

wants to rely on what the Dealer tells him. It is obvious he will be a little hazy when the Dealer shows him four or five lines and seems equally eager to recommend any of them. If the Dealer has one good line, and has faith in it, and knows it will perform satisfactorily. why should he take on four or five more lines?

Furthermore, Mr. Banford pointed out, handling a number of lines is not profitable. He sighted a parallel case in the automobile field. It seems that one Dealer was the largest outlet in Indianapolis for three well-known makes of automobiles. He survived for a while, and then went bankrupt. Now three Dealers have the three lines separately, and all of them are in sound financial condition.

A merchant cannot successfully have too many irons in the fire at the same time.

#### Tells Company's History

Mr. Banford was followed on the speaker's stand by C. C. Mathews, Radio Sales Manager of the Indianapolis Service Station, and Chairman of the Sales Convention.

Mr. Mathews gave a brief outline of Stewart-Warner's growth in the Radio industry. He pointed out that the first Dealers to be signed up under a Stewart-Warner Radio Franchise had no assurance back of them except the prestige that the factory had built up

(Continued on page 3, col. 4)

## Where to Find It

One Dial Set Makes Sensation. Page 1, Col. 5 New Window Display Contest. Page 1, Col. 3 Indianapolis Radio Convention ......Page 1, Col. 1 WBBM Aids Red Cross..... Page 1, Col. 2 Customer Bonus Plan......Page 2, Col. 1 Air Theatre Serves Dealers..... Page 2, Col. 2 Colors in Window Displays...Page 2, Col. 5 Power Tube Hook-up......Page 3, Col. 1 Dallas Station Moves to Larger Public Schools Open New Matched-Unit Line Scores Triumph at New York Radio Show ..... Page 5, Col. 5 Surprise Window Layout..... Page 6, Col. 2 Laboratory Report on New Test Shows One Dial Set Dealer Solves Window Puzzle. Page 7, Col. 2 Fall Radio Advertising Campaign ......Page 8, Col. 1

There's no better companion than the new one-dial Matched-Unit left, or Model 350, at the other end, is set for you. And for perfect Receiver. If you want the maximum in selectivity and distance without reproduction with either, the Model 415 speaker shown in the middle having to adjust a number of tuning dials, then either Model 345, at picture is without an equal.

## S-W AIR THEATRE AIDS RED CROSS IN STORM RELIEF

Within four days after the Florida hurricane disaster, WBBM, the Stewart-Warner Air Theatre, had collected pledges totaling nearly \$10,000. The money received is for the American Red Cross Relief Fund and is being turned over to that organization as fast as it comes in.

When news of the magnitude of the disaster was received Sunday night, Kelly Smith, director of the Station, immediately stopped the regular program and started appeals for the Red Cross Fund.

On Monday, which is "silent night" in Chicago, WBBM, in company with three other Chicago Stations, was on the air all night raising funds. This action had the approval of Frank McDonald, president of the Broadcast Listeners' Association of America. It also was endorsed by O. N. Taylor, radio editor of the Chicago Evening Post, who himself talked over the microphone.

During the four days of the Station broadcast, special appeals were made by Miss Eva Brown, John Eisenlord and S. N. Knight, members of the Chicago Chapter of the American Red Cross.

In addition "Babe" Ruth, famous home-run hitter of the New York Yankees, made a personal plea to baseball fans to give money for the cause.

When the Station continued to broadcast Monday night, it was found that the telephones in the studio were unable to take care of the flood of pledges. An appeal was broadcast to telephone operators to operate the large switchboard in the main plant of the Stewart-Warner Speedometer Corporation, where the WBBM studio is located. Within thirty minutes one hundred and fifty girls had flocked to the studio. The switchboard was opened up and the work of taking the pledges thus facilitated.

During the broadcast, pledges were received from every state in the United States. They ranged all the way from ten cents to \$1,000. Artists of the station and other stations gave not only money but their time as well.

# Winning Windows To Collect Over \$1,000 In Cash Prizes

Is a picture of your window worth \$175? The answer is "Yes" for one of the Stewart-Warner Radio Dealers now reading this announcement. And the explanation is the Fall Window Display Contest.

Ever since the Spring Window Display Contest was ended requests have been coming in from Stewart-Warner Radio Dealers in all parts of the country for another chance to show their stuff.

The winners last spring claim that their displays have been taking the Coué treatments and getting daily better and better.

Those who didn't finish in the first flight are equally insistent. They have been practicing all summer, according to their letters, and are now so good that when they put on a new display the folks drive in from neighboring counties.

This correspondence resulted in the executives of Stewart-Warner announcing a Bigger and Better Window Display Contest for Stewart-Warner Radio Dealers.

So the Display Division got busy and drew up a set of plans. These are in the main the same as for the Spring Contest. But there are several significant changes.

Before going into details, however, something should be said about the why and wherefore of this contest. Its purpose is to encourage the Stewart-Warner dealers to keep their windows attractively dressed. An attractively arranged window will bring business into your store; a poor display not only does not attract. it repels.

Your window is the face you turn towards the public. By it your store, stock and service are judged. A sloppy window indicates to most prospects that the store will be equally ill-kept. A well dressed window, on the other hand, is an almost irresistible invitation to them to do their buying there.

It is to impress on all Stewart-Warner dealers the actual value in increased sales that attractive windows bring, that this Fall Contest is being offered.

Dress up your window, and whether or not you win one of the 52 cash prizes, your increased business will more than repay your efforts. Here are the details we mentioned above.

In the first place, the windows will be divided into two classes, Class A-windows with a floor space of 30 square feet or less, and Class B-windows with a floor space of 31 square feet or more.

There is a good reason for this division. The size of the window obviously has considerable bearing on the results obtainable, and it was felt that an injustice would be done to the smaller dealers if they were put into direct competition with those who have the space for more elaborate displays.

This does not imply that the small window should be less attractive than the larger one. Not at all. A miniature is just as much an object of beauty as a large landscape. The difference lies only in the method of attack, the results may be beautiful in either or both cases, or not at all.

Perhaps we should have mentioned the prizes first. There are 52 cash prizes, totalling \$1,000, which will be awarded to the dealers whose windows are adjudged the best.

The judges will base their decisions entirely on the photographs of the windows. Incidentally, a Stewart-Warner Radio Tube will be given to every dealer entering a photograph in this contest, which will cover the cost of the picture in most cases. This holds good whether or not the picture wins a prize.

As before, the Contest will be divided into three monthly contests and a grand finale. Each month six prizes will be given, three for Class A, and three for Class B, as follows:

lst Prize
2nd Prize 15.00
3rd Prize 10.00
There are 17 grand prizes in each class, 34
in all, as follows:

1st Prize	\$	150.00	
2nd Prize		75.00	
3rd Prize		50.00	
4th Prize		25.00	
5th Prize		12.50	
6th Prize		7.50	
7th Prize		5.00	
Next ten	best, each	2.50	

In any case where the judges are unable to decide which of two windows is the better, the full amount of the prize will be awarded to each one.

We want every dealer of Matched-Unit Radios to enter this contest. The Stewart-Warner line is the finest achievement of radio engineering. The new models and the new

(Continued on page 6, col. 5)

Department heads at the factory whose work brings them in contact with the radio manufacturing end of the business have been amazed with the phenomenal success of the new line. On the faces of the radio engineers, whose work over a period of two years has resulted in this achievement, there have been smiles of gratification at the recognition of their efforts.

One of the most important results noted is that the success of the Matched-Unit line has forever buried the rumors that Stewart-Warner was to quit the radio business. These rumors, which emanated from a source decidedly unfriendly to this corporation, find uncontradicted denial in the eagerness of dealers to affiliate themselves with the Stewart-Warner Matched-Unit line. In fact, it can be stated with authority that the Stewart-Warner Speedometer Corporation confidently expects its radio business to be one of the best of the many lines that are manufactured by the corporation and its subsidiaries.

As is well known now the complete Matched-Unit radio line consists of reproducers-both the drum and the horn type-radio tubes, antenna kits and the Matched-Unit receivers. The three-dial sets are to be found as in the past in various models that range from the small table type receiver to the big console model. The same range is to be found in the new one-dial sets.

#### Watch for Reproducer Story

Because of the fact that the one-dial set is the newest addition to the line, with the exception of the new reproducer, more space will be given in this article to a description of it than to the three-dial model.

In the next issue of the "Announcer" will be a detailed description of what has been termed by expert acoustic engineers "the greatest reproducer yet manufactured." It may be said in passing, however, that this reproducer and the scientific principles that (Continued on page 7, col. 3)

#### Banford Has Charge of Plans For Dealers' Day

Indianapolis just now presents a scene of excited activity as preparations are being made for their second annual Radio Exposition, to be held the week of October 25th.

Mr. Banford is General Chairman of the Committee in charge of plans for the Convention of Indiana Radio Dealers and Jobbers. This convention will meet on Wednesday, October 27, when the dealers will be the guests of honor at the Exposition.

C. C. Mathews, who has charge of the radio department of the Station, is Vice-Chairman of the General Convention Committee.

# Customer Bonus Plan Makes Every Buyer a Booster

## **CLIENTS GET REWARD FOR** SENDING IN **NEW BUYERS**

2

Making a sale is a good thing. Making a sale and a satisfied customer is better.

Making a sale and a satisfied customer and a permanent booster for your store and your line is still better, and when the profits are added up at the end of the year it will show in big figures in the bank book.

This idea of making a salesman out of every customer is worked out with great success by the Stewart-Warner Radio Sales Company of San Diego, operated by Jack M. Whitley and Bartow B. Morris.

These two men, who have made a conspichave found that it pays to reward their line tomers for additional sales they are responsible for making. Their plan is to offer merchandise, such as batteries, tubes, console tables and the like to the customers who bring in more customers. Mr. Whitley informs us that there are two men in San Diego who are responsible for the sale of at least twenty Matched-Unit sets and they are still going strong as Stewart-Warner boosters. These two men started out as mere customers. They bought their sets and they were well pleased.

Pretty soon they started actively talking up the line to their friends and neighbors and other sales resulted. Then Whitley and Morris got the idea that they might make salesmen of all their customers by offering some inducement. The plan was put into action and it has been working successfully ever since.

Whitley and Morris also have found house to house canvassing an excellent way to boost sales. During the late lamented Summer Slump they grabbed the bull by the horns and took radio right to the public's front door. If the prospect wouldn't come to them they could go to the prospect. This enterprise resulted in the sale of a number of sets that otherwise might even now have been reposing peacefully on the dealer's shelves.

And there is another good idea used by Whitley and Morris that can be used by other dealers. When they call on a person who isn't interested they don't proceed immediately to forget about him. They make a note of his name and put him on the prospect list. Then they keep in touch with him through the mail, send him The Air Current Events and eventually sell him.

The follow-up principle has produced a comfortable volume of business for these Dealers. County fairs offer another good medium for meeting and selling the public. Whitley and Morris found that sales which they made as late as ten months after the fair could be traced directly to contacts made at their booth.



Publicity Assistant, WBBM

Opera stars, "blues" singers, string trio artists, concert pianists, baritones, tenors and theatrical companies come rather high when their talent is bought on the open market. Nevertheless every Stewart-Warner Dealer in every part of the globe has this galaxy of stars working for him as salesmen forty and a half hours every week-and not one of them is on his pay roll.

Perhaps some Dealers may be skeptical as to the efficiency of an opera star as a sales-man. Undoubtedly the Dealer would Sing a term

places, before the microphones of station WBBM, the Stewart-Warner Air Treatre, these artists are probably doing more to create good will and to popularize the name of Stewart-Warner than any high-pressure salesman could hope to do.

It is evident that the WBBM artists are doing their part in getting the name of Stewart-Warner before the public. During the last eight months approximately 40,000 letters have been received from enthusiastic listeners who have heard the station in every state in the Union, in Canada, Alaska, Mexico, the British West Indies, Haiti, Cuba and New Zealand. Try to imagine a salesman making all of those places in eight months.

To acquaint the public with the Stewart-Warner radio line, "Listeners-in" contests were conducted in July and August with Matched-Unit radio sets as prizes for the best letters in regard to features or artists of the station

#### Hand Picked Wave Length

The 226 meter wave length of WBBM is the most adaptable for distance broadcast as well as being a low wave length particularly suited to give clarity of reception. This wave length was selected after careful experimentation by Mr. H. Leslie Atlas, owner of the station to whom it was licensed at Lincoln, Illinois, in December of 1923. Soon after that it was moved to Chicago.

As a commercial station the WBBM time on the air was leased originally to two organiza-tions, one of which was the Stewart-Warner Speedometer Corporation. In March of 1926, however, Stewart-Warner took over exclusively the full forty and a half hours a week.

The programs and the studio staff are directed and controlled by the Stewart-Warner Speedometer Corporation and are broadcast from the studio in the plant at 1826 Diversey Parkway. The transmitting apparatus is located on the roof of the Broadmore Hotel. From the original 200 watt license of the station the WBBM power license was





Complete Home Furnishers 715 WASHINGTON STREET, CORNER STUART

BOSTON 11, MASS

August 26, 1926.

Stewart-Warner Products Service Station, 1111 Commonwealth Avonue, Boston, Mass.

BOSTON IS SATISFIED

#### ATTENTION OF MR. MARQUARD:

Dear Sir:

Last October we signed up with your office for a radio agency and we were somewhat reluctant in handling your Sets, but I cannot help writing you these few lines at this time after solling a large quantity of your different Sets to note, the small amount of complaints, and practically no Sets were ever reported to us not in workable condition.

It is very gratifying to us, more so that we can retain the good-will of our furniture customers by selling them a Radio Set that will give absolute satisfaction. I am pleased to state at this time that your Sets have proven 100% in every respect.

Another good feature which proved to be very profitable was the numerous sales that we derived from customers that have bought the Stewart-Warner Set and sent in their friends and relatives to get a Set just like it.

Very truly yours,

PRIME FURNITURE COMPANY

We don't have to say anything about the letter reproduced above. It not only speaks for itself but for a lot of other satisfied Stewart-Warner Dealers who have written similar letters. In fact, the reason for printing the letter here is not because the experience of the Prime Furniture Company is at all unique but, to the contrary, because it is so typical.

THINK THIS OVER

# **BALANCE OF COLOR MAKES** NEAT WINDOW SAYS EXPERT

 $T^{\rm HIS}$  is the second of a series of articles on the science of window display, prepared for the benefit of Stewart-Warner Dealers by W. L. Stensgaard, head of the Display Division at the factory. The last cdition of the ANNOUNCER carried the first of the series, which dealt with "Power of Attraction." Dealers who follow these articles undoubtedly will get a great deal of information which they can use to advantage their sales.

