



胎壓偵測系統

AVE TPMS

Installation and Operation Manual

操作說明書



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Electronics Technologies Co. Ltd

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AVE 胎壓監測系統(AVE TPMS) **AVE Tire Pressure Monitoring System, AVE TPMS**

謝謝您購買 AVE 胎壓偵測系統(TPMS)。AVE 胎壓監測系統是為了提供您在駕駛時有多一層的保護而設計。他會提前警示車子輪胎狀況。安裝後，可以即時監控輪胎的壓力及溫度。若偵測到不正常的胎壓及溫度時，會立刻送出警示聲及閃燈告知駕駛者。即時的處理問題既可避免交通意外的發生亦可確保駕駛及乘客的安全。

Thank you for purchasing AVE's Tire Pressure Monitoring System (TPMS). AVE TPMS was design to ensure extra protection to you when driving. Our TPMS serves as an early warning system for your vehicle. Once installed, AVE TPMS will monitor your vehicle tires pressure and temperature in real time. If it detected any irregularities with the tires' pressure and temperature, it will send out signal to notify the driver. Prompt actions needs to be taken to avoid accidents and ensure safety to the driver and his passenger.

注意事項 Notice

FCC 注意事項 FCC Notice

此裝置已經遵守美國 FCC 法規第 15 條標準要求。操作使用時仍需注意下列注意事項。

- 該產品可能因為其他的干擾而導致系統無法動作。
- 該系統不正常的操作可能進而導致系統失效。

此設備已經經過測試並遵守數位 Class B 的限制，根據 FCC 第 15 條規定，這些規定是設計提供合理的保護以防止干擾訊號。這種設備將會產生無線射頻訊號，如果未依照安裝及正確使用會導致產生一些訊號源干擾無線通訊。然而，縱使正確安裝也無法完全確保外界不會有干擾源產生。

如果該產品會干擾到收音機或無線電視的收訊時，可以由使用者自行決定是否關閉該產品。使用者也可以自行調整正確頻率解決問題，可能方法如下：

- 重新調整天線
- 增加設備與該系統的距離



- 變更接收器的位置與連接方式

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operations.

This equipment has been tested and found to comply with the limits for Class B device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the factoring measures.

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into outlet on a circuit different from that to which the receiver is connected

警告 Caution

任何的自行修改或變更系統本體將無法保障操作者的權益。必須遵從 FCC RF 列出的規定,此設備的天線不能和其它的天線或發射器設置在相同的地方或連接。

Any changes or modifications in construction of this device which are not expressly approved by the manufacturer could void the user's authority to operate the equipment. To comply with the FCC RF exposure compliance requirements, this device and its antenna must not be co-located or operating to conjunction with any other antenna or transmitter.



預防 Precaution

- 胎壓偵測系統是爲了偵測輪胎的狀態，及當不正常的情況發生時可以及時警示駕駛者而設計

TPMS system is designed to monitor tires condition and alert the user if there is any irregularities are detected. It is the user's responsibilities to react promptly and discretion to alerts.

- 補胎時所使用化學接著劑或是輪胎不正常充氣，可能會造成感測器功能的損害

Use of chemical sealants for temporary resealing or re-inflation in tire assembly may affect or even damage the sensors function.

- 爲了您切身的安全，請在安裝前閱讀此一說明書

For your own safety, please read manual before proceeding to installation and setup.

- 請專業人士安裝,不可自行安裝

Please seek qualified personnel for proper tire sensors installation.

- TPMS 胎壓偵測系統安裝後，仍需要準備備胎

Balancing tire is necessary after TPMS is installed.

- 請使用華麗科技所提供的汽車點煙器電源線

Use only power cord cigarette adapter supplied by AVE Technology.

- 請勿將華麗科技所提供的 USB 接線使用在其它的 USB 上，會損害你的 USB 裝置，它不是一般市售的 USB 線，並不相容於其它 USB 裝置

Do not attempt to use AVE Technology power cord into other USB device. It is **NOT USB compatible** and may damage your USB device.

- 若使用者自行使用 USB 線在非 TPMS 上而造成任何損害時，華麗科技則無法提供保固

AVE TECHNOLOGY shall not be held responsible for the damage cause on the USB device due to this incompatibility and also from user's action.

- 當拔出電源線時，請不要拉扯電線，它會造成電線損壞

When unplug the power cord, do not pull from the cord. It may damage the cord.

- 若電源線於保固期間損壞時請聯絡當地的販賣商

Contact your dealer for new power cord or exchange (if under warranty) if the power cord is damaged.

- 請勿自行拆解或修理此一產品

Never try to disassemble or repair the product by yourself.

AVE TPMS 規格

Specifications of AVE TPMS

感測器與發射器規格

Sensors and transmitter specification

- 電池壽命 在正常使用下可使用 8 年
Battery life Estimated 8 years (normal operating condition)
- 電池電壓
Battery voltage 3.6 V
- 儲藏溫度
Storage Temperature $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$
- 操作溫度
Operating Temperature $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$
- 溫度解析度
Temperature Resolution $\pm 1^{\circ}\text{C}$
- 壓力範圍
Pressure range 450kPa, 700kPa, 1400kPa
- 壓力解析度
Pressure Resolution 1.38kPa, 2.35kPa, 5.50kPa
- 操作濕度
Operating Humidity 100%
- 操作頻率
Operating Frequency 434 MHz



接收器規格

Receivers Specifications

- 操作電壓
Operating Voltage 9V ~ 30V
- 操作溫度
Operating Temperature -40°C ~ 85°C
- 監控溫度
Monitored Temperature -40°C ~ 125°C

AVE 無線胎壓偵測系統配件表

AVE TPMS Components

項目 ITEM	配件 Accessory	數量 Quantity
A	輪胎感測發射器 Tire's Sensor	4
B	顯示器 Display Unit	1
C	汽車點煙電源線 Power cord Cigarette adapter	1
D	標準氣嘴 Common valve	4
E	冷氣夾 Air conditioner adapter	2
F	使用說明書 User manual	1
G	顯示器黏著墊 Base Adhesive	1

