

MIDWEST AMATEUR RADIO SERVICE 7258KHz

RADIO WATCH

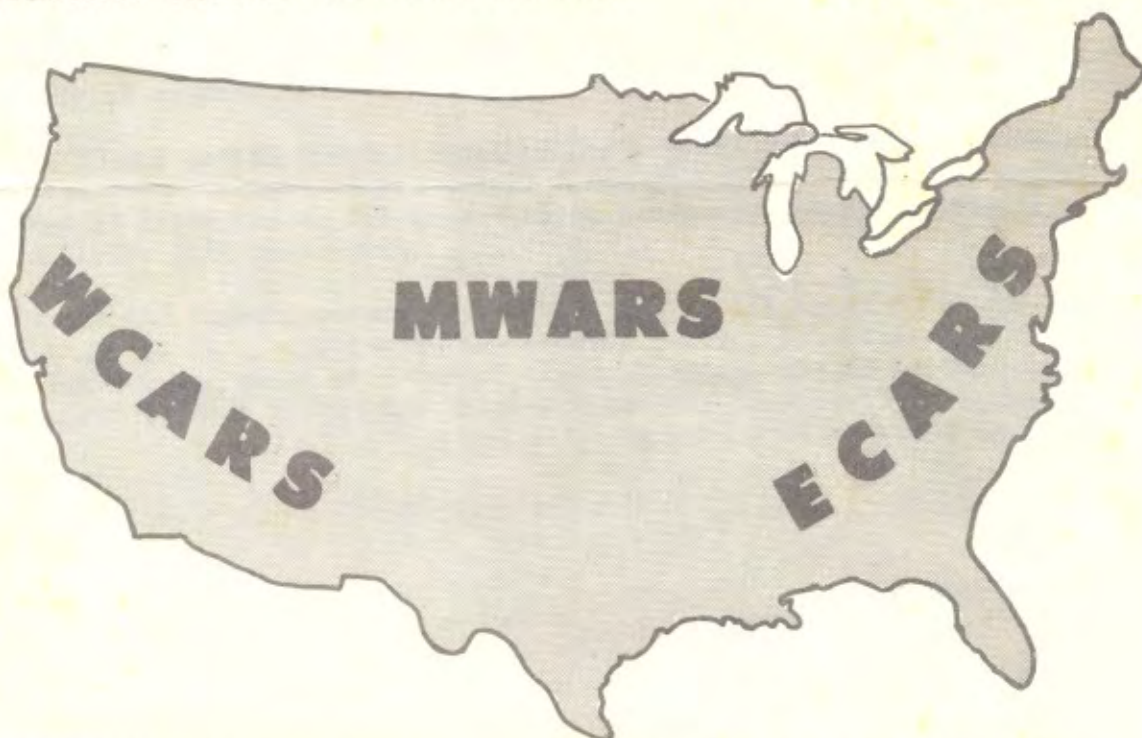
Official News Media For MWARS

MOBILE MONITORING

• **FREQUENCY MARKER STATIONS 7258KHz**

• **CRYSTAL CONTROL**

**K9DDT
WA8FYA
W9WWE**



HAMS AT WORK ACROSS THE NATION

**W9WWE
MWARS**

MIDWEST AMATEUR RADIO SERVICE

RADIO WATCH
APRIL 1969
SEATON, ILL.

MWARS OFFICIAL STATIONS

K9DDT Nick Geer, Service Control Mgr.	WA8FYA Tiny Worden, Coordinator
W9WWE Marv Cook, Secretary	W8UX Bill Hinman, Coordinator
W9YJN Don Achelpohl, Publicity Mgr.	W8FPZ Art Boltz, Coordinator
WA9OIN Bud Laws, Coordinator	W0WYJ Ed Brown, Coordinator and Chairman Liaison Committee for ECARS-MWARS-WCARS
W9GET Jim Moore, Coordinator	

TOTAL REPORTED CHECKINS FOR THE MONTH OF MARCH -- 8812

THE HONOR ROLL - TOP SIX - W0WYJ 939, W8MZS 765, K9GPM 690, W9ILU 661,
W5CTD 637, WA9VQV 458

FOR A SERVICE THAT RUNS 84 HOURS PER WEEK WITH 252 MEMBERS, THAT WORKS OUT TO ABOUT 20 MIN OF CONTROL DUTY FOR EVERYBODY, BUT IT DOESN'T WORK THAT WAY, DOES IT.....? THERE IS NO WAY OF KNOWING WHERE A DISASTER MIGHT STRIKE. IF ONE OCCURS IN YOUR AREA, DO YOU HAVE THE OPERATING SKILLS NECESSARY TO BE A COMMUNICATIONS LINK TO THE OUTSIDE? IT ISN'T DIFFICULT BUT IT DOES TAKE PRACTICE TO FUNCTION EFFECTIVELY WHEN THE GOING GETS ROUGH.

