



The Pileup Lite

Newsletter of the CDXA

Reciprocity in Propagation, NOT!

By John Scott, K8YC

As you check out your favorite spotting cluster for that needed All Time New One (ATNO), you see your chosen target spotted. You tune to his frequency and his signal is quite strong, S9+ on phone or perhaps +06 on FT8. Many stateside callers are calling. Then, the inevitable comment appears on the cluster from someone in North America. “Good signal but deaf.” He’s still there for you, so you call the DX. After a few calls, say on FT8, you can see your targeted DX calling Europe but hardly ever working NA. You turn to your favorite propagation predictor and find that your signal to where your target is situated should be booming, but after many tries, you’re still being skunked in your attempt to put him in your log. Is he really deaf? Is your signal really getting out?

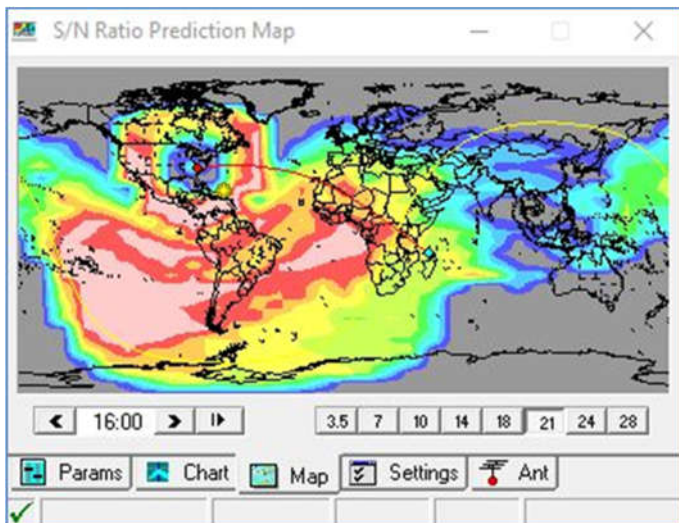
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In the recent activation of FT4GL, the exact situation cited above seemed to be occurring with regularity. I decided to do some investigating using HamCap, my favorite tool for sizing up propagation. I like HamCap because of the very intuitive map it uses to display propagation. With relative ease, one can display propagation from the perspective of the radio amateur at the other end of the path, and the results disclosed that even though the propagation from me to the DX looks great, the opposite may not be true!

On the next page are two propagation maps for 15m at 1600Z on a recent day. One map represents the predicted propagation from my QTH in North Carolina to Glorioso, and the other map is the predicted propagation from Glorioso to North Carolina.

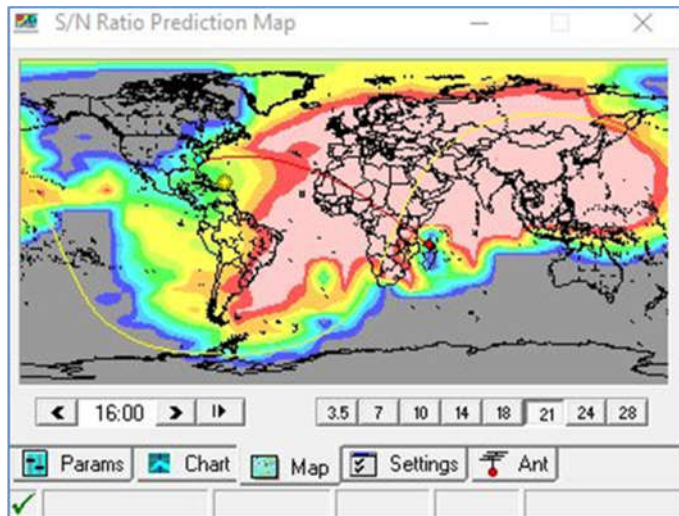
CDXA PacketCluster & Other Communication Systems

K4MD (ARC v.6 Cluster via Telnet)	k4md.no-ip.com:7373
W4DXA (ARC v.6 Cluster via Telnet)	w4dxa.no-ip.com:23
W3GQ (CC Cluster v. 3.372 via Telnet)	w3gq.no-ip.com:7373
CDXA Repeater 147.18 MHz (+600)	W4DXA, Near Fort Mill, SC
World Wide Web Homepage	www.cdxa.org
Wednesday Luncheon (11:30 AM)	Park Place Restaurant, 10517 Park Road, Charlotte, NC 28210



