



Pitts SPECIAL



Official Newsletter of
Metrolina Control Line Society (MCLS)

We Fly Control Line!

And Have been Doing It Since
September, 1981

AMA Chartered Club #1811



April 2018 Issue

— Pitts Special Archives —
This Month's and all Back Issues are Here:
<https://www.dropbox.com/Pitts Archives>



MCLS Club Officers:

President:	Will Davis	willddavis@msn.com
Vice President:	Watt Moore	medplans@truvista.net
Sec./Treasurer:	Don Jenkins	d.l.jenkins33@gmail.com
Safety Officer:	David Smith	smitty8126@yahoo.com
Information:	Howard Shenton	panzer4hs2001@yahoo.com
Newsletter:	Rusty Knowlton	RknRusty@sc.rr.com

MCLS is also in association with:

Mecklenburg County Parks & Recreation Dept. through the
Waymer Aeromodelers Chapter of Academy of Model Aeronautics (WACAMA)
MCLS Representatives to WACAMA are Max Flowe and David Smith

**The next MCLS meeting is Saturday, April 28th, 2018
at David B. Waymer Field
15401 Holbrooks Road
Huntersville, NC**

GPS: [35.401170, - 80.814600](https://www.google.com/maps/place/35.401170,-80.814600)

**There will be flying in the morning, Lunch around Noon,
And more flying until the 2:00 meeting**

Note to our readers

Most of our readers did not receive their March copy of the Pitts Special.

We had an e-mail malfunction while sending it out. I hope we have it resolved now, because there was a multi-part article on trimming a stunt ship, which is pretty good reading. Part two will be in this month's issue, and I have provided a link to last month's Pitts. There is also a flight report with video entertainment from the February meeting at Watt Field.

The link to the [March issue](#)

The link to the whole [Pitts archive](#) dating back to 2015

Depending on your bandwidth, it may take a minute or so for all the pages of any of these documents to download to your system.

Sorry for the inconvenience,
Rusty

Carolina Classic

Control Line Contest

May 4, 5 and 6, 2018

Stunt , Combat , Navy Carrier

Waymer Flying Field. 15401 Holbrooks Road Huntersville, NC 28078

ENTRY FEES Each Event Open \$10.00 (\$30 Max) Jr./Sr. \$5.00 (\$15 Max).
Control Line flying on Two Paved Circles and One Grass Circle, Combat and Carrier circles are on two grass circles at the end of R/C Runway. Large Pavilion with picnic tables for Contestants & Spectators.

Lunch available on Saturday at noon break

NO PARKING IN THE PAVILIAN AREA

No Appearance Points . No BOM, All PAMPA & AMA Rules Apply.

STUNT Registration at the Shelter

COMBAT & CARRIER Registration at each event site

All Circles open for practice THURSDAY & FRIDAY .. May 4 & 5 all day

Friday . May 4 : Fri. 1/2 A Combat (.061 plain bearing ok) 4:00 PM start
Judges Clinic 4:00 PM to 6:00 PM ..open to all

Saturday . May 5 :Registration 9:00 am ..Stunt Pilots Meeting 9:45 AM

- **Stunt** - OTS, N-30, Profile Stunt 10:00 AM Start
- **Basic Flight** 12:00 Noon Start
- **Navy Carrier** - Class I & II Glow & Elect, Profile Glow & Elect, 15, Nostalgia I, II & Profile, 9:00 AM Start
- **Combat** - Speed Limit & 1/2a 9:00 AM pilots Meeting

Sunday . May 6 :Registration 8:00 am.. Stunt Pilots Meeting 8:45 AM

- PAMPA - Beginner., Intermediate, Advanced, & Expert. 9:00 AM Start
- Combat & Carrier if needed to finish TBD by ED's

CONTACTS (for event rules) Hotel Info / map by request

Will Davis --- (CD) willddavis@msn.com
James Duckworth --- (Admin) colduck@netzero.net
Will Davis --- (ED Stunt) willddavis@msn.com
David Smith --- (ED Carrier) smitty8126@gmail.com
Howard Shenton --- (ED Combat) panzer4hs2001@yahoo.com



