

THE CONNECTOR

The Official Newsletter of the Aeroguidance Society, Inc.

Endicott, New York



Editor: Tony Cammarata

THE CONNECTOR is the monthly newsletter of the Aeroguidance Society, Inc., Radio Control Model Club. The club owns and maintains its flying field in Endicott, N.Y. Anyone interested in joining the club should contact any of the officers listed below.



President: **Joseph Felice** Vice President: **Frank Gioffredo**
Secretary: **Michael Pelliccotti** Treasurer: **Grover Ellis**
Board Member: **Richard Allen** Board Member: **Robert Punker**
Past President: **Robert Noll**

VOLUME 22

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August 1989

NEXT MEETING: August 15, 1989 @ 7:30pm

Place: AGS Field

AGS CALENDAR OF EVENTS

DATE	TIME	PLACE	EVENT
August 15	7:30pm	AGS FIELD	Regular AGS Meeting
August 22	7:30pm	201 Hooper Road Annex	Scheduled board meeting
August 27	11:00am	AGS Field	Intra-Club Contest and Family Picnic
Sept. 30 & Oct. 1	10:00am	Greenwood Park	Greenwood Park Float-fly
Sept. 30 October 8	CANCELLED TBD	Damascus AGS Field	Float Fly -- CANCELLED Glider and Electric Fly

NEXT CONNECTOR PUBLISHING DEADLINE IS September 1, 1989

Contributors please note that I will be away on vacation until September 5 so I plan to arrange for a substitute Editor for next month.

ANNUAL Intra-Club Contest and Family Picnic Sunday, August 27th

Contest flying starts at 11:00am. Scott Anderson is our C.D. he will be events for all flying skills - bring your plane and fly.

Picnic begins at 4:00pm - hamburgers* and soda furnished - bring a disk to pass and your own table setting. Kids games and softball after the picnic - bring your family and play..

* Soyburgers - bring your own - we will cook; picnicmaster Bob Punker.

PREF SEZ.....by Joe Felice

So far, we've had great weather for the meeting and the board meeting. The August meeting will also be held at the field. I'll be there rain or shine and if enough members come we'll have a meeting.

There will be copies of the proposed by-laws available for those interested in reviewing them.

Bring your plane, project, or just join in the conversation. There will be no organized program at this meeting. This would be a good time to get a sound reading on your airplane and discuss ways of reducing the db level to within our 78db limit. My sound meter will be available for use at this time.

Safety Corner.....by Tony Cammarata, Editor

First Aid Kit Now At Field. For your information, the club has purchased a **First Aid Kit** and it is being stored in the fliers pavilion under the roof. If you stand in the path entering the pavilion and look up you can see the kit stored at joist level. It is easily removed for use. Just lift it up and take it down for use. Also, a fire extinguisher is now being stored in the tractor shed for our use. My hat is off to the board and other supporters of these purchases. On behalf of all club members, we thank you.

Hi-Lite or Glo Bug or McDaniel Plug Heater. These are great little starting aids. However, you should exercise caution when using one to start your engine. The business end that locks onto the plug, wears with use. This makes the connection loose and when the engine is running, the glow starter wobbles. It wobbles at low speed and increases its wobble perimeter proportionately to engine speed. This in turn, increases the chance of it being dislodged and engage the propeller. So you should not rev up your engine with the plug heater attached.

Safety Is No Accident; Make It Not Happen!

Guests At April Meeting.

None

New Associate Members.

Matt Struck - Box 530C Long Creek Road, Apalachin N.Y. 13732

New Regular Members.

Terry Bernhardt - P617 Princeton Drive, Vestal N.Y. 13850

Scott Seaman - Box 275 River Road, Binghamton N.Y. 13901

New Member To Be Voted - none.

Letters To The Editor. None.

Battery Charging Guidelines. The following article is a reprint of West Shore Flying Society whose Editor is Chuck Pickles. Chuck credits ACE R/C with the technical information that follows.

Battery Charging.

The heart of any R/C system, no matter how sophisticated, is the batteries. If they are rechargeable ni-cd type batteries, there are some basics to know about charging to insure dependable and long life. Since battery failure causes most of the crashes that occur due to radio failure it is important that this information be known by any R/C'er.

