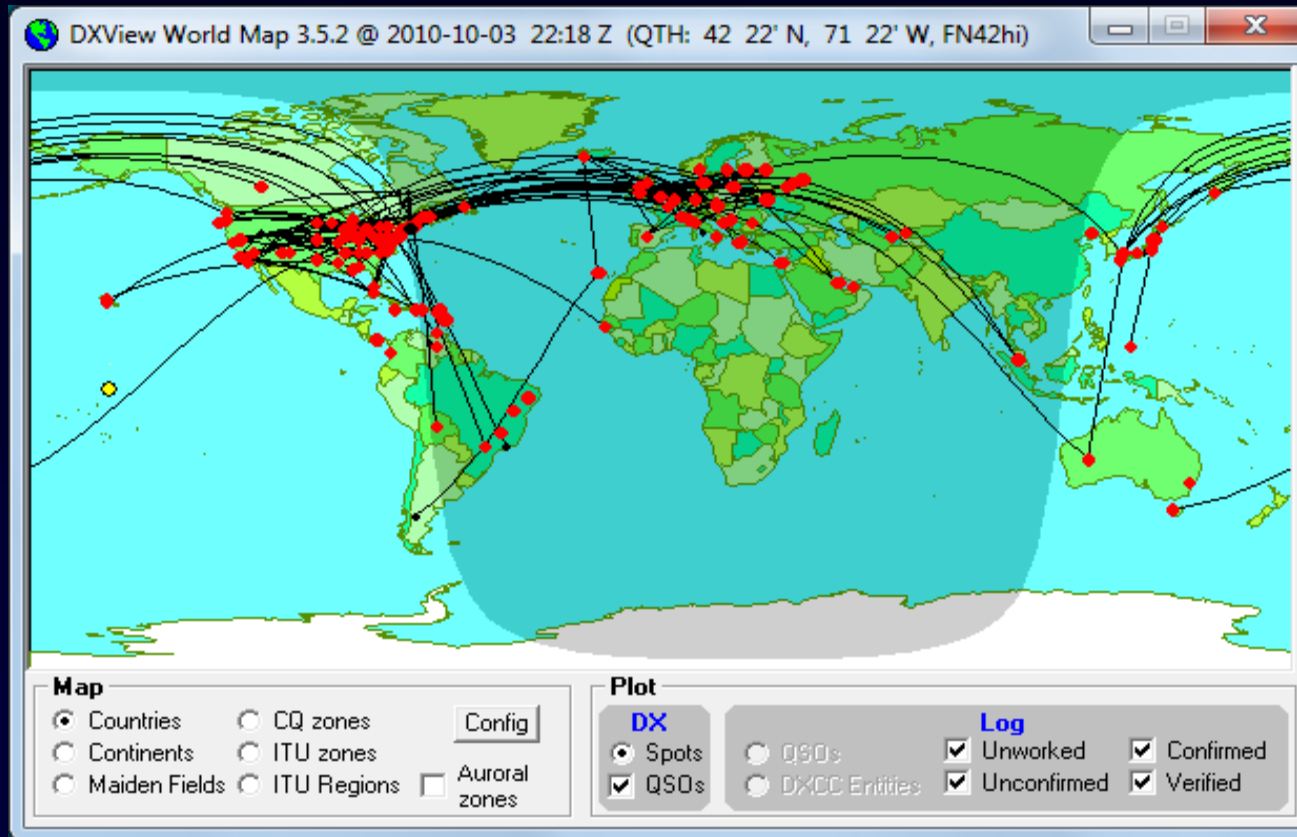


# DXing with DXLab

v16 2023-01



## Better DXing Through Software

# DXing

The art and science  
of making two-way contacts  
with distant amateur radio stations  
using phone, CW, or digital modes

# DXLab: Better DXing Through Software

1. Automates QSL wrangling and award submissions to liberate more time for DXing
2. Makes time spent DXing more productive by helping you
  - Find the DX you need
  - Work the DX you need

# DXLab: Better DXing Through Software

1. Automates **QSL wrangling** and award submissions to liberate more time for DXing
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# Wrangling Electronic and Hardcopy QSLs

- Submit QSOs to LotW & eQSL, and download QSLs
- Request hardcopy QSLs by sending outgoing QSL cards
  - Find QSL routes
  - Track responses
- Update DXing objectives as QSLs are received
- Submit QSLs for Award Credit

# Electronic QSL Automation

- eQSL.cc
  - Database of known Authenticity Guaranteed (AG) participants
  - Optional automatic upload as QSOs are logged
  - One-click download of new confirmations and award progress update
- LotW
  - Database of known participants with date of last submission
  - Optional automatic upload as QSOs are logged
  - One-click download of new confirmations and award progress update
  - Show QSOs that should be confirmed via LoTW, but aren't

# Identifying Missing LoTW QSLs

- DXLab's LoTW database contains all stations known to participate in LoTW, and the date at which each last submitted QSOs to LoTW
- You can identify all unconfirmed QSOs with stations known to participate in LoTW that have submitted QSOs to LoTW after the QSO date
  - contact your QSO partner
  - Ask them to submit your QSO, or correct the mismatch and resubmit

# Hardcopy QSL Automation

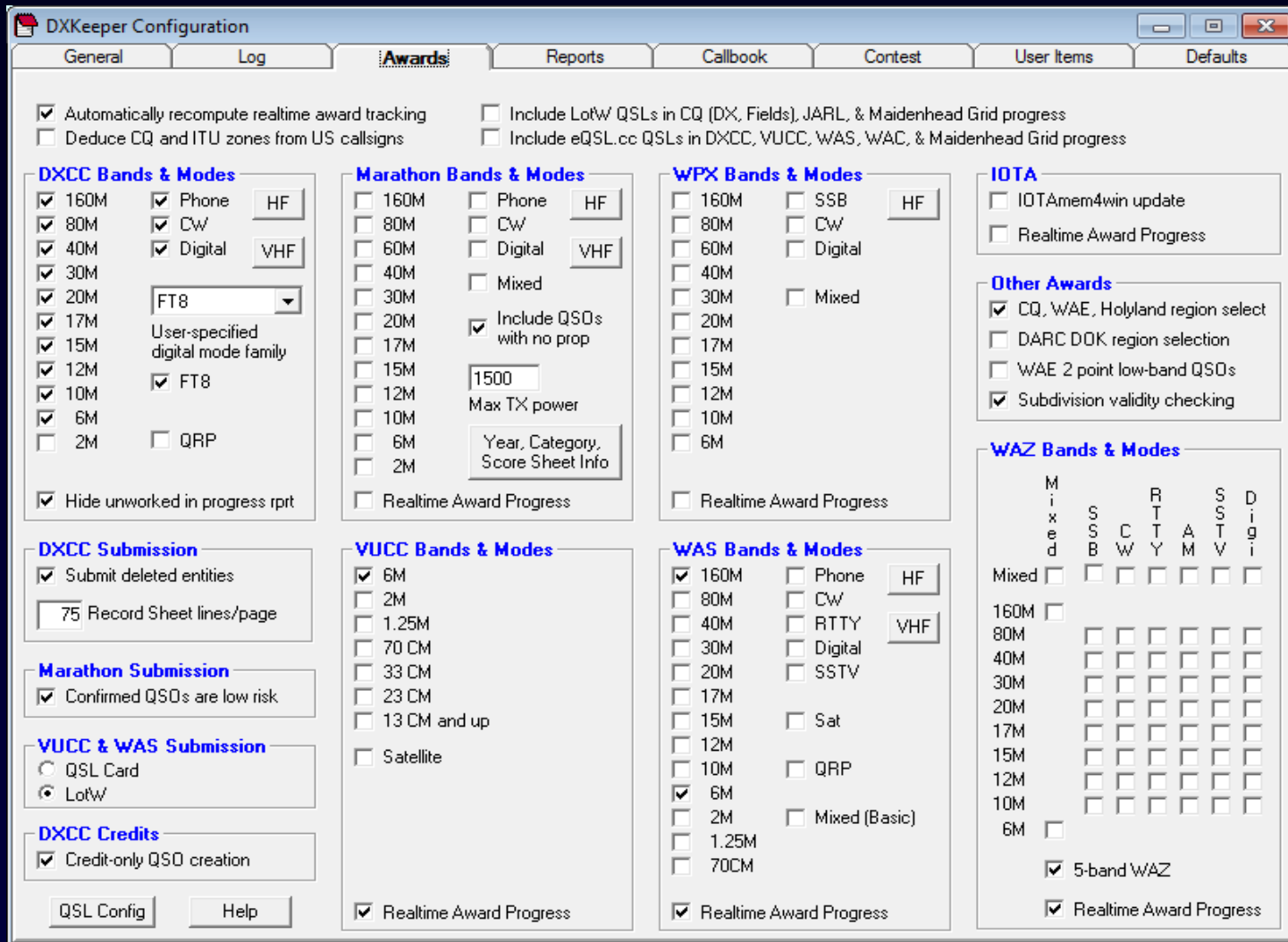
You can

- Generate QSL cards or Labels requesting confirmations **needed** for DXCC, IOTA, Marathon, VUCC, WAS, WAZ, and WPX
- Locate QSL routes from more than 80 web-accessible sources
- Generate address labels or print envelopes
- Use full-page printers and individual label printers



# DXing Objectives Drive Automation

You can specify the bands and modes you are pursuing for each of DXCC, IOTA, Marathon, VUCC, WAS, WAZ, and WPX



# QSL Card Printing

DXKeeper Print Preview

Next Print Left margin: .117 in Width: 10.333 in Top margin: .117 in Height: 8.267 in

Dave Bernstein  
25 Glezen Lane  
Wayland, MA 01778

**AA6YQ**

Middlesex County  
FN42hi  
USA

**Confirming a 2X QSO with AP2TN**

Date	Time	Freq	Mode	RST	QSL?	Notes
02-Sep-10	2058Z	10.102	CW	599	please!	

printed by DXLab freeware [www.dxlabsuite.com](http://www.dxlabsuite.com)

Dave Bernstein  
25 Glezen Lane  
Wayland, MA 01778

**AA6YQ**

Middlesex County  
FN42hi  
USA

**Confirming a 2X QSO with A51A**

Date	Time	Freq	Mode	RST	QSL?	Notes
10-Sep-10	2354Z	7.005	CW	599	please!	

printed by DXLab freeware [www.dxlabsuite.com](http://www.dxlabsuite.com)

Dave Bernstein  
25 Glezen Lane  
Wayland, MA 01778

**AA6YQ**

Middlesex County  
FN42hi  
USA

**Confirming a 2X QSO with JT5DX**

Date	Time	Freq	Mode	RST	QSL?	Notes
19-Sep-10	2323Z	18.075	CW	599		

printed by DXLab freeware [www.dxlabsuite.com](http://www.dxlabsuite.com)

Dave Bernstein  
25 Glezen Lane  
Wayland, MA 01778

**AA6YQ**

Middlesex County  
FN42hi  
USA

**Confirming 2X QSOs with VQ9LA**

Date	Time	Freq	Mode	RST	QSL?	Notes
17-Sep-09	1522Z	18.087	CW	599		
21-Feb-10	0112Z	10.117	CW	599		
08-Aug-10	0144Z	7.002	CW	599		
28-Aug-10	0101Z	3.508	CW	599		

printed by DXLab freeware [www.dxlabsuite.com](http://www.dxlabsuite.com)

# QSL Card Printing

Wayland, Massachusetts  
Middlesex county

**AA6YQ**

Grid: FN42hi  
42° 20' N  
71° 25' W

Confirming a 2X QSO with 5T0JL via ON8RA

Date	Time	Freq	Mode	RST	QSL?	Notes
28-Jul-11	1906Z	24.894	CW	579		

printed by DXLab freeware [www.dxlabsuite.com](http://www.dxlabsuite.com)



# QSL Label Printing

DXKeeper Print Preview

Next Print Left margin: .117 in Width: 8.267 in  
Top margin: .117 in Height: 10.333 in

AA6YQ cfms a 2X QSO with AP2TN

Date	Time	Freq	Mode	RST
02-Sep-14	2058Z	10.102	CW	599

AA6YQ cfms a 2X QSO with A51A

Date	Time	Freq	Mode	RST
10-Sep-14	2354Z	7.005	CW	599

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Date	Time	Freq	Mode	RST
19-Sep-14	2323Z	18.075	CW	599

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Date	Time	Freq	Mode	RST
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28-Aug-10	0101Z	3.508	CW	599

# Hardcopy QSL Automation



You can

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- Locate QSL routes from more than 80 web-accessible sources
- Generate address labels or print envelopes
- Use full-page printers and individual label printers
- Keep track of requested QSLs not yet received

# QSL Route Discovery

Pathfinder 5.2.7 {Script error notifications are hidden}: results from VK Callbook for VK3ZL

2020 X HC VK3ZL Buck QRZ Google K2DSL 425DXN IK3QAR Config  
RAC VK CB Club Log QRZ RU HamQTH DB0SDX JJ1WTL hamdb Help

  Register of Radiocommunications Licences

[Search Register](#)  
[Licences by Sub Service](#)  
[Site Location Map](#)  
[Spectrum Areas Map](#)  
[Frequency Range Search](#)  
[Access Areas](#)  
[Antennas](#)  
[400MHz Search](#)  
[800MHz Search](#)  
[Direction Finder](#)  
[Site Photo Search](#)  
[Data Download](#)  
[Offline RRL](#)  
[RRL Archive](#)  
[Class Licences](#)  
[Help](#)

RRL data as of: 05/May/2021 15:25

### Client Details






Client Number	137687
Licensee	Arie Groen
Postal Address	110 School Road BALLIANG EAST VIC 3340
Fee Status	Normal

### Licences Held

Results 1 - 2 of 2 licences.

BSL/Licence No	Service	Sub Service	Date of Expiry	Callsign(s)	Ship Name	Status
9950204/3	Amateur	Advanced	14/Mar/2022	VK3ZL		Granted
1303411/1	Amateur	Advanced	11/Mar/2022	VK3AMZ		Granted

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Australian Communications and Media Authority  
communicating | facilitating | regulating

# Hardcopy QSL Automation

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# QSLs Requested But Not Received

AA6YQ QSL aging analysis @ 05-May-2021

```
missing DXCC entities:      0
missing DXCC entity-bands:  1
missing DXCC entity-modes:  0

missing IOTA groups:        0

missing VUCC grid-bands:    2

missing WAS states:         0
missing WAS state-bands:    0
missing WAS state-modes:    0

missing WAZ zones:          0
missing WAZ zone-bands:     0
missing WAZ zone-modes:     0
missing WAZ zone-band-modes 0
```

Call	Band	Mode	QSO Date	DXCC	IOTA	Grid1	Grid2	Grid3	Grid4	State	CQ	QSL Date	Weeks	Expired	QSL_SENT_VIA	Need
LA6SL	6M	CW	21-Nov-2001	LA		JP50					14	24-Nov-2001	999			VUCC
CE4WJK	6M	SSB	19-Sep-2011	CE		FF45					12	05-Oct-2011	500		D	VUCC
5B4/YL2RR	6M	SSB	02-May-2014	5B							14	13-Jan-2021	16		D	DXCC (entity-band)

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1. Automates QSL wrangling and **award submissions** to liberate more time for DXing
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# Award Submission Automation

You can

- Generate Award Progress Reports
- Identify confirmed QSOs for which award credit would advance progress towards your DXing objectives, and generate the required submission files (DXCC, IOTA, Marathon, VUCC, WAS, WAZ, WPX)
- Update confirmed QSOs to reflect award credit granted (DXCC, IOTA)

# Award Progress Reports

- DXCC & Challenge
- CQ DX
- CQ DX Marathon
- CQ Field
- Gridsquares
- IOTA
- TOPLIST
- VUCC
- Worked All Continents
- Worked All CQ Zones
- Worked All Europe
- Worked All ITU Zones
- Worked All Prefixes
- Worked All US States
- Worked All Belgian Provinces
- Worked All British Areas
- Worked All Canadian Provinces
- Worked All French Departments
- Worked All DARC DOKs
- Worked All Holyland Areas
- Worked All Hungarian Counties
- Worked All Italian Provinces
- Worked All Japanese Cities
- Worked All Japanese Guns
- Worked All Japanese Prefectures
- Worked All Korean Districts
- Worked All Russian Oblasts
- Worked All Russian Districts
- Worked All Summits on the Air (SOTA)
- Worked All Swiss Cantons
- Worked All US Counties
- Worked All US Gridsquares (FFMA)
- Worked All User-defined Counters

# DXCC Progress Report

Confirmed DXCC Countries (excludes deleted countries)

```

mixed      340
phone     340
cw        339
digi      336
FT8       222
160m     258
80m       312
40m       333
30m       325
20m       339
17m       336
15m       338
12m       331
10m       331
6m        111
2m        002
Sat       003
    
```

Top (9 HF Bands, Phone, CW, Digital, excludes deleted countries)

```

topmode    1015
topband    2903
toplist    3918
    
```

Entity	Prefix Deleted	Mixed	Phone	CW	DIGI	FT8	160M	80M	40M	30M	20M	17M	15M	12M	10M	6M	2M	Card	LotW	Sat
Sov. Military Order Of Malta	1A	V	V	V	V	C	V	V	V	V	V	V	V	V	V				V	V
Spratly Islands	1S	V	V	V	V			V	V		V	V	V	V	V				V	V
Monaco	3A	V	V	V	V	W		V	V	V	V	V	V	V	V				V	C
Agalega & St Brandon Islands	3B6	V	V	V	V		V	V	V	V	V	V	V	V	V				V	C
Mauritius Island	3B8	V	V	V	V	C	V	V	V	V	V	V	V	V	V				V	C
Rodriguez Island	3B9	V	V	V	V	C	V	V	V	V	V	V	V	V	V				V	C
Equatorial Guinea	3C	V	V	V	V		V	V	V	V	V	V	V	V	V				V	V
Annobon	3C0	V	V	V	V		V	V	V	V	V	V	V	V	V				V	V
Conway Reef	3D2-C	V	V	V	V	W		V	V	V	V	V	V	V	V				V	V
Fiji Islands	3D2-F	V	V	V	V	C	V	V	V	V	V	V	V	V	V				V	V
Rotuma	3D2-R	V	V	V	V	W		V	V	V	V	V	V	V	V				V	C
Swaziland	3DA	V	V	V	V	C		V	V	V	V	V	V	V	V				V	C
Tunisia	3V	V	V	V	V	W	V	V	V	V	V	V	V	V	V				V	C
Viet Nam	3W	V	V	V	V			V	V	V	V	V	V	V	V				V	V
Guinea	3X	V	V	V	V		V	V	V	V	V	V	V	V	V				V	C
Bouvet Island	3Y-B	V	V	V	V			V	V	V	V	V	V	V	V				V	C
Peter 1 Island	3Y-P	V	V	V	V		V	V	V	V	V	V	V	V	V				V	C

# Award Submission Automation

You can

- Generate Award Progress Reports
- Identify confirmed QSOs for which award credit would advance progress towards your DXing objectives, and generate the required submission files (DXCC, IOTA, Marathon, VUCC, WAS, WAZ, WPX)
- Update confirmed QSOs to reflect award credit granted (DXCC, IOTA)

# Generated DXCC Record Sheet

AA6YQ DXCC LotW Record Sheet 30-Dec-2020

	Call	QSO Date	Band	Mode	Entity
0001	YE3WIL	27-11-2020	30M	FT8	Indonesia
0002	E44RU	11-01-2020	160M	FT8	Palestine
0003	HL5BLI	26-11-2020	30M	FT8	Republic of Korea

# Award Submission Automation

You can

- Generate Award Progress Reports
- Identify confirmed QSOs for which award credit would advance progress towards your DXing objectives, and generate the required submission files (DXCC, IOTA, Marathon, VUCC, WAS, WAZ, WPX)
- Update confirmed QSOs to reflect award credit granted (DXCC, IOTA)



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1. Automates QSL wrangling and award submissions to liberate more time for DXing
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# DXing With DXLab

- Introduction to the DXLab Suite
  - Drivers
  - Architecture
  - Multiple Views of Active DX
- Finding the DX You Need
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# Drivers

## 1. User-driven iterative development

- Online group with 4700+ participants
- Defect repairs get highest priority; goal is < 24 hours
- Public enhancement lists
- Frequent releases (several per month)

## 2. Powerful **and** Easy to Use

- Primarily for DXers
- Secondarily for casual operators

## 3. Runs on Windows NT, 2000, XP, Vista, 7, 8, 10, and 11

- and Mac in a virtual machine
- and Linux in a virtual machine

# DXing With DXLab

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# the DXLab Suite

Eight free applications that run individually

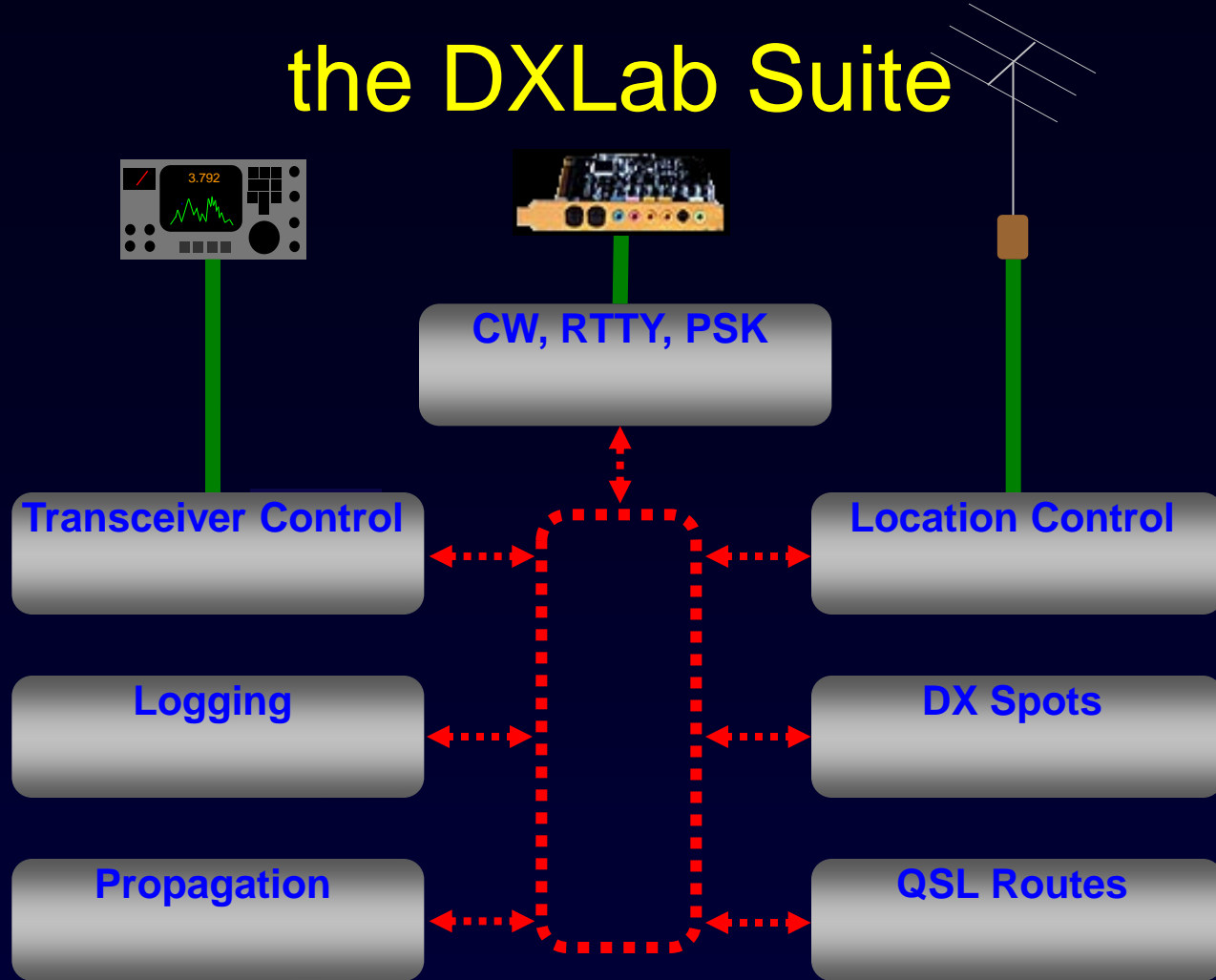
but

when run simultaneously sense each other's presence

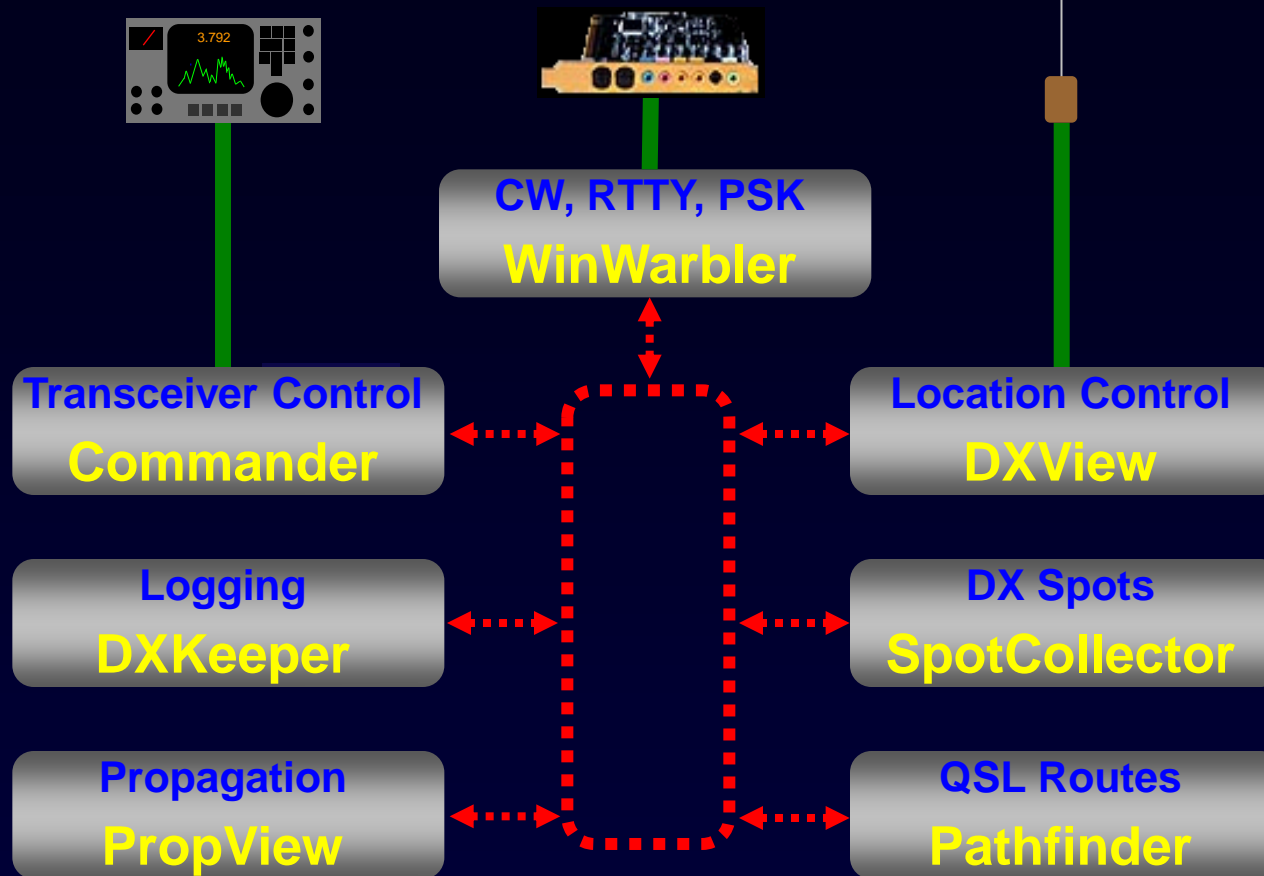
and

interoperate automatically

# the DXLab Suite

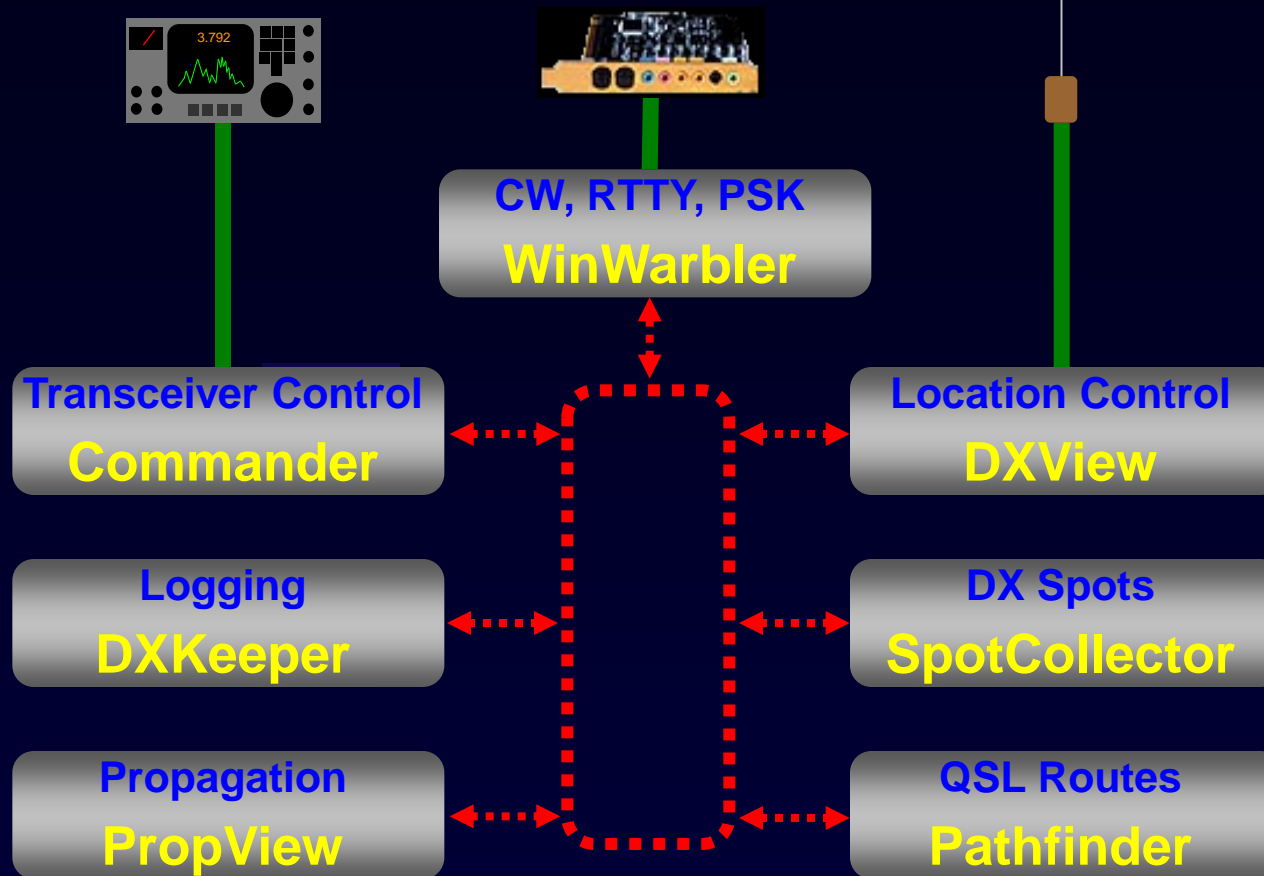


# the DXLab Suite





# the DXLab Suite



- Modular
- Loosely-coupled



# A Suite of DXing Applications

**DXKeeper 8.9.4 [CC,DXV,SC,WW] - AA6YQ.mdb : 18487 QSOs**

Log QSOs | QSL | Check Progress | my QTHs | Import QSOs | Export QSOs

**QSO: Jordan**

call: JY4NE name: QTH: mode: RTTY via: tx freq: 14.086765 begin: 9/20/2010 18:37 sent: 599 rcvd: 599 tx band: 20M rx freq: 14.086764 end: 9/20/2010 18:37 power: 1500 code: 342 DXCC: JY entity: Jordan

