Winter Flying Notes **NR 10/25/05**

Flight Planning – Keep Options Open

It gets dark early.
Beware gnd fog, x-winds, blowing snow, sun setting off the end of runway.
Nobody in the boonies. Conservative routing. Warm gloves, hat, coat, shoes. Phone.
Possible need to turn back, RON, or abandon plane and pick up later.
Possible need to take tiedns, pre-ht hose, extension cord, ladder, brush, covers
Need to check battery up, hangar shoveled, tires up 1 – 2 days before intended flight.

Preflight

Don't track salt into hangar or into airplane. Watch out for turkey-shit on ramp at BED.
If frosted or snowed-in: plane clean enough to fly. No scraping or hammering, no glycol
Ice in flap gaps, frozen trim tab, frozen throttle linkage. Possible re-freeze after thawing.
Water or ice in tanks and fuel lines. (Water will freeze at altitude and choke flow.)
Water, ice in pitot-static system. Be able to go around, land w/o airspeed or altitude ind.
Pitot heat working. Switches, lights working. Freeing stuck starter gear.
Tires not frozen to ramp. Plane free to roll.
Use good cold-start technique to spare the battery and starter motor. Prop discipline.
Jump starting, propping (don't!)
Icing spray

Taxi, Take-off, Enroute, Descent, Landing

Don't taxi over ruts, drain grates, lumps of ice. Stay out of puddles.
Watch out for soft spots on turf or gravel
Leave enough room when taxiing to swing into wind
Oil temp off pin.
Carb heat in raw weather
Oil congealing in cooler enroute
Ice enroute.
Winds picking up at destination; may need to go elsewhere.
Carb heat. Carbon Monoxide
Shock cooling
Gusts, X-winds, go-arounds

Shutdown and Tiedown

Engage bendix
Gust lock, tiedowns
Covers, block heat, hangar
Take phone with
Security

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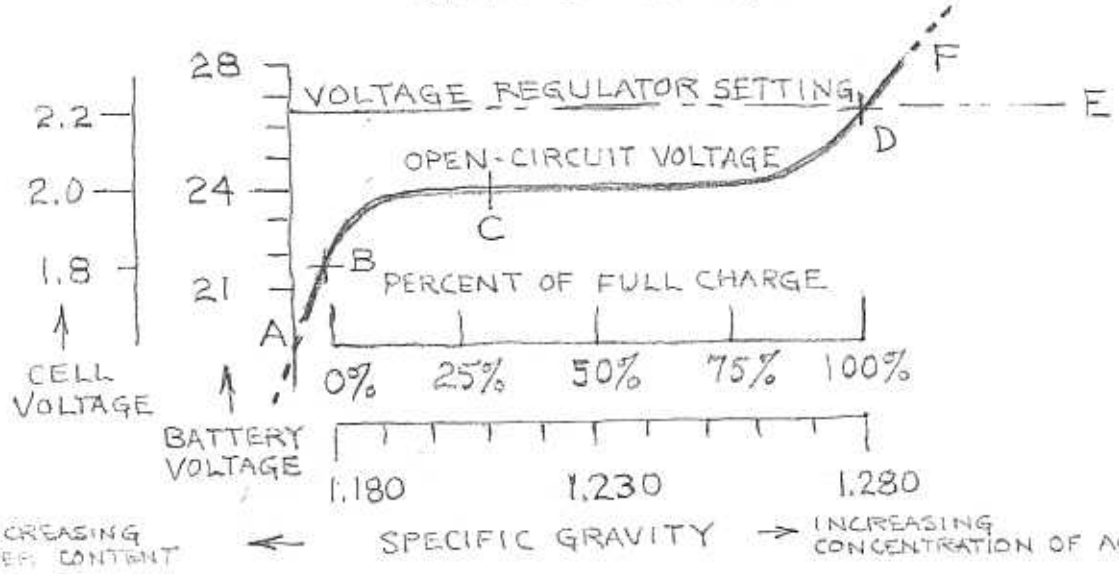
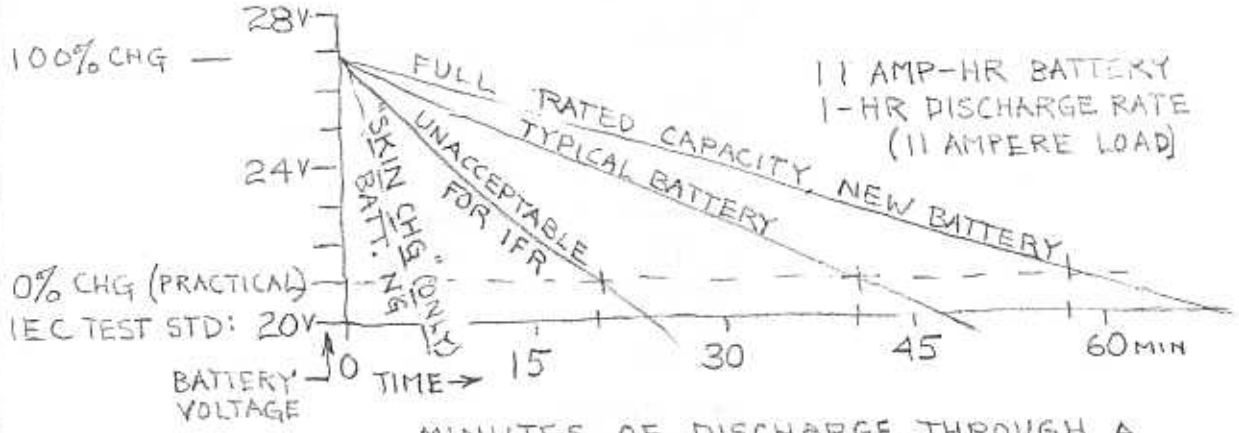
SOME IMPORTANT BATTERY CHARACTERISTICS

