

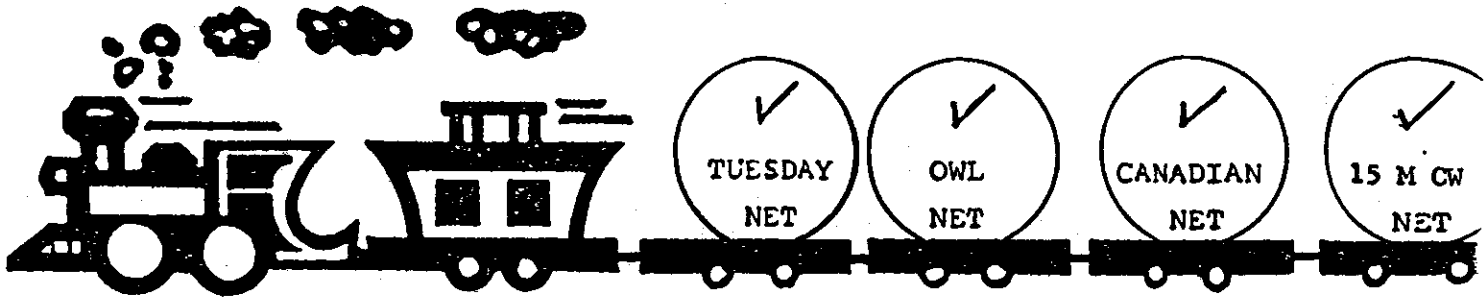


**"THE U.S.E.C.A. EXPRESS"
 UTICA-SHELBY EMERGENCY
 COMMUNICATIONS ASSN.
 MACOMB COUNTY
 147.18/78**



**PUBLISHED MONTHLY
 BY
 USECA INTERNATIONAL
 YOUR EDITOR: KBCFY**

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Utica-Shelby Emergency Communications Assn.

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APRIL 88

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f Founder c Charter h Hon. Charter

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N8FNO f c	K8IZM f c SK
W8MFN f c	W8NHT f c
K8QLM f c	K8BDG c
W8QNI c	W8VZZ c
K8WOT c	N8FDN c
N8BK h	W8OSF h
K8VYV h	N8AWV h
J.Haubner c	G. Marquardt h

POINT NETS

Sun. 1300 EST
147.78/147.18
Tue. 2000 EST
147.78/147.18
Thu. 1930 EST 21.165 CW
Fri. 2359 EST
147.78/147.18

OTHER NETS

Sun 2200 EST 21.125 CW
Mon. 2200 EST 21.125 CW
Tue. 2100 EST 28.400 SSB
Tue. 2200 EST 21.125 CW
Wed. 2200 EST 21.125 CW
Thu. 2200 EST 21.125 CW
Fri. 2200 EST 21.125 CW

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K8BF	Doug Kaherl
W8GDT	Ralph Irish
N8BV	Alex Romig
N8BM	Al Harbour

PRESIDENTS' REPORT

well its almost upon us, yes its almost that time of year; FIELD DAY is approaching very quickly. What does this mean ?

LET ME TELL you!- we need people, many people; cw operators, phone operators, packet operators, antenna set-er- uppers, cooks,- anyone who wants to be part of the team that will come in first place this year for field day! Everyone is invited to participate,- and I mean everyone including the xvi and vi's out there. We plan a special station for them along with novices. This is a special fun event for all. There will be more on this at the membership meeting.

Our amp is installed on the repeater. but is not in full use yet. Thanks to Gordy, WBSH, who in his spare time and with his technical expertise put the amp on line. It still needs a few adjustments before he can crank it up to full power. The repeater usually puts out about 16 watts. but with the work being done on the system, the power has been cut back to about 10 watts; so if the repeater sounds a little rough by your QTH that is why. I hope that in a short time everything will be operating as planned. well that's it for now. Hope to see everyone at the next membership meeting; and dont forget about our super field day station! we need you! Come out!! WABZ.

C R E D I T S

We are thankful for the contributions to this issue from the following : WABZ, WBSITJ, WBSGNI, N8DMW, WDSIWE, VE3LFZ, N8ZR, KB8EM, WB4FX, WBSITB, and "the WIRELESS".

MINUTES OF U.S.E.C.A. MEETING

MARCH 8, 1988

WABZ Opened meeting at 7:35.
N8FNO Read financial report.
KABYDJ Motiioned that minutes of last meeting be accepted as printed in 'Express'. Motion carried.
KBVDA Motiioned that finance report be accepted. Motion carried.
N8BWG Brought repeater amplifier to meeting. Stated that it should be installed by Monday, March 14th.
NBCVC Mentioned that Merlin cw and Rtty interfaces would be available for a cost of \$35.00. These are for COMMODORE 64 & VIC 20's.
N8ZR Gave report on last test session, which will appear in the 'Express'.
WABLGW Won the 60/40 drawing.
WABZ Won the 50/50 drawing. Congratulations to both.
WABZ Adjourned meeting at 8:00 p.m. A Skywarn presentation followed.
WBSITJ

J. V. McGINN, KBCFY
"U.S.E.C.A. EXPRESS"
EDITOR
3/17/88

SPECTRUM ALLOCATION ADVISORY COMMITTEE
P.O. BOX 1026
STATION F
TORONTO, ONTARIO M4Y2T7
ATTN: VE3LCC

DEAR SIR:

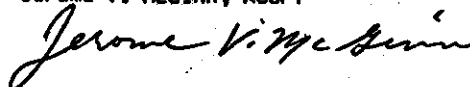
As editor of the "U.S.E.C.A. EXPRESS", the written voice of the Utica-Shelby Emergency Communications Assn. of Macomb County, Michigan, (the 147.18/.78 RPTR), I have copied & published your article "CLEAR AIR DOPPLER RADAR" in this month's issue. I wish to register the above named club as interested and supportive of this matter. Please mail your news releases directly to me at:

EDITOR, USECA EXPRESS
20216 MCKISHNIE
MT. CLEMENS, MI. 48043

Or to:

UTICA SHELBY EMERGENCY COMMUNICATIONS ASSN.
P.O. BOX 1222
STERLING HIGTS., MI.
48311-1222

Sincerely,
Jerome V. McGinn, KBCFY



TESTING REPORT

IN OUR TEST SESSION ON FEB.27, WE HAD 36 EXAMINEES WITH 26 (72%) OF THEM UPGRADING, INCLUDING 3 NEW NOVICES AND A NEW TECHNICAN. OF THE 57 ELEMENTS ADMINISTERED, 39 (68%) WERE SUCCESSFULLY PASSED. FOUR PEOPLE SCORED 100% PERRFECT ON THEIR WRITTEN TESTS. THANKS TO WBSF, KGBF, WABZ, NWBM, AND KABWBQ. NBZR

MARKET PLACE

Panasonic RF 3100 General Coverage Rcvr. 1-29Meghz...Digital Display.. .AM/FM/BRDCAST, BFO, Bass/Treble, AC/DC& BATTERIES(DCELLS), WIDE / NARROW BANDWIDTH.....EXC....\$300

YAESU 101B 10-160 Mtr, w/Shure 444 Microphone. Spectronics digital display reads to 100hz. NEW FINALS. Recently shop serviced completely\$375
MIKE,KB8BY.....739-3275

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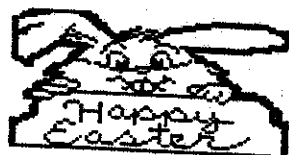
WELCOME NEW MEMBERS

N8BZP.....TIM KINNEY
K8BQPR.....WILLIAM CHAMBERS
DIANE CHAMBERS
N8IGM.....JOE GLOVER

.....
.....
.....

FOR YOUR LISTENING PLEASURE

For all you general coverage people, tune into RADIO RSA, the "Voice of South Afrika". Broadcasts can be found beamed to this part of the world on frequencies:6010,9580, & 9615 khz, at 9:50 pm, saturday nights.



Clear Air Doppler Radar

An appeal for support from VE3LCC

[Ed.'s note: to be discussed at Tuesday's meeting.]

The Department of Communications (DOC) in Canada recently reclassified Clear Air Doppler Radar (CADRS) to that of "Radiolocation" in order that they would conveniently "fit" into the 430-450 MHz portion of the radio spectrum.

In the United States, and elsewhere in the world, CADRS are correctly classified as "Meteorological Aids" and are allocated on 404 MHz.

The Canadian reclassification to that of Radiolocation is entirely contrary to the ITU Treaty, of which Canada is a signatory.

These radars have now been allocated to 441 MHz, and will be deployed all across Canada as they expand into a network. Some will be located close to the Canada/US border, affecting us amateurs.

Pointed skyward, operating in excess of one megawatt ERP, with an expected bandwidth of 4 MHz or greater, these CADRS pose a very significant and serious threat to amateur satellite operations of 70 cm.

ATV, land-based FM repeater, weak signal, and EME operations can also expect to suffer interference as the side-lobes at the horizon are only guaranteed to be 40 dB down from the carrier's ERP.

A group of concerned, dedicated amateurs has been formed to fight this flagrant misclassification which will allow this unwanted device to begin operating within the "amateur" portion of the 70 cm band as early as this fall.

We need your support on this issue. A dangerous precedent is about to be set unless we all work together to stop it!

Please send us your club's name and mailing address, as a signal of your interest and support. This will enable us to keep your group up to date on this very important issue.

A news release will soon be mailed out to all clubs that register with us.

If you prefer, send your club's name, address, and/or your comments to VE3LCC @ VE3K0I, or write:

Spectrum Allocation Advisory Committee
P.O. Box 1026
Station F
Toronto, Ontario
M4Y 2T7



Everything You Always Wanted to Know about the
Michigan QRP Club
 But Didn't Know Who to Ask!

QRP is defined, by agreement among the members of the World QRP Federation, as operating with 5 watts output power (10 watts input) or less.

Frequencies recognized world-wide as QRP areas:

CW: 1810, 3535, 3560, 7030, 7040, 14060, 21060, 28060, 50360 kHz
Phone: 1850, 3985, 7285, 14285, 21385, 28885, 50385 kHz
Novice: 3710, 7110, 21110, 28110 kHz

Purpose of Mi-QRP: "To foster and develop friendship and cooperation among amateur radio operators who have a common interest in the unique pleasure and challenge of operating amateur transmitters at powers of 5 watts or less."

