



RADIO SERVICE NEWS

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VOLUME VIII, No.1

APRIL, 1942

WAR SPURS NEED FOR ADEQUATE RADIO SERVICE

MATERIALS SAVED BY RCA GO FOR WAR PRODUCTION

Scarce Metals Either Replaced
or Eliminated as Intense
Research Continues

Tons of metals and chemicals desperately needed for the United States war production program are among the strategic materials conserved by an all-embracing program worked out by development engineers of the RCA Manufacturing Company. In addition to discovering alternate materials—and then alternates for the alternate materials—RCA engineers have also been able to develop domestic alternates for imported materials, thus freeing shipping space for other commodities.

Started Early

Many months before Pearl Harbor it appeared evident that some materials, especially aluminum, would be available in insufficient quantities for both military and civilian needs. The RCA Manufacturing Development Division was assigned the task of devising new uses for plentiful materials to relieve shortages in strategic commodities.

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READY SOON



New RCA Window display depicts part RCA tubes are playing in War effort. Reproduced in 10 colors.

UNDER THE MIAMI MOON!



Lucy Monroe, RCA Victor Director of Patriotic Music, sings to 15,000 people of Miami on March 13. Miss Monroe is conducting the Victory Song Festival under sponsorship of the U. S. Treasury and RCA Victor.

RCA ALLOCATOR FINE UNIT FOR FAST ALIGNMENT

Gives complete range of frequencies from 405 to 1700 kc.
Net price only \$17.50

For fast alignment and servicing of standard broadcast receivers, the RCA Station Allocator will be found an unusually handy instrument. Operating either from self-



RCA Station Allocator.

contained batteries or a-c, the RCA Station Allocator has stability of an unusually high order. This is accomplished through the use of adjustable magnetite core inductors, wound on polystyrene forms and fixed condensers using polystyrene dielectric.

Frequencies Quickly Changed

Changing frequencies is easily accomplished by use of eight push-buttons which can be set at the frequencies desired for alignment use. Operation either with or without 400 cycle modulation at either high or low output is available.

DO YOU NEED NEW TEST EQUIPMENT?

Here's how we stand as we go to press, in the event you are in the market for new test equipment. It is quite likely that our distributors can deliver other items. Be sure and check with them.

Immediate delivery through your RCA Distributor can be made on the following units:

- No. 154 Audio Oscillator
- No. 171 Station Allocator
- No. 157 Crystal Calibrator
- No. 170 Audio Chanalyst (Ready about May 1, 1942)

A limited number of the following instruments may be available for general sale:

- No. 167A Test Oscillator
- No. 164 Chanalyst Converter (after May 1, 1942)

In addition to the above, we can make shipment of the following instruments against priorities only:

- No. 165 Jr. VoltOhmyst
- No. 162 Chanalyst
- No. 155A Oscillograph—3"
- No. 158 Oscillograph—5"
- No. 160 Oscillograph—5"

ALLOCATOR SPECIFICATIONS

Push Button Ranges:

- Buttons 1 and 2 (approximately) 405-825 k.c.
- Buttons 3, 4, and 5 (approximately) 600-1185 k.c.

(Continued on page 3, col. 3)

WELL EQUIPPED SHOPS DOING LARGE VOLUME OF REPAIR BUSINESS

RCA Providing Aids and Equipment to Facilitate Work

More interest in radio than ever before, plus the halting of all new radio production, has placed the radio service man in one of the busiest positions since the advent of radio broadcasting. Supplementing this is the fact that many radio service men have joined the armed forces, others have accepted positions in defense industries and the picture becomes one of more work than ever before, with fewer qualified men to do it.

RCA has recognized this situation and is making every effort to help the radio service industry streamline its operations to take care of this unusual and profitable condition. The first requirement is the procurement of the necessary tubes and parts. The inauguration of the RCA Preferred Tube program several years ago is now greatly helping the situation by converting the renewal demand

(Continued on page 2, col. 4)

WOW !!



Glamorous Janette Davis wows 'em on the Blue Network's "Matinee" and "Breakfast Club" programs. Sorry—we saw the captivating lady first!

AT RCA TOPMAST



The coveted Navy E Flag and the Bureau of Ships Flag fly proudly beneath Old Glory atop the main office building of the RCA Camden Plant.

DO YOU KNOW . . .

That our sister publication HAM TIPS, has suspended publication for the duration. There is a lot of good dope in the past issues. The last issue covered a V. F. O. of unusual interest. A complete set is available in binder for only 25 cents.

