

Radio Fans Hail A.C. Super-Wasp As Best Short-Wave Set

Smoothness of Operation and Absence of
Hum Elicit Enthusiastic Comment
From Builders

by ROBERT HERTZBERG

THE popularity achieved by the A.C. Super-Wasp immediately after the appearance of the Fall number of RADIO DESIGN is a flattering tribute to the skill of the engineers who designed this all-electric short-wave receiver, and a comforting indication of the faith which the readers have in this little magazine. In his article describing the set, David Grimes fully answered every question radio fans had to ask about the circuit and its operation, and convinced everyone pretty thoroughly that he knew what he was writing about.

Thousands of Super-Wasp kits have already been sold, and those purchasers who followed instructions about using the K-111 power pack and Pilotron tubes, obtained good results from the first time they turned their switches on. As we expected, there were complaints about hum on the point of regeneration, but in every case of this kind it was found that an ordinary 227 was being used in the detector socket. The substitution of a Pilotron P-227, which was developed especially for the Super-Wasp, made such a startling difference in results that the former complainers are now the set's biggest boosters.

A FEW TESTIMONIALS

If there are left among our readers any people who still refuse to believe that a

tuned screen-grid short-wave receiver can be made to work on alternating current, let them read the following letters, which were selected at random from the ever-growing testimonial file in our office:

FROM CHICAGO

"Having bought and built one of your A.C. Super-Wasps, I feel I must tell you that it is by far the best short-wave receiver I have ever had or listened to, which means many in the past ten years. I think it is as good as anyone could want on all the waves. Very smooth, no hum, and easy to operate.

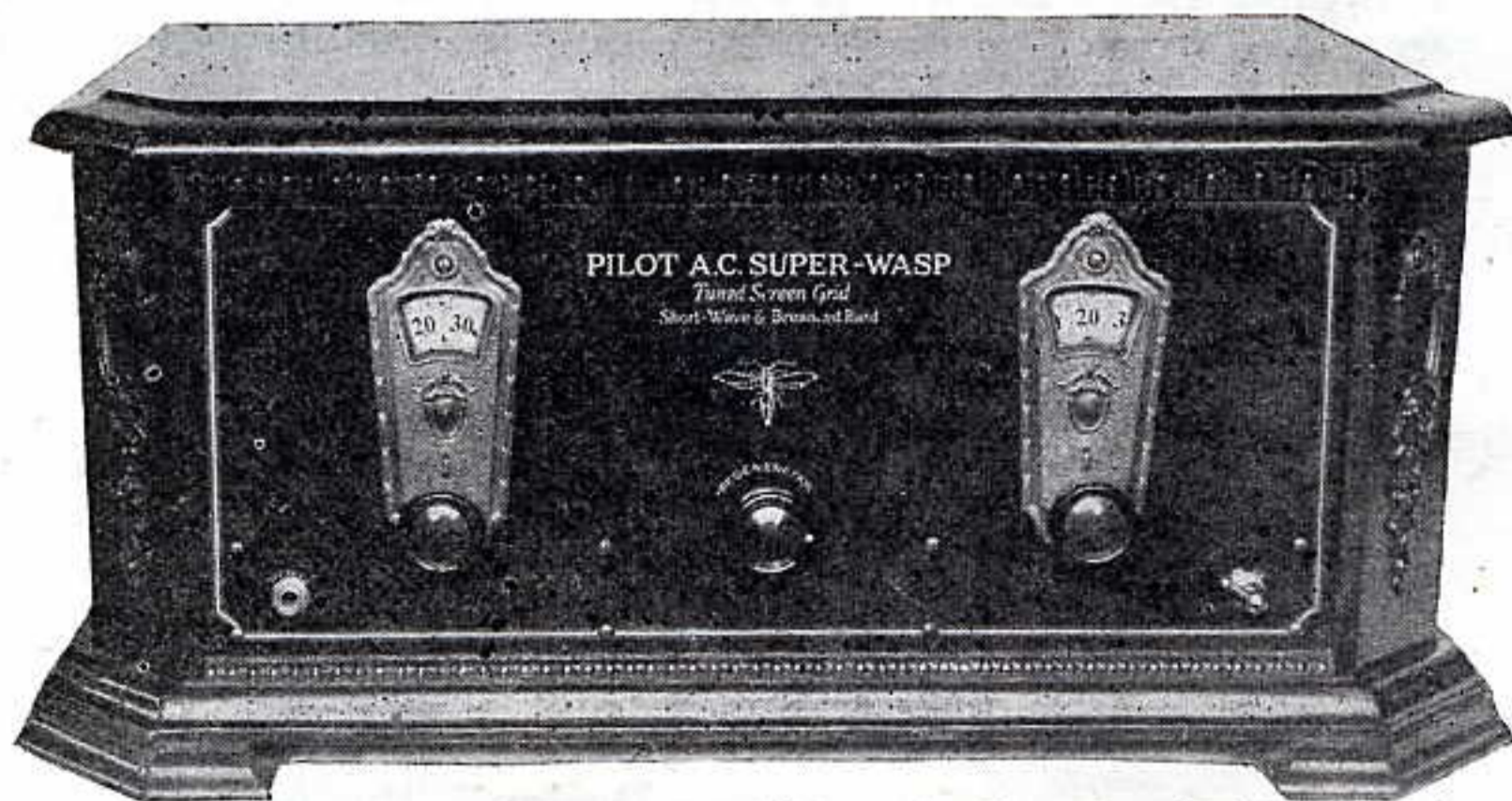
"Until now I didn't believe it was possible. As a ham (W9OJ) and a builder since 1918, I want to compliment the Pilot Radio & Tube Corporation on really having done something. Just 'wonderful' expresses it in a single word."