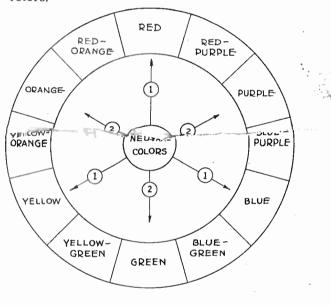
# By W. L. STENSGAARD Manager Display Division The employment of color in window dis-

play has, perhaps, been thought by many to be a matter of personal taste or guess work. While personal taste of the right sort does enter a window display to no small extent, the layman can use color successfully by having a working knowledge of the simple rules as they apply to the proper use of color.

A window display, or any part of it, can be more easily ruined through the improper use or balance of color than perhaps in any other way. For this reason, it is well worth any Dealer's time to master the elementary principles, as no one factor enters into the drawing power of display more than the proper use of color.

There are several theories on color, however, which apply more or less to a specific use. Since this article deals with the proper display of merchandise, we should endeavor to study them as they concern this particular subject.

To understand the use of colors, we will first step back into the position of the color mixer. On the color wheel (Fig. 1) will be noticed three colors pointed out with the arrows marked No. 1. The colors indicated by Figure 1 are red, yellow, and blue. These are the primary colors, which means that they cannot be obtained by the mixing of any other colors.



#### Clinch Your Sales With WBBM Demonstrations

The progressive dealers of radio receivers have recently changed their sales tactics. Formerly they sold a complicated mechanism in a wooden

case. Now they sell a program dispenser. Until lately their sales talk consisted mainly of the mechanical superiority of their line of receivers. This was all very well, except that only one man in ten and one woman in a hundred had the slightest idea as to what it was all about. The laboriously learned technical jargon was all Greek to the majority of customers.

That period has passed. The live wire dealer now talks in terms of programs. After all, the only reason for buying a radio is to hear what is being broadcast.

The prospect wants the set that will pull in the best programs without taking any particular in-terest in the technical processes back of that ability. He realizes that good performance depends on good construction, but if you can satisfy him as to the former he'll take the latter for granted.

In this matter of selling programs the Stewart-Warner dealers have a decided advantage over the rest of the trade. The Matched-Unit Receiving Sets can bring in programs, local or distant, with remarkable clearness. But that's not the half of it.

The point is that the Stewart-Warner dealer can round out his demonstration by setting the dials at 226 meters and tuning in WBBM. He can be sure of an excellent program and he can also augment his sales talk by explaining how Stewart-Warner fulfills its obligation as a manufacturer of radio by operating the "Air Theatre."

Some dealers have the idea that because they are located some distance from Chicago WBBM doesn't help them any. This, fortu-nately, is not correct. The fan letters that come into this station from enthusiastic listeners-in tell a different story.

During September, for instance, a count shows that more letters came in from distant states than from some nearer Chicago. The leading states, ranked according to the number of letters received, are as follows

I letters received, are	43 10110 10 5 .
Illinois	Indiana
New York	Michigan
New Jersey	Kentucky
Pennsylvania	Maryland
Massachusetts	Minnesota

Many dealers located at some distance from Chicago use WBBM for distance demonstrations. S. L. Young, Stewart-Warner dealer in Daniel-

son, Conn., writes in as follows: "I put out Stewart-Warner Radios in the store and sure do like to hear them play, they get so many stations. When I get WBBM at 5 o'clock in the afternoon in the store here, the folks all think it is pretty good, and it is."

The moral of this is: Use WBBM. It is operated for the benefit of the entire organization and should make sales for every dealer.

creased in June 1924 to 1500 watts, making it one of the few super-power stations. At the present time its license permits a broadcast with a power of 10,000 watts. This increased power is not used, however, but the transmitting apparatus is so equipped that the power could be increased in case a "pirate" station should endeavor to usurp the 226 wave band.

A rating as one of the "honor" stations of the Department of Commerce gives WBBM a reputation of integrity in the present chaos in the broadcasting field. This "honor list," published in the monthly radio service bulletin, includes the few stations in the United States that have undertaken mechanical precautions against varying from their wave lengths.

#### Special Features Added

Unusual air feature productions which will bring WBBM to the attention of the radio audience are constantly being added to the programs as part of the broadcasting "sales talk." Kelly Smith, now studio director, has, with the assistance of a feature director, prepared for the winter a series of feature productions which will make the station one of the strongest bidders for the flckle ear of the radio public.

Thousands of sport enthusiasts are living only for the Army-Navy game to be played on Soldiers' Field in Chicago on November 27. To them WBBM will broadcast the game play by play. This feature alone will bring the Stewart-Warner name into the consciousness of vast numbers of listeners.

Other broadcasts on nationally interesting events such as the Army-Navy game, will be put on the air during the year and will serve to make WBBM of public service as well as of public interest. From September 20 to 25 was broadcast from the Broadway Armory in Chicago the International Congress of Jazz, an event of wide interest in the musical world and among all devotees of the great god Jazz. Other special broadcasts have been the dedication of the Elk's Memorial Temple and the tournament for the United States inter-sectional tennis championship. This latter event was the first broadcast of a tennis meet.

The weekly program furnished by the Izaak Walton League of America, which uses WBBM as its official radio station, brings the Air Theatre to the attention of the 150,000 members of the League.

"Bright Spots from the Comic Operas" are being presented every Thursday night at 8:15 by the Stewart-Warner Light Opera company. The most popular and tuneful numbers from the operas will be interwoven with a running review of the plot. This program is bound to be popular not only with lovers of light operas but also with those who enjoy exhilarating music.

The trips of the "Speed Buggy," the travel (Continued on page 6, col. 1)

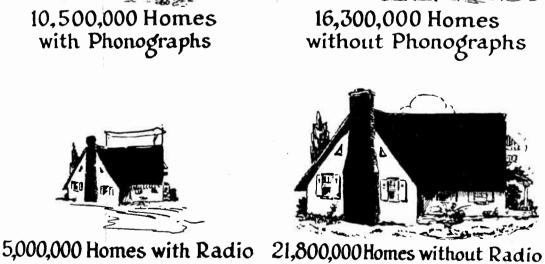


AC:FB.

17,500,000 Homes with Autos



10,500,000 Homes with Phonographs



Look at this illustration.

Look at it with your brains as well as with your eyes. And when you've looked long enough to let it all soak in, sit down and think it over.

In the first place it's an interesting analysis of the luxury market. When the home-owner has some surplus cash, where does it go?

According to our diagram the automobile salesman gets the first crack, then the phonograph man, and, if there's still something left over, the radio dealer comes in for a little.

That looks pretty sad for Mr. Radio Dealer, doesn't it? But before we shed any tears let's take another look from a different angle.

The automobile and phonograph have been on the market for the last twenty years. Radio was discovered only a few years ago, and it has been less than two years since the first satisfactory factory-built sets appeared on the market.

Therefore you would expect a lot more people to own automobiles and phonographs than radios. In fact, looking at the situation in this light, it is surprising that in so short a time there

should be half as many homes equipped with radios as with phonographs, and that for every three families owning cars there is one who has a radio.

9,300,000 Homes without Autos

That makes the outlook more cheerful. And here's another slant on the problem:

The dealer in automobiles faces the situation that two-thirds of the auto-owning class are already supplied. And they are the richer two-thirds at that. Therefore, his job is no cinch. And yet you don't find many car dealers starving to death.

The phonograph field is similarly limited. But the radio dealer has the world before him. Four out of five potential customers are still unsold.

So the wide-awake radio man is out gathering his harvest now, while the field is still unpicked. And if he handles the Matched-Unit line he can be confident that he has the best radio receivers, reproducers and accessories that can be made.

This graphic illustration of sales statistics is reprinted from a recent issue of Radio Retailing.

#### FIGURE 1.

For this reason, they become the basic colors from which all other colors are derived. Now if we mix any two of the primary colors together in equal proportions, we obtain a secondary color, as indicated by arrows No. 2. Thus:

Red and Blue—Purple Blue and Yellow-Green Yellow and Red-Orange

Now, you will notice that each secondary color is directly opposite the primary color that did not enter into its mixing. By using any primary color with a secondary color opposite on the color wheel, we have what is known as "contrast harmony."

These are the "loudest" color schemes that can be used; namely, red with green, orange with blue, and yellow with purple. These colors in their full strength, when placed beside their complements (for example, red is the complement of green), seem to intensify or brighten the other. While such a scheme does attract, it is harsh, and should seldom be used with anything as refined in appearance as Stewart-Warner Radio Products themselves. This is because of the fact that the colors just mentioned make such a strong appeal to the eye that in most cases they detract from the merchandise.

Of course, at Christmas time it is hard to avoid the traditional combination of red and green, although much more quiet colors can be employed in the drapes and floor covers, or a liberal use of white with the use of red and green as a keynote makes a well balanced combination.

Before going any further, let us note on the color wheel between each primary color and the secondary color near it, is the third division, such as red-orange between red and orange, yellow-orange between yellow and orange, etc. We could subdivide these different colors further, but for this occasion we have no doubt dwelt sufficiently with these subdivisions.

Now, any of these colors used with the one opposite on the wheel, is also a contrast scheme, thus-red-orange and blue-green.

By mixing all three primary colors together, we get a neutral color (see small circle in center figure No. 1) depending on the proportions. grey, brown, olive green and citron. These colors are neutrals and can be used in combination with a pure primary, thus-an olive green with red. In this way, the green is "toned down" and will not appear to jump when used with the red.

We are now ready to leave the "contrast (Continued on page 5, col. 1)

# Banford Stages Radio Convention at Indianapolis



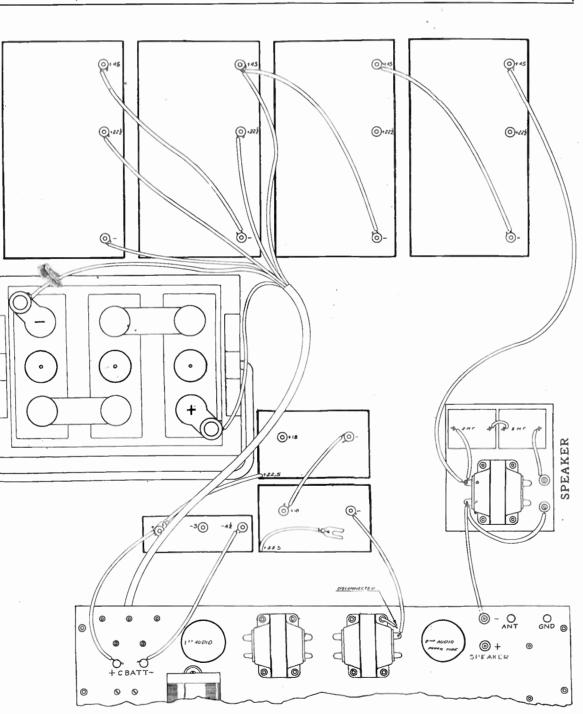
Who's Your Tailor? No, that isn't it—Hoosier Radio Dealer. Here they are, 35 or more Stewart-Warner live wires who have been putting Matched-Unit sets over in a big way in Indiana. The occasion for this picture was a state-wide radio sales conference staged by L. L. Banford, distributor at Indianapolis. The picture, as the letters on the window indicate, was taken in front of Mr. Banford's Service Station. Mr. Banford, for the benefit of those who don't know him already, is standing at the extreme right. The big fellow standing back of the Reproducer in the center of the group is Oden F. Jester, assistant radio sales manager of Stewart-Warner. He looks terribly mad about something, but we can't help that. If you will look in the front row, two figures to the right of the table, your eyes will rest on the sleekly tailored figure of C. H. Stone, assistant chief radio engineer at the factory. Mr. Stone has a reason to look pleased because he had a hand in the development of the new one-dial sets and reproducer, which are taking the country by storm. We would like to print the names of all the Dealers but they skipped out before the picture was developed.

## USE THIS HOOK-UP WITH POWER TUBE

A number of inquiries have come in from Stewart-Warner Radio Dealers concerning the new power tubes and their use on the Matched-Unit Receivers.

These tubes require a special C battery hookup so they obviously cannot be used on the three-dial models which have no connections for C batteries. The following directions apply only to the new one-dial sets.

The normal C battery connection on these one-dial receivers provides for C batteries on both of the audio frequency amplifier tubes.



## Experts Explain All Angles Of Radio Business To Indiana Dealers

#### (Continued from page 1)

during many years in the accessory business. As a Radio manufacturer, Stewart-Warner was entirely new. The reputation of the company was enough, however, and not many months passed before the new Stewart-Warner sets were selling fast.

Dealers who are signing up now have more than the prestige of the company behind them. They have a record of more than a year's successful performance. When they sell a set, they know, and the prospect knows, what it

6 volts and yellow and black for minus 6 volts,

remain as before. Increased volume can be obtained by connecting the red lead to plus 135 volts instead

of 90, and providing  $7\frac{1}{2}$  volts of "C" battery. Selectivity can be modified by raising or lowering detector and radio frequency voltages.

#### Don't Tamper With Slack

The secret of successful operation of the one-dial receiver lies in the definite amount of

The audio system of these receiving sets is such that programs can be brought in on the loud speaker with ample volume for home use. However, when the radio is to be used to furnish music for dancing in a large hall or for outside demonstrations, more volume may be required.

This can be obtained by using the power tubes that have recently appeared on the market, which are designed for operation in the last audio frequency stage. Their use makes it necessary to provide additional C batteries and to make a slight change in the wiring.

This is done as follows: Disconnect the black wire that is soldered to the "F" lug on the right hand audio frequency transformer and replace it by a flexible lead.

This new lead from the "F" terminal of the transformer is connected to the negative post on the power tube C battery. The positive post of this battery is connected to the negative C post on the receiver.

The regular small C battery may be connected across the positive and negative C posts on the set. The accompanying sketch illustrates the completed hook-up.

Naturally a power tube that increases the volume of a receiving set requires more power than is ordinarily necessary. However, it is not advisable to use a greater B voltage than 135 volts on the audio system. This voltage from the B batteries is connected to the red lead in place of the normal 90 volts.

Twenty-seven volts is the usual C battery voltage for a power tube requiring 135 volts from the B batteries, while the C voltage for the first audio frequency tube at 135 volts would be only 7.5 volts.

