

Using the JT65 Digital Mode

There are now many Digital Modes that we can use.

Some, not so popular, and finding someone using them is hard.

Some, more popular, allowing you to get into a QSO easier.

One is very popular, easy to find, and is there nearly 24 x 7.

That Digital Mode is called JT65

Using the JT65 Digital Mode

JT65 is a mode designed for “weak signal communications”.

Since we are getting down in the sunspot cycle, we are now having a lot of days where weak signals are the new normal.

There have been days where the only QSOs that cover any significant distance on 10, 15, or 20 meters are JT65 QSOs.

Using JT65, and running only 25 watts to a simple antenna, one can routinely work DX during the day and during the evenings on 40 meters and during the evenings on 80 meters.

That may contribute to the current popularity of JT65.

Using the JT65 Digital Mode

JT65 does not support any Rag Chewing.

JT65 QSOs are a lot like Contest QSO's, short and sweet.

The exchanges are brief, and contain no personal info.

But, unlike typical Contest QSOs, they are not Fast.

A “short and sweet” JT65 QSO takes 6 minutes.

You can't make it go any faster, and it could take longer.

Using the JT65 Digital Mode

JT65 QSO exchanges use a well defined format:

Minute 1: K3JZD calls CQ

Minute 2: P5AA answers K3JZD's CQ

Minute 3: K3JZD gives P5AA a Signal Report

Minute 4: P5AA gives K3JZD a Signal Report

Minute 5: K3JZD says 73

Minute 6: P5AA says 73

During each of those minutes, a very small packet of digital data is being transmitted repeatedly, for 46 seconds out of that minute. That is generally how your low powered transmissions make it there under weak conditions.

Using the JT65 Digital Mode

Using JT65 has been compared to watching grass grow.

Using JT65 has been compared to watching paint dry.

But, some have said that JT65 is like cocaine for amateurs . . .
. . . because it can become addictive.

It is easy to say, just this one more QSO and then I'll quit . . .
. . . but you see another one that you want, and keep going.

After a while, you begin to think that it might be nice to get some
JT65 Mode WAS and JT65 Mode DXCC wallpaper.

Using the JT65 Digital Mode

Like all digital modes, there is hardware and software to set up.

Since no two of us have the same radios or computers. I will not be touching on the hardware requirements today.

The good news is that, unlike radios and computers, the software needed to use JT65 is all Free !!

I will show you screen shots of a couple that are available and then walk you though how a JT65 QSO works with one of them.

(I will discuss how you use JT65, not how or why JT65 works)

Using the JT65 Digital Mode

First, just a couple of things about the setup for JT65.

Set your radio to USB.

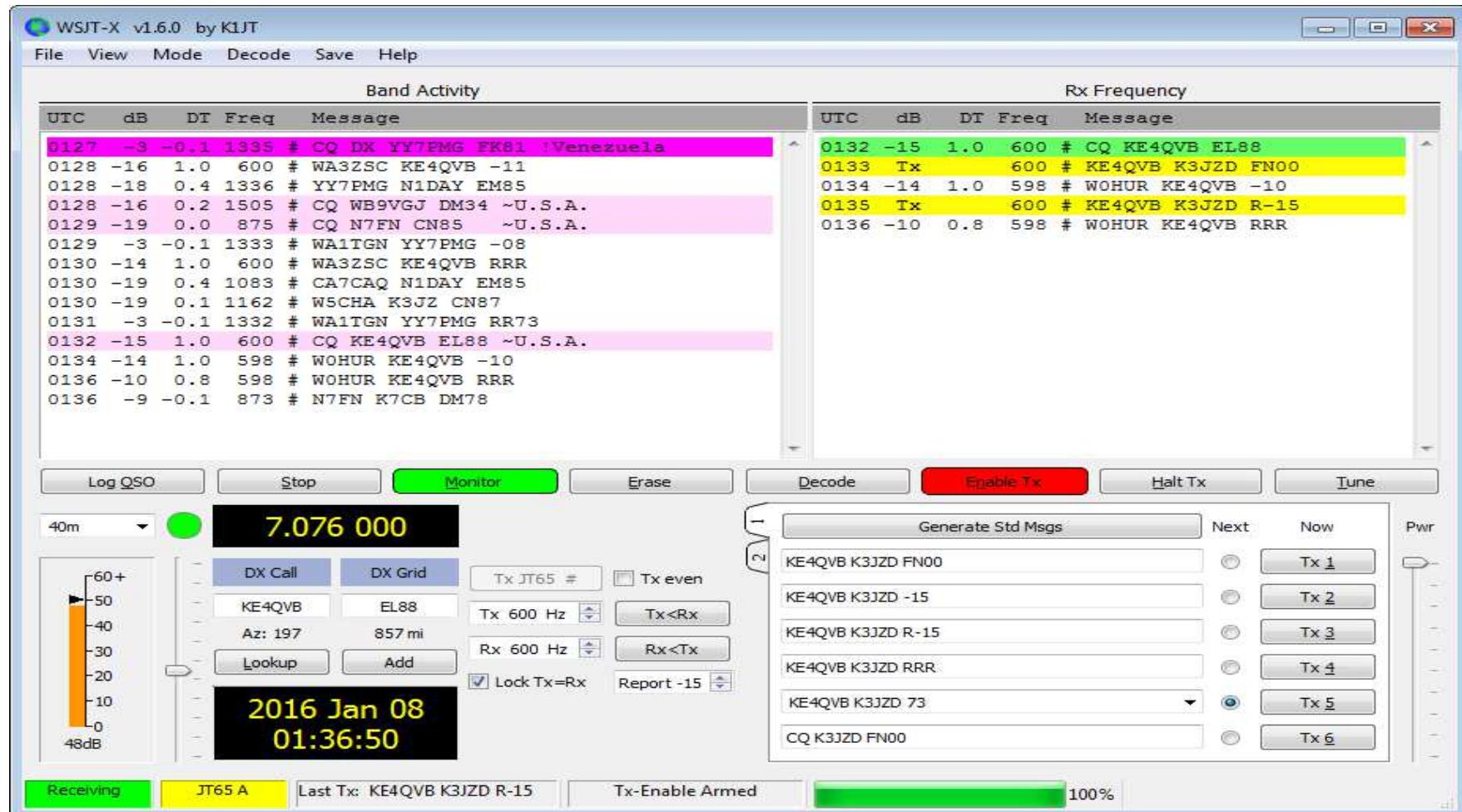
Set your radio to 3576, 7076, 14076, 21076, or 28076
(WARC Bands are used also, but not on the xx76 freqs)

Tuning is done in the JT65 Software, not with your radio.

Power is 1-25 watts. ALC setting is pretty critical.

Using the JT65 Digital Mode

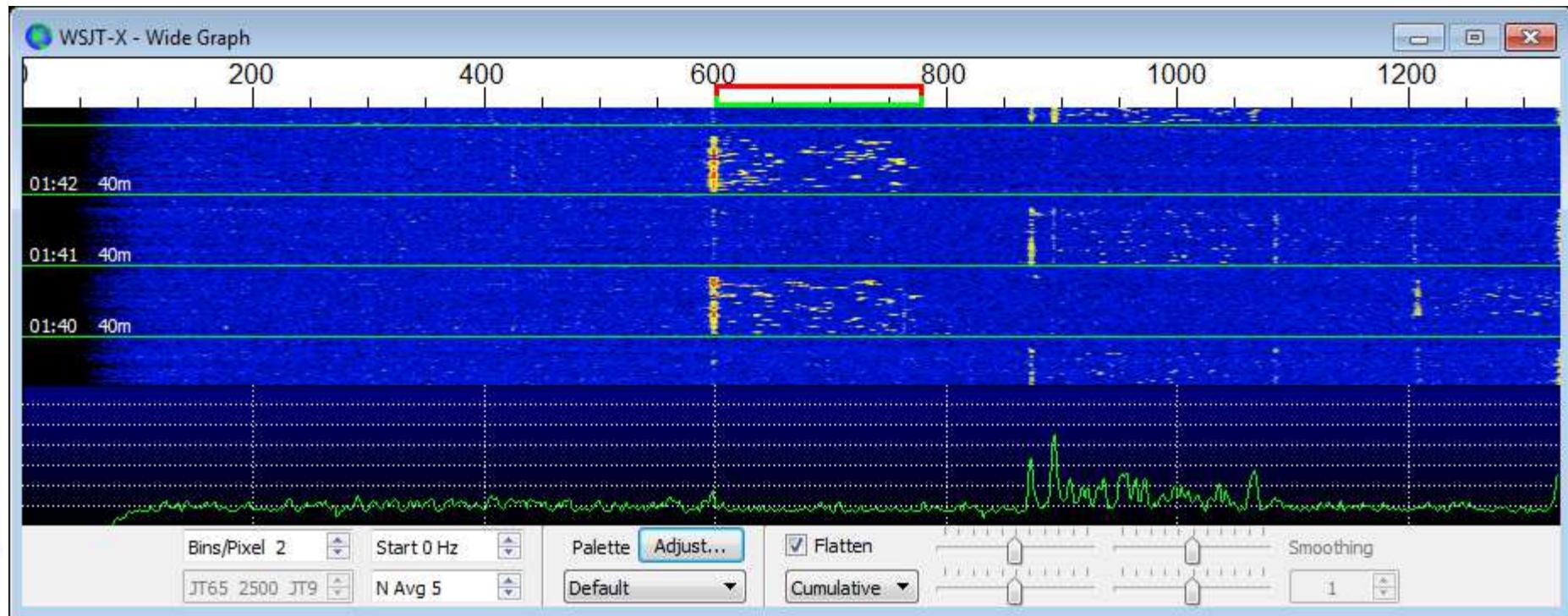
Here is what the WSJT-X Software User Interface looks like.



