



Service News

A PUBLICATION OF THE RCA ELECTRON TUBE DIVISION



JULY-AUGUST

1961

Vol. 26, No. 2

Look what's heading your way from the RCA Electron Tube Division plant in Marion, Ind. It's an RCA-21ZP4B, one of 83 active types that comprise RCA's "one line" of popularly priced Silverama® picture tubes. Now being shipped to your local RCA distributor in bright new cartons—attractively designed in red, black, and white for maximum consumer impact—the new RCA Silverama line fills socket requirements for virtually all name-brand television receivers. As discussed on page 2, the name "Silverama" is synonymous with the best replacement picture tube modern science and technology can produce. It is made with a precision electron gun, the finest parts and materials, and an envelope that is minutely inspected and tested prior to re-use to assure your customer of the best TV pictures possible from his set.

Your local RCA distributor now offers you RCA's comprehensive new "Pacesetter" campaign featuring outstanding advertising aids, consumer premiums, and professional servicing tools. They're all designed to help you promote the world's top-quality replacement picture tubes—RCA Silverama. Please turn to page 4 for details.



1D1094

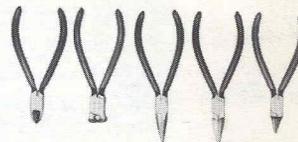


1D1095



1D1097

1D1099



1D1113-1D1117



1D1100

1D1096



At RCA's modern Silverama plant in Marion, Ind., there's never a compromise with quality. Consider the assembly of electron guns, for instance. Since a tiny speck of dust in the wrong place can limit top performance of a picture tube, RCA assembles its electron guns in a dust-free, super-clean "White Room," as illustrated above and below.

83 Active Types in Silverama Line Answer Virtually All Socket Needs

If your stockroom is getting a bit crowded these days, here's good news: As a result of RCA's Universal Picture Tube Replacement Program, socket requirements for virtually all popular-make television sets now can be accommodated by only 83 active types in

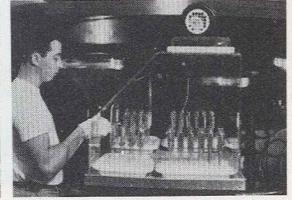
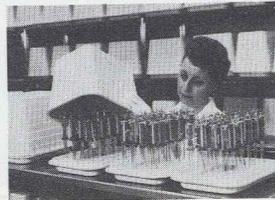
RCA's "one line" of Silverama picture tubes.

(For example, under this new pro-

Workers, wearing lint-free smocks, must enter "White Room" through an airlock. Room is kept under constant pressure to force out any airborne dust when a door is opened.

Finished guns, after ultrasonic cleaning in a super wetting agent, are carried to the assembly line in these covered plastic cases — further protection against contamination.

RCA's all-new, precision electron guns await final assembly in this pressurized plastic housing. Blower at top maintains pressure, prevents dust from entering housing.



Priced to compare with other leading brands, RCA Silverama has rightfully earned its praiseworthy status as the world's best replacement TV picture tube. Small wonder! In design and manufacture, RCA always takes that "extra" precaution to make certain that the tube that goes to market is outstanding in every respect. That's why Silverama's known for keeping troublesome "in-warranty failures" and costly call-backs to a minimum. So go ahead! Install that Silverama with confidence . . . and pride. It contains a precision electron gun, the finest parts and materials, plus a re-used envelope that is minutely inspected and tested.

gram, the RCA-21CBP4A replaces eight other active industry types. It is highly significant to note that the latter eight types should *not* replace the RCA-21CBP4A.)

Such a reduction in the number of RCA picture-tube types means, of course, that you no longer need to inventory an over-extensive picture-tube assortment to handle your customers' varied replacement requirements. Just stock up on the 83 active Silverama types . . . and chances are you'll have it "made." See your local RCA picture-tube distributor for a listing of the types that comprise the dramatically reduced Silverama family.

Establishment of RCA's Universal Picture Tube Replacement Program is the outcome of months of engineering study. This study, incidentally, is still progressing. Therefore, you can expect further exciting developments in the near future.

Easier Identification

Simultaneous with the announcement of the Universal Replacement Type Program for Silverama picture tubes, RCA also introduced a new system for simplified recording and identifying of Silverama picture-tube type numbers on cartons and list-price pocket cards.

In carton identification, the RCA type is set in bold, oversize print and is followed by a listing of all the types the particular tube will replace. This identification used on Silverama's bright new carton emphasizes the RCA picture-tube type but also includes the valuable replacement information. List-price pocket cards now follow the same style.

RADIO AND TELEVISION

Service News

A PUBLICATION OF THE RCA ELECTRON TUBE DIVISION

RCA RADIO & TELEVISION SERVICE NEWS is published in the interest of dealers and service technicians. It is written to assist them in providing better service, and to foster the growth of their business by supplying them with information on the latest troubleshooting and sales promotion techniques, sales and service aids, together with invaluable data on RCA tubes, transistors, batteries, sound tape, and test equipment.

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RCA RADIO & TELEVISION SERVICE NEWS is a bi-monthly publication of the RCA Electron Tube Division, Harrison, New Jersey.

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Harvey Slovik
Editor

'Red Seal' Brand Highlighted in New RCA Sound Tape Promotion

Interested in "bonus" sales and profits? Of course, you are. That's why it will benefit you to turn your attention to RCA's new top-quality line of magnetic sound tape—the "Red Seal" brand—for use with monophonic and stereophonic home recorders. It will have tremendous appeal for every hi-fi enthusiast that sets foot in your store.

You'll be taking a step in the right direction towards sparking your audiophile-customer's enthusiasm in RCA's tape family when you avail yourself of the numerous product promotion items that are part and parcel of RCA's current "Best in Sound for '61" promotion campaign. All of these consumer-directed business-builders are now obtainable from your local RCA sound tape distributor. Stop in and ask him about them. He'll be only too pleased to detail for you the many advantages of Red Seal recording tape—as well as how RCA's extensive new promotion program will help you stimulate consumer requests not only for Red Seal but also for the RCA Vibrant Series of recording tapes and the RCA Victor "Living Stereo" 4-track and 2-track pre-recorded tapes.

