

Results, ARRL 160-Meter Contest

This was a nice, laid back contest, with most folks operating at comfortable CW speeds.—*Lloyd, AA1DL*

By Billy Lunt, KR1R and Warren C. Stankiewicz, NF1J
Contest Manager Assistant Contest Manager

The most difficult problem associated with operating in the ARRL 160-Meter Contest is putting up an antenna for the band. That's largely because of the physical dimensions of a full-size 160-meter antenna. A half-wave dipole is about 260 feet long and a quarter-wave vertical is 130 feet tall! Most amateurs just don't have the real estate or supports for such large antennas. The Soapbox comments give you ideas of how others have overcome these obstacles—for instance, loading the shortened feeders for an 80-meter dipole against ground as a random wire, erecting an inverted L, or using loading coils or traps for a shortened antenna. Once you've mastered the antenna, you'll be pleasantly surprised at the fun you'll have pounding brass on the Top Band.

It's no wonder that 160 meters is called the "Gentleman's Band." Even with the excitement and the adrenalin flowing freely during the contest, the pace is laid back and relaxing. The operators on 160 meters tend to be polite, more so than on any other band.

Conditions

The bands were reported to be quite good. Still, the number of stations that you can work depends greatly on the antenna you use. Antennas with a low angle of radiation tend to be better for working DX. These are the kinds of antennas you should think about if you want to be competitive on 160 meters, although low dipoles are hard to beat for the



Jose, WP4IWW, claims, "It was worth some last-minute effort to get on 160 for the first time with an almost-decent antenna."

Top Ten

Single Operator, High Power

Call	Score
K1ZM	249,054
K5NA	217,658
K1KI	204,379
K8PO	195,327
N4AR	192,879
WB9Z	192,329
K8CC	189,912
(AA8AV, op)	
AA1K	180,600
N0TT	178,268
K2KIR	175,404

Single Operator, Low Power

Call	Score
K9ALP	120,596
N9JF	116,435
WA1UJU	114,026
AA9AX	107,967
WX9U	102,564
N0GY	90,792
NA1R	90,576
K4IQJ	86,802
K0EJ	85,896
WT3Q	82,152

Single Operator, QRP

Call	Score
W3TS	49,518
W4HBK	25,992
K1HTV	25,908
W8VK	25,110
W8ILC	18,644
WT3W	16,940
K0SRL	16,836
WB2UJS	14,348
AA2U	14,004
VE3POS	12,090

Multipoperator

Call	Score
K3LR	273,438
AB4RU	268,074
AA5BL	254,204
K2WI	227,752
NX1G	181,152
AA8U	172,220
KC8MK	170,424
N0SM	159,896
NC0P	158,652
WM4Z	158,389

close-in stuff. It also helps to have a separate receiving antenna, such as a multiple-length Beverage. These antennas reduce the noise level, giving you the ability to hear stations with weak signals. The old adage is still true: If you can't hear 'em, you can't work 'em.

There were a lot of people to work during this year's contest, if you could hear them. Participation increased considerably, up 13.5% over last year's contest! The influx of stations to work helped the winners to pile up larger scores. K3LR and crew set a new multiop all-time score record at 273,438 points during the 1992 contest. Dana, W3TS, set a new QRP record, beating his old one by more than 4k—the new QRP record is 49,518 points. There were also 24 Division records broken this time; check the boxes and score listings for the new records.

Anyone Can Play

If you're a newcomer to the contest or have an average station, don't be discouraged with all these records being broken. The name of the game is to have fun. Try working as many stations as you can, and see how well your station and operating practices stack up against other hams in your area. This is a good time to gain experience

with low-band propagation. If you were on for this year's contest, use the techniques and experience you gained for next year's event. Maybe you can challenge a friend or try to top this year's score.

The Awards Committee added Club Competition to this year's contest. It was well received, with 16 ARRL Affiliated Clubs competing for gavels. The Frankford Radio Club mustered 36 entries, edging out rival Yankee Clipper Contest Club for the Medium Club Gavel by 687,289 points. We received only two entries in the Local Club category this year: The Salt City DX Association took the gavel with 196k points. Next year's competition could get fierce as word gets around and the clubs start organizing for a more competitive atmosphere.

