

# Results, Eighth ARRL International EME Competition

By Edith Holsopple,\* N1CZC

We've come a long way since the first two-way amateur EME link between the Eimac Radio Club, W6HB, and the Rhododendron Swamp VHF Society, W1BU, on 1296 MHz in July 1960. As K1WHS noted on a log sheet margin, "Who ever heard of a dupe sheet for EME contacts? Times do change!"

Yes, the times are changing, and we are changing with them. We received 150 entries for this, the eighth running of the ARRL International EME Competition. Conditions were favorable as a whole, but below normal in some areas because of aurora and bad weather. The daylight hours were marred a bit both weekends by one-way propagation on 432 MHz because of Faraday rotation. U.S. stations were coming in loud and clear in Europe, but statesiders had trouble copying the European stations. The 144 MHz band dried up about one hour after the European window closed on both weekends. Sept. 22-23 and Oct. 20-21 were at perigee, which put the test perilously close to the new moon and resulted in increased solar noise.

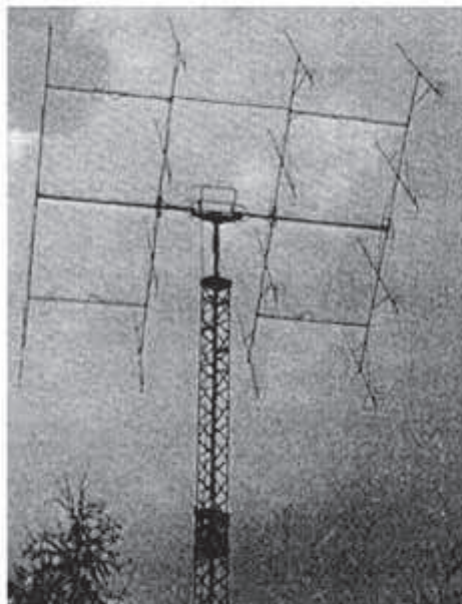
In September, the periods of daylight operating were extended, which, unfortunately, meant increased ionospheric absorption of signals and severe Faraday rotation problems for some. Conditions were better on Saturday than on Sunday, when there was aurora visible. Part of Saturday, solar noise killed all but the strongest stations. On Sunday the sun and moon reached azimuth at one period, with an elevation difference of only 15 degrees.

The October weekend was not the best because of aurora, especially on Sunday. Gale-force winds were prevalent in Europe, making operating difficult, but at times conditions were extremely good. Activity on both weekends was phenomenal. The average QSO total for single-operator stations was 34.

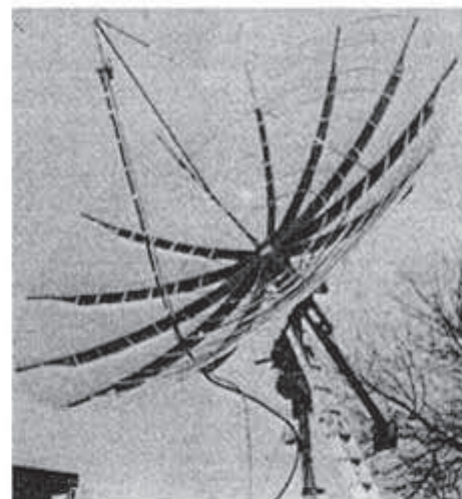
Scores rose significantly this year. HB9SV, active on 144 and 432 MHz, topped his '83 score by 100 kilopoints to lead the single-operator, multiband category. He was followed by WB0TEM, who operated 220 MHz in addition to 144 and 432. N4GJV was at it again with his homebuilt 1-kW transmitters, receivers, quads and quags on 144 and 432 MHz.

K1WHS decided to operate a single band this year and managed to beat out the highly populated 2-meter crowd with the help of his MGF-1200 GaAsFET preamp mounted at the antenna and fed into an MMT 144-28 converter, and a much-modified 75A4 (vintage 1953!) with a 300-Hz crystal filter in the IF. DL8DAT was close on his heels, working 167 stations from his Fed. Rep. of Germany QTH.

No single-band entries were received on 220.



The no. 2 station on 144 MHz, DL8DAT, worked 167 stations with his 16 x 24-element parabears.



This 6-meter dish was used by G3LTF, the number 4 single-operator station on 432 MHz.

Several multiop stations and multiband operators made contacts there.

The top-scoring two on 432 MHz are a repeat of last year. DL9KR and N9AB retained their leadership positions, while JA6CZD moved up to third, replacing W0RRY, who didn't operate this year.

With the activity on 1296, thumb twiddling wasn't an option. EME pioneer VE7BBG

worked 18 stations to take top honors on that band.

The number of multiop entries doubled from 14 in '83 to 28 in '84. K5GW/WB5LUA broke the one-million-point barrier for the first time in EME history, more than doubling the score of last year's top entrant, K2UYH.

