

Preface

Thirteen years have passed since publication of our last book, *The Shortwave Propagation Handbook*, second edition. During this time we have witnessed the labored demise of sunspot Cycle 21 and the rapid ascent, plateau, and initial decline of Cycle 22. During this time, too, tens of thousands of radio amateurs and other users of the high-frequency (HF) spectrum have successfully used the information and techniques presented in that handbook to communicate worldwide and to raise their DX scores to levels some thought unreachable. The WWV broadcasts of solar and geomagnetic activity have become commonplace, and virtually all radio amateur publications devoted to DXing now publish 27-day recurrence forecasts of ionospheric propagation conditions.

The above notwithstanding, it may come as a surprise to some readers that our *unified* approach to “do it yourself” propagation predictions and to the use of the Master Propagation Charts that have been published for many years in *CQ* was only developed in the late 1970s, almost 70 years after Guglielmo Marconi first bridged the Atlantic Ocean using ionospheric propagation. Clearly, the time was long overdue for the development of a more objective approach to employing the ionosphere for radio-wave propagation, an approach we first presented in *The Shortwave Propagation Handbook*. To our delight, your embrace and use of the techniques presented have been phenomenal.

Still, there is always need for improvement. So much has happened over the last thirteen years that nothing less than a new, up-to-date, comprehensive guide to mastering the art of shortwave propagation would meet the needs of today’s operators. First, we have updated our earlier work on both solar phenomena and sunspot cycle behavior. References and data sources have been expanded. At the request of many readers, extensive material has been included on vari-

ous microcomputer programs that are available for use in developing customized ionospheric circuit analyses. And for those who can’t wait to see what the next cycle will bring, we present a summary of the sunspot cycle predictions for Cycle 23 that have been developed by recognized professionals in the field of solar physics. Our intent is to make *The NEW Shortwave Propagation Handbook* the single most comprehensive source available to the amateur, CBER, or SWL interested in optimizing his or her use and enjoyment of the HF spectrum.

The publication of this new book also marks the debut of Robert (Bob) Rose, K6GKU, as our third author. Bob has more than 25 years of professional HF communications experience, and among his other accomplishments, he was responsible for the development of the MINIMUF model in the middle 1970s and of the ionospheric prediction program known as PROPHET, widely used by the military over the last decade. We are honored to have a man of this stature working with us; his contributions were invaluable.

With Cycle 22 now on the wane, users of the HF spectrum not only have to work harder at their DX activities, they also have to work “smarter.” At solar minimum the band of frequencies available for worldwide communications is almost half of that available at solar maximum. It is little wonder, then, that anyone interested in communicating worldwide, in understanding skip interference, or in receiving radio broadcasts from around the world is going to need an extra edge—one which turns an average session on the bands into a winning performance. That is what this book promises, and if used properly, that is what this book will deliver.

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