

**The *K3LR* MultiMulti
Team**

***Living the Amateur Radio
wireless dream!***

K3LR.com

**Tim Duffy, K3LR
Dayton Contest Forum
May 19, 2007**

K3LR History

- **Novice license – WN3SZX at Age 12 Extra at 14**
- **35 Years in Amateur Radio**
- **3 time winner of the NA CW Sprint**
- **2 time SO winner of ARRL DX Phone contest**
- **Many top ten CW SO SS finishes in the 80s**
- **This station started in 1988.**
- **Won CQWW USA Multi single 1981 and 1991**
- **K3LR Multi Multi since 1992. 10 USA #1**

So What is the Secret?

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Base of 120' $\frac{1}{4}$ wave
160 M driven ele
L network
 $\frac{1}{4}$ wave shorted stub

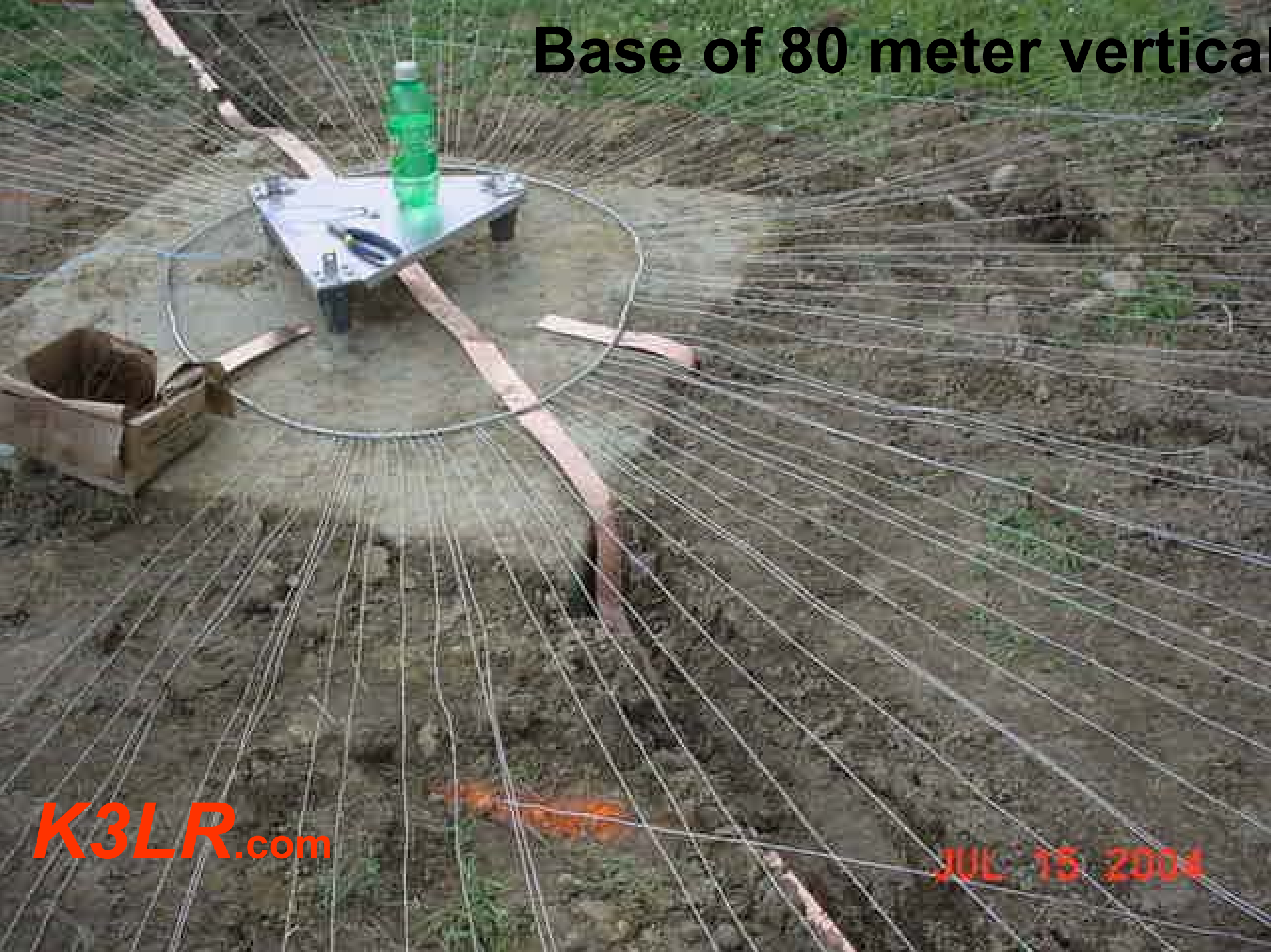
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Use 4 parasitic wires
For 3 L vertical beam

Base insulated



Base of 80 meter vertical



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JUL 15 2004

**Base of 80 meter
Vertical**

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**4 In line towers on
80 meters from
TWO Phased 4 squares**

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**Comtek 4 square
Control for 80 meters**

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Switch control
For TWO 4 squares
80 meters #1

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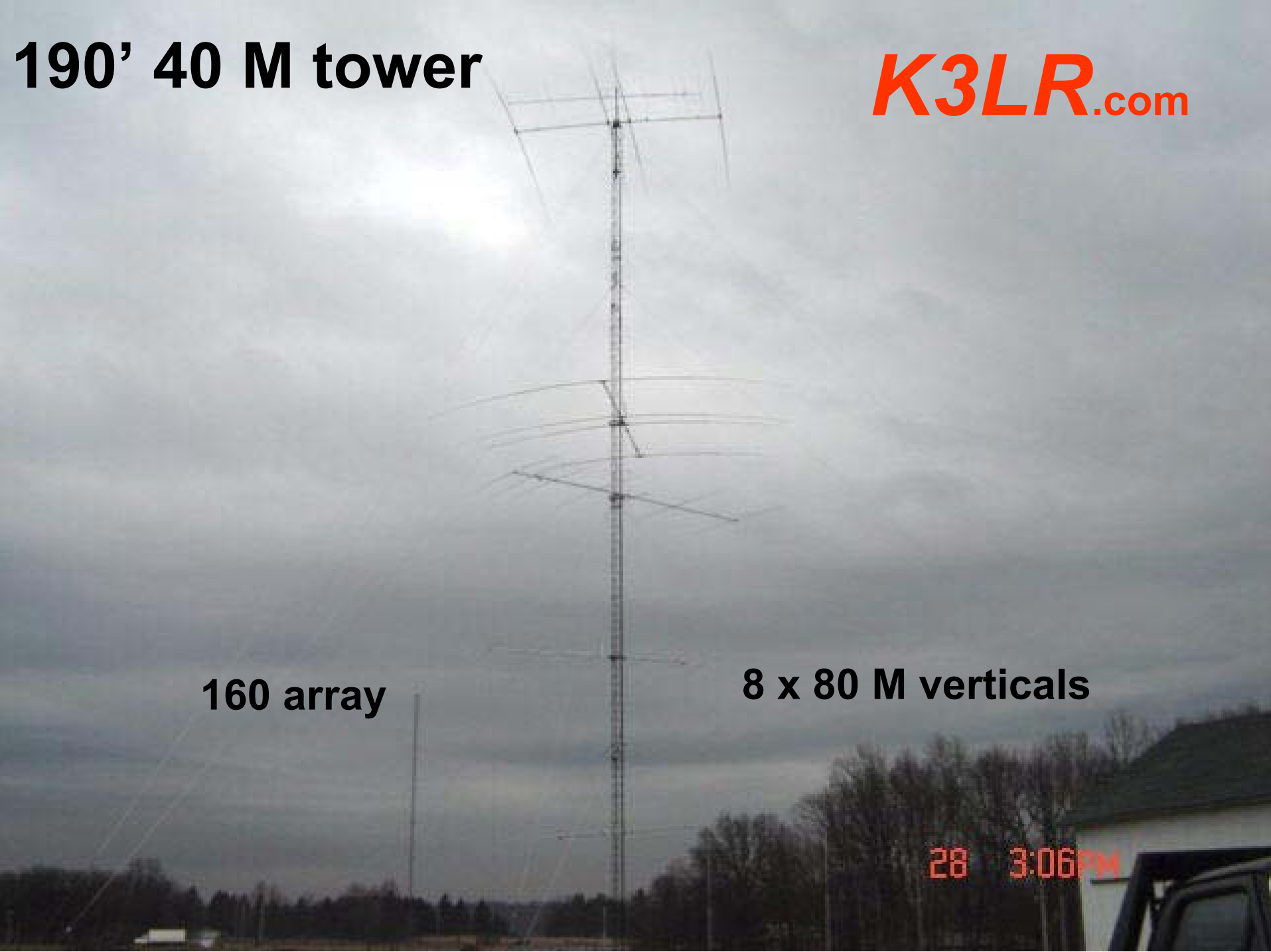
190' 40 M tower

