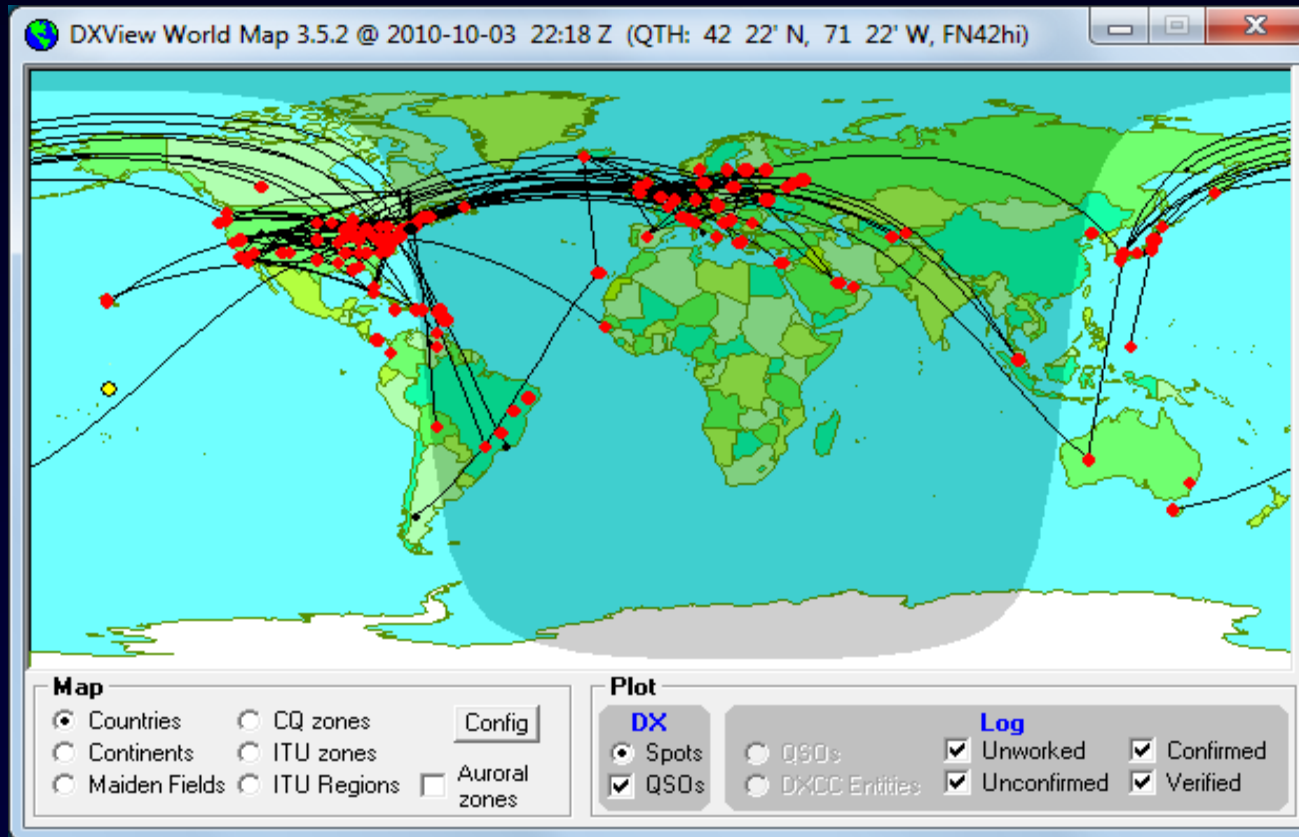


DXing with DXLab

v17 2024-02



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

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DXing With DXLab

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

Drivers

1. User-driven iterative development

- Online group with 5900+ 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

the DXLab Suite

Eight free applications that run individually

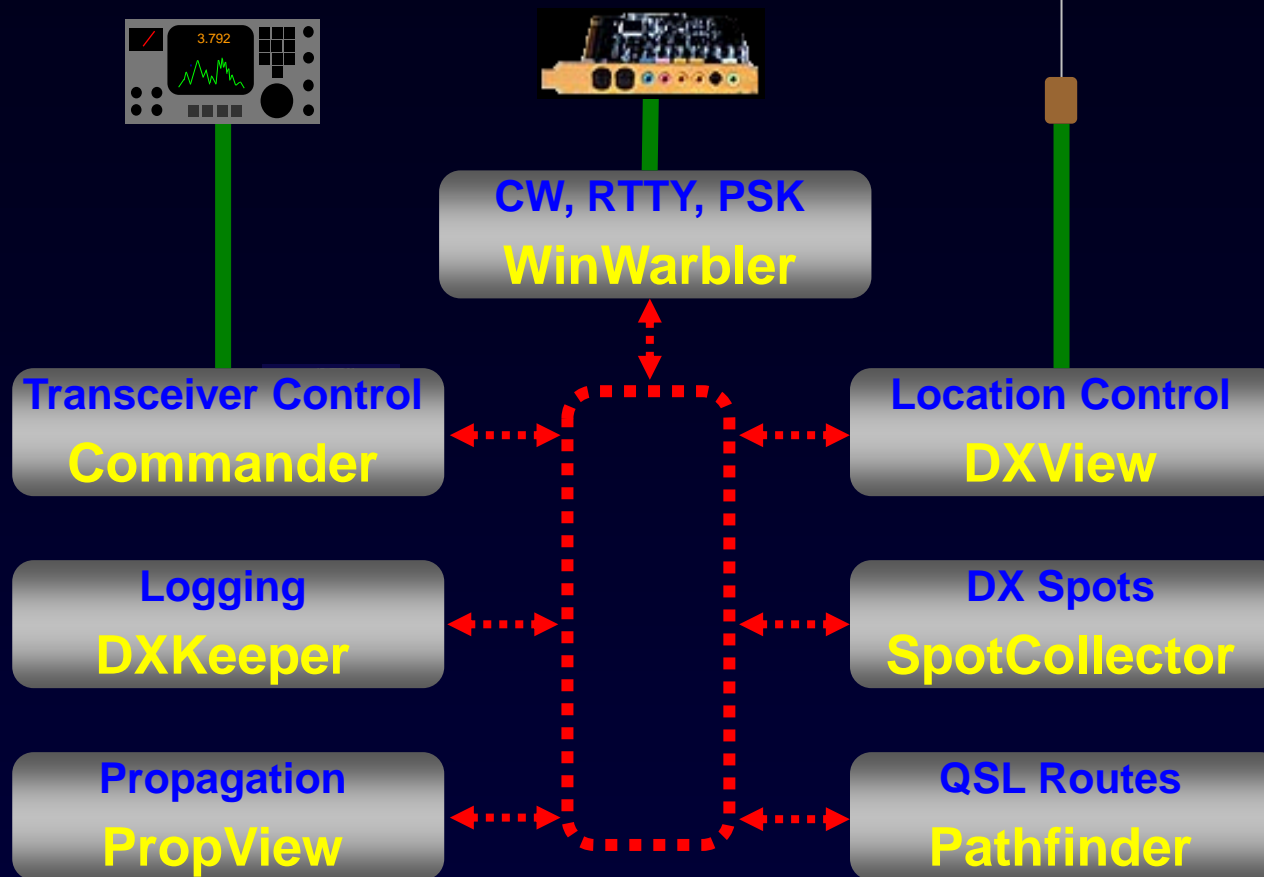
but

when run simultaneously sense each other's presence

and

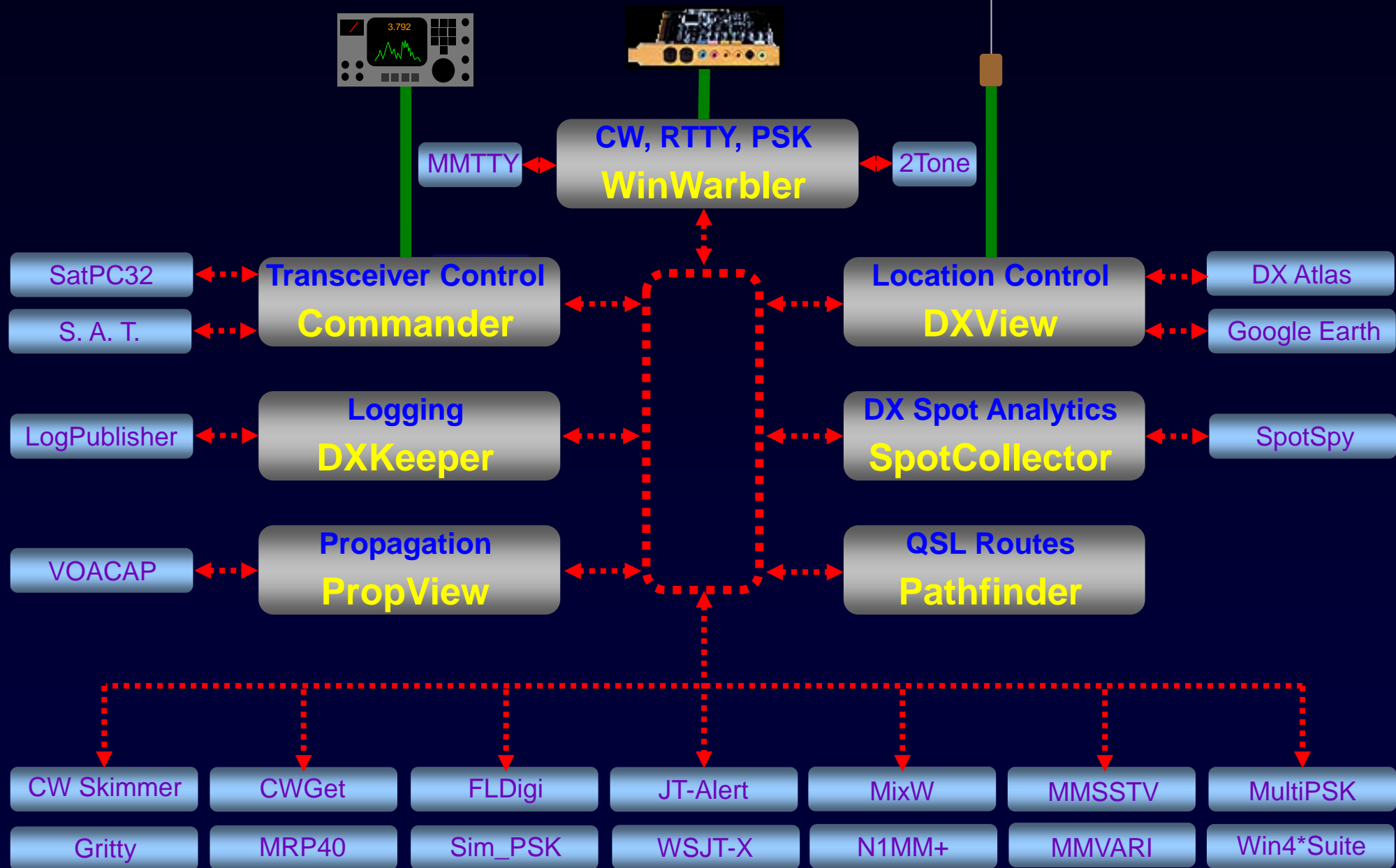
interoperate automatically

the DXLab Suite



- Modular
- Loosely-coupled

the DXLab Ecosystem



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 tx 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
PXQAT	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	

