



# The Cross Keys Flyer --- March, 2010

EXPERIMENTAL AIRCRAFT ASSOCIATION  
SOUTH JERSEY CHAPTER 216

CHARTERED NOVEMBER 3, 1964

INCORPORATED MAY 26, 1966

## HERM AT THE HELM



I woke up this morning and looked outside and I couldn't believe what I saw. IT WAS SPRING! No snow, no freezing temperatures, no heavy winter gear. WOW, it's time to fly. I go out to my trailer and start to hook up when it hits me. I haven't done any maintenance for months because the snow and freezing temperatures have kept me busy doing other things. I start to wonder. Should I or shouldn't I just go fly. I say to myself ( I find I'm talking to myself more and more the older I get) Well anyway, I say to myself, Herman you winterized it properly you should be OK. So I start to hook up again when I remembered. I was going to change the fuel lines, they really need it. I am a little overdue on changing the gear oil that I meant to do it in November. I really should give the battery a long slow charge. I have been meaning to check the lines on the chute to make sure nothing is showing wear, and a long list of little things to inspect. So I left the flying for another day while I built a little peace of mind doing my inspection and maintenance.

I think there are a lot of pilots like me who are anxious to fly when they see a nice day and haven't been in the air for a while. But it's important no matter what time of the year, but especially important if your machine hasn't flown for a while to give it a really good inspection to see if it is in

fact ready to fly. I know I always feel better mentally when my aircraft is in good shape mechanically.

Calm wind and blue skies.

Herman

## MEETING MINUTES

FEBRUARY 17, 2010

LOCATION: Freefall Adventures Sky Diving Center, at Cross Keys Airport, Williamstown, NJ.

ATTENDANCE: A total of 14 members and 2 guests were present. Guest Philip Maynard previously built and flew a KR-1, then got sidetracked into building boats, but is now considering getting back into airplanes. William Getty previously flew an ultralight out of the old Bridgeport, NJ airport and also has a general interest in military aircraft.

CALL TO ORDER: President, Herman Junkerman, called the meeting to order at 7:37 PM.

READING OF MINUTES: Ed Neumann made a motion, seconded by Tom Coyle, to accept the January 20, 2010 minutes as published in the newsletter. The membership approved unanimously.

TREASURERS REPORT: Roy Hermansen reviewed the budget, pointing out a few changes for the 2010 year, which included approximately \$360 for meeting room chairs. Art Kruysman made a motion to accept the budget as presented. Dan Marchetti seconded the motion and the membership approved it unanimously. Roy also reported on a possible bus trip to Dulles and commented on our upcoming Annual Awards Banquet, which is scheduled for March 17 at Masso's Red Pine Inn at Glassboro.

PRESIDENTS REPORT: Pres. Herman Junkerman purchased 10 padded/folding chairs for the chapter and will get 6 more later. He contacted John Desmond about arranging a chapter visit sometime this spring and is also planning on a possible welding seminar/workshop, at either Whitey's Alloway Airport or at Tom McDowell's home workshop.

NEWS AND CORRESPONDENCE: None received.

TECHNICAL COUNSELORS REPORT: No report.

FLIGHT ADVISOR: No report.

YOUNG EAGLES: No report.

#### OLD BUSINESS:

(1) **Annual Awards Banquet** – Plans are complete and reservations are being accepted. Cost is \$26 per person. Contact Treasurer Roy Hermansen.

(2) **Chapter Saturday Get Together** – For March we will carpool to the helicopter museum at Brandywine airport in West Chester, Pa. Meet at the Harrison House in Mullica Hill for breakfast.

#### NEW BUSINESS:

(1) **Local School Program** – Pres. Herman Junkerman has an idea about going to a local school to give a presentation of some sort that would introduce kids to aviation.

PROGRAM: Tonight's program was watching a DVD/Video of flying a homebuilt Challenger UL type aircraft.

ADJOURNMENT: The meeting adjourned at 8:39 and the program ended at 9:50 PM.

