



Smoke Signals

Monthly Newsletter of the Meroke RC Club

March 2009

AMA Gold Leader Club #458 - established 1963

Saved by T.R.A.C.K.

There are some acronyms that are born of pain. The acronym "TRACK" falls into that category. Prior to taking off, it's standard procedure to check your plane and electronics prior to takeoff. There are too many ways to crash your model aircraft, remember - TRACK. This article is printed with the permission of Mike French, Director of Flight Instruction of the SCCMAS club in Santa Clara County, California.

T is for TRANSMITTER. There are three "T"s in transmitter. Time of flight start, Time remaining of transmitter battery power and Trim settings for the plane.

(1) Check the elevator, aileron and rudder trim for neutral flight setting. If there are switches that need to be set on the transmitter to a specific orientation, check them at this point as well.

(2) Unfortunately there is no gas gauge on your plane. Use your timer to measure how much time you have left.

(3) Look at the displayed transmitter battery voltage indication. Will the transmitter hold up for the full length of the intended flight

R is for RUN-UP. It is not uncommon for the two cycle engines to load up with excess fuel and choke upon application of full power. Not being able to sustain takeoff power is a principle cause of crashes. Be sure that you can accelerate the engine RPM to max and then return to idle without having the engine complain. Be sure in the initial setup phase of the aircraft that you can achieve zero power while in flight, to be able to shut the engine down with the transmitter, in case of a genuine operating emergency.

A is for ANTENNA. There have been a few incidents of planes losing control because the pilot(s) forgot to extend the antenna to maximum length and the aircraft flew outside the viable transmission range. Best check

that the antenna is fully extended each time before flight.

C is for CHANNEL PERMIT [Frequency Pin for 72MHz]. Call it what you like, but one of the absolute rules of the field is that the frequency channel is used by only one flier and anyone else on that channel have their turned-off transmitters placed in the impound.

K is for CONTROLS [pardon the pseudo-German, kontrols]. It is very important that the control sense and magnitude of each control surface be verified. Left flight control stick causes the left aileron to come up. Right stick, right aileron up. Back stick, elevator surface up. Left rudder stick, rudder deflects to the left. There has been a few incidents over the years when fliers didn't realize that the aileron control was reversed and attempted a takeoff.

Meroke Calendar

March 5 th	Club Meeting 8 PM - Show & Tell
March 19 th	Club Meeting 8 PM - Meroke Club Auction
March 28 th & 29 th	Model Airplane Exposition at the Cradle of Aviation
April 2 nd	Club Meeting 8 PM - Show & Tell
April 16 th	Club Meeting 8 PM - Program to be announced
June 7 th	Annual Meroke Open Fun Fly
July 19 th	Come Fly with Us
September 13 th	Annual Meroke Picnic at the Cedar Creek Aerodrome

Meetings are held the first and third Thursday of each month at 8:00 PM at the First Presbyterian Church of Levittown located at 474 Wantagh Avenue. The church is about 1 mile north of Exit 28N on the Southern State Parkway. Additional information can be found on the club website - www.meroke.com.

Don't Forget to Pay Your Dues

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Friends of Cedar Creek	George Carley	Ed Wiemann
Building Program Archivists	Charlie Lando Ron Berg	Ernie Schack Stan Blum
Webmaster Social (Coffee) Raffles	Ted Evangelatos Irv Kreutel Curtis Underdue Ed Wiemann	Al Hammer
Show and Tell Video Librarian Audio/Visual	Bob Cook Tom Cott	
Come Fly With Me Open Fly-In TAG Program	Charlie Lando Ernie Schack Charlie Lando	Dave Bell Dave Bell
Monthly Fun Fly One Fly Dinner Picnic	Chris Mantzaris Ted Evangelatos Jaclyn Tavorario Chris Mantzaris	Gene Kolakowski Jaclyn Tavorario Nick Giuffre
Contest Directors	Allen Berg Ernie Schack	Tony Pollio Tom Scotto
Flight Instructors	Allen Berg Douglas Frie Mark Klein Ken Mandel Tony Pollio Bob Reynolds	Ted Evangelatos Dan Gramenga Gene Kolakowski Tim Murphy Mike Hagens* Bill Streb
*Flight Instruction Coordinator	Mike Hagens	Al Weiner 516-546-6773

