XIRGO

VIDEO TELEMATICS

CP4S

USER GUIDE

4-CHANNEL HD VEHICLE RECORDER

VERSION 1.1.2 | LAST UPDATED 2/17/2025

Please read this entire guide and refer to our installation materials before using your CP4S 4-channel HD vehicle recorder.

XIRGO

CP4S

USER GUIDE

TABLE OF CONTENTS

Please read this entire guide before installation and use.

PACKAGE CONTENTS

CP4S VEHICLE RECORDER

Power cable
BAT(+), IGN+, BAT(-)

Remote controller
(Panic button) with 3M adhesive

Video output cable and I/O triggers

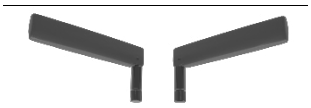
Camera input cable
(4x input)

GPS antenna module

Audio microphone

Wire splice clip, hook-and-loop adhesive, Torx® screw (x2) and Torx screwdriver

Mounting bracket and 4x self-tapping screws



2x stubby antennas

OPTIONAL ACCESSORIES

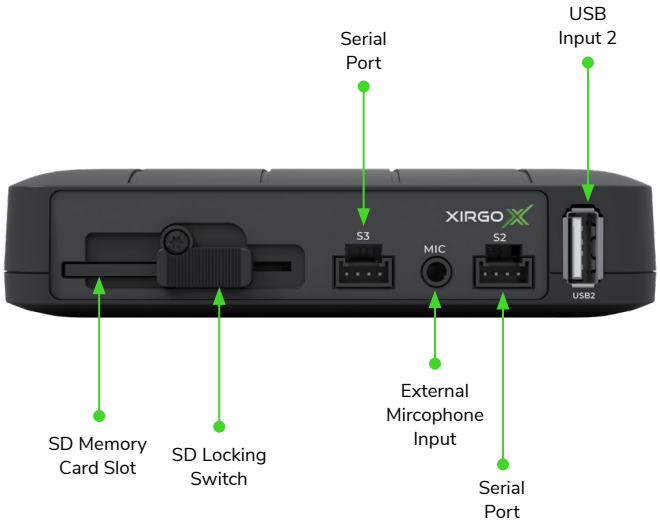
At Xirgo, we give our partners multiple options when selecting their preferred power application and camera configuration. The items mentioned below are compatible with the CP4S and offer different benefits or trade-offs when employed with your device.

For more details on prices and ordering options, please contact your Xirgo Account Manager or email us at **support@xirgo.com**.

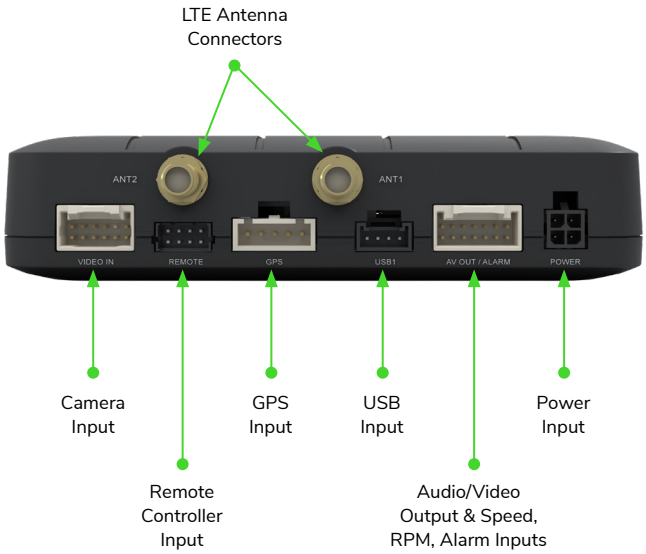
ACCESSORY	NAME & DESCRIPTION	ACCESSORY	NAME & DESCRIPTION
 **CP4S-LC**	**Locking steel housing** **Dimensions:** 155mm x 130mm x 24mm **Weight:** 330 g	 **SVA027-A**	**Weatherproof side-mount camera** **Resolution:** 720p
 **SVA034 INTERIOR DOME**	**Mini dome add-on camera** **Weight:** 200 g **Resolution:** 720p	 **SVA035 EXTERIOR SIDE/MIRROR**	**Side/rear add-on camera** **Resolution:** 720p
 **SVA037-A**	**Weatherproof rear-view camera** **Resolution:** 720p	 **SVA045 INTERIOR**	**Road-facing add-on camera** **Resolution:** 1080p
 **SVA050-A**	**Driver-facing camera** **Resolution:** 720p	 **SVA055-AM**	**Road- and driver-facing dual camera** **Resolution:** Road 1080p + driver 720p