Submitted By: ~~Bill Varnes, Secretary~~

## CALENDAR OF EVENTS

MARCH 17 ----- GLASSBORO, NJ  
EAA CHAPTER 216 ANNUAL AWARDS BANQUET & LADIES NIGHT  
MASSO'S RED PINE INN – \$26.00 PER PERSON  
6:00 PM HOSPITALITY TIME  
7:00 PM – BUFFET DINNER WILL BE SERVED  
TREASURE ROY HERMANSEN – 856/582-2282  
[www.RoyHEAA216@aol.com](http://www.RoyHEAA216@aol.com)

APRIL 13-18, 2010----- LAKELAND, FL  
SUN-'n-FUN FLY-IN  
LAKELAND LINDER REGIONAL AIRPORT (LAL)  
[www.SUN-N-FUN.org](http://www.SUN-N-FUN.org)

APRIL 24 ----- MASSEY, MD  
MASSEY AIR MUSEUM – CHILI FLY-IN  
MASSEY AERODROME (MD1)  
[www.masseyaero.org](http://www.masseyaero.org)

MAY 7 - ----- NEWARK, NJ  
2010 NEW JERSEY AVIATION CONFERENCE  
"NAVIGATING NEW JERSEY AIRSPACE"  
NEWARK LIBERTY INTERNATIONAL AIRPORT,  
BLDG. # 1  
Mike Stoddard – 973/377-8955 - [www.njaviation.com](http://www.njaviation.com)

MAY 9 ----- WOODBINE, NJ  
EAA CHAPTER 287 PANCAKE BREAKFAST FLY-IN  
WOODBINE MUNICIPAL AIRPORT (1N4)  
– 8:00 TO 11:00 AM  
PRESIDENT JIM ROMANO – [Jimromano@eaa287.org](mailto:Jimromano@eaa287.org)

MAY 15 ----- TOUGHKENAMON, PA  
EAA CHAPTER 240 RV FLY-IN  
---AND---PANCAKE BREAKFAST  
NEW GARDEN FLYING FIELD (N57)  
[www.eaa240.org](http://www.eaa240.org)

MAY 22, 2010 ----- CAMBRIDGE, MD  
ANNUAL POTOMAC ANTIQUE AERO SQUADRON  
CHAPTER HORN POINT AERODROME  
– 410/310-0159 [www.arthur.kunder@comcast.net](http://www.arthur.kunder@comcast.net)

MAY 22-23, 2010 ----- SUFFOLK, VA  
VIRGINIA REGIONAL FESTIVAL of FLIGHT  
SUFFOLK EXECUTIVE REGIONAL AIRPORT (SFQ)  
[www.VirginiaFlyin.org](http://www.VirginiaFlyin.org)

JUNE 4 ----- - CROSS KEYS, NJ  
4:00 PM – SET UP FOR THE BREAKFAST AT THE BOB McGUIGAN HANGAR - ALL MEMBERS ARE EXPECTED TO HELP - THEN ENJOY A DAN MARCHETTI FAMOUS STEAK SANDWICH DINNER  
DRY CAMPING AVAILABLE -  
PRESIDENT HERMAN JUNKERMAN – 856/881-3459  
[www.hermanlj13@verizon.net](http://www.hermanlj13@verizon.net)

JUNE 5-6 ----- -CROSS KEYS, NJ  
EAA CHAPTER 216 DOUG MacLEOD MEMORIAL PANCAKE BREAKFAST 2 DAYS RAIN OR SHINE -  
CROSS KEYS AIRPORT (17N)  
PRESIDENT HERMAN JUNKERMAN – 856/881-3459  
[www.hermanlj13@verizon.net](http://www.hermanlj13@verizon.net)

JUNE 12 ----- - LANCASTER, PA  
RAIN DATE JUNE 13<sup>TH</sup>  
EAA CHAPTER 540 BRAKFAST – FLY-IN  
SMOKETOWN AIRPORT (S37) – 717/872-5297

JUNE 12-13 ----- TOUGHKENAMON, PA  
EAA CHAPTER 240 PANCAKE BREAKFAST  
NEW GARDEN FLYING FIELD (N57)  
[www.eaa240.org](http://www.eaa240.org)

JUNE 12-13 ----- TOUGHKENAMON, PA  
NEW GARDEN FLYING FIELD AIRSHOW **"FESTIVAL  
OF FLIGHT"** NEW GARDEN FLYING FIELD (N57)  
[www.eaa240.org](http://www.eaa240.org)

JUNE 13 ----- WOODBINE, NJ  
EAA CHAPTER 287 PANCAKE BREAKFAST FLY-IN  
WOODBINE MUNICIPAL AIRPORT (1N4) – 8:00 to  
11:00 AM  
PRESIDENT JIM ROMANO – [Jimromano@eaa287.org](mailto:Jimromano@eaa287.org)

JUNE 16-19, 2010 ----- LOCK HAVEN, PA  
25<sup>TH</sup> SILVER ANNIVERSARY –  
SENTIMENTAL JOURNEY CUB HAVEN FLY-IN –  
WILLIAM T. PIPER MEMORIAL AIRPORT

