August 5, 2013

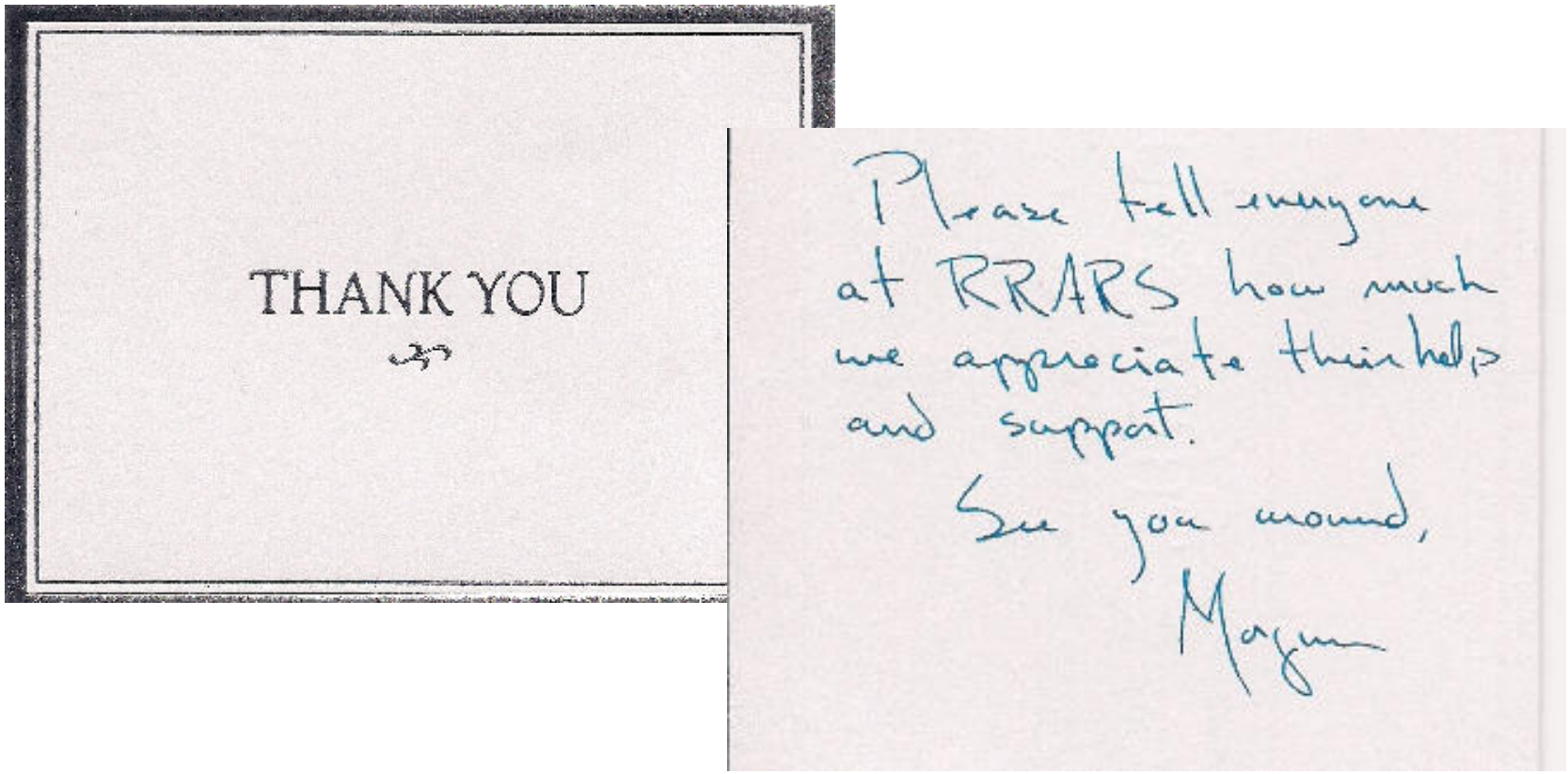
Meeting Agenda

- Welcome-Visitors and Members
  - Introductions
- Recognition
  - Hellbender Thanks
- Calendar/Event Items/ Announcements-
  - Upcoming Hamfests
  - Saint to Saint
  - Test Session
  - ARRL Convention
  - Ozark Trails 100
  - Calendar for 2013
- New Business-
- Tech Talk/ Quiz
- Next Meeting- Sep 9

