Mover® SX

GB  Operating instructions  
To be kept in the vehicle!
Safety instructions

Before using the Mover for the first time, practice with it outdoors to familiarise yourself with the functions of the remote control and the Mover.

This appliance may be used by children from 8 years old and by persons with disabilities or with a lack of experience only if they are supervised or have been instructed in the safe use of the appliance and understand the resulting risks. Children must not be allowed to play with the appliance.

Before each use of the Mover, check tyres and drive rollers, removing any sharp stones and similar objects.

The side slide switch on the remote control (ON / OFF) also serves as an “Emergency Stop switch”. Switch the side slide switch to “OFF” immediately in the event of any abnormalities, e.g. uncontrolled behaviour of the Mover.

No person must be present in the caravan during operation.

There must be no persons (particularly children) inside the turning and movement range (manoeuvring range) of the caravan.

Ensure that there is sufficient visibility and space.

When engaging and disengaging and while operating the Mover, care must be taken to ensure that no hair, parts of the body, clothing or other parts on the body can become caught in moving and/or rotating parts (such as drive rollers).

During manoeuvring, the distance between the radio remote control and the middle of the caravan must not exceed 10 m.

Apply the parking brake in the event of a malfunction.

In order to avoid tilting the caravan, when manoeuvring on slopes the drawbar should be pointed downwards (downhill).

After manoeuvring, always first apply the parking brake, block the wheels (particularly on downhill slopes!) and disengage the drive rollers from the tyres. The Mover is not suitable for use as a parking brake for the parked caravan.

Always protect the radio remote control from unauthorised access (paying particular attention to children).

Do not pocket or put down the ready-to-use remote control, otherwise functions can be unintentionally triggered via the control knob and the slide control.

Never tow the caravan with the drive rollers engaged, as this may cause damage to the tyres, the towing vehicle and the drive units, as well as to attachments.

All wheels and tyres on the caravan must be of the same size and type.

In order to ensure that the Mover operates correctly, the gap between the tyres and the disengaged drive rollers must be 20 mm. All tyres must be inflated to the same pressure in accordance with manufacturer’s instructions and checked regularly. Tyre wear or the fitting of new tyres may make it necessary to readjust the gap between the drive rollers and the tyres (see “Fitting the drive elements”).

When using a jack, the Mover must not be used as a jacking point, as this may damage the drive unit.

Sensitive objects such as cameras, DVD players etc. must not be kept in the stowage box near the control unit or the motor cables, as the powerful electromagnetic fields may damage them.
– The empty weight of the vehicle is increased by the weight of the Mover, thus reducing the vehicle’s payload.

– When engaging, make sure that there are no objects (e.g. stones, lumps of ice) particularly between the drive roller and tyres.

– Inspect the system for damage before use. The system must not be used if it is damaged.

**General instructions**

The Mover is a manoeuvring assistant which allows a caravan to be manoeuvred without the aid of the towing vehicle.

The Mover has been designed to cope with inclines of up to approx. 13 % bearing a gross weight of 2000 kg on a suitable surface.

Depending on the weight of the caravan, the Mover may not be able to overcome obstacles more than about 20 mm in height without auxiliary equipment (please use ascent chocks).

As a result of the characteristic properties of a radio signal, it may be interrupted by terrain / objects. This reduces reception quality in small areas around the caravan, as a result of which the operation of the Mover may be briefly interrupted. In this eventuality, the remote control must be switched off and on again. When the Mover is switched off using the remote control, the control unit remains in standby. To completely switch it off, the battery must be disconnected or isolated from the power supply via a previously installed circuit breaker.

**Power supply**

For optimum operation, we recommend the Truma Mover PowerSet and high-performance Optima® batteries. So-called drive, lighting and gel batteries with sufficient capacity are also suitable.

**Batteries**

<table>
<thead>
<tr>
<th>Recommended battery capacities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Button cell technology</td>
<td>at least 55 Ah</td>
</tr>
<tr>
<td>Gel / AGM</td>
<td>at least 70 Ah</td>
</tr>
<tr>
<td>Lead acid battery (liquid electrolyte)</td>
<td>at least 80 Ah</td>
</tr>
<tr>
<td><strong>Starter batteries are not suitable</strong></td>
<td></td>
</tr>
</tbody>
</table>

Charger

For optimum battery charging we recommend the Truma BC 10 charger, which is suitable for all battery types up to 200 Ah.