No requirement says members must always run QRP. This is left to the good judgment of the member. Sometimes it is necessary to run a kilowatt to do the job! Our members don't claim QRP unless they are running 5 watts or less.

History: Mi-QRP was organized in 1978 by a group of hams in the Lansing area. At the time the name was appropriate. Now our members represent all states and many countries. The name remains as a symbol of the club's origin.

Affiliated with the World QRP Federation, Mi-QRP is active in the international QRP community. Also affiliated with the Federation are CW-OPS-QRP (Australia), DL-

AGCW (Fed. Rep. of Germany), G-QRP (United Kingdom), Gruppo QRP do Brazil (Brazil), QRP-ARI (Italy), and QRP-ARCI (USA).

TSW, "The Five Watters," is our 20-page quarterly newsletter. It contains reports on club activities, technical articles, correspondence from members, chapter news, operating tips, and results of contests, awards and nets.

Nets are held by Mi-QRP each Tuesday at 9:00 pm Eastern time on 3535 kHz.

Awards offered by Mi-QRP:

1. QRP-WAS -- Worked All States QRP
2. QRP-DXCC -- Worked 25 Countries QRP
3. WMA Award -- Worked 10 members of Mi-QRP
4. QNT Award -- 25 Net Check-ins

Contest participation is encouraged. The Mi-QRP CW Contest is sponsored each January. We encourage QRP operation in the ARRL Field Day each June.

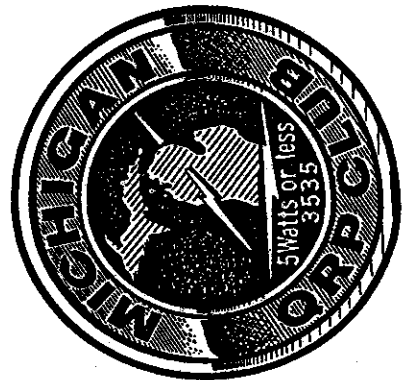
Club Emblems have been made up as a patches for jackets or caps. One patch is provided to each new member.

How and How Much? To join Mi-QRP, complete and return the application form. Dues are \$5.00 a year, and there is a \$2.00 initiation fee.

Michigan QRP Club Membership Application

Mail To: Membership Chairman
 5346 West Frances Rd.
 Clio, MI 48420

Name _____ Date _____
 Street _____ Call _____
 City _____ State _____ Class _____
 ZIP _____
 Why are you interested in QRP? _____
 Special interests in ham radio? _____
 How did you find out about Mi-QRP? _____
 Do not write below this line.
 Date Accepted _____ Membership No. _____
 Packet Mailed _____ Contributions _____



Clinton senior citizen stages one-man crusade for mentally ill patients

By RENA K. SCHNEIDER
 Macomb Daily Special Writer

Frank Formenti is kicking off his 1988 donation drive for the Clinton Valley Mental Health Center and he needs all the help he can get.

"These people have many needs and if the state won't help them I will," he said.

Formenti, an active Clinton Township senior citizen, has been working to help patients in the center get clothing, bedsheets and hundreds of other little things that make life easier for them.

He has also been working to reopen the center's gym, which has been closed for more than 10 years, and is seeking donations of athletic equipment such as exercise bikes, baseballs and bats, footballs, volleyballs and nets.

"All the other state hospitals have gyms in use," Formenti said. "What better thing is there for these people than to exercise. I want them to do more than just walk up and down the halls."

Formenti, a retired plumber, has been soliciting funds for the past two years outside five area K mart stores to help get the items for the facility. The dimes and quarters he has collected have amounted to quite a sum.

"In two years I have raised \$32,000 by standing outside a different store every Saturday," he said.

His efforts have earned him several community and state awards, including Clinton Township Senior Citizen of the Year in 1986. He was also honored with a Humanitarian Award in December by the Abdul Sheikh Society for the Love of People.

As part of Formenti's patient donation drive, he is also seeking yarn and sewing thread as well as ceramic materials and other craft supplies.

The center is located in Pontiac and serves residents from Macomb, St. Clair and Oakland counties.

"If you are mentally ill and need to go to a hospital, you may be sent to Clinton Valley; it is the local state hospital," Formenti said.

Anyone who would like to donate equipment or funds may contact Anthony Drabik, 140 Elizabeth Lake Road, Clinton Valley Mental Health Center. For more information, residents may contact Formenti at 286-0684.

He added, "I want people to know the charity they show others is like a blessing; it will help many people."



FRANK FORMENTI of Clinton Township works hard to raise money for the mentally impaired at the Clinton Valley Center in Pontiac.

GOD

BLESS

YOU

Here is another fine article from one of the members. (Sorry Jim, we could only use one of them this month.) I hope others will follow the example set by you. Al Gordie, Bill and others that have contributed.....(Editor)

Jim Odan NBD/MW



T H I N K S P R I N G

◆◆◆ "S O M E F A C T S" ◆◆◆

Today's scientific question is What in the world is electricity? And where does it go after it leaves the toaster?

Here is a simple experiment that will teach you an important electrical lesson: On a cool, dry day, scuff your feet along a carpet, reach your hand into a friend's mouth and touch one of his dental fillings. Did you notice how your friend twitched violently and cried out in pain? This teaches us that electricity can be a very powerful force, but we must never use it to hurt others unless we need to learn an important electrical lesson.

