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RADIO IN INDEX

The All-wave Radio Log



The Shortest Shortwaves
The Daily Programs
Broadcasting Stations of Oceania
Programs of the Week

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ARE SHORT, Short-wave Bands Worth While?

• • • By B. FRANCIS DASHIELL

THE realm of the newly popular short, short-wave bands is being explored not only with unbounded enthusiasm by radio fans but with great seriousness by scientists. Here the future of short-wave radio will be found. But just now these very short waves, particularly those of less than 5 meters, are purely experimental and at present offer little of a practical nature to the radio listener. In fact, it is impossible to find a receiver that tunes much below 5 meters, except in the scientific, experimental field.

It is the short-wave band, upwards from 5 meters, that holds much promise to the radio fan. Radio sets that tune as high as 60 megacycles are available in the 1938 models, but in the great majority of cases the average moderate-priced all-wave set offered to the public usually tunes to a frequency of approximately 18 megacycles. Some larger sets, which of course are more expensive, include an additional short-wave band that tunes to about 45 megacycles.

5 And 10 Meters

Many radio listeners are wondering whether it is worth while to purchase a 1938 receiver that tunes down to 5 and 10 meters. The question is often asked: Is this additional wave band necessary, and has it enough interest to the general public? Practically all of the short-wave radio business of the world is conducted on wave lengths greater than 10 meters; this fact alone properly raises the question of whether a set with an additional short, short-wave band covering 25 to 60 megacycles need be purchased.

The 1938 offering of radio receivers discloses that the more expensive types, those ranging from 9 to 12 tubes, and as high as 16 tubes, usually cover, in addition to the broadcast band, the 49, 31, 25, 19 and 13-meter international entertainment bands. Some special custom-built sets go down to 5 meters, and are strictly "all-wave". A large number, however, do not include the 13-meter and additional short, short-wave bands. They do, of course, include the popular 20-meter amateur band. But, in most cases, the useful 10 and 5-meter bands that are becoming so sensational, are left off.

International Bands

Practically all sets, except those of inexpensive make, cover the very best of the international short-wave bands, as well as the amateur and commercial zones. So, when a 1938 all-wave set is examined, one need not feel that he has been slighted in the matter of normal all-wave reception. Such a set is best for ordinary household and simple DXing purposes. The wave bands that provide best reception on all international transmissions are the 49, 31, 25 and 19-meter regions. Then, too, there are the 160, 80, 40 and 20-meter amateur bands. The foreign bands work best at different times, for it will be noted that several of the more important stations have separate places in all of the international bands, broadcasting simultaneously on all the different frequencies. If reception should be poor in the 15 megacycles band, for instance, it might turn out to be very good in the 12 or 9 megacycle zones. Therefore, when it is impossible to get

London, Berlin, Rome, Prague, etc., on one frequency, it is likely that the station will be heard, loud and clear, on another of its frequencies.

Below 19 meters, and down to 5 meters, many frequencies are available. This fact provides radio with thousands of future channels. But these stations will be crowded closely, and tuning will be sharp and difficult. Even on 10 meters, with a band spread that will throw all the 2,000 kilocycles available over the entire 180 degrees of the dial, tuning is critically sharp and interference unavoidable. The present trend, therefore, is to the so-called "communications receiver", such as amateurs operate with almost exclusively. These sets are designed for very sharp tuning, with some loss of high fidelity of reproduction, and even then stations cannot always be separated sufficiently for clear reception when the band opens up perfectly. In the ordinary all-wave set, the mechanical separation of stations is not so good since the entire group is squeezed into a tiny spot on the dial. This is an engineering fact, and is to be expected; it is not the fault of the receiver.

20-Meter Amateurs

This does not mean, however, that the short-wave bands below 20 meters are jammed with stations. In the 20-meter region are many of the better amateur phone stations. Many can be picked up easily on the all-wave set, but not, of course, as easily or in as great a number as with an amateur communications receiver. Here will be found some of the best known radio experimenters of the day, and radio's hams and engineers may be heard discussing scientific matters pertaining to radio.

The 20-meter region, is subject to certain conditions which man cannot control. When the band "opens up" nicely it provides an interesting evening. As a rule this band is in



A photographic impression of Benny Goodman, who, with his clarinet, leads his orchestra through intricate swing rhythms on his "Swing School" broadcasts each week over the Columbia network.

action all the time—sometimes better than others. But, if the receiver tunes still lower, down to 13 meters, which is the highest of the international frequencies, still more unstable conditions will be experienced. In this zone, and particularly on the busy 10-meter band, freak reception is a common experience. But when the band opens up, it performs in a way that, to the expert listener, seems little short of miraculous.

The Erratic 10 Meters

The amateur stations on the 10-meter band can be heard distances that seem unbelievable, considering the tiny bit of energy that is emitted by the transmitter. Just below 10 meters can be heard two-way conversations, such as the newer police calls. The 10-meter zone is one of radio's most remarkable regions. Natural static seldom troubles, but, of course, automobiles and man-

these are ham bands