

Results, June VHF QSO Party

By Mark J. Wilson,* AA2Z

The 1982 ARRL June VHF QSO Party will be remembered by many vhf enthusiasts as one of the best vhf contests in years. Participants were treated to the best of everything propagation had to offer this time, including excellent aurora in the afternoon and early-evening hours both days, sporadic E (including coast-to-coast double-hop E_s) and some extended tropo.

The contest got off to an uneventful start, with spurts of single-hop E_s on 6 meters and average conditions on the higher bands. But a few hours into the contest, the experienced hands started noticing auroral buzz on some signals, and the excitement was on! Most of the northern half of the country was treated to a

prolonged aurora that enhanced signals as high as 432 MHz. On 6 meters, the aurora allowed stations to fill in the gaps between E_s and tropo range. And witness the following 2-meter section totals: W8VP, 36; WB8IGY, 34; W3GNR and K9MRI, 32; VE3ONT and W9IP, 31. The midwestern stations, usually left out in the cold on 2, did very well.

The aurora also brought with it a golden opportunity for those with 220 capability to show their stuff. W3GPY brought his EME equipment out to the W3BBS site and cleaned up, working an all-time high of 31 sections on that band. K1WHS lugged his 220 EME array up to the W1FC mountaintop, only to work via aurora all but one of the stations he worked via the moon. Up on 432, K2RIW reports that he heard W9ZIH on the aurora. As if one day wasn't enough, the aurora appeared again the



No cross-band work for the operators of AA9D. With antennas atop the 111-ft Bald Knob Cross, they easily took the top multiop position in Illinois.

*Assistant Communications Manager, ARRL

second afternoon, much to the delight of those missing it the first time around.

On Saturday night, an excellent extended tropo opening made for easy contacts between stations in the Northeast and the Carolinas and northern Florida. There was also a very brief opening to Florida for those W9s lucky enough to be in the right place at the right time. Several Northeastern 432 ops also worked down the coast to northern Florida, while K4QIF from Virginia was pounding in on 1296. Out west, several W6s report good coastal openings and a high level of 1296 activity.

We have come to expect some E_s during the June contest, and this year was no exception. There were short single-hop openings for everyone throughout the contest. Then, on Sunday evening, everything broke loose with an excellent opening that lasted right on through to the end of the contest. The big multiops and single-band 6-M ops had to work at least 55 multipliers to be competitive. Many worked more than 60, while W2CNS/8 found 73 and K5CM hunted down 72.

With conditions like these, it's not surprising that 13 new all-time division records were set, and that we now have new all-time single-op and multiop records. Single op K1FO took home the honors this time from his river-bottom location in Connecticut. Steve's 109,855 points represent an understanding of

the various modes of vhf propagation honed by years of experience, allowing him to juggle his operating time expertly to get the most out of each band. W2SZ/1, operating from Mt. Greylock in western Massachusetts, set the new record in the multiop category, taking it back from W1FC, who grabbed it last year. Aside from a nice showing on the "lower five," the 'SZ group is expanding into the microwaves with QSOs on 2.3, 3.4, 10, 24 and 48 GHz.

Other new single-op division records include WB2IGY's Great Lakes score, which is almost 20,000 points higher (thanks, aurora!) than the WA8TTS score from 1979. In the Hudson Division, WB2DNE (operating K2CBA) just barely beat WA2FGK's record, set last year, while W0RT squeaked past the 1980 WB0TEM Midwest Division record. Up in Canada, VE3ASO added 12 kilopoints to VE2DFO's 1981 record score.

Aside from W2SZ, seven other multiop groups have added their mark to the division record box. In the Atlantic Division, the Pack Rat Crew at W3CCX added 36,000 points to their 1981 record. In the Dakota Division, W0SD's record, set just last year, fell to the dedicated vhf group at W9UD/0, who used aurora and E_s to up the ante by 25,000 points. W8VP upped the 1980 WA8ONQ Great Lakes record by 28 kilopoints, while the W2CNS/8 group jumped their own 1981 record by 61,000. Out in the Rocky Mountain Division, AA0L surpassed the 1981 N0BRI record by 7500 points, and West Gulf Division leader K5CM's score is 18 kilopoints higher than the 1980 K5LZO record. Perhaps the biggest surprise was the Top Ten score from VE3ONT that increased the group's 1974 record by just over 100,000 points! Congratulations to all the division leaders for setting some June records that may stand for years to come.

