

GridTracker

Presented by:

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What is GridTracker?

- Open Source ham radio software for Windows, Mac, and Linux
- In 2018: Listen to WSJT-X traffic and display it on a map
- In 2021: A very powerful ham radio tool, not just for FT8
- Displays a LOT of information on an attractive map
- Very customizable
- Does more than track grids/QSOs/QSLs

Download the Software

- Download location:
<http://gridtracker.org/downloads>
- Available for:
 - Windows, Mac, Linux, Raspberry Pi 3 & 4
- Quick Start Guide (installation instructions and setup):
<http://gridtracker.org/docs>
- GridTracker can run standalone
- Works well with:
 - WSJT-X: <https://www.physics.princeton.edu/pulsar/k1jt/wsjt.html>
 - JTDX (a GPL fork of WSJT-X): <https://www.jtdx.tech/en/about>

Installation and Setup

- The Quick Start Guide has all of the details
- Be sure to do the setup correctly
- If not, GridTracker and WSJT-X won't communicate

GridTracker Main Window

The screenshot displays the GridTracker main window. The central feature is a world map with a semi-transparent grid overlay. The map shows major geographical features like the Arctic Circle, Tropic of Cancer, and the Equator, along with various oceans and seas. A large, semi-transparent circular area is centered over the North Atlantic Ocean, indicating the current tracking zone. The map includes labels for countries and regions such as Canada, United States, Mexico, Europe, and Africa.

On the right side of the window, there is a control panel with the following sections:

- GridTracker**: Shows the current frequency (7.074.000 Hz (40m)), FT8 mode, and date/time (Thu 12 Aug 2021 01:58:40 UTC). It also displays the call sign E77EA and JN84 -15, along with the location Bosnia-Herzegovina 4197mi 54°.
- RECEIVE**: A green button to toggle the receive function.
- Statistics**: A bar chart showing signal strength over time. Below it, statistics are shown: Rx Calls (0), QSO (19627), Rx DXCC (31), and QSL (5842). There are buttons for 'Clear Live' and 'Clear Log'.
- Map View Filters**: A section with dropdown menus for Band (Auto), Mode (Auto), Prop (Unknown), and Data (Live).
- Icons**: A grid of icons for various functions like map, settings, and search.
- Log**: A list of received signals with columns for call sign, frequency, and other details. The current log shows:
 - Thu 12 Aug 2021 01:57:42 UTC: N2LMU EU7FBB R-19
 - Thu 12 Aug 2021 01:57:12 UTC: N2LMU EU7FBB KO43
- Legend**: A table of call sign prefixes and their corresponding colors:

QSO	QSL
QSX	CO
QRZ	QTH
WSPR	QDX

Main Window Features

- Righthand column (top to bottom)
 - Status of communication with WSJT-X, band, mode, etc.
 - Graph of activity per band (from PSKReporter)
 - Stats about QSOs and QSLs from available log files
 - Map View Filters
 - Square Icons – mouse hover to see the function, click to invoke it
 - GridTracker status (saved screenshot, logged QSO, etc)

Map View Filter

- Typically: Band,Mode=Auto, Prop=Unknown, Data=Live
- Band
 - Auto: track band setting from WSJT-X
 - Mixed: display all available QSO data
 - Or...pick a desired band
- Mode:
 - Auto: track mode in use in WSJT-X
 - Or....pick a specific mode
- Data
 - Live: what's happening right now (from WSJT-X)
 - Logbook: load your log file (or download it) and display it
 - Logbook and Live: display both!

Different Maps are Available

The screenshot displays the GridTracker application interface. The main window shows a world map with a grid overlay, color-coded by region. A semi-transparent circular area is centered over North America. The sidebar on the right contains the following information:

- GridTracker**
 - 7.074.000 Hz (40m) FT8
 - Thu 12 Aug 2021 02:25:19 UTC
 - E77EA JN84 -15
 - Bosnia-Herzegovina 4197mi 54°
- RECEIVE** (highlighted in green)
- 630 160 80 60 @ 30 20 17 15 12 10 6 2 (signal strength bar)
- Rx Calls: 0 QSO 19627
- Rx DXCC: 31 QSL 5842
- Buttons: Clear Live, Clear Log
- Map View Filters**
 - Band: Auto
 - Mode: Auto
 - Prop: Unknown
 - Data: Live
- Grid of icons for various features like PSK, LOG, LOG, etc.
- Saved Screenshot**
 - Thu 12 Aug 2021 01:57:42 UTC
 - △ N2LMU EU7FBB R-19
 - Thu 12 Aug 2021 01:57:12 UTC
 - △ N2LMU EU7FBB KO43
 - 40m / FT8
 - OOB / FT8
 - OOB / JT9
 - OOB / FT8
 - OOB / JT9
 - GridTracker v1.21.0620
- Legend**

QSO	QSL
QX	CO
QRZ	QTH
WSPR	

Different Maps are Available

The screenshot displays the GridTracker software interface. The main window shows a world map with a grid overlay centered on the Atlantic Ocean. A small orange square is visible on the map, indicating a specific location. The interface includes several panels and controls:

- GridTracker Panel (Top Right):** Displays the current frequency (7.074.000 Hz (40m)), FT8 mode, and date/time (Thu 12 Aug 2021 02:29:25 UTC). It also shows the call sign E77EA and JN84 -15, and the location Bosnia-Herzegovina 4197mi 54°.
- RECEIVE Panel (Middle Right):** Features a bar chart showing reception activity. Below the chart, it displays statistics: Rx Calls (0), QSO (19627), Rx DXCC (31), and QSL (5842). There are buttons for 'Clear Live' and 'Clear Log'.
- Map View Filters Panel (Bottom Right):** Allows users to filter data by Band (Auto), Mode (Auto), Prop (Unknown), and Data (Live).
- Legend Panel (Bottom Center):** A grid of colored boxes representing different map styles: QSO (yellow), QSL (red), QSX (blue), CO (green), CQDX (cyan), QRZ (orange), QTH (purple), and WSPR (grey).
- Map Controls (Top Left):** Includes zoom in (+) and zoom out (-) buttons.
- Scale Bar (Bottom Left):** Shows a scale of 1000 miles.
- Map Labels:** Various countries and oceans are labeled, including the United States, Canada, Mexico, Brazil, and the Atlantic, Pacific, and Indian Oceans.