April, 2018

By Will Davis

The MCLS March meeting at Huntersville was not the perfect mild March weather that we had hoped for, and we were alone at the field with a gray sky threatening rain. The Flying Aces R/C club had cancelled their fun fly that day due to the weather too. We normally skip the first two months of flying at our meetings in Huntersville and meet at the home of Watt Moore for better weather and a hearty hot meal. Watt's meeting in February it was 78° and much more like Spring. The March meeting in H'ville started out promising with cool weather and spotty drizzle, no sun, and a mild steady unchanging breeze. Quite bearable and almost stunt heaven. It was perfect for trimming, getting the motor runs dialed in, and setting lines and handle spacing. I got 8 full pattern flights on the Supertigre .60 powered model that David Smith will be flying this season. It's an Allen Brickhaus design Encore with a proven contest history, and is now seeing new life in Advanced PA. David placed third in Advanced PA last October and has eyes set on getting his name engraved on the Ringo Trophy in October.

The Tom Lay ST 60 really performs well. I have been flying electric for the most part for the past 3 years and it was great to feel the big Tigre's power through the pattern. The Encore setup includes 6 ounces of Power-Master 10/22, a custom made metal uniflow tank on muffler pressure, a Thunderbolt RC long plug, a Bolly 13-6 prop, 62' x .018" lines eyelet to eyelet, .305 venturi, ST NVA, Tom Lay Tube Muffler, and a Smith Brothers CF handle, This is the same setup that I ran for years on my Sky Dancer from 1996, and then on the Purolator Special # 21.

But, back to the stunt heaven morning and on to the meeting... as the morning wore on, lunch-time brought unseasonably bad weather with some sleet and rain showers and bone chilling blustery winds. By the end of the official club business everyone was cinched up as tight as possible with all the winter clothes they were lucky enough to have had stowed in their cars. My teeth hurt from chattering, and when we finally called an end to the meeting you never saw people jump in their cars so fast and get the heck *Outta'* there!
WhoooBuddy!!! that was some kinda' miserable cold!

Samantha Hines:

2018 Junior Member of the US F2B team, Samantha Hines visited David B. Waymer field for a week of practice leading up to the World Championships in Landres France. Samantha will represent the U.S. in F2B (Control Line Aerobatics) and needed to get a little south of the home in Michigan to enjoy some warmer weather and better conditions. Samantha and her father Steve spent a week flying, trimming, and getting a few bugs worked out to help her prepare for the week in France. We are honored to have Samantha choose our great facility to use as a practice site.



This use of our field for such a high level of competition training shows what many years of dedication from Modelers and the commitment from Mecklenburg County Parks and Recreation Department, and a long term partnership with the county can achieve. Many clubs have asked me what it takes to have a facility like we have, and my usual answer is years of hard work from all clubs involved and a good relationship with the parks Department.

Continued on next page

President's Pen Continued

Park Department News:

There has not been a formal meeting with the county over the past month, The members of the WACAMA keep in touch with each other thru e / mails and phone calls to keep everyone updated on issues .

The WACAMA website, WACAMA.COM, has been updated with a join/renew option to purchase a park pass and applications to join MCLS or FAPA.

MCLS has a web site that is linked through the WACAMA Web site.
MCLS.WACAMA.COM

Member News:

John Gibson is home recovering, He was at the field a couple times over the past month. He is doing better but has a long road to recovery in front of him. Give John a call to wish him well. If you need his number just call me.

Club News:

We will head to Joe Nall Week the Saturday following the Huntersville Contest. This is the Second leg of our Triple Crown Event. Same rules as last year, anyone that wins all Expert Classes in PA at Huntersville (spring contest), Joe Nall, and Brodak will be awarded the **MCLS Triple Crown Trophy** at the Brodak Fly-In. Some have said it cannot be done, but just like the Triple Crown in Horse racing, it can be done, it will not be easy, it will take a special competitor with all of the stars lining up to accomplish this..

Contest prep:

Preparations for the May Huntersville contest is still in full swing , a few items that need to be discussed at the April 28 meeting .If anyone wishes to learn how to judge PA , We have a judging Clinic on Friday for new and Experienced judges.

