



NCP-HWK

Your Safety, Our Priority



User Manual

Hardwire Kit

Provides your dashcam with constant power even when your engine is turned off.



Universal
Kit



Car & Truck
Compatible



Constant
Power



Battery Drain
Protection

Your Safety, Our Priority

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NOTES AND INSTALLATION

IMPORTANT: REFER TO YOUR VEHICLE OWNER'S MANUAL

TO DETERMINE:

- Location of the fuse box
- How to access the fuse box
- The type of fuse tap required

It is highly recommended that you have a quick read of the installation instructions in this user guide. If you are not comfortable with the process please seek further assistance from an authorised technician.

Most vehicles have a fuse box underneath the dashboard on the driver's side which is easily accessible below the steering column (behind a removable panel). However the location does vary between vehicle make and model.

There are 4 types of fuse tap cables included in this kit. Check to see if these fuses suit your vehicle's fuse box. If none are suitable you will need to purchase the correct fuse to attach the hardwire kit to your vehicle's power source.

Note: You may need to consult your vehicle manufacturer for instructions on how to remove vehicle fittings (example A pillar cover) for routing the hardwire kit cables inside your vehicle and for where airbags are located so that these are not obstructed in case of deployment by routed cables.

Installation of NCP-HWK is recommended to be performed by a technician. Working with your vehicle's power system can be dangerous to both you and your vehicle if you do not know what you are doing. If you have any doubts please consult a professional. Nanocam Plus recommends professional installation only of this dashcam hardwire kit.

IMPORTANT: Refer to your dashcam owner's manual for initial installation of your dashcam in your vehicle.

NCP-HWK is a kit that allows for the provision of constant power from your vehicle battery to your dashcam. Any issues with your dashcam should be referred to your dashcam's manufacturer.

1. PRODUCT INFORMATION

Get constant power for your dashcam. NCP-HWK connects to your vehicle battery through your vehicle's fuse box and provides constant power to your dashcam when the engine is turned off. It includes several fuse tap options that suit most vehicles* and your dashcam connects to the hardwire kit with either the Micro USB or Mini USB connectors included. For latest manual and product updates please visit our website.

*A suitable fuse tap cable will need to be purchased separately if the fuse tap cable options included in this pack are not suitable for your vehicle's fuse box.

1.1 INTRODUCTION

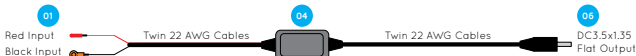
Thank you for purchasing a NCP-HWK Hardwire Kit. NCP-HWK is a simple plug and play solution to hardwire your Nanocam Plus dashcam or any other dashcam with a Mini USB and Micro USB connection. Please read through these instructions carefully before attempting to install or use this product.

1.2 FEATURES

- Universal kit suits Nanocam Plus and all other dashcams with Mini USB or Micro USB connections.
- Can be installed in cars and trucks as is compatible with 12V and 24V batteries.
- Provides constant power to your dashcam when your vehicle is turned off.
- Is protected with Battery Drain Protection to safeguard your dashcam from draining your vehicle's battery. Your battery will stop providing power to your dashcam if your battery level gets too low.
- Includes 4 different fuse tap cables – simply plug the required fuse tap cable into the vehicle's fuse box to provide your dashcam with its own power supply without engaging the cigarette socket.
- Includes both Mini USB and Micro USB connectors for connection to all Nanocam Plus dashcam models

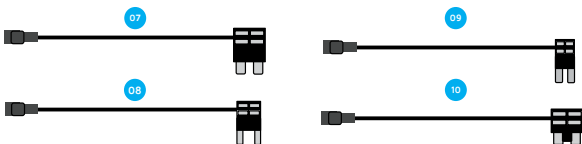
1.3 PACKAGE CONTENTS

HARDWARE KIT



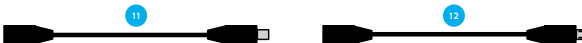
1. Red Input Connector
2. Black Input Connector
3. Input Cable
4. Control Box with Adhesive Pad
5. Output Cable
6. Output Connector

