



OLD TIMER

Memories of a model plane

35 YEARS AGO I received an engine from a kind, elderly gentleman. I used to call him Uncle Nilsson, but in fact he wasn't my real uncle.

This happened during spring time, and the engine was placed on a shelf for a couple of months while the then eleven years old Bo Gardstad earned money for the future use of the item. I was working hard in the potato fields belong to a farmer south of the city of Malmö to obtain money for balsa, spruce, japan tissue, ether, paraffin oil, castor oil and everything else that was needed for a motorised free flight model at that time.

Uncle Nilsson was the owner of the house where my mother and I rented a small flat. He had watched my progress with rubber

From Sweden comes the delightful vintage model designed by Bo Gardstad

powered models in the local club and felt sympathy for the little boy and his mother, who had no money for more-advanced equipment.

ED Bee

The engine was an ED Bee. It was a diesel engine with the cubic content of 1cc and it could deliver 0.1 hp from what I remember. The propeller was fastened with a spinner with a small hole in it. You could tighten it with a piece of 3mm piano wire. This was a

nice feature of the engine for an adjustable spanner was not included in my tool collection yet.

A propeller in the exciting new material "plastic" was the first purchase from the potato money and to my luck Uncle Nilsson mixed a pint of ready made diesel fuel. I had jig-sawed out a motor stand from a plank and during a beautiful afternoon in June in the small yard of the house, I started flicking the propeller. Uncle Nilsson, who was enjoying his Saturday rest was looking at me through his window, glad to see that the boy had advanced this far.

After two hours my patience was at an end, and so were almost all the drinks of Uncle Nilsson. He had a somewhat blurry but compassionate expression in his face when he started walking up to me wondering what was wrong with that stubborn engine. He was a strong man, in his mid forties and with great strength he gave some violent blows to the propeller.

Red Cross

Now it is time for Aunt Nilsson to enter this story and trying to comfort Uncle Nilsson with Red Cross equipment and consoling words. So Uncle Nilsson went back to his – short term more pleasant, but long term more dangerous – hobby again. He left me in the year with one of my first small doubts of the power of the all mighty grown up world.

No, that engine didn't start until 14 days later when another kind man called Marty at the hobby shop told me that there was something called a compression screw at the top of the cylinder that was to be adjusted.

After many days of blood sweat and tears I learned to manage a model diesel. The oh so alluring smell of diesel fuel started to be a habit of my life and the clubmates fiddling with rubber motors were quite out of date.

I was entering the creme de la creme of the Model Club of Malmoe.

I was also a great contender for the noise pollution prize of the neighbourhood, which up till now had been in the possession of a young owner of a 98cc mini motor bike.

From Marty I also received a packet of ribs and some balsa. I started to build my first engine powered model aircraft. The summer evenings were spent in a mist of balsa glue and balsa wood instead of at the street corners, where most of my friends had started to sniff the fumes of petrol, two stroke oil and to some extent the perfume of the local girl population.

The design was my own, but followed the lines of most of the designs from that time. I hadn't named it yet – the first test flight should produce some appropriate name.

At that time we used to trim and fly our models in the meadows and beaches of Oeresund, the sea outside Malmoe. There were vast areas of grassland, used extensively for harvest twice a year. It was a beautiful place and we often cycled down to the place with the models on our carriers.

I had built an F-model, as the class was called in Sweden at that time. The motor time was 20 seconds and max flight time was 180 sec. We had no money for timers then, so fuel was filled to a mark in the transparent plastic tank at the rear of the engine. Not a very exact method, as we soon will learn. (Takes me back to a Slicker Mite with an Albon Dart – Ed).

Neither had we money for a 360 sec timer. Some of us used D.T. fuses, but my model wasn't fitted with such an extravagant feature.

Ready to fly day

One of the last days of July last year I cycled quite alone to the meadows. My model was ready to fly, carefully strapped to the carrier. The maiden flight was to take place in splendid isolation. I was to trim and learn to fly the model in secrecy and appear at the next contest and take the prize – to my clubmates' immense astonishment! Who needed advice and help? Not this young forthcoming World Champion.

A completely idiotic theory, then and now.

