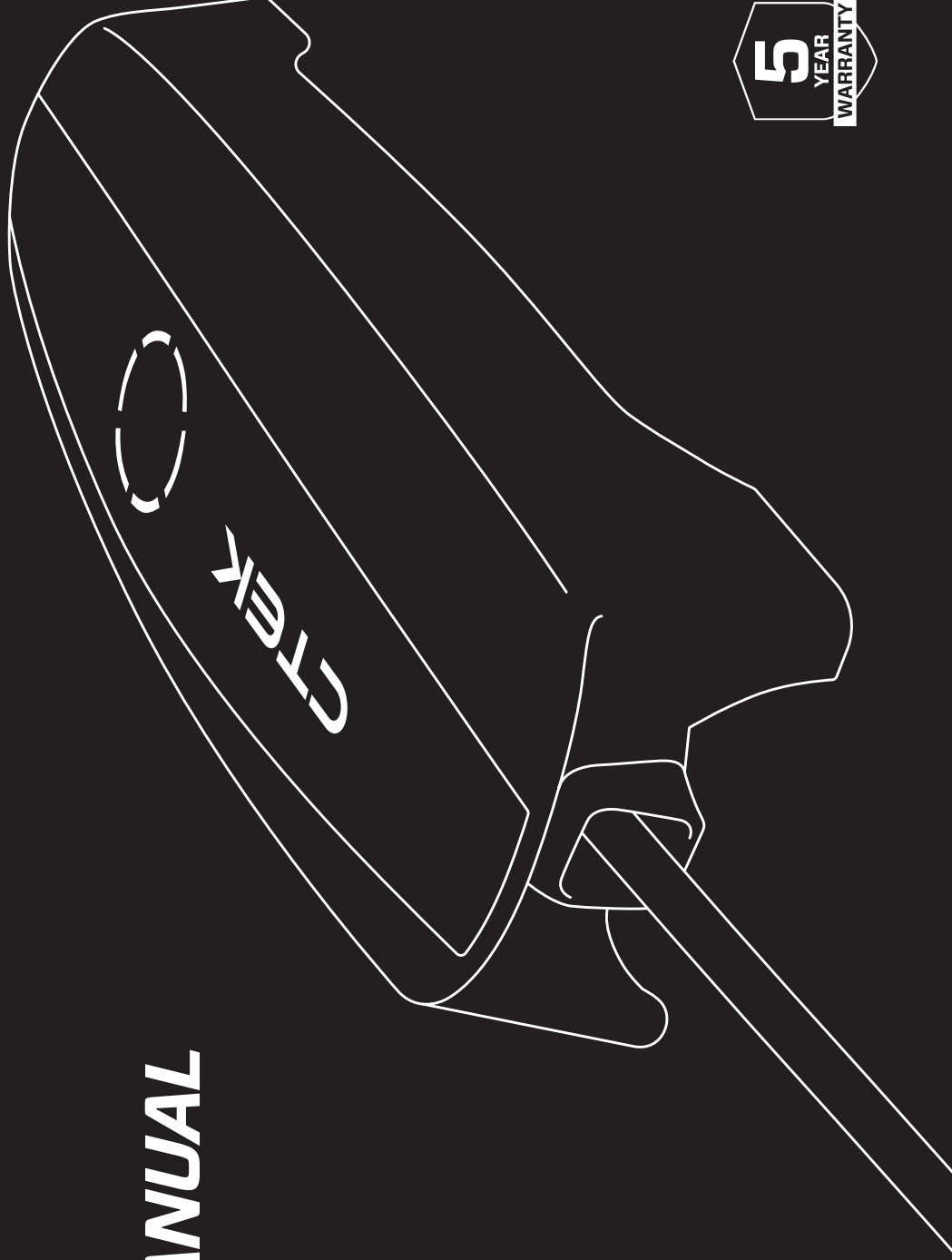


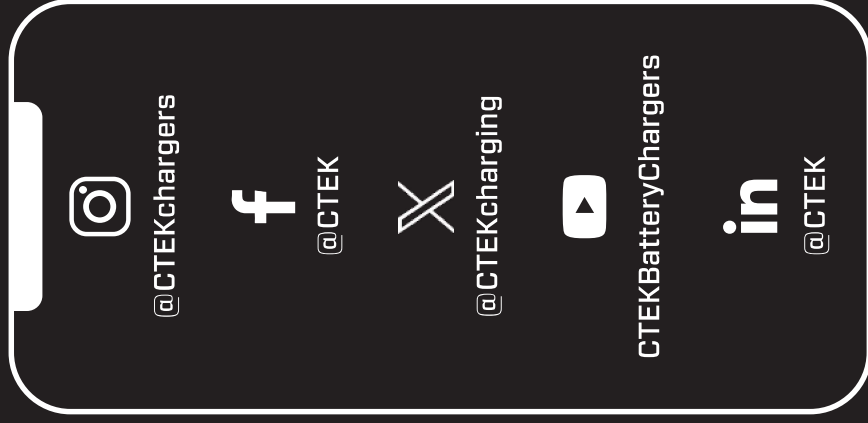
CTEK

USER MANUAL CS ONE

Part No: 40-330, 40-331, 40-332



CTEK



 Please read all of the instructions detailed in this user manual carefully before use.

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THANK YOU FOR CHOOSING CTEK

CTEK was founded in 1997 and since then we've been developing and manufacturing high-quality battery chargers with unique cutting-edge technology, for all types of lead-acid batteries.

Why? Because a battery can last 2-3 times longer if you maintain and charge it properly. This benefits the environment, saves people a lot of money and makes vehicles more reliable.

To learn more about us and our products, please visit: www.ctek.com

REVOLUTIONARY ADAPTIVE BATTERY CHARGER AND MAINTAINER

The revolutionary battery charger and intelligent maintainer with APTO™ (Adaptive Charging) technology. Hands down the most innovative battery charger ever engineered by CTEK, CS ONE comes to you with cutting-edge APTO™ technology that's so advanced it does all the thinking for you.

This is the ONE battery charger capable of delivering a whole new dimension of smartness and simplicity. ONE so ground-breaking, it supports polarity-free charging. ONE you simply plug in to the mains, attach to any 12 V battery and rely on to deliver consistently optimal performance.

