



# SMOKE SIGNALS

## What Is the Importance of Voting in America? - from "eHow"



The importance of voting in America cannot be overstated. The United States is a constitutional republic. Americans democratically elect their leaders, who in turn represent them in the legislative, judicial and executive branches of government. Some of our leaders also have the power to appoint other leaders to certain offices. Our leaders make, enforce and judge laws that impact our health, religion, money and freedoms. Many of these issues are also voted on directly during elections. It is therefore important to vote to have your say about what happens to you.

### Significance

- Every vote has significance. Several elections have been decided by a single vote. In other elections, the vote was tied and the winner decided by a coin flip. In a close presidential election, the winner is actually decided by a small number of voters in swing states. The 2000 presidential election came down to a handful of ballots in Florida.

### Considerations

- There are many issues to consider when casting your vote. Choose your leaders wisely. Politicians make laws protecting and restricting social freedoms. They determine the legality of issues like abortion, capital punishment, gay rights, civil rights and religion. Chief executives appoint judges and justices. The right to have an abortion comes down to a very slim majority vote on the U.S. Supreme Court. Supreme Court justices serve for life. A president you elect today may appoint a justice who decides American social policy for a generation. Our leaders also decide policy on issues like national security, civil liberties and the environment. If you care about these issues, you must vote.

### Benefits

- Many voters who care little about social issues care a great deal about their financial benefits. The politicians we elect decide how much we pay in taxes and how that money is spent. Bond issues and propositions on the ballot determine whether your property taxes or sales taxes will rise. Health care, Social Security and defense spending are enormous financial strains on our economy. Vote for leaders and measures that will spend money the way you want it spent.

### History

- A lot of blood has been shed through American history so that you have the right and privilege to vote. Many people sacrificed and worked tirelessly so that women, minorities and adults younger than 21 could cast ballots. Soldiers and civil rights workers died fighting for your right to vote. You owe it to them to exercise your civic responsibility. American soldiers are still fighting and dying in wars. Vote to choose leaders who make military decisions you agree with.

### Potential

- It is important to vote for America's future potential. Ballots you cast today will impact your children, grandchildren and all the generations that follow. Vote to improve the world they will live in. Voting also sets a good example for your kids. If you don't vote, you have no right to complain about the way the country is being run.

## November 2011

### Meroke Elections



"The only thing necessary for the triumph [of evil] is for good men to do nothing." --Edmund Burke (1729-1797)

### Thrust Vectoring



By definition, thrust vectoring (TV) is an aircraft's ability to direct its main engine or engines' thrust in a direction other than parallel to the aircraft's longitudinal axis.

### The Rookie



...he crashed my plane to smithereens into the wall of the school...



## TIME TO **VOTE**

*This comes to you from Tony Pollio, three time President of the Meroke RC Club. These are the rules for the club elections as per the club bi-laws.*

The election process will proceed as follows:

We will begin the elections by accepting nominations and voting for the positions of President, Vice President, Treasurer, Recording Secretary, Corresponding Secretary, and three Board of Director members.

We will proceed in this order so that if a person is not elected to a higher office, they can then run for a lower office position. The nominating committee will list their nominees for each position first and then we will open the floor for additional nominations for each position. A person can also choose to volunteer to run for a particular position.

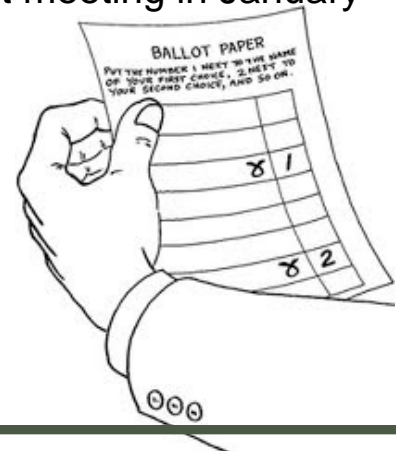
Nominations do not require a second nomination. A nominee needs to accept the nomination in order to be placed on the ballot. If there are two or more candidates for a position, voting will be by written ballots to be counted by a committee of three members.

Voting by proxy must be conducted according to the bi-laws. A member must submit a signed, original, written letter naming and designating another member to vote for that member. No other format will be accepted for proxy voting. No e-mails will be accepted for proxy voting.