The wind was blowing in the wrong direction, but the test flight was to be short. I filled the tank for 5 seconds duration and



Don't be fooled by the snow, they do have some excellent summers in Sweden. 'Old Timer' pylon style model will be familiar to many British F/F contest modellers.

was dead certain of the time. I had made a lot of motor runs and measured the time at home. The sun was shining, larks were singing in the sky and my heart was beating a lively melody. The model was already flight trimmed at home.

After three beats the motor fired and as the engine at once burst out into a steady song I heaved the model into the air. But I made one great mistake. the compression screw had needed further adjustment.

Immediately the motor entered a slow idle. Slowly circling, the model rose up into the air. After half a minute the engine was still running. The model was on its way up into the clouds and was slowly disappearing out of sight over Oeresund. I could see it catch a thermal then it crossed the beach and went out over the water.

I never saw the model again.

I cried and snivelled for a whole week. My model flying life was low for almost a year and it took a long time before I would build a motorised free flight again.

Now, many years afterwards I can look at the whole story in the perspective of the grown up person. But I am still convinced that that loss set deep marks in my young soul. There is so much of work, aspirations, hope and feelings in the building of a model aircraft that such a loss can be disastrous at that age. Why me? What had I done to earn this? I had toiled, laboured and I had not been evil to small children. Those questions, well known to all of us adults, were suddenly very real to me.

Never make light of the loss of a model or a crash for a young boy or girl. Give consolation, help and encouragement in building a new one like never before.

Here she flies again! If you have read the story above you know how the story Bo Gardstad's first F-model ended. Not until now, 35 years later has he built the same model again. But now, with the assistance of RC, there is only a very small risk of a new loss. Read and look and you will be tempted

to build one of your own. Because this is not only a nostalgic Oldtimer but the perfect beginner's choice – if you don't feel forced

to choose one of the usual trainers, of which there are 13 to the dozen.

The Model

The model "Oldtimer" is the F-model of my youth, but with RC equipment in its stomach and some RC design features in the design. In this way I have arranged that the model always turns back to its master and so that the design is better adapted to the weight, strains and speed of modern RC flight (and of the less than agile flyers - Ed).

The choice of motor may vary very much on such a design as an Oldtimer. .15-.25 should be the best for normal flight but you may attach such a small motor as a .10 engine. A four stroke engine would of course be extremely well suited and from .20 to .35 is possible.

The model was constructed during some hectic months at the end of 1986. From the start I just built a prototype, inspired from the Oldtimer trend in RCM&E and here in Sweden. But my clubmates Ture and Lars were so delighted by the lines and the idea of an Oldtimer, that they quickly built two more models from pre-production plans.

Ture is an elderly gentleman who had tried to learn RC flying for many years without success. He finally succeeded with the Oldtimer. With this model he had plenty of time to sort out right and left in the air, and this model was the first one he built that stabilized itself in the air when he neutralized the stick. I was very pleased to see his progress - he taught himself to fly in a month.

OLD TIMER

The design was all right from the start. We only had to redesign some parts of the fuselage to be able to remove the tailplane, which was one of my aims with the model in order to pack it easy in the car.

F-Crates

We used to call them "F-Crates" here in Sweden in the fifties. I guess there is a similar nickname in Gt. Britain. There were many design available at that time, but they all had something in common. The wing had a double dihedral, was mounted on a pylon and often had elliptic wing tips. The fuselage had a fairly large square cross section (there was a rule about a minimum frontal area).

We flew them with .09 engines and 20 sec motor duration, which later was reduced to 10 seconds.

They were rather difficult to trim perfectly because the engine lifted the model in an almost vertical climb, sometimes ending in a loop with an abrupt finish. To avoid this we trimmed them to curve in a tight spiral. When the engine quit, the circles had to be wider to enable the model to catch thermals.

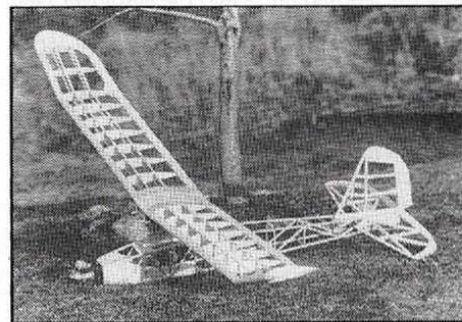
In order that the model wouldn't disappear we mounted the stabilizer with a mechanism so that it could flip up in a 30-40

degree attitude and the model could gently stall down. During flight the stabilizer was held tight to the fuselage with hard tightened sewing thread which was burnt through by a short 180 seconds fuse.