VEHICLE FUSE OPTIONS (USE ONLY ONE OPTION FOR INSTALLATION)



7. ATS (Standard) Fuse Cable
8. Mini Fuse Cable
9. Micro2 Fuse Cable
10. Micro Fuse Cable

DASHCAM OUTPUT CONNECTOR OPTIONS (USE ONLY ONE OPTION FOR INSTALLATION)



11. Mini USB Cable
12. Micro USB Cable

ACCESSORIES



1. Cable Ties x 4

2. BATTERY DRAIN PROTECTION

The Hardwire Kit will protect your dashcam from draining your vehicle's battery. If your vehicle's battery voltage gets too low, NCP-HWK will stop powering your camera to save power. You will never have to worry about your car's battery dying when NCP-HWK is in use.

2.1 SETTING THE CUT OFF VOLTAGE

Set the cut off voltage according to the temperature and the capacity you'd like to consume before the hardwire kit cuts off the output.

There are 4 protecting bands set in the hardwire kit, you can switch according to your requirement.

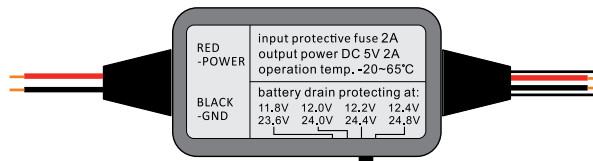
For 12V Batteries

The protecting voltages are 11.8V / 12.0V / 12.2V / 12.4V.
12.2V recommended for most users in general driving conditions.

For 24V Batteries

The protecting voltages are 23.6V / 24.0V / 24.4V / 24.8V.
24.4V recommended for most users in general driving conditions.

The hardwire kit will identify the lead acid battery type automatically (12V or 24V) and protect your battery from draining accordingly.



2.2 VEHICLE BATTERY LEAD ACID STATES AND CAPACITY

Use the below table to assist in determining your desired voltage cut off level for battery drain protection.

For example if the temperature is 38°C and you want to keep a 75% lead acid state capacity remaining in your battery when the hardwire kit cuts off output (meaning the battery voltage is approximately 12.402V) the cut off voltage should be set at the 12.4V band. This means there will be 25% capacity in your vehicle battery which will be used for your dashcam while your vehicle is parked.

Using a 50Wh lead acid battery for an example, the 25% consumption will support approximately 50 hours of dashcam use.

Temperature	Lead Acid State & Voltage (Volt)				
°C	100%	75%	50%	25%	0
-7	12.794	12.594	12.384	12.204	12.034
-1	12.77	12.57	12.36	12.18	12.01
4	12.746	12.546	12.336	12.156	11.986
10	12.722	12.522	12.312	12.132	11.962
16	12.698	12.498	12.288	12.108	11.938
21	12.674	12.474	12.264	12.084	11.914
27	12.65	12.45	12.24	12.06	11.89
32	12.626	12.462	12.216	12.036	11.866
38	12.602	12.406	12.192	12.012	11.842
43	12.578	12.378	12.168	11.988	11.818
49	12.554	12.354	12.144	11.964	11.794

NOTE: Please be advised that the above table is to be used as a reference guide only in order to determine an appropriate voltage selection dependent on the battery age and condition.

3. INSTALLATION

The location of the vehicle's fuse box varies from vehicle make and model. Locations may include underneath the driver's side dashboard, behind the glove box and underneath the central console. Where in doubt, always refer to your vehicle owner's manual to determine the location of the fuse box in your vehicle.

NOTE: The images in this installation were taken for a vehicle where the fuse box is located under the driver's side dashboard (Fig. 1, 2) and should be used as a guide only for a DIY installation. To ensure proper installation Nanocam Plus recommends NCP-HWK be installed by a professional technician.

