

Results, Second Annual ARRL EME Competition

By Tom Frenaye,* K1KI

Interest in weak-signal work on the vhf bands seems to be increasing rapidly. This year's EME Competition was attended by 103 stations, an increase of more than 10 percent from last year.

The average QSO total for single-operator stations last year was 6.9, while this year the total jumped to 13.1 — quite an increase! K1WHS managed to work a total of 39 stations to earn the number one spot. This was with only one weekend of operation on 144 MHz.

The complete setup at K1WHS consists of a 160-el collinear fed with 7/8-in. heliax, a 3N211 MOSFET preamp mounted at the antenna with a 1.4-dB noise figure, homebrew converter and 75A-3. The homebrew transmitter (6360-4CX350A-8877) runs 1000 watts. Plans for next year include a bigger and better antenna.

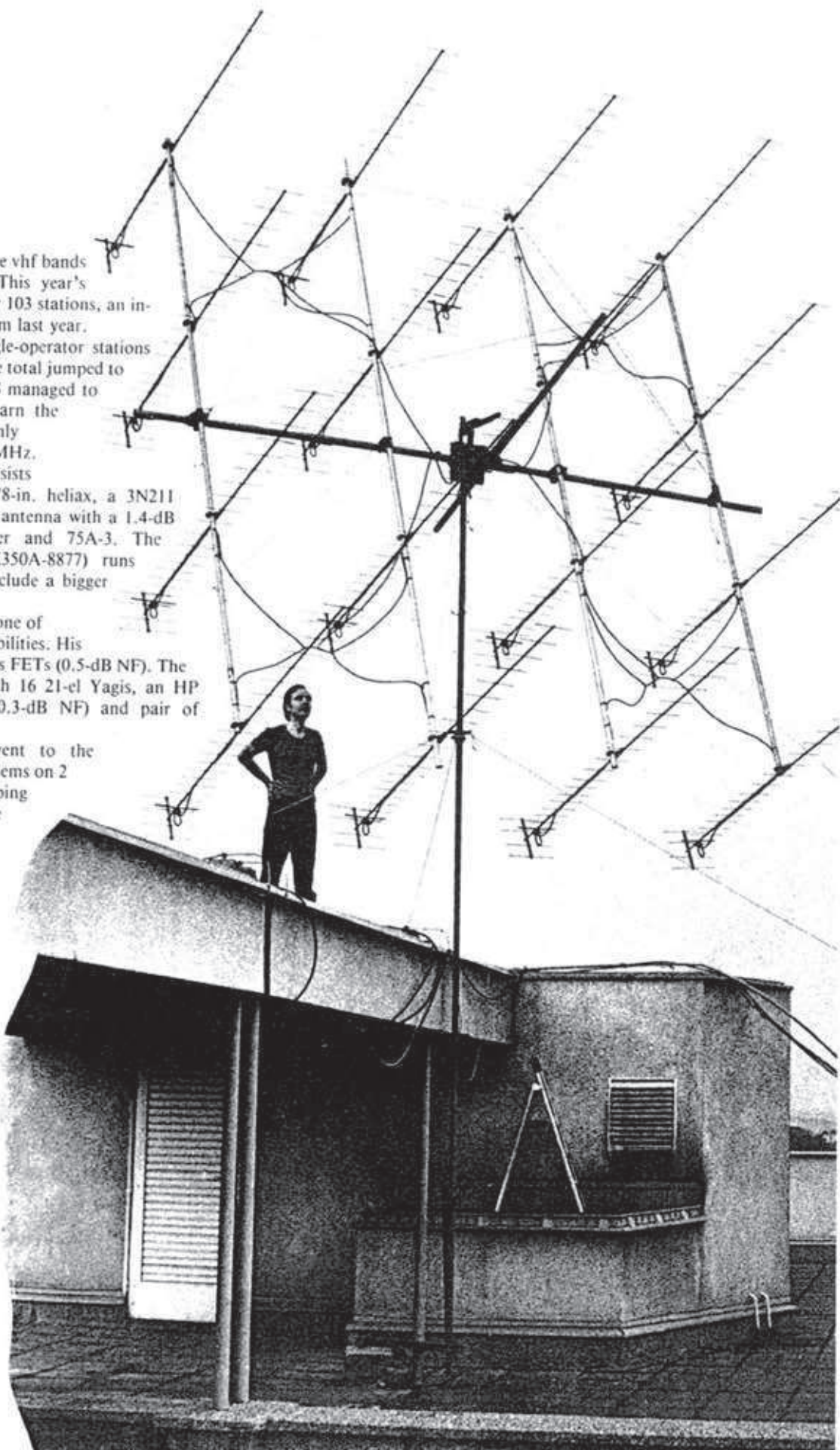
Number two went to WB5LUA, one of the few with both 144 and 432 capabilities. His preamps both use DXL 3501A GaAs FETs (0.5-dB NF). The top 432 honors went to F9FT with 16 21-el Yagis, an HP HFET1101 GaAs FET preamp (0.3-dB NF) and pair of 4CX250Rs.