Using the JT65 Digital Mode

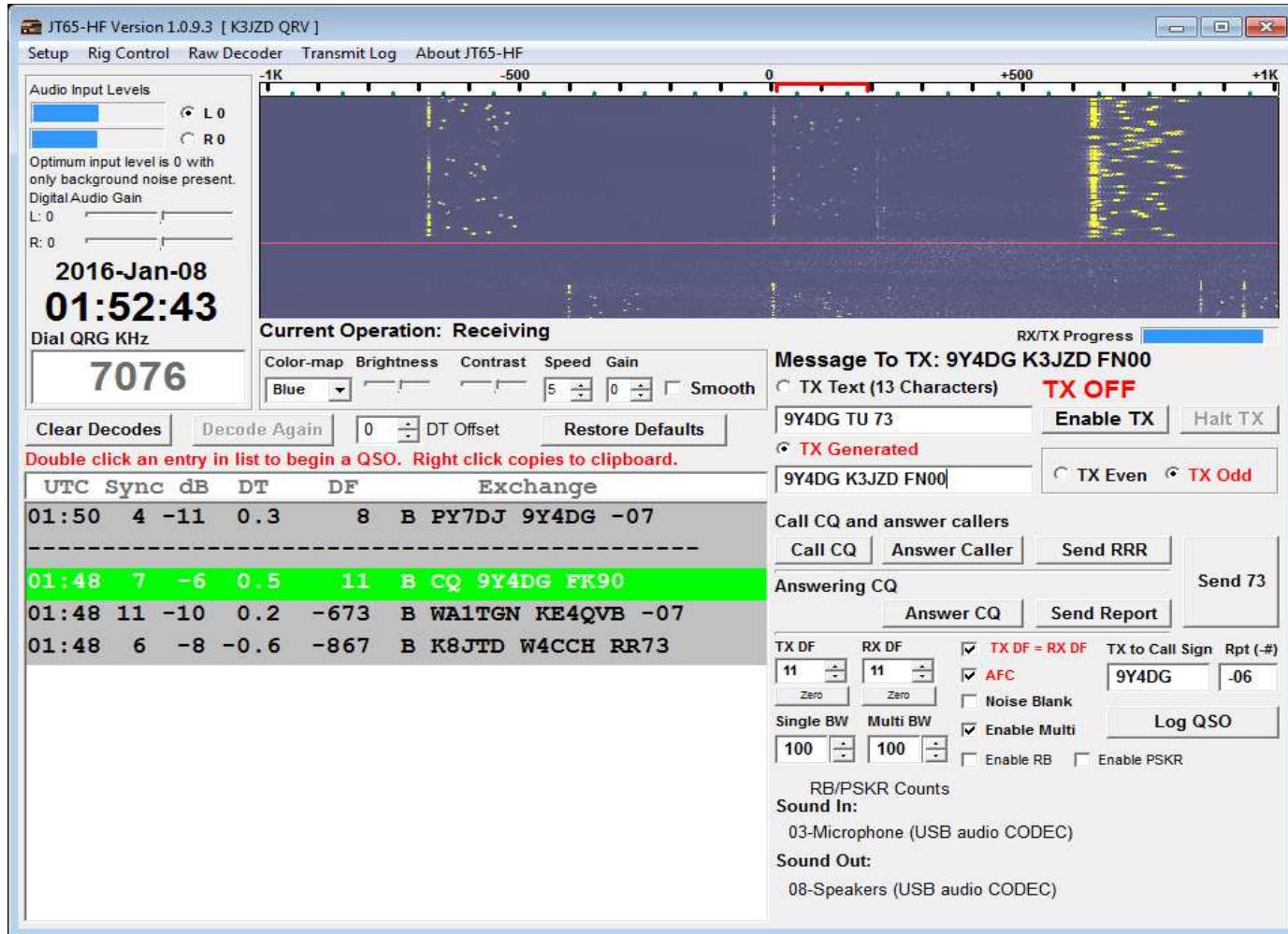
Here is what the WSJT-X Software User Interface looks like.

The Waterfall is in a separate Window



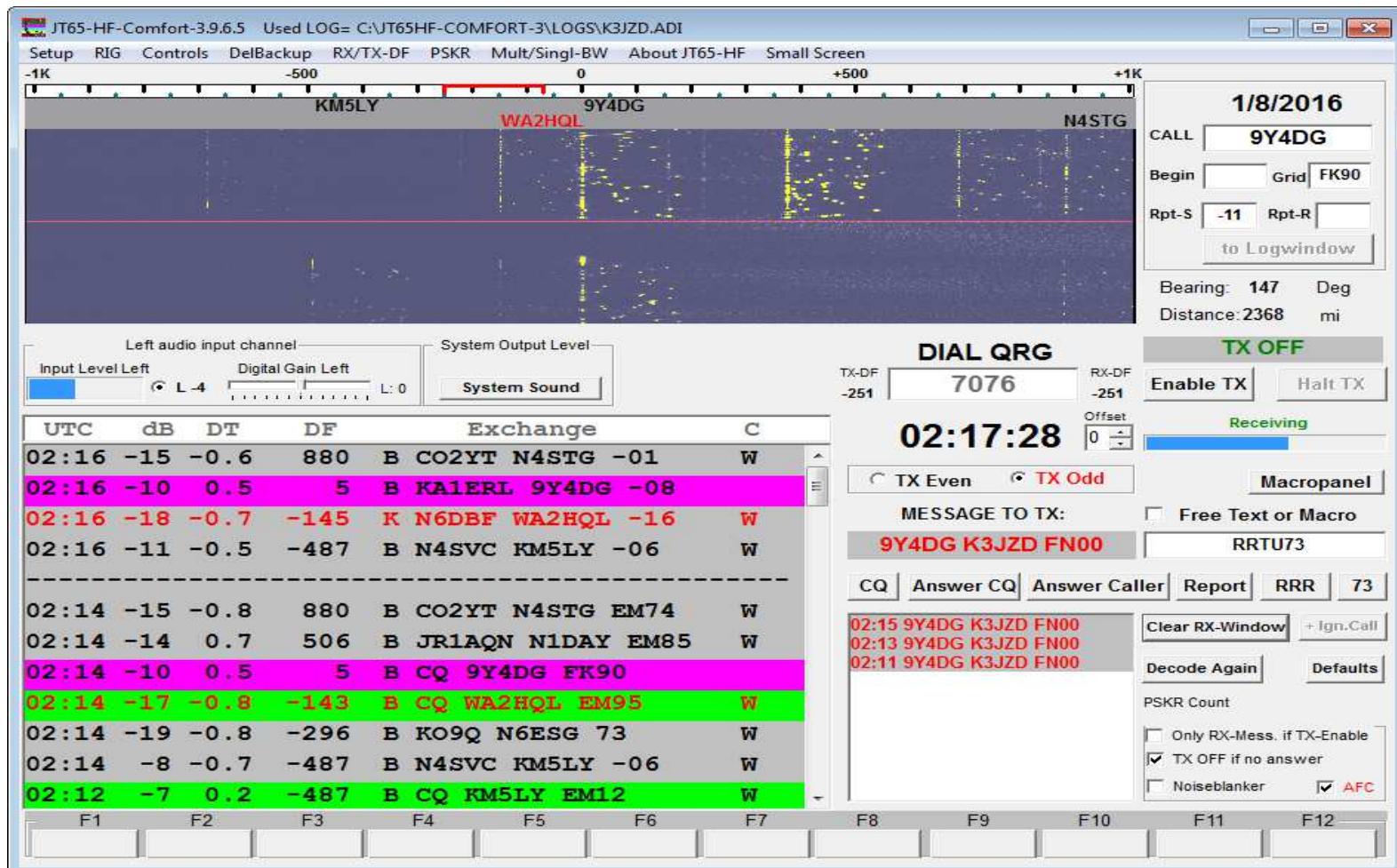
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Here is what the JT65-HF Software User Interface looks like.



Using the JT65 Digital Mode

This is the JT65-HF-Comfort Software User Interface



Using the JT65 Digital Mode

A look at the actual Messages in an “Official” JT65 QSO:

CQ K3JZD FN00

K3JZD P5AA OK31

P5AA K3JZD -18

K3JZD P5AA R-20

P5AA K3JZD RRR

K3JZD P5AA 73

P5AA K3JZD 73

Using the JT65 Digital Mode

A look at the actual Messages in a Shortened JT65 QSO:

CQ K3JZD FN00

K3JZD P5AA OK31

P5AA K3JZD -18

K3JZD P5AA R-20

P5AA RRTU73

K3JZD GL 73

CQ K3JZD FN00

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Variation in Last Message in a Shortened JT65 QSO:

TXN 73 HNY

RR TU GL 73

10W-DIPOLE

RR 73 LOTW

TU EQSL-LOTW

73 CONRAD GL

2W 3EL 73 WLM

Using the JT65 Digital Mode

Timing of the JT65 Messages

Only one Message Per Minute

Each Message is transmitted in the 1 to 46 second window.

This leaves you about 14 seconds to do your next step.

Often this next step can be setup in advance.

But often, you have to make a change to that next step.

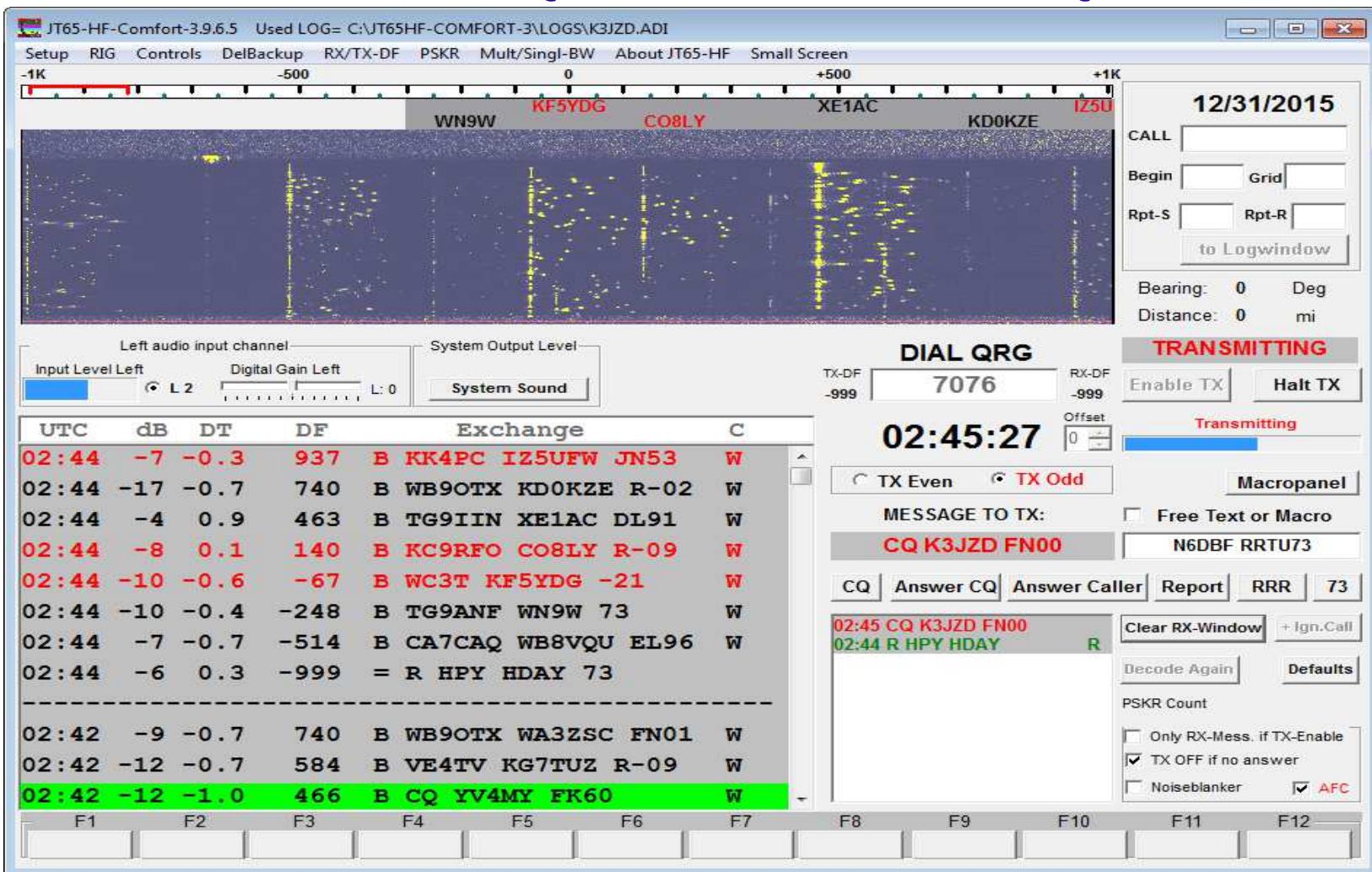
So, for 14 seconds of each minute you have to be awake !!

And, your PC Clock needs to be managed to keep it correct.