- Grass Cutting - Will & Max
- Field Pits set up, Cones, Tape - Watt
- Porta Johns service - Max & David
- Parking
- Tables for vendors - In Storage
- Score sheets for flights - Howard & Will
- Trophies Will
- Scoreboards and Tally Sheets - Howard
- Tabulators - Duck / Holley / Lynn Malin
- Registration - Duck
- Runners - Kyle & ...**Volunteers Needed**
- Judges
- Food / Chips - Will & Wayne
- Drinks - Will
- Posting for field Closure - Will. Do At April Meeting
- Combat needs - Howard
- Carrier Needs - David
- Special Awards - Will



We will do some maintenance on the field on the 28th of April, so come early to help out. Fire-ant control, weed removal, and minor tree trimming are scheduled, along with plenty of flying.

Continued on next page

President's Pen Continued

Upcoming Events:

April

April 28 MCLS Club Meeting Huntersville

May

May 4, 5 & 6 2018 Carolina Classic - Huntersville Contest

May 12 to 19 2018 Joe Nall Week

May 18 & 19 2018 Joe Nall Stunt Contest

June

June 11-16 2018 Brodak Fly-In

July

June 30 –July 1 Jenn Fedorick Memorial. .. Bernie Suhamski .. Hazleton Penn

July 8 -14 July AMA Nationals Stunt /Carrier

August

Atlanta Contest .. August 4, 5 Tom Dixon

Paducah Kentucky Contest...August 18,19 Charlie Reeves

September

KOI Sept 14-16 Gene Martine

October

October 19,20 & 21 2018 Carolina Criterium Contest Huntersville

Club Meeting:

The Next Meeting of MCLS will be Saturday April 28, 2018 at the David B. Waymer flying field in Huntersville NC. We will fly some, break for lunch around Noon, and fly before the meeting at 2:00.

Keep on Keeping on!
Will Davis
President - MCLS



Contributions from our subscribers

This article by an unknown author was submitted by Will Davis

This is a lengthy article, so it will be posted in 3 parts.
To read part 1 in last month's [Pitts Special](#), [Click Here](#) and you'll find it on page 5.

Functions of trim adjustments - Part 2

Roll/Yaw adjustments

Tip weight: primarily affects the ROLL axis More tip weight than necessary rolls airplane away from you, which, VERY APPROXIMATELY directs the lift vector away from you, and gives you more line tension. Too much and it pulls hard, but the line tension varies a lot, too, and the airplane oscillates in roll (hinging). Adjust to keep roll angle at zero through maneuvers.

Rudder offset (fixed/ground adjustable): primarily affects the YAW axis, although yaw and roll are very strongly coupled. Set the *equilibrium* yaw angle, or the yaw angle at which the airplane flies in steady level flight. In my opinion, the goal is to set the equilibrium yaw angle to zero.

Rudder offset (in-flight variable - "Rabe Rudder"): pitching the airplane while having a big prop up front, spinning at goodly RPM, causes the airplane to want to yaw "nose-out" on inside maneuvers, and "nose-in" on outside maneuvers. This cannot be fully corrected by a fixed/adjustable rudder. So Al Rabe figured out to hook the rudder to the elevator, so it moves to give more left rudder on insides, and more right rudder on outsides. Usually, it needs to be asymmetrical, moving a lot more right than left (for reasons that might or might not be obvious).

Note that the purpose is most emphatically NOT to make the airplane yaw nose-in or nose-out, **in fact it's to prevent** the nose from yawing in or out by providing a compensation that counteracts the precessional torques.

If you adjust it right, it compensates well for the precessional effects. Al's worked well. Problem seems to be that unless you are an absolute expert-level trimmer you will not get it adjusted correctly and, given that it's a very powerful feature, it is almost always overdone and causes more issues than it solves. This includes many "name" experts.

Flap "tweak": primarily affects the ROLL axis. Bend the flap horn for a ground-fixed "aileron effect" to make roll angle identical with positive and negative accelerations (Gs).

Leadout adjustment: primarily affects the YAW axis, but cannot be separated from rudder adjustment. I use the leadouts to take out *transient* effects, so that the leadouts and the equilibrium yaw angle are *complementary*.

Too far aft, and you a lot of line tension in level flight, but lose it overhead. Too far forward, and the airplane noses in at every control input and loses line tension.

The leadout position is related to the center-of-gravity. For my purposes, the "baseline" leadout position can be calculated using the computer program "LINEII" downloadable from Pete Soule's website. The position calculated this way is the position that corresponds to the "0 yaw angle" ideal.