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160 array

8 x 80 M verticals

28 3:06PM



190' 40 meter tower

7 el 10 @ 200'

4 el 40 @ 190'

**40 M #1
4L/4L**

**10 M #2
7L/7L/7L**

4 el 40 @ 118'

6 el 20 @ 100'

**20 M #2
6L on 60' boom
(add 2nd this
summer)**

7 el 10 @ 80'

7 el 10 @ 50'

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190 ft 40 meter tower at K3LR

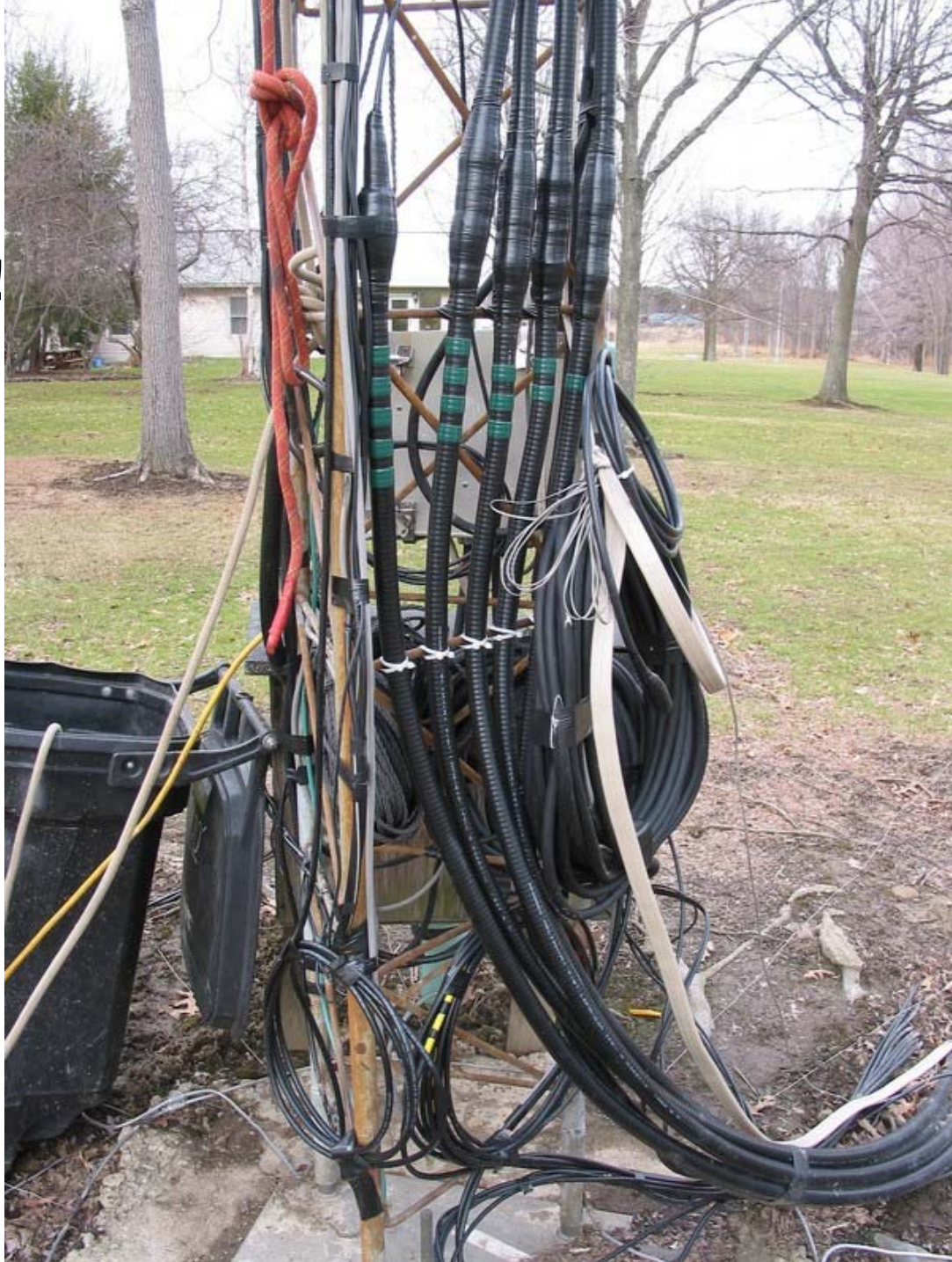
5/8 wave vertical at 200' 10 M

7 ele 10 M beam @ 200'

4 el OWA 40
@ 190'

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28 3:06PM



Very Busy!