**Battery care (including maintenance-free batteries)**

In order to achieve a long battery service life, attention must be paid to the following points:

– Batteries should be fully charged before and after removing power,
– for stationary periods of longer than 24 hours, interrupt power circuit (e.g. using circuit breaker or by disconnecting the battery poles),
– for longer stop periods the battery must be disconnected and charged for 24 hours at least every 12 weeks.

In winter, store the fully-charged battery in a cool and frost-free place and recharge at regular intervals (every 12 weeks).

**Notes for handling batteries**

– When handling batteries, pay attention to the manufacturer’s safety instructions and data sheets
– Ensure that the terminal clamps are secure.
– Secure battery poles with protection caps in order to prevent a short circuit
– When removing the battery, first disconnect the earth connection (negative terminal), followed by the positive terminal. When installing the battery, first connect the positive terminal followed by the negative terminal.

**Function description**

Always observe the operating instructions and the “Safety instructions” prior to starting! The vehicle owner is responsible for correct operation of the device.

Please note that the Mover is only suitable for single-axle trailers.

The Mover is a manoeuvring assistant which allows a caravan to be manoeuvred without the aid of the towing vehicle.

It consists of two separate drive units, each with its own 12 V DC motor. These units are mounted on the chassis in the immediate vicinity of the wheels and are connected by lateral bars.

Once the drive rollers have been engaged against the tyres using the lever provided, the Mover is ready for operation. It is operated exclusively via the remote control, which transmits radio signals to the control unit. A separately installed 12 V lead-acid battery or suitable gel battery (not supplied) provides the control unit with electrical power.
Remote control

Figure 2

Switching on the remote control

No other remote control function must be active when the remote control is switched on.

a = On / Off slide switch

• On (LED 4 lights up*)
• Off (LED 4 goes off)

* LED 4 flashes for approx. 5 seconds after the remote control is switched on, until the system is ready for operation.

The following options are available for controlling the caravan:

b using the control knob only
c using the slide control only
b + c using the control knob and the slide control

The control knob and slide control

(Caravan right or left and forwards or backwards)

– Turn control knob to right and push slide control forwards -> caravan drawbar moves to right
  left wheel rotates fast – right wheel rotates slowly forwards

– Turn control knob to left and push slide control forwards ->
  caravan drawbar moves to left
  left wheel rotates slowly – right wheel rotates fast forwards

– Turn control knob to right and pull slide control backwards ->
  caravan drawbar moves to right
  left wheel rotates slowly – right wheel rotates fast backwards

– Turn control knob to left and pull slide control backwards->
  caravan drawbar moves to left
  left wheel rotates fast – right wheel rotates slowly backwards

The further the slide control is pushed forwards the end stop,
the faster the speed (freely selectable turning radius and speed).

Remote control LED blink code and audio signal

LED 1 red indicates state of charge of caravan battery
  good       LED off
  weak       LED on
  empty      LED on and LED 3 indicates error message

LED 2 yellow lights up in the event of a temporary malfunction,
  and an acoustic signal is also emitted in the event
  of an overcurrent / overtemperature. The power is
  automatically reduced. Allow system to cool.

LED 3 red persistent fault

LED 4 green flashes if radio connection has not yet been established after switching on the remote control
  lights up when remote control is ready for operation and the data link is stable
  flashes in combination with acoustic signal

– 10 seconds after switching on the remote control if the control unit is not yet ready for operation
  – if the control unit has been switched off
  – after the 1st minute without a button on the remote control being pressed
  – after a radio communication interruption

All LEDs “off” and no audio signal
System off
(check batteries in remote control if necessary)
Remote control battery change

Please only use leak-proof micro-batteries with a steel outer casing, type LR 03, AAA, AM 4, MN 2400 (1.5 V).

When inserting new batteries, take care not to reverse the positive and negative terminals!

Figure 3

Empty, used batteries can leak and damage the remote control! Remove the batteries if the remote control is not being used for a long period of time.

No warranty is given for damage caused by leaking batteries.

Disposal

Neither the remote control nor the batteries may be disposed of with domestic refuse, instead they must be sent for recycling separately via a collection point. By doing this you are contributing towards reuse and recycling.