Multioperator honors again went to the K2UYH group with 37 QSOs. Problems on 2 meters prevented them from topping their score from last year. The K3NSS super antenna was put on both 144 and 432 this year with a resulting score nearly double the top score from last year, despite a myriad of equipment problems.

Seems that the choice of weekends didn't turn out to be the best, with low moon declinations hurting a number of stations. Next year we'll do better. The sun didn't help either, with unsettled magnetic activity making Faraday rotation a big problem.

Again, everybody stuck to 144 and 432 for the most part, though PA0SSB (NE64535 preamp) did work W6YFK on 1296 with solid signals (even ssb).

The YU2RGC station consists of an NEC 645 receiver with 600-Hz filter, a pair of 4CX250Bs and 16 23-el Yagis. (YU2RTX photo)



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ECHOES

Most signals averaged 6 dB above the noise (F9FT). Most contacts were made on CQs. U.S. activity on 432 was very low (K5JL). Please use positive declination next year (SM6CKU). Schedule the contest for the summer or fall. Many stations wanted to get on but it is very tough to get things going during the winter months (WA1JXN). Pleased to work all continents again this year (VE7BBG). Finished up my WAS with KH6 and KL7 (WB0ZXU). Power line noise was very bad (DK5LA). My first contest. May have 1296 next year (VE4MA). Was still hearing JA6CZD with the moon 2-3° below the horizon (K4QIF). For a reason that remains a mystery, transmit capabilities remain

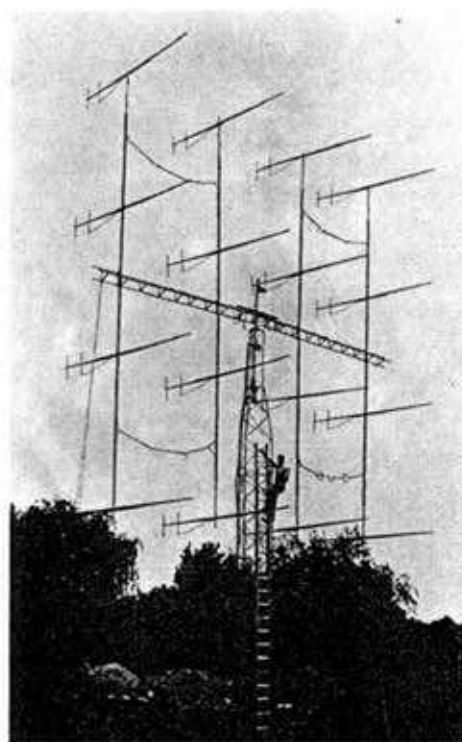
far inferior (WA3VJ). Largest number of Europeans ever heard (W8WN). Impossible to make some QSOs with everybody between 144.004 and 144.006 (I2MBC). Too much QRM (WA4NJP). 432 sounded like the 40-meter Novice band (K3LFO/K3NSS). The decision of the big guns not to schedule during the contest has its pros and cons. The Europeans felt (rightly so) that they were at a disadvantage because we could easily set up via the telephone. On the other hand, it effectively eliminated the marginal EME group. I can just barely make it with 4 14-el Yagis and would have loved just one QSO (WSUWB). Heard bursts from many stations but no valid QSOs. Next year will be better (OK1DAK/OK1KIR). The EME boys are very helpful to newcomers (WA7JUO).