AVE TPMS 包裝圖 Picture of AVE TPMS inside packaging



系統設定 System Setup

<p>1. 汽車點煙電源線的 USB 接頭連接到顯示器 Connect cigarette lighter power cord (mini USB end) to display unit.</p>	
<p>2. 可安裝顯示器至任何想要放置的地方， AVE TPMS 可以嵌入汽車儀表板或冷氣孔 Install the display unit into desired location. AVE TPMS can be mounted on the dashboard or air-con vent.</p> <ul style="list-style-type: none">• 安裝冷氣孔夾至冷氣出風口 Install the air-con adapter for air-con vent mounting• 提供顯示器黏著墊可鑲在汽車儀表板上 Apply adhesive cushion to the base of Display Unit for dashboard mounting.	
<p>3. 汽車點煙電源線另一端的點煙器連接到車內的點煙器插座 Connect the other end (cigarette lighter adapter) to vehicles cigarette lighter socket.</p>	
<p>4. 顯示器已經安裝完成了，安裝感測器及輪胎充氣後，顯示器便可以開始接收從感測器發出的訊號 AVE TPMS display unit setup is complete. AVE TPMS will start receiving signals from tire sensors the moment tire sensor is installed and tire is being inflated.</p>	
<p>5. 請按照步驟安裝輪胎 備註: 在輪胎廠時不需重新設定輪胎的位置 務必依照感測器上的標籤來安裝輪胎 Please proceed to set up the tire.</p>	



<p>Note: There is no need to set the tire position as it is pre-set in the factory.</p>	
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<p>Note: There is no need to set the tire position as it is pre-set in the factory.</p>	
<p>It is important to install the tire according to the position in the sensors label.</p>	

輪胎感測器安裝方法

Tire Sensors Installation

步驟 Step	過程 Process	圖示 Photo
1	<p>從車體拆下輪胎 Remove tire from the vehicle. 將輪胎放氣後，拆掉輪胎及鋁圈 eflate the tire and disassemble the tire and rim. 如有需要，請尋找合格的技工幫助 Seek assistance from qualified personnel if necessary.</p>	
2	<p>每一個感測器都有標籤標示組裝的位置 Each sensor has a label attached showing its position to be assemble;</p> <p>i. Front Left 前左輪 ii. Front Right 前右輪 iii. Rear Left 後左輪 iv. Rear Right 後右輪</p>	





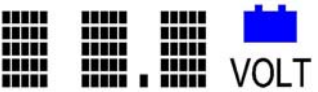
3	<p>將感測器安裝到輪胎上 Install the sensor into the wheel. 確認輪胎是否有完全安裝到預設的輪胎 Identify if the tire's sensor is properly install into the intended tire. 備註: AVE TPMS 使用標準的氣嘴，它可以很方便的在任何輪胎行更換 Note: AVE TPMS uses common valve on its product. This common valve is available anywhere.</p>	
4	<p>確認輪胎皮有完全的與氣嘴與鋁圈密封 Be sure the rubber seal is properly positioned between rim and valve. Tighten the valve using the socket wrench.</p>	
5	<p>清潔輪胎的內部灰塵並將輪胎充氣 Clean the inside tire from dust and inflate the tire to proper pressure.</p>	
6	<p>備胎 Balance the tire. 請合格的技工安裝輪胎到合適的位置 Seeks assistance from qualified personnel is necessary. Install the tire into the proper location.</p>	
7	<p>按照相同的方法，安裝其它 3 顆輪胎 Set up the other three tires in the same manner.</p>	



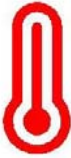
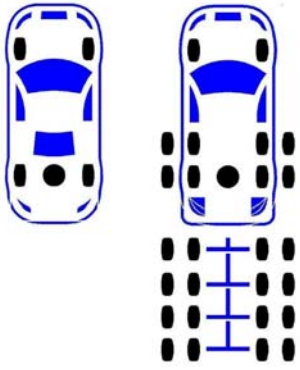




8	<p>發動引擎 Turn on the ignition. 連接顯示器至汽車點煙電源線 Connect the display unit to vehicles cigarette lighter power. AVE TPMS 稍候就可以從感測器偵測出訊號 AVE TPMS will take a moment to detect signals from tire sensors. 假如 5 秒後還未偵測到訊號，請重新設定顯示器(請參考安裝方法) If there is no signal after 5 minutes, please reset the display unit system. (Please refer to Tire Setup Mode) 備註:在輪胎廠時不需重新設定輪胎的位置，按照感測器上的標籤來安裝輪胎是重要 Note: There is no need to setup up the tires location as it is being pre set in the factory. This is only applicable if the tire installation is according to the position on the sensors labels.</p>	

顯示器介紹 Display Unit Introduction



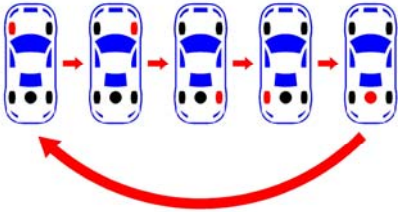
No.	Description	Photo
1	感測器電池圖示 Sensor battery icon 測量感測器電池容量 Measure the sensors battery level	
2	訊號強弱圖示 Signals strength icon 測量輪胎感測器發出訊號接收強弱 Measures the strength of the signal received from the tires sensor.	
3	車用電池讀數 Vehicles battery readings 監控車用電池(操作模式下)Monitor user vehicles battery (in operating mode) Also serve as message area (in setup mode)	

<p>4</p>	<p>胎壓警示圖示 Pressure Warning icon 當偵測到胎壓不正常時，燈即亮 Will light when detected pressure irregularities in tire 如: 漏氣或胎壓低於標準的 30%時 Ex. fast leak, tire below 30% of recommended pressure</p>	
<p>5</p>	<p>胎壓不足圖示 Flat tire icon 當偵測出胎壓不足時，圖示燈亮 Will light when flat tire is detected.</p>	
<p>6</p>	<p>高溫圖示 High Temperature Icon 當輪胎內部溫度高於 85°C 時，圖示燈亮 Will light when temperature inside tire is above 85°C</p>	
<p>7</p>	<p>輪胎的型式(轎車模式或卡車模式) Customable vehicle type (car mode or truck mode) 有 8 種以上車種可供選擇 Up to 8 vehicle modes of vehicle type selection 可設定到 27 個輪胎 Programmable tires up to 27 wheels. 可選擇監控備胎 Optional monitoring for spare tire. 備註: 只適用於 AVE TPMS (卡車) 只適用於 AVE TPMS (汽車)，限安裝於 5 輪車種 Note: Only applicable to AVE TPMS (truck version) AVE TPMS (car version) limited to 5 wheels setup</p>	 <p>CAR MODE TRUCK MODE</p>
<p>8</p>	<p>胎壓計量表 Pressure Meter 可測量 3 個不同壓力質(KPa, bar, psi) Measures 3 different pressure unit (KPa, bar, psi) 以顏色來區分正常與警示的情形 Color difference to differentiate between normal and warning condition 顯示器會顯示目前的壓力質 Display actual pressure value</p>	