New | Save | Undo | CBA | Delete | Report | Plot | 18487 | Adv | RAT | Capture | Config | Help

Call	DXCC	Starting UTC	Band	Mode	Sent	Rcvd	Name
JT5DX	JT	9/19/2010 23:23	17M	CW	599	599	hadraabal
RXQAT	UA	9/20/2010 01:01	20M	RTTY	599	599	Vit
KP4JFR	KP4	9/20/2010 01:11	20M	RTTY	599	599	Jose
JY4NE	JY	9/20/2010 18:37	20M	RTTY	599	599	

Sort: UTC | Call | Adv | Filter: None | EY7AD | X | Call | DXCC | Date | Since | Sel | LotW | Broke

**SpotCollector 5.3.9 @ 2010-10-04 19:59 Z [CC,DXK,DXV,WW] (log: AA6YQ.mdb)**

WVW 10.04 1806 Z - Outgoing spot

Call: 14.086.2 Freq: Cluster: Spot source status: Report | Stats | Config | Help

CallSign	Pfx	Freq	Band	Mode	LastTime	Notes	NAE	NAM	NAW	SA	EU	AF	AS	OC	UN	LastOrig	Source	
PS7DX	FY	14.018.3	20M	CW	10/4/2010 1959	CQ 8 dB 21 WPM	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA-E	N4ZR-#
SQ9CNS	SP	3.541.0	80M	CW	10/4/2010 1959	CQ 16 dB 19 WPM											EU	DL5Q-#
LA3TQ	LA	14.017.8	20M	CW	10/4/2010 1959	CQ 18 dB 23 WPM					Y						EU	S52K-#
IK0RCD	I	14.025.6	20M	CW	10/4/2010 1959	CQ 13 dB 18 WPM	Y	Y	Y								NA-M	K8ND-#
9A/SP9EVP	9A	7.017.0	40M	CW	10/4/2010 1959	CQ 21 dB 26 WPM					Y						EU	DL5Q-#
UA9MA	UA0	1.822.5	160M	CW	10/4/2010 1959	CQ 10 dB 25 WPM					Y						EU	EI6IZ-#

Sort: First | Call | Last | Freq | Rcv | Az | Filter: Band and Mode | Need | Call | DXCC | Freq | Tag | Band | Mode | Cont | Origin | AutoHide | Audio | LotW | eQSL | ALT | SQL 1 | SQL 2 | SQL 3 | SQL 4 | SQL 5 | SQL 6 | SQL 7 | SQL 8 | Color codes: verified, unneeded, unconfirmed, special

**DXView World Map 3.5.2 @ 2010-10-04 19:57 Z (QTH: 42 22' N, 71 22' W, FN42h)**

Map: Countries, Continents, Maiden Fields | CQ zones, ITU zones, ITU Regions | Auroral zones | Config

Plot: DX (Spots, QSOs, DXCC Entities), Log: AA6YQ.mdb (Unworked, Confirmed, Unconfirmed, Verified)

**WinWarbler 6.8.5 for AA6YQ @ 2010-10-04 19:59 Z [CC,DXK,DXV,SC]**

**QSO Info (Receive Pane 0)** local: 2010-10-05 00:59 Xcvr Freq

Call: EY7AD rst S Name: Rakhim DXCC: EY Begin: Log: 14.086.19

QSL: Via: DIRECT - I cq: 17 itu: 30 QTH: 735700 Cont: AS End: Spot: TX: 14.086.19

Buro: Grid: MN30 Pri sub: Sec sub: Config | Help

LotW: IDTA: Az: Path: S Comment:

QUOTHQO DX CQ DX DE SV1PAS SV1PAS PSE K  
 DS1PAUSSVPAS DEHPFF,PD1BPSE K...  
 ))ITCO DX CQ DX DE SV1PAS SV1PAS PSE EEUQ00ESCO DX CQ DX DE SV1PAS SV1PAS PSE K  
 S MSQVAS UV1PAS DE PD1ANB,PD1ANB PSE K...QRZ QRZ DE SV1PAS SV1PAS PSE K

**Commander 8.5.8 [icom IC-7200] @ 19:59:42 Z 14.086.19 LSB**

VFO A: 20M 9 VFO B: 21.008.10

Filters: Group: normal Width: 0 PBT 1: 50 PBT 2: 50

PTT: Rcvng TX RX

AL-1200 Plate: 7.75 Load: 4 Band: 20

Mode: LSB (LSB (normal), USB (normal), CW (narrow), CW-R (narrow), FM (wide), AM (wide), RTTY (wide), RTTY-R (wide))

Bandspeed | Msgs | Scan | Memory Banks | Config | Help

**dx Commander**

Range: 1 5 10 25 50 100

14.088.5 E17BFB  
 14.088.0 E44AHE  
 14.087.5 UR7ITU  
 14.086.5 PF7DKW  
 14.085.5 LX8RTTY  
 14.084.5 SP9GKJ

Band: 160 80 60 40 30 20 17 15 12 10 6 4 2 .7

Spotcollector | Config | Help

**Macros: rty sample**

F5: AFC Call F7: Over SK log ALT F9: ur rpt F10: tu log grz? F11: de mgcall F12: mgcall (3)

80m: 40m: 30m: 20m: 17m: 15m: 12m: 10m: sh F5: sh F6: sh F7: sh F8: sh F9: sh F10: sh F11: sh F12:

**RTTY receive (soundcard)** Freq: 14.084.065 Signal level & squelch: 61

AFC  Notch  BPF  DPF  Reverse  Def  Opt

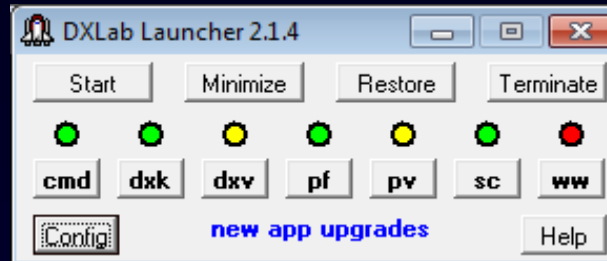
**RTTY transmit (soundcard)** Freq: 14.084.065 net

Reverse  Start  Stop  Abort

**Operating Mode** CW PSK31 Phone PSK63 RTTY PSK125

**Tuning Display** Vert height: 2.0 Horiz zoom: 1 Horiz pan: 14083 14084 14085 14086

# Single Point of Control: DXLab Launcher



- Installation
- Upgrade
- Startup
- Shutdown

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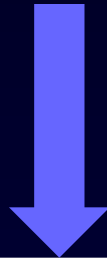
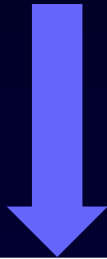
# Active DX Database

Telnet  
Clusters

Reverse  
Beacon  
Network

DX  
Summit

WSJT-X



Call	Freq	QSX	Mode	First	Last	EU	AF	SA	NA-E	NA-M	NA-W	OC	
P5DX	14.005	14.007	CW	0117Z	0341Z	Y					Y	Y	
KP1RY	21.080	21.085	RTTY	0245Z	0356Z	Y	Y	Y	Y	Y			

Active DX Database

# Multiple Views of Active DX

DX Spot Sources



Active DX Database

What DX stations are QRV ?

# Multiple Views of Active DX

DX Spot Sources



Active DX Database

Propagation  
Prediction  
(VOACAP)

Which DX stations can I likely copy ?



# Multiple Views of Active DX

DX Spot Sources

Active DX Database



Propagation  
Prediction  
(VOACAP)



Log Database

DXCC needs

IOTA needs

Leaderboard needs

Marathon needs

VUCC needs

WAS needs

WPX needs

WAZ needs

Logged  
QSOs

What QSOs and QSLs are “Needed” for the awards I’m pursuing on the bands and modes I’ve specified ?

# Multiple Views of Active DX

DX Spot Sources

Active DX Database

Propagation  
Prediction  
(VOACAP)

LotW  
Database

eQSLAG  
Database

What DX stations QSL  
via LotW and eQSL ?

Log Database

DXCC needs

IOTA needs

Leaderboard needs

Marathon needs

VUCC needs

WAS needs

WPX needs

WAZ needs

Logged  
QSOs

# Tabular View of Active DX

DX Spot Sources

Active DX Database

Propagation Prediction (VOACAP)

LotW Database

eQSLAG Database

View Generator

Log Database

DXCC needs

IOTA needs

Leaderboard needs

Marathon needs

VUCC needs

WAS needs

WPX needs

WAZ needs

Logged QSOs

The screenshot shows a software window with a menu bar and a toolbar. The main area contains a table with columns for various fields, including call signs, frequencies, and other data. The table has several rows of data, with some rows highlighted in yellow. The interface appears to be a data management or reporting tool.

Tabular

# Tabular View of Active DX

## Selected Bands and Modes

SpotCollector 7.6.6 @ 2017-04-16 19:20 Z [CC,DXK,DXV,PV,WW] 8168 entries (log: AA6YQ.mdb)

WWV 04-16 1805 Z

Outgoing spot: Call: 14.085.0 Freq Cluster

Spot source status: [6 green circles]

Report Stats Prop Config Help

Need	Call	Prefix	Band	Mode	FirstTime	LastTime	Freq	QSX	Pri	CQ	IOTA	DXGrid	ODX	EU	AF	SA	NA-E	NA-M	NA-W	AS	OC	SP SNR	SP P	LP SNR	LP P
	TA7I	TA	20M	CW	16 1919	16 1919	14,027.4			20		KM69	3830	Y								29	82	-40	1
	HB20MDC	HB	20M	SSB	16 1915	16 1919	14,216.0			14		JN47	515			Y		Y				28	65	-62	
	HA7JIV	HA	30M	CW	16 1918	16 1919	10,138.0			15		JN97	3931	Y								13	55	-155	
	PY1TJ	PY	10M	CW	16 1914	16 1919	28,035.0		RJ	11		GG87	4137			Y						-5	23	-56	
	N2MM	K	20M	CW	16 1911	16 1919	14,028.8		NJ	5		FM29	3727	Y								14	63	-103	
	CE7VPQ	CE	10M	SSB	16 1909	16 1919	28,445.0			12		FE33	4311			Y						15	41	-61	
	5K4R	HK	20M	SSB	16 1839	16 1919	14,214.0			9		FJ15	2304	Y		Y						35	92	-66	
	KM4TVU	K	20M	SSB	16 1919	16 1919	14,316.5		GA	5		EM73	3727	Y								43	86	-88	
D	3Y0RY	3Y-B	20M	RTTY	16 1920	16 1920	14,085.0			38	AN-002	JD14	1	Y								11	52	-50	
	KC1YL	K	20M	SSB	16 1903	16 1920	14,315.0		CT	5		FN31	319	Y			Y					27	70	-73	
	HI8/KB1KK	HI	20M	RTTY	16 1920	16 1920	14,074.0			8		FK49	3830	Y								44	100	-82	
	8Q7VB	8Q	30M	CW	16 1717	16 1920	10,107.0	10,108.0		22	AS-013	MJ64	3486	Y							Y	-5	1	-117	
	PU2KOB	PY	10M	RTTY	16 1920	16 1920	28,076.0		SP	11		GG57	1047				Y					-8	18	-63	
	V31MA	V3	15M	CW	16 1920	16 1920	21,004.1			7		EK57	2503						Y			37	91	-49	

Sort: First, Last, Rcv, Call, Freq, Az

Filter: Band and Mode and Origin

Color codes: verified, unneeded, unconfmd, unwrkd B or M, unwrkd counter, special tag, LotW, eQSL AG, LotW & eQSL AG

Font color indicates "needed" DX stations

Background color indicates LotW and eQSL participation

# Band Filter

SpotCollector Band Filter

Transceiver Band Only  Enable Start/End & Max Origin DX Filtering

Band	Enable	Start UTC	End UTC	Max origin DX	Band	Enable	Start UTC	End UTC	Max origin DX
630m	<input type="checkbox"/>				8m	<input type="checkbox"/>			
160m	<input checked="" type="checkbox"/>	SS-30	SR+45		6m	<input checked="" type="checkbox"/>			500
80m	<input checked="" type="checkbox"/>	SS-60	SR+90		5m	<input type="checkbox"/>			
60m	<input type="checkbox"/>				4m	<input type="checkbox"/>			
40m	<input checked="" type="checkbox"/>				2m	<input type="checkbox"/>			
30m	<input checked="" type="checkbox"/>				1.25m	<input type="checkbox"/>			
20m	<input checked="" type="checkbox"/>				70cm	<input type="checkbox"/>			
17m	<input checked="" type="checkbox"/>				33cm	<input type="checkbox"/>			
15m	<input checked="" type="checkbox"/>				23cm	<input type="checkbox"/>			
12m	<input checked="" type="checkbox"/>				12cm	<input type="checkbox"/>			
10m	<input checked="" type="checkbox"/>				?	<input type="checkbox"/>			

None Top Low Tri Warc HF VHF UHF Micro All

**Sunrise & Sunset**  
Sunrise UTC  Sunset UTC

**Ignore**  
 Start & End times  Max origin DX

# Mode Filter

SpotCollector Mode Filter

<input checked="" type="checkbox"/> SSB	<input type="checkbox"/> AM	<input type="checkbox"/> FM	<input checked="" type="checkbox"/> CW	<input type="checkbox"/> CCW	<input checked="" type="checkbox"/> RTTY	<input type="checkbox"/> ?		
<input type="checkbox"/> Amtor	<input type="checkbox"/> AmtorFEC	<input type="checkbox"/> Ascii	<input type="checkbox"/> Hell	<input type="checkbox"/> FMHell	<input type="checkbox"/> PSKHell	<input type="checkbox"/> Hell80		
<input type="checkbox"/> ATV	<input type="checkbox"/> FAX	<input type="checkbox"/> SSTV	<input type="checkbox"/> HFSK	<input type="checkbox"/> PAX	<input type="checkbox"/> PAX2			
<input type="checkbox"/> Packet	<input type="checkbox"/> Clover	<input type="checkbox"/> GTOR	<input type="checkbox"/> Pactor	<input type="checkbox"/> Pactor2	<input type="checkbox"/> Pactor3	<input type="checkbox"/> WINMOR		
<input checked="" type="checkbox"/> PSK31	<input checked="" type="checkbox"/> PSK63	<input checked="" type="checkbox"/> PSK125	<input type="checkbox"/> PSK250	<input type="checkbox"/> PSK63F	<input type="checkbox"/> PSK220F	<input type="checkbox"/> MT63		
<input type="checkbox"/> QPSK31	<input type="checkbox"/> QPSK63	<input type="checkbox"/> QPSK125	<input type="checkbox"/> QPSK250	<input type="checkbox"/> PSK10	<input type="checkbox"/> PSKFEC31	<input type="checkbox"/> Q15	<input type="checkbox"/> Q65	
<input type="checkbox"/> PSKAM10	<input type="checkbox"/> PSKAM31	<input type="checkbox"/> PSKAM50	<input type="checkbox"/> MFSK8	<input type="checkbox"/> MFSK16	<input type="checkbox"/> FSK31	<input type="checkbox"/> FSK441		
<input type="checkbox"/> Chip64	<input type="checkbox"/> Chip128	<input type="checkbox"/> RDS	<input type="checkbox"/> Thor	<input type="checkbox"/> DominoEX	<input type="checkbox"/> DominoF	<input type="checkbox"/> ALE		
<input type="checkbox"/> Olivia	<input type="checkbox"/> Contestia	<input type="checkbox"/> RTTYM	<input type="checkbox"/> Voi	<input type="checkbox"/> Throb	<input type="checkbox"/> ThrobX	<input type="checkbox"/> JS8	<input type="checkbox"/> JT9	
<input type="checkbox"/> JT44	<input type="checkbox"/> JT4A	<input type="checkbox"/> JT4B	<input type="checkbox"/> JT4C	<input type="checkbox"/> JT4D	<input type="checkbox"/> JT4E	<input type="checkbox"/> JT4F	<input type="checkbox"/> JT4G	
<input checked="" type="checkbox"/> FT4	<input type="checkbox"/> FST4	<input checked="" type="checkbox"/> FT8	<input type="checkbox"/> WSPR	<input type="checkbox"/> JT6M	<input type="checkbox"/> JT65	<input type="checkbox"/> JT65A	<input type="checkbox"/> JT65B	<input type="checkbox"/> JT65C
<input type="checkbox"/> ISCAT	<input type="checkbox"/> MSK144	<input type="checkbox"/> QRA64	<input type="checkbox"/> QRA64A	<input type="checkbox"/> QRA64B	<input type="checkbox"/> QRA64C	<input type="checkbox"/> QRA64D	<input type="checkbox"/> QRA64E	

None All

# Tabular View of Active DX

## Propagation Forecasting

SpotCollector 7.6.6 @ 2017-04-16 19:20 Z [CC,DXK,DXV,PV,WW] 8168 entries (log: AA6YQ.mdb)

WWV 04-16 1805 Z

Outgoing spot: Call: 14.085.0 Freq Cluster

Spot source status: [6 green circles]

Need	Call	Prefix	Band	Mode	FirstTime	LastTime	Freq	QSQ	Pri	CQ	IOTA	DXGrid	ODX	EU	AF	SA	NA-E	NA-M	NA-W	AS	OC	SP SNR	SP P	LP SNR	LP P
	TA7I	TA	20M	CW	16 1919	16 1919	14,027.4			20		KM69	3830	Y								29	82	-40	1
	HB20MDC	HB	20M	SSB	16 1915	16 1919	14,216.0			14		JN47	515			Y		Y				28	65	-62	
	HA7JIV	HA	30M	CW	16 1918	16 1919	10,138.0			15		JN97	3931	Y								13	55	-155	
	PY1TJ	PY	10M	CW	16 1914	16 1919	28,035.0			RJ	11	GG87	4137			Y						-5	23	-56	
	N2MM	K	20M	CW	16 1911	16 1919	14,028.8			NJ	5	FM29	3727	Y								14	63	-103	
	CE7VPQ	CE	10M	SSB	16 1909	16 1919	28,445.0			12		FE33	4311			Y						15	41	-61	
	5K4R	HK	20M	SSB	16 1839	16 1919	14,214.0			9		FJ15	2304	Y		Y						35	92	-66	
	KM4TVU	K	20M	SSB	16 1919	16 1919	14,316.5			GA	5	EM73	3727	Y								43	86	-88	
D	3Y0RY	3Y-B	20M	RTTY	16 1920	16 1920	14,085.0			38	AN-002	JD14	1	Y								11	52	-50	
	KC1YL	K	20M	SSB	16 1903	16 1920	14,315.0			CT	5	FN31	319	Y			Y					27	70	-73	
	HI8/KB1KK	HI	20M	RTTY	16 1920	16 1920	14,074.0			8		FK49	3830	Y								44	100	-82	
	8Q7VB	8Q	30M	CW	16 1717	16 1920	10,107.0	10,108.0		22	AS-013	MJ64	3486	Y						Y		-5	1	-117	
	PU2KOB	PY	10M	RTTY	16 1920	16 1920	28,076.0			SP	11	GG57	1047				Y					-8	18	-63	
	V31MA	V3	15M	CW	16 1920	16 1920	21,004.1			7		EK57	2503						Y			37	91	-49	

Sort:  First  Call  Last  Freq  Rcv  Az

Filter: Band and Mode and Origin

Color codes:  verified  unneeded  unconfmd  unwrkd B or M  unwrkd counter  special tag  Lot/W  eQSL AG  Lot/W & eQSL AG

On 80m through 10m, PropView's VOACAP engine computes

- Short path SNR and probability
- Long path SNR and probability

# Tabular View of Active DX

## Needed DX on Selected Bands and Modes

SpotCollector 7.6.6 @ 2017-04-16 19:25 Z [CC,DXK,DXV,PV,WW] 6 entries (log: AA6YQ.mdb)

WWV 04-16 1805 Z

Outgoing spot: Call: \_\_\_\_\_ 14.085.0 Freq Cluster

Spot source status: ● ● ● ● ● ●

Q: 4 A: 6 1 K

Notes: \_\_\_\_\_ X Local Report Stats Prop Config Help

Need	Call	Prefix	Band	Mode	FirstTime	LastTime	Freq	QSX	Pri	CQ	IOTA	DXGrid	ODX	EU	AF	SA	NA-E	NA-M	NA-W	AS	OC	SP SNR	SP P	LP SNR	LP P	Re
D	DS5USH	HL	30M	PSK63	14 1802	14 1802	10,140.9			25		PM47	4179	Y									-6	2	-112	
D	DS4ADW	HL	30M	CW	15 1556	15 1714	10,108.0	10,109.0		25		PM47	3983	Y							Y		-7	1	-113	
D	DS4ADW	HL	30M	CW	15 1819	15 1944	10,108.0	10,109.0		25		PM47	3539	Y		Y							-5	2	-111	
S	KC3BVL	K	6M	SSB	16 1521	16 1606	50,280.0		PA	5		FN20	228				Y									
D	DS4ADW	HL	30M	RTTY	16 1613	16 1618	10,146.0			25		PM47	3444	Y									-5	3	-110	
D	3Y0RY	3Y-B	20M	RTTY	16 1920	16 1920	14,085.0			38	AN-002	JD14	1	Y									11	52	-50	

Sort:  First  Call  Last  Freq  Rcv  Az

Filter: Band and Mode and Origin and [Unconfirmed DXCC, Marathon, VUCC, WAS]

Filter: AH Need Call DXCC Freq Tag Band Mode Cont Origin

Audio  Age  LotW  eQSL  Mithn     160 test1 W9QL Quixote Need50 SQL 29 SQL 30 160was

Color codes:

- verified (green)
- unwrkd B or M (red)
- LotW (yellow)
- unencoded (black)
- unwrkd counter (red)
- eQSL AG (pink)
- unconfmrd (blue)
- special tag (magenta)
- LotW & eQSL AG (cyan)









# Tabular View of Active DX

in a web browser from anywhere

SFI = 137, A = 4, K = 2

DX Spots @ 5/12/2013 0615Z

50096.55 USB

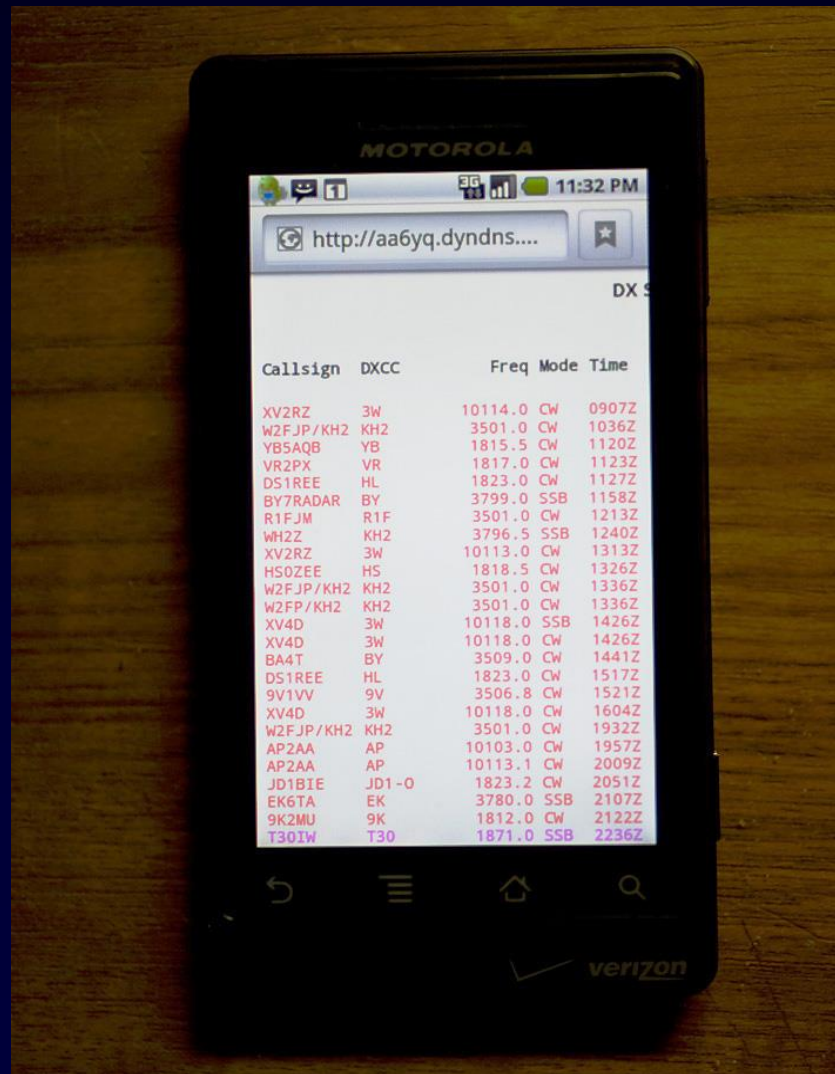
Callsign	DXCC	Freq	Mode	Source	NAE	LastTime	Notes	DXCC Entity	Network
VU7KV	VU7	28,494.0	SSB	VK3SX		05-May-13 0508Z	Tnx fb signals VK3	Lakshadweep Islands	EI7MRE
VU7KV	VU7	28,518.0	SSB	VK2DAG-@		05-May-13 0531Z	VK/ZL only	Lakshadweep Islands	CQDX
VU7KV	VU7	24,960.0	SSB	RU6L		05-May-13 0641Z	simplex	Lakshadweep Islands	VE1DX
VU7KV	VU7	24,960.0	SSB	F4FEP		05-May-13 1200Z	but bad grg grm here 970 NA	Lakshadweep Islands	EI7MRE
VU7KV	VU7	24,950.0	SSB	K5OA		05-May-13 1529Z	no copy my qth esp only	Lakshadweep Islands	VE1DX
VU7KV	VU7	24,961.6	SSB	IWOHBY	Y	05-May-13 1707Z	nw strong	Lakshadweep Islands	EI7MRE
VU7KV	VU7	24,962.0	SSB	W4QN	Y	05-May-13 1928Z	not VU7 he is QRT and on a boa	Lakshadweep Islands	VE1DX
P51X	P5	21,030.0	CW	OH6PP-@		09-May-13 0927Z	correction call	DPRK (North Korea)	CQDX
VK9NT	VK9-N	1,821.7	CW	K5UR		09-May-13 1111Z		Norfolk Is	CQDX
9M2AX	9M2	1,831.5	CW	YC1COZ		09-May-13 1154Z	cq cq	West Malaysia	VE1DX
ZD8VHF/B	ZD8	50,032.5	CW	K1IOL	Y	09-May-13 2124Z	weak, in/out>ME	Ascension Island	EI7MRE
VK9NT	VK9-N	1,807.9	CW	JK7LXU		09-May-13 2154Z	UP1 599 TNX	Norfolk Is	JH1RFM
YC1COZ	YB	1,806.5	CW	9M2AX		09-May-13 2232Z	cqng	Indonesia	EI7MRE
9M2AX	9M2	1,831.5	CW	YC1COZ		09-May-13 2255Z	cq cq	West Malaysia	EI7MRE
ZD8VHF/B	ZD8	50,032.7	CW	N3DB	Y	10-May-13 2101Z	419	Ascension Island	VE1DX
UP0L	UN	1,834.7	CW	RX9CAZ		11-May-13 2031Z	MN83	Kazakhstan	VE7CC
CX2TQ	CX	50,115.0	SSB	N3DB	Y	11-May-13 2041Z	S9	Uruguay	VE1DX
CX9AU	CX	50,110.0	CW	N3DB	Y	11-May-13 2045Z	S9 cw	Uruguay	EI7MRE
CX2TQ	CX	50,110.0	SSB	K7BV	Y	11-May-13 2048Z	55 SSB	Uruguay	EI7MRE
CX9AU	CX	50,098.0	CW	K4QI-@	Y	11-May-13 2118Z	em85<>gf15 cqng 559	Uruguay	CQDX