Eternal Shape

An interesting fact is that these F-models looked quite alike for over three decades. They were born in the forties, were blooming in the fifties and were slimmed a little in the sixties. Even in the seventies you could win a free flight contest with one of these pylon models - with some luck.

You may build the Oldtimer to revive the flights of your youth, but you may also



Simple open structure should appeal to 'real' modellers. Note thick bi-convex wing ribs and vertical webbing between spars for part span.

choose the design in order to have a model for safe flying. It will fly very well without RC gear. But in that case you will have to do a lot of jogging...

The pylon mounted wing Oldtimer models are in fact an ideal beginners choice if you look at the flight envelope. They are virtually impossible to stall - they will sink like a parachute however much up elevator you keep. They will also return to level flight as soon as you neutralize the rudder. Normal trainers will do this very slowly, or even just keep on turning in a spiral dive.

RC Oldtimer

The "Oldtimer" looks like, but isn't, a genuine Oldtimer. The model has been changed to fit RC on the following points:

1. The cambered or thin free flight profile is replaced by a semi symmetric, fairly thick wing profile, which makes the model easy to trim.
2. The CG point is at the normal 25-30% from the leading edge and the stabilizer has a symmetric profile. The F-models almost always had a lifting stab and the CG close to the trailing edge.
3. The wing is of a simpler design than that of the real oldtimers.
4. The thickness of the longerons is increased to 6x6mm from the usual free flight dimensions 3x3 or 4x4.
5. The wing has spars from spruce and webs from ply to withstand the stress of the extra weight of RC equipment.
6. The fin is larger to give a more stable flight - this model isn't intended to float around and search for thermals by itself!

But we have kept the following attractive attributes of the old F models:

1. The stabilizer is removable, if you want.
2. The pylon mounted wing with its double dihedral that maintains extreme stability. The fuselage is hanging down under the wing as in a parachute.

We covered all our Oldtimers with opaque Excelcote. It produces a fine Oldtimer look, almost identical to fine Japan tissue or silk. An advantage of this is that you may easily inspect the inner parts, including the RC equipment and the tank through the covering.

This is fine if you have made a fine framework at the building table. Otherwise ordinary film is better...

Choice of Engine

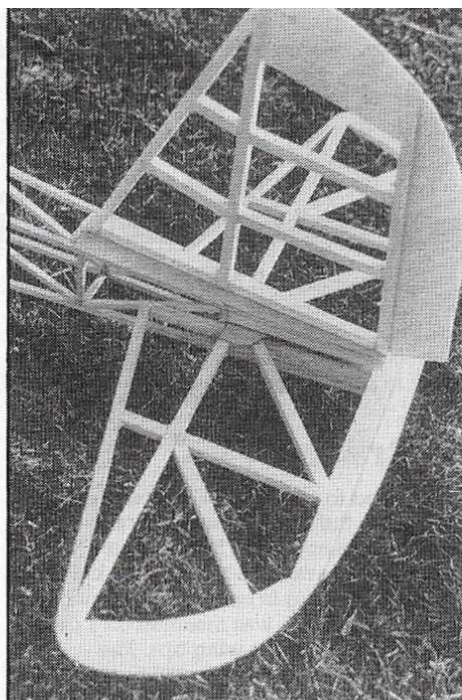
The engine choice is very interesting with these models. Different engines will give quite different planes to fly.

If we start at the lower end you may fly the Oldtimer with as small as .09-.15 engines. This will produce a very docile model, like a motorized glider. In this case, don't fit an undercarriage.

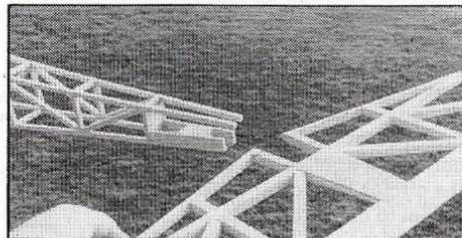
If you want the 'action' option you should choose at least a .20 engine. Now the model starts to climb almost vertical like the contest models of the fifties.