9	<p>溫度計量表 Temperature Meter 測量攝氏溫度(°C)及華氏溫度(°F) Measures in degree Celsius (°C) or Fahrenheit (°F) 以顏色來區分常溫與高溫 Color difference to differentiate between normal and high temperature 顯示器會顯示目前的溫度 Display actual temperature value</p>	
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操作 AVE TPMS Operating AVE TPMS

操作模式 OPERATING MODE


<p>AVE TPMS 顯示器每 10 秒會監控每個輪胎，輪流監控每個輪胎。 AVE TPMS display unit will monitor each tire for 10 seconds before proceeding to next tire. It will monitor the tire in a rotation manner.</p> <p>有問題的輪胎每 15 秒鐘會監控一次。顯示器會一直警示駕駛，直到解決問題為止。 Problematic tire will be monitored for 15 seconds before proceeding to next tire. It will keep display its warning code the moment it reaches it turn until the problem is being taken care by user.</p> <p>若有警示聲或警示訊號，請參考顯示器上所亮燈警示的部份 For the alert / warnings code, please refer to Reacting to Alerts section.</p> <p>顯示器上被監控的輪胎圖示燈會亮起 The monitored tire will light and its information will be displayed.</p> <p>(如：壓力、溫度、電池容量、訊號強弱) (i.e. pressure, temperature, batteries level and signal strength)</p>	
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功能模式 FUNCTION MODE

按功能鍵進入功能模式


Press  button once to enter **FUNCTION MODE**.

顯示器會顯示 FUN
Message area display **FUN**.

按  可以進入下一個選單

Press  for next tire selection.

按  可以進入上一層選單


Press  for previous tire selection.


不按任何按鍵 20 秒就會自動退出
To quit, leave the display unit for 20 seconds.







備註: 只要靜止 20 秒, 系統就會自動離開功能模式進入操作模式
Note: Any inactivity more than 20 seconds, system will quit **FUNCTION MODE** and return to **OPERATING MODE**.



單位模式 UNIT MODE

按住  3 秒以進入單位模式


Press and hold  button for 3 seconds to enter **UNIT MODE**.

- 1) 顯示器顯示 **ΔP**
Message area display **ΔP**
- 2) **psi** 的圖示燈亮 (顯示預設的壓力單位或之前設定的單位)
psi icon will light (default pressure unit or previously setup unit).
- 3) 按  以改變壓力單位
Press  to change pressure unit.
- 4) 再按  以選擇壓力單位
Continue to press  for pressure unit selection.
- 5) 按  確認所選擇的壓力單位，並儲存
Press  to confirm the selection. Pressure unit saved.






備註 Note:

若要再重新設定壓力單位時，可省略步驟(3)，(4)，直接按照步驟(5)確認預設的單位，預設的單位是 **psi**
To bypass pressure unit change, skip step (3) & (4).
Go to step (5) to confirm the default unit settings.
Default pressure unit in **psi**.


靜止 20 秒後系統會自動退出壓力單位設定模式，所有設定將不會被儲存，系統將會使用預設的壓力單位
To quit, leave the display unit for 20 seconds.
Changes will not be saved (before step 5) and the system will use the default pressure unit.

- 6) 在步驟(5)後，顯示器就會顯示 **ΔT**
Immediately after step (5), message area will display **ΔT**.
- 7) **°C** 圖示燈量 (顯示預設的溫度單位或之前設定的單位)
°C icon will light (default temperature unit or previously setup unit).
- 8) 按  以改變溫度單位



<p>Press  to change temperature unit.</p> <p>9) 再按  以選擇溫度單位</p> <p>Continue to press  for temperature unit selection.</p> <p>10) 按  確認所選擇的溫度單位，並儲存</p> <p>Press  to confirm the selection.</p> <p>Temperature unit saved.</p> <p>11) 單位模式已完全設定後，系統會自動回到操作模式 UNIT MODE setup complete. System will return to OPERATING MODE.</p> <p>注意 Note: 若要再重新設定溫度單位時，可省略步驟(8)，(9)，直接按照步驟(10)確認預設的單位，預設的單位是攝氏 <i>To bypass temperature unit change, skip step (8) & (9). Go to step (10) to confirm the default unit settings. Default temperature unit in Celsius.</i></p> <p>靜止 20 秒後系統會自動退出溫度單位設定模式，所有設定將不會被儲存，系統將會使用預設的溫度單位 <i>To quit, leave the display unit for 20 seconds. Any changes after step (5) will not be saved and the system will use the default temperature unit.</i></p> <p>靜止 20 秒後，系統會離開單位模式自動回到操作模式 <i>Any inactivity more than 20 seconds, the system will quit UNIT MODE and return to OPERATING MODE</i></p>	
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壓力設定模式 (車體為卡車時) PRESSURE SETUP MODE (for TRUCK version)

<p>按  鍵 3 秒鐘以進入設定模式</p> <p>Press and hold  button for 3 seconds to enter SETUP MODE.</p> <p>1) 顯示器顯示 M01 Message area display M01.</p> <p>2) M01 訊號閃爍，車種也會顯示在顯示器上(顯示預設車種) M01 message will flash and vehicle mode will be displayed. (Default vehicle type).</p> <p>3) 按  以改變車種</p> <p>Press  to change vehicle mode.</p>	
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- 4) 再按 以選擇車種
Continue to press for vehicle mode selection.
- 5) 按 確認車種，並儲存
Press to confirm the selection. Vehicle mode saved.

Note:

若要再重新設定車種時，可省略步驟(3)，(4)，直接按照步驟(5)確認預設的車種，預設的車種是 **M01**
To bypass vehicle mode change, skip step (3) & (4). Go to step (5) to confirm the default vehicle mode. Default vehicle mode is **M01**.