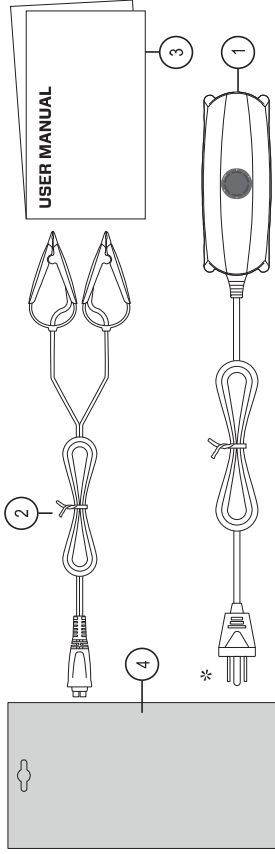
We call that pure brain power, wouldn't you?

FEATURES

- Fully automatic APTO™ (Adaptive Charging) Technology, for every type of 12 V lead acid (WET, MF, Ca/Ca, AGM, EFB, GEL) or 12 V lithium (LiFePO₄) battery
- Groundbraking polarity free clamps that can be safely connected to either charging point. This charger cannot be connected incorrectly
- Easy to use, easy to operate—no buttons to press or modes to select - unless you want to
- Clear, bright display shows you how long is left in hours until the battery is charged and ready to go
- Can be left safely connected for long periods during maintenance charging
- New durable design to make it easy to handle, with unique mounting system on the back for quick connection to CS accessories
- 5 year warranty
- Additional advanced functions (RECOND, WAKE UP, SUPPLY & advanced settings) available via Bluetooth® connection and the CTEK App:

- **RECOND** option to restore and precondition lead-acid batteries.
- **WAKE UP** option to revive seemingly dead lithium and lead-acid batteries.
- **SUPPLY** to support the battery during service work and retain contact power to the vehicle during battery replacement / removal.
- **ADVANCED SETTINGS** to monitor charger voltage & amperage.

