

A Zonal Analysis Approach to Trans Pacific DX

by Bruce Portzer

In recent months, Mark Connelly has developed the concept of zonal analysis, in which foreign ECB stations can be grouped according to loop bearing and distance from North America. As a result, generalized reception patterns can be developed and discussed for each group of stations. This article will continue the series of articles on the subject. The first two articles in the series covered TA and Latin American reception on the east coast. This article, as you may have already guessed, covers Trans Pacific reception on the west coast.

Table I shows the various Asian and Oceanic DX countries according to their loop bearing and distance from Seattle. If you live outside the Pacific Northwest, some stations may fall into an adjacent "box". However, that shouldn't have much of an impact on the comments which follow. Recategorization is left as an exercise for the reader, hi.

Zone 1 - Loop bearings of 200 to 240 degrees

The stations in this zone include many of the easiest-to-hear TP targets, located in Hawaii, New Zealand, and many of the Pacific Islands. Some of the more frequently heard stations in this zone include KORL-650, KIKI-630, KPOI-1040, Tonga-1017, 1YA-756, 1YZ-819, 1ZD-1008, Tahiti-738, and others. Many of the stations in this zone are audible the year around. Because of their easterly location, these stations fade in sooner than other Trans-Pacific stations. Those which are on 24 hours a day are audible (or at least feasible, QRM permitting) right up until West Coast sunrise. On the other hand, some of the smaller, more exotic stations in this zone sign off before midnight PLT, making them more difficult to receive.

Zone 2 - Loop bearings of 240 to 280 degrees

Reception patterns for stations in this zone are similar to those in zone one. However, these stations are noticeably more difficult to hear. Leading the pack are the Australians, especially 2BL-702, 4QS-747, and 3LO-774. Watch for Australians to fade in about an hour after New Zealanders appear. While reception from New Zealand is often good when Australians are in poorly, the opposite is seldom true. Other well received stations in this zone include Tarawa-846 and Solomons-1026. This zone also includes such rare and exotic stations as Papua New Guinea, New Caladonia, and Guam.

Zone 3 - Loop bearings of 280 to 320 degrees

Nearly all the Asian stations heard in North America are in this zone. Leading the pack are the Japanese stations. Although only a few hundred miles closer to us, Japanese signals need one less reflection off the ionosphere to reach the west coast than do other Asians. This, together with a more southerly path and high power, makes stations like JOIB-747, JOUB-774, and JOBB-828 come in well when other Asians aren't even audible. As a general rule, Koreans, Chinese, and some Russians are the next easiest stations to receive from this zone, followed by the less frequently heard Southeast Asia, Philippines, and Malaysia/Indonesia signals. Note the correlation between distance and ease of reception. Most of the stations in this zone are best heard between mid-September and early December, although Malaysia-1475 is best heard in May. The Japanese stations are first to fade in, usually around midnight PST, although fades as early as 2215 PST have been noted. Others fade in later in the night.

Zone 4 - Loop bearings of 320 to 360 degrees

Most of the stations in this zone are rarely, if ever, heard in North America. KFQD-750 is the only one I would classify as easy and more than one DXer would dispute that claim. Much of this region is sparsely settled with few high powered stations. All Asians in this zone arrive via high latitude, multiple-hop signal paths, making them easy prey for auroral disturbances and other nasty animals. Stations beyond 6000 miles are theoretically possible here but as far as I know, haven't been heard in North America in my lifetime; perhaps we'll nab them next time the sunspots bottom out (assuming North America isn't on the 9 KHz plan by then....).

IN CONCLUSION

As a general rule (ignoring interference, station power, and other considerations) the nearer a station is to the left hand side or to the top of Table I, the easier it is to hear in western North America. Hawaii, the "country" nearest to the upper left-hand corner, is certainly the one easiest to receive in these parts. Similarly, those in the lower right-hand corner are usually only called "pests" in the April Fool's issue of DX Monitor.

To some extent this table can be used for seeking out Asian and Pacific DX targets. If one or more stations in a particular "box" are in well, then try for other stations in the box and adjacent boxes. If those stations are also audible, move on to other adjacent boxes. By continuing in this manner you can conceivably get a better idea of the extent of a particular opening (and maybe bag a new country or two). TP openings vary in their extent, sometimes only one or two countries are audible while at other times, the entire Pacific, from Auckland to Vladivostok, is in.

Distance (miles)	Zone 1	Zone 2	Zone 3	Zone 4
0-1000				Alaska parhandle
1000-2000				Yukon Central Alaska
2000-3000	Hawaii		Adak Isl.	Western Alaska
3000-4000				N.E. Siberia
4000-5000	Tahiti	Marshall Islands	Japan USSR(Vladivostok)	N. Central Siberia
5000-6000	Tonga Wallis Isl. Cook Isl. Fiji Samoa	Mariana Is. Guam Kiribati Trust Terr. of Pacific	NE China Korea(M&S) Okinawa	Mongolia Central Siberia Western China Sinkiang
6000-7000		New Caladonia Papua New Guinea Solomon Is.	Taiwan Philippines S.E. China	Afghanistan Nepal Tashkent
over 7000	New Zealand	Australia Tasmania	Thailand Brunei Vietnam Indonesia Malaysia Singapore	Pakistan Bangladesh India Burma Sri Lanka

TABLE I. Asia & Oceania countries arranged by distance and loop bearings from Seattle.