Intelligent Parking Assist System (IPAS)

Item No.: YT-M08

Size:
Main unit: 97 x 85 x 24mm;
Packing: 225 x 140 x 50mm;
Net weight: 150g;
Gross weight: 400g;
50 units in each big carton.

Brand:
Neutral English carton box with neutral English User manual
Works by reading data of steering wheel movement via OBD-II port connection

Integrates parking trajectory (steering wheel movement) into car rear view (rear camera)

**Features:**
1. Plug&play via OBD-II port connection, easy to install.
2. Directly reads steering wheel data from the original car computer uninterruptedly, and shows precise and reliable track of parking.
3. Reads the radar data from OBD and display radar data on screen for some VAG range models, e.g. Audi with **OPS** *(Note Tips 2).*
4. Fitted with general AV input and AV output to support all kinds of original navigations and cameras of OEM and after market.
5. Able to adjust length, distance and angel of dynamic track, position lines and safety bottom lines, so as to fit different positions of rear cameras.
6. Universal for Toyota VW Honda Audi Mazda Ford GM Opel Hyundai Citroen PSA etc. Choose solutions for different car models via menu operation buttons.
7. Menu operation, setting is simple and easy to operate.
8. Mainly supports recent car models, requires OBD canbus and **Electronic stability control system** *(ESC, Note Tips 1).*
**Definition of displayed lines**

![Diagram showing parking trajectory, position lines, and safety bottom line]

Please pay attention to road safety

**Specifications:**
- Rated Voltage: 12V DC
- Rated Current: 300MA
- Max Output Voltage: 12V
- Working Temperature: -30°C - 85°C
- Video Input or output: Composite RCA terminal
- Standard: PAL/NTSC
- Range: 1Vp-p, Synchronization of Negative 0.3Vp-p, Overload 75 Ohm

**Important Note:**
1. The display quality of video output depends on the stand of car camera and display screen.
2. It is assistance to parking, but not necessary when you drive, please pay more attention to the surrounding places intensively when parking.
3. IPAS(YT-M08) requires Electronic stability control (ESC) and OBD Can-bus on car models. If the car model has no ESC on it, then it is not compatible with IPAS.
**Applicationlist (only for reference, not a promise or guarantee):**

<table>
<thead>
<tr>
<th>Toyota Auto range</th>
<th>07-10 Camry</th>
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<tbody>
<tr>
<td></td>
<td>05-09 Crown</td>
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<tr>
<td></td>
<td>09-10 New Crown</td>
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<td></td>
<td>05-09 Reiz/Mark X</td>
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<tr>
<td></td>
<td>07+ FJ Cruiser</td>
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<td></td>
<td>07-10 Highlander</td>
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<td></td>
<td>07-09 Landcruiser (not compatible, LC200)</td>
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<td>07-10 Prius (not compatible)</td>
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<td></td>
<td>09 Fortuner</td>
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<td></td>
<td>09 Prado (LC120)</td>
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<td></td>
<td>10 New Prado (LC150)</td>
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<td></td>
<td>07-10 RAV4</td>
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<td></td>
<td>Verso (not compatible*)</td>
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<tr>
<td>Lexus</td>
<td>07-10 1S 200/250/300/350</td>
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Note: VSC system is required for IPAS applications.
|                      | 07-10 ES 300/330  
|                      | 07-10 GS 300/430  
|                      | 07-10 LS 430      
|                      | 07-10 LX 470      
| Scion                | 04-07 xA          
|                      | 04-07 xB          
|                      | 04-07 tC          
| **Honda Auto range** | **Note**: VSA system is required for IPAS applications  
| Honda                | 08-10 Accord      
|                      | 06-10 Civic       
|                      | 05-10 CRV         
|                      | 09-10 Odyssey     
| Acura                | 2008-2010 TL      
|                      | 2007-2010 RSX     
| **VAG range**        | **Note**: ESP system is required for IPAS applications  
| VW                   | 2006-2010 EOS     
|                      | 2005-2010 Jetta    
|                      | 2005-2010 Passat   
|                      | 2007-2010 Beetle   
|                      | All Golf VI       
|                      | All Tiguan        
| Audi                 | 2006-2008 A3      
|                      | 2008-2010 A4/A4i/S4  
|                      | 2004-2010 A6/S6    
|                      | 2006-2010 AllRoad  
|                      | 2009-2010 Q5       
|                      | 2006-2010 Q7       
|                      | 2006-2010 TT       
|                      | **Note**: Reads and displays OPS data on screen.  
| Skoda                | 2008-2010 Superb   
|                      | 2007-2010 Octavia  
| Lamborghini         | Gallardo 2007-2010 
| **GM Auto range**    | **Note**: ESP or StabiliTrak system is required for IPAS applications  
| Buick                | 2008-2010 Regal    
|                      | 2009-2010 LaCROSSE 