STATE OF CHARGE



A. BATTERY LOW OR FLAT, RISK OF SULFATION
B. BATTERY DISCHARGED, NEEDS PROMPT RE-CHARGE
C. BATTERY IN NEED OF MAINTENANCE-CHARGING
D. BATTERY FULLY CHARGED
E. VOLTAGE LEVEL INTENDED TO PRODUCE FULL CHARGE
F. BATTERY OVERCHARGED, CONSUMING WATER

BATTERY CAPACITY TEST, VOLTAGE vs. TIME UNDER LOAD



MINUTES OF DISCHARGE THROUGH A "C-1" LOAD (TYPICAL A/C EQUIPMENT LOAD)

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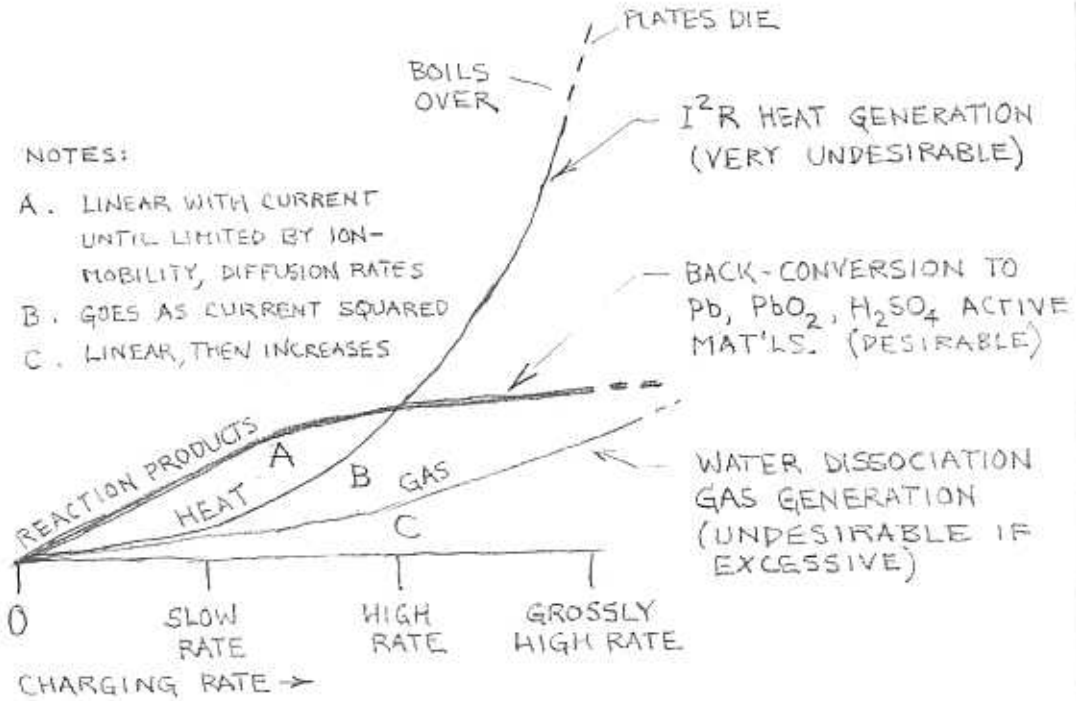
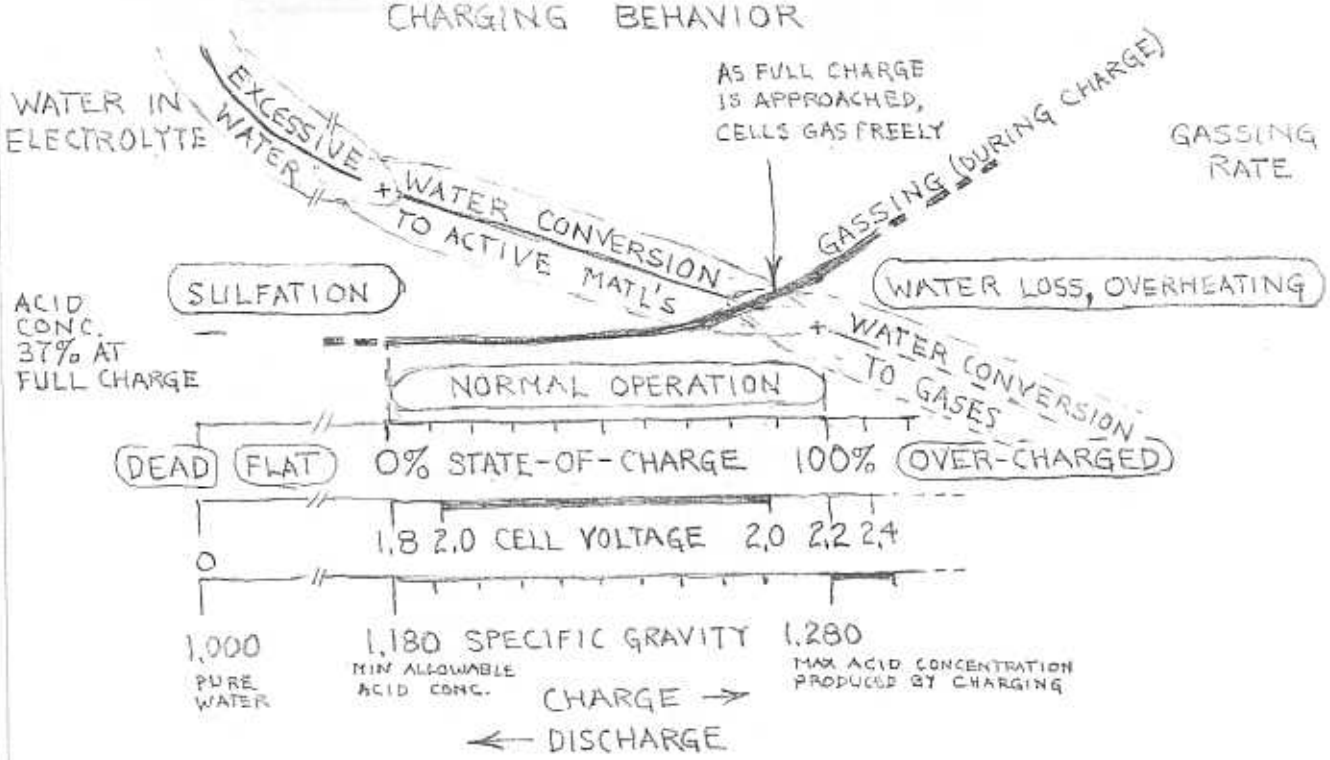
EFFECTS OF HIGH CHARGING CURRENT



