

LightMate 3 User Manual

Towbar Electrics Tester & Trailer/Caravan Road Light Tester

For vehicles fitted with 7pin or 13pin towbar electrics installation
For Trailers or caravans fitted with either a 7 or 13pin plug
Complies with standards ISO 1724 and DIN 11446



**Note: Multicon or WeSt connection
systems are not supported**

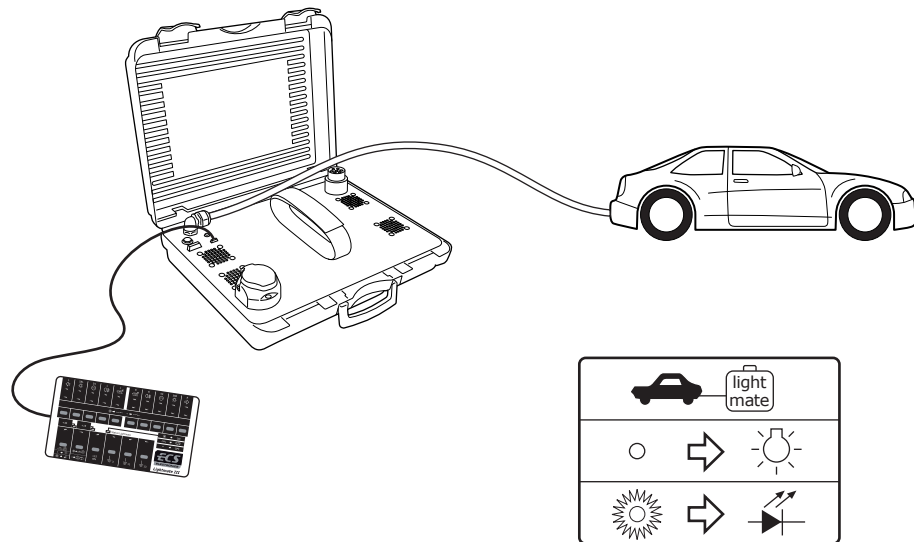
Powered by



rev. 0



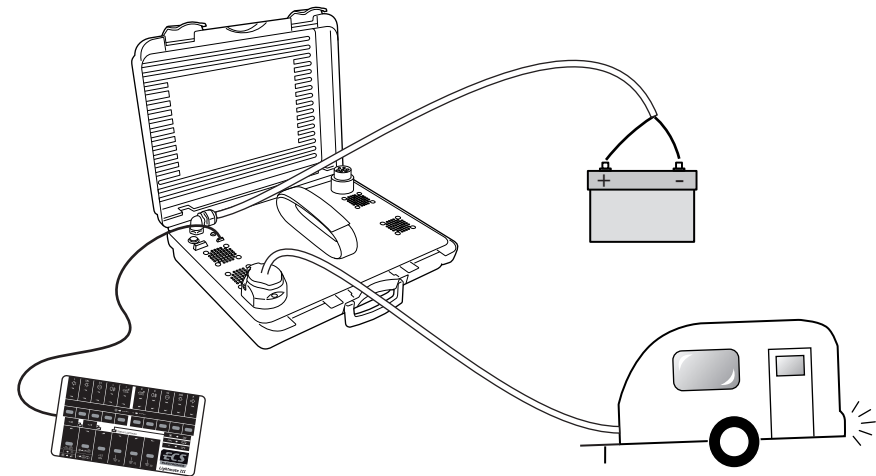
Towbar Electrics Tester



The Lightmate 3 simulates the electrical current load (Amps) on the individual lighting circuits so that the correct operation of the socket functions and any electronics can be checked.