JUNE 18-20 ----- WELLSVILLE, PA  
FOOT LIGHT RANCH ANNUAL FUN FLY-IN –  
@ SHEREPORT NORTH AIRPORT  
[www.footlightranch.com](http://www.footlightranch.com) - 717/432-4441

JUNE 26 ----- PITTSVILLE, MD  
AIRPLANES & AIRSTREAM FLY-IN/RALLY  
COVERED DISH LUNCH & AIRSTREAM RALLY  
WHITE FIELD (6MD8) 38-26-32N, 75-24-11W  
ART KUDNER – 410/310-0159  
[.arthur\\_kudner@comcast.net](mailto:arthur_kudner@comcast.net)

JULY 10 ----- TOUGHKENAMON, PA  
EAA CHAPTER 240 PANCAKE BREAKFAST  
NEW GARDEN FLYING FIELD (N57)  
[www.eaa240.org](http://www.eaa240.org)

JULY 11 ----- WOODBINE, NJ  
EAA CHAPTER 287 PANCAKE BREAKFAST FLY-IN  
WOODBINE MUNICIPAL AIRPORT (1N4)  
– 8:00 to 11:00 AM  
PRESIDENT JIM ROMANO – [Jimromano@eaa287.org](mailto:Jimromano@eaa287.org)

JULY 23 – 25 ----- BRODHEAD, WI  
EAA CHAPTER 431 – HATZ/PIETENPOL FLY-IN  
BRODHEAD AIRPORT (C37) [www.eaa431.org](http://www.eaa431.org)

JULY 26-AUGUST 1, 2010----- OSHKOSH, WI  
EAA AIRVENTURE  
WITTMAN REGIONAL AIRPORT (OSH)  
MAKE PLANS EARLY – [www.AirVenture.org](http://www.AirVenture.org)

AUGUST 23 ----- RIO GRANDE, NJ  
NAVAL AIR STATION WILDWOOD MUSEUM  
2<sup>ND</sup> ANNUAL CAR SHOW – 609/886-8787  
[www.cindy-nasw@comcast.net](mailto:www.cindy-nasw@comcast.net)

SEPTEMBER 3-6 ----- RIO GRANDE, NJ  
NAVAL AIR STATION WILDWOOD MUSEUM  
14<sup>TH</sup> AIRFEST WITH COLLINGS FOUNDATION  
FREEDOM TOUR 2010  
FLIGHTS AVAILABE IN WWII AIRCRAFT –  
[www.usnasw.org](http://www.usnasw.org) 609/886-8787

SEPTEMBER 10-12----- WEST MILFORD, NJ  
GREENWOOD LAKE AIR SHOW & WWII SHOWCASE  
GREENWOOD LAKE AIRPORT (4N1) – 973/728-7721  
[www.greenwoodlakeairshow.com](http://www.greenwoodlakeairshow.com)

SEPTEMBER 11 ----- TOUGHKENAMON, PA  
EAA CHAPTER 240 PANCAKE BREAKFAST  
NEW GARDEN FLYING FIELD (N57)  
[www.eaa240.org](http://www.eaa240.org)

SEPTEMBER 12 --- WOODBINE, NJ  
EAA CHAPTER 287 PANCAKE BREAKFAST FLY-IN  
WOODBINE MUNICIPAL AIRPORT (1N4)  
– 8:00 TO 11:00 AM  
PRESIDENT JIM ROMANO – [Jimromano@eaa287.org](mailto:Jimromano@eaa287.org)

SEPTEMBER 18 ----- OCEAN CITY, NJ  
OCEAN CITY MUNICIPAL AIRPORT AIRFEST 2010  
10:00 AM TO 3:00 PM  
OCEAN CITY MUNICIPAL AIRPORT (26N)  
– 609/399-0907

SEPTEMBER 25 ----- MILLVILLE, NJ  
10:00 AM TO 4:00 PM – RAIN DATE – SEPT. 26<sup>TH</sup>  
MILLVILLE ARMY AIR FIELD MUSEUM –  
- 856/327-2347  
2010 AVIATION CELEBRATION OF THE  
100<sup>TH</sup> ANNIVERSARY OF AIRSHOWS  
MILLVILLE AIRPORT (MIV) - Admission: \$5.00 per  
person [www.p47millville.org](http://www.p47millville.org)