WHAT'S IN THE BOX



NO.	ITEM	PACKAGING MATERIAL USED**	CODE OF MATERIAL	MATERIAL CATEGORY***
1	CS ONE	Transparent film	PP5	Plastics
2	Charge clamps	Cable tie	92	Composite
3	User manual	Paper	PAP22	Paper
4	Gift box	Cardboard	PAP20	Paper

* Supply plugs may differ to suit your wall socket

** Packaging elements may vary subject to the model

*** Check the provision of your municipality for the management of waste

TUTORIALS

Scan the QR code below with your phone's camera to see the CS ONE tutorials..



CTEK.COM/MEDIA/CSONE



SAFETY & RECYCLING

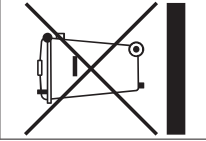
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△ READ ALL OF THE SAFETY AND USER INSTRUCTIONS BEFORE USE

- △ The charger is only designed for charging batteries according to the technical specification. Do not use the charger for any other purpose
- △ Always follow battery manufacturers' user and safety recommendations
- △ Never try to charge non-rechargeable batteries
- △ Never place the charger on top of the battery or cover the charger when charging
- △ Never charge a frozen or damaged battery
- △ Never use a charger with damaged cables. Ensure that the cables have not been damaged by hot surfaces, sharp edges or in any other way
- △ A damaged cable must be replaced by a CTEK representative using an original part supplied by CTEK. A detachable cable can be replaced by the user using an original part supplied by CTEK
- △ Never extend the charger cable to a total length of more than 3.0m. Use only original parts supplied by CTEK
- △ Extension of output cable may cause electromagnetic interference
- △ Connection to the mains supply must be in accordance with the national regulations for electrical installations
- △ Chargers with grounded mains plug must only be connected to a grounded socket outlet
- △ During charging, lead-acid batteries can emit explosive gases. Prevent sparks close to the battery. Provide for good ventilation
- △ Chargers with IP-class lower than IPX4 are designed for indoor use. See technical specification. Do not expose to rain or snow
- △ Don't leave any battery unattended for a longer period of time during charging. If any error occurs disconnect the charger manually
- △ During operation, a minimum distance of 20 cm (8 in) must be maintained between the device and the user or any persons in the same area
- △ **(IEC 7.12 ed.5) This text is applicable out-side European Countries:** This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance
- △ **(EN 7.12) This text is applicable in European Countries:** This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children must not play with the appliance. Cleaning and user maintenance must not be made by children without supervision

DISPOSING OF THE DEVICE

YOUR OBLIGATION AS AN END USER



Products marked with a crossed-out wheeled bin symbol and a single black bar underneath, contain parts that must be handled in compliance with the WEEE Directive (2012/19/EU). The appliance may therefore only be collected and taken back separately from unsorted municipal waste, i.e., it must not be disposed of with household waste. The appliance can, for example, be taken to a municipal collection point or, where applicable, to a distributor.

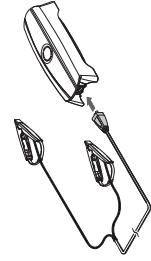
This also applies to all components, sub assemblies, and consumables of the old appliance to be disposed of.

Before the old appliance can be disposed of, all old batteries and accumulators that are not enclosed in the old appliance must be separated from the old appliance. The same applies to lamps that can be removed from the old appliance without being destroyed. The end user is also responsible for deleting personal data from the old appliance.

NOTES ON RECYCLING

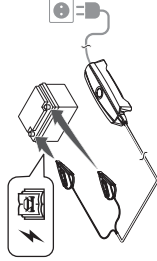


Help to recycle all materials marked with this symbol. Do not dispose of such materials, especially packaging, in the household waste but in the recycling containers provided or in the appropriate local collection systems. Recycle electrical and electronic equipment for environmental and health protection.



Connect the supplied battery terminal clamps to the CS ONE output port.

N

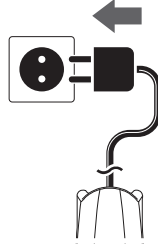


Connect the battery clamps to the 12 V battery.

The CS ONE has built in polarity protection to prevent damage to your battery. The battery clamps can be safely installed to either terminal point.

Note: Refer to the vehicle / battery manufacturers guide for terminal connection points.