**Supports
80, 40, 20
and 15
All on one
tower**

**Base of 170'
20 Meter
Tower**

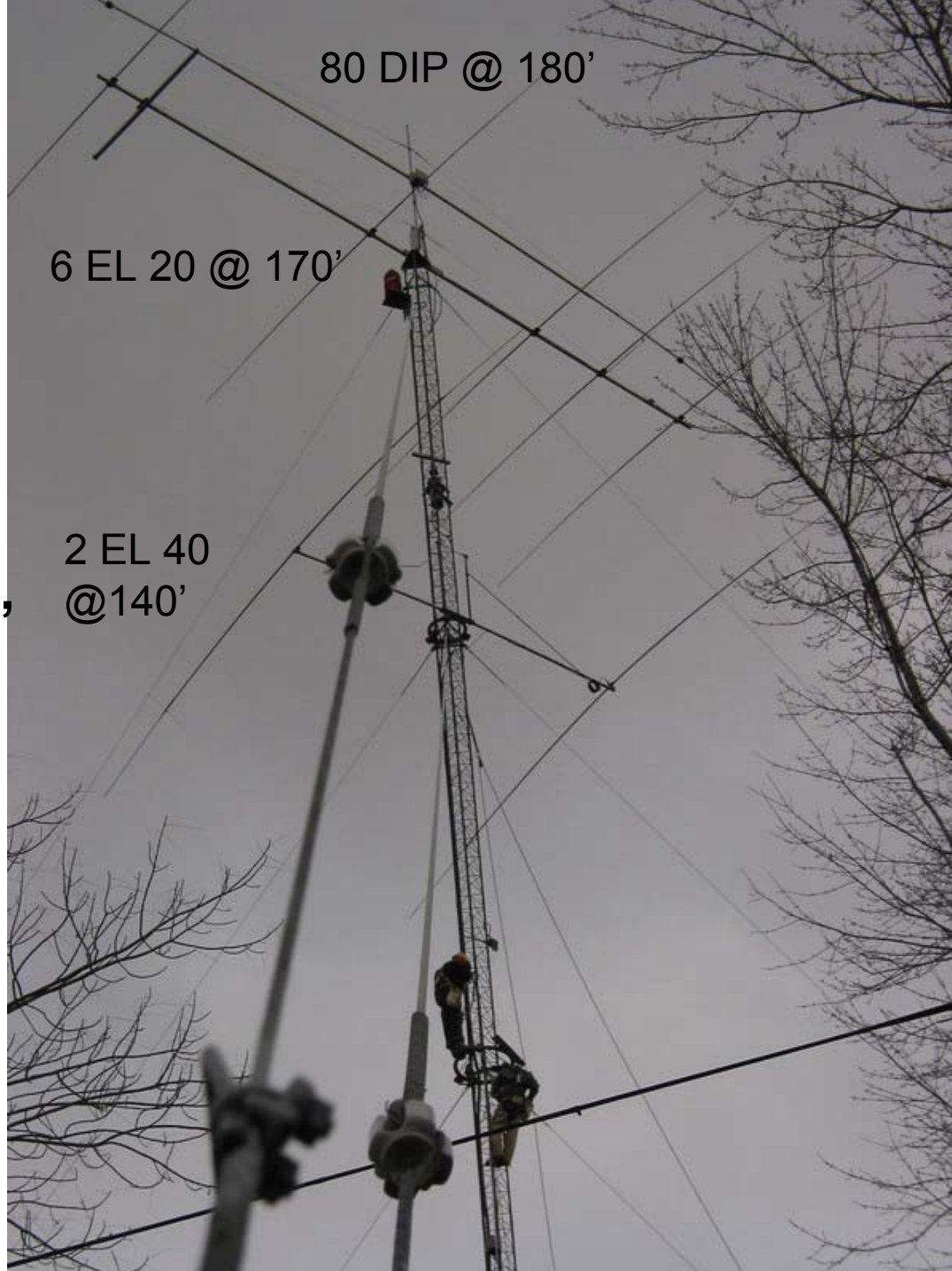
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**20 meter
#1 station**

**6L/6L/6L
OWA
170'/110'/50'**

Now 18 ele

**Upgrade
To 24 ele
This
summer**



80 DIP @ 180'

6 EL 20 @ 170'

2 EL 40
@140'

**80M #2
Dipole at 180'**

**40M #2
2L at 140'
Upgrade to
2L/2L W6NL
Moxon design**

**15M #2
6L/6L
80'/40'**

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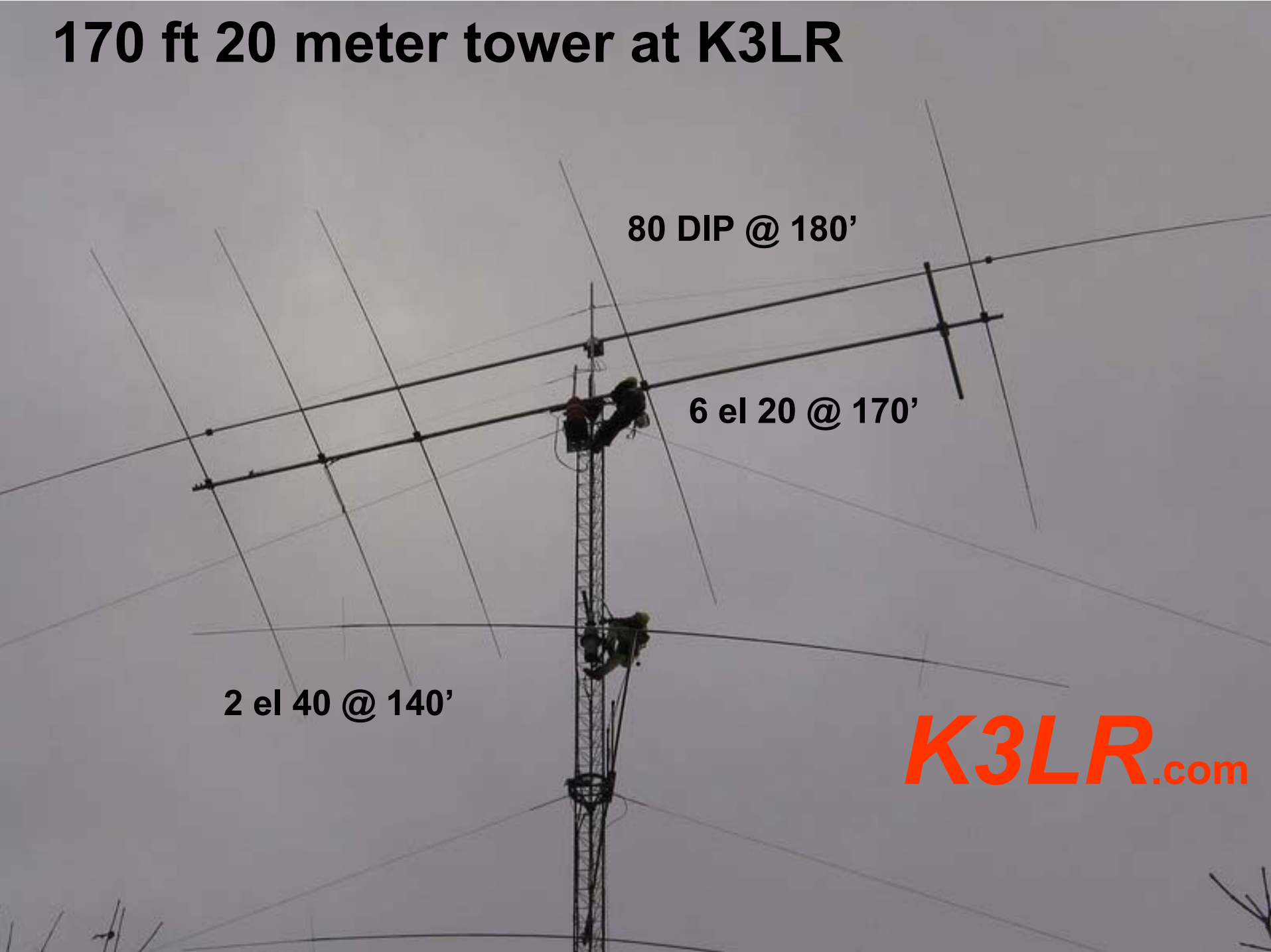
170 ft 20 meter tower at K3LR