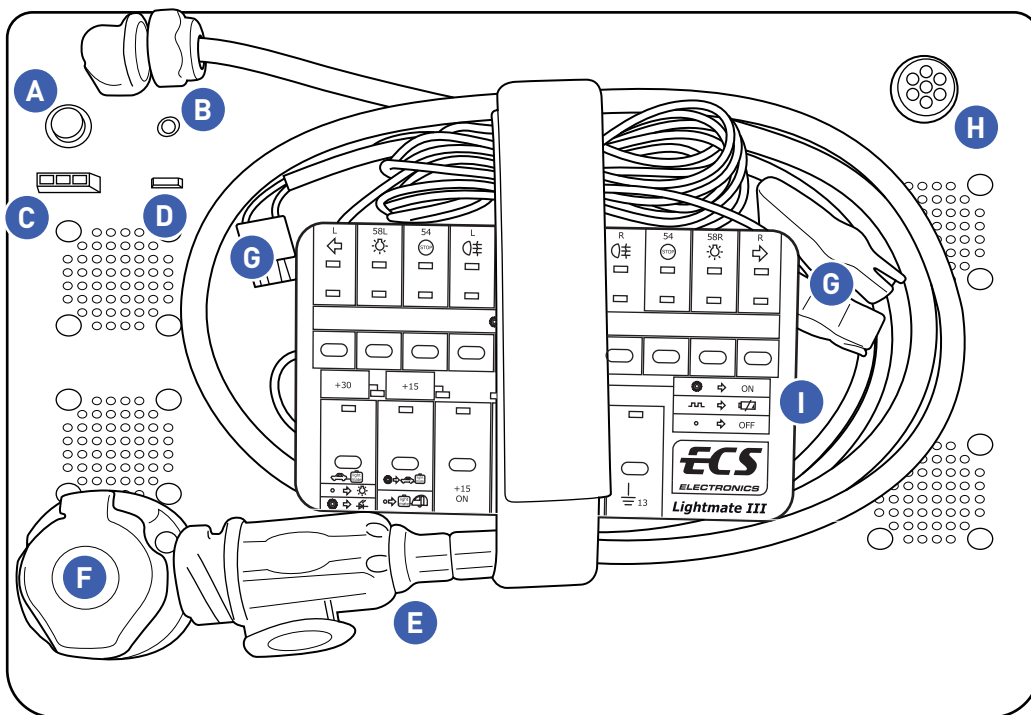
The Lightmate 3 is also able to change the individual lighting circuits to LED so you can check the correct operation of the socket functions if the trailer or caravan has LED lighting systems installed.

Trailer/Caravan Road Light Tester



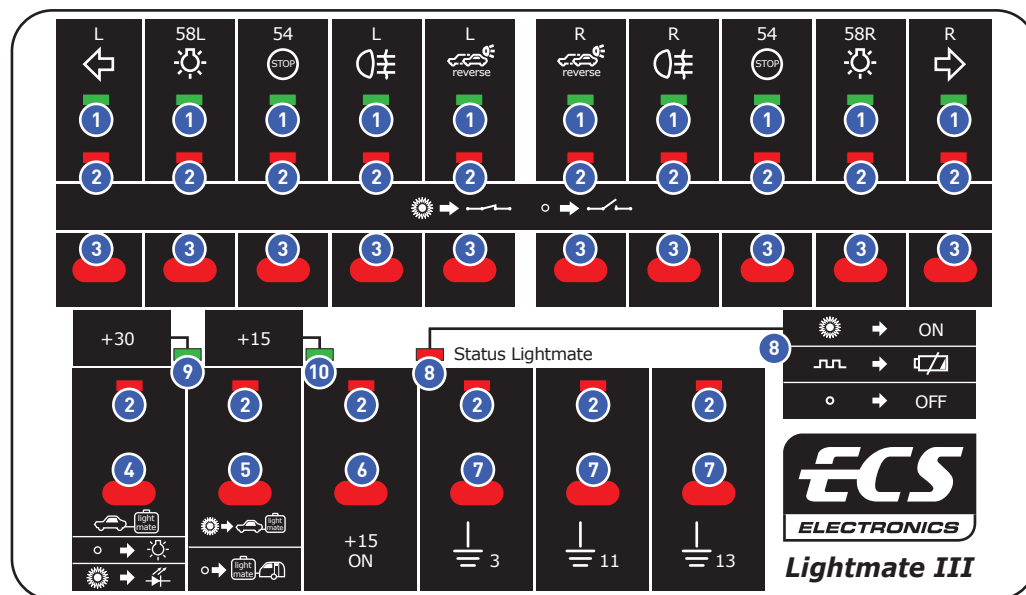
With the use of an external 12V battery you can power the individual road lighting circuits on a trailer or caravan.

