

FIRST 1/12 ELECTRIC FWD CAR

CAMBRIA SAAB

AS A practising enthusiast for front wheel drive (owner and ex-owner driver of two Minis, Renault TL5 and Volkswagen Polo) I was eager to see how the promised Cambria SAAB tackled the problem in miniature. Happily I was lucky enough to receive one of the first two hundred cars that went out and got down right away to building my kit. An 18-page A/4 (11¼ x 8½ins) size instruction booklet provides a well documented path to a satisfactory model, and there everything is covered in a sensible logical sequence.

The kit comes in a stout box with the various stage-by-stage parts in separate lettered packs resting in two long trays each side of the bodyshell included. Apart from jumping the gun and sticking the tyres on the hubs as a first step, I followed the book starting with Pack A and working through steadily. First stage gets the motor mount parts installed in the front of the alloy chassis plate. (Perhaps later on Cambria will offer a special fibreglass chassis plate as an alternative — I was tempted to make one up but refrained).

Pack B introduces the first part of the exciting front end drive and steering in the shape front axle shaft. This is a double ball-ended shaft and I slipped it on the lathe to polish it sweet as a nut with a slip of emery paper. Not an essential job but it all helps to a trouble free unit. Drive gear is attached at this stage though not locked in place. Then come the Pack C parts with the left and right hand wheel hubs and bushes and the steel stub axles and stub axle collars. These parts are bits that really matter.

Some of the early kits went out with their front hub oilite bushes flush with inner face of the hub when they must be flush with outer face. Do not clout them with a hammer to get this right but press them back in a vice. You will need a large nut or piece of metal with a hole in it big enough to take the bush clear and another bit of metal or wood that will clear the steering arms. Close the vice firmly and the bush will go back to its right place. (Cambria say tap them back — I still think they ought to be pressed!) This will ensure that if raced your car will not be disqualified on scrutiny for being over-wide — if not racing it does not matter. You may still be very fractionally over-size so check overall width at a later stage when it may be desirable to rub down wheel and hub to reduce by about 1/32 or less each side. Again a little emery paper to polish up the stub axles pays off.

Now comes the time with Pack D that it really begins to look like a FWD car! Front suspension units are screwed in place with the self tappers supplied and the hubs put in place with the steel kingpins. The two little drive pins that go through the axle ball ends move freely in their holes, so be careful not to mislay them at this stage. Once the hubs are in place they are held there safely.

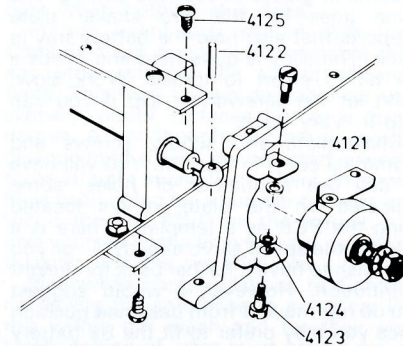
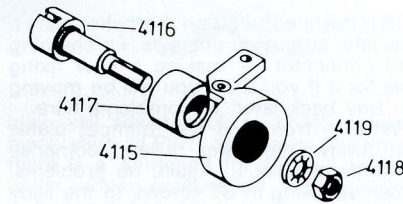
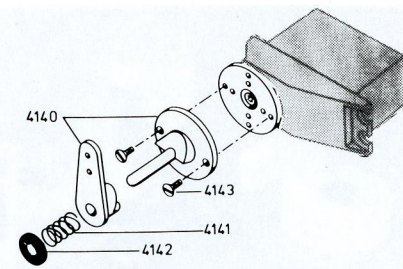
Quiet interval after the excitement: Pack E sets up the rear end — perfectly simple operation Pack F involves fitting the battery tray and locating the nicads in place. See that the right hand (looking from the rear) pack has its red lead facing backwards otherwise you will have to

rearrange the wiring diagram later. Join up with the block connector supplied. Two cable ties (battery straps) are provided to retain the three-cell packs. They will anchor even more securely if you slip a short length of servo tape under each side. Then fit the ties, draw up tight and cut off surplus. A tip from the designers here: Weight distribution is an important factor in FWD cars so drill a couple of holes ¼in back from the holes already on the chassis plate to enable the whole battery tray to be slid backwards if any further trim suits your style of driving. You may have to relocate the charging lead connector at the same time (Pack K).

Back to the front again with Pack G. Again a simple process of fitting the motor and pinion gear. Motor has a certain amount of swing. Do not fit too tightly (cigarette paper clearance is about right).

Steering set-up is quite cunning. Servo saver unit fits directly on to the radio servo output disc. Try your servo for size — I noted that the larger Futaba servo will just not go in the space between battery tray and steering complex: smaller FD16M fits. You will need a clockwise servo here — the red one with Futaba, or marked with a C or a K. (Anti-clocks are black) Pack I contains the various steering rods, end connectors to set up the steering. I do not really like servo tape as a fixer though it could be used. I used it only to hold my servo in place for preliminary adjustment and then drilled holes to take a more rigid mount from the junk-box (I never know what becomes of the mounts that come with some servos!) Now you really have the front wheel drive unit able to show its paces. I could not resist fitting the wheels at this stage (although it does not come on until Pack L).