80 DIP @ 180'

6 el 20 @ 170'

2 el 40 @ 140'

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Top 3 Yagis on 15 meters with 6 meter beam at 170'

**15 meter
#1 station**

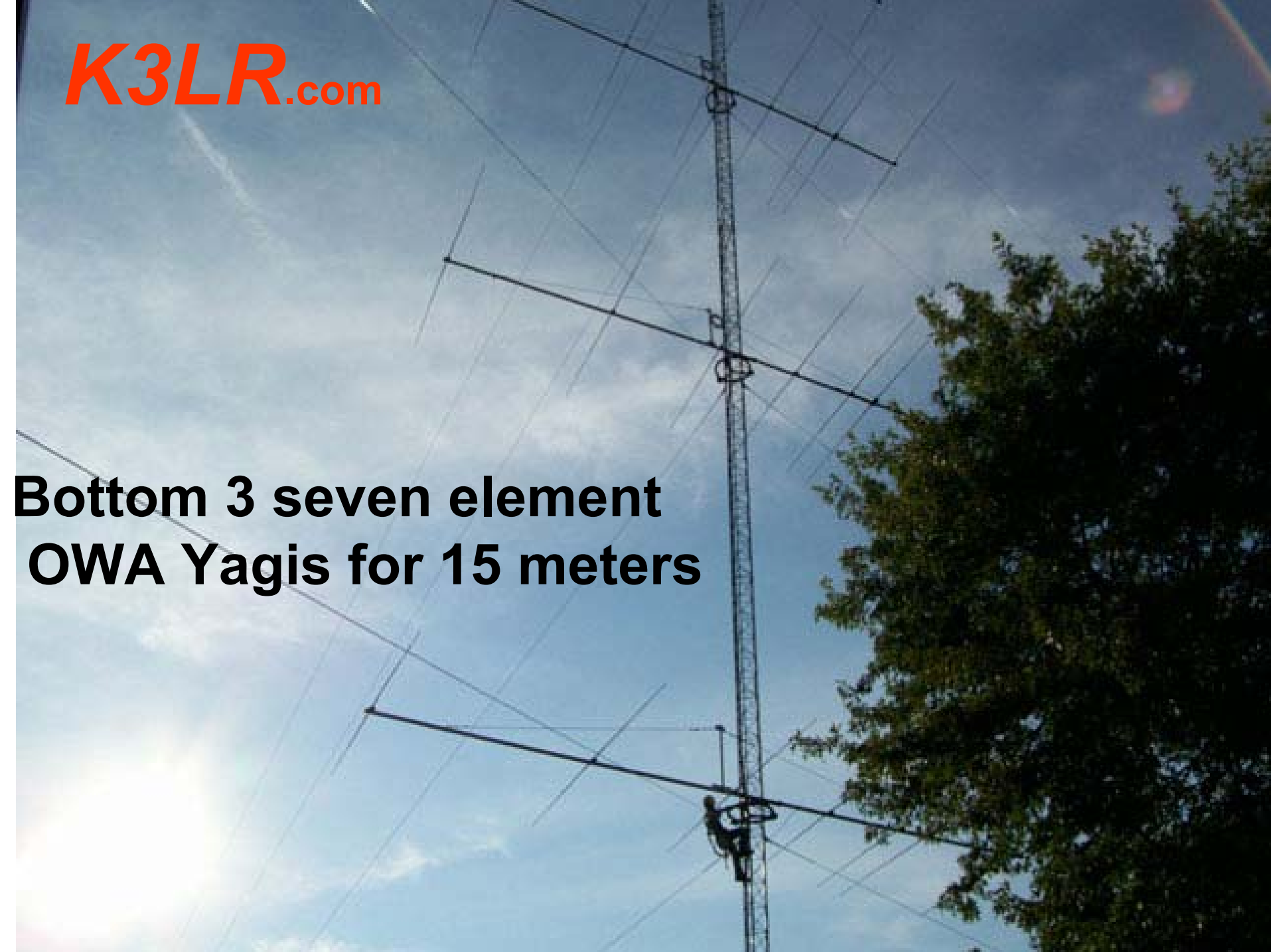
**7L/7L/7L/7L
160'/120'/80'/40'
28 elements**



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**Bottom 3 seven element
OWA Yagis for 15 meters**



10 meters
21 elements
7L/7L/7L
100'/66'/33'

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Controller for DX Engineering 4 square RX array



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**160 meter mobile
Antenna X 4**

***K3LR*.com**



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**4 Square RX array for 10 meters
With 5/8 wave elements**

30 3:51 PM

**20 meter RX
4 square**

10 meter RX 4 square

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00 3:52 PM

**60 1/2 wave radials
Per vertical**

1 5/8" feedline

**10 meter 4 square
RX array**

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30 35299

**Comtek Controller
4 square 10 M RX**

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30 3:52 PM

160/80 Beverage box. K9AY bias "T" and K9AY 9:1 XMFR



Hardware and Engineering are important

Over 50 CQWW and ARRL DX Multi Multi Operations since 1992

Operators are the most important element!

