Empire Slow Speed Net Founded 1955 by KR2RA, ex-K2DYB (SK) \* \*\*\* \*\*\* Daily 6 PM local time 3566 kHz 7110/1815 alternates

## The ESS Bulletin

Pete Gellert W2WSS Memorial Net September 2023

> Anne Fanelli, WI2G, manager 541 Schultz Road Elma, New York 14059 (716) 652-6719 (mobile) Email <u>afwi2g@gmail.com</u> <u>https://www.qsl.net/ess/</u>



https://groups.io/g/empire-slow-speed-net

## **Net Control Stations**

Sunday		londay	Tuesday	Wednesday		Thursday	v Friday	Saturday	
WB2GTG	WA	2YOW	KA2GJV	W2RBA		AB2WB	W2ITT	WI2G	
			4	AUGUST R	OSTER				
AB2W	В	Pat	Ithaca	12	WA2YOW	C. J.	Staten Island	4	
K2EA0	G	Matt	Amherst	6	WB2OCA	Jim	Yorktown Heights	1	
K2NPN	V	Phil	Marcy	7	WI2G	Anne	Elma	16	
KA2G.	JV	Bruce	Fulton	7	K1SEI	Tage	Killingworth CT	25	
KC2FI	)	Rick	Coram	16	W1FEA	Pete	Concord NH	2	
N2PEZ		Reiner	Elmira	12	WB2GTG	Bill	Easton PA	28	
N2TQ	Г	Colin	Brooklyn	19	K3ZYK	Bill	Penn Run PA	12	
N7RM	Р	Ralph	Kingston	12	WA3JXW	Dudley	Reading PA	17	
W2ITT	-	Rob	Huntington	16	K4ZXM	Don	Hanover VA	10	
W2KY	Μ	Jim	Niagara Falls	1	VE3DCX	Jim	Coe Hill ON	5	
W2LC		Scott	Baldwinsville	2	VE3FAS	Phil	Shelburne ON	29	
W2RB	А	Joe	Mount Vision	27	VE3MVM	Mary	Shelburne ON	5	
W2XS		John	Northport	12		2			

August totals: QNI 303, per session 9.8 (Jul 9.2); QSP 59, per session 1.9 (Jul 1.1). As Michael Scott said on The Office, "I'm not superstitious; I'm just a little stitious". Hope I'm not jinxing us by noting that we may at last be emerging from our long, deep summertime doldrums (and I also hope the weather, which has been all over the place, will soon follow suit). Although propagation is definitely improving, we're not out of the woods yet. Please continue asking at least one other station to call the net if you're the net control; don't hesitate to alert the NCS if you hear a station that they don't, or can help to relay traffic between two stations if a OSY to 40 meters is unfeasible for any reason. Many thanks for all the help during my mid-to-late-August vacation with our kids and grandkids. K1SEI (who is heard by stations who can't copy me—I have decent ears with a low-ish noise floor, but the 160-meter dipole here is also low ...) covered for me and W2ITT on ESS, and K4ZXM also picked up a session; KA2GJV and KB2QO helped with some of my other skeds, and it's good to be back in harness. Congratulations and thanks for their support of the net to KA2GJV and K3ZYK, this month's net-certificate recipients. The sole requirement for an ESS net certificate on card stock (the supply of which will probably outlive me) via postal mail is 80 points in a calendar year; you earn one point each time you check in, and a bonus point for running the net. A couple of checkins a week is all it takes! Birthdays: September—W2ITT 28. October—None, as far as I know. Additions and corrections are always welcome, preferably by radiogram.

I'm very grateful to W2XS for supplying this month's sermonette on zero-beating to the ESS .io group webpage (see links to the ESS website and group above) while I was feverishly collecting net reports for ESS and 2RN CW which had been held during my absence. Although John said that he wrote this a few years ago, his observations and suggestions are equally relevant today and deserving of a (somewhat) wider audience. Enjoy!

## How to get exactly on the other operator's frequency when operating CW by John, W2XS

Most ham radio operators today use a "transceiver" which has both the transmitter (TX) and receiver (RX) built in. Normally, there is a single tuning knob that operates both the TX and RX at the same time. (When I started, we had separate transmitters and receivers, some of which were quite big and heavy. But that's another story). When operating on voice modes, the RX and TX will operate on the exact same frequency. If you tune the other station in for natural-sounding speech, then you will hear them and they will hear you. When operating on CW, however, the transceiver has a built-in "offset" between the receiver frequency and the transmitter frequency. It is important to tune the other signal in at precisely the correct frequency to enable the other operator to hear your signal in his receiving passband. One of the reasons that it is important to be exactly on the other person's frequency is that today's receivers have extremely good selectivity – the ability to allow only a small band of signals to pass through the receiver's circuitry. My rig allows for a selectivity setting down to an amazing 50 Hz. In contests, people sometimes use a passband setting of 200 Hz or lower, depending on the activity level at a particular time. Think of it this way. If I am listening to a side-tone frequency of 600 Hz, and you try to call me but are 100 Hz off my frequency, then I will hear you at either a 500 or 700 Hz tone. But if my selectivity is set to 50 Hz, I may not hear your signal at all!

How do you know what the offset frequency is in your particular radio? In today's transceivers, it is usually the same as the side-tone pitch. So, you simply tune in the other station until the pitch of the receiver signal is the same as that of the side-tone pitch. I have a button on my transceiver that is labeled "SPOT" and also "PITCH". If I press and hold "PITCH", the rig allows me to set the offset frequency to whatever pitch (i.e., audio tone) I want it to be. Then, if I press "SPOT", the rig generates a softer tone that I can use as a reference as I tune in the other station. When the incoming signal's tone and the "spot" tone are the same, then I am exactly on the other person's frequency, and he will hear me clearly. Another term for this process is called zero-beating. If you listen closely, you may hear the two tones beating against each other as the frequencies get closer and closer. The beating stops (goes to zero) when both frequencies are the same!

By the way, before using the "spotting" procedure, make sure the radio's **RIT** and/or **XIT** features are turned **OFF**. The use of RIT should be done only after you are on the correct frequency and communications has been established. XIT is a little more subtle in its use, and is best left in the off position in most cases. In fact, now that I think about it, just keep both **OFF** for net use. If you are tone deaf, there are still ways to perform the spotting process. Many rigs have a visual aid for spotting on the front panel. Some also have an "automatic zero beat" function where the rig will adjust itself to get on the right frequency. The bottom line: the other station may be listening with a high degree of selectivity. If you are not on the correct frequency, the other operator may not hear you at all. If your side-tone pitch (and offset) is set to, say, 600 Hz, then you should be listening to the incoming signal at a pitch of exactly 600 Hz. Today's rigs are much more accurate than older rigs. So if you tune to 3566.0 (with RIT and XIT in the **OFF** position!) you should be on or very close to net frequency.

Note 1 – not to add confusion, but some older transceivers and QRP rigs have a side-tone circuit that is not the same as the offset frequency generator. My Ten-Tec Triton 4 had an adjustable side tone circuit that had nothing to do with the TX/RX offset. There is a simple procedure involving the use of a second receiver to get things on the correct frequencies.

Note 2 - The use of "split" mode is also a bit subtle and should be practiced before being used. This mode can be used with or without a built-in second receiver.

Note 3 - Zero-beating does not mean that the tone goes to 0 Hz. When 2 tones are off by say 10 Hz then you will hear a "beat" note at that frequency. When the tones are exactly on the same frequency, the "beat" note goes to zero.

Time to check antennas before winter ! 73 Anne