

produced with equal facility, with any inflection, desired and requested by the audience.

Words consist of certain frequencies in a certain harmonic relation and with a certain amplitude relation. These oscillators generated the frequencies and they were combined in such manner as to produce not only words but actual sentences.

The device is called a *Voder*, which is an abridged term derived from the three words "voice operation demonstrator." Not only will it produce sounds of the human race, but animal sounds as well.

Maybe the day is not far distant when such an instrument may enable an individual who has lost the power of speech to occupy his normal role in the daily course of human relations. And it is not too far fetched to imagine that such a device will be manufactured for such a purpose and that the specialized serviceman may find another field.

Service Guarantees

HERE is a sweet problem for some of the servicemen of the world: What about this guarantee situation? . . . What does it mean? . . . What can a serviceman do when he knows that the customer is wrong in demanding that a receiver be repaired for the second time when the second defect has no bearing upon the first which was repaired and the work guaranteed?

I admit that I have no solution to offer, that is when I consider all of the ramifications of the problem. On the one hand the serviceman wishes to keep the customer's good will; on the other hand he must of necessity take a loss on the job. If he takes a loss, what assurance does he have that he will again find the opportunity to make up that loss upon the same customer? The customer may move out of the neighborhood.

The customer knows nothing about radio. How can the serviceman convince him of the fact that the second defect is not related to the first? Should the serviceman identify the various parts which have been replaced and the exact nature of the repair? Should the serviceman return the defective parts to the customer? Should the serviceman identify the parts replaced in the receiver?

One thing I feel certain of, the blanket guarantees now being given by service organizations are wrong. . . . How can a shop advertise a year's guarantee and offer that guarantee on a receiver which is 5, 6 or even 8 years old? What is the guarantee on the replacement parts which were used in the repair? . . . Is there a guarantee on such replacement parts?

Does it mean anything to guarantee the work done? . . . How can it be identified to a person who knows nothing about radio? . . . Does such a guarantee afford any protection to the customer? . . . To the serviceman?

(Continue on page 58, please)



by W. C. DORF

FOR the first part of January and up to the time this column went to press, television in the eastern part of the United States was marking time. After many personal interviews, with a bit of information here and a word dropped there, this reporter found that video activities were in general, being held under wraps, in other words, toned down, only awaiting the advantageous moment for the introduction of the particular advancement or instrument.

Naturally, the lack of scheduled programs is a drawback to the complete situation, but this is only a temporary condition and there is a rumor that one of the chains will put on a series of television transmissions as a rehearsal to the regular sked to take place with the opening of the World's Fair.

Behind the scenes the National Broadcasting Company and the Columbia Broadcasting System are working no-end on their latest transmitters, new antenna systems, etc. and the receiver companies and parts manufacturers are not sitting idly by, no sir, you will read in this column about the latest RCA cathode-ray tubes with the white screen, a new DuMont "Aquarium" set with a 14 inch tube, and the Andrea 16-tube picture and sound receiving kit. Also, there is the NBC announcement on the appointment of Miss Thelma A. Prescott who is to handle the interests of the feminine video fan. This brings up the thought that when television is on a regular schedule, there should be a much greater number of female sight and sound fans over the other gender. Why? Because it would appear that television holds the greater possibilities for them, the pre-view of a Paris hat or a gown, a new dance step, a digest or sketch from a new play, a front row seat at a smart social event, etc. However, when a championship boxing match is telecast, well, that's something else again.

NBC Looks to the Women's Interest

TELEVISION'S first woman program director, Miss Thelma A. Prescott, has been added to the staff of NBC to represent the feminine interest in the new art. The new tele-director's job will be to produce fashion shows and other programs appealing primarily to women.

Mr. Thomas H. Hutchinson, director of television programs for NBC, states that the addition of Miss Prescott rounds out a small but competent staff that has been preparing for two years for the inauguration of a public television service. "When NBC television goes on the air regularly next spring, we shall appeal to as wide an audience as possible. Because of Miss Prescott's academic training and subsequent experience in art, fashions, journalism and photography, we feel that she will be particularly competent in staging programs of unusual appeal to women."

Low Price Kit for the Experimenter

MR. ANDREA of the Andrea Radio Corporation recently stated that it was the set-builders and servicemen who led the parade for radio broadcasting back in 1923 and he believes it will be this same group who will form the nucleus of the audience for the new video art. This company, therefore, is making available the table model KT-E-5 television receiver in kit form, as shown in the accompanying illustrations.

It is a sixteen tube outfit, employs a 5

inch short-neck cathode-ray tube and it is supplied with complete step-by-step assembly instructions. There are six controls, three to regulate the sound and the remaining three to adjust the position, brilliance and contrast of the images. Production is well along on this kit and it is set for delivery this month. [See page 34, Ed.]

Two New White Screen Kinescopes

RCA just brought out two new electrostatic-reflection type television tubes which feature a white fluorescent screen. They are types 9061'4 and 18021'4. The first is a 3 inch tube designed primarily for use by amateurs and experimenters for the reproduction of experimental television pictures. It can also be used for oscillographic applications. Heater voltage 2.5 volts, heater current 2.1 amp. and high voltage electrode 1500 max. volts. The type 18021'4 is a 5 inch tube to provide excellent quality television pictures. The heater voltage of this number is 6.3 volts, current 0.6 amp. and anode No. 2 voltage max. 2000 volts.