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

WVV 10.04 1806 Z - Outgoing spot

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

Callign	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 16 dB 19 WPM										EU	DL5Q-#
LA3TQ	LA	14.017.8	20M	CW	10/4/2010 1959	CQ 18 dB 23 WPM										EU	S52K-#
IK0RCD	I	14.025.6	20M	CW	10/4/2010 1959	CQ 13 dB 18 WPM	Y	Y	Y							NA-M	K8ND-#
3A/SP9EVP	3A	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-#

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, Unworked, Confirmed, Unconfirmed, Verified

Log: AA6YQ.mdb

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

QSO Info (Receive Pane 0)

Call: EY7AD Name: Rakhim DXCC: EU QTH: 735700 Cont: AS

local: 2010-10-05 00:59 Xcvr Freq: 14,086.19

QSL: Via DIRECT -1 CQ: 17 ITU: 30 QTH: 735700 Cont: AS End: Spot

Buro: Grid: MN30 Pri sub: Sec sub: LotW: IDTA: Az: Path: Comment:

QUOTHQ DX CQ DX DE SV1PAS SV1PAS PSE K
 DS1PAUSSVPAS DEHPFF,PD1BPSE K...
))ITCQ DX CQ DX DE SV1PAS SV1PAS PSE EEU000ESCO 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 [Icom IC-7200] @ 19:59:42 Z 14,086.19 LSB

VFO A: 20M 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 (normal) FM (wide) USB (normal) AM (wide) CW (narrow) RTTY (wide) CW-R (narrow) 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
 14,084.0

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

Spotcollector Config Help

Macros: rtty sample

F5: CQ F6: Call F7: Over F8: SK log ALT
 F9: ur rpt F10: tu log qrz? 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

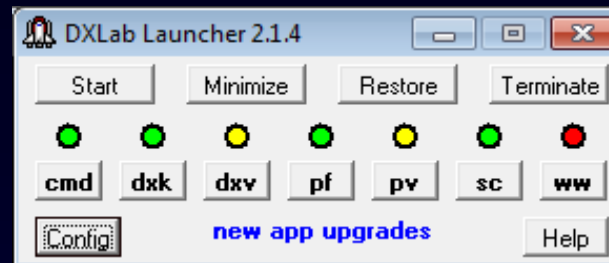
RTTY receive (soundcard) Freq: 14,084.065 Signal level & squelch: 61
 AFC Notch BPF DPF Profile: Reverse Def Opt

RTTY transmit (soundcard) Freq: 14,084.065 net tune
 Reverse F2 Stop F4 Start F4 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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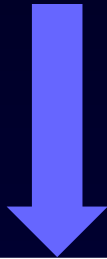
Active DX Database

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 ?

Specifying DXing Objectives

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

The screenshot shows the DXKeeper Configuration window, Awards tab. The window is divided into several sections for different awards:

- DXCC Bands & Modes:** Bands 160M, 80M, 40M, 30M, 20M, 17M, 15M, 12M, 10M, 6M are checked. Modes Phone, CW, and Digital are checked. A dropdown menu is set to FT8. QRP is unchecked.
- Marathon Bands & Modes:** Bands 160M through 2M are unchecked. Modes Phone, CW, and Digital are unchecked. Mixed is unchecked. "Include QSOs with no prop" is checked. Max TX power is set to 1500. "Year, Category, Score Sheet Info" is selected. Realtime Award Progress is unchecked.
- WPX Bands & Modes:** Bands 160M through 6M are unchecked. Modes SSB, CW, and Digital are unchecked. Mixed is unchecked. Realtime Award Progress is unchecked.
- IOTA:** IOTAmem4win update and Realtime Award Progress are unchecked.
- Other Awards:** CQ, WAE, Holyland region select is checked. DARC DOK region selection, WAE 2 point low-band QSOs, and Subdivision validity checking are unchecked.
- DXCC Submission:** Submit deleted entities is checked. Record Sheet lines/page is set to 75.
- Marathon Submission:** Confirmed QSOs are low risk is checked.
- VUCC & WAS Submission:** QSL Card is selected, LoTW is selected.
- DXCC Credits:** Credit-only QSO creation is checked.
- VUCC Bands & Modes:** Band 6M is checked. Bands 2M, 1.25M, 70 CM, 33 CM, 23 CM, and 13 CM and up are unchecked. Satellite is unchecked. Realtime Award Progress is checked.
- WAS Bands & Modes:** Bands 160M and 6M are checked. Bands 80M, 40M, 30M, 20M, 17M, 15M, 12M, 10M, 2M, 1.25M, and 70CM are unchecked. Modes Phone, CW, RTTY, Digital, SSTV, and Sat are unchecked. QRP is unchecked. Mixed (Basic) is unchecked. Realtime Award Progress is checked.
- WAZ Bands & Modes:** A grid shows modes Mixed, SSB, CW, RTTY, Y, A, M, V, and Digital. The 5-band WAZ checkbox is checked. Realtime Award Progress is checked.

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 interface with a table of data. The table has columns for various fields, including call signs, frequencies, and other technical details. The data is presented in a grid format with alternating row colors for readability.

Tabular

Tabular View of Active DX

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

WWV 04-16 1805 Z

SFI 73 History

Outgoing spot

Call 14,085.0 Freq Cluster

Notes X Local

Spot source status

Report Stats Prop Config Help

Need	Call	Prefix	Band	Mode	FirstTime	LastTime	Freq	QSQ	Pri	CQ	IOTA	DXGrnd	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	

Filter: Band and Mode and Origin

Sort: First Call, Last Freq, Rcv Az

Color codes: verified, unneeded, unconfirmed, world B or M, world counter, special tsg, LotW, eQSL AG, LotW & eQSL AG

On 80m through 10m, PropView computes Short Path & Long Path SNR and probability

Font color indicates “needed” DX stations

Background color indicates LotW and eQSL participation

This view is *filtered* by Band, Mode, and Origin

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 & Origin Filters

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"/> ROS	<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

SpotCollector Origin Filter

<input checked="" type="checkbox"/> NA-E	<input checked="" type="checkbox"/> NA-M	<input checked="" type="checkbox"/> NA-W	<input checked="" type="checkbox"/> SA	<input checked="" type="checkbox"/> EU	<input checked="" type="checkbox"/> AF	<input checked="" type="checkbox"/> AS	<input checked="" type="checkbox"/> OC	<input type="checkbox"/> ?
--	--	--	--	--	--	--	--	----------------------------

None All

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

SFI 73 History

Outgoing spot

Call: 14,085.0 Freq Cluster

Notes X Local

Spot source status

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		

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

Sort: First Call Last Freq Rcv Az

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

Audio Age LotW eQSL Mithn

160 test1 W9DL Quixote Need50 SQL 29 SQL 30 160was

Color codes

- verified
- unconfirmed
- unconfirmed
- workd B or M
- workd counter
- special tag
- LotW
- eQSL AG
- LotW & eQSL AG

Tabular View of Active DX

Needed DX on Selected Bands & Modes with SP Prob > 50%

<NEEDFILTER> and <BANDFILTER> and <MODEFILTER> and <ORIGINFILTER> and (SPProb>50)

SpotCollector 7.6.6 © 2017-04-16 19:29 Z [CC,DXK,DXV,PV,WW] 1 entries (log: AA6YQ.mdb)

WWV 04-16 1805 Z

Outgoing spot: Call: 14,085.0 Freq: Cluster: Notes: Local: Report: Stats: Prop: Config: Help

Spot source status: [Green] [Green] [Green] [Green] [Red] [Green]

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	3Y0RY	3Y-B	20M	RTTY	16 1920	16 1920	14,085.0			38	AN-002	JD14	1	Y								11	52	-50		

Filter: SQL [Need50]

Sort: First, Last, Rcv, Call, Freq, Az, AH, Need, Call, DXCC, Freq, Tag, Band, Mode, Cont, Origin

Color codes: verified, uncodcd, unconfmd, wkrd B or M, wkrd counter, special tag, Lot/, eQSL AG, Lot/ & eQSL AG

Tabular View of Active DX

Entries for K1JT modes show last SNR, max SNR, min SNR

The screenshot displays the SpotCollector 8.2.3 interface. The main window shows a table of active DX entries. At the top, the window title is "SpotCollector 8.2.3 @ 2019-02-02 01:34 Z [CC,DXK,DXV,PV] 26367 entries (log: AA6YQ.mdb)". The interface includes a search bar with "www 02-02 0005 Z", a "Spot source status" indicator, and an "Autoscroll" button. The table has columns for "Need", "Cat", "Callsign", "Prefix", "Freq", "Band", "Mode", "FirstTime", "LastTime", "Network", "QSQ", "Pri", "CQ", "IOTA", "DXGrid", "Gr", "ODX", "Source", "EU", "AF", "SA", "NA-E", "NA-M", "NA-W", "AS", "OC", "SNR", "SNRMax", and "SNRMin".