GET TO KNOW THE CP4S

FRONT

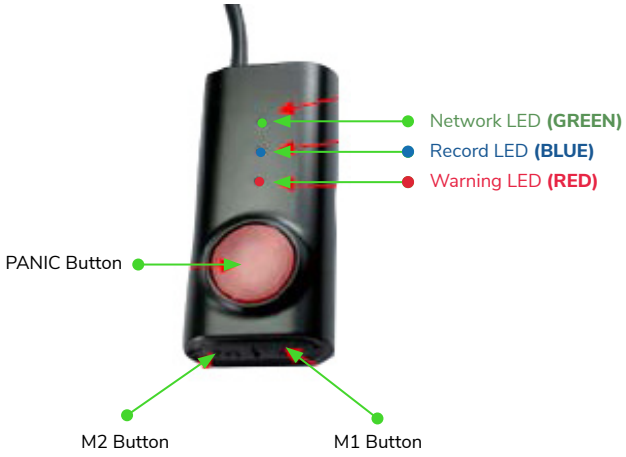


BACK



GET TO KNOW THE CP4S

REMOTE CONTROLLER



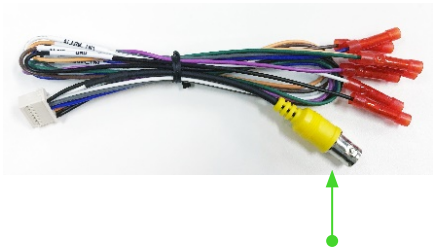
POWER CABLE

Required:
Ground BAT (-) **(Black)**
Power BAT (+) **(RED)**
Ignition (IGN+) **(White)**

Power Specifications
Input: DC 10~32V, 2000 mA
Output: DC 5V, 2500 mA

IMPORTANT NOTE
True ignition source should be used to connect the white wire.

VIDEO OUTPUT CABLE AND I/O TRIGGERS



Video output for connecting LCD monitor (BNC female)

Alarm In 1, voltage on/off (3~70V) **(White)**

Alarm In 2, voltage on/off (3~70V) **(Purple)**

Alarm in 3, voltage on/off (3~70V) **(Green)**

Alarm in 4, NC/NO (open/close) **(Orange)**

Speed (TACHO) **(Blue)**

RPM (TACHO) **(Gray)**

Alarm out, low (0V) to high (5V) **(Brown)**

Ground for Alarm In 4 (NC/NO circuit) **(Black)**

KEY FUNCTIONS

Automatic booting

Make sure the main unit and all components are properly connected. Once the CP4S has been wired to your vehicle power source, the CP4S will boot up. It will take around 30 seconds for the unit to be ready to record.

NOTE
The unit will not start recording immediately after power on. It takes around 30 seconds for the built-in power backup system to charge. Thereafter, the SD card will be ready to record.

1. Video recording

CONTINUOUS RECORD (WHEN RECORD MODE SET AS “CONTINUOUS”)

This is the default mode for recording. In this setting, the unit will begin recording after boot-up and record the entire time the unit is powered. The resolution and frame rates can be set per your requirements. You can change the configuration of the recording using the CP4S Configuration Tool.

EVENT RECORD (WHEN RECORD MODE SET AS “EVENT”)

The unit will record when triggered by an impact (G-sensor), a push of the panic button, over speed or Alarm In 1~3. Each event file contains up to 20 seconds prior to and up to 30 seconds post the event. And the event file can be extended by a second trigger during event recording. When events are triggered continuously, for every event, 20 seconds post-recording from the time of the event will be added to the event data file with a maximum recording time of 3 minutes. When this 3 minutes is reached, the file will be split and a new file will be created, but the data will be continuous.