And while you're at your RCA sound tape distributor's, tell him you've heard there's a fabulous new premium plan whereby dealers can acquire valuable gift certificates in return for purchases of RCA 5-inch or 7-inch reels of Red Seal and Vibrant Series tape. Participating distributors are offering these certificates for a limited time only—so it is advisable that you check on this program without delay.

Under the premium plan, quantities of the special gift certificates can be redeemed for exciting premiums such as



Nite Light
(1T1036)

RCA Victor color and black-and-white TV sets, hi-fi stereo sets, and portable transistor radios.

A Few Words About 'Red Seal'

To meet virtually every recording need, Red Seal recording tapes are available in 3-, 4-, 5-, and 7-inch reel

sizes and in thicknesses of ½, 1, and 1½ mils. These full-frequency, high-fidelity tapes are being offered in three types of base material consisting of acetate (plastic), "Mylar," and tensilized "Mylar." ("Mylar" is a registered duPont trademark for its polyester film.) Flawless recordings are possible with all three base materials. The acetate base is the most economical, while the "Mylar" base is tougher and resists temperature and humidity extremes. The new tensilized "Mylar" base used in the extra-long-play tape provides an additional "no-stretch" feature.

Both you and your customers will like the Red Seal's distinctive package design and simplified product identification.

A standout for quick recognition, the colorful Red Seal package is consumer-oriented for eye-appeal to all tape users. And, under RCA's new type-numbering system, type numbers appear prominently on the front and one side of each Red Seal reel box.

Here's how the Red Seal type-numbering system works: First digits indicate mil thickness, letters indicate base material, and last digits indicate length in hundreds of feet. The mil thicknesses of ½, 1, and 1½ are represented by the respective numerals 5, 10, and 15. The letters A, M, and TM represent "Acetate," "Mylar," and "Tensilized Mylar." In other words, a package type designation 15A-3 describes the product as 1½-mil acetate tape of 300-foot length.

Concurrent with RCA's announcement of Red Seal, the company made known that all types of tape for home and semi-professional use within the RCA 200C1 series are now superseded by Red Seal tapes.

Check with your local RCA distributor for a complete listing of all the types in the Red Seal line, as well as on tape accessories. He should point out to you, for instance, that this new sound tape line includes two new 4-inch-reel additions consisting of types 15A-3 and 5TM-6.



Available in sizes and thicknesses that meet virtually every recording need, RCA's top line of sound tape comes in this handsome new package—consumer-oriented for eye-appeal to all users.

Versatile Sales Promotion Aids

RCA's "Best in Sound for '61" campaign "package" is loaded with a wide array of versatile new promotion items. Here's a run-down on the dynamic sound-tape sales aids which your RCA distributor is now ready and waiting to provide to you.

Of the two new flyers available for your use as direct-mail pieces, envelope-stuffers, or across-the-counter giveaways, the one on Red Seal tape (1T1033) presents the complete-quality story of this important new product line. The other flyer (1T1002A) points out the merits of Vibrant Series magnetic tape to economy-minded consumers.

You can further promote Red Seal sound tape "for the professional touch" with the high-impact (1T1061) Window Streamer, as well as with the combination Red Seal and Vibrant Tape Series Counter Card (1T1042) which announces "an RCA magnetic recording tape for every need."

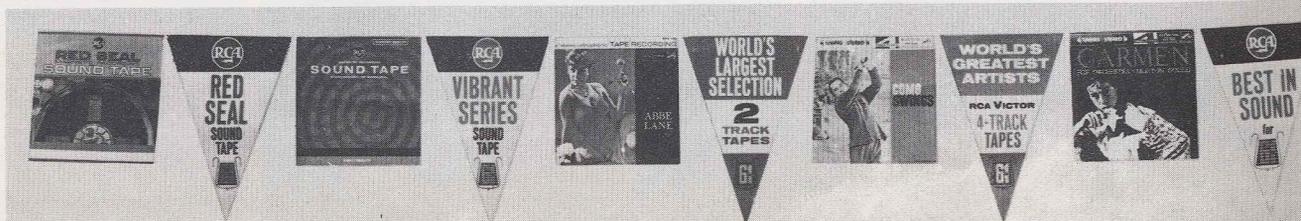
For sheer selling impact and decorative effect, the Flag Streamer Kit (1T1038) has no equal. This colorful, wall-to-wall display of pennants and flags calls attention to all lines of RCA sound tape and gives key emphasis to some of the top selections now being offered in pre-recorded tape. These outstanding tape recordings by world-

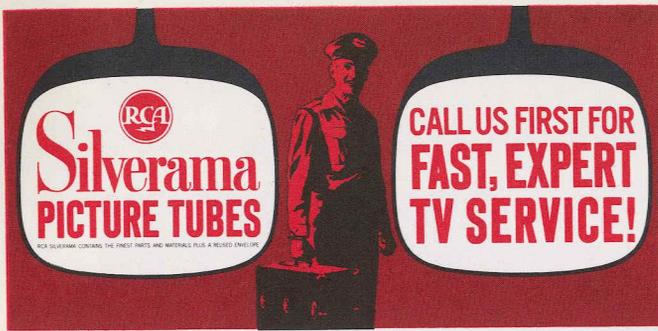
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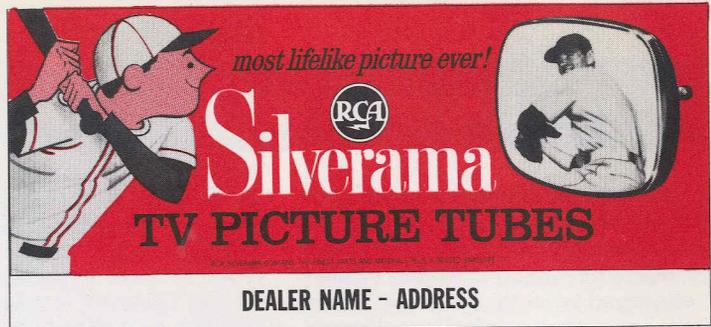
Red Seal Flyer
(1T1033)

