

CHANGING MEMORY SETTINGS

YOUR Vtrac-FP HAS BEEN SUPPLIED PRE-SET WITH MEMORY 1 SET AS A 'NORMAL' THROTTLE RESPONSE, MEMORIES 2 TO 5 INCREASE THROTTLE RESPONSE (PUNCHY), AND MEMORIES 6 TO 10 DECREASE IT (SMOOTH). TO CHANGE A MEMORY SETTING FROM THOSE SUPPLIED TO YOUR OWN 'CUSTOM' SETTINGS DO THE FOLLOWING:

PRESS AND RELEASE THE 'SET' BUTTON UNTIL THE MEMORY YOU WANT TO CHANGE IS THE SELECTED MEMORY.

PRESS AND HOLD THE 'SET' BUTTON UNTIL THE GREEN 'MODE' LED IS ON, THE CURRENTLY SELECTED DYNAMIC THROTTLE PROGRAM WILL BE SHOWN ON THE 'SETTING' LEDs 1 TO 10 AS LED OFF, LED FLASHING OR LED SOLID. LED OFF IS A 'NORMAL' THROTTLE, LED FLASHING ARE THE 'PUNCHY' SETTINGS AND LED SOLID ARE 'SMOOTH'.

PRESS AND RELEASE THE 'SET' BUTTON TO CYCLE THROUGH THE 20 DYNAMIC THROTTLE PROGRAMS AVAILABLE. WHEN YOU HAVE SELECTED THE ONE YOU WANT TO USE SWITCH THE Vtrac-FP OFF TO EXIT 'SET-UP' MODE.

THE SAME SET-UP METHOD IS USED TO CHANGE THE START RESPONSE, BRAKE RESPONSE, BRAKE MINIMUM AND BRAKE MAXIMUM SETTINGS. (REFER TO THE 'VTRAC-FP SET-UP GUIDE' SHEET FOR FURTHER DETAILS)

'DYNAMIC THROTTLE RESPONSE' (DTR)

'DTR' IS THE BEST METHOD YET DEvised FOR POWER HANDLING ON DIGITAL ELECTRONIC SPEED CONTROLLERS. DTR IS MUCH BETTER THAN CURRENT LIMITING WHICH CAN ONLY LIMIT CURRENT PEAKS AND IS LESS EFFICIENT. THE WAY DTR OPERATES MEANS THE 'FEEL' OF THE THROTTLE IS ALWAYS GOOD, ESPECIALLY AT LOW-MID SPEED. INSTEAD OF LIMITING CURRENT DRAW ABOVE A SET 'CURRENT LIMIT' WHEN ACCELERATING, DTR CONTINUOUSLY MODIFIES THE THROTTLE IN RESPONSE TO THE DRIVERS INPUT GIVING IMPROVED ON-TRACK PERFORMANCE.

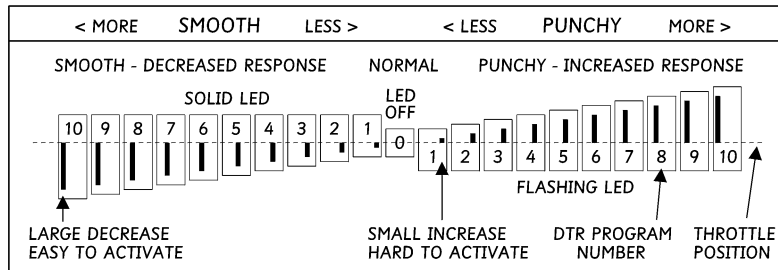
DTR WILL GIVE YOU AN ON-TRACK ADVANTAGE IN VARYING TRACK CONDITIONS AND ON MANY TRACK SURFACES. BY TESTING OUT SETTINGS TO FIND THOSE THAT WORK WELL FOR YOU AND SAVING THEM AS 'CUSTOM SETTINGS' YOU WILL SOON HAVE A USEFUL RANGE OF STORED SETTINGS AVAILABLE TO CALL UP WHEN REQUIRED.

THE BLANK 'CUSTOM SETTINGS' TABLES ON THE VTRAC-FP SET-UP GUIDE CAN BE COPIED AND USED TO KEEP A RECORD OF YOUR OWN CUSTOM SETTINGS. THESE COULD BE FOR DIFFERENT CARS, TRACKS, MOTORS ETC.

