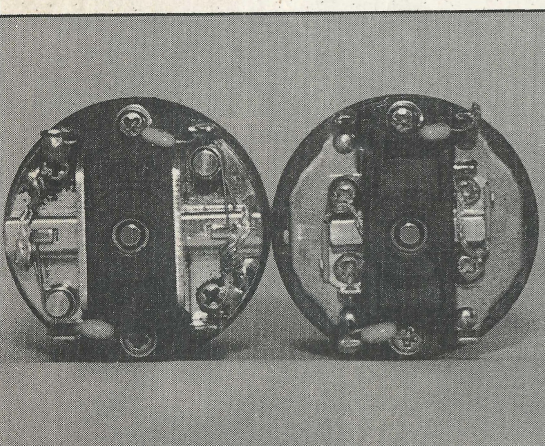
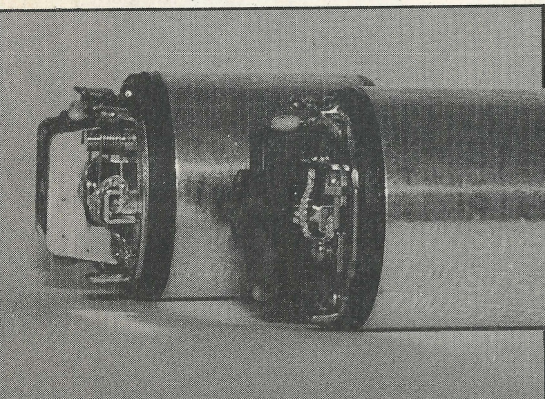


# Power On

There are now more motors in different specifications than ever before, quads, triples, doubles and singles all feature in our up to date motor list.



Twister series features too many winds to list, call PAP for a complete list.

Last year we witnessed the USA regulate the amount of advance allowed in a stock motor. Why, you might ask are we in the U.K. interested in what happens on the other side of the Atlantic.

As it happens we in the UK are probably more heavily influenced by the US market than anywhere else in the world. Ironically it is not the USA that is the prime source of all things RC, but it is the USA that controls what the market buys. The reason for this is very simple. The American market is vast. They dominate what Taiwan, Japan and Hong Kong produce, as such the influence that America wields is immense.

The regulations that are introduced are, on the surface for the benefit of the hobby. In truth the people that create the regulations are those with a

substantial interest in the commercial side of the hobby. So the wrangling over this or that motor being legal or illegal are really to allow this or that manufacturer to have the edge over his competitor. The latest fuss has been over the shortening of armature stacks. This allows less wire to be used in the winding with the benefit of lower resistance, less weight and higher performance. It now seems that idea has been crushed by ensuring the length of stack remains constant. The interesting aspect of that modification was that the change to a shorter stack was within the rules. The rules only stated the number of turns, not the length of wire to be used.

...Attempts at lowering efficiency have included making the armature smaller...

A modification to a standard motor that seems to be staying with us is to have gaps in the stack. This will alter the magnetic performance of the motor, by making it less efficient. This is not such a bad thing, as magnets are so good nowadays that most motors have magnetic saturation. They are only as good as the weakest point. The can (motor body) was the point of highest reluctance, with recent changes in can materials and some alterations to can thickness this may no longer be the case. Other attempts at lowering efficiency have included making the armature smaller to increase the air gap or machining chunks off the armature body. In the end it all a matter of balance. Ideally the complete magnetic circuit should make the best use of the available magnetic energy, at the best possible price.

So, some fifteen to twenty years after the original open brush motor appeared we are still going through developments. I must admit to being a little surprised,



The Trinity cans are brightly coloured with a good feel of quality.

but it is pleasing to see that innovation is alive and well.

At the risk of boring readers mindless I will repeat once again that the prime suppliers of virtually all motors are from Japan and Hong Kong with a few from Taiwan. Modified motors come from either Sagami or Orion. These two companies between them supply the major manufacturers Yokomo and Trinity. From here the motors migrate to the specialist companies such as Reedy, Peak Performance, B&R, C&M and just about all the others. Now do not run away with the idea that because the source is the same, all the motors are the same. It is now down to the skill of the winder of the armature, the balancing, the truing of the comm. choice of brushes, springs and setting up the magnetic field that make your motor a good one or a bit of a duffer.

