MANUAL

Drowsiness and Distraction Detector

CDP-001F

COMERCIALIZADO EN EXCLUSIVA POR:

CDP | CONSUMER DESIGN PRODUCTS

C.D.PRODUCTS S.A.
Polígono P-29, Calle Kanna, 2 – Local 3
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1.1 Introduction

This advanced fatigue and distraction digital detector can prevent serious driving accidents.

This device constantly monitors all facial gestures of the driver. Through a complex facial recognition algorithm, it detects signs of tiredness, drowsiness or distractions, even with the use of sunglasses or at night.

The drowsiness and distraction monitor CDP-001F is a simple and effective detection device that identifies danger immediately. Warnings include powerful sound alerts and LED lights.

With this real-time driving monitoring system you can prevent serious traffic accidents. **According to a DGT (*National Department of Traffic*) report, distractions behind the wheel cause one in three fatal accidents**.

It is especially suitable for all types of drivers, especially people with high risk exposure due to fatigue or distractions while driving.

1.2 Accessories

| List of Accessories		
S / N	Part name	Quantity
①	Device	1 PC
②	Car charging cable	1 PC
③	User manual	1 PC

★ Carefully check that all parts are in the box. If any are missing, please contact the seller.

★ In order to understand the installation and use of this device, read this manual carefully.

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2. Specifications and features

2.1 Product appearance and interface description

1. Camera (with front view and adjustable angle)
2. Warning indicator light
3. Power indicator light
4. Speaker
5. USB, power connector
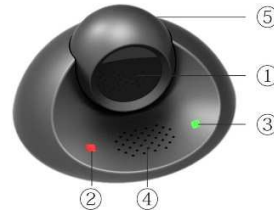
2.2 Product Specifications

Specification	Standard	Operating range
Voltage	5V	4.75 ~ 5.25V
Consumption	0.4 A	0,4 ~ 0.5A
Adapter	12V / 24V	9 ~ 30V
Adapter current	1A	
Dimension	88 * 88 * 48 mm	
Power key	N / A	
On/Off signs	V sign: Turns off (red light turns off)	Open palm: Turns on (red light turns on)
LED indicator	Flashing bright red: Alarm Indicator	Green indicator: Ready
Power supply connector	Micro-USB	
Temperature	-20 ~ 70℃	

2.3 Main features

> Functional day or night
> Switch using gestures
> Led indicators
> Adjustable camera angle
> Contactless design

3. Description of features

3.1 Alarm function

Inspection	Description	Sound
Closing eye (according to The P80 standard)	Device alerts when it detects that the driver closes his eyes.	Beep sound 1
Closing eye with UV sunglasses	Device alerts when it detects that the driver closes his eyes.	Beep sound 1
Yawning	Device alerts when it detects that the driver yawns.	Beep sound 2
Nodding off	Device alerts when it detects that the driver is nodding off.	Slow beep
V sign	The device is deactivated when the driver makes a V sign with his hand.	Short tone
Open palm gesture	The device is activated when the driver makes an open palm gesture with his hand.	Ready voice

3.2 Operation of LEDs status

Green LED on: Power on.
Red LED on: Alarm sounds activated.
Red LED off: Alarm sounds off.
Red LED flashing: Closing eyes, yawning or nodding off detected.

4. Installation and test

Select the placement of the device according to the driver's height and posture. Perform the tests in section 4.2 before attaching it to the dashboard.

<u>It is very important a good placement for proper operation, test at various sites and distances until you find the best location for your vehicle.</u>

4.1 Installation and tests
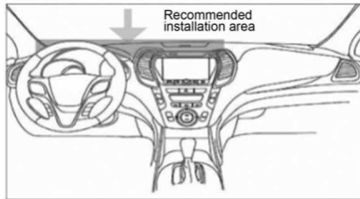
(1) Connect the micro USB charging port of the device to the car using the charging cable.
(2) Adjust the position of the seat as shown in Photo 4-1, leaving it a distance of 50 ~ 90 cm from your face. Check that there are no obstacles between the driver and the device. <u>The better distances around 80 cm in ours test.</u>
(3) Adjust the horizontal position of the camera with your head in front of it, as shown in Photo 4-2.
(4) Adjust the vertical angle of the camera to capture your face.
(5) Connect the camera, close your eyes for 1 second, yawn or nod off to check its functions. Then, remove the protective film from the non-slip mat and attach the device. (If the anti-slip mat loses adhesion, you can clean it with water, wait for it to dry and it will work again).
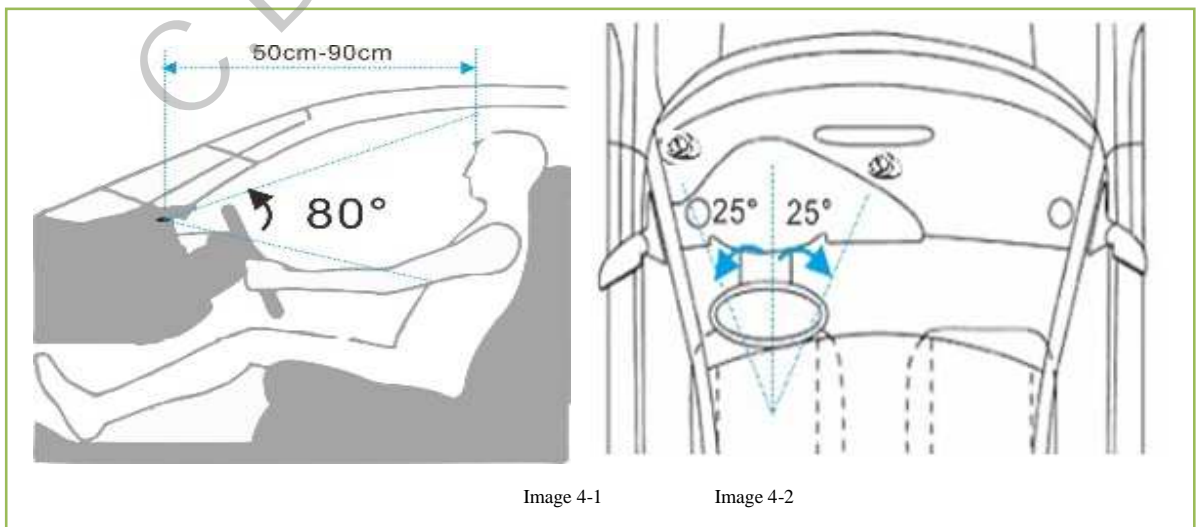(6) The charging cable can be installed and set according to the actual placement.

