



How to use the Cosmo Spaceship

Diesel fuel system

The Diesel fuel tank also serves both the diesel heater and the diesel hob. The diesel connection to the heater and hob is set to work from $\frac{1}{4}$ of the way from the bottom of the fuel tank. This means that if the diesel level in the fuel tank is below 25% then the hob and the heater will not function. This is designed to avoid running out of diesel and being stuck on a campsite with no fuel.

IMPORTANT: Please keep your fuel tank well above half full when camping out in your Cosmo. If you know you will be camping in the same spot for an extended period, particularly during colder months when you could be running the heater for longer periods then it is best to fuel up fully.

Warning:

The fuel line for the hob and heater connect via a T section join about midway on the underside of the vehicle on the driver's side. This connection is located above the vehicle protection plate. Care needs to be taken to not damage this connection during repair work or by driving the vehicle off road.

Power button for ventilation mode

Power button for heater



Diesel Heater

The diesel heater is an Autoterm 2kw heater. The heater is located underneath the vehicle below where the driver's seat is located. The inlet to the heater is in the driver's doorstep. The outlet is behind the driver's seat on the floor. The controls are above the cooker on the wall.

DO NOT place any objects on the floor behind the driver's seat that block the heaters outlet.

Starting the heater

Look for the black control dial on the wall above the bench.



1. Press the **power button** once. This is the bottom left button.
2. The status light beside the power button will illuminate.
3. The heater will begin its startup sequence:
 - Fan starts.
 - Glow plug ignites.
 - Fuel pump starts ticking.

Stay patient as the heater goes through its warmup process. This will take a few minutes, and then warm air should appear.

Setting the heat

Turn the **rotary knob**:

- Clockwise = warmer / more heat.
- Counter-clockwise = cooler / less heat.

What the lights mean

- **Solid yellow/green**: operating normally.
- **Flashing light**: starting up, shutting down, or indicating a fault condition.

Turning the heater off

1. Press the **power button** once. This is the bottom left button.
2. The heater will continue running for several minutes.
3. This is normal—the heater is cooling itself down and cleaning the combustion chamber.
4. **NEVER** disconnect power during this process. **DO NOT** turn off the touch screen for several minutes or until the heater has completely shut down on its own.

Ventilation mode (fan only)

- Press the ventilation/fan button. This is the top left button.
- The heater will circulate air without producing heat.

Best settings for a campervan

- Cold night (0–5°C): knob around **70–90% clockwise**.
- Mild night (8–12°C): knob around **50–70% clockwise**.

Manual

<https://cdn.autoterm.com/Manuals/Control%20panels/PU-5/1.%20Simple%20Control%20EN%20OperMan%20v01.2025.pdf>

Trouble shooting

1. Make sure the vehicle has sufficient diesel in its fuel tank. Once the level reaches 25% of a tank the heater and hob will not work.
2. Check the battery has at least 12 volts. This will show on the digital control screen.
3. If the status light is flashing, please contact Spaceships.

Touch screen display

The touchscreen controls the:

- Tank level sensors
- The tap in the sink
- The hob
- The lights
- Water pump



The touch screen controls everything except for the diesel heater.

Daily screen wake-up

Simply double tap anywhere on the screen to wake the system from sleep mode.

12v power is supplied direct from the leisure battery to the main unit and the tank level sensor unit. The touch screen is powered via a cable from the main unit. The tank level sensor unit communicates with the main unit via Bluetooth.

Lights

To use the lights, **press “Master Power” on the touch screen.**

The circular lights can be activated by touching either the light itself or the metal surround (depending on the light type).

The light on the splash back can be activated by pressing the “Kitchen Light” button.

The pop top light can be activated by pressing the “Roof Light” button or ‘Master lights’

Pressing “Master Lights” will turn off all lights.

Diesel Hob

The Cosmo is fitted out with a Webasto x100 Diesel cooktop



Turning on the hob

To use the 2-burner hob **first turn on the touch screen** and turn on master power (if not already on). Then press the “Hob” button. Pressing this button gives power to the hob.

