

# Live Wire "PURSUIT"

## Assembly and Operating Instructions

### Design notes ...

Your Live Wire "Pursuit" is a high performance multi-channel R/C model, not intended for the beginner to radio control. This airplane requires multi-channel equipment for operation, not because of its stability, it has ample stability, but instead because of its flying speed and extreme agility. Things happen very quickly with the "Pursuit" and it covers ground in an awful hurry, hence elevation control via elevators, plus engine speed control is very necessary for ease of flying. It is felt that 2 channels is a minimum of control for it, and better yet would be more channels and a more versatile type of control such as is available with 5 to 10 channel equipment.

The design itself is unique in that it possesses a great deal of inherent stability. This feature takes a considerable load off of the pilot, inasmuch as the model is capable of flying itself, to a certain extent and that it recovers from all maneuvers automatically simply by neutralizing the controls. It has no spinning tendency and thus high angles of attack present no particular problem (the "Pursuit" will spin readily when proper control is given for this maneuver). In general, the model is steered with the rudder and the ailerons used only for lateral control and associated maneuvers such as various rolls. The model uses a NACA full symmetrical airfoil, which allows equalized inverted maneuvers, and also adds considerably to the stability of the model. With this symmetrical airfoil, a center hinged aileron can be used which means greater efficiency without any yaw moments. Also adding to the efficiency and overall performance is the "neutral thrust"; this means that all power is being used to pull and fly the airplane and that thrust is being applied equally no matter what position the airplane may be in. You will find many other unique design features in the "Pursuit" which have been developed over the past 2 years and that when all are added together they give you a most useable and outstanding R/C design!

You will note that the structure is simplicity itself; in the end this is a golden asset in that it allows you to assemble the model quickly; it also gives you the greatest strength-to-weight ratio. Then too, simple graceful lines do have considerable beauty and thus the "Pursuit" is a pretty model to look at also! The use of the interchangeable R/C unit is an expense-saving accessory if you own more than one airplane; it allows easy bench checks and equipment changes out of the model, and most important too, is that you have no equipment mountings or problems within the airplane itself. The removable landing gear will be appreciated for the weight it saves and the lack of wing damage and repairs should you land roughly. The aileron control system is the result of a lengthy search for a useable system which would reduce the linkage weight, be easily installed, and provide the least of maintenance. As shown, the servo is kept in the R/C unit for complete interchangeability and to reduce wing weight, however, if desired, it may be mounted in the wing in place of the bellcrank shown. You will find the aileron hinges to be as simple as any and yet they are a hinge which will stand up under considerable abuse. Most of the other features follow the proven Live Wire philosophy and are things which you are undoubtedly already familiar with.

Choice of power for the "Pursuit" is an important consideration. If you are a "sport" flyer there should be no necessity to use any thing larger than a .35 engine. If you are after the ultimate in performance a bit more attention should be given to this point. The consideration is that this is an extremely "clean flying" airplane, and as such, it does not require nearly as much power as would some other design. Too much

power can be a detriment in that the airplane gets to flying so fast that it becomes difficult to keep up with it and that it is possible to build up some extremely heavy "G" forces should you enter a maneuver at high speeds.

We seriously recommend that you give attention to the weight-power chart on the drawings and choose your engine accordingly. This chart comes from considerable practical experience with the original model and can be of great help to you with yours.

Before commencing assembly, you should decide exactly what sort of control system you plan on using with it. If this is done beforehand, and the R/C unit completed before the model is started, it will greatly speed up the model's construction and the end result will be a more satisfactory job too.

### Assembling the "Pursuit"

#### R/C unit ...

This is a simple box as you can see. Assemble it from the parts furnished just as the drawings show; be sure to keep all sides square to each other, and when completed give it several coats of clear dope or Epoxy Resin to keep it clean.

#### Equipment installation ...

With the box finished, you are ready to install the mountings for the equipment. The "Hillcrest" battery box is fastened to the front as shown with short screws and "blind" mounting nuts. The "B" battery box is made from 1/8" sheet and is installed as shown.