This year's June party was different from past years in several respects. Single-band categories were introduced, and the use of 146.52-MHz simplex was prohibited, while the

time limit on 223.50 simplex was lifted. The single-band entry categories, designed to give those with only one band a chance to compete, appear to have been successful. Of the 593 total entries we received, 225 were for single-op, multiband, and 224 were for single op, single band. The overall number of entries is up about 8 percent from last year's 547. The vast majority of operators commenting on the single-band entry classes liked the idea, and more than a few of the single-band entrants indicated that the new categories gave them the incentive to get on and try.

While there were a few ops who were vehemently opposed to the elimination of 146.52 simplex as a contest frequency, a large majority were in favor of the new rules. In fact, unsolicited comments from all areas of the country suggested taking it one step farther and eliminating 2-meter fm as a contest mode or restricting its use to the 144.9- to 145.1-MHz region. The top two single ops, K1FO and W9IP, both asked to be put on record as having used no fm at all. If you have an opinion on the use of fm during contests or on anything else connected with vhf contesting, transmit your ideas to the Ad Hoc Committee for VHF/UHF Contesting via W1XX at ARRL HQ.

And finally, here are a few administrative notes. We can't seem to stress this point enough: The only requirement for a complete and valid June VHF QSO Party (and September, too!) QSO is call sign and the name of the ARRL section in which you are located. You must send this information for each contact, and you must receive and log it for each valid QSO you claim. RST-type signal reports are *not* required for the QSO Parties. They never have been, ever since the very first June Party was held in 1949. Also, a signal report is *not* required for the WAS or DXCC cards. If you *also* wish to exchange and write down signal reports, that's fine; but we don't even look at any signal reports written in the log when considering whether a contact is valid or not.

Several stations probably will notice that their scores are not reported in the listings. The mailing deadline was 30 days after the contest (in this case, July 13), which is about the same time this copy was prepared for inclusion in September *QST*. You must mail on or before the deadline, or the *QST* deadline dictates that your score will not be listed. With *QST* space at a premium these days, the June contest results must appear either in September or December, and we think you like to see them as early as possible.

SOAPBOX

The operation of our contest radio wasn't complete chaos, but close. All of the operators except me hadn't been in a contest before, but what they lacked in experience they made up for in enthusiasm (N4YN). I probably worked more stations on 6 meters on Sunday than I have in the past 20 years! (VE2AEJ/3). Best 23-cm activity during a contest to date — 20 QSOs, 8 sections, 420-mile DX (K6ELQ). Where the heck did XE1JJU/XF4 come from? Could have used more like that (N0BRI). Probably the most-fun contest experience in many years. Never a dull moment. Good meteor scatter for appetizers, a steady repast of aurora for two days and a delicious dessert of E_s that refused to quit. Came tantalizingly close to division record — gives me something to shoot for next year (W0XG). Picked up three new states on 220 MHz (K0DAS). 800 miles round trip, a bad carburetor, 40-mph winds, just to make three 1296-MHz QSOs — and my wife, WB6OPA, brought lite beer! (N6CA/7). It certainly will be many years before we again have a contest as good as this one (ACIT). My measly 15 watts just

Top Ten

<i>Single Operator</i>	<i>Multioperator</i>
K1FO	109,855
W9IP	80,398
K1EM	66,504
K2CBA	62,316
WB2IGY	57,138
W2CRS	55,808
WA1UQC	52,736
W9OEH	52,725
WB1CJT	50,149
VE3ASO	49,495

<i>50 MHz</i>	<i>144 MHz</i>	<i>220 MHz</i>	<i>432 MHz</i>	<i>1296 MHz</i>
WA1UQC — 64	K1FO — 29	K1FO — 18	K1PXE — 17	K1FO — 8
W2LT — 65	KC2ME — 26	W2CRS — 18	K2RIW — 26	K2LNS — 10
AE3T — 62	K3SX — 26	K3SX — 17	K3SX — 17	W3IP — 6
N4MM — 64	N4AR — 28	W3IY/4 — 8	K4QIF — 18	K4QIF — 9
K5ZD — 60	W4UHJ — 13			
N6BXP — 46	WA6LHD — 11	WA6EKD — 7	(3 stns) — 8	K6ZMW — 8
KB7Q — 46	KB7Q — 9	K7KOT — 3	K7KOT — 3	K7GNV/7 — 4
WB2IGY — 68	WB2IGY — 34	WA8TXT — 17	WA8TXT — 9	K8WW — 11
W9OEH — 72	W9IP — 31	W9IP — 18	WB8SNR — 13	WB8SNR — 6
W0XG — 58	K0DAS — 19	W0VB — 16	W0RT — 6	
VE3ASO — 60	VE3ASO — 27	VE3ADJ — 18	VE3LNX — 7	VE3BFM

