



Beware of Poor Neutralization

Squeals and Poor Quality Among Ills of Maladjustment.

A neutralized receiver, unless it is carefully adjusted, can be less efficient than one in which neutralization is not employed. There are three chief ills of improper neutralization, according to an article in the Radio Broadcast Magazine.

"The first and most obvious manifestation of incorrect adjustment of the neutralizing device is oscillation in some or all of the radio-frequency circuits," reads this article. "These oscillations, as a general rule, become more severe as the frequency is increased, and a loud squeal or whistle will be heard as the tuning controls are adjusted to receive some station that is transmitting.

"Such an effect will make it difficult for the user of the receiver to obtain satisfactory reception and the oscillations will be radiated from the antenna attached to the receiver and cause interference on other receivers located in the neighborhood. Such oscillations can be prevented by correct adjustment, and it is essential that the proper setting be determined in order to make it possible to obtain best results from the receiver.

"A second detrimental effect of maladjustment of the neutralizers is poor quality, which is generally due to the existence of too much regeneration. The quality, under these conditions, will generally sound drummy, indicating that the various frequencies in the carrier are being unequally amplified by the radio-frequency amplifiers. To preserve good quality, the radio-frequency amplifiers must amplify without distortion a band of frequencies extending about 5,000 cycles above and 5,000 cycles below the carrier frequency, and this condition does not exist unless proper neutralization is obtained.

"Another effect of improper neutralization," says Radio Broadcast, "is to cause one or more of the tuned circuits in a single-control receiver to be thrown out of synchronism so that the set loses a great deal of its sensitivity, and as a result it is not possible to tune-in distant stations with satisfactory volume. These three major effects of improper neutralization indicate how essential it is that neutralization be always carefully and completely accomplished."

May Teach English by Radio to Filipinos

Radio may solve the long-standing problem of a common language, which is of first importance to Filipinos and to the United States. From the inception of the American regime English has been put forward in the schools and in the press to be the people's common language—since they speak some 67 Malay dialects with sharp distinctions, making it impossible for people even of adjacent provinces to converse. But the native tongue does not accommodate itself to English readily; few American teachers are left in the schools and the native teachers are, for the most part, ill prepared in English, so the results of their instruction are discouraging. The children recite glibly enough, but in a strange gibberish not English. But the Radio Corporation of the Philippines recently broadcast a lesson in English diction which proved that Filipinos can acquire English by radio.

Battery Clamp Used for Skinning Hook-up Wire

In using the popular rubber-covered stranded hook-up wire, radio constructors usually experience considerable trouble in skinning the ends for connections. A simple tool which is very convenient for this work can be made from an ordinary large battery-connection clamp, which resembles an overgrown tie-clasp. Merely file the jaws of the clamp smooth, and then cut in the wire with a three-cornered file, a notch which is roughly the size of the wire.

To use the tool, simply close the jaws over the wire to be skinned, squeeze with the fingers and at the same time pull outward toward the wire's end. The edges of the notch will pare the rubber insulation off neatly without cutting any of the fine strands of wire.

Cleaning Radio Panels Very Simple Operation

Take a bit of cheese cloth and wet it thoroughly in water. Wring out all of the water and shake on a few drops of alcohol (any kind of alcohol will do). Now wipe the panel with this cloth and the dirt and every fingerprint and every foreign substance will come off as it by magic. Wipe dry with soft cloth or cambric and the job is done.

Precaution: Be sure that this alcohol rag does not come into contact with any of the woodwork. Alcohol will tend to remove the varnish and spoil the finish on the wood. Used in the manner prescribed, it is excellent for the bakelite panel.

Radio Aids Operation of Inland River Craft

It is generally known that radio has transformed the art of navigation upon the high seas. This science is also coming into its own as an aid to the operation of craft upon inland rivers.

Maj. W. W. Parker, chief clerk of the American Engineers' office, Cincinnati, originated broadcasting of river stage reports over station WLW?

In response to a circular letter sent out by Major Parker recently to test the value of this service, the lockmasters and transportation companies operating Ohio river craft have given enthusiastic endorsement of the value received from this service.

River stage reports are broadcast each morning and are picked up by the lockmasters and boat captains along the Ohio river and its tributaries from a point a few miles south of Pittsburgh to Cairo, Ill. Lockmasters find this service extremely valuable. All of the fifty dams along the Ohio are movable and the reports of the rising and falling of the river enable the lockmasters to know when to raise and when to lower the dam. The dams are made of wicket, a device invented by a Frenchman and tried out in the Ohio river for the first time at Davis Island dam, seven miles below Pittsburgh, in 1870. When all of the wicket sections are in position they form a barrier. When the river is rising, the dam tender goes out in a maneuvering boat, equipped with a derrick, and lowers each section to the bottom of the river, and the traffic goes over the dam instead of through the locks.

As for the steamboat captains, the reports enable them to determine the stage at which they must navigate, and to know when they will go through locks and when they will go over the dam. They can sit in their cabins and compare the river stage reports with the draft of their boats, which tells them what precautions they must take to steer to the channel.