If you have less than 8 channel equipment, you will have to choose between aileron and rudder control or possibly interconnect them according to instructions from someone with experience in that sort of thing. Actually, the airplane will fly well with either control but there are advantages to be weighed. With ailerons the rate of roll will go up but smoothness of turning will suffer. With rudder the rolls will be wider but turns will be smoother and in addition you will be able to tail spin the model.

In mounting the servos for less than 8 channel, simply leave out the one which will not be used, install all others in the position shown and no problem will be encountered with the balance of the model.

All servos are mounted on the 1/8 x 1/4 maple strips. These strips should be fashioned to fit any peculiarities of particular servos and fastened to the servos with wood screws. The length of the strips should be cut, so that the servos mount in the unit in the positions shown, and so that the strips form part of the box as indicated. With the strips fastened to the servos, cement can be applied to them and the whole unit slipped into its place to assure proper alignment. This can be repeated for all the servos. Note that there is a 1/8 x 1 pine strip which runs crosswise of the box just aft of the receiver. This is a mounting for the on-off switch and for the disconnect plugs which are normally used between the receiver and the servos, etc. The female disconnect plugs are fastened to a small piece of plastic and the plastic in turn is screwed to this mounting strip. A hole is drilled through the strip to serve as a mounting for the switch.

You can now study the box and visualize where you might want to get at something which is inside it for adjustments, etc. Within reason,

openings can be made in the box where desired. After making the openings, add a vertical doubling strip at each end of the opening to replace the strength which was lost.

### Wiring the equipment . . .

The wiring system will vary according to the equipment used, of course. In any case, do follow the makers' instructions relative to this. However, no matter what the system, the same method can be used in wiring your equipment within this R/C unit. First, attach all necessary wiring to the receiver. Try to group these wires so that they can be twisted into cables as they come out of the receiver. These cables are then cut off at a suitable length and soldered to the male disconnect plugs, so that the plugs can be easily plugged into the stationary female receptacles. You may attach the necessary wires to each servo, out of the unit, of course. Take these wires from one servo and twist them into a cable. Now, place the servo in its place within the unit and locate a convenient route for the cable from the servo to the disconnect plug. Be sure that the cable will not interfere with some other servo, and then cut the cable where it comes to the plug. Remove the servo and repeat the sequence with all the other servos. You should now have the servos on your bench each with a cable coming from it. Arrange the servos and the disconnect plugs on your bench in the same general arrangement as they will have within the R/C unit. Now, taking each cable separately, solder the wires to the disconnect plug, repeat for all the servos. The on-off switch is wired to the battery box and to the disconnect plug in the same way outside of the unit. You should now have a completely wired rig which can be picked up as a whole and inserted into the unit. Once in the unit the equipment is placed on its mountings and screwed in place.

Your radio equipment can now be checked for operation, being sure that it all performs satisfactorily right down to the last detail. It should be easy to see that any future detailed inspection can be made by loosening the servos and lifting the entire rig out onto your bench; this is a smart procedure at least once a year.

### Structure assembly

If you have built Live Wire models before, you will see that the "Pursuit" follows the same basic practice used with the others. These methods have been well proven and you should refrain from major construction changes if you expect your results to equal those attained with the original model. If you are new to R/C, follow general control line building practice, rather than free-flight methods. In any case, be sure to pay careful attention to the aft portion of the model; sand these parts extremely well, and be careful not to add any additional or unnecessary weight; this will help maintain a true C.G. location and remove any need for nose ballast.

If your model will have less controls than those indicated, build all the controls just as shown. The control surface which will not be used can then be cemented in place and thus made inoperative.

### Wing assembly . . .

This is a straight chord wing with 10 degrees of dihedral and a full symmetrical airfoil. We strongly advise you not to consider reducing the dihedral even though this may be a temptation. Considerable experimenting was done with dihedral and the results showed that the angle used is superior in all respects including lateral control and inverted flight.