Flag Streamer
Kit (1T1038)





Truck Decal (1D1095)



Billboard Poster (1D1094)

RCA's New Silverama Promotion Sets Pace For Increased Sales

Your RCA distributor is now ready and waiting to help you swing into high gear in your promotion of the "one line" of truly-competitive Silverama picture tubes—the world's finest. Consult with him about RCA's comprehensive new "Pacesetter" campaign highlighting an effective combination of advertising aids, consumer premiums, and professional servicing tools.

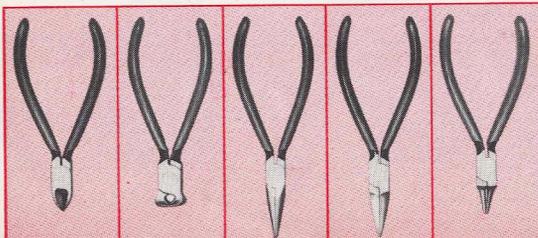
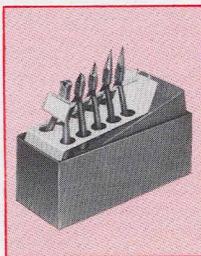
"Silverama" is the popular, nationally advertised RCA brand name television-set owners continue to ask for when they're in need of precision-engineered picture-tube replacements. Now being packed in distinctive, attractively designed new cartons, Silverama tubes will impress your customers more than ever.

RCA's fast-moving "Pacesetter" program features the following:

- **Giant-Size Billboard Poster (1D1094)**—a six-sheet, 11-foot-by-5-foot, full-color consumer-reminder that dramatizes RCA picture tubes in a big way. It promotes Silverama for the "most lifelike picture ever!" Large space for your imprint quickly identifies your store as RCA Silverama headquarters.

*Made with the finest parts and materials, plus a re-used envelope.

Metal bracket (at right) holds complete set of Kraeuter Tools (1D1112). Set consists of a diagonal-cutting pliers, end-cutting nipper, chain-nose pliers, flat-nose pliers, and round-nose, round-jaw pliers.



- **Truck Decal (1D1095)**—just the kind of traveling advertisement you've been looking for to build the appeal of RCA Silverama picture tubes and your fast, expert service. Easily applied to any smooth surface, this colorful 24-inch-by-11¼-inch decal can also be used on your store window.

- **Radio-TV Scripts (1D1096)**—four lively commercials easily adapted to meet your specific needs in convincing prospective customers to stop, look, and listen, and buy Silverama. Com-



Window Display (1D1097)

binning audio messages with suggested slides, the two TV "spots" are timed for 20 seconds each, while the two radio "spots" are timed for 30 seconds and 40 seconds, respectively.

- **Ad Mat Proof Booklet (1D1100)**—showing a wide assortment of complete dealer ad mats and drop-in illustrations. They're tailored to draw new Silverama business to your store by arousing the interest of local newspaper readers.

- **Window Display and Streamer Kit (1D1097)**—containing a striking three-dimensional display and a special window streamer. Lightweight and easy to assemble, the display is quite a traffic-stopper. Handsome as it is



Close-up view of RCA's attractive new printed carton for Silverama picture tubes. As you can see, it is colorfully designed in red, black, and white for maximum consumer impression.

versatile, it's perfect for use anywhere in your store.

- **Ball Point Pens (1D1099)**—available in seven smart colors: ice-blue, beige, blue, green, red, white, and yellow. These inexpensive yet highly useful giveaways are sure to be appreciated by your customers. Imprinted with your name, the pens will serve as personal reminders of your services. Offer one free to the set owner at the conclusion of your service call—and you're sure to build goodwill and resultant repeat business.

- **Chamois Cloth (1D1098)**—another terrific, low-cost consumer premium item. This pure-cellulose cloth needs only to be soaked in water to become as soft and resilient as a chamois. Perfect for cleaning TV faceplate and safety shields, as well as cars, refrigerators, and windows, the Chamois Cloth can be washed over and over again without losing your imprinted message.

- **Kraeuter Tools (1D1112)**—a set of precision pliers that are hand drop-forged from fine grain steel, tempered and tested for perfect performance. Prized by TV service technicians everywhere for accurate and exacting work, the five pliers that make up the complete set are matched in size and handle-shape. Colorful vinyl cushion grips on the handles lend even more attractiveness and utility to these multi-purpose tools.

The complete set, including a metal bracket for holding the 4½-inch-size pliers, consists of:

- (1) Diagonal-cutting pliers (1D1113)—designed for close cutting of small, soft wires.

- (2) End-cutting nipper (1D1114)—carefully edged to give a clean close cut.