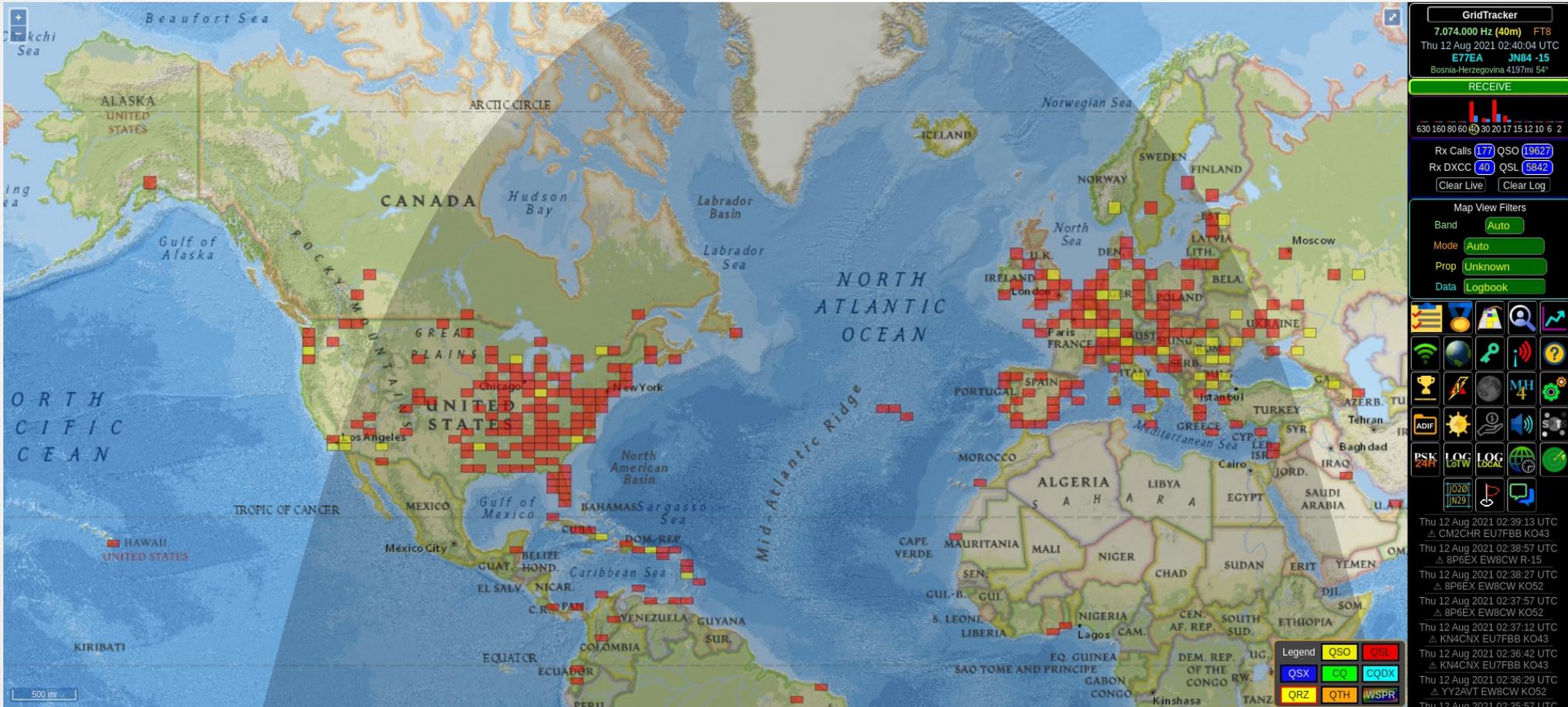
Display Live Data



Live Data Explained

- Green lines (marching ants) are QSOs heard by your radio
- Red line: your QSO during transmit
- Red highlight around AK: somebody called CQ AK
- See Map Legend:
 - Zoom in to see the boxes more clearly
 - Green box: somebody calling CQ
 - Blue box: somebody in a QSO
 - Orange box: Your QTH
 - Red box: grid has been confirmed (QSL) when Logbook data enabled