THE TABLE BELOW SHOWS THE DYNAMIC THROTTLE PROGRAMS, EACH PROGRAM HAS TWO PARAMETERS:

- 1 'THROTTLE RATE' HOW EASILY A THROTTLE CONTROL CHANGE WILL ACTIVATE 'POWER CONTROL'
- 2 'POWER CONTROL' THE AMOUNT OF THROTTLE INCREASE/DECREASE USED TO CONTROL THE POWER

DYNAMIC THROTTLE PROGRAMS



EACH DTR PROGRAM IS SHOWN AS A BOX, THE DASHED HORIZONTAL LINE SHOWS THE THROTTLE POSITION. THE THICK VERTICAL BAR IS THE AMOUNT OF THROTTLE INCREASE/DECREASE AND THE POSITION OF THE VERTICAL BAR IN EACH BOX (LEFT OR RIGHT) SHOWS WHEN THE POWER CONTROL WILL BE ACTIVATED. IF TO THE LEFT IN THE BOX IT IS EASILY ACTIVATED AND TO THE RIGHT IT IS MUCH HARDER TO ACTIVATE. WHEN SET TO EASY ANY MOVEMENT OF THE THROTTLE CONTROL WILL HAVE AN EFFECT ON THE POWER. WHEN SET TO HARD ONLY A QUICK 'JABBING' MOVEMENT OF THE THROTTLE WILL HAVE ANY EFFECT.

Vtrac-FP SPECIFICATIONS

Case Size	40x29x16mm	Brake On-Resistance	0.009Ω
Weight (no wires)	Approx. 34g	†Brake Current	69A
Voltage Input	4 - 10 cells	Regenerative Braking	Yes
Drive On-Resistance	0.0018Ω	Brake Programs	Selectable
PWM Frequency	Optimised	Brake Minimum Setting	Adjustable
PWM Resolution	Digital 10-bit	Brake Maximum Setting	Adjustable
†Drive Current	345A	Neutral 'Drag' Braking	Adjustable
Throttle Rate (Pro-Set)	Adjustable	Internal Schottky Diode	30A
Power Control (Pro-Set)	Adjustable	Rx Supply Output Voltage	6.0V
Start Response	Adjustable	Rx Supply Output Current	1.0A
Dynamic Throttle Programs ..	20 Selectable	Rx Supply Priority/Protection ..	Yes
User Set-up Memories (1-10) ..	Programmable	Full FP Water/Dirt Protection ..	Yes

†Transistor Rating at 25°C Junction Temperature.

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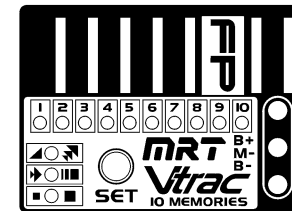
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Vtrac-FP

SPORT SERIES DIGITAL

ELECTRONIC SPEED CONTROL

INSTRUCTIONS



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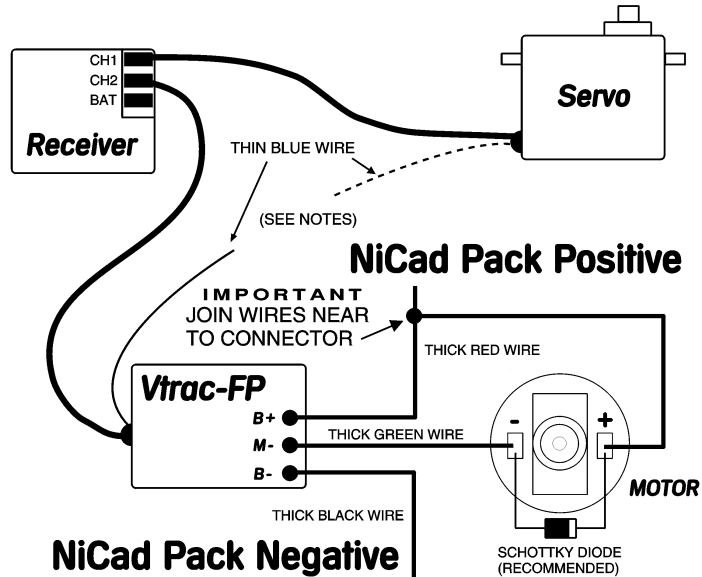
258 DOVER ROAD, FOLKESTONE, KENT, CT19 6NS, ENGLAND.
TELEPHONE/FAX (UK) 01303 259196

IMPORTANT Please Read!

BEFORE WIRING UP YOUR Vtrac PLEASE READ THE INSTRUCTIONS CAREFULLY AND LOOK AT THE WIRING DIAGRAM. REMEMBER YOUR Vtrac-FP IS 100% WATERPROOF, NOW RACING IN THE WET IS FUN!!

