FIRE-TRUCK

Part Two of Ian Peacock's review of Robbe's multi-function fire fighter. Getting it lit up and pumping water

HAVING GOT TO the stage of a basic bodyshell fitted to a rolling chassis, the fire tender starts to create the illusion of being 'nearly there'. However, nothing could be further from the truth!! Shovelling all the radio gear into what appears to be a vast amount of space, is, as the man said: "Where it's all at!"

The basic two functions to make the beast mobile is no real bother, particularly if one uses the *Robbe* recommended route.

In fact the entire control system is shown in diagramatic form on one of the two huge plan sheets and, given a good source of pocket money, the entire system of 'plug-in' modules can be purchased.

However, I, like most modellers, have a supply of 'cast-off' goodies in the junk draw, many of which can be pressed into service. However, for sheer convenience, I did use the *Robbe* speed controller (and *Robbe* plug and socket connectors throughout).

The first noticeable effect of powering up the beast was its terrific speed potential. Whilst it is not going to win any races, the fire tender has a goodly turn of speed, much faster than one might expect, and definitely too fast to run around the dining room. Wheel spin was the greatest problem (particularly) on the dining room carpet!) as only one axle is driven and smooth, 'scale-type' tyres are used. Still, with a vehicle of this type, one shouldn't expect to do wheelies. Driven sensibly, i.e. opening the tap gently, the truck moves off smoothly, with more than adequate power to achieve a speed that is definitely 'over the top', scalewise!

Steering is accomplished with a conventional servo system (except that there is no real need for a servo-saver and indeed one is not fitted!).

Because all four front wheels steer, extra effort is needed and a heavy-duty servo would not come amiss, and, of course, greater care needs to be taken with wheel alignment and all linkages.

So there it is, running, dashing about the dining room barging into the furniture and terrifying the cat, but this is just the beginning.

To make the rest of the system come to life, takes longer by far than just getting it to move.

The basic functions and the add-on gimmicks consume more channels than most of us have available and the route I chose was to press into service an anticipated, but very reliable *Futaba* M series 6 function outfit as below.

Right-hand Stick
(both axis spring-loaded)
Forward and reverse
Left and right

Left-hand stick
Left and right (spring-loaded — operate left and right movement of monitor nozzle.
Backward and forward (ratchet stick) — operate raise and lower of monitor nozzle.

Retract switch
Operate nozzle pump

Flap lever
Operate all auxiliaries.
e.g. Head and tail lights
Flashing blue lights
Two-tone siren
Diesel engine sound

This required some sort of sequence switching for the auxiliaries but it was the best I could do, not having a nine function outfit to hand (of course, for those of us that have to have a nine function outfit spare, there should be no problem, ha! ha!).

The comprehensive instruction book and two large plan sheets deal in moderate depth with all this (providing that *Robbe* parts are used) and only a modicum of commonsense is needed to create any necessary adaption. What the instruction book doesn't say, is that a goodly supply of that ever short product — time!! is a prerequisite, for the inclusion of all these extras is going to take you past the 'odd half-hour or so'.

I started with the lights. Head and tail lamps are supplied and full mounting details are given. Yellow flashing indicators may be fitted at the same time. Extra lamp bulbs are needed for these flashers, and for the flashing blue lights on the roof. Once flashing blue lights on the roof. Once more they can be obtained as *Robbe* spares, but I had already to hand 6-volt 'Grain of Wheat' lamps from *Proops* (an extremely useful source of all sorts of modelling goodies!). Clear plastic is supplied for the lamp fronts and the red and yellow fronts need to be tinted with translucent colour. I used *Hobbynox* Lexan paint which is pretty translucent and worked well.

The flashing yellow indicator lamps operate from an auxiliary 7.2 volt Ni-Cad (as do most of the ancillary items) and are controlled by a pair of microswitches driven from the steering servo. The plans and instructions cover this area fully and parts are provided to produce the operating cam. Any solid state flasher will do, but the very convenience of fitting the standard *Robbe* module was worth the few pounds spent upon it.

Head and tail lights are all wired together (remember that the flashing indicators are wired in series — don't do what I did and get the front L.H. lamp flashing together — its guaranteed to confuse other road users!).

