



DRIIFT SPARROWHAWK DC

1/10 SCALE ELECTRIC POWERED DRIFT RACING CAR SERIES
1:10 電動四輪傳動飄移房車



Racing Car Series
LED Light Kit Included

No.6534-F



This radio control model car is not a toy! Before beginning operation, please read this manual thoroughly.

本產品為高性能模型非一般玩具，操作前請詳閱本產品說明書。

The contents are subject to change without prior notice due to product improvements and specification changes.

本套件所附之零件可能跟圖示有所差異，因產品後續之設計研發或功能不斷改善之原因，我們將保留產品規格變更權力，不再另行通知使用者。

Instruction Manual **操作說明書**

WARRANTY 品質保證事項

Thunder Tiger Corporation guarantees this model kit to be free from defects in both material and workmanship. The total monetary value under warranty will in no case exceed the cost of the original kit purchased. This warranty does not cover any components damaged by use or modification. Part or parts missing from this kit must be reported within 60 days of purchase. No part or parts will be sent under warranty without proof of purchase. To receive part or parts under warranty, the service center must receive a proof of purchase and/or the defective part or parts. Should you find a defective or missing part, contact the authorized Thunder Tiger Service/Distributor nearest you. Under no circumstances can a dealer or distributor accept return of a kit if assembly has started.

本公司對於製造過程中產生之瑕疵，負完全品質保證責任。

保證事項僅限於產品本身與隨產品所附之零配件。

品質保證不包含下列事項

因使用、組裝或調整本產品所發生之損壞。

其他所有非產品本身品質所造成之損壞。

INTRODUCTION 前言

Thank you for your purchase of this Thunder Tiger product. You should enjoy many hours of fun and excitement from this advanced R/C model. Thunder Tiger strives to bring you the highest level of quality and service we can provide. We race and test our cars around the world to bring you state-of-the-art products.

We offer on-line help on our www.thundertiger.com forum and our product specialists are ready to take your call if you have any technical questions. Please read all instructions and familiarize yourself with the systems and controls of this model before running. Have fun and enjoy the exciting world of R/C!

感謝您購買雷虎科技產品。雷虎科技以提供最高品質的產品及服務作為持續努力的目標。藉由參與競賽及重覆測試產品，不斷累積經驗，進而提升設計及製造品質，期望能呈現給您最頂級之工藝產品。本使用說明書包含了操作本產品前所需注意的重要事項，建議您在開始準備及操作本產品之前，能詳閱此說明書，並熟悉本產品之操控系統。若是您在產品的操作及使用上有任何的疑問，歡迎多加利用我們所提供的24小時諮詢留言版或洽詢雷虎科技授權經銷商。雷虎科技的全球英文網址為www.thundertiger.com，我們將竭誠為您服務！

CAUTION 注意事項

Thanks you for purchasing a Thunder Tiger product. Please read all instructions thoroughly before operation.

1. This product is not a toy. It is a high performance model product. It is important to familiarize yourself with the model, its manual, and its construction before assembly or operation. Children's operating under the supervision of the adults is necessary.
2. Always keep this instruction manual ready at your hand for your assembling and operating reference, even after completing the assembly.
3. Do not operate model products in rain, on public roads, near crowds, near airport, or near areas with restricted radio operation.
4. This product, its parts, and its construction tools can be harmful to your health. Always exercise extreme caution when assembling and/or operating this product. Do not touch any part of model that rotates.
5. Check your radio frequency with the proper operating frequency of the area or country. Always check if there are any modelers operating on the same frequency as you are. Also, check your radio for proper operation before operating a model.
6. Use an adequate charger for the batteries and follow the instruction correctly.
7. Right after use, do not touch equipment on the model because they may generate high temperatures!
8. Do not stall the motor. The ESC may fail if power is applied to the motor when car cannot move freely.
9. By the act of assembling or operating this product, the user accepts all resulting liability. If the buyer is not prepared to accept this liability, then he/she return this product in new, unassembled, and unused condition to the place of purchase.

WARNING: To avoid a possible fire hazard, ALWAYS unplug the battery after use. Do NOT leave your vehicle unattended with the battery plugged in.

感謝您購買雷虎科技產品，在您開始操作本產品前，請詳閱本產品說明書。

1. 本產品為高性能模型產品非一般玩具，組裝與操作過程皆須由成人陪同。請詳讀此本使用說明書，避免因組裝錯誤與操作不當造成損壞。
2. 請妥善保管此說明書，對於後續維修、操控說明將可提供您協助。
3. 請勿於雨天、公眾空間、道路、機場附近與其他限制遙控模型活動區域，操控本項產品。
4. 此項產品具有相當之危險性，於組裝、調整、操控上的不熟悉都可能造成自身或他人的傷害，當發生這些傷害事件時製造商是可以免除責任的，建議您於初次使用本產品前，先行請教具有相當程度經驗同好或是專業雷虎經銷商與模型專賣店。
5. 請您確認您所在地區對於頻率規定之相關法規，來選用適當的頻率。避免與其他同好使用相同頻率造成失控事件。
6. 請使用合格之電池充電器並遵循說明書之使用規範，以免發生危險。
7. 車輛操作後，請小心誤觸碰到會產生高溫之零件部分，以避免燙傷。
8. 車輛作動時，請勿以異物強制停止馬達(輪胎)以避免電子速控器超出承載負荷而失效。
9. 如使用者對於產品品質或操作組裝上所須負擔之風險有任何疑慮，請勿開封組裝或進行操作本產品並將產品退回原購買地點。

警告！ 為避免因電線短路等因素而引起之可能災害，請務必於操作本產品後，將電池接頭拔除以避免可能發生之危險！請勿在電池接頭未經拔除前就將產品儲藏於無法留意之處。

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ITEMS REQUIRED FOR OPERATION 周邊配件

RTR CONTENTS 完成車輛配備



2-Channel Surface or Pistol Radio with Standard Servo.
2動作發射機、接收機及伺服機



Hex Wrench Set, 2.0mm / 2.5mm / 3.0mm / 5.0mm
六角扳手, 2.0mm / 2.5mm / 3.0mm / 5.0mm