SEPTEMBER 25-26 ----- WEST CHESTER, PA  
2010 ROTORFEST - AMERICAN HELICOPTER  
MUSEUM HELICOPTER AIR SHOW  
1220 AMERICAN BLVD #1 - AT BRANDYWINE  
AIRPORT (N99)  
10:00 AM TO 4:30 PM – 610/436-9600 –  
[www.helicoptermuseum.org](http://www.helicoptermuseum.org)

OCTOBER 2 ----- ALLOWAY, NJ  
EAA CHAPTER 216 FALL FESTIVAL FLY-IN – 11:00  
TO 3:00  
WHITEY LANCE AIRPORT (NJ02)  
DRY CAMPING AVAILABLE  
PRESIDENT HERMAN JUNKERMAN – 856/881-3459  
[www.hermanlj13@verizon.net](mailto:www.hermanlj13@verizon.net)

OCTOBER 14-17 ----- MASSEY, MD  
VINTAGE SAILPLNE ASSOCIATION VISIT  
MASSEY AIR MUSEUM – MASSEY AERODROME  
(MD1) [www.masseyaero.org](http://www.masseyaero.org)



came back too. And then, shortly after that, Tom arrived in his Trike for a short visit. What a great day for flying. Hope we get some more like that soon.

## ~~View from the Tail Gunner~~

Ed Neumann

Last month as I was putting the Newsletter together we were in the midst of a Major Record Breaking snow storm.

Look what I found under the snow



on my front lawn on March 1<sup>st</sup>. That's a sure sign that spring is on its way.

Our first Saturday event was a visit to the American Helicopter Museum at Brandywine Airport. We had a great time and met some nice people. Dave Bevan the Tour Guide was especially interesting to listen to.



He worked for Boeing Vertol as an Engineer and he knew our past president Walt Balauer who worked on the Osprey.



The first guide that gave us the Welcome Introduction. I didn't get his Name.



We met another interesting young man, Adam Stewart, who is a School Teacher and private Pilot. I hope he joins our Chapter. The March awards Banquet is on March 17<sup>th</sup> Which just happens to be St. Paddy's Day. The Prop award will finally be on display and we will Recognize all of the Chapter members who built and Flew their own plane.

We had a member, Marti, from Finland who while he was here carved a propeller He left us the Prop when he went home to Finland. Mark Ramos and Ron Kortum came up with the idea to make it a memorial award.



Marti and Ron Kortum Sept 18, 2002

There wouldn't have been enough room on the Plaque for all of the names of past members that built a flew their own plane so we had to leave out the really old members that are no longer with us. The names are:

Buck Shute	Benson Gyrocopter
Ken Mancus	VP-1 & Kolb Firestar KXP
Tony Butterhof	Aeronca 11AC EXP
Charlie Eshleman	Avid Flyer MK 4
Joe Flood	Smith Mini Plane
Ken Fones	Mini 500 Helicopter
Paul Ginter	RV-7A
Les Glessner	CGS Hawk
Art Kruysman	Fisher FP-404
Whitey Lance	Lance Aero Bellanca
Don Leady	Montana Coyote
Erv Leshner	Amphibious Motor Glider
Ed Lodge	RV-4
Dan Marchetti	Avid Flyer ModelB
Gus Mihlebach	Hatz CB-1 & Waco F2 Rep.
Bill Varnes	Kolb Firestar
Otto Zauner	Playboy & RV-4
Charlie Zielke	RV-4 & RV-8A

And not to be forgotten a few old timers not on the Plaque who have gone west before us

## Experimental Aircraft Association South Jersey Chapter 216

President: Herman Junkerman 856-881-3459  
 Vice Pres: Tom McDowell 856-358-7351  
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What: Welding Demo

Where: Alloway Airfield (Whitey's Hanger)

When: April 3, 2010

Who: Tom McDowell

I will make my best attempt to explain, demo and have you do 'Hands On' welding.

I am not a pro at public demos so I need to have some help from you. Here is what you can do to help us get this completed in good time.

- If you really need to have a *side bar conversation* with someone here or on the phone-take it outside. If you B/S, you will be called on to explain the process. There are people who want to hear what is going on.
- If you have any questions, please save them until the intro is done.
- I am not an instructor and don't make any apologies, so if I miss something, or I'm not correct, please jump in and share the info.

There is or will be a need for you to have a weld repair, or fabrication of something sometime. Metal fabrication is part of welding but not fully covered now. You have or will have an aircraft, motorcycle, car, atv, bicycle etc that will need welding. You can do it.

There are many types of metals we deal with in some fashion. Steel, Aluminum, Stainless Steel, Copper are the most common we see daily. Our planes are made up of one of any combination of these metals. Some are pop riveted together, some are welded.