It also teaches us how an electrical circuit works. When you scuffed your feet, you picked up a batch of "electrons", which are very small objects that carpet manufacturers weave into carpets so they will attract dirt. The electrons travel through your bloodstream and collect in your fingers. Where they form a spark that leaps to your friend's filling, then travels down to his feet and back into the carpet, thus completing the circuit.

Amazing electronic facts: If you scuffed your feet long enough without touching anything, you would build up so many electrons that your finger would explode! But this is nothing to worry about, unless you have carpeting.

Although we modern persons tend to take our electric lights, radios, mixers, etc. for granted, hundreds of years ago people did not have any of these things, which is just as well because there was no place to plug them in. Then along came the first Electrical pioneer, Benjamin Franklin, who flew a kite in a lightning storm and received a serious electrical shock. This proved that lightning was powered by the same forces as carpets, but it also damaged Franklin's brain so severely that he started speaking only in incomprehensible maxims, such as, "A penny saved is a penny earned". Eventually, he had to be given a job running the post office.

After Franklin, came a herd of electrical pioneers whose names have become part of our electrical terminology: Byron Volt, Mary Louise Amp, James Watt, Bob Transformer, etc. These pioneers conducted many important electrical experiments. For example, in 1780 Luigi Galvani discovered (this is the truth) that when he attached two different kinds of metal to the leg of a frog, an electrical current developed and the frog, which was dead anyway. Galvani's discovery led to enormous advances in the field of amphibian medicine. Today, skilled

veterinary surgeons can take a frog that has been seriously injured or killed, implant pieces of metal in its muscles, and watch it hop back into the pond just like a normal frog, except for the fact that it sinks like a stone.

But the greatest Electrical Pioneer of all was Thomas Edison, who was a brilliant inventor despite the fact that he had little formal education and lived in New Jersey. Edison's first major invention, in 1877, was the phonograph, which could soon be found in thousands of American homes, where it basically sat until 1923, when the record was invented. But Edison's greatest design was a brilliant adaption of the simple electrical circuit: The electric company sends electricity through a wire to a customer, then immediately gets the electricity back through another wire, then (this is the brilliant part) sends it right back to the customer again.

This means that an electric company sell a customer the same batch of electricity thousands of times a day and never get caught, since very few customers take the time to examine their electricity closely. In fact, the last year in which any new electricity was generated in the United States was 1937; the electric companies have been merely re-selling it ever since, which is why they have so much free time to apply for rate increases.

Today, thanks to men like Edison and Franklin, and frogs like Galvani's, we receive almost unlimited benefits from electricity. For example, in the past decade scientists developed the laser, an electric appliance that emits a beam of light so powerful that it can vaporize a bulldozer 2,000 yards away, yet so precise that doctors can use it to perform delicate operations on the human eyeball, provided they remember to change the power setting from "VAPORIZE BULLDOZER" to "DELICATE".

◆◆◆ Source Unknown ◆◆◆

◆◆ What a Shock ◆◆



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Anyone desiring net point information
should send an sase to DON BECKMON, WBSF
=====
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**"THINK FIELD DAY 88"
A YEAR OF CHALLENGE**

Yes Gang it is time to start planning for our 1988
Field Day.

This year our Club is going out to take first place in this
event as our Club is already Number One in most other categories.
Now it is time we put the frosting on the cake and take first
place in this event, "Field Day 88".

To achieve our goal we will need our normal club effort,
which means everyone contributing, each in their own special way.
Everyone has a specialty, whether it is cooking, camping,
tower & antenna set ups, station equipment and station operating.

We have to work at this event like our other events as a
family event, to make it fun and number one.

This means you must put the dates for Field Day 88 on your
calendar now, June 24, 25, & 26th so we can all be there as a
family to once again have fun and a successful Number One Event.

Our Field Day Chairman will be Fred W8ITB & Walt W8BE who
was KA8TOV. All questions and ideas are welcome give the fellows
a buzz on the phone or at the next club meeting, board meeting,
they need our support and all of our help.

C I N E M A S I G N A L S

-----W8EGNI

D.O.A. This film, starring Dennis Quaid
and Meg Ryan, is a detective story with
a strange twist. Following a poisoning, a
man spends his last twenty-four hours
trying to find out who "murdered"
him, before he becomes "DOA". The plot
idea is good. Some of the acting is a
bit heavy handed, but its not too bad a
film. R RST/477



AMATEUR RADIO NEWS SERVICE

ANNUAL
PUBLICATION AWARD



FOR THE ADVANCEMENT OF AMATEUR RADIO JOURNALISM

..... The U.S.E.C.A. Express

EDITED BY: Jerome McGinn, K8CFY
having been judged

Good

is hereby awarded this testimonial in official recognition of the excellence of its
performance and outstanding contribution to Amateur Radio journalism during 1987

Dated February 29, 1988

Carol Shader W1TK
Vice-President A.R.N.S.

Lee Kiehl W9KOL
President, A.R.N.S.

Helium Balloon - ATV Launched!

The WBSELK Helium Balloon experiment was launched Aug. 15, 1987 at 1:25 pm EDT from Findlay, Ohio. The balloon package consisted of a 1-watt ATV transmitter (P.C. Electronics KPA-5), a custom built computer graphics video generator in color with two graphic screens timed in sequence, a GLB C.W. ID module, and a 100 mW 2 meter FM transmitter made by International Radio Kits during the early 70's. Power consisted of 10 Polaroid Lithium cells connected so as to provide 500 ma. at 12 volts for approximately 7 hours.