Over 100 different Ops in 15 years

Several have over 40 contests at K3LR

**Young Ops like N2NL, N6MJ, KL9A, N6RT
W2AU, LU7DW, M0DXR**

**Experienced Ops like N3RA, K1AR, K3UA
N2NT, N2NC, N3GJ, N9RV, K8CX, W9ZRX,
W2RQ**

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KEYS TO SUCCESS

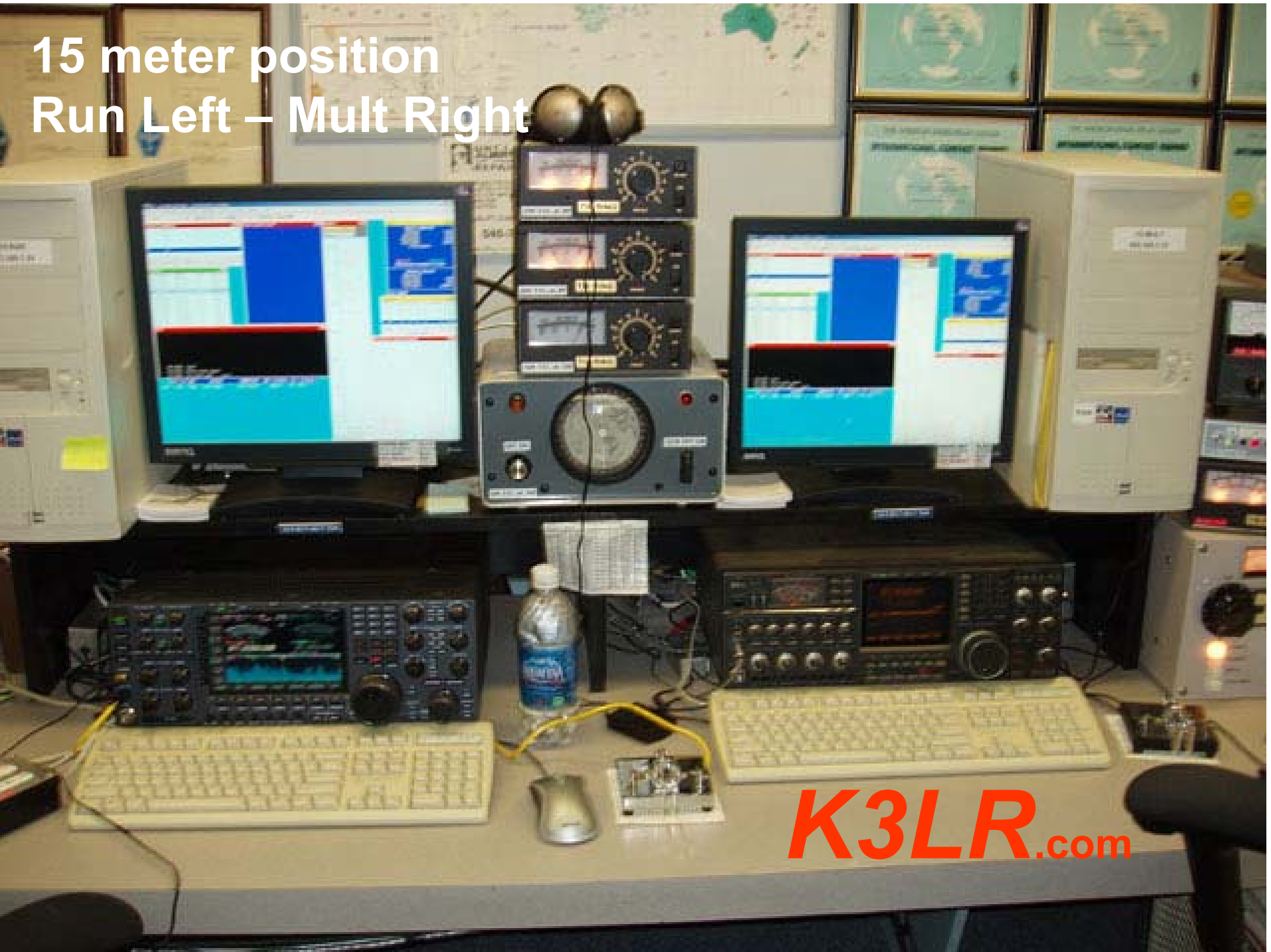
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- OPERATORS are VERY IMPORTANT!**
- Dave, W9ZRX is an amazing engineer**
- Use the best radios available. Modify for MM**
- Single band amplifiers using single 8877**
- Operated 24 Multi Multi contests before 1st win
2nd win followed several years later**
- Competition is FIERCE from W3LPL and KC1XX!**

More Keys

- Winning operators always receive exact copies of winning plaques**
- A winning tradition. History is important.**
- Good food and good coffee.**
- K3LR QSLs 100% via direct, bureau, LoTW, eQSL**
- An operator team that works very well together, trusts each other and won't let any member down.**
- Will, commitment and a clear vision to win by all**

15 meter position
Run Left – Mult Right



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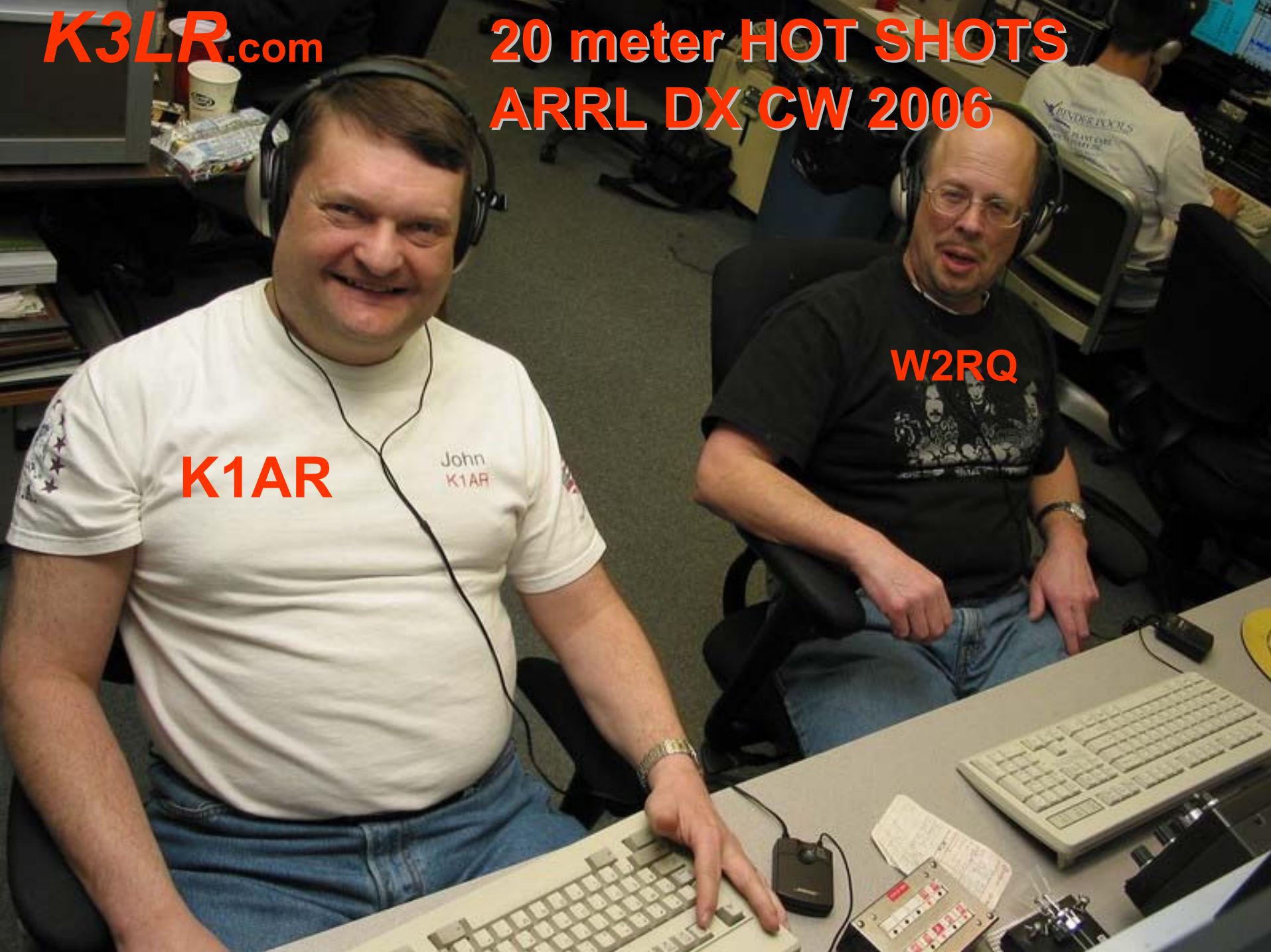
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**20 meter HOT SHOTS
ARRL DX CW 2006**