Filter: Band and Mode and Cont and Origin and [entity-band unworked or unconfirmed, or entity-mode unworked or unconfirmed]

X Need Call DXCC Freq Tag Band Mode Cont Orig SQL Config

# Tabular View of Active DX

in a web browser from anywhere





# Audio and Email Views of Active DX

DX Spot Sources

Active DX Database

Propagation  
Prediction  
(VOACAP)

LotW  
Database

eQSLAG  
Database

View  
Generator

Log Database

DXCC needs

IOTA needs

Leaderboard needs

Marathon needs

VUCC needs

WAS needs

WPX needs

WAZ needs

Logged  
QSOs



Audio/Email

# Audio and Email Views of Active DX

Creation of a new Active DX Database Entry for a needed DX station can trigger

- an audio announcement (callsign, “counter”, band, mode)
- an outgoing email message (which can initiate a text message)

# World Map View of Active DX

DX Spot Sources

Active DX Database

Propagation Prediction (VOACAP)

LotW Database

eQSLAG Database

View Generator

Log Database

DXCC needs

IOTA needs

Leaderboard needs

Marathon needs

VUCC needs

WAS needs

WPX needs

WAZ needs

Logged QSOs

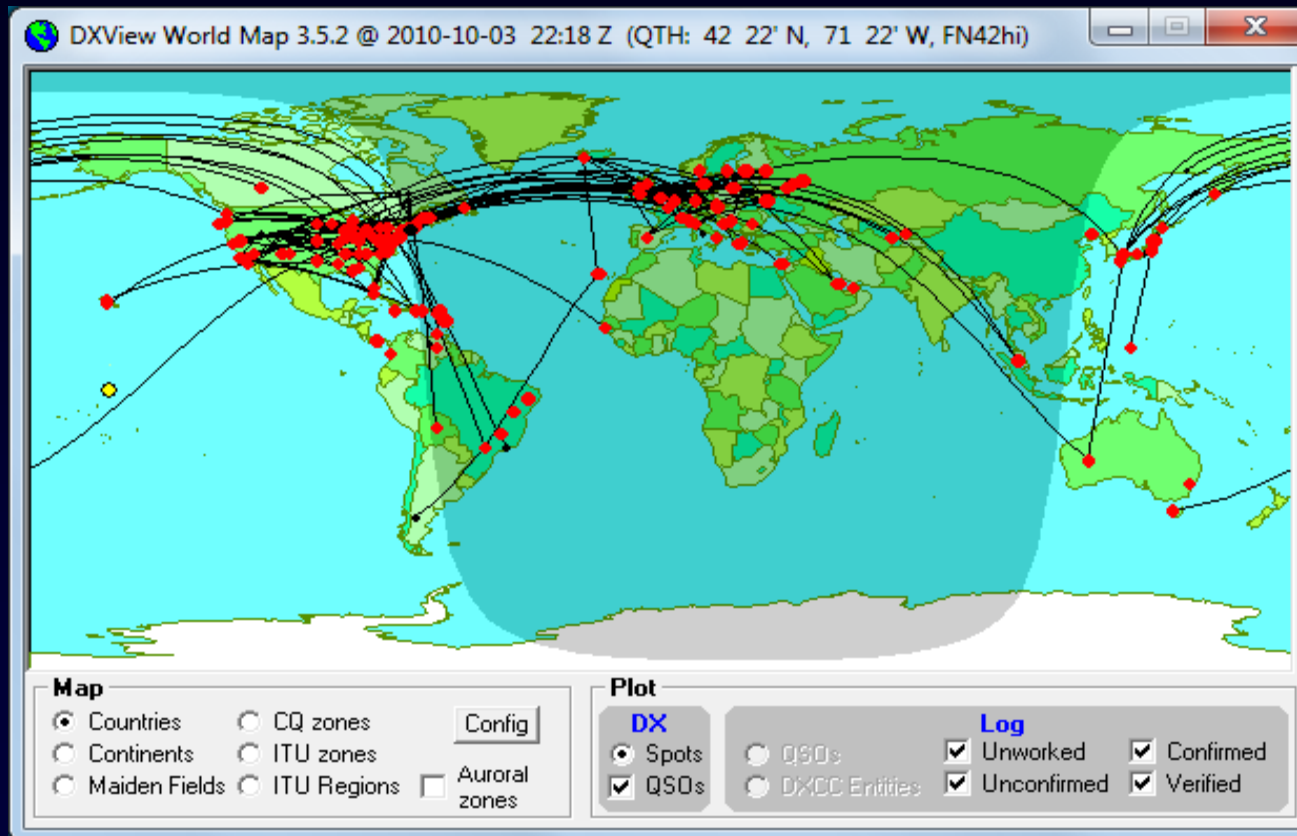


World Map



# World Map View of Active DX

“Active DX on Selected Bands”



# World Map View of Active DX

## Controlling the Map View

The screenshot shows the 'World Map' configuration tab in the DXView software. The window title is 'DXView Configuration'. The 'World Map' tab is selected, and the 'Log: AA6YQ.mdb' is displayed. The 'Selection' section has 'Spots' selected, 'QSOs' checked, and a 'Lifetime (hrs)' of 3. The 'Scan DX Bands' section has checkboxes for 160m, 80m, 60m, 40m, 30m, 20m, 17m, 15m, 12m, 10m, 6m, 4m, 2m, 70cm, and 'ann', with a 'dwell' value of 2. The 'Band Filter' section has checkboxes for the same bands and buttons for 'Xcvr band only', 'Top', 'Low', 'Tri', 'Warc', 'VHF', 'None', and 'All'. The 'Mode Filter' section has checkboxes for SSB, CW, RTTY, AM, FM, ?, Amtor, Ascii, ATV, Chip64, Clover, FAX, FSK31, FSK441, GTOR, Hell, HFSK, JT44, JT65, JT9, MFSK8, MFSK16, MT63, Olivia, Packet, Pactor, Pactor2, Pactor3, PSK31, PSK63, PSK125, Q15, SSTV, and Throb, with 'None' and 'All' buttons. The 'Continent Filter' section has checkboxes for NA, SA, EU, AF, AS, OC, AN, and ?, with 'None' and 'All' buttons. The 'Origin Filter' section has checkboxes for NAE, NAM, NAW, SA, EU, AF, AS, OC, and ?, with 'None' and 'All' buttons.

**DXView Configuration**

**World Map**

Log: AA6YQ.mdb

**Selection**

Spots  
 QSOs  
3 Lifetime (hrs)

**Scan DX Bands**

160m  80m  60m  40m  30m  20m  17m  15m  12m  10m  6m  4m  2m  70cm  ann  dwell 2

**Band Filter**

160m  80m  60m  40m  30m  20m  17m  15m  12m  10m  6m  4m  2m  70cm ?

Xcvr band only

**Mode Filter**

SSB  CW  RTTY  AM  FM  ?

Amtor  Ascii  ATV  Chip64  Clover  FAX  FSK31  FSK441  GTOR

Hell  HFSK  JT44  JT65  JT9  MFSK8  MFSK16  MT63  Olivia  Packet

Pactor  Pactor2  Pactor3  PSK31  PSK63  PSK125  Q15  SSTV  Throb

**Continent Filter**

NA  SA  EU  AF  AS  OC  AN  ?

**Origin Filter**

NAE  NAM  NAW  SA  EU  AF  AS  OC  ?

# World Map View of Active DX

## Controlling the Map View

The screenshot shows the 'World Map' configuration tab in the DXView software. The window title is 'DXView Configuration'. The 'World Map' tab is selected, and the 'Log: AA6YQ.mdb' is displayed. The 'Selection' section has 'Spots' selected, 'QSOs' checked, and a 'Lifetime (hrs)' of 3. The 'Scan DX Bands' section has checkboxes for 160m, 80m, 60m, 40m, 30m, 20m, 17m, 15m, 12m, 10m, 6m, 4m, 2m, 70cm, and 'ann', with a 'dwell' value of 2. The 'Band Filter' section has checkboxes for the same bands and a 'None' button. The 'Mode Filter' section has checkboxes for SSB, CW, RTTY, AM, FM, and '?', and buttons for 'None' and 'All'. The 'Continent Filter' section has checkboxes for NA, SA, EU, AF, AS, OC, AN, and '?', and buttons for 'None' and 'All'. The 'Origin Filter' section has checkboxes for NAE, NAM, NAW, SA, EU, AF, AS, OC, and '?', and buttons for 'None' and 'All'.

**DXView Configuration**

**World Map**

Log: AA6YQ.mdb

**Selection**

Spots  
 QSOs  
3 Lifetime (hrs)

**Scan DX Bands**

160m  80m  60m  40m  30m  20m  17m  15m  12m  10m  6m  4m  2m  70cm  ann  dwell 2

**Band Filter**

160m  80m  60m  40m  30m  20m  17m  15m  12m  10m  6m  4m  2m  70cm  ?

Xcvr band only

**Mode Filter**

SSB  CW  RTTY  AM  FM  ?

Amtor  Ascii  ATV  Chip64  Clover  FAX  FSK31  FSK441  GTOR

Hell  HFSK  JT44  JT65  JT9  MFSK8  MFSK16  MT63  Olivia  Packet

Pactor  Pactor2  Pactor3  PSK31  PSK63  PSK125  Q15  SSTV  Throb

**Continent Filter**

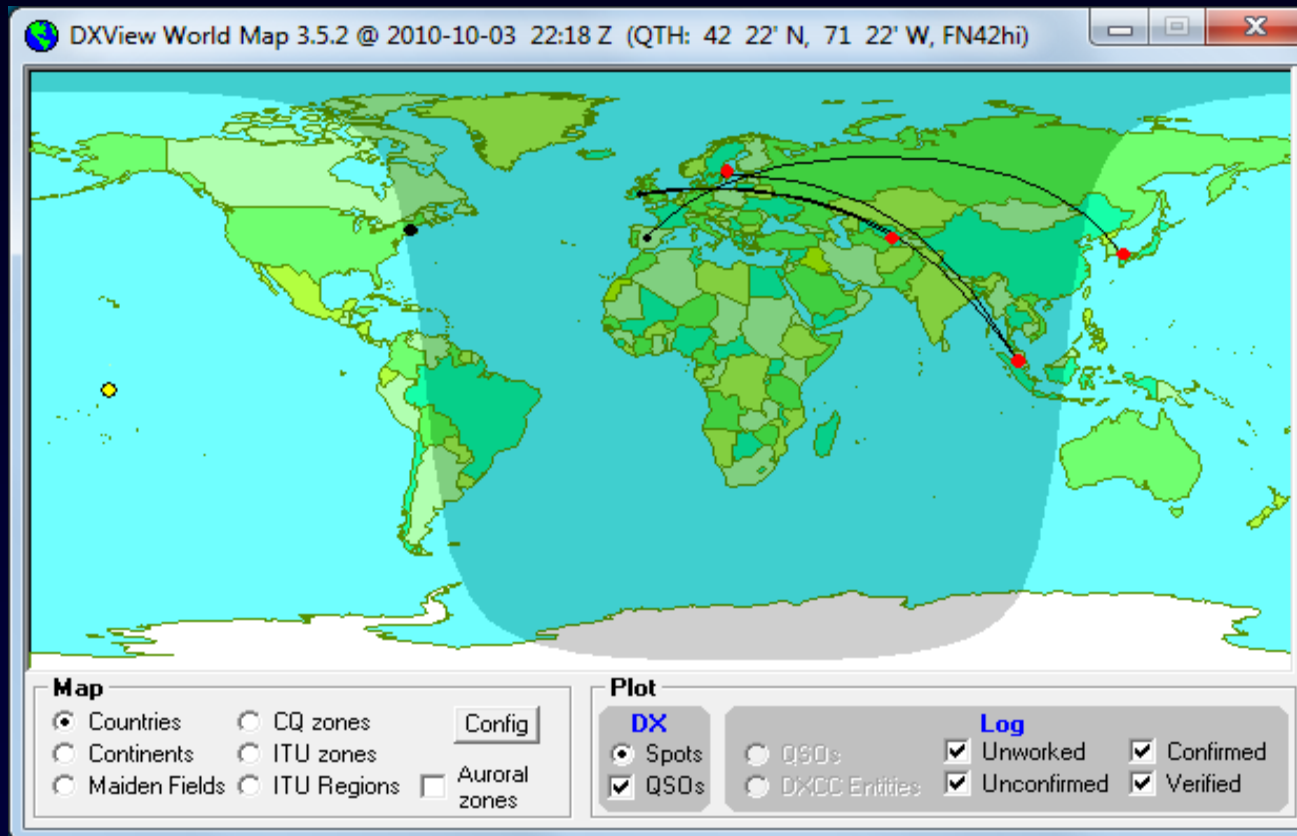
NA  SA  EU  AF  AS  OC  AN  ?

**Origin Filter**

NAE  NAM  NAW  SA  EU  AF  AS  OC  ?

# World Map View of Active DX

“160m”



# World Map View of Active DX

## ScanDX

DXView Info 4.3.3 @ 2017-04-18 16:43:07 Z [CC,SC,PV]

**Search**  **DXCC**

callsign  prefix  entity  code

**GeoMag** max  K

**Location @ 2017-04-18 16:43:07 local** **DXCC database**

latitude  longitude  SP DX  cont  grid  CQ  ITU

location  IOTA  time zone

**Heading** short  long

**Special Callsign Tags**

**3Y-B Progress (AA6YQ.mdb)**

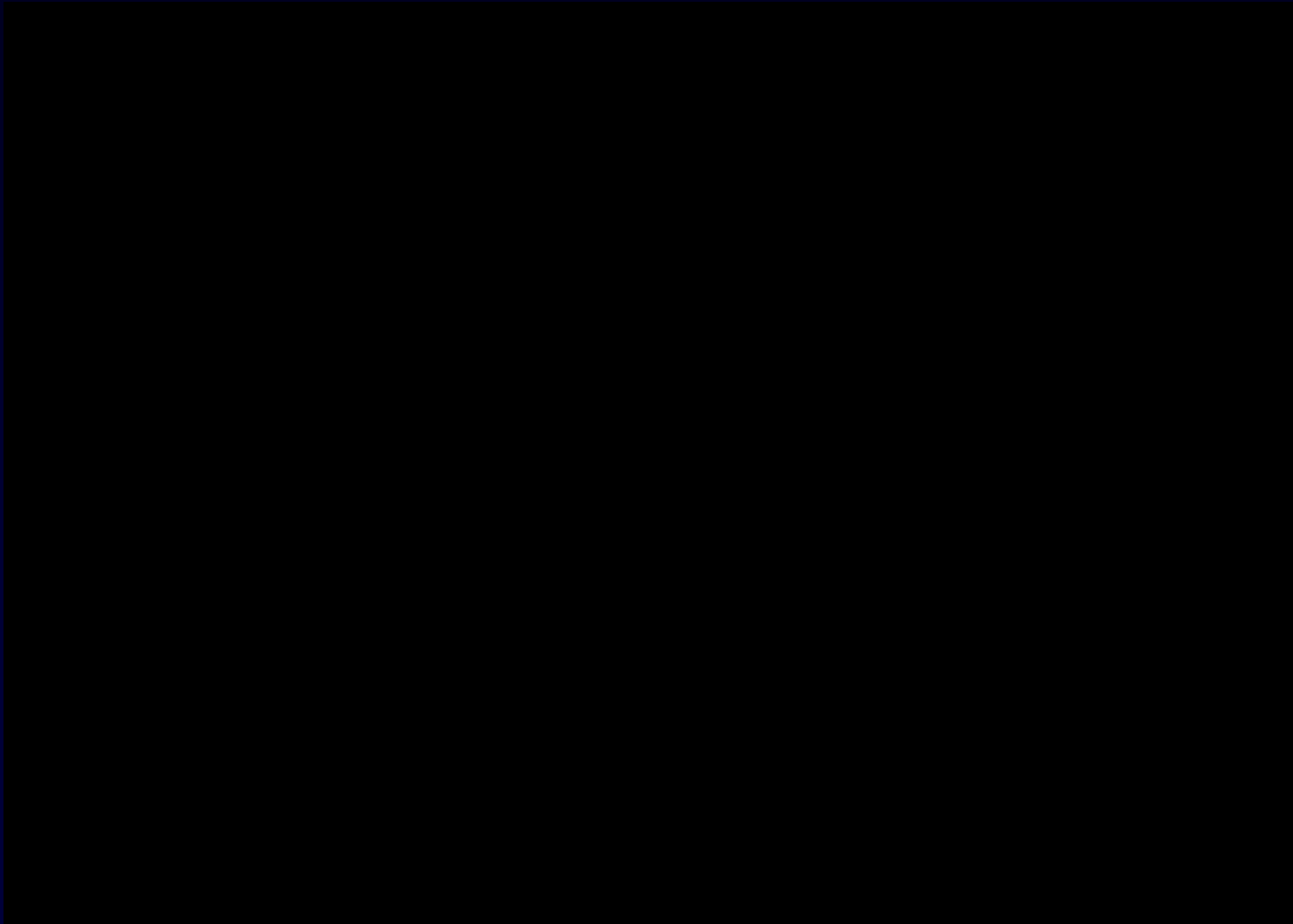
	160M	80M	40M	30M	20M	17M	15M	12M	10M	6M	2M
PHONE			V		V	V	V	V	V		
CW								V			
DIGI											
PSK											

**Map**

**Ant**

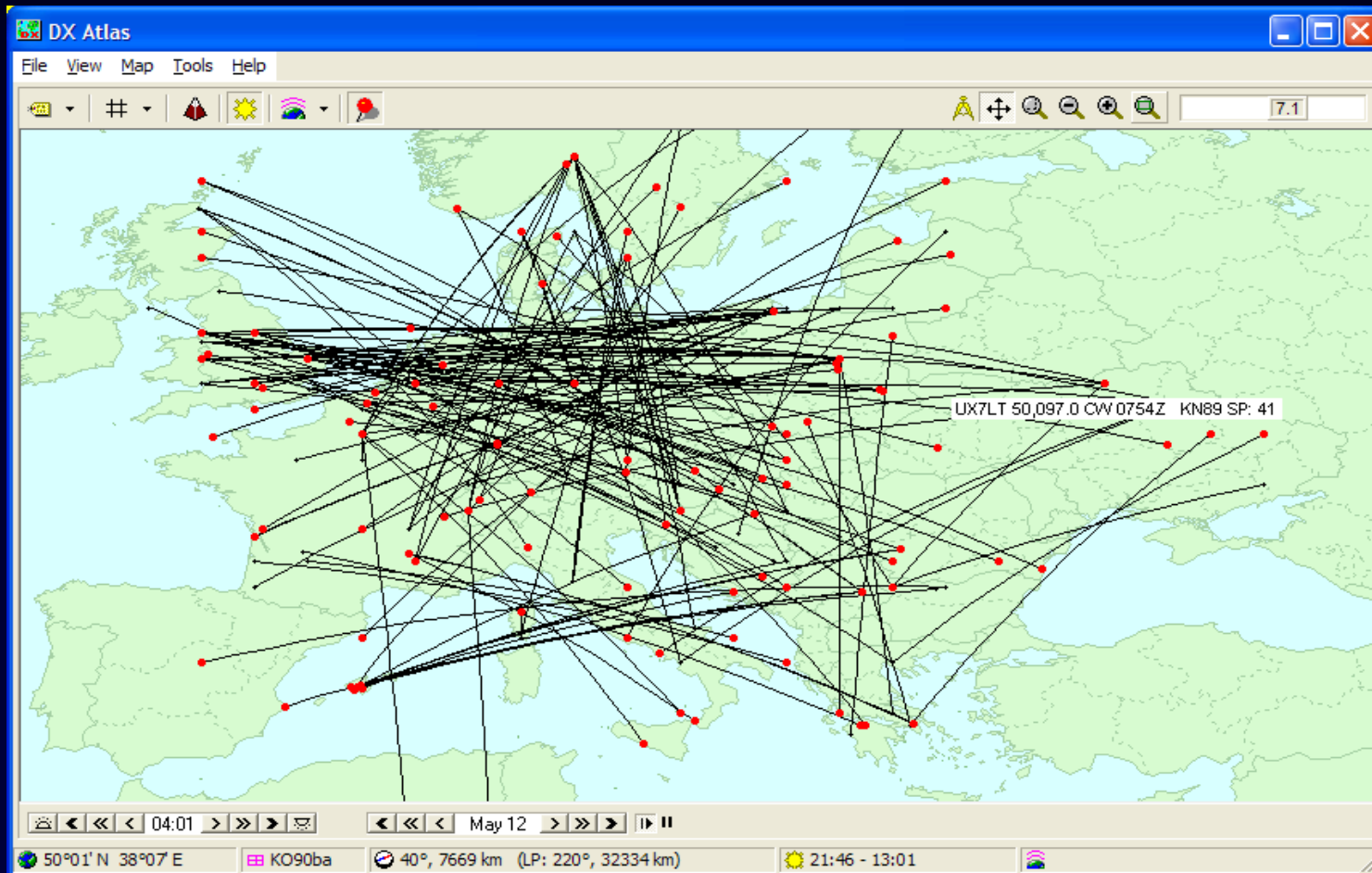
# World Map View of Active DX

ScanDX



# World Map View of Active DX

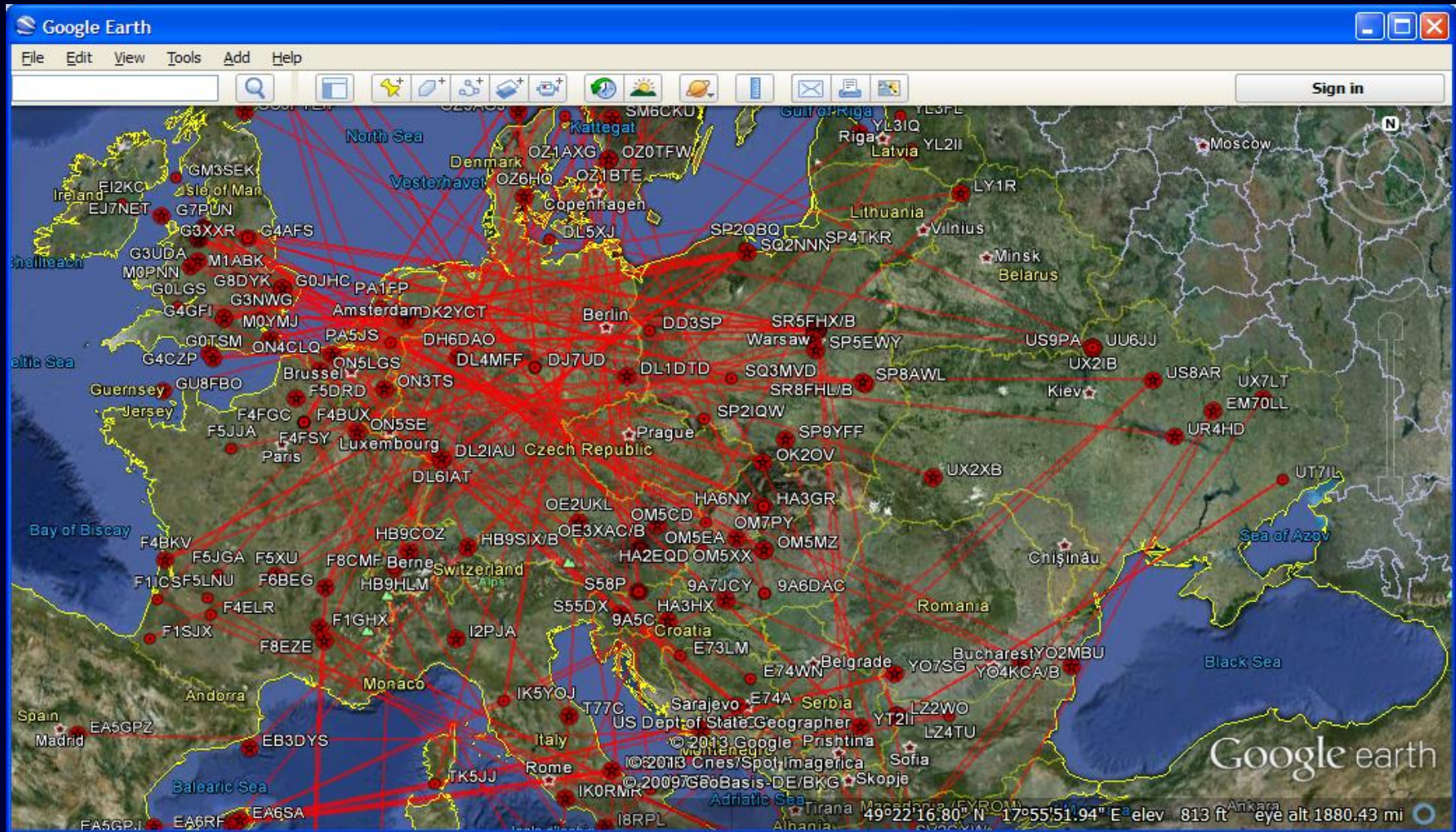
“6m” on DX Atlas





# World Map View of Active DX

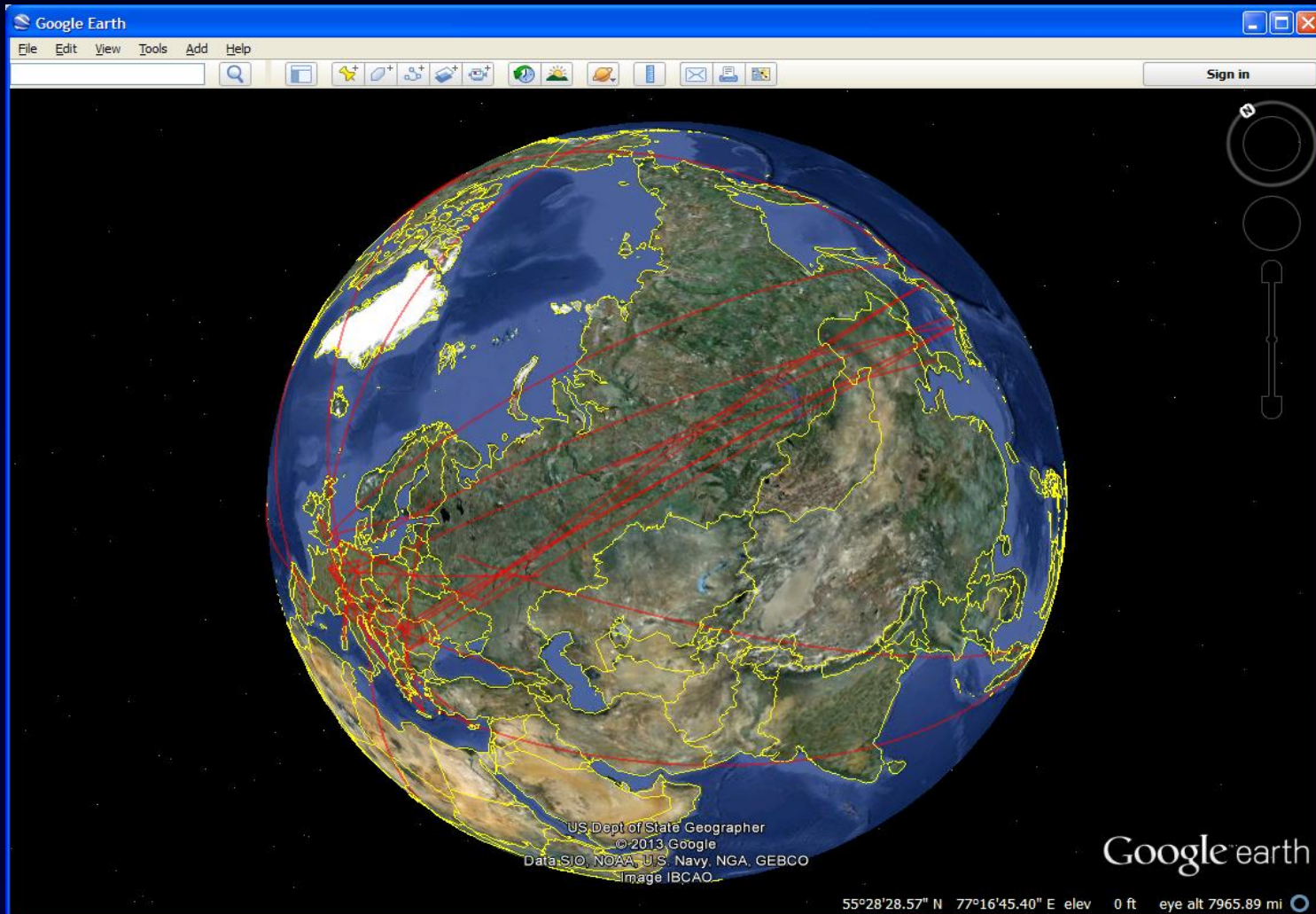
“6m” on Google Earth





# World Map View of Active DX

“12m” on Google Earth



# Bandspread View of Active DX

DX Spot Sources

Active DX Database

Propagation Prediction (VOACAP)