It must be remembered that only one power tube can be used in a receiving set, and then only in the last audio frequency stage. As this tube calls for so much B current, as much as the total for the other five tubes, the life of the B batteries will be considerably shortened. It is therefore suggested that these batteries be replaced with a good B battery eliminator.

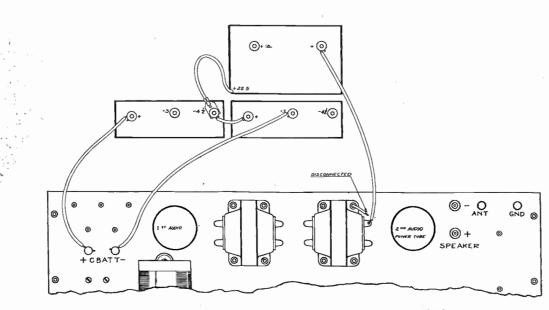
The windings of the reproducer must also be protected against the large amount of B current and pressure. This is accomplished by passing the output through a choke system similar to that shown in the sketch.

Practically equal results to those obtainable with a power tube can be attained by using one of the regular 501-AX tubes in this capacity. It is best to select one having a high mutual conductance (about 800 micro-mhos at our standard of measurement).

As high as 180 volts can be placed on this tube, providing the C battery has approximately 12 to 13<sup>1</sup>/<sub>2</sub> volts. The lower section of our sketch shows such an arrangement may be made.

The 415 speaker may be operated without difficulty as high as 135 volts B pressure. Under no conditions, however, should it be used with this extra high voltage unless the by pass scheme is used, as illustrated.

Power tube connections using 180 volts on last audio frequency tube and 40.5 volts C bias.



Power tube connections showing 135 volts on power tube and 27 volts C bias.

will do.

The next speaker was Mr. C. H. Stone, Assistant Chief Radio Engineer of Stewart-Warner. Mr. Stone's talk was labeled "Radio Theory," but it ought to have been entitled "Radio Facts," for it dealt with a number of problems that Stewart-Warner Dealers encounter every day.

Mr. Stone brought out an important fact dealing with the new Model No. 501-AX vacuum tube. Some of the Dealers seem to have had the idea that the manufacture of this tube relegated the standard 501-A to the scrap heap, and consequently they consider the older model obsolete, and have ceased to boost its sale.

The truth is, according to Mr. Stone, that the 501-AX and the older 501-A are identical "from the neck up." The only difference lies in the fact that the 501-AX has what is known as the long-prong base, making it adaptable for use in the flush type socket, as well as in the regular navy type shell socket.

Mr. Stone urged the Dealers to sell the standard S501-A tubes for use in those models of the Stewart-Warner line having Navy base or shell sockets. The 501-AX, however, must be used in the single dial receivers with flush sockets.

New Speaker Described Mr. Stone then went into brief discussion of the performance and mechanism of the new Model 415 drum type reproducer. This speaker, he said, is a genuine achievement in radio engineering. The characteristic vibration, or natural period of the mechanism, was "cut off short" so as not to affect reproduction.

Here's another point. The Model 415 was designed as an item in the Matched-Unit scheme, and it will reproduce a great volume when the set is operated normally. When the speaker is used with any special amplification system, it is better to protect it by means of an audio frequency choke circuit.

Jumping from the Model 415 Reproducer to the one-dial set, Mr. Stone put special emphasis on the proper scheme for tuning in distant stations. This involves a rocking motion of the single tuning control in the vicinity of the desired wave length setting. This slight movement tunes the three attached variable condensers individually.

For all other signals, the method of tuning is simply the turning of the knob to the desired wave length.

Then Mr. Stone took up the color system used in identifying the cables leading from the receiving set to the batteries. The red lead, for instance, which is attached to the audio frequency system, should be connected to plus 90 volts, and the yellow and red wire from the radio frequency, should be connected with plus  $67\frac{1}{2}$  volts.

The maroon lead from the detector circuit connects the 22½ volts and the red and black lead hooks up with negative "B". The regular colors for "A" battery leads, yellow for plus

slack present in the transmission bands connecting the three condensers. This slack is carefully set at the factory and should never be taken up, as such a readjustment would throw the tuning arrangement out of step. Taking up slack or adjusting condensers should not be included in the Dealer's service to his customers.

The next speaker was O. F. Jester, Assistant to R. H. Woodford, Radio Sales Manager, Mr. Jester told the Dealers that Radio receivers no longer are bought. They are sold. The best and latest in Radio merchandizing ideas must be exploited by Dealers who expect to be successful. Thorough and systematic canvassing was stressed by Mr. Jester as an important factor. This plan, he recalled, has been used with excellent results recently by a nationally known manufacturer of electric sewing machines. It works for sewing machines—why won't it work for Radio?

Mr. Jester was scheduled to have been followed by Mr. W. L. Stensgaard, Manager of Stewart-Warner's Window Display Division. Mr. Stensgaard, however, was detained at the New York Radio Show and could not get to Indianapolis.

He sent a telegram of apology, adding that the Stewart-Warner exhibit at the New York Show had been voted the best at the exposition by the 35,000 persons who paid admission on the first day. In the absence of Mr. Stensgaard, Mr. Jester briefly explained the nature of Stewart-Warner's window display service. This has been dwelt upon at length in previous editions of the "Announcer."

Mr. Henry J. Giessenbier, head of the Reserve Discount Company of St. Louis, outlined a plan for financing time payments on Radio sales. This talk was identical with the one Mr. Giessenbier gave at the recent sales convention at St. Louis, and Dealers may find a complete report in the 10th edition of the "Announcer."

After the hard work was over at the Convention, the Dealers and other guests gathered in the James Whitcomb Riley Room of the hotel and staged a banquet. A number of brief talks were on the program at this event. They were mainly reiterations of what had been said during the business session.

### Order Advertising Early For Show Distribution

Dealers have been ordering advertising material for distribution at local radio shows only three days to a week in advance.

This does not give us time to put through the order and ship the goods to their destination before the show. There is also the factor of increased expense when we have to use express.

Dealers and stations should co-operate by anticipating their needs earlier.

# Dallas Station Celebrates Its Tenth Anniversary

# DISTRIBUTOR **OPENS RADIO** DEPARTMENT **IN NEW HOME**

Five years ago the public laughed at radio and predicted, as the public always predicts, that it never would amount to anything.

Five days ago, more or less, they called out the police to regulate the crowd that blocked traffic at the opening of the new Radio Section of the Dallas Service Station.

One of the features at the opening was the broadcast of a program by Station WFAA from the new Stewart-Warner studio in Dallas.

· Another was the awarding of prizes for the three best answers to the proposition: "Why I want a radio."

This feature brought in approximately 1,500 replies from Dallas and nearby towns. The prizes were Stewart-Warner Receiving Sets offered by the Dallas Service Station, the Dallas Power and Light Company and the Edison Shop. The Light Company and the Edison Shop are the two Stewart-Warner Authorized Dealers in Dallas.

Here are the three reasons selected as the prize winners by the contest judges:

"I want a Radio because it is a ready agent bringing me association with mankind; driving away loneliness by giving me interest in affairs of state, church, art, science and literature in their onward rush toward perfection" - Jessie Staub, 721 Fidelity Union Building, Dallas.

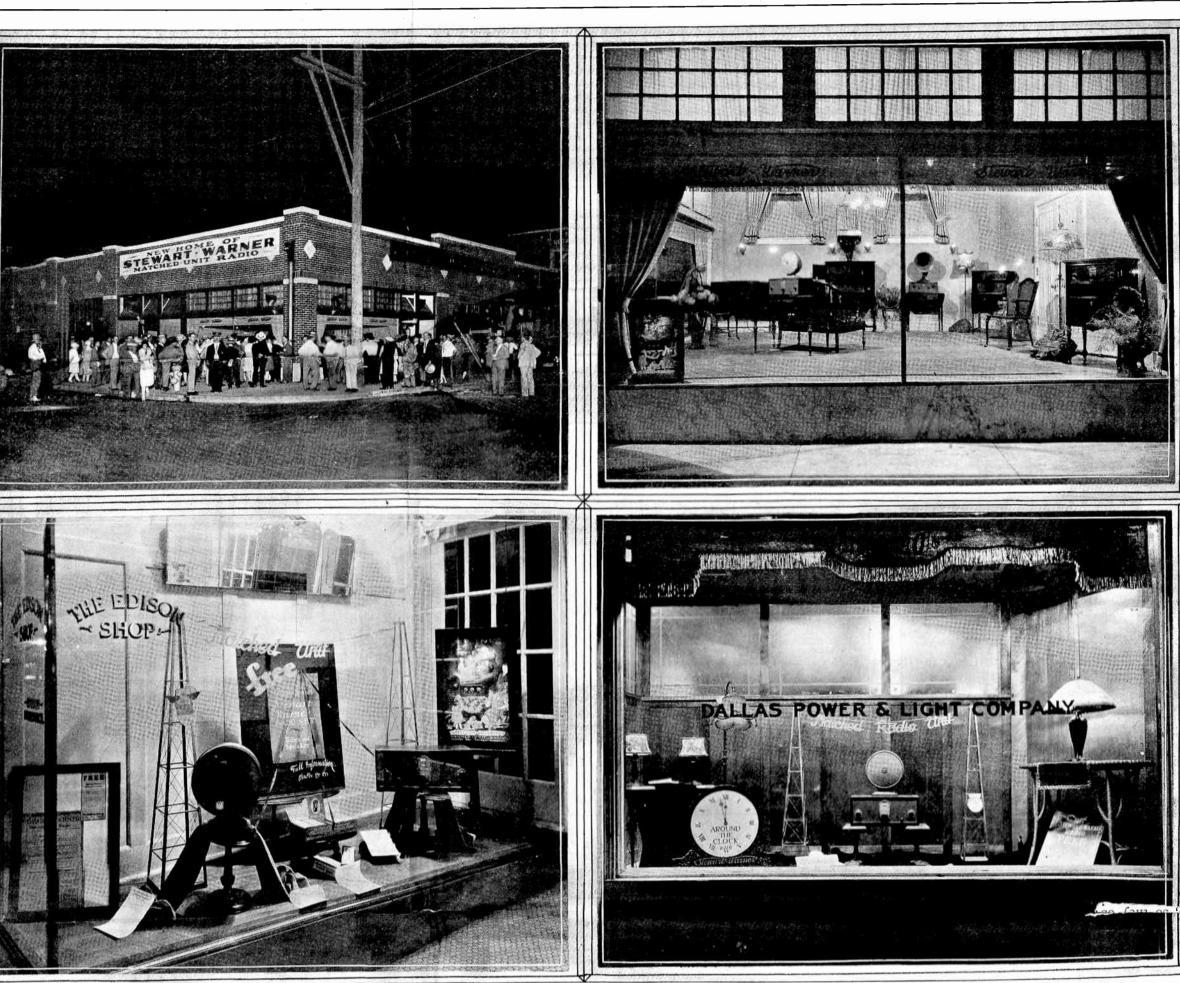
"Because Radio is an ever-flowing stream of diversion draining the best talent from every realm of activity; quickly and abundantly conveying information, instruction and entertainment to interested audiences everywhere"-G. E. Scruby, 5935 Mercedes St., Dallas.

"Because of its educational benefits, inspiration, entertainment, broadening influences and last, but not least, the opportunity it gives the music hungry in the small towns, to hear the great artists."-Miss Mae Sammons, 1131 W. Woodard St., Denison, Texas.

The opening celebration marked the tenth anniversary of the career of G. P. Burgess as Stewart-Warner Distributor in Dallas.

Following is the brief talk made by Mr. Burgess in connection with the event:

"Since this radio program is being broadcast on the 10th anniversary of my connection, and that of my business associate, Mr. Clarence Gustafson, as Southwest Distributors for Stewart-Warner, I have been invited to speak of some of the factors which are related to the progress we have made. In doing this I am reminded of the many changes in the automobile industry to which, during these ten years, we have been so closely allied. "On the item of highways, it is estimated that approximately twenty million dollars will be expended on the highways of Texas during the year 1926. This strikes us as a staggering sum as compared with the less than one million expended during the year 1916, but it only reflects the growth of an industry which had not been surpassed prior to its inception.



arrived to cart away the dead and dying. In reality it is a snapshot of the new Radio Division

The picture in the upper left looks like a front page thriller taken just before the ambulance the crowd multiplied to such numbers that police were called out to keep the people from stepping on each other. The photo in the upper right shows the Station's display window, while ws of Stewart-Warner's two Blue Ribbon Radio Dealers in Dallas.

"In 1916 Texas had a total car registration of 194,720 motor vehicles, while the registration for the year 1926 will exceed one million.

"The automobile has become such an important part of our daily life, I often wonder if people ever stop to realize that it is the improved motor car and radio that are developing our country. By that, I mean during the last five or ten years, so many new features have been added to the automobile to make it safer, surer, sounder and simpler to drive. It is in this sphere that that great institution at Chicago, the Stewart-Warner Speedometer Corporation, has played an important part and I believe I can say modestly, has been a potent factor.

"Any story concerning the manufacture of Stewart-Warner Products is a story filled with phenomenal achievement.

"From an obscure beginning back in 1906, this institution has risen to world leadership by devoting its efforts to the manufacture of devices to make the automobile more comfortable, more safe and more simple to operate. Today Stewart-Warner Accessories are used on more than twelve million cars. Stewart-Warner factories command unequaled facilities for quantity with quality production. They comprise a floor space of more than 22 acres and represent an investment of many millions of dollars.

"With this splendid record as a background it is not surprising that Stewart-Warner would sense the possibilities of the Radio Industry.

"The Radio Industry, whose growth has surpassed that of the automobile, and the radio industry as we know it today, had its beginning in 1920.

"Today there are more than six hundred broadcasting stations in the U. S. alone, their waves reaching the remotest part of the country. One of the stations is WBBM, operated by Stewart-Warner at Chicago.

"As a result of Stewart-Warner's embarkation in the manufacture of Radio, we are able to celebrate our tenth anniversary by moving into our enlarged quarters at Jackson and

of the Dallas Service Station on its opening night. A few minutes after the picture was snapped





G. P. Burgess

ing time with an institution whose destiny in radio is based on sound fundamental business principles."

The celebration at the Dallas station was in the nature of a house warming. It opened at 7:30 in the evening and the first hour was devoted to explaining the new Stewart-Warner models to the visitors.

After that came the talk by Mr. Burgess, the contest and the broadcast.

