

Germany's Jurgen Lautenbach has achieved a great deal during his involvement with model car racing, establishing a sound reputation both for himself as a driver and for Lautenbach Racing Products (LRP) early in the development of the company, when his hand wound motors became 'the' motors to run, regardless of the class of racing, if a driver wanted to be competitive not only in his native homeland, but the rest of Europe and Britain too.

The plain bearing Rallye Series of motors provide more than enough power for beginners cars with their 'modified' type winds.



The flagship of the LRP range is the LE AMS MKIII (MKII pictured here),

which finished second in 4wd at the '93 Worlds in Kevin Moore's hands.

Jurgen's very first customer! LRP has expanded into a business that encompasses not only the model car racing electric motor side, the roots from which the company grew, but electronics too; as LRP have had an electronics section for some years now which designs and develops speed controllers for cars of all types, plus purpose designed controllers for electric model trucks (of the heavy

the respect and friendship of names in the racing World such as Ernie Provetti of Trinity and Mike Reedy of Associated. Talking of Formula 1, it was at the '93 World Championships in Basildon that Jurgen fitted a prototype of LRP's Traction Control System, similar to that used in F1 cars of last season, to his Cougar 2000. The system worked so effectively that it was immediately banned, although I think that it was the fact he was actually able to adjust this version from his transmitter's third channel that had a lot to do with the ban. The rules do state that only two channels must be used for controlling the car, so obviously it was deemed illegal. A good idea though! Enough of history though, let's now take a look at the current range of LRP products.....

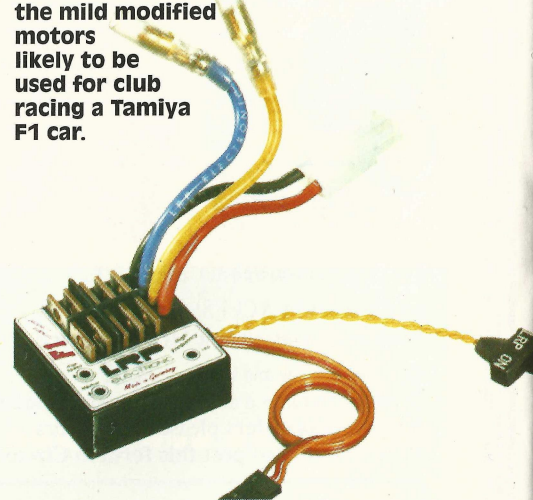
### Motors

Initially LRP marketed only 'top of the pile' motors for use at the very highest levels of racing in 1/12, Off Road and Pro 10, winning virtually everything in sight. With the advent of the Tamiya EuroCup and the obvious follow up of club racing for cars of this

type, LRP now cater for all budgets and power requirements with a range of three distinctly different types of

motor, the Rallye Series, the F1 Series, and the top class Grand Prix II Series with handwound armatures as used by Jurgen, Kevin Moore and Derek Furutani at the Worlds.

The beginners F1 Plus forward and reverse speed controller, suitable for the mild modified motors likely to be used for club racing a Tamiya F1 car.



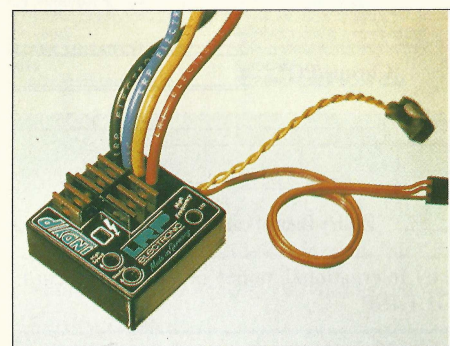
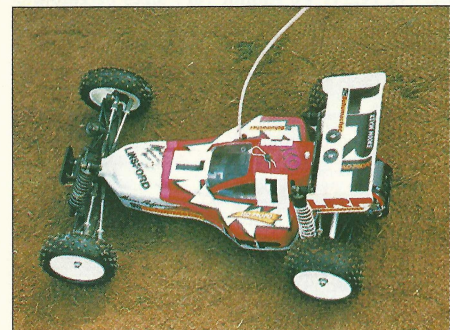
articulated type), aeroplanes and helicopters. These diverse uses place specific demands on speed controls, so, acknowledging the incredible popularity of electric flight in Europe and the Worldwide increase of interest in this type of motive power, LRP have risen to the occasion with great success. With their custom designed nicad cell matching equipment producing the well matched battery power needed to be successful in every form of electric powered competition formula these days, LRP market literally every possible item that the electric power enthusiast will find necessary to pursue their chosen branch of modelling!