4-Way Wrench
4向六角螺帽套筒板手



Electric Speed Control
8050 ACE R/C VELOCI RS
電子速控器



Motor SUPER 17
17 turn 馬達

EQUIPMENT NEEDED 需求配件



AA Alkaline dry batteries 8 pieces for transmitter
發射機用電池



7.2V Compatible Power Charger (AC/DC Charger)
7.2V充電器

AT6116 US PLUG
AT6117 EU PLUG
AT6118 UK PLUG



7.2V Battery Pack
7.2V充電電池條

2974 1B Ni-MH Batter Pack, 7.2V/1B3000
2977 1B Ni-MH Batter Pack, 7.2V/1B4200

TOOLS NEEDED 需求工具



M3

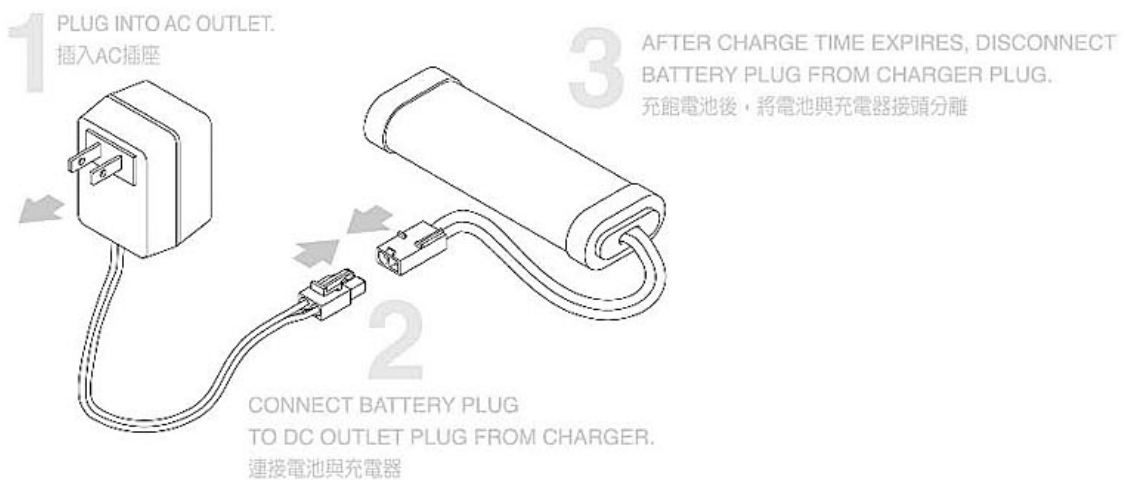
Philips Screwdriver
十字起子



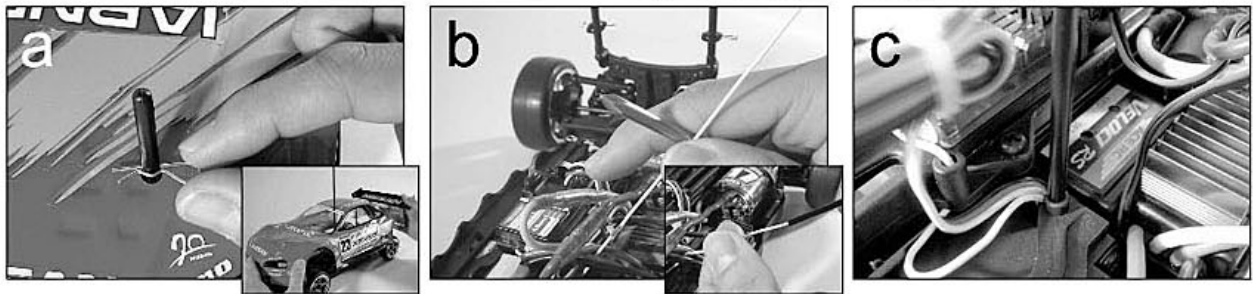
M2

1 CHARGING THE BATTERY PACK 電池包充電 (Battery and Charger are not included in the kit. 本產品不含電池及充電器)

- Once the battery is ready to be charged, first plug the AC quick-charger into the AC power source outlet, and then connect the battery input/output harness to the charger.
 - Always monitor the battery during charging. As soon as the battery is fully charged, disconnect the battery from the charger plug (over-charging or charging incorrectly using inadequate chargers may cause the battery pack to become dangerously hot).
 - Ensure the battery pack is completely discharged prior to charging. Discharge the battery pack by either running the electric motor until it slows down or use a discharger (not included).
 - For best results, let the battery pack cool before charging. Heat may prevent the battery pack from charging to full capacity and also decreases the performance of the battery.
- 準備充電時，首先將充電器之插頭插入電源插座，再連接電池之充/放電接頭。
 - 充電過程中請注意電池之充電情況。電池充電完成將電池與充電器接頭分開。
(電池過充或是不適當之充電，將可能導致電池產生危險之過熱情況，如電池溫度超過攝氏45度，需立即停止充電。)
 - 充電前，最好先確認電池是否已經完全放電。倘若尚未放電完全，可將車子加速直到馬達轉速變慢或使用專業放電器放電(另購)。
 - 為得到最佳之充電效果，電池使用完畢請勿馬上進行充電，充電前請先確認電池溫度已下降再行充電，以延長電池壽命及電池性能。



2 PREPARING THE CHASSIS 操作前，車體準備



- Remove the body pins (4pcs.) and detach the body.
 - Straighten antenna with a screwdriver so it is easier to insert into antenna tube.
 - Put the antenna wire through the antenna pipe. (Do not cut or shorten antenna wire.!) Push the antenna pipe into the chassis mount hole.
- 將車殼固定車銷(共四個)拆除以取下車殼。
 - 利用螺絲起子將接收機天線桿直，以方便將天線穿套進天線管內。
 - 將天線開關安裝於底板固定孔上(請勿裁短天線，以免影響接收距離)。

3 RADIO BATTERY INSTALLATION 遙控器電池安裝



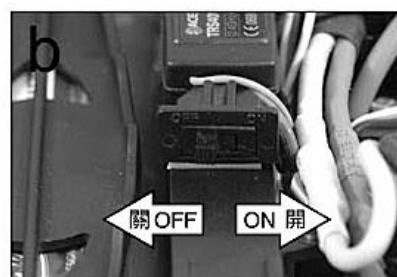
- a. Install 8 AA-size alkaline batteries into transmitter.
- b. Secure the power pack (stick type battery pack shown in the picture) into the battery tray with supplied rubber band and connect the battery to the ESC.

Caution: Check all the wirings and connections before you connect the speed control to a drive battery. Incorrect polarity will damage your speed control.

- a. 安裝發射機電池或電池包。
- b. 將開關座固定於接收機旁(如圖示)。將模型專用7.2V條狀充電電池裝入電池座上並以橡皮筋固定電池，之後電池條開關與速控器。

注意！如使用自行焊接之充電電池請注意電池與速控器接線之正負極位置（反裝電極將造成電池短路或速控器之損壞）。

4 RADIO OPERATION 遙控器操作



- a. When turning your system on, ALWAYS turn on the transmitter FIRST.
- b. Then, turn on the receiver. When turning off, ALWAYS turn the receiver off FIRST, then the transmitter off.
- c. To reverse the functions of servos, use the small, white servo reverse switches located on the back of the pistol transmitter. To trim the servos on pistol transmitter, use the trim switches on side of the steering wheel (the ST. trims steering, and the TH trims throttle/brake).

Caution! : Do not run flat the battery on your transmitter as you may lose control of the car. For additional details, please check the transmitter instruction manual.

- a. 先開啓發射機電源。
- b. 接著開啓接收機電源。電源的關閉則是相反的順序，先關接收機電源，再關發射機電源。
- c. 伺服機的正逆轉開關，槍型發射機在後側。

注意！操作前請先確認電池處於充電之狀態，以免發生失控之狀況。其他注意事項請參考發射機說明書。

5 The ACE RC Cougar PS3 2.4GHz Radio System

熟悉2.4GHz電控系統與速控器及馬達安裝



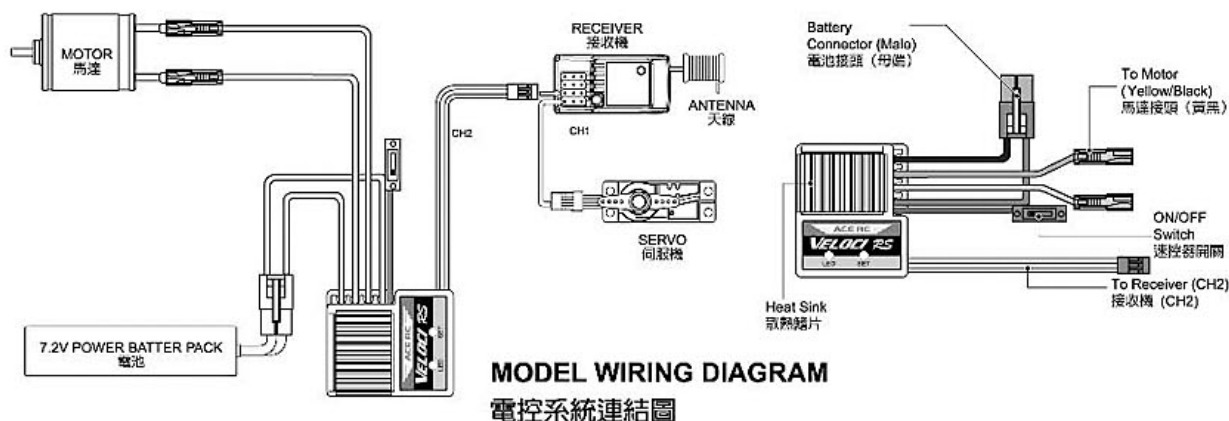
- | | | |
|---|--|---|
| 1 Transmitter Antenna
發射機天線 | 6 Throttle Trim
油門微調鈕 | 11 Steering Wheel
轉向舵輪 |
| 2 Battery Level Indicator
發射機電源顯示燈 | 7 Steering D/R (Dual Rates)
轉向大小動調整鈕 | 12 Power Switch
電源開關 |
| 3 HI/LO Throttle ATV (Adjustable Travel Volume)
高、低速油門行程調整鈕 | 8 AUX Ch Button
第三動開關 | 13 Throttle Trigger
油門控制板機 |
| 4 Servo reversing switches
正逆轉設定裝置 | 9 External Charging Jack
充電孔 | 14 Steering Tension Adjustment
轉向舵輪調整螺絲 |
| 5 Steering Trim
轉向微調鈕 | 10 2.4GHz TX RF Module and binding SW
發射模組及校頻配對設定鈕 | 15 Battery Cover
電池蓋 |