Need	Cat	Callsign	Prefix	Freq	Band	Mode	FirstTime	LastTime	Network	QSQ	Pri	CQ	IOTA	DXGrid	Gr	ODX	Source	EU	AF	SA	NA-E	NA-M	NA-W	AS	OC	SNR	SNRMax	SNRMin	
	2	E76C	E7	14,074.3	20M	FT8	01 1258	01 1841	WSJTX			15		JN93	S	0	AA6YQ	Y			Y					-8	14	-22	
	2	IZ3VBM	I	14,074.9	20M	FT8	01 1801	01 1841	WSJTX			15		JN65	S	0	AA6YQ				Y					-10	-1	-16	
	2	EA7JZL	EA	14,074.8	20M	FT8	01 1841	01 1841	WSJTX			14		IM86	S	0	AA6YQ				Y					6	6	6	
	2	HK3UA	HK	14,075.1	20M	FT8	01 1841	01 1841	WSJTX			9		FJ45	S	3187	CT7AIU	Y											
	2	EA3CFV	EA	14,075.4	20M	FT8	01 1842	01 1842	WSJTX			14		IN80	S	3033	GD3YUM	Y											
	2	DK2BK	DL	14,074.4	20M	FT8	01 1834	01 1842	WSJTX			14		JN49	S	1	AA6YQ		Y		Y					-7	-7	-7	
	2	JF2KOZ	JA	7,077.0	40M	JT65	01 1842	01 1842	QDX			25		PM85	S	4729	UA3QNA-@												
M	0	GD3YUM	GD	14,075.4	20M	FT8	01 1834	01 1842	WSJTX			14	EU-116	IO74	S	0	AA6YQ	Y			Y					-2	4	-7	
	2	KE8ERH	K	14,075.2	20M	FT8	01 1829	01 1842	WSJTX		MI	4		EN83	S	1018	KK4RDI				Y								
	2	IU2EBQ	I	14,075.2	20M	FT8	01 1703	01 1842	WSJTX			15		JN45	S	0	AA6YQ				Y						-6	10	-20
	2	DJ5EJ	DL	14,075.4	20M	FT8	01 1841	01 1842	WSJTX			14		JN57	S	0	AA6YQ				Y						-10	-1	-10
	2	SP2IQW	SP	14,074.2	20M	FT8	01 1815	01 1842	WSJTX			15		K002	S	6634	Z81D			Y									
	2	EA7KDR	EA	7,179.8	40M	SSB	01 1810	01 1843	K1TTT			14		IN80	S	3105	SP9MKG	Y	Y										
	2	EABAOC	EA8	14,218.3	20M	SSB	01 1842	01 1843	EI7MRE			33	AF-004	IL27	S	730	N4WMB	Y			Y								
	2	EA5WO	EA	10,136.7	30M	FT8	01 1843	01 1843	JH1RFM			14		IN80	D	4084	9A3GNF	Y											
	2	R4CI	UA	3,575.3	80M	FT8	01 1843	01 1843	JH1RFM		SA	16		LO31	S	4463	UY5AX	Y											
	2	KX4FZ	K	14,075.1	20M	FT8	01 1843	01 1843	WSJTX		FL	5		EL87	S	0	AA6YQ				Y						-9	-9	-9
	2	SV1MO	SV	14,075.0	20M	FT8	01 1841	01 1843	WSJTX			20		KM17	S	0	AA6YQ				Y						-17	-14	-23
	2	N8AWM	K	14,075.3	20M	FT8	01 1801	01 1843	WSJTX		MI	4		EN82	S	1124	KW4IG	Y			Y								
	2	4U1WB	K	14,074.5	20M	FT8	01 1801	01 1844	WSJTX			5			S	901	NY0V					Y							
	2	EA3CC	EA	14,260.0	20M	SSB	01 1752	01 1844	EI7MRE			14		IN80	S	42	AB2KL	Y			Y								

Below the table, there are three red arrows pointing from text labels to the table:

- An arrow points to the "LastTime" column for the first WSJTX entry. Label: "Entries last updated by reports from WSJT-X"
- An arrow points to the "Source" column for the first AA6YQ entry. Label: "Entries last updated by my WSJT-X copying the station"
- An arrow points to the "SNR", "SNRMax", and "SNRMin" columns for the first AA6YQ entry. Label: "last, maximum, and minimum SNRs reported by WSJT-X"

The interface also includes a "Filter: Band and Mode and Origin" section at the bottom left and a "Color codes" legend at the bottom right.

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

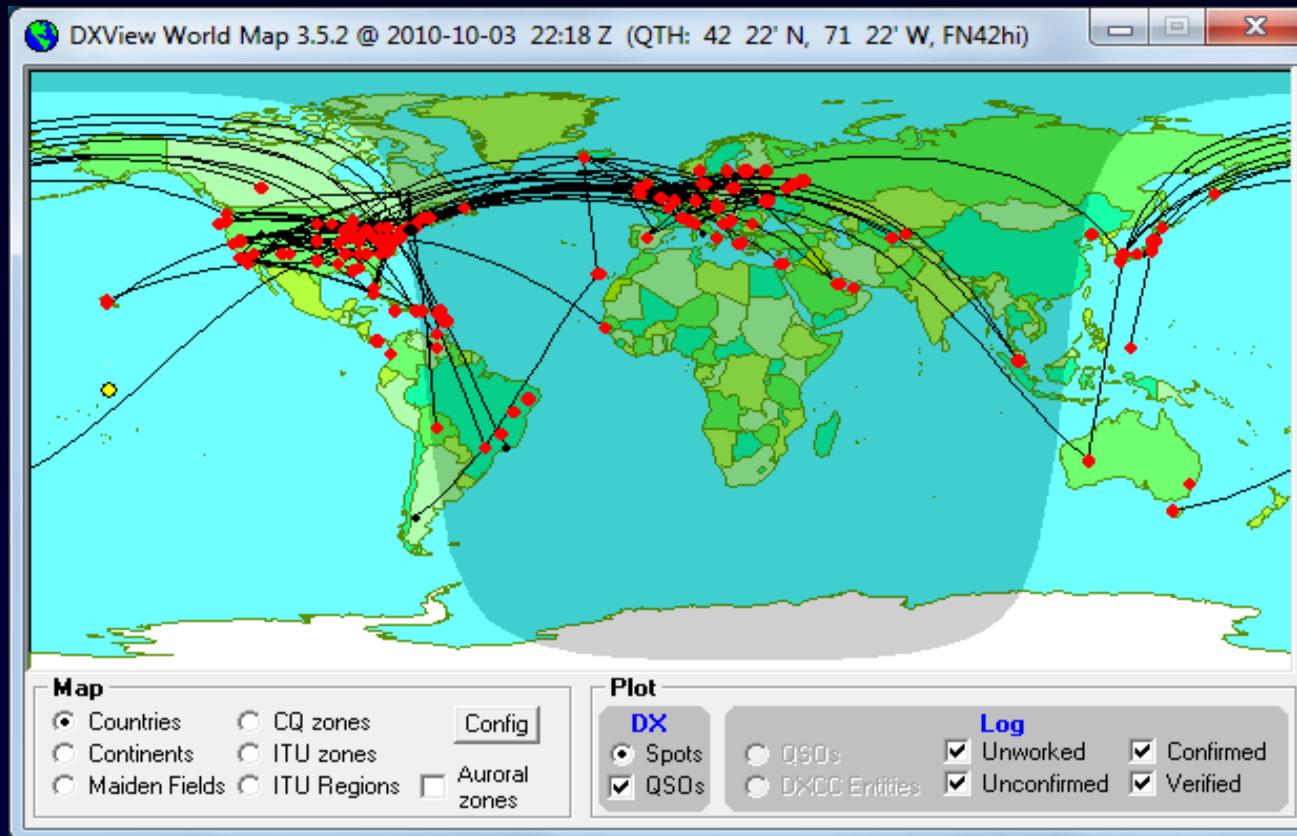
Logged QSOs



World Map

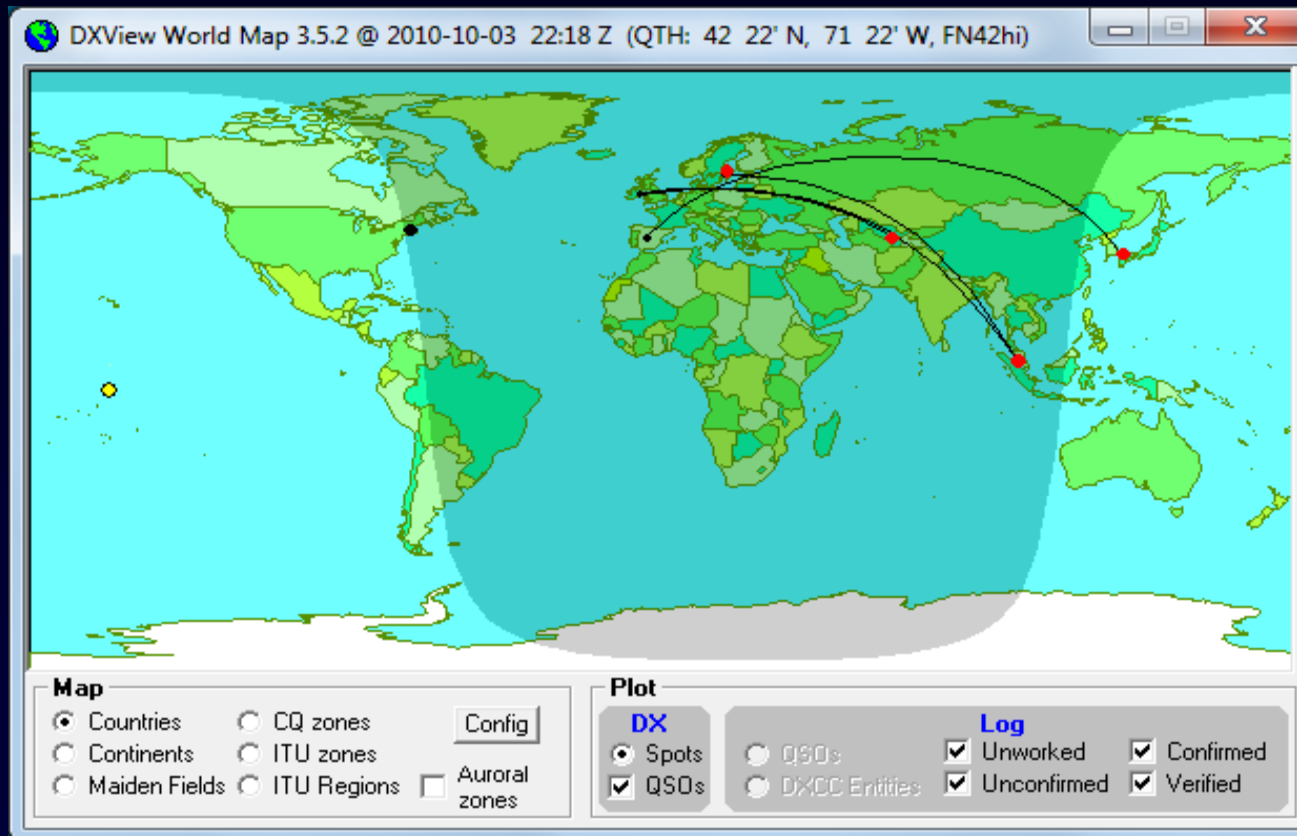
World Map View of Active DX

“Active DX on Selected Bands”



World Map View of Active DX

“160m”



