

Serviceman's Diary

John H. Potts

WEDNESDAY: When it's down around zero, as it was this morning, I usually knock off a few shop jobs and then, around eleven or twelve when it gets warmer, I start out on the calls. But with eighteen jobs on the hook, I had to shove off early this a.m., or be stuck until late tonight.

The first four calls went fast—averaged only fifteen minutes including traveling time—but they were only tube replacement jobs plus, of course, a few lead-in strip replacements. Then, all of a sudden, I heard the air-raid siren sound off with its long and short blasts. I looked up but the sky was dull and I couldn't see anything, so I kept on driving. Then a traffic cop yelled to me to pull up to the curb and get to a shelter. No use giving him an argument—they had just passed a law calling for a five-hundred-buck fine for disobeying an air-raid instruction, so there wasn't anything else to do.

I found myself in front of a big apartment house, but no air-raid shelter anywhere around. I remembered that the safest place was supposed to be about the third or fourth floor of a tall apartment building, so I entered and walked up to the third floor. I punched the first bell-button I came to and a moment later the door opened slightly and a charming blonde head made its appearance. It looked as if I'd picked a good spot, though perhaps not too safe in some respects.

"Air raid, miss," I said authoritatively, "and I'm obliged to take refuge here."

"But why," she protested, "can't you go to a regular shelter? There's one about a block north. I'm really not prepared to receive visitors."

"Sorry," I snapped. "I was sent here by an officer of the law and there's a five-hundred-dollar fine for disobeying orders. So I'll have to come in." I

wasn't taking any chances on being thrown out of this place.

"I'm sorry I'm not more familiar with air-raids and such things," she said, as she opened the door wide for me to come in. "But, you see, mother and I just moved here recently from the West. Won't you sit down and make yourself at home, and may I offer you a drink?" I had made no mistake about this place, all right. No better shelter in the entire town, air raid or no air raid. She sure looked a lot like Betty Grable, too.

"No, thank you, miss," I answered automatically. Might as well be polite about it. Then, on second thought, I added, "That is, not at the moment." She might forget to offer drinks again.

"Now," I continued, "We've got to get busy and protect ourselves. The regulations say to crawl under a table placed near a hall wall. So if you'll give me a hand with this kitchen table we'll move it out in the hall. Then I'll need a mattress to place under the table, or at least cushions, so we can sit down and be comfortable until after the raid."

"But isn't the kitchen table a little small?" she inquired. "After all, there may be others coming in and we'll be a little crowded. Why not take the big dining-room table?"

"The kitchen table will be plenty big enough," I insisted. "It's too late now for others to attempt to get here." Besides, I thought to myself, it'll be far more congenial with a small table, and I swore that no one else would get in.

She gave me a hand in getting the table and mattress in place, and then made herself comfortable under the table.

"Now," I told her, "I can bring you a book from the library, or this morning's newspaper," (which I saw in the living room) "or we can sit together and I'll discuss some of the latest methods of detecting spurious ionization."

"If you don't mind," she replied, "I'd prefer the newspaper."

I brought it and was about to sit down beside her when the door-bell rang. She started to get up, but I motioned her back and answered the ring myself. There a big, fine-looking fellow, who resembled Gary Cooper, was standing.

"I've come to help Gloria get ready for the air-raid," he announced.

"Thank you so much," I told him,

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"Air raid, miss," I said authoritatively, "and I'm obliged to take refuge here."

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decent businessman of his locality.

Servicemen! This is your great chance. Don't miff it. You won't see another like it in this lifetime!

Odds n' Ends

Uncle Sam is considering raising the ante so as to obtain the services of the better class of radio engineers, most of whom are older men with commitments deserving of higher salaries . . . —

When the complete story of the Fifth Column of Hawaii is told, it will raise hair on a bald man's head. We have heard some details, but they are much too hush-hush to repeat at this time . . . —

Here's one for the book. Uncle Sam's Military engineers complain that there do not seem to be enough frequencies for his operations. Contact some hams, Uncle; they'll tell you how to put 'steen stations on the same band, and have them all work out fine. Haw!

