

RRC Visits...



Martin Hansell is the man behind Fibre-Lyte, based up in Cleveland, and the story behind his involvement in the manufacture of model car components is both typical and interesting, because prior to starting the firm he had no experience of models at all! 35 year old Martin was employed by ICI as a Thermoplastics Development Engineer, opting to leave and start his own business producing carbon fibre frames and parts for mountain bikes due to he and his brother John's interest in keeping fit! Martin's introduction to cars came about when he was asked to make some parts for a 1/8 IC RallyCross racer, then Terry Sadler at Wasp Racing asked Martin to produce Lazer chassis for him with the cells 12mm further rearwards than standard, Martin then deciding to concentrate on the model car market due to the volume of orders flooding in!

The real attraction for racers is that carbon fibre is 6 times stronger than steel, yet only between 1/2 to 2/3 the weight of an equivalent piece of GRP... There is no doubting the fact that carbon parts certainly add that 'certain something' to a car in the looks dept!

Fibre-Lyte made their name with those early

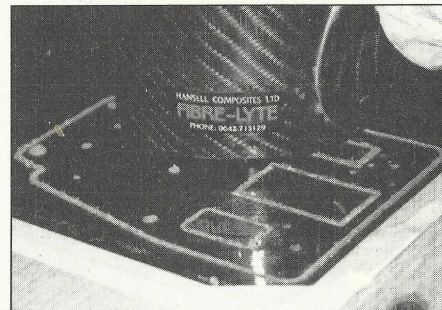
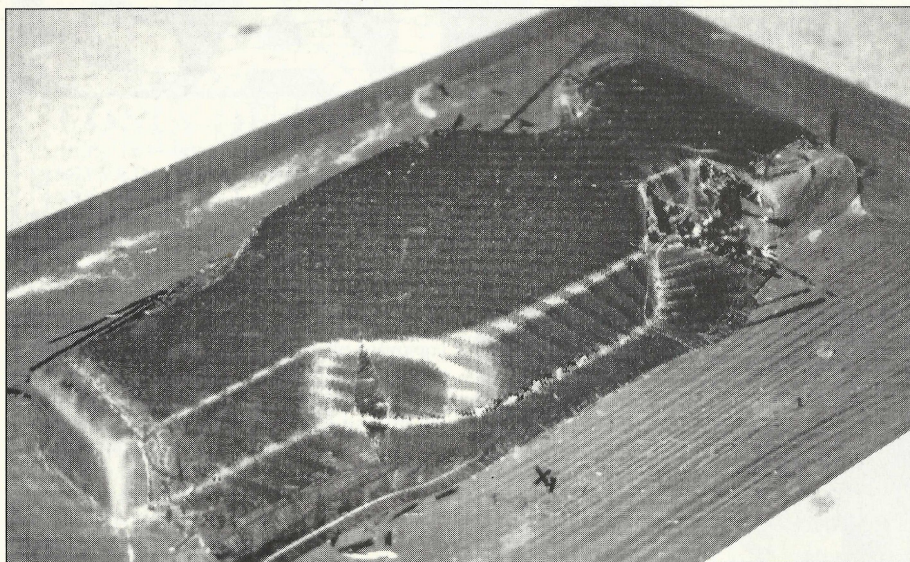
Lazer chassis, followed by those for the Pro Cat including hollow 6mm thick versions for Richard Isherwood. Craig Drescher soon picked up on the 'classy chassis' from Fibre-Lyte, Craig having used Martin's carbon parts on his Yokomo and RC10 cars for some time now, his present RC10 featuring a Fibre-Lyte carbon tub chassis, which really caused a stir the first time American racers saw it!

Purpose Laminated Carbon Sheet

Martin knows a great deal about carbon fibre, resins etc, thanks to his career with ICI, so he laminates his own raw carbon sheet, rather than using commercially available offerings. Woven carbon cloth is supplied in roll form, much as a carpet would be (slightly more expensive though!), with the secret to quality carbon being the amount and type of resin used, the curing time and temperature, and the direction of the carbon cloth's weave in relation to the loads imposed upon it.

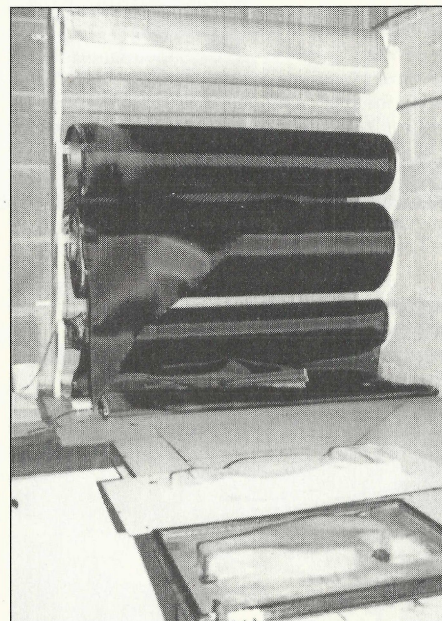
To produce a 28" x18" sheet, layers of carbon

An RC10 tub chassis before removal from the mould. There is still much work left to be done by hand before it's finished!