(Continued on page 10)

**YOUR RCA TUBE DISTRIBUTOR
PROUDLY PRESENTS
'TAKEN ON THE Q.T.'
THE BEHIND-THE-SCENES STORY OF
RCA RECEIVING-TUBE QUALITY... NEVER
BEFORE TOLD IN SUCH A VIVID MANNER**

Heard about RCA's industrial film hit of the year? It's "Taken on the Q.T."—a 16mm, sound, color motion picture that takes viewers on a Quality Tour of RCA's receiving-tube manufacturing facilities. Ask your local RCA distributor how soon you can see this educational and entertaining movie. The talk of the trade, it clearly presents the story behind RCA receiving-tube quality (and what this quality means to the service-dealer in fewer call-backs.) "Taken on the Q.T." translates a complex tube-production procedure into easy-to-understand terms. Here's a synopsis:

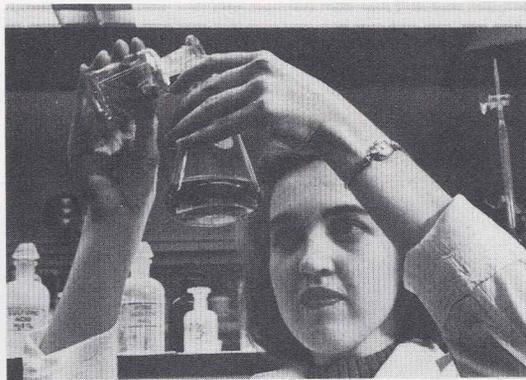
(1) Agreed: the fewer your number of call-backs, the prettier your profit picture. That's why built-in quality for top performance at a reasonable price is RCA's primary product-design objective. To accomplish this from the very beginning, RCA engineers, quality-control specialists, chemists, and physicists combine their knowledge and skills to create top-quality receiving tubes. (2) Right from the start, RCA

builds reliability and quality into a tube by using only the very best raw materials. Everything is minutely checked and tested all the way down the line to the finished product. (3) Every material used in a tube is thoroughly tested. Only if it passes very strict inspection will it be used. The polarized light of a polariscope (shown here) permits analysis of glass used in tube envelopes.

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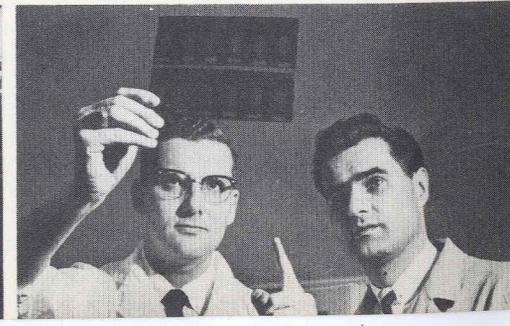
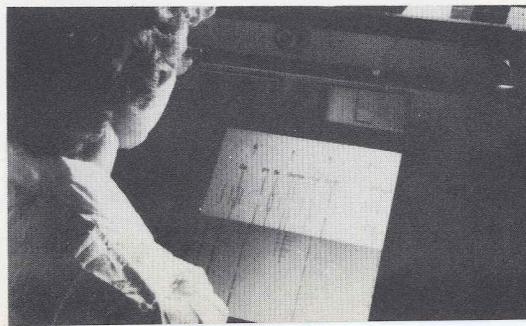
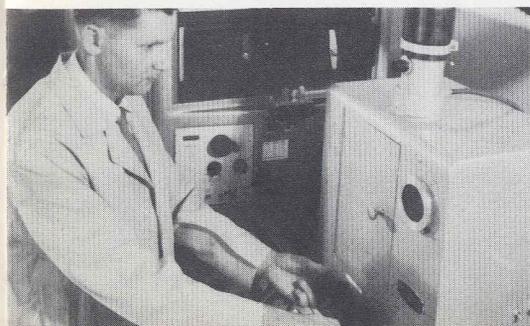
(4) Modern spectrographs are used to analyze and check the composition of materials. Exact measurements are aimed at determining the kind and quantity of each element contained in the material under study. (5) Spectroscopic plates are made, then studied; and results are used for precise con-

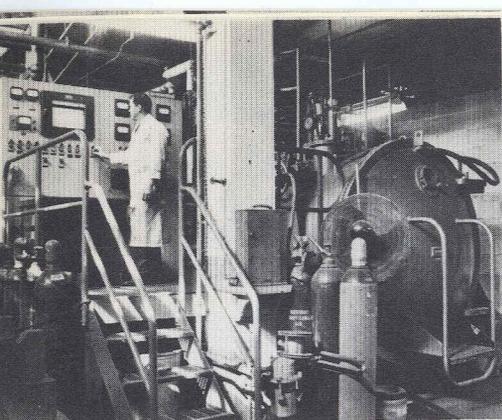
trol. (6) The latest X-ray developments let specialists view the inside of any electron tube. Experience and new techniques combine forces at the RCA Electron Tube Division in a continuing search for improved materials to do an even better job.

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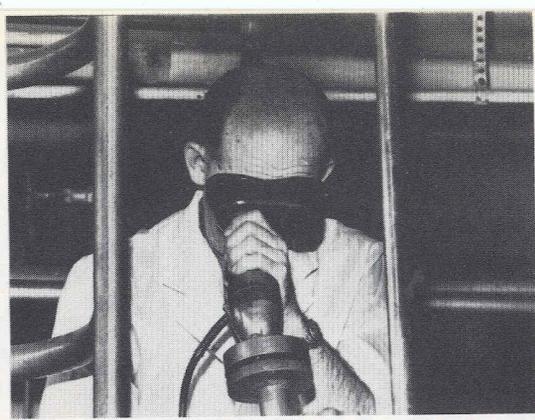
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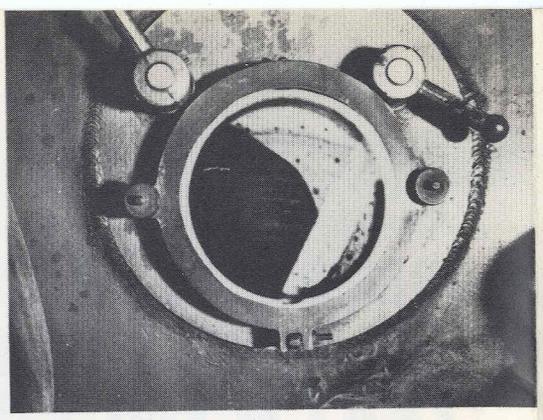