The wing structure is built on a flat surface, one panel at a time. Jigs are used to assure alignment and when the two panels are nearly complete they are joined for the dihedral. The aileron linkage is installed after the wing is nearly completed. Both wing panels can be built over the same drawing, minus the wing tips which are added after the two panels have been joined. Proceed as follows:

Take the wing jig pieces and erect one at each rib trailing edge as shown. Pin the full length 1/16 x 2 trailing edge skin to these jig pieces. Cement the shorter inboard trailing edge skin to the long one and pin it also to the jig pieces. Pin the lower 1/4 sq. spar in place. Then cement the tip rib to the trailing edge skin and spar, follow with the 1st inboard rib. Now, cement the leading edge to these two ribs, checking alignment carefully. Now, with these parts in place, cement the remaining ribs in place, once again watching alignment. Install the 1/8 x 5/8 aileron spar. Next, take the 1/16 x 13/16 main spar fill in material, and cut it to fit between each rib. Cement these pieces in place. Do the same with the 1/16 x 1 fill in for the trailing edge sheeting. Install the top main spar. Next, fabricate the plywood aileron hinges, and sew them as shown. Install the small balsa filler blocks for these hinges as shown. Assemble the aileron complete except for the top skin. Now, cement the aileron hinges to the wing; pin in place. Next insert and cement these hinges to the aileron. Add the remaining skin to the aileron. Now, the top trailing edge skins can be added; install the longest one first. Fabricate the spar splices as shown. Cement these splices in place as indicated. When all is dry, remove from the drawings and repeat the procedure with the second panel. When first starting this panel remember that it will be "flopped over" so that top is bottom, etc. and use the completed panel as a guide to be sure that the two panels will match exactly when the time comes to join them. When the 2nd panel is completed to the point where the splices were installed, allow it to dry and remove from the drawings. Now, take the 1st panel and pin it in place on the jig again, take the 2nd panel and erect it onto the splices without cementing. Check all fits and the dihedral measurements against the drawings. Take some strip material and use it for props on the 2nd panel tip so that you can align the tip rib with the bench top. When you are sure of the fit and alignment remove the panel from the splices and apply cement to all splice joints, reassemble the panel to the splices and double check alignment. Now, the top leading edge sheeting can be added to the 1st panel, plus all cap strips. The 1st panel wing tip can also be added. When all this has dried remove from the bench and place the 2nd panel in the jig. Apply the leading edge sheeting, cap strips and tip to this panel as with the 1st. When dry remove and install the 1/16 plywood main spar splice. The landing gear block fits into the space between the main spar and leading edge as shown. The landing gear block is cemented to a substructure made up of 1/4 sheet. Follow the details of this on the drawing and assemble it so that the block fits tightly in place as shown. With this substructure completed, cement the landing gear dowels in place, and then the landing gear block.

The bottom leading edge sheeting is now installed and the bottom rib cap strips. Before the center section sheeting can be added the aileron linkage should be installed.

First, install the center section plywood bellcrank mount. If a wing mounted servo is to be used build a platform for it from the 1/8 x 1/4 maple strips as you did for the others in the R/C unit. This platform should be arranged so that the strips will be cemented to the wing skin when completed; arrangements will also have to be made for an access opening for the servo.

With the bellcrank mount in place, lay out the location of the aileron

pushed on each rib. Pierce each rib at this point with a 1/16 hole. Now, take 1/16 push rod wire and bend it at the center so that the bent wire matches the wing dihedral. Make 4 plywood push rod fairleads and then slip the wire through the ribs putting the fairleads on as required. Now, assemble the flexible cable and tubing as shown, bend the tube around some suitable size object to get a neat bend. Fashion each cable assembly so that it fits as shown; cut the cable to size leaving about 1" exposed from each end of the tubing. Push one end of the flex cable all the way into the tube. Then, carefully sweat solder the other end's entire exposed area. Push this soldered end completely within the tube and sweat solder the remaining end. Adjust the cable in the tube so the ends are equally exposed and be sure that it push-pulls about 3/4" very freely. Now, fashion the two brass tubing push rod-cable connectors. Sweat solder a cable connector to one end of the push rod, and in turn, sweat solder one flex cable to the connector. Temporarily fasten the cable assembly in its final place and repeat for the opposite aileron. When both assemblies are fastened to the push rod, and temporarily in place, check for freedom of movement. When all is perfect, bind the two cable assemblies to the ribs with thread and cement as shown. Fashion the bike spoke aileron push rods as indicated and hook up the ailerons. Adjust the length of the pushrods until the pushrod assembly is centered when both ailerons are in neutral. Check for freedom of action, there should be no drag to speak of. With the ailerons in neutral, locate the point in the center section where the bellcrank link will be, fashion it, and solder it to the push rod with binding. With the ailerons still in neutral, fashion the bellcrank, and using the push rod link for a guide, locate the position of the bellcrank pivot bolt exactly. Drill this hole and mount the bellcrank to finish the linkage assembly.