Fifty Dealers in the Dallas territory were on hand at the event and they helped Mr. Burgess and Mr. Gustafson in the important business of entertaining the crowd. They had been in Dallas for two days preceding the house warming attending a Dealers' Convention.

Among the visitors at the convention were several factory representatives, including Mr. V. N. Hansen, Service Station Sales Manager. Mr. Hansen described the opening celebration very effectively in the following letter to Mr. W. J. Zucker, general sales manager:

T arrived here at 1:10 yesterday after-

son's attractive new Station. The new Radio Division, I want to tell you, is an outstanding credit to our organization, reflecting as it does both enterprise and outlay such as is seldom seen in the Stations as a whole.

Today is the big day of the session; the main front corner of the building has two large plate glass windows facing each of the two streets and these four windows look in on their studio where Station WFAA will broadcast with their various talent. In the center of this attractive studio is a grand piano and furniture. floor lamps, rugs, etc., such as will lead you to believe that you are stepping into our own broadcasting studio at the factory except on a minor scale.

Adjoining that room is a room some twenty feet by sixty feet which this week is being devoted to convention programs. Some thirty of their better dealers are attending with a quality of interest that makes it look like "seventh grade in school." Various battery men, "B" climinator representatives, our own Mr. Fernandez from our Radio Engineering Department of the factory and the writer have had the privilege of addressing these dealers at length on our respective topics.

The large black-board in front has held the interest of the dealers who are technically inclined, as Mr. Fernandez and others have elaborated upon the various technical details they have sought to put over.

We have several hundred replies to the newspaper announcement with which was incorporated a coupon asking for the best reasons why the public would like to own a Stewart-Warner Radio; and the reward for the best of these replies is a Stewart-Warner Radio to three different individuals. The replies are mighty interesting to look over and it leads me to believe that this would be a good idea for our own stations and dealers.

Mr. Fernandez happened to step into Mr. Burgess's Station at Houston the other day while in Texas to see his father who is ill. The boys in Houston wired Mr. Burgess, knowing that he was particularly anxious to have a factory engineering representative here at their convention; and Mr. Parker at the factory readily agreed to his coming up here to spend three days among the dealers who spent their own time and money in com-ing in here to learn more about Stewart-Warner Radios.

## HEADS RESEARCH



#### Sylvan Harris

Sylvan Harris, nationally known authority on Radio and former technical editor of Radio News, has been appointed head of the Research Department in the Stewart-Warner Radio Engineering Laboratory.

Mr. Harris is very well known for his excellent contributions to various radio magazines throughout the country. His best contributions to the radio industry have been treatises on the variable condenser.

The addition of a radio authority of such ability as Mr. Harris to the Stewart-Warner staff of Radio Engineers is in keeping with the progressive policy of the corporation.

and I know that Mr. Burgess is sincere in expressing his appreciation of my coming down as a factory sales representative.

I hope to be back in Chicago about Friday of this week.

With kindest personal regards, I

## PUBLIC SCHOOLS **OPEN NEW FIELD** TO RADIO TRADE

There is a field for radio merchandising that some of our dealers have taken advantage of and others have not explored.

This field lies in the public schools, where the radio is bound to supplant the piano and the phonograph.

It occurs to us that a number of sales are waiting for dealers who get busy and canvass this territory before some other merchant gets there first and stakes out a claim.

We don't mean that the schools are an entirely new field that no radio salesmen have ever entered, but it is a fact that in most localities they have not been canvassed extensively.

The field has been pioneered but it remains undeveloped.

One way of breaking the soil is through the teachers. Generally they don't have anything to do with purchases of school supplies but at any rate they have influence. If the teachers, singly and collectively, prefer radio to the piano or phonograph for class room use, it is a pretty good bet that the school board will buy a few.

It ought not to take a great deal of talking to convince school authorities of the value of radio instruction. This is especially true insofar as instruction in appreciation of music is concerned.

A piano is just a piano at best and it can't impersonate orchestras and bands. Furthermore, in the average school, the chances are that there isn't one person out of the bunch who can draw anything out of the ivories except a lot of noise, which naturally would not furnish a great deal of inspiration to the students.

The phonograph has the disadvantage of a limited selection of numbers, depending on the ability or the inclination of the school board to invest in records.

The radio alone offers endless variety-all kinds of music interpreted through all kinds of mediums. In addition to that, the radio brings in lectures and information.

At any rate, here's a tip for the dealers who are interested: Mrs. Pearl Baltzell, 502 East Ohio Avenue, Mount Vernon, Ohio, has prepared a list of school teachers by counties which she is furnishing for \$1 per county. Maybe you want a list covering your section and maybe you can get the list through some other source.

The point we are trying to put over is that the public schools look like a pretty green pasture.

# Stewart-Warner Broadcasting Station Aids Dealers

# AIR THEATRE **OFFERS BEST PROGRAMS TO RADIO PUBLIC**

6

#### (Continued from page 2)

talks so widely listened to during the summer, will appear again after October 1 in a series entitled "Around the World with the Stewart-Warner 'Speed Buggy'". They will be pre-sented under the direction of Billy Spears, internationally known travel authority. He and his two travel companions will, via the air, visit most of the intriguing spots of the globe. The music of the countries visited will be used as a background to their conversation and the travelogue descriptions.

For the classically minded radio listeners is offered at 8:15 on Friday nights a duo-artist recital under the direction of Lester D. Mather, concert pianist.

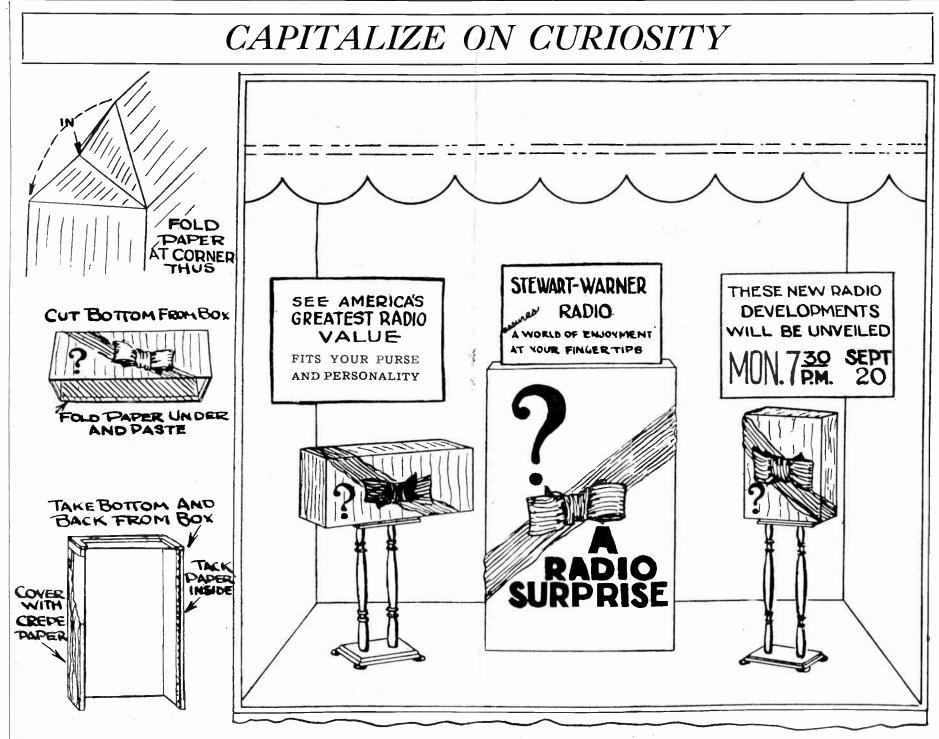
Two new orchestras, Art Cope's Vanity Fair Orchestra and Cope Harvey's orchestra, dispense riotous music from the station during the evening hours. The Stewart-Warner String Symphonette, a trio of accomplished girl musicians, furnished classical music every afternoon from four until six and between the hours of eight and ten at night. From six until seven on Monday night, there is tea dance music broadcast by remote control from a downtown hotel.

The Nutty Club, whose meetings are conducted by Charlie Garland, former studio di-rector, holds forth on Wednesday and Sunday nights from twelve midnight until the last fan stops wiring or phoning into the studio. The Nutty Club has a staggering number of members, all of whom seem willing to stay up all night to attend the meetings.

Howard Osborne and his Stewart-Warner International Radio Orchestra are now on a tour of the Orient. On September 7 they sailed from Seattle on the S. S. President Jackson to visit Japan and China. Besides playing on ship board under the Stewart-Warner name, they will give Chicago jazz con-certs for the Dealers in Yokohama, Tokio, Kobe and other Asiatic cities. On their return to America, the orchestra will be the Stewart-Warner Air Theatre orchestra and will broadcast as the studio orchestra. It will be the first orchestra to be a permanent adjunct of the station, for hitherto all of the dance orchestras have been broadcast by remote control from some dance floor.

#### Large Regular Staff

Aside from these special occasional produc-tions on the WDBM programs, there is the WBBM staff, one of the largest maintained by any station, which is always "on the job" to furnish the programs of music that draw delighted applause from thousands of their invisible audience and requests from thousands



It has been proven that suspense is one of the best ways of attracting attention. If you can get the public guessing as to what you have for them, they will eagerly wait for the disclosure.

Barnum demonstrated this when his "What Is It?" filled his tent with people and his money box with dimes. And everyone is familiar with advertising campaigns of the curiosity-arousing kind.

There is every reason to believe that this suspense plan could be effectively used in a window display. With this in mind the Display Division has prepared the accompanying sketch, showing how you may make a "Radio Surprise" to bring out the new Matched-Unit models.

This display may be easily constructed with little or no expense. The boxes may be made from the shipping boxes in which the sets are received. These boxes should then be covered with crepe papers or sateen of attractive colors. Around the box is then placed a ribbon on which is pasted a cardboard question mark. The words, "A Radio Surprise" may be cut out of cardboard and pasted onto the covering, or if the surface is smooth enough, the letters may be painted on.

The signs for the glass and the central window card can be lettered in any way desired. The wording on the signs in the sketch is merely a suggestion of what may be done.

In fact, the entire layout as shown is more in the nature of a suggestion than a definite plan to be followed exactly. Windows vary in size and some dealers will want to work out more elaborate displays. Others may have ideas of their own to incorporate.

The display should be exhibited for a week or so before the unveiling. At any rate, it should be shown for a long enough time to arouse interest and to get people talking about it.

The Display Division is interested in this idea and will appreciate letters from dealers using it, telling how the plan works out for them. Questions or suggestions concerning any details will be welcomed by that department.

**RADIO BOOTH AT** 

## **NEW DISPLAY CONTEST FOR** S-W DEALERS **IS LAUNCHED**

(Continued from page 1) loud speaker are taking the country by storm. Display them in your windows.

As we said before this display may net you \$175. The grand prize winner will clearly be the best of the three windows winning the monthly first prizes, so that one photograph will be awarded first \$25 and later \$150. Not to mention the tube.

If you need any assistance in arranging a display the Display Division at the factory will be glad to help. The Distributors, through their salesmen, will also be ready to offer suggestions.

Incidentally, by entering this contest you may help your Service Station win the additional cash prize of \$50 that will be given to the Station from whose territory the largest number of entries are received during the entire three months of the Window Display Contest.

Now is the time to get started. The contest opens October 1st and it's none too early to begin planning your displays. Fall into line and make this Contest 100 per cent, a display every month from every dealer.

- Here are the rules of the Contest:
- The Contest is open to every Authorized Stewart-Warner Matched-Unit Radio Dealer. The displays may be placed by the dealer, any of his employees, or a pro-forming displayer and study by the
- fessional display man selected by him. 2-Photograph of Matched-Unit Radio Display that you have installed between October 1st and December 31st must be no smaller than 5x7 size, 8x10 size is considcred better, and photograph made at night is preferred. All photographs must bear the postmark as having been mailed before midnight of December 31st, 1926. Photograph should be mailed flat, and not rolled or folded.
- 3-Write name and address of firm and name of party who placed the display on the back of photograph and mail to the Contest Editor, Display Division, Stewart-Warner Speedometer Corporation, Chicago, Illinois.
- -Send brief letter describing the display with the photograph and state the actual increase in your Matched-Unit Radio business, if any, during the week the display was in your window over the previous week. Also did your display attract more than the average attention a doubt attract more by? Further, tell us any doubt attract sales created thereby. This will help us tabulate Point No. 4 "Sales Results," on which a maximum credit of 100 points is possible.
- 5-Give the exact size of the floor in your window so that we may figure the square feet of floor space and place your entry in class

This is a reproduction of a full page advertisement appearing in The Saturday Evening Post, issue of October 2nd, 1926

"This is Station WBBM, the Stewart-Warner Air Theatre, Chicago, operated by the Stewart-Warner Speedometer Corporation, makers of Better Accessories and the Matched-Unit Radio."

These are the opening words that go out on the air in the mellifluous voice of Nate Caldwell, chief announcer. Nate, a radio announcer of wide experience, is said to be one of the most popular at the microphone today. Besides his ready announcements, Nate plays the piano and ukulele and sings weird songs about undertakers and onions.

The \$25,000 special Barton radio organ was installed this spring when the studio was en-larged and redecorated. The most popular organ artist is probably Eddie Hanson, who gives a daily recital from five until six and a program of church hymns from 12:30 to 2:00 p. m. Sunday. Eunice Hoeffer, petite and pretty, plays both the organ and piano as does Charlie Garland who composes most of the numbers he plays.

"Red hot" are the adjectives that describe the "blue" songs sung by Kay Ronayne, contralto syncopator. Kay plays and sings her "blue" numbers in a way that gives a tremendous "kick" to every one who listens in. She is in great demand on request programs.

"The Baritone with the Lovin' Voice" as a fan christened Fred L. Jeske, has a subtle something in his voice that brings him more mail from the women than any of his fellow staff-members. If the women could see Joe Allabough, the tenor with the melting brown eyes, they would undoubtedly fill his box with letters.

When Lee Sims, pianist of the lightning fingers, joined the WBBM staff some months ago, he was announced as "Mr. X". Listeners were asked to identify him by recognizing his radio personality as he had established it from another Chicago station. Correct guesses from 2004 out of 2037 listeners prove that he has a radio artistry that is distinctive.