DUAL RECORD (CONTINUOUS & EVENT RECORD)

The continuous record FPS is 1FPS, and the file will be stored on the “Normal” folder. Event record will work according to the FPS setting, e.g., 30 frames per second recording, and the file will be stored on the “Event” folder.

DO NOT RECORD

The DRV (drive data) file will be recorded during driving at “Do Not Record” mode. And the unit can send limited API like live track to the server.

NOTE
The DRV file consists of GPS and G-sensor data, and it helps to find specific data or driving behaviors. The DRV file overwrites the oldest data. The DVR file will be made every 10 minutes.

KEY FUNCTIONS (CONTINUED)

2. G-sensor calibration

G-sensor calibration is needed after installing the CP4S.

1. Set G-sensor axis using the configuration tool.
2. “selfadj.ini” should be in the config folder of the SD card.
3. Install the unit and park the vehicle on a flat surface.
4. Turn on the unit and wait until it starts to record.
5. Press and hold the “M1” button more than 2 seconds.
6. You will hear “beep” when you press the “M1” button, and then you will hear another “beep” after 2 seconds. Then release the “M1” button.
7. Then calibration will be done within 2 seconds.

3. Supercapacitor (built-in power backup)

When power to the unit is interrupted, the CP4S creates the last file using the internal supercapacitor.

4. Time and Date

Set your time zone using the configuration tool, then the CP4S gets its time from GPS satellites.

5. Parking Mode Recording

With parking mode activated and on normal recording mode, the CP4S will change to parking mode when the vehicle is not moving for more than 5 minutes, recording at 1FPS.

6. Live Screening

With an external monitor attached, the CP4S offers the option to screen video live.

7. Delayed Power Shutdown

Control the duration of time using the configuration tool. The CP4S stays powered and recording/networking after shutdown.

KEY FUNCTIONS (CONTINUED)

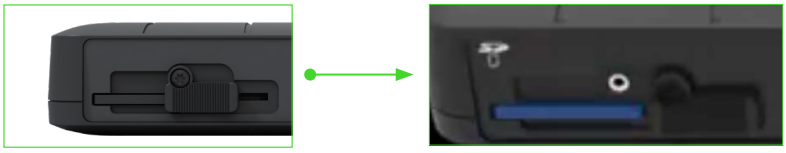
8. SD memory card

SD MEMORY CARD FORMAT

Please format (initialize) the SD card using the CP4S Configuration Tool software. A blank SD card will also automatically format but will take a few minutes to complete.

SAFE REMOVAL OF SD CARD

Remove the Torx screw, and then slide the SD door open. The blue LED on the remote will turn off, then you can safely eject the SD card by pressing it in. After reinserting the SD card, close the door and attach the Torx screw.



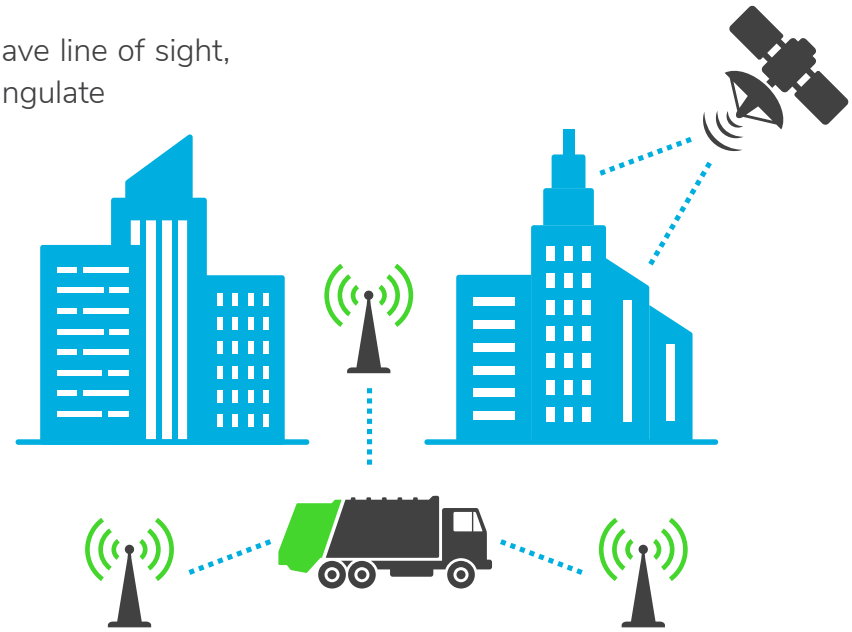
PRECAUTIONS FOR SD CARDS

To optimize use and prolong the life of your SD cards, please follow the below instructions.

