JAYHAWK MODEL MASTERS NEWSLETTER

JUNE 1991 A.M.A. CHARTER #2013

MEETING MINUTES

MAY 18, 1991

There were 10 door prizes awarded. Darryl Andersen won the charger. Seven people received ACE catalogues. They were: Bill Elkins (2), C.W. Holt, Gary Rockman, Tom Puckett, Brett Bennett, and Jesse Longoria. Three people received an RC Report newspaper. They were: Bill Elkins, Gary Rockman, and Jesse Langoria.

Treasury report: $1,114.95. $209.67 is Clinton Lake Clean-Up Fund, so the club has $905.28.

It was brought to everyone's attention that the Corp. of Engineers will be sending representatives to the June meeting to answer any questions we might have.

FOR SALE:
120 Super Sportster
120 O.S. 4-cycle
Futaba radio
$350.00
Danny Robinson
597-5977

Bill Elkins made a motion to buy 2 dozen t-shirts to have on hand to sell. The motion carried.

Richard wants to know if anyone has seen the original artwork for the Club Logo lately.

Brett Bennett and C.W. Holt presented information regarding the adding of odd channels at the field.

Richard Ballard brought part of a tri-plane that he is putting together. Gary Rockman brought an F-15 that he is building. Richard also showed off a needlepoint kit that his wife (Wilma) did for him. All three show-n-tells were impressive.

It was also mentioned that the club start thinking of plans for a Fall Fun-Fly, as there was no interest in a Spring Fun-Fly.

JAYHAWK MODEL MASTERS
132 Florida Street
Lawrence, Kansas 66044
913/843-8623
A.M.A. CHARTER #2013
PRESIDENT/TREASURER
Richard Ballard - 913/843-8623
VICE PRESIDENT
Dave Plamann - 913/842-1837
SECRETARY/EDITOR
Tom Puckett - 913/841-5889
SAFETY OFFICER
Darrel Cordle - 913/749-4146
FIELD MARSHALL
Nate Ericson - 913/843-7395

OWBAM cautions

(old wide-band AM)

Since odd channels will probably be coming to our field soon, if you are still flying with a wide-band receiver, you should make yourself familiar with what the problems will be for your radio. The low odd-channels seem to effect the higher wide-band depending on the channel spacing (image) or, it can also cause problems because of harmonics (2nd and 3rd order I.M.). If you cannot find your copies of the Model Aviation to read about these problems, let me know and I will get a copy of the articles to you (a reprint of one article appears on page 3).

Just beware that low odd-channel transmitters can effect high wide-band receivers.

We have been getting reports about some pilots trying to impress people in the parking lot at the field by "buzzing" them or by doing vertical (straight down) maneuvers over their heads or cars. While this practice may give the pilot a thrill, it doesn't do much for the person in the parking lot, and if something should happen, and the plane crash into someone or something, the Club would be at risk of losing the field.

Here are some facts to consider:

If a plane flies at 60 mph, it flies 1 mile per minute.

60 miles/hour = 1 mile/minute = 5280 ft/minute = 88 ft/sec

Flying at 100 feet you would have a little over 1 second to pull your plane out of a dive.

If you are diving at someone in the parking lot, at 50 feet you will have less than a second to pull out. If you blinked, you have lost even more time. If you have a glitch, you may or may not get control back. The list could go on and on.

These are some very good reasons why you shouldn't do it. How many reasons are there to do it?

CONGRATULATIONS TO ALL GRADUATES.

We wish you all the best.

Both of your letters arrived today in one envelope from the *Model Aviation* office. It saves time if you use my home address (it appears in every column).

1) The text and drawing are correct in the October 1990 issue. The caption writer substituted "negative" where I put "positive," as the text and the drawing labels demonstrate.

2) As I wrote in the text in three places and two articles, one of the RCMA/AMA RF CHECK stickers is *not* required for AMA insurance except when flying in sanctioned competition. The caption writer left off the qualifying phrase.

3) When printed with black ink on aluminum-colored paper, the RCMA/AMA sticker is referred to as a "silver sticker." It denotes performance acceptable to the FCC's 1982 Type Acceptance criteria.