TRANSMITTER CONTROLS

- 1. Transmitter Antenna:** Straighten up the antenna before operating the model.
- 2. Battery Level Indicator:** Three LEDs indicate the battery voltage level. If the Red LED flashes, please replace the batteries.
- 3. HI/LO Throttle ATV (Adjustable Travel Volume):** Allows you to independently preset the maximum travel of the throttle servo either side (high / low) of neutral.
- 4. Servo reversing switches:** To reverse the servo's rotation direction at the flip of the switch. The reversing switches are recessed into the transmitter to prevent accidental operation.
- 5. Steering Trim:** To adjust the steering in small increments or decrements to run the model straight.
- 6. Throttle Trim:** To adjust the throttle in small increments or decrements and shift neutral position.
- 7. Steering D/R (Dual Rates):** Push this lever left or right to adjust the amount of the steering dual rate. Right to increase dual rate amount, and left to decrease amount.
- 8. AUX Ch Button:** Additional function for controlling of the model.
- 9. External Charging Jack:** For rechargeable NiCd/NiMH battery pack (transmitter pack only).
- 10. 2.4GHz TX Module and binding SW:** The Binding SW button is located on the 2.4GHz TX module unit. For additional information, please refer to the "Binding" setting procedure (Page 7).
- 11. Steering Wheel:** To control the steering of the model.
- 12. Power Switch:** Slide to turn the transmitter on & off.
- 13. Throttle Trigger:** pull or push to control forward, reverse & speed of the model.
- 14. Steering Tension Adjustment:** Use a Phillip type screwdriver to tighten or loosen the tension of the steering wheel.
- 15. Battery Cover:** Slide cover to install or remove batteries.

發射機各部功能簡介

- 1. 發射機天線：**使用發射機時，請先將發射機天線打直，以增加訊號接收距離。
- 2. 發射機電源顯示燈：**三顆LED設計顯示發射機電池殘量，若紅色LED燈閃爍時，請更換發射機電池。
- 3. 高、低速油門行程調整鈕：**獨立調整高、低速油門行程量功能。
- 4. 正逆轉設定裝置：**位於發射機背面（如圖示），控制伺服機作動方向。
- 5. 轉向微調鈕：**利用此旋鈕，調整設定轉向正確中立點位置。
- 6. 油門微調鈕：**利用此旋鈕，調整設定油門正確中立點位置。
- 7. 轉向大小動調整鈕：**調整轉向伺服機的行程量。
- 8. 第三動開關：**第三動功能開關鈕
- 9. 充電孔：**使用充電式電池時，可利用此充電孔，進行充電工作。
- 10. 2.4GHz 發射模組及校頻配對設定鈕：**發射機背面為2.4GHz發射模組。模組上之BINDING SW校頻配對設定鈕為配對發射/接收頻率之用。更多功能設定方式請參考說明書第7頁“校頻配對步驟”。
- 11. 轉向舵輪：**控制車輛轉向裝置
- 12. 電源開關：**發射機電源開關
- 13. 油門控制板機：**控制車輛前進或後退的裝置
- 14. 轉向舵輪調整螺絲：**使用小型十字起子調整此調整螺絲來改變轉向舵輪旋轉鬆緊度。
- 15. 電池蓋**



6 BINDING PROCESS 安全校頻配對

A binding feature is included in the ACE RC Cougar 2.4GHz spread spectrum system to ensure the transmitter and receiver bind properly and prevent interference from other controllers.

To manually bind Tx/Rx, please proceed as per the following steps:


- Press and hold the "Binding SW" button on the back side of the transmitter while turning on the transmitter.
- Release the "Binding SW" button after the green LED flashes indicating the transmitter is binding.
- Press and hold the bind button on the receiver while turning on the receiver. Binding process will then start automatically. The LED will turn green/red flash on the receiver.
- Release the "Binding SW" button. Successful binding is confirmed by the binding LED changing from a quick blinking and then remain solid on the transmitter. The LED will turn green on the receiver. Once binding is complete, the system will automatically connect.

Note: Binding process may take 3~10 seconds to execute. If binding fails, the LED on the receiver will turn red. Please turn off the power and repeat the steps from a) ~d).

ACE RC Cougar PS3i 採用最先進的專用3動2.4GHz無線展頻遙控系統。這個系統結合發射與接收可以互動溝通模式，跳動頻道搜尋，使得整體無線遙控系統的傳輸展現精準穩定的特性同時也無須擔心頻率干擾的問題。如發現無法操控情形發生，需要重新校頻配對，請依照下列步驟重新進行校頻配對程序：

- 打開發射機電源時，同時持續按壓發射機背面之"Binding SW"按鈕。
- 直到按鈕旁之LED綠燈快速閃爍，再放開"Binding SW"按鈕，表示發射機正在進行自動搜尋校頻，此時請不要關閉發射機電源。
- 然後按壓接收機上之"Binding SW"按鈕並同時開啓接收機電源，此時接收機將自動進行校頻配對程序。接收機LED燈號為紅綠快速閃爍。
- 放開"Binding SW"，一旦完成配對程序，發射機LED燈號會從綠色快速閃爍轉換成持續綠色燈號，接收機LED燈號將從紅色轉換為綠色。此時表示接收機與發射機已完成配對溝通，可以進行操控。

注意：遙控系統校頻配對可能需要3~10秒執行程序。如果程序執行錯誤，發射及接收模組的LED燈號將持續呈現紅色。請關閉電源再依a) ~d) 的順序重新操作配對程序。


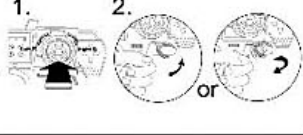




Step 步驟	TX Action 動作	RX Action 動作	LED 燈號
a	Switch On 開 / Push 按 	No Action	
		無須動作	
b	Release 放開 	No Action	TX LED : GREEN FLASH
		無須動作	TX 燈號：綠燈快速閃爍
c	No Action	Switch On 開 / Push 按 	RX LED : GREEN/RED FLASH
	無須動作	Switch on Power 開啓電源 	RX 燈號：綠/紅燈快速閃爍
d	No Action	LED: GREEN 綠 	TX LED : GREEN FLASH-->GREEN SOLID RX LED : RED SOLID-->GREEN SOLID
	無須動作	Release 放開 	TX 燈號：綠燈快速閃爍-->綠燈恆亮 RX 燈號：紅燈恆亮-->綠燈恆亮

7 F/S-FAIL SAFE 防暴衝設定

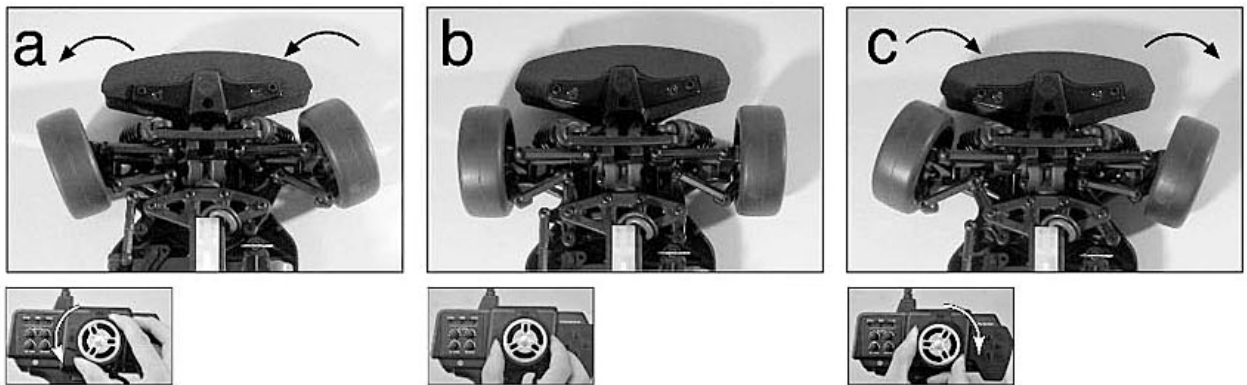
How to Set the Fail Safe (F/S) Position

- After binding the transmitter and receiver, you can continually set up the F/S position. Turn on the transmitter power and then receiver power.
- Press the "Binding SW" button on the receiver. 10 seconds later, the LED will turn green flash on the receiver.
(Caution! Don't release the "Binding SW" button now until STEP3 has been completed.)
- Move and hold the throttle trigger to the F/S servo position where you want to set. Keep steering wheel at Neutral. o set up F/S with servo position at "Brake", first push the trigger to the brake position and hold. To set up F/S with servo position at "Neutral", first pull or push the trigger and then release to neutral.
(Caution: Always set the throttle trigger to the neutral or full brake position incase of any unexpected control error!.)
- After the Step3, release the "Binding SW" button first and then the throttle trigger. The LED turns to solid "RED" and then back to solid "GREEN" 2 seconds after. The F/S set up has now been activated.
- F/S at "Neutral": To check the fail safe is working properly, by moving the throttle trigger to the full forward (full brake), hold it on this position and then turn off the transmitter. The F/S function should move the throttle servo to "Neutral". F/S at "Brake": To check the fail safe is working properly, by keeping the throttle trigger at neutral and then turn off the transmitter. The F/S function should move the throttle servo to "Brake".
- If the F/S set up fail, try the steps from a) ~f) again. After the F/S has been fully complete, you can just start your operation. Transmitter first, receiver later.