1. Use only compatibly tested SD cards.
2. Only use dry and clean SD cards.
3. Will need to validate this with engineering and support. This will wipe all data, images and file names on the card, reducing recording errors.
4. Insert or remove SD cards only when the device is completely powered off. Wait until the blue LED is completely off before removing the SD card.
5. Exchange SD cards periodically.

GPS RECEPTION

When satellites don't have line of sight, cellular towers help triangulate a vehicle's location.



IMPROVE YOUR SIGNAL

1. Activate your CP4S in an area without large buildings.
   - The commercial-purpose GPS has the average range error of more than 15 meters, and the range error could be more than 100 meters due to environmental conditions like buildings, roadside trees, etc.
2. The optimum operating temperature for your vehicle's GPS is -10° C~50° C
3. When first using your CP4S or turning it on after a period (>3 days), allow more time to recognize your current location.

RECEPTION MAY BE IMPAIRED:

1. If there is an object at the end of the GPS antenna.
2. If your vehicle has metallic elements on the windshield.
3. If you install equipment generating electromagnetic waves that interfere with the GPS signal in the vehicle (e.g., other GPS devices like certain wireless activated alarms, MP3 and CD players and camera alarms use GPS.)
4. If you use a receiver connected by cable. You can avoid electric interference by changing the receiver's location (antenna).
5. On heavily overcast or cloudy days if the vehicle is:
   - In a covered place such as under a bridge or raised roadway
   - In a tunnel
   - In an underground roadway or a parking area
   - Inside a building or garage
   - Surrounded by high-rise buildings
6. If GPS signal reception is poor. It may take longer to locate your current position when the vehicle is moving than when it's stationary.

REMOTE CONTROLLER INDICATORS AND LED SPECIFICATIONS

STATUS/STEP			LED			Buzzer	Sound To hear the voice, place audio output cable to speaker
			Warning	Record	Communication		
			Red	Blue	Green		
Startup & power off	Booting step 1 (0~20)		On	Off	Off	-	-
	Booting step 2 (20~30)		On	On and off	Off	-	-
	Booting finished (30, 1 second)		On	On	On	Beep (1000HZ, 200msec)	Beep (1 time)
	During power off		Off	Simultaneous flashing (blink rate: fast)		-	-
	Power off finished		Off	Off	Off	Beep (2 times) (500HZ, 150msec)	-
Record	Continuous record	Recording	-	On	-	-	-
	Event record	Standby	-	On	-	-	-
		Recording	-	Flashing (Blink rate: fast)	-	-	-
	Dual record	Continuous recording	-	On	-	-	-
		Event recording	-	Flashing (Blink rate: fast)	-	-	-
	No record	Not recording	-	Off	-	-	-
Network	Network device ready		-	-	On	-	-
	Communication		-	-	On	-	-
Function	SD initialize (format)		Off	On and off	Off and on	-	Beep (1 time) continuously
	G-sensor calibration		-	-	-	-	Beep, after 2 seconds beep x 2
	FW upgrade		-	On/on and off/off	Off/off and on/on	-	
	Button press		-	-	-	Beep (2000Hz, 200msec)	Beep
Warning	System warning	SD card full	Flashing Blink rate: fast)	Off	-	-	Beep x 4 (3 times)
		Video loss, video STD error	On	-	-	-	
Error	Record error	SD error, no SD, write fail	Flashing (Blink rate: slow)	Off	-	-	Beep x 4 (3 times)
	Network error	Network device error, SIM error	-	-	Off	-	-
		Data network connection error	-	-	Flashing (Blink rate: slow)	-	-
		DMS communication error	-	-	Flashing (Blink rate: slow)	-	-
Event trigger	G-sensor, panic button, alarm-in		-	-	-	-	Dingdong x 2 (1 time)
	Over speed		-	-	-	-	Beep, beep x 2 (1 time)