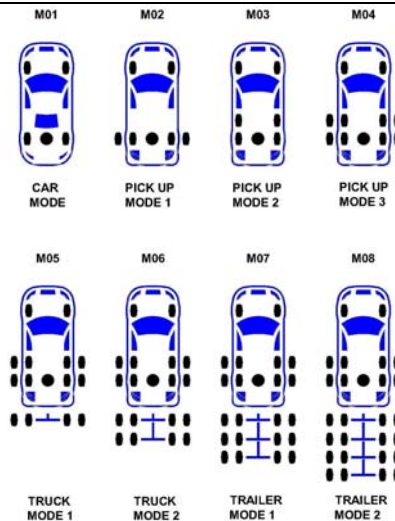
靜止 20 秒後系統會自動退出車種設定模式，所有設定將不會被儲存，系統將會使用預設的車種
To quit, leave the display unit for 20 seconds. Changes will not be saved (before step 5) and the system will use the default vehicle mode.

在步驟(5)後，顯示器就會顯示預設的壓力質 **pressure value**.

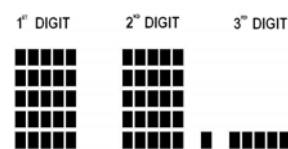
- 6) Immediately after step (5), message area will display default **pressure value**.

注意: 預設的壓力質是按照車種所選擇的
Note: Default pressure value depends on the vehicle mode selection.


- 7) 按 確認預設的壓力質，跳過步驟(8)~(14)，到步驟(15)
Press to accept default pressure value. Skip step (8) to (14). Go to step (15).
- 8) 按 以改變壓力質
Press to change pressure value.
- 9) 進入第 3 個壓力值－顯示器第 3 個壓力值會閃燈
Message Area will prompt for input will flash on 3rd digit message area.
- 10) 按 確認第 3 個壓力質，跳過步驟(11)~(12)
Press to accept the displayed value on 3rd digit. Step (11) to (12) will be skipped.
- 11) 要更改壓力質，按 。當每次按 時，顯示器所顯示的數字便會增加 1，可以一直按到所需要的壓力質為止，它的範圍在 0~9，9~0
To change the pressure value, press button. The displayed number will increase by 1






車種 Vehicle Mode	預設的壓力值 Default pressure (psi)
M01	028
M02	035
M03	035
M04	038
M05	038
M06	038
M07	045
M08	045



壓力值設定正確時
Correctly Enter Pressure

every time  button is pressed. Continue pressing the button until your wanted value. The number will be looping from 0 to 9 back to 0.

- 12) 按  確認輸入壓力質
Press  to accept the input value.
- 13) 顯示器會進入第 2 個數值－顯示器第 2 個壓力值會閃燈
Message Area will proceed to 2nd digit for input.
 will flash on 2nd digit message area.

- 14) 重覆(10)~(12)設定第 2，第 3 個壓力值
Repeat step (10) to (12) for 2nd and 3rd digit.

備註: 當加入的壓力數質為 28psi 時，請輸入 028psi
Note: When entering the pressure as 28 psi please enter as 028 psi.

- 15) 當完成後，系統會自動檢查所輸入的壓力數質，可以避免目前的車種有不當的壓力值設定
Once done, the system will perform a check on pressure entered. This is to avoid improper pressure setup for selected vehicle mode.
- 16) 假如輸入了合適的壓力值
If proper pressure is being entered,
- 顯示器會顯示 PS (壓力儲存)
Message area will display **PS (Pressure Saved)**.
 - 系統會嗶一聲確認
Buzzer will beep once
 - 輸入的壓力會儲存
Entered pressure will be saved
- 17) 假如輸入不合適的壓力值
If improper pressure is being entered,
- 顯示器會顯示 ERR (壓力錯誤)
Message area will display **ERR (Pressure Error)**.
 - 系統會嗶二聲警示
Buzzer will beep twice
 - 使用者必需回到步驟(6)重新設定
User will be return to step (6) for re-setup.
 - 假如不當的輸入(ERR)發生第二次，系統將會自動以預設的壓力質來取代使用者的設定
 - If improper error (**ERR**) occurs for the second time, the system will replace the pressure to default value.
 - 請參考所屬車種允許的最大壓力質
Please refer to maximum allowable pressure table for the maximum pressure for vehicle mode type.

備註:Note:

第二次不當的壓力設定時，顯示器會顯示 ERR(壓力錯誤)，且自動回到預設的壓力質並儲存(儲存預設的壓力



壓力值設定錯誤時
Error in pressure

車種 Vehicle Mode	最大的壓力值 Maximum allowable pressure (psi)
M01	044
M02, M03, M04	049
M05, M06	055
M07, M08	065



質以取代不合適的加入質

For improper pressure setup in second time,

Message area will display **ERR (Pressure Error)**.

Followed by **default pressure value** and **PS**.

(Saving default pressure value instead of improper entered value)

18) 壓力設定完後後，系統將會自動返回操作模式

PRESSURE SETUP MODE is complete. The

system will return to **OPERATING MODE**.

備注 Note:

靜止 20 秒後，會自動退出，在步驟(5)前所設定的內容

將不會被儲存，系統將會使用預設的壓力單位

To quit, leave the display for 20 seconds.

Any changes after step (5) will not be saved and the

system will use the default pressure unit.

靜止 20 秒後，系統將會自動退出壓力設定模式並返

回操作模式


Any inactivity more than 20 seconds, the system will quit

PRESSURE SETUP MODE and return to

OPERATING MODE

壓力設定模式 (汽車車種) **PRESSURE SETUP MODE**

(for CAR version)


按  3秒以進入壓力設定模式


Press and hold  button for 3 seconds to enter **PRESSURE SETUP MODE**.

- 1) 顯示器會顯示預設壓力值或之前設定的壓力質
Message Area will display default pressure value or previously set-up pressure.


備注:汽車預設的壓力質是 028psi

Note: Default pressure value for car mode is 028 psi.

- 2) 按  確認預設的壓力值，跳過步驟 (3)~(9)，到步驟(10)

Press  to accept default pressure value. Skip step (3) to (9). Go to step (10).


- 3) 按  以改變壓力值


Press  to change pressure value.



- 4) 顯示器右下角第 3 個壓力值會閃燈


Message Area will prompt for input
== will flash on 3rd digit message area.

- 5) 若要確認現在的壓力值，按  即可跳過步驟(6)~(7)

Press  to accept the displayed value on 3rd digit. Step (6) to (7) will be skipped.