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<table>
<thead>
<tr>
<th>Make</th>
<th>Model Years</th>
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<tbody>
<tr>
<td>Opel</td>
<td>2008-2010 Insignia</td>
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<td></td>
<td>2010 Astar</td>
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<tr>
<td>Chevrolet</td>
<td>2009-2010 Cruze</td>
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<td>Cadillac</td>
<td>2009-2010 CTS</td>
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<td></td>
<td>2010 SLS</td>
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<td></td>
<td>2009-2010 SRX</td>
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<tr>
<td><strong>Ford range</strong></td>
<td><strong>Note: ESP or DSC system is required for IPAS applications</strong></td>
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<tr>
<td>Ford</td>
<td>2007-2010 Mondeo</td>
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<td>2007-2010 Focus</td>
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<td>2007-2010 S-Max</td>
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<td>Mazda</td>
<td>2008-2010 Mazda 6</td>
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<td><strong>PSA Auto range</strong></td>
<td><strong>Note: ESP system is required for IPAS applications</strong></td>
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<tr>
<td>Citroen</td>
<td>2007-2010 C4</td>
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<td></td>
<td>2009-2010 C5</td>
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<tr>
<td><strong>Subaru</strong></td>
<td><strong>Note: VDCS system is required for IPAS applications</strong></td>
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<tr>
<td>Subaru</td>
<td>2009-2010 Legacy (not compatible*)</td>
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<td>2008-2010 Forester</td>
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<td>2008-2010 Impreza</td>
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<td>2008-2010 Tribeca</td>
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<td>2009-2010 Outback</td>
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<tr>
<td><strong>Hyundai range</strong></td>
<td><strong>Note: ESC or ESP system is required for IPAS applications</strong></td>
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<tr>
<td>Hyundai</td>
<td>2009-2010 ELANTRA</td>
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<td>2005-2010 Sonata</td>
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<td>2009-2010 Tucson</td>
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<td>2006-2010 SantaFe</td>
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<td>2006-2010 Veracruz</td>
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<td>KIA</td>
<td>2005-2010 Optima</td>
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<td>2004-2010 Sorento</td>
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<td>2009-2010 Soul</td>
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<td>2006-2010 Carens</td>
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<td>2008-2010 Borrego</td>
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<tr>
<td><strong>Mitsubishi range</strong></td>
<td><strong>Note: M-ASTC system is required for IPAS applications</strong></td>
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<tr>
<td>Mitsubishi</td>
<td>2008-2009 EVO</td>
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<tr>
<th>Chery</th>
<th>Note: ESP system is required for IPAS applications</th>
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<tbody>
<tr>
<td>2009-2010 A3</td>
<td>Chery</td>
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**Note:**
Not all supported vehicles are listed here. The models list is continually updating with product editions and production batches. Before installation, please make sure that the vehicle is fit for installation conditions, as vehicle specific configuration would probably be varied with the vehicle production time.

Works by reading data of steering wheel movement via OBD-II port connection

Integrates parking trajectory (steering wheel movement) into car rear view (rear camera)
Now you have finished installation of IPAS and choose the right “Vehicle model selection” for your car model in function menu.

**Troubleshooting:**

1. When I shift gearbox to “R”, no video display on screen?

On some vehicles with canbus, the electric current of stereo head unit is too small to make IPAS work. In this case, you just need to connect ACC of IPAS to your cigarette lighter power.

2. When I shift gearbox to “R”, there is video display on screen, but no parking trajectory displays on screen?

(1) Choose the right “Vehicle model selection” for your car model in function menu;
(2) For Toyota series and Honda series, the steering wheel requires initialized calibration after selecting the vehicle model;
(3) Please check compatibility with local suppliers of IPAS.

3. Do I need to connect +12V output wire of IPAS to front camera?

+12V output wire has two functions:

A. To output reverse signal to screen;
   Generally, there are two ways to output reverse signal to screen: reverse light power output and original vehicle’s Can-bus output. IPAS’s +12V output wire gives the third way to output reverse signal to screen.

B. To supply power to front camera;
   If you want to watch the car front image via screen when you shift gearbox away from "R", you need to connect +12V output wire to front camera and screen. IPAS’s +12V output wire will offer 12 seconds’s power supply to front camera, it means 12 second’s front image display on screen when you shift gearbox away from "R".

*Note:* Please do wrap or cover +12V output wire properly to avoid short circuit, if you do not need to use it.
1. What is Electronic stability control (ESC)?