We've noticed over the years that this contest isn't attracting a lot of DX stations. Could that be because of the rules? For instance, according to the rules, if KR1R works G3BDQ, KR1R gets five QSO points for the contact, but G3BDQ only gets two points for the same contact! Is this fair? There may be other glitches in the rules, such as stations on Guam in the Pacific Section being able to work anybody (Japan, Europe, USA, etc), but someone nearby in the Philippines can



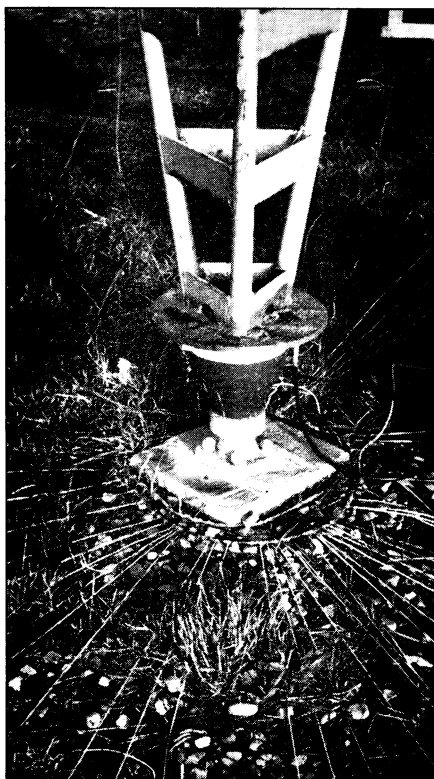
Steve, AA9AX, had to improvise a feed line consisting of coax, a 4:1 balun, more coax, another 4:1 balun and 50 feet of ladder line. It must have worked—he finished with 735 QSOs and 107k.

only work stations in ARRL Sections or Canada. Should we consider modifying or rewriting the rules? Send us a note to let us know what you think.

Thanks to Contest Assistant Anne Jaworski for her help in preparing the results. See you again December 3-5, 1993, for the next running of the ARRL 160-Meter Contest.

SOAPBOX

I enjoyed the QSOs, but conditions weren't so good (JA7AO). I put up an inverted V a few weeks before the contest and had a great time operating (K1DAT). My thanks to the ops out there with good ears (N1JAC). Where were Hawaii and Mississippi? (K7OA). Operating from the "Black Hole" of the Midwest on 160 meters and trying to be competitive is challenging, but the results can be gratifying (AA8AV). My thanks to WL7E, who stuck with my QRP signal for almost five minutes until we made a QSO of it (W4HBK). The Top Band sure has changed. I only spent a few hours in the contest, but I had a lot of fun chasing Wyoming, Nevada and other "rare" states! (W1ECH). This was my first CW contest and I really enjoyed it. My code speed isn't the best, but I had fun learning (N3NCS). This was my best effort ever in this contest (VE3CUI). Conditions were poor and I didn't hear most of the East Coast (G3BDQ). The activity was fantastic! I had more than 100 QSOs in two hours! The club competition improved participation (W2GD). The band was so quiet that when a signal was absent, I thought my receiver had croaked. The cold front quieted the band down (K4LDR). S9-plus QRN can make for tired ears (AA6DX). Murphy fired a few shots and Mother Nature sent snow the first night, aborting my portable operation in the high desert (KG7D). I threw a piece of wire up and had a ball for a weekend (K2LE). Had I known in advance that I'd do so well, I'd have dragged out the computer and used CT. It's nice to hear CW on 160 meters. Lousy antennas and static crashes build character (WB2GIN). This was my first Top Band contest, as I'd never had an antenna for this band before! I only had a little time, but I had a lot of fun. The band was packed! (W12G). This was my first 160-meter operation and I thoroughly enjoyed it (K6SG). The first winter storm of the season limited our first attempt at the contest. We had to "ferry in" our operators with a 4 x 4! (VE3GCB). Conditions were great—there was no QRN! (KN5H). Conditions were excellent and the band was loaded wall-to-wall with signals. This contest is popular (N4UH). I'm not sure what antenna worked better: My 600-foot long wire or my full-size 1/4-wave sloper (W7LHO). The lack of a working MF transceiver wasn't going to keep me off the air, so I home-brewed a transverter for my FT-726R (WG3I). It was an exciting and easygoing contest, even with noisy conditions. I had a hard time with the 115-kV tower across the street (WP4IIV). The QRN drove us nuts! Murphy threw RF into our computer so we couldn't use it, but it was still a lot of fun (K0LIR). Friday night was fast and furious (WB2JSJ). I tried a balloon vertical with about 3000 feet of radials next to a lake and was impressed with



How many ground wires can you count in this picture? The WA6RKE club station at Cuesta College used a full-sized quarter-wave vertical antenna with this extensive ground system.