02:45 UTC

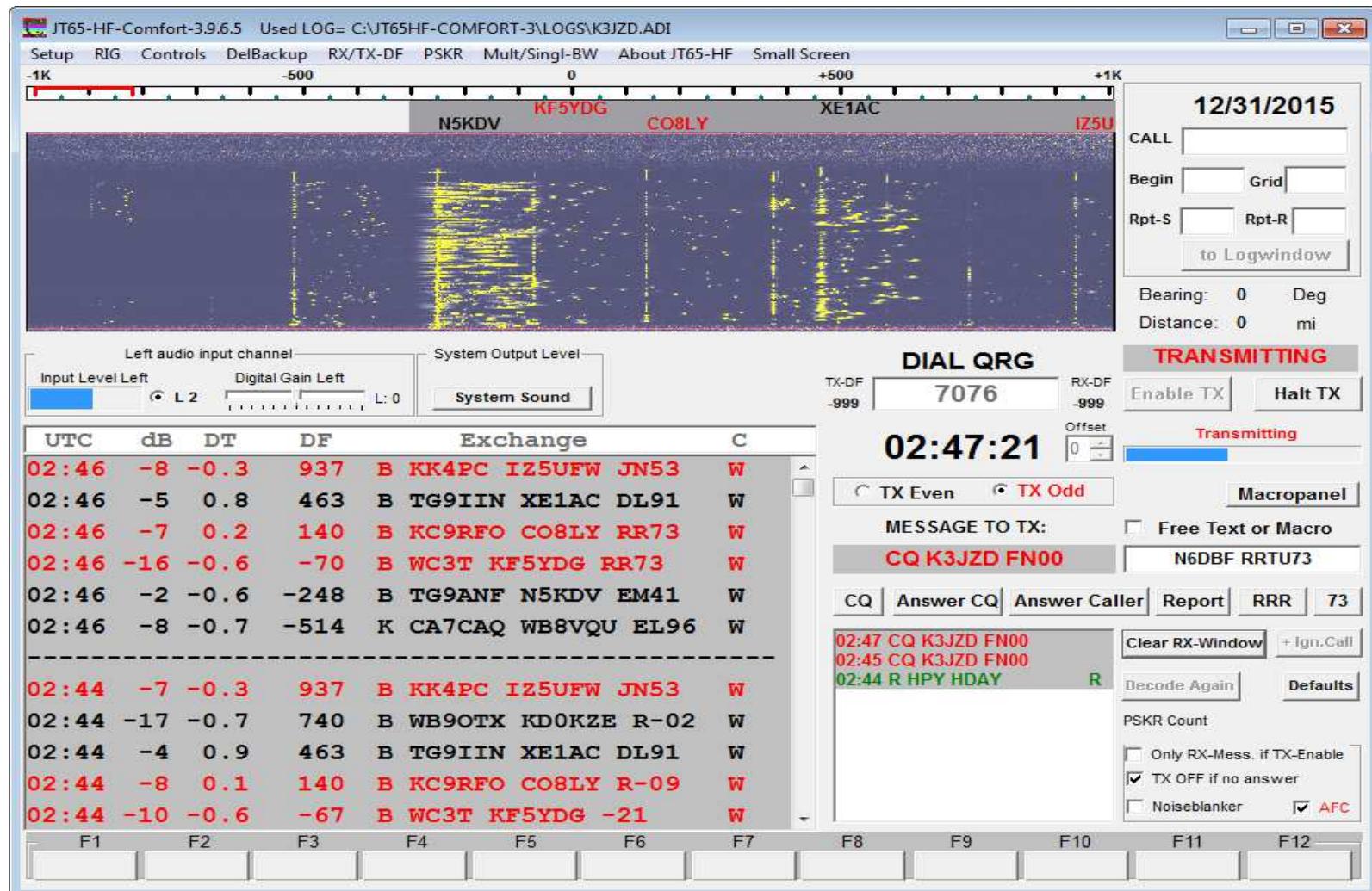
Using the JT65 Digital Mode

Start of a QSO where I Called CQ



Using the JT65 Digital Mode

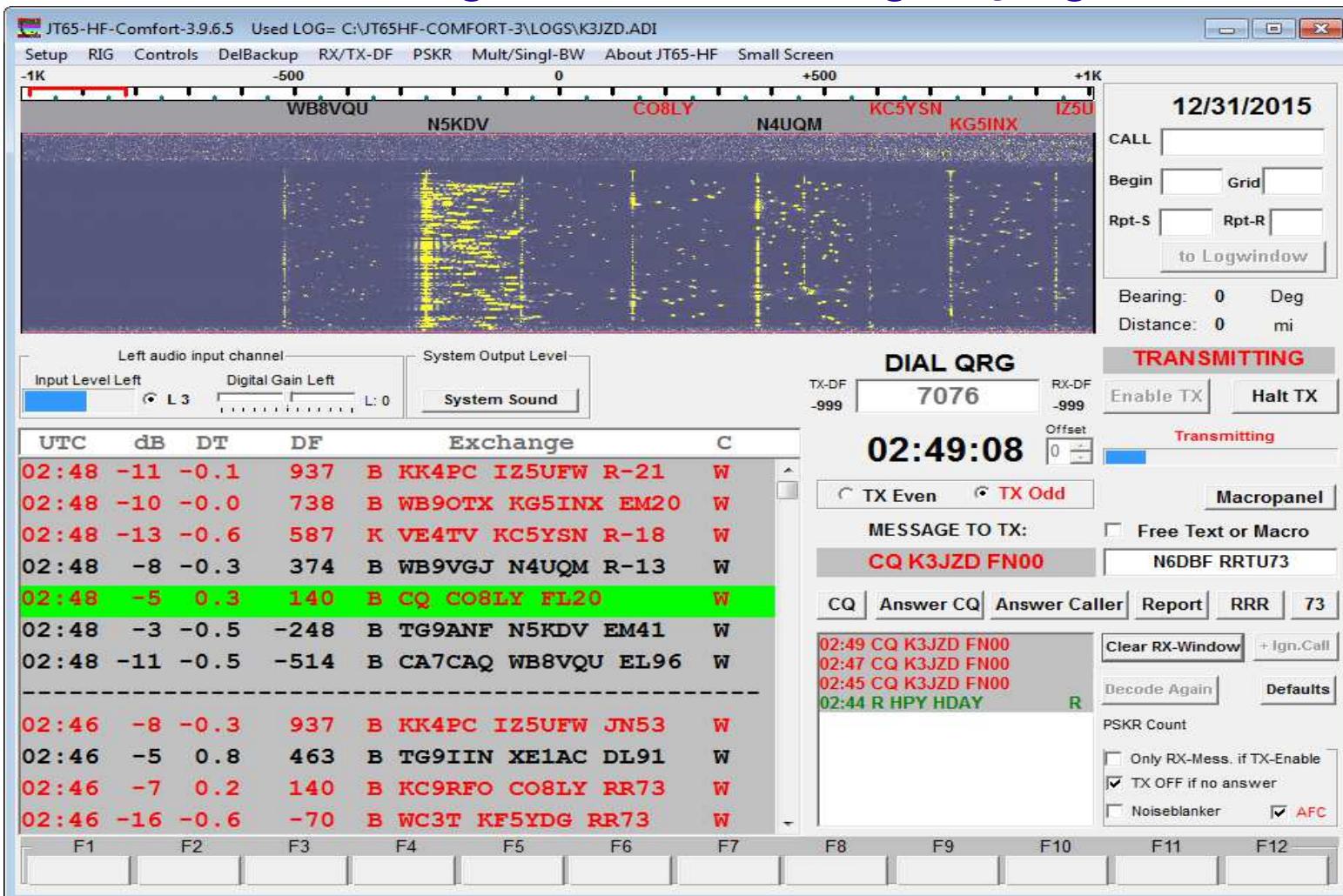
02:47 UTC Some Activity But No “Decode” - Calling CQ Again