Many Ohio river craft tow a large number of barges of coal. It is difficult to maneuver such a tow under the best conditions. In the absence of accurate information as to river stages, the craft may be caught on a sandbar or a rock shoal.

The promptness of the radio information is especially appreciated by river men, as they receive the broadcasting, in many cases, several hours ahead of the printed report.

Some of the companies operating river craft have equipped all of their boats with receiving sets as the result of the river stage broadcast. Many large shippers have attested to the value of this service.

Varieties of Troubles That Cause Interference

Outside sources of interference which affect reception in a receiver are listed as follows:

- Sign flashers.
- Induction coils.
- X-ray machines.
- Static machines.
- Telephone ringers.
- Atmospheric static.
- Electric street cars.
- Defective transformer.
- Regenerative receivers.
- Bad contact in switches.
- Amateur wireless station.
- Static produced by belts.
- Loose street lamp in socket.
- Smoke or dust precipitators.
- Defective street light rectifiers.
- Electrical manufacturing processes.
- Commercial wireless (code) stations.
- Leaking insulators on power circuits.

Overlapping of broadcasting stations.

- Motion picture machines using arc lamp.
- Induction from high potential circuits.
- Heterodyning of broadcasting stations.
- Defective rail bends on street railway systems.
- Defective lightning arresters—power circuits.
- Motors and generators of the commutator type.
- Arcing wires in trees and other grounded objects.

How Sun Determines Volume on Long Waves

That the sun's activity is probably the chief factor in determining the strength of long-wave radio signals was the most important conclusion in the annual report of the laboratory for special radio transmission research prepared by Dr. L. W. Austin, of the bureau of standards.

In addition to the curves and tables showing the routine measurements of the laboratory, curves were shown in the report which indicate a close relationship between the long-wave signal strength and the changes in number of sun spots during the eleven-year sun-spot cycle, the signals increasing in strength with the increase of sun spots.

Other curves given show periodic changes in the signals during the time of the sun's rotation (twenty-six days), while others indicate a nine-day period in the case of certain stations.

Some of these curves also suggest fixed active areas on the sun, which often produce increase in signal strength when they face the earth. These periodic relationships, however, are not considered as well established as the relationship of the monthly and yearly averages of sun spots and signals extending over a number of years.



I think that I shall never see A poem lovely as a tree. A tree whose hungry mouth is prest Against the world's sweet flowing breast.

A tree that looks at God all day And lifts her leafy arms to pray: A tree that may in summer wear A nest of robbers in her hair: Upon whose bosom snow has lain; Who intimately lives with rain. Poems are made by fools like me, But only God can make a tree. —Joyce Kilmer.

HOUSEHOLD HELPS

If a trip to the cellar or storeroom is necessary carry a basket to save time and strength.

Keep on your desk a list of things to do—calls, letters to write, mending and other household tasks that one may forget or slight. As the list is finished cross off the list. This is a most satisfactory way of knowing what has been accomplished during a week or month. It is also an incentive to hurry up and leave a clean slate. This method is a good one for the kitchen, too; various things are forgotten that will, with a list, keep things running smoothly.

A camp chair or stool which can be slipped under the table when not in use is a great convenience in a small kitchen. Sit down as much as possible when working, save your legs for walks in the open air.

Before taking disagreeable medicine, hold a piece of ice in the mouth for a moment—it dulls the sense of taste. Grease the cork of the glue bottle, then it will open easily.

Keep old can rubbers to set on ice when dishes are to be placed on the ice to cool. They keep the dish from slipping.

When reeling drawers with paper, use a small sticker to hold them in place.

A fresh blood stain may be removed by rubbing with dry starch. The starch absorbs the blood and when dry it may be rubbed out, leaving no mark.

Anyone who has tried it knows that in housekeeping one cannot follow a schedule invariably. However the housekeeper is greatly assisted by a system which is carefully followed when possible. A slate or tablet hanging on the wall with an outline of the week's meals and extra duties will prove to be a wonderful step-saver as well as time-saver.

Transplant a few flowers like asters, snapdragons or cosmos in the garden between the rows of lettuce, radishes or onions. When they are pulled the plants will flourish and bloom.

A roomy market basket with a handle is a fine bed for a small child while traveling and in it may be carried its belongings. The basket may be picked up and carried without disturbing the baby or exposing him to the weather.

Kitchen aprons made of unbleached cotton make most satisfactory aprons as they are easily kept free from stains by boiling.

"Dressy" Dressings. In warm weather there is no food more appetizing, wholesome and attractive than a good salad. Almost anything edible may be used in a salad, so there is no excuse for throwing away any small amounts of left-over vegetable or meat.

When serving salad for a company dinner it need not be especially nourishing, for the menu is usually a full one. Something piquant, appealing and crisp and green is most desirable. The following are a few to be served as a simple green, varied by the different dressings:

Thousand Island Dressing.—Take one-half cupful of oil, the juice of one-half a lemon and half an orange, one teaspoonful of scraped or grated onion, three teaspoonfuls of chopped parsley, one-fourth teaspoonful of mustard, eight ounces sliced, one teaspoonful of worcestershire sauce, one-half cupful of mayonnaise, one-fourth teaspoonful of salt and the same of paprika. Mix the dry ingredients, dissolve them in the fruit juices, put all together in a fruit jar. Adjust the rubber and top and shake until the mixture is smooth. Set in the ice-box to keep cold until the time comes to serve. Another shaking and pour over the salad, or crisp lettuce.