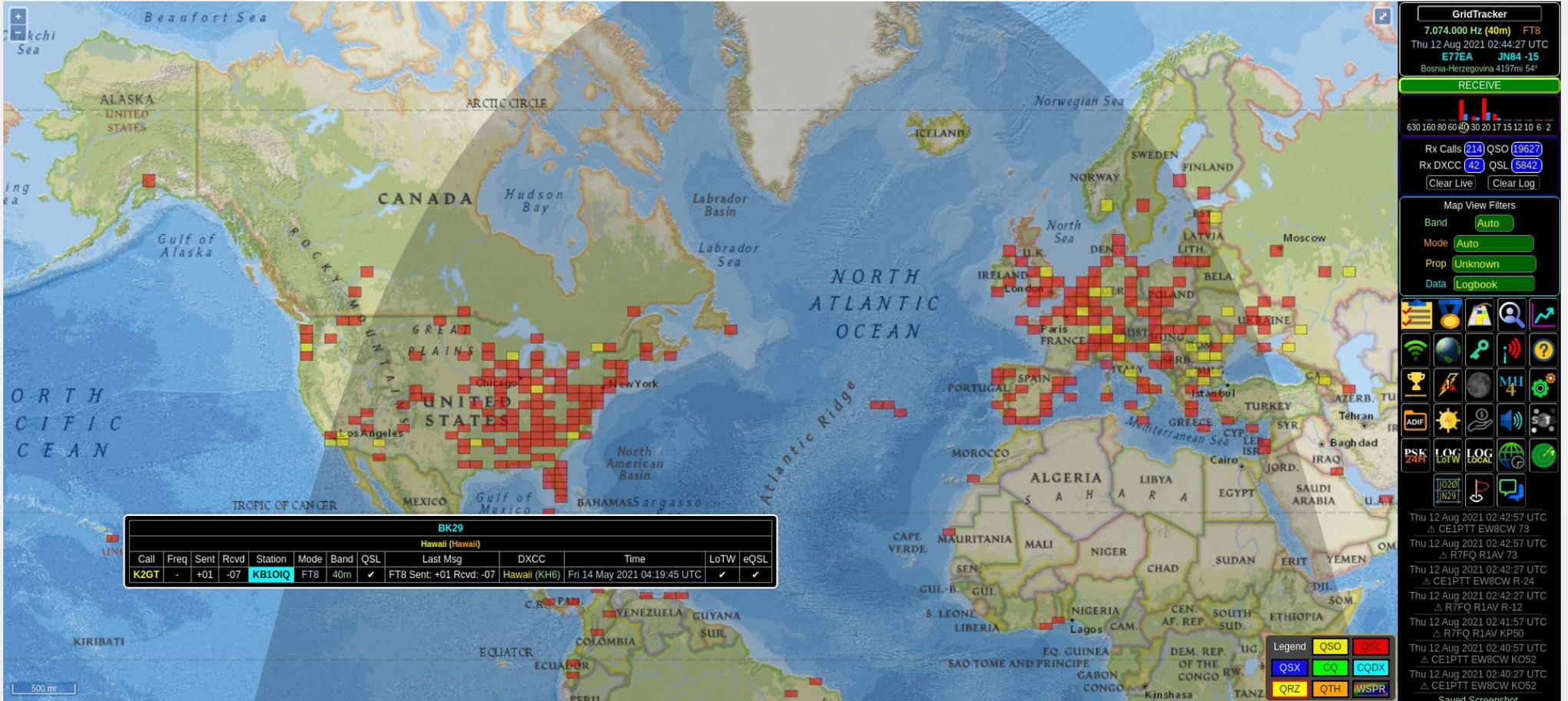
Logbook Data Display



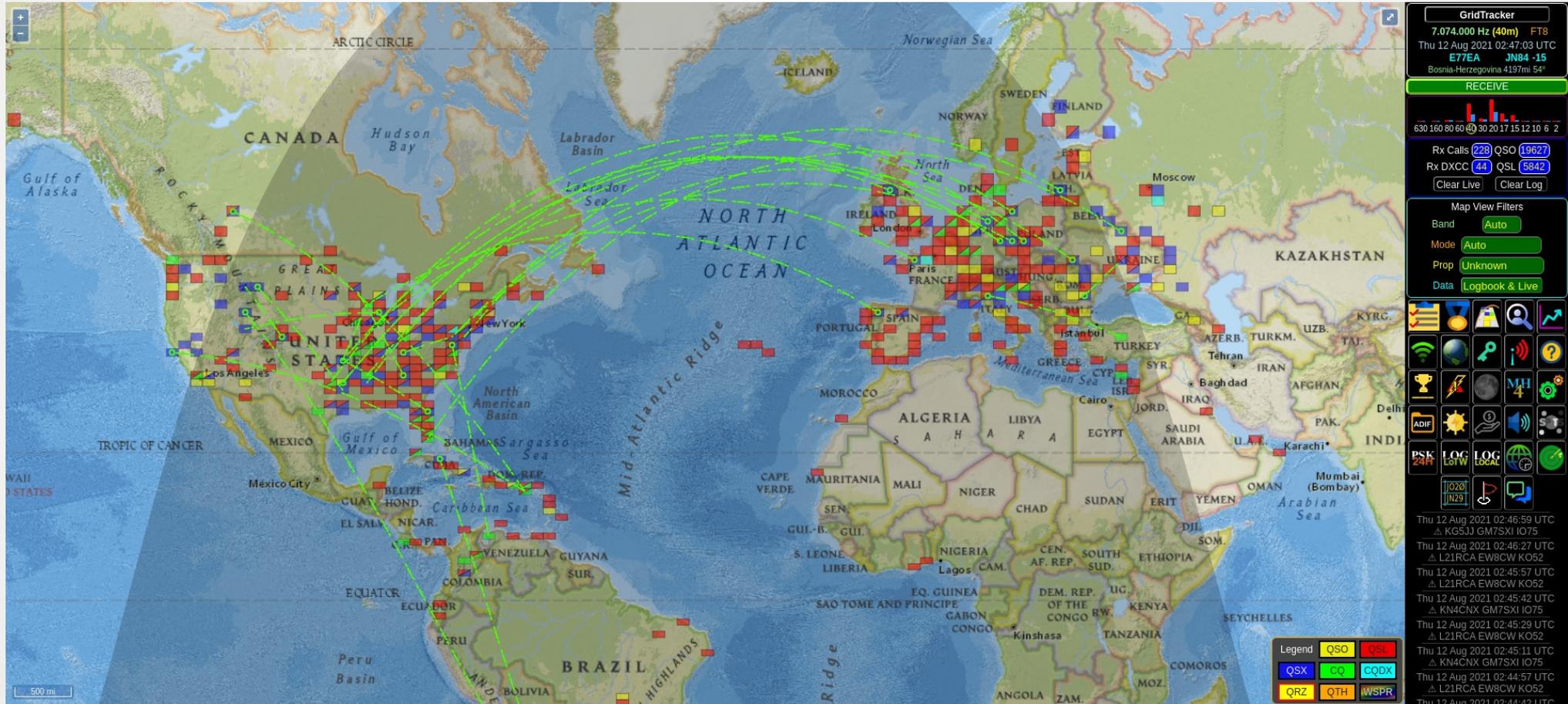
Logbook Data Explained

- Refer to the Map Legend (near bottom right)
 - Red boxes: confirmed grids
 - Yellow boxes: unconfirmed grids
 - No box: no QSO with that grid
- Point to a grid with the mouse to get QSO info