Multiplier Leaders

Single Operator

<i>50 MHz</i>	<i>144 MHz</i>	<i>220 MHz</i>	<i>432 MHz</i>	<i>1296 MHz</i>
WA1UQC — 64	K1FO — 29	K1FO — 18	K1PXE — 17	K1FO — 8
W2LT — 65	KC2ME — 26	W2CRS — 18	K2RIW — 26	K2LNS — 10
AE3T — 62	K3SX — 26	K3SX — 17	K3SX — 17	W3IP — 6
N4MM — 64	N4AR — 28	W3IY/4 — 8	K4QIF — 18	K4QIF — 9
K5ZD — 60	W4UHJ — 13			
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KB7Q — 46	KB7Q — 9	K7KOT — 3	K7KOT — 3	K7GNV/7 — 4
WB2IGY — 68	WB2IGY — 34	WA8TXT — 17	WA8TXT — 9	K8WW — 11
W9OEH — 72	W9IP — 31	W9IP — 18	WB8SNR — 13	WB8SNR — 6
W0XG — 58	K0DAS — 19	W0VB — 16	W0RT — 6	
VE3ASO — 60	VE3ASO — 27	VE3ADJ — 18	VE3LNX — 7	VE3BFM

Multioperator

<i>50 MHz</i>	<i>144 MHz</i>	<i>220 MHz</i>	<i>432 MHz</i>	<i>1296 MHz</i>
W1VD — 65	W2SZ/1 — 30	W1FC — 28	WB1FGW — 24	W2SZ/1 — 14
K2KLP — 61	WA2SNA — 29	WA2GBG — 16	WA2SNA — 21	K2BWR — 9
W3BBS — 66	W3GNR/3 — 32	W3BBS — 31	W3BBS — 21	WB3CCX — 16
WA8LXJ/4 — 65	W4IY — 28	W4IY — 14	W4IY — 13	WB4NMA — 1
K5CM — 72	K5CM — 19	N5DL — 9	N5DL — 9	K5CM — 3
W8XJ — 54	WA6EJO — 12	WA6EJO — 8	WA6EJO — 11	WA6EJO — 9
K7OO — 63	K1RZ/6	K7OO — 5	N7BPA — 7	N7BPA — 7
W2CNS/8 — 73	W8VP — 36	W2CNS/8 — 29	W2CNS/8 — 21	W2CNS/8 — 4
K9IMM — 65	K9MRI — 32	K9IMM — 16	AA9D — 8	K9IMM — 2
AA0L — 66	W9UD/0 — 25	W9UD/0 — 16	W9UD/0 — 10	W9UD/0 — 3
VE3ONT — 66	VE3ONT — 31	VE3ONT — 22	VE3ONT — 18	VE3ONT — 6

