FACTORY-TESTED RCA PARTS

LET THEM HELP YOU BUILD A PROFITABLE SERVICE BUSINESS

*"As a Quality Business, Radio Service Will Become a Profitable Business"**

THE most valuable asset any radio service business can have is the confidence of its customers. As in any professional service business, there are three factors in radio service work which go to create customer confidence: the ability of the radio service engineer, the business methods employed, and the parts or merchandise used.

The most tangible of these three factors is the parts used. Months must elapse after a service job is done before your customer can be sure of your ability; repeated contacts are necessary before your customer is aware of your business methods; but today he can appreciate the fact that you used the highest quality, factory-tested parts when you serviced his radio receiver.

And that mere fact alone—that you used factory-tested parts of a well-known brand—reassures him that you are competent and that your business methods are of the same high quality as the parts you used. Because you have used quality parts, your customer is confident he is getting a quality job and is satisfied to pay a quality price.

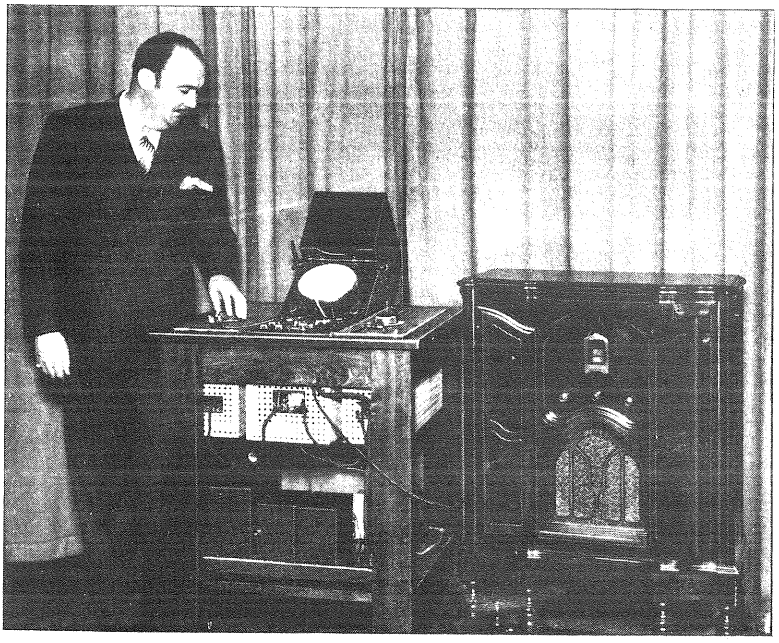
What makes for quality in radio parts?

First, consider the manufacturers: their reputation, their position in the radio industry, their research and laboratory facilities, their manufacturing facilities, their reputation for quality and fair dealing. Consider all of these points when you buy replacement parts and you have your best reason for insisting on factory-tested RCA Parts.

Through every step from the research in the laboratory to the packaging, RCA Parts are designed to be worthy of the greatest name in radio, RCA. Every radio replacement part manufactured by RCA Victor Company, Inc., owes its quality primarily to RCA's unmatched laboratory and engineering facilities, and secondly to a factory organization that for thirty years has produced only quality merchandise.

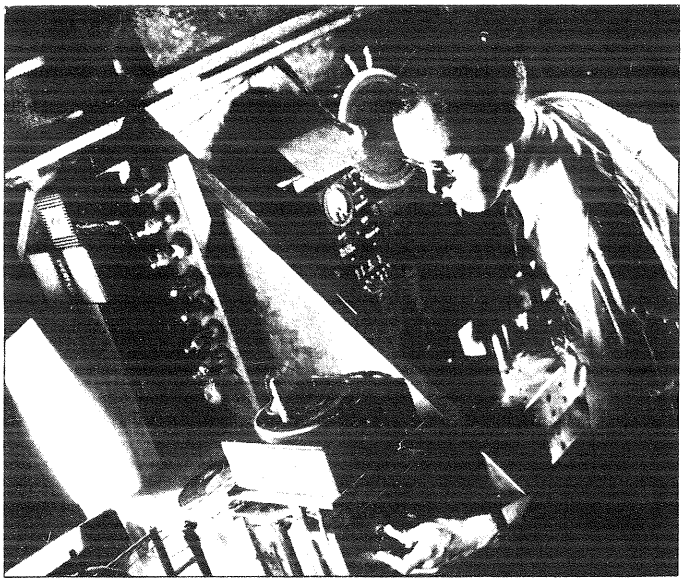
Let us take an RCA power transformer, for instance. It was designed to do a specific job by engineers who are specialists in power transformers, who have concentrated their efforts for years on this one type of equipment. They have had the invaluable advantage of the collaboration of other specialists in all divisions of radio engineering.

Every normal requirement of the power transformer's particular function is first calculated. Tentative specifications providing generous safety margins are drawn up. From these specifications sample lots are



The oscillograph gives Paul Whiteman a "picture" of his music

* Excerpt from an editorial, RCA Radio Service News, April 20, 1934, by E. M. Hartley, Manager, RCA Parts Division.