The balloon was a 5 foot weather balloon made by Kausam and is the same balloon used by the National Weather Service for radiosonde launches. The balloon system consisted of the balloon, a parachute for recovery, aluminum foil for observation and radar reflection, and the transmitter package on the end. The two meter antenna was a 1/4 wave vertical whip and the 439.25 Mhz ATV antenna was an omni-directional turnstile mounted on the bottom of the package.

The total package weight came in at 2 lbs 11 oz and our final lift from the balloon was 2 lbs 15 oz giving us only 4 oz lifting force resulting in a slower than planned ascent of approximately 700-800 feet/minute.

High winds during launch caused the package to drag across the ground bending two of the elements of the turnstile downwards. As a result, deep fades were seen as the package spun around. However, this had the side benefit of providing some vertical polarization. At about 60,000 feet the ATV xmitter quit transmitting at approx. 2:59pm EDT and the two meter beacon quit fairly suddenly at around 3:05pm EDT at approximately 70,000 feet. (One possibility is that the batteries may have burst due to the near vacuum at that altitude) The balloon was followed by Jim, WABVMY, shortly after launch in his Cessna and was able to optically track it until 4:00pm at an estimated altitude of over 100,000 feet. The ground crew was able to view the balloon with binoculars until 4:30 pm with the balloon appearing as a bright star. After that the balloon moved close the sun and was lost to the view of the ground crew as it slowly drifted westward. Due to very light winds, the balloon stayed within 18 miles for over 3 hours but was never seen again after 4:30 pm. It's hoped that someone will find it during this fall's crop harvest.

The 439.25 Mhz ATV signal was received as far away as Buffalo, NY by W2RPO with a Pi picture (dist. - 290 miles) and in Chicago, Ill. at a P2-P3 level by N7AB (dist. - 250 miles). Stations within 100 miles reported varying signal strengths of between P3-P5 with deep fading, although W8RVH tilted his ATV antenna 45 degrees which eliminated most of the fading. Picture reception reports have been coming in from all over Ohio, Mich., Ind., Pa., Ill., NY, and Ontario.

The two meter beacon was heard as far away as Baltimore, MD by N3AGG (dist. 400 miles) and in St. Louis, MO (dist. 400 miles). The 2 meter range seemed to follow the radio line of sight formula $1.4 \times \sqrt{f}$ while the ATV range seemed to more closely approximate the optical line of sight formula $1.2 \times \sqrt{f}$. An interesting phenomena occurred within 3 minutes of launch at about 2500 feet when the balloon passed through an inversion layer and produced reception in Cleveland, Pittsburg, Detroit, and Canada of a strong 2 meter beacon and ATV picture for about 1 minute. Band conditions were interesting indeed as W8BSAJ in Cleveland reported hearing both signals as the package was activated several minutes prior to launch at an altitude of 3 feet off the ground. (Distance - 125 miles). W89FOL received the beacon 8 seconds after launch at a distance of 110 miles.

Helium Balloon Found!

On Sept. 30, 1987 the WBSELK Helium balloon was found intact in a Boy Bean field 26 miles northwest of the launch site near the town of Custer, Ohio. Howard Straw, the farmer who discovered the balloon, was harvesting his soy beans the previous night but had to stop due to dusty conditions and poor visibility. The next morning he noticed a white styrofoam package just two feet from where he had been the night before. A few more feet and the balloon package would've been ground up into little bits!! At first Howard was a little wary of getting too close to the package thinking that it might be a bomb, but fortunately got near enough to see the Reward sign with my address and phone number!

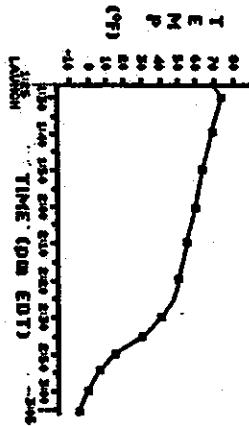
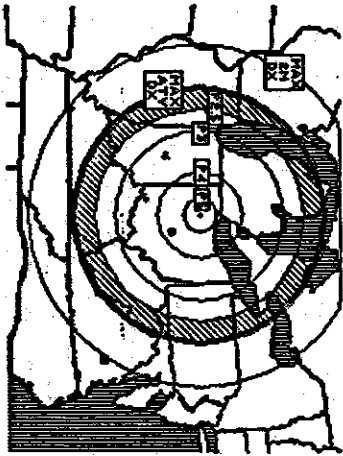
The parachute and balloon were still attached to the package. The rubber balloon looked like a dead animal after laying in a field for six weeks, however everything else was in excellent condition. Apparently the parachute performed well as the transmitter package looked like it had landed very gently. Upon opening up the package everything looked perfectly intact and dry except for two grasshoppers and a spider that had snawed a small hole through and were living inside. I attached a new battery pack and everything fired right up! The ATV signal looked great and the 2 meter beacon was sending out its message once again.