Using the JT65 Digital Mode

02:49 UTC

Nothing Decoded Calling CQ Again



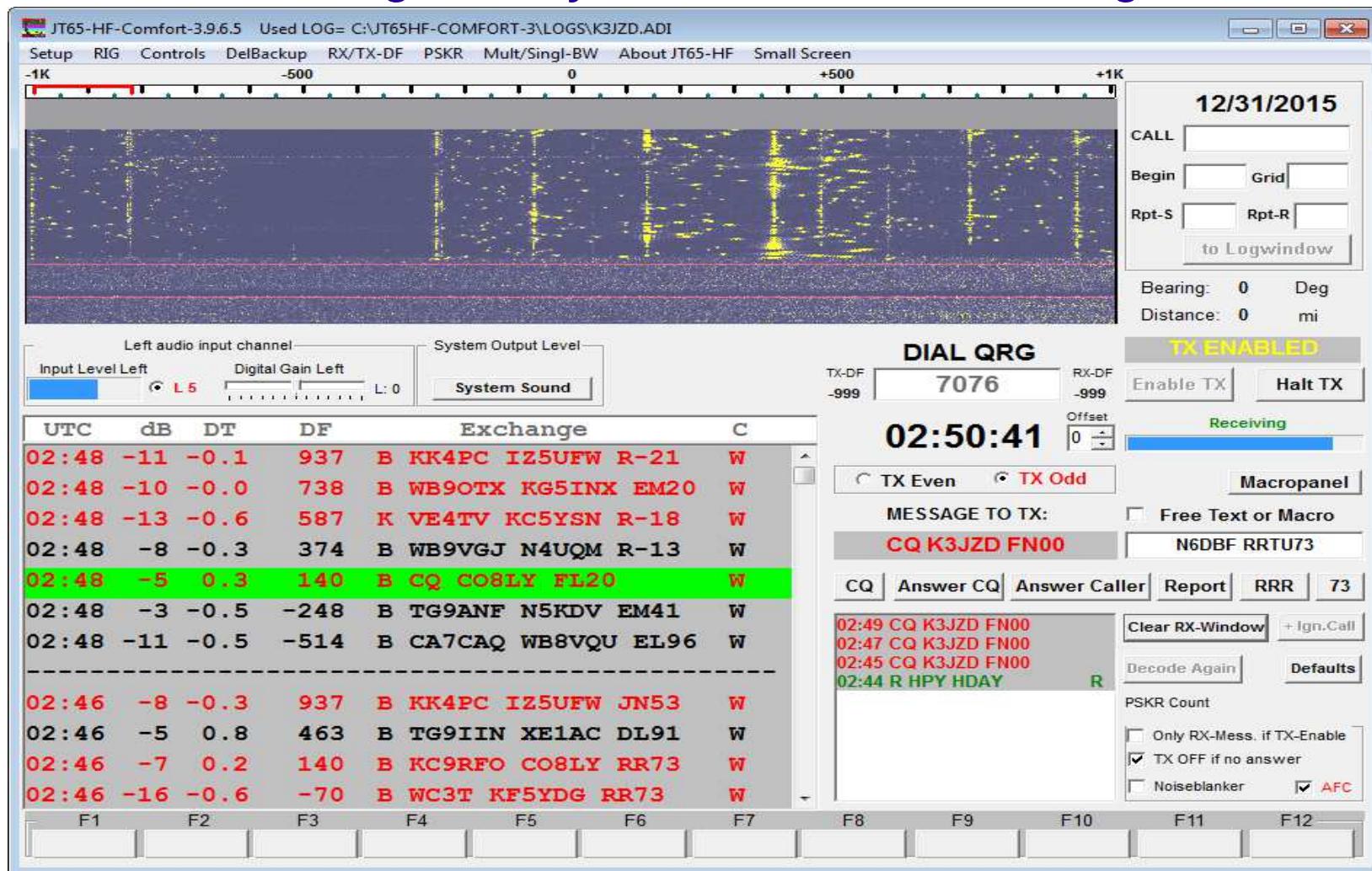
07/18/16

Jody - K3JZD

18

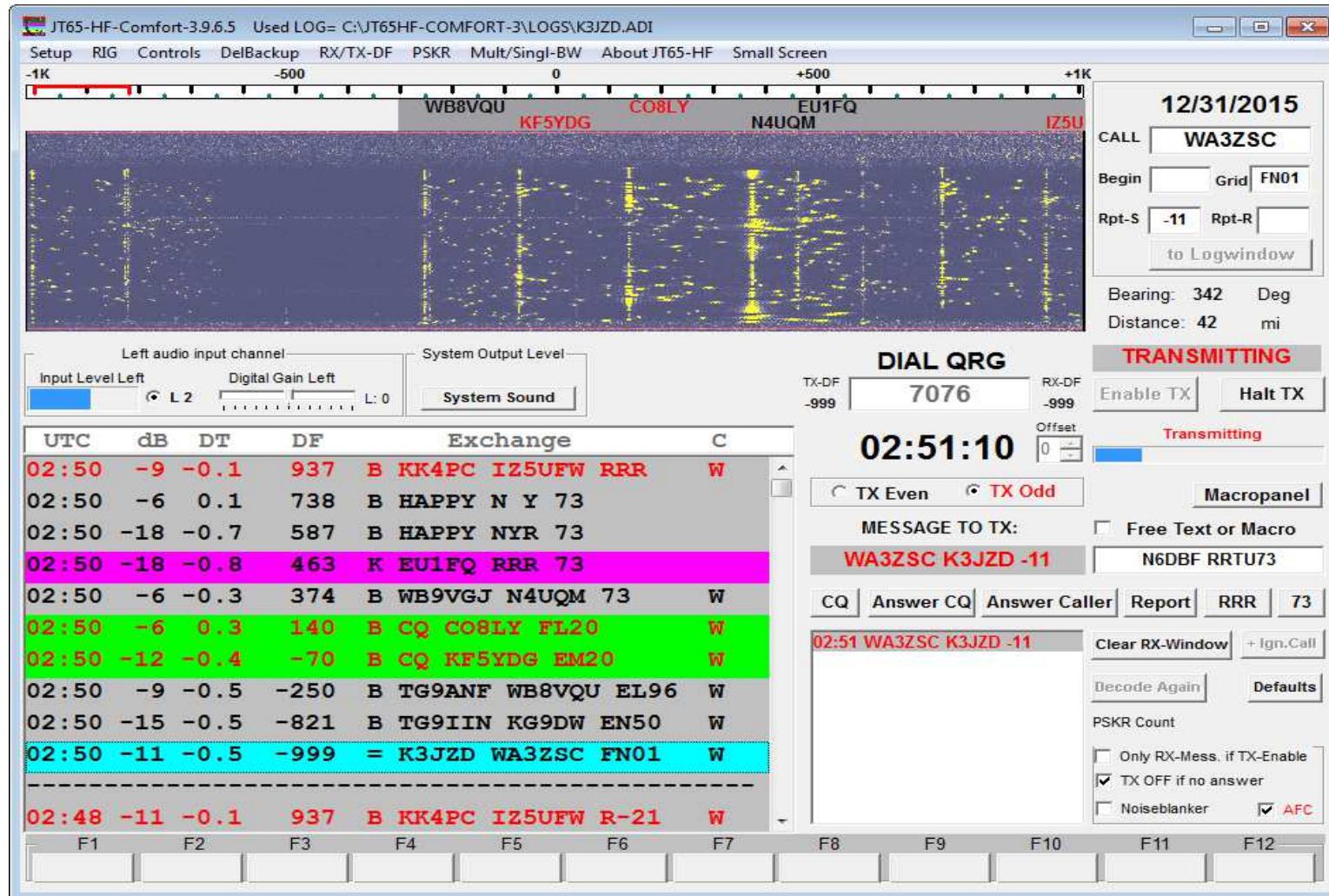
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02:50 UTC Strong Activity On Waterfall – Getting a Call



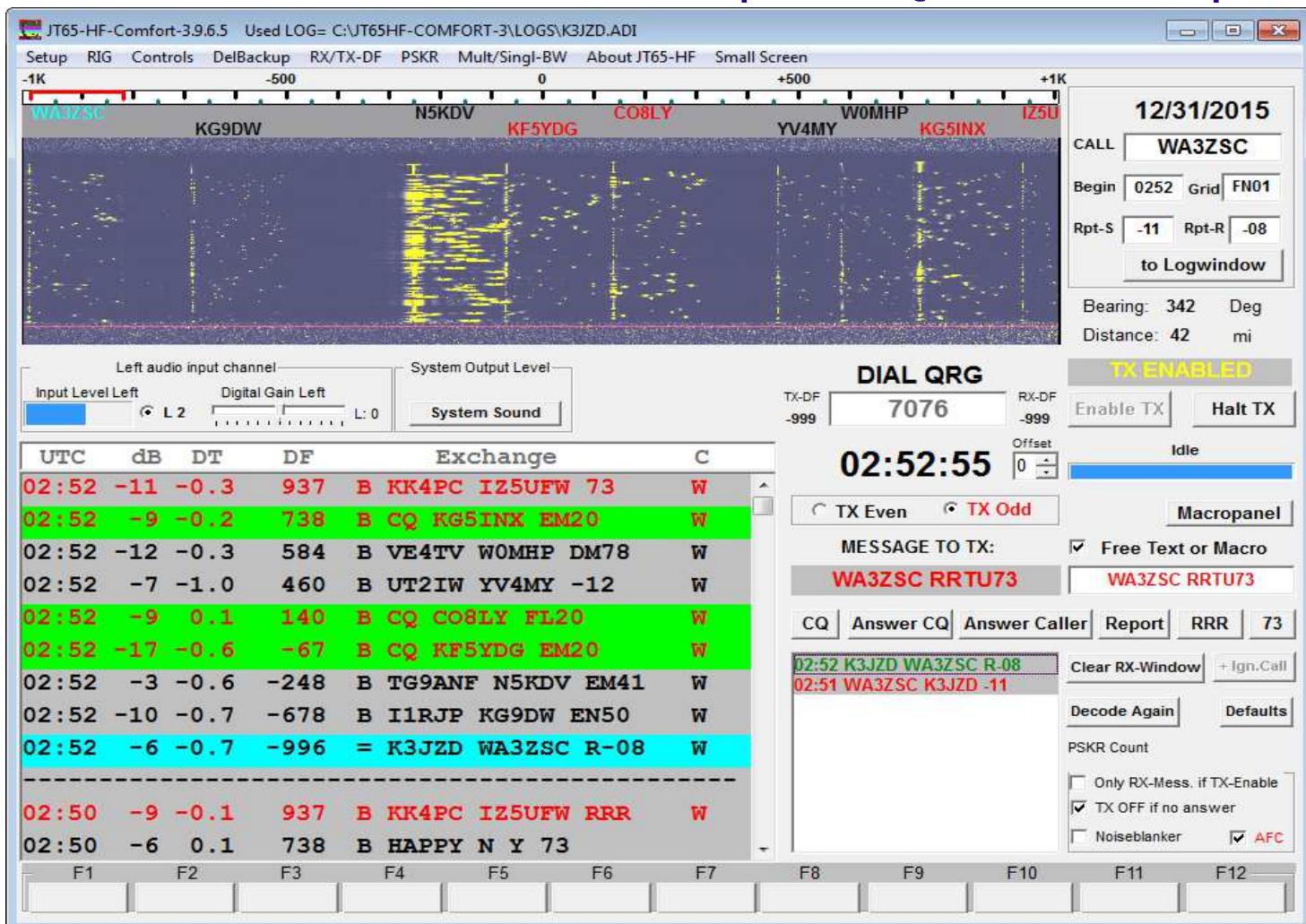
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02:51 UTC WA3ZSC Called Me (DEL?) – Giving his Report