The Navy and the Army are still looking for radiomen. Contact George Bailey, 2101 Constitution Avenue, Washington, D. C.

How to make Saps outa Japs: buy a Defense Bond, and Stamp out treachery!

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"but it won't be necessary. She's asleep now under a table and is perfectly safe. I wouldn't have her disturbed for worlds."

He gave me a funny look. "Well, I'm glad she's being looked after," he said. "Just tell her that Bill called, will you? I'll drop in as soon as the all-clear sounds."

I closed the door and went back to Gloria.

"Who was there?" she asked. "Just a Fuller Brush man," I answered. "He has a special offer on brooms today, designed especially for cleaning up dust and dirt caused by bomb explosions. He'll be back right after the bomb hits this building."

"Right on the job, isn't he?" Gloria said. "But somehow his voice seemed to sound a little like my boy friend's. How does it happen he didn't leave a free gift brush of some sort?"

"Said he'd bring it when he came back," I told her. She was getting me in a corner.

"You know," she continued, drawing her knees up and putting her arms around them, "I do hope you can call some time when Bill is here. You'd like him. I do. He's big and tall and looks like Gary Cooper. He sells hair tonic. Now you're a little bald and I'm sure, if I ask him, he'll be able to get just the right kind of tonic to make your hair grow over that bald spot on top. Also, he's a boxer and——"

"Yes," I said, "he's a swell fellow, I'm sure. I used to use hair tonic myself. During prohibition. You see, it contains alcohol—of a sort—but it does have a kick and we had nothing better to drink then. I wouldn't want more hair now, you know. Not patriotic. Keeps the barbers busy so they can't go out and carry a gun. Have to take those things into consideration too, you know." It began to look as if I were getting nowhere fast.

"You interrupted me," she said sternly. "I was telling you that Bill is also a boxer, and he can fix radios too. You know our big set started to get

weak and noisy a few days ago and we were going to call a repair man. But Bill's been coming in every morning—he only goes out in the afternoons and evenings to his customers—and is giving our radio a thorough going over. Already he has put in new tubes and a filter for the electric light and this week, he thinks, he may have it playing again. But if I had gone to an ordinary serviceman it might take months to get it fixed. You know how dumb they are."

"Yeah," I answered. "Let me see that radio." She started to get up.

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THE STRANGE CASE OF SERVICEMAN WALDO MUDD

Dear Miss Barefacts:

I know that your column is entitled "Advice to the Loveless" and I am not loveless. As a matter of fact, I have more love than I know what to do with. That's why I am writing to you.

You see, Miss Barefacts, I am a radio service man. I make good money and I'm very happy. I mean I was happy until I met Arabella Blotts. She is one of my customers. In fact, she is my very best customer. That's the trouble.

Arabella has a very nice apartment with about eight radios in it. The first time she called me, I went over and fixed two of the radios in about half an hour. Then Arabella asked me to sit down and have a drink with her.

The correspondence course I took in radio servicing didn't say anything about what to do in a case like this. Besides, I don't drink anything but ginger ale. However, Arabella insisted, so I asked for ginger ale. It was very funny tasting ginger ale and I even felt funny after I drank it.

Then Arabella sat down beside me. She is a very big girl. Also, she is very determined. Every time I moved away from her, she shoved over closer to me. Finally, I was at the end of the davenport and couldn't move any farther. Also, I was at the end of my wits.

When I got back to my shop, I remembered she hadn't paid me for fixing the radio. Also, I was dizzy and didn't feel like working any more that day.

The next day, Arabella called and said both of the radios I had fixed were broken again and would I please come right over. Well, there wasn't anything to do but go over and fix them. So I did.



Then the same thing happened again, the very next day.