LotW Database

eQSLAG Database

View Generator

Log Database

DXCC needs

IOTA needs

Leaderboard needs

Marathon needs

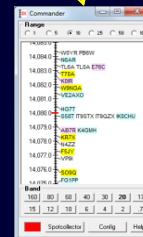
VUCC needs

WAS needs

WPX needs

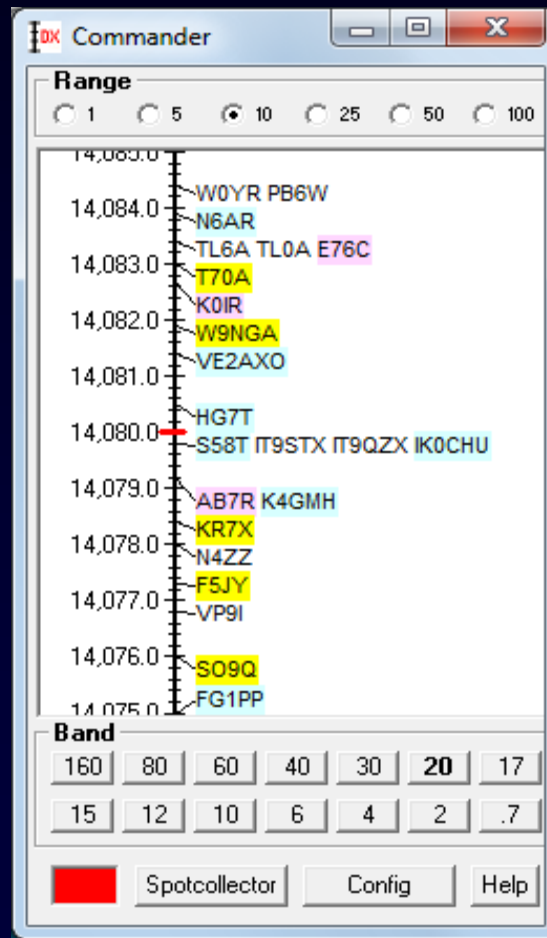
WAZ needs

Logged QSOs



Bandspread

# Bandspread View of Active DX



# Spectrum-Waterfall View of Active DX

DX Spot Sources

Active DX Database

Propagation Prediction (VOACAP)

LotW Database

eQSLAG Database

View Generator

Log Database

DXCC needs

IOTA needs

Leaderboard needs

Marathon needs

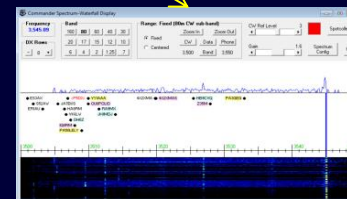
VUCC needs

WAS needs

WPX needs

WAZ needs

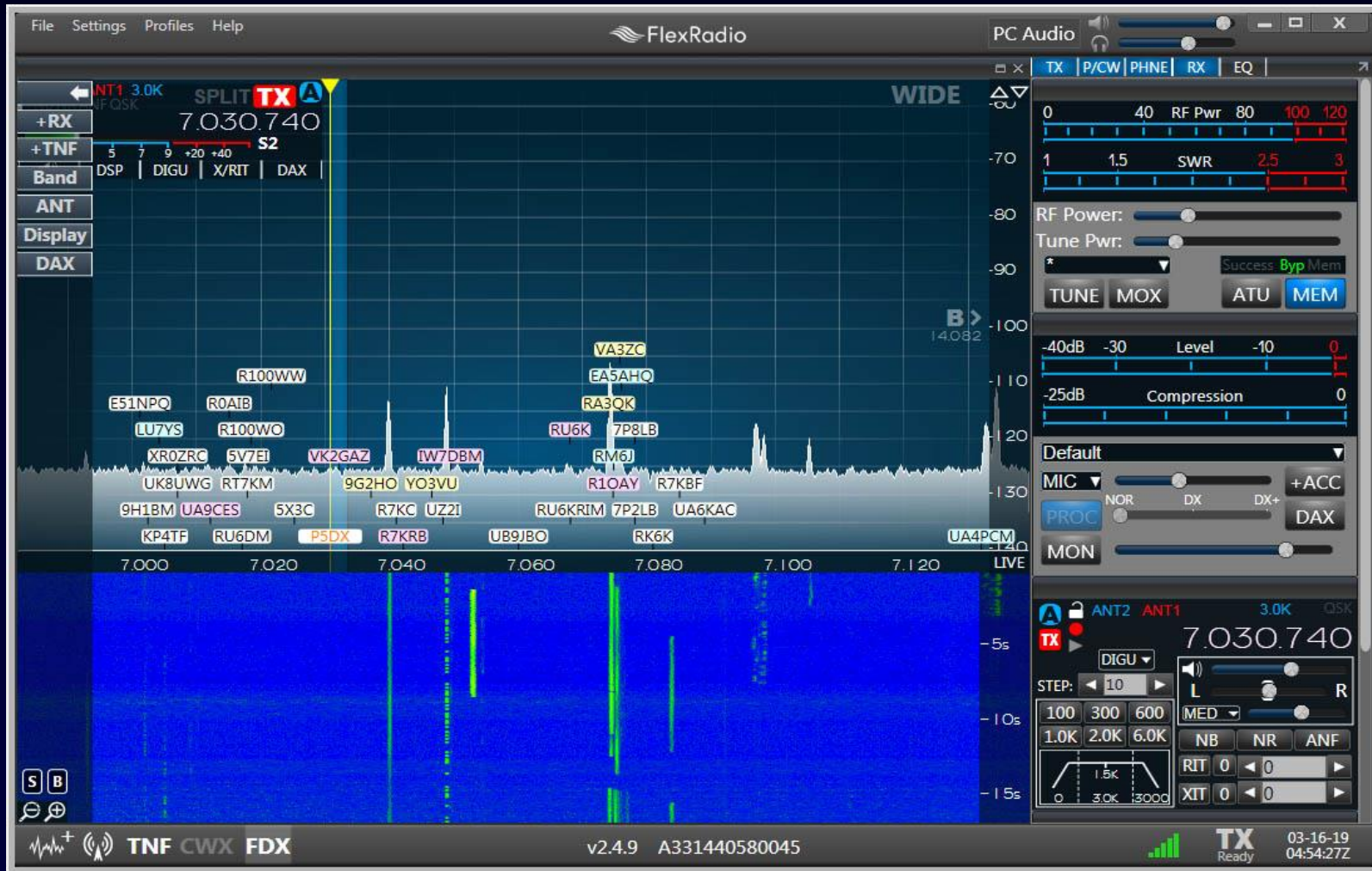
Logged QSOs



Spectrum

# Spectrum-Waterfall View of Active DX

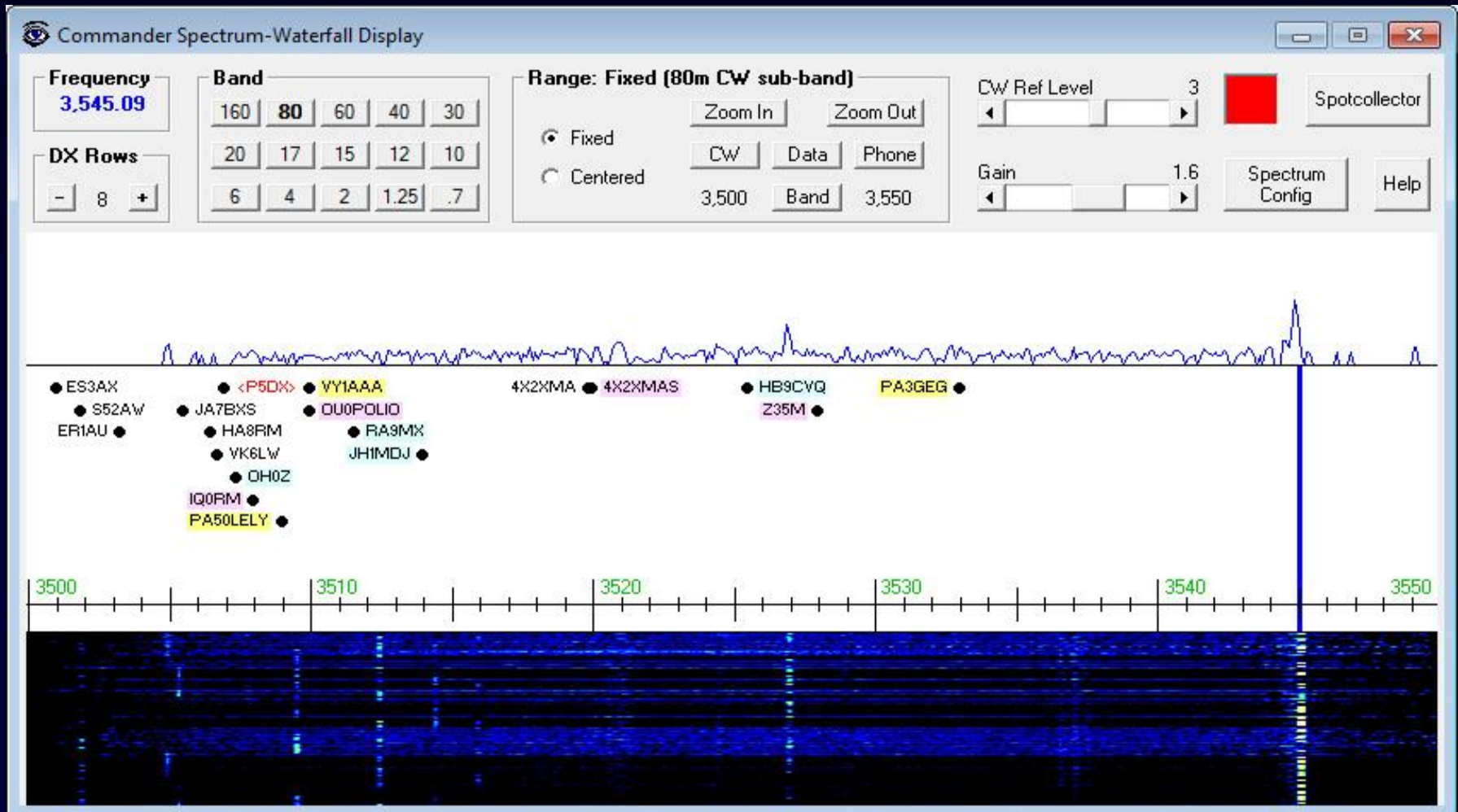
## Flex Signature Radios





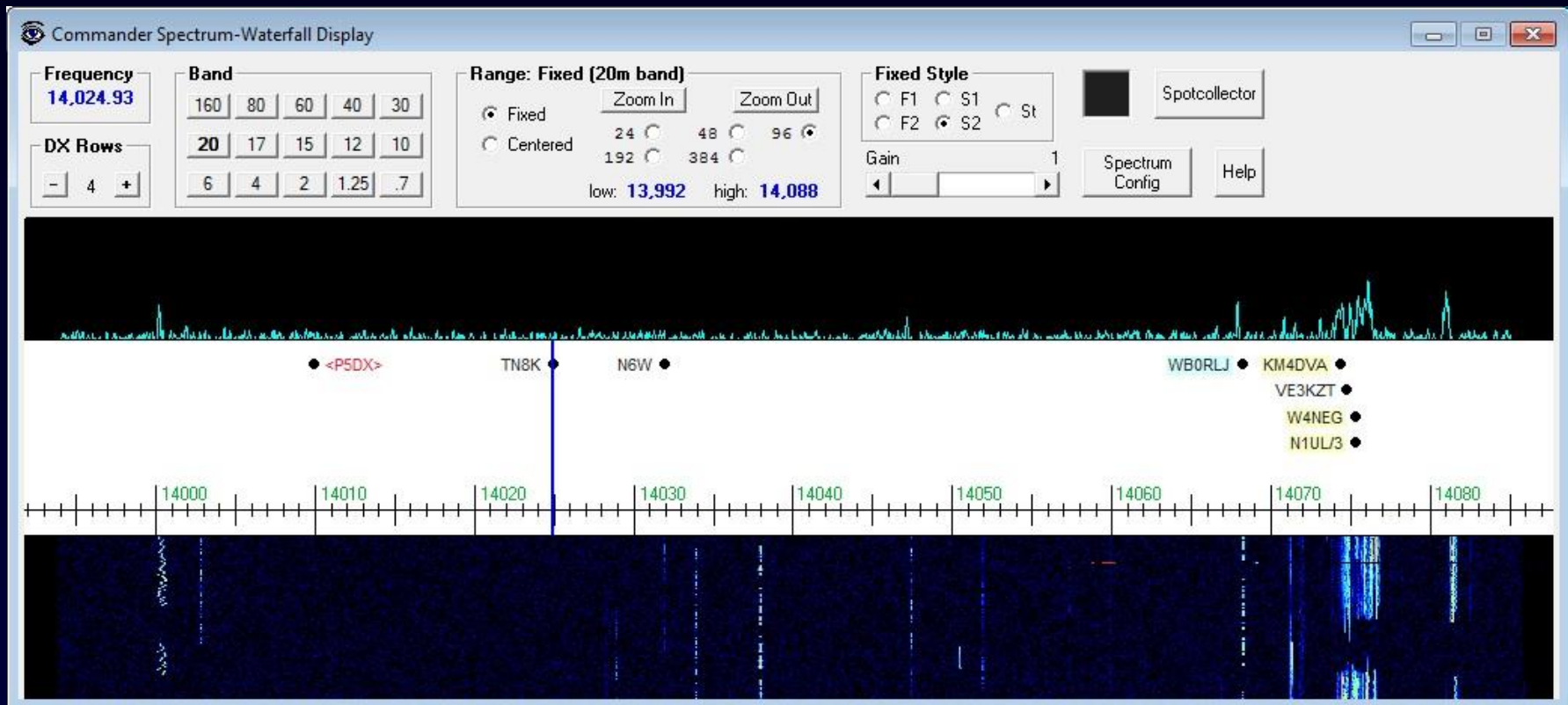
# Spectrum-Waterfall View of Active DX

Icom 705, 7300, 7610, 7850, 7851, 9700



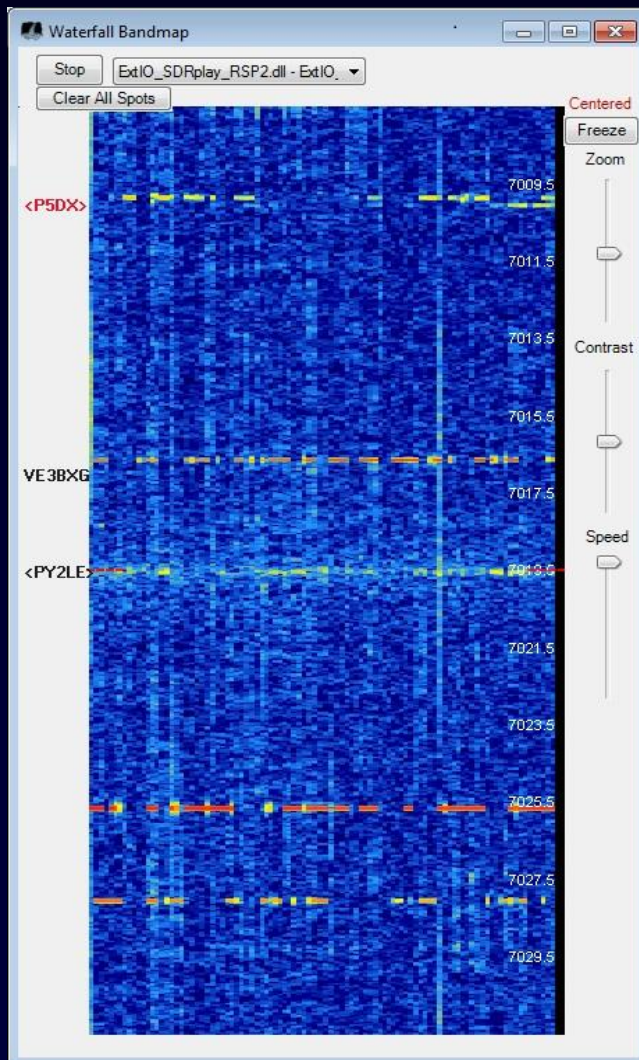
# Spectrum-Waterfall View of Active DX

## Elecraft K4



# Spectrum-Waterfall View of Active DX

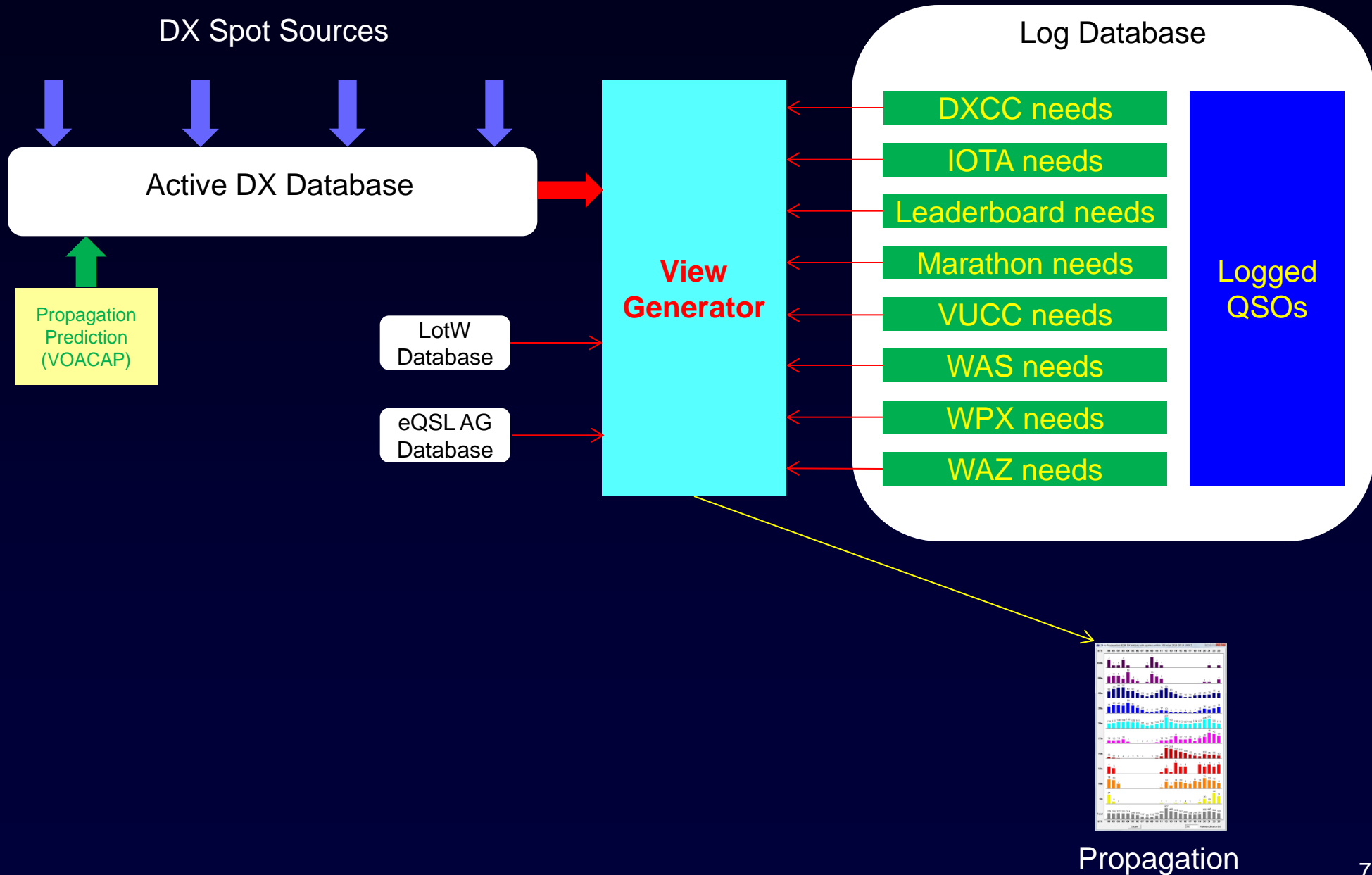
Interoperation with N2IC's Waterfall Bandmap



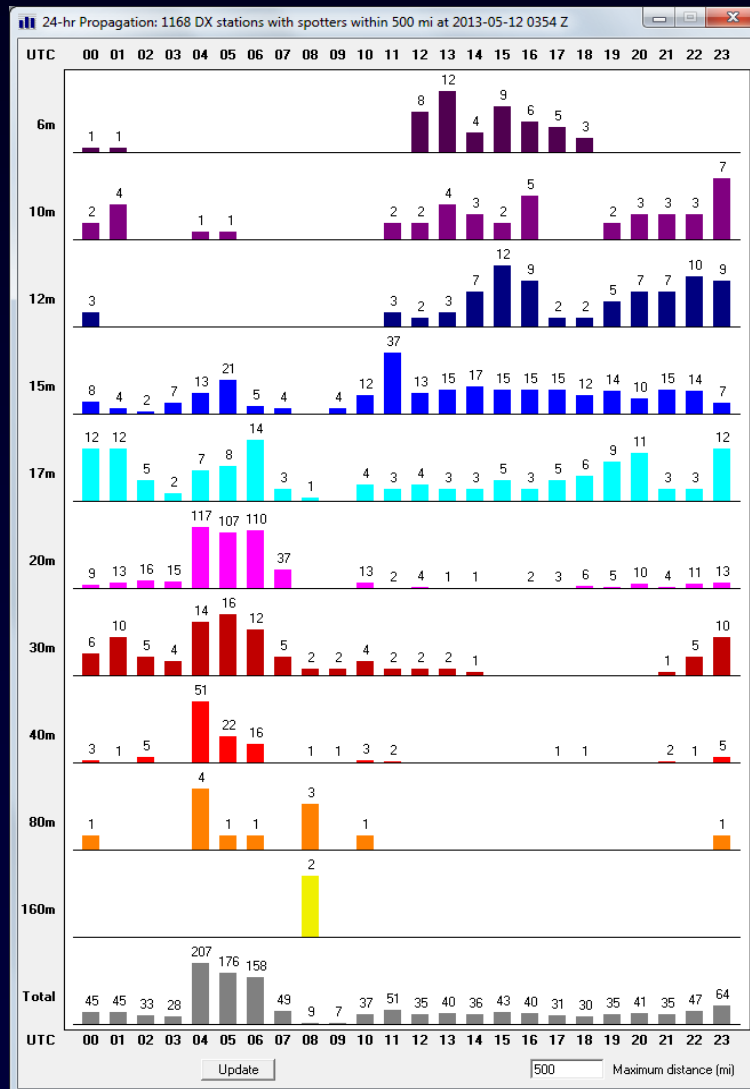
- Supports most SDRs
- RF or IF input



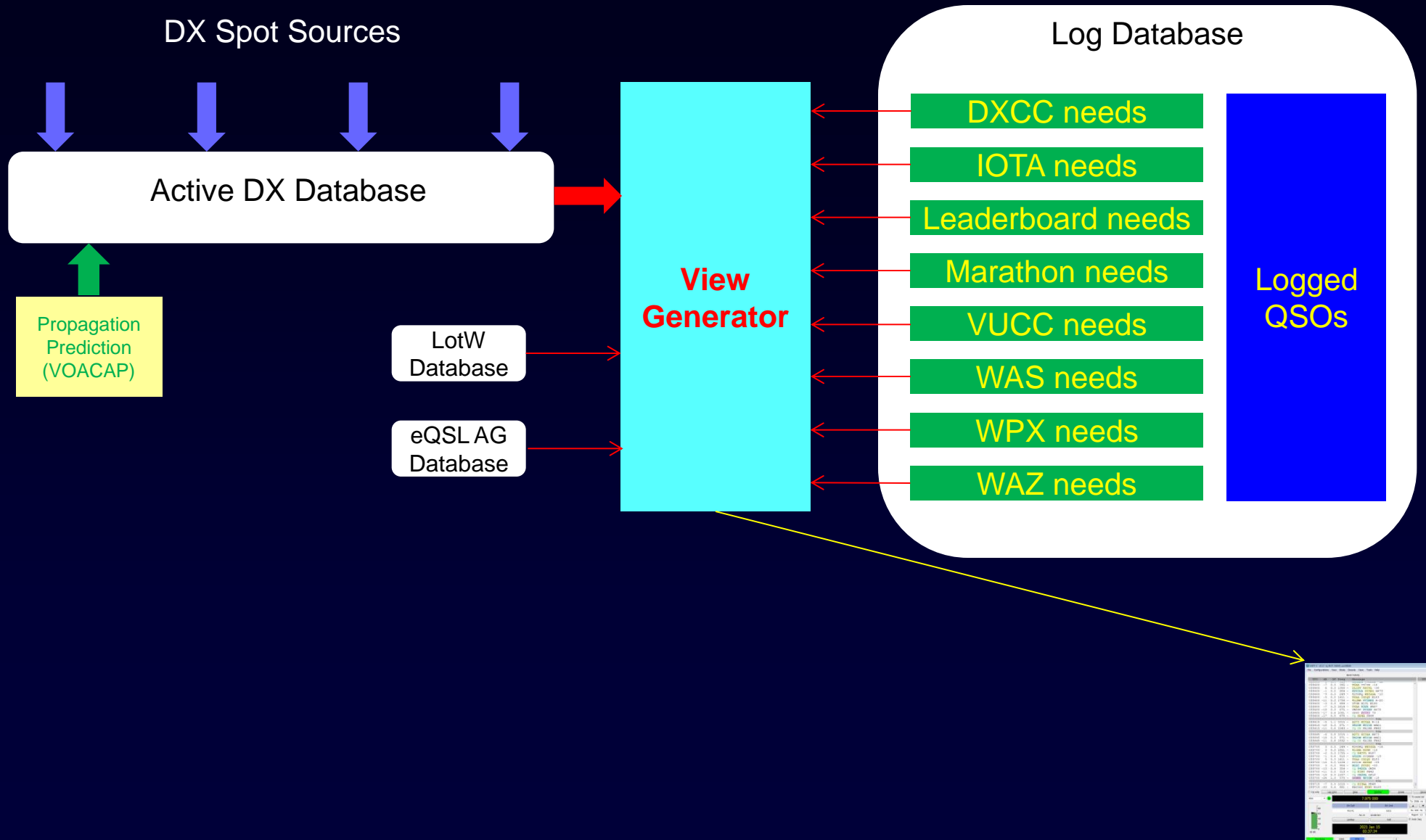
# Propagation View of Active DX



# Propagation View of Active DX



# WSJT-X View of Active DX



# WSJT-X View of Active DX

Log Database

The screenshot displays the WSJT-X v2.0.0 interface. The main window is divided into two panes: 'Band Activity' on the left and 'Rx Frequency' on the right. The 'Band Activity' pane shows a list of active stations with columns for UTC, dB, DT, Freq, and Message. The 'Rx Frequency' pane shows the current frequency and the active station, with '014018 Tx 715 - LY3BG AA6YQ -22' highlighted in yellow. A red arrow points from the text '"Needed" callsigns' to several entries in the 'Band Activity' list, including K4Z0 LY3BG KO24, VU3SEV L2ZFP R-22, UN7DBA WA5VGI R-24, and VU3SEV L2ZFP R-22. The bottom of the interface features a control panel with a frequency display showing 7.074 000, a DX Call field with LY3BG, a DX Grid field with KO24, and a list of generated messages for transmission. The status bar at the bottom indicates 'Receiving' and 'IC-7800 FT8'.