Enclosed this month is a FCC notification form for portable/mobile operation- courtesy of K9VJJ. Additional copies available from the secretary if needed.

K9KTB has gotten the ball rolling for a MWARS get-together on July 5. This will be an all day affair and it falls on a long weekend. Tentative location is Springfield, Ill with 4 sites presently under consideration. More definite info next month.

As the tornado season approaches, MWARS will again have the opportunity to be of service to the general public. All members should be aware that in the event of a funnel cloud sighting, the US Weather Bureau will accept collect calls. The Chicago number is 312-922-1593. We suggest that members learn the location and phone number of the Weather Bureau nearest them and keep the info handy. The Weather Bureau will want to know the exact location, direction of travel, approximate speed, and damage done, if any.

Effective immediately, all requests for membership to be handled as follows: send QSL or post card and twelve 6 cent stamps to - Secretary, Midwest Amateur Radio Service, Box 82, Seaton, Ill 61476.

W8NXD would like to put together an album to be circulated among MWARS. So if you have a snapshot of yourself that you can spare, send it to Ron at 1646 Leahy St, Muskegon, Mich 49442.

A note from WB4LIV- "ON April 22 at 1515est W4IAN mobile Ø checked into MWARS reporting a serious automobile accident on I-70 south in St. Louis. KØUPT who was monitoring the frequency relayed the information to the St. Louis police who said they had no prior report of the accident."

If your copy of Radio Watch is marked with an "X", it means that your postage stamp supply is exhausted. Will have to have more stamps from you in order to send you the next copy. If no "X" displayed

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As always, suggestions and constructive criticism are welcome.

MID-WEST AMATEUR RADIO SERVICE
W9WWE M. J. COOK
Box 82 Seaton, Illinois 61476



FIRST CLASS

ARS WA9VLK

Vern Weiss

719 West Water St.

Kankakee, Ill.

60901

NOTICE OF OPERATION AWAY FROM HOME

To the District FCC Engineer-In-Charge

Rot Section 97.97

District(s)

a. Name of licensee _____ b. Call _____

c. Authorized fixed transmitter location _____

d(1) Portable _____ or temporary fixed _____ or new permanent location _____

(Check one of the above and put in address here) _____

d(2) Or insert mobile itinerary here: _____

g. Vehicle: _____ Registration Number _____ of _____ State

f. Address at which, or through which, the licensee can be reached: _____

e. Dates of beginning and ending these portable or mobile operations: _____

Remarks: _____

NOTE: This form should be mailed early enough to reach all the FCC engineers concerned before operation begins. However, the amateur need not wait for a reply.

ARRL Form S-43(a) 6902

Printed in the U.S.A.

COMMISSION FIELD ENGINEERING OFFICES

Mailing addresses for Commission Field Engineering Offices are listed below. All communications with Field Offices should be addressed to the Engineer in Charge, Federal Communications Commission.