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

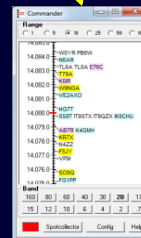
VUCC needs

WAS needs

WPX needs

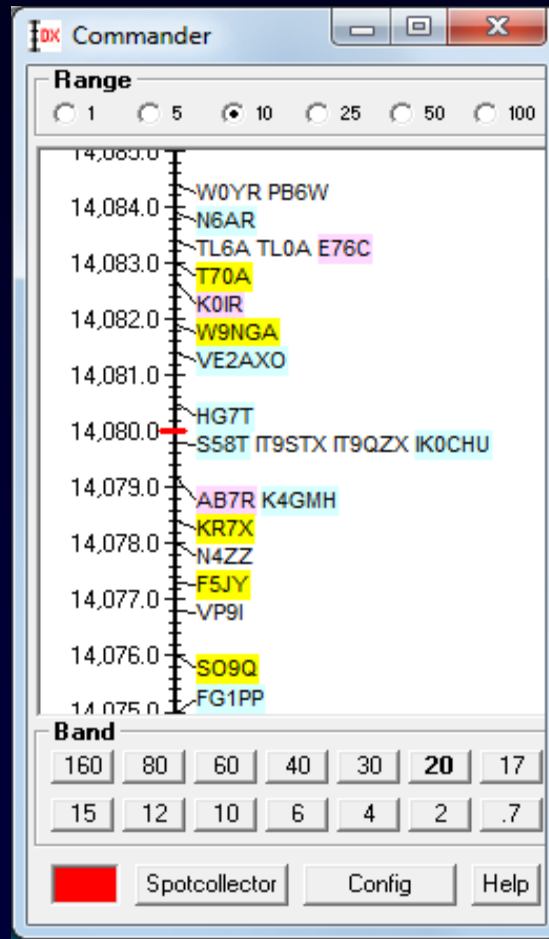
WAZ needs

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

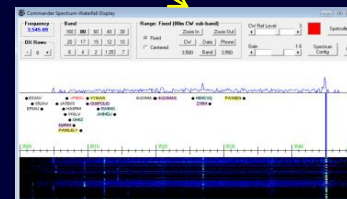
VUCC needs

WAS needs

WPX needs

WAZ needs

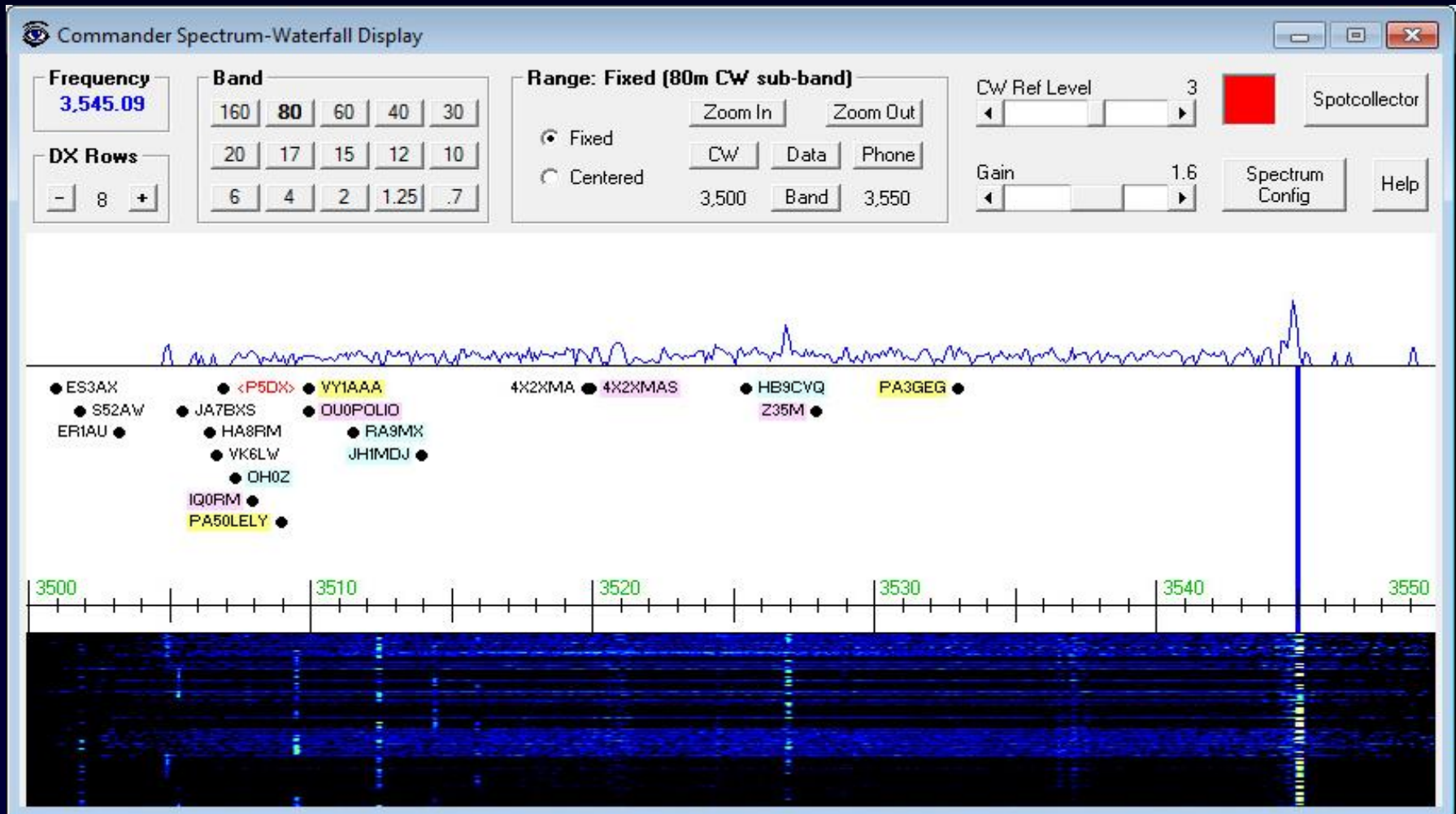
Logged QSOs



Spectrum

Spectrum-Waterfall View of Active DX

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



Propagation 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

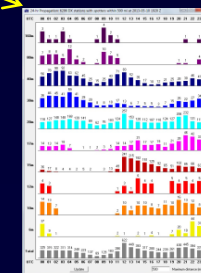
VUCC needs

WAS needs

WPX needs

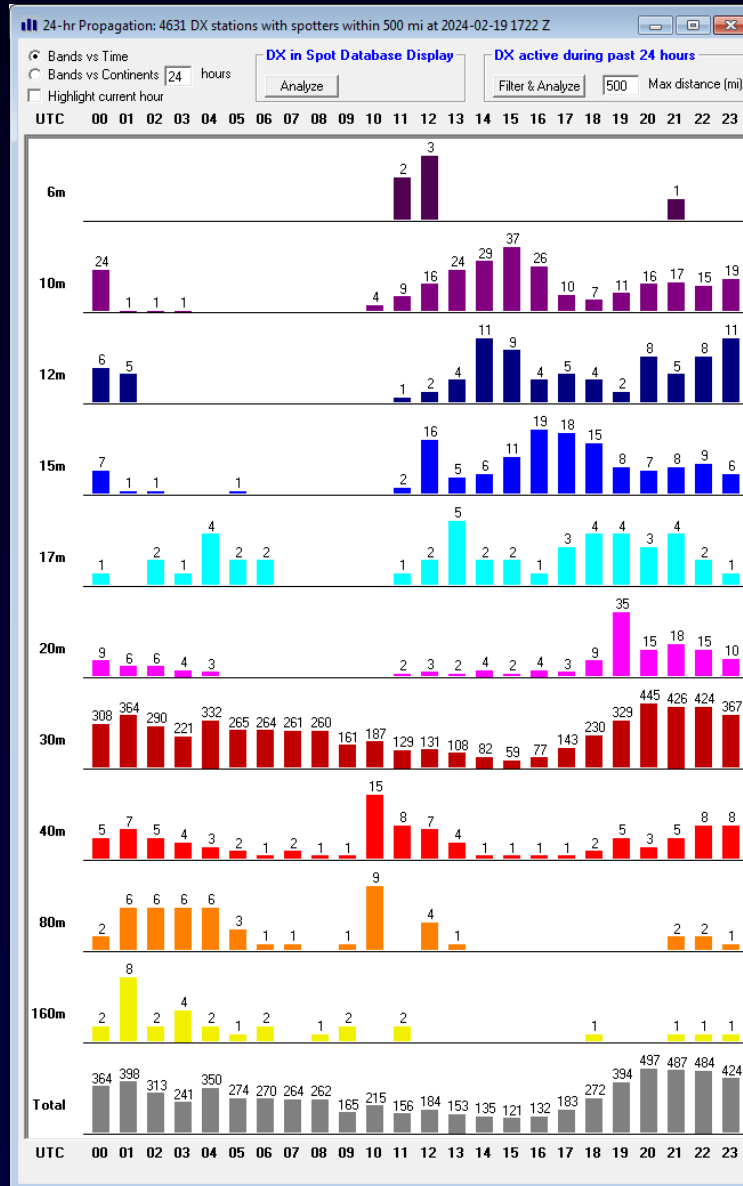
WAZ needs

Logged QSOs

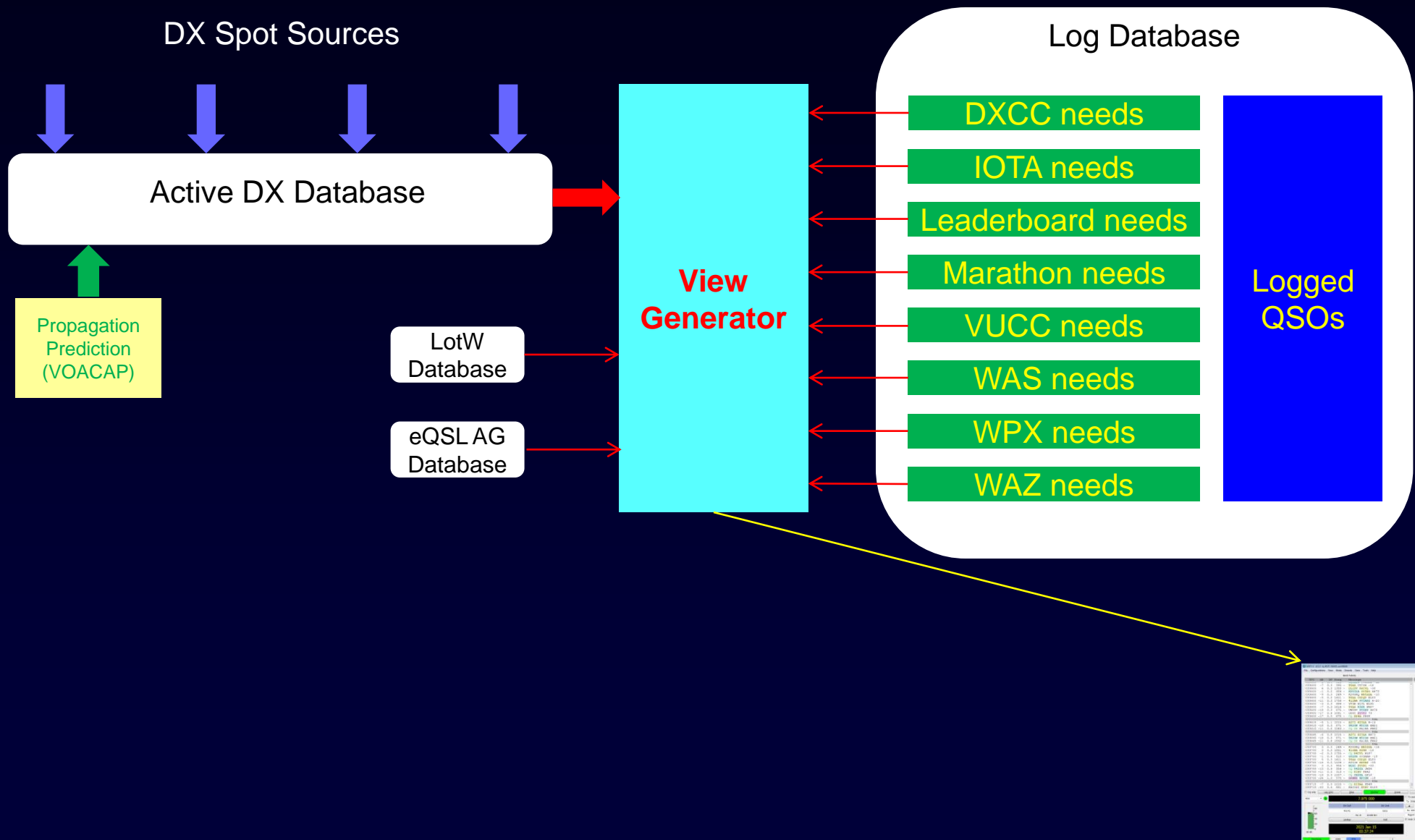


Propagation

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 log of received stations with columns for UTC, dB, DT, Freq, and Message. The 'Rx Frequency' pane shows a list of stations currently being received, with the entry '014018 Tx 715 - LY3BG AA6YQ -22' highlighted in yellow. A red arrow points from this entry to a list of 'Needed' call signs in the center of the screen. Below the log panes, there are control buttons for 'Log QSO', 'Stop', 'Monitor', 'Erase', 'Decode', 'Enable Tx', 'Halt Tx', and 'Tune'. At the bottom, there is a status bar showing 'Receiving', 'IC-7800', 'FT8', 'Last Tx: LY3BG AA6YQ -22', and '14/15 WD:6m'.

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	K4ZO LY3BG KO24
013930	-11	0.0	1930	CQ EA1CDV IN80	014018	Tx	715	-	LY3BG AA6YQ -22
013930	0	0.2	2003	VU3WEW HK3EU R-19					
013930	-22	-0.1	2072	K4ZO 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	VU3ESV LZ2FF R-22					
----- 40m -----									
013945	-2	0.1	200	CQ NUL1 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 WP4AZT RRR					
013945	2	0.3	1182	CANNON VET 73					
013945	-11	0.2	1319	AA9SJ W8WVG DM34					
013945	-16	1.5	1395	LZ2FU 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					
----- 40m -----									
014000	-6	0.1	201	NUL1 IK1GEY JN45					
014000	8	0.4	501	VE3SSV W7YA -20					
014000	-14	0.1	571	WDSJK KR7DX DM22					
014000	-1	0.0	791	KALGOO N5RB -06					
014000	2	-0.2	891	CO8OB EA5HRV 2M99					
014000	-6	-0.6	1030	KB1HNZ IZ5MKA JM53					
014000	-15	-0.0	1196	N7TWS 3B9FR -02					
014000	-10	0.0	1233	VU3ESV LZ2FF R-22					
014000	-7	0.4	1395	KM4JNR LZ2FU -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	VU3WEW 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 OE6ATD JN76					