Now, finish covering the center section with sheeting and add the 1/16 x 3/16 fairing strips to the aileron openings. Make access holes for the aileron linkage and for the landing gear rubberbands.

With the wing completed, use a long blade knife, and a sanding block to work it down to final shape, remove all irregularities and finish it off to a real smooth surface. For those who build for durability, the vulnerable spots of the center section can be protected with Nylon cloth applied and coated with Epoxy Resin.

### Stabilizer assembly ...

The stabilizer is built up as a "flat" structure right on the building board to assure alignment; then the airfoil is sanded into it, using a long sanding block. Start, by pinning the 1/8 x 3/4 main spar in place. Next, block the leading and trailing edges in place as shown. Then fill in between them with ribs cut from 1/8 x 3/4 stock as required. Add the tips and bracing. Align the elevator leading edge spar with the stabilizer trailing edge spar. Cut 1/8 x 3/4 stock ribs to size and pin in place. Align and cement the tapered trailing edge to these ribs; add gussets and the tips. When all is dry, remove from the drawings. Cover the center section of the stabilizer with sheet as shown. Next, fashion the wire elevator horns, bind and cement them to the elevator spar. Now, taking a long sanding block, work the streamline airfoil section into the stabilizer and finish sanding to a smooth surface. Finish sanding the elevators. When both units are finished, install the Dacron hinges as shown and cement well. Set aside for covering.

### Fuselage assembly ...

The basic structure of the fuselage is the 2 lengthwise keel pieces and the bulkheads between them. To this is added the top formers, stringers, and covering. Then the bottom wing fairing, cowl blocks and covering.

The base on which the fuselage is built is the bottom of the keel pieces which is a straight line. The parts will be assembled on the top view of the fuselage.

First, take the two keel pieces and pin them together with the best matching edges down. Use a sanding block and trim these edges to perfection. Now, cut the two tapers and the stabilizer saddle as shown; both sides should be identical. Now, take all bulkheads as furnished and be sure that the bottoms are absolutely square to the sides, assures perfect alignment.

Take bulkheads number 3 and 5 and cement the required vertical stiffeners to them. With this done, pin all bulkheads in their places on the top view of the drawings. Install the 3/16 x 1/2 longitudinal stiffeners which run from bulkhead no. 1 to 5. Now, cement the two keel pieces in place. Taper and cement the two forward fuselage sides in place. Cement the engine mounts in place and their reinforcing. Add the vent extensions to the fuel tank and cement it in place. Cement bulkheads 1A through 8A in place and add the 3/16" sq. stringers to them. Add all reinforcements and gussets to this area. Now, cover these bulkheads with the 3/32" sheet. This sheet is cut and tapered to fit from stringer to stringer; there is a break at bulkhead 5A. There will be 8 pieces in all, 4 aft of 5A and 4 forward of it. Fit these pieces one-by-one in place and get the curvature into them before pinning and cementing. The curvature is obtained by dampening the outside with water and working the curve in carefully between your fingers; fitting it to the formers as you go. A word of advice: some balsa just will not bend and it is not always possible to furnish perfect bending balsa; if it should happen that your stock is not bendable replace it with some that will. Apply these skins, one at a time, cementing them to the stringers and their edges. Next, cement the fin fairing block in place. While this is drying the fin should be built.

The fin is a simple structure built much like the stabilizer. Assemble it, and when dry, remove and sand to a streamline shape. Sand the taper into the rudder and hinge it to the fin in the same manner as the elevators. Square the tip of the fuselage fin fairing block up and cement the fin to it. Add the dorsal fin in rough form; it can be shaped while finishing the fuselage.