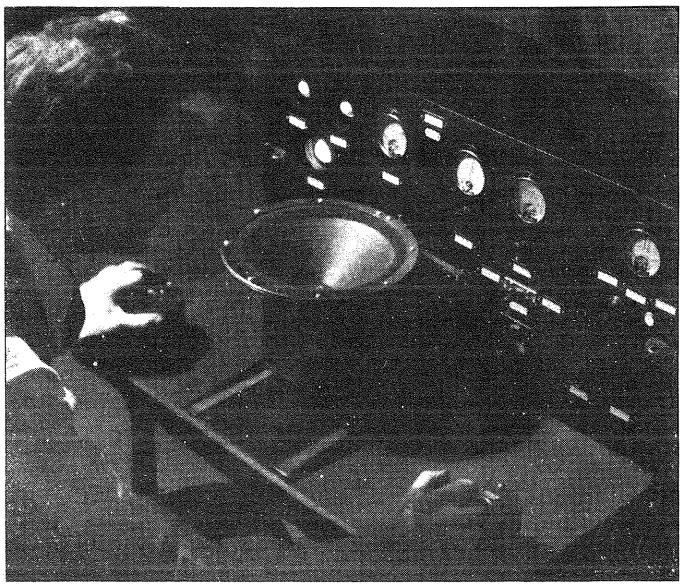


Drawing I. F. curves by means of specially developed equipment

manufactured and the product is tested in actual use. Changes in specifications may be necessary before the Engineering Department permits the transformer to go into regular production. However, when design specifications are adopted for a part, and a stock number assigned to it, thereafter every part sold under that number must conform to specifications as to essential electrical characteristics. RCA Replacement Parts do not vary from one factory lot to another. You are assured of uniformity between lots as well as between individual pieces.

In the Manufacturing Department, the quality of RCA Parts starts with the specifications and rigid tests for raw materials, and continues through the manufacturing processes. In power transformers, for example, the multiple winding system is used tc avoid strain and to permit of tests of individual coils before assembling. An exclusive vacuum asphalt process of impregnation gives complete penetration of laminations as well as of coils. The result is a product that is impervious to moisture and which has an extremely low hum or rattle factor. RCA power transformers, as all RCA Parts, are built up to laboratory standards of quality rather than down to meet a price and yet they cost no more than "just-as-good" parts.

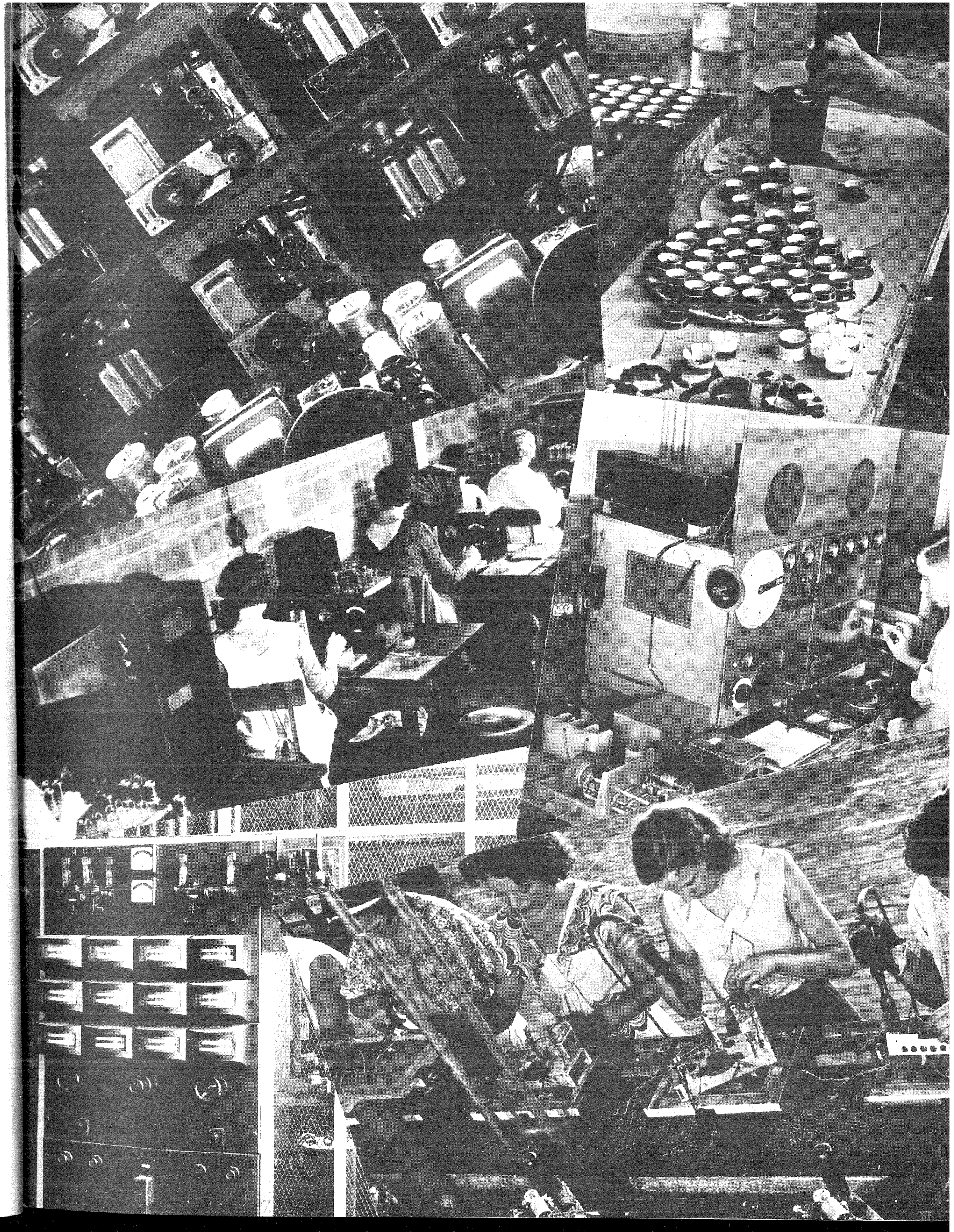
"Factory-tested" is more than a slogan. It means that every RCA Part is tested individually many times between steps in production. It means that every RCA Part is tested as a finished product. It means that sample lots of parts are tested before shipment. Most of all, it means that the transformer you buy, or any part you buy, is not just another transformer, but is factory-tested for the particular job it was designed for. It means that you get quality in the fullest sense of the word.