Band Activity					Rx Frequency				
UTC	dB	DT	Freq	Message	UTC	dB	DT	Freq	Message
013930	-7	0.7	1877	CQ YV5ZY FK60	013930	-22	-0.1	2072	K4Z0 LY3BG KO24
013930	-11	0.0	1930	CQ EA1CDV IN80	014018	Tx	715	-	LY3BG AA6YQ -22
013930	0	0.2	2003	VU3SEW HK3EU R-19					
013930	-22	-0.1	2072	K4Z0 LY3BG KO24					
013930	7	-0.7	2315	CQ CM2RSV EL83					
013930	-20	0.1	2496	KR7DX W3KX FM19					
013930	-10	0.4	2572	CQ N5SDR EM10					
013930	12	0.2	2695	AD6FR KOGDI 73					
013930	-14	0.0	2806	VU3SEV L2ZFP R-22					
013945	-2	0.1	200	CQ NUI1 FN42					
013945	-11	-1.0	542	CQ HK6JCF FJ25					
013945	-11	1.8	720	CQ IUSGUC JM89					
013945	-5	0.2	951	CQ W1FDR FN42					
013945	2	-0.8	1106	W4JFG WP4AZI RRR					
013945	2	0.3	1182	CANNON VET 73					
013945	-11	0.2	1319	A29SJ W89VQJ DM34					
013945	-16	1.5	1395	L2ZFU YV5KG -15					
013945	-15	-0.3	1551	M6JVJ OE1MKA -20					
013945	-7	0.3	1653	CQ IZ8JFA JM89					
013945	-6	-0.3	1744	EA4GA AFSVR R-22					
013945	-8	-0.0	1813	UN7DBA WA5VGI R-24					
013945	2	0.1	1863	KC6HBB KB1EFS RRR					
013945	1	0.0	2196	3B9FR N08D EN91					
013945	-4	-0.6	2272	EA5HRV CO8OB +00					
013945	-21	0.1	2556	CM2RSV OK4FX JO70					
013945	7	0.1	2752	UT6UZ W1DNP EM90					
014000	-6	0.1	201	NUI1 IK1GEY JN45					
014000	8	0.4	501	VE3SSV W7YA -20					
014000	-14	0.1	571	WDSJK KR7DX DM22					
014000	-1	0.0	791	KA1GOO N5RB -06					
014000	2	-0.2	891	CO8OB EA5HRV 1M99					
014000	-6	-0.6	1030	KB1HNZ IZ5MKA JN53					
014000	-15	-0.0	1196	N7TWS 3B9FR -02					
014000	-10	0.0	1233	VU3SEV L2ZFP R-22					
014000	-7	0.4	1395	KM4JNR L2ZFU -22					
014000	10	0.0	1589	VE1GG WOQU 73					
014000	-6	1.8	1655	W1FDR YV5AJY FK60					
014000	-16	-0.5	1745	AF5VR EA4GA -10					
014000	-8	0.7	1877	AB9RP YV5ZV -14					
014000	-5	0.0	1930	CQ EA1CDV IN80					
014000	4	0.2	2003	VU3SEW HK3EU R-19					
014000	7	-0.7	2315	CQ CM2RSV EL83					
014000	-6	0.4	2572	K9DN N5SDR -10					
014000	-7	-0.0	2677	CQ OE6AIT JN76					

# Multiple Views of Active DX

DX Spot Sources

Active DX Database

Propagation Prediction (VOACAP)

LotW Database

eQSLAG Database

View Generator

Log Database

DXCC needs

IOTA needs

Leaderboard needs

Marathon needs

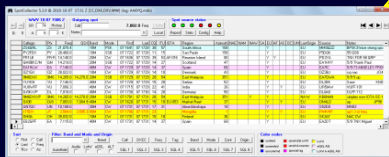
VUCC needs

WAS needs

WPX needs

WAZ needs

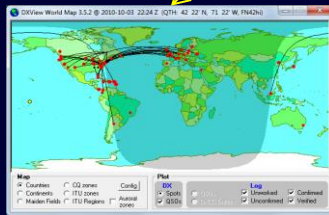
Logged QSOs



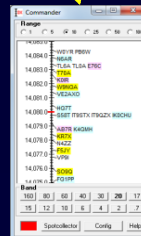
Tabular



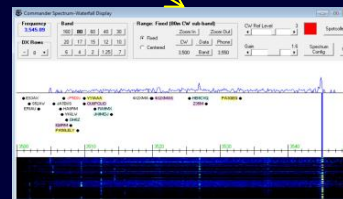
Audio/Email



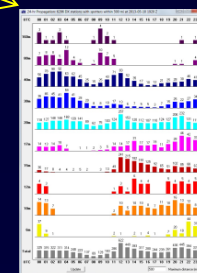
World Map



Bandspread



Spectrum



Propagation



WSJT-X

# DXing With DXLab

- Introduction to the DXLab Suite
  - Architecture
  - Development Drivers
  - Multiple Views of Active DX
- Finding the DX You Need
- Working the DX You Need

# Finding and Working Needed DX

My DXing Objectives: DXCC, VUCC, WAS, WAZ

**DXKeeper Configuration**

General | Log | **Awards** | Reports | Callbook | Contest | User Items | Defaults

Automatically recompute realtime award tracking  
 Deduce CQ and ITU zones from US callsigns  
 Include LoTW QSLs in CQ (DX, Fields), JARL, & Maidenhead Grid progress  
 Include eQSL.cc QSLs in DXCC, VUCC, WAS, WAC, & Maidenhead Grid progress

**DXCC Bands & Modes**

160M  
 80M  
 40M  
 30M  
 20M  
 17M  
 15M  
 12M  
 10M  
 6M  
 2M

Phone HF  
 CW  
 Digital VHF

FT8  
User-specified digital mode family  
 FT8  
 QRP

Hide unworked in progress rpt

**DXCC Submission**

Submit deleted entities  
75 Record Sheet lines/page

**Marathon Submission**

Confirmed QSOs are low risk

**VUCC & WAS Submission**

QSL Card  
 LoTW

**DXCC Credits**

Credit-only QSO creation

QSL Config | Help

**Marathon Bands & Modes**

160M  
 80M  
 60M  
 40M  
 30M  
 20M  
 17M  
 15M  
 12M  
 10M  
 6M  
 2M

Phone HF  
 CW  
 Digital VHF  
 Mixed  
 Include QSOs with no prop  
1500  
Max TX power  
Year, Category, Score Sheet Info  
 Realtime Award Progress

**WPX Bands & Modes**

160M  
 80M  
 60M  
 40M  
 30M  
 20M  
 17M  
 15M  
 12M  
 10M  
 6M

SSB HF  
 CW  
 Digital  
 Mixed  
 Realtime Award Progress

**IOTA**

IOTA Nem4win update  
 Realtime Award Progress

**Other Awards**

CQ, WAE, Holyland region select  
 DARC DOK region selection  
 WAE 2 point low-band QSOs  
 Subdivision validity checking

**WAS Bands & Modes**

160M  
 80M  
 40M  
 30M  
 20M  
 17M  
 15M  
 12M  
 10M  
 6M  
 2M  
 1.25M  
 70CM

Phone HF  
 CW  
 RTTY VHF  
 Digital  
 SSTV  
 Sat  
 QRP  
 Mixed (Basic)  
 Realtime Award Progress

**WAZ Bands & Modes**

	Mixed	SSB	CW	RTTY	SSTV	Sat	QRP	Digital
Mixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5-band WAZ  
 Realtime Award Progress

# Finding and Working Needed DX

I'm also pursuing all DXCC Entities in FT8

**DXKeeper Configuration**

General | Log | **Awards** | Reports | Callbook | Contest | User Items | Defaults

Automatically recompute realtime award tracking  
 Deduce CQ and ITU zones from US callsigns  
 Include LoTW QSLs in CQ (DX, Fields), JARL, & Maidenhead Grid progress  
 Include eQSL.cc QSLs in DXCC, VUCC, WAS, WAC, & Maidenhead Grid progress

**DXCC Bands & Modes**

160M  Phone  HF  
 80M  CW  
 40M  Digital  VHF  
 30M  
 20M  FT8  
User-specified digital mode family  
 FT8  
 17M  
 15M  
 12M  
 10M  
 6M  
 2M  QRP

Hide unworked in progress rpt

**DXCC Submission**

Submit deleted entities  
75 Record Sheet lines/page

**Marathon Submission**

Confirmed QSOs are low risk

**VUCC & WAS Submission**

QSL Card  
 LoTW

**DXCC Credits**

Credit-only QSO creation

QSL Config | Help

**Marathon Bands & Modes**

160M  Phone  HF  
 80M  CW  
 60M  Digital  VHF  
 40M  
 30M  
 20M  
 17M  
 15M  
 12M  
 10M  
 6M  
 2M

Mixed  
 Include QSOs with no prop  
1500 Max TX power  
Year, Category, Score Sheet Info

Realtime Award Progress

**WPX Bands & Modes**

160M  SSB  HF  
 80M  CW  
 60M  Digital  
 40M  
 30M  
 20M  
 17M  
 15M  
 12M  
 10M  
 6M

Realtime Award Progress

**WAS Bands & Modes**

160M  Phone  HF  
 80M  CW  
 40M  RTTY  VHF  
 30M  Digital  
 20M  SSTV  
 17M  
 15M  Sat  
 12M  
 10M  QRP  
 6M  
 2M  Mixed (Basic)  
 1.25M  
 70CM

Realtime Award Progress

**IOTA**

IOTAnem4win update  
 Realtime Award Progress

**Other Awards**

CQ, WAE, Holyland region select  
 DARC DOK region selection  
 WAE 2 point low-band QSOs  
 Subdivision validity checking

**WAZ Bands & Modes**

	Mixed	SSB	CW	RTTY	SSTV	Sat	QRP	Mixed (Basic)	Digital
Mixed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
160M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

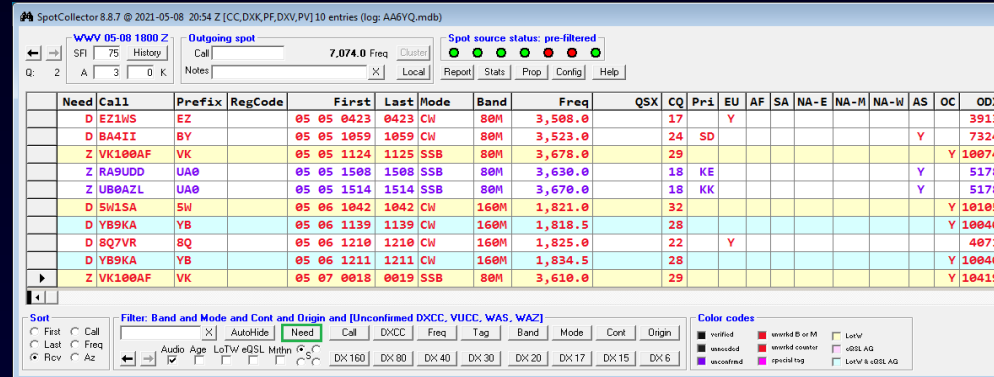
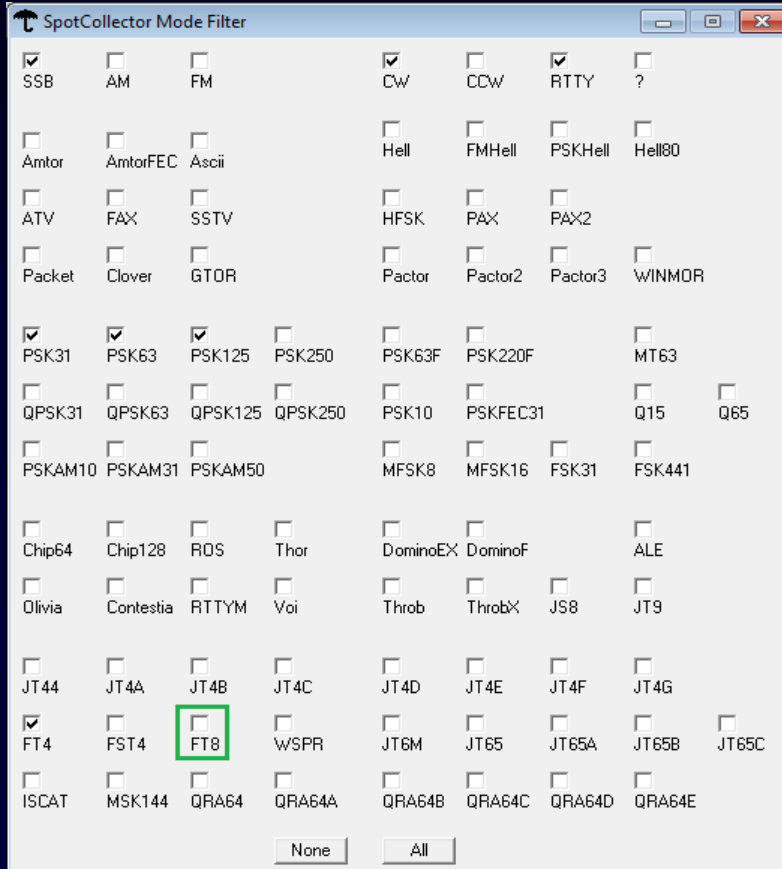
5-band WAZ  
 Realtime Award Progress





# Finding and Working Needed DX

## What is QRV in other than FT8 that I Need?



- Stations on 160m and 80m
  - EZ1WS not valid for DXCC
  - VK1000AF is in SSB, and is only needed for WAZ
  - The rest were spotted after my 1030Z sunrise



# Award Tracking for ZC4GR on 15m FT8

✓ Realtime Award Tracking for ZC4GR on 15M FT8

DXCC: U K Bases on Cyprus

Mixed status	verified, sought
15M status	verified, sought
Digital status	<b>not worked, sought</b>

Marathon

IOTA

WAS state

Mixed status	
15M status	
Digital status	

Leaderboard

WAZ zone: 20

Mixed status	verified, not sought
15M status	confirmed, sought
Digital status	confirmed, not sought
15M-Digital status	confirmed, not sought

Marathon Zone

VUCC

15M status

WFX

log pathname: C:\DXLab\DXKeeper\Logs\AA6YQ.mdb

# DXCC Award Tracking for ZC4GR

**DXKeeper Realtime Award Tracking**

DXCC IOTA Marathon VUCC WAS WAZ WPX

**Award Progress: 340 current DXCC entities [Filter: by progress]**

	Prefix	Entity	Phone	CW	DIGI	FT8	160M	80M	40M	30M	20M	17M	15M	12M	10M	6M	2M
	YN	V	V	V	V	W	V	V	V	V	V	V	V	V	V		
	YD	V	V	V	V	C	V	V	V	V	V	V	V	V	V		
	YS	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	
	YU	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	
	YV	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	
	YV0	V	V	V	V		V	V	V	V	V	V	V	V	V		
	Z2	V	V	V	V	C	V	V	V	V	V	V	V	V	V		
	Z3	V	V	V	V	C	V	V	V	V	V	V	V	V	V		
	Z6	V	V	V	V	C	V	V	V	V	V	V	V				
	Z8	V	V	V	V	C	V	V	V	V	V	V	V	V			
	ZA	V	V	V	V	C	V	V	V	V	V	V	V	V	V		
	ZB2	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	
	ZC4	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	
	ZD7	V	V	V	V	W	V	V	V	V	V	V	V	V	V		
	ZD8	V	V	V	V	C	V	V	V	V	V	V	V	V	V		
	ZD9	V	V	V	V		V	V	V	V	V	V	V	V	V		
	ZF	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	
	ZK3	V	V	V	V	C		V	V	V	V	V	V	V	V		
	ZL	V	V	V	V	C	V	V	V	V	V	V	V	V	V		
	ZL7	V	V	V	V		V	V	V	V	V	V	V	V	V		
	ZL8	V	V	V	V		V	V	V	V	V	V	V	V	V		
	ZL9	V	V	V	V			V	V	V	V	V	V	V	V		
	ZP	V	V	V	V	C	V	V	V	V	V	V	V	V	V		
	ZS	V	V	V	V	C	V	V	V	V	V	V	V	V	V		
	ZS8	V	V	V	V				V		V		V		V		

**Key**  
W - worked  
R - requested  
Q - queued  
C - confirmed  
V - verified

**Award Progress Filter**

Band: ANY  Unworked  Worked  Requested  Confirmed  Verified

Mode: MIXED  Include deleted DXCC entities

**ZC4 (U K Bases on Cyprus) Progress Details**

	160M	80M	40M	30M	20M	17M	15M	12M	10M	6M	2M
PHONE					V		V		C		
CW	V	V	V	V	V	V	C	V	V		
DIGI		C					V		V		
FT8											

Summary


Help

Config

# ZC4GR on FT8 Looks Challenging

Pathfinder 5.2.7 (Script error notifications are hidden): results from QRZ for ZC4GR

2020 X HC ZC4GR Buck QRZ Google K2DSL 425DXN IK3QAR Config  
RAC Club Log QRZ RU HamQTH DB0SDX JJ1WTL hamdb Help



18 new alerts 21:46:25 UTC 8 May 2021

by Callsign Search Database News Forums Store Swapmeet Resources Contact AA6YQ

## ZC4GR


Cyprus SBA

**Garry Russell**  
ESBA Cyprus  
U K BASES ON CYPRUS  
Cyprus SBA  
QSL: QSL via EB7DX  
Email: [zc4gr@outlook.com](mailto:zc4gr@outlook.com)

Ham Member Lookups: 43262 Label

Biography Detail Logbook 14941 Log a NEW contact with ZC4GR...

Hi and thanks for looking at my QRZ page, I am currently back on operating from ESBA Cyprus locator KM65WC. My main interest is operating voice SSB and Digi modes, I mainly operate FT8, other modes I operate are SSTV, PSK31, JS8 call and WSPR. my station includes an FT450 which is my main HF radio, my other radio for VHF UHF is an FT847, which is a lovely radio for the higher bands. and as you can imagine with this hobby I have accumulated many other radios over the years. I have now improved my antenna and PC situation. I am now operating using a Vine City Windom antenna from Lamco [www.hamradio-shop.co.uk](http://www.hamradio-shop.co.uk) Bands I operate on 40, 20, 30, 17, 15, 10, 12.



# ZC4GR on FT8 Looks Challenging

## Check for Recent Activity

SpotCollector 8.8.7 @ 2021-05-08 21:27 Z [C,DXK,PF,DXV,PV] 43 entries (log: AA6YQ.mdb)

WV 05-08 2105 Z Outgoing spot Call TA2EE 7.074.0 Freq Cluster Spot source status: pre-filtered

Q: 0 A 4 0 K Notes Local Report Stats Prop Config Help

Need	Call	Prefix	RegCode	First	Last	Mode	Band	Freq	QX	CQ	Pr1	EU	AF	SA	NA-E	NA-M	NA-W	AS	OC	ODX	S Min	S Max	S Last	SP S	SP P	LP S	LP P
D	ZC4GR	ZC4		04 16 1519	1538	FT8	15M	21,076.0		20		Y								3602				-32	13	-35	11
D	ZC4GR	ZC4		04 16 1943	1943	FT8	30M	10,137.5		20		Y								3444				5	81	-148	
D	ZC4GR	ZC4		04 18 1628	1628	FT8	15M	21,075.0		20		Y								4067				10	84	-51	2
D	ZC4GR	ZC4		04 18 1741	1825	FT8	10M	28,075.1		20		Y		Y						4246				-46	4	-148	
D	ZC4GR	ZC4		04 18 1914	1915	FT8	30M	10,136.0		20								Y		6931				12	91	-121	
D	ZC4GR	ZC4		04 18 2031	2031	FT8	30M	10,138.5		20								Y		6905				12	91	-121	
D	ZC4GR	ZC4		04 19 1420	1421	FT8	10M	28,076.3		20		Y								4462				-135		-71	
D	ZC4GR	ZC4		04 19 1622	1638	FT8	30M	10,136.7		20		Y								4266				-6	61	-161	
D	ZC4GR	ZC4		04 19 1826	1834	FT8	30M	10,136.0		20		Y						Y		3615				0	77	-159	
D	ZC4GR	ZC4		04 19 1936	2023	FT8	40M	7,074.0		20		Y								4694				-18	11	-252	
D	ZC4GR	ZC4		04 20 1424	1425	FT8	15M	21,074.0		20		Y								4985				-25	23	-30	16
D	ZC4GR	ZC4		04 20 1806	1806	FT8	40M	7,076.3		20		Y								3766				-31		-270	
D	ZC4GR	ZC4		04 20 1803	1911	FT8	30M	10,136.0		20		Y						Y		3127				5	81	-148	
D	ZC4GR	ZC4		04 22 1409	1409	FT8	20M	14,074.0		20		Y								3444				23	94	-60	
D	ZC4GR	ZC4		04 22 1640	1646	FT8	20M	14,074.0		20		Y								3930				25	96	-64	
D	ZC4GR	ZC4		04 22 1821	1924	FT8	20M	14,074.0		20		Y								4087				28	97	-49	1
D	ZC4GR	ZC4		04 23 1830	1830	FT8	15M	21,074.0		20		Y								3881				-26	21	-27	19
D	ZC4GR	ZC4		04 23 1229	2136	FT8	20M	14,074.0		20		Y			Y			Y		0	-24	-11	-13	26	96	-68	
D	ZC4GR	ZC4		04 23 2326	2331	FT8	20M	14,074.0		20		Y								4332				7	79	-41	6
D	ZC4GR	ZC4		04 25 1239	1240	FT8	20M	14,074.0		20		Y						Y		6770				19	92	-47	3
D	ZC4GR	ZC4		04 25 1446	1446	FT8	20M	14,076.0		20								Y		5250				23	95	-59	
D	ZC4GR	ZC4		04 25 1533	1558	FT8	30M	10,136.0		20		Y						Y		4728				-20	5	-147	
D	ZC4GR	ZC4		04 25 1741	1818	FT8	30M	10,136.0		20		Y						Y		4266				-7	60	-179	
D	ZC4GR	ZC4		04 25 2045	2104	FT8	40M	7,074.0		20		Y								4462				-1	77	-231	
D	ZC4GR	ZC4		04 26 1531	1536	FT8	30M	10,136.0		20		Y						Y		4694				-20	5	-147	
D	ZC4GR	ZC4		04 26 1649	1708	FT8	30M	10,136.0		20		Y						Y		3459				-6	61	-161	
D	ZC4GR	ZC4		04 27 0742	0742	FT8	40M	7,075.4		20		Y								3615				-8	55	-240	
D	ZC4GR	ZC4		04 27 1654	1654	FT8	40M	7,074.0		20		Y								3569				-70		-293	
D	ZC4GR	ZC4		04 27 1803	1809	FT8	40M	7,074.0		20		Y						Y		4462				-31		-271	
D	ZC4GR	ZC4		04 27 2004	2004	FT8	40M	7,074.0		20		Y								4649				-1	76	-231	
D	ZC4GR	ZC4		04 30 2027	2342	FT8	20M	14,074.0		20		Y		Y	Y					86				29	97	-49	3
D	ZC4GR	ZC4		05 03 1148	1225	FT8	15M	21,074.0		20		Y						Y		3104				-25	23	-121	
D	ZC4GR	ZC4		05 03 1352	1419	FT8	15M	21,075.7		20		Y						Y		1043				-41	6	-37	9
D	ZC4GR	ZC4		05 03 1609	1643	FT8	15M	21,075.7		20		Y								3311				-61	1	-37	9
D	ZC4GR	ZC4		05 03 1757	1838	FT8	15M	21,074.0		20		Y								3693				-59	1	-21	29
D	ZC4GR	ZC4		05 04 1553	1553	FT8	20M	14,085.0		20								Y		5250				26	96	-62	
D	ZC4GR	ZC4		05 04 1559	1559	FT8	20M	14,075.0		20								Y		5250				26	96	-62	
D	ZC4GR	ZC4		05 06 2200	2201	FT8	30M	10,136.0		20								Y		6839				13	88	-84	
D	ZC4GR	ZC4		05 06 2143	2227	FT8	40M	7,074.0		20		Y						Y		3700				5	86	-176	
D	ZC4GR	ZC4		05 07 0753	0753	FT8	15M	21,075.7		20		Y								4462				-143		-137	
D	ZC4GR	ZC4		05 07 0757	0757	FT8	12M	24,915.0		20								Y		6803				-119		-167	
D	ZC4GR	ZC4		05 08 1917	1939	FT8	15M	21,074.0		20		Y								3206				-2	64	-31	15

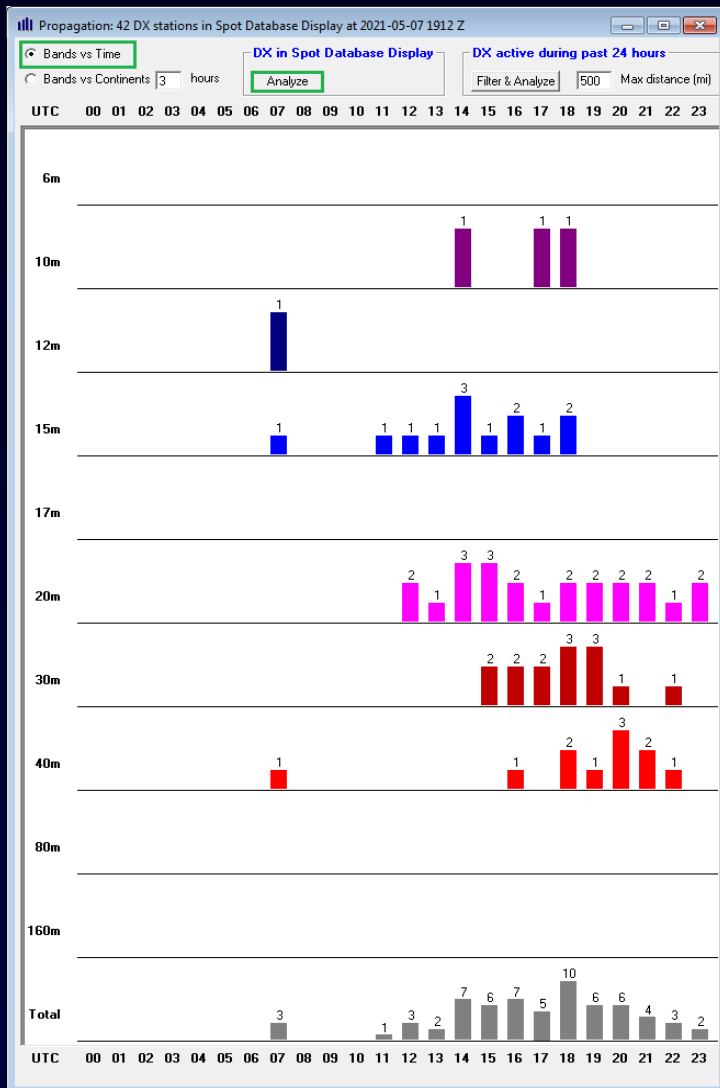
Filter: Band and Mode and Cont and Origin and [DXCC-ZC4]