The head and tail lights were checked out and then left for connection later, as, at this stage, I was uncertain as to just how I was going to switch them on!

Blue flashing lamps were also ex-*Proops* and are fitted inside the moulded blue lenses supplied. Once again, the relevant *Robbe* 'flasher' module was used to provide a more realistic effect. For cheapness, one module can be used to flash all three lamps, but the diagram shows three flasher modules. This might seem an unnecessary expense, but having used three, and having the three lamps flashing slightly out of synchronisation (just like the real thing) certainly improves the scale appearance. I suppose it is a justifiable argument about 'not spoiling the ship, etc., etc.' for with the kit costing in excess of £100 and the accessory package likewise, the extra tenner for these flasher modules might well be considered justified. Once more, the actual switching on of these modules was left until later on.

Having got the entire vehicle to the state where it looked like an illuminated Christmas tree, attention was turned to the monitor set. This was an extremely good set of moulded plastic and metal parts, that is a kit in its own right. Any criticism that could be levelled, is that it does not seem to be the right type of monitor nozzle for an airport crash tender. It is a 'water cannon' as fitted to boats rather than a 'foam nozzle' more associated with aviation use. One imagines that this slight digression from scale is 'manufacturers licence' as the monitor kit appears in several other places in the *Robbe* catalogue — noticeably on a 'scale' fire boat.

Either way, it does not look too far out of place and does make for extra working features.

Assembly is straightforward if a little complex and yet another *Robbe* accessory module is needed. This takes the form of a miniscule motor/gearbox unit to actually drive the monitor from side to side. Up and down movement is by virtue of a standard servo mounted beneath the cab roof. The problem comes in driving the motor/gearbox unit. Special modules from *Robbe* are apparently the answer, but they are temporarily out of stock and another method had to be found. Initially, a pair of micro-switches were fitted to a spare servo and operated as a 'two-pole changeover with centre off' and worked quite well. Power was taken from the 7.2 volt auxiliary Ni-Cad, which made travel a bit quick (the motor is rated 4.8-6v).

Richard Robertson, of *Star Electronics*, Leicester, came up with a better answer. A custom-built switcher, using a servo amplifier chip and working directly from the output socket of the receiver. This then is off at stick centre and drives the motor left or right with stick movement. It supplies the motor/gearbox direct from the receiver Ni-Cad (4.8 volts) but with a current consumption of only 30mA, it is unlikely to put any great strain on the system.

There is provision for 'limit stops' on the traverse mechanism, consequently one needs to be a little careful when operating or one can rotate past the 360° point and tie the whole operating system up in knots.

Having got the monitor nozzle all set up O.K. the next avenue to explore is the pump itself. Once more it is expedient to use the *Robbe* accessory pack which comprises pump, bottle and all tubes, fixtures and fittings.

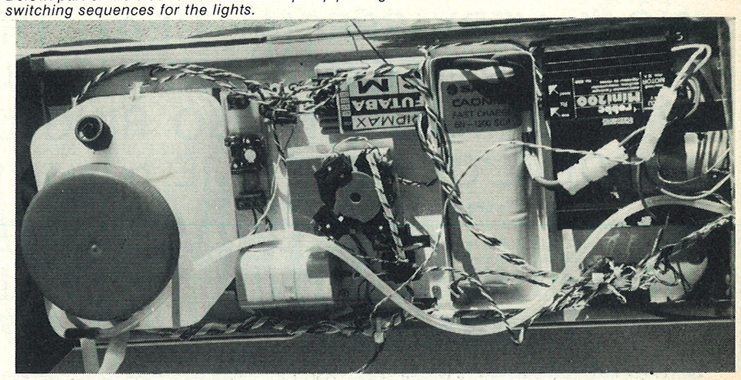
The bottle is approximately 1 litre capacity and takes up about 1/3rd of the main body space. The pump is a proprietary item (probably '540' driven) which produces a healthy jet of water and does not take many minutes to empty the bottle. Once again assistance was forthcoming from *Star Electronics*. Richard Robertson had been good enough to supply us with electronic ON/OFF switches for use in electric flight and one of these was 'robbed' from an aircraft and pressed into use as a simple method of turning the pump on and off. Needless to say, a servo operated micro switch would do just as well, as would the proper *Robbe* switch module. The pump system is perhaps one of the areas where the enthusiastic amateur would find suitable alternative parts.