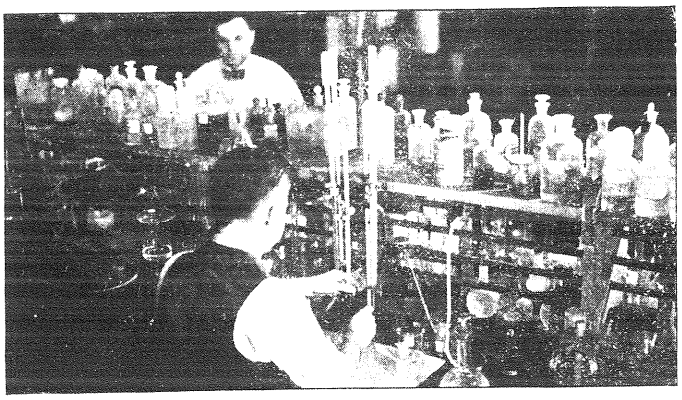


Each speaker gets a high voltage breakdown and impedance test

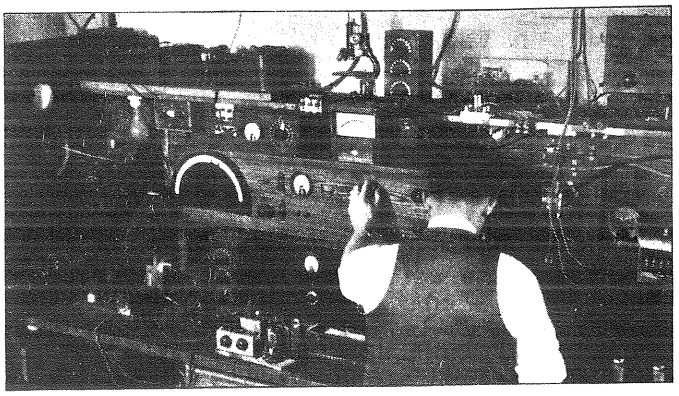
But why buy quality factory-tested RCA Parts from an authorized RCA Parts distributor when apparently the same part or an almost-as-good part can be obtained from, for instance, a salvage house? The reason is salvage. Who can afford to entrust his reputation and good will to replacement parts that were salvaged out of old sets or

The continuity test - one of many tests along the production line

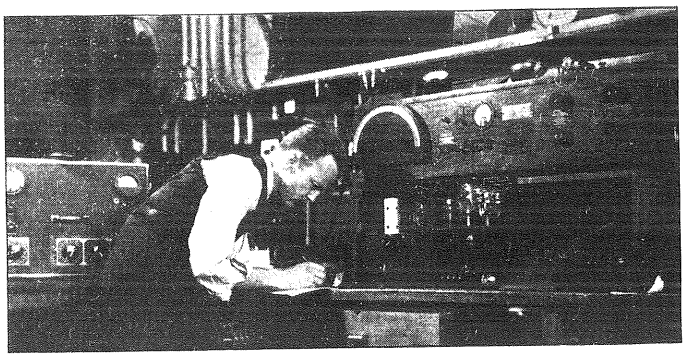




The first step toward quality—testing raw materials



Where test instruments are tested—the Standards Laboratory



Test data is carefully noted and studied

that were rejected by the factory as not up to quality standards? Who can afford to make the call-backs necessitated by the failure of salvaged or "just-as-good" parts?

Parts for radio receivers can be made cheaply as so many turns of wire and so many pieces of iron, or they can be built with the precision of laboratory apparatus. When parts are scientifically designed to perform a certain function, built with precision to the most exact standards from only the finest raw materials, and then tested time and time again during the process of manufacture, they naturally cost more to produce than parts whose outstanding feature is their price.

