

# THE FLYING MACHINE NEWS

Volume 25 Issue 10

A GOLD LEADER CLUB

October 2009

The Newsletter of the Rocky Mountain Flying Machine

AMA Charter Club #2229



## President's Message

We had major field maintenance on October 8<sup>th</sup>, 9<sup>th</sup>, and Sunday, October 4<sup>th</sup>. A lot of prep work was done on Friday to prevent the damage the rains have inflicted on our

field. It is early Saturday morning as I write this, so I don't know what progress we will make on Saturday and Sunday. The plan is to put down the Geotex fabric on the runways as we have been talking about for months. I am sure we will get a lot of the project completed and we can put the finishing touches to the project in the next couple of weeks. My sincere thanks to all of you that pitched in with a helping hand on the project.

It seems like just yesterday it was a new year, and guess what; the year is almost over. I know I have a lot of catch-up flying to do. Personally, I haven't been in the best of health this year, so I know I haven't met my flying goals. I hope we have some nice flying weather before winter sets in. I guess, when you think about it, we are lucky. We can fly all year.

It's also that time of the year to start thinking about what level of commitment you are willing to make to the club for next year. We are a volunteer organization and it doesn't work without your help. We will need volunteers for officers and there will be some board positions coming open. Your board is putting together a nominating committee that we will announce at the regular meeting on October 15<sup>th</sup>.

Are we having fun yet?  
Ken Morris  
President, RMFM

## Meeting Information

**Program—Vic Newton will Discuss batteries**

**Raffle Prize—Unknown as of the writing of the Newsletter**

**The club meeting giveaway is \$40**

**Brass Monkey Breakfast Oct 18th 8:00am (Western View)**



Hello Members,  
I want to thank Jerry and John for the work they are doing at the field. The new wind sock is up and the rest room has been moved to a better place. Jim and I helped some on Sunday. Remember all

that can help is appreciated. We have lots more to get done. This month's meeting will be about battery charging. Vic and I will run this month's program segment. It should be a good meeting. Remember to help out with the field this week end. V.P. David Haygood.



WOW!!!! What a job by the hard working folks at the field this weekend. Dave Haygood, Jon Bell, Kent Paul, Ken Morris, Eric Brummett, Fred Magee, George, Jim Swart, Jerry Jones, John Gayer, Derek Gill And myself, GREAT JOB to all those who were out both DAYS!!!



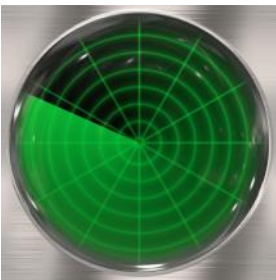
## August Fun-Fly

By Vic Newton

RRRRRiiii-  
innnnngggg.  
Rrrriiii-  
innnnngggg. It's  
5:30 in the morning  
and Jedediah Prop-  
wash jumps out of  
bed. He's going to  
attend the monthly

fun fly with his new Super Duper Elegant Stick. By six thirty he's ready to leave and heads to his truck. He packed the night before, so all he has to do is grab his transmitter off the charger. But he has a nagging feeling he has forgotten something. Oh well, I'll just have to do without it. When he gets outside he finds it's raining. A steady but not too heavy rain. Oh well, if you wait 20 minutes the weather will change. He's determined to win today, so he starts the 2.5 hour drive to the field. Despite the rain he makes good time as traffic is light. When he gets to the last turn, a dirt road leading to the field, it's still raining. Oh well, he shifts into four-wheel drive and heads down the dirt road. With a bit of slipping and sliding he gets to the field. No one else is there so he unlocks the gate and goes in, after all, the weather will change in 20 minutes and then others will appear.

Well, three hours later he's still in his truck and the rain is still pouring, heavier now. His posterior is getting real tired as he's been sitting in his truck for 5.5 hours. Enough is enough, the rain hasn't quit and no one is coming, so Jedediah heads for home. About half way down the dirt road he gets stuck, really stuck! He tries every trick he can think of to get unstuck, but to no avail. Time to call for help. He reaches for his cell phone but doesn't find it. Now he knows what he forgot, it's at home, plugged into his charger.....