Sort: First, Call, Last, Freq, Rev, Az

Color codes: verified, unconfirmed, unworld B or M, unworld counter, special tag, LoTW, eQSL AG, LoTW & eQSL AG

# Working ZC4GR on FT8

## Band vs. Time-of-Day Analysis of Recent Activity



### When QRV?

- 15m: 11Z to 18Z
- 20m: 12Z to 23Z
- 30m: 15Z to 20Z
- 40m: 16Z to 21Z



# Working ZC4GR on FT8

- No “Fox/Hound” frequencies
- Spotted from NA-E on 4/23 and 4/30
- Copied on 4/23

SpotCollector 8.8.7 @ 2021-05-08 21:27 Z [CC,DXK,PF,DXV,PV] 43 entries (log: AA6YQ.mdb)

WVY 05-08 2105 Z Outgoing spot Call TA2EE 7.074.0 Freq Cluster Spot source status: pre-filtered

Q: 0 A 4 0 K Notes Local Report Stats Prop Config Help

Closest Spotter

Spotted from Regions Actual SNR

Need	Call	Prefix	RegCode	First	Last	Mode	Band	Freq	QSQ	CQ	Pr1	EU	AF	SA	NA-E	NA-M	NA-W	AS	OC	ODX	S Min	S Max	S Last	SP S	SP P	LP S	LP P
D	ZC4GR	ZC4		04 16 1519	1538	FT8	15M	21,076.0	20			Y								3602			-32	13	-35	11	
D	ZC4GR	ZC4		04 16 1943	1943	FT8	30M	10,137.5	20			Y								3444			5	81	-148		
D	ZC4GR	ZC4		04 18 1628	1628	FT8	15M	21,075.0	20			Y								4067			10	84	-51	2	
D	ZC4GR	ZC4		04 18 1741	1825	FT8	10M	28,075.1	20			Y		Y						4246			-46	4	-148		
D	ZC4GR	ZC4		04 18 1914	1915	FT8	30M	10,136.0	20									Y		6931			12	91	-121		
D	ZC4GR	ZC4		04 18 2031	2031	FT8	30M	10,138.5	20									Y		6905			12	91	-121		
D	ZC4GR	ZC4		04 19 1420	1421	FT8	10M	28,076.3	20			Y								4462			-135		-71		
D	ZC4GR	ZC4		04 19 1622	1638	FT8	30M	10,136.7	20			Y								4266			-6	61	-161		
D	ZC4GR	ZC4		04 19 1826	1834	FT8	30M	10,136.0	20									Y		3615			0	77	-159		
D	ZC4GR	ZC4		04 19 1936	2023	FT8	40M	7,074.0	20			Y								4694			-18	11	-252		
D	ZC4GR	ZC4		04 20 1424	1425	FT8	15M	21,074.0	20			Y								4985			-25	23	-30	16	
D	ZC4GR	ZC4		04 20 1806	1806	FT8	40M	7,076.3	20			Y								3766			-31		-270		
D	ZC4GR	ZC4		04 20 1803	1911	FT8	30M	10,136.0	20			Y						Y		3127			5	81	-148		
D	ZC4GR	ZC4		04 22 1409	1409	FT8	20M	14,074.0	20			Y								3444			23	94	-60		
D	ZC4GR	ZC4		04 22 1640	1646	FT8	20M	14,074.0	20			Y								3930			25	96	-64		
D	ZC4GR	ZC4		04 22 1821	1924	FT8	20M	14,074.0	20			Y								4087			28	97	-49	1	
D	ZC4GR	ZC4		04 23 1830	1830	FT8	15M	21,074.0	20			Y								3881			-26	21	-27	19	
D	ZC4GR	ZC4		04 23 1229	2136	FT8	20M	14,074.0	20			Y		Y				Y		0	-24	-11	-13	26	96	-68	
D	ZC4GR	ZC4		04 23 2326	2331	FT8	20M	14,074.0	20			Y								4332			7	79	-41	6	
D	ZC4GR	ZC4		04 25 1239	1240	FT8	20M	14,074.0	20									Y		6770			19	92	-47	3	
D	ZC4GR	ZC4		04 25 1446	1446	FT8	20M	14,076.0	20									Y		5250			23	95	-59		
D	ZC4GR	ZC4		04 25 1533	1558	FT8	30M	10,136.0	20			Y						Y		4728			-20	5	-147		
D	ZC4GR	ZC4		04 25 1741	1818	FT8	30M	10,136.0	20			Y						Y		4266			-7	60	-179		
D	ZC4GR	ZC4		04 25 2045	2104	FT8	40M	7,074.0	20			Y								4462			-1	77	-231		
D	ZC4GR	ZC4		04 26 1531	1536	FT8	30M	10,136.0	20			Y						Y		4694			-20	5	-147		
D	ZC4GR	ZC4		04 26 1649	1708	FT8	30M	10,136.0	20			Y						Y		3459			-6	61	-161		
D	ZC4GR	ZC4		04 27 0742	0742	FT8	40M	7,075.4	20			Y								3615			-8	55	-240		
D	ZC4GR	ZC4		04 27 1654	1654	FT8	40M	7,074.0	20			Y								3569			-70		-293		
D	ZC4GR	ZC4		04 27 1803	1809	FT8	40M	7,074.0	20			Y						Y		4462			-31		-271		
D	ZC4GR	ZC4		04 27 2004	2004	FT8	40M	7,074.0	20			Y								4649			-1	76	-231		
D	ZC4GR	ZC4		04 30 2027	2342	FT8	20M	14,074.0	20			Y		Y	Y					86			29	97	-49	3	
D	ZC4GR	ZC4		05 03 1148	1225	FT8	15M	21,074.0	20			Y						Y		3104			-25	23	-121		
D	ZC4GR	ZC4		05 03 1352	1419	FT8	15M	21,075.7	20			Y						Y		1043			-41	6	-37	9	
D	ZC4GR	ZC4		05 03 1609	1643	FT8	15M	21,075.7	20			Y								3311			-61	1	-37	9	
D	ZC4GR	ZC4		05 03 1757	1838	FT8	15M	21,074.0	20			Y								3693			-59	1	-21	29	
D	ZC4GR	ZC4		05 04 1553	1553	FT8	20M	14,085.0	20									Y		5250			26	96	-62		
D	ZC4GR	ZC4		05 04 1559	1559	FT8	20M	14,075.0	20									Y		5250			26	96	-62		
D	ZC4GR	ZC4		05 06 2200	2201	FT8	30M	10,136.0	20									Y		6839			13	88	-84		
D	ZC4GR	ZC4		05 06 2143	2227	FT8	40M	7,074.0	20			Y						Y		3700			5	86	-176		
D	ZC4GR	ZC4		05 07 0753	0753	FT8	15M	21,075.7	20			Y								4462			-143		-137		
D	ZC4GR	ZC4		05 07 0757	0757	FT8	12M	24,915.0	20									Y		6803			-119		-167		
D	ZC4GR	ZC4		05 08 1917	1939	FT8	15M	21,074.0	20			Y								3206			-2	64	-31	15	

Filter: Band and Mode and Cont and Origin and [DXCC-ZC4]

Sort: First, Call, Last, Freq, Rcv, Az

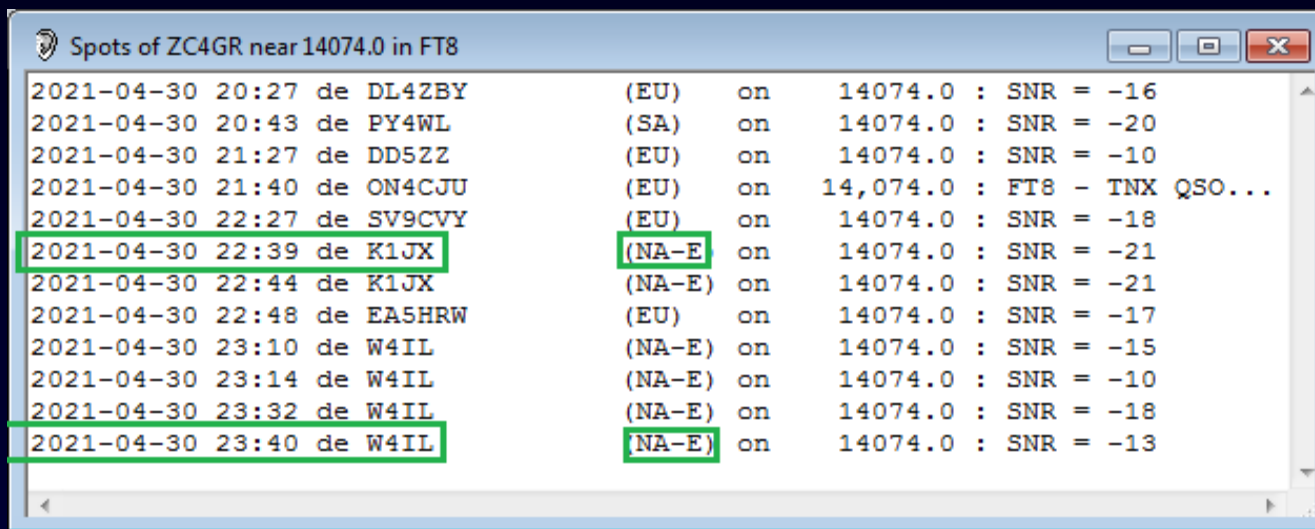
Color codes: verified, unverified, unconfirmed, world E or M, world center, special tag, LoTW, eQSL AG, LoTW & eQSL AG

# 20m ZC4GR Spots on 4/23 @ 1229Z

Spots of ZC4GR near 14074.0 in FT8			
2021-04-23 12:29	de S53EO	(EU)	on 14074.0 : SNR = -03
2021-04-23 16:37	de SV2CSR	(EU)	on 14074.0 : SNR = -10
2021-04-23 17:30	de AA6YQ	(NA-E)	on 14076.6 : CQ from KM65
2021-04-23 17:35	de AA6YQ	(NA-E)	on 14076.6 : calling EA3HYN with SNR = -05
2021-04-23 17:45	de UR5QBB	(EU)	on 14074.0 : SNR = -12
2021-04-23 17:48	de AA6YQ	(NA-E)	on 14076.6 : calling UR5QBB with RR73
2021-04-23 17:48	de AA6YQ	(NA-E)	on 14076.6 : calling MIOJZZ with SNR = -15
2021-04-23 17:49	de MIOJZZ	(EU)	on 14074.0 : SNR = -24
2021-04-23 17:49	de MIOJZZ	(EU)	on 14074.0 : SNR = -20
2021-04-23 17:50	de AA6YQ	(NA-E)	on 14076.6 : calling LB2EG with SNR = -11
2021-04-23 17:51	de AA6YQ	(NA-E)	on 14076.6 : calling DL5RMM with RR73
2021-04-23 17:56	de MIOJZZ	(EU)	on 14074.0 : SNR = -20
2021-04-23 17:59	de MIOJZZ	(EU)	on 14074.0 : SNR = -14
2021-04-23 18:01	de MIOJZZ	(EU)	on 14074.0 : SNR = -12
2021-04-23 18:04	de F6BHK	(EU)	on 14074.0 : SNR = -19
2021-04-23 18:09	de DC0KK	(EU)	on 14074.0 : SNR = -11
2021-04-23 18:09	de MIOJZZ	(EU)	on 14074.0 : SNR = -12
2021-04-23 18:13	de KK4WQ	(NA-E)	on 14074.0 : SNR = -24
2021-04-23 18:16	de AA6YQ	(NA-E)	on 14076.6 : calling OZ1BUR with RR73
2021-04-23 18:23	de AA6YQ	(NA-E)	on 14076.6 : calling EA5JZZ with SNR = -06
2021-04-23 18:27	de AA6YQ	(NA-E)	on 14076.6 : calling LA6NNA with SNR = -10
2021-04-23 18:29	de G8KVM	(EU)	on 14074.0 : SNR = -12
2021-04-23 18:30	de AA6YQ	(NA-E)	on 14076.6 : calling S56KFG with SNR = -14
2021-04-23 18:35	de AA6YQ	(NA-E)	on 14076.6 : calling DJ2VA with SNR = -01
2021-04-23 18:35	de AA6YQ	(NA-E)	on 14076.6 : calling LZ3CB with SNR = +11
2021-04-23 18:35	de LZ3CB	(EU)	on 14074.0 : SNR = +05
2021-04-23 18:36	de AA6YQ	(NA-E)	on 14076.6 : calling LZ3CB with RR73
2021-04-23 18:36	de DL3UB	(EU)	on 14074.0 : SNR = -11
2021-04-23 18:42	de G8KVM	(EU)	on 14074.0 : SNR = -15
2021-04-23 18:46	de 9A8DX	(EU)	on 14074.0 : SNR = -02
2021-04-23 19:03	de AA6YQ	(NA-E)	on 14076.6 : CQ from KM65
2021-04-23 19:04	de UR7UV	(EU)	on 14074.0 : SNR = -11
2021-04-23 19:07	de AA6YQ	(NA-E)	on 14076.6 : calling S57ESG with SNR = +07
2021-04-23 19:09	de AA6YQ	(NA-E)	on 14076.6 : calling IUSKZL with RR73
2021-04-23 19:10	de AA6YQ	(NA-E)	on 14076.6 : calling LA3PU with SNR = +01
2021-04-23 19:10	de LA3PU	(EU)	on 14074.0 : SNR = -13
2021-04-23 19:11	de AA6YQ	(NA-E)	on 14076.6 : calling LA3PU with RR73
2021-04-23 19:16	de HA2ETP	(EU)	on 14,074.0 : Chunks amnd 73 gl!
2021-04-23 19:21	de K23EP	(EU)	on 14074.0 : SNR = -10
2021-04-23 19:23	de RG4D	(EU)	on 14074.0 : SNR = -15
2021-04-23 19:24	de G3UHU	(EU)	on 14074.0 : SNR = -23
2021-04-23 19:31	de EA3AEY	(EU)	on 14074.0 : SNR = -17
2021-04-23 19:33	de AA6YQ	(NA-E)	on 14076.6 : calling EA3AEY with SNR = -07
2021-04-23 19:36	de SQ6ELV	(EU)	on 14074.0 : SNR = -07
2021-04-23 19:40	de IW8ELR	(EU)	on 14074.0 : SNR = -17
2021-04-23 19:44	de SK200PMQ	(EU)	on 14074.0 : SNR = -17
2021-04-23 19:49	de SV1PMQ	(EU)	on 14074.0 : SNR = -14
2021-04-23 19:52	de SV1DZB	(EU)	on 14074.0 : SNR = -12
2021-04-23 20:12	de IZAOX	(EU)	on 14074.0 : SNR = -24
2021-04-23 20:26	de WB2SNN	(NA-E)	on 14074.0 : SNR = -22
2021-04-23 20:27	de AA6YQ	(NA-E)	on 14076.6 : calling WB2SNN with RR73
2021-04-23 20:31	de WB2SNN	(NA-E)	on 14074.0 : SNR = -22
2021-04-23 20:31	de CO2WP	(NA-E)	on 14074.0 : SNR = -24
2021-04-23 20:45	de DL1AE	(EU)	on 14074.0 : SNR = -12
2021-04-23 20:49	de DG5YCG	(EU)	on 14074.0 : SNR = -13
2021-04-23 20:56	de DF3WI	(EU)	on 14074.0 : SNR = -12
2021-04-23 20:57	de AA6YQ	(NA-E)	on 14076.6 : calling DF3WI with RR73
2021-04-23 21:01	de AA6YQ	(NA-E)	on 14076.6 : CQ from KM65
2021-04-23 21:02	de IZ2KTE	(EU)	on 14074.0 : SNR = -19
2021-04-23 21:04	de AA6YQ	(NA-E)	on 14076.6 : calling VA3QB with SNR = -15
2021-04-23 21:08	de PA1H	(EU)	on 14074.0 : SNR = -14
2021-04-23 21:10	de EA3RT	(EU)	on 14074.0 : SNR = -18
2021-04-23 21:15	de G4FFY	(EU)	on 14074.0 : SNR = -19
2021-04-23 21:28	de AA6YQ	(NA-E)	on 14076.6 : calling TA2L with SNR = +00
2021-04-23 21:29	de AA6YQ	(NA-E)	on 14074.0 : SNR = -19
2021-04-23 21:36	de AA6YQ	(NA-E)	on 14076.6 : calling TA2L with RR73
2021-04-23 21:36	de 6V7VC	(EU)	on 14074.0 : SNR = -17

- QRV from 1229Z to 2136Z
- WSJT-X copied from 1730Z to 2129Z

# 20m ZC4GR Spots on 4/30 @ 2027Z

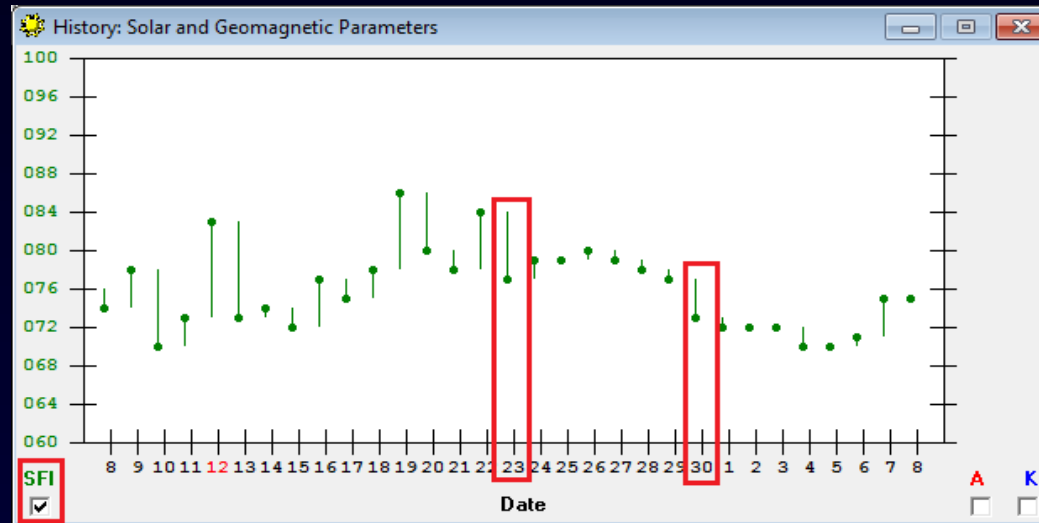


Spots of ZC4GR near 14074.0 in FT8

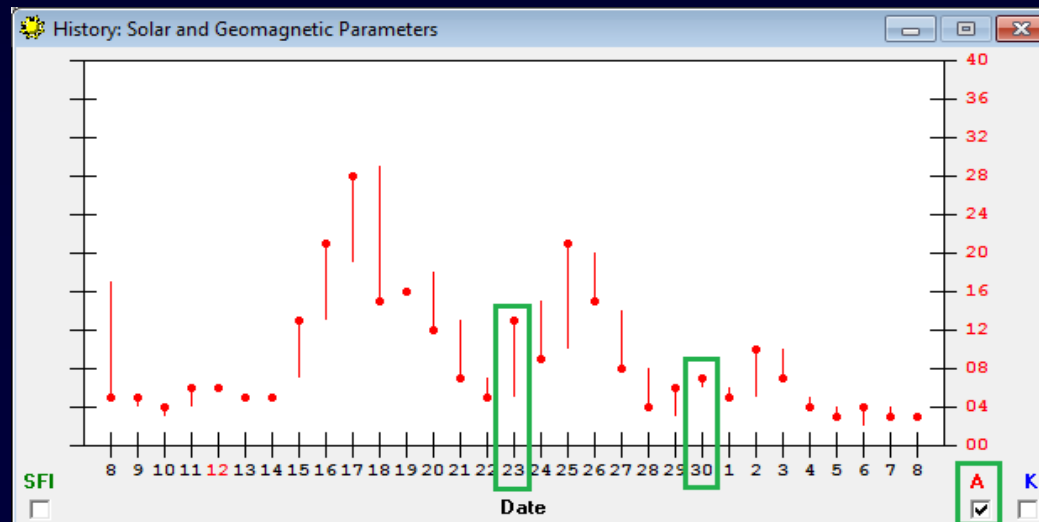
2021-04-30	20:27	de DL4ZBY	(EU)	on	14074.0	: SNR = -16
2021-04-30	20:43	de PY4WL	(SA)	on	14074.0	: SNR = -20
2021-04-30	21:27	de DD5ZZ	(EU)	on	14074.0	: SNR = -10
2021-04-30	21:40	de ON4CJU	(EU)	on	14,074.0	: FT8 - TNX QSO...
2021-04-30	22:27	de SV9CVY	(EU)	on	14074.0	: SNR = -18
2021-04-30	22:39	de K1JX	(NA-E)	on	14074.0	: SNR = -21
2021-04-30	22:44	de K1JX	(NA-E)	on	14074.0	: SNR = -21
2021-04-30	22:48	de EA5HRW	(EU)	on	14074.0	: SNR = -17
2021-04-30	23:10	de W4IL	(NA-E)	on	14074.0	: SNR = -15
2021-04-30	23:14	de W4IL	(NA-E)	on	14074.0	: SNR = -10
2021-04-30	23:32	de W4IL	(NA-E)	on	14074.0	: SNR = -18
2021-04-30	23:40	de W4IL	(NA-E)	on	14074.0	: SNR = -13

# Propagation Conditions

Solar Flux Index



Geomagnetic A Index



# Check for Gray-Line Enhancement

DXView Sunrise/Sunset @ 19:24:12 Z

DX: Cyprus (UK Military Bases)  Auto update

Latitude Longitude Starting Date Selected Time

Sun rise & set  
 Gray-Line

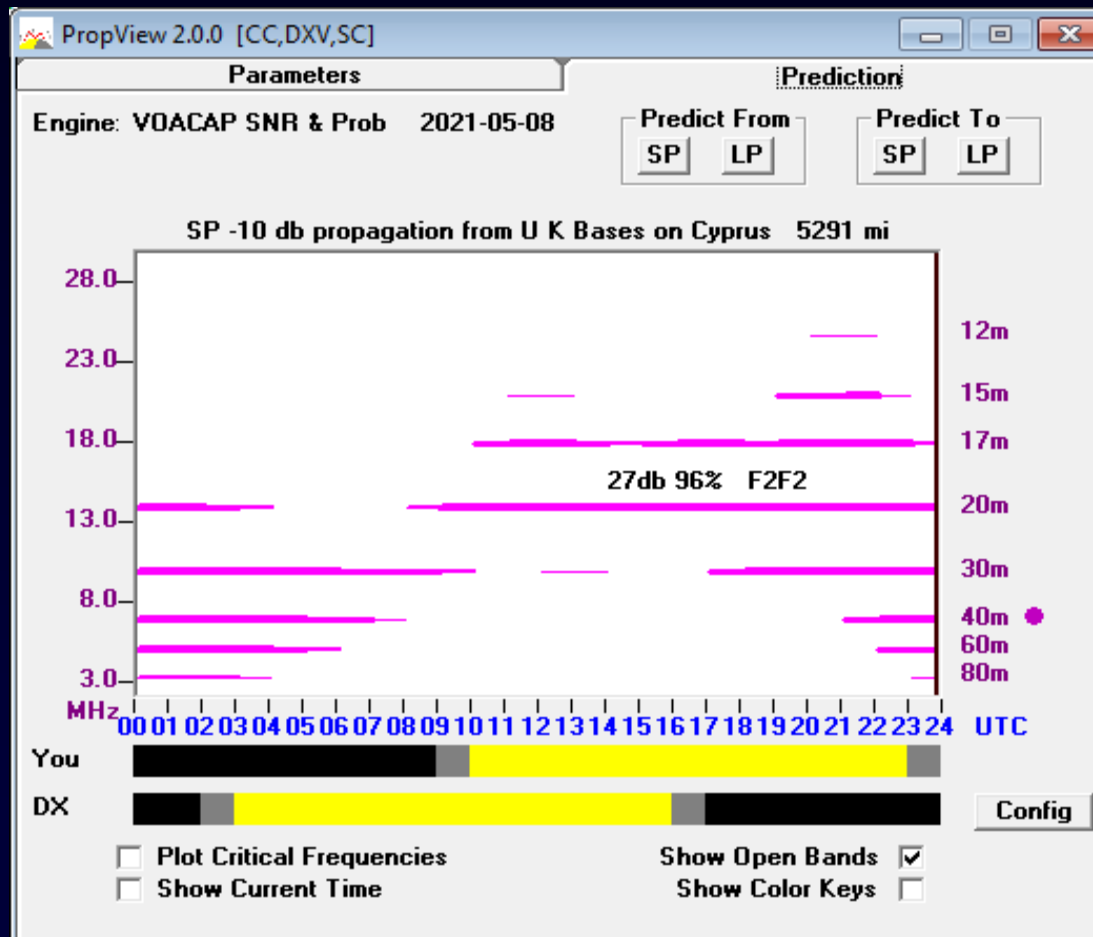
QTH-DX Gray-line (GL) Paths

Date	Sunrise GL Start	Sunrise GL End	Sunset GL Start	Sunset GL End
------	------------------	----------------	-----------------	---------------

None!

# 20m Propagation Forecast to ZC4

Solar Flux Index = 75, DX running 100 watts



17m, 20m, 30m, and 40m look feasible

# Check “Actual” Propagation

NCDXF 4X6TU Beacon is ~230 miles from ZC4

The screenshot shows the PropView Beacon Monitor software interface. The title bar reads "PropView Beacon Monitor @ 03:37:41 06-May-2021 [CC,DXV,SC]". The interface is divided into several sections:

- Monitor:** Includes an "Enable" checkbox (checked), and options for "QSY", "Map", and "Predict". There are "Config" and "Help" buttons.
- Band:** Radio buttons for 20m, 17m, 15m, 12m, and 10m.
- Beacons:** A grid of checkboxes for various call signs. "4X6TU" is checked and highlighted with a red box.
- Octant:** Radio buttons for 315, 270, 225, 180, 0, 45, 90, and 135. A "Rotate" checkbox is also present.
- Transceiver:** A text input field for "Offset (Hz)" with the value "0".
- Beacon Schedule (1 cycle):** A table with columns: Time, Call, City, DXCC Country, Freq (khz), SP, and Dist (mi). The schedule shows a cycle of five beacons from 20:00 to 28:00.


Time	Call	City	DXCC Country	Freq (khz)	SP	Dist (mi)
0						
10						
20	4X6TU	Tel Aviv	Israel	14100	55	5486
30	4X6TU	Tel Aviv	Israel	18110	55	5486
40	4X6TU	Tel Aviv	Israel	21150	55	5486
50	4X6TU	Tel Aviv	Israel	24930	55	5486
60	4X6TU	Tel Aviv	Israel	28200	55	5486
70						
80						
90						
100						
110						
120						
130						
140						
150						
160						
170						

# Check “Actual” Propagation

Who Near Me has been Spotting Stations Near ZC4?

Define a “near ZC4” filter to show stations

- In ZC4, 5B4, TA, OD, 4X, SU
- spotted by stations less than 500 miles from my QTH



The image shows a screenshot of a software interface for defining a filter. On the left, there is a small text box containing the text "nr ZC4". To its right is a larger text area containing the filter expression: "(DXCCPrefix in ('ZC4','5B4','TA','OD','4X','SU')) and (DX<500)". The text area has a vertical scrollbar on the right side.