4) The same sticker, when coated with transparent, gold-colored disappearing ink, is referred to as a "gold sticker." The gold sticker denotes performance in accordance with the AMA Guidelines. (Put a piece of Scotch tape over the sticker to preserve its gold.)

5) Yes, the AMA Guidelines have "anticipated" FCC actions. AMA has anticipated that the FCC would establish Type Acceptance criteria compatible with the 10 kHz raster ever since they mandated that raster for the 72- to 73-MHz band in 1981. AMA spent some of your dues money to hire a professional engineer to define the necessary properties of a narrow-band radio. His definitions became the AMA Guidelines.

6) The sentence discussing channels 23, 45 and 46 in the article "Are you ready for 1991?" (December 1990 issue, pg. 43) was improperly edited. There is nothing wrong with any of those channels.

I wrote that old, wideband AM (what I call OWBAM) receivers 23 channel **numbers** from other RC transmitters operating in the same area may suffer "Second Order Intermodulation Interference" (which I abbreviate 2IM). For example, an OWBAM receiver on RC44 may see interference from a transmitter on RC21.

A narrow-band receiver, even if it is a single-conversion type like the JR ABC&W FM receiver, will not see any 2IM interference. The AMA Guidelines are being rewritten to make this point clearer, even though the Guidelines have addressed the problem from the beginning.

I also wrote that OWBAM receivers operating 45 or 46 channel **numbers** from other RC transmitters operating in the same area may be subject to Image interference. So, if the receiver is an OWBAM on RC12, it may see interference from a transmitter on RC57 or RC58. Again, a narrow-band receiver will not see that interference.

Those are problems for old receivers! Narrow-band receivers like yours won't be bothered. I hope this eases your mind.

7) People may be telling you that the channel you mentioned is taboo in your area because they have observed some kind of interference on it. Your 1991 receiver should have better resistance to interference than OWBAMs; but, when somebody tells you there is a problem, it is always a good idea to proceed cautiously.

No receiver can totally reject interference. If the power level is high enough, the interference will get through. Haven't you observed that a strong local broadcast signal will "break through" the station you are listening to on your automobile receiver when you drive by the transmitter? It happens all the time.

8) The cross-responses to AM and FM signals that I reported are what I saw with two particular receivers under test. The test results demonstrate the point that you should not try to operate both an AM and an FM system on the same channel. Although the encoding schemes are different, two transmitters on one channel will produce interference.

I agree that PCM systems resist such interference better than other systems, but it remains obvious that we must use a system that prevents two transmitters from operating on one channel, even if the encoding schemes are different.

9) See below for alternative plans to carry us through the interim period until the preponderance of club members have "all narrow-band" systems.

Thanks for writing. GMM

THE ODD/EVEN PLAN

The simplest temporary way to deal with the new odd-numbered channels (RC11, 13, . . .) is to fly by the clock! Fly odd channels on the odd hours and even channels on the even hours. OWBAM receivers won't even know that the new odd-channel systems are in use.

Odd-channel users can just take the clip and fly during the 9:00 a.m., 11:00 a.m., 1:00 p.m., 3:00 p.m., etc. hours. (I'm assuming that all odd-channel transmitters and receivers will be narrow band.

Even-channel users must follow whatever plan has worked for your club in the past when they fly during the 10:00 a.m., 12:00 noon, 2:00 p.m., 4:00 p.m., etc. hours. (I'm assuming that even-channel users will include owners of old equipment.)

THE ADD-A-CLIP PLAN

The most likely scheme for mixed usage is the "ADD-A-CLIP" scheme. Each flier is responsible for bringing his own clip to the field, marked with his name and RC channel followed by a "W" if he is still using obsolete wideband equipment. If it's a "W" then the person must tie additional clips to the first clip using a long piece of string. These clips will designate frequencies which must not be on the air at the same time in order to avoid interference.

Mark the additional clips with the number of a channel 23, 45 or 46 numbers away (both above and below the own-transmitter channel). When it is your turn to fly, put the clips on the necessary channels to block interference.