## Field Updates

By Jon Bell

We are still on schedule for the installation of the Geo-tec on our runway. We are going to meet Sunday to decide what repairs need to be done by the back hoe we are going to hire. Jerry Jones will purchase the drill bits and mallets. We will do the weed control this week.

We will be making calls to everyone to remind them there will be no flying at the field on the weekend of the 10<sup>th</sup> and 11<sup>th</sup> of this month. We will also ask for help with the installation of the Geo-tec.

This is going to be a huge improvement to our runway so I urge everyone to pitch in and help.

Thanks! Jon Bell

## Secretary's Report

By Jerry Jones

Our last club meeting in Sept. was a sad collection of members, guess too many things were going on. We only had 6 members present so did not do any drawings, decided to put them off till the Oct. meeting. We did have two planes, Vic brought his Mustang and Pat had his new Fleet bi plane.



Pat gave his presentation on designing and explained the difference in different plan drawings. We may have to have him give it again when more members are there as it was very informative. Work is progressing at the field, getting ready for the installation of the Geotex runway, which is still set for the weekend of the 10<sup>th</sup>.

We had quite a bit of rain this summer in the last storm, so we need to fix the road as it washed out in culvert area, and some parts of the runway.

We are going to make a pedestal for "Bob's" plaque which I hope to get up this week.

The Club picnic held at Marks house was great, weather turned out to be super, Mark grilled some great stuff, and there were many goodies to be had and lots of stories!

Lets all get to the next meeting..

Jerry



## Conversations With A Friend

I was sitting in the coffee corner of the hobby shop, thumbing through a recent issue of a magazine, when Kris spotted me. “Hi, Richard. Mind if I join you?”

“Hey, Kris, how are ya? I’ve just been reading an article on one of the new computer radios...”

“That’s what I wanna talk to you about,” interrupted Kris. I finally got my income tax refund, and I got to thinking that I really should invest in a new radio, like, some computer controlled one. I remember we talked about radios a while ago, but I don’t remember that we talked about computers. I’ve been lookin’ at a few, but there’s so many, and they’re all so different, I got confused. What should I be lookin’ for? Got any recommendations?”

“If you mean specific radios, sure, but really, there’s a lot more to know before you plop down your bucks. Since all those computer radios are basically the same, mebbe we oughtta talk about particular features, don’t ‘cha think?”

“With what I saw, we’ll be here all day, there were so many! And like I said, all of ‘em are different!”

“Well,” I replied, “that may appear to be the case, but think about it for a minute. If I hand you my transmitter, do you think you’d be able to fly my plane, even though the radio’s got a computer in it?”

“Well, yeah, but...”

“Right. The end result of ALL the radios out there is just that—control the aircraft—and do it in a standardized way. Fundamentally, they’re all alike. What’s different isn’t the end result, it’s the setup. Computer radios make it easier to set up an aircraft before and after flight—a whole lot easier. And after the airplane is set up, it generally is easier to fly, too. That’s why you’ll find most manufacturers putting computers into all of their radios, from bottom to top. It helps, of course, to have the computer chips themselves be pretty cheap, too! If the radio is easy to use, they figure, it should be easier to sell. So most of the manufacturers are going overboard, touting how easy it is to use THEIR radios.”

“But,” interjected Kris, “they’re NOT all alike! I looked at ‘em—none of ‘em look the same, or even have the same functions! How can this be?”

“All of these computer radios have a set of features that perform the same functions—centering, trimming, direction of movement (called servo reversing), and amount of movement (called by various names, like end-point adjustment, f’r instance). Most of these radios have, in addition, sets of features that perform more ‘exotic’ functions—dual rates, exponential, mixing, fail safe, trim authority, flight conditions or modes, and more—and it’s these functions, in conjunction with the basic set, that determine the radio model differences.

“And how they’re programmed, or used, determines what they ‘look like’. When you really stop to look at those computer ra-

dios, you’ll find that yes, indeed, there are common functions, as I stated, and hence they really are all alike. How you access them, and how you adjust the parameters to suit your airplane (and your flying style), is determined by each manufacturer, and are the determining factors in ‘ease of use’. The basic functions are there; it’s just a matter of how to access them. In my experience, none of the computer radios is particularly difficult to use, and for the features they offer, they’re the only type of radio to buy.”

