

JAYHAWK MODEL MASTERS NEWSLETTER

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A.M.A. CHARTER #2013

ISSUE DATE: February 9, 1990

NEXT MEETING: February 17, 1990; DAYS INN MOTEL; 8:30 a.m.

MEETING MINUTES January 20, 1990

Richard called the meeting to order. There is \$1,250.12 in the Treasury. Gary Rauckman won the door prize which was an ACE ESV Meter. Congratulations Gary!

There was a film presentation from ACE R/C on batteries. Brett Bennett discussed his "simple cycler". Richard displayed his R/C "combat" plane. Bill McCollum brought his plane (a Sig Kadet that he bought at the auction). Michael Winesaft showed plans for a Monocoupe that he is going to build.

We are looking forward to John Britt (the Futaba representative in Kansas City) being at our February meeting.

Doc Wise says we need to think about seeding the runway in March.

We welcome two new members: Onis Bearden (has built and is building

cardboard airplanes that fly) and Alan Jack.

Richard is going to have a meeting with the Corps of Engineers in January regarding spring clean-up.

The door prize at our next meeting will be an ACE CVC. Tickets will be \$1.00 each.

The meeting was adjourned.

ATTENTION

LAST NEWSLETTER UNTIL RICHARD

RECEIVES YOUR DUES

**PRODUCT TEST: ACE R/C FFC CHARGER
(Fast Field Charger)**

For some time now I have resisted the urge to get on the fast charging band wagon. To begin with, I didn't feel that I would ever fly long enough in one session to need fast charging at the field. I also didn't think fast charging was healthy for your radio batteries. Fortunately Santa changed my way of thinking! I got an ACE R/C FFC Charger kit for Christmas and, after building it and using it for awhile, my thinking is beginning to come around.

First let's look at the FFC. What you get is a dual output, dual rate charging system designed to operate off of any 12 volt power source, such as your automobile or flight box battery. An internal voltage regulator circuit allows the FFC to operate safely with your car engine running or stopped (it makes no difference). An external Thermistor measures outdoor air temperature and adjusts accordingly to prevent overcharging in hot weather. Transmitter and receiver output is 500ma. on fast rate which automatically cuts back to a 35ma. "overnight" rate when 50% and 80% charge is reached on the respective batteries. This feature allows the FFC to be used as an "overnight" charger on trips away from home. Another nice touch is that depending on the order things are hooked up, you can fast charge on one output while slow charging on the other. In all, a well designed, safe charging system with a multitude of uses for the R/C pilot.

Now let's look at an ACE R/C kit. What do you get for only a moderate savings over an assembled unit? What you get is a small box chock full of electronic components, wire, solder, heat shrink tubing, hardware, and last but not least, excellent instructions on building

and calibrating the unit. Along with this, you also get a crash course in building electronic kits and identifying transistors, IC's, diodes, resistors, and other mysterious things that go "smoke" in the night! Items you need an excuse to run out and buy include a small soldering iron, digital volt/ohm meter, and perhaps a new pair of Bi-focals if you are past the age of 40 or so! Unless you are already familiar with electronics, begin by reviewing the kit builder's data sheets. This will give you enough knowledge to identify the parts, and also a lot of good info on soldering, etc. Time well spent before you begin construction. The kit itself took about 3 hours to build, and another hour or so for calibration, hook-up wiring, etc. In all, the FFC was simple to build and works exactly like Caption Eddy said it would.

Now what will it do for you? Well, suppose you haven't been flying for several weeks, when all of a sudden you get the urge to go. A quick check with your ESV meter shows that your batteries have self-discharged to a point that would make flying risky. If you have an FFC, you don't have a problem. If you don't have one, you better plan on a 16 hour overnight charge and gold today, instead of flying! The same goes for that extra nice day at the field. You know the one... when it's just too nice to go home and mow the yard! The FFC allows you to keep right on flying as long as there is a 12 volt battery still charged up. All well and good, but will it hurt your batteries to fast charge them?

Let me relate the experience I have had so far. I have two old flight packs that mostly never get used. I had just cycled each of them three times and got 87 min./435ma. on one and 91 min./455ma. on the other. Following two complete dis-

charge cycles with fast charging, I got better than 100 min./500ma. out of both of them. For whatever reason, fast charging seemed to revive these two old packs!