# Propagation from "Near Me" to "Near ZC4"

Stations in ZC4, 5B4, TA, OD, 4X, SU spotted by stations within 500 miles of my QTH

SpotCollector 8.8.7 @ 2021-05-08 18:57 Z [CC,DXK,PF,DXV,PV] 38 entries (log: AA6YQ.mdb)

WWW 05-07 0605 Z Outgoing spot Call TA2EE 7.074.0 Freq Cluster

Spot source status: pre-filtered

Closest Spotter

Spotted from Regions Actual SNR

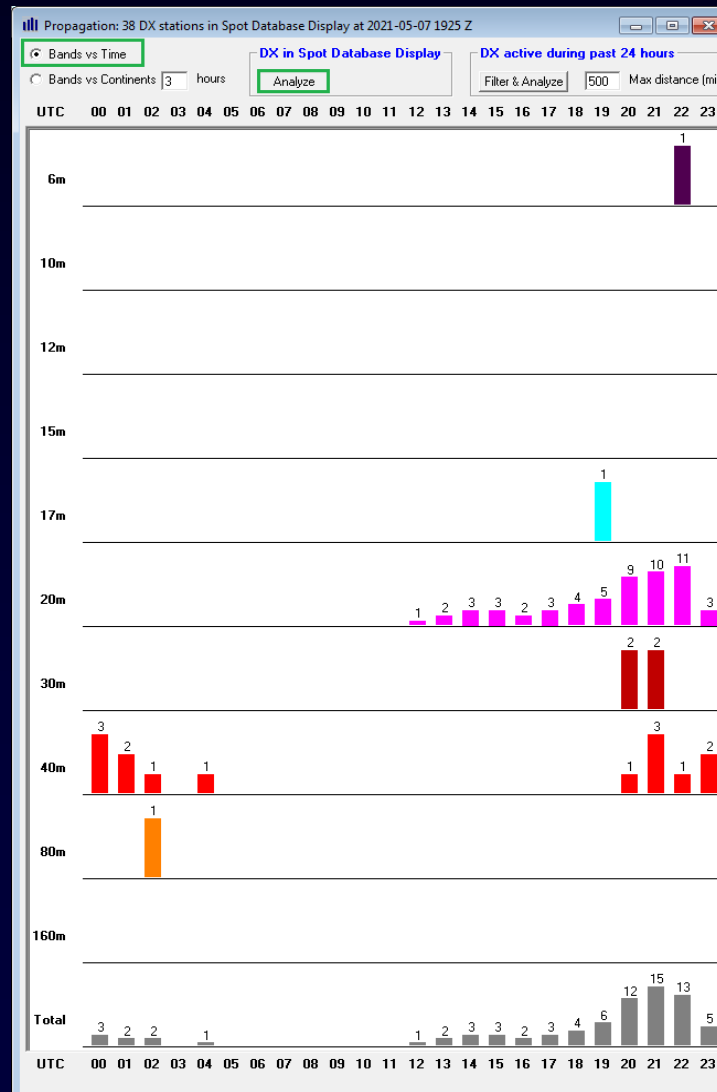
Need	Call	Prefix	RegCode	First	Last	Mode	Band	Freq	QSX	CQ	Pri	EU	AF	SA	NA-E	NA-M	NA-W	AS	OC	ODX	S Min	S Max	S Last	SP S	SP P	LP S	LP P
	D	ZC4GR	ZC4	04 23 1229	2136	FT8	20M	14,074.0		20		Y			Y			Y		0	-24	-11	-13	26	96	-68	
	D	ZC4GR	ZC4	04 30 2027	2342	FT8	20M	14,074.0		20				Y	Y					86				29	97	-49	3
	D	YM8DAG	TA	05 04 2226	2226	FT4	6M	50,318.0		20					Y					188							
		TA6B	TA	05 04 2230	2230	FT8	20M	14,075.3		20					Y					319				24	95	-30	15
		4X5VA	4X	05 04 2238	2238	FT8	20M	14,076.4		20					Y					319				29	97	-30	16
		TC568FA	TA	05 04 1329	2241	SSB	20M	14,257.0		20		Y		Y	Y	Y		Y		40				27	63	-53	
		TA7I	TA	05 04 2125	2255	CW	20M	14,004.0		20		Y			Y	Y	Y			35				23	74	-37	1
		TA2LG	TA	05 04 2115	2317	SSB	20M	14,232.0		20		Y			Y	Y				149				13	34	-27	1
		SU1AS	SU	05 04 2339	2341	FT8	40M	7,074.0		34					Y			Y		299				13	96	-172	
		4Z4KX	4X	05 05 0241	0242	CW	80M	3,504.0		20					Y					355				-12		-312	
		TA0S	TA	05 05 1823	2010	SSB	20M	14,286.0		20		Y	Y	Y	Y					66				28	65	-53	
		TA3DJ	TA	05 05 2015	2019	CW	30M	10,116.0		20					Y			Y		355				8	36	-134	
		TA2ANK	TA	05 05 2039	2039	FT8	20M	14,074.2		20					Y					0	-20	-20	-20	27	96	-45	4
		OD5ZZ	OD	05 05 1935	2041	FT8	20M	14,074.0		20		Y		Y	Y	Y	Y			193				28	97	-41	6
		4X6HU	4X	05 05 2005	2047	SSB	20M	14,307.0		20		Y			Y			Y		64				31	70	-35	
		TA7OYG	TA	05 05 2222	2222	FT8	20M	14,074.0		20					Y					46				24	95	-31	14
		TA2LG	TA	05 05 2212	2323	SSB	20M	14,242.0		20					Y	Y		Y		193				23	57	-30	1
		4Z5ML	4X	05 06 0214	0237	CW	40M	7,024.0		20					Y					58				10	48	-52	
		TA2ABX	TA	05 06 1459	1503	SSB	20M	14,217.0		20		Y			Y					186				26	61	-61	
		4Z5KU	4X	05 06 1906	1906	FT8	17M	18,102.4		20					Y					319				18	91	-33	13
		TA7OYG	TA	05 06 2020	2021	FT8	40M	7,076.5		20					Y					474				-16	18	-229	
		TA1PB	TA	05 06 2103	2103	CW	30M	10,103.0		20					Y					355				13	58	-122	
		4X6HU	4X	05 06 2003	2057	SSB	20M	14,282.0		20		Y		Y	Y			Y		423				31	70	-35	
		TA3DJ	TA	05 06 2057	2105	CW	30M	10,117.0		20		Y			Y					355				8	36	-134	
		TA0S	TA	05 06 2128	2128	FT8	20M	14,076.6		20					Y					483				30	97	-35	10
		TA6B	TA	05 06 2130	2130	FT8	20M	14,074.0		20					Y					400				25	95	-36	9
		TA2NEH	TA	05 06 2125	2150	FT8	40M	7,074.0		20		Y			Y					0	-19	-19	-19	-1	74	-196	
		4X5KS	4X	05 06 2146	2155	FT8	40M	7,075.1		20		Y			Y					0	-15	-15	-15	-5	65	-197	
		TA7OYG	TA	05 06 2151	2158	FT8	40M	7,076.1		20		Y			Y			Y		0	-16	-11	-15	-3	70	-193	
		TC568FA	TA	05 06 1736	2200	SSB	20M	14,257.0		20		Y		Y	Y			Y		185				27	62	-73	
		TA7I	TA	05 06 2106	2220	SSB	20M	14,340.0		20		Y			Y	Y	Y	Y		267				25	60	-34	
		TA2LG	TA	05 06 2137	2220	SSB	20M	14,264.0		20		Y			Y	Y		Y		267				25	60	-42	
		TA1PB	TA	05 06 2234	2235	CW	40M	7,003.0		20					Y					355				9	44	-175	
		4Z1KN	4X	05 07 0025	0026	FT8	40M	7,074.0		20					Y					143				10	92	-128	
		TA2SE	TA	05 07 0011	0012	CW	40M	7,030.0		20					Y					355				16	63	-127	
		TA2HC	TA	05 06 2343	0134	FT8	40M	7,074.0		20		Y			Y	Y				0	-19	-11	-13	10	88	-160	
		TA2LG	TA	05 07 0152	0154	SSB	40M	7,128.0		20					Y					15				7	4	-170	
		4Z5ML	4X	05 07 0405	0407	FT8	40M	7,076.9		20					Y					0	-16	-12	-12	4	86	-179	

Filter: SQL [nr ZC4]

Sort: First, Call, Last, Freq, Rcv, Az

Color codes: verified, unverified, unconfirmed, unverified B or M, unverified counter, special tag, LoTW, eQSL AG, LoTW & eQSL AG

# Propagation from “Near Me” to “Near ZC4”

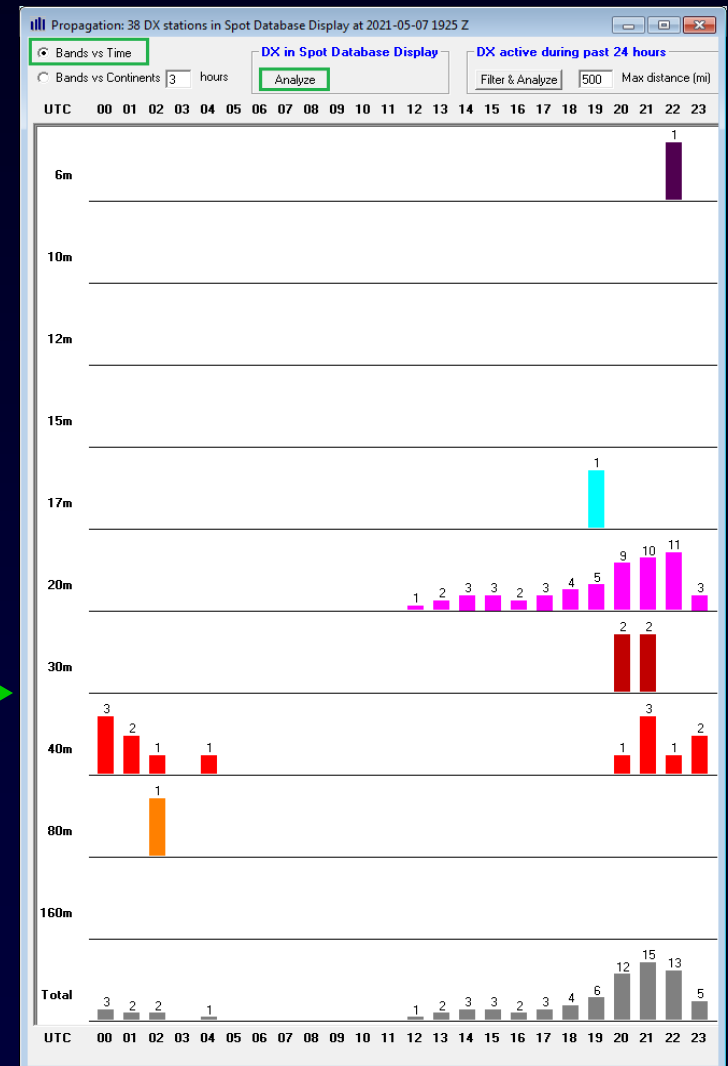
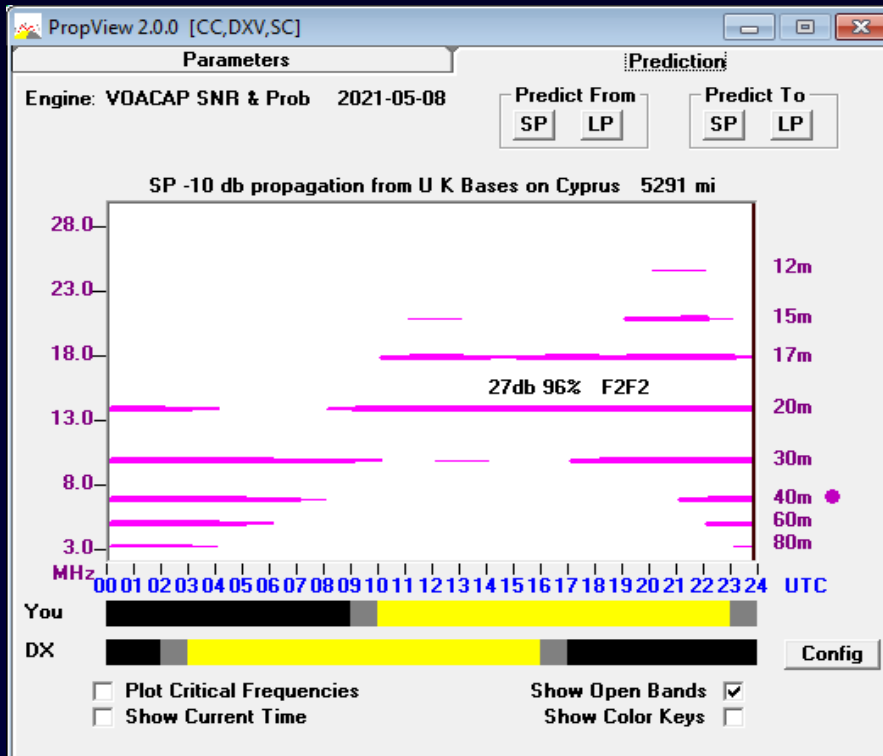


## Propagation Openings?

- 20m: 12Z to 23Z
- 30m: 20Z to 21Z
- 40m: 20Z to 23Z

# Compare Actual & Forecast Propagation

Solar Flux Index = 80, DX running 100 watts



# ZC4GR: The Plan

1. Monitor the 20m FT8 sub-band from 12Z to 23Z, especially
  - when the Solar Flux Index is 75 or above
  - when the NCDXF 4X Beacon can be copied

## When QRV?

- 15m: 11Z to 18Z
- 20m: 12Z to 23Z
- 30m: 15Z to 20Z
- 40m: 16Z to 21Z

## Propagation Openings?

- 20m: 12Z to 23Z
- 30m: 20Z to 21Z
- 40m: 20Z to 23Z

2. Employ a European DX Cluster as a Spot Source
3. Rapidly QSY if ZC4GR is spotted on another band
  - Enable audio announcements
  - Exploit Frequency-dependent Amplifier and Tuner settings

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# Multiple Views of Active DX

DX Spot Sources

EU

Active DX Database

Propagation Prediction (VOACAP)

LotW Database

eQSLAG Database

View Generator

Log Database

DXCC needs

IOTA needs

Leaderboard needs

Marathon needs

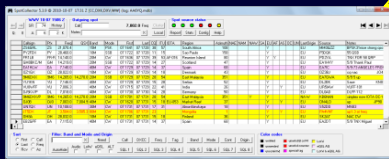
VUCC needs

WAS needs

WPX needs

WAZ needs

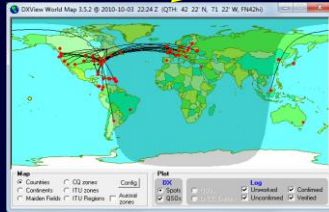
Logged QSOs



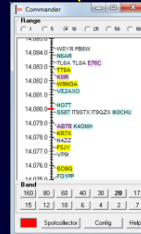
Tabular



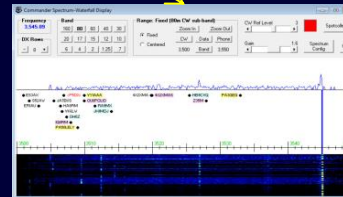
Audio/Email



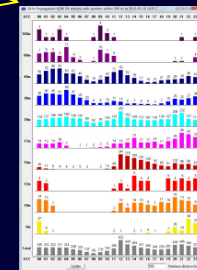
World Map



Bandspread



Spectrum



Propagation



WSJT-X

# ZC4GR: The Plan

1. Monitor the 20m FT8 sub-band from 12Z to 23Z, especially
  - when the Solar Flux Index is 75 or above
  - when the NCDXF 4X Beacon can be copied

## When QRV?

- 15m: 11Z to 18Z
- 20m: 12Z to 23Z
- 30m: 15Z to 20Z
- 40m: 16Z to 21Z

## Propagation Openings?

- 20m: 12Z to 23Z
- 30m: 20Z to 21Z
- 40m: 20Z to 23Z

2. Employ a European DX Cluster as a Spot Source
3. Rapidly QSY if ZC4GR is spotted on another band
  - Enable audio announcements
  - Exploit Frequency-dependent Amplifier and Tuner settings

# Rapidly Setup Amplifier After QSY

Commander 15.1.3 [FlexRadio SDR-6500 (no connection)] @ 03:17:16 Z 7,074.0...

VFO: S9 + 20db  
7,074.00

Alt VFO: [Blank]

Filters: Group [Blank], Width 100, High-cut 138, Low-cut 50

PTT: Rcvng  
TX RX

IC-7800, F6500, IC-7300, TS-2000

Mode: USB  
LSB (Wide), USB (Normal), CW (Normal), RTTY (Wide), FM (Normal), AM (Normal), DIGL (Normal), DIGU (Normal)

AL1200: Plate 4, Load 2, Band 40

ATR-30: Xmit 6.5, Ant 4.5, L 75

Buttons: Bandsread, Msgs, Config, Scan, Memory Banks, Help

User-defined Controls: ALT F5-F12, SHIFT, Sliders 9-16

Commander Configuration

Filter Groups: General, Memories, MultiRadio, Bandsread, Transverters

Ports: AL1200, ATR-30, Alpha, Test

Enabled

Plate Control 1, Load Control 2, Band Control 3

Device Name: AL1200, # Controls: 3, Tolerance: 2%

Setting Readout Colors: Font (Cyan), Background (Black), Default

Plate	Freq	Plate	Load	Band
1800	2	0	160	
1825	2	0	160	
1850	2	0	160	
1900	0	5	160	
3500	1.5	0	80	
3525	1.5	0	80	
3550	2	2	80	
3600	2	2	80	
3650	2.5	2.5	80	
3700	2.5	2.5	80	
3750	2.5	2.5	80	
3800	3	3	80	
3825	4	3	80	
3950	4	3	80	
7000	4	2	40	
7025	4	2	40	
7050	4	2	40	
7100	4.25	2	40	
7150	4.5	0	40	
7200	4.75	0	40	
10100	9.25	5.75	40	
10150	9.25	5.75	40	
10200	9.25	5.75	40	
14000	7.75	3.5	20	
14050	7.75	4	20	
14100	7.75	4	20	
14150	7.75	4	20	

Data File: [C:\Program Files (x86)\Lab Suite\CI-V Commander\Tune1200.txt]

Filename: [Blank]

Buttons: Select, Reload, Save, Help



# ZC4GR: The Plan

## 1. Monitor the 20m FT8 sub-band from 12Z to 23Z

### When QRV?

- 15m: 11Z to 18Z
- 20m: 12Z to 23Z
- 30m: 15Z to 20Z
- 40m: 16Z to 21Z

### Propagation Openings?

- 20m: 12Z to 23Z
- 30m: 20Z to 21Z
- 40m: 20Z to 23Z

## 2. Employ a European DX Cluster as a Spot Source

## 3. Rapidly QSY if ZC4GR is spotted on another band

- Enable audio announcements
- Exploit Frequency-dependent Amplifier and Tuner settings

# ZC4GR: Success!

20m FT8 @20:12Z

Spots of ZC4GR near 14076.2 in FT8					
2021-08-14	20:12	de AA6YQ	(NA-E)	on	14076.2 : CQ from KM65
2021-08-14	20:15	de IZ4UFQ	(EU)	on	14074.0 : ZC4GR called by IZ4UFQ reported SNR = -10
2021-08-14	20:18	de AA6YQ	(NA-E)	on	14076.2 : calling YL2SW with SNR = +04
2021-08-14	20:18	de AA6YQ	(NA-E)	on	14076.2 : calling YL2SW with RR73
2021-08-14	20:19	de AA6YQ	(NA-E)	on	14076.2 : calling JK1OZS with RR73
2021-08-14	20:20	de DL4DW	(EU)	on	14074.0 : ZC4GR called by DL4DW reported SNR = -20
2021-08-14	20:26	de DL8AKI	(EU)	on	14074.0 : ZC4GR called by DL8AKI reported SNR = -05
2021-08-14	20:27	de AA6YQ	(NA-E)	on	14076.2 : calling DL8AKI with RR73
2021-08-14	20:29	de F4CQR	(EU)	on	14074.0 : ZC4GR called by F4CQR reported SNR = -14
2021-08-14	20:29	de AA6YQ	(NA-E)	on	14076.2 : calling KZ9DX with SNR = -12
2021-08-14	20:31	de AA6YQ	(NA-E)	on	14076.2 : calling WA9WUD with SNR = -14
2021-08-14	20:34	de AA6YQ	(NA-E)	on	14076.2 : calling AA6YQ with SNR = -02
2021-08-14	20:34	de AA6YQ	(NA-E)	on	14076.2 : calling AA6YQ with RR73
2021-08-14	20:35	de AA6YQ	(NA-E)	on	14076.2 : calling KZ9DX with SNR = -09
2021-08-14	20:39	de AA6YQ	(NA-E)	on	14076.2 : calling UA9AAE with SNR = -06
2021-08-14	20:48	de AA6YQ	(NA-E)	on	14076.2 : calling OK1EK with SNR = +24
2021-08-14	20:48	de OK1EK	(EU)	on	14074.0 : ZC4GR called by OK1EK reported SNR = +00
2021-08-14	20:50	de AA6YQ	(NA-E)	on	14076.2 : calling CT1BWU with SNR = +05
2021-08-14	20:51	de CT1BWU	(EU)	on	14074.0 : ZC4GR called by CT1BWU reported SNR = -22
2021-08-14	20:51	de AA6YQ	(NA-E)	on	14076.2 : calling CT1BWU with RR73
2021-08-14	20:52	de AA6YQ	(NA-E)	on	14076.2 : calling PY3DXM with SNR = -08
2021-08-14	20:53	de AA6YQ	(NA-E)	on	14076.2 : CQ from KM65
2021-08-14	20:54	de CT1BWU	(EU)	on	14,074.0 : All ok in Log 73.
2021-08-14	20:54	de AA6YQ	(NA-E)	on	14076.2 : calling DL9QB with SNR = +11
2021-08-14	20:55	de DL9QB	(EU)	on	14074.0 : ZC4GR called by DL9QB reported SNR = -09
2021-08-14	20:56	de AA6YQ	(NA-E)	on	14076.2 : calling DL9QB with RR73
2021-08-14	20:57	de EA3HKA	(EU)	on	14074.0 : ZC4GR called by EA3HKA reported SNR = -19

# ZC4GR: Success!

----- 20m						
203415	-17	0.3	2193	~	AA6YQ	ZC4GR -02
203415	-6	0.3	500	~	CQ	HB9LBC JN47
203415	-4	0.4	2922	~	PJ4EVA	5X3R 73
203415	15	0.3	2565	~	CQ	HA7TM JN97
203415	-10	0.3	659	~	SM5FQQ	PF1B R-01
203415	-16	0.3	203	~	PY2BMX	2E0ELA -20
203415	12	0.3	2414	~	LU6XQB	OG2A KP11
203415	2	0.5	1275	~	5B4AHL	F5RRS -06
203415	3	0.6	1491	~	K4FW	PA3EPP -14
203415	-2	0.3	398	~	5B4AHL	EB3JT JN01
203415	4	0.6	976	~	KS3F	IT9SSI 73
203415	-9	0.4	606	~	MW7FRN	LA3BUA JP77
203415	-7	0.3	1639	~	PC2K	EA3EDU R-21
203415	-15	0.7	810	~	6Y5DW	N0DOW EN26
203415	-2	0.4	745	~	GJ0KYZ	KA2NFG R-03
203415	4	0.7	1998	~	AA6YQ	UA3LSX KO65
203415	-7	0.7	1145	~	HA1RB	IK8BDA JM78
203415	-10	0.3	2279	~	G3VMW	KN4CNU EM75
203415	-5	0.4	1426	~	CQ	SV2STE KN00
203415	-3	-1.7	1834	~	KP4JFR	RC1C 73
203415	-1	0.3	1761	~	K4MM	W4HKJ R-11
203415	-15	0.2	333	~	CQ	9A7PBV JN85
203415	-7	1.3	2084	~	CQ	UW5KW KO30
----- 20m						
203445	-13	0.3	2193	~	AA6YQ	ZC4GR RR73
203445	-8	0.4	500	~	CQ	HB9LBC JN47
203445	4	0.5	1491	~	K4FW	PA3EPP RR73
203445	-8	0.4	606	~	MW7FRN	LA3BUA R-15
203445	-5	0.5	2922	~	K6VVK	5X3R -12
203445	-7	0.3	659	~	SM5FQQ	PF1B 73
203445	17	0.3	2565	~	CQ	HA7TM JN97
203445	-8	0.3	2084	~	PP5TI	UW5KW KO30
203445	-6	0.7	1144	~	HA1RB	IK8BDA JM78
203445	13	0.3	2415	~	LU6XQB	OG2A KP11
203445	-8	0.3	1639	~	PC2K	EA3EDU 73
203445	-1	0.3	398	~	5B4AHL	EB3JT JN01
203445	5	0.6	976	~	CQ	IT9SSI JM78
203445	-16	0.3	202	~	PY2BMX	2E0ELA -20
203445	0	0.3	1703	~	SV9RGI	N5OB -15
203445	-18	0.5	871	~	<KP4JFR>	TK/F4HVZ/P
203445	-8	0.3	748	~	5B4AHL	PA1EL JO22
203445	1	0.5	1275	~	5B4AHL	F5RRS RR73

WSJT-X v2.4.0 by K1JT, G4WJS, K9AN, and IV3NWW - Log QSO

Click OK to confirm the following QSO:

Call	Start	End
ZC4GR	2021-08-14 20:34:00	2021-08-14 20:35:00

Mode	Band	Rpt Sent	Rpt Rcvd	Grid	Name
FT8	20m	-17	-02		

Tx power 800  Retain

Comments  Retain

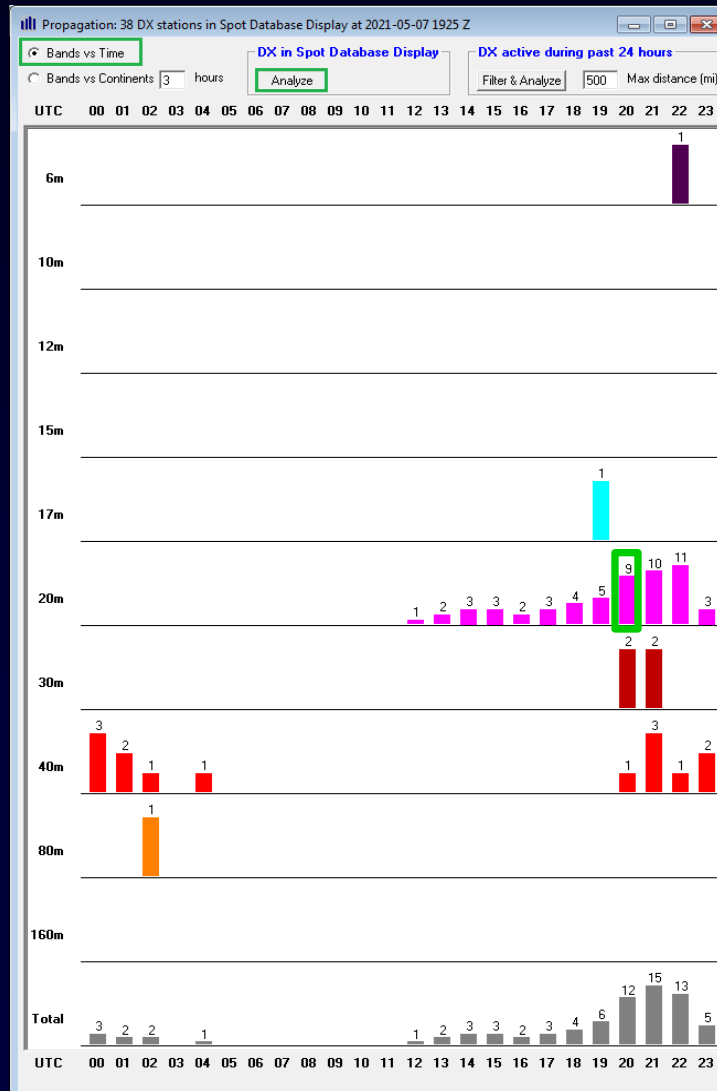
Operator AA6YQ

Exch sent  Rcvd

Prop Mode   Retain

OK Cancel

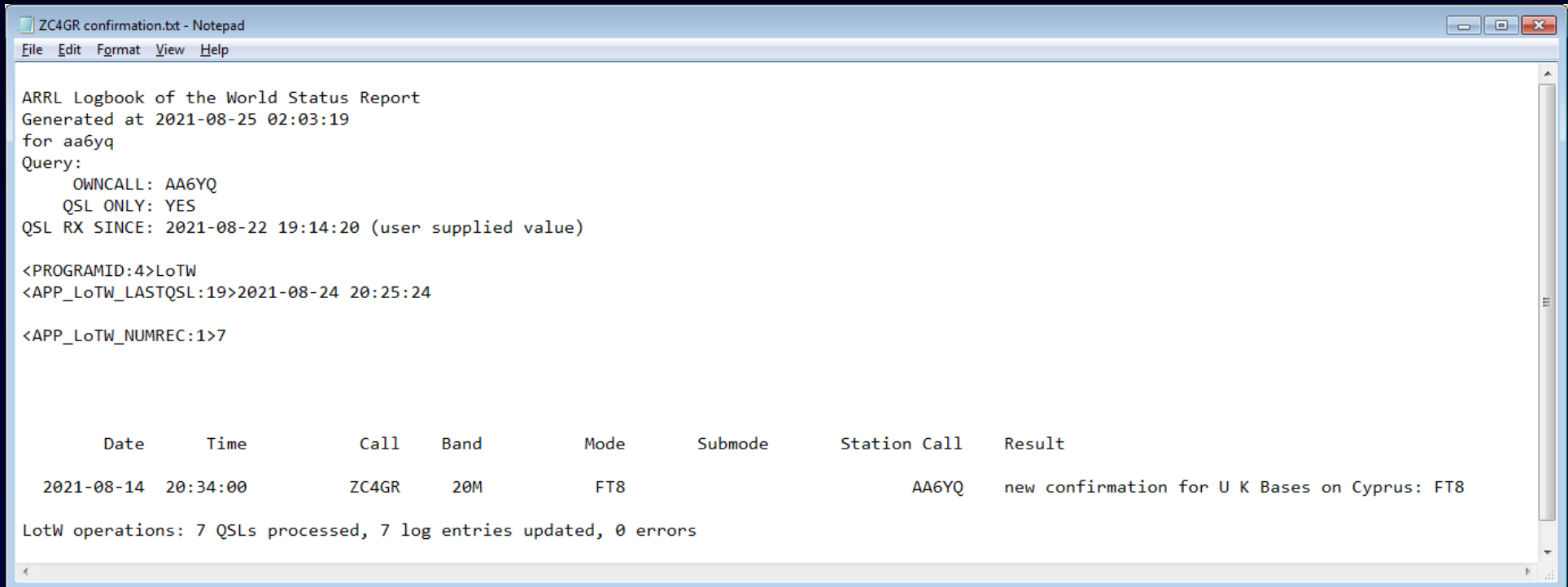
# ZC4GR: Success!