Recognition

Hellbender 2013-

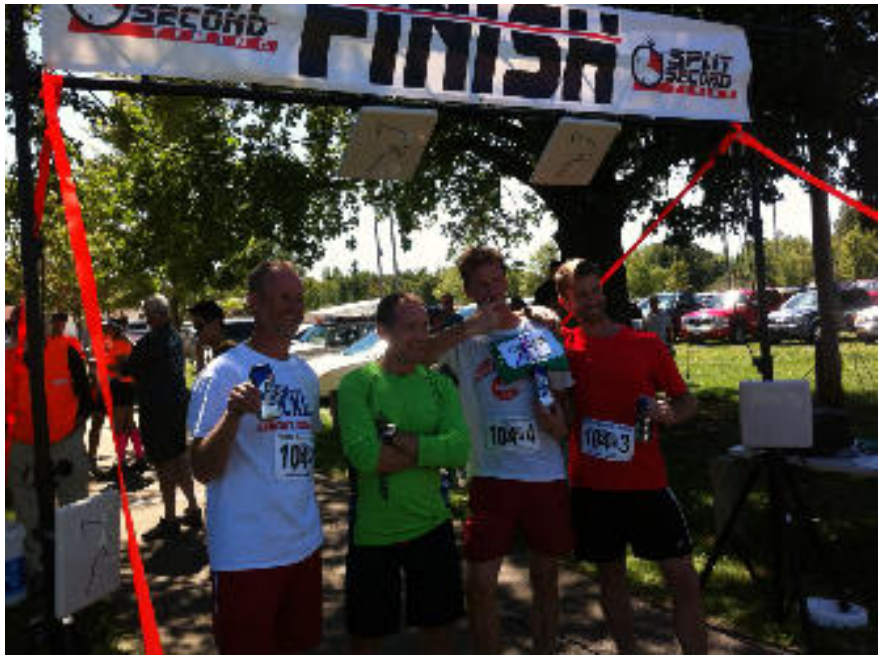
RRARS saves the day!



Calendar/ Events
2013 RADAR

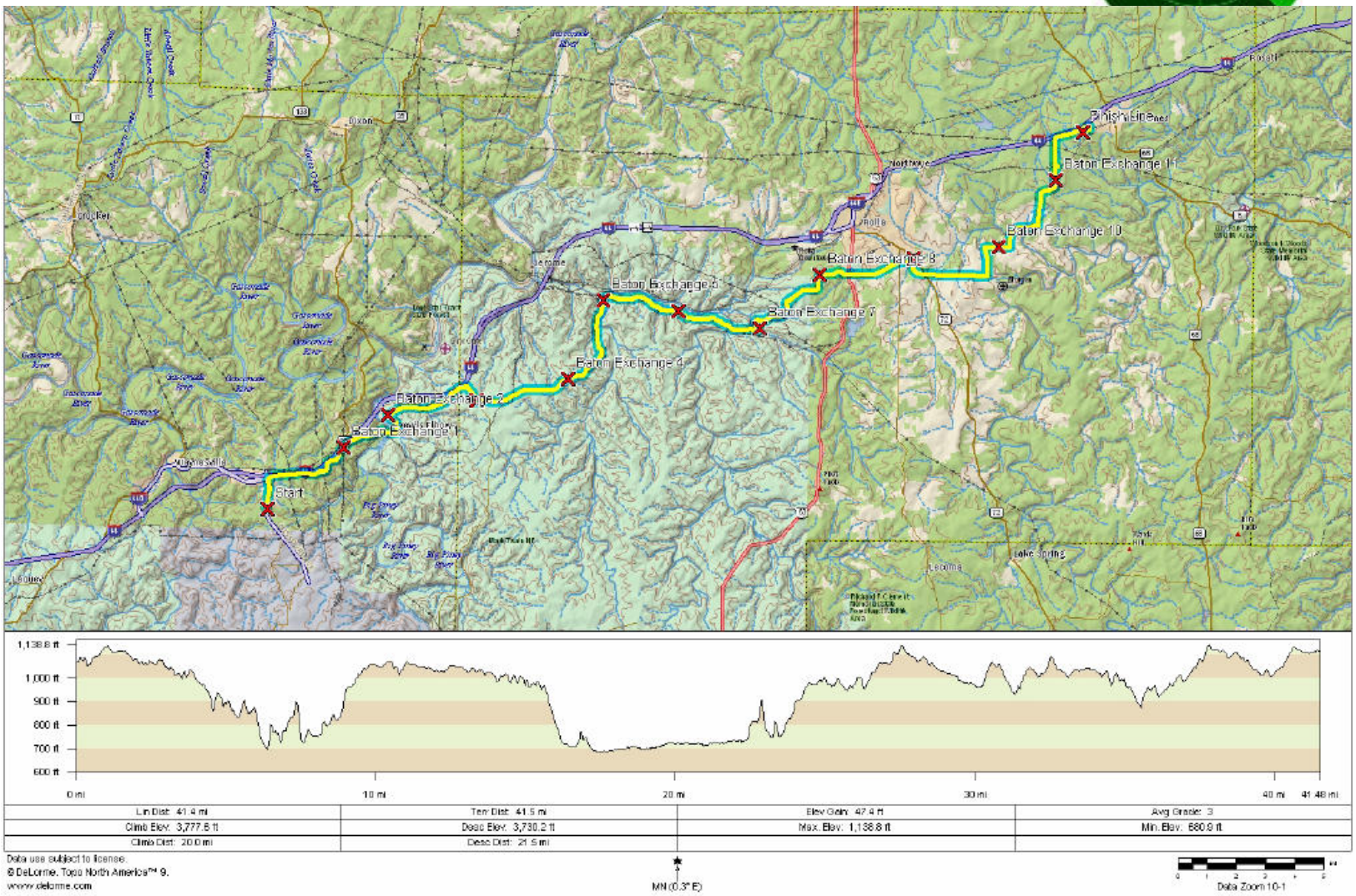
Aug	11	St. Charles Amateur Radio Club Hamfest
	23	24th Annual Joplin Hamfest