From the President

"We are only two months into 2009, but we have all of our programs planned for the remainder of the year thanks to the many members who have stepped up to volunteer to run the various programs and activities and thanks to the dedication of your clubs officers and directors who developed the plan for 2009. Following is a brief summary of the many 2009 programs and activities that make the Meroke R/C Club the premier R/C Club on Long Island.

The membership role is in the process of being updated and we have applied for renewal of our club charter. A membership committee has been formed to help recruit new members, retain existing members, involve newly elected members in club activities, and produce a new club brochure for dissemination to prospective new members.

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AUCTION

At the second meeting in March (19th), we will have the almost Annual Meroke Auction. If you have anything that you want to have auctioned off - please bring it to the meeting. You can set a minimum bid for any of your items. As in the past, Mark Klein will once again honor us with his always exciting presence as our auctioneer. If you have any questions, contact either Mark or our Programs Director - Jaclyn.



Congratulations

New Senior Pilot - Nick Giuffre

New Members - Kevin Urso and Tom Tavorario

Our website has been updated and we continue to produce an outstanding Smoke Signals newsletter.

In January, we participated at the Levittown Hall Flea Market sponsored by the Nassau Flyers. We have a committee to coordinate our participation at the Cradle of Aviation on March 28th and 29th. A Pattern Flying Primer is being coordinated and scheduled for May. The date for our Open Fun Fly (Fly-In) has been set for June 7th, the field has been reserved, and we have received our AMA sanction for this event. We have submitted our application to the AMA for another TAG Program Grant and are scheduling Tag/Come Fly With Us activities for July and August. A club picnic is planned to be held at the Aerodrome sometime in September. At the request of our members, an Awards/Dinner for members only is being scheduled and planned for December.

Shortly, our monthly Fun Fly and One Fly activities will begin. Club meeting programs are being developed and last month we held a virtual fun fly that was very successful, to be followed next month by a club auction. Our Instructor and Intro Pilot program is being updated and should be in place shortly to support our flying activities and programs. Our Social (Coffee and Cake) Committee continues to seamlessly provide refreshments at all of our meetings. Our Field Safety Officer, Education Committee, Friends of Cedar Creek Committee, Raffles Committee, Show and Tell Committee, Video Library Committee, Audio/Visual Committee, Contest Directors, Intro Pilots, and Flight Instructors all continue to support our club's meetings, activities, and programs.

The building program continues with the group meeting on Saturday mornings and with the inclusion of lessons regarding how to assemble and how to repair ARF's. We have begun allowing the flying of small electric helicopters or planes in our meeting room from 7 p.m. to 8 p.m. before our meetings begin and last month there

were at least six participants. Also, from 7 p.m. to 8 p.m., and at the coffee break, the club computer is available to read the Smoke Signals newsletter or to use the radio control simulator. The boy scouts project to construct additional safety benches and place wheels on existing safety benches continues to move forward.

Guidelines are to be established for selection of a Mr./Ms. Meroke and the selection committee has been directed to hold several meetings during the year, instead of only one meeting at the end of the year, before making a selection. This year we will upgrade our election process by starting in September and continuing through November with the acceptance of nominations from the floor and by allowing those nominated to speak about their qualifications and plans for improving the club.

None of the above activities and programs would be possible without the cooperation and dedication of our club members.

Thank you one and all."

