SUMMER STATIC - A SKYWAVE PORPOSITION

by Gene Martin

It was Larry Godwin who initiated me into the possibilities of sunrise DXing in Denver during the late Spring and Summer: Chile, Peru, Argentina, Bolivia, Tonga, Hawaii, New Zealand and Australia; maybe even Paraquay!

Now I have heard some of them myself and realize that all of them are possible, given the manner in which night and day alternates over the earth at the time the annual high sun in the Northern Hemisphere. But I soon became impressed with another favorable factor entering into the equation, and just as important as the requisite path of darkness established briefly between Denver and Santiago, for example. This other factor was the regular and rapid let-up of summer static that occured in Denver virtually every summer morning in the sixty to ninety minutes before sunrise. Reception of weak signals was generally impossible before 0400 EST, yet morning after morning the band was as quiet as typical wintertime conditions by 0500. I would also guess that this swift disappearance of static also registers on the Pacific Coast about this time.

Pondering this let-up in the static against my knowledge of American weather, I can readily understand what happens to account for it. (I should explain at this point that I make my living writing about the weather and other seasonal phenomena.)

Summer static is created by thunderstorms; the flash of lightning causes static for many miles around. From May to September, thunderstorms occur by the hundreds almost every day from the Central Plains to the Atlantic Coast. As examples of thunderstorms gone berserk, May and June bring our annual climax of tornado and hail storm activity. Nothing creates heavier static than a line of tornados sweeping across the country in a squall line.

Thunderstorms reach their peak in July but start to dwindle away conspicuously during August. August thunderstorm activity is only one-ninth the July level.

In each 24 hours, during the thunderstorm season, the activity rises and declines. It reaches its maximum in the warmest part of the day, and its minimum during the coolest part. In the summer this is always dawn. This is one reason for the swift reduction of static as the line of sunrise approaches Denver, but it's not the major reason why Chile and New Zealand can be heard around Dawn.

The noise generated by thunderstorms is propagated by skywave. As evidence of this, there is the swift increase in static almost every evening around sunset. Up until sundown, you were hearing only the static from nearby (200-300 miles) thunderstorms. But after sunset, you begin hearing it from thunderstorms and squall lines that may be a thousand or more miles away. Now, instead of the noise of a few thunderstorms, you are perhaps hearing hundreds.

The most thunderstorms occur in the Eastern half of the U.S. They are most frequent in Florida but are also very frequent in the Cotton Belt and through the Mississippi Valley. Thunderstorms are quite rare on the Pacific Coast and seldom occur at night from the Pacific to the Rockies. As the line of sunrise sweeps westward, more and more of the high thunderstorm area is shifted into daylight. When dawn reaches Cincinnati, Western DXers are no longer hearing static from Eastern Seaboard thunderstorms.

When the line of sunrise passes Kansas City, static originating from east of Kansas City are eliminated. The air goes quieter as in Denver as 0500 approaches. Dawn is in the sky; Detroit, Chicago, St. Louis and Des Moines have vanished from the BCB while San Antonio, New Orleans, and Dallas are still there. Anf the air is as quiet as on a good winter night.

The Eastern DXer is rarely able to benefit from thie let-up in static as he will find the BCB cluttered with static right up to the minute that skywave signals are quenched by the sunrise. There will still be thunderstorms active in the Mississippi Valley to make his life miserable. In Denver, the static free period is sixty to ninety minutes; the West Coast DXer should have a similar period lasting from two to three hours!