Windscreen washer pumps and bottles can be obtained from local scrap yards for a few coppers, and will work just as well as the proprietary items.

So far, so good, now we have a runner that lights up and squirts water (this annoys the cat even more!). This leaves only the 'son et lumiere' switching to figure out.

Robbe are renowned for their scale boat kits and the detail contained therein. Much of this reputation is obvious in the fire tender. (The handrails, for instance, are 'boat-type' items!). Much of the 'add-on' goodies associated with scale boating is equally valid here. For instance, the sound generating modules. There are

Below: part of the electronics and water pump package. Centre is the micro switch/servo set up for multi switching sequences for the lights.



many such modules, horn, siren etc., etc., but only two of the many were fitted here. The Martins horn and 'diesel engine' sound.

The martins horn is that well known, two-tone 'Dee dah, dee dah' with which all emergency vehicles advise their arrival! The module for this has pre-adjustable controls for the high and low pitch and for the rate. It is fed from the auxiliary 7.2 volt Ni-Cad and is connected to a 4in. diameter loudspeaker. (Either the proper *Robbe* part as in our case or some other suitable speaker filched from a defunct radio, tape player, etc.).

The diesel engine sound module is a much more complex affair, having pre-set controls to cover virtually the whole of the sound spectrum. It certainly sounds very realistic when in use, but be aware, and stick closely to the diagrams and instructions when wiring up. Failure to connect the Ni-Cad to the modules the *right way round* can seriously damage the module and failure to connect more than one loudspeaker the right way round reduces the output noise by some 25% and may also damage one or both modules.

The really interesting gimmick in the diesel engine sound module is the 'auxiliary' input. This takes the voltage from the main drive motors and uses it to 'modify' the generated noise. The end result is the noise of the diesel 'ticking over' when the vehicle is stationary, with the diesel 'noise' speeding up as the vehicle moves off and reaching top speed 'noise' as the vehicle also reaches top speed! Dead cunning these solid state gadgets!!

Each module was fitted within the truck body with the loudspeaker in the roof. Holes need to be drilled in the roof to let the sound out and this looks messy from the 'scale' appearance. It was felt to be far better to make up two dummy grills from thin wire and thin strips of plasticard and fit these to the roof, following the old adage 'if you can't disguise it — accentuate it and make it look like it's meant to be there!

All that remained now was to figure a way to turn the sound and lights on and off. Again there is a special *Robbe* system for doing this, but for simplicity (and from the point of view of items to hand!) four small micro switches were fitted to a standard servo and operated by a cam cut from a plain output disc drive. By cutting this cam to suit, alternative switching sequences can be obtained. Either one function can be switched at a time or one can be switched on one at a time!! Confusing?? Not really!! One can switch each item independently (i.e. one can have only one of the four on at once) or one can switch sequentially (item 1, then 1 + 2, 1 + 1 + 3 and finally, all on together!) or one can produce any intermediate condition.

A good effect is to sequence so that one can enter the arena with everything on, switching off the martins horn upon arrival (but leaving the rest on). One can then turn off the head-lights (leaving only the blue flashers and the diesel noise) and if required leaving the engine noise on last!!

It is doubtful if more sophisticated control is needed for auxiliary functions of this nature, but should it become a requirement then solid state devices can provide the answer. One of my modelling colleagues has, in fact, come up with a solid state build-it-yourself unit that will allow you to independently switch on or off each item without any effect on the others, and all from one channel on the Tx! It is perhaps a bit top heavy for just a couple of auxiliaries but is indefinitely expandable and really comes into its own when a dozen or so switchable outputs are required. (Maybe this is more of use to the boat modellers but details can be made available if required!).

So now we are up and running with all systems 'go'! Care is advisable when setting out the electronics of the vehicle not only to ensure correct connections everywhere, but to endeavour to keep the wiring reasonably neat. Even *with* care, the insides tend to resemble a rats nest and makes fault-finding difficult.