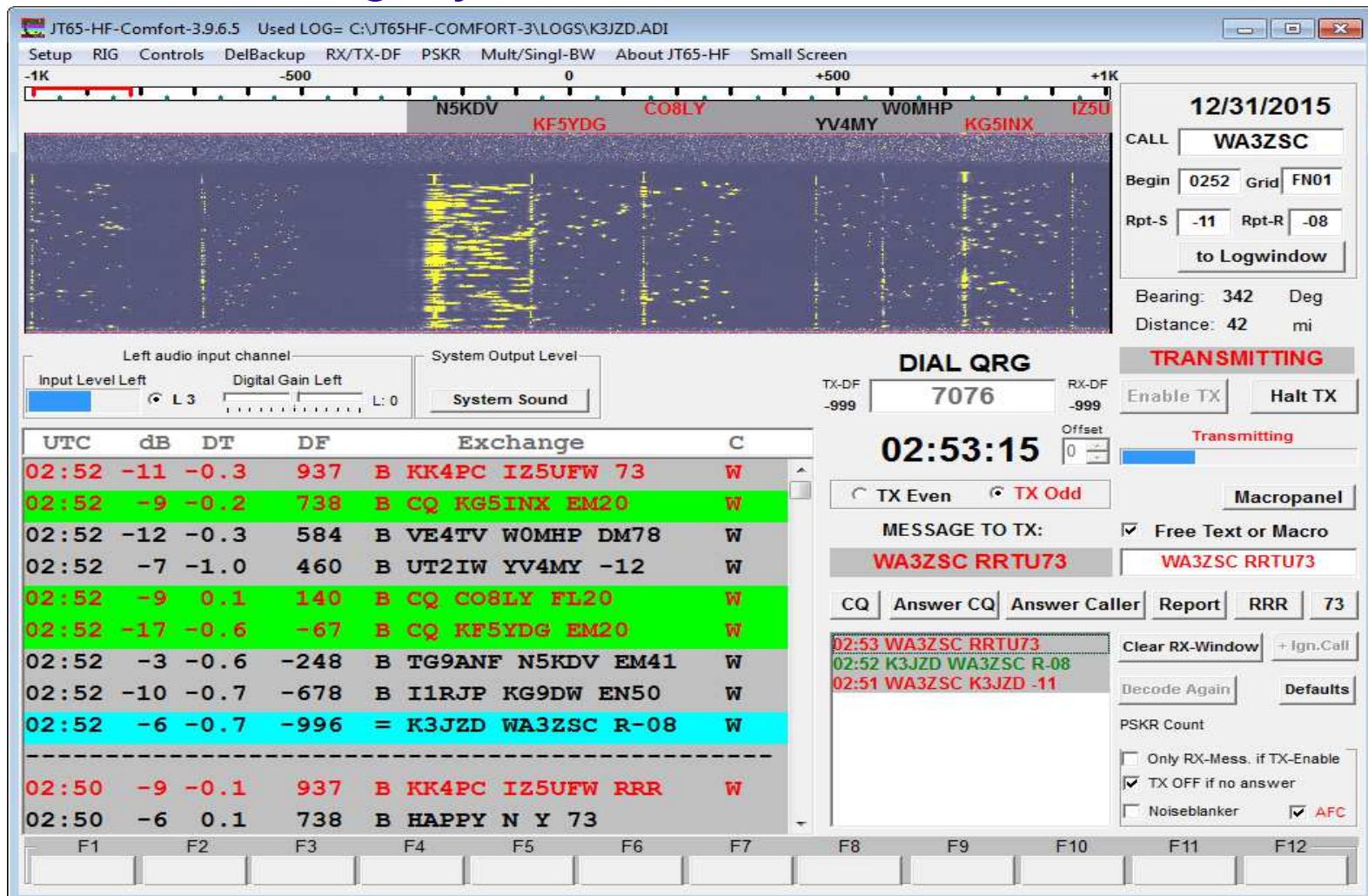
Using the JT65 Digital Mode

02:52 UTC WA3ZSC Sent Me R-Report - Queued Response



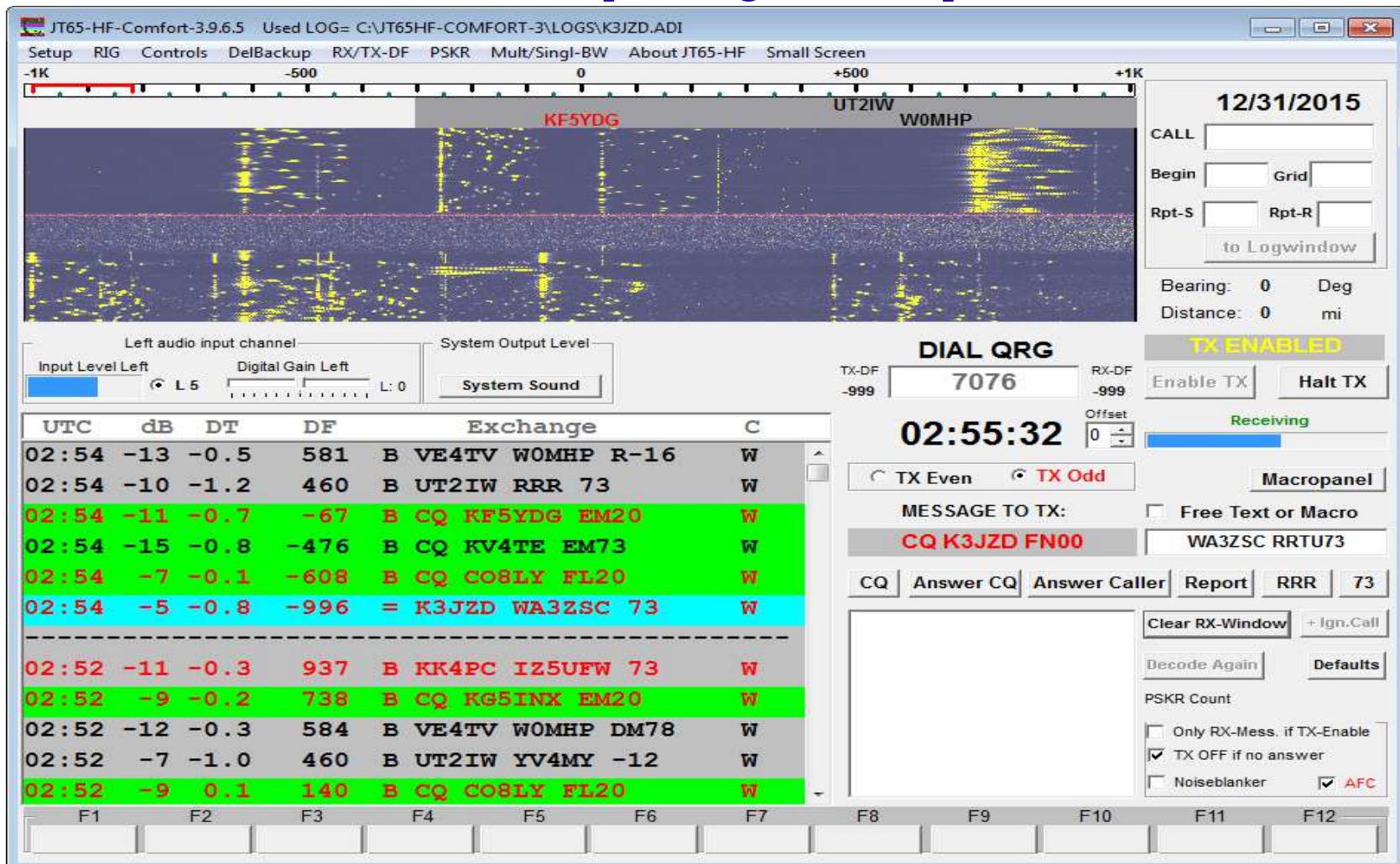
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02:53 UTC Sending My Custom Abbreviated RRTU73



Using the JT65 Digital Mode

02:55 UTC His 73 – Clicked [to Logwindow] – Data Cleared



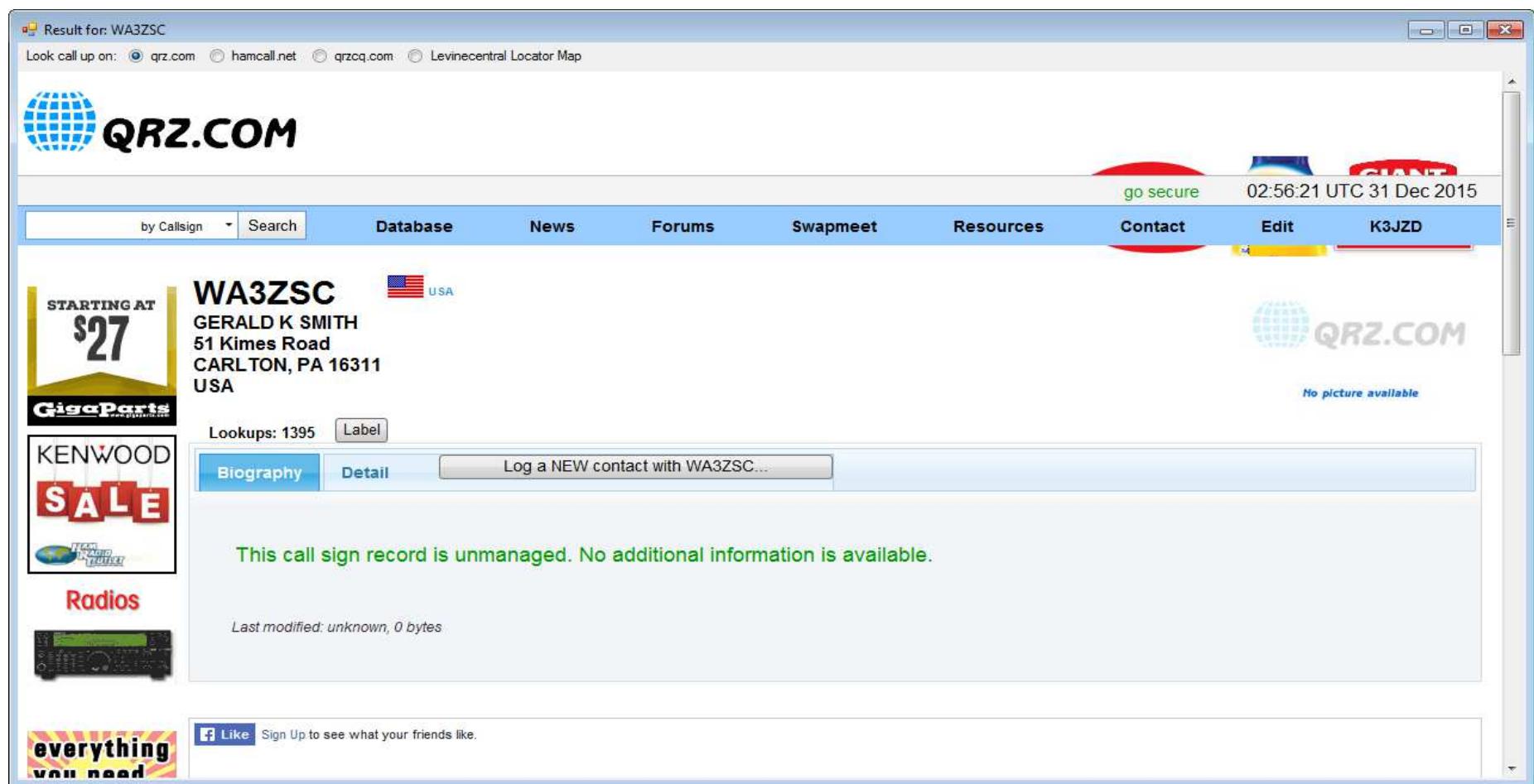
Using the JT65 Digital Mode

02:55 UTC What is Known From the QSO is in the Local Log

JT65-HF Log View Version 1.9.8.1 Total QSO's in log: 424									
Logfile: C:\jt65hf-comfort-3\Logs\k3jzd.adi		Browse	Help	About	Setup	Search	Exit		
	Call	Band	Date	Time_on	Time_off	Freq	RST_sent	RST_rcvd	Grid
▶	WA3ZSC	40M	2015-12-31	02:52	02:55	7.076000	-11	-08	FN01
	N6DBF	40M	2015-12-31	02:42	02:43	7.076000	-02	-14	DM13
	WC3T	40M	2015-12-31	02:34	02:35	7.076000	-17	-01	FN20
	KG5INX	40M	2015-12-31	02:29	02:29	7.076000	-14	-14	EM20
	WA1HEW	40M	2015-12-31	02:15	02:15	7.076000	-04	-14	FM19
	N3EEI	40M	2015-12-31	02:02	02:03	7.076000	-11	-06	FM19
	W5NZ	40M	2015-12-31	01:46	01:46	7.076000	-03	-01	EM62
	KA1ERL	40M	2015-12-31	01:35	01:36	7.076000	-06	-09	FN41
	F4GBD	40M	2015-12-30	23:10	23:11	7.076000	-15	-11	JN05
	DL9ZAD	40M	2015-12-30	22:57	22:57	7.076000	-17	-20	JN49
	KA0UNB	40M	2015-12-30	22:47	22:48	7.076000	-09	-09	EN11
	N4DLT	40M	2015-12-30	22:37	22:38	7.076000	-06	-05	EM95
	W6DPD	20M	2015-12-30	22:22	22:23	14.076000	-08	-12	DM06
	CO8LY	15M	2015-12-30	22:00	22:03	21.076000	-01	-07	FL20
	PY4WL	15M	2015-12-30	21:51	21:54	21.076000	-08	-11	GH61
	K7TBM	15M	2015-12-30	20:30	20:32	21.076000	-10	-21	CN87

Using the JT65 Digital Mode

02:55 UTC QRZ.COM gives me more info on him (Not my DEL)



The screenshot shows a Windows application window for QRZ.COM. The title bar says "Result for: WA3ZSC". The main content area displays the following information:

WA3ZSC (Call Sign)
by Gerald K Smith (Name)
51 Kimes Road (Address)
Carlton, PA 16311 (City, State)
USA (Country)
No picture available (Profile Picture)

Lookups: 1395 (Lookup History)

Biography (Tab selected) | Detail | Log a NEW contact with WA3ZSC...

This call sign record is unmanaged. No additional information is available.