Similarly, merchandise that is produced to meet a demand, and sold only through legitimate channels of distribution, must cost more than merchandise that has been dumped on the market or salvaged from what sources nobody knows. If such merchandise has any place in the radio-service industry it is in that part that does poor work, with poor parts, and can charge only starvation prices.

For a profitable radio-service business, conducted by real radio-service sales engineers, the best quality parts are the soundest investment that can be made. They save time and money, and, in the long run, they save the customer's good will. Their cost is only a small part of profitable radio-service prices.

RCA Parts, purchased from an authorized RCA Parts distributor, are the only RCA Parts which you can be sure were factory-tested. They are guaranteed by the manufacturer and by the distributor—and the distributor stands ready at all times to make good the factory guarantee.

RCA Parts give your service work the prestige of the greatest name in radio. They give you the assurance that the customer will accept them without question.

RCA Parts are quality parts, for quality work, entitling you to charge quality prices. They are worth the difference.

Use factory-tested RCA Parts—and let your customers know that you use them.

FOR PROFITABLE SERVICE WORK

FACTORY-TESTED RCA PARTS

Announcing . . .

The RCA World-Wide Antenna System

A Di-Pole Antenna System for All-Wave Receivers

Stock No. 9500

The RCA World-Wide Antenna System is an expertly designed di-pole antenna system for all-wave receivers. Greatly improved signals and elimination of noise pickup between the antenna and receiver are among its numerous features.

ADVANTAGES

1. The RCA World-Wide Antenna System uses a "Double Doublet" antenna (a doublet is a special short-wave antenna), which gives as much as five times the signal pickup as that of an ordinary antenna.

2. The RCA World-Wide Antenna System uses a special transmission line between the antenna and the receiver which permits the antenna to be placed as far as 500 feet from the receiver without loss in efficiency. This transmission line also eliminates noise pickup between the antenna and the receiver.

3. The RCA World-Wide Antenna System uses a coupling transformer, located at the receiver, to properly match the transmission line to the input circuit of the receiver. A low-capacity switch is mounted on the transformer for switching from broadcast to short-wave reception so that maximum efficiency is obtained on both bands.

4. The RCA World-Wide Antenna System gives greatly improved results on the broadcast band.

5. The RCA World-Wide Antenna System greatly improves the reception of all short-wave receivers. On the older type short-wave receivers using adaptors, the results are especially desirable.

6. The RCA World-Wide Antenna System is easy to install. Stranded antenna wire is furnished in exact lengths, tinned at proper points for soldering. The transmission line is light and flexible and does not require heavy transposition blocks or cut-and-try methods for installing. A special cross-over insulator and all necessary insulators and fittings are included in the kit.

7. The RCA World-Wide Antenna System may be used in locations where physical limitations prohibit the erection of full-length antenna spans. Loading coils (obtainable as an accessory) may be used to increase the antenna lengths, electrically.

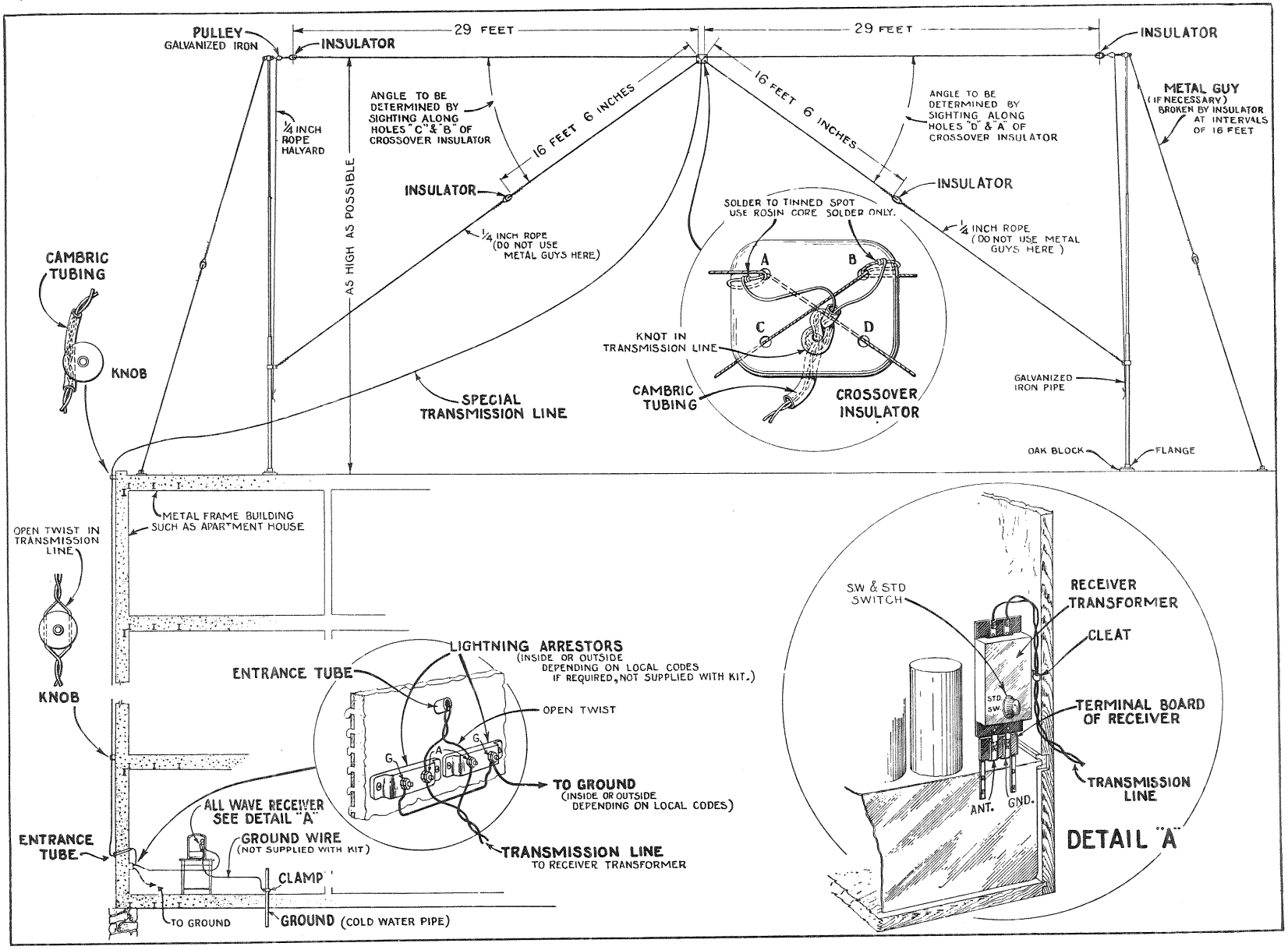
8. The RCA World-Wide Antenna System consists of a kit of parts, packed in an attractive carton and made up of the following items:

- 1 Antenna Transformer and Switch
- 1 Antenna Crossover Insulator
- 2 Rolls Antenna Wire—each roll 46½ ft. long
- 1 Roll Transmission Line—110 ft. long
- 4 Strain Insulators
- 1 Lead-in Insulator
- 2 Transmission Line Insulators
- 1 Ground Clamp
- 1 Transmission Line Clamp
- 3 Wood Screws
- 2 Insulating Sleeves
- 2 Spacers

List Price $6.00

Order from

ALL RCA PARTS DISTRIBUTORS



Typical Installation of Stock No. 9500 Kit

MANUFACTURED BY

RCA Victor Company, Inc.

CAMDEN, N. J., U. S. A.

RCA VICTOR SHIELD KITS

Stock Nos. 7717 and 7718

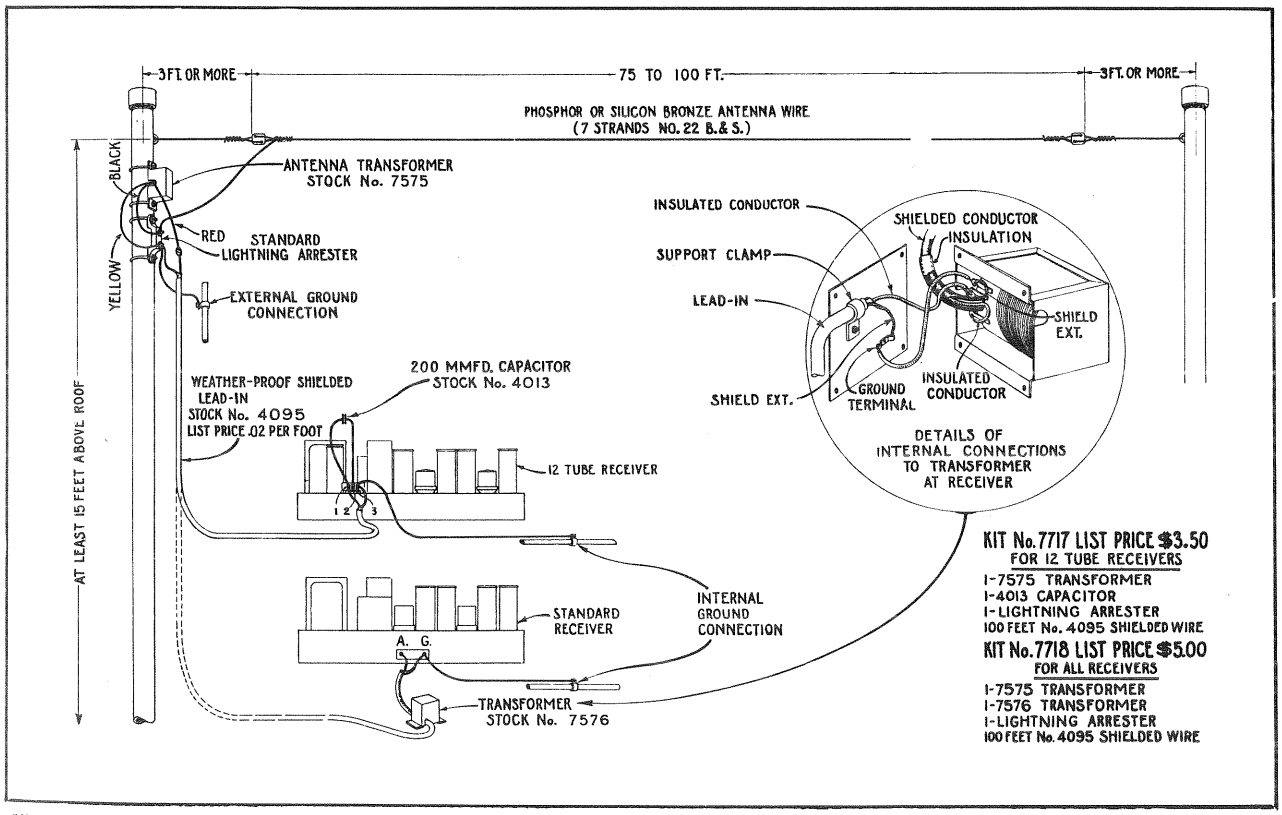
The RCA Victor Shield Kits, Stock Nos. 7717 and 7718, consist of an assembly of parts designed to be used in conjunction with radio receivers for the prevention of interference pickup by the lead-in portion of an antenna system. Inasmuch as the majority of man-made interference is picked up on the lead-in section of an antenna, installation of these kits greatly improves the ratio of signal to noise.