That our replacement parts section has a good stock of pickup crystals, and cartridges. Our supply of complete crystal pickups is limited and of magnetic pickups, extremely limited.

That if you are considering ordering the RCA Aerocrystal Microphone MI-6202 or MI-6205, a priority is essential to secure early delivery.

That we can still supply back volumes of all Service Notes except 1930-31 and 1937. The price up through 1938 is \$1.25, 1938, 1939, and 1940 \$1.50. Better make sure your set is in good condition and complete. RCA Victor Service Notes contain the most complete data available on RCA Victor receivers. When these are gone—there won't be any more!

That the RCA Stock No. 9912 External Antenna Coupler is a handy gadget for many difficult jobs. Enables you to connect external antenna to loop receiver, eliminate loop where better signal to noise ratio is desired, or it may be used as a fixed tuned substitute for any standard loop antenna to aid aligning loop receivers in the shop.

UNIVERSAL TRANSFORMERS IDEAL FOR USE IN MANY AUDIO CIRCUITS

Years of service have proven value of RCA units

Two universal units, one for interstage use and one for output coupling to dynamic loudspeakers, give the service man an ideal method for making repairs in such circuits. These units have been in service for many years and have proven satisfactory in thousands of



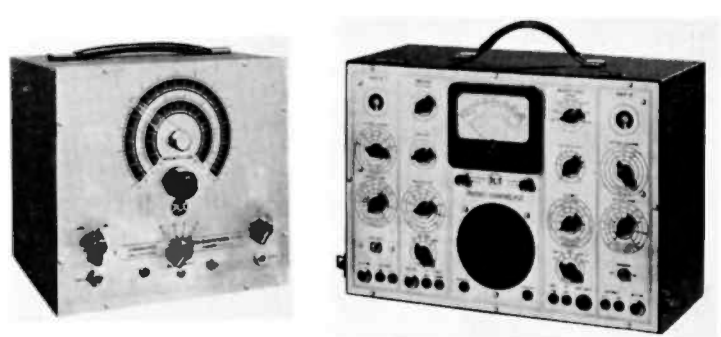
RCA universal output transformer

installations. Today, when the need for simplification is greater than ever, these transformers will be found to be an excellent unit for servicemen to keep in stock.

Interstage transformer, Stock No. 9632, List Price \$2.00, contains a center-tapped primary and a center-tapped secondary for correcting either from or to any single or push pull stage. The turn ratio is 1:3 overall and its frequency response is essentially flat from 30 to 10,000 cycles.

Output Transformer, Stock No. 7852, List Price \$2.00, fits any combination of output tubes and speakers ordinarily encountered in service work. It is easily mounted by means of slotted angle brackets, has a silicon steel core and the windings are protected with baked varnish impregnation. Fits voice coil impedance of from 1 to 15 ohms. The primary load impedance may be from 1,000 to 20,000 ohms and the maximum plate current 55 milliamperes. The frequency range extends from 30 to 10,000 cycles.

TWO NEW ADDITIONS TO LINE



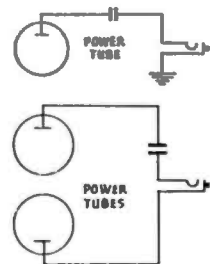
After many difficulties and delays, the RCA Audio Chanalyst and the RCA Chanalyst High Frequency Converter are now ready for shipment. These instruments are finding wide application in defense uses.

CONNECTING HEAD- PHONES FOR THE DEAF

By J. Paul Taggart, Sound Engineer for the Deaf

My experience in connecting phones for the deaf leads me to think that but only a few service men know how to do this job properly.

Having been hard of hearing for a life time with a 48% loss, and in this work as a business, I will give my humble advice and say that only by the following method will the deaf receive the volume desired and the family also be able to have the speaker at normal volume.



Note: Always put switch in voice coil line to cut speaker out when family not interested in program.

(Continued on page 3, col. 3)

WELL EQUIPPED SHOPS DOING LARGE VOLUME OF REPAIR BUSINESS

(Continued from page 1, col. 4) into a few type numbers, which are practically all available. In regard to replacement parts, every effort is being made to keep adequate stocks for RCA Victor Receivers. In the accessory field, a number of items are available to help the service man in many ways to do better work and make a more profitable transaction.

For the duration, RCA Radio Service News will be issued in its new handy size. This greatly conserves badly needed paper, and reduces distribution costs. Every effort will be made to keep the radio service profession up to the minute with the latest information that will help them in the performance of their work.