Virtual Fun Fly

At the last meeting in February, Jaclyn with the assistance of Dr Phil ran the first virtual fun fly of the year. The 13 pilots were broken up into 3 teams. Team 1 consisted of Chris Mantzaris, Patrick Boll, Bill Streb and Nelson Ramos. Team 2's members were Richard Boll, Kevin Urso, Ron Berg and Curtis Underdue. Team 3 consisted of Doug Frie, Tony Pollio, Bob Henken, Ed Wiemann and Mark Klein.

The 3 events were - 4 loops, loop - 2 rolls - loop and 2 figure 8s. The event was timed and scored by Russ Rhine and the scores were prorated due to team 5 having an additional member. Team 1 took first in all 3 events and won the virtual fun fly with a total score of 4 min 29 sec. Team 3 came in second at 5 min 42 sec and Team 2 finished last with a time of 6 min 49 sec. During the course of the event, Teams 2 and 3 each had a 40 second penalty.

A Whole Bunch of Useful Hints

Sticky Fingers

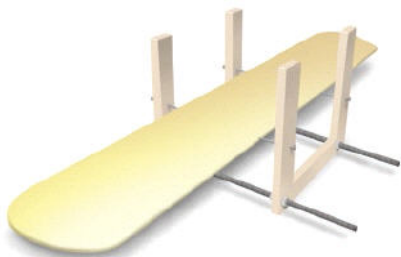
Have you ever had a problem trying to thread a nut onto a bolt while working in a tight place? Try this next time: take a small piece of double-sided carpet tape, wrap it around your finger, and then stick the nut to it. Now you just might be able to reach that tight location and thread on the nut.



Wing Painting Made Easy

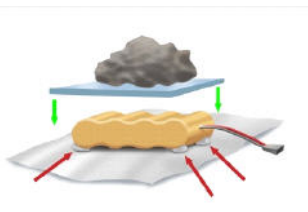
When you paint a wing, you usually have to lay it down on the table and paint one side at a time. But if you make these simple wing frames, you'll be able to paint both sides at one time and will also be able to spray the wing outside and then take it inside to dry.

Cut the frames out of 3/4-inch-thick, 1-foot-square pieces of plywood. The 18-inch-long threaded rods in the corners are 1/2 inch in diameter and allow the frames to be adjusted to accommodate wings of differing sizes. The screws that hold the wing are 3-inch-long drywall screws that are screwed through the frame arms halfway up. The screw points go about 1/8 inch into the wing's leading and trailing edges, and the holes are easy to fill when the wing has been removed from the fixture.



Stuck on You

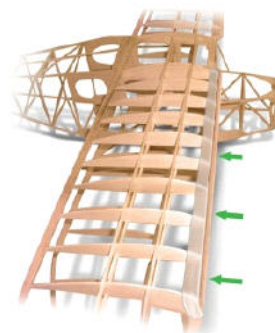
Adhesive Velcro tape is often used to hold the battery in place on foam airplanes, but constantly pulling on it to remove and install the battery can weaken the foam. To remove the battery without



damaging the foam, put a spot of silicone sealant on each of the four corners of the flat side of the battery. Place the battery flat-side down on a piece of wax paper, and cover it with a board and some weight. This flattens the spots to provide flat, foam-grabbing rubbery contacts at the corners of the battery. A Velcro strap is all you need to keep the battery firmly locked into place on the foam airplane.

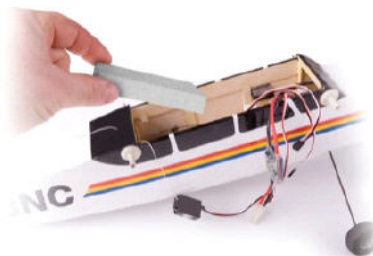
Don't Touch Your Ribs

When it comes time to sand the leading edge or trailing edge of your wing, ribs are very vulnerable when using a sanding block or sanding T. All it takes is one stroke from the block and your ribs could break or get sanded down by accident causing a flat spot to appear. We all know that is not good. To help prevent this, use a strip of masking tape and attach it to the ribs along the full length of the wing just behind the leading edge material to be sanded. You will still need to be careful sanding but it will help as a guide from over-sanding.