More Truth Than Poetry

NOW that television is about to make its bow to the American public, unscrupulous promoters are edging up front, to peddle their get-rich schemes to the gullible public. The financial sections of the several New York papers and periodicals have run excellent articles on the subject, cautioning the public to beware of stock promoting rackets. There is a lot of truth in what they say—that the established companies should be looked to for guidance, not the overnight concerns with bales of fine embossed paper to sell.

New Video Set with 14 Inch Tube Attracts Crowds

IN order to acquaint the public with the intricacies of a television receiver, the Allen B. DuMont Laboratories, Inc., have made up several of their standard table-model sight-and-sound receivers with glass sides, back and top instead of the solid-wood cabinets. The interior of these "aquarium" sets as they are called, are illuminated by means of concealed mercury-vapor tube lights. These sets are attracting crowds in the Davaga-City Radio stores and elsewhere where they are on display in Metropolitan New York.

Mr. Public Gets the Low-down on Television

FROM last account the NBC television tours are still being received with a great deal of interest by the public. These conducted tours at Rockefeller Centre provide a 30 minute demonstration on how television works from the television eye or camera with its iconoscope to the received image on the kinescope or cathode-ray tube. Pages directing the tours report that Mr. Public wants to know when the receivers will be ready, how much will they cost and why can't they just put a picture box on their present set?

Mary Eastman as Tele-Test Signal

BECAUSE Monotron tubes are in rapidly-growing demand by television engineer and tele fans, particularly in areas not served by experimental video transmitters the National Union Radio Corp. has just brought out a new Monotron picture CR. tube containing a sharp half-tone (Follow over to page 61)



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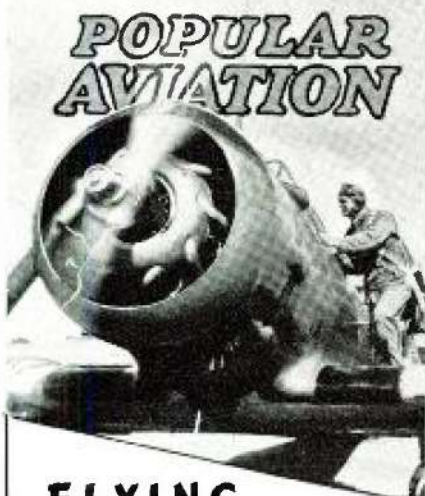
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The Video Reporter

(Continued from page 14)

photograph of Mary Eastman, popular radio vocalist. It is actually a signal generator cathode-ray tube with the fixed image mounted in the tube at the time of manufacture. It is used in place of the conventional test-pattern line drawings.

Tele-Casts

YOUR scribe is endeavoring to run down the story on the rumored \$60,000,000 new radio chain set-up for broadcast and particularly television. No doubt some of our readers have noticed the scoop items (very vague) on this, in the columns of the tabloid newspapers.

An experimental television transmitter construction permit has just been granted by the Federal Communications Commission to the Allen B. DuMont Labs., Inc. The permit covers a power rating of 50 watts, and a frequency range of 42,000-56,000 kc. This application was made for the purpose of establishing an experimental television transmitter to aid in the practical development of visual broadcasting and reception.

It was recently reported that Mr. Solomon Sagall, managing director of Scophony Ltd., England, is now in New York with plans to launch an American plant to produce its own receivers and possibly erect its own chain of transmitters. It is said that their set differs from ours, in the fact that they do not use the cathode ray tube,

It's an Art!

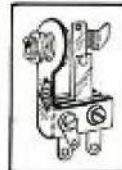
(Continued from page 33)

the bakelite of a socket where it couldn't be seen.

As for the actual lacing, this can be better explained by a simple drawing than a thousand words. The diagram shows the main points to watch. The rib, or cord connecting the loops, should be kept underneath, out of sight. This adds immensely to the final appearance. Also, the idea of a knot under each loop is to prevent all the lacing from unraveling, should one loop break. If the cables are more than one-half inch thick, it is a good plan to make two loops at each point, separating one set of double loops from the next by about three-quarters of an inch. Any light, strong cord will do, preferably waxed. [Fishing-line makes fine lacing material.—Ed.]

Now let us go on to Audio Wiring. In this type, high gain stages are likely to give the most trouble, since any slight disturbance in the grid is greatly amplified in the plate circuit, and feed-back and self-oscillation are very common. The safety rule to remember is to keep the grid circuits of a stage well isolated from its own following plate circuit. It is permissible to have the plate circuit components of the preceding stage close, since theoretically they are at the same audio potential as the grid components they are driving. In making coupling leads to gain controls, or any other low level leads, it pays to shield the leads well, grounding the shielding very solidly by returning it with a piece of hook-up to a point as near to the cathode by-pass condenser ground as possible. Never have more than one direct chassis ground to a stage, returning all grounds for that stage, and that stage alone to the one point.

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