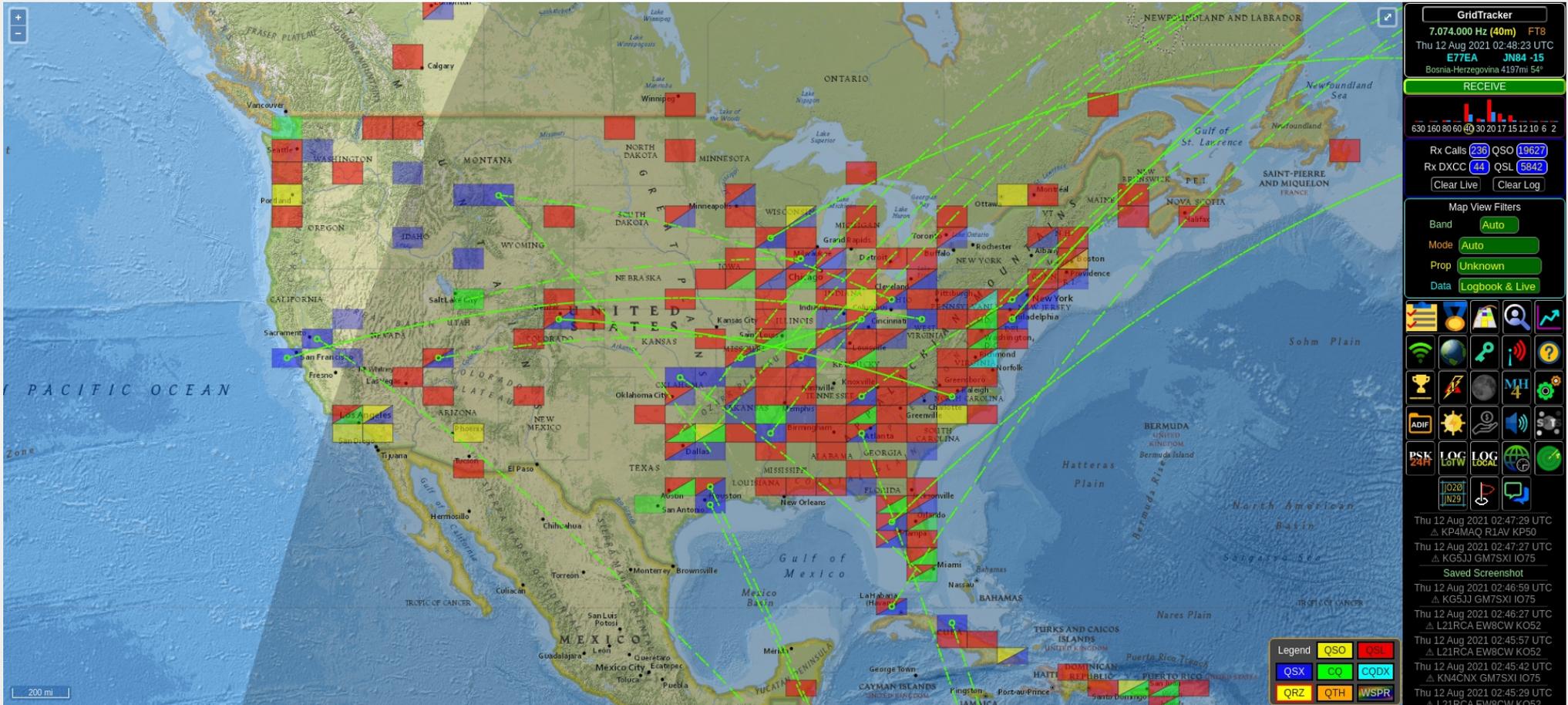
Logbook Data Displayed



Logbook & Live Data Displayed



Logbook and Live: Zoom In



Logbook and Live Explained

- Some boxes are rectangular
 - Colors match the map legend
- Some boxes have a diagonal line
 - Top left is the logbook status
 - Bottom right is the live status
- Example: Top left red, bottom right green
 - Means that you've confirmed the grid and somebody is calling CQ

Call Roster

Call Roster: 157 heard • 31 in roster • 5 wanted

DECODE Halt Tx Logbook Live Band & Mode Callsigns All Traffic/Only Wanted Hunting New+Unconfirmed More Controls

Callsign	Grid	Calling	DXCC	Flag	State	County	Cont	dB	Azim	PX	OAMS	Age
F1ATB	JN33	CQ	France				EU	-18	60	F1		19s
KI5FQJ	EM11	CQ DX	United States		TX	Bell	NA	-5	249	KI5		19s
WD5EED	EM44	CQ	United States		MS	De Soto	NA	0	248	WD5		19s
9A1AD	JN85	CQ	Croatia				EU	-22	53	9A1		32s
TA2HC	KM69	CQ	Turkey				AS	-17	51	TA2		1m 19s

- This display can be filtered in many ways:
 - New, unconfirmed, all traffic, etc.
- Light blue highlight is needed grid
- Click the callsign once to start a QSO