As near as I can determine, the combination of very cold internal temperature and it's effect on battery capacity must be the main reason for the transmitter shutting down at 70,000 feet. At that point the outside temperature was -60 deg. F. and the internal temperature was zero degrees and heading down fast as measured by my C.W.ID telemetry. (If you have a recording of the C.W.ID you will notice the audio frequency varies with temperature. 860 Hz is 70 deg. F and 770 Hz is 0 deg. F.) Apparently under these conditions the batteries simply gave out earlier than expected, although we did get 1.5 hours of life out of them. The ATV antenna definitely had two of the turnstile elements bent downwards resulting in deep fades as the package spun around. This had the side benefit of providing the spin rate (2 seconds per revolution). This means that we will have to work out a method of stabilization or everyone is going to get very very dizzy when the "live" camera launch goes up!! Reception reports came in from all over the Midwest and Canada. I've included some actual reports along with a map of the signal strength zones based on these reports. These were pretty much as predicted based on line of sight path loss calculations however I received reports of P5 and P4 quite a bit further than expected. KAP7GX in Lafayette, IN even reported a few seconds of a P4 signal at a distance of 185 miles!! Beyond 250 miles reception depended on whether the receive station had an unobstructed view to the horizon as the elevation angle was quite low.

Future flights will include a Live TV camera and will have improved insulation as well as being solar-powered. Also the package will be heated to maintain internal temperature. Details for this second launch will be provided by SPEC-COM and also announced via the newly formed weekly HF ATV NET every Tues. Night at 10pm-EST near 3.870 Mhz. In addition to the live TV launch I'm working on a possible "Round the World" venture which would be the closest thing to an ATV satellite we can get!! Stay Tuned.....New Heights for ATV are in the works! - 73's Bill WBSELK

9610r
870
9610r
9610r

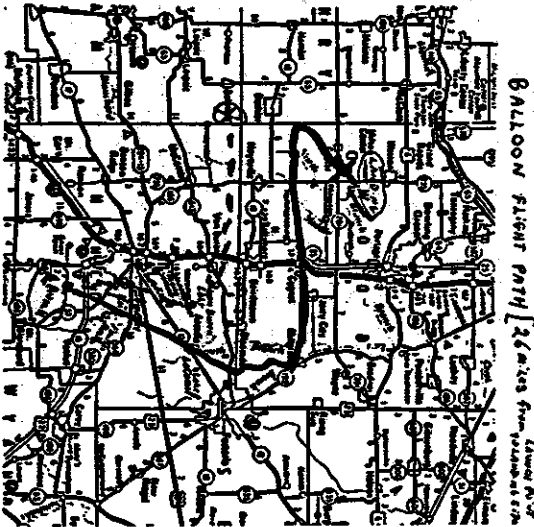
ATV Balloon Signal Strength
(Actual)



Internal Temperature

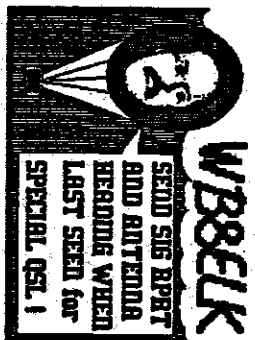
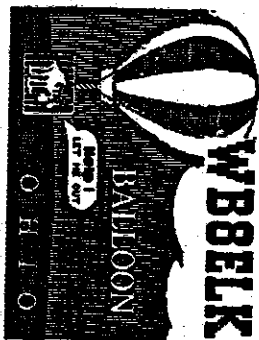
Actual Reports :

- WB8ELK - 20mi. (P5)
- KABLWR - 50mi. (P5)
- WB6URI - 70 mi. (P4+)
- WB8VH - 90 mi. (P4)
- WA8SBJ - 100 mi. (P4)
- WB8ZTV - 165 mi. (P3)
- W9NTP - 180 mi. (P3)
- KR9TGX - 185 mi. (P3)
- K3IBD - 200 mi. (P3)
- K9WZB - 200 mi. (P2)
- N9RB - 250 mi. (P2.5)
- K9NTE - 270 mi. (P2+)
- W2RP0 - 290 mi. (Sync)

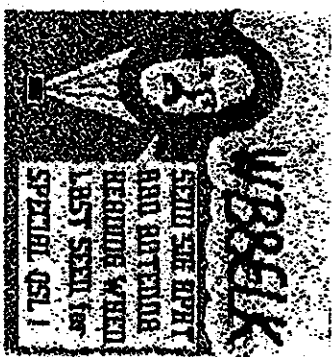
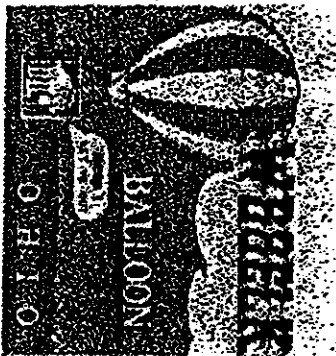


BALLOON FLIGHT PATH [26 miles from launch area]

I wish to thank all the support I received for this project. In particular W8BNDX for use of his barn (although we could have done without the balloon-eating soy beans!); W8WVY for his excellent airplane tracking; W8BMSJ for working out the balloon-filling procedure; KABLWR and W4JUG for their fine job of coordinating the 40 meter information net; W8VNR for his equipment donations-look for the miniature Sony camera on the next balloon launch for "live" video; SPEC-COM and W8QGD for donating the ATV antenna and solar cells for balloon II; W6ORG of P.C. Electronics for his technical support; and finally to the valiant efforts of the chase team of N8D00, W8G5U, W8R8K, N8BQ and KABLWY (any group capable of looking through binoculars at a tiny speck in the sky for hours while lying in a ditch filled with poison ivy has to be dedicated!) '73's - Bill - WB8ELK