This year, we are including the antenna type with the score listings. This will help you compare your station with others. We appreciate your comments, suggestions and photos.

The 1985 EME Competition dates are Nov. 2-3 and Nov. 23-24. We are looking forward to seeing you then. Our warm thanks to WIJR and WA1JXN for help in choosing the dates.

## SOAPBOX

I'm a beginner and was very surprised at such high activity. In the last night of the contest, I was so tired I fell asleep in the middle of a CQ call (DL8DAT). The activity was very good this time, but I had no luck. I had a problem with the power dividers and relay, but good luck also in working two new states, bringing my total up to 48 (SM2GGF). I have never heard so many stations at one time on any EME weekend. It is unfortunate that everyone wanted to operate on the same frequency at the same time when we have all the band space. It makes things rather difficult, but exciting (ZL3AAD). Our downtown Tijuana QTH is almost too noisy, even for the big guys. I hope we can find another location for the equipment and show up to the level that the gear is really capable of (WB6NMT). I had fun and look forward to trying again. I hope by next year, VE3OCX will be on to give at least one good signal from VE3 on 144 MHz (VE3FN). The first day of the second weekend, WA7CJO and I worked for 24 hours straight getting things ready. Unfortunately, we fell over dead tired after making three contacts (WA7LYI). The first part of the contest had good activity and good weather. The second part was just the opposite. High winds damaged my antenna and made operation very difficult (SM7BAE). This contest was perhaps the most exciting one I have entered in 15 years of VHFing! Signals were weak, QRM from below the band was intense, but perseverance paid off. Look out next year (VE3DSS). This was the best contest we had yet. I want to thank KL7WE and KL7MJ for the best contact ever. That was the big number 50 for WAS (KB8RQ). It was a pity that the propagation on 432 MHz toward the U.S. was very bad during both weekends (HB9SV). US stations were very loud, but few could detect my signals. Although perigee is supposed to help us smaller stations, the theoretical 2-dB advantage was wiped out by unkind Faraday rotation. So please, when choosing the contest weekends for next year, consider a wider range of factors instead of listening only to the cries of "Give me perigee or give me death" (G3SEK). Thanks for the contest. I worked 11 new stations and was happy to work ZL3AAD (DJ6MB). W5FF drove 1900 miles to set up a portable station at WA4LYS. We worked every 220 station that called, including VE3EMS for his number 50 for WAS (WA4LYS and W5FF). I was lucky that the 90-mi/h gales the week before didn't damage my antennas. They only caused the azimuth rotator to slip out of alignment. Despite these problems, I was delighted to work the seven stations on random (GM4JJJ). Murphy sure visited my place this year! On the first weekend, my antenna was covered with ice and wet snow so that I couldn't hear anything. By the time it melted, the moon had set in Europe, an aurora had moved in, and my converter

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## Leading Stations

### Single Operator

#### Multiband

HB9SV	407,400
WB8TEM	329,000
N4GJV	276,900
F2TU	139,500
K4QIF	96,200

#### 432 MHz

DL9KR	297,600
N9AB	207,700
JA6CZD	174,200
G3LTF	130,200
K1FO	130,000

#### 144 MHz

K1WHS	844,800
DL8DAT	818,300
YU3WV	733,200
KB8RQ	682,000
SM7BAE	607,500
WA1JXN	607,200

#### 1296 MHz

VE7BBG	27,000
OE9FKI	12,100
SM8CKU	8800
N6CA	2500

### Multioperator

K5GW/WB5LUA	1,324,800
K2UYH	610,200
G4EZN	319,800
F6BSJ	272,000
HG1W	267,300

### Top Ten

#### Single Operator

K1WHS	844,800
DL8DAT	818,300
YU3WV	733,200
KB8RQ	682,000
SM7BAE	607,500
WA1JXN	607,200
SM2GGF	540,000
HB9SV	407,400
K8MYC	370,600
F6CJG	357,200

broke. The second weekend, the aurora was back, but at least things were working, and the snow stayed away. At times, conditions were extremely good. The big problem for me on the second weekend was the very short window with Europe (WA1JXN). The weather gods smiled on me this year. In fact, they outdid themselves in Sept. (K1WHS). This was the best EME test yet. There was lots of activity and reasonable band conditions. I made more QSOs than ever before, but I wonder what it would have been like if my antenna hadn't broken (W7IUV). I can stay up all night and work all day, but still can't be in two places at the same time! I had fun, and that's what counts (WB8TEM).