MATERIALS SAVED BY RCA GO FOR WAR PRODUCTION

(Continued from page 1, col. 1)

This Division has been able to save tons of nickel needed to make armor plate by replacing its use as a plating material with a lacquer polish. Cobalt went into the defense effort after a way had been found to eliminate it entirely from certain types of magnets. Brass parts have been replaced with wood and less critical materials.

At RCA's tube manufacturing plant at Harrison, N. J., engineers have set up production plans for 1942 that will leave many tons of materials free for defense use which had been thought indispensable in tubes. Included are 440 tons of brass needed for shell casings, 29 tons of nickel, 12 tons of aluminum, and 1½ tons of tin.

Cooperating in RCA's Company-wide conservation program, the Indianapolis plant has designed a new type of high-frequency horn required for motion picture sound reproducing systems. The new horn is made entirely of wood excepting for the throat, and will save a substantial quantity of metal.

PRODUCTION SCOREBOARD



Something new in production scoreboards, as suggested by WPB Chief Donald Nelson, is illustrated in this tug-of-war chart designed by RCA Manufacturing Company and displayed (above) in one of the Company's Camden plants.

SALES AND SERVICE TIPS

Now you can win your choice of a handsome RCA Service Engineer's Pencil or any volume of RCA Victor Service Notes by sending tips to RCA Radio Service News, Camden, New Jersey. All tips become the property of RCA to be used as they see fit. . . . Service Tips are our readers' ideas, not ours. While we believe they are worthwhile, we cannot be responsible for results.

WHEEL STATIC

Remove valve core, pour about 1 ounce of powdered graphite in each wheel. Replace core and inflate tire. It certainly does a fine job and can be purchased at any auto parts store for a few cents.

Oliver F. Klein
c/o O.K. Radio Service
2235 N. 39 Street
Milwaukee, Wisconsin

SPECIAL SOLDERING IRON

For getting into close quarters on small sets, I have found that the heat from my ordinary 55-watt iron is too great. Therefore, I have



made a spring of copper wire coiled around the tip with one end sticking out about 1½". This tool is very handy for many types of work.

Albert C. Hart
603 Logan Street
Hammond, Indiana

SALES HELP

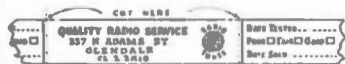
When finishing up a repair job take an RCA tube sticker and cut off the tube test part. Then stick the imprinted portion in the back of the radio cabinet within plain view. Call your customer's attention to it and tell her why it is there. The results are obvious. RCA tube test stickers, #F1402

TALENTED



Loretta Poynton, talented NBC actress, not only does outstanding work on the radio but designs her clothes as well! What's holding Television?

in the sales aid catalog, are available with servicemen's imprint for only one dollar, and the roll will



last "forever." It is truly money well spent.

James R. Limbeck
337 N. Adams
Glendale, California

FACILITATES CABINET REMOVAL

I recently had a lot of trouble trying to remove the chassis of an RCA 46X12. It was so firmly wedged into the plastic cabinet that nothing would remove it short of breaking the case. Remedy—I heated it on a steam radiator for a few minutes and it slipped out readily. I then ground the edges of the chassis where it bound to prevent a recurrence of the difficulty.

Paul E. Frost
485 North State St.
W. Concord, N. H.

METAL TUBE PLUG

An inexpensive yet quite efficient plug can be made from an old burned out metal tube. Grind the top off the tube and remove



the stem assembly. Then grind and file the top until it is smooth and not sharp. After you have the cable connected to the prongs, fill the empty space with tar or wax.

Bob Johnston
5306 Avondale Street
Duluth, Minnesota

DISTORTION IN RCA VICTOR MODEL 6T5

When an RCA Victor Model 6T5 comes into the shop with the complaint of being distorted, check the 220,000 ohm A. V. C. resistor in the can of the 2nd I. F. transformer for open. Replacement will bring the set back to normal operation.

Floyd E. Smith
Radio Sales & Service
Prairie du Rocher, Illinois

NEW OFFICERS OF RCA MANUFACTURING COMPANY



George K. Throckmorton has been elected Chairman of the Executive Committee and Robert Shannon has been elected President of the RCA Manufacturing Company, Inc.

CONNECTING HEADPHONES FOR THE DEAF

(Continued from page 2, col. 3)

A .05 mfd. coupling condenser usually is about right, although some tubes will require a larger condenser. Without a condenser the best phones will last only a short while.

From the fact that 85% of all deafness is catarrhal and of eustachian tube type, most audiometer charts show an almost complete loss on all frequencies over 4000 to 5000 cycles. That is why magnetic phones are much more pleasing in tone to the deaf.