When charging ni-cd batteries, we are concerned about the charge rate, or the amount of electrical energy flow (current) that is going into the batteries while being charged. This amount of energy flow, the charge rate, is measured in milliamperes (ma). Fixed rate chargers are set-up to provide a constant rate for a given voltage pack; i.e. 50ma at 4.8 volts. If a higher voltage pack is charged with this charger, less current will be provided. Variable rate chargers provide adjustment to set the desired charging rate. As long as the charger is capable, the voltage of the pack being charged is not a factor because the rate can be adjusted as needed. (Note) Ni-Cds are always charged in series, never in parallel. There are four different charge rates for ni-cds: overnight, quick, fast, and trickle.

OVERNIGHT. When charging at the overnight rate, discharged ni-cds will reach 100% of charge in 14-16 hrs. This rate is determined by the formula $C/10$, where C is the rated capacity of the battery which is divided by 10. So, if we are charging 500 milliamperere hour (mah) batteries at the overnight rate, the rate would be 50 ma. For 900 mah cells it would be 90 ma; 1200 mah; 120 ma; etc. this rate is the most commonly used in R/C. It is also the safest because ni-cd batteries can be left on charge at this rate for extended periods (days, even weeks) without damage. We are talking ni-cd batteries only, not lead-acid.

QUICK. Discharged batteries charged at the Quick Rate will reach full charge in 4-6 hours. This is determined by the formula $C/3$ or the battery capacity divided by 3. For 500 mah batteries it would be 166 ma; 900 mah would be 300 ma; 1200 mah, 400 ma; etc. It is not recommended that the batteries be left on beyond the 6 hour period or overcharge might result (damage). Most ni-cd used in modern radios will accept a quick charge, but it is not recommended to quick charge the cells on a routine basis because it can degrade the life of the battery.

FAST. The fast Rate will charge ni-cds in 15 minutes or less. This is determined by the formula $3C$ or three times the capacity of the battery. For 500 mah batteries, it would be 1500 ma or 1.5 amps. Most ni-cds used today will accept a fast charge, but it is not recommended for R/C receiver and transmitter batteries because the charge time is very critical to prevent overcharge and damage. Only specialized chargers for fast charging should be used.

TRICKLE. The Trickle (or float) rate replaces the energy ni-cds lose via lack of use (shelf life). It is defined by $C/50$; for 500 mah batteries, it would be 10 ma; for 1200 mah, 24 ma; etc. Ni-cds can be left on trickle indefinitely without damage and always be 100% charged. Realize that the batteries can't be charged up at this rate, only maintained. If you use the Trickle Rate, do so only after the batteries have been fully charged. preferably at the Overnight rate.

If you wish to measure the charge rate so you know what is going on when the batteries are being charged, it is necessary to have an ammeter capable of measuring 150 ma or so. A small inexpensive Radio Shack multimeter is fine. You need to hook it in the charge circuit so that it is in series so the current flows through the meter. Always be careful not to short the batteries or charger out or you may damage something. Also, when dealing with batteries, always maintain the proper polarity. To sum up; where C = battery capacity:

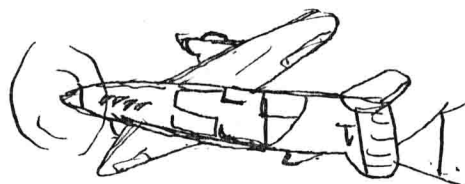
Overnight charge = $C/10$

Fast charge = $3C$

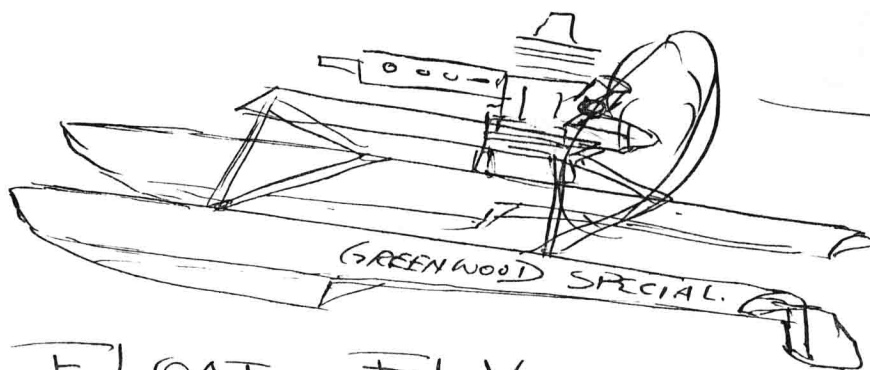
Quick charge = $C/3$

Trickle charge = $C/50$

Note: Thanks go to ACF R/C for the above information.



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FLOAT FLY

(Time to start getting Ready!)