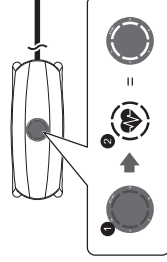
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Plug the CS ONE into the supply outlet.

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WWW.CTEK.COM



APTO™ Technology will now analyze the condition of the battery to be charged.

The LED indicator will cycle during this process.

Note: If LED indicators '2' & '8' are illuminated red, refer to the Troubleshooting section.

LD



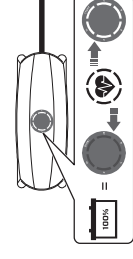
APTO™ Technology automatically recognizes the type of battery, and then automatically delivers a customized charging program*.

The charge time is shown on the LED indicator.

* Charging programs can include: ANALYZE, DESULPHATION (lead-acid only), WAKE UP, BULK, ABSORPTION. CARE

	$\sim 1\text{ h}$
	$\sim 2\text{ h}$
	$\sim 4\text{ h}$
	$\sim 6\text{ h}$
	$\sim 8\text{ h}$

6



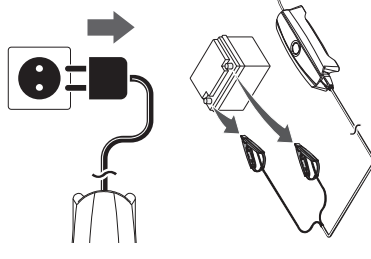
When the battery is fully charged, the CS ONE will automatically go into CARE mode and maintain a safe charge.

The CARE mode is shown by all lights on the LED indicator pulsing.

In CARE mode the battery is safe to be left on charge for long term storage on or off the vehicle.

Note: Check the CS ONE goes into CARE mode after 80 hours. If not, the battery could be faulty. CTEK recommend to get the battery tested - it may need replacing.

2



Disconnect the CS ONE when the battery is and ready for use.

- To disconnect, unplug the CS ONE from the supply outlet
- Follow by removing the CS ONE battery clamps
- Store the CS ONE in a suitable location

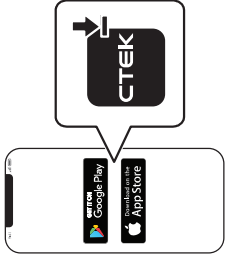
© CTEK SWEDEN AB



8

Install the CTEK App:

- Android – On the smart mobile device go to 'Play Store' → search 'CTEK App' → 'Install'
- iOS – On the smart mobile device go to 'App store' → search 'CTEK App' → 'Get' → 'Install'



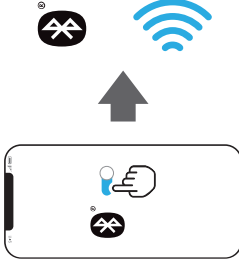
Other operating systems – Refer to the smart mobile device manual to correctly select the App store and install the CTEK App.

9

Establish Bluetooth® connection:

- Android – Go to 'Settings' → 'Connected Devices' → 'Connection preferences' → 'Bluetooth®' → 'Activate'
- iOS – Go to 'Settings' → 'Bluetooth®' → toggle to activate

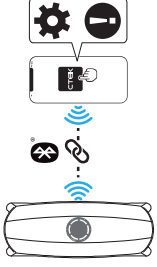
Other operating systems – Refer to the smart mobile device manual to correctly establish the Bluetooth® connection.



10

Open the CTEK App:

- Follow the instructions when prompted in the CTEK App to register an account
- Follow the instructions when prompted in the CTEK App to pair with the CS ONE



Note: The CS ONE is ready for pairing for 2 minutes after being powered on. This can be indicated by the blue LED's blinking.



+ ACCESSORIES

A range of CTEK accessories can be used with the CS ONE as shown, visit www.ctek.com for more information and compatibility requirements.

CS ONE BUMPER

Part no. 40-476



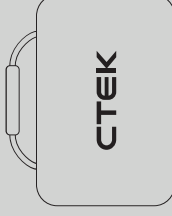
CS WALL MOUNT

Part no. 40-375



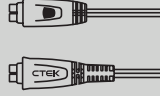
CTEK STORAGE CASE

Part no. 40-517



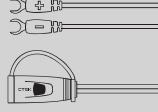
CS CONNECT ADAPTER CABLE

Part no. 40-376



CS CONNECT U-TERMINAL

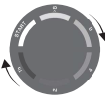
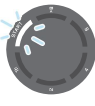
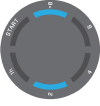
Part no. 40-377
Requires CS CONNECT ADAPTER CABLE





TROUBLESHOOTING & FAQ

For further FAQs, troubleshooting and support contact details, visit www.ctek.com for more information.