Next press the top “on” button on the hob controller located on the splash back next to the hob. The hob will take approximately 3 minutes to warm up before the surface starts getting hot.

The dial (1-6) controls the temperature.

Note: that the second button on the control panel is for cooking at high altitude. Pressing this button changes the mix of air and diesel to maintain efficiency at high altitudes. Do not use this button.

The hob should never be used as a secondary heater. Vent holes are located above the fridge. **These should not be covered when the hob is in use.**

The hob is fitted with a failsafe to prevent it being accidentally turned on.

The stove is incredibly fuel-efficient, using as little as 0.02 gal/h. This means that you can safely boil water, cook soups without worrying about the stove turning off.

Turning off the hob

To turn off the hob press the top button on the hob controller. The hob will then perform a warm down sequence which takes about 5 minutes. After 5 minutes the “Hob” button on the touch screen can also be pressed.

During this warm down the hob must have power, so it is important not to press the touch screen “Hob” button until the warm down cycle is completed.

It is very important that the hob is allowed to follow its cool down procedure to prevent overheating and damage.

Troubleshooting

Troubleshooting is quite straightforward. Lights on the control panel flash in a certain pattern to indicate the fault. These codes can be seen in the Webasto instructions.

https://www.melloronline.co.uk/Vehicle_Heater_Kits/5087/Webasto_Diesel_Cooker_X100.html#tablinks

The most common issues are:

Low battery. The cooker takes a lot of power to warm the glow plug before it can start burning diesel. If the battery is very low, it will not be able to complete the warmup procedure. This can be temporarily fixed by running the vehicle during the startup procedure.

No diesel. The hob tries to pump diesel for about 30 seconds at the end of the warmup procedure. If it does not receive any diesel then it will give an error. You must ensure there is more than a quarter of a tank of fuel.

If you had previously let the hob or heater run until the fuel level went below the pickup point (1/4 of a tank of fuel) then the line will be filled with air. It may take 2 or 3 warm up procedures and errors.

Incorrect shutdown. If the power to the hob is turned off before the end of the warm down procedure, then there may be an error on the next startup. It is very important that the hob is allowed to follow its cool down procedure to prevent overheating and damage.

Master Power switch

When the van is plugged into 230V shore power and that red switch is ON (I), the EC155:

- Converts 230V AC to approximately 13.8V DC, up to about 12A / 155W.
- Supplies the van's 12V leisure circuits.
- Normally uses any spare capacity to charge the leisure battery.

The Master Power switch is located under the sink.

Red Vision display for battery monitoring



In SoC Display mode, it indicates the battery's current level. When charging, the segment that is currently charging will flash.



POWER BUTTON

- Press to turn display illumination On/Off (enters/exits standby mode)
- Press from within the settings menu to exit.
- Press during the Start Battery Recovery process to cancel it.



CONTROL BUTTON

- Press to cycle through the settings menu.
- Press during the Start Battery Recovery process to cancel it.

VEHICLE BATTERY RECOVERY MODE

If the vehicle's start battery is flat, the Recovery process safely transfers charge from the auxiliary battery to the vehicle battery. Once Recovery is initiated, the flat vehicle battery will charge for approximately 15 minutes to transfer enough charge to safely start the vehicle.

RECOVERY PROCEDURE

1. Press the Control Button to cycle to the Recovery setting (flashing green).
2. Long-press the Control Button to initiate the Recovery process. To cancel the Vehicle Battery Recovery process, press the Control or Power button.
3. The top five segments of the state of charge (SoC) Display will illuminate, then begin to count down as the vehicle battery charges. Once the Recovery is complete the top 5 segments will flash.
4. You can then start the vehicle.

Pop Top

**Full instructions video
(please watch to avoid damaging the pop top)**

<https://youtu.be/0H9xTOFJeco>



To open the pop top

Before opening the pop top, you must always have a vehicle door or window fully open. The pop top will not go up otherwise due to the vacuum effect.