how well it worked (K0EJ). I used a 260-foot vertical wire to a helium balloon and discovered that cattle are fascinated by balloons (WB9JTK). This was my first 160-meter contest. I loaded up half of my 80-meter dipole as a long wire and had a blast! I'll be back next year with better stuff (N0HJZ). It was a thrill to work Alaska with a high-angle radiator and low power (K2WK). I wish I could have operated the entire contest! The only DX I heard and worked was Japan (N7RK). My rig and new antenna worked well, but my body did not (W1GL). Maybe with better conditions and a few more radials, I'll bag a JA next time! (KX7L). Participation must have been way up this year if I could break the Division low-power record in 15 hours! (WT1M). I never thought I'd make more contacts in the 160-meter contest than in the 10-meter contest! (KZ1M). This was the best I've ever done in this contest and the most Sections I've ever worked. The high point of the contest was WL7E calling me at my sunrise on Sunday (KI6MS). I had a great time with my

inverted L! There were a lot more high-speed stations this year than in the past (WA5MWD). Where was the DX? I didn't hear any atolls at all (W6PM). I just put up an inverted L and went right on the air. I never believed you could work this band with QRP power, but 46 contacts in six hours of just "playing around" isn't bad! (N6WMF). My 80-meter trap vertical wouldn't load, so at 9 PM that night, I was up on the roof by flashlight stringing wire around the yard until I got an SWR of 2:1. I love ham radio! (AB6NE). Conditions were super, especially when Gs, GWs, CTs and ONs call you when you're running 100 watts (K2POF). Conditions were fine to the west, but poor to Europe (K3ZO). It was a lot of fun, although I wish I could hear better (W6GO). Conditions were poor the first night. There were a number of stations that never heard others calling them either night—there's no substitute for a low-noise receiving antenna! (K0PP). I enjoyed my first venture on Top Band (NX1Q). I was stuck with no tuner, a 10:1 SWR and had to operate QRP, but I still had fun! (WA0QOA). This was truly a terrific contest! There appeared to be quite a bit of activity. My only disappointment was that I could only spend a short time at it! (K2ZR). It was a good contest, although it was too bad conditions to the West Coast were dead (W3ERU). This contest broke a lot of contest records (AB4RU). It was noisy Sunday morning (W6PRI). I got frustrated operating low power, so I switched to high power and still got frustrated! (W7TSQ). I entered the contest to prove to myself that QRP can be effective. Even with my modest antenna, I had a great time (N09S). It was nice to be in the contest! (ON7TK). I didn't think I'd work much of anything with five watts. I was surprised! Although I couldn't work everything I heard, it was still amazing how far five watts can go (K1HTV). Whatever happened to Mississippi? I haven't heard it in four years of operating this contest (NZ7T). Conditions were reasonable both nights, with openings to W9 and W5. The alligator syndrome was the most frustrating experience in the contest (ON4UN). I had a lot of fun with a droopy dipole with the ends held up by forsythia bushes (AB1U). I enjoyed the contest, even though I only operated for one day (N8FU). Conditions were great, with the QRN never more than S1! (WX9U). It was another fine contest, with plenty of activity and conditions seemed good. I'm already looking forward to next year (W8VVE). My antenna is made of electric-fence wire and seems to do a better job of radiating RF than at keeping the cattle in (N9FVN). I worked my first 95 stations on my 20-meter vertical—it's amazing that anyone even heard me (WJ2W). I made a quick reconfiguration of the 80-meter tuned-fed dipole and away I went. I was pleasantly surprised at the activity (KC1XR). Maybe Santa will bring me a three-element beam and a 200-foot tower next year—in November, of course! (N0AX). I made more contacts in the first 10 minutes than I've ever made on 160 meters! I had a lot of fun! Next year I'll be ready with a vertical to reach those West Coast stations I could hear but couldn't work (WA8YRS). It was a terrific contest and I heard a lot of stations (N4UZ). I really enjoyed working this contest (W0YZZ). I can't believe I could work 40 Sections in nine casual hours of operating using four watts to a shortened vertical. Conditions were unbelievable the first night, with no QRN at all (WA0ZPT).

Division Leaders

Division	QRP	Low Power	High Power	Multioperator
Atlantic	* W3TS	W73Q	AA1K	* K3LR
Central	NN9K	* N9JF	* WB9Z	AJ9C
Dakota	* WA0ZPT	* KS0T	W0HW	AA0AW
Delta	—	N5GW	KC4IIS	K5MC
Great Lakes	W8VK	* K9ALP	N4AR	AA8U
Hudson	WB2UJS	* K2POF	K12M	W2GD
Midwest	* K0SRL	* N00Y	N0TT	* N8SM
New England	KN1H	* K1BNQ	* K1KI	NX1G
Northwestern	—	* W7YAQ	K0PP7	WA7UQV
Pacific	* N6OJ	N6NF	* W6GO	N6RZ
Roanoke	N09S	K0EJ	KI6MS	W8WEJ
Rocky Mountain	—	W7HS	W2CRS	NZ7T
Southeastern	* W4HBK	K4IQJ	KX4R	* AB4RU
Southwestern	N7IR	* N6BK	* N6SS	WA6RKE
West Gulf	WY7UJ5	WN5TEN	W5XJ	* AA5BL
Canada	* VE3POS	* VE3OSZ	* VE2FU	VE2OJ