Others use the leadout position to create "opposing forces" so that they have a rather large equilibrium yaw angle, and then overcome the ill effects overhead by forcing the nose back in with a forward leadout position. This creates yaw, roll, and (because the line tension changes when yawing and rolling) pitch transients.

Differential flap area: This "adjustment" primarily affects the roll axis. It exists to compensate for an interesting observed effect - that sometimes it looks like you need less tip weight to do a square corner than a round corner, and less tip weight to do a round corner than to fly level (all assuming 0 roll angle). Folklore says this is so you can "carry more tip weight", which is vaguely correct if you only see things in "binary". It's really because of aerodynamic asymmetry effect (even if you have equal-span wings) of flying in a circle.

Wing asymmetry: this "adjustment" primarily affects the roll axis. It was originally envisioned as "using the fuselage/engine as tipweight", which, once again, is vaguely, notionally, correct. In fact you are attempting to line up the lateral CG position with the lateral center of pressure. 1/2-3/4" is about right, more leads to less tipweight, but more likelihood of needing a lot of differential flap area. That's because everybody just moved the wing off center - and left the tail right down the middle!

Wing fences/drag tabs/drag vanes - other ways of doing various things. Never seemed to prove useful over the long haul, sometimes useful for specific problems, **I don't think it's worth going into at this point.**

Next Month: Pitch Adjustments and a basic summary of trimming

[Click Here](#) to download and/or read the article in its entirety.

The Editor's Sandbox

It's been a long winter for everybody. Everything from the cold bleak weather, cold and flu season, and even broken bones for Holley and myself. Mercy! It seems like most of my friends were sick with varying degrees of one plague or another and cabin fever had set in something awful. But to my amazement, every year, some way, some how, we emerge at the other end and spring finally comes. Nothing like fresh air, sunshine, and exercise to refresh one's soul. And contest season is only a couple of weeks away. The season where almost no one has flown a pattern or a combat match since October, and anything is possible.

In February at Watt's field Will Davis coerced me onto a barstool and put a handle in my hand to fly my first flight of the new year while he turned me round and round. At was uplifting to say the least. Then Steve Hines told me on our weekly video show he wanted to come south to get Samantha some good weather to practice in for her trip to the World Championships in France this July. I mentioned it to Will at our March meeting, and he arranged for them to use our club field at Huntersville.

They came down in April to find warmer weather, but wind that was picking up gravel in the parking lot. She still got some handle time on her practice plane, and Thursday turned out to be a nice flying day. I drove up to H'ville to meet them at the field only to find Steve working on a gutted engine from Sam's Vector. When he got it back together, I figured I could do some practice judging if she was okay with it. She was, and I was excited to get to see this world-class Expert young woman fly. But after her takeoff and reverse wingover, entering the three inside loops, the motor crapped out. They were out of resources and Samantha's week of practice ended just like that.

I'd thrown my old Shoestring from my Beginner days in the car and offered it to Sam, but she declined. But now was my chance to try and fly on my own two feet for the first time. I had preflighted the airframe, flushed the tank, and burped the Max-S before lunch, so what the heck, gotta try sometime. So I chucked my walking stick aside and Steve rigged up the plane for me and did all the footwork. I was dubious, having no handle time since the middle of October and not even sure if I could turn circles. I'd not even done any dry-flying in the house.

After 2 years of hanging in the shop, it needed a little funky, but we'd short-tanked it, so I went on out to the handle and waved it off. It took off like a rocket as I roller-coastered it for a lap before I finally relaxed and leveled it out. She must have been flying 4 second laps but surprisingly I felt no pain and was balancing pretty well as the trees and clouds zoomed by. Hotdamn, I was flying again, Yaaaazoo! I started getting a little dizzy, so I stood still and did some long 180 degree lazy 8s. Then some loops and about 5 laps inverted. More lazy 8s and loops, inside and outside. I dared not try any balance-challenging wingovers or the like, but I had no problems with the simple stuff. I was getting about ready for it to suck air and it did finally burp in a loop, so I leveled out and flew laps... and got a touch of dizziness. I didn't want to do anymore 8s over the tarmac, but I finally had to, and just when it was in the worst attitude for it to happen, it shut off and the lines collapsed. Crap! I have not even tried walking backwards, much less trotting backwards. No way I was ever going to catch it. But reflexively I trotted 4 or 5 steps backwards and it hooked up just in time for me to grease in a no-bounce rolling landing. *WhoooHoo!* I did it!