"Needed" call signs

- LY3BG AA6YQ FN42
- LY3BG AA6YQ -22
- LY3BG AA6YQ R-22
- LY3BG AA6YQ RRR
- LY3BG AA6YQ 73
- CQ AA6YQ FN42

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

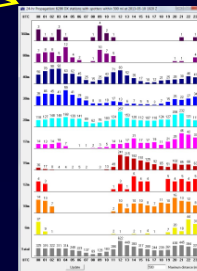
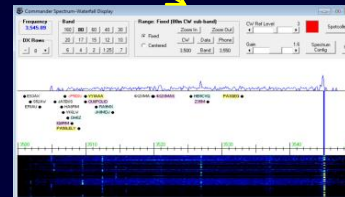
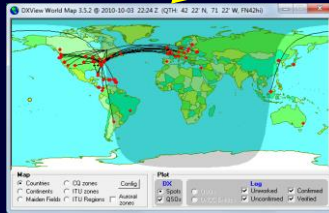
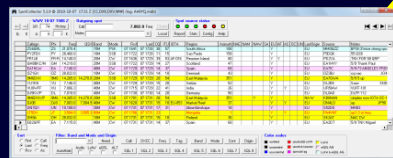
VUCC needs

WAS needs

WPX needs

WAZ needs

Logged QSOs



Tabular

Audio/Email

World Map

Bandspread

Spectrum

Propagation

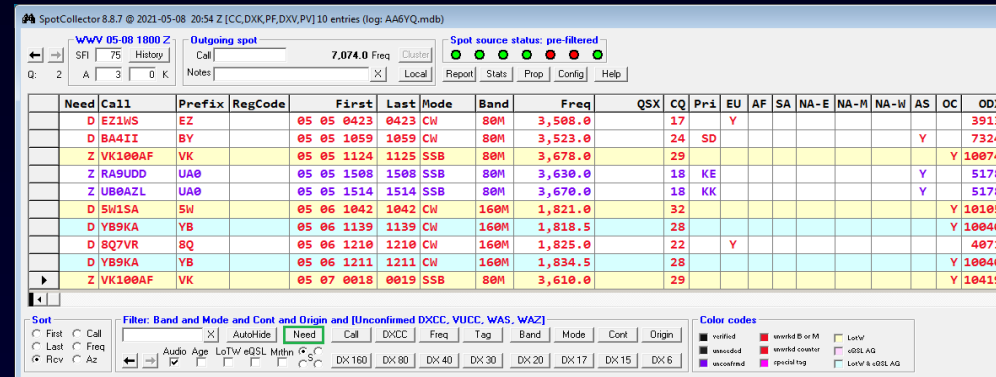
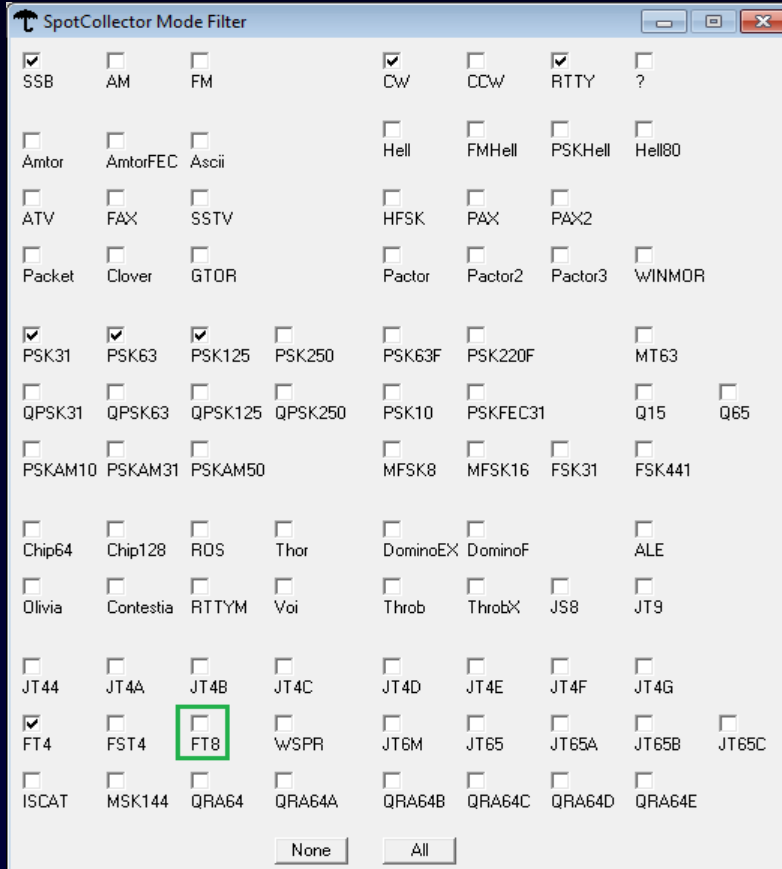
WSJT-X

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

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	not worked, sought

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	V	V
YD	V	V	V	V	C	V	V	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	V
YU	V	V	V	V	C	V	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	V
YV0	V	V	V	V		V	V	V	V	V	V	V	V	V	V	V
ZZ	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	V
Z3	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	V
Z6	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	V
Z8	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	V
ZA	V	V	V	V	C	V	V	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	V
ZC4	V	V	V	V	W	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	V	V
ZD8	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	V
ZD9	V	V	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	V
ZK3	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	V
ZL	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	V
ZL7	V	V	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	V	V
ZL9	V	V	V	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	V	V
ZS	V	V	V	V	C	V	V	V	V	V	V	V	V	V	V	V
ZS8	V	V	V	V		V	V	V	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 | All

Mode: MIXED | Include deleted DXCC entities | Report

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

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 Bands I operate on 40, 20, 30, 17, 15, 10, 12.



ZC4GR on FT8 Looks Challenging

Check for Recent Activity: 43 Entries from April 16 through May 8

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

WVW 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	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 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

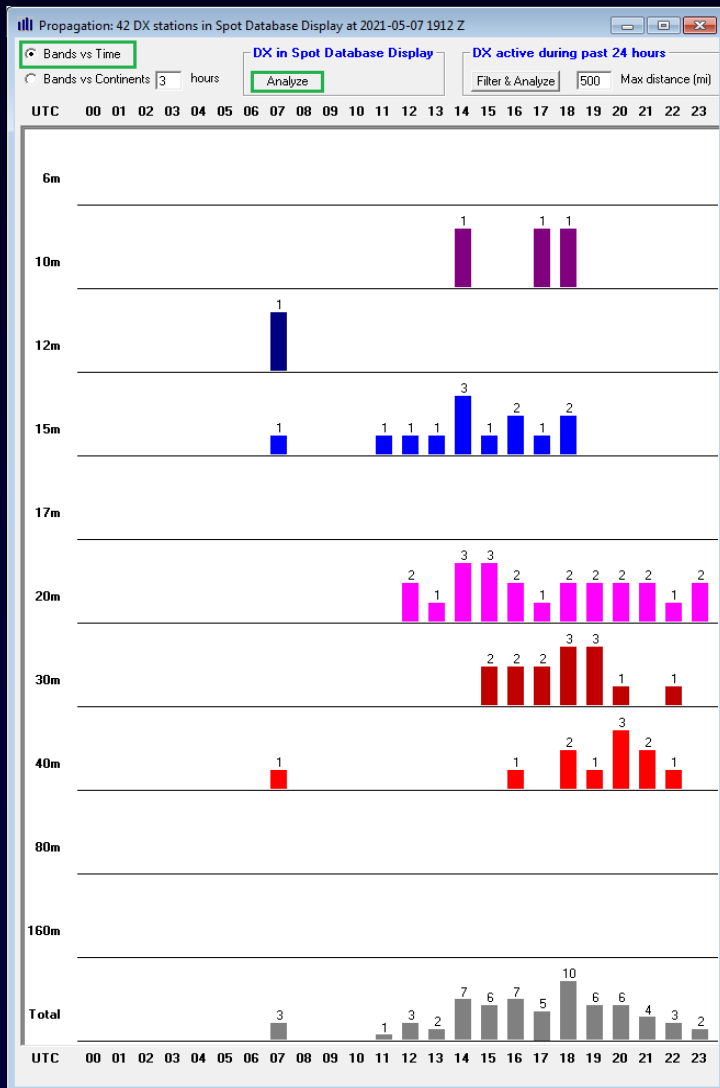
Filter: Band and Mode and Cont and Origin and [DXCC-ZC4]