* Division Record

Affiliated Club Competition

Medium Category

Club	Score	Entries	Single-Op Winner
Frankford Radio Club	1,835,767	36	AA1K
Yankee Clipper Contest Club	1,148,478	17	K12M
Society of Midwest Contesters	784,539	12	KE9I
Kentucky Contest Group	762,452	10	N4AR
Mad River Radio Club	712,091	9	K8CC (AA8AV, op)
Southeastern DX Club	708,383	7	KX4R
Potomac Valley Radio Club	558,324	10	K3ZO
North Texas Contest Club	365,936	3	W5XJ
North California Contest Club	351,956	8	W1FEA
North Coast Contesters	273,438	5	K3TUP
Mile High DX Assn	248,668	3	W2CRS
Salt City DX Assn	196,070	3	K2KIR
Southern California Contest Club	50,826	3	K6LL
Murphy's Marauders	31,353	3	AB1U

Local Category

Staten Island ARA	110,850	3	K2LUQ
West Park Radio Ops	61,360	6	W8IDM

Scores

Scores are listed by DXCC Countries and ARRL/Canadian Sections. Within each country or Section, single-operator scores are listed first, followed by multioperator scores. Each line score lists call sign, final score, total QSOs, total multipliers and power (A = QRP, B = low power, C = high power, D = multiplier).