Now, the fuselage is removed from the building board. All internal reinforcements (nose section), gussets and stiffeners are added. The wing fairing sheets are added and then the wing saddle reinforcements. The wing is now fitted to the saddle, checking alignment carefully. Next, add the aft fuselage covering, bottom nose covering and bottom cowl block. Now, fit and cement the engine cowl blocks in place. When dry, take a long bladed knife and a sanding block and work the whole fuselage down to contour and sand until smooth. Next, drill the hole for the tail wheel dowel, fashion the tail wheel fork and mount the wheel. Cement the dowel into the fuselage, slip the wire fork through it and bend at 90 degrees at the top. Solder the metal horn to this wire extension to complete the job. To add durability, vulnerable spots about the nose section can be covered with Nylon cloth applied and coated with Epoxy Resin.

### Checking alignment ...

Before thinking of covering the model, it should be assembled and all wing and tail angles checked against the drawings for accuracy. This is done by installing the landing gear on the wing, then the wing and tail onto the fuselage. Now, choose a flat surface such as a table top and set the model up on it by blocking up the rear portion until the bottom of the keel piece is parallel to the table top. Measure with a ruler and block until you get equal readings front and rear. Now, measure from the leading edge of the wing to the table top (at its junction with the fuselage);

then get the measurement at the trailing edge in the same manner; subtract the two and the difference should be 9/16". Do the same thing with the stabilizer-elevator and the difference here should be 5/16". It's important that these differences should exist, so if necessary, rework the saddles until you do get these differences in measurement. You will now have the correct incidence angles in the wing and stabilizer.

Next, block the landing gear as required until you get equal measurements from each wing tip to the table top. Now, measure from the stabilizer tips to the table top. If the stab tips do not have equal measurements, rework the stabilizer saddle until they are equal. Now, lay a yardstick along the center line of the fuselage (top) and be sure that the fin is parallel to it. The model is now ready for covering and doping.

### Covering the model ...

For a long-lasting model and lightest weight, we suggest the use of silk for covering (not furnished with kit). If colored silk is used, only the wooden parts of the model need be color doped which means a cheaper and lighter paint job. If the whole model is color doped, white silk will work fine.

Proceed as follows: Sand the entire model's structure well with fine-sandpaper. Then apply a heavy coat of clear fuelproof dope. Sand lightly till smooth. Apply a second coat and sand smooth again. It is best to apply the silk one section at a time, for instance 1/2 of the top of the wing, 4 sections to the wing in all. The same for the fuselage, top, sides and bottom.

Take the silk and iron it with a moderately hot iron until all wrinkles have been removed. Then cut a section slightly larger than the section to be covered. Arrange the silk on the section so that the grain of the silk runs the long way of the section. Lay it on as smoothly as possible. Pin the silk in place at one corner. Now, draw the silk taut across the narrow way of the section. Now, pin the silk in place at intervals across this taut section. Next, go to the extreme end and draw it taut the long way and pin it in place here. Should there be any wrinkles or loose spots remove them by stretching and pinning the silk. When the silk is laying perfectly smooth, dope through the silk onto the wood at the short end (crosswise). Then, dope a narrow strip to the wood lengthwise as near to the center of the section as you can. Now, starting at the doped crosswise end, dope the silk down to the wood along the outside edge stretching it taut lengthwise and crosswise as you go. Repeat this procedure with the opposite side. You now have the silk fastened smoothly down to the section. Repeat this with the remaining sections of this portion of the model. When finished, wet the silk wherever there is no wood, and it will shrink as it dries. When the entire model has been covered it is ready for doping.

The first coat of dope is applied to the silk rather slowly. This is done by using a small amount of dope on the brush and spreading it around as much as possible with a vigorous action with the brush. Try to make each brushful go as far as possible. In this manner, the dope can be kept from seeping through the silk. Additional coats can be "painted" on much more quickly. When you have two coats thoroughly dry, sand the structure well with fine sandpaper removing any and all imperfections. Apply two more coats and sand until smooth when dry. Repeat this operation once or twice more and/or until the pores have been sealed. The model is now ready for color to be added.