- 6) 若要更改第 3 個壓力值，按  會增加 1，可以一直按到所需要的壓力質為止，它的數值範圍在 0~9

To change the pressure value, press  button. The displayed number will increase by 1 every time  button is pressed. Continue pressing the button until your wanted value. The number will be looping from 0 to 9 back to 0.

- 7) 按  確認輸入的第 3 個壓力數值



Correctly Enter Pressure

Press  to accept the input value.

- 8) 然後顯示器會進入第 2 個壓力數值並閃爍
Message Area will proceed to 2nd digit for input.
== will flash on 2nd digit message area.
- 9) 重覆(5)~(7)設定第 2，第 3 個壓力值
Repeat step (5) to (7) for 2nd and 3rd digit.

注意: 當加入的壓力質為 28psi 時，請輸入 028psi

Note: When entering the pressure as 28 psi please enter as 028 psi.

- 10) 當完成後，系統會自動檢查輸入的壓力值，這可以避免目前的車種設定有不當的壓力值
Once done, the system will perform a check on pressure entered. This is to avoid improper pressure setup for selected vehicle mode.
- 11) 假如輸入了合適的壓力
If proper pressure in being entered,
 - 顯示器會顯示 PS(壓力值儲存)
Message area will display **PS (Pressure Saved)**.
 - 系統會嗶一聲確認
Buzzer will beep once
 - 設定的壓力值會儲存
Entered pressure will be saved
- 12) 假如輸入了不合適的壓力
If improper pressure is being entered,
 - 顯示器會顯示 ERR (壓力值設定錯誤)
Message area will display **ERR (Pressure Error)**.
 - 系統會嗶二聲警示
Buzzer will beep twice
 - 使用者必需回到步驟(6)重新設定 User
will be return to step (6) for re-setup.
 - 假如不當的錯誤(ERR)發生第二次，系統會以預設的壓力值取代使用者所設定的
If improper error (**ERR**) occurs for the second time, the system will replace the pressure to default value.
 - 請參考所屬車種允許的最大壓力質
Please refer to maximum allowable pressure table for the maximum pressure for car mode.

備註:Note:

第二次不當的壓力數值設定後，顯示器會顯示 ERR(壓力數值設定錯誤)，且會返回預設的壓力數值(028)並自動儲存來取代不正確當的輸入壓力值

For improper pressure setup in second time, Message area will display **ERR (Pressure Error)**.

Followed by **default pressure value** and **PS**.

(Saving default pressure value instead of improper entered value)



Error in pressure

Vehicle Mode 車 種	Maximum allowable pressure (psi) 允許的最大壓力數值
Car mode 汽車	044



- 13) 壓力值設定完成後，系統將會自動返回操作模式
PRESSURE SETUP MODE is complete. The system will return to **OPERATING MODE**.

備註:Note:





若沒有操作任何按鍵，系統將在靜止 20 秒後自動返回操作模式，並回到預設的壓力值

To quit, leave the display unit for 20 seconds.

Any changes after step (5) will not be saved and the system will use the default pressure unit.


*Any inactivity more than 20 seconds, the system will quit **PRESSURE SETUP MODE** and return to **OPERATING MODE**.*

TIRE SETUP MODE 輪胎設定模式

一起按  及  以進入輪胎設定模式
Press and hold  and  button for together to enter **TIRE SETUP MODE**.

- 顯示器將會清除之前記憶在感測器 ID 中的設定，顯示器會顯示 CM? 並閃爍
Message Area will prompt to clear the previous memory (sensors ID) stored in the system.
Message area will display **CM?** (flash).

按  以清除記憶

Press  to clear the memory.

備註:當換胎時需要操作此功能

Note: Select this option when performing tire rotation.

按  維持記憶

Press  to keep the memory.

備註:當換置固障的感測器時需選擇操作此功能

Note: Select this option when replacing broken sensor.

- 所有輪胎圖示燈亮
All tires (depending on the vehicle mode) will light.
左前輪胎閃爍
Front left tire will flash.
顯示器顯示 LT(輪胎滲漏測試)
Message area will display **LT** (Leak Test)
使用者有 4 分鐘的時間可以測試目前閃爍燈號的輪胎是否有滲漏的情形
User will have 240 seconds (4 minute) to perform the **leak test** on the flashed tire.

備註:Note:

輪胎滲漏測試是使用者在輪胎漏氣或充氣 5 秒到 10 秒內基本的動作。突然的胎壓改變會引起感測器不斷的發送訊號
Leak Test is basically user action to deflate or inflate the air in the tire for 5 to 10 seconds. A sudden change in tire pressure will cause tire's sensor to transmit signal continuously.


輪胎滲漏測試是不需的 **Optional to leak test.**


若使用 AVE TPMS 感測控制器便不需執行滲漏測試，AVE TPMS 感測控制器在沒有漏氣或充氣的情形下仍會強迫感測器傳送訊號，此一控制器可以選購

User can avoid performing leak test on the tire by using AVE TPMS sensor's remote control. AVE TPMS sensor's remote control will force sensor to transmit signal without inflating or deflating tire's pressure.



This sensor's remote control is available as an optional accessory.

- 3) 若要退出某一個輪胎滲漏測試可按  跳過 步驟(4)~(5)，到步驟(7)

To quit leak test on particular tire press  button.

Skip step (4) to (5). Go to step (7).

備註:Note:

當要換置固障的感測器時，此一步驟才可實行


This is applicable when replacing broken tire's sensor.

- 4) 當收到訊號時，顯示器會嗶一聲。輪胎圖示燈會關掉(表示輪胎已成功定位)。顯示器會顯示 TIS(已記憶輪胎位置)


Display unit will beep once if signal is received.

The light on flashed tire will turn off (indicating tire successfully setup)

Message Area will display **TIS**. (Tire ID saved)

- 5) 繼續設定下一個輪胎，請按 

To exit **TIRE SETUP MODE**, press  button.

To continue to next tire, press  button.

- 6) 再重覆其它輪胎的滲漏測試

Repeat the leak test for the rest of tire.

備註:Note:

當所有輪胎設定完全後(所有輪胎圖示燈會關掉)，系統會自動返回操作模式


Once the setup is complete will all tires (all tire light turned off), the system will exit **TIRE SETUP MODE**.


- 7) From step (3).

系統會提示使用者是否裝有備胎，顯示器此時會顯示 ST? (是否有備胎)

System will prompt user if the flashed tire is a spare / reserve tire.

Message area will display **ST?** (Spare Tire?)