wasn't enough to heat the northern lights (N3ET). I've been waiting some time for aurora during a vhf contest. This time it hit, with quite wild results. Picked up three sections on 432-MHz aurora! (WB9SNR). Could work only the "guns" on 432; the peanut whistles never got through (W5UKQ). Have to say that my first two days ever on 6 meters were great (KA1BLJ). Spent more time picking up the empty beer cans and peanut shells from WA2KOB . . . (WA2JSG). Like the U.S. Cavalry, 6 meters came to the rescue Sunday night! (W0FTY). A big thrill was working K4QIF in Virginia on 1296 while running only 1.7 watts to a 4-ft dish (K1TR). We stand ready to work any station requesting a sked, unlike some multiop stations I know (W2SZ/1). We were disappointed that W2SZ wouldn't take the time for a 10-GHz QSO (W1OD). Was going to give it hell, but ended up in bed with no voice and a spring head cold. I was very disappointed (WA1VCU). Do you always schedule auroras for both contest evenings? (WA1JGK). After two winter vhf contests, this was a refreshing change (K1IKN). Six meters became "wild and crazy" Sunday night (WB8UTY). An elevator to the top of the fire tower would have helped (W5EW). Must have been exciting. KA5FLE and I forgot to work each other on 432 (WA5VJB). As usual, the weekend before the contest provided extended tropo on 2, 432 and 1296 (W5UWB). W6SFH and I are phase locked on 10.368 GHz. Is there any other activity nearby? (WB7ABP/6). Wanted to use a 3-element quad for 2, but destroyed it trying to mount it on my car Saturday morning. I fixed it Saturday evening, and proceeded to destroy it again Sunday morning while backing out of the driveway (WA6ZGQ). VHFers are a good-natured lot. Enjoyed my time immensely (N6CZJ). 432 surprised me with 5 QSOs using 10 watts (K1VOW/7). Every year I work a new country in this contest; this year it was XF4 (WB7FDQ). The weather held up as expected — cold and wet, same as the last two years (N7DB). Spent most of the contest trying to get my beam up in the air, only to have the neighbors complain of TVI just as 6 meters opened up (N7ABJ). Many stations would call "CQ" on 144.200, yet could

Division Leaders

Single operator	Division	Multioperator		
C6ADV	15,539	DX	XE2XW	1,026
K3SX	41,584	Atlantic	W3CCX	276,875*
W9IP	80,398	Central	K9IMM	79,840
W0XG	27,156	Dakota	W9UD/0	115,072*
N4JS/5	28,356	Delta	WA5FDF	26,856
WB8IGY	57,138*	Great Lakes	W8VP	139,356*
K2CBA	62,316*	Hudson	WA2SNA	150,921
W0RT	30,562*	Midwest	WA0NOK	35,210
K1FO	109,865*	New England	W2SZ/1	342,855*
KB7Q	9,856	Northwestern	N7NW	23,618
WD8CHL	5,928	Pacific	K6GSS	55,979
K4LHB	27,636	Roanoke	W2CNS/8	214,472*
W5FF	13,376	Rocky Mountain	AA0L	41,448*
WB4OSN	28,875	Southeastern	WB4NMA	65,740
N68XP	39,744	Southwestern	WA6EJO	75,439
WA5HNK	29,078	West Gulf	K5CM	110,001*
VE3ASO	49,495*	Canadian	VE3ONT	182,582*

*New Division record

not tune 2 kHz to where I was rockbound calling them and could have given them a new section (W7LFL). Stuck a 6-meter beam up "just in case." Sure glad I did. Worked CO via tropo for the first time during the contest (W0RT). Local competition from WB9GGM forced me to battle it out to the end of the contest (WA0RLY). Had a lot of competition from my friend WA0RLY, which made it better (WB0GGM). It took me nearly 20 years to work 39 states — I repeated that feat in less than 48 hours on 6 meters during the contest (W0PEC). ARRL should give QSO points for working RCA, Zenith, Magnavox, etc. (WB8YFE). One local station was splattering nearly 30-40 kHz; punch is nice, but clean is courteous! (K8CQA).

FEEDBACK

□ The Canadian Postal strike of 1981 kept the

following entries from making the results of the 1981 June VHF QSO Party. See pages 82-85 of September 1981 QST.

VE2WA 190 - 19 - 10 - B - PQ

VE3BZE 1428 - 102 - 14 - B - ON

4218 - 103 - 37 - ABCD - ON

□ N3EG/6 in the Los Angeles Section sent his log in on time, and we filed it in the wrong section. Earl had a score of 427 points, 61 QSOs and 7 multipliers in a 2-meter single-band effort.

□ In the Division Leaders box on page 82 of September QST, please note the following changes: W3CCX* at 240,380 points, is the holder of that new all-time record for multiop stations in the Atlantic Division. N7DB/7,* at 42,210 points, is the new multiop record holder in the Northwestern Division.

Scores

Scores are listed by ARRL section. Within each section, single-operator, multi-band scores are listed first, then single-operator, single-band scores starting with the lowest frequency band, and then multioperator scores. From left to right, each line score lists: call, score, QSOs, multiplier, bands operated (A-50-MHz; B-144 MHz; C-220 MHz; D-432 MHz; E-1296 MHz; F-2.3 GHz; G-3.4 GHz; H-5.7 GHz; I-10 GHz; J-24 GHz; K-48 GHz; L-light). Among the single-operator stations, the single-band award winners are indicated by using bold-face type for the letter(s) denoting the bands won. For example, in Connecticut, K1FO is the single-operator section award winner, and he also had the highest single-band scores on 144, 220, and 1296 and above. K1PXE had the highest single-band score on 432 MHz, and WB1FVS had the highest single-band 50-MHz score. W1VD is the highest-scoring Connecticut multiop.