Saint to Saint
(Robert to James)

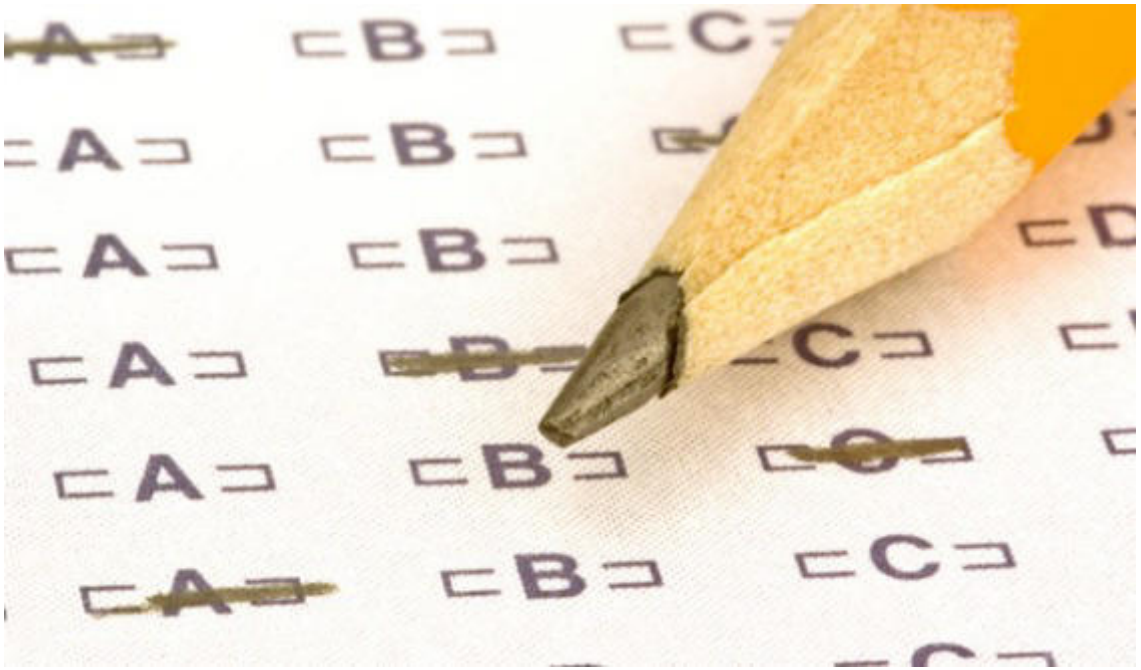


- Sat Sept 7
- 41 Miles, 11 Baton Stations
- Operators needed!
- Sign up with N6RHQ

Saint to Saint
(Robert to James)



Announcements
Test Session



- Saturday, September 14
- Earn your Technician or Upgrade
- Sign up with Joe, K0OG in advance please

Announcements
Midwest ARRL Convention Nov 8,9

Update from Joe K0OG…..
Its going to be big!
W1AW/0 needs our help
Sign up sheet going around