The .25FSR engine is the best choice, by my standards.

A very special derivative of the formula is born when you fit a racer .25. This model zooms up to 200-300 metres in 10-20 seconds with a deafening howl. I had a temporary permit for three starts per weekend from the noise committee in our club when I momentarily fitted an



Relatively generous rudder requires minimal movement under high engine power - a good case for dual rates. Elevator is much more modest.



Tailplane houses into fuselage rear end, infill pieces hold the unit firmly in place.

OS25VDFD with no silencer! But the show was imposing and so was the long, slow glide down with shut down engine. I'm sure the total sound volume was less than the continuous buzzing of the ordinary .25.

Another brand of the make is of course an Oldtimer with a four-stroke at the front end. From .20 to .35 is possible and of course you then fit an undercarriage with big ballooney wheels. The result is a model which quite resembles the early RC-planes of the fifties.

Building

The Wing

Build the wing on the plan, on a building board. Put household film over if you want to keep the plan clean. The design is very conventional but you must decide whether you want a divisible wing before you cover the middle parts.

Build up the two inner parts and the outer parts by themselves and lean the ribs to the appropriate angle before you attach the wing parts to each other.

The very special leading edge is obtainable here in Sweden (all the parts of the wing are the same as the parts for the upper wing of my Josephine design) but there should be look alikes in Gt. Britain.

The Fuselage

Those of you readers who are not oldtimers by age, may think it is an enormous job to build up a "bird cage" type of fuselage as of the Oldtimer. Actually it takes about the same time as the box type fuselage of a modern trainer when you know the way it should be done.

First build one side directly over the plan,

using a soft building board as a support. If possible let this dry overnight while doing other things in the evening! Put household film over the side and build the other side on the other. Use pins to 'nail' them together while the glue is drying. Use white glue. You will end up with two identical halves.

Now join them with formers 2 and 3. When this glue has dried, go on with formers 1 and 4. Now you have a steady structure for your future building and if the structure was straight and the angles were 90 degrees you will easily see from the plan how to proceed.

The Pylon

This is a piece that you have probably never seen on an RC plane before, if you are under 30. You saw it out from 4mm ply (or from two laminated layers of 2mm ply). Sink it down into the cuts of formers 2 and 3. Glue carefully! The fuselage is hanging down from the wing via the pylon.

Sand it and curve it before you glue it into place. It is much easier that way.

Engine Mount

The engine mount adds much atmosphere to the model. If you use the Oldtimer as a trainer or want it to look like a contest model - use a nylon mount. A more antique look will appear with bearers of hardwood and a softly curved nose.

RC Installation

Rudder and elevator are small on the Oldtimer. This is to give the model an authentic look and at the same time it will make it a good trainer. But don't be fooled by the size of the rudder - it is surprisingly effective on a pylon wing model. I can easily do barrel rolls with the prototype!

There is of course plenty of room for a standard flight pack. In order to hide the antennae, install an extra pushrod tube in the fuselage.

Flying the Oldtimer

You can fly the Oldtimer in different ways, depending on what memories you have.

If you had your active years in the forties or fifties you have probably fitted a small engine or a four-stroke. Your flights will then be at a slow pace a couple of feet over the grass, and your joy is simply looking at the model, its colours and the reflections of the sunlight in its covering material.

If you are one of the lucky ones (?) who first experienced the art of RC flight, you may try to remember those days by avoiding use of elevator and throttle control, just guiding the aircraft with the rudder only.

If you were flying in the sixties, there may be reasons for installing a hot engine and only use the throttle as a shut off device. Its an impressive show (well worth showing on a display!) to see the Oldtimer climb like a rocket into the sky. When the motor has howled for 10-20 seconds your close the throttle and may drift around for 5-10 minutes, searching for thermals. You will be comforted at the thought that you will never have to light that dangerous fuse again to get it back.

Modern transmitters, with dual rate controls, are useful for this model. Use the lower rate rudder movement under power and full movement when on the glide.

The glories of the past are not lost forever.