North Carolina to Glorioso-15m

Strength of propagation ranges from red (very good) through pink, green and blue (very modest). As can be noted in the path from North Carolina to Glorioso, it looks like one’s signal originating in North Carolina should be very good at the other end. Yet if we look at the propagation Glorioso is experiencing at the same time, it is very good to All of Africa, Europe, Asia and even the eastern coast of South America but only modest to the eastern coast of North America. So, Glorioso may not be deaf, it may just be hearing other parts of the world so much better.



Glorioso to North Carolina-15m

What does it look like on 17 meters at the same time? Check out the maps on the next page.

Note: Propagation prediction programs require defining the type of antenna being used. The antenna used for generating the predictions herein was a 3 element Yagi at 35 feet above the ground to represent a simple gain antenna. The antenna used for predicting the propagation from the “other end” was assumed to be the same. Unfortunately, we seldom know the antenna being used by our targeted DX station.

For a gain antenna, the propagation is computed based on the antenna being aimed at the azimuth for which the computation is performed. If a targeted DX station has his gain antenna pointed to a different azimuth than the reciprocal path to your station, the propagation TOWARD your station will be affected

accordingly and in most every case will be poorer than indicated by these propagation predictions.

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Published when the editor has something to offer. Contributions from authors are welcomed.

The purpose of the Association is to secure for the members the pleasures and benefits of associating with persons having a common interest in Amateur Radio.

Members of the CDXA shall adhere to “The Amateur’s Code” as published from time to time in *The ARRL Handbook for Radio Amateurs*, and shall consist of those valid licensed amateur operators having an interest in promoting amateur radio. Long distance communications (DX) is of special interest to members of the Association, but said interest is not a requirement of membership.

Yearly dues are \$15.00. A second licensed Amateur family member living in the same household can join for \$5.00 for a total family price of \$20.00 per year. The total price for 3 or more licensed family members living in the same household is only \$25.00 per year. All family members enjoy full member status. Dues are payable annually in December by check to the Secretary/Treasurer:

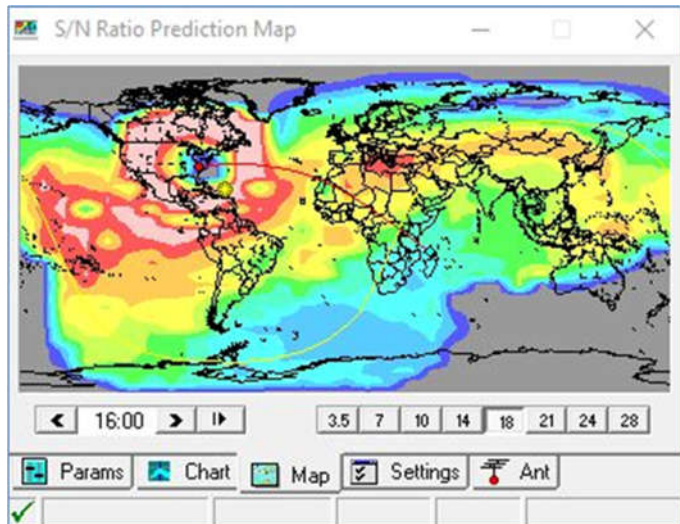
Ray Weeks., N4APR
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Address, telephone, and email address changes should be directed to the Secretary/Treasurer at the above address or via email at: rweeks1@carolina.rr.com.