The Stock No. 7717 kit consists of an antenna transformer, 100 feet of low-impedance shielded lead-in wire, a 200 mmfd. capacitor and a lightning arrester. This kit is designed to be used with the RCA Victor Model 280 *only* and does not include a receiver coupling transformer. Such omission is made possible by the inclusion of a tap on the antenna coil of the Model 280, which matches the impedance of the shielded lead-in.

The Stock No. 7718 kit consists of an antenna transformer, 100 feet of shielded lead-in wire, a receiver transformer and a lightning arrestor. This kit is designed to be used with all types of broadcast receivers. The illustration below shows the proper manner of connecting these kits.

In conjunction with the Stock Nos. 7717 and 7718 kits, it must be remembered that these lead-in systems will not affect such conditions as natural atmospheric conditions which induce static into the antenna or any other noise that is picked up by the flat top portion of the antenna. To visualize the gain in these systems, the results will be approximately equal to the reception that would be obtained if the receiver were located at the top of the antenna pole.

These kits will give excellent results over the entire broadcast and police frequency bands. However, they are not recommended for the short-wave broadcasting bands.



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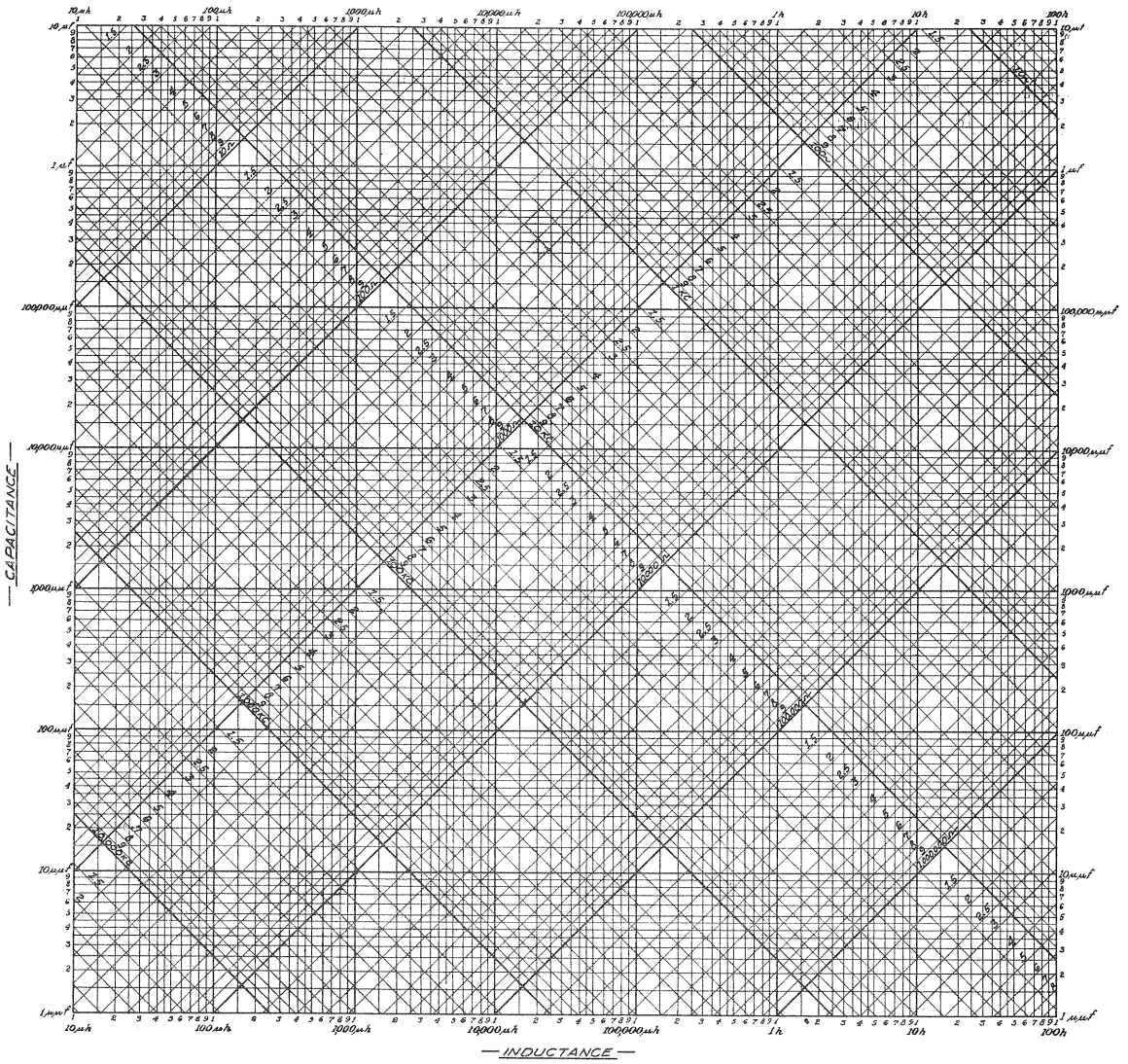
Proper Method of Connecting Kits to Antenna and Receivers