G. Edwin Farley, D.D.S.,
1539 Marshall Field Annex Building,
Chicago, Ill.

FROM WATERTOWN, N. Y.

"With regard to the Pilot A.C. Super-Wasp, I can say that it is the best of four short-wave sets I have. In my opinion it is quieter than the battery-operated short-wave sets which I own."

Cecil B. Aiken,
International Burr Corporation,
Watertown, N. Y.



The advent of the Pilot "Super-Wasp" has dispelled the old idea that short-wave receivers are necessarily ugly. Here is a K-115 installed in a standard Corbett cabinet to show what a handsome outfit a short-wave set can be.

To skip around the world a bit, read the following letters about the Super-Wasp, and you will understand why it has earned such a wonderful reputation.

FROM ECUADOR

First, from Mr. A. Francis Ewell, an American engineer, at Quito, Ecuador, who writes:

"Believing you might have some interest in the behaviour of the Super-Wasp short-wave receiver, I am writing you about the results as received here in Quito, Ecuador.

"Beginning in the days of 1925, radio has always been a hobby. However, my efforts have always been confined to the broadcast band, the short waves being a mystery.

"While residing here in the highest capital in the world which also straddles the Equator, I sent to New York for one of your sets, for the broadcast band is not received here.

"The Super-Wasp arrived and after a short time was assembled. Like any innovation the set was, according to various predictions, doomed to silence in these altitudes. Several short-wave sets have been tried up here but outside of squeals and a faint whisper they are now gathering dust. Well, the first

night, after a little experimenting, the following were received on a loud speaker and were too loud, and had to be toned down: Holland, Pittsburgh, Schenectady, New York (WABC), and Sydney, Australia.

"As I am leaving shortly for New York, I sold the set and could have disposed of a dozen. As it is, I know that two of these sets have been ordered for the President of the Republic. I can certainly unqualifiedly recommend the Super-Wasp as the perfect short-wave receiver. This letter is sent to you voluntarily."

FROM HULA-HULA LAND

Now we'll skip across the Pacific and see what Mr. Paul Kaelemakule, Jr., of Kohala, Hawaii, has to say:

"You will recall that I wrote to you about getting the Pilot Super-Wasp short-wave receiver. I bought a kit from the Mutual Telephone Company of Honolulu and five days later was listening to stations 10,000 miles away. The list of stations I now

have on my log is as follows: WGY, New York; KDKA, Pennsylvania; 5SW, England; JOAK, Tokio, Japan; JOHK, Sadai, Japan; RA77, Saline, Russia; KNX, KPO, KFI, KGO, KOA, KSL and many others."