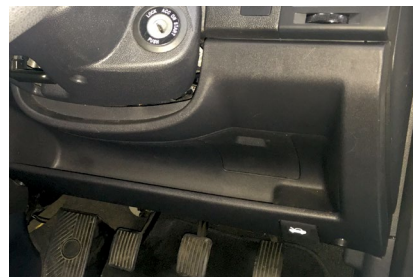


FIG. 1



FIG. 2

There are 2 main stages in the hardwire kit installation

- Connecting output cable to your dashcam
- Connecting input cables to your fuse box and grounding

NOTE: Determine the location of your vehicle's fuse box before commencing the installation of the hardwire kit. Where in doubt, refer to the vehicle owner's manual.

3.1 CONNECTING HARDWIRE KIT TO YOUR DASHCAM

IMPORTANT: Refer to your dashcam owner's manual for initial installation of your dashcam in your vehicle.

3.1.1 ATTACHING THE USB CONNECTOR TO THE DASHCAM

1. Two dashcam connector cables are included with NCP-HWK – one with a Mini USB plug and one with a Micro USB plug. Determine the connection interface type on your dashcam and then select the appropriate USB connector cable. (Fig 3)
2. Insert the USB connector cable to your dashcam (Fig 4)



FIG. 3



FIG. 4

3.2 ROUTING THE OUTPUT CABLE FROM THE DASHCAM TO THE FUSE BOX

NOTE: You may need to consult your vehicle manufacturer for instructions on how to remove vehicle fittings (example A pillar cover) for routing the hardwire kit cables inside your vehicle and for where airbags are located so that these are not obstructed in case of deployment by routed cables.

3.2.1 INSTALLING THE OUTPUT CABLES IN VEHICLE

1. Once the USB connector cable is attached to your dashcam, it then needs to be connected to the hardwire kit's output cable. (Fig 5)
2. The hardwire kit output cable will then need to be recessed into the roof lining where it meets the edge of the windscreen to conceal the cable (Fig 6a, 6b)
3. At the farthest end of the roof lining the output cable needs to then be routed along the A pillar that is closest to the fuse box of the vehicle. You will need to remove the door seal (Fig 7) and A pillar cover (Fig 8) to route the cable (Fig 9a, 9b). Route the cable all the way down to the end of the A pillar where it meets the dashboard.
4. Use the provided cable ties to attach the output cable to any existing cable(s) that may be housed in the A pillar (Fig 10a, 10b).

NOTE: The A pillar used to route the cable is not always the driver's side one as shown. Refer to the vehicle owner's manual to determine location of fuse box in your vehicle. The output cable needs to be routed in the A-pillar closest to the fuse box.



FIG. 5



FIG. 6a

3.2.1 INSTALLING THE OUTPUT CABLES IN VEHICLE CONT'D



FIG. 6b



FIG. 7



FIG. 8

3.2.1 INSTALLING THE OUTPUT CABLES IN VEHICLE CONT'D



FIG. 9a



FIG. 9b



FIG. 10a

3.2.1 INSTALLING THE OUTPUT CABLES IN VEHICLE CONT'D



FIG. 10b

3.2.2 HOUSING THE OUTPUT CABLE

1. Where the output cable from the A pillar meets the side of the dashboard, the output cable will then need to be routed towards the direction of the fuse box by concealing the cable along the side of the vehicle dash (Fig 11a, 11b).
2. Any excess output cable length can be wrapped and held together with a cable tie when it reaches the fuse box (Fig 12)
3. Tuck away any excess output cable behind the fuse box (Fig 13)
4. If required, peel off the control box label to attach the control box to the vehicle (near the fuse box) with the adhesive tape.



FIG. 11a

3.2.2 HOUSING THE OUTPUT CABLE CONT'D



FIG. 11b

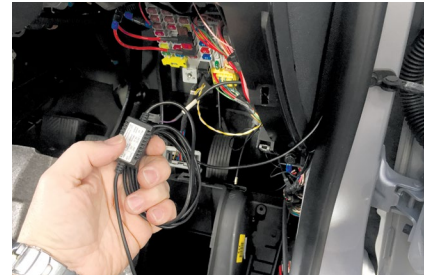


FIG. 12

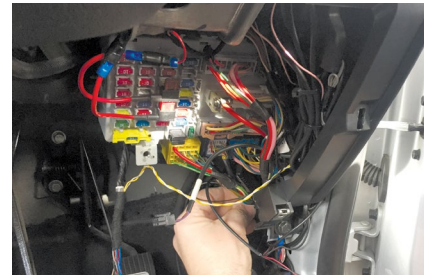


FIG. 13

3.3.1 CONNECTING TO THE FUSE BOX

NOTE: Refer to your vehicle's fuse layout panel to determine the permanent power fuse for constant power feed. The fuse cable needs to be connected to the 12V/24V battery feed.