However, Miss Barefacts, I will not bore you by telling you any more of this sort of thing. Suffice to say, it was six months ago that Arabella first called me. Since then, she has called me almost every day. I have fixed all of her radios at least a half dozen times each and she still hasn't paid me for a single job. What's more, I am afraid to send her a bill. Arabella is funny that way. She might get mad and not call me any more. After all, she

is the best customer I have.

What shall I do?

Very truly yours,

WALDO MUDD,
Radio Service Man.

★ ★ ★

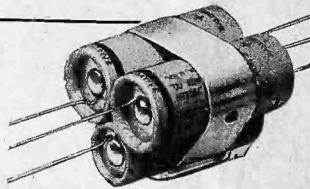
Dear Mr. Mudd:

Don't worry. Your problem should be an easy one to solve. My first suggestion is that you marry Arabella Blotts. Evidently that would please her. Then you can repair her radios in your spare time and spend the rest of your time at work for which you will be paid. My second suggestion is that, in the future, you use Sprague Condensers and Koolohm Resistors for every replacement. Once you install them you can forget them—and so can your customer. Then, the next time you meet a girl like Arabella, she will have to be more original in finding an excuse to invite you back again.

Sincerely yours,

GERTRUDE BAREFACTS,
Editor, "Advice to the Loveless Column."

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"No," I said, "you stay where you are. I'll find it."

I went into the parlor and found a big Philco. I switched it on and listened. Nothing but a lot of noise. Pulled it out from the wall and checked the antenna connection. The wire was hooked to the antenna post alright, but seemed to be a little too limber. I pulled out my knife and scraped the insulation off. As I thought, the lead was broken under the insulation. I fixed it and reconnected it to the set. The set responded in glorious volume, a voice announcing that the all-clear had just sounded. Gloria came running in.

"How did you do it?" she gasped. "It plays wonderfully now. I think you're marvelous!"

"Oh, it wasn't anything," I said modestly. "I'm sure Bill could have done it better!"

"Never mind Bill," she replied. "He just tinkered around and got nowhere."

"Well, you see," I answered, "I'm just one of those dumb servicemen. And I haven't got much hair—"

"I wouldn't worry too much about it if I were you," she answered. "Because—" and she pinched my arm a little—"you see, I don't!"

KP and G

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ther places where there may be room for argument—at least not until we win the war.

PLATE-FEED INVERTERS

Continuing further with such two-tube systems, Fig. 2-A illustrates a different method. In this arrangement the signal voltage for the phase-inverter tube is secured from a divider located in the plate circuit of the amplifier tube. Starting with an instantaneous positive voltage upon the grid of the upper amplifier tube, the grid of the phase inverter receives a signal which is negative with respect to ground.

Still another arrangement somewhat similar to Fig. 2-A, is shown in Fig. 3, but in this system the phase inversion takes place in the output stage by tapping off a portion of a signal-voltage divider connected across the plate to ground system of one of the output tubes. The relative instantaneous polarities of the signal are as indicated.

In Fig. 4 is shown a phase-inversion system employing a single tube, and based on the fact that the signal voltage developed across the plate resistor R_1 is 180° out of phase with the signal voltage developed across the

cathode resistor R_2 . Hence the output voltages e_o are out of phase, and equal providing the resistors R_1 and R_2 are of the proper value.

It is possible to give many more illustrations of phase-inversion systems but they should be unnecessary, considering the number already shown in these pages. There are several differences between these systems other than the location of the point from which the signal is secured for the phase-inverter tube. But that is another story for some time in the future. In the meantime, we want to reiterate that such phase inversion is not limited to

triodes when considering multi-element tubes. For example, in Fig. 3, the tubes could just as readily be pentodes and the load resistances, R_3 and R_4 , could have been located in the screen circuit instead of the plate circuit.

The plate system would contain the conventional load resistance, whereas the screen circuit of the upper tube would not be bypassed to ground so that a signal voltage would be built up across the screen resistor. The phase of this voltage is inverted in the same way as the phase of the signal voltage

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