Three weeks earlier, I was still having occasional 3 day stretches when I could not walk without a cane, and wondering if that was as good as it would ever be. Three weeks from that day I'd be entering a contest, and I think there's a chance I'll be able to fly a pattern for the judges. Maybe I'll get some of that spring luck. Yet another "Rusty Come-Back" story. How 'bout that! These "I'm Back!" stories are coming more often than I'd like, but I'll take it. If I can't fly, Maybe I'll try some judging. I've actually had some training. Just please, let me try it on the Beginners, Lol... Please?

I didn't get a camera on my flight that day, but here's the old Shoestring with my buddy Ron Cribbs from Oklahoma flying it out at Fort Jackson a couple of years ago. The Max-S .35 is a sweet engine. Check out the 4-2 break on this old baby. See y'all in Stuntersville, Rusty



2018 - METROLINA CONTROL LINE SOCIETY - 2018

MEETINGS, CONTROL LINE CONTESTS / INTERESTS & HOLIDAYS

Legend Holidays MCLS Activities (Meetings, Contests, Ect.) Control Line Contests or of interest Updated: 31-Dec-17

Mo / Day Weekend	Sun	Mon	Tue	Wed	Thr	Fri	Sat 1st	Sun	Mon	Tue	Wed	Thr	Fri	Sat 2nd	Sun	Mon	Tue	Wed	Thr	Fri	Sat 3rd	Sun	Mon	Tue	Wed	Thr	Fri	Sat 4th	Sun	Mon	Tue	Wed	Thr	Fri	Sat 5th	Sun	Mon
	2018 January		New Years Day					Froy Dog Electric fly in Tripple Tree							Allan Brickhouse Memorial Dinner Gastonia NC							6:00pm Market Street Restaurant							NO Mtg								
February														Swap Meet Perry Ga					Valentine's Day								MCLS At Watts										
March																																					
April																																					
May																																					
June																																					
July																																					
August																																					
September																																					
October																																					
November																																					
December																																					



Metrolina Control Line Society

AMA Club # 1811

2018 Membership Application

Name AMA #

Birthday (M D ?Y)

Mo Day (Y Year - optional if you want it known)

Spouse / or?

Address

City

State

Zip

Home Phone

Cell Phone

email

General Interests / Comment

Control Line Flying Interest Stunt (St) Combat (Cb) Speed (Sp) Sport (Sr)
 Carrier (Cr) Scale (Sc) Racing (Ra)

- | | |
|-----------------|--|
| Membership Dues | <input type="checkbox"/> \$0 JR/SR AMA Member or ASSOCIATE non flying member |
| | <input type="checkbox"/> \$20 INDIVIDUAL or non flying member wanting to support the club |
| | <input type="checkbox"/> \$25 FAMILY- Only if all members are flyers. Need separate applications for all family members. |
| | <input type="checkbox"/> \$0 NEWSLETTER ONLY- MCLS Membership not required but we would like your personal information for our mailing list. AMA card not required |

Make Checks or Money Order Payable to:
 Metrolina Control Line Society
 Send to

Don Jenkins
 4042 River Oaks Road
 Lake Wylie SC 29710

Phone: 803-831-1753
 email: D.I.jenkins33@gmail.com

Please record the date on your current
 AMA or MAAC (Canada)
 MEMBERSHIP CARD

 Month - Year
 Ex: 01-2018

**You must be an 2018 AMA member
 to fly with us at Waymer field**

SURFING THE WEB - USEFUL WEB SITES FOR CONTROL LINE:

Stunthangar.com
Control line forum



Non-member visitors can close the Log-In nag window.
Click the "Do not display again" button.
Guests can post in the "General Questions" forum

Stuka Stunt Works - www.cstunt.com/htdocs/dc/dcboard.php

Brotherhood of the Ring - <http://brotherhoodofthering.info/>

Airfield Models - <http://www.airfieldmodels.com/>

One of the best sources of modeling and building explanations and illustrations on the web

PAMPA - <http://www.pampacl.org/>

You must be a member of PAMPA to access many areas of this valuable site

AMA - Academy of Model Aeronautics - <https://www.modelaircraft.org>

Brodak - www.brodak.com

Complete Control Line hobby shop and manufacturer of supplies and kits

Sig Manufacturing - sigmfg.com

Bob Machado's Museum and Gallery: www.hobbyistparadise.com.