Electronic stability control (ESC) is a computerized technology \cite{1} that improves the safety of a vehicle's stability\footnote{www.car-solutions.com} by detecting and minimizing skids. When ESC detects loss of steering control, it automatically applies the brakes to help "steer" the vehicle where the driver intends to go. Braking is automatically applied to individual wheel, such as the outer front wheel to counter oversteer or the inner rear wheel to counter understeer. Some ESC systems also reduce engine power until control is regained. ESC does not improve a vehicle's cornering performance, it rather helps minimize the loss of control. According to IIHS and NHTSA, one-third of fatal accidents could have been prevented by the technology\footnote{www.car-solutions.com}.

Electronic stability control (ESC) is the generic term recognised by the European Automobile Manufacturers Association (ACEA), the North American Society of Automotive Engineers (SAE), the Japan Automobile Manufacturers Association, and other worldwide authorities. However, vehicle manufacturers may use a variety of different trade names for ESC:

- **Acura**: Vehicle Stability Assist (VSA)
- **Alfa Romeo**: Vehicle Dynamic Control (VDC)
- **Audi**: Electronic Stability Program (ESP)
- **Bentley**: Electronic Stability Program (ESP)
- **BMW**: Dynamic Stability Control (DSC) (including Dynamic Traction Control)
- **Bugatti**: Electronic Stability Program (ESP)
- **Buick**: StabiliTrak
- **Cadillac**: StabiliTrak & Active Front Steering (AFS)
- **Chery Automobile**: Electronic Stability Program
- **Chevrolet**: StabiliTrak, Active Handling (Corvette only)
- **Chrysler**: Electronic Stability Program (ESP)
- **Citroën**: Electronic Stability Program (ESP)
- **Daimler**: Electronic Stability Program (ESP)
- **Fiat**: Electronic Stability Program (ESP) and Vehicle Dynamic Control (VDC)
- **Ferrari**: Controlo Stabilità (CST)
- **Ford**: AdvanceTrac with Roll Stability Control (RSC) and Interactive Vehicle Dynamics (IVD) and Electronic Stability Program (ESP); Dynamic Stability Control (DSC) (Australia only)
- **General Motors**: StabiliTrak

\cite{1} \cite{2} \cite{3}
- Honda: Vehicle Stability Assist (VSA)
- Holden: Electronic Stability Program (ESP)
- Hyundai: Electronic Stability Program (ESP), Electronic Stability Control (ESC), and Vehicle Stability Assist (VSA)
- Infiniti: Vehicle Dynamic Control (VDC)
- Jaguar: Dynamic Stability Control (DSC)
- Jeep: Electronic Stability Program (ESP)
- Kia: Electronic Stability Control (ESC)' and 'Electronic Stability Program (ESP)'
- Lamborghini: Electronic Stability Program (ESP)
- Land Rover: Dynamic Stability Control (DSC)
- Lexus: Vehicle Dynamics Integrated Management (VDIM) with Vehicle Stability Control (VSC)
- Lincoln: AdvanceTrac
- Maserati: Maserati Stability Program (MSP)
- Mazda: Dynamic Stability Control (DSC) (including Dynamic Traction Control)
- Mercedes-Benz (co-inventor): Electronic Stability Program (ESP)
- Mercury: AdvanceTrac
- MINI: Dynamic Stability Control
- Mitsubishi: Active Skid and Traction Control MULTIMODE and Active Stability Control (ASC)
- Nissan: Vehicle Dynamic Control (VDC)
- Oldsmobile: Precision Control System (PCS)
- Opel: Electronic Stability Program (ESP)
- Peugeot: Electronic Stability Program (ESP)
- Pontiac: StabiliTrak
- Porsche: Porsche Stability Management (PSM)
- Proton: Electronic Stability Program
- Renault: Electronic Stability Program (ESP)
- Rover Group: Dynamic Stability Control (DSC)
- Saab: Electronic Stability Program (ESP)
- Saturn: StabiliTrak
- Scania: Electronic Stability Program (ESP)
- SEAT: Electronic Stability Program (ESP)
- Škoda: Electronic Stability Program (ESP)
- Smart: Electronic Stability Program (ESP)
- Subaru: Vehicle Dynamics Control (VDC)
- Suzuki: Electronic Stability Program (ESP)
- Toyota: Either Vehicle Stability Control (VSC) -OR- Vehicle Dynamics Integrated Management (VDIM - Advanced version of the STAR Safety System found on hybrid vehicles, includes with Vehicle Stability Control)
- Vauxhall: Electronic Stability Program (ESP)
- Volvo: Dynamic Stability and Traction Control (DSTC)
- Volkswagen: Electronic Stability Program (ESP)
2. What is Optical Parking System (OPS)?

Volkswagen’s Optical Parking System (OPS) gives a visual display of the rear and front (where fitted) PDC sensors on the RCD 310, RCD 510 and RNS 510.