1. Determine the fuse tap cable required for connection to your fuse box. Where in doubt refer to the vehicle owner's manual.
2. Place the vehicle fuse in the fuse tap cable. Note the correct position location for both the vehicle fuse and the hardwire kit fuse in the fuse tap cable (Fig 14).
3. Locate the input cable and connect the fuse tap cable to the red input connector (Fig 15a, 15b). Ensure connection is secure.
4. Insert the fuse tap into the fuse box (Fig 16a, 16b).
5. Tuck away any excess red input cable behind the fuse box.

NOTE: To determine constant power feed fuse use a voltage meter.

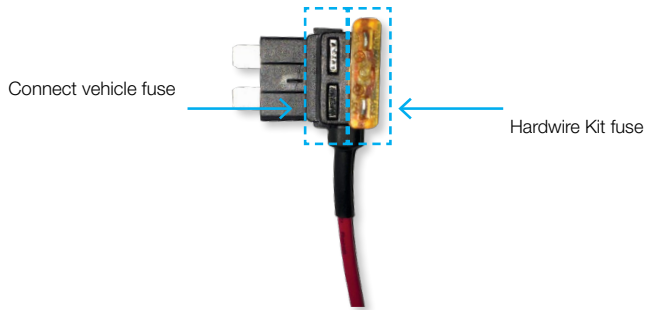


FIG. 14

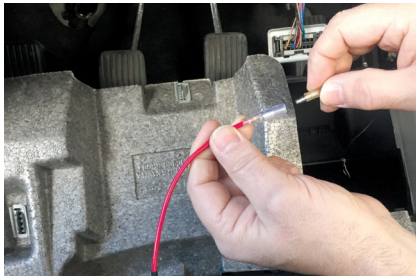


FIG. 15

3.3.1 CONNECTING TO THE FUSE BOX CONT'D

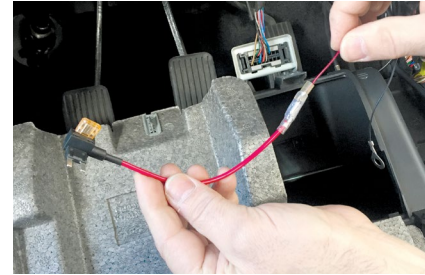


FIG. 15b

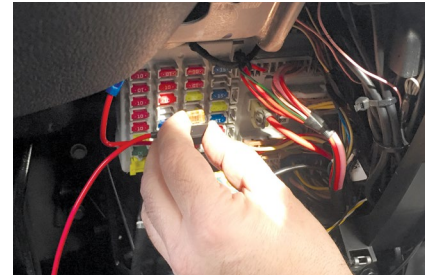


FIG. 16a

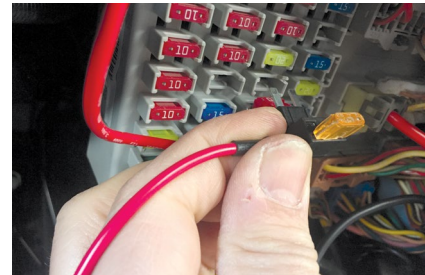


FIG. 16b

3.3.2 CONNECTING TO GROUND

1. Locate earth terminal/bolt or any vehicle bolt accessible that is mounted to the chassis of the vehicle or any metal part of the vehicle - located near the vehicle fuse box (Fig (17)).
2. Feed black input wire eyelet into bolt and screw bolt back on existing location.
3. Tuck away any excess input cable behind the fuse box.