The company employs 7 full time employees, backed up by 10 part time workers, although very busy times will see at least 20 people working full time in order to keep the orders fulfilled. Jurgen himself works a 7 day week unless he is committed to a race meeting, but working long hours is always necessary when constant development is called for to keep in front of the competition. Ask the members of any Formula 1 Team! It is precisely this type of dedication that Jurgen gives to his products that has earned him

The 2000Hz INDY P-Plus can handle hot motors of down to 11 turns, so its use is basically unlimited. It features reverse polarity protection for those of us prone to 'accidents'!

# LRP - THE COMPANY AND ITS PRODUCTS

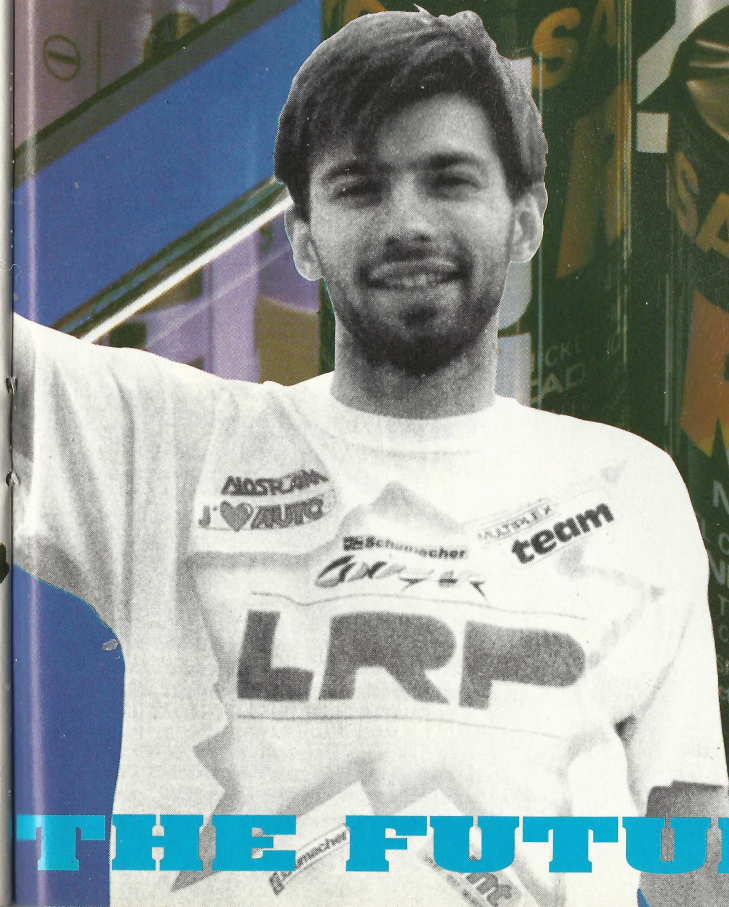
The name of Lautenbach seems to have been around for ever, but despite this fact, Jurgen is still only at the comparatively youthful age of 28! Jurgen and his business manager 'Joules' (aka Klaus Brommer) have built up a thriving business since 1986 when Jurgen started to wind his own motors. Indeed, Joules was



## YOU'RE GOING TO SEE MORE OF LRP IN THE FUTURE!

# PROFILE

The start of the 'power chain'. LRP match Panasonic and Sanyo cells to high standards to provide the motive power for their range of speed controllers and motors.



Jurgen Lautenbach

# YOU'RE GOING TO SEE MORE OF LRP IN THE FUTURE!

The Rallye Series consists of 4 different winds (17x2, 19x2, 21x2, 23x2), have plain bushed bearings, and a new design of endbell that allows a constant flow of cooling air to reach the commutator. These motors fill a niche in the Tamiya and Kyosho F1 and German Touring car Championships, but also make good budget motors for use 'at the club' by beginners.