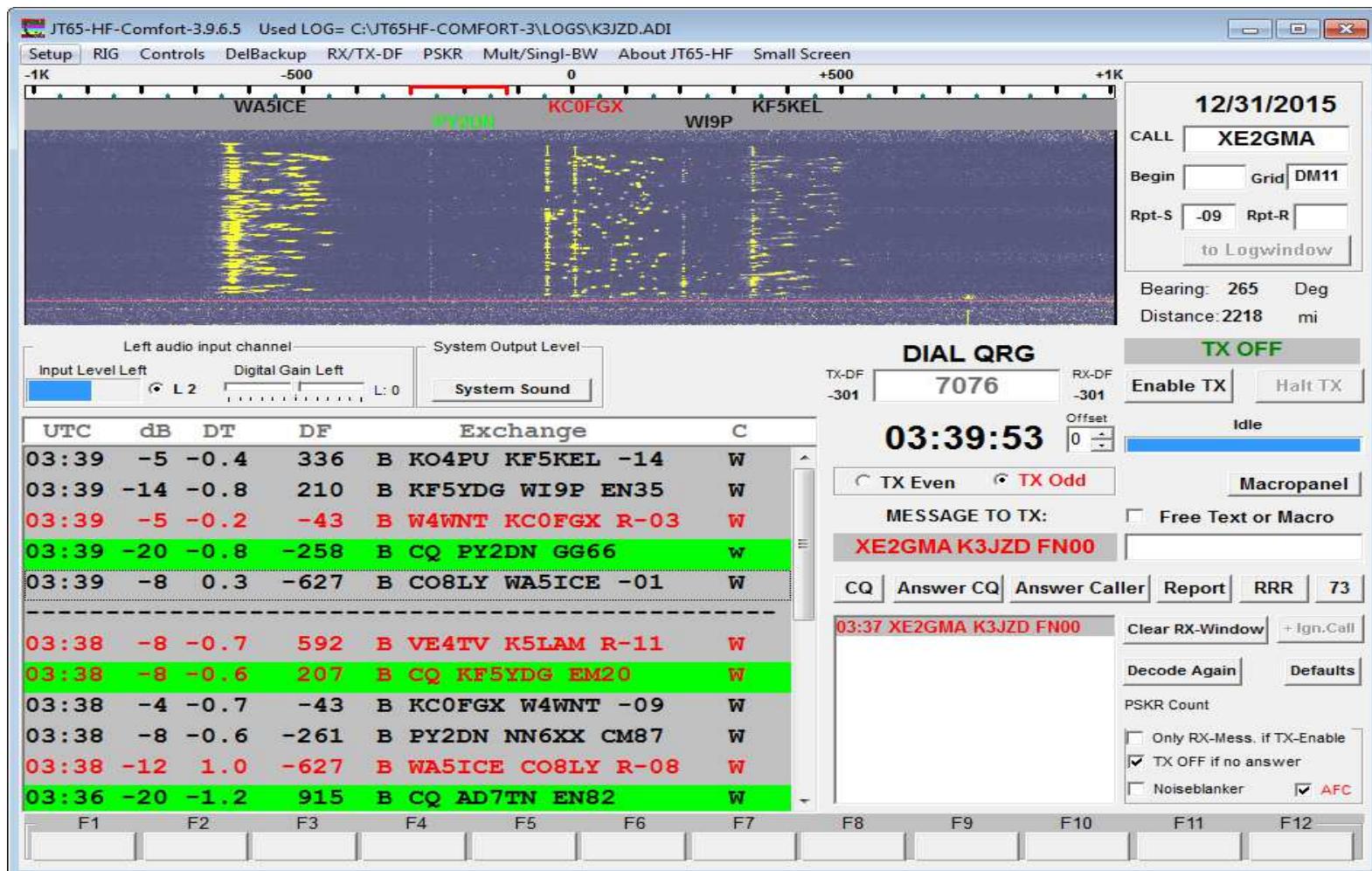
Last modified: unknown, 0 bytes

Facebook Like button: Like Sign Up to see what your friends like.

Advertisement banners on the left and right sides of the page.

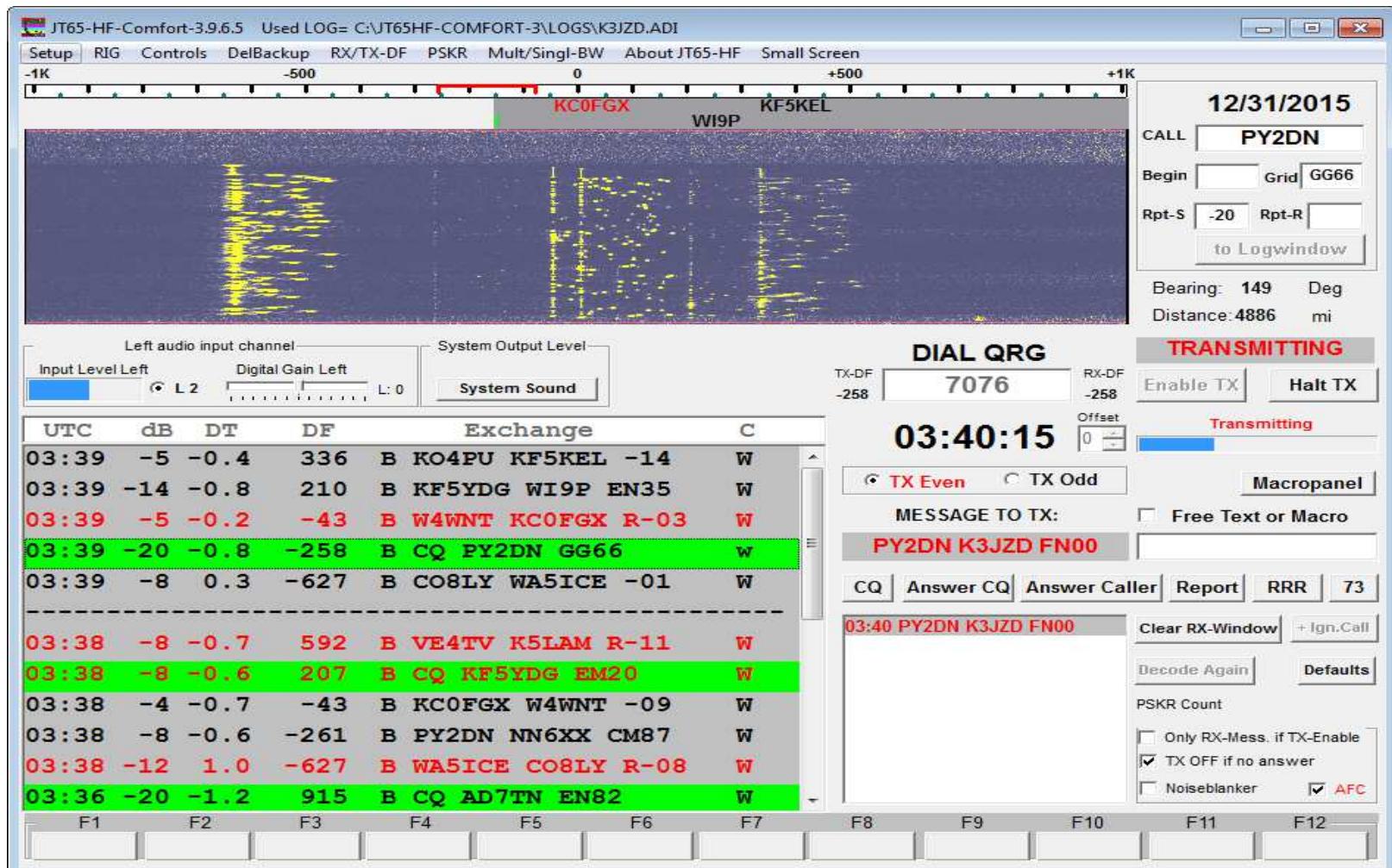
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03:39 UTC Start of a QSO Where I Answer PY2DN's CQ