Manoeuvring the caravan

Follow the “Safety instructions” before using the Mover!

With the caravan uncoupled (apply parking brake and secure against rolling away) engage the drive rollers on the tyres using the lever provided. Turn the lever until it cannot be turned any further without excessive force. In the end position the drive unit engages securely. This must be checked on both sides before manoeuvring.

Before starting the Mover, release the parking brake and remove the chocks.

Move the slide switch (a) on the remote control to the “On” position — the green LED flashes in combination with the audio signal for approx. 5 seconds until the control unit is ready for use.

Movement in all directions is possible using the control knob and the slide control.

The Softstart / Softstop makes the caravan start to move without jolting, and brakes it gently when stopping.

When the control knob or slide control are released, or if the radio signal is interrupted or becomes too weak, the caravan stops moving. Radio equipment and other Mover remote controls will not activate your Mover.

After start-up, the Mover moves at a steady speed (according to the setting on the slide control). Speed increases slightly on downhill slopes and decreases on uphill slopes.

System factors mean that the speed increases on slopes. To reduce the speed, it is necessary to stop often (slide control in the idle position) and then start again.

Move the slide switch on the remote control to the “Off” position to switch off the remote control and the Mover.

The slide switch also acts as an “Emergency Stop” switch.

After manoeuvring, apply the parking brake first and secure the caravan with chocks to prevent it from rolling away, then disengage the drive rollers from the tyres.

Coupling to a towing vehicle

The Mover allows a caravan to be coupled to a towing vehicle with millimetric precision. However, this requires care and a degree of practice.

Following the operating instructions, move the caravan close to the towing vehicle (apply parking brake and engage gear). In order to position the caravan precisely, operate the control knob or slide control until the caravan’s coupling is located precisely over the ball coupling on the towing vehicle. Then couple the caravan to the vehicle by lowering it at the support wheel in the usual manner.

Prepare the caravan for towing in the usual way.

The caravan must not be towed with the drive rollers engaged.

Maintenance

Keep drive elements clear of coarse road dirt. When cleaning the caravan, spray the Mover with a water hose to remove mud etc. Make sure that no stones, twigs etc. are trapped in it. The control unit does not require servicing. The remote control must be kept in a dry place.

Clean the Mover as described above every year (or before overwintering).

Do not park the caravan with the drive rollers engaged.

To prevent the battery from becoming totally discharged during long periods of inactivity, it must be disconnected and then recharged from time to time. Charge the caravan battery before starting up.

It is extremely easy for you or your caravan dealer to perform the checking and maintenance of your Mover during the annual inspection of your caravan. If in doubt, please contact Truma Service (www.truma.com).

Checks

– Check the installation, wiring and connections for damage at regular intervals. The drive units must be able to move freely, and the spring must automatically return them to the safe idle position when they are disengaged. If this is not the case, check the drive units for dirt or corrosion on their guides, and if necessary have them cleaned by trained specialists.

– After the annual inspection, check whether all motors react properly to the commands from the remote control.

– At least every 2 years, an expert must check the Mover for rust, check that detachable parts are firmly attached and check that all safety-related parts are in good working order.
Troubleshooting

Before calling customer service, please check the following:

Are the batteries in the remote control in perfect condition?

Is the caravan battery in perfect condition and fully charged? Please note that battery performance can deteriorate considerably at cold ambient temperatures.

Perform a reset by briefly disconnecting the battery (approx. 10 seconds).

If these actions do not remedy the problem, please contact Truma Service.

Tuning the electronic control unit to the radio remote control

The remote control and the control unit are tuned to each other in the factory.

If the control unit or the remote control is replaced, they must be tuned to each other again in accordance with the instructions below.

Check that installation has been carried out in accordance with the installation instructions, and make sure that the drive rollers are not engaged. Check that the caravan battery is properly connected and its condition.

Read the following instructions beforehand, as you only have a limited time for tuning (approx. 10 seconds).

You will need a pen, a small screwdriver or similar to press the reset button (k).