Call Roster: Needed DXCC entity

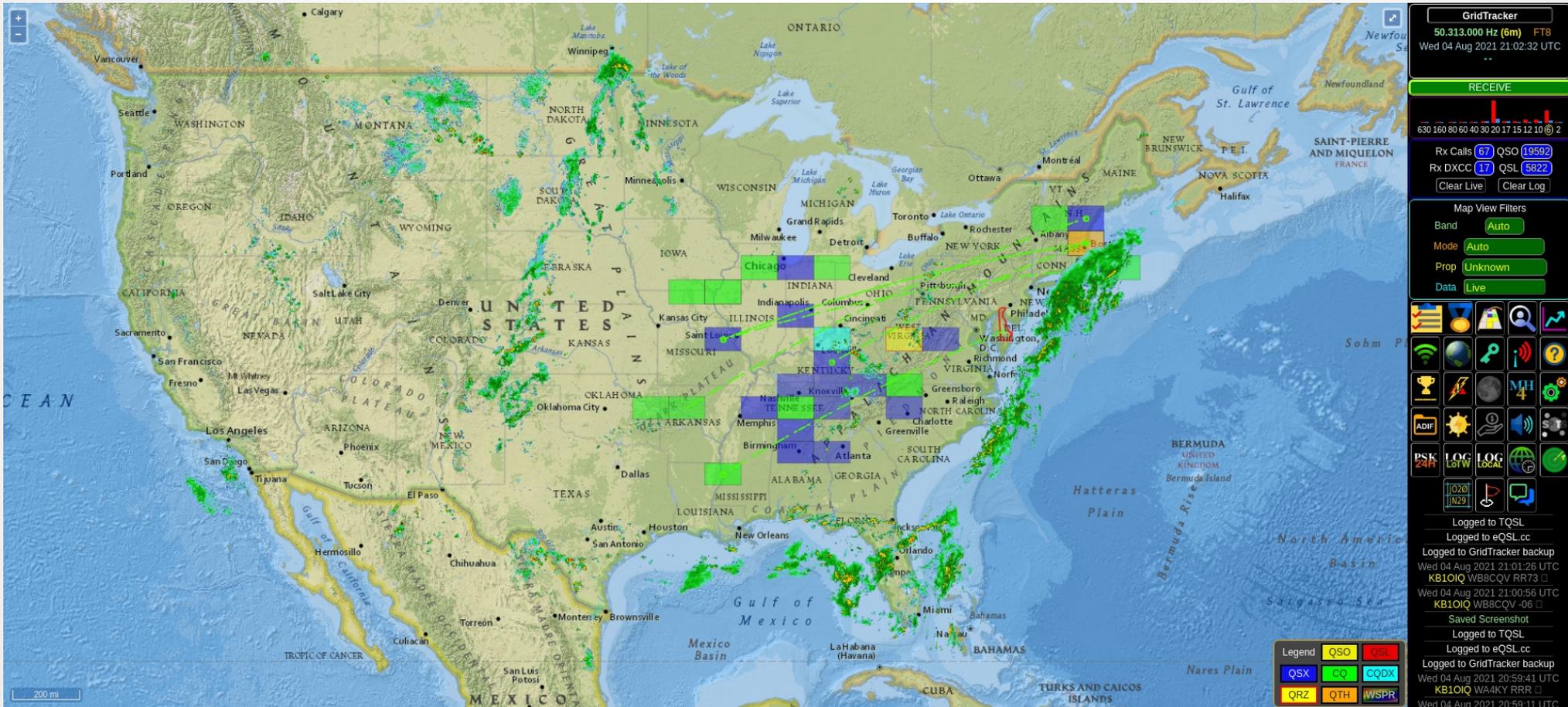
RECEIVE	Halt Tx	Logbook	Live Band & Mode	Callsigns	All Traffic/Only Wanted	Hunting	New+Unconfirmed	More Controls				
Callsign	Grid	Calling	DXCC	Flag	State	County	Cont	dB	Azim	PX	OAMS	Age
KJ7PEJ	DN40	CQ	United States		UT	Davis	NA	-14	279	KJ7		1s
CO7OI	FL01	CQ	Cuba				NA	0	199	CO7		1s
ER100	KN46	CQ	Moldova				EU	-14	47	ER1		1s
DL7BO	JO62	CQ	Germany				EU	-11	48	DL7		1s
CE2FME	FF47	CQ	Chile				SA	-12	179	CE2		1s
KC1AJT	FN55	CQ	United States		MA	Norfolk	NA	5	30	KC1		1s
DH8WR	JO50	KB1OIQ	Germany				EU	-8	50	DH8		2s
F6GEU	IN97	CQ	France				EU	-19	58	F6		1m 16s
KD2PSC	FN12	CQ	United States		NY	~ Genesee ~	NA	6	270	KD2		1m 17s

- A station is calling KB1OIQ (dark blue)
- Several grids are needed (light blue)
- Moldova is a needed DXCC entity (golden color)

Map Layers

- Many layers can be added to the map
- Too many layers makes the map challenging to read
- Examples:
 - Nexrad and lightning strikes – shows storms (is lightning in your area?)
 - Grids
 - Other GridTracker users
 - Grey line
 - Timezones