IT IS VERY IMPORTANT THAT YOU DO NOT SHORT OUT OR REVERSE CONNECT ANY OF THE WIRES ON YOUR Vtrac AS THIS COULD CAUSE DAMAGE TO YOUR SPEED CONTROLLER AND THE EQUIPMENT CONNECTED TO IT. IF YOU DO INCORRECTLY CONNECT THE POWER WIRES AND THE BRAKES STOP WORKING, DO NOT USE YOUR Vtrac AS FURTHER DAMAGE COULD OCCUR - RETURN TO MRT FOR REPAIR.

Vtrac-FP WIRING DIAGRAM



- If using a FET servo, connect the thin blue wire from the Vtrac-FP to the thin blue wire from the servo and wire a 4.7uH choke into the lead. (choke should be supplied with FET servo)
- If using a non-FET servo the thin blue wire on the Vtrac-FP is not used and should be insulated.

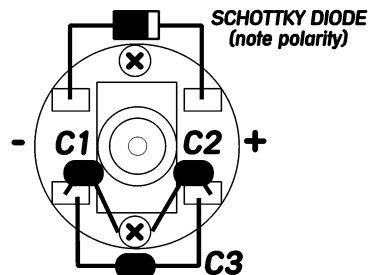
CONNECTION OF WIRES

BLACK WIRE - BATTERY NEGATIVE
 RED WIRE - BATTERY POSITIVE
 GREEN WIRE - MOTOR NEGATIVE
 THIN BLUE WIRE - FET SERVO LEAD

CAPACITORS: C1, C2 AND C3 0.1uF

TIP: SCHOTTKY DIODES ON MOTORS IMPROVE OVERALL EFFICIENCY, SO USE THEM IF POSSIBLE.

INSTALLATION OF CAPACITORS AND SCHOTTKY DIODE



Vtrac-FP INSTALLATION

WIRE UP YOUR Vtrac-FP ACCORDING TO THE WIRING DIAGRAM AND REMEMBER TO FOLLOW THE ADVICE BELOW:

- DO NOT ALLOW SOLDER POSTS TO GET TOO HOT WHEN SOLDERING WIRES. USE AT LEAST A 25W SOLDERING IRON AND MAKE SURE A GOOD SOLDER JOINT IS MADE.
- ALWAYS USE A MOTOR WITH CAPACITORS FITTED TO HELP PREVENT ANY POSSIBLE RADIO GLITCHES.
- SCHOTTKY DIODES CAN BE USED ON THE MOTOR TO IMPROVE EFFICIENCY. (SEE DIAGRAM ON OPPOSITE PAGE)
- ALWAYS KEEP THE RECEIVER AND RECEIVER AERIAL AWAY FROM ALL THE POWER WIRES IN YOUR CAR.
- IF USING A SEPARATE RECEIVER BATTERY DISCONNECT RED RX WIRE FROM Vtrac-FP RX PLUG AND INSULATE.
- INSTALL YOUR Vtrac-FP SECURELY IN CAR WITH VELCRO OR SERVO TAPE - FIT Vtrac-FP IN A SAFE POSITION.
- KEEP POWER WIRE LENGTHS AS SHORT AS POSSIBLE TO MAXIMISE PERFORMANCE AND EFFICIENCY.
- KEEP ESC / MOTOR POSITIVE POWER WIRE JOINT AS CLOSE TO POSITIVE BATTERY CONNECTOR AS POSSIBLE TO HELP AVOID THE RISK OF STEERING AND THROTTLE GLITCHES UNDER VERY HARD ACCELERATION.
- YOUR Vtrac-FP IS 100% PROTECTED FROM WATER/DUST/DIRT AND DOES NOT NEED ANY OTHER PROTECTION.
- HEATSINKS CAN BE USED ON YOUR Vtrac-FP BUT MUST NOT SHORT OUT ACROSS THE DRIVE AND BRAKE FETs.

NOTE: MOTOR MUST BE CONNECTED TO Vtrac-FP FOR BEEPS TO BE HEARD.

ADJUSTING THE Vtrac-FP TO YOUR TRANSMITTER

AFTER WIRING UP YOUR Vtrac-FP, TURN YOUR TRANSMITTER ON AND SET THE THROTTLE TRIM TO NEUTRAL.