K1AR

John
K1AR

W2RQ



K1DG and N2NT on 20 meters



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Dave, KM3T on 40 M RUN during ARRL DX Phone 2006



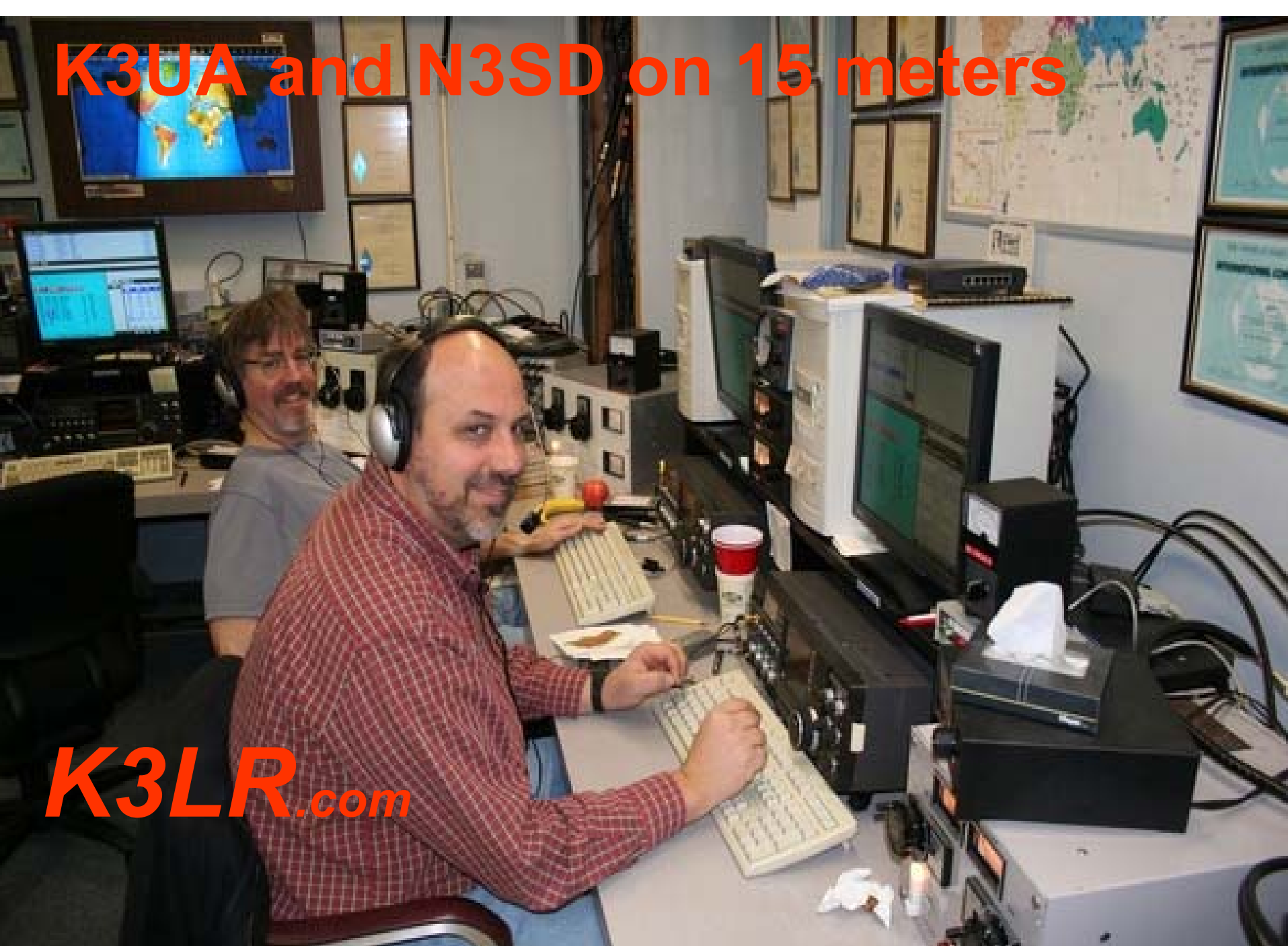
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W2RQ and KI4MTU on 40

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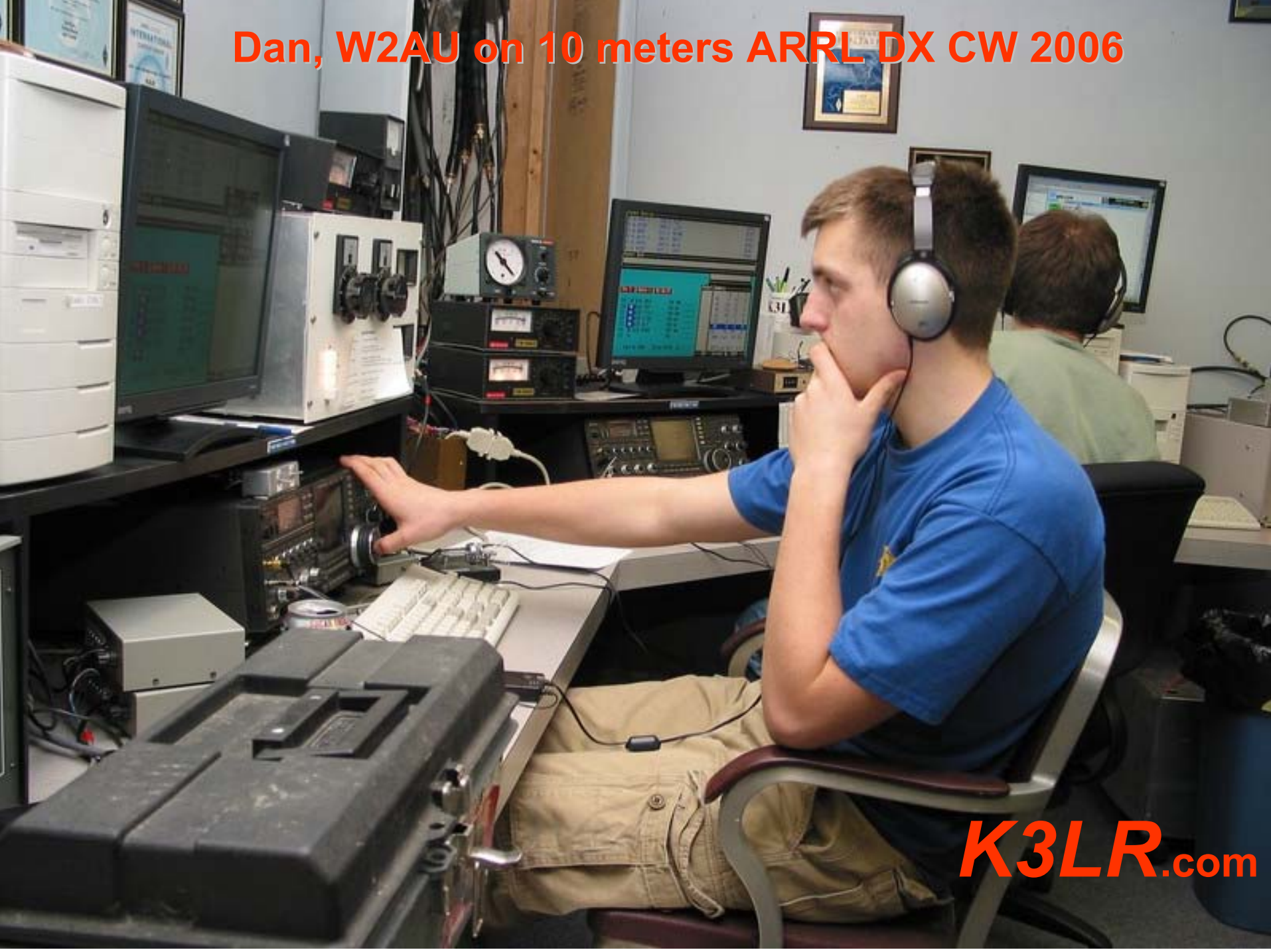