There should be a format in future EME contests for stations who are not in their call area to indicate this (such as /4) and to determine the call area they are in. This would help determine a new multiplier (WA4HGN). Participation by North American stations was lacking, especially after the European window (WA6MGZ). Let's do this in the spring, also (K9RX). I used manual elevation the first weekend — 80-someodd trips up the tower to elevate (W5UWB). Conditions during both parts were below normal because of the aurora and bad weather (PA2VST). I had a ball. I'm still surprised at what can be worked with just 4- x 12-ft-long homebrew 9-el crossed log-Yagi OSCAR

antennas (W7ID). Obviously a WWV K-index of 6 and an EME contest don't go well together. I found both Sundays excellent for working on my truck (K2QR). FB contest. I worked KD8SI/4 in KY for state no. 50. The aurora Sunday, Sept. 23, made things interesting (W7HAH). Signals were good most of the time (K7KOT). When I was flying to New York the night of Sept. 23, a very strong aurora was visible, probably responsible for the propagation phenomena. Oct. 20, many Europeans were plagued by gale-force winds (DL9KR). Conditions were excellent on 1296 MHz and also on 432 during the night, but 432 sounded a bit weak on Sunday afternoon, Oct. 21. I would much prefer the later weekends for the contest, Oct./Nov., as this gives more nighttime operating at least for the northern hemisphere (G3LTF). The conditions were not the best because of Faraday (DK1PZ). Activity as observed from VK6: nil from NO. America and very little from Europe. Some other stations were heard, but not identified (VK6ZT). We got more rain on Oct. 20 and 21 at my QTH than we had the entire year prior to Oct. 20 (WB5AFY). We were grateful for the beautiful weather both weekends. It is no fun to change feeds in the rain (K2UYH).

## FEEDBACK

Please refer to March 1984 QST, pages 84-86, for the following corrections. OK1KIR's log was sent, but was never received. Operators were OK1s DAI, DAK, DCI, DKW, PG. Score line: 91,800-20-20-15-C and -14-14-12-D. Two entries were found with the Fall Sprint logs. W1JR was the only single-band entrant on 220 MHz. His score line reads 3000-6-6-5-B, and WB4NMA's 2-meter entry reads 9000-10-10-9-A. Multiop station I2ODI was listed as a checklog. Their entry should read I2ODI (+14BXN, I3YXQ, I2CSE) 481,000-140-130-37-A. K1GVM's score line was omitted. It reads 9600-12-12-8-A.

## SCORES

Scores list: call, score, stations heard, stations worked, multipliers, band (A — 144 MHz; B — 220 MHz; C — 432 MHz; D — 1296 MHz; E — 2304 MHz) and type of antenna (Y — Yagi; LY — loop Yagi; Q — quad; QY — quagi; mD — meter dish; E Col — element collinear).

### Single Operator

#### Multiband

HB9SV	407,400	67	67-28-A-16 x 16Y
WB8TEM	329,000	33	30-30-14-C-16 x 21Y
N4GJV	276,900	37	3-3-3-B-34-34-21-C
F2TU	139,500	29	19-15-A-16 x 3Q
K4QIF	96,200	28	52-24-C-16 x 13QY