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

Color codes: verified, unconfirmed, uncodcd, unconfm, wwrld B or M, wwrld coater, special tag, LotW, eQSL AG, LotW & eQSL AG

Working ZC4GR on FT8

Propagation View: 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)

WWV 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

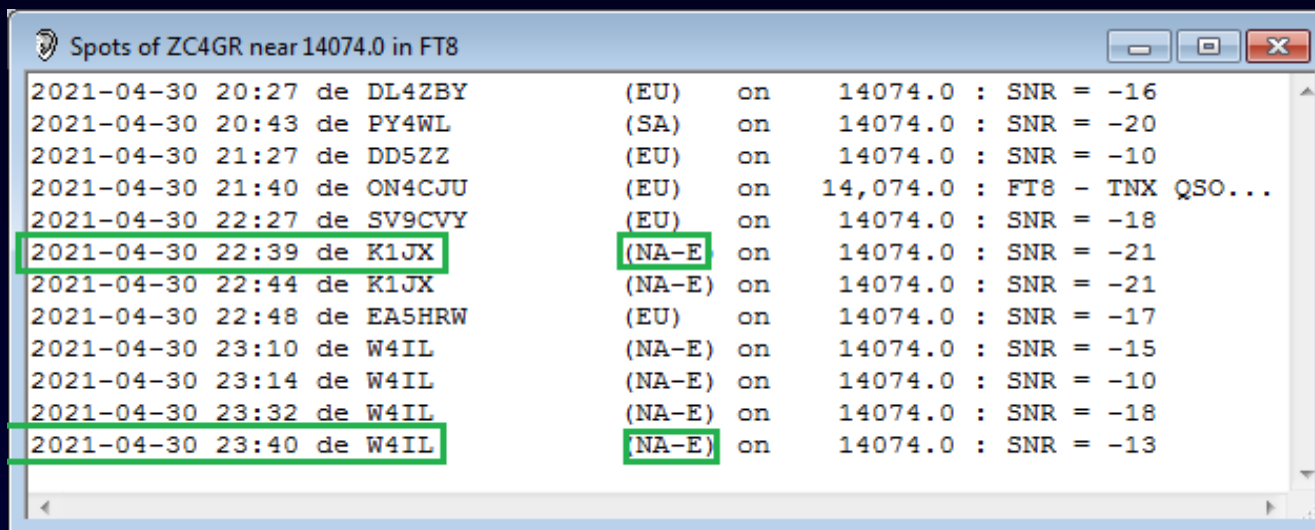
Color codes: verified, unverified, unconfirmed, world E or M, world contour, special tag, LoTW, eQSL AG, LoTW & eQSL AG

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 IK4WQ	(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 88KVM	(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 88KVM	(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 KZ3EP	(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 GSUHU	(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 S6ELV	(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 87VNC	(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



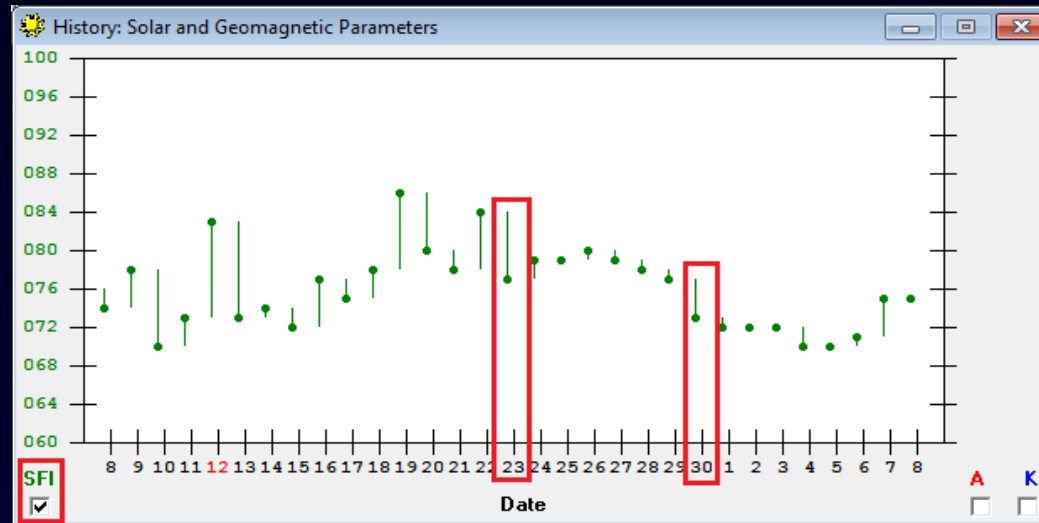
Spots of ZC4GR near 14074.0 in FT8

Date	Time	Call Sign	Region	Mode	Freq	SNR
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

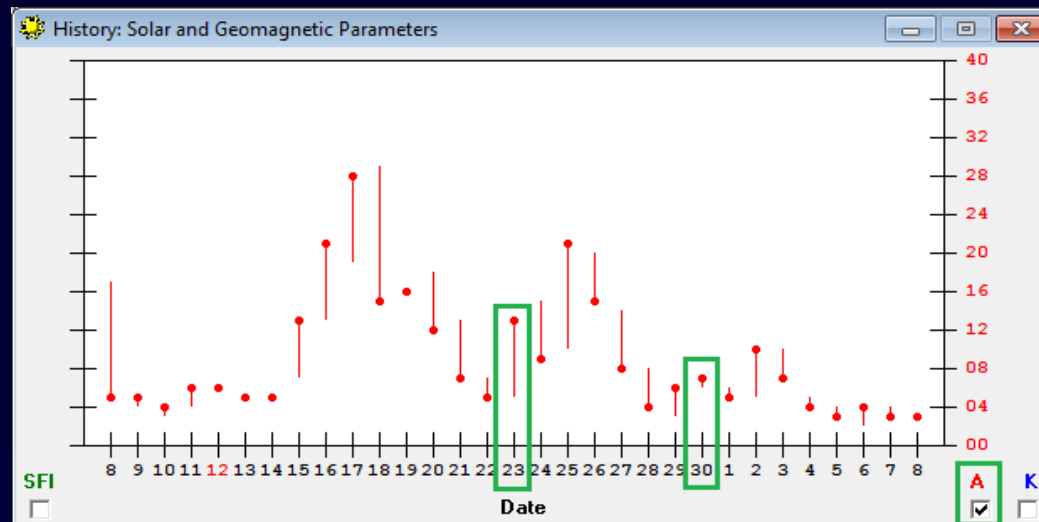
Propagation Conditions

SpotCollector collects “WWV spots” and maintains a 31-day history of SFI, A, and K

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

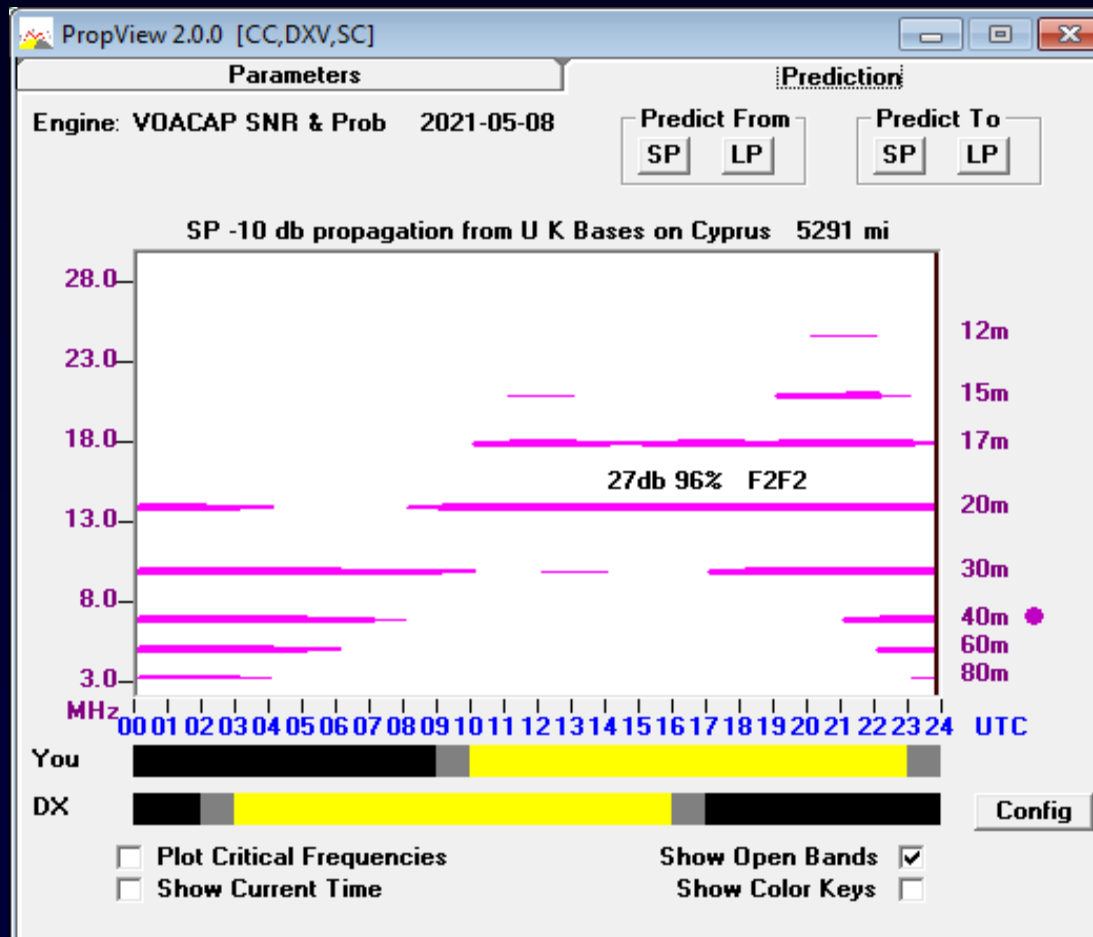
QTH-DX Gray-line (GL) Paths

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

None!