Phil Brown's Web site: www.mastercontrollinelinksite.info/

A complete listing of control line web sites.

Tulsa Glue Daubers Website - www.tulsacl.com/

Flying Lines Website - <http://flyinglines.org/>

Great site out of the Northwest. Lots of columns on all aspects of CL modeling.

**Pitts Special Archives, all back issues plus the annual club Calendar
of events and contest flyers:**

[https://www.dropbox.com/sh/b66ijo7zsvrfqp9/
AAD5XUYeMXHoTDqtKsajRThNa?dl=0](https://www.dropbox.com/sh/b66ijo7zsvrfqp9/AAD5XUYeMXHoTDqtKsajRThNa?dl=0)

VENDORS' CORNER

The following are club members and frequent contest attendees who provide parts, tools and supplies.

Norine Armish - Phone: 717-805-4457. Email: karmish@ptd.net

We are a small, neighborhood shop in Selinsgrove, PA. I do artwork on wood, tin and slate, and I have two associates who do stained glass and crochet.

Website: <https://www.facebook.com/ArmishsCountryStar>

Phil Cartier - Phone: 717-566-3810. Email: philcartier@earthlink.net

Combat & Stunt kits, Cores & misc. combat & Stunt CL items.

Website: <http://home.earthlink.net/~philcartier/webcat/catalog.html>

Tom Dixon - Phone: 770-592-3279. Email: bdixon@mindspring.com. (Does not use email-Call)

Plans and accessories for the stunt flyer. Double Starr engine importer. Stunt eng. mods.

Website: <http://tomdixon.tripod.com/tomdixon.htm>

Bob Krug - Phone: 923-696-1291. Email: rlkrupa@sbcglobal.net

Supplies Powermaster fuel and other miscellaneous items for sale at contests. Does not ship fuel. Contact him for contests he will attend.

Jim Lee - Phone: 785-266-7714. Email: jlee9@cox.net

Expertly machined parts and tools for model building.

Website: www.leemachineshop.com

Bob Machado - Phone: 508-404-6376. Email: bobandedy@aol.com.

Buy /sell CL and everything else from the website info. Also has a model museum.

Website: <http://www.bobmachadosgallery.com>

Brian Malin - Phone: 321-537-1159. Email: brian@bmjrmodels.com

Laser cut FF, CL & RC kits.

Website: www.bmjrmodels.com

Bill Mandakis - Phone: 336-499-1192. Email: mandakis@bjm-home.com

Brodak distributor

Website: <http://www.bjm-home.com/modelshop/openingselectionwindow.html>

Randy Smith - Phone: 687-407-9376. Email: Randy@aero@msn.com

Full service stunt items, Engine tuners, Plans, Props. Engines, etc...

Website: <http://www.aeroproduct.net>

Tom Morris - Phone: 256-820-1983. Email: ctmorris@cableone.net

Extensive line of built models. Electric supplier.

Tom's supplies are available through <http://stunthanger.com/hobby>

Watt Moore (Brodak distributor) - Phone: 803-789-9430, 803-517-1153 Email: medplans@truvista.net.

He can order anything from the Brodak catalog or may have it in his shop.

John Saunders (Brodak distributor) - Phone: 856-697-0656. Email: Stiletto46@comcast.net.

Look for John at contests with all sorts of CL supplies. Brodak Dealer.



If you find any broken or erroneous links, addresses or phone numbers, please notify me at RknRusty@sc.rr.com

Directions to Waymer Field in Huntersville, NC



GPS: [35.401170, - 80.814600](#)

**And that's a Wrap for April, 2018
Thanks for Reading**

**If you have any questions, trouble reading or
accessing the newsletter, mistakes, correc-
tions or any other reason, please contact me:**

Rusty Knowlton

RknRusty@sc.rr.com

803-603-5532

[Browse the Pitts Special Archives here](#)

**All current and past Issues with printer friendly
calendar and articles**

That's all Folks

**See y'all in Huntersville and
then at Triple Tree for the
judging clinic and contests**