The F1 Series represent a step up in the power stakes due to the fact that these motors are fully ball-raced and are therefore able to utilise armatures with a lower number of turns for higher revs and more power. The winds available: 13x2, 15x2, 17x2 and 23x2, represent a good spread of characteristics, from quite hot to very mild, so a motor in the F1 Series makes a good buy for those looking for a power increase without breaking the bank. As with the Rallye Series, the F1 motors are power tested and race ready, altogether just the job for novices!

The latest



**The F1 Series have ballraced bearings and range from 13 to 23 turns. Ideal for club racing!**

Grand Prix II Series of handwound motors are based on the latest specification Sagami motor can and endbell, which make the best possible use of the performance available from Sanyo's 'Super Cell', the SP-SCRC. With very strong magnets which retain their effectiveness throughout a run and give increased mid range power, plus the new endbell which allows air to circulate for increased cooling, the Grand Prix II

Series motors are available in the well known designations such as Bee D, Magic and Big C. Each Grand Prix II motor is supplied with a spare set of High Power silver brushes, whilst they are set up as supplied to use the long life Sagami type. LRP motor designations have always slightly confused racers because the wind of each motor isn't given, just a 'colour' such as Orange-AE or Blue SE. LRP maintain that they do things this way to avoid confusion with some manufacturers methods of winding doubles and triples etc using the same gauge of wire, whereas LRP use differing gauges of wire for particular applications.

The Grand Prix II Series of motors encompasses no less than 22 different specifications of winds, so there is certainly a wide enough choice there for racers in all classes from 1/12 to Stadium Trucks!

## Speed Controllers

The design and development of LRP's speed controllers is all taken care of 'in house', with a constant programme of improvement in process throughout the range. What the great many car racers out there probably don't realise is that LRP have quite a large profile in electric boat racing, model planes and, to top it all off,



**The latest Sagami armature has a slot running the length of each stack, not only giving a positive location for balancing drillings, but promoting improved air circulation too.**

helicopters! They manufacture dedicated speed controls for all of these classes, so the depth of experience at LRP is unquestionable.

In car racing terms, LRP have no less than six (!) speedos available, all of varying specification and price to cater for drivers from the rank beginner to European Champions in all classes.

The speed control range begins with the F1 Plus, a forward and reverse plus proportional brake controller, aimed at the novice using mild motors and between 4-8 cells, the motors preferably having 17 turns or more. The most suitable use is in a Tamiya or Kyosho F1 car using a stock or mild modified motor, hence the name!

Moving up a notch, we find the F1 P-Plus version, suitable for winds down to 13 turns. As per the Plus version, the P-Plus operates at 2000hz and features thermal overload protection and LRP's Super BEC, whereby the driver can keep control of the car even when the cells are really dumping, and both controllers are supplied ready fitted with connectors that match with those found in the popular Japanese kits.

The next step up in performance is provided by the INDY Plus forward only controller, again marketed in two versions, the INDY Plus capable of handling 13 turn motors upwards, with the P-Plus suitable for 11 turn winds. These versions have reverse polarity protection on top of the features listed for the F1 controllers.

The very top specification controllers in LRP's line up are the LE25AMS Sport and LE25AMS MKIII versions, capable of running between 4-10 cells comfortably and winds as low as 11 turns without the need for a heatsink being clamped to the FETs. These operate on a higher frequency than the lower spec versions at 2500Hz, with the now usual regenerative brake feature (LRP controllers have very effective brakes when dialled up to maximum!), plus a FET servo power supply lead and LRP's Super BEC system, whilst the use of LEDs simplifies the setting up procedure immensely. The torque control or

current limiting can either be made by the use of plug-in colour coded chips, each chip allowing a set amount of current to be fed to the motor on acceleration, the amperage range being 35A, 45A, 60A and 80A, or by a plug-in calibrated pot to allow the driver to set the limiting to his own tastes.

The AMS MKIII uses higher quality FETs than those used in the Sport version, and has had great success to date, not only in terms of Off Road racing (2nd overall '93 4wd World's), but also in On Road 1/12 and Touring Car racing, winning this season's BRCA Championship in Jimmy Davis's hands.