DX

Niger	5U7M (JH4NMT,op)	2	1	1	C
Croatia	9A1HCD	2,496	48	26	C
Bahamas	C6A/N4RP	3,420	57	30	B
Portugal	CT1AOZ	9,672	124	39	C
England	G3BDQ	126	9	7	B
Hungary	HA6PX	504	18	14	C
Haiti	HH2PK	18,090	201	45	B
Panama	HP1AC	1,156	34	17	C
Japan	JH5FXP	4,440	74	30	C
	JA7NI	3,348	62	27	C
	JH1HGC	2,450	49	25	C
	JH2QMT	1,480	37	20	C
	JH7XGN	1,216	38	16	C
	JA7AO	700	25	14	B
	JQ1NGT	560	28	10	B
	JA9OH	252	14	9	C
	JE2LPC	160	10	8	B
	JA9DOF	140	10	7	B
	JH9CZQ	50	5	5	B
	JH3CYZ	8	2	2	A
	JH0ZHQ (JH1s BBT,GNU,SBE,JK1GK, JR1JUV,ops)	2,520	60	21	D
	JA2YKA (JK1GRI, JL2TZX, JS2ERL, JI4RDO, AH0K,ops)	1,482	39	19	D
Czechoslovakia	OK2PSZ	18	3	3	B
Belgium	ON4UN	8,496	118	36	C
	ON7TK	3,840	64	30	C
Aruba	P43GR	2,430	45	27	B
Sweden	SM3CVM	2	1	1	B
Bermuda	W1AWJ/P9	1,366	33	21	B
W					
1					
Connecticut	K1KI	204,379	989	97	C
	K1BNQ	53,928	477	56	B
	AB1U	25,959	253	51	B
	W05T	25,400	251	50	B
	W1WEF	22,790	209	53	C
	W1EHC	20,196	181	54	C
	N1JW	16,560	207	40	B
	KC1XR	14,514	177	41	B
	K2SX	13,760	160	43	B
	WA1LJP	13,494	173	39	B
	W51Y	12,285	156	39	B
	NX1Q	10,989	147	37	B
	W1TKG	5,829	99	29	B
	NJ2L	3,186	59	27	B
	K1DW	2,208	46	24	B
	KA1CZF	1,919	49	19	A
	K1BTD	1,080	36	15	B
	N4XR (+NET)	20,961	204	51	D
Eastern Massachusetts	K8PO	195,327	916	99	C
	WS1M	88,344	591	72	C
	WT1M	40,550	404	50	B
	KA1DWX	35,648	271	64	C
	K1NTR	21,500	250	43	B
	N1DM	20,683	239	43	B
	KA1CLV	19,140	216	44	C
	W1AX	18,630	204	45	C
	K1DAT	13,611	173	39	B
	KB1KM	12,546	153	41	B
	W1MK	2,244	51	22	B
Maine	N1CEP	13,986	165	42	B
	AA1DL	3,726	69	27	B
New Hampshire	N1HFE	44,492	451	49	B
	WS1E	29,070	252	57	B
	KN1H	11,305	160	35	A
	AE1D	5,084	82	31	C
	W21F	3,402	81	21	A
	NX1G (+NET)	181,152	870	96	D
	KC1F (+NET)	6,138	93	33	D
Rhode Island	W1HYN	63,030	470	66	C
	W1GL	15,103	421	53	B
	K2MN	20,950	205	50	B
	K1MD	10,101	135	37	B
	W21R	832	26	16	A
W1OP (N1AKO, K1DT, W1GS, ops)		77,686	622	62	D
Vermont	WB1GQR	(WB2JSJ,op)147,967	911	79	C
	WA1GUV	17,860	190	47	B
Western Massachusetts	KZ1M	55,518	475	57	C
	W1BYH	37,860	311	60	C
	W1GSM	28,623	303	47	B
	W1NY (W1KX,op)	14,696	167	44	C
	KB1W	13,560	165	40	C
	N1JAC	11,270	161	35	B
	KC2GE	7,750	125	31	B
2					
Eastern New York	K1ZM	249,054	1128	103	C
	K5NA	217,658	1058	98	C
	K2POF	70,040	503	68	B
	K2DW	42,734	463	46	B
	K2UF	38,665	350	55	B
	W2XL	7,316	118	31	C
	KR2V	7,175	101	35	A
	WB2GIN	5,040	90	28	A
	WB2PUH	4,588	74	31	B
	NA2M (+NET)	47,120	374	62	D
	WA2UKP (-WA2JOK)	23,409	228	51	D
NYC-Long Island	K2LE	79,449	555	71	C
	N2KA	47,190	350	66	C
	W2PJS	17,280	216	40	B
	WB2LJS	14,348	111	34	A
	W2KTF	12,096	144	42	B
	K2OV5	7,040	110	32	A
	WB2DLA	6,021	110	27	B
	K2LUQ	2,376	44	27	B
	N2KOO	2	1	1	A
	W2CWW (K2LUQ, KA2DMQ, KB2s DBP, JQB, OPQ, OQI, N2s KOO, MUK, NQ, NA1V, NT2X, NX20, WB2PXO, AA3BG, RC2CW, ops)	110,850	727	75	D
Northern New Jersey	WA2SRQ	156,046	932	82	C
	K2WK	68,160	528	64	B
	K2SG	65,660	478	67	C
	WA2VYA	58,300	524	55	B
	WA2WYR	17,618	190	46	C
	N2KJM	15,640	194	40	B
	AA2U	14,004	193	36	A
	K2JT	13,806	177	39	B
	W2HCA	10,988	134	41	C
	KA2SXS	7,776	108	36	B
	W1GD	7,511	100	37	B
	WG3I (GAFFE,op)	5,100	85	30	A
	WA8QOA	3,425	67	25	A