From Central America, comes a letter in picturesque English written by Amando Cespedes Marin, owner of station NRH:

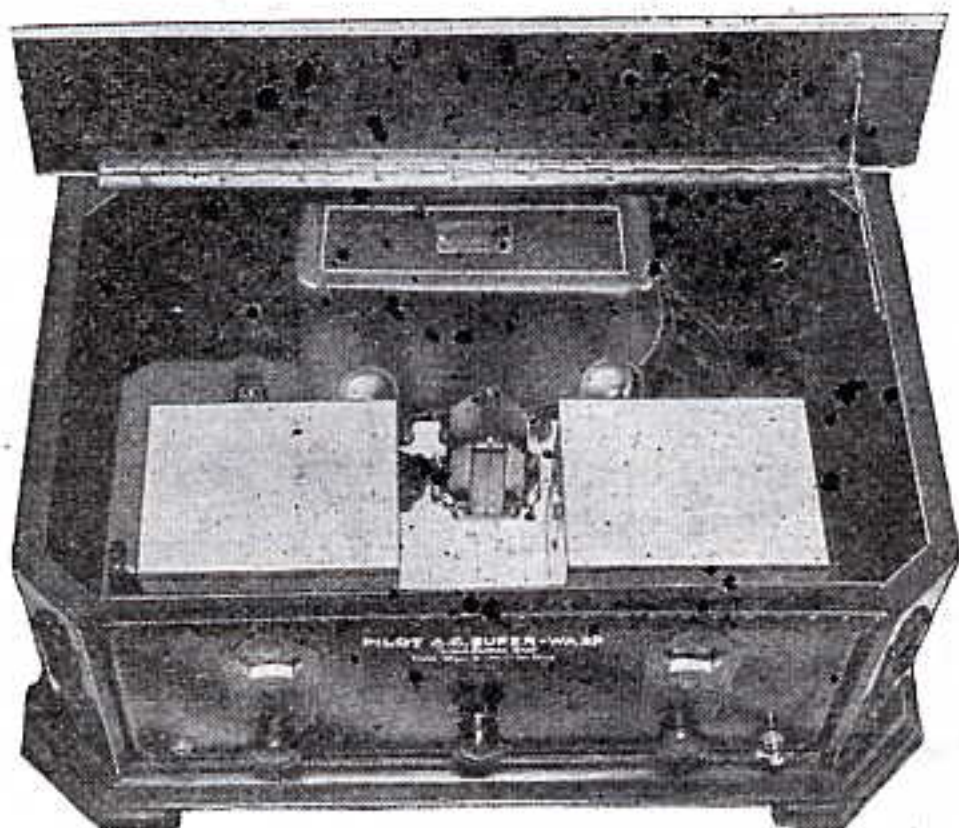
"At last I got the parcel post, and the Super-Wasp within. As I told you, same was put up and wired the next day, and in a few minutes I was catching code like stars and KDKA and WGY clear as a bell. Tried long wave and got WLW and WJZ loud enough to dance by. But gee, a fan station from San Jose come in so loud that words cannot clear me to make you understand."

PREVENTING OSCILLATION

As the tuning of the A.C. Super-Wasp is exactly like that of the battery model, which has been the subject of several articles in RADIO DESIGN, very few purchasers of the K-115 had any real difficulty with the dials. However, a minor and unexpected trouble did arise with the broadcast coils which can be cured very easily. This was the tendency of the circuit to break into oscillation, even with the regeneration condenser turned down to zero.