W/VE

N1BLI (+N1BCG)	14,518- 224- 61-ABCD	K1SF	17,150- 219- 70-ABCD	N2BMR	8084- 151- 47-ABCD	WB2YIZ	328- 41- 8-B
Maine		K1WLE	8476- 163- 52-ABCD	K2ULR	7632- 140- 48-ABCD	KA2CGV	1- 1- 1-B
		WA1PLS	6272- 192- 28-ABC	WA2FXB	1449- 63- 23-AB	WA2GBG (+K2EF, N2AU,	
			3585- 87- 36-ABD	WA2FZ	1500- 53- 28-AB	KA3EVQ, W1GIV	
		WA1VCU	1626- 53- 28-ABD	WB2TMD	8722- 178- 59-A	90,288- 746-114-ABCD	
		WA1UOL	3260- 84- 40-AB	K4BNC	6517- 133- 49-A	K2JFV (+WA2TM),	
		WA1VTA	4654- 179- 26-B	WB2CUT	3952- 208- 19-B	46,920- 487- 92-ABCD	
		KAICRX	69- 23- 3-B	KE2N	2970- 165- 18-B	K2KLP (K2E KGE, OEQ, W2UTH,	
		K1JG	4- 2- 2-B	WA2ALM	2272- 142- 12-B	WA2VTM, WB2IEY, WD2AFH,	
		W2SZ/1 (AG1M, AG2X, K1DH,	WA2KKZ	168- 12- 2-B	AKA, WB8ZPE, oprs.,		
		K2MM, WA1VW, WA1VZ, WA2	K2LNS	690- 23- 10-E	WB2AZZ (KA2NYC, KC2ZG,		
		WA1NBF, WA1NAFM, WA1UGER, WA2	WA2NSA (KA2JG, KA2GM, N2COJ, WB2JUB, oprs.,	6612- 174- 38-AB			
		WA1VW, WA1VZ, WA2	WA2NSA (KA2JG, KA2GM, N2COJ, WB2JUB, oprs.,	6612- 174- 38-AB			
		WA1VZ	342,855-1623-171-ABCD	JSW, UPK, WB2RFB, WD2ADH, oprs.,	WA2EXX (+KA2PMF, N2BTJ, CJJ),		
		WA1VZ	342,855-1623-171-ABCD	WB2RFB	150,921- 202- 123-BCDE	4060- 116- 35-AB	
		WA1VZ	342,855-1623-171-ABCD	KS2T	120,400- 200- 67-100-ABCD	KC2MI (KA2S KAG, MYD, N2CZL, oprs.),	
		WA1VZ	342,855-1623-171-ABCD	WB2WLM	2889- 107- 27-AB	WB2WLM	
		WA1VZ	342,855-1623-171-ABCD	DJS, WB2EPW, NQV, BB8, ABH	WB2WLM		
		WA1VZ	342,855-1623-171-ABCD	WA2FXB (+WA2PJZ)	WB2WLM		
		WA1VZ	342,855-1623-171-ABCD	4452- 212- 21-B	WA2FXB (+WA2PJZ)		
1							
New Hampshire							
Connecticut							
K1FO	103,855- 744-127-ABCDE	WB1CJT	50,149- 447- 97-ABCDE	W2E1F	40,400- 319-100-ABCD	K3SX/A 41,584- 364- 92-ABCD	
K1EM	66,504- 601-102-ABCD	KA1CDZ	9964- 188- 53-AB	W2E1F	40,400- 319-100-ABCD	K4CHE/3 26,296- 303- 76-ABCD	
WA1UGC	52,736- 449-103-ABCD	AC1J	4340- 115- 35-ABD	W2E1F	40,400- 319-100-ABCD	K3JL 10,626- 231- 46-AB	
K1PXE	28,908- 299- 73-ABCD	WA1GDR	3745- 86- 43-ABC	W2E1F	40,400- 319-100-ABCD	AC3T (+K3WJV, KB3HI, N3	
K1AXB	16,820- 259- 58-ABCD	WA1GRB	3034- 61- 25-B	W2E1F	40,400- 319-100-ABCD	AYJ, BH5, COX)	
W1FAJ	12,993- 171- 61-ABCD	K1XR	10,675- 427- 25-B	W2E1F	40,400- 319-100-ABCD	65,044- 658- 92-ABCD	
WA1VWT	10,701- 181- 63-ABCD	WA1TFH	8025- 321- 25-B	W2E1F	40,400- 319-100-ABCD		
K1VYU	2,709- 63- 43-AB	WA1JSM	332- 74- 18-B	W2E1F	40,400- 319-100-ABCD		
