

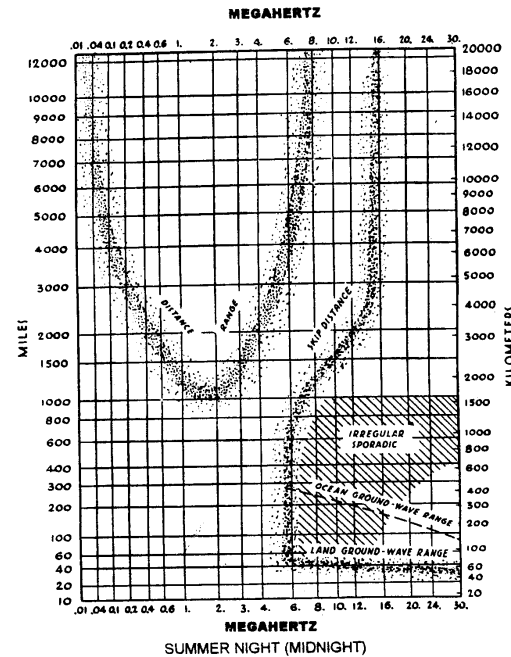
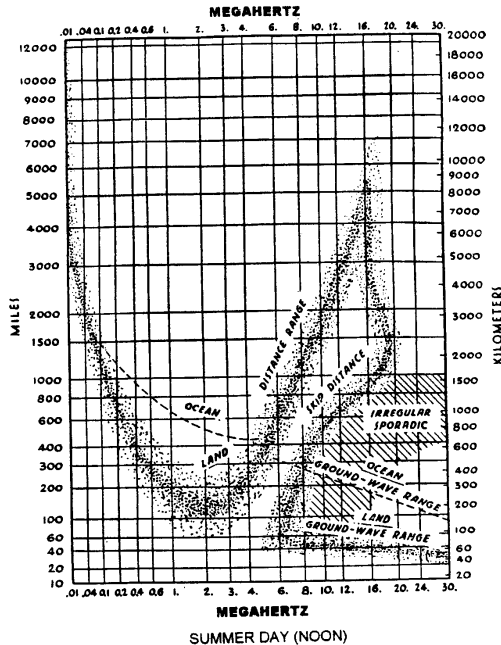
**Scout radio Newsletter  
Fact Sheet No 2  
A PERPETUAL PROPAGATION  
FORECASTER**

These four graphs provide a very useful tool for short wave propagation forecasting. However it has to be remembered that the sun spots impose an 11 year cycle on conditions and odd solar events can cause random changes with little warning too.

These graphs show the conditions expected to prevail at NOON and MIDNIGHT in MIDSUMMER and MIDWINTER.

At 0600 hrs and 1800 hrs the positions of the distance boundaries should be roughly half between the noon and midnight positions.

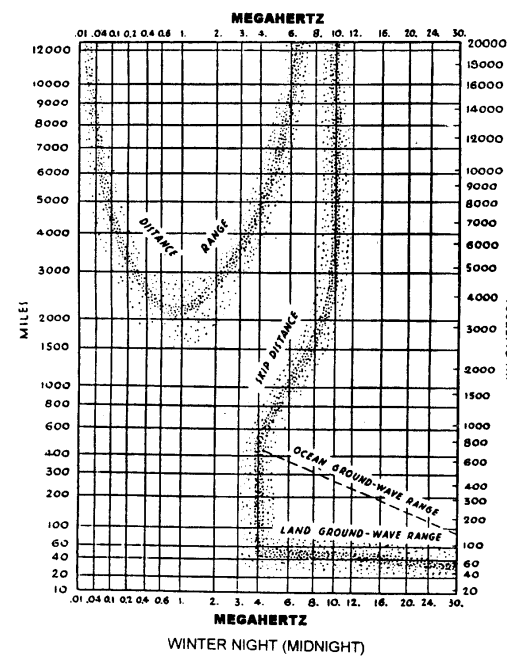
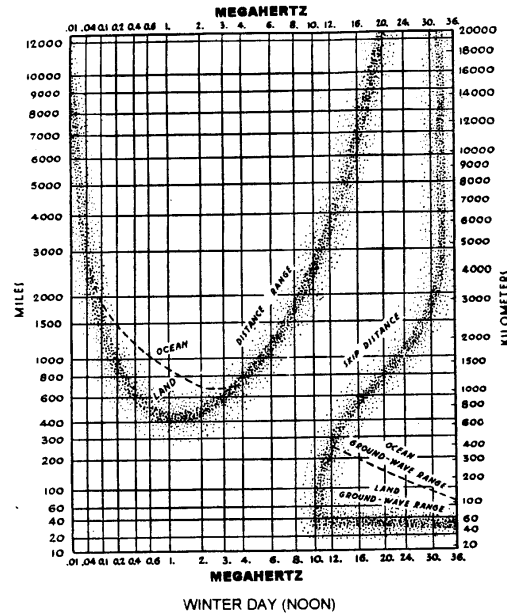
Such changes also apply to Spring and Autumn conditions. In these instances the distance lines should be roughly halfway between the Summer and Winter positions.



It is suggested that frequent users of such charts should photocopy these graphs and then draw coloured vertical lines from the base line against the frequencies they are interested in but only where the signal is audible at the distant point. e.g. a line for the 1.8 MHz amateur band for a Summer Night would be drawn from the base line to the 1,000 miles level. However a line for the 10 MHz band would extend upwards from the base line to the 40 mile level and then start again at the 1500 level continuing on upwards to the upper border of the graph.

For instance the SWL who listens regularly to the broadcasts from, say, Radio Australia can draw coloured lines against the several frequencies used. He can then see at a glance the best frequencies for reception at different times of the year.

It is a useful exercise to imagine you are going to set up a broadcast station with a 24 hour world wide coverage. If you are only allowed a single frequency which one would you choose? Once you study the problem you



quickly realise why such stations use several frequencies at different times of the day and night and different times of the year.

These graphs also illustrate why on a Winter day when really long haul DX is not possible on the 14 MHz band such paths are open in the 21 and 24 MHz and (possibly) the 30 MHz bands. They also show that the 14 MHz band possibly provides a greatest number of hours per year for DX working when considered in comparison with any other single amateur band.

Finally these graphs show distances over which one should expect reliable communication signals over most days of the season indicated. As with weather forecasting they cannot predict unnatural and unusual changes in conditions but they can be used to avoid trying to make contacts with other countries at unsuitable times and on unsuitable frequencies.

Many thanks to Les, G3BHK, for retrieving these charts from an Radio Scouting article in Short Wave Magazine many years ago.

Please visit the Radio Scouting web-site for additional material.