It is only fair to caution you on a couple of points that could damage your equipment. Due to the design of the FFC, it is unlikely that you would ever over-charge your transmitter batteries. This is because the 12 volt source cannot supply enough voltage to over-charge the 8-cell transmitter pack. On the other hand, it is possible to over-charge the 4-cell flight pack under certain conditions. These conditions are: a pack with a "reverse polarity" cell would not shut off because the 6.25v trip voltage could not be reached; it would continue to fast-charge until a thermal melt-down occurred. Also, some of the new "Super" Ni-Cads have a built-in thermal peak designed in to make use of thermistor temperature sensors in industrial and aerospace applications. These "Super" cells may get hot before the 6.25 volt cut-off voltage is reached and this would also result in a thermal run-a-way condition if fast charging were allowed to continue past 30-45 minutes. To avoid the problem, keep an eye on the time and check for a problem if it becomes longer than normal. I highly recommend the ACE FFC to any serious R/C flyer.

FLY SAFE
RLB

FUTABA R/C PRODUCTS

Richard Ballard wrote Futaba and asked the following questions that club members frequently ask.

Q) How come Futaba radios have not been listed in the A.M.A. type acceptance published in Model Aviation?

A) We, as of this date; have not applied with the AMA to list any of our equipment. We will have the AMA list our equipment in early 1990.

Q) The new computer radios are great, but I don't need anything more than 5 or 6 channels with the 5th channel proportional for flaps. Futaba has stopped making a radio like the FGK-6. Why?

The computer radios require more study on my part to program them. I'm not willing to spend that much time to learn how they work!

A) Our current product line now consists of the V Series Competition line; the U Series Standard line and the Conquest Series of entry level line. The recently introduced Conquest, FP-6NFK or NPK has a 3 position sixth channel function that can be used for flaps.

If you require a fully proportional sixth channel, we have the FP-7UAF or UAP. The U Series replaces the FP-7, 6, 5FGK line of systems.

Q) Futaba is changing the servo plugs to a new type. How much longer will I be able to buy AM type servos for my older radios? Is it planned obsolescence?

A) The "New Type" connector is our FM or J Series connector which was first used in our J Series line back in 1979.

All FM systems used this connector system. In 1984 all Futaba production, except AM systems to the U.S. used this connector.

Beginning in 1988 all two channel systems sold in the U.S. used the FM or J Series connector.

We finally completed the conversion

in 1989 when all systems to the U.S. featured the FM or J Series connector, which incidentally is a 3 point contact connector as opposed to the mini 3 pin that is a single contact system.

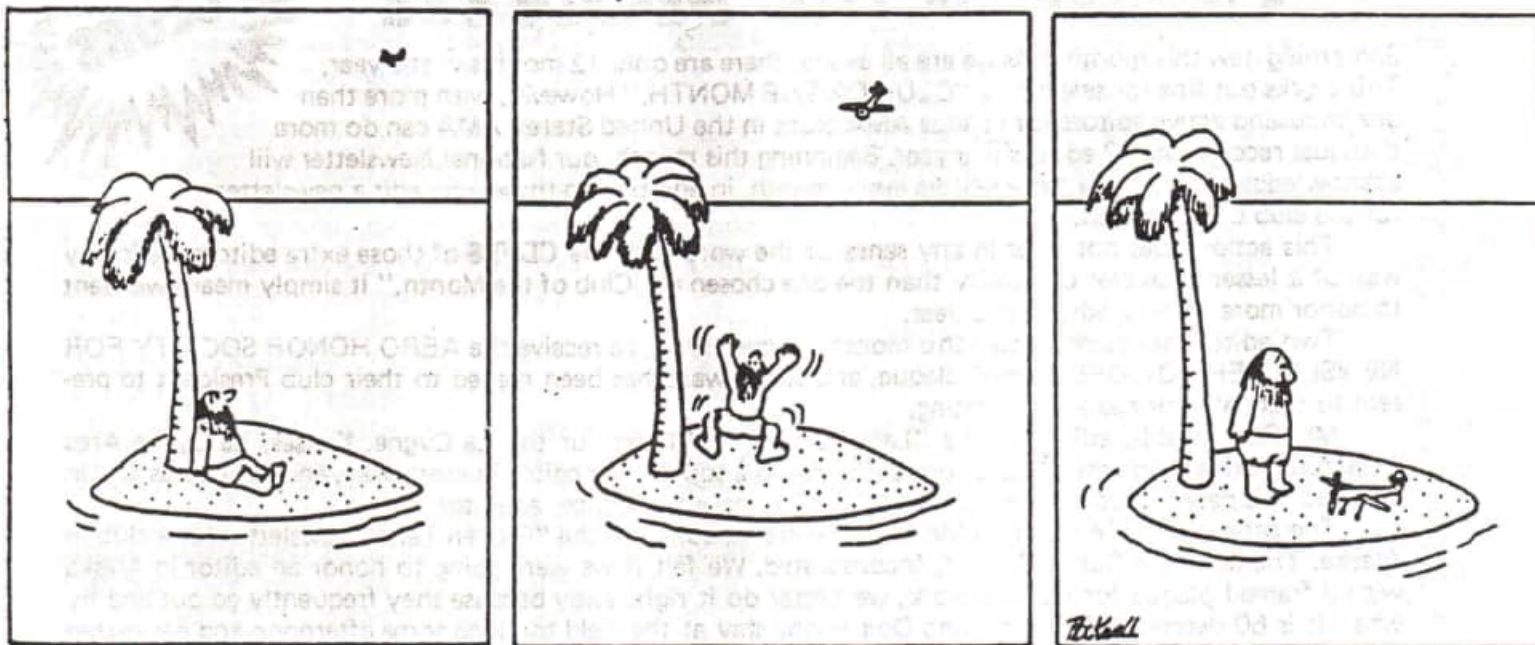
Servos with old style connectors will be available as long as there is a demand. Also, note that all Futaba "1991" AMA specification receivers use the FM or J Series Connector.