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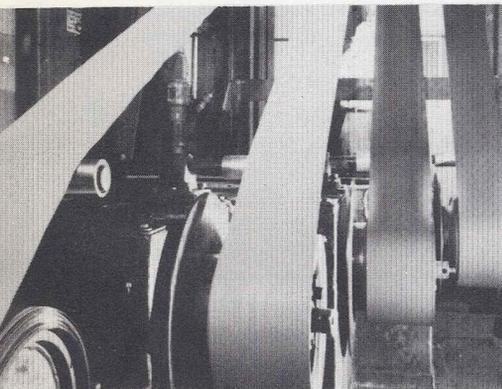
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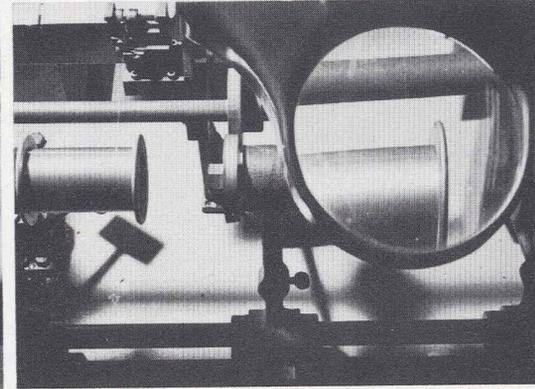
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(7) The purity of materials is also important. This high vacuum and high temperature melting process is one of RCA's new additions to the specialized technique of tube making. Temperatures in the heart of this vacuum furnace reach 1500° C. (8) The advantage of vacuum melting is that purity can be precisely controlled. Just the right amounts

of chemical elements can be added to get the exact electrical characteristics needed for a quality tube part. (9) This results in tighter controls for essential elements such as carbon, magnesium, silicon, titanium. Through vacuum melting, greater purity than ever before is achieved for some basic tube materials.



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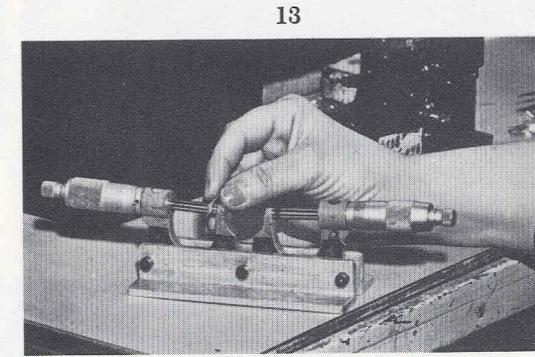


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(10) S311 is RCA's name for a new plate material with a virtually perfect black body characteristic. It fights two dangerous enemies of tube performance: element overheating and interelectrode leakage. Hence, S311 assures more stable operation and long, dependable performance. (11) When it comes to plating wire, RCA uses the finest in raw materials. As the wire unwinds, it is carefully inspected. (12) To combine the best performance with the longest tube life,

RCA is continually investigating processes and developing innovations in the receiving tube field. Even with the best research, design, and raw materials, a tube has to be expertly put together before you can put it to work with confidence. RCA proudly boasts the best tube-making staff and machinery in the world. They're unmatched in their ability to bring top quality to all parts of a tube—large and small—with care and precision.

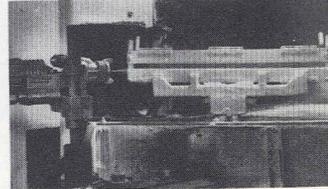
(13) A specially developed automatic lathe forms grids that are constantly sampled to insure uniformity . . . none too large, none too small. (14) The results must be checked and rechecked. Shadow projections permit accurate inspection and control of uniformity. (15) By studying a close-up of a shadow projection, the wire spacing of a grid can be determined with a high degree of accuracy.



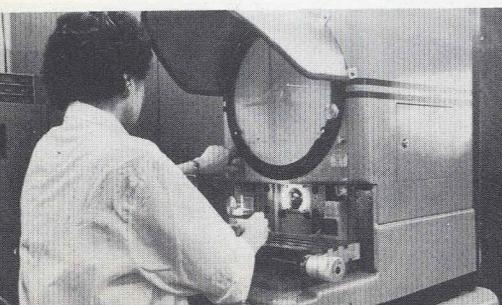
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control tests performed during all manufacturing stages. Cathodes are weighed to make certain that just the right amount of spray material is applied—for too much or too little coating could adversely affect tube performance and life.

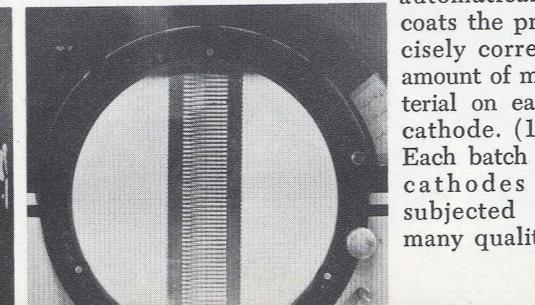
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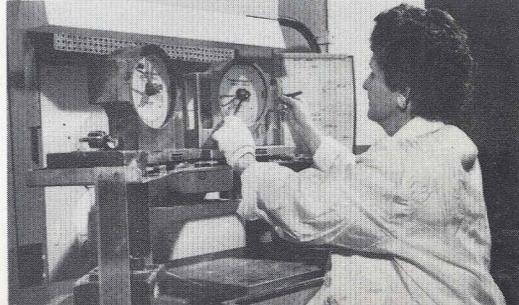


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(16) A sprayer automatically coats the precisely correct amount of material on each cathode. (17) Each batch of cathodes is subjected to many quality-

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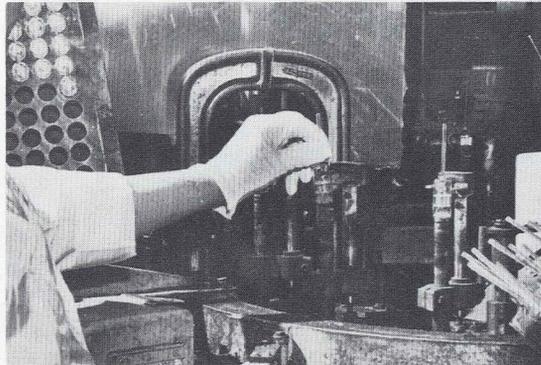
(18) The heart of the receiving tube is put together by an automatic cage maker, developed in RCA's Harrison, N. J., plant. It combines many complex operations for maximum accuracy in assembly. Mica wafers, grids, plates, shields, heater, and stem are all joined here. Of course, each assembly is inspected as it comes from the cage maker. (19) Another inspection procedure takes place at the Sealex machine where glass parts (including stem-and-bulb attachments) are examined and re-examined. (20) It is at the Sealex machine where the glass assembly and the cage are permanently joined. (21) Then the air inside the envelope is evacuated . . . and each tube is permanently sealed.



