

PHILCO SERVICEMAN

PHILCO

Factory-Supervised

Service

Service News For Philco Servicemen

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Price Plaque Reminder

Television and Radio members of PHILCO FACTORY-SUPERVISED SERVICE who intend using the Television Service Recommended Charge Plaques, PR-1977, and Radio Plaques, PR-1976, should remember that *these plaques are not OPS-Approved*. You are solely responsible for seeing that they conform with your price schedules if you intend using them!

If your prices were the same, or as high, as those given on the Plaques, during the base period decided upon by OPS (see article, "Watch Your OPS Prices," July, 1951, PHILCO SERVICEMAN), you can display and use them. However, if your prices were lower than those suggested on the Plaques during the base period, you must adhere to your base period prices and cannot use the Plaques.

Philco Factory-Supervised Service Goes Nation-Wide on Radio and TV!

Your efforts to get PHILCO FACTORY-SUPERVISED SERVICE circulated around are going to get a tremendous boost and you are going to be on the receiving end (of profits!) real soon!

If you'll tune in on Don McNeill's radio show any morning, or his Wednesday evening television show, or the Sunday evening Philco Playhouse, you will see and hear Philco plugging away for you and FACTORY-SUPERVISED SERVICE! A new policy instituted by Philco is putting this service in radio and television advertising as a continuing program guaranteed to blanket the nation with a demand for your service!

How About You . . . in 52?

Happy new year!

And take it from us, it's going to be a PHILCO FACTORY-SUPERVISED SERVICE New Year for all of you!

But before we get into the new year with a bang, let's get down to brass tacks. The re-signing campaign for 1952 PHILCO FACTORY-SUPERVISED SERVICE is underway NOW! . . . and there's no time to lose in signing up! In fact, you have to get your new application in *before January 10, 1952*, to receive the February, 1952, mailing!

Your Service Division, as in past years, has again been making big plans to aid all PHILCO FACTORY-SUPERVISED SERVICE Men in 1952 to build a bigger business, gain extra profits, and gain more popularity in their respective communities.

All Over the Country!

Just as an example, a feature story appearing elsewhere on these pages will tell you of the tremendous advertising program going into PHILCO FACTORY-SUPERVISED SERVICE on the radio and television, and in newspapers and magazines. The greatest service story in the industry . . . the PHILCO FACTORY-SUPERVISED SERV-

ICE Story . . . is being told to your customers wherever they may be, in every section of the country!

And, in January's issue of the new, improved PHILCO SERVICEMAN watch for sensational news that, with the present materials situation, will come as a welcome opportunity and a continued assurance of business-as-usual!

Big Year Coming Up!

Last year we said in this publication that the future of the electrical appliance servicing business never looked brighter. Well, we may have to eat those words because 1952 is shaping up to be the Serviceman's year. And that means that every wide-awake and ambitious serviceman will want to be sure he gets his share of the wealth of information coming out of PHILCO FACTORY-SUPERVISED SERVICE, to more efficiently serve his customers.

Just a few moments of time spent at your local Philco Distributor will give you all the details of PHILCO FACTORY-SUPERVISED SERVICE IN 1952—get down there today without a moment's delay and see him. Remember you must be re-signed by January 10, 1952, to get February's mailing! Don't put it off—it may cost you valuable information you can use to good advantage!

Along with the famous Philco quality story we are telling the story of quality service which backs up the customer 100 per cent on the Philco products he owns with PHILCO FACTORY-SUPERVISED SERVICE. And PHILCO FACTORY-SUPERVISED SERVICE is *you* and means *your* service!

To top off this sensational news, PHILCO FACTORY-SUPERVISED

SERVICE will also be seen nationwide in all Philco newspaper and magazine advertisements. In every one of our publications media reaching the vast consumer potential your affiliation with this organization will be emphasized.

Turn on your radio—tune in your television . . . and watch PHILCO FACTORY-SUPERVISED SERVICE go to bat for you! You can see it this week, you can hear it every day from now on!



ANOTHER PHILCO FIRST!

Here's one sensational item we don't have to tell the smart service technician anything about! The beautifully tailored "Ike" Jacket Uniform pictured at the left tells its own story!

Due to a fabulous arrangement with a national clothing manufacturer, Philco can supply these uniforms exclusively to **PHILCO FACTORY-SUPERVISED SERVICE** men!

Here's the ideal way for you to show the public what is meant by **PHILCO FACTORY-SUPERVISED SERVICE**. Smart, distinctive servicemen carry weight with their customers—makes him feel that your service is efficient and affiliated with a nationally known and respected organization.

These uniforms are top quality and the price is right! You can get the whole story from your Philco Distributor—don't put this off for even one day. Get all the details on a really sensational buy right now!!

