manoeuvring system is suitable for use in combination with the autoSteady system (for an optimal Finding Level use). To operate the two systems with one remote handset and automatically have the corner steadies turned out during the Finding Level function, the autoSteady communication cable (36) must be connected between the two control boxes. When connecting the cable, the battery power isolation switches of both systems must be turned off.

**Twin axle communication cable** (Fig. 3H):

The emove EM306 manoeuvring system is suitable for use on twin axle caravans with four motors (two systems). To operate the two systems with one single remote handset, the twin axle communication cable (37) should be connected between the two control units. When connecting the cable, the battery power isolation switches of both manoeuvring systems must be turned off.

### **The single/twin axle function switch (Fig. 3S/T):**

The emove EM306 manoeuvring system is suitable for both single axle and twin axle caravans. You just need to pull the single/twin axle function switch (Fig 3S/T) on the control unit, so that the manoeuvring system can be used for a single axle caravan or a twin axle caravan (for 2 motor use but also for 4 motor use). In the twin axle function the all wheels will drive but at a different speed.

The switch standard pre-selected for single axle use (Fig 3S). For twin axle use, just move the switch to the twin axle position (Fig. 3T). When move the single/twin axle function switch, the battery power isolation switch must be turned off.

## OPERATION – GETTING STARTED



**Please make sure you read the safety instructions very carefully and make sure that you follow these guidelines!**



**Make sure that the battery that supplies the system is fully charged and in good condition.**



**Make sure that the caravan is free from the vehicle and the handbrake is on. Also make sure that the corner steady feet are fully raised.**

Turn on the battery power isolation switch (29).

Activate the manoeuvring system by moving slide switch (Fig. 5A) on the remote handset up. The power LED (Fig. 5Q), the manoeuvring system LED (Fig. 5V) and the communication LED (Fig. 5H) on the remote handset will illuminate and you will hear a short beep. The remote handset is ready for use.

Press at the same time, during at least three seconds, the two buttons for engaging the motor powered rollers (Fig. 5I). The blue LED (Fig. 5H) will blink fast during these three seconds and every second there will be a beep. This warns you that the system will be activated!

After these three seconds the motor powered rollers will be pressed against the tyre and the blue LED will illuminate constant. Now you can release the two buttons. When the motor powered rollers are pressed on the tyre strongly enough, you hear a short beep, the blue LED will switch off and is the system ready to manoeuvre. The colour of the traction indicator (Fig. 11A) should be into the green area.

Before operating the manoeuvring system, release the handbrake.

Now you can choose the movements according the symbols shown on the remote handset. Straight forward (Fig. 5B), straight reverse (Fig. 5C), left forward (Fig. 5D), left reverse (Fig. 5F), right forward (Fig. 5E), right reverse (Fig. 5G).

In addition, the left forward (Fig. 5D) and right reverse (Fig. 5G) buttons or right forward (Fig. 5E) and left reverse (Fig. 5F) buttons may be pressed at the same time to turn the caravan around on its own axis without moving forward or backward (*this function just can work under the "single-axle function"*).

When you drive straight forwards or reverse (press button 5B or 5C), it is also possible to adjust the direction by additional pressing button 5D or 5E (when driving forwards) or button 13F or 13G (when driving reverse).

Because of the "soft start" technology, the caravan will slowly speed up. Because of the "soft stop" technology, the caravan will stop slowly. This allows you to manoeuvre your caravan even more accurately without any shocks.



**WARNING: When the buttons on the remote handset are released, the caravan will slowly stop after 0.5 second and continue to move about 6cm (depending on final speed). When the buttons of the remote handset are released when the system is still in the "soft start" stage (slowly speed up), the caravan will stop immediately.**

After the "soft start" stage the caravan moves according one fixed speed. The speed can increase a little when going downhill and decrease a little when going uphill.