The five club officers elected, the three Board of Directors elected, and the last past president, make up the nine members of the Meroke Board of Directors.

After the officers are elected, we will ask for volunteers for each of the club committees and for the clubs various activities, if the president-elect so chooses. As an alternative, the President-elect may choose to appoint members to these positions at a later time.

Newly elected club officers and board of director members will begin their term of office at the first meeting in January 2012.





## **Thrust Vectoring** - *Contributed by Russell Rhine*

Lately, there have been RC jet designs that perform amazing maneuvers and seem to have something extra. This new breed of agility owes its success to one thing— thrust vectoring. As with full-size aviation, model designers have been tweaking and experimenting with their planes to make them as maneuverable as possible. It's little wonder that RC has now added the advantages of thrust vectoring to several new aircraft. But what it's all about? Let's take a closer look

This single motor EDF F-35 jet from Hobby-Lobby features 360 TV for pitch and yaw control.



By definition, thrust vectoring (TV) is an aircraft's ability to direct its main engine or engines' thrust in a direction other than parallel to the aircraft's longitudinal axis. The technique was originally envisioned as a way to provide upward vertical thrust to improve vertical takeoff (VTOL) or short takeoff (STOL) and landing performance. The best-known example of thrust vectoring is with the Rolls-Royce Pegasus engine used to power the Hawker-Siddeley Harrier jump jet. Often during flight tests, Harrier pilots would use the aircraft's swiveling thrust deflectors to perform much tighter maneuvers than normally allowed by the aircraft's aerodynamic design. Thrust vectoring experiments with the Harrier, also called "Vectoring in Forward Flight" or (ViFFing,) was discouraged by the Royal Air Force and Royal Navy, but encouraged and actively practiced by the U.S. Marine Corps. This control technology quickly led to thrust vectoring nozzles being installed on various experimental X-planes where vectored thrust was deployed in directions other than down.

The twin motor Su-34 shows off its simple 180 degree TV control setup. With two servos, it provides both pitch and roll control.



The newest generation of twenty-first century fighter/attack aircraft uses every possible design augmentation to gain the advantage in air combat. A list of modern jet fighter-bomber aircraft utilizing TV exhaust nozzles includes the Mikoyan MiG-29, the Sukhoi Su-34 Fullback, the Lockheed Martin/Boeing F-22 Raptor and the Lockheed Martin F-35 Lightning II. What's on the drawing boards for future fighter aircraft design has yet to be seen, but one thing is for sure—they will all have some form of exhaust thrust vectoring to maintain air-superiority. Though there are some experimental propeller-driven RC aerobatic models. using TV to improve 3D performance, for this article, we are talking specifically about jets equipped with either electric ducted fan (EDF) exhaust nozzles or with pusher-prop setups.



## Thrust Vectoring



Here is the Vane control setup for the Phase 3 Squall EDF jet. Notice that all the linkage is attached to the control surfaces so no complex mixing is required.

By design, when it comes to vectoring (directing) our aircraft's thrust, there are two ways to go. One setup uses moving control vanes to deflect the airflow exiting a fixed nozzle and another way is to use a swiveling nozzle. Though deflector

vanes are an easy way to add TV to a jet, they can spoil the exhaust's airflow making it a bit less efficient.

With a free-flowing swiveling nozzle, very little thrust force is lost. With a pusher prop setup, the entire motor/

propeller assembly is mounted to a hinged or pivoting motor mount which, like the exhaust nozzle and deflector vanes, are then moved by servos and ridged pushrods.

The simplest form of TV (in the pitch of the axis) is "two dimension" vectoring, also considered 180-degree thrust vectoring. In this setup, all you need is a single, fixed rotation point and linkage to move the nozzle or motor/prop assembly up and down. Of course, you could also use 180-degree setup in the yaw axis (working with rudder) but pitch control (elevator) is much more useful for controlling your plane. Pitch vectoring allows much tighter loops and can actually make your jet do flips. In the real world, the MiG-29 became famous for performing the amazing Cobra maneuver using pitch vectoring. A single TV nozzle or motor/prop setup combining both elevator and rudder (pitch and yaw) is called "three dimension" vectoring and is often referred to as 360-degree thrust vectoring. This setup requires two channels (elevator and rudder) and is a bit more complicated. With 360-degree thrust vectoring, your single motor jet can perform all sorts of advanced loop and flip maneuvers including as well as incredibly flat spins and extremely high-alpha slow-speed flight.