Release the two straps holding the pop top down.

To release the straps, use one finger to push the top of the cam buckle in and use the other hand to pull the strap down.

Once the straps have been released you can push the roof up and the pop top will open fully. You can then push the bed up.

The vehicle must not be driven when the pop top is open – even moving around in a campsite.

Closing the pop top

Before closing the roof, you must always have a vehicle door or window fully open. If you don't the pop top canvas will not fold inwards due to the vacuum effect. This will cause damage to the canvas.

It is your responsibility to make sure the canvas has folded inwards when closing the roof. If it isn't folded inwards correctly it could get stuck in the scissor hinges and damage the canvas.

While standing in the front and lowering the pop top please lower in stages and fold the canvas at the front in layers as you lower in stages. This will help look after the canvas.

Please do a walk around the vehicle while lowering the pop top to ensure the canvas has folded inwards and is not stuck in the scissor hinges.

Connect the bungy cords which helps pull the canvas inwards to avoid it getting stuck in pop top lifting mechanism.

NOTE: If the weather is bad, it would be advisable to leave the pop top down. The main bed is large enough to sleep 3 people.

Swivel Seat

The passenger bench seat is a two-person swivel seat also. It can swivel around to form part of a dinning arear in the Cosmo.

It has two bolts on the front and another two bolts on the rear that need to be released to be able to swivel the seat.

Step 1: Release the four bolts. Once released lift and turn 90 degrees until they locate and are held up. This stops them dropping into other holes in the swivel seat base as you turn the seat.

Step 2: Push the seat forward and toward the driver's seat slightly

Step3: Start to spin the seat around anti clockwise (towards the driver's seat). It should move freely. You might need to adjust the arm rest of the driver's seat and the head rests of the swivel seat if they are getting caught.

Step 4: Once you have spun the seat around, move it forward and secure one of the bolts as this will stop the seat moving on its swivel plate.

Video link <https://www.youtube.com/watch?v=hVZoVWN4Pl8>

IMPORTANT:

You must locate spin the swivel seat back around and secure all 4 bolts properly before you drive.

Items stored under the squab of the swivel bench seat

Lift the squab off the swivel bench seat and there will be

- Two back up portable cookers and 2 gas cans in case the vehicle runs below 25% of its fuel level and the cooker stops working
- The grey water waste hose in a green bag to enable emptying of the grey water at a dump station
- The freshwater hose to refill the external water tank
- The jack and tools

Thetford Porta Potti 145

How to Use, Empty & Stow Your Campervan Toilet.

Your campervan is fitted with a Thetford Porta Potti 145 toilet mounted securely inside a sliding drawer.

Please follow these instructions when using, emptying and stowing the toilet.

1. ACCESSING THE TOILET

- Open the drawer.
- Push both blue drawer levers DOWN to release the drawer.
- Pull the drawer out.
- Remove the drawer front. Place your hand inside the drawer handle and pull the front panel UPWARDS to remove it.
- Position the toilet
- Slide the drawer out far enough to allow the toilet lid to open fully.

The toilet is now ready to use.

2. USING THE TOILET

The toilet consists of two main sections:

Upper tank: Toilet bowl and fresh-water flush tank

Lower tank: Waste-holding tank

Before use

- Make sure there is sufficient water in the flush-water tank.
- If required, a small amount of water can be pumped into the bowl before using the toilet.
- Open the waste valve.
- Use the blade/valve handle to open the waste tank.

This allows waste to pass from the toilet bowl into the holding tank.

Use the toilet normally.

Only use toilet paper suitable for portable/chemical toilets and avoid using excessive amounts.

Flush

- Use the manual bellows pump on top of the toilet to flush the bowl.
- Several short pumps normally provide a better rinse than one large pump.

Close the waste valve

- After flushing, fully close the blade/valve.