Choose one of the color schemes suggested and follow the drawing for trim, or else make up a good looking scheme of your own. If you can spray the color on, it makes a smoother and lighter job of it. In any

event, use just enough colored dope to cover, any more just adds additional weight. When all trimming has been finished give the whole model one coat of clear dope for protection.

### Preflight check ...

If you followed the chapter on checking alignment you are ready to complete the preflight check out. Assemble the model completely and place it on the table again. It's best to run through the previous alignment check again, just to be sure. Now, pile up some books so that the fuselage will rest on them and the wheels clear the table top. Place a piece of 1/2" sq. wood under the wing at the center so that the model will balance on it. Mark the spot where it balances with a pencil; then measure back from the leading edge 4 1/2"; the model must not balance aft of this spot. Anything up to 1" forward of it will be O.K. Add ballast if necessary!

When finished, balance the model on this piece of wood again, only this time check it spanwise. It should balance very closely on the dihedral joint of the wing; if it does not, add weight to the high wing tip until you can get an indication of balance on this point.

### Flying the "Pursuit" ...

No matter how experienced you may be, it is smart to check your model out thoroughly before its first flight. The following questions can be used to help on this score.

1. Have you completed the pre-flight checkout including incidence angles and C.G. location?
2. Does your radio operate according to the manufacturer's specs?
3. Do all actuators operate normally and neutralize correctly?
4. Have you checked all batteries under a load?
5. Have you thoroughly tested the engine for operation; does it run steadily and idle correctly?
6. Have you tuned your receiver at a distance; not just a rough tune close by etc.?
7. Have you wound the escapement rubber if used?
8. Is the wind blowing less than 10 mph for this first hop?  
Better to wait than be sorry with an untested model!

If you can answer "yes" to all of the above, you are ready for your first flight!

The "Pursuit" is a fast and relatively heavy airplane, thus unlike some of our other models, very little can be learned about it by trying to test glide it by hand. However, using another procedure, and with the multi-controls available, we can learn quite a bit about it without ever getting off the ground. The procedure for this goes as follows:

Choose a smooth take off area which will allow a ground run of at least 200 ft. Start your engine and set it at its lowest speed, release the model and add just enough power so that it will roll on the ground. Allow the model to taxi about and try the rudder control so that you can become accustomed to its response. The model will be directionally controlled at all times with rudder, not the ailerons. The ailerons will lift a wing quickly but will not change the model's course easily. After taxiing a bit take the model to the head of the runway and head it directly into the wind; now apply about half power and allow it to start a take off run; as it runs down the runway note any turning tendency and if one starts, retard the throttle immediately instead of trying to steer it out of the turn. Make corrections for the turning tendency; check the wheels for alignment or drag; if OK compensate for the turn with a tail

wheel adjustment. If the turn starts late in the run, it is probably aerodynamic, so correct with 1 turn of the rudder adjustment. After changes have been made, go back to the head of the runway again and with the model headed directly into the wind, apply half power and allow the run to start. If the model holds its heading well for the first few feet, increase the power to full and allow it to continue.

If you require steering corrections, use short beeps of rudder applied in succession; never hold a rudder control on during a take off run. Also, quit beeping the minute you see the model start to correct itself; these are the secrets to successful take offs. If the model shows no sign of lifting off after 2/3 of the runway has been used, retard the throttle; do not horse it off with the elevators! Bring it back and try again using full power all the way this time; if this doesn't work decide whether it was showing signs of lifting or not. If it looked promising, increase power by engine alterations or a larger engine. If no sign of lift was present, go back and repeat the pre-flight check, something is not right somewhere!

Once you are in the air, note any turning tendency and correct with one turn of the rudder adjustment at a time. Also note the horizontal flight attitude, the model should normally fly quite flatly with little tendency to climb. If a nose-up attitude is present, it may tend to wander and be hard to fly straight. Correct for any nose-up tendency with a 1/16" shim under the leading edge of the stabilizer. When the model is flying flatly you can climb by applying a momentary bit of up elevator; this will point the nose up into a climb and the model should proceed for some time this way before leveling off again. When it comes to landing under power you will have to use a different sort of approach than you would with a "high wing" or "Bi-Plane" model; power-off landings are the same as with any model.