Computer screens transmitted by Balloon Package



As received by N9RB near Chicago (250 Miles)

SAAC

news release

SPECTRUM ALLOCATION ADVISORY COMMITTEE
P.O. Box 1026, Station F, Toronto, Ontario M4Y 2T7 Canada

for immediate release

US AMATEUR FREQUENCIES THREATENED BY CANADIAN RECLASSIFICATION

TORONTO, FEB. 9, 1988: American as well as Canadian amateur operations could be seriously threatened if Canada's Department of Communications (DOC) succeeds in its plan to reclassify a meteorological aid as a radiolocation device.

The intent of the DOC reclassification is to allow a meteorological aid to be operated within the 430 to 450 MHz (70 cm) amateur band. Such a frequency assignment to a meteorological aid is in contravention of an international frequency band plan treaty to which Canada is a signatory.

Radiolocation devices, however, can be assigned frequencies in the 70 cm band and DOC has used reclassification as an opportunity to seize valuable amateur spectrum.

The very real danger to amateurs in the United States is that once Canada reclassifies a meteorological aid as a radiolocation device, there would be virtually irresistible pressure in the US for the FCC to do likewise.

The impact on 70 cm amateur operations in the US could be devastating. Existing and future satellite uplinks could be rendered useless, ATV, weak signal and EME operations could become impossible in many areas; and FM repeaters could be forced out of the band completely.

more...

Page 2

The meteorological aid in question is a high-power, triple beam, broad band Clear Air Doppler Radar (CADR) system. CADR systems are now operating in the US on the meteorological aid frequency of 404.37 MHz were they pose no direct threat to amateur operations. These and future installations could be moved to the 70 cm amateur band, however, if CADR is reclassified.

CADR is a research system designed to study high-altitude wind profiles. As such it clearly and correctly falls within the definition of Meteorological Aids Service: "A radiocommunication service used for meteorological, including hydrological, observation and exploration."

If the Canadian DOC reclassification is permitted to proceed, it would also set a dangerous precedent. Any radio service could be reclassified at the whim of a civil servant. This must not be allowed to happen, in Canada or the US.

US amateurs are urged to fight this serious problem by writing their elected officials in Washington, urging them to file diplomatic protests with the Canadian government on behalf of US amateurs. The fate of the 70 cm band in the United States could be at stake.

US amateurs should also write the IARU and ARRL urging these organizations to take immediate action to fight the Canadian reclassification. The addresses for these organizations are:

Mr. Richard L. Baldwin, President
International Amateur Radio Union
HC 60 Box 60, Waldoboro, ME 04572

SAAC

SPECTRUM ALLOCATION ADVISORY COMMITTEE
 P.O. Box 1026, Station F, Toronto, Ontario M4Y 2T7 Canada

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March 27, 1988

KERRY
 Jerome V. McGinn
 Editor, USECA Express
 20216 McRishnie
 Mt. Clemens, Michigan
 U.S.A. 48043

Dear Mr. McGinn:

Thank you for your letter of March 17, 1988. I am not sure whether the article you published was received from the packet bulletin we issued a short time ago or was a reprint from our original SAAC news release, so I am sending you our original release.

It is pleasing to us to see so many groups like yourselves taking an interest in preserving the amateur radio spectrum.

Amateurs should make no mistake, these high power transmitters will be disastrous to amateur 70 cm activity in Canada and in the US if the Department of Communications (DOC) is allowed to get away with this.

The DOC has cleverly reclassified these devices from "Meteorological Aids" (as they are classified in the US and operate on 404.37 MHz) to that of "radiolocation" in order that they could "conveniently" fit them into the amateur portion of the 70 cm band.

Attempts by CRRL and The Canadian Amateur Federation failed to change DOC's mind. This was the ammunition that sparked the formation of this organization, an organization to preserve amateur spectrum without having to compromise to DOC for past favors received. Amateur spectrum is too valuable to "trade" away.

It is our position that only the strongest political pressure both nationally and, internationally by radio clubs all across the United States, will have any chance of changing this reclassification by DOC, and, thus remove the present threat to ALL amateurs that these devices will bring.

As many amateurs as possible must be encouraged to write ARRL and their congressmen about this Clear Air Doppler Radar wind profiler issue.

Thank you once again for your interest and your co-operation.

Sincerely & 73,

Jerome V. McGinn

MAIL ROOM 4872

CADR GRAPHS

The following graphs were produced by an electrical engineer based on pulse durations, pulse repetition rates and data obtained from existing wind profilers. This data, together with Fourier analysis principles and, with the aid of a computer, produced the resultant graphs.

The scale on the left side of the graph represents total signal power. The inherent nature of pulsed radar emissions leads to transmitter energy being dispersed over an extremely wide bandwidth, thus the carrier representation on the graph never reaches 0 db.