- 8) 假如沒有備胎時，請按 ，顯示器會顯示 **IDX**(輪胎位置並未記憶)，警示器會嗶一聲

Press  button if not a spare tire.

Message area will display **IDX**. (ID not saved)

Buzzer will beep once.

備註:Note:

假如輪胎定位記憶已清除，輪胎圖示燈亮(請參考步驟一)


The tire's light will remain light if memory is cleared (step 1)


假如輪胎定位記憶未清除，輪胎圖示燈會關掉(請參考步驟一)，因為系統會使用上一次感測器裡的輪胎定位記憶

The tire's light will turn off if memory is not cleared (step 1).

This is due to the system is using previous sensors ID.



- 9) 假如有備胎，請按 ，顯示器會顯示 **IDX**(輪胎位置並未記憶)。在輪胎圖示燈關掉前，輪胎圖示燈會閃 3 次，警示器會嗶 2 聲

Press  button if it is a spare tire.
 Message area will display **IDX**. (ID not saved)
 Tire's light will flash 3 times before turned off.
 Buzzer will beep twice.

備註:Note:

因為大多數的備胎都沒有裝置感測器，所以此一選項可以允許使用者關掉監控備胎功能

This option allows user option to turn off the monitoring spare tire as most spare tire are not equipped with the tire's sensor.

- 10) 系統會直接進入下一個輪胎做設定
 System will proceed to the next tire to set up.

備註:Note:

假如所有輪胎設定完成後(所有輪胎圖示燈滅)，系統將會自動退出輪胎設定模式

If the setup is complete will all tires (all tire light turned off), the system will exit **TIRE SETUP MODE**.

當沒有操作任何按鍵時，系統將在靜止 4 分鐘後，自動返回操作模式並儲存儲存最後的設定

To quit, leave the display unit for 240 seconds.

Any changes will only be reflected onto the last saved data.

*Any inactivity more than 240 seconds, the system will quit **TIRE SETUP MODE** and return to **OPERATING MODE**.*


警示反應 Reacting to Alerts

當設定不正確或不完整時 INCOMPLETE SETUP

- 在操作模式下，受到影響的輪胎圖示會亮燈
Affected tire will light during its turn on operating mode
- 系統每 3 秒會發出警示嗶聲 1 次
Buzzer will beep once every 3 seconds.
- 壓力及溫度計量表表燈會持續閃爍
Pressure and Temperature bar indicator will flash
- 壓力及溫度數字表會顯示英文字 E 並持續閃爍
Pressure and Temperature digits will flash

備註:Note

按  以關掉警示聲

Press  to turn off the sound.

當警示聲被關掉時，直到使用者正確設定前，燈號仍會持續閃爍以警示使用者目前的設定並不正確或不完整

Warning will remain if sound is turn off until it is taken care by user.




沒有訊號 NO SIGNAL

- 在操作模式下，受到影響的輪胎圖示燈會閃爍
Affected tire will flash during its turn on operating mode.
- 系統每 1 秒會發出警示嗶聲 1 次
Buzzer will beep once every 1 second.
- 天線訊號圖示只會顯示 Y，而不會顯示訊號格數
Antenna signal Icon shows Y only without the bar.
- 壓力及溫度計量表表燈會亮
Pressure and Temperature bar indicator will light.
- 壓力及溫度數字表燈將不會顯示
Pressure and Temperature digits if off.

備註:Note

按  以關掉警示聲

Press  to turn off the sound.

當警示聲被關掉時，直到使用者正確設定前，燈號仍會持續閃爍以警示使用者目前的設定並不正確或不完整



<p>整 Warning will remain if sound is turn off until it is taken care by user.</p>	
<p><u>胎壓不足(25%)UNDER-INFLATION (25%)</u></p> <ul style="list-style-type: none"> 在操作模式下，受到影響的輪胎圖示燈會閃爍 Affected tire will flash during its turn on operating mode 系統每 2 秒會發出警示嗶聲 1 次 Buzzer will beep once every 2 seconds 胎壓在 75%時，壓力計量表表燈會閃爍 Pressure bar indicator will flash at 75% <p>備註 Note</p> <p>按  以關掉警示聲 Press  to turn off the sound. 當警報聲被關掉時，直到使用者處理胎壓不足的問題前，警示燈號仍會閃爍 Warning will remain if sound is turn off until it is taken care by user.</p> <p>備註:Note: 胎壓不足 25%是指在預設的壓力質 28psi 基礎下 The 25% under-inflation value in pressure display is based on default 28 psi.</p>	
<p><u>胎壓不足(30%)UNDER-INFLATION (30%)</u></p> <ul style="list-style-type: none"> 在操作模式下，受到影響的輪胎圖示燈會閃爍 Affected tire will flash during its turn on operating mode 系統每 2 秒會發出警示嗶聲 1 次 Buzzer will beep twice every 2 seconds 胎壓在 70%時，壓力計量表表燈會閃爍 Pressure bar indicator will flash at 70% 輪胎漏氣圖示燈亮 Tire leak icon will light <p>備註:Note</p> <p>按  以關掉警示聲 Press  to turn off the sound. 當警報聲被關掉時，直到使用者處理胎壓不足的問題前，警示燈號仍會閃爍 Warning will remain if sound is turn off until it is taken care by user.</p> <p>備註:Note:</p>	

<p>胎壓不足 30%是指在預設的壓力質 28psi 基礎下 The 30% under-inflation value in pressure display is based on default 28 psi.</p>	
<p><u>胎壓過高(125%)OVER-INFLATION (125%)</u></p> <ul style="list-style-type: none"> 在操作模式下，受到影響的輪胎圖示亮會閃爍 Affected tire will flash during its turn on operating mode 系統每 2 秒會發出警示嗶聲 1 次 Buzzer will beep once every 2 seconds 胎壓在 125%時，壓力計量表表燈會閃爍 Pressure bar indicator will flash at 125% <p><u>備註 Note</u></p> <p>按  以關掉警示聲 Press  to turn off the sound. 當警報聲被關掉時，直到使用者處理胎壓過高的問題前，警示燈號仍會閃爍 Warning will remain if sound is turn off until it is taken care by user.</p> <p>Note:</p> <p>胎壓過高 125%是指在預設的壓力質 28psi 基礎下 The 125% over-inflation value in pressure display is based on default 28 psi.</p>	
<p><u>胎壓過高(130%) OVER-INFLATION (130%)</u></p> <ul style="list-style-type: none"> 在操作模式下，受到影響的輪胎圖示燈會閃爍 Affected tire will flash during its turn on operating mode 系統每 2 秒會發出警示嗶聲 1 次 Buzzer will beep twice every 2 seconds 胎壓在 130%時，壓力計量表表燈會閃爍 Pressure bar indicator will flash at 130% 輪胎漏氣圖示燈亮 Tire leak icon will light <p><u>備註 Note</u></p> <p>按  以關掉警示聲 Press  to turn off the sound. 當警報聲被關掉時，直到使用者處理胎壓過高的問題前，警示燈號仍會閃爍 Warning will remain if sound is turn off until it is taken care by user.</p> <p>備註:Note:</p>	