There is a vast field in the new business of Hearing Aids for the service man who has the ability to build and service this equipment.

Church Installations Require 14 Watts

In Church installations at least a 14 watt amplifier should be used to have a reserve of power on the line for those deaf people who require greater volume. I insure reception by having the janitor or warden turn enough volume into the 500 ohm line so that the deafest of the deaf can sit in their pew and turn on their individual rheostat control to get every word spoken.

RCA ALLOCATOR FINE UNIT FOR FAST ALIGNMENT

(Continued from page 1, col. 3)

Buttons 6, 7, and 8 (approximately) 820-1700 k.c.

Tube Complement:
1 RCA-1R5 as r-f oscillator, 1 RCA-6H6 for a-c rectification, 1 neon tube for a-f oscillator and pilot lamp.

Weight:
5½ pounds with batteries. (Uses two flashlight cells and two 45-volt "B" batteries.)

Dimensions:
Height, 5 inches. Length, 8¾ inches. Depth, 3¾ inches.

RCA TECHNICAL LIBRARY

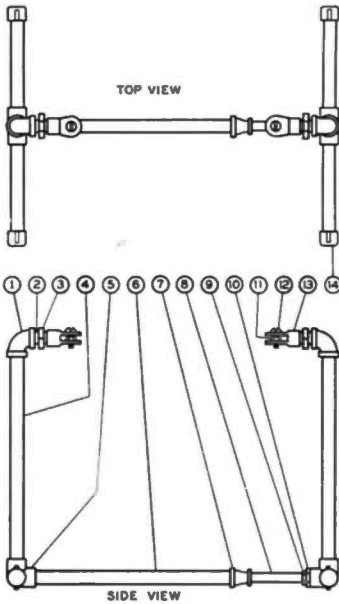
Good books are a *must* for every active serviceman, experimenter, engineer or student. This material is obtainable through your RCA Tube and Equipment Distributor or direct from RCA Manufacturing Company, Camden, N. J., by sending the proper remittance.

- RCA Receiving Tube Manual RC-14\$.25
Contains complete information on practically all RCA Receiving Tube types—256 pages, paper bound.
 - RCA Receiving Tube Characteristic Chart 1275-B05
Shows operating characteristics, socket connections of RCA Receiving Tubes—16 pages.
 - RCA Transmitting Tube Manual TT-325
Shows complete information on RCA Transmitting Tubes. 1939 Edition, latest available, 192 pages.
 - RCA Transmitting Tube Folder TT-10010
A 16-page booklet that shows at a glance the maximum ratings and typical operating conditions of RCA Transmitting and Special Purpose Tubes.
 - HB-3 All Types Handbook
A loose-leaf binder complete with data and curves on all transmitting, receiving, cathode-ray, television, and special-purpose tubes sold by RCA. A real engineering guide and an essential reference for circuit designers. Available on subscription basis. Write to Commercial Engineering Section, Harrison, N. J., for a descriptive folder and order form.
 - Ham Tips from RCA
A regular news publication prepared for radio amateurs, experimenters and engineers. Contains application information on popular RCA Transmitting Tubes with circuits and constructional information. Complete set of all back issues in paper cover25
(Publication suspended for D. O. W.)
 - RCA Transmitting Tube Guide25
A comprehensive 72-page book giving important data on the popular types of RCA Transmitting Tubes and constructional information on their use.
- In addition to the above, service notes and instruction books are available on many RCA products. A small charge is made for the more elaborate items. Write us your requirements.

HOLDER FOR RECORD CHANGER

In servicing an automatic record changer, it is essential to have some kind of a holder or stand to support the mechanism in a level position at a convenient height above the work table to permit easy access to all parts under the motorboard.

Adjustable stands can be purchased, or assembled from pipe fittings as shown in the accompanying sketch.



Legs can be used to support a record changer in level position at a convenient height above work table. The legs can be made from threaded rod, or from pipe fitting, as shown above.

The following parts are required for the record-changer holder shown. These parts can be obtained in hardware or plumbing shops.

FOR DEFENSE



Red Skelton gives Hollywood's juke box defense stamp drive a big boost by making a purchase from lovely Melena Brinton, an Earl Carroll beauty.