	W2JEK	750	25	15	A
	K2JLA	287	19	7	B
	W2GD (+NET)	146,168	796	88	D
	WU3A (+NET)	30,233	307	49	D
	NS2K (+NET)	22,850	227	50	D
	KD2NT (+NET)	19,400	191	50	D
Southern New Jersey	K2BU	35,310	315	55	B
	W2EA	30,480	316	48	B
	K2TD	14,570	155	47	B
	K2FL	14,473	175	41	B
	WB2DIN	7,820	115	34	A
	K2JF	1,088	34	16	B
	K3JGJ	294	23	6	B
	K2WV (+N2NU, WW2Y)	227,752	1105	98	D
	N2VW (+NET)	17,013	156	53	D
	K2SB (+NET)	16,416	171	48	D
Western New York	K2KIR	175,404	882	94	C
	WF2W	116,660	751	76	C
	W2TZ	65,520	546	60	B
	K2ZR	47,300	430	55	B
	W2JW	35,454	311	57	B
	W2FXA	25,480	226	56	B
	KU2A	23,541	205	57	B
	KW2J	19,976	224	44	C
	WB2ABD	17,390	185	47	C
	K2MGR	15,750	175	45	C
	KE2VB	12,200	151	40	B
	W2OMV	12,096	168	36	B
	WA2EYA	9,792	144	34	B
	W2FR	8,466	123	34	B
	W2FB	8,352	116	36	A
	W2IG	2,200	50	22	B
	N2DCH	840	28	15	B
	K2DB (+NET)	24,518	299	41	D
3					
Delaware	AA1K	180,600	1054	84	C
	WN3K	5,180	91	28	A
Eastern Pennsylvania	W3UM	128,700	801	78	C
	W3OV	109,516	704	76	C
	W3BGN	84,392	527	77	C
	W3CQ	82,152	580	72	B
	WN3Q	51,026	404	62	C
	W3TS	49,518	457	54	A
	K3MOH	49,126	422	58	B
	W3TDF	33,660	303	55	C
WU3M		32,293	374	43	B
K2DOX		31,440	326	48	B
W3FL		26,880	280	48	B
W3PM		24,910	262	47	C
K4JLD		23,664	201	58	B
W3EHZ		20,070	223	45	B
W3W		16,940	191	44	A
W3FAA		13,202	161	41	C
KU3X		10,008	139	36	C
W3U		7,310	106	34	B
K3ATO		4,968	92	27	B
W3KV		2,600	50	26	B
W8J		180	10	9	D
K3WW (+NET)		117,525	770	75	D
K3NZ (+NET)		73,071	525	69	D
W3VF (+NET)		20,400	204	50	D
K3ND (+NET)		17,003	172	49	D
K3CP (+NET)		16,900	160	50	D
AA3B (+NET)		13,440	160	42	D
Maryland-DC	K3ZO	167,508	1022	81	C
	W3GN	99,912	715	69	C
	W3A	52,200	447	58	B
	W3AZ	47,760	392	60	B
	W3K1	41,106	327	62	B
	W3GG	40,235	299	65	C
	W3DP	36,432	378	48	B
	W3DAD	34,776	378	46	C
	N3AM	31,458	318	49	C
	K3EI	30,150	300	50	C
	WB1DTJ	29,744	338	44	B
	K1HTV	25,908	254	51	A
	KN5H	23,276	263	44	B
	W3CPB	21,240	236	45	B
	W3ERU	18,122	221	41	B
	K3SA	17,630	215	41	B
	KE3Q	10,280	127	40	C
Western Pennsylvania	K3TUP	167,411	989	83	C
	W3GH (W9XR,op)	57,140	955	81	C
	NW3C	100,083	672	73	C
	K3MD	26,977	253	73	C
	N3EQY	20,580	210	49	B
	K3UA	20,088	186	54	B
	W3U	3,762	57	33	B
	K3LVO	2,400	48	25	A
	N3NCS	1,344	32	21	B
	K3LR (+W3YQ, W3RG)	273,438	1333	99	D
4					
Alabama	K4IQJ	86,802	579	74	B
Georgia	KX4R	127,194	704	87	C
	K4SB	48,112	385	62	C
	KL7JAR	46,266	346	66	C
	KB4GD	33,102	305	54	B
	NA4U	31,980	306	52	B
	W4ZYQ	14,852	165	44	B
	W4DXI	13,727	128	53	C
	W4GTS	8,274	97	42	C
	K4LDR	2,500	50	25	B
	AB4RU (+AA4s GA,NC)	268,074	1182	106	D
	AC4QT (+NET)	138,852	771	87	D
	KO4WE (+K4DKH)	126,338	731	84	D
	K4ODL (+NET)	25,926	213	58	D
	K4PIC (+NET)	10,944	144	38	D
Kentucky	N4AR	192,879	1080	87	C
	K4FU	83,510	595	70	C
	KM4FO	47,104	368	64	B
	KK4Q	37,492	359	52	C
	KU4A	2,750	55	25	C
	N4XM (+K4DU, N4BPP)	108,000	717	75	D
North Carolina	K18MS	126,163	782	79	C
	N4YDU	62,272	556	56	B
	K4PQL	60,927	437	69	C
	N4UH	39,780	327	60	C
	AE4Y	22,344	228	49	C
	KA2CDJ/A	22,194	204	54	B
	N4BNO	17,384	212	41	B
	W1IHN	4,712	76	31	C
	N4ROL	3,186	59	27	B
	W8UCE (+W1IHN, N4AG, N4GT)				