#### Publicity Aids Dealers

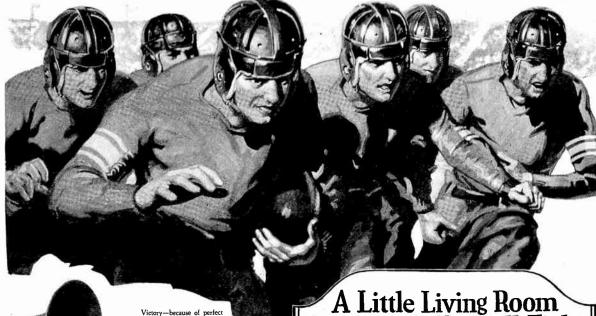
Charlie Shultz, "the eighty-pound Alemite tenor" is another very popular entertainer. He has a sense of humor and a funny bone that tickles the ears of his audience and make them cry for more. He weighs 180 pounds.

Sympathetic ballads are Hazel McBroom's specialty since they are so peculiarly suited to her warm contralto voice.

Entertainers from other Chicago stations, and from stations outside of the station, gravitate toward WBBM frequently and appear on the programs. The Nutty Club usually attracts a number who lend variety to the offerings of the "program committee."

Besides the air publicity that Stewart-Warner derives from its radio station, its name is publicized through the medium of news published about the station and its activities. Stories about the station and its stars go out

# STEWART-WARNER Matched-Unit Radio



# A Little Living Room Becomes a Football Field

ONE can't measure the size of the living room with a ruler any more. Right here in our living room this alternoon were twenty-two big, brawny fellows. There they were, strug-gling, rushing, gasping for breath. We fought with them on the forty-five yard line, we were held tense in our chairs as they crashed over the ten yard line, and we jumped up and cheered when with one great effort they crossed the goal line.

"And tonight, with the quiet and peace of falling shadows, there will enter this same small living room a forty piece sym-phony orchestra, or perhaps a well known jazz band to set us a-dreaming with beautiful melodies or awaken our fancies with weird harmony.

That is the entertainment that awaits you, that converts your room, your home, into a stadium or an auditorium. All comes to you with the turning of the dials of a Stewart-Warner Matched-Unit Radio.

And the announcer's voice is clear, the orchestral strains are full and true, because in this Matched-Unit Radio every little part, every important unit is matched to perform together in perfect harmony. Not only that—the Stewart-Warner Re-ceiver, the Stewart-Warner Reproducer and the Stewart-Warner Tubes are designed and made with the same thought of unity in mind.

Your nearest Stewart-Warner Dealer, one of our many Blue Ribbon Representatives, will be pleased to bring you these many hours of happiness that come with a Stewart-Warner Matched-Unit Radio.

STEWART-WARNER SPEEDOMETER CORPORATION

TWELVE MILLION PEOPLE ARE TODAY USING STEWART-WARNER PRODUCTS

weekly to 1800 daily newspapers. National press associations give further distribution to the station news, as do the radio magazines and trade journals. Pictures of the radio entertainers and personality stories about them are in constant demand.

The Stewart-Warner Line

Five-tube, tuned radio frequency models with two tuning dials • • \$65 to

ve-tube, tuned radio frequency models with three tuning dials - \$65 to \$400

Six-tube, tuned radio frequency models with one tuning dial • • \$80 to \$400 art-Warner Matched-Unit Tube - \$2

rices are without accessories) slightly higher west of Rockies}

In the matter of publicity for the stations

the Dealers themselves can be of great value. In the near future Dealers will be furnished with news stories about WBBM which they may be able to place in their city papers. The Service Stations and Sub Service Stations are already offering valuable assistance in this connection.

## COUNTY FAIR IS **GOOD SALESMAN**

A good dealer misses no chances to get business. And he sees opportunities that others are likely to overlook.

Meerdink and Willets, Stewart-Warner Radio Dealers in Watts Flats, N. Y., furnish a case in point. When the county fair was announced they immediately signed up for a booth to dis-play the Matched-Unit line.

Then they circularized the county as follows: TAKE NOTICE

If you go to the Chautauqua County Fair next week. September 6-10, be sure to see the Stewart-Warner Radio Booth. All of the latest models will be shown there, including the new Six-Tube Receivers and the new Reproducers. There's only one Matched-Unit Radio. the Stewart-Warner. If you do not get to see these models, ask for a circular or a free demonstration, or come and see one at our store.

### Revised Size And Style For Air Current Events

The October issue of "Air Current Events" inaugurates a new style, size and general make-up of this magazine. The new "Air Current Events" will be 93/4 inches wide and 123/8 inches long and will be printed in two colors.

These magazines are not to be imprinted but there is ample space reserved for you to insert your name on them. The prices have been greatly reduced and you may now purchase "Air Current Events" in any additional quantity, over the free quota of twenty-five each month, as follows:

100 copies\$ 5.00
200 copies 9.75
300 copies 14.50
400 copies 19.25
500 copies 23.75
1000 copies 35.00
It is advisable to send in your orders
promptly. There is only a limited number of
copies of the October issue and the size of
future issues will be determined by the orders
received now. Fill out the attached coupon

Dealer's Business Halted When River Floods Town

and send it in today.

Grimes and Epting, Stewart-Warner Blue Ribbon Dealers at Burlington, Kansas, suffered serious damage to their stock last week when the Neosho river overflowed its banks and flooded the business district. For several days the water rushed through the streets in a foaming swirl. At the crest the water stood about three feet deep on the first floor level.

- A or B accordingly. Windows with floor space of thirty square feet or less will be placed in Class A. Windows of thirty-one square feet or more will be placed in Class B.
- 6-Send as many photographs as you wish. Every entry you send will increase your chance of winning a big prize. Special prizes are offered for the best entries each month during this Contest. Grand Prizes will be awarded for the best photographs received during the entire Contest.
- -A variety of Stewart-Warner Matched-Unit Radio Models and Accessories should be shown in your display. However, remember not to overcrowd your display, but keep it attractive. Your display should remain in the window at least a week.
- 8-A committee of five judges with display and merchandising experience will judge the Contest. Be sure to have sufficient stock to place your display and meet the sales your display will help create for you.
- 9-Points Prizes Will Be Awarded for: To make certain that the best windows are awarded the prizes, the following scale will be adhered to. Make your displays accordingly.

1—Attractiveness	200 points
2—Originality	200 points
3—Human interest appeal	200 points
4—Sales Results	100 points
5—Use of S.W. display material	100 points
6-Use of own display material.	100 points
7—Decorative effort	100 points

1000 points

WBBM
The Stewart-Warner
Air Theatre, Chicago
226 Meters
Sundays—12:30 p. m. to 2 p. m. 4:00 p. m. to 6 p. m. 8:00 p. m. to 10 p. m. Mondays—12:01 a. m. to 3 a. m.
4:00 p. m. to 7 p. m. Tuesdays—4:00 p. m. to 6 p. m.
8:00 p. m. to Midnight. Wednesdays—4:00 p. m. to 6 p. m.
8:00 p. m. to 10 p. m. Thursdays—12:01 a. m. to 2 a. m. 4:00 p. m. to 6 p. m.
8:00 p. m. to Midnight. Fridays—4:00 p. m. to 6 p. m.
8:00 p. m. to 10 p. m. Saturdays—4:00 p. m. to 6 p. m. 8:00 p. m. to 2 a. m.
WBBM's program is broadcast on Central Standard Time. Tune in and hear Stewart-Warner on the air.

# Matched-Unit Display Makes Hit at New York Show

# **BALANCE OF COLOR MAKES NEAT WINDOW** SAYS EXPERT

#### (Continued from page 2)

schemes" and go on to the analogous schemes. The latter are obtained by using any color in conjunction with the color or colors next to it on the color wheel, thus-orange, yellow. Orange and yellow is an analogous scheme, or simply the orange and yellow-orange, etc.

So far we have been talking about colors used in their full strength, or intensity. Be-sides the divisions referred to, color can have different "shades" by the addition of black. The more black that is added, the darker the "shade." On the other hand, a color can have "tints" by the addition of white. The more white added, the lighter the "tint." A very pleasing color scheme is a monochromatic scheme, namely one made up of various "tints" or "shades" of the SAME COLOR.

Thus we could have a purple floor covering with a tint a few steps removed (a lighter purple with the same hue in red or blue added) for a back drape, and one in between of perhaps still a lighter shade, etc.

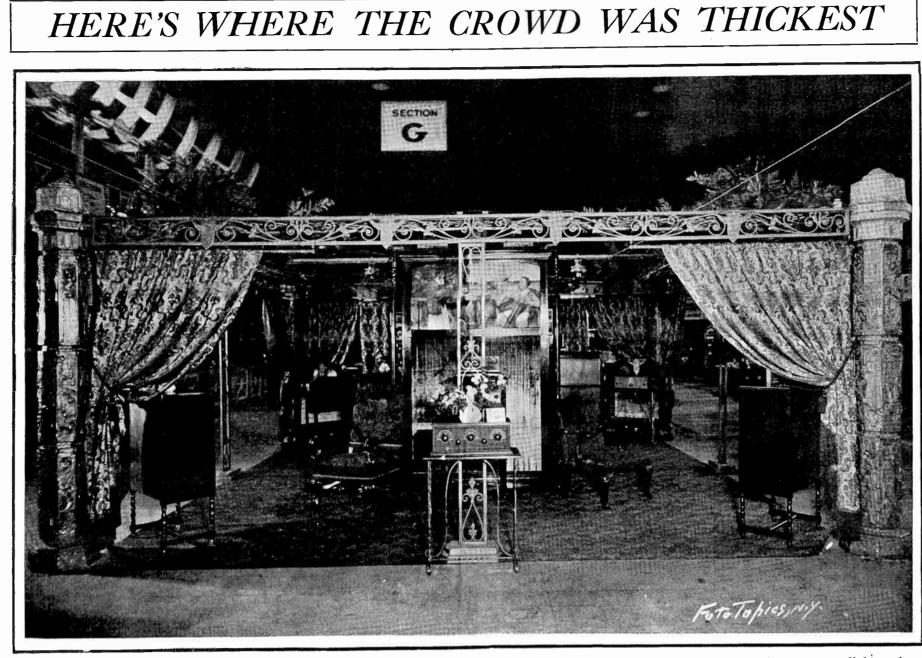
We have one more scheme to suggest: namely, "Perfected Harmony." This is accomplished by using an analogous scheme with a touch of a complement on one of the colors in it—thus—orange and yellow used with a small amount of blue-purple. "Perfected Har-mony" should not be attempted at first, but grow into it by the use of the other schemes.

We now come to the question of how much of one color to use along side of other colors in any scheme. In other words, to make the colors "balance." By "balance" we do not mean an equal amount of each color, but if we compare it to the weights of different metals, for instance, the brighter colors, like red-orange, are heavy and therefore a small amount of them would counterbalance a larger amount of duller color, such as blue-green. With analogous colors, a more even amount of each can be used.

There are two big divisions of colors; name-ly, "warm" and "cold." Yellow and red are the warm colors and blue is the cold.

Any color with red or yellow predominating is a warm color, while if blue is in the greater amount in any color, it is a cold color. Therefore, it is obvious that ordinarily one would not want to put a red background in the window for summer for vellow-green background easy io no. Te, should always be taken into consideration.

A person looking in your window during a cold winter day finds it easier to look at the display longer or realizes a greater attraction when the warm colors are present in the display. Again we are assisted in our choice in color by the season of the year. Therefore, we have warm red at Christmas, yellowgreen in conjunction with the delicate tints for Spring, cool green for summer and orange for autumn. Now for a few concrete applications of color theory to the display of Stewart-Warner products to their best advantage. Stewart-Warner products in most every case, are of a neutral color finish Therefore, any primary color may be used in the same way as we have explained before, that neutral colors may be used with any color on the wheel. As a suggestion for a background in front of which walnut radio sets may be shown to advantage, we might suggest a lighter shade of tan, with perhaps the use of some blue in a lesser quantity.



This picture of the Stewart-Warner booth at the New York Radio Show had to be taken early in the morning, before the gates were open. For all day long and far into the night the radio fans crowded into the exhibition hall at Madison Square Gardens and immediately headed for the Matched-Unit display.

Everybody seemed to have heard about the new one-dial receiver and the drum head reproducer and wanted to look them over. And, according to the men in charge of the booth, everyone who could get into the display went away with the conviction that nothing else they had seen could compare with the Matched-Unit line.



# **3800 FOLDERS GIVEN AWAY** IN ONE HOUR ATS-WBOOTH

Manhattan is bored to death with conventions and expositions. And no wonder; because ever since the community made its first million and changed its name from New Amsterdam to New York it has seen so many, large and small, that it accepts them with the same cool reserve that it offers to prohibition agents.

It is hard to imagine Mr. New York getting excited enough over a mere exposition to dash off to work wearing his daily dozen instead of his hat.

Yet that is just about the effect created by the recent Radio World's Fair.

From Sept. 13 to Sept. 18, no less than half a million men, women and children passed through the turnstiles into Madison Square Gardens; which makes the attendance at the recent Tunney-Dempsey party look like a neighborhood gathering at "Uncle Tom's Cabin," put on by local talent, admission three pins.

It was the biggest and best radio show in the history of the industry, and right in the center of it was the Stewart-Warner Display. We quote R. H. Woodford, Radio Sales Manager:

"From a Stewart-Warner standpoint it was a decided success, in that we unquestionably had the outstanding exhibit as to beauty and artistic setting.

"The Dealers, Distributors, the public, competitive manufacturers and even the management admitted that we had the finest display, definitely and freely expressing themselves on the subject.'

George Armstrong, Radio Sales Manager at the New York Factory Branch, had this to

"The attendance was greater than ex-pected and probably was fairly close to the Wednesday evehalf million mark. On Wednesday evening, in one hour, between 8 and 9 o'clock, our booth gave out 3,800 separate pieces of literature, consisting for the most part of 'Around-the-Clock' booklets and some 50-R inserts and the flat sheets.

"This is an index of the attendance at the show.'

One feature of this year's show attracted the notice of all professional radio men. That was the difference between the crowd that attended this year and the crowds that have attended in the past.

Ileretofore the great majority of visitors were technically inclined men seeking tips for their home-made sets and boys in caps who were dabbling with hook-ups.

This year the average type of citizen, seriously contemplating a purchase with an eye to value, was present in force and dominated the visitors to the show.

It is well to bear in mind the fact that in order to show a dark radio cabinet to the best advantage, a lighter shade should be used as a background.

It is also well to remember that in the showing of dark products, that considerable reflection will be created, unless a lighter background is used.