SEE YOUR PHILCO DISTRIBUTOR *Today!*

Picture "Washout"

You may occasionally encounter an RF chassis in which "wash out" occurs when the contrast control is advanced to its nearly full clockwise position. This term "wash out" is used to describe a condition where the black part of the picture reaches a maximum black and then turns gray with further rotation of the contrast control. This condition is most likely to be observed in chassis employing the Colorado Tuner because the video level at the output stage tends to be higher in this chassis than those in which the Indiana Tuner is used. "Wash out" is simply evidence that the amplifier system is being overloaded. In those cases where wash out occurs without sync instability it is evident that the overload must occur after the sync pick off point. In most cases the overload occurs in the video output stage.

To correct "wash out" the supply point for the B+ to the screen of the 6AQ5 video output tube

with the change in B+. It has been established that this change in screen voltage actually aggravates and contributes to the "wash out" condition in areas of intermediate signal strength. At the same time that the screen voltage is changed, the control grid bias should also be increased. The control grid bias is easily increased by changing the position of the two resistors in the grid circuit. The changes are shown schematically in figures 1 and 2.

"Wash out" is in many cases very similar to overload of the audio system which can be brought about simply by turning the volume control full on. In other words, "wash out" in some cases indicates that the contrast control is being advanced too far. It should therefore be kept in mind that although the changes prescribed above extends the contrast range before overload occurs there must necessarily be some signal level at which overload will be inevitable.

tremely high signal level it is also necessary to reduce the time constant in the grid of the first common IF stage. This is done by reducing the value of the 470 μ fd condenser from the plate of the mixer to the grid of the first IF down to 100 μ fd and connecting a 40 μ h choke across the grid resistor of the first IF.

The VID. Out. wiring and component changes are shown below. Refer to pages 2 and 3 of PR-1928 and page 45 of PR-1943 for the correct base layouts.

VIDEO OUTPUT CHANGES

(See figures 1 and 2)

1. Shunt the 5600 ohm resistor in the plate circuit of the first video stage with a 12K ohm 1 watt carbon resistor.
2. Remove connection from pin 6 (screen) of 6AQ5 socket. Connect the two wires together, solder, and insulate with spaghetti tubing, or insulating tape.
3. Connect new length of wire from capacitor lug C303A to pin 6 of 6AQ5 socket.
4. Interchange resistors R306 and R307; that is, the 1.8 meg. resistor will now connect from pin 7 to lug 1 of B-2 and the 1.2 meg. resistor will connect from pin 1 to lug 4 of B-2.

NOTE: The reference to "lug 1 of B-2," etc. in the following text, indicates wiring lug of terminal panel number B-2. All components and terminal panels referred to are shown on the base layout of PR-1943, page 24.

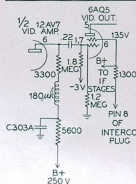


Fig. 1

should be changed. This change will permit the tube to handle a large signal. The new supply point provides a higher screen voltage and a voltage which does not vary as much with variations in AGC voltage. Previously the screen grid was connected to the same B+ line as the IF strip. Since the B+ at this point varies in response to the AGC voltage or signal level in the IF strip the voltage applied to the video output tube screen grid would also vary in step

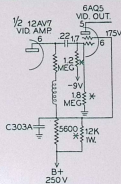


Fig. 2

In some chassis employing the Colorado Tuner it is possible that with very strong signals applied to the antenna, "wash out" will occur when the contrast control is only about $\frac{3}{4}$ toward its maximum clockwise position. In these cases you may wish to modify the AGC control system to the tuner so that the signal delivered to the video output stage is maintained more nearly constant. In areas of ex-

Emergency Food Preservation

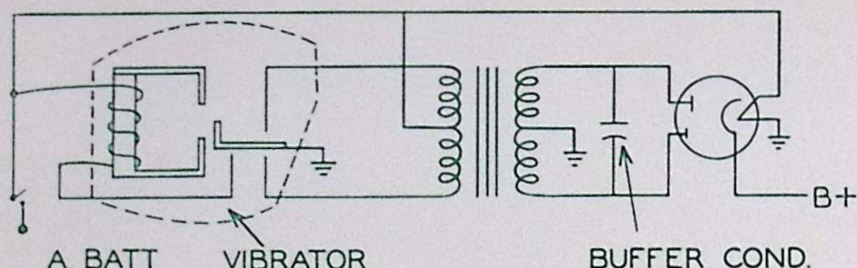
In servicing refrigerators and freezers, it is occasionally necessary to look for temporary means of sub-zero temperature supply other than the refrigerator system. This may be brought about by Utility Company power failure, an essential replacement part that is not immediately available or the customer may be moving from one home to another and wishes to transfer her freezer with the contents safely stored. To take care of this type of emergency when it may arise it is well to know of a source of supply, for DRY ICE.