When Size Matters

Ever wonder if a particular battery you're thinking about ordering will fit in your airplane? My solution is to first find the dimensions of the battery and cut an exact size from a piece of Styrofoam to make a mock-up of the battery. With this mock-up battery in hand, you can trial-fit it in place to make sure it will fit before you order.



LADO Retracts

A Quick and Easy Solution

If you have ever struggled installing mechanical retracts, your no-nonsense solution is here: electric retracts. If you have had a hard time getting your mechanical retracts to lock up or down, LADO has the answer. If you've ever had a gear failure or watched your warbird swaying back and forth while just setting on the runway the all aircraft 6061 aluminum CNC 180-degree retracts for your .40 -.60 retracts are here.

This gear was specifically designed to replace the retracts in the Hangar 9 P-40, Corsair or Hellcat. The holes in this electric gear match the mounting holes in all three planes.

Installation

If you cut out one piece of plywood with a Zona saw and fiber cutting wheel with a Dremel tool, you can install this .40 size electric 180-degree turning gear. Looking at the photos, it is easy to see how really simple the installation turns out to be. After removing some balsa from the factory leg clearance slot, place the retracts on the flat plywood retract mount and used 4-4x $\frac{1}{2}$ " socket head metal screws after drilling the pilot holes and running some thin CA in the holes.

Once you have the gear in place, drop the wheel that came with the kit into the dead center of the hole and then measure from the top of the gear collar to the hold in the wheel and then add $\frac{7}{8}$ " to that measurement. If you have some $\frac{5}{32}$ " wire laying around, you can bend a 90 degree angle on the gear with axle long enough to allow 2 $\frac{5}{32}$ wheel collars on either side of the wheel. Make sure to file a flat on the wire for the Allen screws to set on the wheel collars and make use blue lock tight again.

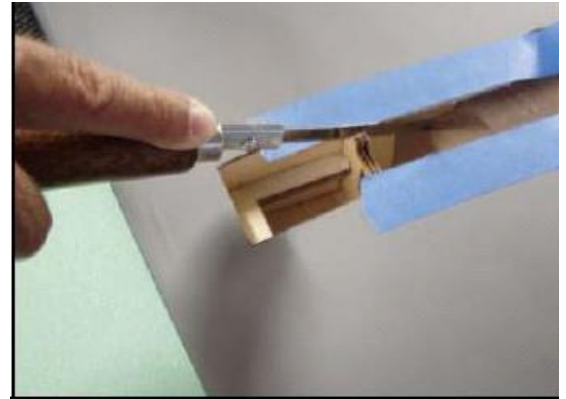
Now cycle your gear into the hole in the wing and check the clearances. Don't install the gear too close with those tolerances here; it can cause you heartache if you happen to make a hard landing and bend the gear leg. You can use either a straight gear leg or one with a shock-absorbing loop in it.

Plug 'em in. That's it, the retracts are in. The servo connector comes out of the back of the unit and simply plugs into a Y-harness that then plugs into your retract channel on your receiver. You can use a servo driver/tester from Vexa to run the gear up and down. You could however, hook it up to your receiver and cycle it that way too. Make sure that your servo travel limit is set at 100% to activate the gear.

Scale like speed

Retract speed is 9 seconds on 4.8 and 7 seconds on 6 volts Yes the gear runs off the 4.8 (0.05) or 6 volt (0.8) receiver battery just like any other servo. After all, it is just a servo-motor running a jackscrew to bring the gear up and down. This makes for a positive lock up and down.

Don't worry, it won't run your battery down and make your crash. It pulls no more amps than any other servo.