Control panel



- A** Push button activation (**Note: the LightMate 3 switches off automatically after approx. 5 min..**)
- B** Power status LED
- C** External 12V power connection
- D** Remote Control connection
- E** Cable with 13-pin plug DIN 11446 compliant
- F** 13-pin socket DIN 11446 compliant
- G** External 12V power cable
- H** Adapter from 7-pin ISO 1724 > 13-p DIN/ISO 11446
- I** Remote Control

Remote Control



- 1** Green function LED's
- 2** Red status LED's for push-buttons
- 3** Light function push-buttons
- 4** Globe / LED simulation selection push-button
- 5** Trailer simulator & Trailer tester push-button
- 6** Push button for switched power supply
- 7** Earth circuits test buttons
- 8** LED indication for vehicle battery status and LightMate
- 9** +30 constant voltage active
- 10** +15 switched voltage active

Towbar Electrics Test Procedure

Connect the 13-pin plug **E** with the vehicle's 13-pin socket. If required, use the 13pin to 7pin adapter **H** for 7pin installations.

LED 30+ **9** will light up if the permanent supply is connected. (13pin systems only).

+15LED **10** will light up when the switched supply is activated and switched on. (13pin systems only).

If +30 or +15 is not connected, the LightMate is activated with push-button **A**.

Select the required position BULB/LED selection with the accompanying push-button **4**.
(Tip: Start testing in standard Lamp mode.)

Switch on the vehicle's lights. Using push-button(s) **3** on the Remote Control, you can simulate a faulty lamp. More and more vehicles display a bulb failure warning on the dashboard if the trailer's lights fail.

Switch on the vehicle's side lights. Operate the three earth push-buttons **7** one by one to check the earth connections. If the lights fail during testing, the earth connection is not correct. For the 7-pin systems, use the push-button for circuit 1 -8. The other 2 earth circuits are for testing the +30 and +15 circuits on a 13pin installation.

Switch on the vehicle's ignition. Check the C2 function (indicators) by switching on the left indicator of the vehicle and then, switching off the left indicator on the LightMate, so a defective lamp can be simulated on the trailer. The C2 function should activate and the driver will be given a visual or audible indication. Repeat the same check with the right indicator.

Normally to check the brake lights the ignition must be on.

To check the fog-lamp cut out switch on the vehicle's rear fog light(s). Check if they are off on the vehicle and on, on the LightMate. Switch off the vehicle's rear fog lamp(s). Disconnect the 13-pin plug. Switch the vehicle's rear fog lamp(s) on again. The fog lamp(s) on the vehicle should go on.

(Note: Some tow-bar modules must first experience 3 light switches before a trailer can be registered and the fog lights can be switched on.)

To check the reverse lights the ignition must be on. Put the vehicle in reverse gear. Check whether the reverse lights switch on, on the vehicle and the LightMate.
(13pin systems only).

Trailer/Caravan Road Light Test Procedure

Before starting switch off or disconnect any extra electric consumers or internal lighting circuits temporarily.

Push the trailer plug into the LightMate **F** socket.
If necessary obtain a 13pin plug to 7pin plug adapter. (Not supplied)

Using the supplied power cable **G**, connect an External battery / 12 V cable (10 amp. Rated minimum) to **C**.

Switch the LightMate into Trailer tester mode **5**. You can now test the lighting circuits and power feed functions on the trailer / caravan.

Switch on one of the 2 rear lights using the relevant push-button **3**. Push down push-button **7** for circuit 1-8 to interrupt the trailer light earth connection. The relevant rear light will switch off.

Check all light functions one by one using the accompanying push-buttons **3**.
(IMPORTANT: Maximum 3 functions at once, due to the load.)

If the trailer/caravan has additional electric consumers or internal lights, switch on one circuit at a time so the LightMate is not overloaded.

Push in push-button **7** for circuit 9 to check the 12V constant power supply (+30).
(Only applicable with 13-pin system.)