One megawatt ERP, average power, is the minimum level that the CADR will operate. This represents +90 dbm and must be added to the scale at the left side of the graph to obtain quantitative analysis of the effects the CADR will have on amateur radio operations within the 70 cm portion of the band.

For example:

Referring to the first graph: Period=100 u.s. Duration =1.0 u.s. At the operating frequency of the CADR, 441 MHz, the graph shows a signal level of -20 db w.r.t. total signal power of one megawatt (+90 dbm)

+90dbm
 -20db = 10,000 watts
 +70db

The CADR will emit ten thousand watts of RF energy at 441 MHz!!!

Similarly: referring to the same graph, at a frequency of 436.5 MHz, in the middle of the international satellite band, the CADR will emit -42 db w.r.t. total signal power.

+90dbm 63 watts of RF energy
 -42db = pointed up at the
 +48db = satellites!!!

Similarly, at the start of the FM repeater INPT allocations, on 447 MHz, the CADR will emit an overall power level of +43 db or the equivalent of 20 watts of RF energy.

NOTE: Some sections of the country have repeater inputs beginning at 442 MHz. The signal power at 442 MHz will be +58 db or just under 1000 watts!!!

Increased power of the CADR, changing pulse and repetition rates, scatter and spurious emissions will all contribute to compound interference to amateur radio operations within 70 cm.

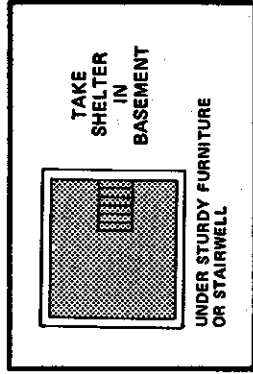
After looking at the graphs, do you really want this on 70 cm?

TORNADO SAFETY RULES



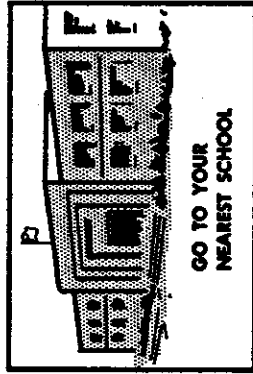
TORNADO WATCH

- Watches are broadcast by radio and television stations.
- Remain calm. Keep radio or television on.
- Take precautionary measures.
- Do not call weather bureau.



TORNADO WARNING

- Take best shelter — usually under sturdy furniture or stairwell
- Stay away from windows.
- Have flashlight, pick and shovel handy, and battery radio.
- Do not shut off utilities. (See other side.)

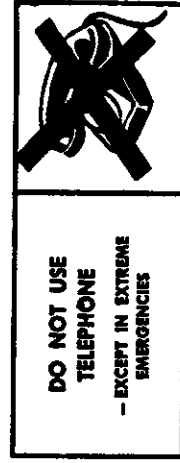


TORNADO STRIKE

- Seek assistance at nearest school.
- Schools will be emergency headquarters for disaster areas.
- Do not use matches or lighted candles.
- Watch for fallen wires.



**STAY AWAY FROM AREA
SIGHTSEERS IMPEDE
RESCUE WORKERS**



**DO NOT USE TELEPHONE
- EXCEPT IN EXTREME
EMERGENCIES**

LEARN THESE RULES—And What To Do:

A TORNADO WATCH is issued by the U. S. Weather Bureau when conditions are such that a tornado may develop within a defined area.

A TORNADO WARNING is issued when tornadoes are sighted in an area. Whenever possible the path of the tornado will be given.

IN THE OPEN COUNTRY

Move at right angles to the tornado's path. Tornadoes usually move ahead at 25 to 40 miles per hour. If there is no time to escape, lie flat in the nearest depression such as a ditch or a ravine.

AT HOME

Watch-Do not use your telephone except to report a tornado. Prepare to go to your best shelter — usually under sturdy furniture or stairwell in basement. Do not engage in unnecessary travel. Keep children at home. If they are in school, they will be cared for there. Keep radio or television set turned on for instructions. Remain calm.

Warning-Go to your best shelter. If you have none, or no basement, lie flat, face down under sturdy furniture or use clothes closet in center of home. **STAY AWAY FROM WINDOWS.** Do not use telephone. A battery operated radio is best in a shelter.

AT SCHOOL

ObeY school authorities.

AT WORK

Follow instructions set up by safety department of your employing agency. In public buildings and office buildings standing against an inside wall on a lower floor affords some protection.

GAS AND ELECTRICITY

Do not turn them off at meter or main switch. Turn off gas and electric appliances, except radio or television, but do not turn off gas pilot lights. If your home is hit and heavily damaged, only then should you shut off main gas valve. Do not turn it back on yourself. Call a trained man to restore your service.

Only Authorized Personnel Should Go To A Disaster Area
THE CURIOUS AND THE SIGHTSEERS BLOCK HIGHWAYS AND IMPEDE RESCUE EFFORTS



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POST CONSPICUOUSLY IN YOUR HOME

A black and white photograph of a tall, lattice-structured aluminum tower. A worker is visible at the very top of the tower, working on the cross-arms. The tower is supported by four diagonal guy wires. The background consists of a dense forest of evergreen trees. The sky is bright and clear.

UNIVERSAL TOWERS

Universal Manufacturing Co. 12357 E. 8 Mile Rd. Warren, Mich. 48089 (313) 774-4140

ALUMINUM TOWER