K3UA and N3SD on 15 meters



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Dan, W2AU on 10 meters ARRL DX CW 2006



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George, N3GJ on 10 meters



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Ken, K1EA on 160 meters ARRL DX CW



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160 meter station



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Beverage distribution
K9AY RAS

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80 Meters ARRL DX CW 2006 with K8CX



**ARRL DX CW
2006**

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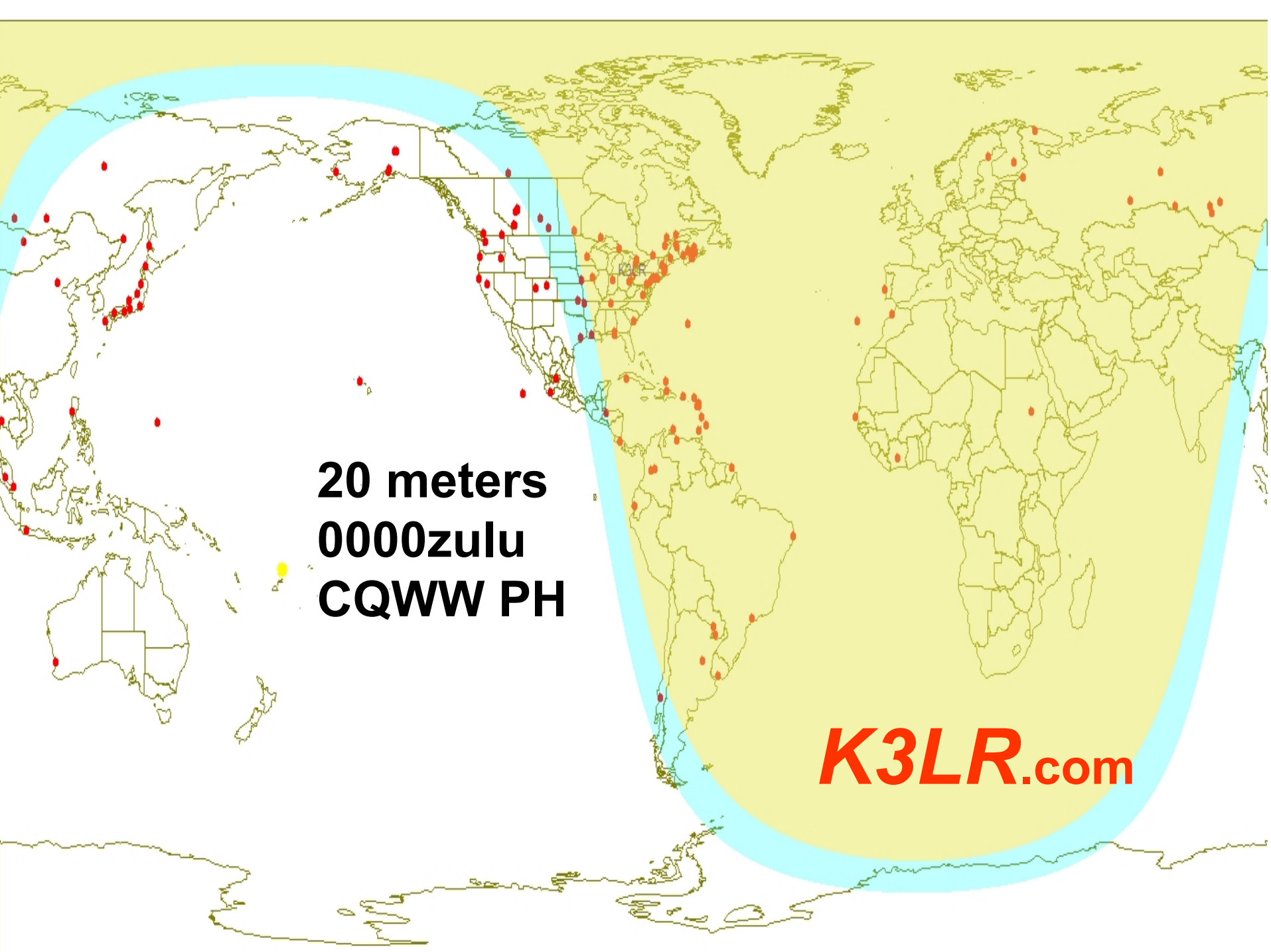
K3LR 2006 CQ WW Team

