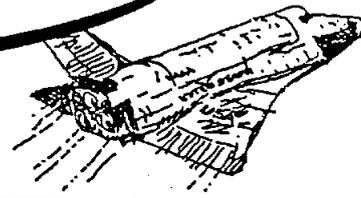


# The **R** **C** Flyer

February 1989



The Newsletter of the *Manned Space Center Radio Control Club*

## PILOTS, MAN YOUR PLANES!

We certainly enjoyed Monty Burton's stories about his career in the RAF last meeting. Next meeting, as you will see from the entertainment announcement, we will hear from the renowned Dr. Doom. And I hope we will also have another bunch of models and projects for everyone to enjoy.

As directed by the membership, I bought and forwarded to Brad Prior a card to let him know that the Club was thinking of him. It was reported to the membership by John Kiker that Dr. Prior was suffering from a brain tumor. If anyone would like to send Brad a personal card, his address is:

Dr. Brad W. Prior  
1412 Dolomiti Drive  
Las Vegas, NV 89117  
His phone is 702/363-8548.

Flying - even with the recent rainy spells - has attracted a good turnout at the field on weekends. The larger turnout makes it even more important that we be considerate of the others who are waiting to fly, taking care to be sure everyone gets his turn. Please return the pin each time you complete a flight, and - if things are getting crowded - wait a little while to give other fliers an opportunity. Please be attentive to the problems created by the rule against three-in-a-row. Fliers on either end of the sequence may be waiting for the "double" to be worked out. This means that a pin may have to be left unused so a flier on a higher (or lower) channel will have a chance to fly. A little friendliness will go a long way.

SEE YOU ALL AT THE MEETING!

Jim Brock

**NEXT MEETING**  
**THIS THURSDAY**  
**FEBRUARY 9th**  
**at 7:30**  
in the Clear Lake Park Building

## ENTERTAINMENT

This month's entertainment will consist of a discussion about adhesives. The talk will be given by Dave Thomason, an experienced modeller, and will consist of a general overview of adhesives, their use, and when they are used. There will be a special section on the fast setting CA glues and how to make proper glue joints. It will be a very informative discussion for the novice and should teach us "experts" a thing or two. Hope to see everyone at the club meeting!

Mike Goza



-Jim Brock 334-1715  
-John Campo 488-7748  
-Dennis Smerz 482-9431  
-Don White 488-1024



# THE SUBJECT IS FUEL!

By Mike Goza

Yes, it's that time of the year again when the club buys fuel and the wars begin!! Seriously though, the club needs to pick a supplier for fuel, decide on the amount, and the percentage of 5% and 10% we wish to buy. Based on last years figures and a guess, I am suggesting a 60/40 split of 5% and 10% in an 80 gallon total. That means 48 gallons of 5% and 32 gallons of 10%. These figures are not fixed, they are just a starting point. The final amount, along with the brand of fuel, will be determined at the club meeting. As per last year, special orders for fuel will be taken on a prepaid basis. If you want helicopter, four stroke, 15%, etc. put in your order with number of gallons, type, and money. In order to speed things up at the meeting, I have compiled a list of fuel suppliers, their cost and the lubrication they use in their fuels. Please review the list and make your decision. If you have another supplier you would like to add, please bring the information to the meeting. Also, before anyone asks, Cool Power and Omega (Morgan) fuels are distributor only. Mach7 is their mail order brand. Hope the information helps.

By Don White

It is the time of the year to reorder fuel and as one of the club members that has volunteered to store the fuel and sell it to the membership, I was very dissatisfied with the RED MAX we got last year. The bottles leaked, making it difficult to sell and a mess in the garage. I suspect the leakage was caused by the summer heat. The fuel also did not give satisfactory performance in some of the members' engines causing them to be hard to start and run hot. This was reported to me at the Prop-Nuts field during the scale contest and again at our field. The inconsistent runs and difficult idle were probably caused by moisture in the fuel, let in by poor bottles.