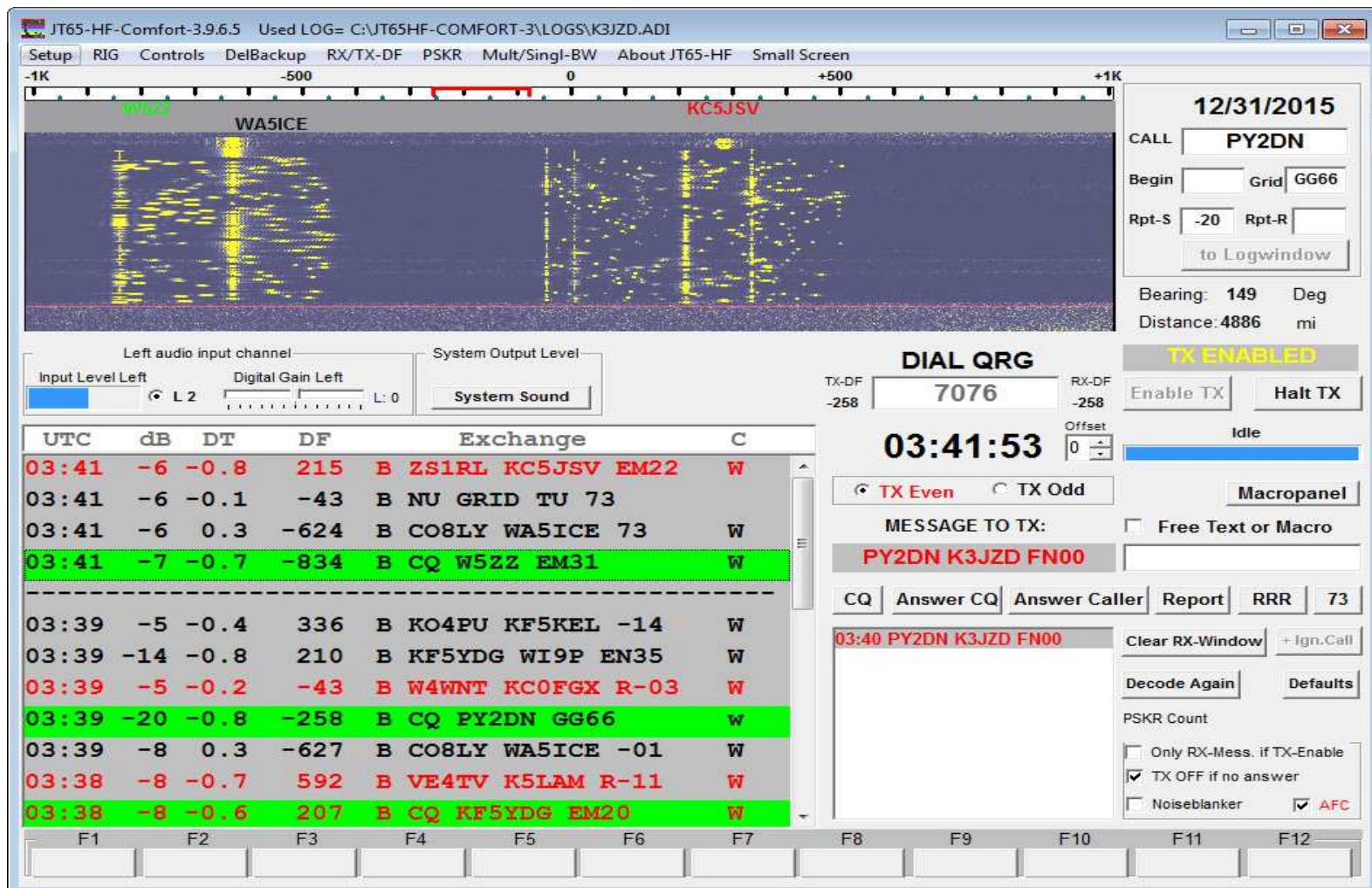
Using the JT65 Digital Mode

03:40 UTC I Moved to His Frequency and I Am Calling Him



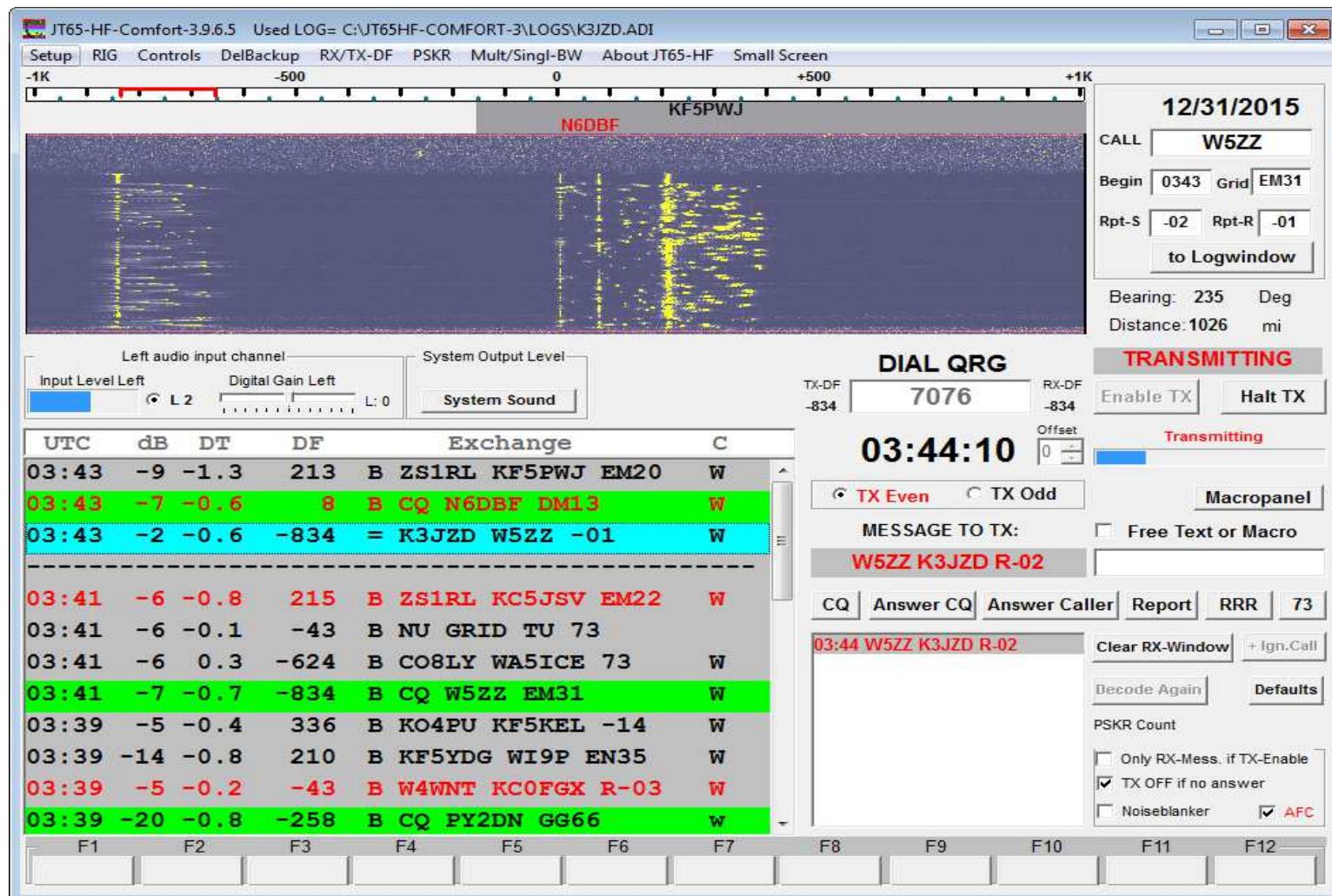
Using the JT65 Digital Mode

03:41 UTC PY3DN No Good – So I Decide To Call W5ZZ



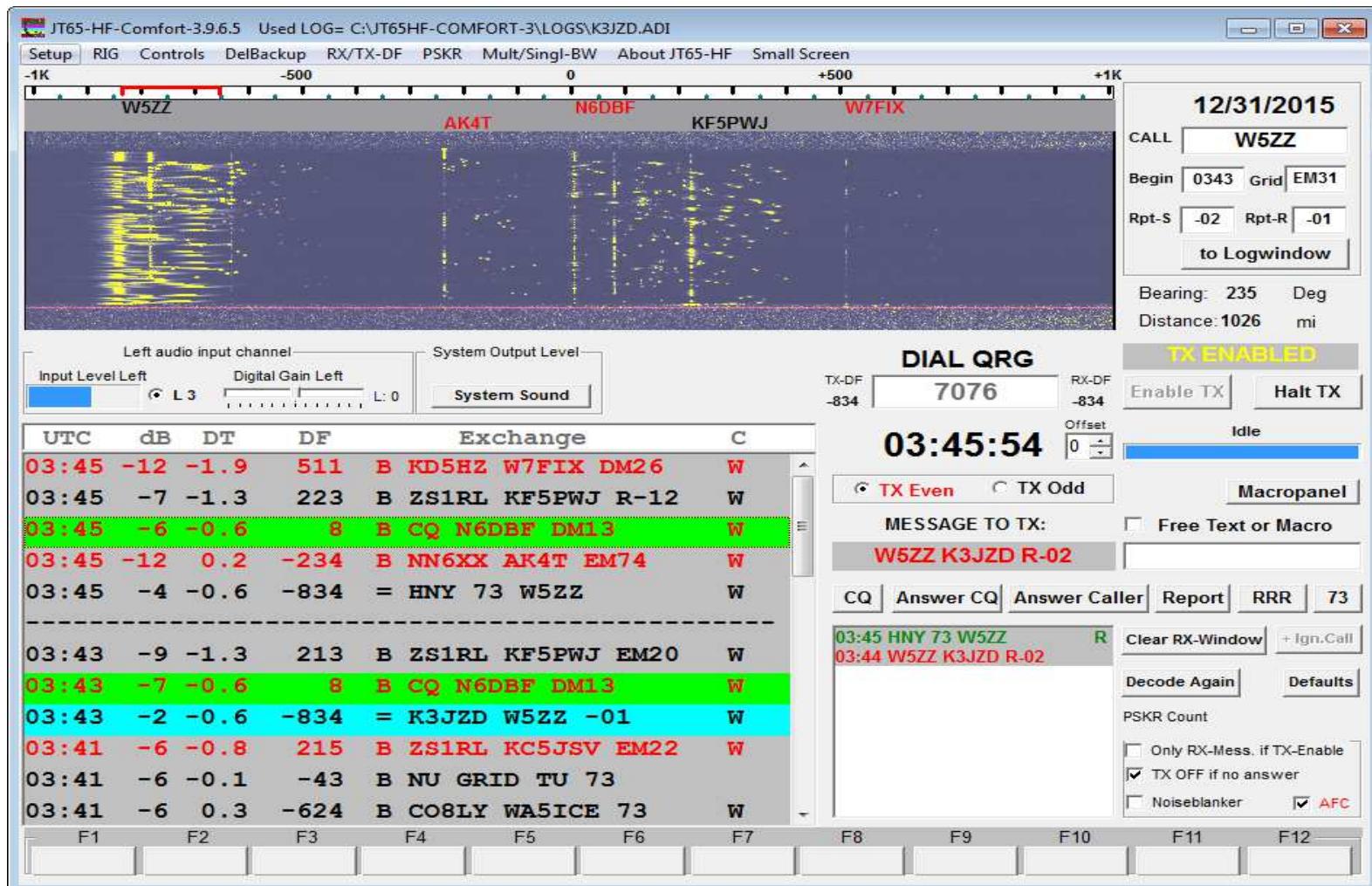
Using the JT65 Digital Mode

03:44 UTC W5ZZ Answered – Rogering, With His Report



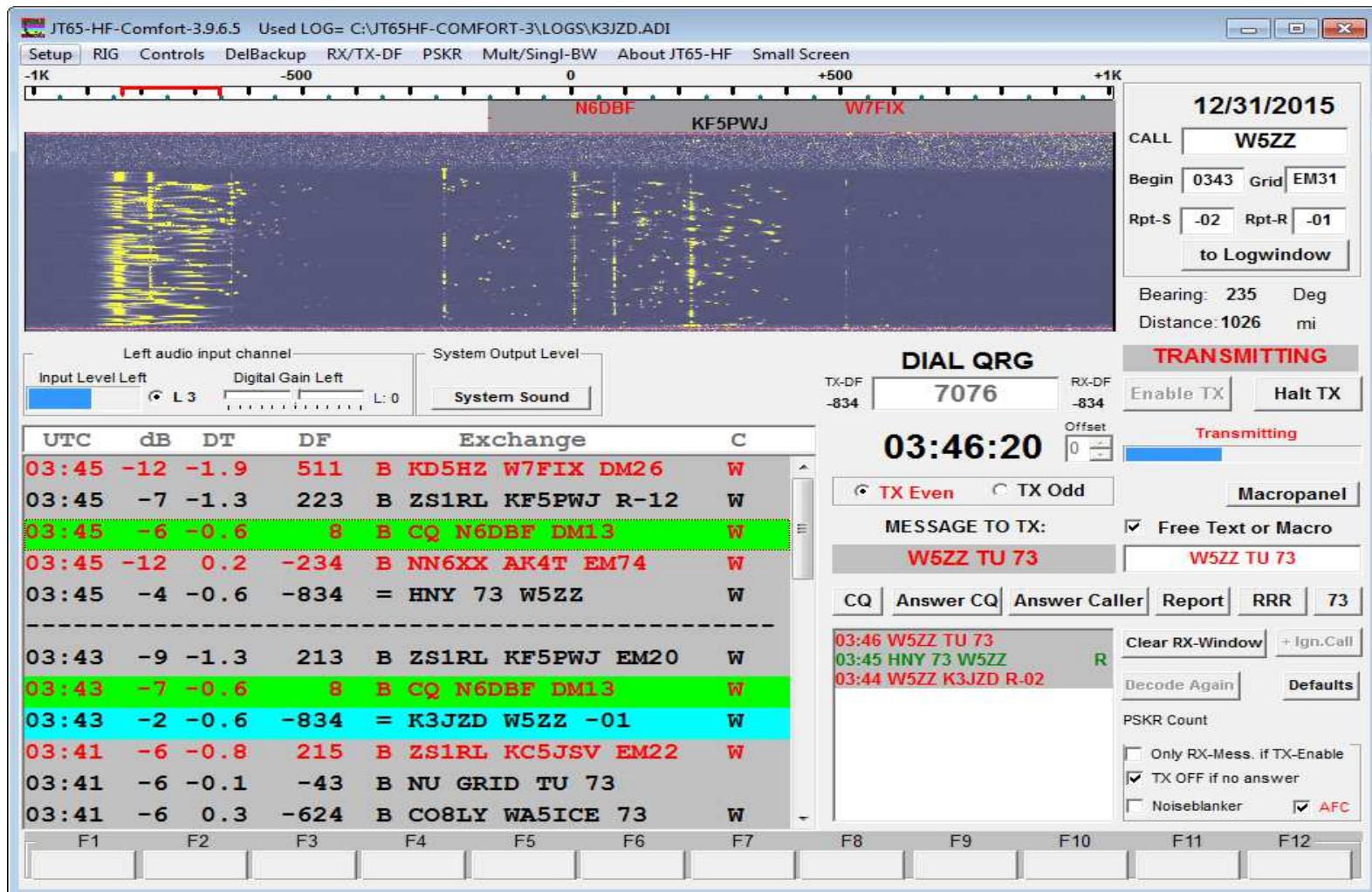
Using the JT65 Digital Mode

03:45 UTC W5ZZ Sent Me a Non-Standard 73 Message



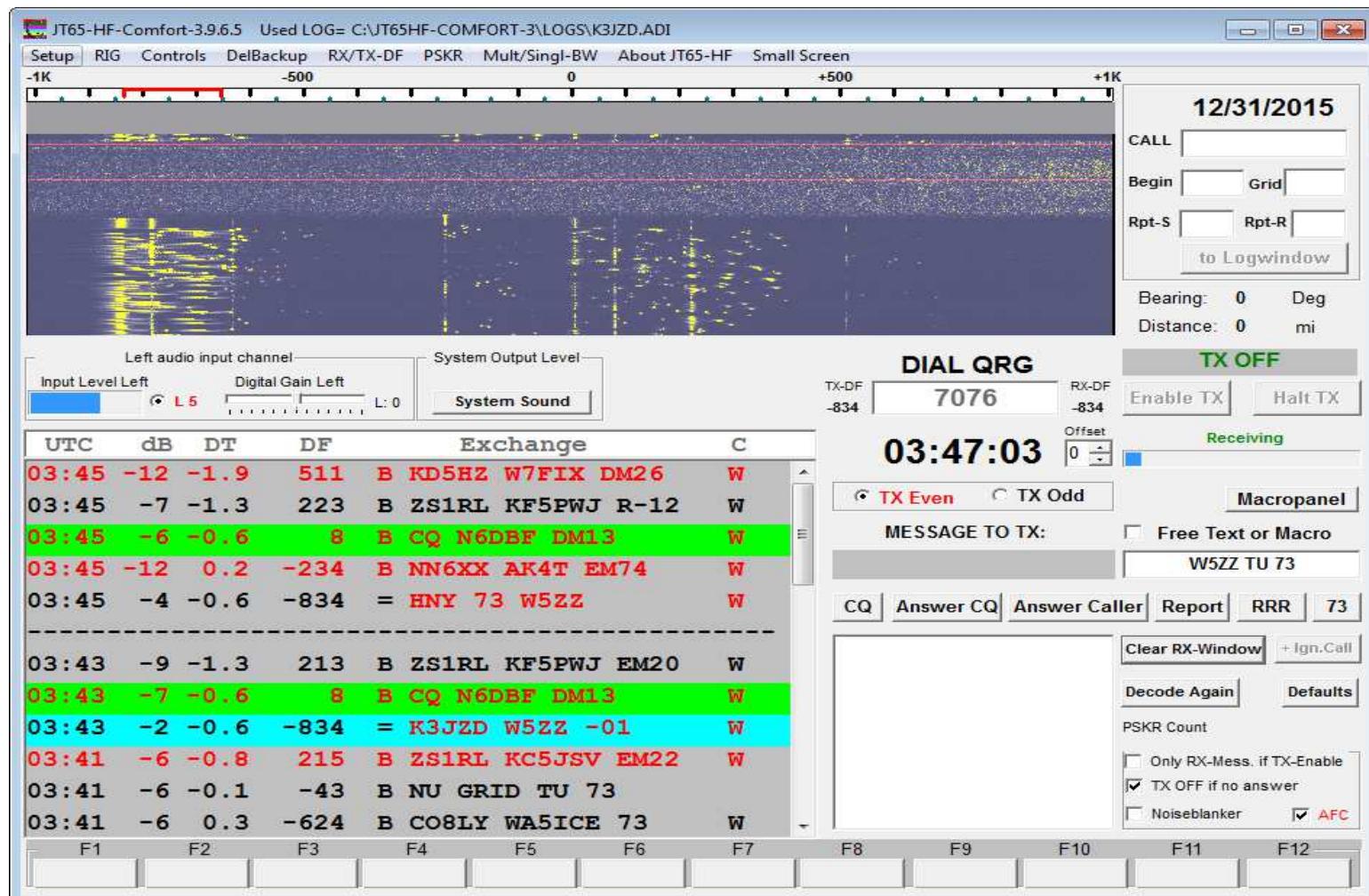
Using the JT65 Digital Mode

03:46 UTC I send W5ZZ a Non-Standard 73 Message



Using the JT65 Digital Mode

03:47 UTC I Clicked On [to Logwindow] – Data Cleared Here



Using the JT65 Digital Mode

03:47 UTC What is Known From the QSO is in the Local Log

JT65-HF Log View Version 1.9.8.1 Total QSO's in log: 427										
Logfile: C:\jt65hf-comfort-3\Logs\k3jzd.adi					Browse	Help	About	Setup	Search	Exit
	Call	Band	Date	Time_on	Time_off	Freq	RST_sent	RST_rcvd	Grid	
	W5ZZ	40M	2015-12-31	03:43	03:46	7.076000	-02	-01	EM31	
	AF0S	40M	2015-12-31	03:21	03:21	7.076000	-13	-12	DM78	
	AI6AK	40M	2015-12-31	03:07	03:07	7.076000	-17	-17	DM13	
	WA3ZSC	40M	2015-12-31	02:52	02:55	7.076000	-11	-08	FN01	
	N6DBF	40M	2015-12-31	02:42	02:43	7.076000	-02	-14	DM13	
	WC3T	40M	2015-12-31	02:34	02:35	7.076000	-17	-01	FN20	
	KG5INX	40M	2015-12-31	02:29	02:29	7.076000	-14	-14	EM20	
	WA1HEW	40M	2015-12-31	02:15	02:15	7.076000	-04	-14	FM19	
	N3EEI	40M	2015-12-31	02:02	02:03	7.076000	-11	-06	FM19	
	W5NZ	40M	2015-12-31	01:46	01:46	7.076000	-03	-01	EM62	
	KA1ERL	40M	2015-12-31	01:35	01:36	7.076000	-06	-09	FN41	
	F4GBD	40M	2015-12-30	23:10	23:11	7.076000	-15	-11	JN05	
	DL9ZAD	40M	2015-12-30	22:57	22:57	7.076000	-17	-20	JN49	