## Power Products

P.O. Box 12, Aldershot, Hants. Power Products after more than 15 years of producing specialist equipment for the RC business still have a substantial range of motors in many winds and magnet powers. Power have their own endbell design and are offered with a range of magnetic specifications.

All "adjustable" motors are precision balanced by Power Products in the U.K.

Full spares and rebuild service available. Magnetising of magnets, comm truing and balancing available for Power Products and Demon motors.

## Standard

27 x 1 BRCA stock motor. 30 deg timing

Radio Control Model Cars

17 x 1 fixed timing. Fast for 4WD  
20 x 1 fixed timing. Fast for 2WD

## Modified

13 x 1  
14 x 1  
15 x 1  
16 x 1  
17 x 1  
18 x 1  
19 x 1  
20 x 1  
21 x 1  
10 x 2 also in x 3  
11 x 2 also in x 3 also in x 4  
12 x 2 also in x 3 also in x 4 in x 3 also in x 4  
14 x 2 also in x 3 also in x 4  
15 x 2 also in x 3 also in x 4  
16 x 2 also in x 3 also in x 4  
17 x 2 also in x 3 also in x 4  
18 x 2 also in x 3 also in x 4  
19 x 2 also in x 3 also in x 4  
20 x 2 also in x 3 also in x 4  
21 x 2 also in x 3 also in x 4  
22 x 2 also in x 3 also in x 4  
23 x 4  
24 x 4

## Kyosho

The Le Mans range of motors has now been supplemented by the Mega Motor range. Kyosho have a good range of motors that are suitable for powering not only their cars but also boats, aircraft and helicopters.

Kyosho do not give wind details on the Le Man range  
Pro High Speed high speed off road  
Pro High Torque twisty off road courses

Pro On Road 8 minute races on road

## Mega Motors

12 x 2  
14 x 2  
16 x 2  
18 x 2  
20 x 2  
22 x 1  
360 for monster trucks.

## MRI Motors

Wetmags and ballraces  
31 x 2  
15 x 2  
15 x 3  
17 x 2  
19 x 2  
19 x 3  
21 x 1  
27 x 1

## Yokomo CML

Yokomo motors have long been the source for other manufacturers to

Racing Special

rework. Yokomo's own range go under the generic title of Wing. This includes all types from stock to modified.

## Reedy

Mike Reedy still dominates more international races than any other manufacturer. Although the Reedy outfit have a team of technicians winding and assembling motors, Mike himself is still heavily involved in the development of his products always trying to get just that little bit extra.

## Tru Stock

This motor is a stock motor (non adjustable) with 24 degrees of advance. Slotted can, wet magnets and silver shunted low resistance brushes.

## Mr Outlaw series

A maximum of 38 degrees of advance is achievable. Slotted can, copper head motor springs and heat sink brush holders. All winds.

## Mr Series

Ultra torque magnets for a wider power band. Winds from 12 to 19 in numerous varieties, doubles triple and quads.