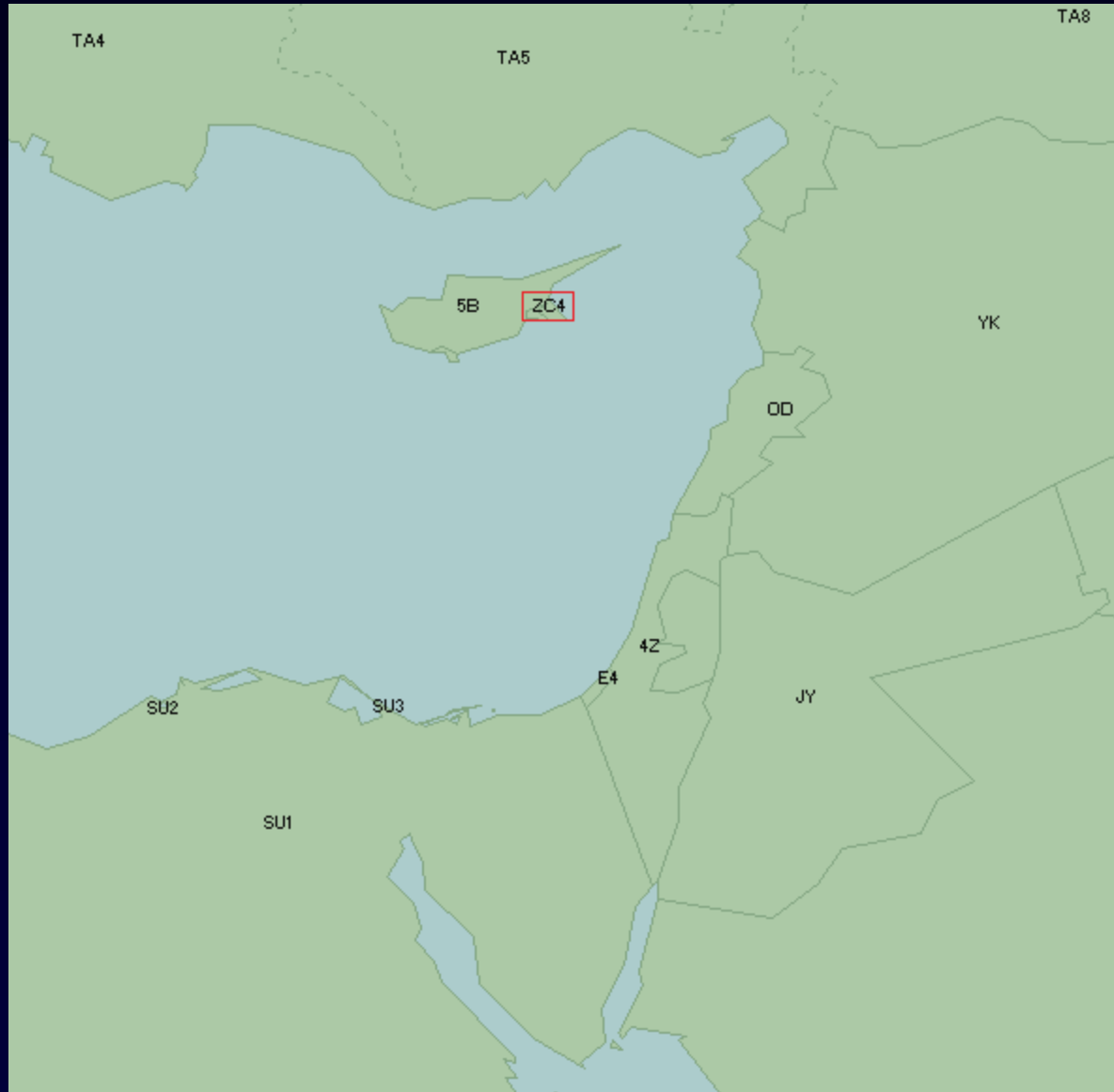
20m Propagation Forecast to ZC4

Solar Flux Index = 75, DX running 100 watts



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

Check “Actual” Propagation



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:** Contains a checked "Enable" checkbox, and unchecked checkboxes 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 showing "0" and the label "Offset (Hz)".
- Beacon Schedule (1 cycle):** A table with columns: Time, Call, City, DXCC Country, Freq (khz), SP, and Dist (mi). The schedule shows a repeating pattern of beacons from 20:00 to 06:00.


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

A screenshot of a search filter input field. On the left, there is a small box containing the text "nr ZC4". To its right is a larger text input area containing the filter expression: "[DXCCPrefix in ('ZC4','5B4','TA','OD','4X','SU')] and (DX<500)". The input field has a light gray border and a vertical scrollbar on the right side.

nr ZC4 [DXCCPrefix in ('ZC4','5B4','TA','OD','4X','SU')] and (DX<500)

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

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

Closest Spotter Spotted from Regions Actual SNR

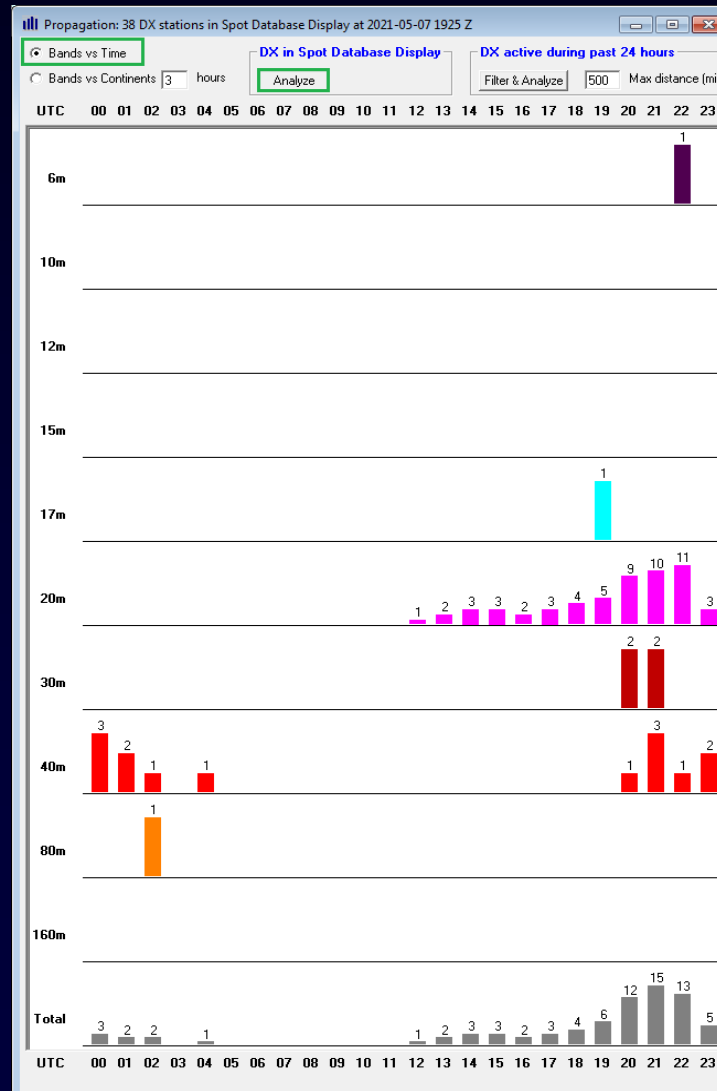
Need	Call	Prefix	RegCode	First	Last	Mode	Band	Freq	QSX	CQ	Pri	EU	AF	SA	NA-E	NA-M	NA-W	AS	OC	ODX	S Min	S Max	S Last	SP S	SP P	LP S	LP P
	D	ZC4GR	ZC4	04 23 1229	2136	FT8	20M	14,074.0		20		Y			Y			Y		0	-24	-11	-13	26	96	-68	
	D	ZC4GR	ZC4	04 30 2027	2342	FT8	20M	14,074.0		20				Y	Y					86				29	97	-49	3
	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”

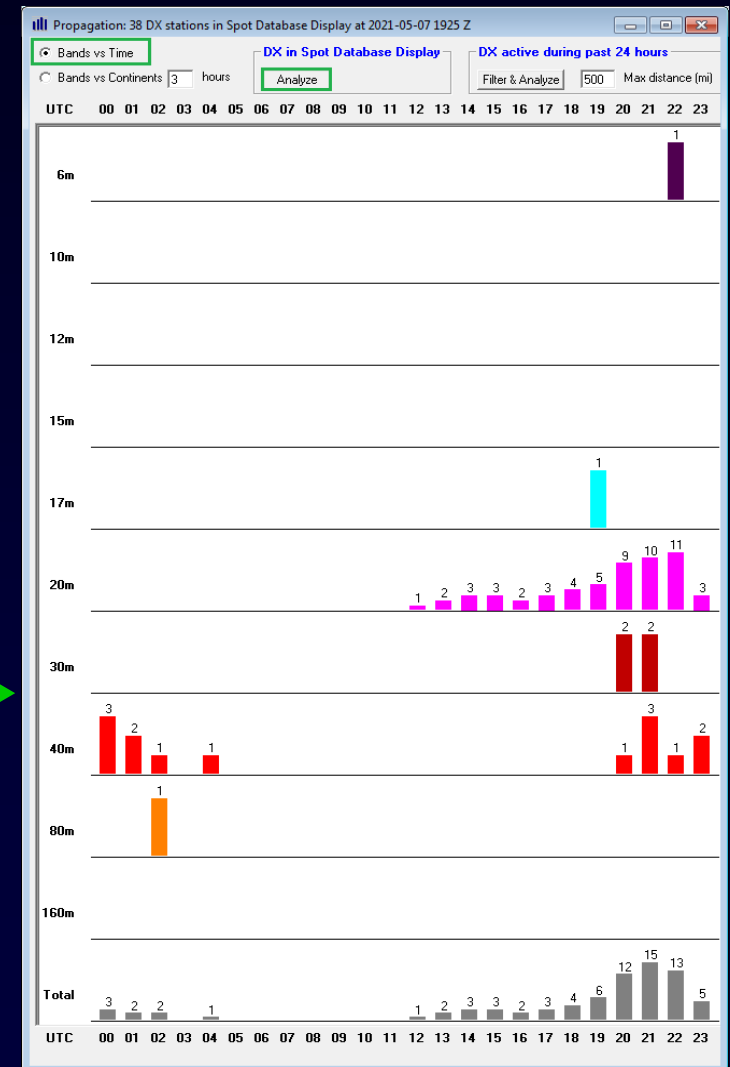
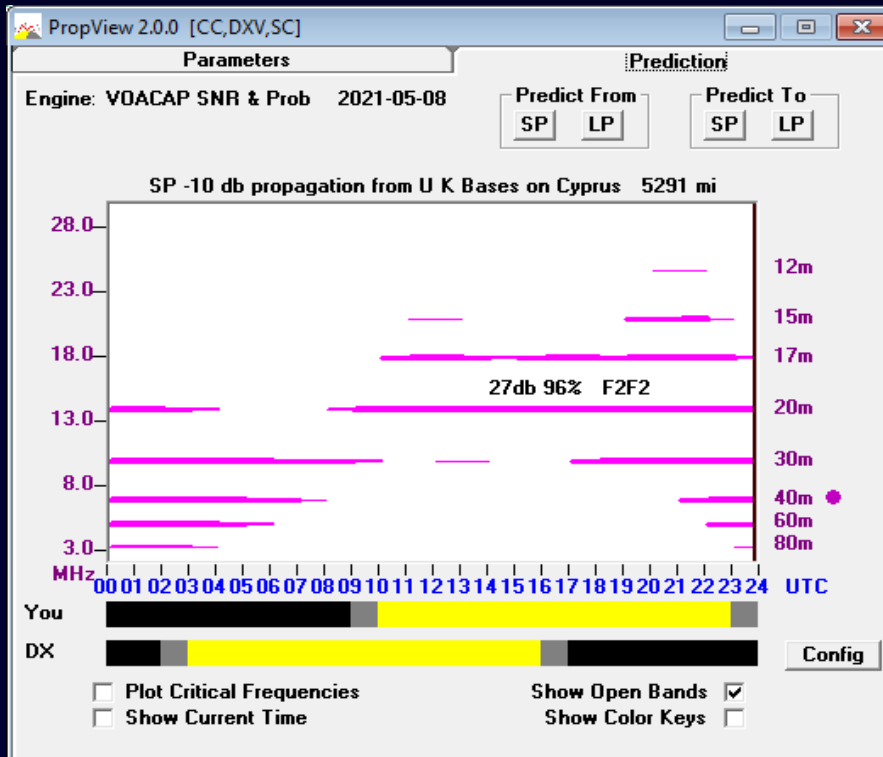


