Nieuport Type 28

R/C Scale Model Instructions

CONTACT INFORMATION
The Nieuport Type 28 was designed by
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Nieuport Type 28

Thank you for purchasing the Nieuport Type 28 model for electric flight.

The Model

Model By Gary Ritchie
As seen on the September '07 cover of
Quiet Flyer Magazine

Described by many as the most elegant fighter plane of the First World War, she typifies fast scouting aircraft. Although by no means the most successful type of the conflict, the Nieuport 28 fully deserves its place in aviation history.

This model has been high on my building list for many years and I have finally managed it. The main thing that had always put me off in the past was the round fuselage shape. I have never been exactly fond of drawing up lots of former shapes, but have, with this model found a way around the problem. Whilst I realize that my solution is possibly a bit heavier than a former and stringer type of assembly, it is only marginally so. When you take in to account the weight of the Nicad pack the model will be carrying, it becomes clear that lack of nose weight is not going to be a problem.

Model Specifications

More than 140 laser cut parts

Scale:	~1/9
Channel:	R/E/T
Wingspan:	36″
Wing Area:	316 sq in
Weight:	23 oz
Power System:	Speed 400 with Mini-Olympus
Prop:	9x4.7
Wheels:	Balsa & plywood, Neoprene foam tires
Airfoil Type:	Flat bottomed
Cowl:	Built up balsa and plywood
Spinner:	N/A

CONSTRUCTION

I have attempted to keep the construction of the Nieuport 28 as uncomplicated as I possibly could. The only point that you need to remember is that my models are designed to fly, not to bounce. Even then, because of their lightness, they will probably suffer less damage than with larger and heavier models.

WINGS

The mainplanes are always a good place to begin construction. Not only do you get them out of the way before you lose or damage any of the ribs, but you can work on the basic panels while the glue is drying elsewhere. Pin down the trailing edge and the spar. Then glue the ribs in place. Ensure that the top wing root ribs lean in slightly (using the dihedral gauge, RAG) to allow for dihedral, but that all other ribs are upright. The tips and leading edge may now be added and the panels allowed to dry.

Once the wing panels are dry, remove them from the building board and trim and sand them to shape. Now the top wing panels can be joined using the ply dihedral brace and both sets of wings have their root bay sheeting added. A little more sanding and the wings are ready to cover.

TAIL SURFACES

The tail surfaces should be trimmed and sanded before the elevators are joined. Don’t forget to solder the control horn to the joiner before gluing the elevators in places though; it gets a bit complicated otherwise.

COWL

Although the construction of the cowl is quite straight forward, it is likely to take some time to get it right. This is simply because of the amount of trimming, sanding, filling and yet more sanding involved. The cowl is a quite predominant feature on the Nieuport 28, so take time to get it right.

Construction is commenced by gluing the strip of 1/32” ply around the two C1 formers, cyano works well for this task. Glue C2 in place and then trim and sand your cowl to shape. Once you are totally satisfied with the shape of the cowl, it should be thoroughly filled, primered and sanded very smooth. It is very important that there is no wood grain showing one the finished cowl.

FUSELAGE

This is the point at which construction becomes a little unconventional – no means more difficult, just unusual.

The basic fuselage frame is built in two separate sections, the sheet nose section and the rear built up part. Once these are completed, they are then joined over the plan, and have the stringers, formers and sheeting added. I know that doesn’t sound particularly unusual, but it will, when explained more fully.

Commence assembly by adding the spruce (or bass) struts to the sheet sides. Once completely dry, these are joined over the plan using formers F1 and F2 and the ply undercarriage mounts. It is vital importance for you to ensure the center section struts align accurately, so check and double check before allowing the glue to dry.

Now attach the motor plate in the slot in the side sheeting and glue firmly in place.

The rear, open frame basic box is assembled in the usual manner using cross braces and is joined to the front section.