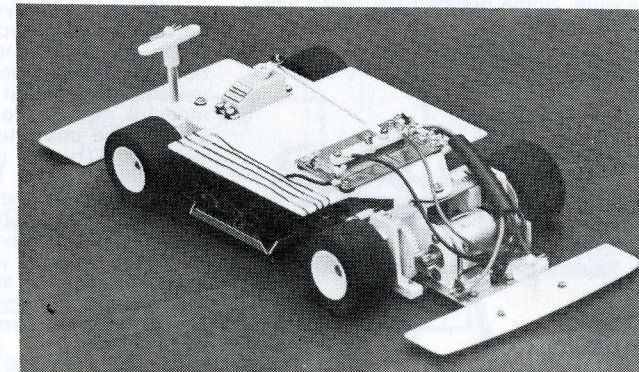
Printed circuit board for speed control and the resistors are assembled next. The

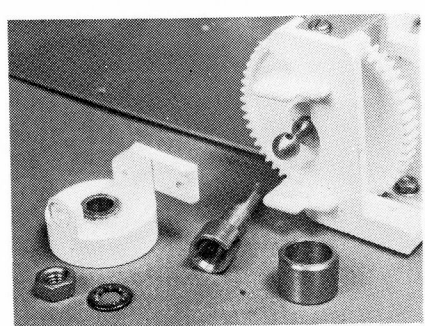


Heading: Completed works car in black with flash and clear screen and side windows.

Above: Illustrations from Instruction Manual — a very comprehensive production.

Right: Car ready to go. Control panel can be moved rearwards to provide room for a driver.





I found that my shaker plate did line up with the predrilled holes on the rear axle hangers intended to take the screws. They also had a little ridge on them that seemed to serve no useful purpose and was not mentioned in the instruction booklet. New screwplacement is not so strong so perhaps it would have been better to move the holes forward a trifle to line up. A case of wise after the event!

Final stage before you can get the chassis operative is to follow the excellent wiring up diagram. Some leads can be shortened to avoid loose leads here and there. A sleeve is provided to neaten the control/resistance assembly.

There remains the bodyshell to prepare. A stout ABS Saab body comes with the kit. Excess material is cut off in the usual manner: I use large scissors for the first cut, then turn up with straight and curved small scissors — nail scissors come in useful. Leave some of the wheel arch when trimming up. Fit to chassis, enlarge popped holes for the body mounts and smooth up edges neatly with glass paper.

If you just want a fun car then follow advice and paint the windows white or silver, or what you wish. For competition use rules require that windows are cut out and possess a transparent windshield; side and rear windows must be clear or open (Rule IX (p)(q) General Specification). Before cutting them out make up a paper template of windshield shape and side and rear windows if you intend to glaze them. Allow a little extra all round for sticking them in place. Drill a few starter holes in the parts you are going to cut out and insert scissor point to get cutting. Do not try to get to the very edge with scissors or knife, leave this for a final trim up with glasspaper wrapped round a flat or curved surface according to need.

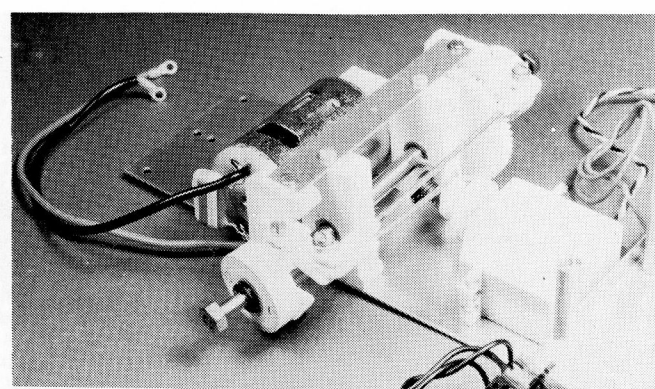
ABS can be sprayed with car touch-up paint or any of the special paints in a wide range of colours now available for car bodies. Black is a recommended colour to match prototype but I do not like it for a model it makes it look smaller than ever and can be unsighted in a dim hall at a distance. Try a good bright colour combination. Light blue and yellow are Swedish colours and make a good visible job. Clear plastic sheet windscreens and glass go on last. The ubiquitous Evo-stik will do the work for you. Coat the parts of screen that will be adhering and also the inside of the body where the panels will go. Allow to dry then place firmly in place taking care to get location right first time — that is so there will be no

FWD Components.

Control panel detail.

Front end assembled; servo placed temporarily in position.

Right: Circuit diagram.



shifting about adjusting. I have a car (Ford Escort — early Mardave) whose windows have stayed put now nearly two years.

Now comes the moment of truth: running. Connect up leads and charge up the ni-cads. Since a FWD car involves a great deal more potential friction loss than a more normal layout I suggest that two or three charges of the batteries running free supported from the ground will not come amiss. This should get the universals well bedded in — remembering to give them a little touch of grease (not oil) before beginning. Other friction points, wheel bearings etc can have a little, not too much, oil. I use one of those Peco Electrolube oil-pens.

I have not said anything much about Rx and battery. There is far more room for manoeuvre with this car than usual, and these fairly heavy items can be adjusted to get balance right. Since the drive is at the front then balance should start at about 60/40% with front the heavier end. This

may well adjust back to 55/45 or even more. With all FWD cars (large and small) there is a tendency for the tail to wag under sudden acceleration. Theoretically it is bad practice to cure this by adding weight or by putting weight outside the wheelbase but sometimes it will effect a cure when nothing else does.

In any event you should find your Cambria Saab much more tractable than any other without the aid of siliconed tyres. This may still be desirable on very slippery indoor surfaces but to a lesser degree. A last thought maybe: do not be disappointed if you do not start winning races straight away. Rear wheel drive cars have been going for a number of years and this is the first FWD on the market: just give yourself a little time to learn its special qualities and the we shall see.

Meanwhile congratulations to Cambria for having the enterprise to put a car like this within our reach and for their very kindly pricing of what must have been an expensive job to tool up.