With power on, cut back to low speed at a considerable distance from the touch down spot, and allow the model to descend until it is about 15 feet high and pointed towards you. With the model headed towards you, leave the elevator alone and add or take off power to change the altitude and maintain a steady descent towards the landing spot. It is most important that you should make a long and low approach with the model under full control, as it flies quite fast and any "last minute" altitude corrections are extremely difficult to get in. You should fly it in so that it is practically on the ground as it gets to the spot and with a small bit of power on, at the last minute take the remaining power off and your touch down should be pretty as a picture! Try to refrain from using elevator all during the approach, as elevator control at low speeds is mushy and you tend to overcontrol; as a result it usually louses up the approach.

You will find that the "Pursuit" is a completely maneuverable airplane; on a par with anything in the air today. There is no known maneuver which it will not perform well, and there are a few that it will do which are not even in the book yet! So you can expect to perform any that you are capable of and the others will come with a bit of practice! We strongly recommend the use of a "trimmable and self-neutralizing" elevator servo; the reason is that if a small amount of down trim is available the model will fly inverted equally as well as upright without holding any elevator control on. Only change from upright flight is to switch to aileron control for steering; reason being that right aileron is right aileron inverted or upright. If you steer inverted with rudder, you must remember that right is left and vice-versa, and tougher to do!

The "Pursuit" may not be the ultimate in our R/C progress, but it does seem to be awfully close to it at this time. It was only a few short years ago that we were dreaming of flying a low wing radio model in the fashion of a full scale fighting machine, and yet here we are today,

with an extremely reliable one which can do many things which the full scale "Pursuit" pilot would never even dare attempt! We feel that you have a mighty fine model in your "Pursuit" and if it is treated with reasonable respect it will respond with most enjoyable results. May we wish you the best of luck with your flying and great success along the way!