8		KC8MK (+NZ4K,K8MP,KV8Q, N8MFQ,WR8C)	170,424 1040 81 D	WB9SKE (+WB9GOJ)	29,526 259 57 D	K0SRLL 16,836 183 46 A	VE
Michigan		K8CC (AA8AV,op)		Indiana		N0SM (+K0s JGH,RW,N0s DJY,JL, NR0E,W0OTF,ops)	Maritime-Newfoundland
N8EA	189,912 1143 82 C	KF8NN (+WA5Y)	101,033 710 71 D	KE9I	143,838 902 79 C	NC0P (+WA0FLS,W00GV)	VE1NH 4,640 80 29 B
N8UVZ	52,195 400 65 C	N8TL (+NET)	46,116 366 63 D	AA9AX	107,967 735 73 B	KB0SK (+KB0CRG)	Quebec
K8LX	42,880 335 64 C	WD8AUB (+NET)	13,524 161 42 D	AG9S	76,896 531 72 C		VE2FU 137,286 750 87 C
AG8L	31,860 295 54 C	W8CCI (N2ERI,AA8HH,K8TCR, KB8GHY,KF8YA,W8KVU,ops)	11,644 142 41 D	W9RE	70,630 500 70 C		VE2OO 14,256 162 44 B
W8LUX	25,194 247 51 B			WB9IQI	57,289 484 59 B		VE2AWR 12,129 154 39 B
K8CV	18,998 205 46 C	West Virginia		N9RD	50,520 421 60 B	Kansas	VE2OJ (VE2s FLD,BDK,VE3s JGY, NJ,OP,ops) 68,152 607 56 D
W8WVU	17,860 190 47 B	KV8S	98,496 678 72 C	W9OEH	43,680 390 56 C	N00Y	
N8CQA	15,224 173 44 B	K8OQL	85,869 677 63 C	WB9PXR	23,210 211 55 B	W0UY	
W8ROS	13,464 132 51 B	N8II	50,778 405 62 B	N9BS	19,700 197 50 B	W0AWP	
K8DD	13,038 159 41 B	W8VVE	26,460 270 49 B	KA4IQD/9	10,730 145 37 B	N0IZE	
WB8RUQ	12,464 152 41 B	N09S	3,120 60 26 A	AJ9C (+WD8LLR,WM9M,WX9X)	157,168 1031 76 D		
W8YL	1,968 41 24 B	W8WEJ (+N8DGV)	95,353 667 71 D			Minnesota	
K8LFO	672 21 16 A			Wisconsin		W0HW	108,864 756 72 C
AA8U (+K8MJZ,KC8EK,KF8QE, WA8VHQ)	172,220 1084 79 D			WA1UJU	114,026 803 71 B	KJ0B	83,559 604 69 C
Ohio		9		N9FVN	79,380 567 70 B	KS0T	63,558 480 66 B
N8AA	126,450 834 75 C	Illinois		K9OSH	37,406 317 59 C	KB0ZQ	62,288 458 68 B
K9ALP	120,596 823 73 B	WB9Z	192,329 1040 89 C	WT9Q	23,735 251 47 B	W0UC	20,178 171 59 B
W8SJU	84,840 603 70 C	KF9D	161,700 1038 77 C	K9MA	22,960 205 56 B	KN0V	20,048 179 56 B
KF8HR	82,080 567 72 B	N9JF	116,435 796 73 B	N9NE	17,500 175 50 B	KE0OL	7,360 92 40 B
NG8D	70,484 523 67 C	W8U9	102,564 690 74 B	N9CKC	17,238 169 51 B	W3FAF	7,220 95 38 A
WD8LLD	56,980 404 70 C	NA1R	90,576 629 72 B	WD9IAB	16,652 181 46 B	A10Y	6,936 102 34 B
WD9INF	33,935 307 55 C	KS0S	54,990 423 65 B	N9KS	15,912 156 51 B	N0HJZ	4,088 73 28 B
KW8M	31,507 320 49 B	KF9FU	54,080 416 65 C	W9UDU (W5ONL,op)	15,488 176 44 B	AA0AW (+N0s TCR,UOZ)	8,136 113 36 D
W8VNE	28,215 255 55 B	AC9A	49,644 394 63 B	WE9V	9,361 125 37 B	Missouri	
WA9KWS	24,072 236 51 B	K9AB	40,061 338 59 C	W9YCV	7,176 78 46 B	N0TT	178,268 1075 82 C
K8MR	23,746 190 62 C	W9EYX	37,680 314 60 B	W9RZW	4,650 75 31 C	K0DEQ	65,392 488 67 C
WA8YRS	22,770 253 45 B	N9ITX	24,624 216 57 C	WA9TZE	3,480 60 29 C	AA0EN	33,480 270 62 B
N8BJQ	20,400 200 51 C	W9QA	23,030 245 47 B	WW1M	1,776 37 24 B	KM0L	16,128 168 48 B
K8SVT	20,064 209 48 B	K9PPW	17,576 169 52 B	W9ERW	1,672 38 22 B	AA0FN	14,260 155 46 B
W8FN	19,722 173 57 C	K9SM	16,473 160 51 C	N9BBL	40 5 4 A	WA0UI	11,610 135 43 B
N8AGU	18,906 204 46 B	W8LNQ	14,880 155 48 B	W0AIH (+K0FVF,KM00)	151,632 966 78 D	W0GWT	5,160 86 30 A
W8ILC	18,644 158 59 A	W9TD	13,020 155 42 B			WB0QLU	4,526 73 31 B
W8IDM	17,600 200 44 B	N0FFZ	12,740 130 49 B	0		W0YZZ	3,584 64 28 B
W8PN	16,808 191 44 C	N9LCR	10,500 125 42 A	Colorado		K0LIR (AA0A,KE0YU,N0s IS,KFE, QE2,N0ZV,W0YIU,ops)	83,200 640 65 D
W8FDN	13,182 169 39 B	NN9K	10,412 137 38 B	W2CRS	98,420 665 74 C	North Dakota	
W8V6	11,600 145 40 A	AA9DH	9,048 116 39 B	K8GU	93,758 802 74 C	WB0O	5,600 80 35 C
N8JQX	11,540 122 35 B	W9CA	6,600 100 33 B	K8KR	56,490 402 70 C	KK0Q	2,646 49 27 B
WB8JBR	8,190 105 39 B	W9REC	4,148 61 34 B	KY8A	38,491 248 61 C	Nebraska	
N8FU	4,526 73 31 B	N9GGE	918 27 17 B	NSOP	25,742 211 61 B	AJ0I	60,792 447 68 B
AF8C	4,428 82 27 B	WA9Z (N2CS,AK9F,K9s IFO,NR, KE9MG,KF9IK,N9LCX,W9HBI, WC9B,WU9B,ops)	149,626 938 79 D	Iowa		N0LAQ	11,526 113 51 B
WA8MEM	2,754 51 27 B			KE0Y	17,248 176 49 B	South Dakota	
KA8OUT	1,224 36 17 B					WA0ZPT	8,640 108 40 A