- 設定此功能前請先完成系統發射與接收之對頻。確定後，先打開發射機再開接收機電源。
- 押著接收機對頻開關，約10秒鐘後LED會變為綠色快速閃爍，注意步驟3完成前不要放開接收機對頻開關。
- 同時移動油門扳機至您想要設定F/S伺服機位置。轉向舵輪保持中立點位置。
【如想要設定F/S油門伺服機位置為煞車，需先移動油門扳機至煞車位置不要鬆開。】
【如想要設定F/S油門伺服機位置為中立，需先移動油門扳機（煞車或加速）然後再回復中立點位置。】
！注意：防暴衝油門伺服機位置建議設定為煞車或中立點，請勿設定為油門開啓位置，以免發生危險。
- 此時你可以放開接收機對頻開關，再放開發射機油門扳機。LED會變為恆亮紅燈，約2秒後又回到恆亮綠燈，此時表示F/S設定成功。
- F/S油門伺服機位置為中立點：將油門扳機全煞車，關掉發射機電源，檢視F/S伺服機位置動作是否轉回中立點位置。F/S油門伺服機位置為煞車：油門扳機保持中立點，關掉發射機電源，檢視F/S伺服機位置動作是否轉回煞車位置。
- 檢查無誤後，打開發射機開關，然後接收機開始操作。

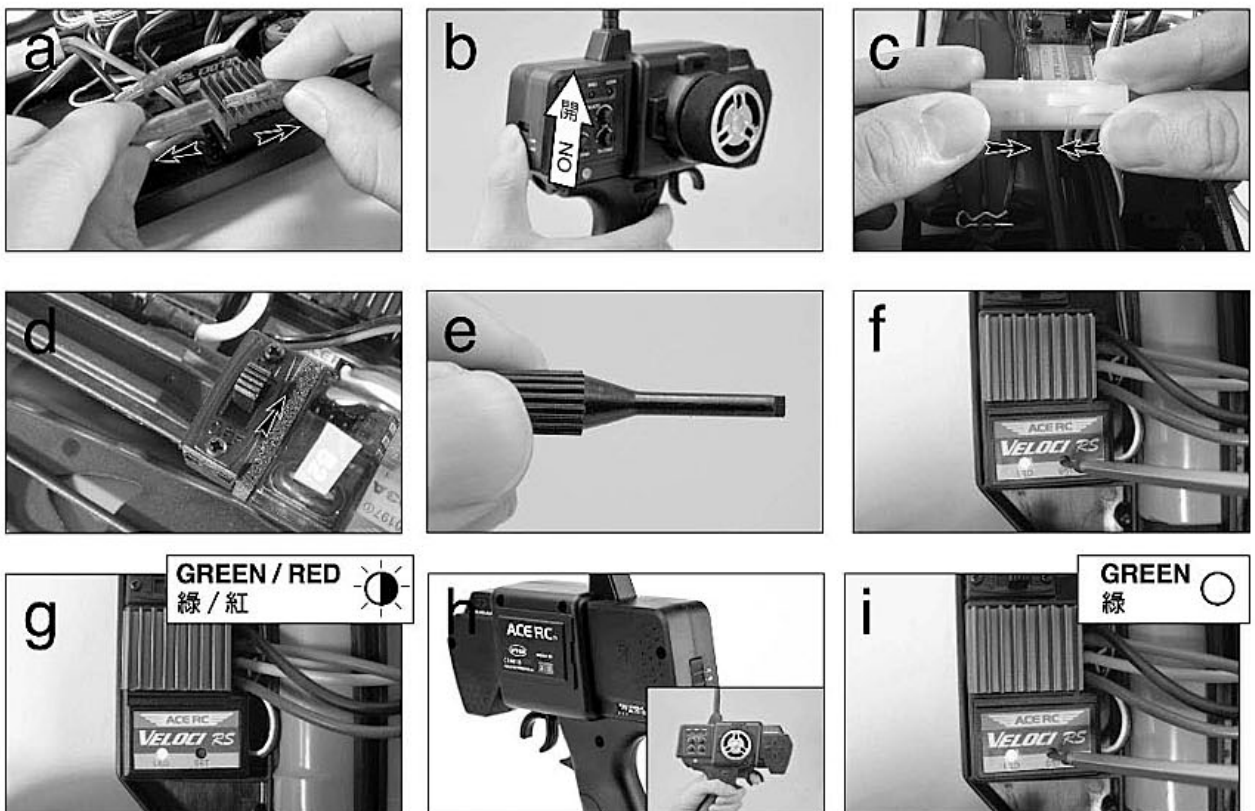
Step 步驟	TX Action 動作	RX Action 動作	Check 確認
a	Binding Complete 完成對頻	Binding Complete 完成對頻	TX LED : GREEN SOLID RX LED : GREEN SOLID TX 燈號 : 綠燈恆亮 RX 燈號 : 綠燈恆亮
b	No Action 無須動作	Push for 10 seconds 先持續按10秒  Switch on Power 開啓電源	RX LED : GREEN FLASH RX 燈號 : 綠燈快速閃爍
c	1. Steering: Neutral 2. Keep brake or pull trigger and release 1. 轉向中立 2. 保持煞車或移動油門後回復 	No Action 無須動作	
d	Release later 後放開 	Release first! 先放開 	RX LED: RED SOLID-2s->GREEN SOLID RX燈號 : 紅燈恆亮-2秒->綠燈恆亮
e	1. Keep brake 2. Switch Off 1. 保持煞車 2. 關發射機 	No Action 無須動作	EP Car: Steering at Neutral / ESC at Neutral/Barke GP Car: Steering at Neutral / Carb. at Iddle and car barks 電車：轉向朝前，速控器煞車 油車：轉向朝前，油門關閉（怠速）煞車啓動
f	OK! 		

8 OPERATING RADIO STEERING FUNCTION 遙控器設定-轉向



- Check the radio steering functions. With the radio transmitter and receiver on, turn the steering wheel to the left. The front tires/wheels should turn left accordingly. If not, flip the steering servo reverse switch.
 - Return the steering wheel to neutral. The front tires/wheels should point straight forward. If not, use the steering trim lever to correct it.
 - Turn the steering wheel to the right. The front tires/wheels should turn right accordingly.
- a. 確認轉向功能。打開發射機及接收機電源，方向轉左邊時，輪胎將朝左邊，若方向不一致，請調整方向的正逆轉開關。
 b. 方向舵回中立點時，前輪應筆直向前，若有偏差，請調整方向舵微調旋鈕。
 c. 方向舵轉向右邊時，前輪應轉向右邊。

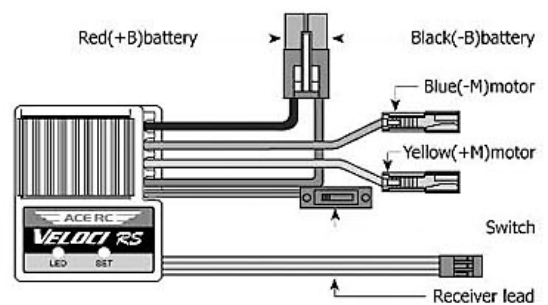
9 ADJUSTING THE ELECTRONIC SPEED CONTROL(ESC) 速控器調整





(Picture shows the Ace R/C "Veloci-RS" electric speed control pre-installing on SPARROWHAWK XT Ready-To-Run version). Before operating your model, you have to set to either NEUTRAL, HIGH SPEED and BRAKE position of the electric speed control prior running the motor.

- Make sure the motor is disconnected or ensure some other way that the wheels are free to rotate.
- Turn the transmitter on.
- Connect your battery pack.
- Turn the power (ESC) switch on.
- Find the supplied tuning wand in the package or a small screwdriver.
- Hold the set-up button pressed in for at least 3 seconds using the plastic tuning wand supplied.
- The set-up LED now flashes RED/GREEN to indicate that the ESC is in the set-up mode.
- Leave the throttle trigger at the neutral position and the throttle trim knob/lever in the middle
- Press the set-up button, the neutral setting is now stored, and the set-up LED lightens GREEN.
- Move the transmitter trigger to full-throttle.
- Press the set-up button with the trigger still in this position.
- The full-throttle setting is now stored, and the set-up LED lightens RED.
- Move the transmitter trigger to full brake
- Press the set-up button with the trigger still in this position.
- The brake setting is now stored, and the set-up LED flashes 3 times simultaneously and then goes RED/GREEN light still.