<p>胎壓過高 130%是指在預設的壓力質 28psi 基礎下 The 130% under-inflation value in pressure display is based on default 28 psi.</p>	
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<p>漏氣 FAST LEAK</p> <ul style="list-style-type: none"> 在操作模式下，受到影響的輪胎圖示燈會閃爍 Affected tire will flash during its turn on operating mode 系統每 1 秒會發出警示嗶聲 2 次 Buzzer will beep twice every 1 seconds 輪胎漏氣圖示燈亮 Tire leak icon will light <p>備註 Note</p> <p>按  以關掉警示聲</p> <p>Press  to turn off the sound.</p> <p>當警報聲被關掉時，直到使用者處理漏氣問題前，警示燈號仍會閃爍 Warning will remain if sound is turn off until it is taken care by user.</p>	
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<p>爆胎 FLAT TIRE</p> <ul style="list-style-type: none"> 在操作模式下，受到影響的輪胎圖示燈會閃爍 Affected tire will flash during its turn on operating mode 系統每 1 秒會發出警示嗶聲 2 次 Buzzer will beep twice every 1 seconds 輪胎漏氣圖示燈亮 Tire flat icon will light <p>備註 Note</p> <p>按  以關掉警示聲</p> <p>Press  to turn off the sound.</p> <p>當警報聲被關掉時，直到使用者處理爆胎問題前，警示燈號仍會閃爍 Warning will remain if sound is turn off until it is taken care by user.</p>	
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溫度高於 80°C (176°F)時

TEMPERATURE ABOVE 80°C (176°F)

- 在操作模式下，受到影響的輪胎圖示燈會閃爍
Affected tire will flash during its turn on operating mode
- 系統會發出 1 長警示嗶聲，間隔一秒後再發出 1 長警示嗶聲，警示聲會一直持續
Buzzer will beep one long beep followed by 1 second delay
- 溫度數字表燈亮
Temperature icon will light
- 溫度刻度表燈會閃爍
Temperature bar indicator will flash

備註 Note

按  以關掉警示聲

Press  to turn off the sound.

當警報聲被關掉時，直到使用者處理問題前，警示燈號仍會閃爍

Warning will remain if sound is turn off until it is taken care by user.




溫度高於 90°C (194°F)

TEMPERATURE ABOVE 90°C (194°F)

- 在操作模式下，受到影響的輪胎圖示燈會閃爍
Affected tire will flash during its turn on operating mode
- 系統會發出 1 長 1 短警示嗶聲，間隔一秒後再警示 1 長 1 短警示嗶聲，警示聲會一直持續
Buzzer will beep one long beep follow by one short beep and 1 second delay.
- 溫度數字表燈亮
Temperature icon will light.
- 溫度刻度表燈會閃爍
Temperature bar indicator will flash.




備註 Note

按  以關掉警示聲


Press  to turn off the sound.


當警報聲被關掉時，直到使用者處理問題前，警示燈號仍會閃爍



<p>Warning will remain if sound is turn off until it is taken care by user.</p>	
<p><u>溫度高於 100°C (212°F)</u> <u>TEMPERATURE ABOVE 100°C (212°F)</u></p> <ul style="list-style-type: none"> • 在操作模式下，受到影響的輪胎圖示會燈亮 Affected tire will flash during its turn on operating mode • 系統會發出 1 長 2 短警示嗶聲，間隔 1 秒後再發出 1 長 2 短警示嗶聲，警示聲會一直持續 • Buzzer will beep one long beep follow by two short beep and 1 second delay. • 溫度數字表燈亮 Temperature icon will light. • 溫度刻度表燈會閃爍 Temperature bar indicator will flash. <p><u>備註 Note</u></p> <p>按  以關掉警示聲</p> <p>Press  to turn off the sound.</p> <p>當警報聲被關掉時，直到使用者處理問題前，警示燈號仍會閃爍</p> <p>Warning will remain if sound is turn off until it is taken care by user.</p>	

AVE TPMS Optional Accessories

<p><u>電池盒(8AA)</u> <u>Battery Pack (8AA)</u></p> <ul style="list-style-type: none"> • 攜帶式電池盒更易於安裝 Battery Pack allows display unit to be carried around for easier setup. • 使用者不需依賴車上的汽車點煙電源線 Users need not have to rely on power from vehicles (cigarette lighter power cord) • 方便用於設定多輪車種 Useful when set up especially when setting up vehicles with a lot of wheels. • AVE TPMS 可支援至 27 個輪胎 AVE TPMS support up to 27 wheels 	
<p><u>感測控制器 Remote controls for sensor</u></p> <ul style="list-style-type: none"> • 感測控制器有控制感測器的功能，4 個主要的功能包含 The remote control will have function to control sensor. 4 main function includes; <ul style="list-style-type: none"> ○ 喚醒模式 WAKE UP mode ○ 睡眠模式 SLEEP mode ○ 正常模式 NORMAL mode ○ 強迫訊號模式 FORCE SIGNAL mode • 有助於設定輪胎。強迫感測器傳送訊號以取代滲漏測試 This is useful when setup up the tire. Force tire's sensor to transmit signal instead of performing leak test. • 假如感測器傳送訊號，就會使用診斷工具來測試輪胎感測器 Use as a diagnostic tool to test the tire's sensor if sensor is transmitting signal. • 可以更節省輪胎感測器電池的電源 Power saving on tire's sensors battery. 強迫輪胎感測器進入睡眠模式(當車子或輪胎有一段時間未使用時這是有幫助的) Force tire's sensor to go into SLEEP mode (useful when vehicle / tire is not being used for a period of time) 	

<p><u>標準氣嘴 Standard Valve</u></p> <ul style="list-style-type: none"> • AVE TPMS 使用標準氣嘴 AVE TPMS uses standard valve. • 任何輪胎行均有銷售 It is available anywhere. • 假如故障時，可置換氣嘴即可，而不需置換整個感測器 Replace only the valve if it is broken but not the sensor. • 不像其它的 TPMS，不管氣嘴或感測器壞掉，要全部更換 Unlike other TPMS, replace both irregardless if either valve or sensor is broken. 	
<p><u>輪胎感測器 Tire's sensor</u></p> <ul style="list-style-type: none"> • 備胎也可使用感測器 Tire sensors is available in for spare tire • 若有需要，可洽詢華麗科技經銷商 Please inquire from AVE Technology authorized center. 	