Exam Info

Conducted By Bart Jahnke, KB9NM
ARRL/VEC Manager

New Novice and Tech Question Pools Released

New Novice (Element 2) and Technician (Element 3A) question pools were released into the public domain on December 1, 1992, by the National VEC Conference Question Pool Committee (QPC). These new question pools are for use in examinations to be administered on or after July 1, 1993.

Until then, the current Novice and Technician pools (with effective dates of 7/1/90) will be used in exams through June 30, 1993.

Many publishers will have revised study guides available in early May.

These two new question pools have been rewritten with extra emphasis on simplification. An effort has been made to write or rewrite the questions toward a junior high school reading level. A simplified question-numbering system is also introduced with these new pools, and will be used in all future updated-pools releases.

Printed copies of the new pools can be obtained from the ARRL/VEC, 225 Main St, Newington CT 06111, by sending a large SASE with \$2.10 postage.

New General (Element 3B) Question Pool Syllabus

On February 1, 1993, a new General (Element 3B) question pool syllabus was released into the public domain by the QPC. A call for public input on changes to the General question pool is now underway and will

Pool Revision Timetable Element 3B (General class)

Call for input to syllabus from public 7/1/92
QPC to begin work on syllabus 10/1/92
Release of updated/revised syllabus 2/1/93

Call for input to pool from public 2/1/93 through 6/30/93

QPC to begin work on pool 7/1/93
QPC to release pool in ASCII format 12/1/93
QPC to furnish written copy of pool 1/1/94
Recommended date for *Study Guide* to be available 5/1/94
Implementation date for updated/revised pool 7/1/94
(The Advanced [Element 4A] and Extra Class [Element 4B] question pools will follow this update timeline, starting one year and two years later, respectively.)

continue until June 30, 1993.

FCC License Processing Delay—Update

In mid-December, the FCC's Special Services Branch in Gettysburg, Pennsylvania, wrote all VECs to inform them that license processing at the Commission was taking 90 days from the FCC's receipt of the application. The FCC stated that VEs may want to advise applicants that a license might take up to 120 days to arrive—from the test date until the license is received by the applicant—taking into account VE and VEC processing and

mailing time.

As required by FCC Rules, the ARRL/VEC continues to meet the required 10-day processing limitation. Typically, test sessions are processed through the ARRL/VEC in 5-7 days or less.

The VE team and the coordinating VEC have 10 days each to process and place into the mail the completed test-session package, per FCC Rules.

Privatization of FCC Commercial Radio Operator Examinations

The FCC's Field Operations Bureau (FOB) has suspended examinations for Commercial Radio Operator licenses at FCC Field Offices and other locations.

On January 14, 1993, the FCC adopted a *Report and Order* allowing the Commission to seek proposals from one or more entities interested in becoming Commercial Operator License Examination Managers, or COLEMS (similar to VECs).

For more information, send an SASE with five units of First-Class postage to the ARRL Regulatory Information Branch at HQ (request FO Docket 92-206).

National Exam Day is October 30, 1993

Contact ARRL Public Information Manager Steve Mansfield, N1MZA, at 203-666-1541, ext 240 for information.