LRP always maintain a strong commitment to testing, as it is really only in that type of environment that worthwhile results are obtained. All of LRP's speed controller SMT (surface mount technology) components are assembled out of house to aerospace standards (there are none higher), with the final assembly and setting up taking place within LRP's walls to ensure top quality items are available to all. This also means that LRP know that the speed controller sold over the counter worked perfectly under testing. No excuses for 'Little Jonny' when he shows his dad a cube of smoking black plastic an hour after coming back from the model shop!

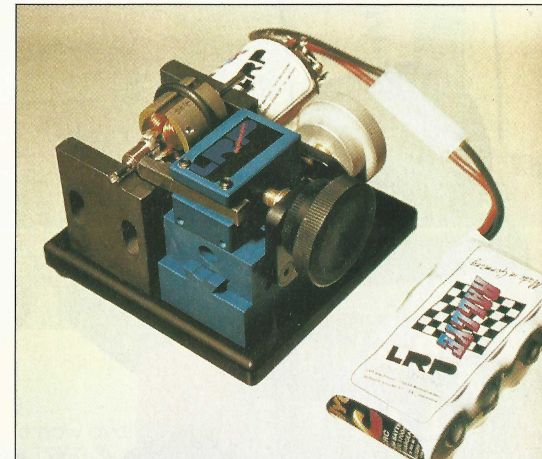
## Cells and Accessories

Obviously electric motors need batteries to make them go, so LRP offer cycled and matched Sanyo and Panasonic cells to cover all applications from 1/12 to 1/10 Off Road racing. Due to the obvious performance difference in



any type of rechargeable nicad cell, LRP offer standard Sanyo SCRCs in Club pack and Power pack grades, with the better capacity SP type cells in Team pack and Power pack Plus form. Better batteries come at a higher price though!

LRP's silver plated connectors are small and neat, allowing the wire to be inserted into the connector at 90° should this be so desired, and with a positive push-in fit they offer a convenient



**The LRP Com-Tru provides the perfect finish to a commutator right when it's needed most - at the track!**

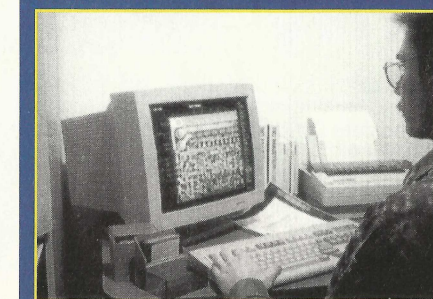
and trouble free connection with little hassle.

A new item in the LRP range of products is the Com-Tru, which not altogether surprisingly is a miniature commutator lathe! Home or trackside comm skimming is an essential part of being competitive in the modern electric racing World, so the LRP Com-Tru fits the bill nicely. It is supplied complete with a motor, battery pack cutting tool and drive band etc, with a diamond tipped tool available as an alternative if a lot of use is foreseen (the standard tool will need regular grinding).

There you have it, a complete rundown on LRP and the high quality products produced by a (growing) band of enthusiasts in Germany led by Jurgen Lautenbach, a young man determined to see his company thrive by virtue of marketing quality products Worldwide. LRP's profile is relatively low in the U.K. at present, but through Kevin Moore, who is now working solely to promote LRP products, this situation is likely to change in the coming months! Jurgen and Kevin have a commitment to support up and coming racers with talent in their thumbs but a lack of backing, so Kevin is at present talking to young hopefuls with a mind to support their efforts. It is always good to hear of people putting something back into racing, especially when it concerns really good 'club' racers such as those who take part in the RRC Series!

LRP Products are imported into the UK and distributed by Kevin Moore, 2 Hawksbrook Lane, Beckenham, Kent. BR3 3SR. Tel/Fax (081) 658 2672. Trade enquiries only.

## CAD SPEEDO DESIGN



## COMPUTER MOTOR TESTING



**PROFILE**



**The Grand Prix II Series feature all of the old favourite LRP winds plus some new ones, all based on the latest Sagami can and endbell.**