– Switch off the remote control with the slide switch (a).
– After switching on the control unit (e.g. battery cut-off switch), wait (for about 15 seconds) until the red LED (j) starts flashing slowly.
– Press the reset button (k) on the control unit (LED (j) flashes more rapidly) until the red LED (j) flashes very rapidly.
– Turn the control knob (b) all the way to the left and hold it in place – push the slide control (c) all the way forwards and hold it in place, and at the same time switch on the remote control using the slide switch (a). Release the control knob (b) and slide control (c) within 10 seconds.
– When the devices have been successfully tuned, the red LED (j) on the control unit flashes very rapidly and the green LED 4 on the remote control remains permanently on.

If tuning was unsuccessful, the red LED (j) flashes and you have to repeat the process.

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EU Declaration of Conformity

Product
Function: Manoeuvring assistant
Type: Mover® SX
Versions: SX

Manufacturer
Truma Gerätetechnik GmbH & Co. KG
Wernher-von-Braun-Str. 12,
85640 Putzbrunn, Germany

This declaration of conformity is issued under the sole responsibility of the manufacturer.

The product is in conformity with the relevant Union harmonisation legislation:
Directive 2014/53/EU Radio equipment
UN ECE R10 Electromagnetic compatibility of vehicles

The following (harmonised) standards and other technical specifications were used:
EN 300 220-1 V3.1.1; EN 300 220-2 V3.1.1
EN 301 489-1 V2.1.1; EN 301 489-3 V2.1.1
EN 62368-1:2014
EN 60335-1:2012/A11:2014

The KBA, 24932 Flensburg, Germany issued the type approval(s):
E1 10R-05 8280

Signed for and on behalf of:
Truma Gerätetechnik GmbH & Co. KG

Frank Oster
CEO Putzbrunn, 29.06.2017

Technical data

Designation
Mover

Area of use
Single-axle caravans with a gross weight of up to 2000 kg

Operating voltage
12 V DC

Power consumption
Approx. 20 A on average
Maximum 120 A

Quiescent current consumption
< 20 mA

Remote control frequency
Class 1, 868 MHz

Speed
Approx. 16 cm per second (depending on weight and slope)

Weight
Approx. 35 kg
(including cross actuation device)

Subject to technical changes.
Manufacturer’s Warranty
(European Union)

1. Scope of Manufacturer’s Warranty

As the Manufacturer of the unit, Truma undertakes a warranty towards the Consumer that covers any material and/or manufacturing defects of the unit.

This Warranty is applicable in EU member states as well as in Iceland, Norway, Switzerland and Turkey. A Consumer is the natural person who was the first one to purchase the unit from the Manufacturer, OEM or dealer and who neither resold the unit in a commercial or self-employed professional capacity nor did he or she install it for a third party in such a capacity.

The Manufacturer’s Warranty covers any of the aforementioned defects that occur within 24 months upon concluding the purchase agreement between the seller and the Consumer.

The Manufacturer or an authorised service partner undertakes to remedy such defects through subsequent fulfilment, i.e. at its discretion either by repairing or replacing the defective item. Any defective parts shall become the property of the Manufacturer or the authorised service partner. If the unit is no longer manufactured at the time of defect notification and if replacement delivery has been opted for, then the Manufacturer may deliver a similar product.

If the Manufacturer remedies a defect under its warranty commitment, the term of the Warranty shall not recommence anew with regard to the repaired or replaced parts; rather, the original warranty period shall continue to be applicable to the unit.

Only the Manufacturer itself and an authorised service partner shall be entitled to conduct a warranty job. Any costs that occur in the event of a warranty claim shall be settled directly between the authorised service partner and the Manufacturer. The Warranty does not cover additional costs arising from complicated removal or installation jobs on the unit (e.g. dismantling of furnishings or parts of the vehicle body), and neither does it cover travel expenses incurred by the authorised service partner or the Manufacturer.

No further-reaching claims shall be permitted, especially damage claims presented by the Consumer or third parties. This provision shall not affect the validity of the German Product Liability Act (Produkthaftungsgesetz).

Neither does the voluntary Manufacturer’s Warranty affect the Consumer’s legally applicable claims for defects towards the seller in the relevant country of purchase.

In individual countries there may be warranties that can be issued by the relevant dealer (official distributor, Truma Partner). In such cases the warranty can be implemented directly through the dealer from whom the Consumer bought the unit. The warranty regulations of the country in which the unit was purchased by the Consumer for the first time shall also be applicable.