There is, however, no way for a single thrust vectoring power system (either 180 or 360 degrees) in the roll axis. To take advantage of TV for improved rolling performance, you have to use a pair of power systems and mix them to work with the aileron channel so they move in opposite pitch directions. Programmable radios make this fairly easy to accomplish without the use of complicated linkages.



## **Thrust Vectoring**

Here's what the pusher props look like for a full-right.

### PUSHER PROP SETUP

Pusher prop jet designs are also very popular, and several take advantage of TV control. For these setups, the only real difference is that the power unit is external and the thrust is totally unrestricted during changes in thrust angle. Longtime hobbyist Steve Shumate has been designing foam pusher jets for several years and one of his most popular designs is his Su-37 Super Flanker Park Jet that was featured in the July 2008 issue of Backyard Flyer. To keep the force of the power systems isolated from the lightweight foam fuselage structure, the TV motor mounts were made from strong 3/8-inch square hardwood sticks with 1/8-inch plywood side plates and pivot around a small bolt. Steve used two Hitec HS-85MG servos and 1/16-inch music wire pushrods to actuate the pivoting motor mounts. As you can see from the photos, his design is simple, straightforward and very easy to build. You can buy your own set of plans for Steve's Su-37 Super Flanker (plan no. K0708A), at [rcstore.com](http://rcstore.com).



### TV SETUP AND PILOTING TIPS



In a recent interview, Jason Cole of Hobby-Lobby spoke on how to get the inside scoop on flying and setting up thrust vectoring jets. Here's what he had to say. "It's often said that good flight management begins with proper setup. When it comes to TV, what's the recommended degree of deflection for the exhaust nozzle? I like to set up the TV nozzles for maximum control deflection on high rates. This gives the best push for radical maneuvering. Low rates will be right at half the deflection of full travel."



## **Thrust Vectoring**

When asked if the mixes for each control axis be set on an active mixer or do you think a flight mode switch is better? Jason responded with the following. "It just comes down to personal preference. For initial test flights I like to turn on all of the TV mixes at one time with one switch. It keeps things simple so you can concentrate more on flying the model rather than trying to remember to turn the different mixes on and off. Some models land easier without the TV units activated so it's nice to hit one switch before making your landing approach."



With the foamie jets so popular today, what about the servo requirements for moving TV nozzles?

The design of the TV units I've used require very little pressure and holding power from the servo to deflect a TV nozzle fully. A regular 9-gram sub-micro servo does the job in most cases. While flying, how should you progress, one control axis at a time, or go for it all?

You should have low rates set up for takeoffs, landings and just cruising around. Get up a few mistakes high and then go to high rates. One of the first and easiest maneuvers to try is a tight flip. When flying along straight and level, go to full throttle and pull full up-elevator until the model flips and comes back to upright. Let off on elevator to exit. Another one is go high and use full throttle, full rudder, full up-elevator and a touch of aileron in the opposite direction as the rudder. This will create



a nice tight flat spin. To exit, let off the aileron and elevator, and apply slight opposite rudder. Stay high and play with it until you feel comfortable. Most maneuvers require full throttle to get the maximum push from the TV units, so don't forget to go back to low rates when setting up for a landing. Thrust vectoring is here to stay. TV completely alters the flight dynamics of an aircraft and allows previously unimaginable maneuvers to be accomplished.



# THE MEROKE RC CLUB - EST. 1963

**YOUR CLUB NEEDS YOU! PLEASE VOLUNTEER!!!**

## **The Rookie** - by Dennis Osik

*I wrote "The Rookie" last year when I first got into RC flying and joined the Meroke's. I thought it might be fun for all of us to reflect on what it was like in the beginning, when we first started to fly. I know for some of you that was long ago when RC was a different animal but I have to think that my experience was not such a unique one but probably common to us all.*

On March 8th of this year I became a Meroke, it feels pretty good. Other than organized sports when I was younger I never belonged to a club, no cub scouts or boy scouts or chess club in High School. Now I am a Meroke, now I belong to the Meroke RC Club, I am the Rookie.