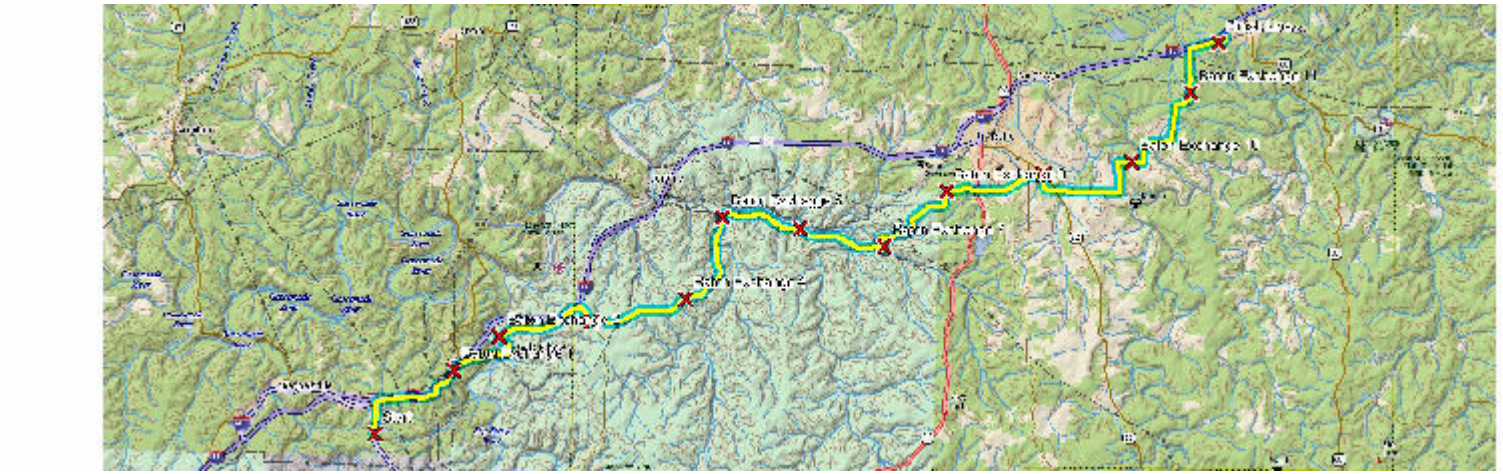
Calendar/ Events
2013 RADAR

Sep 7-15 Route 66 On The Air

7th Saint to Saint Run (Robert to James)

Nov 2nd- OT100

8th- ARRL Midwest Convention, Lebanon, MO!



New Business?

- Anyone know of tower/antenna installers?
- Need a volunteer for September Tech Talk
    - Share a project
- Repeater Technical Committee
    - Hospital Ghost
    - Hancock Maintenance

- Others…

Tech Talk
The Infamous dB

- The Bel (B) is a unit of measurement invented by Bell Labs and named after Alexander Graham Bell.
- Parameters are expressed as logarithmic ratio of the measured value to a reference value
- One Bel represents a difference in level between two intensities (one of the two is ten times greater than the other)
- The Bel was too large, so the deciBel(dB), equal to 0.1 B, became more commonly used as a unit for measuring sound intensity

Tech Talk
The Infamous dB

- The intensity level is the comparison of one intensity to another and may be expressed:

$$\text{Intensity level} = 10 \log_{10} (I_1 / I_{ref})$$

- For a radio example:

$$dB = 10 \log_{10} (P_2 / P_1)$$

$$dB = 10 \log_{10} (10w / 5w)$$

$$dB = 10 \times 0.3$$

$$dB = 3$$

Tech Talk
The Infamous dB

- The intensity level is the comparison of one intensity to another and may be expressed:

$$\text{Intensity level} = 10 \log_{10} (I_1 / I_{ref})$$

- For a radio example:

$$dB = 10 \log_{10} (P_2 / P_1)$$

$$dB = 10 \log_{10} (10w / 5w)$$

$$dB = 10 \times 0.3$$

$$dB = 3$$

So..twice the power is a 3 dB gain!

Tech Talk
The Infamous dB

P2/P1	dB
0	0
2	3
4	6
10	10

Every time you increase the power by a factor of 2 you have a 3 dB increase of power. Every 4 times is a 6 dB increase and 10 times is a power increase of 10 dB.

Tech Talk

You can also use the same values for decrease in power

P2/P1	dB
.1	-10
.25	-6
.5	-3

Cut the power in half for a 3 dB loss of power. Reduce to ¼ of original power for a 6 dB loss and if your reduce power to 1/10th The original power, you will have a 10 db loss.

NOT LABOR DAY!

Next meeting: Sep 9

(Meeting notes are posted on RRARS.org)