	W2AU		MODXR	KL9A	N6MJ		N2NL
K3UA	N6RT	N3GJ	K8CX	N2NC		K3LR	

2007 ARRL DX CW K3LR Multi Multi Team

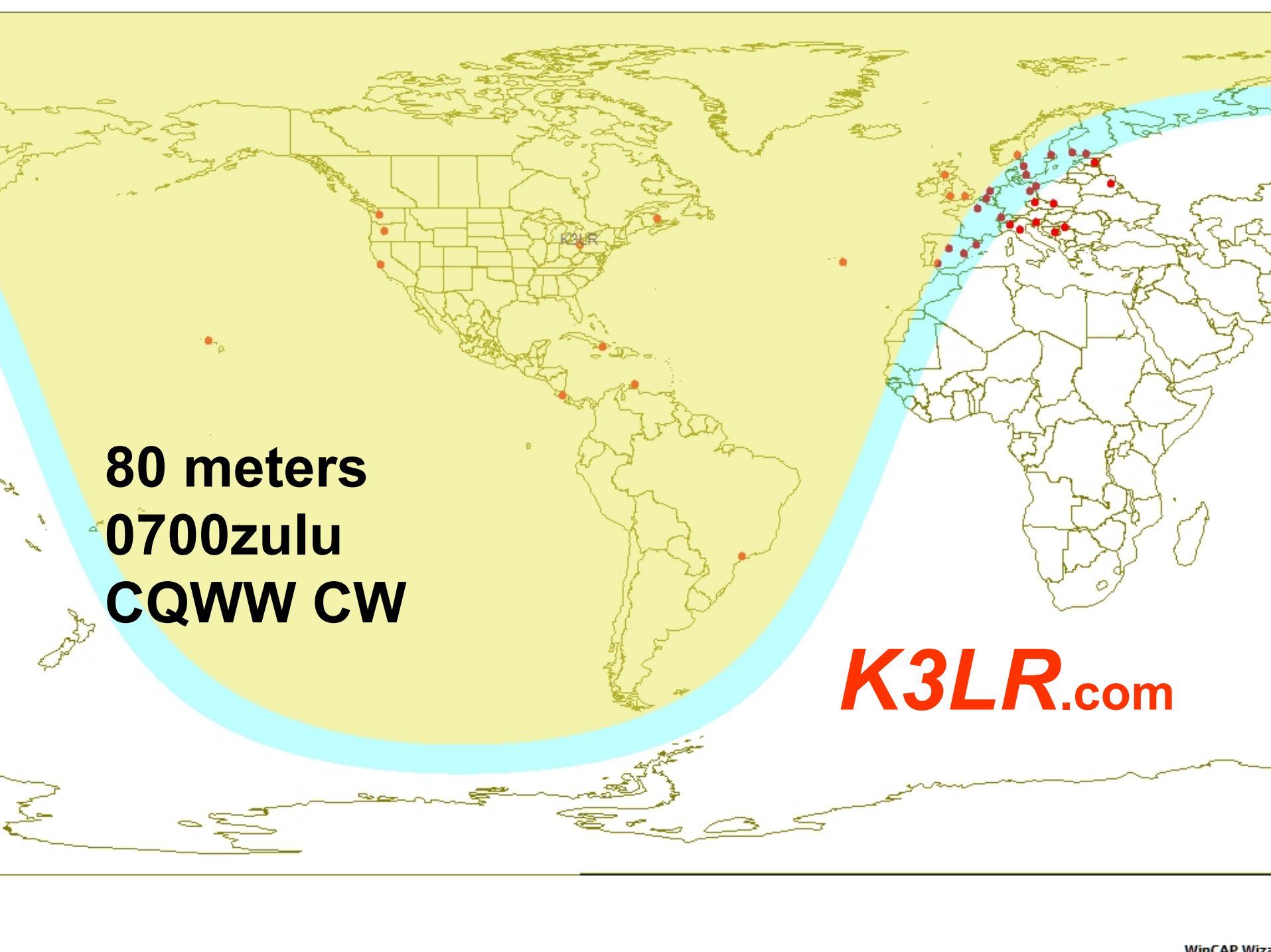


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20 meters
0000zulu
CQWW PH

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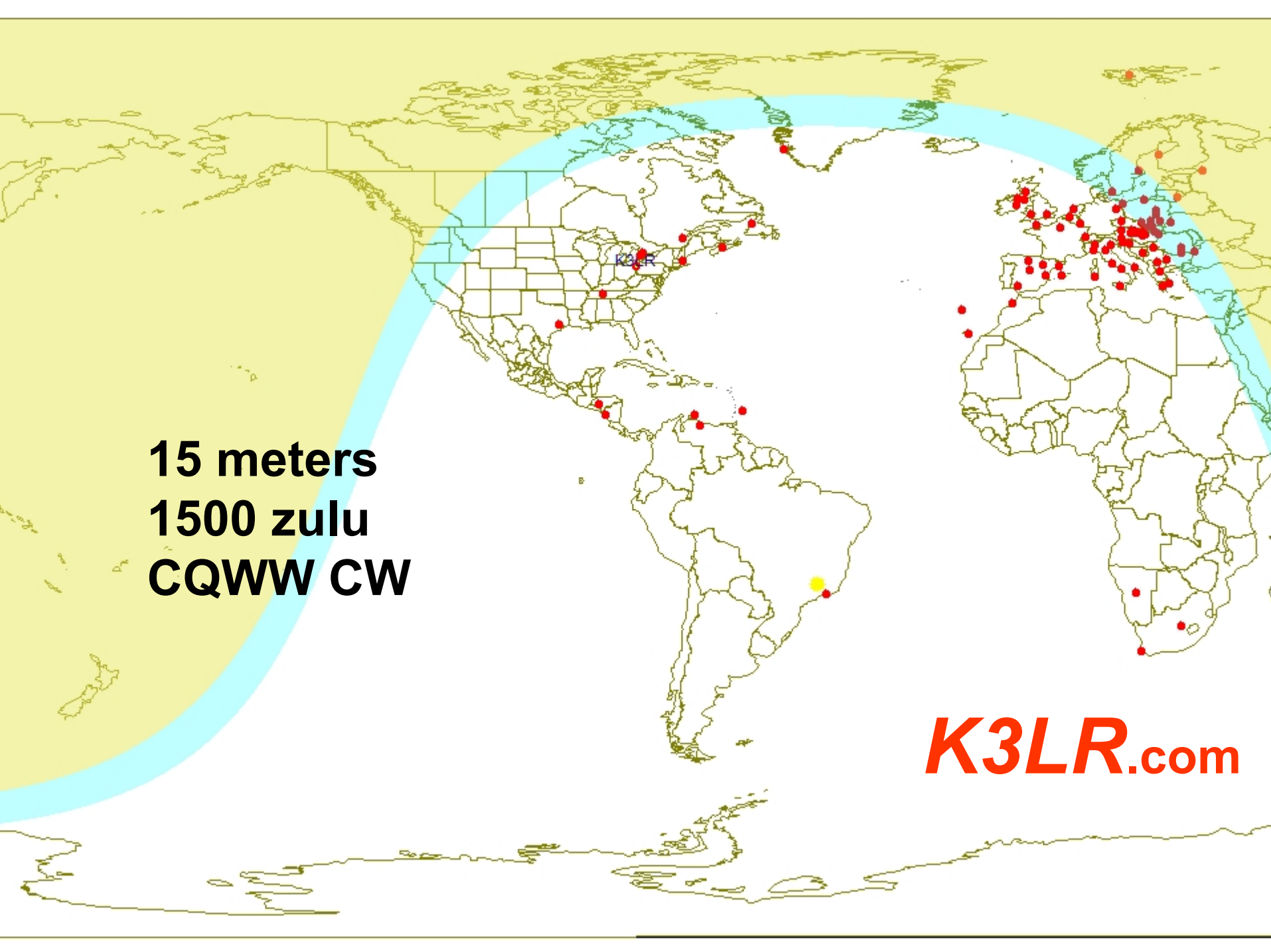


80 meters
0700zulu
CQWW CW

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15 meters
1500 zulu
CQWW CW

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