(Continued on page 4)

Buffer Condenser Application

It may sometimes be puzzling why different value buffer condensers are used on a similar application. There is, of course, a very good reason and the same reason shows you why you should always replace a condenser with the same value that

one-half of the windings of the power transformer are also energized inducing a voltage in the secondary, which is applied to the rectifier tube to produce the B voltage. When the reed moves, it interrupts this circuit and acts as an electric switch in



was originally in the auto radio.

Illustrated above is a basic vibrator-rectifier circuit. It will be noted that when the radio On-Off switch is closed the vibrator coil will be energized and attract the reed so that the circuit is broken momentarily. During the same period of time

making contact with the other section of the primary winding.

Now we can see why the buffer condenser is used. At the instant of contact break an extremely rapid voltage reversal would take place with resultant high arcing at the vibrator contacts, but with a condenser

across the secondary windings this voltage reversal starts to occur in a resonant circuit and decays in an oscillatory manner and thus quenching the arc that might have developed and damaged the contacts.

To establish a satisfactory resonant circuit, the proper value of buffer condenser must be used. The charging current of transformers vary with the type of iron used for laminations, method of winding, size of wire, etc., so that with these factors known by the engineers a proper value of condenser can be selected that will be large enough to properly quench the oscillation but not too large so that it will not be discharged before the next cycle starts, small enough to function on time yet large enough for satisfactory resonance. Therefore, the value buffer found in the auto radio usually has these characteristics to match up with the transformer and vibrator used, so replacement should be made with that value.

(Continued from preceding page)

Dry Ice is the trade name for Solid Carbon Dioxide. Carbon Dioxide when solidified has an internal temperature of -109°F . and an evaporation temperature of 70 degrees below zero Fahrenheit. Its efficiency by weight is approximately ten times that of ice manufactured of water. The high efficiency of cooling is caused by the dry ice evaporating into a heavy carbon dioxide gas cloud, which has a tendency to lay in a concentration over the refrigerated area, which gives added heat insulation. A ten inch block of dry ice weighs approximately 50 pounds.

We have found that we can safely store food in perfect condition for a period of six days in a four cubic foot freezer with ten pounds of dry ice, in an eight cubic foot freezer with twenty-five pounds of dry ice and in a twelve cubic foot freezer with fifty pounds of dry ice.

With the use of dry ice a few common sense precautions must be observed in handling it. Since in its solid state it is at a sub zero

temperature, if it were brought into contact with the hands or any portion of the body, it would very quickly freeze the surface moisture of the body and cause it to adhere to the hands, producing cold burns and blisters. A pair of heavy gloves are necessary equipment for the handling operation.

The average supplier of dry ice sells a minimum order of ten pounds and charges from \$.04 to \$.07 per pound plus \$.01 per pound for cutting into slabs or slices.

A very good lead for the local supply of dry ice can be gained by speaking to the railroad freight agent or the local ice cream manufacturer. A few dry ice manufacturers that widely distribute their products through local agencies are: The Chenez Chemical Co., Cleveland, Ohio, Crystal Pure, Carbonic Division of Pure Carbonic, Inc., Atlanta, Georgia, King & Co., Inc., Boston, Mass., Liquid Carbonic Corp., Chicago, Ill., Mathieson Chemical Co., New York, Monsanto Chemical Co., St. Louis, Mo., New England Alcohol Co., Everett, Mass., Pure Carbonic, Inc., New York.

PHILCO MODELS 7050 AND 7051 TUBE TESTER

Supplemental Tube Settings for Testing Recently Developed Tubes

TUBE TYPE	Wavelength Control	Toggle Switches	Short Test	Load Control	Toggle Switches	Quality Test	Tube Section
1AF4	1	eBF	6	E			P
1AF5	1	BDEF	6	B			D
1E7G/GT	2	ABCDEF	14	DEF			P
1L6	1	BDEF	4	AD			P
5AX4GT	5	m	4	BE			P
6BD5GT	6	ACF	9				
6BQ7	6	CDEF	10	BM			D
6BY5	6	FC	10	DM			D
6CD6G	6	ACE	3	A			
6J6/S	6	bnAEFG	3	AD			T
6SF7G/GT	6	cABDE	3	ACEF			T
6SG7G/GT	6	aeBCDF	3	CDF			D
6S4	6	D	5	CEF			D
7X6	6	AC	10	AE			T
12BH7	6	hCDEF	22	ABGNS			T
12SF7G/GT	8	cABDE	22	BGN			T
25BQ6GT	11	CDE	11	ABCD			D
35Z6G/GT	10	ABCDEF	11	ACE			P
6AQ7GT Revised	6	bcAEDEF	1	ACE			P
			2	C			D
			2	D			D
			12	ABC			D
			12	BCDEF			T
			12	ABCDE			D