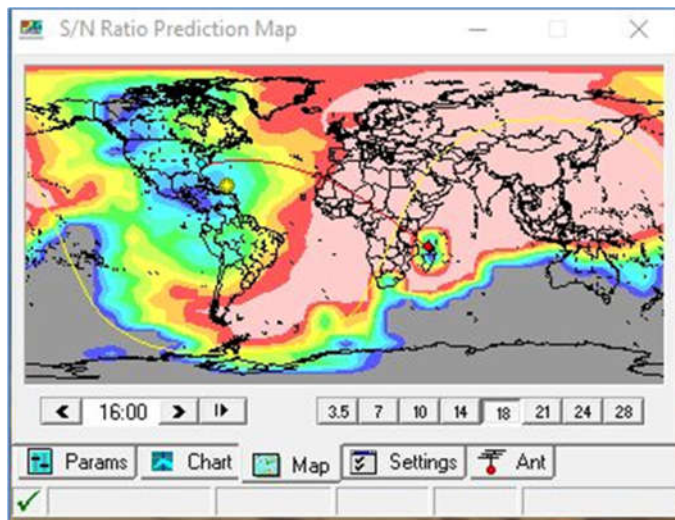
Notice

This issue of Pileup Lite is being sent to the CDXA membership as something that may be of interest to the membership. If you have something of interest that you might like to contribute, contact John Scott, K8YC, to explore how it can be produced in a future issue of Pileup Lite.

--The “Unofficial” Editor



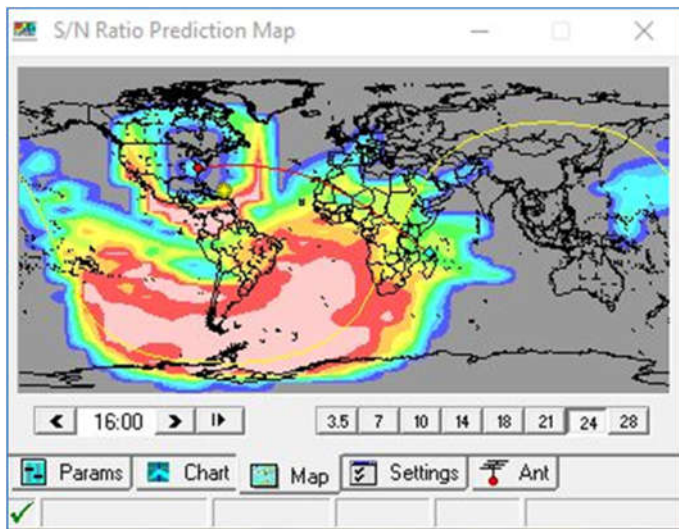
North Carolina to Glorioso-17m



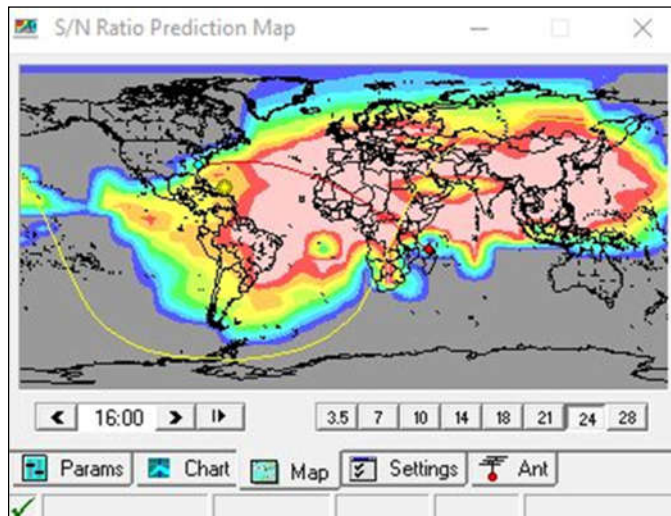
Glorioso to North Carolina-17m

Things look a little better on the 17m band. Propagation TO Glorioso isn't too bad, but at least from Glorioso's perspective, propagation to North America is not great, but it is possible. Yet, even now Glorioso has excellent propagation to all of Africa, Europe, and Asia but only modest propagation to North America.

Now, what's predicted for 12 meters at the same time?



North Carolina to Glorioso-12m



Glorioso to North Carolina-12m

Now propagation looks moderately good to Glorioso from North Carolina, but only a sliver of the East Coast of North America seems to be a candidate for Glorioso to work at this time.

The takeaway from this exercise: To really understand what may be the BEST time to work that much needed DX, take a look at the propagation from the perspective of both ends because there is NO RECIPROCITY IN PROPAGATION!

Perhaps you'd like to know a bit more about HamCap? The April 2018 and May 2018 issues of The Pileup, available in the Pileup archive on the CDXA webpage, have articles providing an overview of HamCap.