District No.	OFFICE LOCATION	District No.	OFFICE LOCATION	District No.	OFFICE LOCATION
1	1600 Customhouse Boston, Massachusetts 02109	11	Mezzanine 50 849 South Broadway Los Angeles, California 90014	21	502 Federal Building Courthouse & Post Office Honolulu, Hawaii 96808 P.O. Box 1021
2	748 Federal Building 641 Washington Street New York, New York 10014	12	323 - A Customhouse 555 Battery Street P.O. Box 2549 San Francisco, California 94126	22	322-323 Federal Building P.O. Box 2987 San Juan, Puerto Rico 00903
3	1005 New U. S. Customhouse Philadelphia, Pennsylvania 19106	13	441 U. S. Courthouse 620 S. W. Main Street Portland, Oregon 97205	23	U. S. Post Office Bldg. & Courthouse Room 55 P. O. Box 644 Anchorage, Alaska 99501
4	415 U. S. Customhouse Gay and Water Streets Baltimore, Maryland 21202	14	806 Federal Office Building 1st Avenue and Marion Seattle, Washington 98104	24	Room 10110 1101 Pennsylvania Ave., N. W. Washington, D. C. 20555
5	405 Federal Building Norfolk, Virginia 23510	15	521 New Customhouse 19th between California & Stout Streets Denver, Colorado 80202	6S	238 Post Office Building Savannah, Georgia 31402 P. O. Box 77
6	2010 Atlanta Merchandise Mart 240 Peachtree St. N. E. Atlanta, Georgia 30303	16	208 Federal Courts Bldg. 6th and Market Streets St. Paul, Minnesota 55102	7T	Room 201, Spradlin Bldg. 221 N. Howard Avenue Tampa, Florida 33606
7	312 Federal Building Miami, Florida 33101 P. O. Box 568	17	3100 Federal Office Building 911 Walnut Street Kansas City, Missouri 64106	8M	439 U.S. Courthouse and Customhouse Mobile, Alabama 36602
8	608 Federal Office Building 600 South Street New Orleans, Louisiana 70130	18	826 U. S. Courthouse 219 South Clark Street Chicago, Illinois 60604	9B	301 Post Office Building 300 Willow Street Beaumont, Texas 77704 P. O. Box 1527
9	New Federal Office Building 515 Rusk Avenue Room 5636 Houston, Texas 77002	19	1029 New Federal Building Detroit, Michigan 48226	11S1	Fox Theatre Bldg. 1245 - 7th Avenue San Diego, California 92101
10	Room 401, States General Life Insurance Bldg. 708 Jackson Street Dallas, Texas 75202	20	328 Federal Building Ellicott and Swan Streets Buffalo, New York 14203	11S2	356 W. 5th Street San Pedro, California 90731

IN THE LAST ARTICLE WE COVERED A LITTLE BIT ABOUT MOBILE ANTENNAS. I WOULD LIKE TO CARRY IT A BIT FURTHER-- ESPECIALLY THE PART ABOUT THE SWR.

FIRST OF ALL, I SHOULD MENTION THAT SINCE THE SWR BRIDGE MEASURES THE SWR ONLY AT THE POINT IN THE LINE WHERE IT IS INSERTED, WE SHOULD TAKE CARE THAT THE POINT WE SELECT FOR THE BRIDGE IS ONE THAT WILL DUPLICATE THE CONDITIONS AT THE FEED POINT OF THE ANTENNA. I WON'T DELVE TOO DEEPLY INTO TRANSMISSION LINE THEORY BUT IT IS HELPFUL TO KNOW THAT CERTAIN LENGTHS OF LINE ARE REACTIVE AND THEY DISTORT THE SWR READINGS CONSIDERABLY. USING A MULTIPLE OF A HALF WAVE LENGTH FOR THE TRANSMISSION LINE WILL AVOID THIS PITFALL SINCE A HALF WAVE LINE WILL REPRODUCE ITS TERMINATION EXACTLY AT THE TRANSMITTER END. A QUARTER WAVE LINE ALSO IS NON-REACTIVE BUT IT IS AN IMPEDANCE INVERTER RATHER AN IMPEDANCE REPEATER. FOR EXAMPLE, ASSUME A 25 OHM MOBILE ANTENNA FED THRU A QUARTER WAVE OF 50 OHM COAX. THE TRANSMITTER WILL THEN BE LOOKING AT A 100 OHM LOAD. THE RELATIONSHIP IS AS FOLLOWS-- $(25)(X) = (50)^2$ $25X = 2500$ $X = 100$. IN OTHER WORDS, SQUARE THE IMPEDANCE OF THE LINE AND DIVIDE BY THE IMPEDANCE OF THE ANTENNA IN ORDER TO FIND THE LOAD THAT THE TRANSMITTER WILL SEE. THIS PROPERTY OF THE QUARTER WAVE LINE IS QUITE USEFUL WHEN TRYING TO FEED A LOW IMPEDANCE ANTENNA WITH A TRANSMITTER THAT WILL ONLY MATCH 40-100 OHMS.