CONGRATULATIONS!

Your electric speed control is now completely set-up. Reattach the motor cord, you are ready to run.

- Remember this! The transmitter is always the **FIRST TO BE TURNED ON** and **THE LAST TURNED OFF**.
- If you make a mistake during the set-up procedure, don't worry: disconnect the battery for about 10 seconds and start again from the first step.
- Refer to the instruction manual for more information on setting the electric speed control.

- 請先確認馬達之電源線是處於拔除的狀態或是將車子放置於輪胎可懸空的平台上。
- 先打開發射機電源。
- 接上電池。
- 將速控器開關打開。
- 使用調整棒或小號之螺絲起子調整。
- 按下速控器上“設定set-up”之按鈕，停留約3鐘。
- 按鈕旁之LED狀態燈將同時閃爍“紅/綠燈”，此燈號示速控器已進入調整模式。
- 確認發射機油門處於中立點置(油門板機不動)，油門微調鈕調整至中間置。
- 再按一次“設定set-up”鈕，將中立點之址寫入速控器內，此時LED狀態燈將同時亮“綠燈”。(不閃爍)
- 再將油門板機扳動至全油門狀態並且暫時按不放。
- 接著再按一次“設定set-up”鈕。
- 此時便已將全油門之址寫入速控器內，此時LED狀態燈將同時亮“紅燈”。(不閃爍)
- 緊接著將油門板機扳動至全煞車/後退狀態並且暫時按不放。
- 接著再按一次“設定set-up”鈕。
- 此時便已將全煞車/後退之址寫入速控器內，此時LED狀態燈將同時連續閃爍“紅/綠燈”3次之後跳回靜不閃爍之“紅/綠燈”狀態。

恭喜你

你的速控器已被重新設定完成，重新接上馬達電源線，接下來便可進行車輛之操控。請注意！為避免失控暴衝，須先開啓發射機電源再接著開啓速控器電源。關閉時則順序相反。設定速控器時若需要重新開始，只要把電源接頭拔除約10鐘即可重新記憶。更多關於速控器之資訊，請參考速控器說明書。

10 VELOCI SPECIAL FEATURE 速控器過溫保護特性

The VELOCI digital speed controls feature a new overheat protection function. This function protects the VELOCI against overheating during operation. If the speed controls temperature exceeds safe levels, the motor function will be temporarily switched off. However, full steering function is still maintained during this period. When the overheat protection mode is activated, the setup LED will flash GREEN and RED simultaneously. Simply wait a few minutes to allow the speed control to cool down to normal operating temperatures and full function will be restored.

Overheating may be caused by the following:

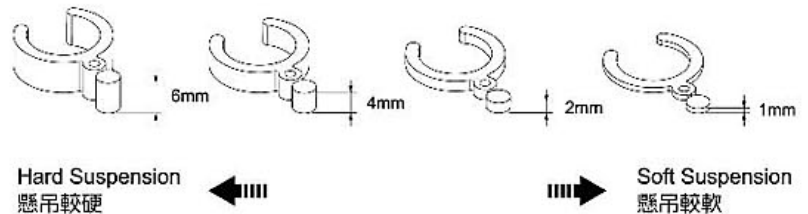
- Driving in reverse in excess of 8 seconds.
- The motor used has less than factory limit of turns.
- Gear mesh is too tight or other drivetrain problems.
- Inappropriate gear ratios.
- Repeatedly going from full reverse to full forward instantaneously.
- Using full brakes too often.
- Not enough ventilation to the speed control.

本速控器設有過溫保護之功能，此功能將會於下列情況進行過溫斷電保護機制，以避免過高的內部溫度損害速控器本體。此時LED狀態燈將同時連續閃爍“紅/綠燈”，當遇到此狀況時不需驚慌，請靜待幾分鐘冷卻後速控器便可恢復原先之功能，速控器原先之設定將會繼續保留，不須重新設定。

速控器過溫保護機制啟動原因可能如下：

- 連續後退超過8秒鐘。
- 自行改裝之馬達圈數超過此速控器之安全限制（出廠內定為17T改裝馬達）。
- 齒隙比太緊或是傳動系統問題，造成馬達負荷過重。
- 自行改裝搭配不適當之驅動齒終傳比。
- 連續不斷進行“前進-後退”操控。
- 連續使用全煞車/後退，次數太頻繁。
- 速控器安裝位置錯誤，散熱空間不足。

11 SHOCK ADJUSTMENT 避震器懸吊調整



Use the included shock clips to adjust for spring pre-load.

使用內附的避震器調整環，調整車身高度。更詳細的調整方式請參考設定表。

12 WHEEL AND TIRE PREPARATION 輪胎及輪殼



- Remove wheel cap crew using equipped 3mm hex wrench and detach wheels.
- Replace fresh tires and wheels if the original tires worn out seriously.
- Tighten the wheel cap screw down with the washer.

- 使用內附之六角板手將輪殼上六角固定螺絲取下。
- 將已磨損嚴重之輪胎組取下後換上新的輪胎組。
- 將六角固定螺絲及墊片重新鎖緊。

13 MAINTENANCE AFTER RUNNING 車體保養

- a. Always turn off the radio system and disconnect the battery pack when the car is not in use.
 - b. Remove the sand, mud, dirt, and any other elements completely from the car before you store it.
 - c. Never use chemicals or any solvents to clean the chassis as it may cause damage to the electronics components and plastic parts as well. Use compressed air, soft paintbrush, or toothbrush to clean dust and dirt.
- a. 結束操控儲存車體前，請謹記要關閉電源並將電池接頭拔除以免電池短路造成不必要之危險。
 - b. 清潔車體上所沾附之沙塵、泥屑。
 - c. 請勿使用化學清潔劑來清洗底板，以免遙控之電子設備受潮、電線、焊點及塑膠件被侵蝕而導致不必要之損壞。清潔車體時，請儘量使用強力之壓縮空氣搭配軟毛刷來請清理車體上所沾附之沙塵、泥屑。

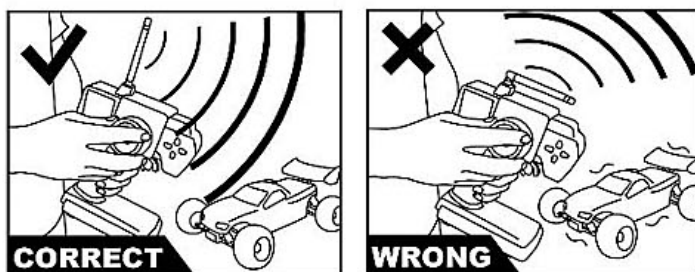
14 BEFORE OPERATING 操控前準備

For best operating range, always ensure the largest section of your transmitter antenna faces the model.

⚠ Warning! Operating range may be significantly reduced with the transmitter antenna pointing directly at the model!

以天線最大面積對正模型，可獲得最佳的遙控距離。

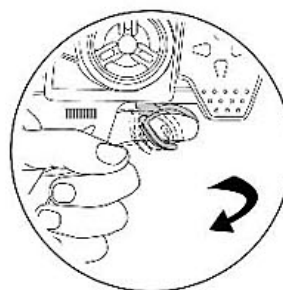
⚠ 警告！天線頂端直指模型會嚴重縮短遙控距離！



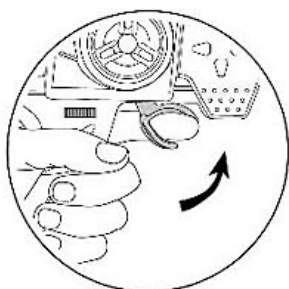
15 DRIVING BASIC 操控基本動作



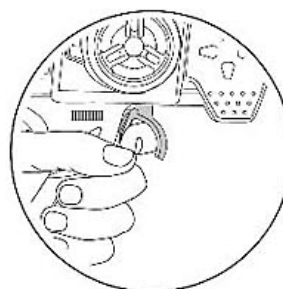
Stop (Neutral)
停止 (中立點)