QUESTION	ANSWER	ACTION
The CS ONE shows two BLINKING red lights, what does that mean?	 This indicates that the CS ONE does not work as it should.	Disconnect from battery and supply outlet → wait several minutes → reconnect and try again. If this happens every time the CS ONE is used, please contact the dealer, the CS ONE may be broken and need to be replaced.
The CS ONE shows two steady red lights, what does that mean?	 This indicates that there is either a faulty connection to the battery or the battery being charged is faulty.	If the indication shows immediately when attempting a charge → check that the connection is not short circuited or the battery voltage is not higher than 16V.
The white lights keeps circling on the CS ONE after the battery is connected, why?	 The circling white light on the CS ONE shows that the charger seeking / analyzing the battery. If this process takes longer than 60 seconds, it is an indication of poor contact between the battery and the charger - or a battery drained too low (<1,5V for lead acid and a lithium that has closed down, Under Voltage Protection).	If the indication shows some time after charging has started, this means the charge is interrupted as there might be something wrong with the battery. Disconnect all possible consumers and try again. If the problem persists, CTEK recommend to get the battery tested - it may need replacing.
What does it mean when the 'START' indicator is blinking?	 It means that the battery does not have enough power to start the vehicle.	Check all connection points, including connections into the CS ONE. If the problem persists, using the free CTEK APP begin the 'WAKE UP' procedure to start the charge. If the problem persists, CTEK recommend to get the battery tested - it may need replacing.
The CS ONE shows two BLINKING blue lights, what does that mean?	 The CS ONE is ready to be paired with a mobile device via Bluetooth®.	Continue to charge until the 'START' indicator becomes permanently lit. This can be seen during the first 2 minutes after powering on.
The CS ONE shows two steady blue lights, what does that mean?	 Bluetooth® connection is verified	The CTEK APP can now be used to control the CS ONE.
What is the Bluetooth® range of the CS ONE?	 The Bluetooth® range of the CS ONE is approximately 33 ft (10 m).	No action required.
The CS ONE shows two steady white lights, '<8' and '2', what does that mean?	 It means that the CTEK APP is being used and controlling the CS ONE.	No action required.



TROUBLESHOOTING & FAQ

EN

QUESTION	ANSWER	ACTION
What does it mean when all LED segments are pulsing slowly with a white colour?	 This means the battery is fully charged and the CS ONE has gone into maintenance 'CARE' mode.	The battery can now be used. In 'CARE' mode the battery is safe to be left on charge for long term storage on or off the vehicle.
The CTEK APP cannot find the CS ONE, the status is shown as being offline, why?	 Connection between the CS ONE and the mobile device is faulty.	Check that Bluetooth® is active on the mobile device. Check that the mobile device and the CS ONE are within the receiving range of the Bluetooth®.
Trying to 'WAKE UP' the CS ONE via the CTEK app, but the battery doesn't start, why?.	 This indicates that there is either a faulty connection to the battery or the battery being charged is faulty.	Disconnect the battery from the vehicle or from the load → run wake up procedure again. If it still does not work, the battery might be broken or has closed down (LiFePO4). CTEK recommend to get the battery tested - it may need replacing.
Cannot choose the 'WAKE UP' function on the app, why is it missing?	 'WAKE UP' is only available when the CS ONE cannot find the battery.	Open the app and start the CS ONE - but doesn't connect the charger to the battery (or to recommended charge points) it will show up on the app directly.
How does the 'SUPPLY' function work in the CTEK APP?	 In 'SUPPLY' the CS ONE works as a supply unit, giving out a constant voltage of 13,6 volt and as much current as required (max 8 ampere). There is also an output power limit of 100 watt.	No action required.
I have used the 'SUPPLY' function from the CTEK APP but it will not go back to charging, why?	 The charging mode will need to be changed via the CTEK APP.	After using the 'SUPPLY' function from the CTEK APP, choose the operation 'RESET TO APTO' to make the battery charge again.
How does the 'RECOND' function work in the CTEK APP?	 The 'RECOND' function should only be used on wet lead acid batteries (Not Lithium LiFePO4, GEL or AGM batteries). In 'RECOND' the CS ONE will firstly go through all of the charging steps until the battery is fully charged. The voltage is then raised in a controlled way to prevent acid stratification and prolong battery life. 'RECOND' should only be used 1-2 times per year.	No action required
What type of batteries can CS ONE charge?	The CS ONE charges all types of 12 V batteries from 3Ah up to 180Ah.	See 'TECHNICAL SPECIFICATION' for further information.
Does the CS ONE work with other CTEK Accessories?	The optional CS CONNECT ADAPTER CABLE will be required to make the CS ONE compatible with the CTEK accessories.	See 'ACCESSORIES: CS ONE' for further information.
Do I need to register my charger to have the 5 year warranty time?	No.	Should any issues arise, please contact your supplier. If the supplier is unable to help, please contact CTEK directly.