ANOTHER ITEM THAT SHOULD BE MENTIONED IN CONNECTION WITH THE MOBILE ANTENNA IS THE GROUND RETURN PATH. ON 40 METERS AND LOWER THE CAR BODY ACTS PRIMARILY AS A COUNTERPOISE-- I.E. A CAPACITANCE TO GROUND. THE CAR BODY IS ONE PLATE OF THE CAPACITOR AND THE GROUND IS THE OTHER. OUR AIM IS TO BUILD THE BIGGEST CAPACITOR THAT WE CAN SINCE CAPACITANCE IS DIRECTLY PROPORTIONAL TO THE SIZE OF THE PLATES. THE WAY TO DO THIS IS TO ASSUME THAT THE VARIOUS BODY PANELS ARE NOT CONNECTED ELECTRICALLY, AND TO BOND THEM TOGETHER WITH BRAID. BOND FENDERS, HOOD, TRUNK LID, AND FLOOR PANS- TRUNK AND PASSENGER COMPARTMENT. BRAZING IS PREFERABLE BUT SELF-TAPPING SCREWS CAN BE USED. THE BONDING ALSO HELPS CUT DOWN IGNITION NOISE.

ANOTHER ITEM OF CURRENT INTEREST IS THE USE OF TWO MOBILE ANTENNAS IN PHASE. THEY ARE MOUNTED SYMMETRICALLY ON THE CAR AND FED WITH FEED LINES OF EQUAL LENGTH, PREFERABLY A QUARTER WAVE. THIS GIVES A PHASE ANGLE OF ZERO DEGREES BETWEEN THE ANTENNAS, WHICH DOES NOT PROVIDE ADDITIONAL GAIN OR DIRECTIVITY IN THE USUAL SENSE. HOWEVER, BY FEEDING THE ANTENNAS IN PARALLEL, THE LOSS RESISTANCES ARE ALSO IN PARALLEL. SINCE LOW FREQUENCY MOBILE ANTENNAS HAVE MORE LOSS THAN RADIATION, THE IMPROVEMENT CAN BE QUITE STRIKING. IN FACT, WITH HIGH Q LOADING COILS (NOT THE USUAL VARIETY) THE EFFICIENCY APPROACHES 30 PER CENT. THIS REQUIRES AIR WOUND COILS WITH THE TURNS SPACED THE DIAMETER OF THE WIRE AND THE DIAMETER OF THE COIL SHOULD BE APPROXIMATELY HALF THE LENGTH. FOR PURPOSES OF COMPARISON, THE GARDEN VARIETY OF MOBILE ANTENNA HAS A CALCULATED EFFICIENCY IN THE NEIGHBORHOOD OF 7 PER CENT.

SO, UNLESS INTEREST DEVELOPS IN CAPACITY HATS, THAT JUST ABOUT FINISHES UP THE SUBJECT OF THE MOBILE ANTENNA. I HOPE SOME OF YOU FIND THIS INFORMATION USEFUL AND I AM LOOKING FORWARD TO HEARING SOME BIG SIGNALS FROM YOU MOBILES OUT THERE. CIRCUMSTANCES PERMITTING, THE NEXT TOPIC WILL BE THE HALF WAVE ANTENNA. UNTIL THEN,