**TIP:** The manoeuvring system is more efficient when reversing the caravan up an incline.

During manoeuvring you can already see if your caravan is level. The display shows by orange and red LEDs which side is the lowest. This is made visible in the longitudinal direction (front/rear) and in the width direction (left/right). With the aid of the jockey wheel, the "longitudinal direction" level to be adjusted, and with the help of, for example, a drive block or leveller under the wheel, the "width direction" level can be adjusted. If the caravan is level (approximate) only the green centre LED will light up.

You can also level the caravan automatically by using the Finding Level function. See the separate chapter **OPERATION – Finding Level** for this.



**When you are ready with manoeuvring you need to secure the handbrake.**

Press at the same time, during at least three seconds, the two buttons for disengaging the motor powered rollers (Fig. 5J). The blue LED (Fig. 5H) will blink fast during these three seconds and every second there will be a beep. This warns you that the system will be activated!

After these three seconds the motor powered rollers will be released from the tyre and the blue LED will illuminate constant, now you can release the two buttons. When the motor powered rollers are completely disengaged you hear a short beep, the blue LED will switch off and the system is ready for transport.

After manoeuvring, deactivate the manoeuvring system by moving the slide switch of the remote handset (Fig. 5A) down (Position "0"). The power LED (Fig. 5Q), the manoeuvring system LED (Fig. 5V) and the communication LED (Fig. 5H) on the remote handset will turn off. Store remote handset in a safe place (out of reach of children or other unauthorised people).

Turn off the battery power isolation switch.



**Before you start driving always make sure that the both drive units are fully disengaged!**

## OPERATION – FINDING LEVEL

It is possible to completely level the caravan with the manoeuvring system and autoSteady system.

First of all, it is important that the caravan is skewed within the set specifications:

- Make sure that the caravan tilts a few degrees, possibly turning the nose wheel slightly upwards.
- Make sure that the caravan on the axle does not tilt too much to one side. The maximum height difference between the left and right wheel may not exceed 10cm (for a caravan with a width of 230cm).

*When activating the "finding level function" but having the caravan tilting too much to one side (on the axle), the remote handset will give an optical signal and the LEDs of the leveling system (Fig. 5O) will indicate which side of the caravan is too low. The Finding Level function will not start and also the Finding Level LED (Fig. 5S) will not light up.*

If the caravan is almost in place, press the FL button (Fig. 5T) on the remote handset during at least three seconds (every second there will be a beep). If the caravan is misaligned within the specified specifications, the Finding Level LED (Fig. 5S) will light up continuously. The system is ready to continue.

Place the wedge / leveler (*not supplied*) on the front or on the back of the wheel which is lowest (Fig. 20).

Now you can choose the movements according the symbols shown on the remote handset. Straight forward (Fig. 5B) or straight reverse (Fig. 5C) or possibly left forward (Fig. 5D), left reverse (Fig. 5F), right forward (Fig. 5E), right reverse (Fig. 5G).

As soon as the caravan is level in the width direction (on the axle (Fig. 21)), the manoeuvring system will stop automatically and the remote handset will give a buzzer.



**NOTE: The Finding Level system only stops if the caravan is level in the width direction (on the axle). If the ramp/leveler used is not high enough, or if a different situation arises, the caravan may run over the ramp/leveler. Make sure you release the remote control buttons in time!**

If the manoeuvring system is extended with the autoSteady system, then the corner steadies will also be automatically turned out (Fig. 22) and the caravan will also be levelled automatically in the longitudinal direction. However, it is very important that the caravan tilts a few degrees (front of caravan a little down), otherwise the system will stop and the remote handset will give an optical message and the LEDs of the waterlevel display will blink.

*If this situation occurs, turn the nose wheel slightly downwards and again go through the Finding Level process (press the FL button). Since the caravan is already level at the axle, and thus the corner steadies will turn out.*

If the caravan is tilted for a few degrees, the front corner steadies will be automatically turned out, and the caravan will be levelled in the longitudinal direction. Then the rear corner steadies will be turned out. Finally, all corner steadies will shortly be turned out (short boost) to stabilize the caravan.