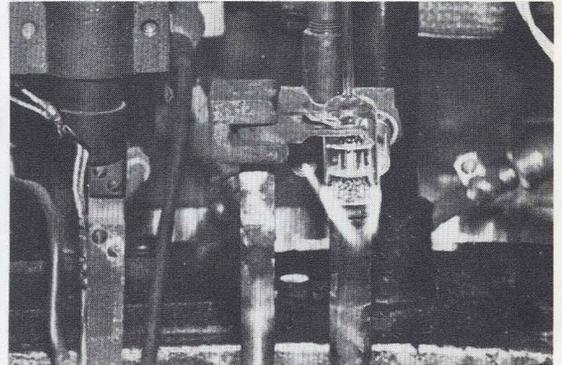
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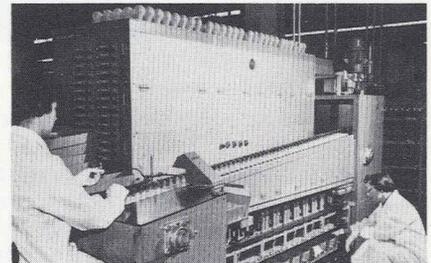
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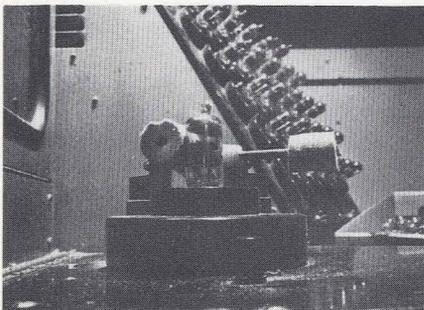
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(22) The newly-finished tubes are put through their paces by an RCA-developed tube tester that can automatically check up to 2,500 electron tubes an hour. This device pre-heats the tubes and subjects them to many different tests to maintain top manufacturing quality. If a defective tube shows up, it is rejected and destroyed. (23) In addition, to prevent fracture during tube life, tubes are tested for top strength

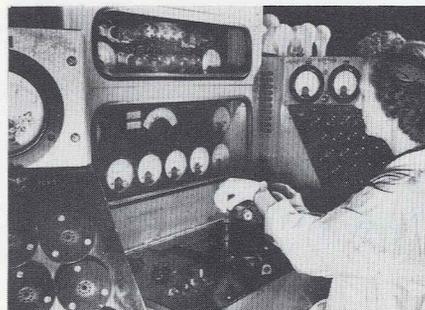
and for low level of glass strain. (24) Tubes are also tested for shorts. (25) Tubes that pass then go to the Quality Control Department, which runs further tests for glass strength and physical defects. Tubes are vibrated on a special testing machine. If any discrepancy appears on control charts, it is traced back to source and corrected, thereby keeping quality high. Rejected tubes, of course, are destroyed.



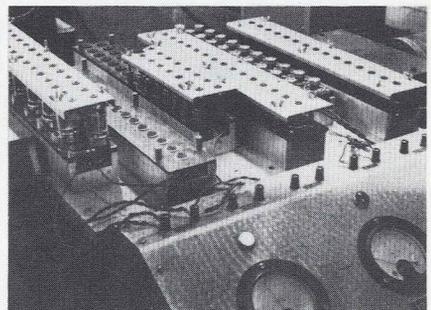
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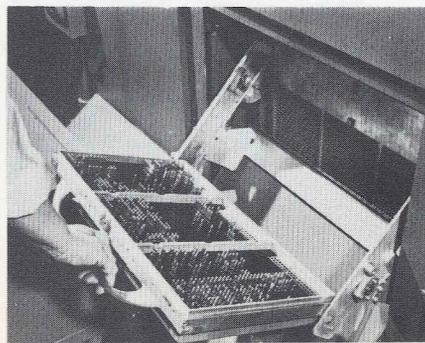
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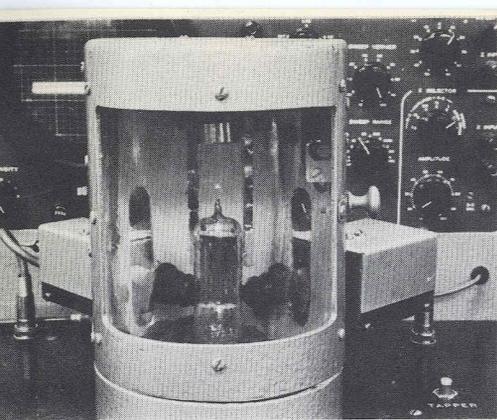
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(26) Designed specifically for RCA, STAR (Special Tube Analyzing Recorder) is a product of the search for even greater precision and controls in tube testing. (27) Tube types are subjected to a variety of tests that are pre-programmed and immediately on hand for thorough spot checks of the tubes coming off the line. These tests carry the tubes far beyond the already exacting requirements demanded by the tests performed during manufacturing.