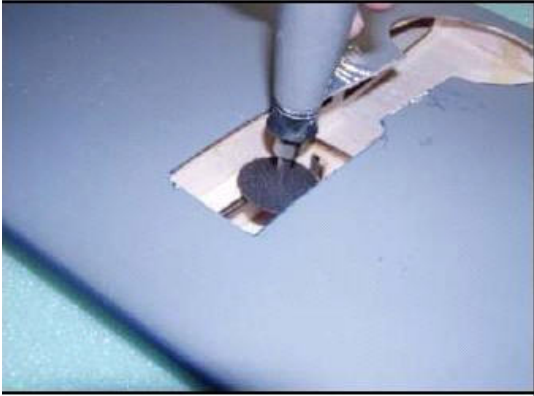


However, there is a fully stalled motor detection circuit that turns of the gear if it gets hung up so it will not burn up the drive motor or drain your battery. It is recommended that you use 6 volts and a Ni-M battery pack of 1600mAh or better.

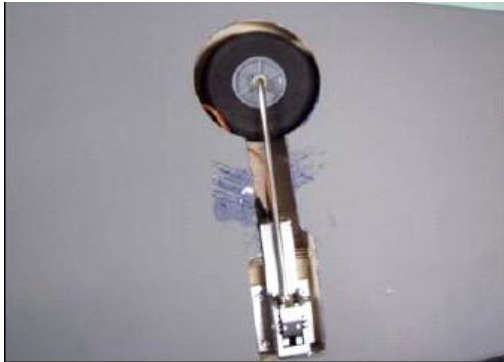
Gear Legs

Once it is in the down position, you can use the $\frac{5}{32}$ " wire gear that comes in the kit as the landing legs. The wire gear goes about $\frac{7}{8}$ " into the gear unit and is held in place by two Allen screws. It is important that once you get the gear lined up with wing that you file a flat on the wire for both Allen screws and use blue Loctite on the threads. Make sure there is a little toe in on the wheels by standing directly over the wheel and lining then about 1 degree in. This will make your warbird tract true and help slow it down on touch down.

How it works - The gear is rotated 180 deg by a clever bevel gear that follow a gear pattern CNC machined into the 6061 aluminum gear frame and since it is an all metal gear box. This provides a very simple, clean and reliable system. A servo motor drives the jack screw for power.

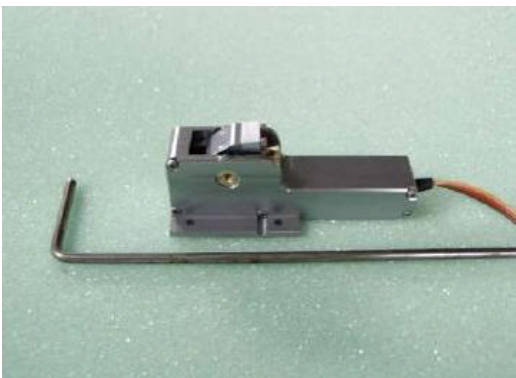


In this example, the author used the electric retract conversion of a set Robart retracts from LADO for a Cox T-28 and they have performed flawlessly. The new retracts sell for \$189.99 on the web site www.lado-tech.com or call and order them at (530) 553-4444.



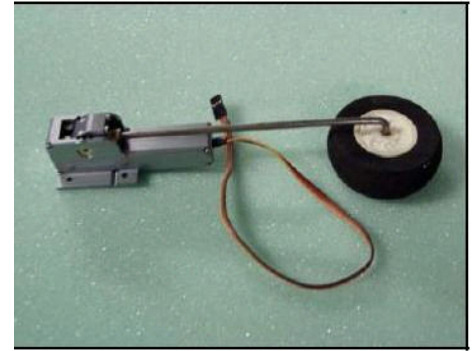
Installation starts by taking out the cross brace with a Zona saw to clear the motor end of the LADO retract unit.

A fiber cutting disk on a dremel tool cable is used to remove the cross brace level with the retract mounting plate. Install the retracts by using the gear leg and wheel in place to ensure a proper amount of clearance.



Drill 4 pilot holes and install using 4 -4 X 1/2" socket-head metal screws. Holes are the same in all Hangar 9 models.