As soon as the caravan is level and stable, the remote control will give an optical message (2 beeps) and the Finding Level LED will go off.



**When you are ready with manoeuvring you need to secure the handbrake.**

If necessary, place a "counter-keg/leveller" or stone behind the wheel on the keg/leveller to prevent rollback (Fig. 23).

Press at the same time, during at least three seconds, the two buttons for disengaging the motor powered rollers (Fig. 5J). The blue LED (Fig. 5H) will blink fast during these three seconds and every second there will be a beep. This warns you that the system will be activated!

After these three seconds the motor powered rollers will be released from the tyre and the blue LED will illuminate constant, now you can release the two buttons. When the motor powered rollers are completely disengaged you hear a short beep, the blue LED will switch off and the system is ready for transport.

After manoeuvring, deactivate the manoeuvring system by moving the slide switch of the remote handset (Fig. 5A) down (Position "0"). The power LED (Fig. 5Q), the manoeuvring system LED (Fig. 5V) and the communication LED (Fig. 5H) on the remote handset will turn off. Store remote handset in a safe place (out of reach of children or other unauthorised people).

Turn off the battery power isolation switch.

For the use of the individual autoSteady system (for example to turn the corner steadies in, or to turn one or more corner steadies further down with the individual operation), you can switch the remote control from manoeuvring system use to autoSteady use.

Turn the remote Handset on by sliding the slide switch (Fig. 5A) down (autoSteady position). The green LED (Fig. 5H) and the red LEDs (Fig. 5Q and 5U) on the remote handset will now light up continuously.

The autoSteady system can now be used as described in the standard user manual for the autoSteady system.

**NOTE:** *The leveling system of the manoeuvring system is not available when using the individual autoSteady system. The automatic leveling system only works via the Finding Level function of the manoeuvring system.*

## OPERATION - HITCHING AND UNHITCHING

It is possible to position the caravan's hitch exactly over a stationery car's tow ball using the manoeuvring system. But please be very careful!

Use the button controls on the remote control to bring the hitch of the caravan to the car. The soft start technology allows you to locate the tow-ball of the car by centimetre. It is better reach the tow ball with several short "trips" rather than trying to do it in one "trip".



**WARNING: When the buttons on the remote control handset are released, the caravan will slowly stop after 0.5 second and continue to move about 6cm (depending on final speed). When the buttons of the remote control handset are released when the system is still in the "soft start" stage (slowly speed up), the caravan will stop immediately.**

When the hitch is right above the tow ball of the vehicle, lower the hitch to the ball and engage in the normal way using the jockey wheel.



**Release the rollers from the caravan's tyres. You cannot tow the caravan with the drive units are engaged! Before you start driving always make sure that the both drive units are fully disengaged!**



**Trying to drive away with the drive units still engaged, will damage the manoeuvring system, your caravan tyres and strain your towvehicle!**

## MAINTENANCE

To prevent the battery from becoming totally discharged during long periods of inactivity it must be disconnected, fully charged and frost-proof stored.

Please check regularly that the rollers of the drive units are free of any dirt, or debris that may have been picked up from the road.

Regularly clean the drive units with a water hose to dissolve mud etc.

Please check regularly the distance between the rollers and the tyres. In the neutral (fully disengaged) position this must be about 20mm.

Once a year have your caravan manoeuvring system maintained and visually inspected. This inspection must include all the bolt/nut connections, the cables and electrical connections and lubrication of movable parts/joints.



**In case of any failure or problem, please contact your remove supplier.**

## TROUBLE SHOOTING

Should your manoeuvring system fail to operate, please check the following:

### **Unit fails to operate, does not function at all:**

Make sure that the battery power isolation switch (29) is turned on.

Check the cable-connection between the caravan battery and the control unit.