- CONNECT YOUR Vtrac-FP TO THE BATTERY PACK WITH THE Vtrac-FP SWITCHED OFF.
- PRESS AND HOLD THE Vtrac-FP 'SET' BUTTON WHILE SWITCHING YOUR Vtrac-FP ON.
- AFTER 1 SECOND THE MOTOR WILL 'BEEP' AND THE AMBER LED WILL COME ON. THE NEUTRAL POSITION HAS NOW BEEN SET. THE GREEN AND RED LEDs WILL BE FLASHING.
- HOLD THE TRANSMITTER THROTTLE CONTROL AT THE POSITION FULL POWER IS REQUIRED, THEN PRESS AND RELEASE THE 'SET' BUTTON, THE FULL POWER POSITION HAS NOW BEEN SET.
- HOLD THE TRANSMITTER THROTTLE CONTROL AT THE POSITION FULL BRAKES ARE REQUIRED, THEN PRESS AND RELEASE THE 'SET' BUTTON, THE FULL BRAKES POSITION HAS NOW BEEN SET.

THE RADIO SET-UP IS NOW COMPLETE AND YOUR Vtrac-FP IS READY TO BE USED WHATEVER THE WEATHER!!

A QUICK GUIDE TO SETTING AND USING YOUR Vtrac-FP

SETTING YOUR Vtrac-FP IS EASY, THE 20 'PRO-RESPONSE' X98 DYNAMIC CONTROL PROGRAMS WILL GIVE YOU PERFECT THROTTLE CONTROL JUST LIKE THE BEST DRIVERS IN THE WORLD, SIMPLY BY THE PRESS OF A BUTTON!!

CONNECT YOUR Vtrac-FP TO A BATTERY PACK AND THEN SWITCH IT ON, AFTER POWER-UP THE AMBER LED IS ON.

YOUR Vtrac-FP IS SUPPLIED SET ON MEMORY 1 AND IS READY FOR USE RIGHT AWAY.

MEMORY 1 IS SET AS A 'NORMAL' THROTTLE, THE RESPONSE IS PROPORTIONAL TO THE TX THROTTLE POSITION. IE. IF YOU MOVE THE TX THROTTLE CONTROL THE POWER/BRAKES WILL MATCH YOUR INPUT EXACTLY, THIS IS A SIMPLE METHOD OF CONTROL AVAILABLE ON ALL SPEEDOS. (YOUR Vtrac-FP CAN DO A LOT MORE THAN THIS)

FIRST TRY A RUN SET ON MEMORY 1, AFTER THE RUN IF BATTERY DURATION IS OK AND YOU WANT TO IMPROVE YOUR CAR'S PERFORMANCE TRY A RUN ON MEMORY 2 UP TO 5 (LED FLASHING). REMEMBER THAT ON MEMORY 5 THE PERFORMANCE WILL BE A LOT BETTER THAN ON MEMORY 1 AND THAT BATTERY DURATION WILL BE REDUCED.

IF AFTER THE RUN BATTERY DURATION IS NOT OK THEN TRY A RUN SET FROM MEMORY 6 UP TO 10 (LED SOLID). MEMORIES 6 TO 10 INCREASE IN 'SMOOTHNESS' FROM 6 UP TO 10 WITH MEMORY 10 BEING THE SMOOTHEST. SMOOTH SETTINGS WILL HELP TO MAKE YOUR CAR EASIER TO CONTROL AND WILL IMPROVE BATTERY DURATION.

TO CHANGE THE SELECTED MEMORY SETTING ON YOUR Vtrac-FP, SIMPLY PRESS AND RELEASE THE 'SET' BUTTON. THE 3 'MODE' LEDs WILL FLASH AND ONE OF THE 'SETTING' LEDs NUMBERED 1 TO 10 WILL BE ON TO SHOW THE CURRENTLY SELECTED MEMORY. TO CYCLE THROUGH THE MEMORIES PRESS AND RELEASE THE 'SET' BUTTON. AFTER THE REQUIRED MEMORY HAS BEEN SELECTED SIMPLY SWITCH YOUR Vtrac-FP OFF TO EXIT 'SET-UP' MODE.

REMEMBER . . .

MOTORS, GEARING AND BATTERIES HAVE THE BIGGEST EFFECT ON CAR PERFORMANCE. PUNCHY THROTTLE RESPONSE SETTINGS (LED FLASHING) REDUCE BATTERY DURATION. SMOOTH THROTTLE RESPONSE SETTINGS (LED SOLID) INCREASE BATTERY DURATION. ALWAYS USE THE SMOOTHEST SETTING YOU CAN, THE BEST DRIVERS ARE VERY SMOOTH.