MODEL NUMBER	1098
INPUT	220–240 VAC, 47–63 Hz, 1.2 A
OUTPUT	12 V, 8.0 A
START VOLTAGE	1.5 V Lead-acid battery types 1.5 V Lithium battery types
BACK CURRENT DRAIN*	Corresponding to less than 1.5 Ah/month
RIPPLE**	Less than 4 %
AMBIENT OPERATING TEMPERATURE	-22°F to +122°F (-30°C to +50°C)
BATTERY CHEMISTRY	Lead-acid, Lithium-ion
BATTERY TYPES	12 V Lead-acid battery types: WET, MF, Ca/Ca, AGM, EFB, GEL 12 V Lithium battery types: LiFePO ₄
BATTERY CAPACITY	3–180 Ah
INGRESS PROTECTION	IP65
TEMPERATURE COMPENSATION	Built in charge voltage compensation according to ambient temperature
NET WEIGHT (UNIT WITH CABLES)	1.5 lbs (0.675 Kg)
DIMENSIONS (L X W X H)	9.25 x 3.4 x 2 in (235 x 88 x 52 mm)
MAINS CABLE LENGTH (INPUT)	55 in (1.4 m)
FREQUENCY BAND	2402 - 2480 Hz
MAX. RF OUTPUT POWER (EIRP), WIFI®	20 dBm
MAX. RF OUTPUT POWER (EIRP), BLUETOOTH® LOW ENERGY	5.93 dBm
RF EXPOSURE (MAX. E-FIELD STRENGTH)	8.18 V/m (limit: 61 V/m)
WARRANTY	5 years

*) Back current drain is the current that drains the battery if the charger is not connected to the mains. CTEK chargers have a very low back current.

**) The quality of the charging voltage and charging current is very important. A high current ripple heats up the battery which has an aging effect on the positive electrode. High voltage ripple could harm other equipment that is connected to the battery. CTEK battery chargers produce very clean voltage and current with low ripple.

LIMITED WARRANTY

CTEK Sweden AB, issues this limited warranty to the original purchaser of this product. This limited warranty is not transferable. The warranty applies to manufacturing faults and material defects for 5 years from the date of purchase. The customer must return the product together with the receipt of purchase to the point of purchase. This warranty is void if the battery charger has been opened, handled carelessly or repaired by anyone other than CTEK Sweden AB or its authorised representatives. One of the screw holes in the bottom of the charger is sealed. Removing or damaging the seal will void the warranty. CTEK Sweden AB makes no warranty other than this limited warranty and is not liable for any other costs other than those mentioned above, i.e. no consequential damages.

Moreover, CTEK Sweden AB is not obligated to any other warranty other than this warranty.

EU DECLARATION OF CONFORMITY

Hereby, CTEK Sweden AB, declares that the radio equipment type, CS ONE (1098) is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following Internet address:

<https://www.ctek.com/uk/quality/doc>

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SUPPORT

CTEK offers a professional customer support. Get in touch using one of the following:



support.ctek.com



support@ctek.com



+46 10 344 88 10