Not to bore you all with my story, which I told at one of the meetings, but I will. When I was a young lad I spent many days building a cable controlled aircraft. A friend was to supply a motor and we were to fly it in the school yard near his house. After gluing and painting and painting and gluing for hours on end the big day arrived we were to fly my model plane. Since my friend had the experience, and the motor, he would take the first flight and I would follow. My palms were sweaty my anticipation high. My friend started the motor, more sweat, anticipation grew, he took the control cables, my anticipation grew greater, he got the plane to lift off, my heart pounding anticipation peaked...

...he crashed my plane to smithereens into the wall of the school...

...my anticipation was in the crapper.

Ever since that day I wanted to fly a model aircraft and by George I did it, thanks to you all.

It probably has been a long time, for most of you, since you learned to fly and joined the Meroke's, so let me remind you of what it is like to be the new, inexperienced Rookie with a long road or sky of learning ahead of you. Don't take for granted what you have in this club, it is a treasure, we should all be proud that we are a part of it and here's why.

**FIRST OF ALL THE PEOPLE.** When I was looking to learn to fly RC planes thank God I decided to do it the right way and find people who knew what they were doing. I found the Meroke RC Club on line. The first person I contacted was Ted Evangelatos, after a while I'll bet that he cringed every time that he saw he had e-mail...from me. But he put up with my constant questions and always answered them with respect and intelligence no matter how inane they were. He also took me under his wing (no pun intended) at the WRAM show where I bought my first plane and some of what I needed to get it in flying shape. I thank him for that and for all his guidance. Mike Hagens took the time on a long phone call, explaining much to me and giving me a really good idea of what I was getting myself into. In both cases there was no pressure just a love of the hobby. Phil Friedensohn coached me at the club auction giving me the nod when there was something for sale that I needed and thought of me when an entire set up became available which included plane transmitter, field box and more...thanks Phil.



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## The Rookie

**MORE PEOPLE.** What can I say about the build club except that it is a microcosm of the entire Meroke RC Club. Nelson is a gem to be cherished, Charley and Ernie make you feel like you have known them all your life or at least wish you did. Lou, Joe and Bob, and if I forgot anyone please forgive me, would give you the shirt off their back if you asked, usually though it is just needle nose pliers, thin CA, “you should watch this” or something like that.

At each meeting I attended I met someone new, someone who was pleasant and answered patiently all my Newbie questions. What I found at the meetings

extends to the field. A great group of people that are not only doing what they love to do but enjoy helping anyone who needs it, tuning engines, lending tools, watching out for the next guy making sure they are safe. In this “Me, me, me” world we live in, here is a group that says “You, you, you” and “Us, us, us.” Very impressive!

My biggest problem is keeping track of all the information, sometimes it feels like my head will explode if I have to remember one more important concept or idea, “Servo’s, push rods, Z bends, ailerons, glow plugs”. “Don’t snap the controls, more throttle into the wind, easy on the turns, let the plane fly.” It is a lot harder than you make it look, you people are really good!

Last but not least let’s talk equipment that YOU HAVE TO HAVE! I’ll just say this “Cha-Ching, Cha-Ching, Cha-Ching!!! Every time I turn around someone says “OH! You need to BUY or you have to HAVE or go on line to Tower Hobbies”. I surrender; just take my wallet, please!

So if I give you the “Deer in the headlights” look after you’ve taken twenty minutes to explain the difference between a 2 stroke and 4 stroke engine or why it is better to learn to fly with a plane that has a dihedral wing or the all importance of a prop reamer (I think I saw that in a movie once, but I digress) like I said if I give you the thousand yard stare or moths fly out of my ears, do not fear because it is all part of being “The Rookie” and it is all the great part of becoming a Meroke. All in all it really is a gas or is it Nitro?





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## **Balsarite**

Our good friend and fellow Meroke Charlie Lando sent me the following e-mail and thought that it might be of interest to the membership, so I am passing it along to you all.

**“Since there’s been a question on how to recover “fuel soaked” balsa, I thought you might be interested in the attached that I copied from Tower’s Tech Department. Also see P. 2 for info. from the manufacturer.”**

### **Coverite Balsarite (for) Film**

#### **NOTES FROM OUR TECH DEPARTMENT**

Balsarite is a Clear Liquid that is used to Prep the Wood Surface Before Applying Covering. Balsarite absorbs into the wood, waterproofing it, strengthening it, and increasing the adhesion.