BYRON ORIGINALS has begun to market some performance blended fuel and I was asked by our President to investigate this new product. I have and they have provided a video tape which I will bring to our next meeting. A summary of the features of this fuel follow:

1. Blended with castor oil in state of the art facility.
2. Steps taken to prevent moisture. (Nitrogen Blanket)

Continued on Page 3

FUEL PRICING TABLE

FUEL	PHONE #	LUBRICANT *	5%	10%	SHIPPING
BYRON	712-364-2009	CS S	7.50	8.50	INCLUDED
MACH7 (MORGAN)	800-633-7556	C CS S	6.50	7.75	INCLUDED
RED MAX (FHS)	800-742-8484	S	7.72	8.62	INCLUDED
RITCH'S BREW	713-661-5458	C CS S	5.65	6.50	NOT APPLICABLE
SHELDON	800-228-3237	S	7.95	9.95	EXTRA **
SIG	800-247-5008	CS	12.75	14.75	INCLUDED

\* - LUBRICANT CODE: C-CASTOR, CS-CASTOR/SYNTHETIC MIX, S-SYNTHETIC  
 \*\* - SHIPPING WAS \$4.95 A CASE

NOTE: ALL PRICES BASED ON 80 GALLON ORDER AND/OR CLUB DISCOUNTS.



MANNED SPACE CENTER RADIO CONTROL CLUB

Minutes of the Meeting  
January 12, 1988

The meeting was called to order by President Brock at 7:47pm. Minutes of the last meeting were approved as published in the R/C Flyer with a correction in the spelling of Don Bartos' name as a winner in the attendance drawing.

Guest speaker Monty Burton AFC spoke of his experiences in the RAF and his record setting flight from London to Christchurch, New Zealand.

Old Business:

Dave Thomasson announced that the sanction has been obtained for the joint scale contest with the Prop Nuts club and that the George Myers Memorial Fly-In is scheduled to be held here beginning in 1990 with MSCRCC and Prop Nuts as joint sponsors.

New Business:

A motion was passed to begin making an annual donation of an unspecified amount to AMA and that it be designated a memorial on behalf of any members or their immediate families who have died during the preceding year.

A motion was passed to assist the SAM 82 Club in sponsoring a 2-day SAM contest at our flying site pending receipt of permission from NASA to use the field for a contest and to allow vehicles on the field to transport pilots and models from the parking area to the field.

Model-of-the-Month was won by Don Payne with his GHC-3 Otter.

The meeting was adjourned at 9:50pm.

  
Secretary

FUEL - Continued

- 3. Stress resistant container.
- 4. High temperature lubrication.
- 5. Varnish build up prevented.
- 6. Anti-Corrosion Additives. (no after run oil needed)
- 7. Free Freight.

A purchase of 32 Gal. of 5% and 48 Gal. of 10% would result in a cost to our club membership of \$8.10 plus tax each. The fuel is packaged in 4-Gal. cases, making them easier to lift and move around. That would come to \$648.00 total. Byron is in the process of establishing a dealer network. The dealer has assured me that he will honor the price and deliver the fuel. We would have to pay sales tax since the dealer is in Conroe, Texas.

I further investigated the Byron fuel when I contacted my friends in Omaha, Nebraska and they have adopted the fuel as the club fuel. Many of the club Nebraska members have toured the plant and witnessed the fuel production. They are happy with it.

I propose we order the Byron fuel and sell it for \$9.00/Gal. in order to recoup the losses from the other fuel. The club would make \$0.30/Gal. I further propose we sell the remaining RED MAX and Riches' Brew out at \$5.00/Gal.