CHART OF FREQUENCY OR IMPEDANCE VS. INDUCTANCE AND CAPACITY

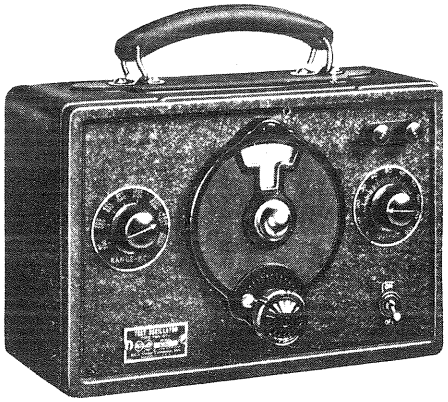
The Chart shown below provides a quick method of determining several unknown factors when one or more are known. The Chart covers a very wide range, namely, from 10 micro-henries to 100 henries inductance, 10 cycles to 50,000 kilocycles, 1 ohm to 10 megohms and 1 micro-microfarad to 10 microfarads. If, for example, one wishes to know the capacitance to use with a 10 henry inductor to have it resonate at 50 cycles, it can be readily seen that it would be a 1 mfd. capacitor. This is determined by finding the intersection of the vertical line representing 10 henries and the oblique line representing 50 cycles. The intersection occurs at the horizontal line representing 1 mfd. The other oblique line at this intersection represents the impedance at this frequency. This is approximately 3000 ohms.



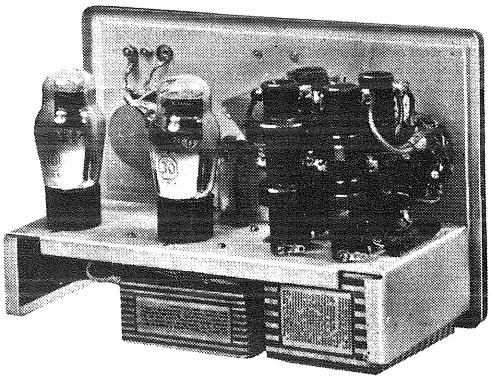
RCA

Full Range Test Oscillator

Type TMV-97-B



Front View



Rear View of Chassis

The RCA Full Range Type TMV-97-B Test Oscillator is a modulated R. F. oscillator which supersedes the Type TMV-97-A. New features are a wider frequency range, an improved calibrated tuning dial (reading in frequency) and a direct-reading range switch. All older features such as small compact size, light weight, self-contained batteries, etc., of the Type TMV-97-A are retained.

The frequency range extends continuously from 90 K. C. to 25,000 K. C. (3300–12 meters) and is divided into eight bands. This covers all intermediate, broadcast, police and short-wave frequency line-up points of all makes of receivers. An eight-position range switch provides for the selection of any desired band. An attenuator (output control) gives a means of adjusting the output to any level. This is very important in modern receivers, due to the increasing practice of combining the automatic volume control with other tubes.

Of special interest to amateurs and experimenters is the simplicity with which the modulation may be eliminated. This may be done by the use of a special adapter in the modulator socket. The oscillator then may be used as a heterodyne oscillator for short-wave superheterodyne receivers or for heterodyning the I. F. frequency of all-wave receivers to permit reception of pure CW signals.

Proper servicing of the simplest receivers is impossible without an oscillator. New designs covering an increasingly higher frequency range make the use of such an oscillator imperative. The TMV-97-B Oscillator fills the need for such apparatus at a price heretofore considered impossible

SPECIFICATIONS

Circuit—A tuned-grid, plate-modulated circuit is used, which gives good stability over a wide range of voltage and climatic conditions. The output is modulated 50% at 400 cycles.

Radiotrons—Two Radiotrons RCA-30 are used, one as an R. F. oscillator and one as an A. F. modulator.