Where a mahogany or walnut background is found to be used in the showing of walnut radio cabinets, considerable reflection is sure to be apparent from the outside of the window, unless much illumination is used inside the window. It is also well to bear in mind that a walnut cabinet can be shown to greater advantage by a contrast of material as well as a contrast of color.

By this I mean to say, that by showing a walnut cabinet in front of a tan velour curtain, it has greater apparent value than if shown in front of a walnut panel background.

A velour fabric makes a soft contrast of material, while the walnut panel would furnish no contrast of material, and for this reason, we suggest that a contrast of material is in most instances, of equal importance to perhaps the contrast of color tones.

If you care to use colored window lighting, amber colored gelatine produces a soft and pleasing effect when focused on walnut cabinets, and will no doubt be found to produce a most pleasing effect. As a suggestion for a fall window, I might suggest a blue or bluegreen drape of sateen or velour with which can be used a bouquet of yellow and orange flowers, or perhaps some gold with a floor of light tan.

This will produce a refined effect and will illustrate the use of proper color contrast and balance. For a winter display, a dark red would be permissible, but it would be wise to avoid a bright red in full intensity, as it has a tendency to cheapen the effect and less properly balance with the color contrast. After a brief study of the color, you will

readily gain an insight as to the value of color in the proper showing of your merchandise.

Color can be made a powerful force in increasing both sales and production. Color is that's why we are printing here this letter from R. & M. Nicol, Stewart-Warner Radio Dealers in Te Aroha, New Zealand.

Stewart-Warner Speedometer Corp., Chicago, Ill., U. S. A. Dear Sirs:

Having just been appointed local dealers for Stewart-Warner Radio Receivers, and having received the first sample set, we thought you might be interested to know how things are going. We have been successful in bringing in all the Australian stations of any consequence on full loud speaker strength, that is over a distance of approximately 1,000 miles.

Being curious as to just what this set could do, on last Sunday, August 8th, we listened in for more distant stations and were successful in picking up KGO, Oakland, Cal. We held this station for about two hours and heard some very good numbers, including a song entitled "All the World Loves a Smile," and several jazz pieces.

These selections came in sufficiently strong to be comfortably heard on the loud speaker, although of course not strong. The set used was Model No. 300, Reproducer No. 405.

Perhaps this will be an interesting item for publication in THE ANNOUNCER.

Hoping to hear from you, we are Yours faithfully,

(Signed) R. & M. NICOL.

THE ANNOUNCER will welcome and pass along letters from any other foreign Dealers telling of unusual and interesting conditions in their territories.

known to have a desired effect when rightly used, even in the work room. A warm sunshiny yellow shade with perhaps a trim of light green, tends to stimulate employees. On the other hand, where groups are working under high tension, a shade of grey-green will tend to relieve nerve strain.

The whole atmosphere of a mill town can be changed by the proper selection of house paint. The drab and depressing appearance of the usual mill town is enough to make any one dissatisfied with his work.

The real possibilities in the use of color have hardly yet been touched. It is my belief that the next great step in merchandising will be in the proper application of this powerful force. Whether it is in the planning of your store window, marketing automobiles, buying clothing, or running a factory, there is equal opportunity to capitalize on color.

If you will but give the subject of color due consideration, as it applies to modern day merchandising, I am sure that the increase in the volume of business, due to the proper showing of the merchandise you offer for sale, will be surprising.

Any further questions concerning the use of color as it concerns the merchandising of Stewart-Warner products will gladly be answered by the display division.

The next article by Mr. Stensgaard will concern the subject of " Sales Power of Displays."

This picture shows the Stewart-Warner Radio booth at the State Fair held recently in Columbus, Ohio. C. V. Carpenter, manager of the Columbus Service Station, reports that the exhibit attracted a lot of favorable attention, with the new one and two-dial receivers and the drum head reproducer holding the limelight.

#### PRIZE WINNER



This unusual float was awarded the silver cup that stands between the two Matched-Unit Receiving Sets on the rear of the truck, as the most distinctive entry in a parade held recently in Toronto.

They came, men, women and children, and were definitely interested in a receiving set as an instrument that would add to their entertainment and knowledge.

They were interested not only in pleasing cabinets but also in the things which make for technical excellence, in tubes and in reproducer construction and performance. Critical comparison of values, among all the makes shown, from the standpoint of appearance, construction and performance, was the order of the day.

We quote Mr. Armstrong again:

"The public as a unit-the average citizen in any walk of life-is definitely and seriously interested in radio and is a potential buyer. He is critical not only of appearance and performance, but is also intelligently appraisive of technical excellence, materials, construction and the latest developments of radio science.

"Our single dial instruments pleased by their appearance, and visitors to the show expressed their opinion that the prices are right. Our booth was exceptionally attractive and brought many visitors and Dealers to our display, from whom we obtained a considerable number of orders. All in all it was a successful show from the standpoint of Stewart-Warner."

The new Stewart-Warner one-dial models and the new Model 415 Reproducer made a decided "hit" at the show. They are going to be big sellers and there's no getting around it. Along this line Mr. Woodford had this to

say: "The entire radio line was really enthusiastically received. Repeatedly people would return to our exhibit after going all over the show, leaving their names and addresses after choosing one of our models. One old gentleman and his wife returned three times and finally said our 360 Model, One-Dial Console, was the finest thing they had seen and that they intended to have one for their home.'

Business was rushing at the Stewart-Warner Booth from the beginning of the show to the end.

In fact the factory men would have been quite unable to take care of the situation had they not had the assistance of a number of Eastern Distributors who visited the show and then stuck to the guns until the last shot was fired.

Stewart-Warner was represented at the Radio Banquet at the Astor Hotel by the following:

Frank White, New York Branch Manager; George Armstrong, New York Radio Sales Manager; Warner Moore, Assistant General Sales Manager; William Jutras, Distributor at Providence; Mr. Reinboldt of Providence; Mr. Jutras, Distributor at Springfield, Mass; J. B. Suess, Distributor at Philadelphia; W. L. Stensgaard, Stewart-Warner Display Manager and R. H. Woodford, Radie Sales Manager.

# Single Control Receiver Is Beautiful and Efficient



Several years ago, when the Director of Publications was in the newspaper business, he became interested in radio. Many of his friends were, and are, radio experimenters. Consequently, he understands what constitutes an efficient radio receiver.

He has operated every kind of a set from a crystal receiver to an eleven tube superheterodyne. Recently he has been experimenting with both the three-dial and the new one-dial models of the Stewart-Warner Matched-Unit line. Today it is his earnest conviction that there is no receiver on the market that compares in efficiency with the receivers manufactured by this Corporation.

By that statement he means this: That for selectivity, tone value and distance, there is no set on sale today that will perform more satisfactorily than the Matched-Unit Receiver.

Several months ago he had one of the three dial models installed in his home. Because he lives in an apartment building where an aerial is not allowed he was forced to content himself with a twelve foot inside aerial, which had a light socket adaptor connection. With this aerial, he was able to get any and all of the Chicago stations at any time.

As many of you know, Monday night is "silent night" in Chicago. That means that the broadcasting stations here are "off the air" on Monday night. For a month or so after this Receiver was installed in his home, the Director of Publications made no attempt to get outside stations on "silent night," thinking it impossible with such a short aerial.

However, one Monday night a short time ago, he turned the set on and started to masic came nom and Reproducer. He adjusted the set until the music came in good volume and then listened for the announcement. To his great surprise it was Atlantic City.

When a passerby glances into a shop window what does he really see? The answer to this question depends not so much on the observer as on the merchant. And the answer will prove instantly whether the window is an asset to the business or just so much waste space.

Consider the problem. First of all the average person is going some place and hasn't time to stop and examine the window carefully. Obviously, then, the most a dealer can hope his window to do is to leave one impression on the mind of that individual.

It is easy, men, to see that if one attempts to display his entire stock in his windows the man he is trying to impress, the potential buyer, sees only a jumbled mass of merchandise wherein nothing stands out clearly

enough to remain in his memory. Concentration is the secret. Each display should feature one thing, which will "hit the observer in the eye" and leave a clear cut, definite picture in his mind.

The dealer who carries a variety of articles, or who has a window too large for the isolation of one object, is up against a difficult problem. But often with a little thought he can find an effective solution.

When H. S. Brown, dealer in Stewart-Warner radios in Fitchburg, Mass., moved into his new store at 537 Main Street, his windows caused him no small concern. In the first place, besides the Matched-Unit line, Mr. Brown also carries a complete stock of pianos and phonographs. Then his window stretched completely across one side of the store. This was entirely too big for any one display, so his first act was to install two partitions, separating the window into three sections. After this it was easy. Each section displays one thing, radio, piano, or talking machine. The casual passerby gets one definite idea from each display. His attention is focused on the one in which he is most interested and not diverted by extraneous material. Mr. Brown's success in the solution of his window problem was the subject of a full page story in the September 11th issue of The Music Trade Review. Mr. Brown is a heavy advertiser, considering the size of his store, in the papers of Fitchburg and its neighboring town, Leominster. His theory is, if you've got something to say, you have to take space enough to say it right.

## Exact Tuning Of Three Condensers With One Dial Is Unique Feature

(Continued from page 1)

are back of it are covered by four exclusive patents assigned to this corporation.

Insofar as the three-dial models are concerned it can be stated here definitely that minor improvements have made this set today one of the best in the United States for the man or woman who may be classed as a "radio fan."

This three-dial model appeals to those people who have more or less knowledge of the working of a radio set and who appreciate the hairline tuning that will bring in a fifty watt station across the country. It is manufactured and placed on the market

by the Stewart-Warner Speedometer Corporation because exhaustive research shows that there will always be a class of people who prefer a three-dial model.

The new one-dial receiver has attracted such wide attention because of the fact that it is the latest addition to the Matched-Unit family. Set Takes First Place

Primarily it has impressed people with its beauty of appearance, with its unusual selec-tivity, with its ease of operation and with its wonderful tone quality. It too has been designed by men who are expert in judging the public demands. They have called it one of the most beautiful and efficient receivers on the market today.

This, together with the fact that it is backed by the name and reputation of the Stewart-Warner Speedometer Corporation, has made it one of the most sought after receivers on the market.

With the failure of many small companies who started out enthusiastically a few years ago to manufacture radio sets, the buying public in the United States has come to a realization, amounting to conviction, that the only safe purchase today is the purchase of a receiver that is manufactured by a corporation which has been in business for years in the past and whose reputation shows that it will continue in business in the future.

The new one-dial set is the product of two years of intensive work in the radio research laboratories of the Stewart-Warner Speed-ometer Corporation. This research work has been conducted by expert radio engineers and inventors under the personal direction of Leonard E. Parker, chief radio engineer, and C. H. Stone, his assistant.

Combines Best of All Sets

During the course of these two years, hundreds of one-dial receivers have been built, torn down and discarded. The one-dial receivers of every competitor in the United States have been examined and analyzed and the Stewart-Warner one-dial set, therefore, represents the total sum of all the information available from the outside, together with the inventive ideas of the research experts of the Stewart-Warner Speedometer Corporation.

There have been found scientific reasons why one-dial receivers of the past have not been satisfactory. It is true that such receivers have been able to give some results, but Stewart-Warner engineers have not been satisfied with this situation. In the usual manufactured one-dial receivers there are various arrangements that are used to operate the three tuning condensers with one control. In some instances this was done by putting these condensers on a single shaft operated by direct or vernier control. In other cases it was necessary to equip the two end condensers with sub-controls, so that in reality the set was a three-dial set. Sometimes the condensers were driven with pulleys, or cords or levers. In every instance, however, it was found that two principal difficulties were not overcome.

The second difficulty had to do with the electric influences that tend to throw the condensers out of tune after they had been assembled in a set. It is possible to make three perfectly matched condensers, put them in a set on a rigid drive shaft and find that they are out of tune at several points on the wave band. This difficulty was ingeniously remedied by a method of condenser control

that is exclusive in Stewart-Warner sets. In explaining this arrangement it is necessary to say first of all that the condensers are controlled by the single dial through the manipulation of phosphor bronze belts. These belts operate much as any transmission belt operates.

In one point do they differ from other belt operated condensers. In other sets where belts are used, the belts are tight and permit no flexibility. In the Stewart-Warner one-dial set a pre-determined amount of slack is allowed in the belts, which permits the exact tuning of all three condensers with the one control. Under this arrangement it is possible to tune first one condenser, then the second and finally the third by the use of the one knob.

All that is necessary is to use a slight rocking motion of the knob and the station will be brought in as clearly as on a three-dial set. In other words, through the slack arrangement of the belts, the Stewart-Warner one-dial set can be perfectly tuned. Extra Stage Adds Amplification

The one-dial set also differs from the regular three-dial sets in that one stage of untuned radio frequency, giving greater amplification has been added.

This stage takes care of variance in the antenna. For instance, one antenna may be longer than another and under ordinary circumstances this would make a difference in the tuning of the set. In the case of the Stewart-Warner one-dial set the one stage of untuned radio frequency takes care of this variance. The audio circuit remains unchanged, having been fully tested in the threedial sets that Stewart-Warner has manufactured in the past.

In making a connection between the knob control and the condensers it was decided to use a friction clutch in place of gears. The clutch is held in place by a strong spring that prevents slipping. In addition to that, if one were to turn the knob too far, he would not wreck the set, as would be done in a case where gears were used. The rest of the set is in keeping with the scientific accuracy just described.

The cabinet models have been designed by two of the best designers in the United States. The art medallions on the front were evolved only after many designs had been drawn and redrawn. The cabinets themselves are walnut and the front panel is made of heavy metal, which acts as a shield. They are finished in antique stippled bronze. The medallions are in government bronze in bold relief. The bakelite knobs controlling volume and batteries have been finished in walnut to conform with the rest of the cabinet. A speedometer type dial is used and the index numbers and wave lengths are reproduced in exactly the same way as are the numbers on the face of a high grade clock dial.

# LABORATORY **REPORTS ON DETAILS OF NEW MODELS**

Whenever a radio receiving set is sold, the purchaser has certain questions about its installation and operation.

For your information in answering such questions in regard to the new one-dial Matched-Unit Receivers, we are printing here the report of the Stewart-Warner Radio Laboratories on Models 345 and 350 (table sets), and 355 (console).

ANTENNA SYSTEM: These models are designed to use an antenna whose length is between 80 and 90 feet long measuring from the antenna post of the set to the terminal insulator. However, they are not critical as to antenna length. The following suggestions should be adhered to. In cities where there are more than two local stations in operation at the same time the antenna length should be kept at 80 ft. or less if the location is within 2 miles of the station. Where the location is in the smaller cities and towns and in the country at a distance of approximately 15 miles from the nearest station, the length of the antenna is only limited by the space available up to 150 ft.