	KA0UNB	40M	2015-12-30	22:47	22:48	7.076000	-09	-09	EN11	
	N4DLT	40M	2015-12-30	22:37	22:38	7.076000	-06	-05	EM95	
	W6DPD	20M	2015-12-30	22:22	22:23	14.076000	-08	-12	DM06	
	QSOs	40M	2015-12-30	00:00	00:00	04.076000	01	07	EL00	

Using the JT65 Digital Mode

03:47 UTC QRZ.COM gives me more info on him

Result for: W5ZZ

Look call up on: qrz.com hamcall.net qrzcq.com [Levinecentral Locator Map](#)

 **W5ZZ** USA

SERGEY A SEMEYKIN
3907 Briarwood Blvd.,
ALEXANDRIA, LA 71303
USA

Email: Use mouse to view..

Ham Member Lookups: 17862 Label

Biography Detail Logbook 14 Log a NEW contact with W5ZZ...

Visitors

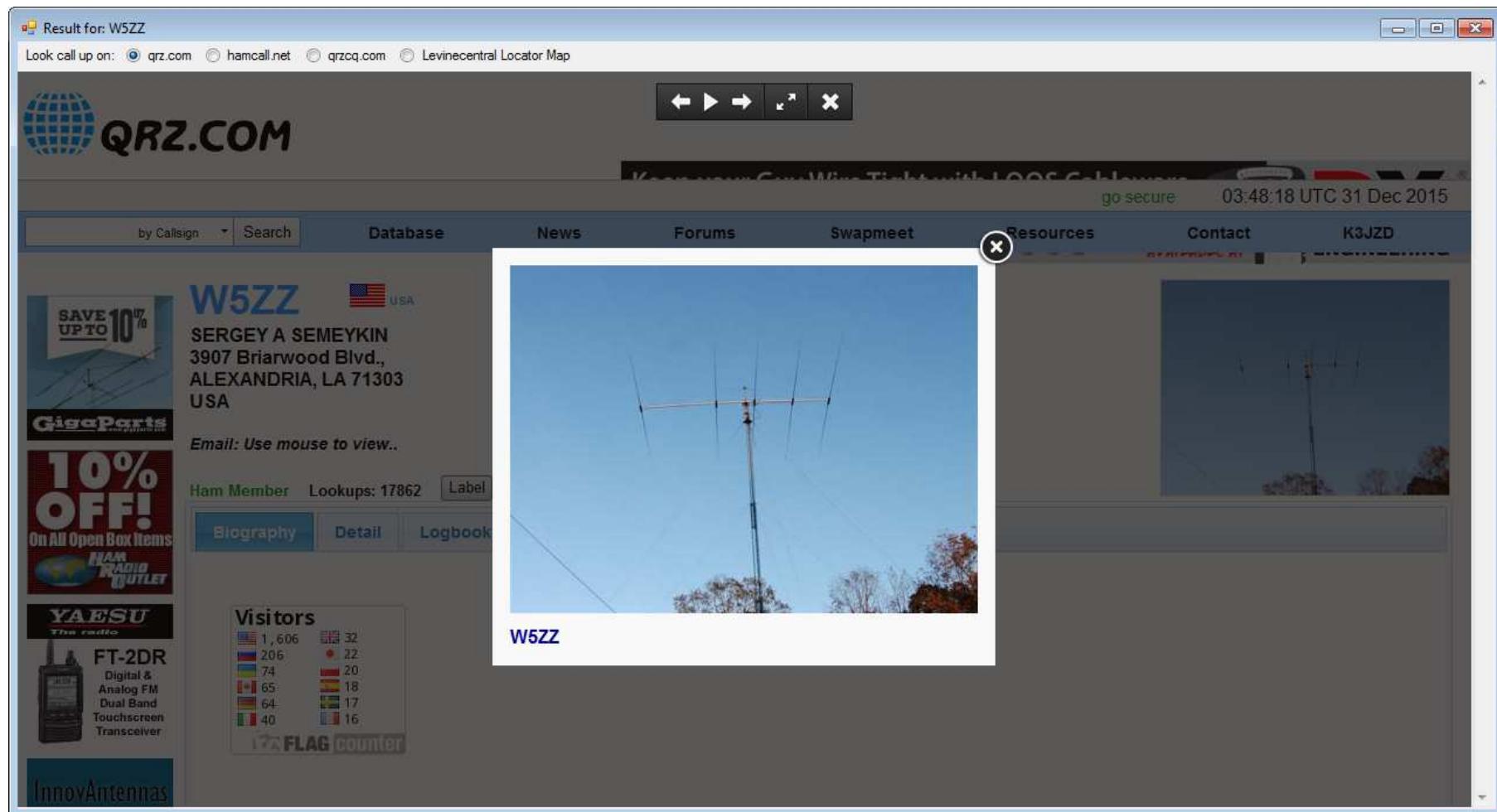
 1,606	 32
 206	 22
 74	 20
 65	 18
 64	 17
 40	 16





Using the JT65 Digital Mode

03:47 UTC No real story there, but a nice Antenna



Using the JT65 Digital Mode

Some Parting Thoughts

Should you Call CQ or Answer a CQ ??

When you Answer a CQ, you may be one of many Answering.
Only one will win (best s/n ratio? or luck? - don't know)

Whenever you call CQ, You will only get One Answer.
It will be whoever, wherever. But it will be an answer.
(You do need to find a clear frequency to call CQ on)

There are some tricks to Answer someone you really want to get, like calling them on a different (but clear) frequency.

Using the JT65 Digital Mode

Some Parting Thoughts

Transmit on Even Minute or on Odd Minute?

Doesn't make any difference. When calling CQ, you need to watch for two minutes to find a clear frequency to use.

Sometimes it makes sense to see which minute has the most stations displayed, and then transmit on the opposite minute when you are calling CQ so that more stations will see you.

It takes a while to get the hang of it.

Using the JT65 Digital Mode

Questions ??