As an example, let's say you are flying on a wideband receiver on channel RC56. Subtract 23 and that tells you that you need to tie on a clip marked for RC33 so you can block possible 2IM from RC33 while you are flying. Subtract 45 and tie on another clip marked for channel RC11 so you can block possible Image interference from RC11 while you are flying.

What I like about the "ADD-A-CLIP" scheme is that it puts the onus on the wideband user to look out for himself. From a practical standpoint, the most likely place to find wideband equipment is on the channels RC12, 38, 40, 42, 44, 46, 48, 50, 52, 54 and 56, so we only need to consider 11 tied groups:

- 56 + 33 + 11
- 54 + 31
- 52 + 29
- 50 + 27
- 48 + 25
- 46 + 23
- 44 + 21
- 42 + 19
- 40 + 17
- 38 + 15
- 12 + 35 + 57

People flying with narrow-band receivers don't need any extra clips.

FLIGHT STATION CARDS

No matter who designs the card, there are some fundamentals to be observed. The major problem for 1991 will be old receivers. If you want to protect them from Image and 2IM, the following groups should be placed on one flight station. Only one channel in a flight station group is allowed to operate at a time.

A: 11 + 34 + 57 + 12 + 35 + 58 (A + B can be combined on one station)

B: 13 + 36 + 59 + 14 + 37 + 60 (but the A and B groups can't be broken down.)

The following 23-channel pairs must be kept together to protect old receivers from 2IM. I show them on six flight stations, but you can follow the scheme to get any number of stations.

For example, you might combine A&B, C&D, E&F, G&H to get four flight stations. The basic ideas are:

1) Keep the 23-channel pairs together to avoid 2IM.

2) Keep adjacent channels together to minimize the possibility of 3IM and interactions between wideband and narrow band.

C: 15 + 38 + 16 + 39 + 17 + 40
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IDCo offers similar cards already made up for all 50 channels using six flight stations (S50-6 for $58.50), eight stations (S50-8 for $72.00) or 10 stations (S50-10 for $85.00) as well as for the AMA Plan 1 (S25-AP-1 for $42.50) and Plan 2 (S37-AP2 for $51.50). These cards contain all of the channels in use, printed for the appropriate station. All you have to know is how to read numbers.

IDCo., N8024 Elser Drive, Beaver Dam, WI 53196; tel. (414) 885-3675

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Appreciation

DUKE FOX
FOX MANUFACTURING COMPANY

Duke Fox, pioneer model airplane engine designer and manufacturer, succumbed to a stroke February 15, 1991.

Duke had several bouts with heart problems the past several years, leading to his death. At age 71, he led a full life as a modeler who loved model airplane engines.

In California, back in the '30s, he saw the need for a light powerful, reliable model engine design, and developed the oroginal Fox 35. This engine was the forerunner of the basic design that followed and was used by other manufacturers throughout the world. Duke's "Fox 35" won, and is still winning, model contests.

He built his first factory in California and later moved to Fort Smith, Arkansas, where a better business climate existed. Besides the Fox 35, he manufactured various sizes of model engines. Through the years, several hundred thousand Fox engines were sold.

Perhaps the item that for which Duke is most recognized is the Fox Glow Plug, which is the standard of its field. Through the years, Duke developed several different styles of glow plugs that filled the exacting needs of the modeling public. Millions were made through the years.

Duke Fox was honored by the Academy of Model Aeronautics in 1978, and was inducted in the Model Aviation Hall of Fame for the many contributions he made during the past 50 years.

Fox Manufacturing Company has been a major force in the hobby for over 43 years, and will continue to carry on in the fine tradition of producing quality products at reasonable prices. Duke always promoted "Made In America" even before it was fashionable and now, more than ever, the Fox Manufacturing Company will continue to maintain those ideals that have been established by Duke.

Duke's contributions and presence in the model aviation scene will be missed by all. The Fox Manufacturing employees promise to see to it that the name Fox will be around for many years to come.