SELECTIVITY: Selectivity in these sets is dependent on the circuit constants of the set itself and is only affected within narrow limits by the antenna length. Where, due to numerous locals, there exists a background from one station while another is tuned in, a series condenser of approximately .0001 mfd. should be inserted in the ground lead.

BATTERY VOLTAGES: Models 345, 350 and 355 are equipped with receptacles so that the voltage across the filaments of the tubes can be determined with a table type voltmeter. The Weston Model 489, the Jewell Pattern 135-C, the Hoyt Type 17-A and other table type voltmeters equipped with terminal tipped cord similar to a reproducer or phone cord can be used for this purpose. To read the voltage on the filaments of all the tubes in the set for any particular setting of the battery control, it is necessary to insert the terminals of the voltmeter cord into the gold receptacles on the sub-panel of the receiver. These receptacles are located directly in front of the spring suspended detector socket. The Weston and Jewell voltmeters mentioned are double range instruments and can also be used in testing the voltage of the B battery units. The use of the following B supply voltages are recommended:

No. 2 22<sup>1</sup>/<sub>2</sub> volts—Detector (Maroon wire)......22<sup>1</sup>/<sub>2</sub> volts 67<sup>1</sup>/<sub>2</sub> volts—Radio frequency(yellowandred) 67<sup>1</sup>/<sub>2</sub> volts 

Immediately his interest was aroused and he started to "fish" for other stations. Within an hour, he had picked up Florida, New Orleans, Ames, Iowa, Cincinnati, Kansas City, and Buffalo.

The stations were easily heard and the volume was much greater than would ordinarily be expected.

When the new one-dial set was finally in production, he had one sent to his home. The facts are that this set has given the most remarkable demonstration of Radio efficiency that he has encountered. Using the same twelve foot aerial, he was able, on a night when all Chicago stations were on, to tune out the local broadcasters and bring in Station KMOX at St. Louis.

This Station operates on a wave length of 280 meters. At the time that it was tuned in, there was a station operating in Chicago on 275 meters and another Chicago station operating on 288 meters.

In other words, the one-dial Receiver cut right between these two local stations and brought in St. Louis without any difficulty. A few minutes later he was able to pick up KDKA at Pittsburgh, which is also located between two powerful Chicago Stations, WGN, the Chicago Tribune, and WGES.

The Tribune is just above 300 meters, KDKA is on the 311 band and WGES is approximately 315 to 320 meters. It sometimes happens that the Receiver will show off when the owner is alone but fails to operate in the presence of company.

However, with full faith in the Radio Engineering Department of Stewart-Warner, the Director of Publications invited to his home the jury of experts referred to in the first sentence. They were Lieut. O. N. Taylor, Radio Editor of the Chicago Evening Post; Lieut. Paul Neal, Technical Editor of the Chicago Evening Post; Mr. Carleton Butler, Technical Editor of the Chicago Evening American; Mr. Edward Young, Assistant Radio Editor of the Chicago Herald & Examiner; Mr. Frank D. Pearne, Technical Editor of the Chicago Herald & Examiner; Mr. Evan Plummer, Managing Editor of the Radio Di-gest; and Mr. K. A. Hathaway, Technical Editor of the Chicago Daily News. In addition to these men, members of the Radio Engineering Department and the Executive 'Officers of the Stewart-Warner Speedometer Corporation were present.

By special permission of the owner of the building, an aerial was strung up. The demonstration started at approximately 8 o'clock on Friday night, when all Chicago Stations were on the air. Incidentally, in passing, it may be mentioned that there are between twenty-five and thirty such stations in this city. Then, despite the fact that the air was absolutely crowded with local broadcasting, the new one-dial set was able to pick up Davenport, Iowa, through a jumble of local broadcasting. Davenport is on a wave length of approximately 483 meters. Immediately above that on 491 meters, is a powerful Chicago

In fact, every department of his business, from the front windows to the basement store rooms, gives evidence of the fact that Mr. Brown is a firm adherent to the old maxim that a thing worth doing is worth doing well.

Station, and only a few meters below it is another.

Shortly thereafter, the set was tuned in to a Station at San Antonio, Texas. Also in this case Chicago Stations were on both sides. The demonstration was somewhat handicapped by reason of the fact that in the apartment building is located an ice making machine that afforded local interference. Despite these conditions the set literally "stood up" like a million dollars. When WOC Davenport was tuned in, Mr. Pearne exclaimed, "Why, I have a big Super-Heterodyne Receiver, and it won't do as well as that."

At the present time, we are going to say nothing about the new reproducer. That is a story in itself and we might say in passing, a most remarkable story. It is the best reproducer on the market today, with no exceptions.

At the conclusion of the demonstration of the one-dial set, which, of course, brought in every local station with no difficulty, proving unusual selectivity, the frank expression of opinion was, "At last here is a one-dial receiver that actually works."

One of the men present at the demonstration has a one-dial receiver manufactured by a competitor. He declared, without hesitancy, that the Stewart-Warner Matched-Unit Set is so far superior to the one he operates that there is hardly any basis for comparison.

This editorial is more or less in the nature of a personal reminiscence. Nevertheless, the fact remains, that if the Director of Publications were to leave the employ of the Stewart-

#### Difficulties Overcome

These two difficulties were, first, that it was not possible to manufacture condensers of the same capacity and, second, if the condensers were so manufactured there are certain electrical influences in a receiving set that would tend to throw them out of tune. These, then, were the two principal difficulties that Stewart-Warner engineers faced. In explaining condenser capacity, condensers can be likened to high grade thermometers. A high grade thermometer is calibrated after it is constructed. Consequently, if one were to take three high grade thermometers and calibrate each one separately and scientifically, they would all register exactly the same temperature at any heat.

In the past, it was found possible to manufacture condensers that at a certain period would have the same capacity, but it was found that on another wave length this capacity varied slightly. In the past also, it was possible to match condensers for use in a laboratory, but this was not practical in production.

As a result, Stewart-Warner engineers were first to invent testing equipment that would permit the manufacturing of condensers that did not vary in their capacity throughout the whole wave length. As a result, the three condensers that are used in the one-dial set have been actually matched in a testing apparatus and consequently they do not vary throughout the wave band.

If a condenser does not match after a test in this machine, its capacity can quickly be adjusted by changing the plate distance in the condenser. This permits the manufacture and testing of condensers for matched production.

Warner Speedometer Corporation he would purchase for his own use a Stewart-Warner Matched-Unit Radio Receiver.

He desires to offer his sincere congratulations to Mr. Leonard E. Parker, Chief Radio Engineer of the Stewart-Warner Speedometer Corporation, to Mr. C. H. Stone, and to their able assistants. He believes they have produced a Receiver that will beat all competition. And he further believes that the Blue Ribbon Radio Dealers of the Stewart-Warner Speedometer Corporation will find this to be a fact, and not a theory.

#### Special Socket Reduces Noise

The detector tube socket is in a special spring suspension which tends to prevent any noise in a set. Special holes make it possible to insert the terminals of the various table type voltmeters for the testing of filament voltage.

Another feature is a variable high resistor. This provides for economy because when the tone is reduced for local stations there is an accompanying reduction in power requirement. The one-dial set contains a number of features that prevent any unnecessary noises such as might occur if the set were operated by a person who did not understand it or if it were improperly tuned.

Another special feature is a choke that has been developed in the laboratory, which provides for equal amplification throughout the broadcast band. This makes it possible to tune in stations with ease, irrespective of wave length.

The set also is equipped for the installation of a "C" battery.

This article so far gives some idea of the scientific side of the new one-dial set. It has told little about its work.

Here, however, is a laboratory test record that was made the latter part of June, at a time when Chicago stations were on the air and at a time when atmospheric conditions were not of the best.

#### Distant Stations Brought In

During the test in question an antenna 80 feet long was used. During a short period stations at the following cities were tuned in on the one dial set: New York City, Madison, Wis.; St. Louis, Des Moines, Cleveland. San Antonio, Fort Wayne, Ind.; Milwaukee, New Orleans, Troy, N. Y.; Nashville, Fort Worth, Texas; Detroit, Omaha, Decatur and Atlanta.

One of the first sets was sent to C. P. Underwood of the Stewart-Warner Products Service Station, at Spokane, Washington. Mr. Underwood writes the following letter in part:

After having tried out the new Model 345 we are convinced that it is without doubt the best single dial job on the market and we are looking for a heavy sale. The following is a list of stations tuned in on the model Saturday night,

August 28th, 1926: KFOA, KGW, KPO, KQO, KFI, KFWB, KFWI, KHQ, KFWO, KFOM, CNRV, KOWW, KHJ, KMX, KJR, KTCL, CFCN, KOA, Denver, Colo., KX, KYW, Chicago, and KSD, St. Louis.

As to selectivity, the set will tune out KHQ, Spokane, on 1000 watts, in four points

This, in a word, tells the story of the new addition to the Stewart-Warner Matched-Unit line. In the next issue of THE ANNOUNCER a detailed announcement of the Stewart-Warner reproducer will be made.

The following table gives the approximate battery current with each of the above arrangements;

No. 1

Arrangement No. 1	
Maximum	Normal
4½ C Battery23 milliamperes 3V C Battery25 milliamperes	16 milliamperes 19 milliamperes
Arrangement No. 2	•
Maximum	Normal
9V C Battery23 milliamperes 7½V C Battery26 milliamperes	16 milliamperes 18 milliamperes

A power tube such as the UX-112 may be used in the last audio socket with either of these B supply arrangements, with improvement in quality and with improved volume especially with arrangement No. 2.

TUBE ARRANGEMENT: Stewart-Warner tubes average between 600 and 750 mutual conductance. If it is possible the tubes for the set should be checked and the two with the highest mutual conductance placed in the first R. F. and second audio frequency socket. The mutual conductance of the second and third R. F. should be as high as possible up to the point that the set becomes unstable.

SENSITIVITY: The set as delivered does not oscillate. Its sensitivity is controlled by the following factors:

1. Grid resistance normal value-950 to 1150 ohms. 2. Detector voltage normal, 221/2 volts.

- 3. R. F. voltage-normal value 67<sup>1</sup>/<sub>2</sub> volts.
- 4. Grid leak--normal value 3 megohms.

The sensitivity of the set may be increased by raising the R. F. voltage, by raising the detector voltage, by decreasing the grid resistances or increasing the resistance of the grid leak. The sensitivity of the set may be decreased by the reverse operation.

Of these methods the most practical are the manipulation of the detector B voltage and the adjustment of the grid leak.

No attempt to change the grid resistance is advised.

VOLUME AND QUALITY: Volume is controlled by the knob marked "Tone." Quality in this set is entirely dependent upon that which is transmitted by the particular station being received. It is possible to secure improvement of volume with an attendant increase in quality by increasing the power available for the lower musical sounds. This is done by the use of 135 volts B and  $7\frac{1}{2}$  to 9 volts C battery on the audio amplifier. Still greater power is secured by the use of a power tube such as the UX-112, however, very satisfactory results are secured by using a Stewart-Warner tube of high mutual conductance (750 micromhos or greater at 45 volts).

TUNING: The belts which actuate the A and C condensers are set with a slight amount of slack. The belt connecting the A and B condensers has a slack of approximately 1 dial division and that connecting the B and C condenser has a slack of approximately 2 divisions. The set is brought into exact resonance by a slight rocking motion of the vernier knob.

# Fall Advertising Campaign Covers All of U.S.

# NEWSPAPERS IN 71 CITIES TELL PUBLIC OF S-W LINE

This is a Stewart-Warner year in the radio world.

The line of Matched-Unit Radios has been rounded out until there is a receiver to satisfy the individual requirements of every customer. The reproducers, both horn and drum head, are the most perfect that audio engineering can produce.

At radio shows all over the country the Matched-Unit line has been the center of attraction. The factory is working at top speed to fill the orders coming in from Dealers who thought they were stocked up for the winter.

And now the Advertising Department an-nounces an autumn campaign of Radio Ad-vertising in the newspapers throughout the country.

Beginning October 10th and continuing until Christmas, the newspapers of 71 cities in the United States will carry a series of advertisements of the Matched-Unit Radio Products.

The striking advertisement printed in the center of this page is a reproduction of one of the earlier numbers of the series.