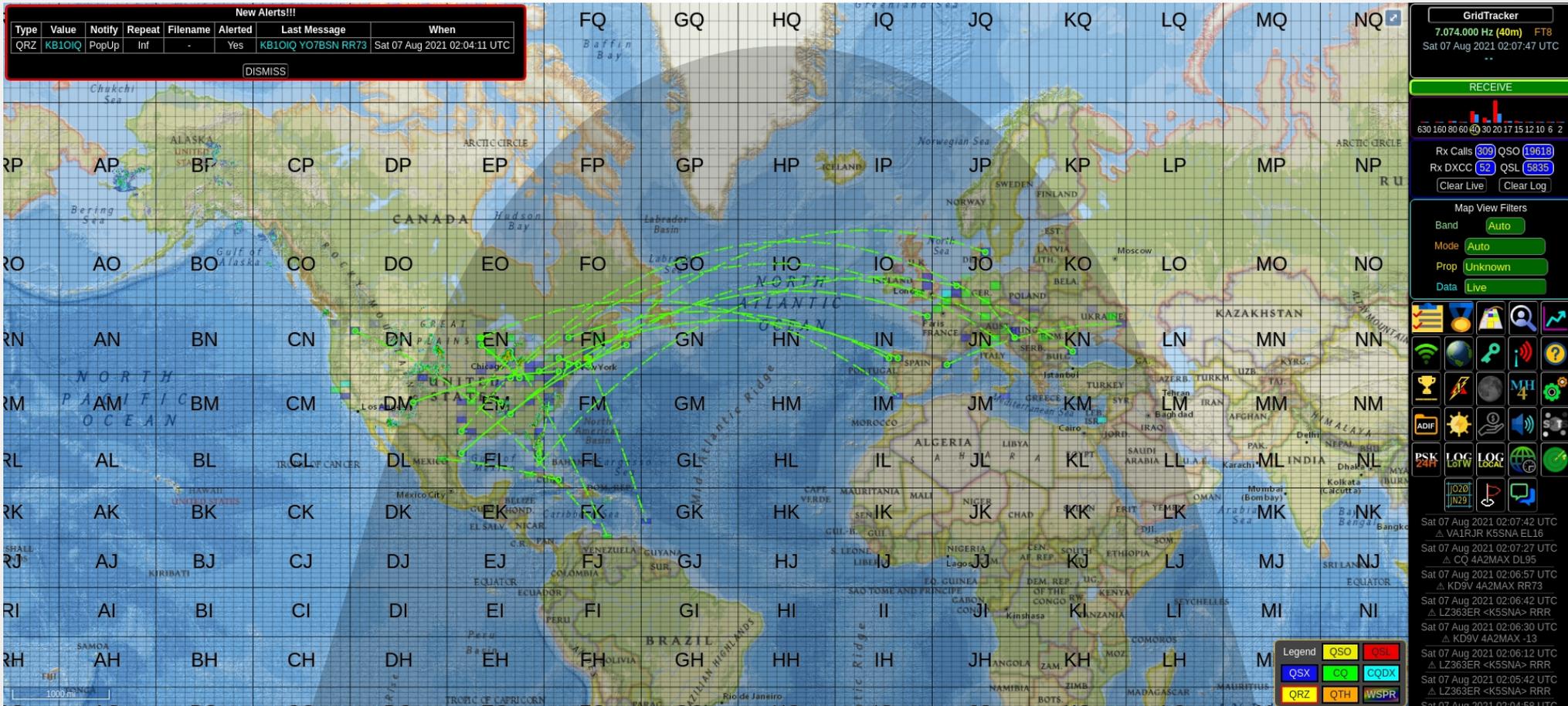
Nexrad Display



Grid Display #1

New Alerts!!!							
Type	Value	Notify	Repeat	Filename	Alerted	Last Message	When
QRZ	KB1OIQ	PopUp	Inf	-	Yes	KB1OIQ YO7BSN RR73	Sat 07 Aug 2021 02:04:11 UTC

[DISMISS](#)



GridTracker	
7.074.000 Hz (40m)	FT8
Sat 07 Aug 2021 02:07:47 UTC	..

RECEIVE

630 160 80 60 40 30 20 17 15 12 10 6 2

Rx Calls **309** QSO **19618**
 Rx DXCC **52** QST **6835**

[Clear Live](#) [Clear Log](#)

Map View Filters

Band **Auto**
 Mode **Auto**
 Prop **Unknown**
 Data **Live**

[Home](#) [Alerts](#) [Log](#) [Map](#) [Settings](#) [Help](#) [About](#)

[WiFi](#) [Bluetooth](#) [GPS](#) [MMS](#) [SMS](#) [Email](#) [Calendar](#) [Clock](#) [Weather](#) [Calculator](#) [Browser](#)