This is where things begin to become less normal. Add Formers F1A, F1B, F2A, the cockpit floor and all the decking around the nose section. Assemble and roughly sand the balsa hatch to shape and tack glue in place. Use the templates provided to mark the ends of the hatch and remove the balsa down to the lines for proper shape. Carving out the inside of the assembled hatch can save additional weight. Trim and sand the nose area to shape. Cut the top and bottom stringers to the shape shown in the side view, but adjust their depth to match that at the position they fit against F1A and F2A.

All the side stringers are produced in similar fashion, but are all cut over-deep. Now you will need to trim and sand a curve into the side stringers until your fuselage looks like that of a Nieuport 28. Once you are completely satisfied with the shape of your fuselage, remove the hatch block and add the sheet fillers between the stringers. More trimming and sanding next, I’m afraid.

Add the tailskid plate and bind the undercarriage wires in place before binding and soldering them to the axle. Using the template carve the headrest to shape, but do not fit it until after your model is covered.

COVERING AND FINISHING

With the exception of the cowl, which is scaled and painted, my model is covered entirely with LiteSpan, using BalsaLoc as adhesive. Whilst, I would not usually recommend painting an entire model because of the weight it adds, there’s not much option with the N28. All the paintwork on my model is done using Humbrol enamels, including the markings. (Krylon spray paints also work well) Do try to keep the amount of paint to a minimum or you could end up with a seriously overweight model.

Downloadable decal outlines are being developed. Check on-line at http://www.aerodromerc.com/decals.htm to see if one is available for this model.

ASSEMBLY

This is where you find out how accurate your center section struts and strut plates are. Accurately align the top wing with the fuselage and epoxy it in place on the center section struts.

Do insure that it is truly accurate, since everything else will be assembled using the top wing/fuselage as a guide. Mark and cut away the bottom root wing panel cutouts in the fuse side sheeting.

The panels should now be glued in place using the interplane struts and top wing as a guide to accurate alignment. It is worth mentioning that on the full size aircraft, there was no dihedral on the bottom wing. So the slightly, Star Wars look is scale.

Make up your elevator pushrod, fit it to the horn and glue the ready-hinged tail plane and elevators in place, sliding the push rod into the fuselage as you go. Check for alignment with the previous assembly and allow to dry before fitting the fin and rudder.

You should now be looking at an almost complete Nieuport 28; the cowl being glued in place after the motor is fitted.

RADIO AND MOTOR INSTALLATION

Although the plan shows the approximate location of the R/C gear, this is dependent on the gear you actually use. In my model, the servos are fitted to 1/8”x3/8” spruce rails in the normal fashion. The elevator push rod fits into either an adapter on the servo output arm or is “Z” bent. The rudder linkage is via closed loop of 25Lb. Breaking strain nylon fishing line. Mine runs directly from the ply control horn to the servo output arm.

A Speed 400 motor using 7x500AR cells on a 2.33:1 Mini-Olympus gearbox provides motive power for the model. I used a wooden propeller of around 11x6. Use the battery pack for fine-tuning the balance.

FLYING

Whilst the model will take off from a grass strip, it does need to be a fairly smooth grass strip. However, since she is easy enough to hand launch, a less smooth strip isn’t a problem.

Whichever method you use to get your model airborne, you will find that the climb out will be stable and reasonably fast. Once you have made some height and made any trim adjustments required, you should be able to throttle her back and cruise around nicely. The model is no problem to fly, but is must also be remembered that she isn’t a trainer. She is mildly aerobatic and performs loops and stall turns with ease. Full rudder and elevator will produce the type of flick roll that a Pitts model would be proud of, it’s just a pity that it isn’t very scale like for a Nieuport 28.

Landings, either under power or ‘dead stick’ are very straightforward, just don’t try to hold her off for too long. The stall, when it comes, may not be very violent, but at three or four feet of the ground it is far from funny.

Once the motor cuts, it is time to liner her up and get her back on the ground in fairly short order. Allow her to sink at her own pace and use only minimal amounts of elevator. A little flare and a slight bounce later and it’s time to recharge her and start the while process again.

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