A memorial fund to honor Duke Fox is being established by Karen and Williams Hopkins of Arlington, Texas. Because Duke was always looking for ways to perpetuate the hobby, it has been decided that, as a means of benefitting all modelers, the memorial fund proceeds will be used for aiding with the construction of the Muncie National Site in Indiana.

Contributions may be sent to AMA HQ, Duke Fox Memorial Fund, 1810 Samuel Morse Drive, Reston, VA 22090.

Aerobatics team may not make it

The Capital-Journal

The scheduled appearance of the Chilean Air Force's aerobatics team, the Halcones, at the 1991 Superbatics Air Show Oct. 5-6 is in doubt, W.D. "Pete" Martin, head of the Metropolitan Topeka Airport Authority's air show committee, told the MTAA board at its monthly meeting Monday.

But a Soviet team, the Mikovan Group, flying MiG jet fighters, will be at the air show, and Combat Air Museum officials are seeking an interpreter, said Roger Miller, executive director of the museum, which sponsors the annual show.

And Miller added the museum hasn't written off the Halcones yet. The group had to cancel its North American tour for lack of transportation funds, but still is trying to get the funding.

"It's not an absolute 'No,'" Miller said. "The door is still open, if the funding can be found on their end."

At the meeting, David A. Stremming, MTAA president, said the National Weather Service will install basic hardware for a new forecasting system at Philip Billard Airport and Forbes Field about June 1. The Automated Surface Observation System is expected to be fully operational by mid-August or mid-September.

The ASOS will enable the weather service to take in-depth weather information about all kinds of weather systems, from tornadoes to wind and hail, Stremming said.

Jerry Holley, MTAA board chairman and head of the air service committee, said use of USAir Express service out of Forbes Field to Kansas City International Airport is increasing. USAir Express flew 304 passengers from May 2, when service began, to May 16, an average of 12 people per flight.

TW Express will resume four daily flights from Topeka to St. Louis June 2, giving the airport a total of nine daily departures, he said.

In other business, the board:

- Heard an update on two overlay projects at Forbes Field and Philip Billard Airports.
- Voted to solicit bids for the cost of painting or attaching siding to Building 625.
- Asked MTAA staff to make a list of guidelines for selecting a real estate firm to assist in development of the Air Industrial Park.
- Heard a preliminary report from board member Rod Taylor on the 1992 budget.
- Voted to require groups who use MTAA property for events such as Railroad Days or Huff n' Puff balloon rally to have at least $1 million in liability insurance.
- Met for 20 minutes in executive session to discuss legal matters with its attorney.

FLYING ACES
Lin Reichel, Editor
3301 Cindy Lane
Erie, PA 16506

TROPHIES TO 3RD PLACE

PRIZES! FUN!

AMA SANCTION #10678

KANSAS CITY RADIO CONTROL ASSN

36th ANNUAL PATTERN CONTEST

JUNE 15 - 16, 1991

LAKE JACOMO/FLEMING PARK FIELD
FIRST FLIGHT AT 8:30 SHARP

- 40' X 500' ASPHALT RUNWAY
- FREE DINNER FOR ALL SATURDAY NIGHT
- CAMPING FACILITIES IN THE PARK

ENTRY FEE - $20 AT THE FIELD
PRE-REGISTRATION - $15 IF RECEIVED BY 6/14
PIPES WILL BE ALLOWED IN NOVICE CLASS
SEND PRE-REGISTRATION TO:

JOHN BRITT PH (816) 478-0834
4515 BRAMBLE TRAIL AFTER 5PM CDST
LEE'S SUMMIT, MO 64064

KC/RC 36th ANNUAL PATTERN CONTEST

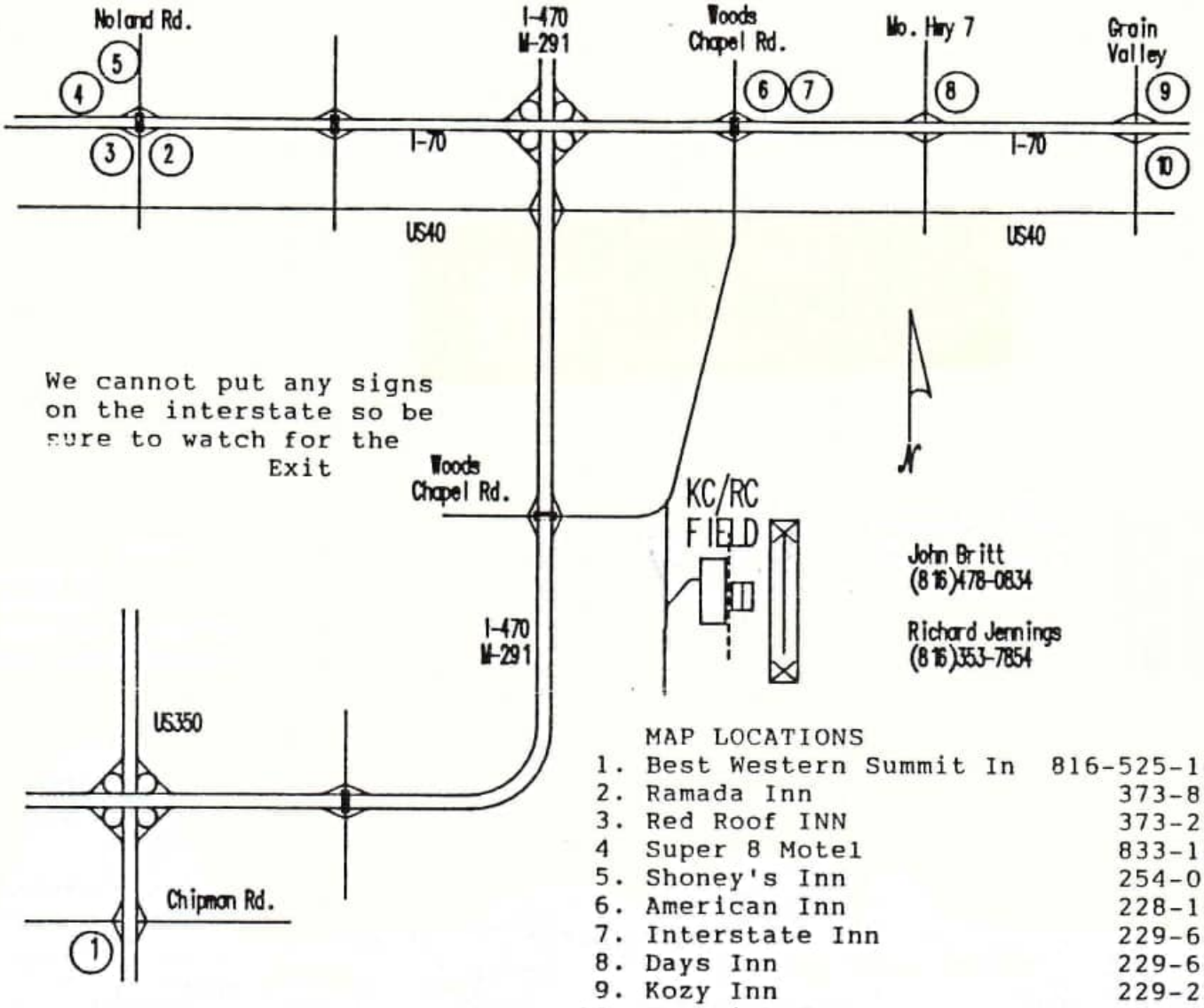
Name_____ AMA No._____ Channel_____

Address_____ City_____ State____ Zip_____

Event - Circle one of the following events:

Novice Sportsman Advanced Expert-Turnaround FAI-F3A

FCC CALL SIGN (50 - 53 MHz ONLY)_____



MAP LOCATIONS

1.	Best Western Summit In	816-525-1400
2.	Ramada Inn	373-8300
3.	Red Roof INN	373-2800
4	Super 8 Motel	833-1888
5.	Shoney's Inn	254-0100
6.	American Inn	228-1080
7.	Interstate Inn	229-6311
8.	Days Inn	229-6363
9.	Kozy Inn	229-2323
10.	Scottish Inn	224-3420