“Umm, I guess you’re right,” said Kris. “But how’s that gonna help me make a decision about what to buy?”

“Let’s take this a bit further,” I said. “First, accept that the basic function package of all radios is the same. Second, determine whether your current investment in a particular brand of radio should influence your choice—after all, if you have a lot of one particular manufacturer’s equipment, you might want to continue buying that brand of radio for the sake of compatibility and familiarity. Third, consider your pocketbook—how much money you are willing to spend will determine the fourth consideration: what extra features are important to you.”

“That’s just it—how can I choose what’s important if I don’t know what these functions do? Have you got any suggestions, Richard?”



“Sure—but it’s not that easy. What I like and consider important may not be what you need or consider important. But I DO have a set of features that I think are useful and that will handle the ma-

majority of problem areas we pattern pilots run into. Most of the computer radios today have these features, so your choices are still large, though! Here’s my list, in no particular order: dual rates, exponential, some form of trim memory, user-determined mixing, at least three model memory, and wing type selection.”

“What do these features do for me, Richard?” asked Kris.

“I’ll briefly describe them for you, but for details, just borrow one of the instruction manuals for the radio you’re interested in, bring it over here, and start reading. The particulars should then become clear. Anyway, here’s what each of my features does. Dual rates are easy—a switch (usually) controls the maximum amount of servo movement allowed. This is one feature that is easily changed during flight, and is very useful for reducing an airplane’s sensitivity.

“Exponential is a means of controlling how fast a servo moves as the stick is moved. Typically, it reduces the apparent sensitivity of a model by providing less servo motion around the center position for a given stick movement.

In other words, you can move the stick a lot from center and not get much servo movement, so the airplane doesn’t jump around. You still have full deflection of the control surface with full stick movement, though.



“Trim memory allows you to center your trims after a flight without having to mess with the linkages—please note that I don’t recommend that you make a habit of using this feature! You should always make sure your servos are properly aligned to a centered control surface as you set up your airplane on the bench, before flight. The use of trim memory then will be a convenience, and there shouldn’t be much change in your servo center positions. By the way, trim memory is usually used in conjunction with another type of memory called ‘sub trim’, which is really used for centering the servos—included in the basic function package, remember? There are two types of trim memory in use today—that which I just described (mechanical trim levers that are moved during flight, then their values transferred to memory afterwards)—and electronic, which automatically store trim changes as you fly.

“The electronic trim controls are momentary contact switches, and each time you push one in a particular direction, it beeps (telling you it did something) and stores a trim increment in memory. So you never have to worry about saving your trims, or having someone inadvertently change them on you.

“User-determined mixing allows you to mix any channel into any other channel, so that when you move one stick, two (and sometimes more) control surfaces move. This feature enables you to trim out problems with knife edge flight, for instance...”

“Oh, yeah, I remember how much trouble I had with my airplane trying to stop it from comin’ around in knife edge. I finally had to mess around with the wing—what a pain!”

“Right—I remember now—your plane pulled towards the canopy during knife edge, and I suggested dropping the trailing edge of the wing or reflexing the ailerons down a bit. You said that worked. With a computer radio which has mixing capabilities, you could have mixed in a little down elevator with rudder so that when you used the rudder in knife edge, you got just enough down elevator to keep the airplane flying straight. Jeff and Juan used this capability to additionally mix in a little aileron with rudder to control roll coupling under knife edge.

“Anyway, user-determined mixing is most desirable. Some computer radios permit you to mix, say, rudder with aileron (for coordinated turns, for instance), or perhaps some other preset combination. This is OK if that’s what you need, but it isn’t very versatile. If the only mixing capability is preset mixing, then shop around for a better radio.