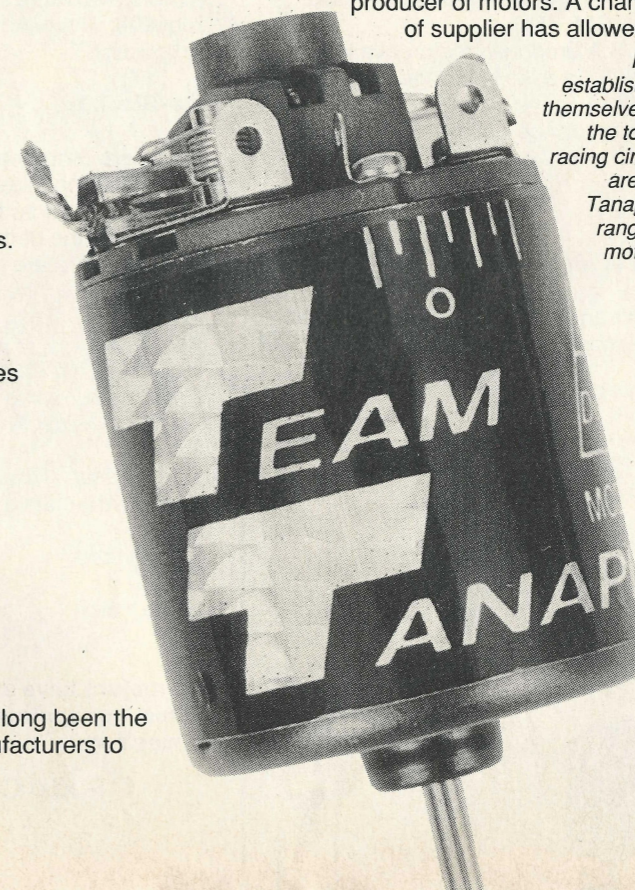
## Losi CML

Super insane and Big Ed are hand wound very hot motors. The Double Trouble motors are non legal stock versions

## Trinity

One of the USA's major producer of motors. A change of supplier has allowed

Now establishing themselves at the top in racing circles are the Tanaplan range of motors.



## 540 ELECTRIC MOTORS

some innovation of Trinities range. Determined to keep a slice of the stock market Trinity have the Slot Machine which meets the 24 degrees of advance rule. They also produce a very non legal 45 degrees of advance Team Tuned Stock.

In the modified range there is the Chris Doseck World Champion Edition. A 13 x 3 with something called 4.9 magnets. Although not stated this figure must be something to do with the magnetic field created by these particular magnets.

## Oval Man

A 13 x 2 on the tri rotor armature. This armature has the armature stack split into three sections. This is claimed to lower its running resistance. All Trinity motors have 1.3mm cans.

Numerous other winds and powers available.

## Lesro

One of the Trinity importers provide a motor overhaul and rebuild service including truing and balancing.

## Twister

Pete's Awesome Products, 316a High Road, Tottenham, London, N15 4BP  
19 x 2 Kris Moore special Championship winner.

17 x 3 Stadium special 2WD cars and trucks.

14 x 1 Titan Championship winner, best in heavier cars

12 x 2 Fast Eddie's Ride Masses of torque

14 x 3 Flash Intended for direct drive

Also available is the newer range of Scorpion stock and modifieds.

11 x 3

12 x 3

13 x 3

12 x 2

## Parma

Parma have always turned out good reliable motors.

The long lasting Cyclone range:  
The winds range from 11, 16, 19 doubles 13, 15, 17 and 18 quads

## Cyclone II Motor Series

Stock motors with an excellent spec. Choices range from plain or ball bearings, some with legal (24 degree advance) to some non legal advance.

Wet magnets, large heatsinks and

thick motor cans. Some motors are still available with dry type magnets.

## MG

After various moves around the country MG seems to have come to rest again in the Weymouth area. A full range of custom winds are available to order.

Red dot motors for standard class with slotted armatures.

Exterminator range for all modified specs. including hex winds.

## Tamiya

Tamiya have their own version of high performance motors. Sadly some racers tend to dismiss the Tamiya race motors. These are of the finest quality and should not be underrated. The real problem is that they are not easily available to the specialist motor builder.