Check the fuse (80A) in the red positive battery cable (Fig. 6). If the fuse is blown, it must be replaced with a fuse of the same value (80A). Never "bridge" the fuse (if needed contact your remove supplier). To replace the fuse, first disconnect the positive (+) power cable from the battery. Then release the mounting screws that hold the fuse (Fig. 6A), replace the fuse (Fig. 6B), and finally tighten the screws securely. Close the housing of the fuse and connect the positive (+) power cable again to the battery. The system is ready again for use.

Check the battery of the remote control handset. If empty, renew the 9V battery.

Caravan battery could be empty. If empty, recharge completely or renew caravan battery before taking any further action.

Caravan battery could be overloaded. Check your charging equipment and try to discharge the battery by connecting/using a light or any other load. If this does not give any result, renew caravan battery before taking any further action.

Check the distance between the remote control and the caravan is not more than 5 metres. If there is no signal between the remote control handset and the control unit, the manoeuvring system will not function at all and the green LED on handset is blinking.

Check if there is any distortion signal (other transmitter, high power cables, Wifi etc.) that disturbs a good communication between remote control handset and control unit. If there is no good communication between the control unit and remote control handset, the manoeuvring system will not function and the green LED on remote control handset is blinking.

In general, all error messages will reset automatically after one minute. If this is not the case, reset the electronics of the manoeuvring system by switching off the manoeuvring system via the isolation switch and the remote control handset for at least 15 seconds and then turn them on again.

### **Unit fails to operate or moves intermittently:**

Check the battery of the remote control. If empty, renew the 9V battery.

Caravan battery could be empty. If empty, recharge completely or renew caravan battery before taking any further action.

Caravan battery could be low - with the rollers engaged. Check the voltage drop on the caravan battery, if this drops well below 10 volts, charge or renew caravan battery

Caravan battery could be overloaded. Check your charging equipment and try to discharge the battery by connecting/using a light or other load. If this does not give any result, renew caravan battery before taking any further action.

Check the cable-connection between the caravan battery and the control unit.

Badly connected or corroded battery terminals can cause intermittent problems, check battery terminals, clean and connect again.

Check the distance between the remote control and the caravan is not more than 5metres. If there is no signal between the remote control handset and the control unit, the manoeuvring system will not function at all and the green LED on handset is blinking.



Check if there is any distortion signal (other transmitter, high power cables, Wifi etc.) that disturbs a good communication between remote control handset and control unit. If there is no good communication between the control unit and remote control handset, the manoeuvring system will not function and the green LED on remote control handset is blinking.

In general, all error messages will reset automatically after one minute. If this is not the case, reset the electronics of the manoeuvring system by switching off the manoeuvring system via the isolation switch and the remote control handset for at least 15 seconds and then turn them on again.

**Roller will not turn, spindle rotates freely:**

The motor or gear is broken, please contact your remove supplier.

**In case of any doubt, please call your remove supplier.**





### **Five Year Warranty**

**Your emove caravan mover is covered by a five years' parts and labour warranty (when registered).**

You are covered against reasonable use of your caravan mover for the period of five years. It does not cover against misuse or accidental damage of the emove caravan mover. It does not cover against issues caused by the ill-fitting of the emove caravan mover. It does not cover against the fitting of the mover, when carried out by non-authorized fitter/dealer or fitted DIY. You are not covered by the warranty if the mover has been bought second-hand or from a non-authorized dealer or the mover has been transferred to another caravan. Any modification made to your caravan mover or non-use of emove authorised spare parts will make your warranty null and void. Any non-use of maker's instructions when fitting or using the emove caravan mover will make your warranty null and void. The emove caravan mover is a leisure product and your warranty does not cover you for commercial or industrial use. emove reserves the right to make a call out charge if faced with an issue outside the control of the company (such as faults with leisure battery, misuse of the mover, accidental damage, or unauthorised modification etc.).

**WARRANTY:** To validate the warranty on this product, please go to our web site and enter your details on the warranty screen. [www.streetwizeaccessories.com](http://www.streetwizeaccessories.com).

**Important! Retain this manual for future reference! Please forward this manual to the new owner when you sell the manoeuvring system!**

The Ace Supply Co. Ltd. T/A

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