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As this effect took place even with the tickler winding of the detector plug-in coil altogether disconnected, the trouble obviously was in the screen-grid stage. It was discovered to be due to too high a voltage on the screen of the P-224. In some locations the K-111 power pack delivers more "B" voltage than usual, which is not at all harmful. The simplest cure is to connect a No. 941 (100,000 ohm) Volumgrad, as shown at the bottom of page 24. In this connection it acts as a potentiometer, and the voltage to the screen can be reduced. The Volumgrad can be mounted anywhere in back of the set, as once adjusted, it need not be disturbed. The right adjustment is quickly found by experiment. The idea is to plug in the blue ring coils, turn the regeneration condenser to zero, and to try to make the set oscillate with the Volumgrad turned all the way to the left. Due to power line variations it may not oscillate at some



With the K-111 power pack installed in the back of the cabinet, you have the A.C. Super-Wasp as a self-contained short-wave receiver, requiring only aerial and ground and a connection to the nearest lamp socket. Contrast the appearance of this splendid set with that of other short-wave outfits, which sprawl all over the table!

times but will at others. Once you get it into this condition, merely turn down the Volumgrad until the signals clear up. Trouble of this kind has happened only in a few cases, but it is a good thing to know what to do about it.

"DOLLING UP"

As many owners of the A.C. Super-Wasp use the sets are regular broadcast receivers, we are showing how the set can be "dolloed up" in a cabinet, with all the wires out of sight. The cabinet pictured on pages 22 and 23 is a standard 7 by 18 Corbett product, with the removable top bar trimmed down to accomodate the 7½ inch panel of the Super-Wasp. The back is cut out to expose the back of the K-111 power pack, which is mounted in back of the chassis. Exposing the back of the K-111 in this way is a decided advantage, as otherwise the heat of the rectifier tube makes things pretty uncomfortable inside the wooden cabinet.

A good way to dispose of the plug-in coils is to screw five ordinary brass hooks to the left and right insides of the cabinet, and to hang the coils on them. Put the antenna coils on the left and the detector coils on the right, and you will always have them nearby when shifting from one wavelength range to another.

We would like to hear from owners of Super-Wasps. Tell us what results you are obtaining, and what little tricks you have applied, if any. Radio fans always have ideas of their own, and it is good sportsmanship to let the other fellow know about them.

K-110 STILL POPULAR

As many people still have perfectly good batteries on hand, the battery model of the Super-Wasp continues to be sold in large quantities and is giving excellent service wherever it is being used. If you have a six-volt storage "A" battery and three 45-volt "B" blocks, this model, K-110, will fill your need for a short-wave receiver.

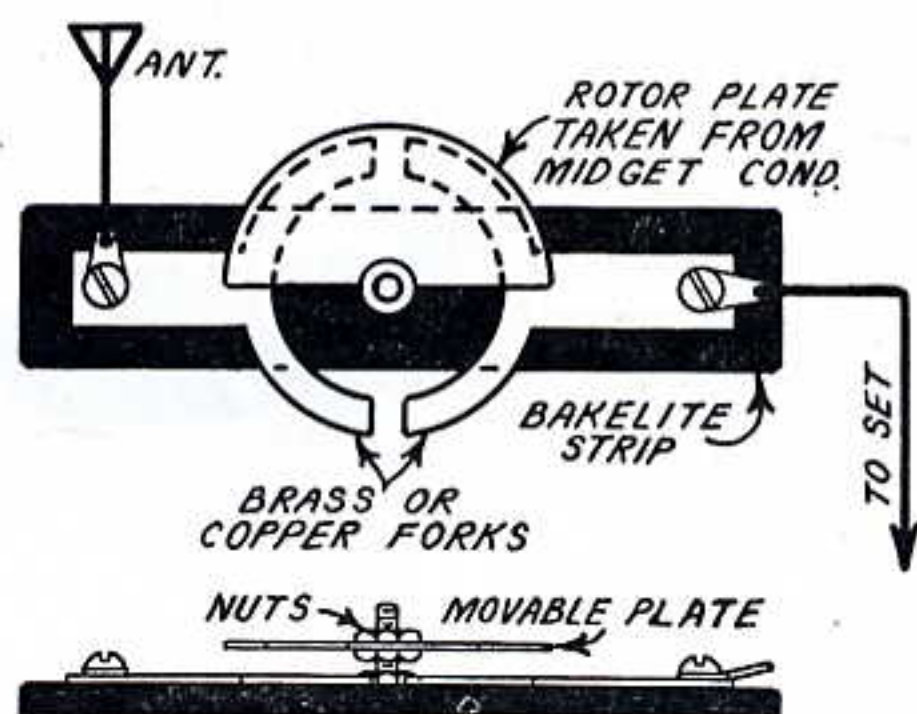
By the way, the Spring, 1929 issue of RADIO DESIGN, which contained the original description of the K-110, has been completely sold out. However, we have a 12-page folder on the set which we will send

you free for the asking. Just say you want No. 7 data sheet.