NOTE: The black earth cable needs to be connected to the vehicle chassis otherwise it will not earth out.

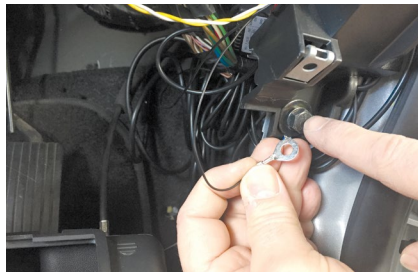


FIG. 17

4. SPECIFICATIONS

HARDWIRE KIT: CABLES	
RED INPUT CONNECTOR	BULLET PLUG OD4MM
BLACK INPUT CONNECTOR	ROUND RING TERMINAL, NICKEL PLATED, OD10MM ID6MM L20MM
INPUT CABLE	TWIN CABLES (RED: 12V/24V POWER; BLACK: GROUND), 2X22AWG, CONDUCTOR, SR-PVC INSULATION, PVC JACKET; UL1015/2586, 1M, 150MM CLEARANCE
OUTPUT CABLE	TWIN CABLES, 2X22AWG CONDUCTOR; SR-PVC INSULATION, PVC JACKET; UL/1007/2464, 3M
OUTPUT CONNECTOR	DC3.5X1.35 FEMALE RECEPTOR
HARDWIRE KIT: CONTROL BOX	
FLAME RETARDANT ABS 94V0, CONTAINS DC-DC CONVERTER	
INPUT VOLTAGE MIN	10V
INPUT VOLTAGE MAX	32V
OUTPUT VOLTAGE	NO LOAD: 5.2V 0.5A LOAD: 5.1V 1A LOAD: 5V
OUTPUT POWER	DC 5V 2A
BATTERY DRAIN PROTECTION BANDS	11.8V/23.6V 12.0V/24.0V 12.2V/24.4V 12.4V/24.8V
OTHER PROTECTION	REVERSE POLARITY; SHORT CIRCUIT; OVER TEMPERATURE; OVER VOLTAGE; OVER LOAD
WORKING TEMP	-20°C TO 65°C
FUSE CABLES	
ATS (STANDARD) FUSE CABLE	CABLE WITH 5A ATS (STANDARD) FUSE, L125MM
MINI FUSE CABLE	CABLE WITH 5A MINI FUSE, L125MM
MICRO2 FUSE CABLE	CABLE WITH 5A MICRO2 FUSE, L125MM
MICRO FUSE CABLE	CABLE WITH 5A MICRO FUSE, L125MM
ACCESSORIES	
MINI USB CABLE	DC3.5X1.35 MALE TO MINI USB ADAPTOR, L400MM
MICRO USB CABLE	DC3.5X1.35 MALE TO MICRO USB ADAPTOR, L400MM
CABLE TIES	QUICK FIX CABLE TIE, BLACK PA66, UL94V2, -20°C TO 105°C, 8KGs, W2.5MM L80MM

5. WARRANTY TERMS & CONDITIONS

Our goods come with guarantees that cannot be excluded under the Australian & New Zealand Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

This warranty is provided in addition to your rights under the Australian & New Zealand Consumer Law.

Directed Electronics warrants that this product is free from defects in material and workmanship for a period of 12 months from the date of purchase or for the period stated on the packaging. This warranty is only valid where you have used the product in accordance with any recommendations or instructions provided by Directed Electronics. This warranty excludes defects resulting from alterations of the product, accident, misuse, abuse or neglect.

In order to claim the warranty, you must return the product to the retailer from which it was purchased or if that retailer is part of a National network, a store within that chain, along with satisfactory proof of purchase. The retailer will then return the goods to Directed Electronics.

Directed Electronics will repair, replace or refurbish the product at its discretion. The retailer will contact you when the product is ready for collection. All costs involved in claiming this warranty, including the cost of the retailer sending the product to Directed Electronics, will be borne by you.

Email: service@nanocamplus.com.au

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www.nanocamplus.com.au
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