Brake
煞車



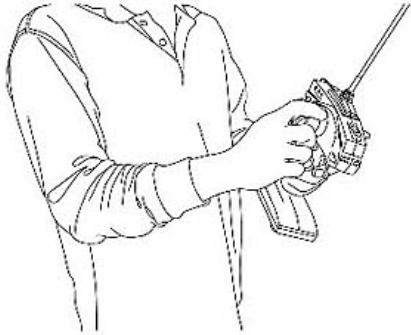
Reverse
後退



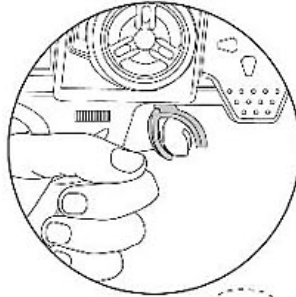
Acceleration
加速

16 DRIVING TIPS 操控的小技巧

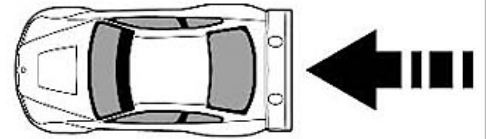
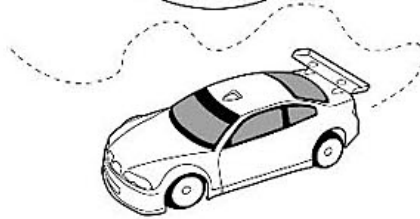
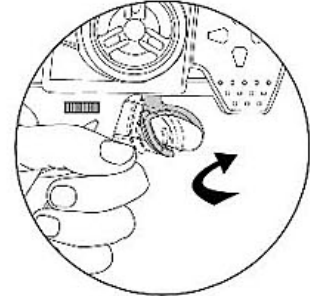
- a. Hold your elbows in and keep the transmitter antenna pointing straight up.
- a. 手持發射機時請將雙肘靠緊身體並保持發射機天線朝上。



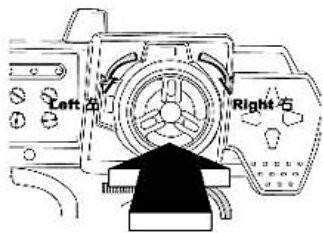
- b. Squeeze the throttle trigger or pull the throttle stick gently and steer the car to left and right.
- b. 開始操控前按扣油門板機(油門拉桿)時請緩慢增加油門並試著熟悉前輪轉向操作。



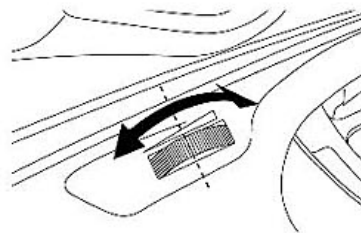
- c. Squeeze the throttle trigger and release. Repeat this action to control car speed.
- c. 初學者請先熟悉油門操控再慢慢加快車子行進速度。



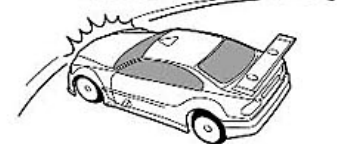
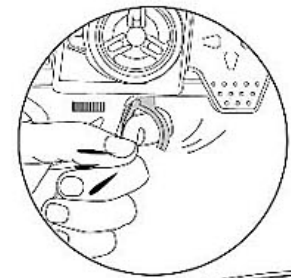
- d. If you are of unsure of the steering direction, practice with the transmitter facing towards you.
- d. 假設你不確定發射機的轉向，將發射機轉輪面向自己，先熟悉左右轉向。



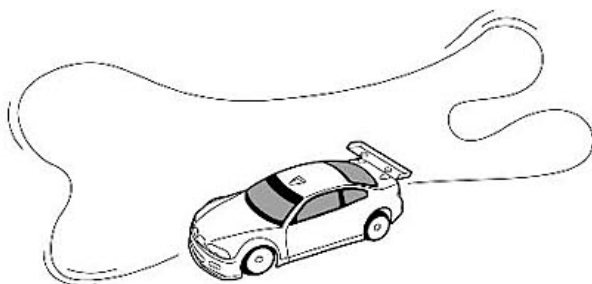
- e. At first, set the steering D/R function for less steering response.
- e. 初學者可參考發射機說明書調整D/R功能，以避免轉向太過靈活不易操控。



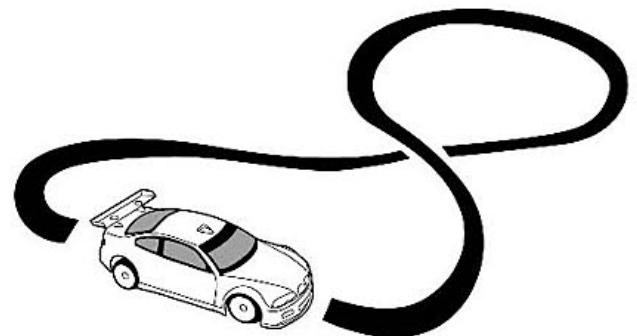
- f. Be careful not to squeeze the throttle trigger abruptly while steering.
- f. 轉向時請勿將油門全開以避免速度過快導致失控翻覆。



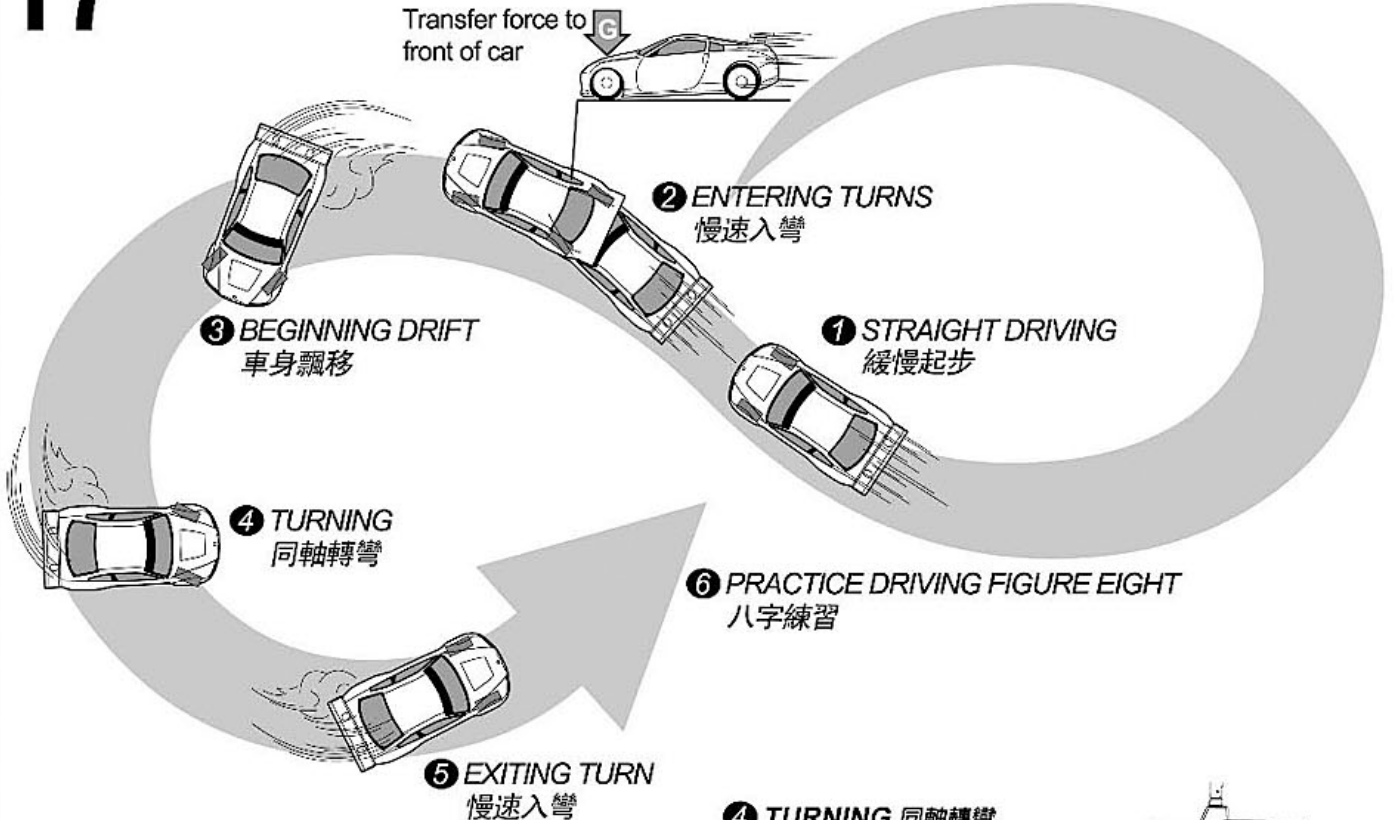
- g. After you become used to the controls, experiment with high performance possible at full throttle and full steering.
- g. 熟悉前述基本操控後再試著將油門全開進行高速操控。



- h. Practice doing figure 8S.
- h. 建議可以使用繞8字來熟悉發射機操控動作。



17 DRIFT RACING SKILLS 飄移競速技法



1 STRAIGHT DRIVING 緩慢起步

Maintain consistent throttle control. Sudden changes can throw the vehicle out of balance.