 **Always leave the waste valve fully closed when the toilet is not being used.**

3. WHEN TO EMPTY THE TOILET

The Thetford Porta Potti 145 does not have a waste-level indicator, so the waste tank needs to be checked regularly.

Do not allow the waste level to reach the valve opening.

For comfort and hygiene, empty the toilet regularly rather than waiting until the tank is completely full.

The lower waste tank has a capacity of approximately 12 litres.

4. REMOVING THE WASTE TANK

 **Double check the waste valve is fully closed before removing the waste tank.**

- Tilt the toilet forward
- Lift the handle at the rear of the toilet.
- While lifting the handle, rotate the toilet forward.
- This allows access so the upper and lower sections of the toilet can be separated.

Separate the toilet

Separate the upper toilet/flush-water section from the lower waste-holding tank using the normal Thetford release mechanism.

Remove the lower waste tank from the campervan.

5. EMPTYING THE WASTE TANK

⚠️ Only empty the toilet into an approved toilet or campervan dump station.

- Take the lower waste tank to the disposal point.

Prepare the tank

- Rotate the pour-out spout away from the tank.
- Remove the cap from the spout.
- Hold the tank securely by its handle and position the spout over the dump point.

Empty

- Tip the tank so the waste begins flowing through the spout.
- While emptying, press the vent button to allow air into the tank.
- This helps the tank empty smoothly without splashing.

Do not press the vent button until the pour-out spout is pointing downwards.

Rinse

Once empty:

1. Add a small amount of clean water to the waste tank.
2. Replace the cap.
3. Gently rinse the tank.
4. Empty the rinse water into the approved dump point.
5. Repeat if necessary.

Never use a high-pressure hose to clean the toilet.

6. PREPARING THE TOILET FOR USE AGAIN

After emptying, add the appropriate amount of portable-toilet waste treatment/chemical to the waste tank according to the product manufacturer's instructions.

Add the required amount of water if specified by the toilet chemical manufacturer.

Make sure the pour-out spout cap is securely fitted and return the spout to its storage position.

7. REINSTALLING THE WASTE TANK

Return the lower waste tank to the campervan.

Reconnect the upper toilet section and lower waste tank following the normal Thetford Porta Potti 145 procedure.

Make sure the two sections are correctly connected and securely locked together.

Rotate the toilet back into its normal position in the drawer.

Before stowing the toilet, check that:

- ✓ The waste valve is fully closed
- ✓ The two toilet sections are securely connected
- ✓ The waste tank cap is fitted
- ✓ Nothing is obstructing the drawer

8. STOWING THE TOILET AWAY

- Refit the drawer front
- Place the front drawer panel back into position.
- Make sure it is correctly seated.

Release the drawer locks

- Lift both blue drawer levers UP.
- Keep the levers lifted while pushing the drawer back into the cabinet.

Close the drawer completely

- Push the drawer all the way in until it reaches the fully closed locking position.

IMPORTANT – DRAWER LOCKING POSITIONS

The toilet drawer locks in three positions:

- Fully closed
- Halfway extended
- Fully extended

You may need to keep both blue levers lifted when moving past these locking positions.

 **Before driving, always make sure the toilet drawer is FULLY CLOSED AND LOCKED.**

IMPORTANT – PLEASE DO NOT

- X Do not travel with the toilet drawer extended.
- X Do not leave the waste valve open when the toilet is not being used.
- X Do not overfill the waste tank.
- X Do not put wipes, sanitary products, paper towels, nappies or other rubbish into the toilet.
- X Do not force the toilet valve or drawer mechanism.
- X Do not empty toilet waste onto the ground, into stormwater drains or anywhere other than an appropriate toilet/dump station.

QUICK USE

Push blue levers DOWN → Open drawer → Remove drawer front → Slide toilet out → Open lid → Open waste valve → Use toilet → Flush → CLOSE waste valve → Refit drawer front → Lift blue levers UP → Push drawer fully closed & locked.