2. Warranty exclusions

No warranty claim shall be applicable under the following circumstances:

- Improper use, contrary to the specified use
- Improper installation, assembly or commissioning, contrary to operating or installation instructions
- Improper operation, contrary to operating or installation instructions, particularly maintenance, care and warning notes
- Instances where repairs, installations or any other procedures have been conducted by non-authorised partners
- Consumable materials and parts which are subject to natural wear and tear
- Installation of replacement, supplementary or accessory parts that are not original Manufacturer’s parts and which have thus caused a defect
- Damage arising from foreign substances (e.g. oils, plasticisers in the gas), chemical or electrochemical influences in the water, or cases when the unit has come into contact with unsuitable substances (e.g. chemical products, unsuitable cleaning agents)
- Damage caused by abnormal environmental or unsuitable operating conditions
- Damage caused by force majeure or natural disasters or any other influences not within Truma’s responsibility
- Damage resulting from improper transport

3. Making a warranty claim

The warranty must be claimed with an authorised service partner or at the Truma Service Centre. All the relevant addresses and phone numbers can be found at www.truma.com, in the “Service” section.

To ensure a smooth procedure, we would be grateful if you could have the following details ready before contacting us:

- Detailed description of the defect
- Serial number of the unit
- Date of purchase

The authorised service partner or the Truma Service Centre will then specify the further procedure. To avoid transport damage, the affected unit must only be shipped by prior arrangement with the authorised service partner or the Truma Service Centre.

If the warranty claim is recognised by the Manufacturer, then the transport expenses shall be borne by the same. If no warranty claim is applicable, the Consumer will be notified accordingly and any repair and transport expenses shall then be the Consumer’s liability.

We ask you not to send in a unit without prior arrangement.
Mover SX

Außenkante
Outside edge
Bord extérieur
Filo esterno
Buitenkant
Yderkant
Ytterkant
Bei Störungen wenden Sie sich bitte an das Truma Servicezentrum oder an einen unserer autorisierten Servicepartner (siehe www.truma.com).

Für eine rasche Bearbeitung halten Sie bitte Gerätetyp und Seriennummer (siehe Typenschild) bereit.

Should problems occur, please contact the Truma Service Centre or one of our authorised service partners (see www.truma.com).

In order to avoid delays, please have the unit model and serial number ready (see type plate).

Veuillez vous adresser au centre de SAV Truma ou à un de nos partenaires de SAV agréés en cas de dysfonctionnements (voir www.truma.com).

Pour un traitement rapide de votre demande, veuillez tenir prêts le type d’appareil et le numéro de série (voir plaque signalétique).

In caso di guasti rivolgersi al centro di assistenza Truma o a un nostro partner di assistenza autorizzato (consultare il sito www.truma.com).

Affinché la richiesta possa essere elaborata rapidamente, tenere a portata di mano il modello dell’apparecchio e il numero di matricola (vedere targa dati).

Bij storingen kunt u contact opnemen met het Truma Servicecentrum of met een van onze erkende servicepartners (zie www.truma.com).

Voor een snelle bediening dient u apparaattype en serienummer (zie typeplaat) gereed te houden.

Ved fejl kontaktes Trumas serviceafdeling eller en af vores autoriserede servicepartners (se www.truma.com).

Sørg for at have oplysninger om apparattype og serienummer (se typeskiltet) klar for hurtig behandling.

Vid fel kontakta Truma servicecenter eller någon av våra auktoriserade servicepartner (se www.truma.com).

För snabb handläggning bör du ha aggregatets typ och serienummer (se typskylten) till hands.

Las instrucciones de uso y de montaje en su idioma pueden solicitarse al fabricante Truma o al Servicio postventa Truma en su país.

Saat käyttö- ja asennusohjeen pyynnöstä omalla kielelläsi valmistajalta (Truma) tai maasi Truma-huoltoon.

Návod k použití a montáži si lze v jazyce vaší země vyžádat u výrobcu Truma nebo servisu Truma ve vaší zemi.

Az Ön nyelvén a használati és beszerelési utasítás a Truma gyártójától vagy az adott ország Truma szerviztől szerezhető be.

Instrukcie obsługi i montażu we właściwej wersji językowej można otrzymać u výrobce Truma lub serwisie firmy Truma znajdującym się w danym kraju.

Instructies voor gebruik en montage in uw taal kunnen worden gevraagd bij Truma of bij een van onze erkende servicepartners (zie www.truma.com).

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