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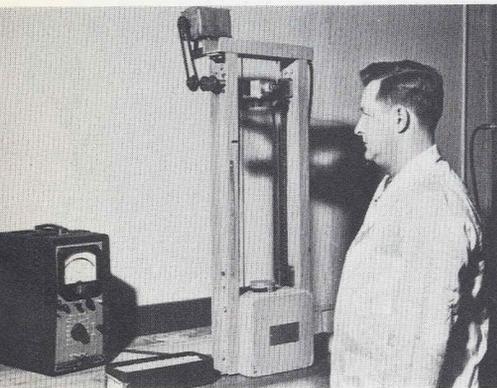
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(28) RCA research and precision control continue 'round the clock. Thousands of tubes are tested each month for every significant characteristic. Thousands of tubes are also life tested continuously as part of RCA's intensive study of its own products. These tests supplement regular quality-control checks run on every tube produced. They are a part

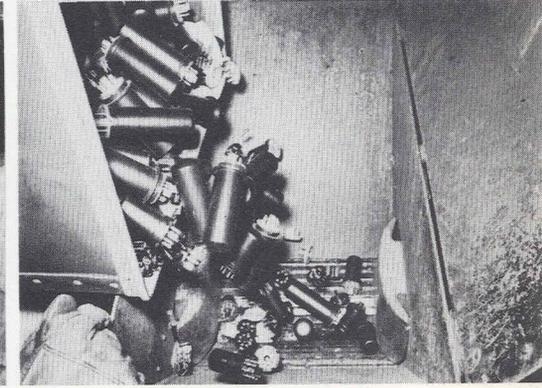
of the quality-control procedure by which RCA keeps customer satisfaction and tube performance at the highest level. (29) All tube types are rechecked against the highest standards before shipment to a customer. (30) RCA tubes will operate under extreme temperature conditions—from boiling . . . to ice cold. These tubes can take it.



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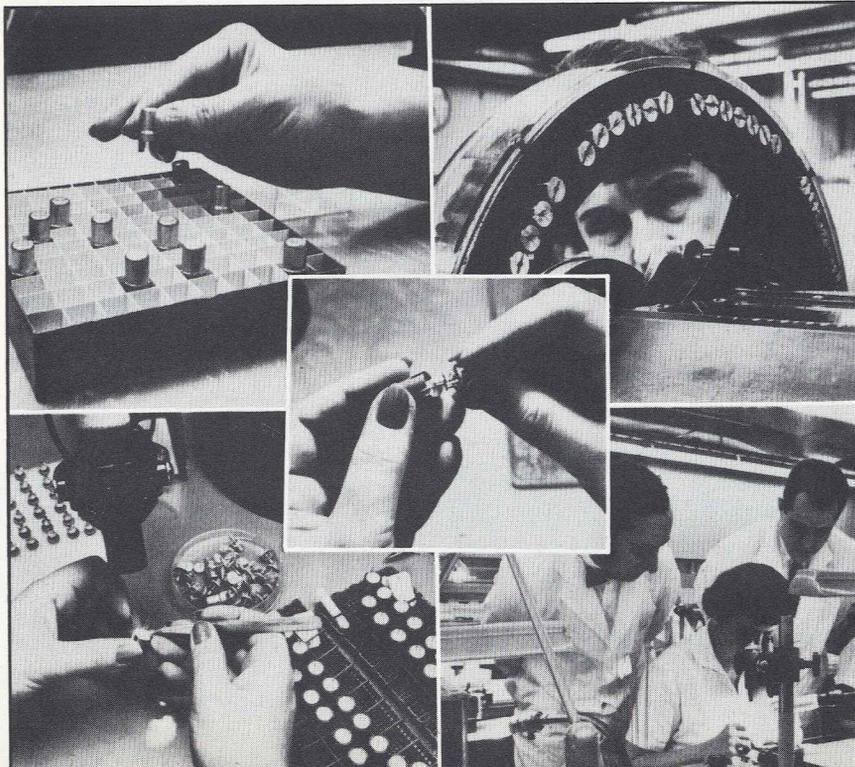
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33

(31) Engineers at the RCA Electron Tube Division affectionately call this the "guillotine drop tester." A tube is lifted . . . and dropped. It's really got to be tough to take that kind of impact—equal to thousands of times its own weight. (32) Nothing can be left to chance. Even the testing equipment itself is under close surveillance. Instruments used in RCA

quality tests are kept precisely calibrated. They are checked against strict Government standards. (33) Tubes that don't meet RCA's high standards are ground up and thrown out. They'll never reach any service technician's shelves to give trouble in a customer's set. *You see, there's no such thing as a second in RCA receiving tubes.*



AND NOW . . . NUVISTOR

Introduced by RCA in 1959, the thimble-size nuvistor has opened an entirely new era in tube design. The result of years of study and development by RCA engineers, nuvistors are radically reduced in size, weight, and power consumption compared with conventional electron tubes.

Small size and weight are not the only assets of nuvistors. They offer superlative performance. In fact, nuvistors can be expected to provide higher levels of performance in television receivers, AM and FM radios, and phonographs. Manufacturers are now busily engaged in designing nuvistors into electronic equipment for home entertainment.

RCA Tube Plants Earn Signal Corps' Highest Quality Recognition

Want further substantiation of RCA electron-tube quality? Then take note of this:

The United States Army Signal Corps recently presented its highest quality recognition to two plants of the RCA Electron Tube Division for "consistent production of high-quality receiving and microwave tubes over a long-term period."

Designated RIQAP, the award identifies the Army Signal Corp's Reduced Inspection Quality Assurance Plan. RCA is the first company in New Jersey to be honored with a special RIQAP flag-raising ceremony.

Presentation of the award and the orange-and-white RIQAP flag were held in front of the Division's Administration Building in Harrison, N. J. Hundreds of RCA office and production employees witnessed the event while several thousand personnel heard the proceedings in the plant via public address systems.