I'll have some flyers at the next meeting.  
Don White



The following article appeared in the January 1989 issue of the AMA NATIONAL NEWSLETTER:

## "FREQUENCY" ASKED QUESTIONS

(THE STRAIGHT STORY FOR 1988-1991)

Recently various publications and advertisements have listed AMA so-called "regulations concerning radio frequency use. Confusion has resulted from the various articles. The following information is presented in an effort to clarify the situation. Specific, complete information may be found in the "Radio Frequency Information" section of the Membership manual.

**Q** "Is operation on the so-called "old" frequencies (72.080, 72.160, 72.240, 72.320, 72.400, 72.960, 75.640), a violation of AMA Safety Code, placing liability insurance in jeopardy?"

**A** Absolutely. See Radio Control, item 4 of the Safety Code - it is illegal! Operation on those frequencies was discontinued by the FCC in December 1987. The same condition applies to operation on the "Ham" band (6 meters) without proper licensing.

**Q** "For channels 12-34 are narrowband transmitters required for sanctioned events and recommended for all RC operating sites?"

**A** Yes! See the Frequency Recommendations in the Membership Manual. (Item 4.9 AMA Radio Control Utilization Plan)

**Q** "How can I tell if my transmitter meets the narrowband guidelines?"

**A** There is no simple answer. If it was manufactured within the last year and a half, there is a good possibility it does, especially if it is FM or PCM. Older radios that are sent for service or frequency conversion may be returned with a sticker affixed; silver for broadband and gold for narrowband.

The checking is generally done with a spectrum analyzer, a device that "reads" the transmitted signal. The Academy has offered this service for the last two years, free, at most trade shows and other selected events where expert personnel are available. The service is also provided by many of the service centers around the nation. Certainly, the surest way to know is to return it to the manufacturer for checking.

**Q** "Are transmitters required to have a sticker affixed to indicate whether it is "narrowband" or "broadband?"

**A** No! Not at the present time. The sticker program developed jointly with the Radio Control Manufacturers Association (RCMA) and AMA currently is a voluntary informational program to let modelers know the type of equipment they are operating.

It should be noted that if a club wishes to require stickers either for their sanctioned events or normal club operation, they may do so. Adding such a requirement to club rules automatically makes it a part of the AMA Safety Code for club site operation.

Also, if Contest Directors wish to do so, they can require individuals operating on channels 12-34 to sign a document certifying that the transmitter they are using meets the guidelines for narrowband, but it might be wise for the CD to ask how the flier knows (Was it checked by the manufacturer? Was it checked by AMA at a trade show?, etc.). The current plan is to require stickers on all transmitters used at sanctioned events beginning December 20, 1990.

**Q** "Is the new frequency flag identification plan required?"

**A** No! The plan, which consists of a single color wind streamer and channel number plaque, is **strongly recommended** for all RC operating sites. Again, if your club wishes to mandate their use, they may do so. If you come to the NATS, be certain to have the recommended flag, expect to have your transmitter checked with a spectrum analyzer, use a frequency clothes pin, and be required to use a TX impound between flights. Those are our rules,

for our event, at our site; you may have your own rules but - again - the AMA plan is strongly recommended, so that going from one site to another will not mean different requirements.

Q "Are our new channel numbered frequencies shared with others?"

A They are not! But in some areas, you may find some stations operating between our RC channels. If those stations are high powered and close to the flying site, it may make operation on one or more of our channeled frequencies difficult or impossible. That is the primary reason the FCC granted 80 frequencies for model use (ie., 50 for aircraft - 30 for surface) - so we can find a group without interference problems.

The Academy has frequency scanners available for clubs to use in an effort to determine commercial use in the area. Contact your District Frequency Coordinator, Vice President, or AMA Headquarters.

Q "What about my older equipment?"

A The issue must be addressed on more of a single casebasis. If it is very old, the manufacturer no longer exists, and you cannot locate a service facility to work on it, the answer is that it should be retired from service.

However, there have been 10-year old transmitters that have been brought up to 1991 specifications with little cost and effort. Note that we said transmitters, not receivers. While the manufacturers and service facilities have changed frequencies and adjusted equipment for very reasonable fees, you will need to determine the value of the older equipment to you, individually. In light of declining equipment costs in recent years, it may not be practical to "fix up" older equipment.