TECHNICAL SPECIFICATIONS

MECHANICAL	
Size	1.1" H x 4.7" W x 3.5" D (28mm H x 120mm W x 90mm D)
Weight	166 g
ELECTRICAL	
Power Input	12/24V DC nominal
Power Consumption	Max. 36 W
Delayed Power Shutdown	Yes
Supercapacitor	Enables Recording of Last File & Safe Shutdown
Video Resolution	Supports HD (1080p) on Channel 1, HD (720p) on Channels 2~4
Recording Speed	4 Channels HD at 15 FPS
Recording Mode	Continuous, Event and Dual Mode
Storage	Supports SD Cards up to 1TB
AV In/Out	1 x Audio In (internal/external microphone)/1 x Video Out; 1 x Audio Out
Alarm In/Out	4 x Alarm In/1 x Alarm Out
LED	Green LED (network), Blue LED (recording), Red LED (error)
ENVIRONMENTAL	
Operational Temperature	-10° C~+55° C
COMMUNICATIONS	
Cellular	CP4S-NA [CAT4]: B2/B4/B5/B12/B13/B14/B66/B71 3G Bands: B2/B4/B5
	CP4S-EU [CAT4]: B1/B3/B7/B8/B20/B28A/B38/B40/B41 3G Bands: B1/B8
POSITIONING	
GNSS	External GPS/GLONASS
G-Sensor	Internal 3-Axis G-Sensor
Gyro	3 Axis (X,Y,Z), Output Rate: 100 Hz
COMPLIANCE	
Certification/Regulatory	FCC, AT&T, Verizon, CE, E-Mark, PTCRB, RoHS
Warranty	2-Years Standard

OPERATION — ON-SCREEN DISPLAY

The following displays can only be seen when a monitor is connected.

The default display is quad view (2x2) with all cameras shown. To change the video display channel, press the M2 button to select which camera to view. Each press will change the camera on display with the last option being all camera views.

4 cameras (2x2) → **Camera 1** → **Camera 2** → **Camera 3** → **Camera 4**

CONFIGURATION TOOL

CP4S CONFIGURATION TOOL

The CP4/CP4S Configuration Tool allows you to further customize your CP4/CP4S device settings. If you wish to make specific calibration changes, please follow this link to download the software and gain access to supplemental documentation.

PC SYSTEM REQUIREMENTS

Recommended settings for optimal configuration tool compatibility:

OS	Windows 7/8/8.1/10 or higher
CPU	Core 2 Duo 2.5GHz or higher
RAM	2GB or higher
Interface	SD memory card reader
HDD Free Space	Install: 55MB or higher Backup: 4GB or higher
Display	1024 x 768 pixel/true color or higher

If your PC doesn't meet these requirements, the CP4/CP4S configuration software may not function properly.

SD VIEWER SOFTWARE

SD VIEWER SOFTWARE

Xirgo's SD Viewer Software gives you access to enhanced video playback, editing and review. Please follow this link to download the software and gain access to supplemental documentation.

PC REQUIREMENTS

Recommended settings for optimal SD Viewer Software compatibility:

OS	Windows Vista, Windows 7, Windows 8/8.1 or higher
CPU	Core 2 Duo 2.5GHz or higher
RAM	2GB or higher
Interface	SD memory card reader
HDD free space	Install: 55MB or higher Backup: 4GB or higher
Display	1024 x 768 pixel/true color or higher

If your PC doesn't meet these requirements, the SD Viewer Software may not function properly.

RECORDING TIME TABLE

DRV File Size		Reserved space for overwriting	Space for video/audio (MB)				
Hours	Size		16GB	32GB	64GB	128GB	256GB
25	106.8MB	300MB	15,593	31,593	63,593	127,593	255,593
168	748MB		14,952	30,952	62,952	126,952	254,952
240	1068MB		14,632	30,632	62,632	126,632	254,632
336	1200MB		14,500	30,500	62,500	126,500	254,500