This mighty little compact electric landing gear will solve all of your mechanical retract problems by just dropping into place. Install 4 screws and just plug it into a Y-harness like a servo. Use the fixed 5/32" wire gear that comes in the kit or bend your own!



There is a lot of clearance for the gear leg. Plastic leg covers from Robart would give it a more scale look with no added weight. Be sure to file flats on the 5/32" gear leg and use blue Loctite on the Allen screws that hold the gear leg in place.

Show and Tell

At the February 5th meeting we had 4 members participate in the Show and Tell.

- Mark Klein spoke about his Fokker D7 built from a kit, but so greatly modified that most of the kit is still in the box.
- Charlie Meyer showed his Mini Capricorn, built from his favorite EPP foam.
- Tim Murphy showed yet another of his foamie and he won the \$10 prize.
- Joe MacDougall showed the mini welding system that he bought at Home Depot for \$49 - great for use in fabricating parts for scale aircraft.

Product Recall - DX6i Transmitters

On January 30, 2009, Horizon Hobby, Inc. issued a Service Bulletin for Spektrum DX6i transmitters due to a concern of potential issues with stick potentiometers. You may find the Service Bulletin at the following website - <http://www.horizonhobby.com/Articles/Article.aspx?ArticleID=1885>. After closely monitoring the situation, Horizon has also determined that we need to physically inspect all DX6i transmitters with date codes containing 807E, 808E, 809E, 810E, 811E, 812E, and 901E, including those ending in "US", "UK", or "DE". The date code will be found inside the battery compartment. If your transmitter has one of those dates, email them at productsupport@horizonhobby.com or call 877-504-0233 for a free shipping label and more information. Do not use the transmitter if you identify one of these date codes.

Flight Technique

Realism & Model Size

Let's review basic aerodynamics. For better flight realism (and higher flight scores), most scale competitors prefer 1/4 scale for WW I and Golden Age aircraft, 1/5 scale for WW II fighter aircraft and 1/6 to 1/8 scale for ducted-fan jet aircraft; turbine-powered jets are now even bigger.

No matter how large or small an aircraft is, its ability to fly is governed by the laws of physics. Thrust, drag, lift and gravity are the forces that make flight possible. In straight and level flight, gravity is a constant. Drag is related to aircraft volume (displacement of air and airflow) and is usually related to the aircraft's surface area, some of which provides lift. A larger plane (one with more surface area and volume) creates more drag than a smaller aircraft. Drag is countered by thrust (forward air speed) to keep a plane airborne.

Lift counteracts gravity but can be varied by altering the wing's angle of attack and the control surfaces, but only at the cost of increasing drag. Prop pitch and engine rpm affect thrust; when drag is changed, thrust must be adjusted accordingly.

As model airplanes become larger, their ability to fly more efficiently is improved. A models' overall weight

does not automatically double as you double the size of the airframe; i.e., a 72-inch-span model doesn't weigh twice as much as a model with a 36-inch span; this, in turn, reduces the relative wing loading of the a larger model. Also, without getting too technical, larger models better tolerate higher wing loadings. All this and more contribute to the relevance of "Bigger is better."

With larger airframes, drag also plays a lesser role. If we compare a 1/6-scale model with a 1/5-scale one, the larger models' wing area may be 25 percent larger than the smaller one's, but its drag will not be 25 percent greater. Bigger means more efficient. So when we talk of scale flying for realism, it is important to remember that smaller planes need to fly faster than larger ones just to overcome drag. The small plane has less lifting area, and this, too, means that it has to fly relatively faster to stay airborne.

March Birthdays

- 10 *Joseph Czeto*
- 13 *Charlie Meyer*
- 23 *Dave Bell******
- 27 *Philip Friedensohn*
- 29 *Tony Grimaldi*
- 31 *Dave Strunk*

* *Big One*



CHICKEN WINGS