By letter dated December 14, 1988, the FCC has confirmed that manufacturers or their authorized representatives may perform the "narrowbanding" service on older transmitters without having to retype accept it.

Currently, no AMA requirement for "narrowbanding" receivers has been established for now or 1991. It should be noted, however, that more reliable, safer operation will result when both narrowband transmitters and receivers are used. Some

sites, due to nearby commercial operation may find that "narrowband" receivers are a must in order to minimize or eliminate interference.

Q "What are these guidelines I have heard about?"

A The Academy, through its Frequency Committee, developed a set of operational guidelines that would set the required specifications for radio equipment to function in a 1991 environment. These specifications are very comprehensive in nature and were the result of field work, committee studies, and research accomplished by an independent agency. The guidelines were provided to RC industry for their consideration. They have been given support in their implementation by the newly formed Radio Control Manufacturers Association (RCMA). The complete text can be found in your AMA Membership Manual.

Q "In a nutshell, what are the specifications the AMA is looking for in the Gold Star transmitter checks at trade shows?"

A In order for a transmitter to be classified "narrowband" and acceptable for 1991 operation by the AMA, it must not be more than +/- 1500 Hertz off its stated channel center frequency. In addition, the side bands must be at least 55 db down at +/- 20 KHz out from the stated channel center frequency. Many of the newer transmitters checked meet this requirement.

For use on channels 38-56, 40 KHz spacing "broadband" requirements are acceptable. For this, the transmitter must be within +/- 3500 Hertz and at least 35 db down at +/- 20 KHz out. If your equipment is outside of these specifications, it should be serviced.

Q "Why do we need 50 frequencies? Our club only flies four models at a time!"

A Few RC clubs need 50 frequencies. No one is suggesting that you have to use all of them at your field. They were given to modelers by the FCC because, in some areas, particularly large metropolitan centers, commercial use of the in between frequencies (frequencies 10 KHz away from ours) may prove to be interference causing. Having 50 to choose from means your club can pick whatever frequencies can be used in your areas without outside interference.

Q "I'm confused! What are the rules concerning frequency control methods such as pins, transmitter flags, and impounds?"

A For the most part, there aren't any "rules"! There are brief references in the Competition Regulations book that address these issues. For instance, in RC Sailplanes, transmitter impounding is mentioned. Generally, however, there is no mention of frequency control methods as rules either in the Competition Regulations or the Safety Code.

A basic plan for frequency control and identification has been developed and is strongly recommended for use at all flying sites.

Contest Directors may require specific frequency control methods at sanctioned events. Typically, the NATS has required a spectrum analyzer check of transmitters, the recommended frequency flag, "pin" system of frequency control, and impounding of transmitters.

Local club rules should require some form of frequency identification and control. Once such operating procedures are incorporated as rules for the site, they become part of the AMA Safety Code by virtue of General Rule number three of the Code.

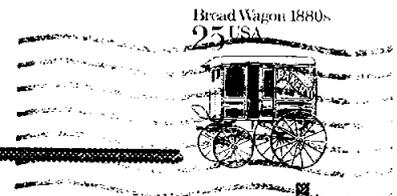
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*The R/C Flyer*

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Once again, while the methods developed by the Frequency Committee are strongly recommended for use at your field, other systems may be used. As an example, some sites use a subtractive system where an identifying "pin" is removed from a board and placed on a transmitter antenna. Others use an additive system. In that case, a pin or paddle is placed on a board indicating the frequency in use. One club uses inexpensive nylon vests with a patch of white cloth and HUGE channel numbers on the back for identification.

In any case, there are no specific "rules" that state that a certain type of frequency control method must be used. The AMA Safety Code is a very general document and allows the club or individual an extremely wide latitude in operating procedures. END