K2OS	92,000	40	40-23-A-4 x 14Y
KG8DX	89,700	39	39-23-A-8 x 14Y
K1MNS	76,800	45	32-24-A

WA2GSX	74,800	34	34-22-A-4 x 19Y
OK2TU	72,600	33	33-22-A-8 x 16Y
UA8LJV	68,400	38	38-18-A-8 x 10Y

VE1UT	62,700	33	33-19-A-8 x 19Y
WB8ART	62,700	33	33-19-A-4 x 19Y
SM5CNO	55,800	31	31-18-A-4 x 15Y

SM5CFS	54,000	30	30-18-A-8 x 15Y
JA6DR	51,000	30	30-17-A-12mD
K3MD	48,600	40	27-18-A-4 x 19Y

ON7RB	47,600	54	28-17-A-4 x 15Y
KB7Q	41,400	23	23-18-A-4 x 16Y
PA2VST	40,500	27	27-15-A-4 x 15Y

WD4DGF	34,000	20	20-17-A-4 x 16Y
W7ID	33,000	30	22-15-A-4 x 9Y
F9HS	31,500	37	21-15-A-4 x 17Y

OZ1GF	30,800	22	22-14-A-8 x 10Y
UA3TCF	26,800	32	19-14-A-8 x 9Y
H9B9NI	26,600	30	19-14-A-4 x 16Y

K1GVM	25,200	18	18-14-A-4 x 16Y
OZ1ASL	24,700	38	19-13-A-6 x 14Y
OH51Y	23,800	17	17-14-A-4 x 17Y

K2QR	22,100	43	17-13-A-4 x 13Y
W7HAH	22,100	17	17-13-A-4 x 19Y
K7KOT	20,900	19	19-11-A-4 x 16Y

XE2BC (WB6NMT, opr.)	19,200	16	16-12-A-4 x 11Y
ZS8ALE	17,600	16	16-11-A
LA9FY	16,800	15	14-12-A-4 x 16Y

WB9OZ	16,800	14	14-12-A-4 x 16Y
DK9IP	15,400	19	14-11-A-4 x 15Y
K1BKK	15,400	14	14-11-A-160 E Col

#### 144 MHz Only

K1WHS	844,800	180	176-48-A-24 x 14Y
DL8DAT	818,300	171	167-49-A-16 x 14Y
YU3WV	733,200	172	156-47-A-24 x 12Y
KB8RQ	682,000	155	144-A-16 x 19Y
SM7BAE	607,500	137	135-45-A-16 x 15Y
WA1JXN/7	607,200	144	138-44-A-12 x 19Y
SM2GGF	540,000	135	135-40-A-16 x 15Y
K8MYC	370,600	109	109-34-A-16 x 18Y
F6CJG	357,200	94	94-38-A-8 x 17Y
JA12CL	334,800	115	93-36-A-16 x 9Y
WA6MGZ	307,100	83	83-37-A-8 x 16Y
W7IUV	273,000	78	78-35-A-8 x 11QY
K9RX	270,600	96	82-33-A-8 x 19Y
SM4GVF	245,000	106	70-35-A-6 x 15Y
WA4NJP	182,900	59	59-31-A-16 x 11Y
Y2ME	180,000	70	60-30-A-8 x 13LY
KXDO	147,000	49	49-30-A-4 x 13Y
KD8SI	137,700	51	51-27-A-4 x 16Y
OK1MS	112,500	45	45-25-A-8 x 16Y
DJ5DT	109,200	65	42-26-A-4 x 15Y
W5UWB	98,400	41	41-24-A-4 x 16Y

#### 432 MHz Only

DL9KR	297,600	96	96-31-C-16 x 20Y
N9AB	207,700	68	67-31-C-16 x 19QY
JA6CZD	174,200	67	67-28-C-9mD
G3LTF	130,200	55	42-31-C-6mD
K1FO	130,000	54	52-25-C-8 x 19Y
DJ6MB	86,100	41	41-21-C-12 x 21Y
JA3IAF	66,500	35	35-19-C-15 x 16Y
G3SEK	64,600	48	34-19-C-8 x 21Y
DF3RU	54,000	47	30-18-C-8 x 24Y
DK1PZ	49,300	48	29-17-C-4 x 24Y
W8IDU	17,600	16	16-11-C-8 x 13Y
K5WYN	16,000	19	16-10-C-8 x 19Y
JA4BLC	14,400	16	16-9-C-6mD
W5TI	11,700	13	13-8-C-9mD
JA9BOH	9100	27	13-7-C-16 x 13Y
DF7VX	9000	10	10-9-C-4 x 21Y
WB8AP	7200	31	9-B-C-5mD
ZL2AQE	5600	8	8-7-C-8 x 4.2Y
VE3CRU	4200	7	7-F-C
JR4AEP	1600	4	4-4-C-16 x 19Y
VK6ZT	900	3	3-3-C-5.5mD
JAMXX	100	19	1-1-C-4 x 15Y
WB5AFY	100	1	1-1-C-8 x 24Y

#### 1296 MHz Only

VE7BBG	27,000	18	18-15-D
OE9FKI	12,100	12	11-11-D-4mD
SM8CKU	8800	11	11-9-D
N6CA	2500	5	5-5-D

### Multioperator

K5GW/WB5LUA (+ KD5RO, WA5TKU)	1,324,800	128	128-39-A-16 x 16Y
K2UYH (+ K2TXB)	610,200	6	6-6-A-8.5mD
G4EZN (+ G3s CWI, IOR, G4JNX, GBVLL)	319,800	16	16-13-A-12.3mD
F6BSJ (+ F6s GBY, HLC)	272,000	80	80-34-A-12 x 16Y
HG1W (4 oprs)	267,300	81	81-33-A-8 x 13Y
OE9XXI (OE9s MCI, PMJ, oprs)	248,000	37	28-15-C-7.5mD

### Single Operator

WB8DRL (+ N8UJ, WABTKJ)	21,600	27	18-12-A-120 E Col
W55AGO (+ KF8M, WABUJF)	14,300	15	13-11-A-4 x 11QY
WA4LYS (+ W5FF)	4800	8	8-6-B-1 x 15Y
ZS6NG (+ ZS6JT)	2500	5	5-5-D-5mD
JA2YKA (JE2JCV, JH2DQJ, JI2NPL, JR2GMC, oprs)	1200	5	4-3-C-4 x 19Y/8 x 24Y
WA7LYI (+ WA7CJO)	900	3	3-3-A-4 x 16Y
DF8EME (DJ4s AU, UR, DL5FAU, DJ8OL, oprs)	400	2	2-2-E-9mD

### SWL

OK3KMY (OK3LQ, OK3LU, oprs)			
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