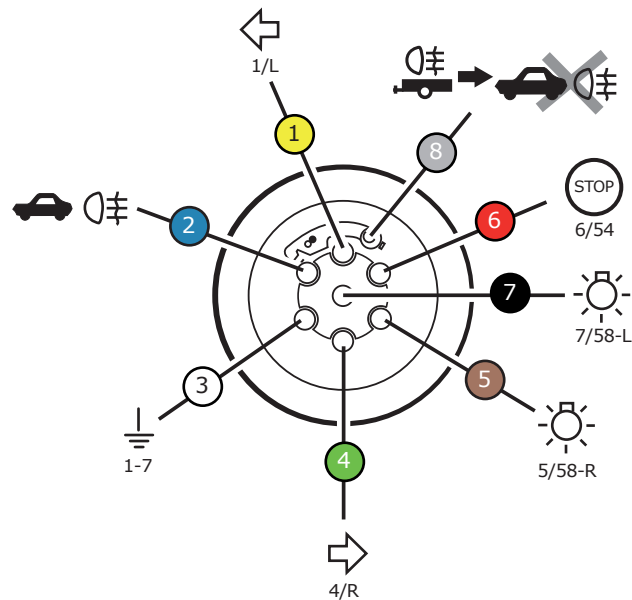
Operate the +15 push-button **6** to check the 12V switched supply.
(Only applicable with 13-pin system.)

Push in push-button **7** for circuit 9 to check the earth connection with +15 push-button **6** for the trailer's switched supply (+15). Only applicable with 13-pin system.

To allow for a short-circuit, the LightMate limits the power output to approx. 10 Amp. If the internal and/or external battery is unable to supply enough power, the LightMate will reset and restart in trailer simulation mode.
(IMPORTANT: The short-circuit must be repaired before continuing the testing.)

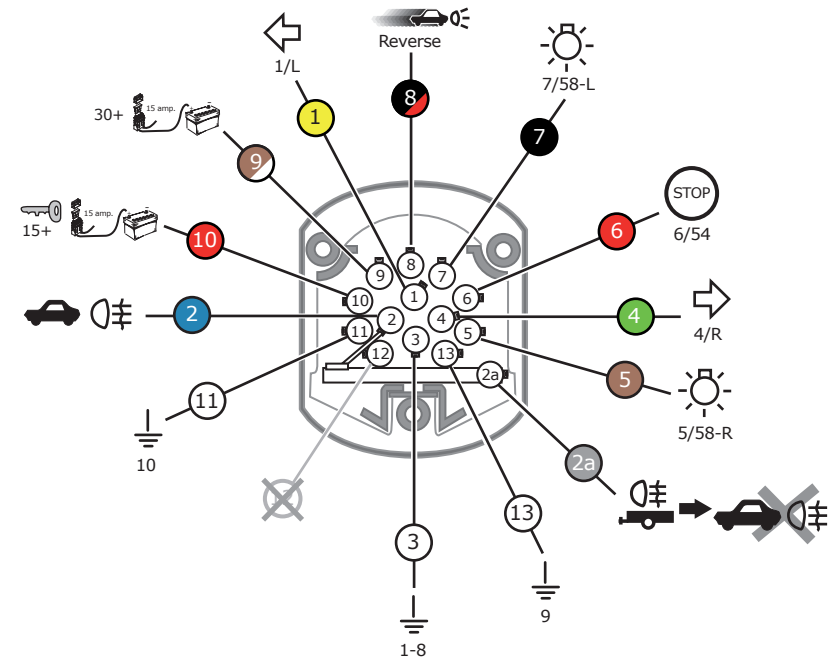
Socket connection diagram DIN/ISO 1724

1	← 1/L	Yellow
2	🚗	Blue
3	⏚ 1-7	White
4	→ 4/R	Green
5	💡 5/58-R	Brown
6	STOP 6/54	Red
7	💡 7/58-L	Black
8	🚗 → 🚗	Grey



Socket connection diagram DIN/ISO 11446

1	← 1/L	Yellow
2	🚗	Blue
2a	🚗 → 🚗	Grey
3	⏚ 1-8	White
4	→ 4/R	Green
5	💡 5/58-R	Brown
6	STOP 6/54	Red 1mm ²
7	💡 7/58-L	Black
8	Reverse	Black/red
9	30+ 15 amp	Brown/White
10	15+ 15 amp	Red 2,5mm ²
11	⏚ 10	White
12	—	×
13	⏚ 9	White