Drawing Number	Description	Quantity
1	1/2-in. ell	3
2	1/2-in. all-thread nipple	2
3	1/2-in. gas-pipe locknut	2
4	1/2-in x 15-in. pipe	2
5	1/2-in. 4-way ell on side outlet tee	2
6	1/2-in. x 14-in. pipe	1
7 (optional)	1/2-in x 3/8-in. reducer	1
8	1/2-in. x 15-in. pipe	1
9-10	1/2-in. to 1/4-in. bushing	1
11 (optional)	1/2-in. std. nut and 5/16-in. std. nut	2 each
12	1/4-in x 1 1/4-in. std. and 5/16-in. x 1/4-in. std bolt	2 each
13	1/2-in. awning eyelet	2
14	1/2-in. pipe cap	4

NOTE: If item 13 is not obtainable, change item 2 to 2 1/2-in. nipples, and drill 1/8-in. holes close to one end to accommodate the motorboard mounting bolts.

The simplest and cheapest type of holder is made by using legs that screw into the motorboard-mounting-screw sockets. Such legs

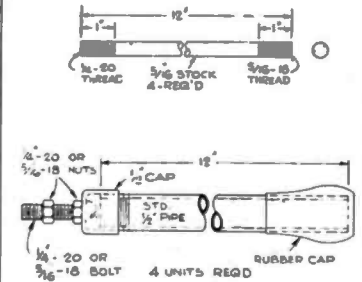
NAVY "E" PENNANT AWARDED TO RCA

Employees on Navy work entitled to wear "E" Button

Citing "outstanding results in the production of Navy material vital to our war effort," the United States Navy has awarded to RCA Manufacturing Company the coveted Navy "E" pennant.

"Your company will be privileged to fly this emblem as public evidence of your outstanding achievement," stated Under Secretary of the Navy James V. Forrestal in a letter of notification to Geo. K. Throckmorton. "In addition, your employees will be entitled to wear a special lapel decoration bearing the insignia of the Navy Department and the Navy 'E', which, as you doubtless know, is a traditional Navy award for excellence. In Navy parlance it means 'Well done'—the highest praise the Navy can bestow."

can be made from pipe fittings or from threaded rods as shown in the sketches. One end of each leg



has a 1/4-20 thread to accommodate most RCA changers, and the other end has a 5/8-18 thread to accommodate the RP-151 mechanism.

RCA MAKES FINAL RADIO-PHONOGRAPH AT CAMDEN PLANT

William L. Batt delivers war statement

William L. Batt, Director of the Raw Materials Division of the War Production Board, was the guest of honor at ceremonies, on April 7, marking the final production of phonographs and radios for civilian use for the duration at the Camden, New Jersey plant of the RCA Manufacturing Company.

Mr. Batt received the last phonograph-radio instrument as it came off the assembly line of the Camden factory. A group of RCA production "heroes," outstanding workers in the company's Beat the Promise war production drive, made the presentation, after which the materials division chief turned the instrument over to Basil O'Connor, chairman of the executive board of the Georgia Warm Springs Foundation for infantile paralysis victims.

Marked on the books at 17,991,547, the total number of instruments manufactured by RCA Victor and its predecessor companies in more than 40 years of continuous operations, the final phonograph-radio will bear an inscribed name-plate reading:

Presented to Georgia Warm Springs Foundation By RCA Victor Family of Workers This is the last RCA Victrola to be built for the duration of the war #17,991,547

Camden, N. J. 7 April 1942 Immediately after the presentation, work was started to convert the last remaining equipment to war production.

RCA TOOLS THAT ARE DESIGNED TO MAKE YOUR JOB EASIER

STOCK NO. 31031 ALIGNING TOOL

STOCK NO. 11890 FIBRE SCREWDRIVER

STOCK NO. 12636 TRIMMER TOOL

STOCK NO. 34455 PHILLIPS #1 SCREWDRIVER

STOCK NO. 30369 SET SCREW WRENCH

STOCK NO. 4160 OR 30050 TRIMMER TOOL

STOCK NO. 10983 ALIGNING WRENCH

STOCK NO. 39598 BP10 ELLIPTICAL CONE GAUGE

STOCK NO. 38600 VOLUME CONTROL SHAFT CUTTER

STOCK NO. 36950 CENTERING CALIPERS

STOCK NO. 32611 ALIGNING TOOL (VA-20)

STOCK NO. 35300 CONE GAUGE (3/4)

STOCK NO. 35301 CONE GAUGE (1/2)

STOCK NO. MI-6235 CONE ASSEMBLING TOOL ACCORDION TYPE SPEAKER

The tools shown above are designed for special uses, that are outside of the usefulness of ordinary tools. They are accurately and strongly built and will give good service over a long period of time. Your RCA Tube and Equipment Distributor will be glad to give you more details concerning these useful items.