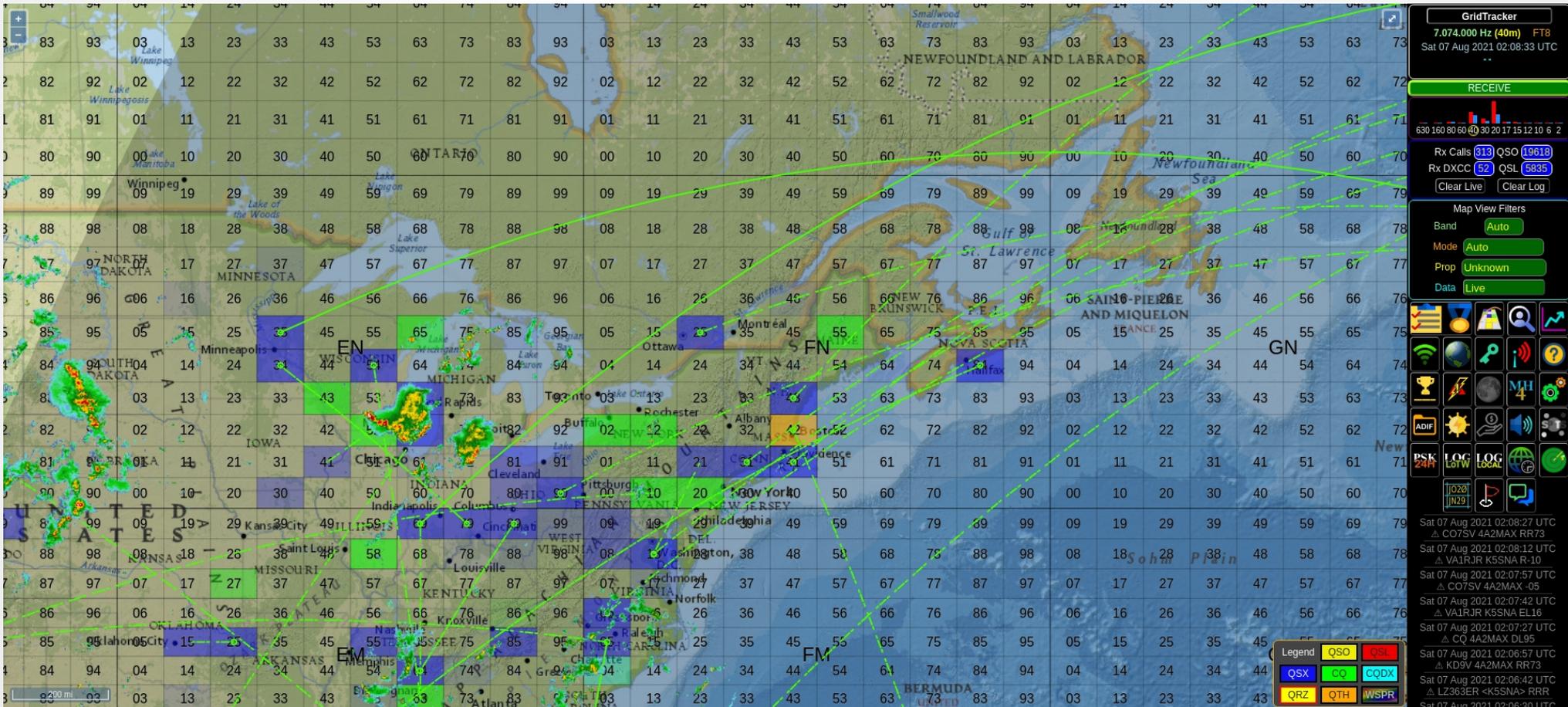
[ADIF](#) [PSK](#) [LOG](#) [LOG](#) [LOCAL](#) [GLOBAL](#)

[J029](#) [JN29](#)

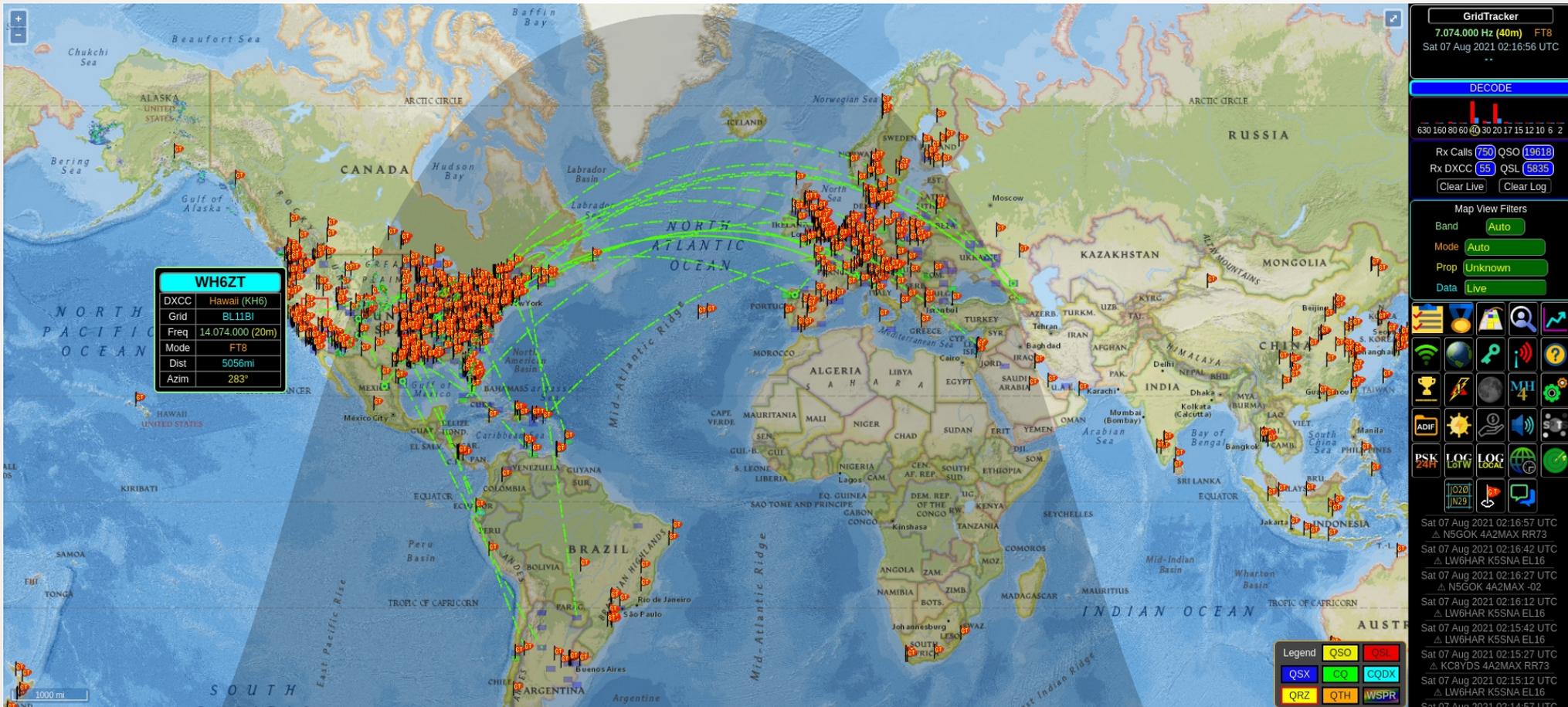
Sat 07 Aug 2021 02:07:42 UTC	Δ VAI RJR K5SNA E116
Sat 07 Aug 2021 02:07:27 UTC	Δ CQ 4A2MAX DL95
Sat 07 Aug 2021 02:06:57 UTC	Δ KD9V 4A2MAX RR73
Sat 07 Aug 2021 02:06:42 UTC	Δ LZ363ER <K5SNA> RRR
Sat 07 Aug 2021 02:06:30 UTC	Δ KD9V 4A2MAX -13
Sat 07 Aug 2021 02:06:12 UTC	Δ LZ363ER <K5SNA> RRR
Sat 07 Aug 2021 02:05:42 UTC	Δ LZ363ER <K5SNA> RRR
Sat 07 Aug 2021 02:04:58 UTC	Δ LZ363ER <K5SNA> RRR