A 1/10 IC car top plate in the process of being milled out.

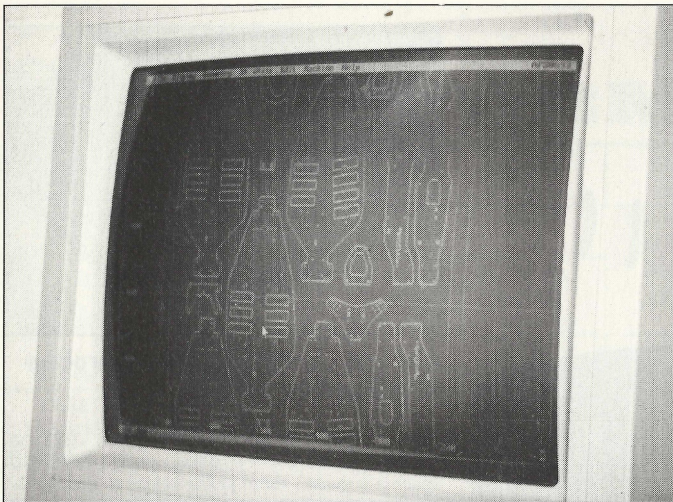
cloth and thermo setting resin are laid up 'wet' (imagine a lasagne!) between glass plates with spacers between them at the edges to dictate the finished sheet's thickness, the direction of each layer of cloth's weave alternating as seen in the illustration of the top brace. The plates are then vacuum bagged to ensure even distribution of the resin and to clamp the glass firmly onto the resin/carbon cloth mix, another benefit being a superb surface finish, then cured at 90°C for 1 1/2 to 2 hours in a custom built oven, with a moulded tub chassis curing faster than a complete carbon sheet (just as well with the amount of work needed to produce them!).



Rolls of carbon cloth in the lay up room, the upper roll of carbon cloth distinctly different to the roll in the middle.

If the weave of each layer followed the same direction, the sheet would be stiff in one direction but relatively easy to bend in the other, so sheet intended for shock mounts is made from layers of cloth laid at +45° and -45° to allow a degree of flexibility should the car come to an abrupt stop using the shock mount as a brake! 5 layer material intended for chassis has a 0-90° layer in the middle, top and bottom for maximum rigidity. The multi directional layers of the weave provide the strength and torsional rigidity required for a stiff chassis that allows the suspension to do its job properly!

Manufacturers of the beautiful carbon fibre chassis components used by some of the biggest names in the sport.



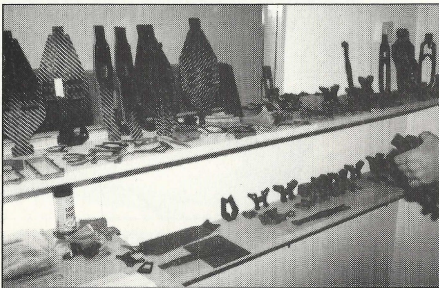
The first link in the production chain - the computer upon which the parts are drawn and laid out on the carbon sheets.

ECONOMICAL alternatives to full carbon are CSC (carbon-silica-carbon) and Carbotex parts, using carbon skins with glass cloth or silica spheres as the 'meat in the sandwich', resulting in very light and stiff parts due to their 'box' section.

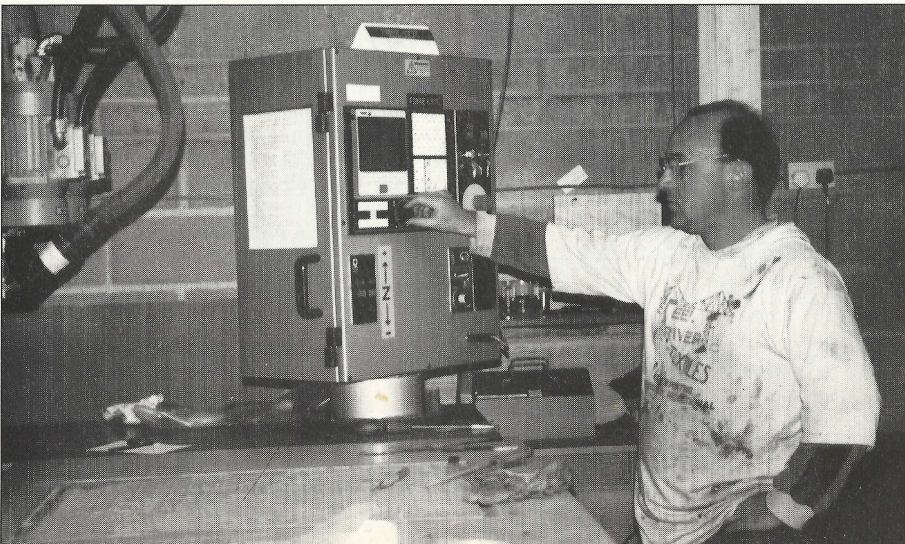
Moulded Tub Chassis

Full size F1 cars use carbon monocoque 'tubs', so model versions soon followed, Fibre-Lyte's being the first on the market in this country. The degree of hand finishing after the lay up is evident after a look at the photo of the raw part on its mould (the asking price is well justified!). The tub chassis also go through the vacuum bagging process to persuade the wet cloth to follow faithfully the shape of the male mould.