Steel is made many forms. For us we only need to know a couple. Mild Carbon Steel and Chrome Molly. The basic difference is Chrome Molly steel has a very small percentage of Chromium added to the metal for more strength. This means you can use lighter metal and get the same strength. There are other benefits, such as better resistance to corrosion. Welding process is essentially the same for both. Aluminum also has many forms or Grades. Some of the processes to make the structures differ as well, cast, extruded, etc.

Some of the problems seen in welds such as cracks, total failure etc can be traced back to preparation. When fitting two pieces of metal to weld together, the metal must be very clean and the fit up between the two pieces must be tight.

The welding/soldering process also lends itself to problems with the product. Bad process will induce impurities into the weld area creating weak areas or stress points. Porosity is something like Blueberries in pancakes. The blueberries are slag deposits and the pancake is the parent metal.

Preheat is an important part of the weld process. It drives out any moisture and sets up the metal molecules to reduce stress. Kind of like stretching before a workout and a walking lap after running a marathon.

**Personal protection** is real **important**. Leather gloves, sleeves welding shield. Type of welding will dictate what kind of dress out you need. If you were welding on dirty, rusty beams on a waterfront, the kind of welding would require full leather body protection with heavy gloves and protection for the feet, where as welding a thin stainless steel aircraft muffler on a bench will only require inferred protection of the body parts and light gloves with a weld helmet.

There are many weld processes used in the trade. Some of them are

- Oxyegen /Acetyene (open flame via torch)
- Submerged Arc welding (commonly called 'Stick)
- Tig Welding (Tungsten electrode Inert Gas)-( Electric welding)
- Mig (Metal Inert Gas (Consumable metal electrode)
- Soldering (Oxy/Acy or Propane flame)

**Welding melts the parent metal** and melts the filler metal to be added to the molten metal. **Soldering does not melt the base or parent metal** but does melt the filler metal. The filler metal bonds itself to the surface of the parent metal filling in any voids, i.e. soldering brass fitting to copper pipe with lead.

**Oxy/Acy or Gas welding**, You set the mixture of Oxygen to Acetylene to a neutral flame.

-To much Acetylene and you get a sooty black covering on your work. This introduces excess carbon into the weld.

-To much Oxygen and you will introduce to much O2 into the weld causing brittleness.

**Submerged Arc or Arc Welding**. An Electric producing machine takes 240v AC Or 120v AC current and converts it to DC (sometimes AC current) It lowers the voltage but kicks up the amperage very high to melt the metal. The 'filler metal' used has a power coating that melts and floats on top of the molten metal to protect the weld area from oxygen and to slow the metal cooling rate. You can get a shock from this that is equivalent to touching an electric cattle fence. Not pleasant but gets your attention.

**TIG welding.** Again, an Electric producing machine that does the same as stick but with a twist. There is an 'inert gas bottle hooked up the machine that allows a bit of 'shield gas' that does the same thing as the flux on the stick weld procedure. It shields the molten metal from oxygen. There is a small hose coming from the machine. This hose houses a conductive shield material to carries the current from the machine to the tip. There is a hollow area of the hose that carries the inert gas to the point of weld. At the end of the hose, there is a tungsten piece. This looks very much like a pencil lead. It has a point ground on the tip to control the arc. A foot pedal normally controls the arc or current flow.

MIG welding: (Metal Inert Gas) is a process similar to TIG. The difference here is the cable that comes from the welding machine carries a wire from a spool fed by drive wheels. The wire is the filler metal. It is electrically charged from the welding machine. Some of the filler wire contains a flux core to shield the weld, precluding the need for inert gas shield. The end of the cable has a handle grip that has a pistol trigger. When the trigger is squeezed, the wire is charges and will spool out of the tip until trigger is released. This action essentially allows the operator to weld until he can't stand up anymore! There are some variations, i.e. Aluminum welding.

Last but not least, **Soldering.** This is what plumbers do. Gluing brass fittings to copper pipe with lead and heat. It isn't that easy. This is an art as well. Just one bad solder joint and you ruin Thanksgiving dinner!

Any questions? If I can't answer them, maybe someone else can. The EAA web site has some great videos on this stuff . If you want to know anything about this subject, just google it.

**What you should bring to the demo?**

- High collared shirt (**cotton turtle neck**) is preferred. **No synthetics**
- Light leather driving gloves. **No rubber or synthetics**
- Long sleeve shirt (may get a couple small holes in the sleeves so don't bring your Sunday best.
- Long pants and leather work shoes if you have them.