Technigold  
Techniplus  
Dynatech 01R  
Dynatech 02H

## Tanaplan

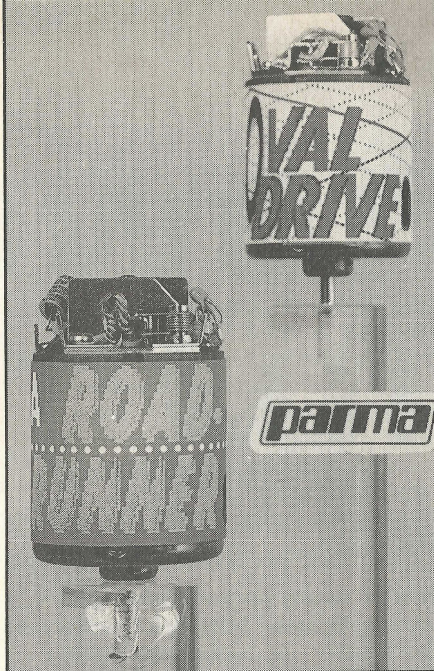
Tanaplan have had outstanding commercial as well as race successes over the last few years. Initially prices offered were excellent value for money, the hand wounds are now comparable with most other makes. Motors have ballraces, diamond trued commutator and with wet magnets.

13 x 2  
14 x 2  
15 x 2  
16 x 3  
17 x 2  
18 x 2  
12 x 1  
12 x 2  
13 x 2  
13 x 3  
14 x 2  
15 x 2  
15 x 3  
15 x 4  
16 x 2  
16 x 3  
17 x 2  
17 x 3  
18 x 2  
19 x 2

Brushes are available in timed, hard and medium types.

## Checkpoint

16 x 2  
18 x 2



Parma have re-vamped the image of their range with these zany new labels.

# Power On

## HPI

Top Gear Models and Trading, 157 Parrock Street, Gravesend, Kent, DA12 1ER

## HPI Motors

Original motor chassis by Air Supply.

Motors available in many winds both hand and machine wound.

## Paragon

Holcomac Marketing Ltd., Britannic House, 17A George Street, Stroud, Glos. GL5 3DP

U.S.A produced motor, available in the U.K. in a limited range of winds.

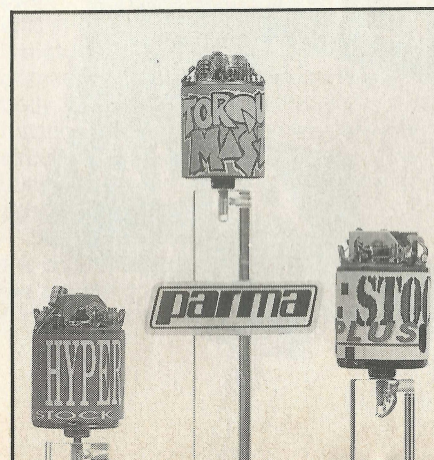
27 x 1 Stock motor  
Modified range Eclipse

13 x 3  
15 x 2  
19 x 2

## B & R Motorworks

Samifran Racing  
5 Skimpot Road, Luton, Beds. LU4 0JB.

Standard motors are still the biggest sellers in the UK.



Motors from the U.S.A. offering both fixed and adjustable timing types. Stock motors are available with up to 44 degs. of advance, silver graphite brushes and in some cases wet magnets.

Modified are hand wound and epoxied, balanced armature, trued comm. wet magnets, silver graphite brushes and are tested.

12 x 2  
13 x 2  
14 x 2  
15 x 2  
16 x 2  
12 x 3  
13 x 3  
15 x 3  
16 x 3  
19 x 3  
12 x 4  
13 x 4  
14 x 4  
15 x 4  
16 x 4  
17 x 4  
18 x 4  
12 x 5  
13 x 5  
14 x 5  
15 x 5  
16 x 5  
17 x 5  
12 x 6

## Cobra

Motors available in both stock and modified form. Cobra have their own specially design spring which pushes the Cobra brushes onto the comm. The brushes replace the original equipment.

## Corally

Corally have a range of high quality motors available in any wind the user requires. The motors are orderable from Intronics.

## Re-Working

There are other manufactures or re-working companies. Some appear and then disappear so fast there is not even time to get the names onto paper.

A few more are listed below, whether they make it to the U.K. only time will tell.

Altech  
Dialed Racing Products  
Endurance Racing Products  
Precision Motor Works  
PSE  
Quarter Flash Motors  
Peak Performance  
S & K  
Speedworks  
Stealth  
Strike Force

All motors have attempted to be listed, our apologies for any omissions.