Finished components ready for shipping. Fibre-Lyte have over 150 components logged on computer disc for immediate use!



Martin setting up the Rye Gemini 1700 computer controlled milling machine. This machine is so fast it's amazing!



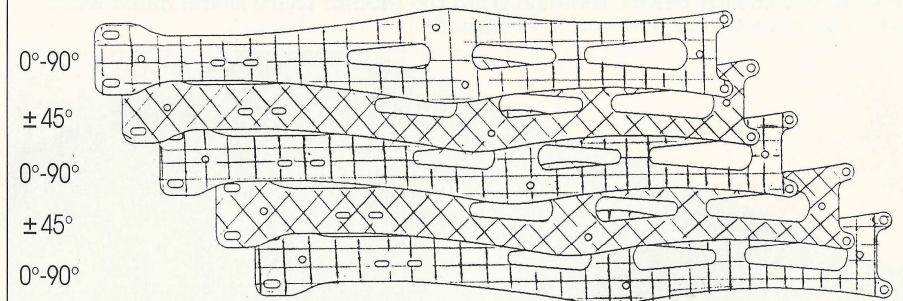
The Clever Bit!

Fibre-Lyte can supply carbon parts for basically any car, some improved by altering known critical dimensions, and thanks to their British (Hooray!) Rye Gemini 1700 machine, which mills out components such as a 1/12 chassis in approximately 3 1/2 minutes, and the computer control system, a Licom APS from Cyncero of Coventry, with a CAD 'on screen' design facility, repeatability of parts is guaranteed to infinity. Should a modification be asked for to a common part, then Fibre-Lyte can fulfil the order with ease. Bespoke chassis, shock mounts

etc, present no problems, so you can build your own scratchbuilt car with Fibre-Lyte doing all the work!

It was interesting to see that a 1/10 IC car radio plate took up 300 lines of programme (a sheet of complicated parts run to 5000!), but watching

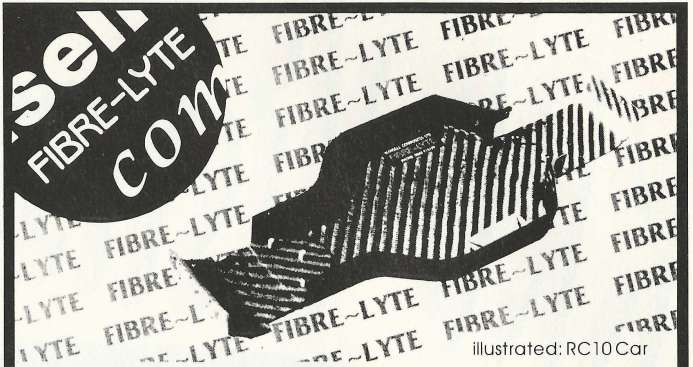
FIBRE ALIGNMENT STANDARD 5 PLY (2.1MM)



parts being milled out was fascinating. The computer plans the layout of parts, the cutting speed is set, and away it goes! First the cutter drilled the desired holes, then took a 1mm deep cut around the part's profile, returning to the lightening holes etc, before taking the final profile out to part it from the sheet.

Exports account for the lion's share of their products, Germany taking all that Martin, John and Danny Callaghan can supply! The recent German 1/12 Championships saw ComCom spec Fibre-Lyte chassied 12LS cars 1st and 2nd, whilst Jimmy Davis's Fibre-Lyte Cat 2000 took the BRCA Touring Car title.

Fibre-Lyte's latest is coloured carbon, having a distinctive sheen to it, altogether very smart, so look out for it in your local shop- there's always something new from Fibre-Lyte!



illustrated: RC10 Car

We have now added the CAT 2000 to our list of moulded chassis also * RC10 * Cougar 2000 * Lazer ZXR * * BOSS-Cat * W93 * all £70.94

Our ever increasing range of parts are produced using the latest CAD/CAM and CNC technology all parts are now available in a unique range of CARBON COLOURS

* PURPLE * BLUE *
* GREEN * RED *

LATEST parts :
YZ-10 * YR-4 * W95 * STORM
TRUCK * CAT 2001 * KAWADA
special chassis, uses
Associated front suspension.

To receive a copy of our CATALOGUE and a sample CARBON-COLOUR part

tell us the make of your car and send £1 and a SAE to:
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DIY sheet and specials

Sheet	Price/Sq inch
2.0mm	29 pence
2.3mm	33 pence
3.0mm	37 pence

1/12th NEWS

Martin Filesbach & Ralf Helbing take 1st & 2nd places in the German Championships using special FIBRE-LYTE ASSO 12LS modified chassis's