加速時，維持油門速度再慢慢加速。猛然的加速將使車子失去平衡。



KEEP

2 ENTERING TURNS 慢速入彎

Release throttle for an instant, transferring force to front of car while cutting the steering wheel.

準備入彎時，轉動方向舵輪，並同時鬆開油門使車輛重心往車子前方移動，藉以固定住前輪。



OFF

3 BEGINNING DRIFT 車身飄移

As rear starts to slide, counter-steer to prevent spinning out. Use throttle to maintain drift posture.

當車子後半部開始產生側移現象時，反打方向舵輪來預防過度飄移而造成的車身自旋。適時的加上油門來維持飄移路徑和姿態。

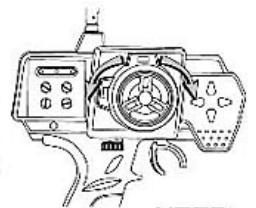


ON

4 TURNING 同軸轉彎

Use throttle and steering to control turning radius. Start returning controls of neutral position as you near exit to turn.

交互使用油門與轉向控制車頭朝向彎道中心做同軸飄移。

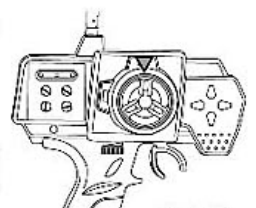


KEEP

5 ENTERING TURNS 慢速入彎

Return controls to neutral position, after car's position has stabilized, accelerate gradually.

當車身已經滑移到直線段時，將油門恢復到中立位置，等到車身穩定以後再逐漸加速。



KEEP

6 PRACTICE DRIVING FIGURE EIGHT 八字練習

The figure eight is perfect for mastering the mixture of straights and turns that drift driving entails. Practice as often as you can, perfecting the timing of when to cut steering and the best throttle position for maintaining drift. When you're ready, practice high speed oval course driving and wild drift parking!

練習飄移技巧時，將車子控制做8字型的繞圈是最適合初學者的練習方式。8字型的繞圈融合了直線的加速、轉彎和飄移所需各種技巧，持續地練習並加快過彎速度，並運用最佳的油門位置來維持飄移姿態。當完成此項基礎的飄移練習後，你可以嘗試進階的橢圓型飄移練習及華麗的飄移定位停車。

18 LED INSTALLATION & INSTRUCTIONS LED多功能車燈組安裝使用說明

Wire Mounting 安裝說明

1. Use a piece of double-sided tape to mount LED Light Control Unit on the top roof inside of body. Secure all the leads accordingly behind the covered parts of the body and then connect the LED sets to the LED Light Control Unit.
 2. Use a piece of double-sided tape to mount the PC board of the LED headlights / tail lights set on appropriate positions inside the body. Use mounting tape (Not included) to hold excess leads in place for not falling or binding wheels.
 3. By bending the pins of the LED light to adjust the LED lights for your own body light casings.
 4. Insert the LEDs into the LED light casings (holders). Secure the LEDs with the light casings (holders) with silicon glue appropriately.
1. 將LED主控盒用雙面膠固定在車殼內部之車頂位置，前後配線由A柱及B柱走線到前後車燈處。
 2. 用泡綿雙面膠將前/後車燈IC燈板固定車殼之適當位置。使用膠帶固定配線，配線應避開車輪轉彎及運轉時的干涉。
 3. 調整LED的角度，可折彎LED的金屬針腳，使它能符合於車殼燈座位置。
 4. 完成後，可用熱熔膠把LED固定於燈座上。

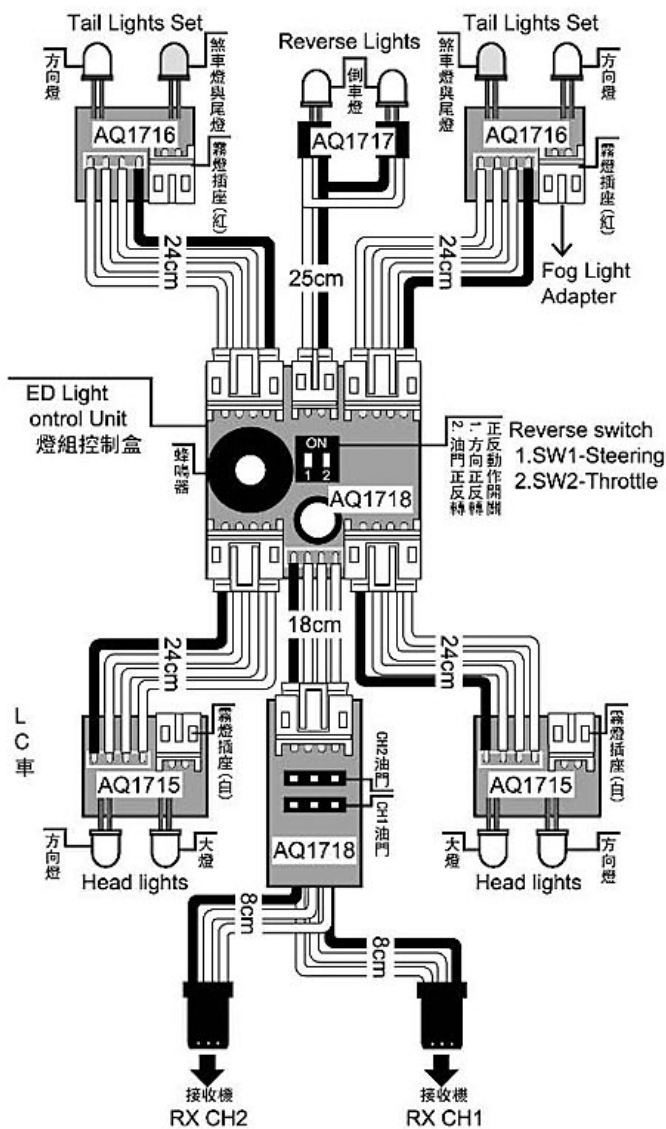
Lighting/Sound Effects 功能說明

1. The blinking hazard light will be activated 3 seconds right after the throttle returning to neutral position. The front and rear turn signal lights will be activated at the same time but turns off 10 seconds after being activated.
 2. Slowly apply the throttle forwards, the headlights keeps constant full brightness, and then the LED lights start to flash along with tail lights get half-brightness once after the trigger has been completely pulled forwards.
 3. When apply the braking, the LED headlights / tail lights will be keeping fully brightness without blinking.
 4. By reversing the throttle direction, the LED Control Unit will denote a series sound of "Bi.Bi.Bi" indicating the car is driving backwards.
 5. If the car turns right, the right turn LED signal lights start to flash. If the car turns left, the left turn LED signal lights start to flash.
1. 油門靜置在中立點約三秒時啟動障礙燈，四個方向燈同時閃爍，大燈約十秒後熄滅，只剩障礙燈閃爍。
 2. 油門動作時大燈恆亮，全速時大燈閃爍，車尾燈半亮。
 3. 煞車時車尾燈全亮，大燈全亮但不閃爍。
 4. 後退時倒車燈全亮，蜂鳴器發出連續“嗶嗶嗶”的聲音。
 5. 向左轉時，左方向燈前後同時閃爍，向右轉時，右方向燈前後同時閃爍。

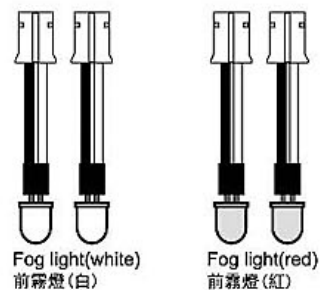
Dip Switch Adjusting 設定調整

1. Connect the LED leads according to the diagram show below. Do not connect the CH1 (Steering) and CH2 (Throttle) leads onto the wrong connectors of receiver.
 2. When applying the throttle to forward position, the headlights keeps constant full brightness, and then the LED lights start to quickly flash once after the trigger has been completely pulled forwards. If the forward direction does not coincide with the LED lighting functions. Change the dip switch (CH2) on the LED Control Unit will correct the non-coincidence problem.
 3. If the steering direction does not coincide with the car turning directions. Change the dip switch (CH1) on the LED Control Unit will correct the non-coincidence problem.
1. 本產品在安裝時，注意連接到接收機的伺服線，請勿錯接孔位，按照圖示將兩組伺服線接到正確孔位中。
 2. 前進時，大燈應該亮起，並在全速時閃爍，如果發生前進時，亮煞車燈的情況，請把主控盒上(2)的指撥(dip switch)切換到另一方即可。
 3. 方向燈動作方向如與實際車子作動方向不同時，請把主控盒上(1)的指撥(dip switch)切換到另一方即可。