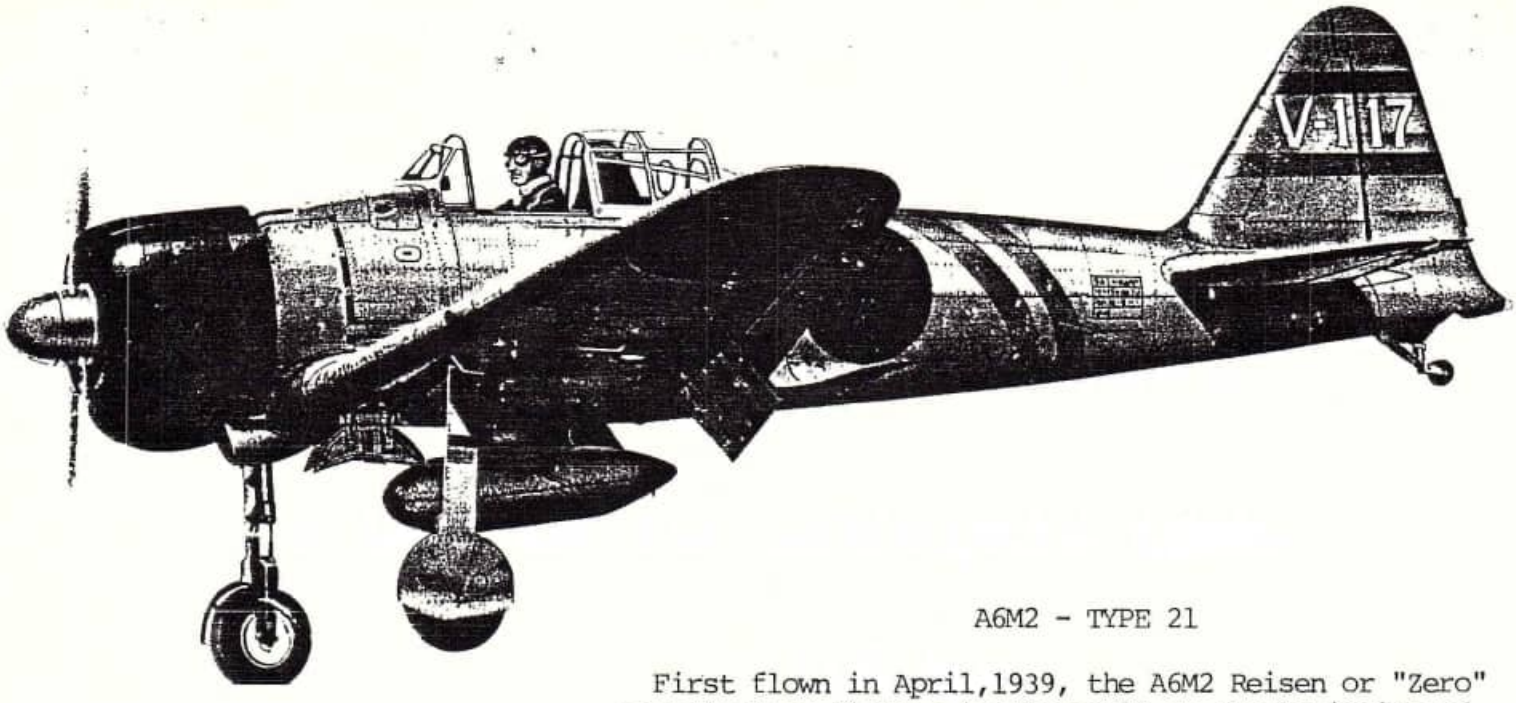
Make your reservations EARLY

Return preregistration fees and forms to:

John Britt
4515 Bramble Trail
Lee's Summit, Mo. 64064

[redacted]

[redacted]



A6M2 - TYPE 21

First flown in April,1939, the A6M2 Reisen or "Zero" was the best fighter in the world at the beginning of W.W.II. Speed,Range,Rate of climb,and manuverability were so superior that the Zero was thought to be invincible.