QUICK EMPTY

Open drawer → Remove drawer front → Lift rear toilet handle → Rotate toilet forward → Separate upper and lower tanks → Remove waste tank → Empty at approved dump station → Rinse → Prepare tank → Reassemble toilet → Rotate back into position → Close and lock drawer.

Front window black out thermal screens

The Cosmo comes with external black out thermal window screens. The benefits of using external thermal blinds are

- **Thermal Performance:** Highly effective. By blocking sunlight and cold air before it touches the glass, they keep the van significantly cooler in summer and warmer in winter.
- **Condensation Control:** Virtually eliminate internal windscreen condensation because the cold barrier is on the outside of the vehicle.
- **Security & Fit:** Hook over the top of the doors and secure around the wing mirrors, providing a tight exterior blackout fit.

Shake any moisture off them well in the morning before putting back in the bag.

Leisure battery

There is a lithium leisure battery located under the driver's seat. Please do not touch this battery.

A solar panel is connected to the leisure battery to help keep the battery levels topped up while the vehicle is in use. This also supports camping off grid and being less reliant on powered campsites.

Solar

Your campervan is fitted with a **200W solar panel on the pop-top roof**.

For the best solar charging performance:

1. **Raise the pop-top roof** whenever practical to face the direction of the sun. This angles the solar panel towards the sky and can significantly improve its exposure to direct sunlight.
2. **Park with the rear of the campervan facing towards the sun.** When the pop-top is raised, the roof slopes upwards towards the rear of the van. Positioning the rear of the van towards the sun therefore angles the solar panel more directly towards the sunlight.
3. **Avoid shade where possible.** Even partial shading from trees, buildings or other vehicles can considerably reduce the amount of power produced by the solar panel.
4. **Reposition the van if necessary.** The sun moves throughout the day, so the best direction will change. If you are staying in one location for an extended period and maximum charging is important, consider the sun's position when choosing your parking spot.

TIP: For maximum solar charging, raise the pop-top, keep the solar panel free from shade, and point the **rear of the campervan towards the sun**.

Mains plug

The vehicle has a 240-volt mains plug connection. When this is plugged in the fridge and any other gadgets you have will be powered by the mains plug.

Table

The table is stored on the end of the kitchen unit and is clipped in. To set the table up press the button on the table leg and straighten out the leg. Clip the table onto the silver rail above the fridge. Table legs can be height adjusted if necessary.

The table can only be stored in its holder one way round (thinnest edge facing downwards).

You can sit on the bed and use the table or swivel the front seat to form part of the dinning seat up.

Drawer Handles

Drawer handles open by putting your fingers in the hole and pressing down on the latch that releases the draw.

Water System

The freshwater tank is 36 litres. It has an overflow which drains underneath the vehicle. The freshwater tank feeds the tap using a submersible pump in the tank. The tap contains a microswitch which completes the circuit.

There is also a button on the 'touch screen' which must be pressed to provide power to the pump. This acts as a failsafe to ensure the tap isn't accidentally turned on.

Water drains into a 69 litre waste tank underneath the vehicle at the rear. There is no overflow for this tank so if the sink isn't draining it is likely because the waste tank is full. The tap to empty it is underneath the vehicle at the back.

Portable shower



The Cosmo comes equipped with the Ontap Roam portable shower.

- Made from food grade materials
- USB-C rechargeable battery
- 40 PSI high pressure
- Heats with the sun
- 20x full tanks per charge
- 16 litre tank
- 6 minutes of rinse time per tank
- Includes pump housing, hose and spray gun, suction cup mount, USB-C cord

The top part of the shower is stored separately to the water tank so it fits under the bed. The top part is the power base for the shower and has the USB-C plug.

The portable shower must be removed from the vehicle and set up outside the vehicle.

The shower head can attach to any flat surface with the provided suction cup and hook, allowing you to hang it over your head for a quick shower, or to rinse off muddy boots or sandy feet. You can also hold the shower head and have a quick rinse off.