The papers in which this advertising will be inserted have been carefully chosen. Every section of the country has been covered as thoroughly as is possible. Here is the list of papers with the dates when the advertising will appear:

will appe	ar:		
	SC	HEDULE	
	Sun.	Thurs.	
¢	October	24-October 21	
	November	10—October 7 24—October 21 7—November 4 21—November 18	
	December	J-December 2	
	December	19—December 16	
C	City	Paper	Day Sun.
Oakland,	Cal.	. Tribune . Republican . Republican	Sun.
Fresno, C	al	Republican Examiner—Oct. 10	Sun.
Los Ange	eles, Cal	Tunes—Occ. 21	
, ·		Examiner—Nov. 7 Times—Nov. 21	
		Examiner—Dec. 5	
	,	Times—Dec. 12 Examiner—Dec. 19	
	,	Times—Dec. 19	-
Sacrament	to, Cal	Bee Examiner-Oct 10	Thurs.
San Fran	cisco, Cal	Bee Examiner—Oct. 10 Chronicle—Oct. 24 Examiner—Nov. 7 Chronicle—Nov. 21 Examiner—Dec. 5 Chronicle—Dec. 12 Examiner—Dec. 19 Chronicle—Dec. 19 Union	
		Examiner—Nov. 7 Chronicle—Nov. 21	
		Examiner-Dec. 5	
		Examiner—Dec. 12	
	<u> </u>	Chronicle—Dec. 19	Sun.
San Diego Denver, C	o, Cal	. Union . Post	Sun.
Hartford,	Conn.	Courant	Sun. Sun.
Bridgepor New Hav	t, Conn en, Conn	. Post . Register	Sun.
Washingto	on. D. C	, Star	Sun, Sun.
Birmingha	Ga m, Ala	News	Sun.
Charlestor	S.C.	. Post . News—Oct. 7	Sun.
Indianapo	us, ma	Star-Oct. 24	
		News—Nov. 4 Star—Nov. 21	
		News—Dec. 2	
		Star—Dec. 12 News—Dec. 16	
		Star-Dec. 19	(T)
Ft. Wayne Terre Hai	e, Ind ute. Ind	.Journal Gazette .Star	Thurs. Sun.
Des Moin	ute, Ind es, Iowa	Register	Sun. Sun.
Evansville,	, Ind	Courier Journal Press	Thurs.
			Sun. Sun.
Springfield	i, Mass.	. Sun News & Repub.	Sun.
Detroit, M	hich nids. Mich.	. News Press	Sun. Thurs.
Minneapol	is. Minn.	Tribune	Sun. Sun,
		Pioneer Press World Herald	Sun.
Newark, M	N. J	Sunday Call	Sun. Thurs.
Albany, N	Y	Sunday Call Times Knickerbocker	
		FICSS	Sun. Thurs.
Erie, Pa.	NT XZ	. News Dispatch Herald Dem. & Chron. Herald Observer Dispatch Press Dispatch	Sun. Sun.
· Rochester, Svracuse,	N. Y	Herald	Sun.
Utica, N.	Yv	Observer Dispatch	Thurs. Thurs.
			1 1141 5.
Toledo, O Portland	hio Ore	. Blade .Oregonian	
Harrisbur	g, Pa.	.Oregonian .Patriot News .Call	
*Allentown *Reading.	, Pa Pa	. Call . Eagle	
*Lancaster,	Ра Ра Ра	. News . Gazette Times—	
· Fittsburgi	I, I II,	Oct. 10	
		Oct. 31 Nov. 21	
0	D.	Dec. 19	Thurs
Wilkes-Ba	rre, Pa	. Times . Times Leader	Thurs. Thurs.
Providenc	e, R. I	. Journal . Comm. Appeal	Sun. Sun.
Dallas, Te	exas	. News	Sun.
		. Star Telegram . Post Dispatch	Sun. Sun.
*San Anto	nio. Texas.	. Express	Sun.
*Salt Lake Richmond	City, Utah Va.	Tribune Times Dispatch Post Intelligencer	Sun. Sun.
*Seattle, W	ash	. Post Intelligencer	Sun.
*Spokane, *Tacoma,	Wash Wash	. Ledger	Thurs. Sun.
Milwaukee	e, Wis	. Journal Herald & Times	Sun. Sun.
*Iacksonvil	le. Fla	Times Union	Sun.
*Tampa, F. Kansas Ci	la	. Tribune . Star	Sun. Sun.
Cincinnati	, Óhio	. (Enquirer, Oct. 3rd-	Show)
		Times Star—Oct. 7 Enquirer—Oct. 24	
		Times Star—Nov. 4 Enquirer—Nov. 21	
		Times Star-Dec. 2	
		Enquirer—Dec. 12 Times Star—Dec. 16	
01	01	Enquirer—Dec. 19 Plaindealer—Sept. 19	
Cleveland,	Unio	Plaindealer—Sept. 19 Press—Oct. 14	
		Press—Nov. 4	
		Plaindealer—Nov. 21 Press—Dec. 2	
		Plaindealer—Dec. 12 Press—Dec. 16	
		Plaindealer—Dec. 19	
Chicago, I New York	11	Not decided Not decided	

🖞 This is a reproduction of an advertisement soon to appear in newspapers throughout the country 🔅



# For Perfect Performance -Units Must be Matched/

The winning football team must be composed of a group of men who are trained to work in perfect co-ordination. Even the greatest individual stars, without the full support of a completely co-ordinated team, cannot be depended upon to give a winning performance. It's teamwork-the matching of the brains and muscles

*matched*, to give you the finest radio reception you have ever enjoyed.

You've heard the others-now we urge you to hear a Stewart-Warner. Regardless of how critical you may be, we know you will be delighted with the magnificent tones that flow from the new Stewart-Warner Reproducer, the marvelous invention which employs a new principle whereby every musical sound is reproduced clearly and naturally.

# **NEW ZEALAND IS READY FOR RADIO BOOM** SAYS S-W FAN

Here's a letter from a Matched-Unit owner in New Zealand which gives us a view of radio conditions there.

> Pipi Bank, Herbertville, Hawkes Bay, New Zealand.

#### THE ANNOUNCER,

Stewart-Warner Speedometer Cor'n., Chicago.

Gentlemen:

I have now got my Stewart-Warner set going in splendid form, and I must say I think it a very fine set indeed. It is exceptionally good on distance, has a splen-did tone and is simple to operate. I am highly delighted with it.

Although reception of American stations has been very poor for some time, a few nights ago I had three stations, KFON, Long Beach, KFFD, Santiago, and KGO, Oakland. In the one evening KFON and KFFO could be heard fairly well on the speaker. Other stations which I have heard using the Stewart-Warner set are KFI, Los Angeles, KPO, 'Frisco, and KOA, Denver, so you may be sure that when better DX conditions come 'round again I will get a good many more.

Broadcasting in New Zealand at present is very poor, but we are in hopes of better conditions very shortly. A contract has been let to a company to erect four five hundred watt (aerial) stations, one each at Auckland, Wellington, Christchurch, and Dunedin. Two of these should be up within a month. As the length of New Zealand is about 1,000 miles, these stations placed at equal intervals should be able to adequately cover the ground.

The radio boom has not started in N. Z. yet, but no doubt when the new stations are going, we will see the boom there has been in other countries where the broadcasting conditions are better. The population of New Zealand is about 1,300,000 while the holders of wireless licenses amount only to about 5,000, so you see from these figures how backward we are in this respect.

Australia has a pop, eqt mos, 6,000,000, while over 100 been issued, so that on the same proportional basis we should have about 20,000 instead of 5.000.

of the whole team—that wins!

Co-ordination of units is just as vital in radio as in football. Perfect reception can be had only through a radio composed entirely of parts and units especially designed and constructed to work with each other as a perfect whole.

That's what you get in a Stewart-Warner Matched-Unit Radio. Every part made with precision and deliberate care—and all parts fitted together,

Let your nearest Stewart-Warner dealer demonstrate a complete Matched-Unit Radio-with Stewart-Warner receiver, tubes, and reproducer-for you tonight. Judge it by any test you choose. Learn for yourself how Stewart-Warner matched units open a new world of radio enjoyment to you.

If you don't know address of nearest dealer, write us.

STEWART-WARNER SPEEDOMETER CORPORATION 1826 DIVERSEY PARKWAY, CHICAGO

# STEWART-WARNER Matched-Unit Radio

### Boston, Mass. ..... Not decided Philadelphia, Pa. .... Not decided

\*Not definite as yet. The ideal plan, of course, would be to run

these ads in every town where there is an Authorized Radio Dealer. But that is obviously impractical.

In the first place, the cost of such a campaign would be tremendous. Also, the metropolitan newspapers cover the smaller towns in their sections almost as thoroughly as do the local papers.

However, the Dealers should tie up with this campaign in all cases. The Advertising Department has prepared a number of mats and electros which will be furnished free to any Dealer who wishes to use them.

In some cities the newspapers are publish-ing special Radio Show Numbers before October 10th. Where this is the case the first advertisement of the series will be printed in these special editions and consequently omitted from the issues of October 10th.

This applies to the	following towns:
Minneapolis	Pittsburgh
Cleveland	Fort Worth
Milwaukee	San Antonio
Portland	Cincinnati
St. Paul	Boston
Columbus	Chicago

As other special issues are announced the schedules will be arranged to take advantage of the increased circulation, wherever possible. In addition to the advertising matter, every paper on the list is being furnished with publicity stories to be used in connection with the campaign.

In the publicity field our broadcasting sta-tion WBBM has been a tremendous asset. Stories about "The Stewart-Warner Air Theatre" have appeared not only in papers carrying Stewart-Warner advertising, but in small town publications in all parts of the country.

The appended list will give some idea of the widespread attention WBBM has received.

#### NEWSPAPERS THAT HAVE USED WBBM PUBLICITY SINCE JULY 15, 1926

Akron, Ohio, Journal Alliance, Neb., Herald Amarillo, Tex., Globe Amarillo, Tex., Plains-	Bellaire, Ohio, Leader Benton, Ill., Evening Bensenville, Ill., Register Black River Falls, Wis.,
man Anderson, Ind., Bulletin	Journal Bowling Green, Ky.,
Arlington Heights, Ill.,	News
Herald	Butte, Mont., American
Atchison, Kas., Globe	Butte, Mont. Miner
Atlanta, Ga., Journal	Calumet, Mich., News
Baltimore, Md., American	Camden, N. J., Courier

Escanaba, Mich., Press Cardington, Ohio, Independent Chambersburg, Pa., Pub. Eugene, Ore., Guard Opinion Chicago American Chicago Calumet Index Chicago Daily News Chicago Evening Post Chicago Herald and Examiner Chicago Sunday Tribune Cincinnati, Ohio, Enquirer Cleburne, Tex., Review Cleveland, Ohio, Press Coeur D'Alene, Ida., Press Colorado Springs Gazette Colorado Springs Telegraph Concordia, Kas., Kansan Covington, Ky., Post Crawfordsville, Ind., Journal Crossett, Ark., Observer Danville, Ill., Press Decatur, Ill., Review Des Arc, Ark., Journal Detroit, Mich., News Dodge City, Kas., Globe

Journal

Emporia, Kas., Gazette

Everett, Wash., Herald Fall River, Mass., News Franklin Park, Ill., Beacon Fresno, Cal., Republican Ft. Wayne, Ind., Gazette Ft. Worth, Tex., S-West Magazine Magazine Galesburg, Ill., Republi-can Register Galveston, Tex., Tribune Gilroy, Calif., Gazette Grand Haven, Mich., Tribune Ne Tribune Grand Rapids, Mich. Herald Grand Rapids, Mich., Ne Nev Niaj Press Greenfield, Ind., Reporter News Hammond, Ind., News Hammond, Ind., Times Hanford, Cal., Journal No Ogo Pala Haverhill, Mass., Gazette Highland Park, Ill., Press pl Par Houghton, Kas., Headlight Douglas. Ariz., Dispatch East St. Louis, Ill., Houghton, Mich., Gazette Indianapolis, Ind., News Elkhart, Ind., Truth Elmyra, N. Y., Telegram Indianapolis, Ind., Star

Chronicle

I am sorry to say that I have been unable to tune in WBBM for some time, though I can pick up the carrier but it is too weak. As soon as conditions improve and we start again to get American stations further away from the Pacific Coast, no doubt WBBM will come in again, at least I hope so. I will drop you a line occasionally to let you know how the set is going.

Yours sincerely,

SPENCER SPEEDY.

Kalamazoo, Mich., Ga-	Pittsburgh, Pa., Gazette-
zette	Times
Kansas City, Mo., News-	Pittsburgh, Pa., Post
Press	Portland, Ore., Orego-
Keokuk, Iowa, Gate	nian
City	Portsmouth, Ohio, Sun
Kokomo, Ind., Dispatch	Portsmouth, Ohio, Sun Pratt, Kas., Tribune
Kokomo, Ind., Dispatch Kokomo, Ind., Tribune	Pueblo, Calif., Chieftain
Lake Forest, Ill., For-	Quincy, Ill., Herald
ester	Ranson, Kas., Record
La Salle, Ill., Post Lincoln, Ill., Courier	Rochester, N. Y., Journal Rochester, N. Y., Times-
Lincoln, Ill., Courier	Rochester, N. Y., Times-
Lincoin, III., Star	Union
Los Angeles, Cal., Re-	Rockford, Ill., Gazette
tailer	Rockford, Ill., Republic
Louisville, Ky., Times	San Antonio, Tex, News
Lovington, N. M., Leader	San Diego, Cal., Tribune
Lyons, Kas., News	San Diego, Cal., Tribune San Diego, Cal., Union Sandusky, Ohio, Journal
Mankato, Minn., Free	Sandusky, Ohio, Journal
Press	San Francisco, Cal.,
Marinette, Wis., Eagle	Chronicle
Mauch Chunk, Pa., News	Santa Rosa, Cal., Press-
McComb, Ohio, Herald	Democrat
Miami, Fla., News	Schenectady, N. Y., Ga-
Milwaukee, Wis., Sen-	Zette Sharon Donne Tale
tinel Minster Obio Post	Sharon, Penna., Tele- graph
Minster, Ohio, Post Monee, Ill., Review Monmouth, Ill., Atlas	Spokane Wash Press
Monmouth, Ill., Atlas	Spokane, Wash., Press Spokane, Wash., Spokes-
Monterey, Cal., Park	man-Review
Tribune	Springfield, Ill., Journal
Moultrie, Ga., Observer	Springfield, Mass., News
Mt. Carmel, Pa., Item	Springfield, Ohio, News
Murphysboro, Ind.,	Stewartsville, Mo., Rec-
Herald	ord
Nebraska City, Neb.,	St. Joseph, Mo., Gazette
News	St. Louis, Mo., Caronde-
New Britain, Conn., Rec-	let News
ord	St. Louis Globe-Demo-
News City, Kas., News	
New Haven, Conn.,	St. Paul, Minn., News
New Orleans, La., Trib-	Stover, Mo., Republican Syracuse, N. Y., Journal
une Norsten Kor Konzen	Tomple Oble Triburg
Newston, Kas., Kansan	Temple, Okla., Tribune Tipton, Ind., Tribune
New York City Post New York City Sun	Tonkawa, Okla., News
New York Herald Trib-	Topeka, Kas., Capital
une	Trinidad, Colo., Chronicle
New York Mirror	News
New York Mirror New York Sun	Tucumcari, N. M., Amer-
New York Times	ican
New York World	Tulsa, Okla., Tribune
Niagara Falls, N. Y.,	Vicksburg, Miss., Post
Gazette	Vincennes, Ohio, Sun
N. Judson, Ind., News	Walden, Colo., Star
Norfolk, Neb., News Ogden, Utah, Examiner Palatine, Ill., Enterprise	Union
Ogden, Utah, Examiner	Waukegan, Ill., News
Palatine, Ill., Enterprise	West Unity, Ohio, Re-
Paragould, Ark., Soli-	porter
phone	Williamson, N. Y., Sun
Parsons, Kas., Republi-	Witchita, Kas., Beacon Witchita, Kas., Eagle
can N. J. D.	Witchita, Kas., Eagle
Paterson, N. J., Press	Worchester, Mass., Ga-
Guardian Dendree Neb Timer	zette Worcostor Moss Talo
Pendree, Neb., Times	Worcester, Mass., Tele-
Peotone, Ill., Vedette Peru, Ill., News Herald	gram Youngstown, Ohio, Vine
Philadelphia, Pa., Record	Zanesville, Ohio, Signal
a manacipina, i a., iccold	, onio, orginal