WORKSHOP SPECIAL HINTS

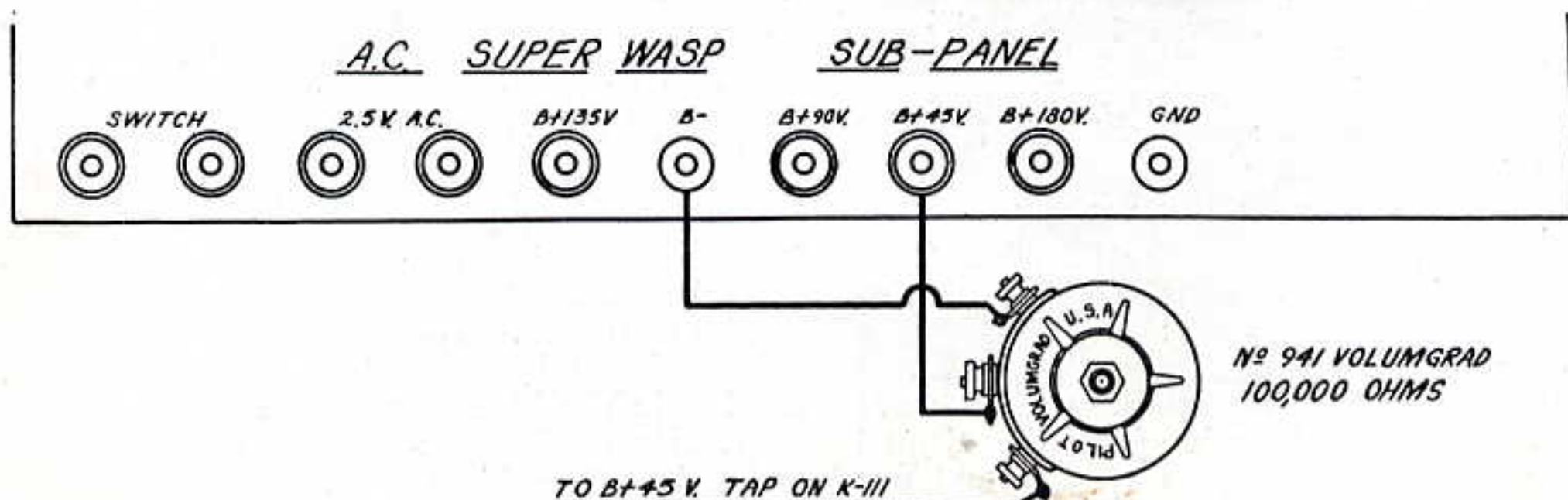
The "Workshop Special" short-wave receiver described in the Fall, 1929 issue of RADIO DESIGN made quite a hit. Many readers made this little "breadboard" set as their first short-wave outfit, and although it has had bad hand capacity effects, as the article stated, it is producing good signals on the foreign short-wave broadcasting stations.

Some builders of the "Workshop Special" had trouble in making it oscillate. This is invariably due to an improper antenna series condenser. We are indebted to Mr. James L. Williams, 2700 Olive Street, Kansas City, Mo., for the excellent little condenser shown in the sketch below. We recommend this gadget as a good wrinkle.



The rotor plate may be taken from a Pilot midget condenser. It should be raised about a half inch above the two fixed plates, and arranged so that it can be turned with the fingers. The capacity of this condenser is highest when the rotor plate is in the position shown, and lowest when turned all the way, either to the right or left.

Another thing: the 199 dry cell tube is rather irregular. If you have two, try switching them around. One may be a much better oscillator than the other.



A No. 941 Volumgrad, connected to the A.C. Super-Wasp as shown, will provide accurate adjustment of the screen voltage to compensate for different power conditions.