Line scores list: Call, score, stations heard, stations worked, multipliers, band (A-144 MHz, B-432 MHz, C-1296 MHz)

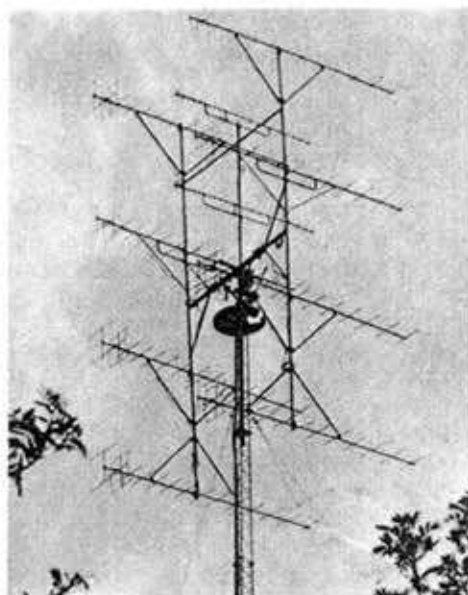
Single Operator

Call	Score	Stations Heard	Stations Worked	Multipliers	Band	Antenna
K1WHS	70,200	47-39-18-A	160-el collinear			
WB5LUA	63,800	10-10-7-A 19-19-15-B	160-el collinear 16 13-el Yagi			
F9FT	48,600	31-27-18-B	16 21-el Yagi			
K5JL	46,800	28-26-18-B				
ZE5JJ	45,900	28-27-17-B	10 meter dish			
PA955B	45,600	23-23-18-B 1-1-1-C	6 meter dish 6 meter dish			
SM6CKU	42,500	31-25-17-B	8 meter dish			
WA1JXN	40,000	40-25-16-A	8 16-el Yagi			
K5BMG	39,100	23-23-17-A	8 16-el Yagi			
DK1FGA	38,400	30-24-16-A	8 15-el Yagi			
JA6CZD	35,700	24-23-17-B	10 meter dish			
DL9KR	30,800	23-22-14-B	16 10-el quagi			
F2TU	30,400	20-19-16-B	6 meter dish			
DL7YCA	30,000	20-20-15-B	16 19-el Yagi			
VE7BBG	26,000	20-20-13-B	6.6 meter dish			
I2COR	25,200	23-18-14-B	8 meter dish			
GW4CQT	24,700	19-19-13-A	160-el collinear			
W7FN	22,800	22-19-12-A				
WB9ZXU	19,800	40-16-11-A	8 16-el Yagi			
W1JR	19,500	1-1-1-A 14-14-12-B	4 19-el Yagi 16 21-el Yagi			
WB5LBT	18,700	17-17-11-A	16 7-el loop Yagi			
WB9QMN	15,300	19-17-9-A	8 14-el Yagi			
YU2RGC	14,300	13-13-11-B	16 23-el Yagi			
K9KFR	12,600	14-14-9-A	16 8-el quagi			
DK5LA	12,100	26-11-11-A	160-el collinear			
SM7BAE	12,000	14-12-10-A				
W4WD	12,000	12-12-10-B	16 46-el J beams			
VE4MA	9,000	11-10-9-B	8 19-el Yagi			
DJ8QL	8,000	10-10-8-B	7.6 meter dish			
WA7BJU	7,700	24-11-7-A				
W8IDU	7,700	11-11-7-A	160-el collinear			
K4QIF	6,400	14-8-8-B	6.6 meter dish			
F9MD(DK4X1)	6,300	25-9-7-A	16 9-el Yagi			
G4DZU	6,300	12-9-9-A	4 14-el Yagi			
SM3AKW	5,600	9-8-7-B	16 17-el Yagi			
WA4GPM	5,400	9-9-6-A				
N7NW	4,900	8-7-7-A	4 16-el Yagi			
WA4CQG	4,800	8-8-6-A	4 16-el Yagi			
WA9LPK/KL7	4,200	9-7-6-A	4 16-el Yagi			
K4DL	3,600	8-6-6-A	160-el collinear			