General description of LightMate

Application	for vehicles with 7 / 13 pin sockets and trailer/caravan with 7 / 13 pin plug in compliance with ISO 1724 and DIN 11446		
Voltage supply	9V up to a maximum 15 V		
Maximum ampere	10A, PWM limited		
Maximum load	L and R (indicator)	:	21W, each
	58L and 58 R (rear light)	:	21W, each
	54 (brake)	:	2 × 21W
	54G (fog)	:	2 × 21W
	BU (reverse)	:	2 × 21W
Housing dimensions	425 × 342 × 125 mm		
Weight	approx. 4.2 kg		
External power cord	approx. 1.50m with clamps		
Adapter	13 > 7-pin to DIN 11446 & ISO 1724 specification		
Extras	For testing standard bulb and LED lighting circuits		
Warning:	The LightMate is designed for functional circuit testing. Cannot be used for endurance testing.		

LightMate trailer socket check list

(Make a copy for use)

Vehicle model:

Registration plate:

Date:

Checked by:


☐

LightMate connected

☐

30+ functional (13pin only)

☐

15+ functional (13pin only)

☐

Left indicator

☐

C2-function (indicator check) left (if applicable)

☐

Right indicator

☐

C2-function (indicator check) right (if applicable)

☐

Brake light

☐

Fog light/fog light conversion

☐

Right tail light

☐

Reverse light

☐

Check earth circuit 1-8

☐

Check earth circuit 9 (13pin only)

☐

Check earth circuit 10 (13pin only)

User manual
Gebruikershandleiding
Gebrauchsanleitung
Mode d'emploi



www.ecs-electronics.nl

The internal lithium battery should be charged regularly via an external power supply (battery)!



Order no: **CF001ZZ**

Extra protection for the
LightMate 3 remote control



Order no: **LM3BUMPER**

Plug adapter with 13-pin
DIN-plug and 7-pin
ISO plug box



Order no: **SP123ZZ**



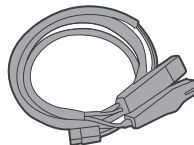
Order no: **SP126ZZ**

Remote control for the
LightMate 3



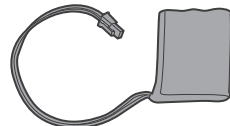
Order no: **LM3REM**

Charge and power cable
for the LightMate 3



Order no: **LM3POWCABLE**

Battery for LightMate 3



Order no: **LM3BATTERY**

General Guarantee Conditions

ECS Electronics guarantees the LightMate 3 based on the following conditions:

- Defects in the LightMate 3 which can demonstrably be attributed to the material, design and/or production error, shall be repaired free of charge by ECS Electronics in accordance with the following conditions (paragraph 2 through 4) if the LightMate 3 is not older than two years. For the battery this shall be a maximum of six months.
- Highly fragile components such as the remote or light bulbs are not covered under the warranty. No warranty claim shall exist in case of:
 - Minor deviations from the required properties in as far as this is of no importance for the value and functionality of the device.
 - In case of damage caused by the chemical action of water and in general as a result of anomalous environmental factors or contact with substances against which the device is otherwise not resistant to.
 - If the deficiencies to the device can be traced back to incorrect, careless use, unsound maintenance or non-compliance with the operating instructions. The LightMate 3 is a test-measuring instrument; it should therefore be handled with care.
 - If repairs or procedures are performed by persons not authorized by ECS Electronics, or if the devices are fitted with (spare) parts, extensions or accessories other than original spare parts and a defect is caused thereby.
 - The device's warranty sticker has been removed, damaged, altered or is illegible.
- Warranty cases are settled in such a way that defective parts are repaired or replaced by sound components, free of charge, to the discretion of ECS Electronics. For the warranty to apply, you should first contact ECS Electronics customer care by email at customer@ecs-electronics.com or by phone 0800 22 55 23 27. After agreement, the LightMate 3 can be sent in at your own expense. This should be made on presentation of the purchase receipt with purchase and/or delivery date.
- Warranty cases do not lead to an extension of the warranty period and neither does it represent the start of a new warranty period. The warranty period for built-in spare parts ends at the same time as the warranty period for the device as a whole.