Propagation Openings?

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

Compare Forecast & Actual Propagation

Solar Flux Index = 80, DX running 100 watts



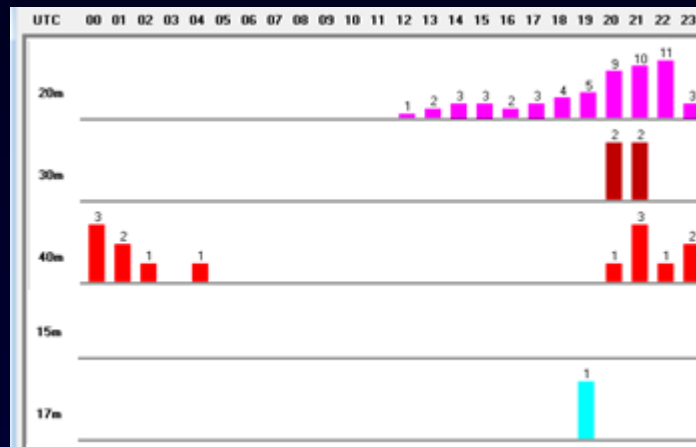
ZC4GR: The Plan

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



Monitor the 20m FT8 sub-band from 19Z through 23Z, especially

- when the Solar Flux Index is 75 or above
- when the NCDXF 4X Beacon can be copied

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

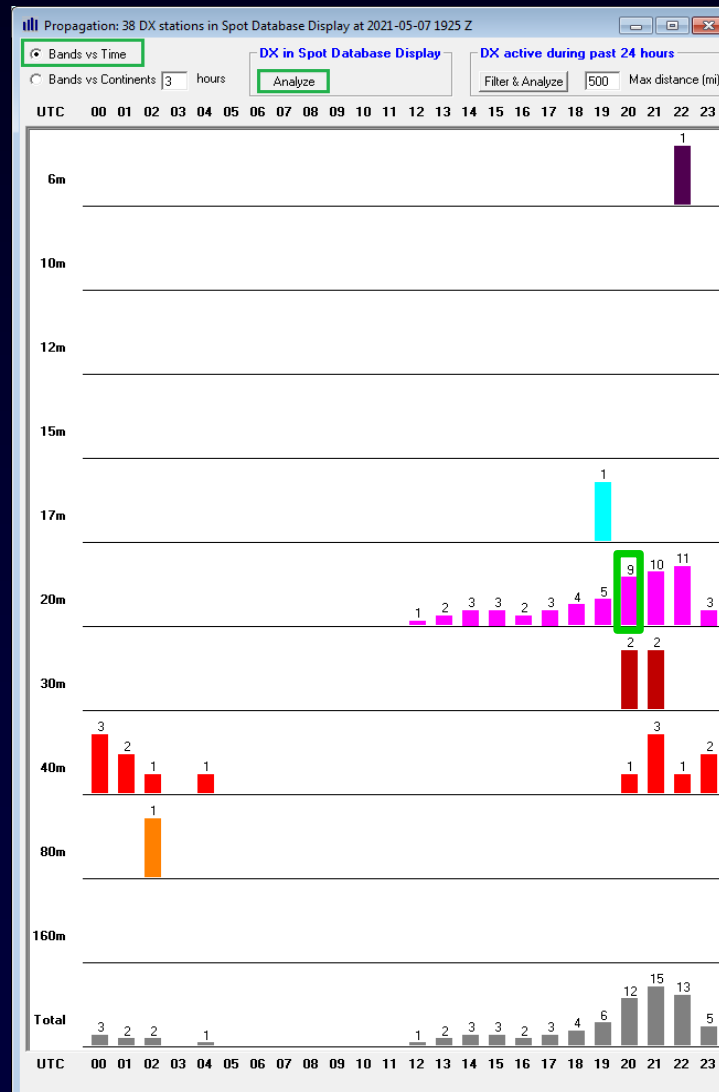
Operator: AA6YQ

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.txt - 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
```

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

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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

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.

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DXLab

dxlabsuite.com

Commander DXView DXKeeper Launcher Pathfinder PropView SpotCollector WinWarbler

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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 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)

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

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 16 dB 19 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-#
9A/5P9EVP	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-#

Filter: Band and Mode | Need | Call | DXCC | Freq | Tag | Band | Mode | Cont | Origin

Color codes: verified unworkd E unneeded unworkd C unconfmrd special

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 Unworked Unconfirmed Confirmed Verified

Log: AA6YQ.mdb

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 | Name: Rakhim | DXCC: EY | Begin: | Log: | RX: 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: | Comment: | Config: | Help:

QUOTH CQ DX CQ DX DE SV1PAS SV1PAS PSE K
 DS1PAUSSVPAS DEHPFF,PD1BPSE K...
))ITCO DX CQ DX DE SV1PAS SV1PAS PSE EEUQOESCO 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 | VFO B: 20M

14,086.19 | 21,008.10

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

PTT: Rcvg | 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)

Bandspread | Msgs | Scan | Memory Banks | Config | Help

DX Commander

Range: 1 5 10 25 50 100

14,088.5 | 14,088.0 | 14,087.5 | 14,087.0 | 14,086.5 | 14,086.0 | 14,085.5 | 14,085.0 | 14,084.5 | 14,084.0

EI7BFB
EA4AHE
UR7ITU
PF7DKW
LX8RTTY
SP9GKJ

Band: 160 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 mgcall | F12: mgcall (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 | Freq: 14,084.065 | net

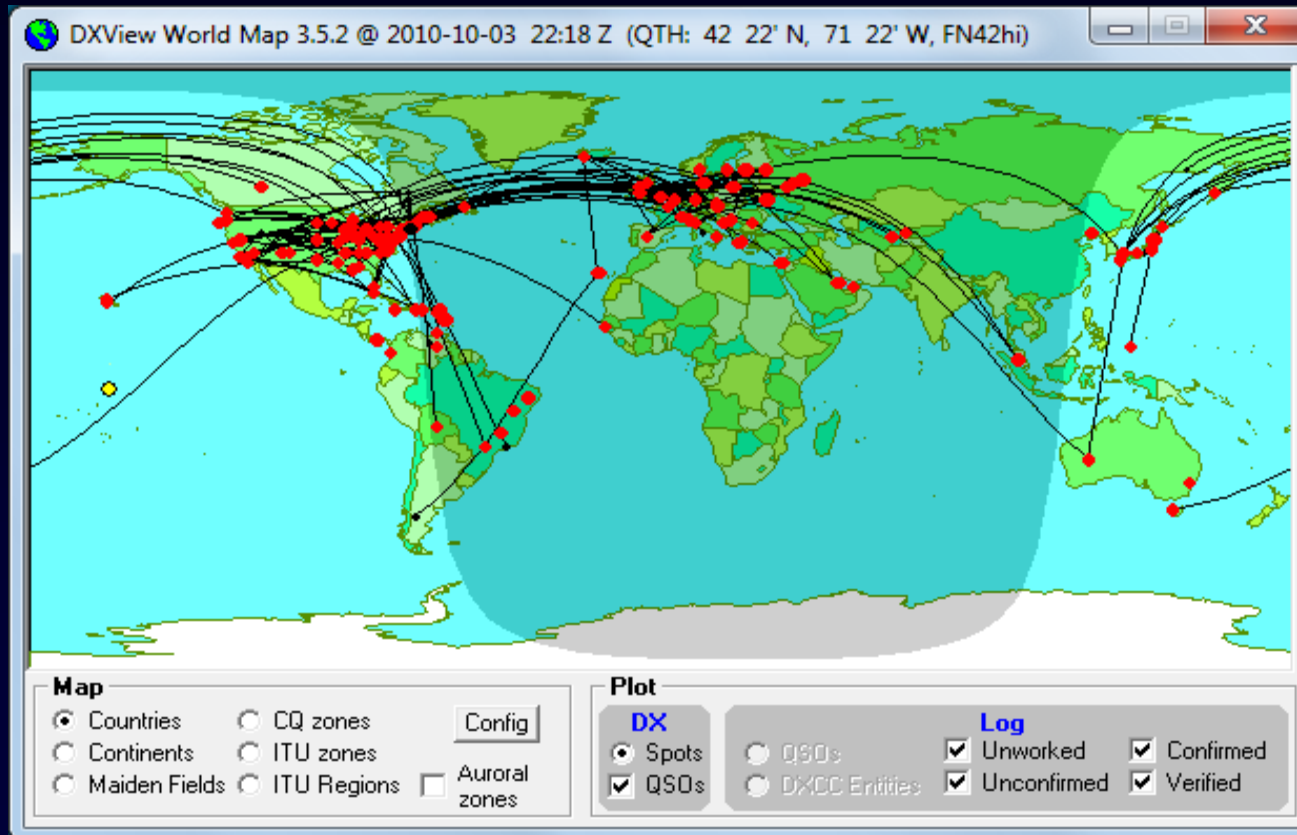
AFC Notch Profile Reverse Reverse Def Opt | <current settings>

Reverse Start | F2 | F4 | Esc | 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

DXing with DXLab



Better DXing Through Software