CHARGING BEHAVIOR



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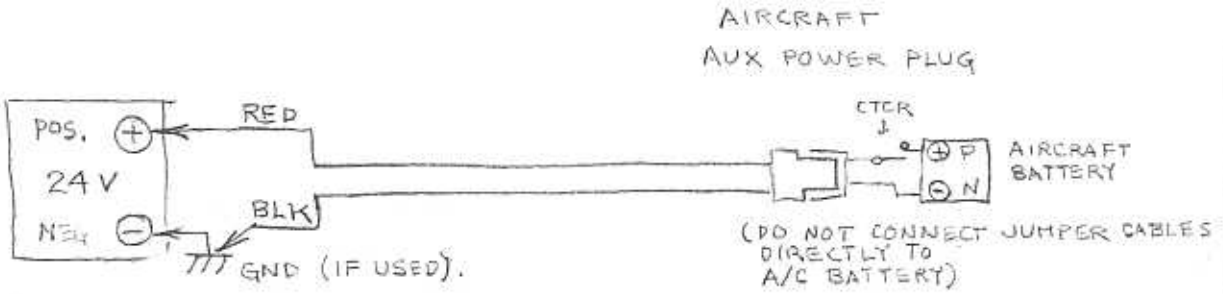
BATTERY CONNECTION DIAGRAMS

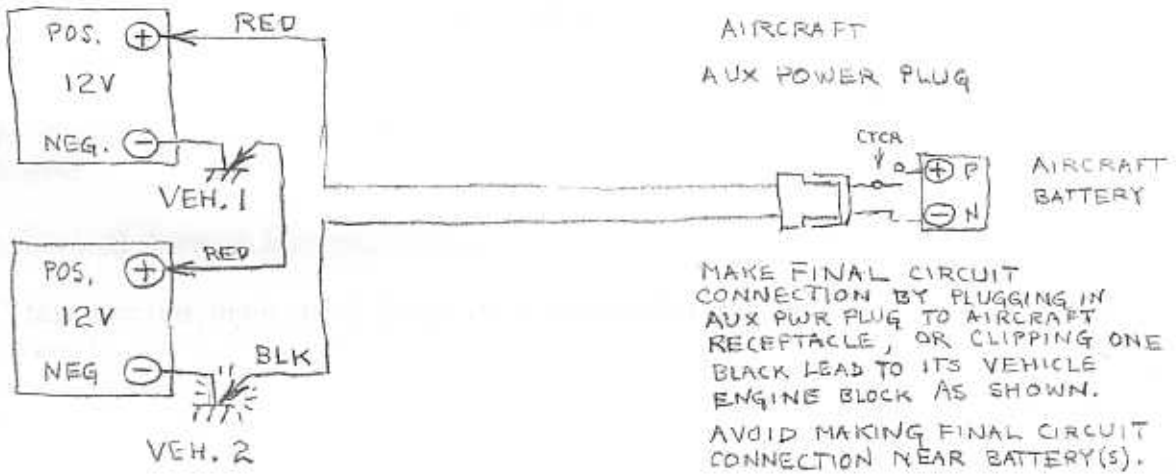


24-V BATTERY CART — FOR STARTING
FOR PROLONGED GROUND OPERATION OF AVIONICS

— OR —

24-V BATTERY CHARGER — FOR CHARGING AIRCRAFT BATTERY

→ ALWAYS WEAR EYE PROTECTION ←
→ ALWAYS SHUT AVIONICS OFF WHEN MAKING/BREAKING CONNECTIONS ←
→ FOLLOW POH INSTRUCTIONS ←



TWO 12-VOLT AUTOMOBILES OR AUTOMOBILE BATTERIES — FOR STARTING
FOR PROLONGED GROUND OPERATION OF AVIONICS

NOTES:

GROUND OF VEHICLE 1 MUST NOT BE CONNECTED TO GROUND OF VEHICLE 2 IN CIRCUIT SHOWN ABOVE

JUMPING OR TRYING TO CHARGE A DEAD AIRCRAFT BATTERY WITH AUTOMOBILE ALTERNATORS RUNNING MAY NOT BE A GOOD THING TO DO. CHARGING CURRENT MUST BE LIMITED TO A SAFE VALUE FOR THE AIRCRAFT BATTERY

BEST TO MAKE FINAL CIRCUIT CONNECTION AWAY FROM BATTERIES, TO VEH. GND AS SHOWN, OR BY JOINING CLIPS AT FAR END OF 2-CONDUCTOR BATTERY CABLE USED AS (SINGLE) SERIES CONDUCTOR BETWEEN BATTERIES, OR BY PLUGGING AUX PWR PLUG INTO A/C RECEPTACLE, AND FOLLOWING POH INSTRNS (PREFERRED)