Image 4-1   Image 4-2

Example in a Toyota Land Cruiser and BMW series 5

4.2 Testing the alarm function

(1) **Start-up test:** Connect the device. After a few seconds you will hear "Ready" and the green and red LEDs will remain on. This means that the device has been successfully activated

(2) **Closing eyes test:** Close your eyes for about 1-2 seconds, and you'll hear a beep sound. This sound indicates that the alarm is operating correctly.

(3) **Yawning test:** Open your mouth as if you were yawning for about 1-2 seconds. You'll hear a beep sound. This indicates that the alarm works correctly.

(4) **Nodding off test:** Nod off slightly for about 1-2 seconds. You'll hear a beep sound, indicating that the alarm works correctly.

(5) **V sign test:** Face the camera and make a V sign for more than 3 seconds (V-shaped hand gesture as shown in photo 4-3). Place your hand next to your head at eye level. (This gesture might not be recognized at night or in very strong sunlight.) You will hear a beep sound and the red light will turn off while deactivating the alarms.

(1) Image
4-3

(2) Image
4-4
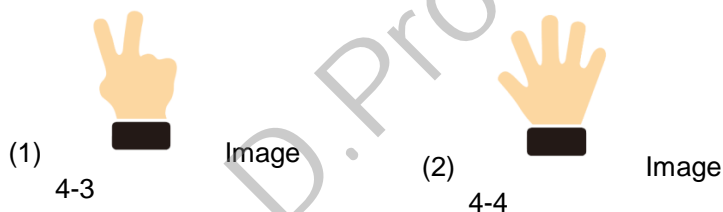
(6) **Open palm test:** Raise your open palm (as shown in photo 4-4) for about 3.5 seconds. Place your hand next to your head at eye level. (This gesture might not be recognized at night or in very strong sunlight.) If you hear a short "Ready", it means that the device has recognized the palm gesture as normal and it has been activated.

* You can watch an explanatory video of these tests on our website www.cdpsa.eu

5. Attention

1. Make sure the device does not interfere with the driver's field of vision.

2. When wearing anti-infrared sunglasses, with IR cut or overly opaque lens, the device will not be able to identify the pupils and it will not work. Normally, the device is capable of working with category 0, 1, or 2 lens. **Performance is greatly affected with category 3 lens, and driving is forbidden with category 4 lens.**

CATEGORY	LIGHT TRANSMISSION	WEATHER CONDITIONS	USAGE
CATEGORY 0	100 to 81%		Indoor and cloudy weather
CATEGORY 1	80 to 44%		Low brightness
CATEGORY 2	43 to 19%		Middle brightness
CATEGORY 3	18 to 9%		Bright light Seaside / Mountain
CATEGORY 4	8 to 3%		Extreme bright light **NO DRIVING**

- Under normal conditions, an absorption of 60% to 80% is sufficient.

3. The device constantly monitors the driver's fatigue by controlling his facial expression. The alert cannot be triggered if his eyes cannot be viewed, or if something is worn covering his face, such as a mask, ski mask, etc.

4. Check that the dashboard is clean and dry before affixing the device in position.

5. Be aware of traffic rules, do not drive if you are feeling fatigued.

6. This product is sensitive to infrared light (such as sunlight), in some specific environments it can affect identification accuracy.

6. Troubleshooting

Problem	Possible reason	Solution
Does not start	The device is turned off.	Make sure the power is connected correctly.
No alarm sounds are heard	The red indicator is off.	1. Make an open palm gesture to turn on the device. 2. Reconnect the device.
	The driver's face is not within the viewing range of the camera.	Adjust the camera's mounting position or angle.
	The camera lens is dirty.	Clean the camera lens.
	The device works abnormally.	Reconnect the device.
	The speaker is faulty.	Replace the device.
Stops recognizing the gestures	The gesture is outside the device's identification range.	Repeat the gesture in the appropriate position.
It stops working at night	The IR is faulty.	Replace the device.

7. Important notices

- This product should only be used as a driver assistance system. It can help minimize traffic accidents caused by fatigue, but it can't prevent traffic accidents. **C.D. Products S.A. will in no case assume responsibility for traffic accidents**. Always observe traffic rules and drive with caution. Take driving breaks and always stay alert behind the wheel.
- Do not hit, drop, or shake the device violently. Use it correctly.
- Do not open or unscrew the device. Only our technical support personnel is authorized and trained to do so. If you disassemble the device without our authorization, you will automatically void the warranty.
- Please store this product in a dry environment when not in use.

8. Contact data

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