Batteries Required—One 22½ volt "B" battery and one 4½ volt "C" battery are used. The "C" battery provides filament power for the Radiotrons, the filaments of which are connected in series.

Size—Height 8½ inches (including raised handle), case alone 6½ inches, width 9¾ inches, depth 4½ inches.

Weight—3½ lbs., including batteries.

Switch—A toggle-type operating switch for turning the oscillator "on" and "off" is mounted on the front panel.

Frequency Range—90 K. C.–25,000 K. C. by eight bands. The Range Switch is located on the front panel and marked directly in frequency.

Output—Two binding posts on the front panel, together with an attenuator, give an easy means of connecting and adjusting the output.

Dial—Variable vernier dial adjustable from 6:1 to 20:1 speed reduction. The dial glass has been made thicker so that the indicator line is very close to the dial, thus avoiding a possible parallax.

Calibration—The dial is calibrated directly in frequency to an accuracy of ±3%. Complete individual calibration may be obtained at an additional cost of $5.00.

Case—The entire oscillator is enclosed in a black wrinkle-finished aluminum case provided with a leather handle.

Net Price $29.50

(WITH RADIOTRONS—LESS BATTERIES)

Order Stock No. 9050

RCA Tools and Accessories

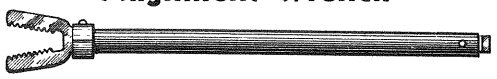
The following tools and accessories are useful for servicing Radio Receivers, Combinations and Short-Wave Instruments of all types and manufacture.

Alignment Tool

Stock No. 4160 **Net Price $0.60**

The Stock No. 4160 Alignment Tool is a bakelite shaft combination screwdriver and socket wrench. The matal screwdriver bit is so shaped that the increase in capacity caused by its touching a trimmer screw is offset by the reduction in inductance caused by its shape. This is very important when making adjustments on all-wave receivers where the screwdriver must be inserted through the end of the coil. The socket end fits the main tuning capacitor trimmer adjustment screws used on numerous RCA Victor Receivers. The bakelite shaft is 7/32" diameter, which gives entrance to 1/4" holes, used on older model Radiola receivers.

Alignment Wrench



Stock No. 7065 **Net Price $0.50**

The Stock No. 7065 Alignment Wrench is a combination screwdriver and alligator jaw end wrench. The metal screwdriver bit is shaped so that it will have a minimum effect on the alignment of the set when it touches a trimmer screw. The end wrench is suitable for adjusting trimmer screws that are accessible only from the side. The shaft is of bakelite, 7/32" diameter and the overall length is 5 1/2".

Riveting Punch

Stock No. 10987 **Net Price $0.50**

The Stock No. 10987 Riveting Punch is a special metal punch for use with a riveting anvil. The punch may be used with the rivets usually used on radio receivers and permits the service man to make a factory type repair, instead of using machine screws to replace rivets. The punch is 5/16" in diameter and 5 1/2" long.

Riveting Anvil

Stock No. 10988 **Net Price $0.70**

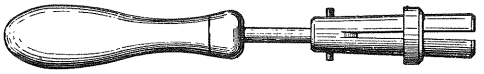
The Stock No. 10988 Off-Set Riveting Anvil is a special anvil that permits riveting in places ordinarily inaccessible. It is to be used in conjunction with a riveting punch such as Stock No. 10987. The Anvil is 5/16" in diameter and 3 1/2" long.

Tuning Wand

Stock No. 6679 **Net Price $1.10**

The Stock No. 6679 Tuning Wand is a special alignment tool which makes possible the checking of alignment in all-wave receivers without disturbing the adjustment of the trimmer capacitors. The tool consists of a bakelite rod having a brass cylinder at one end and a special finely divided iron core at the other end. Inserting the brass cylinder into a coil lowers its inductance, while inserting the iron increases the inductance. From this it is evident that before adjusting trimmers, the adjustment may be checked by inserting each end of the wand into the coil. Proper adjustment is evidenced by a reduction in output with either end of the wand inserted into the coil.

Knurled Nut Wrench



Stock No. 10982 **Net Price $1.20**

The Stock No. 10982 Knurled Nut Wrench is a special wrench designed for tightening or removing the knurled nuts such as are used with toggle type switches. These nuts are ordinarily impossible to remove or tighten without marring. The wrench will hold a nut from 5/8" to 1/2" diameter. The overall length is 8 1/2".

Off-Set Screwdrivers

Stock No. 3064 **Net Price $0.50**

Stock No. 2930 **Net Price $0.50**

The Stock Nos. 3064 and 2930 Off-Set Screwdrivers are useful for making adjustments to remote control units and other small screws that are inaccessible with an ordinary screwdriver. The No. 3064 screwdriver is 2 1/2" long while No. 2930 has an overall length of 4 3/8".

Socket Wrench

Stock No. 10983 **Net Price $1.80**

The Stock No. 10983 Socket Wrench is a special flexible end socket wrench designed for adjusting the alignment screws of the 1929 and 1930 Victor Receivers, Models R-32, R-35, etc. The overall length is 8 3/4".

MANUFACTURED BY

RCA Victor Company, Inc.

CAMDEN, N. J., U. S. A.