A good way to serve French dressing, which is the simplest of all salad dressings, is to put the ingredients in a bottle, set in the ice chest after shaking well, then shake again before serving. The dressing is usually liked with three parts of oil to one of lemon juice, a pinch of salt and sugar, cayenne and dry mustard if liked. One may vary this recipe by the addition of different seasonings, and foods.

East Indian Dressing.—Add one-fourth teaspoonful of curry powder and one-third of a cupful of chutney or chopped pickle to one cupful of mayonnaise or French dressing. Roquefort Cheese Dressing.—Grate or crumble a two-inch square of Roquefort cheese into a cupful of French dressing. Serve on lettuce or endive.

Julia Bottomley

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WEAVE PRINT WITH PLAIN POPULAR; CAPES AND DRAPES CONSIDERED

THOSE tiny print silks which came early in the season, and according to fashion's prophecy, will stay late, have completely captured the fancy of the fashionable world. Not only are they charming made up alone, forming their own self-trim, but they have such a companionable way of combining with other silks. These tiny flower-patterned prints seem to take on even more color glory, used with solid navies and blacks.

Composed costumes, such as here pictured showing wee print with plain, have gained a place of distinction in the season's styles. Another interesting point about the little patterned silks is that they play so effectively. Note that the skirt of the frock illus-

ing introduction of metal embellishment. The two-piece frock of velvet print, consisting of blouse and skirt, is among newest styles.

Very latest wrinkle is to match one's sheersleeved frock with a cape. If the gown be of chiffon or georgette, its cape is usually full length and finely plaited like the one in the picture. This one is detachable, being caught to the neckline across the back with invisible snaps. There it is, ready to envelop midday at her wish, but until called upon to do service, it is content to flutter and float and sway with enchanting grace.

To effectively wear one of these diaphanous capes is quite an art in itself. There's a way of drawing them



A DISTINCTIVE COMPOSE

trated is neatly plaited, its hemline adopting a narrow border of the solid silk. This solid border treatment is being much featured this season.

The blouse is navy, of course, for this color is at present outstanding. The drape which appears at the left is really a huge kerchief of the figured silk which may be worn in the pocket as shown or knotted about the shoulders at the sweet will of its wearer. That's the way of sports frocks this season, most of them have a matching, dashing silk square somewhere in sight if not loosely tied about the neck and shoulders.

The large navy milan hat which accompanies this costume deserves special mention, for it expresses millinery at its smartest. Not only is this costume

about one's shoulders, "concealing yet revealing" the unsweated arm. Then, too, a cape, such as here shown, seems to serve as a background against which the slenderized lines of the dress are accented.

Aprons of the slender silhouette, the newest trick of fashion is to gather all superfluity of material into a single side drape (see picture), leaving unmolessted the sleek, slim figure so coveted by women these days.

Of all important sheer fabrics none is more so than white georgette, especially for evening wear. It is this material which is chosen for the development of the winsome ensemble in this illustration.

But to return to the subject of capes, the vogue of matching them



SHEER ENSEMBLE COSTUME

time timely for immediate wear, but it will serve admirably throughout the soon-to-be autumn days.

As to prints, the future promises revelations in the way of handsome patterned velvets with wee figures somewhat after the silk which are at this moment so popular.

These incoming costumes of print velvet follow the system of the summer silk prints, in that they are made entirely of the figured material or of print with plain. One can readily foresee the treat in store of a handsome black or navy velvet with panels, revers and other details of the patterned weave.

Advance novelty velvets show in addition to grey colored design, a fetch-

Machine That Talks Is Recent Invention

The astonishing experiment of constructing artificial lips, palate and tongue, and making them utter words, phrases, and even sentences by driving a current of air through them with a foot bellows, has been successfully carried out by Sir Richard Paget, an English barrister, who since the war has devoted himself to phonetic experiments. It is said that Sir Richard can literally talk with his fingers—not after the familiar fashion of the deaf mutes, but by making them take the place of the ordinary vocal organs.

Sir Richard has developed an astonishingly new theory of the origin of speech. Primitive man, he holds, began with gesture as his sole language. Later on he found it was convenient to imitate the gestures of his hands by using lips, tongue and palate. Then he accompanied these by cries, and so speech gradually developed.—The Forum.

The Claque

Stella Mayhew was talking about other days on Broadway. "I'll never forget the first time I ever saw my name in lights," said the veteran. "I was coming down Broadway in a horse-drawn cab, and suddenly saw my name in huge letters on top of the building where the Anheuser-Busch moving sign was for so long. I got right up in that hack and applauded myself."—Variety.

When Is Tomorrow?

"Mother," said little Bobby, "have you any cake?" "No," replied mother, "but I will bake one tomorrow." After deep study Bobby said: "Mother, tell me when is tomorrow. Does it come after 'soon'?"

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