WB1FVS	25,730- 415- 62-A	WA1VYK/M	270- 30- 7-B	W2E1F	40,400- 319-100-ABCD		
WA1VWU	14,628- 276- 53-A	WB1FGW (+WA1SUH)	210- 30- 7-B	W2E1F	40,400- 319-100-ABCD		
W1WHL	10,504- 202- 52-A			W2E1F	40,400- 319-100-ABCD		
WA1VZ	6,209- 185- 36-A			W2E1F	40,400- 319-100-ABCD		
K1ABJ	5,633- 177- 37-A			W2E1F	40,400- 319-100-ABCD		
K1A1GY	4,664- 124- 36-A			W2E1F	40,400- 319-100-ABCD		
K1VM1	3,969- 189- 21-B			W2E1F	40,400- 319-100-ABCD		
W1FXS	3492- 194- 18-B			W2E1F	40,400- 319-100-ABCD		
K1TN	2921- 127- 23-B			W2E1F	40,400- 319-100-ABCD		
WA1LOU	21,80- 109- 20-B			W2E1F	40,400- 319-100-ABCD		
N1BGA	1,380- 92- 15-B			W2E1F	40,400- 319-100-ABCD		
N1ECL	1,190- 82- 18-B			W2E1F	40,400- 319-100-ABCD		
KE1A	649- 59- 11-C			W2E1F	40,400- 319-100-ABCD		
W1OD	6- 1- 1-I			W2E1F	40,400- 319-100-ABCD		
W1VD (+AA22, K1JX, WA1STO)	21,766-26,140-138-ABCD	W1AJR	26,257- 324- 77-ABCD	W2E1F	40,400- 319-100-ABCD		
W1QK (+KA1S JR, TD, KC2QF,	WA1KJX, WA1STO)	KA1K15	47,932- 505- 92-ABCD	W2E1F	40,400- 319-100-ABCD		
W1PV, WA1WV, EA1ZK, WA1VW,	WA1PBR (+AJ1G, YVH, YVH)	KA1K16	47,932- 505- 92-ABCD	W2E1F	40,400- 319-100-ABCD		
WB1CVW, EZL, WB9F, WA1VW,	WA1PBR (+AJ1G, YVH, YVH)	KA1K17	47,932- 505- 92-ABCD	W2E1F	40,400- 319-100-ABCD		
120,292- 827-122-ABCD	WB1CVW, EZL, WB9F, WA1VW	K1DS (+K1PAM, WA1K1P)	31,298- 349- 57-ABCD	W2E1F	40,400- 319-100-ABCD		
WB1BXS (+K1GX)	8856- 328- 27-B		29,580- 412- 68-ABCD	W2E1F	40,400- 319-100-ABCD		
			310- 31- 10-B	W2E1F	40,400- 319-100-ABCD		
Eastern Massachusetts		Vermont					
W1JR	31,374- 257- 83-ABCD	W1AIM	25,974- 313- 78-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	10,502- 156- 59-ABD	W2E1F	40,400- 319-100-ABCD		
		NIQG	4800- 81- 48-ABCD	W2E1F	40,400- 319-100-ABCD		
		WA1JGK	1584- 72- 22-B	W2E1F	40,400- 319-100-ABCD		
		K1LJL	385- 35- 11-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	25,272- 257- 81-ABCD	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	10,812- 204- 53-AB	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	7134- 174- 41-AB	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	14,892- 292- 51-AB	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	112,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD		
		W1TKZ (K10GQ, K10UR, N2AWG,	12,224- 912- 112-ABCD	W2E1F	40,400- 319-100-ABCD		
		FI	2970- 165- 18-B	W2E1F	40,400- 319-100-ABCD</		