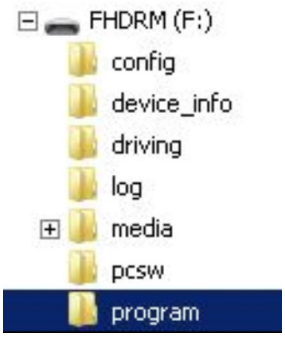
Resolution	Quality	FPS	16GB	32GB	64GB	128GB
FHD (1080p) 1920 x 1080	Super	30	5 hours	10 hours	19 hours	39 hours
		1	21 hours	44 hours	99 hours	167 hours
	High	30	6 hours	11 hours	23 hours	47 hours
		1	25 hours	52 hours	106 hours	167 hours
	Standard	30	7 hours	14 hours	29 hours	58 hours
		1	31 hours	63 hours	129 hours	167 hours
HD (720p) 1280 x 720	Super	30	9 hours	19 hours	38 hours	76 hours
		1	39 hours	80 hours	163 hours	167 hours
	High	30	11 hours	22 hours	45 hours	90 hours
		1	45 hours	93 hours	167 hours	167 hours
	Standard	30	13 hours	27 hours	55 hours	111 hours
		1	53 hours	110 hours	167 hours	167 hours
D1 720 x 480	Super	30	13 hours	27 hours	55 hours	111 hours
		1	53 hours	110 hours	167 hours	167 hours
	High	30	17 hours	35 hours	71 hours	144 hours
		1	66 hours	136 hours	167 hours	167 hours
	Standard	30	24 hours	50 hours	101 hours	167 hours
		1	85 hours	167 hours	167 hours	167 hours

This table is a guideline only.
Actual results may vary depending on a variety of factors on the road.

FIRMWARE UPDATE INSTRUCTIONS VIA SD CARD

PREPARE FIRMWARE

1. Create a folder called [program] on the SD root as shown below:



2. Save the “XXXXXX_x.x.x.img” file to the SD card inside the [program] folder

UPGRADING THE CP4S

1. Insert the prepared SD card into the CP4S unit, and turn on the power.

The **blue** and **red** LED lights will blink while the unit is upgrading. It will also beep continuously. Upgrading the unit usually takes about 30 seconds.

Once the upgrading is finished, the unit will automatically reboot and power up as normal

NOTE

If you’re using the CP4S with a SIM and connected service, please consult your telematics provider or Xirgo before attempting to update your device firmware. In this case, the firmware update can be much more easily applied to your device using SmartAPI over-the-air update service.

WARNING

Do not turn off the power during upgrading. If the upgrade fails, the CP4S unit should be returned to your distributor.

TECHNICAL SUPPORT & WARRANTY

TECHNICAL SUPPORT

For technical support, please contact your local distributor, email us at **support@xirgo.com** or call our support team:

NORTH AMERICA, SOUTH AMERICA, APAC

+1 (312) 981-8774

EMEA

+44 (0) 1483 397005

LIMITED WARRANTY

This product is supplied with a 2-year warranty.

The warranty excludes products that have been misused (including accidental damage) and damage caused by normal wear and tear. In the unlikely event that you encounter a problem with this product, it should be returned to the place of purchase.

INSTALLATION SAFETY ADVICE

FCC PART 15.19

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC PART 15.21

Any changes or modifications (including the antennas) to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

FCC RF RADIATION EXPOSURE STATEMENT

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

WARNING
Xirgo installations should be performed by a qualified individual or installation professional only. Working with a vehicle's power system can be dangerous to both you and your vehicle. This installation is intended only to be a guide since vehicle designs and power/input sources can vary significantly from vehicle to vehicle.

CAUTION
To reduce the risk of electric shock, do not remove cover. No user-serviceable parts inside. Refer servicing to qualified service personnel.

CAUTION
Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions. Battery for real-time clock (RTC) inside.

CAUTION
Install the product where it does not block driver's visibility and where there is no air bag installed. This could cause an accident or might injure passengers in case of accident.

WARNING:
To prevent fire or electric shock hazard, do not expose this appliance to rain or moisture.

CAUTION
Damages due to production malfunction, loss of data or other damages occurring while using this product shall not be the responsibility of the manufacturer. Although the product is a device used for recording videos, the product may not save all videos in the case of a malfunction. In the case of an accident, the sensor may not recognize the shock when the impact is light, and as a result, it may not begin recording automatically.

CAUTION
Please make sure you follow the safety advice/instructions given in CP4S instruction materials.

XIRGO

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