Q) Even if I bought a computer radio that can handle several plane set-ups in memory, I still have to pay as much for a flight pack as the whole system costs. Why doesn't Futaba offer a flight-pack (less transmitter) at a reduced price?

A) Flight packs are not available because of the lack of demand by Dealers. This became very evident when the "new" frequencies became legal. The distribution system cannot handle the increased complexity of stocking up to 50 frequencies for 72MHz or 75MHz bands, plus whether the receiver should be AM, FM or PCM. At present, airborne components must be purchased individually.

Q) Futaba offers an "Electric" system and a "Glider" system. Why not a 1/4 scale system with big battery, servos, etc.?

A) A Quarter Scale system has not been offered due to insufficient dealer demand for such a product. At present, Dealers who cater to large models have been customizing systems for their clientele.



POP BOTTLE TRICKS YOU CAN DO!

(One man's trash is
another man's treasure!)

Some things in life seem so useful it makes one wonder how we ever got along without them before they were invented. Consider bailing wire, duct tape, and of course, the empty one liter pop bottle. Now wait a minute! Empty one liter pop bottle? Yes, that's right. The clear plastic ones that Coke comes in. There is almost no end to what you can do with them once you get done sucking down the contents.

Do you need a canopy for your Ace 4-120? No problem! Peel the label and black plastic bottom off of a pop bottle and take a long hard look at the shape. With a little thought and a sharp pair of scissors you can have a real nice looking canopy for a total investment of? That's right. Nothing! Smaller canopies and windshields or side windows can also easily be cut out of an empty jug.

Need a funnel to put a quart of oil in the old pick-up truck before you go flying? Take a look at the top half of an empty jug. How about a bucket to dip the water out of the

old row boat? (For you sea plane pilots!) Look at the bottom half you had left from the funnel!

Is your flight box beginning to weigh a ton? Is that your trouble, Bucky? Then why carry around a gallon of fuel when you are only going to use a quart? The answer of course, is to get rid of the fuel jug and replace it with a pop bottle. It cuts the weight by more than half, yet still holds plenty of fuel for a day of flying.

Oh, By the way! Coke bottles are totally fuel proof and will seal air tight. IT'S A GOOD IDEA TO REMOVE THE SOFT DRINK LABEL AND KEEP YOUR JUG AWAY FROM THE NEIGHBORHOOD RUG-RATS, LEAST THEY TRY TO DRINK IT!

(FUEL IS POISON, YOU KNOW!)

One other thing you might want to try some boring winter weekend. RCM has plans for a plane called the PARA-COLA-SOL. You guessed it. It's made from an empty pop bottle! Now, how much more useful can you get than that?

FLY SAFE!
RLB