保證策略 Warranty Policy

華麗科技自購買日開始起算提供一年之產品免費保固。在保固期間，若產品在正常使用操作下故障時，華麗科技將免費提供替換品或修復。華麗科技保留更換其它新產品或同等價值產品的權利。

AVE Technology warrants to the original end user that the product purchased is free from defects in material and workmanship for a period of one (1) year from the date of original purchase. Should the product fail within the warranty period, it will be replaced or repaired at the option of AVE Technology. AVE Technology reserves the right to replace defect products with either new or refurbished to be functionally equivalent to new.

若有以下情形，則無法提供原有的保固： The Warranty is void and inapplicable if:

1. 產品未依照說明手冊操作
the product has been used or handled other than accordance with the instructions in user manual
2. 產品因為意外或疏忽而被濫用、誤用而遭致損壞時
the product is abused, misused, damaged by accident or neglect
3. 在本公司或本公司授權的維修處之外維修而導致損壞時
the damage is due from being repaired or tampered with by anyone other than AVE Technology or an authorized AVE Technology repair center.
4. 由於運送而導致的損壞
the damage is due from during transit.

所有故障品都需送到本公司或本公司授權的維修處維修，並附上故障的明細及出示原始購買發票。此保固需在當地購買的國家始能生效。

The damaged product must be delivered prepaid to AVE Technology or its authorized AVE Technology repair center. The RETURN PRODUCT MUST BE ACCOMPANIED BY A WRITTEN DESCRIPTION OF THE DEFECT AND A PHOTOCOPY OF THE ORIGINAL PURCHASE RECEIPT. This warranty is valid in the country of purchase

此保固僅限于在此說明的條件，本公司將不對與出售本產品有關的任何特別，次要或者隨之發生的損害負責。此保固書提供您具體的法定權利，但也可能因國家而不同的其他權利

This warranty is limited to the terms stated herein. AVE Technology shall not be liable for any special, incidental or consequential damages relating to the product sold. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Appendix 附件

Pressure conversion table 壓力單位對照表

KPa	psi	bar	KPa	psi	bar	KPa	psi	bar	KPa	psi	bar
10	1.5	0.1	310	45.0	3.1	610	88.5	6.1	910	132.0	9.1
20	2.9	0.2	320	46.4	3.2	620	89.9	6.2	920	133.4	9.2
30	4.4	0.3	330	47.9	3.3	630	91.4	6.3	930	134.9	9.3
40	5.8	0.4	340	49.3	3.4	640	92.8	6.4	940	136.3	9.4
50	7.3	0.5	350	50.8	3.5	650	94.3	6.5	950	137.8	9.5
60	8.7	0.6	360	52.2	3.6	660	95.7	6.6	960	139.2	9.6
70	10.2	0.7	370	53.7	3.7	670	97.2	6.7	970	140.7	9.7
80	11.6	0.8	380	55.1	3.8	680	98.6	6.8	980	142.1	9.8
90	13.1	0.9	390	56.6	3.9	690	100.1	6.9	990	143.6	9.9
100	14.5	1.0	400	58.0	4.0	700	101.5	7.0	1000	145.0	10.0
110	16.0	1.1	410	59.5	4.1	710	103.0	7.1	1010	146.5	10.1
120	17.4	1.2	420	60.9	4.2	720	104.4	7.2	1020	147.9	10.2
130	18.9	1.3	430	62.4	4.3	730	105.9	7.3	1030	149.4	10.3
140	20.3	1.4	440	63.8	4.4	740	107.3	7.4	1040	150.8	10.4
150	21.8	1.5	450	65.3	4.5	750	108.8	7.5	1050	152.3	10.5
160	23.2	1.6	460	66.7	4.6	760	110.2	7.6	1060	153.7	10.6
170	24.7	1.7	470	68.2	4.7	770	111.7	7.7	1070	155.2	10.7
180	26.1	1.8	480	69.6	4.8	780	113.1	7.8	1080	156.6	10.8
190	27.6	1.9	490	71.1	4.9	790	114.6	7.9	1090	158.1	10.9
200	29.0	2.0	500	72.5	5.0	800	116.0	8.0	1100	159.5	11.0
210	30.5	2.1	510	74.0	5.1	810	117.5	8.1	1110	161.0	11.1
220	31.9	2.2	520	75.4	5.2	820	118.9	8.2	1120	162.4	11.2
230	33.4	2.3	530	76.9	5.3	830	120.4	8.3	1130	163.9	11.3
240	34.8	2.4	540	78.3	5.4	840	121.8	8.4	1140	165.3	11.4
250	36.3	2.5	550	79.8	5.5	850	123.3	8.5	1150	166.8	11.5
260	37.7	2.6	560	81.2	5.6	860	124.7	8.6	1160	168.2	11.6
270	39.2	2.7	570	82.7	5.7	870	126.2	8.7	1170	169.7	11.7
280	40.6	2.8	580	84.1	5.8	880	127.6	8.8	1180	171.1	11.8
290	42.1	2.9	590	85.6	5.9	890	129.1	8.9	1190	172.6	11.9
300	43.5	3.0	600	87.0	6.0	900	130.5	9.0	1200	174.0	12.0

Temperature conversion table 溫度單位對照表

°C	°F	°C	°F	°C	°F
-40	-40.0	20	68.0	80	176.0
-30	-22.0	30	86.0	90	194.0
-20	-4.0	40	104.0	100	212.0
-10	14.0	50	122.0	110	230.0
0	32.0	60	140.0	120	248.0
10	50.0	70	158.0	125	257.0



華麗科技股份有限公司

Advanced Vehicle Electronic Technology Co., Ltd.