SUGGESTED PROCEDURES FOR THE DESTRUCTION OF MWARS

1. USE PUSH-TO-TALK AND CONCENTRATE ON PAUSING FREQUENTLY WITHOUT RELEASING THE BUTTON. THIS IS A TRIED AND TESTED METHOD OF RENDERING THE FREQUENCY UNUSEABLE AND IT WORKS MOST EFFECTIVELY WHEN 3 OR 4 STATIONS USE IT SIMULTANEOUSLY.
2. AT EVERY OPPORTUNITY VOLUNTEER SOMEONE ELSE FOR CONTROL STATION.
3. CONSTANTLY PEPPER THE CONTROL STATION WITH LONG-WINDED COMMENTS AND SUGGESTIONS SO THAT HE HAS LITTLE TIME FOR ANYONE ELSE.
4. WHEN THE CONTROL STATION STANDS BY FOR MOBILES, CHECK IN WITH UR FIXED STATION AND RATTLE OFF A PARAGRAPH OR TWO WITHOUT WAITING FOR AN ACKNOWLEDGMENT.
5. WHEN UR FRIENDS CHECK IN, TRANSMIT ON TOP OF THE CONTROL STATION AND TELL THEM WHAT FINE SIGNALS THEY HAVE AND WHAT LOVELY WEATHER UR HAVING.
6. WHEN SOMEONE INADVERTENTLY LANDS ON THE FREQUENCY, JUMP RIGHT IN AND TELL HIM HOW WRONG AND STUPID HE IS. DONT GIVE HIM A CHANCE TO HEAR WHAT IS GOING ON AND DEVELOP AN INTEREST IN IT. HE WILL RETURN AGAIN AND AGAIN TO EXPRESS HIS GRATITUDE FOR UR HOLIER-THAN-THOU SPEECH.
7. KEEP A LIST OF EXCUSES ON UR OPERATING DESK SO YOU HAVE A QUICK ANSWER WHEN THE CONTROL STATION ASKS FOR RELIEF. CHECK THEM OFF AS THEY ARE USED SO YOU CAN EVENLY DISTRIBUTE THE WEAR AND TEAR ON EACH ONE. SOME SUGGESTIONS-- I JUST CAME DOWN WITH 2¹/₂HR HEPATITIS, ITS GETTING DARK NOW AND I HAVE TO GO BUY SOME LIGHT BULBS, MY ANTENNA JUST BLEW DOWN AND BY THE TIME I GET IT PUT BACK UP- DINNER WILL BE READY.
8. WHEN TWO STATIONS CALL IN, ONE S9 AND ONE S3, TRANSMIT ON TOP OF THE S3 STATION AND ADVISE THE CONTROL STATION THAT THE S9 STATION IS CALLING HIM.
9. WHEN SOMEONE ON FREQUENCY VOICES AN OBJECTION TO MWARS, ANSWER HIM WITH ABOUT 300 WELL CHOSEN WORDS. EVERYONE ON FREQUENCY WILL THEN JOIN IN AND A GOOD DONNYBROOK WILL TIE UP THE FREQUENCY FOR 30 TO 45 MINUTES.
10. WHENEVER POSSIBLE, GRIPE LONG AND LOUD ABOUT THE QRM. THE QRM WONT GO AWAY BUT IT IS BOUND TO START A DISCUSSION WHICH WILL AMUSE AND ENTERTAIN THE STATIONS WHO ARE WAITING TO CHECK IN.

THE FOLLOWING IS OFFERED AS AN ALTERNATIVE TO NR 7 ABOVE FOR STATIONS THAT TAKE THEIR TURN AT SERVICE CONTROL --

- A. USE A TRANSCEIVER AND ZERO-BEAT EACH STATION THAT CALLS IN.
- B. SEE 1. ABOVE.
- C. USE PUSH-TO-TALK AND ONLY STAND BY FOR CHECK-INS. THIS MAKES IT NECESSARY FOR -CONTACT- OR -INFORMATION- STATIONS TO WALK ON SOMEONE IN ORDER TO BE HEARD.
- D. TELL A STATION TO STANDBY AND THEN FORGET HIM.
- E. BE AN ENTERTAINER. DONT LET A BIG AUDIENCE GO TO WASTE. KEEP UP THE CHATTER. DONT USE A SENTENCE WHEN YOU CAN SAY THE SAME THING IN A PARAGRAPH.
- F. ANSWER STRONG STATIONS QUICKLY SO UR TRAIN OF THOUGHT WONT BE DISRUPTED BY THE WEAKER STATIONS WHO ARE CALLING.
- G. STAND-BY AS LITTLE AS POSSIBLE. THIS CREATES PILEUPS AND MAKES MWARS SOUND VERY POPULAR TO THE CASUAL LISTENER.
- H. DONT TAKE ANY TRAFFIC OR INFORMATION FROM A STATION UNTIL YOU KNOW HIS NAME. THIS IS ESPECIALLY IMPORTANT WHEN THE FREQUENCY IS BUSY AND THE CALLING STATION IS BARELY READABLE. TAKE AS LONG AS YOU HAVE TO -- STATIONS WHO ARE WAITING REALIZE HOW IMPORTANT A NAME IS AND THEY WONT MIND WAITING.
- I. WHEN A STATION CALLS IN LOOKING FOR SOMEONE, ASSUME THAT HE IS NOT ON FREQUENCY BECAUSE NOBODY HAS HEARD HIM.
- J. WAIT UNTIL THE LAST MINUTE TO ASK FOR RELIEF.

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