Legend		
QSO	QST	QST
QSX	CQ	CQDX
QRZ	QTH	WSPR

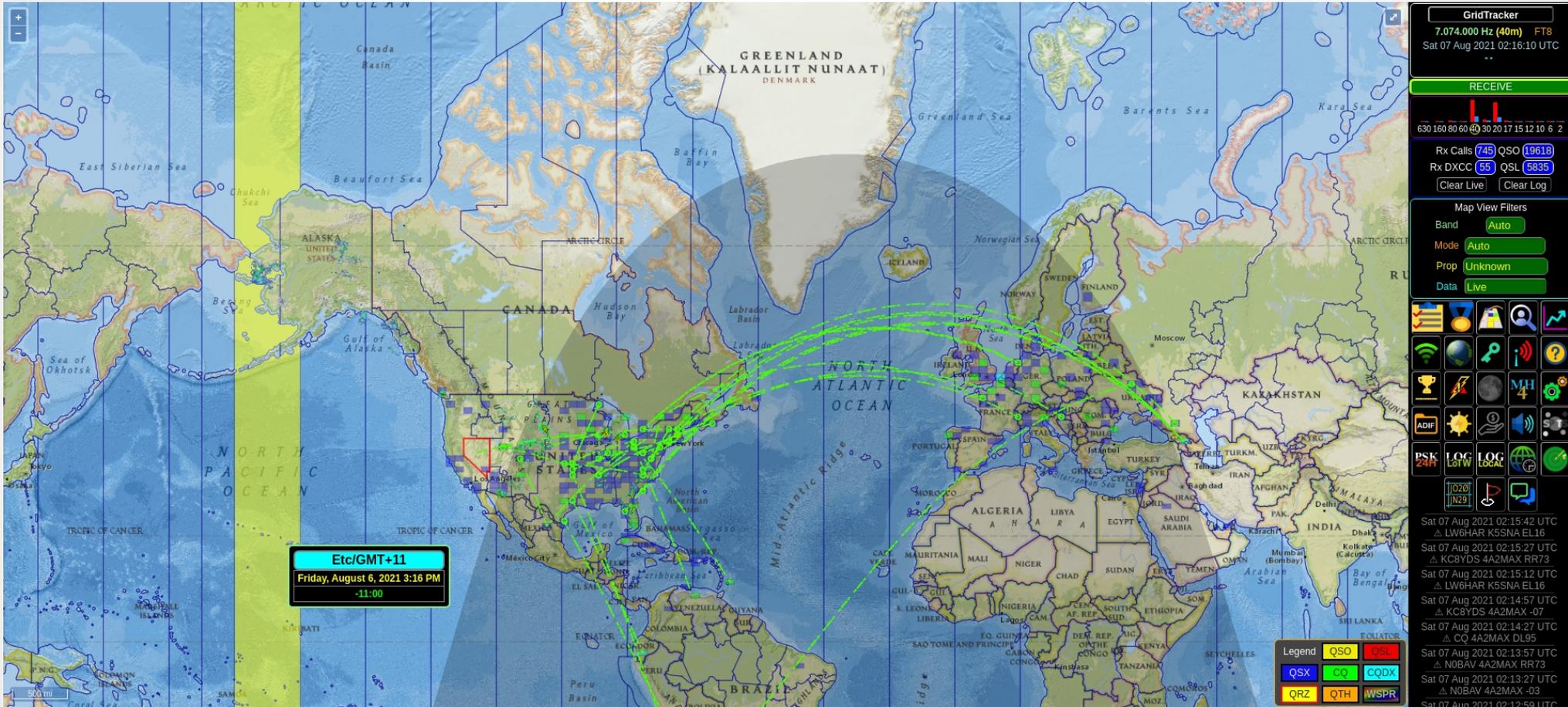
Grid Display #2



Other GridTracker Users



Timezones



Additional Map Overlays

- CQ zones
- ITU zones
- WAC (worked all continents)
- WAS (worked all states)
- DXCC
- USC (US Counties)
- US48 (Fred Fish 6m)

Logging

- Logging info comes from many places
 - Locally wsjtx-log.adi
 - User specified ADIF log file(s)
 - Upload / Download of logs:
 - LoTW, ClubLog, HDRLOG, Cloudlog, eQSL, QRZ.com
- Go to the Settings – Logging menu

Additional Features

- Callsign Lookup
- Speech alerts
- Audio alerts
- Chat with other GridTracker users
- Statistics
 - Grids, distance, prefixes, awards, modes, LOTS of stuff here!

Summary

- GridTracker is highly capable of displaying a lot of information
- Integrates nicely with WSJT-X and JTDX
- Integrates nicely with LoTW and other online repositories
 - QSOs automatically uploaded
 - QSOs downloaded each time GridTracker is started
- Open Source – thank you!

The End

- Thank you for attending!
- Let's attempt a live demo.....