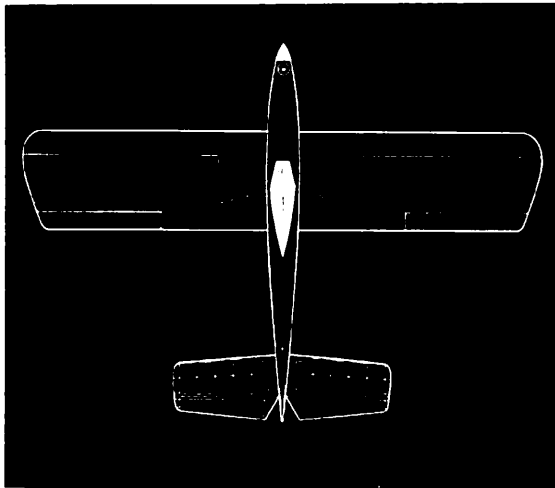
dmeco models

## Parts Listing Live Wire "Pursuit"

Wing...	2.. 1/4 x 7/16 x 31	Leading edges
	4.. 1/4 x 1/4 x 33	Main Spars
	1.. 5/16 x 5/8 x 32	Shaped aileron leading edge
	7.. 1/16 x 3/16 x 24	Cap strips
	2.. 1/8 x 5/8 x 20	Wing aileron spars
	2.. 1/16 x 13/16 x 31	Main Spar fill in
	2.. 1/16 x 1 x 31	Trailing edge sheet fill in
	4.. 1/16 x 3 x 33	Leading edge skins
	6.. 1/16 x 2 x 33	Trailing edge skins
	3.. 1/16 x 2 x 33	Center section covering
	2.. 1/16 x 2 x 33	Aileron skins
	1.. 1/4 x 3 x 8	Spar splice material
	1.. 3/32 x 1/2 x 30	Aileron spars
	2.. 1/8 x 3/16 x 32	Aileron fairing strips
	1.. 3/16 x 5/8 x 8	Filler blocks (center section T.E.)
	2.. 1/16 x 3 x 7 1/2	D.C. ribs and tip parts
	17. 1/16" sheet	Machined wing ribs
	2.. 1/16" sheet	Shaped wing tips
	1.. 1/16" Plywood	D.C. hinge & splice parts
	1.. 1/4 x 1 1/2 x 4	Maple landing gear block
Fuselage...		
	2.. 1/8 x 2 x 44	Main side keel pieces
	1.. 1/8 x 2 x 20	Aft fuselage doublers
	2.. 1/8 x 1 3/16 x 31	Forward fuselage sides
	2.. 1/8 x 1 1/16 x 23	Wing fairing pieces
	1.. 1/16 x 2 x 33	Bottom fuselage covering
	4.. 3/32 x 3 x 20	Top fuselage covering
	6.. 3/16 x 3/16 x 20	Longerons
	4.. 3/16 x 2 1/2 x 19	Stiffeners
	2.. 3/16 x 1 2 1/2 x 5 7/8	Fore and Aft stiffeners
	1.. 1/4 x 3 3/16 x 3 1/2	No. 3 bulkhead
	2.. 1/8 x 3 x 8 1/2	D.C. Blkhd. No. 3B, 5, 6.
	1.. 1/8 x 3 x 9 1/2	D.C. Blkhd. No. 3A, 3C, 7A, 8, 8A.
	1.. 1/8 x 3 x 11	D.C. Blkhd. No. 1, 2B, 1A, 2A.
	1.. 1/8 x 3 x 11	D.C. Blkhd. No. 5A, 5C, 7, 7B.
	1.. 1/8 x 3 x 11	D.C. Blkhd. No. 4A, 5, 6A, 6B, 8B.
	1.. 3/16 x 2 1/2 x 9 1/2	D.C. wing saddle and gussets
	1.. 2 x 2 1/2 x 2 5/8	Nose block
	1.. 1 1/16 x 1 7/8 x 9 3/16	Tail fairing block
	1.. 1 1/8 x 2 5/16 x 3 3/4	Lower Cowl block
	2.. 5/8 x 2 5/8 x 4 1/2	Side Cowl blocks
	2.. 3/8 x 1/2 x 8 5/8	Maple engine mounts
	1.. 3/16" dowel	Stabilizer mounting
	1.. 1/4" dowel	Wing and L.G. mounting
Fin & Rudder...		
	1.. 1/8 x 3 x 9	D.C. Rudder and dorsal fin
	1.. 3/16 x 1/2 x 7 1/2	Fin post
	1.. 1/8 x 1/2 x 19 1/2	Fin rib and spar material

# ~~LIVE WIRE~~ PURSUIT

## ASSEMBLY and OPERATING INSTRUCTIONS



DeBolt Model Engineering Co.  
BUFFALO 15, N. Y.

### Parts Listing Live Wire "Pursuit" (cont.)

#### Stabilizer & Elevator...

- 1.. 1/4 x 3/8 x 28
- 1.. 1/4 x 1/2 x 27½
- 2.. 1/8 x 3/4 x 36
- 2.. 1/16 x 2 x 20
- 1.. 1/8 x 1/2 x 19½
- 1.. 1/4 x 7/16 x 27½
- 1.. 3/16 x 5/8 x 23
- 1.. 7/16 x 1¼ x 4

#### Removable R/C unit...

- 3.. 1/8 x 4 x 8½
- 2.. 1/4 x 4 x 3¼
- 1.. 1/8 x 1/2 x 19½
- 1.. 1/8 x 1 x 3½
- 1.. 1/8 x 1/4 x 18

#### Hardware...

- 2.. 8/32 x 1¼ bolts
- 4.. 8/32 nuts
- 6.. #4 x 5/8 screws
- 1.. 1/32 x 6 wire
- 1.. piece dural stock

Shaped stabilizer leading edge  
Stabilizer trailing edge spar  
Main spar and rib material  
Center section covering  
Elevator rib material  
Elevator leading edge  
Shaped elevator trailing edges  
Filler blocks

side and bottom sheets  
end pieces  
reinforcing  
switch and terminal mount (pine)  
maple servo mounts

- 2.. 1/16 x 27 wire
- 1.. 1/16 x 35 wire
- 1.. formed dural gear
- 1.. formed dural horn
- 1.. plastic R/C canopy