“Model memory allows you to fly three (or more—depends on the radio) different models with one transmitter—just don’t forget to set up the transmitter for the model you want to fly, BEFORE you fly! I use this feature to fly one airplane under different sets of flight conditions, sometimes. For instance, I set up one ‘model’ for normal flight. I then set up the second ‘model’ for, say, flaperons (ailerons reflexed downward to act as flaps), mixing elevator with flaperons to experiment with landing modes in addition to normal flight. This way, if I don’t like what I’m testing, I can return to normal conditions for the next flight. (In case you’re interested, high-end radios have the capability of changing flight conditions during flight. How they do it is ‘in the details’.)

“Finally, wing type. I alluded to this when I mentioned flaperons. All this means is that you can choose to use two independent servos on your ailerons. It works by using another channel in

your radio which is slaved to the aileron channel. Other wing types are available (e.g., elevons), but for pattern, flaperons are ‘it’.”

“Wow, Richard, that’s a lot to think about, but I’ll probably be able to make a better decision now,” said Kris. “Thanks again for your help—I really appreciate it. Gotta run, though—I’m late again! Bye!”

With that outburst, Kris was gone! Now, where’s that article I was reading? Whoops—it’s time for me to head on outta here, too—look at the time!

*Stay focused...*

## Rice Memorial Trip

By Mark Johnston

My Wife and I went to San Antonio the first weekend of October along with Brian Regan. The event was Saturday and Sunday. We left on Thursday night and got in to Seguin Tx on



Friday afternoon. After getting checked in to the hotel we proceeded out to the field to get our trailer and Tent setup. After that we went back to the hotel for an AVP meeting, Ilona Maine from Muncie was there to talk to

all of us about the insurance coverage that AMA provides to all members. On Saturday we proceeded to get registered, but as that was starting so was the rain, It did clear up and we got some flying in but as the picture to the



left shows it came back with a vengeance after all was said and done the field had about 5” of water on it. The Saturday night BBQ was very good, When we got up on Sun. It had rained all night long and when we out to the field no one had come out so all was done for the weekend. After a few prizes and talks by Jim Rice We left for home. The event was attended by about 80+ pilots. Even with the rain it was a good trip. Thanks to Jim Cherry and Ilona Maine for the pictures



Mark

RMFM Event Calendar, October—December 2009

October 2009 EVENTS

- 3-4 J.R. Rice Memorial (Tri City Flyers)
- 3-4 Socorro Fun Fly
- 3 Electric Fun-Fly (NMSU (Las Cruces Club))
- 10-11 **Scheduled Work Party for Field (Put down Geotex)**
- 15 **RMFM Club Meeting**
- 18 Brass Monkey Breakfast (Western View Restaurant)
- 18 Monthly RMFM Fun-Fly (Henry Wood Memorial Field)

November 2009 EVENTS

- 15 **RMFM Club Meeting**
- 18 Brass Monkey Breakfast (Western View Restaurant)
- 18 Monthly RMFM Fun-Fly (Henry Wood Memorial Field)

December 2009 EVENTS

- TBD RMFM Christmas Party

*That's all for now folks - check next month's Calendar!*

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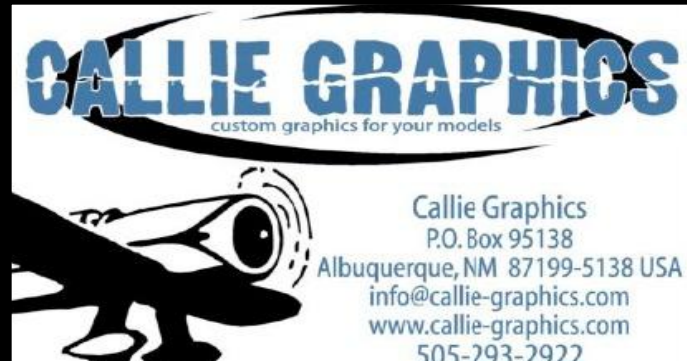
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Fred Magee/Vic Newton**

**NEXT MEETING IS ON  
Oct 15, 2009  
At Cutter Flying Services  
Albuquerque Sunport**

**HELP KEEP OUR FIELD CLEAN. WE HAVE A TRASH CAN, BUT  
SOMETIMES WE HAVE MORE THAN IT CAN HOLD.  
PLEASE TAKE YOUR REFUSE HOME. THANK YOU!!!**

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