**\*\*NOT FOR USE ON MICAFILM\*\***

**FEATURES:** This is for use with Film Coverings such as MonoKote, TowerKote, EconoKote, UltraCote, 21st Century Film, Black Baron Film and other similar coverings.

Can be Applied to Fuel-Soaked Wood so that Covering can be reapplied.

**INCLUDES:** One 16 ounce Can of Balsarite Fabric Formula.

**COMMENTS:** To Thin Balsarite Film, use Coverite Ironex ([COVR2600](#))

For the 8oz Can, use [COVR2515](#).

For Fabric Coverings, use 8oz [COVR2500](#)

If you need more information, use these Coverite resources –

Click Here: [Manufacturer's Product Web Page](#)

E-mail: [airsupport@hobbico.com](mailto:airsupport@hobbico.com)

Web Site: <http://www.coverite.com/>

Phone: 217-398-8970

Postal Address:

Coverite

3002 N. APOLLO DRIVE, SUITE #1

CHAMPAIGN, IL 61822

## **Balsarite**

### **Waterproofs and primes in a single step!**

Crystal-clear Balsarite brushes on easily, waterproofing woods and smoothing surfaces for professional-looking results. When covering is applied, Balsarite reacts with adhesives to lock coverings on with an unbreakable bond. Available in **Balsarite - Fabric** for fabric and Micafilm, and **Balsarite - Film** for all film coverings including Black Baron, Solarfilm and MonoKote®.

- Formulated for better bonds with fabric and films.

Available in the following sizes:

**Balsarite - Fabric 8oz** (Stock Number: COVR2500)

**Balsarite - Film 8oz** (Stock Number: COVR2515)

**Balsarite - Film 16oz** (Stock Number: COVR2520)





# THE MEROKE RC CLUB - EST. 1963

YOUR CLUB NEEDS YOU! PLEASE VOLUNTEER!!!



## HAPPY THANKSGIVING



### TIME TO PAY YOUR 2012 MEMBERSHIP DUES



A special "Thank You" goes out to Mr. George Haber who mesmerized the Meroke members who attended the October 20th meeting, with his presentation on the World Wars. George introduced us to the likes of Giulio Douhet, Alexander de Seversky and his book "Victory Through Air Power" along with Bomber Harris, General Billy Mitchell and the book "Winged Warfare" by General Hap Arnold. I cannot do justice to his presentation in this short space. Those who did not attend the meeting really missed out and I for one would like to have Mr. Haber come back and speak again, this was just the tip of the Iceberg.

### Calendar

#### **November 3, 2011**

Club Meeting  
Show and Tell

#### **November 12, 2011**

##### Meroke Building Program

Saturdays at the First Presbyterian Church of Levittown

474 Wantagh Avenue, Levittown

#### **November 17, 2011**

Club Meeting  
ELECTIONS

#### **November 20, 2011**

Whitman Flyers Swap Meet  
The Meroke RC Club has reserved 1 table for its members exhibits. For more information:

[www.whitmanflyers.com](http://www.whitmanflyers.com)

### TOP GUN RESULTS

AS OF NOVEMBER

- |                    |        |
|--------------------|--------|
| 1. Ted Evangelatos | 51 pts |
| 2. Jack Tramuta    | 54 pts |
| 3. Patrick Boll    | 58 pts |
| 4. Nelson Ramos    | 80 pts |
| 5. Jim Taverese    | 84 pts |
| 6. Gene Kolakowski | 87 pts |
| 7. Rich Boll       | 93 pts |

### BIRTHDAYS

- |               |                        |
|---------------|------------------------|
| <u>Nov 2</u>  | <b>Lou Pinto</b>       |
| <u>Nov 5</u>  | <b>George Althaus</b>  |
| <u>Nov 7</u>  | <b>Herb Henery</b>     |
| <u>Nov 7</u>  | <b>Ken Mandel</b>      |
| <u>Nov 14</u> | <b>Vlad Pean</b>       |
| <u>Nov 25</u> | <b>Bob Wohlgermuth</b> |

### SUGGESTION BOX

Send all suggestions to:  
[newsletter@meroke.com](mailto:newsletter@meroke.com)