Externally, the fine detail may now be added. Robbe's fire tender is not *exactly* scale (at least not as far as I have been able to ascertain. However, it *does* look the part and it would take some pretty knowledgeable purist to tell that you've got it wrong.

It does benefit from added detail. For instance, windscreen wipers! The box art shows two wipers yet the kit contains no parts nor are they mentioned in the text or drawings. Photos of the 'real thing' suggest that even the box art might be wrong. A windscreen of this size is more likely to feature three or four wipers, probably of the parellelogram type, hanging from the top edge of the screen. They could simply be made from microstrip and micro-rod and would add a bit of character. (It would not take an awful lot of imagination to actually make them work!!)

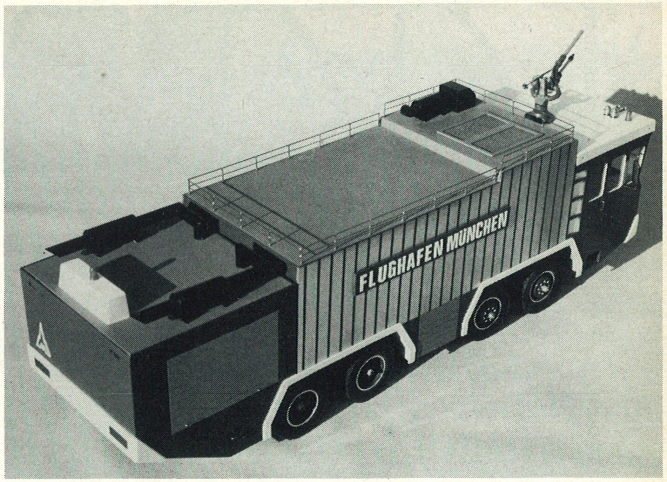
No door handles are mentioned and small pieces of piano wire, suitably bent, work wonders for the appearance. Lettering is provided, together with the logos, for front, back and both sides. However, the stick-on vinyl looks a bit amateur and in my infinite wisdom, I elected to give the letters 'body' (especially as the wording on the front of the 'real thing' are cast metal!) Consequently I contacted a specialist model railway firm who produced me a set of etched brass letters using the vinyl stickers as a pattern. The only problem with this route is then the alignment of the individual letters and this is not that easy, requiring a very steady hand. Just where one stops when adding such detail is very much a matter for the individual, but at the end of the day, too little certainly spoils the effect.

So at the end of that day, just exactly what have we got for our hard earned pennies??

Well, one does get a truly magnificent vehicle, if slightly suspect on scale! True, it does not come cheap, but then what does these days? In terms of the enjoyment potential per pound, the fire tender must rate tops for value. Many, many more hours enjoyment (and a degree of frustration!) were spent assembling, painting, detailing and fitting out, than I think I've *ever* spent on any other model vehicle (wheeled type that is!). The end result was truly worthwhile because a virtually unique truck results (don't know of any other eight-wheeler in this category). In terms of operating potential, it is a show-stopper!! True, one is not going to win races, but as a demonstration item it has no equal. Mine is, I'm sure, going to be in great demand over the coming months and years.

More people have queued up 'just to have a go' than with any other wheeled model that I have ever seen.

So, if you are bored with just two functions on your buggy, yet do not have the incentive to scratchbuild 'Smokey and the Bandit's' truck or that all singing, all dancing military 'go-anywhere' vehicle, maybe the *Robbe* fire truck is the thing for you!



Above: Robbe's 'Fire Truck' ready for some serious fire-fighting.

Technical data:
Length: 28ins.
Width: 7¼ins.
Height: 12ins.
Weight: Up to 10lbs. dependant upon fitments.

	Part No.	*Price*
Basic kit	3625	£124.19
Fittings kit	3626	£18.74
Speed controller	8299	£38.94
Pump	1564	£21.09
Motor/gearbox	4124	£13.27
Martin horn module	8291	£9.78
Diesel Sound	8276	£22.76
Loudspeaker	8075	£5.31
Flasher Module (orange indicators)	8220	£8.21
Flasher module (blue roof lights)	8302	£8.17
Micro switch	4030	£1.70

Available through most good model shops, but if any difficulty is encountered contact the Robbe distributor for assistance.

Distributed by:
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