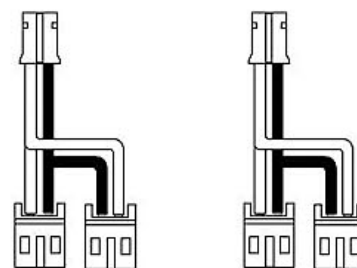
LED Lighting KIT II



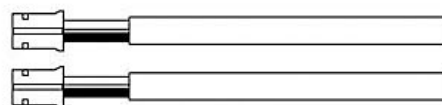
Fog Lights Set 霧燈組



Optional Accessories 改裝燈組



3-Way Lead Connector
三向Y型訊號線分接頭



BLUE LEDs Set
炫藍車底燈組

DRIIFT SPARROWHAWK DX

TROUBLESHOOTING 常見問題與解決辦法

If you have trouble starting or keeping your SPARROWHAWK DX running, here's a quick checklist of what to look for first.

如果您的 SPARROWHAWK DX 有行駛上的問題，您可以參考下表的說明。
如果問題無法解決，請與原購買經銷商聯絡。

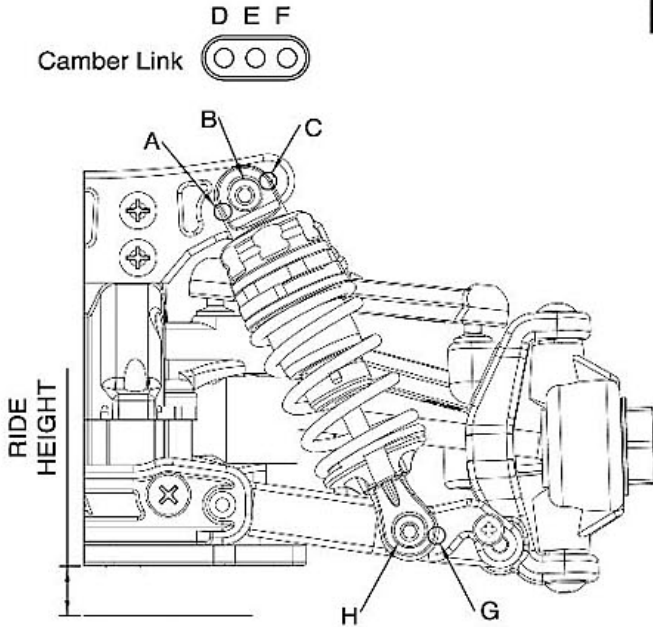
Description 問題	Problem 可能原因	Solution 解決方法
Car dies or slows 車不動或速度變慢	Speed control over heats 速控器過熱	Let it cool and try later 先冷卻，稍後再試
Car is glitching 車故障	Car has a problem on power 車子的動力有問題	Check for loose wires, dead radio batteries or loose crystals. 檢查電線、震盪晶體是否脫落或遺失 Check motor capacitors, losse wires or crystals. 檢查馬達之焊接電容是否鬆脫或是連結電線脫落
Motor is overheats 馬達過熱	Gear mesh is too tight 馬達驅動齒輪太緊	Let motor cool and check recommended gearing for motor type. Reset gear mesh 先讓馬達冷卻，再重新調整合適的齒隙
No power 失去電力	Battery is discharged 電池沒充電 Battery not plugged in 電池沒接好	Charge battery 將電池充電 Charge battery 將電池接頭確實連接遙控車
No throttle 失去動力	Motor not plugged in 馬達連接線沒接好 Motor failure 馬達損壞 No throttle, only steering 只能控制左右轉向，但不會前進及後退 Motor keeps running 未扣引發射機油門，馬達卻持續轉動	Plug motor in 確實接上紅、黑端之馬達電源傳輸線（紅對紅、黑對黑） Replace motor 置換新馬達 A-T-L function works;turn off the vehicle first and follow the guide to turn on the radio. (Radio first, vehicle second!!!) 可能為內建自動安全鎖保護裝置開啓。重新啓動卡車需先將電源關掉，並依照正確步驟啓動卡車（先開發射機，再開車子） Check if the throttle trim knob is in neutral position. 檢查是否油門微調鈕不在中立點的位置
No steering 失去控制	Servo not plugged in 轉向伺服機未安裝好 Locked up steering linkage 轉向裝置卡死 Servo failure 伺服機失靈	Plug servo into ESC unit 將連接電線接上速控器（RS速控／接收盒） Free up steering linkage 排除可能的干涉（卡住）的零件部位 Replace servo 置換新伺服機
Reversing 後退功能	Goes backwards when you pull the trigger or goes right when turning the wheel left 當扣引／放開發射機油門板機，車子卻後退／前進或是發射機方向轉輪之轉向跟車子轉向左右相反	Check throttle / steering reversing switches on transmitter 檢查發射機上之油門／轉向的反轉開關是否反轉？

SPARROWHAWK **DX**

SETUP SHEET Ver 1.0

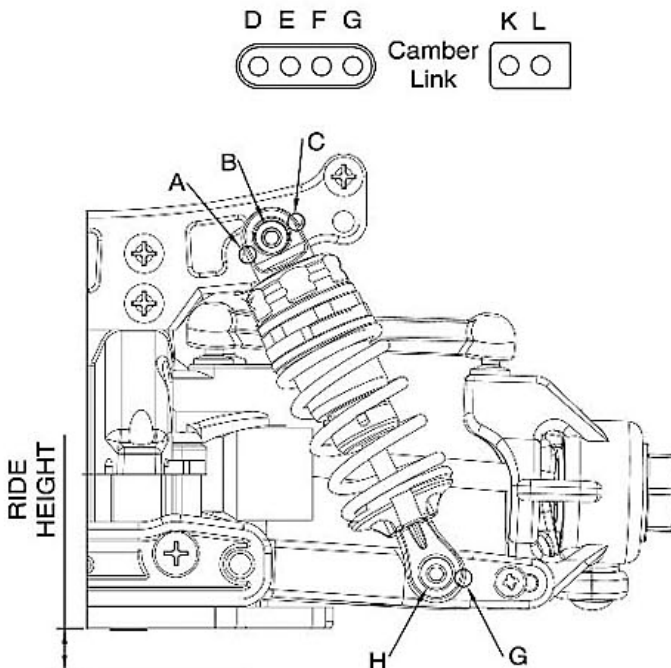
NAME		EVENT		DATE	
TRACK		TEMP		CONDITIONS	
SERVO		ESC		RADIO	

FRONT



SHOCKS	
SHOCK OIL	
SHOCK PISTON	Ø1.2 Ø1.3 Ø1.4
SPRING	
SHOCK POSITION	A B C H G
ALIGNMENT	
CASTER ANGLE	
CAMBER ANGLE	
TOE IN	
RIDE HEIGHT	
TIRES	
TIRE TYPE	
TIRE HARDNESS	
TIRE DIAMETER	
INSERT HARDNESS	
SUSPENSION GEOMETRY	
LOWER ARM POSITION	⊙ ⊙ ⊙
CAMBER LINK POSITION	D E F
SWAY BAR	
DIFFERENTIALS	
DIFF OIL	

REAR



SHOCKS	
SHOCK OIL	
SHOCK PISTON	Ø1.2 Ø1.3 Ø1.4
SPRING	
SHOCK POSITION	A B C J H
ALIGNMENT	
CASTER ANGLE	
CAMBER ANGLE	
TOE IN	
RIDE HEIGHT	
TIRES	
TIRE TYPE	
TIRE HARDNESS	
TIRE DIAMETER	
INSERT HARDNESS	
SUSPENSION GEOMETRY	
LOWER ARM POSITION	⊙ ⊙ ⊙
CAMBER LINK POSITION	D E F G K L
SWAY BAR	
DIFFERENTIALS	
DIFF OIL	

MOTOR TYPE		SPUR	t	PINION	t
BRUSH		SPRING		TIMING	°
BODY		WING		BATTERY	