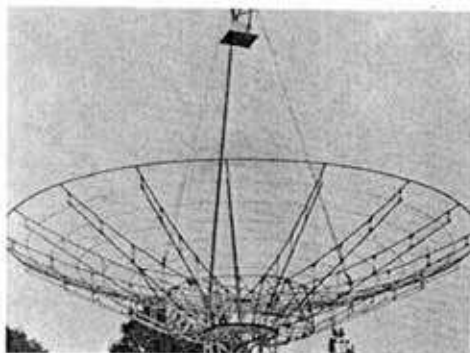
VK5MC	3,600	6-6-6-B	6.6 meter dish
W9SD	2,500	14-5-5-A	8 14-el Yagi
JA9BOH	2,500	1-0-0-A 6-5-5-B	8 10-el Yagi 8 14-el Yagi
W7JF	2,400	7-6-4-A	4 16-el Yagi
KH6IHP	2,400	6-6-4-A	4 16-el Yagi
JA6DR	1,600	4-4-4-A	12 meter dish
WA3VJ	900	25-3-3-A	16 3-el quad
I4EAT	900	14-3-3-A	4 14-el Yagi
K1MNS	400	11-2-2-A	8 16-el Yagi
WA4AUU	400	6-2-2-B	
W8WN	100	18-1-1-A	4 16-el LP Yagi
K9KE	100	18-1-1-A	8 8-el Yagi
G5CSZ(W4FAY)	100	12-1-1-A	4 21-el Yagi
K9XY	100	5-1-1-A	8 8-el quagi
Multioperator			
K2UYH(WB2s HH4 PKY W3HQT,opr)	88,800	2-1-1-A 39-36-23-B	9 meter dish 9 meter dish
I5MSH(+I5TDJ)	53,200	28-28-19-B	11 meter dish
G3WDG(+G3YGF)	28,000	26-20-14-B	6.6 meter dish
K4PKV(+WB4EXW)	18,700	17-17-11-A	4 19-el Yagi
I2MBC(+I2s FUM SVA SXZ ZFN,ISMZY)	11,700	22-13-9-A	8 16-el Yagi
WA7JUO(+W4FAY)	5,600	25-8-7-A	160-el collinear
UK2BAS(UP2s BBC PAJ,opr)	4,900	7-7-7-B	72 4-el Yagi
W2AV(+K2OS,WA2ZKD)	2,000	15-5-4-A	4 12-el LP Yagi
WA4NJP(+WB4NMA)	800	23-3-2-A	8 9-el Yagi
G3OUR(G3s WDG YGF, G4s BUO EZN GFX, G8s LYB RHI,opr)	400	3-2-2-A	4 16-el Yagi
Non-amateur Equipment			
K3NSS(W1ZX, K3s JYD LFO W3PJM, W5CQ, K6LEW, N7BW,opr)	210,000	30-27-13-A 35-33-22-B	23.7 meter dish 23.7 meter dish
SWL			
PA9XMA	(144 - 11 stations heard)		4 10-el Yagi
WSUWB	(144 - 8 stations heard)		4 14-el Yagi
K2QR	(144 - 1 station heard)		1 15-el Yagi
G8EKB/W1	(432 - 10 stations heard)		16 8-el quagi
OK1KIR(OK1s DAI DAK DCI DKW,opr)	(432 - 5 stations heard)		5 meter dish
Other Active Stations			
K1FO WA1TFH W1XP K2CBA K3PGP K4IXC K5GW W5IT1 WB4ESQ WB6NMT W6PO W6YFK WA7BBM W7GBI K7ICW K7KOT W7UBI K9HMB K9IMM W9PW W9VB W9Y5G G4DGU I8CV5 LX1DB O29CR SM4DHN SM5BFK VE7BQH XE1RY YU1PKW YV5ZZ ZL2BCG			



K9KFR's 16 8-el quagis put the finishing touch on his EME system (TS-700A/3N204 preamp/4CX250s) the weekend before the second half of the contest.



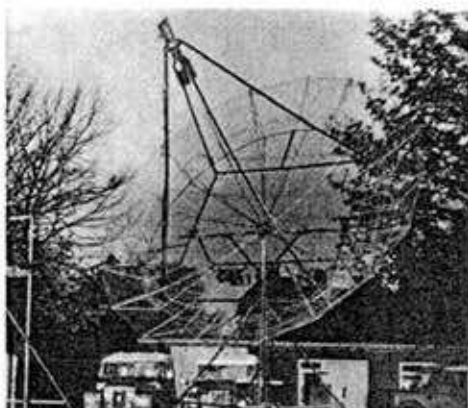
The 160-el array of DK1FGA, along with a homebrew 1.2-dB NF converter and 800-watts input earned the number 10 single operator position.



ZE5JJ's homebrew station includes this 9.9-meter dish, a pair of 4CX250Bs, and NE24406 GaAs FET preamp (0.6 dB). With it, he earned fifth place.



JA6DR makes himself heard with his 7213 amplifier and 12-meter dish. A 3SK48 provides a 1.2-dB noise figure for his preamp.



The G3WDG 6.6-meter dish performed well along with the Plessey GaAs FET GAT4 preamp (0.7 dB) and pair of 4CX250Bs.