## Propagation Openings?

- 20m: 12Z to 23Z
- 30m: 20Z to 21Z
- 40m: 20Z to 23Z

# ZC4GR: Success!



ZC4GR confirmation.bt - Notepad

File Edit Format View Help

ARRL Logbook of the World Status Report  
Generated at 2021-08-25 02:03:19  
for aa6yq  
Query:  
    OWNCALL: AA6YQ  
    QSL ONLY: YES  
QSL RX SINCE: 2021-08-22 19:14:20 (user supplied value)

<PROGRAMID:4>LoTW  
<APP\_LoTW\_LASTQSL:19>2021-08-24 20:25:24

<APP\_LoTW\_NUMREC:1>7

Date	Time	Call	Band	Mode	Submode	Station Call	Result
2021-08-14	20:34:00	ZC4GR	20M	FT8		AA6YQ	new confirmation for U K Bases on Cyprus: FT8

LoTW operations: 7 QSLs processed, 7 log entries updated, 0 errors

# Working ZC4GR in CW, RTTY, or SSB

1. “Blueprint” the band with local spots
2. If ZC4GR is spotted, double-click to QSY and set split
3. Use dual receivers and a panadaptor to rapidly locate ZC4GR’s listening frequency

# Multiple Views of Active DX

DX Spot Sources

EU

Active DX Database

Propagation Prediction (VOACAP)

Local Spot

LotW Database

eQSLAG Database

View Generator

Log Database

DXCC needs

IOTA needs

Leaderboard needs

Marathon needs

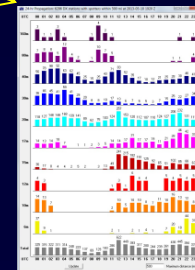
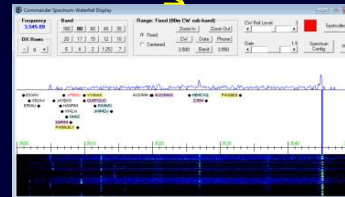
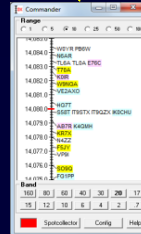
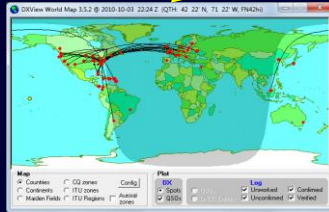
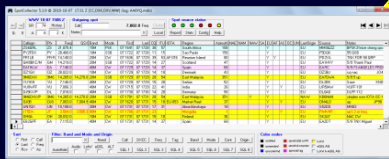
VUCC needs

WAS needs

WPX needs

WAZ needs

Logged QSOs



Tabular

Audio/Email

World Map

Bandspread

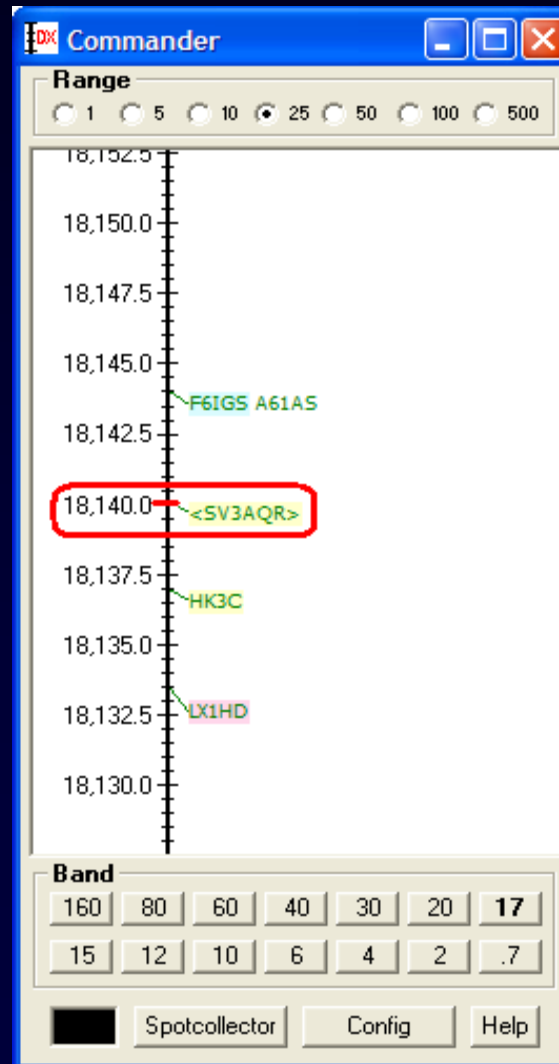
Spectrum

Propagation

WSJT-X

# Blueprinting the Band

“Locally Spot” Every Station You Identify





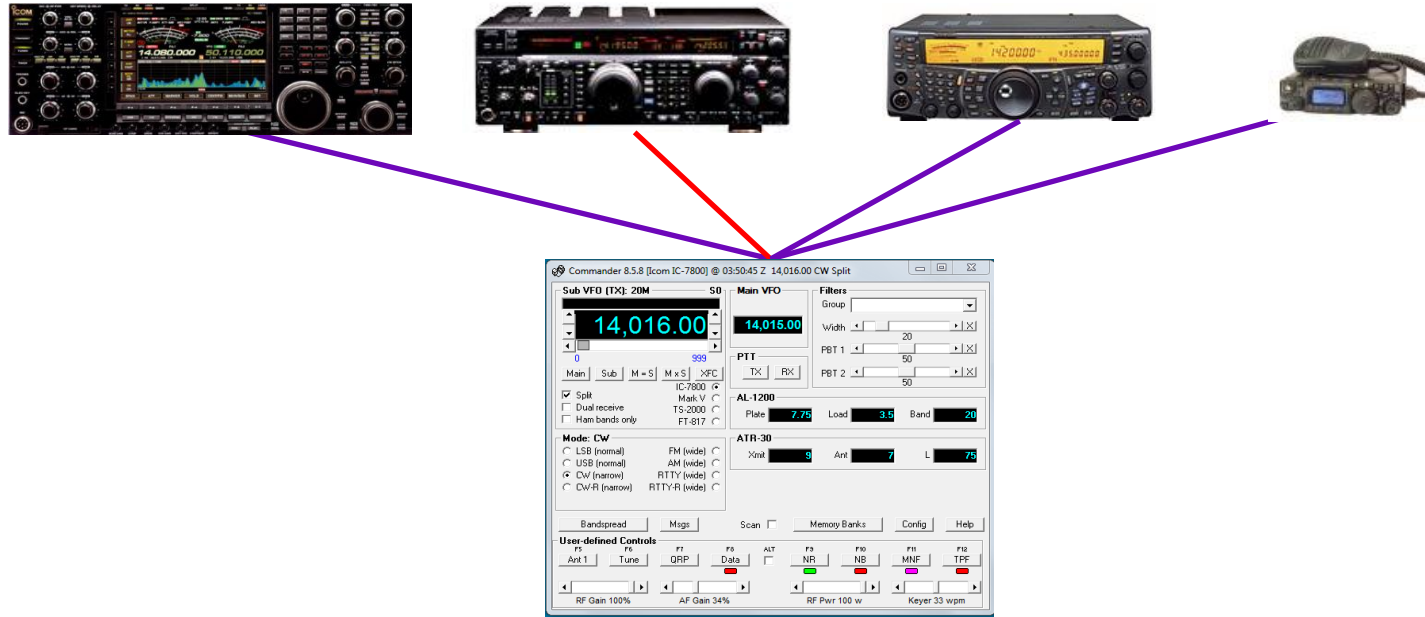
# Working ZC4GR in CW, RTTY, or SSB

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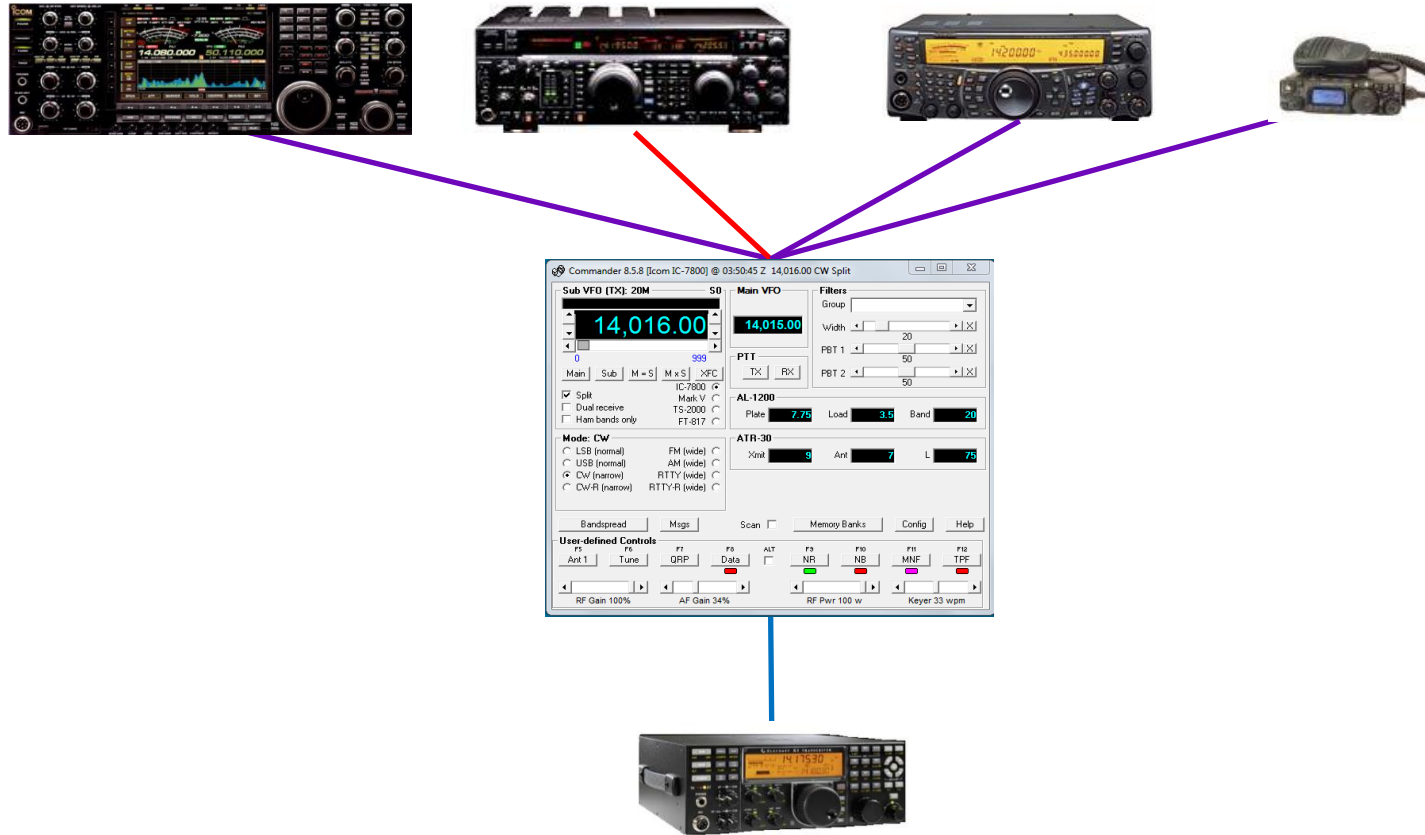
# Commander: Multiple Radio Support



Select one of four *primary* radios

- By button click
- Automatically as a function of frequency

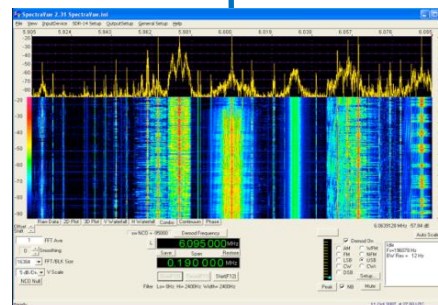
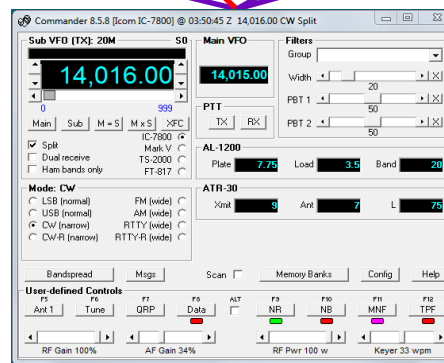
# Commander: Multiple Radio Support



The *Secondary* radio can

- Follow the active primary radio Main or Sub VFO
- Lead the active primary radio

# Commander: Multiple Radio Support



- The *Secondary* radio can
- Follow the active primary radio
  - Lead the active primary radio



# DXing With DXLab

- Introduction to the DXLab Suite
  - Architecture
  - Development Drivers
  - Multiple Views of Active DX
- Finding the DX You Need
- Working the DX You Need

# DXLab Documentation

- Reference documentation
  - HTML: Online and local
  - PDF: Online
  - Updated with each version
- Task-oriented documentation
  - Step-by-step instructions for common actions
  - HTML: Online

The screenshot shows the DXLab website interface. At the top, there are navigation buttons for various applications: Commander, DXView, DXKeeper, Launcher, Pathfinder, PropView, SpotCollector, and WinWarbler. Below these is a 'Download' link and a 'Getting Started with DXLab' link. The main heading is 'DXLab Overview'. A central image shows a world map with the text 'DXLab Better DXing Through Software'. Below the map is a navigation bar with tabs: Overview, Xcvr\_Control, DX\_Info, Logging, Digimodes, QSL\_Info, DX\_Spots, Propagation, Management, Documentation, and Getting Started. The main content area contains a paragraph describing DXLab as a freeware suite of eight interoperating applications. Below this is a list of features, each with a brief description. At the bottom, there is a note about questions and suggestions being welcome in the DXLab Group forum, a phone number '807353', and a footer about web hosting donated by Jamie Punderson W2QO and Networks & More! Inc. with links to their websites.

Download

Getting Started with DXLab

## DXLab Overview

Overview | Xcvr\_Control | DX\_Info | Logging | Digimodes | QSL\_Info | DX\_Spots | Propagation | Management | Documentation | Getting Started

DXLab is a **freeware** suite of eight interoperating applications that can be installed independently in any order. When multiple applications are running, they sense each other's presence and automatically interoperate to support your [Amateur Radio DXing](#) activities:

- [Transceiver control with bandspread](#) - controls up to 4 Alinco, DZKit, Elecraft, FlexRadio, Hilberling, Icom, JRC, Kachina, Kenwood, TenTec, Yaesu transceivers, with frequency and mode tracking by an independent transceiver, receiver, SDR-based panadaptor, or skimmer
- [Rotator control](#) - AlfaSpid, ARSWIN, Heath, Hygain, M2, N1MM Rotor, Prosisstel, SARtek, TIC, Trackbox, Yaesu
- [Solar terminator display and prediction](#) - shows grey line at any specified date and time
- [Prefix, Region, IOTA, and Gridsquare lookup and display](#)
- [Language translation](#) - displays translations of amateur radio words and phrases for languages used in a station's location
- World map display - beam heading, terminator, DX spots, VHF openings, auroral oval
- [Callbook lookup](#) - Buckmaster, RAC, or QRZ CDROMs, Hamcall.Online, or QRZ.com (both free and with data access subscription)
- [Logging](#) - supports both real-time logging, and recording completed QSOs from paper logs
- [QSL card and label generation](#)
- [Logbook of the World and eQSL cc support](#) - automated bidirectional synchronization
- [Award tracking and submission](#) - A-JA, Canadaward, Challenge, DDFM, DOK, DXCC, Holyland, IOTA, JCC, JCG, Maidenhead Fields & Squares, Marathon, RDA, SRR, TopList, VUCC, USA-CA, WAB, WAC, WAE, WAJA, WAIP, WAHUC, WAS, WAZ, WPX, WAJA, WITU
- [QSL route discovery](#) - provides access to more than 80 online sources
- [PSK31, PSK63, PSK125](#) - monitors an entire band and displays heard callsigns
- [RTTY](#) - via the included MMTTY and 2Tone engines, with optional dual receive using a TNC
- [CW](#) (generation only) and [Phone](#) voice keyer
- [DX and WWW spot collection](#) - up to 6 clusters including DX Summit and the [Reverse Beacon Network](#), filtering, direct QSY with QSX
- [Propagation prediction](#) - provides a graphical view of openings by frequency and time using your choice of the included VOACAP, ICEPAC, and IONCAP forecasting engines
- [Propagation monitoring](#) - auto-QSY to monitor the IARU HF beacon network
- supports [add-in applications](#)
- [interoperates](#) with MultiPSK, MMSSTV, MMVARI, DM780, Fldigi, HRD, MixW(\$), DXAtlas(\$)

Questions and suggestions are welcome in the [DXLab Group](#), an open forum that you are encouraged to join.

807353

Web hosting donated by Jamie Punderson W2QO and Networks & More! Inc. ( <http://www.k12usa.com> & <http://www.isboss.com> )



Download

## DXLab Overview

Getting Started with DXLab

**DXLab**  
Better DXing Through Software

Overview | Xcvr\_Control | DX\_Info | Logging | Digimodes | QSL\_Info | DX\_Spots | Propagation | Management | Documentation | Getting Started

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# Better DXing Through Software

**DXKeeper 8.9.4** [CC,DXV,SC,WW] - AA6YQ.mdb : 18487 QSOs

Log QSOs | QSL | Check Progress | my QTHs | Import QSOs | Export QSOs

**QSO: Jordan**

call: JY4NE name: QTH: mode: RTTY via: tx.freq: 14.086765 begin: 9/20/2010 18:37 sent: 599 rcvd: 599 tx.band: 20M rx.freq: 14.086764 end: 9/20/2010 18:37 power: 1500 code: 342 DXCC: JY entity: Jordan

Call	DXCC	Starting UTC	Band	Mode	Sent	Rcvd	Name
JT5DX	JT	9/19/2010 23:23	17M	Cw	599	599	hadraabal
RXQAT	UA	9/20/2010 01:01	20M	RTTY	599	599	Vit
KP4JFR	KP4	9/20/2010 01:11	20M	RTTY	599	599	Jose
JY4NE	JY	9/20/2010 18:37	20M	RTTY	599	599	

Sort:  UTC  Call  Adv Filter: None

**SpotCollector 5.3.9** @ 2010-10-04 19:59 Z [CC,DXK,DXV,WW] (log: AA6YQ.mdb)

WV 10-04 1806 Z | Outgoing spot | Spot source status

SFI: 80 | History | Call: 14.086.2 Freq | Cluster | Report | Stats | Config | Help

Callsign	Pfx	Freq	Band	Mode	LastTime	Notes	NAE	NAM	NAW	SA	EU	AF	AS	OC	UN	LastOrig	Source
PS7DX	PY	14,018.3	20M	Cw	10/4/2010 1959	CQ 8 dB 21 WPM	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA-E	N4ZR-#
SQ9CNS	SP	3,541.0	80M	Cw	10/4/2010 1959	CQ 18 dB 13 WPM										EU	DL5Q-#
LA3TQ	LA	14,017.8	20M	Cw	10/4/2010 1959	CQ 18 dB 23 WPM										EU	S5Z-#
IK0RCD	I	14,025.6	20M	Cw	10/4/2010 1959	CQ 13 dB 18 WPM	Y	Y	Y							NA-M	K8ND-#
SA/SP9EVP	SA	7,017.0	40M	Cw	10/4/2010 1959	CQ 21 dB 26 WPM				Y						EU	DL5Q-#
UA9MA	UA0	1,822.5	160M	Cw	10/4/2010 1959	CQ 10 dB 25 WPM				Y						EU	EI6IZ-#

Filter: Band and Mode

Color codes:  verified  unworkd E  unneeded  unworkd C  unconfmrd  special t

**DXView World Map 3.5.2** @ 2010-10-04 19:57 Z (QTH: 42 22' N, 71 22' W, FN42hi)

Map:  Countries  CQ zones  Continents  ITU zones  Maiden Fields  ITU Regions  Auroral zones

Plot:  DX  Spots  QSOs  DXCC Entities  Log: AA6YQ.mdb  Unworked  Confirmed  Unconfirmed  Verified

**WinWarbler 6.8.5** for AA6YQ @ 2010-10-04 19:59 Z [CC,DXK,DXV,SC]

QSO Info (Receive Pane 0) | local: 2010-10-05 00:59 | Xcvr Freq

Call: 2 | EY7AD | rst R | Name: Rakhim | DXCC: EY | Begin: Log | 14,086.19

QSL:  Via: DIRECT-1 | CQ: 17 | ITU: 30 | QTH: 735700 | Cont: AS | End: Spot | TX: 14,086.19

Buro:  Grid: MN30 | Pri sub:  Sec sub:  Config | Help

Lotw:  IOTA:  Az:  Path:  Comment:

QUOTH CQ DX CQ DX DE SV1PAS SV1PAS PSE K  
 DS1PAUSSVPAS DEHPFF,PD1BPSE K...  
 ))ITCO DX CQ DX DE SV1PAS SV1PAS PSE EEUQOESCQ DX CQ DX DE SV1PAS SV1PAS PSE K  
 S MSQVAS UV1PAS DE PD1ANB,PD1ANB PSE K...9QRZ QRZ QRZ DE SV1PAS SV1PAS PSE K

**Commander 8.5.8** [com IC-7200] @ 19:59:42 Z 14,086.19 LSB

VFO A: 20M | 14,086.19 | VFO B: 21,008.10

Filters: Group: normal | Width: 0 | PBT 1: 50 | PBT 2: 50

PTT: Rcvng | TX | RX | AL-1200 | Plate: 7.75 | Load: 4 | Band: 20

Mode: LSB  LSB (normal)  USB (normal)  CW (narrow)  CW-R (narrow)  FM (wide)  AM (wide)  RTTY (wide)  RTTY-R (wide)

Bands: 180 80 60 40 30 20 17 | 15 12 10 6 4 2 .7

**dx Commander**

Range: 1 5 10 25 50 100

14,088.5 | E17BFB | EA4AHE

14,088.0 | UR7ITU

14,087.5 | PF7DKW

14,087.0 | LX8RTTY

14,086.5 | SP9GKJ

14,085.5

14,085.0

14,084.5

14,084.0

Band: 180 80 60 40 30 20 17 | 15 12 10 6 4 2 .7

Spotcollector | Config | Help

Macros: rty sample

F5: CQ | F6: Call | F7: Over | F8: SK log | ALT | F9: ur rpt | F10: tu log qrz? | F11: de mjc all | F12: mjc all (3)

sh F5: 80m | sh F6: 40m | sh F7: 30m | sh F8: 20m | sh F9: 17m | sh F10: 15m | sh F11: 12m | sh F12: 10m

RTTY receive (soundcard) | RTTY transmit (soundcard)

Freq: 14,084.065 | Signal level & squelch: 61

AFC  Notch  BPF  DPF  Reverse

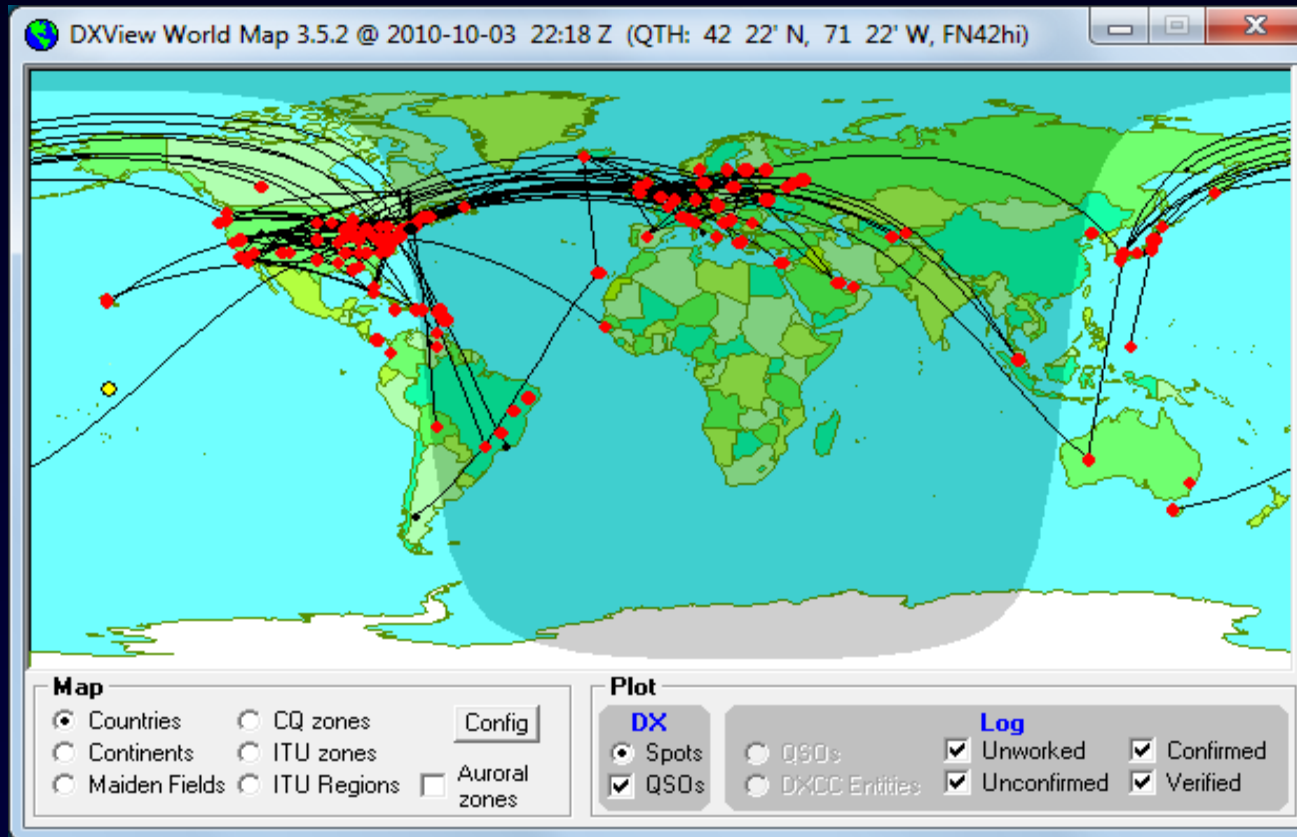
Profile:  net  tune

Reverse  Start  Stop  Abort

Operating Mode:  CW  PSK31  Phone  PSK63  RTTY  PSK125

Tuning Display: Vert height: 2.0 | Horiz zoom: 1 | Horiz pan:

# DXing with DXLab



Better DXing Through Software