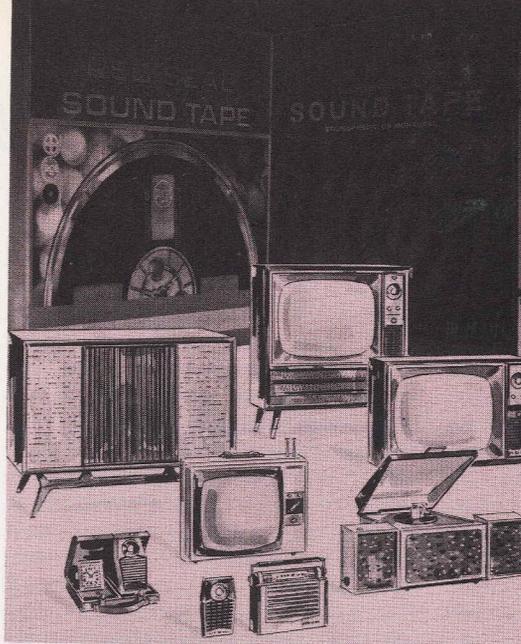
Two Certificates Presented

Brigadier General Charles S. Hays, Commanding General, U. S. Army Signal Supply Agency in Philadelphia, presented two RIQAP certificates to L. S. Thees, Division Vice President, General Sales. Representing the receiving tube and microwave tube activities were: John B. Farese, Division Vice President, Entertainment Tube Products Department, and C. E. Burnett, Division Vice President, Industrial Tube Products Department.

In making the award, Brig. General Hays said:

"I am happy for this opportunity to salute you—both the management and the production teams—you in the laboratories, offices, and on the production lines, who have assured us that you are high-quality producers. Your achievement of membership in our RIQAP program is a proud distinction. Congratulations.

"The U. S. Army Signal Supply Agency qualifies *only* those companies for RIQAP that have consistently produced equipment of a high quality and agree to maintain the quality-control system that produced that high quality. Acceptance of a company into RIQAP is evidence of the completeness of manufacturing processes, quality controls, supporting inspection records, and quality of end products."



Stereo high-fidelity consoles, transistor portable radios, color and black-and-white TV sets—these valuable gifts can be yours with your purchases of 5-inch or 7-inch reels of RCA recording tape. Check your local RCA distributor on his participation in RCA's exciting new premium plan, which will be in effect for a limited time only.

Sound Tape Program

(Continued from page 3)

famous singers and other recording artists are also highlighted on the Pre-Recorded Counter Card (1T1037), the 1T1035 Window Streamer, the combination Window-Wall Streamer (1T1058), and through the attractively designed fluorescent "Nite Light." Available with single or double plastic display face (1T1036 or 1T1036A), the Nite Light is ideal for use in your store window, on your counter, or on your cash register as a 'round-the-clock "silent salesman."

A complete listing of RCA Victor 4-track and 2-track pre-recorded reel tapes is contained in the Pre-Recorded Tape Catalog (1T1055)—a handy sales tool, reference source, and ordering guide.

Your local RCA sound tape distributor is also offering a special Ad Mat Kit (1T1039A-G). Watch the results when you use this professionally-prepared selection of newspaper ad mats in a planned advertising program to let your local trade know that you carry the best 2-track and 4-track tapes available and the best magnetic recording tape—RCA.

In addition to the aforementioned sales-winners, the "Best in Sound for '61" program includes these three proved "favorites":

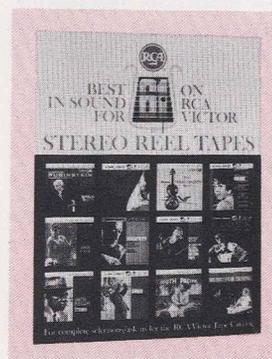
- The Tape Carousel Merchandiser (1T1004). This unit holds more than 200 packaged reels and can be easily revolved to let prospective customers view the front covers of 72 boxes.

- The Revolving Display (4F668). Excellent for counter use, this merchandiser occupies very little space yet holds 12 seven-inch boxes, 6 five-inch boxes, and 6 cartridge boxes.

- The Tape Browser (1T1012). Another counter display unit, this Browser enables your customers to quickly and conveniently thumb through current "best sellers."

All in all, RCA's "Best in Sound for '61" promotion program is extensive, effective. So the sooner you ask your RCA distributor to help you put this campaign to work for you, the sooner you'll stimulate your RCA sound tape business.

And while you're at your distributor's, request a supply of 1T1054 leaflets. They're just what you've been looking for to promote the RCA Tape



Pre-Recorded Counter Card (1T1037)

Recorder Head Demagnetizer through the mails and over the counter.

Here's the consumer-directed message carried by the new quick-reading leaflet:

Recording heads of tape recorders are sensitive to relatively strong magnetic fields which can leave heads in a magnetized state. This residual magnetism creates noise and distortion, and may destroy information on the tape. With the Head Demagnetizer, these dangers are reduced. Featuring a List Price (Optional) of only \$4.95, the device can soon pay for itself by protecting favorite tape recordings.

Electronics Servicing is Big Business

by R. B. Sampson

Manager, Market Research
RCA Electron Tube Division

At latest "count," your industry's 78,000 electronics service firms give employment to some 150,000 technicians—who have the responsibility for the repair and maintenance of 56-million TV sets, 138-million radios, 35-million phonographs, and countless other entertainment devices. Needless to say, this is quite a job, for which independent service-dealers, in general, have the know-how, competence, and means to fulfill.

But what about your *financial* rewards for your part in this giant business achievement? To improve your profit position, may I suggest your earnest consideration of the following nine questions . . . and answers:

(1) **Are you properly identified in your community for the business enterprise in which you have invested your time and money?**

In discussing this question, I like to refer to the TV service-dealer in the town where I live. His store is in an excellent location with ample parking space. The store front is well identified as to who he is and what he sells. The interior is spotless, with well-arranged displays. A fine array of test instruments in the rear of his store impresses customers with the fact that he is well equipped to handle any servicing problem. His trucks are well identified and maintained. As a set owner, I can assure you that it is a pleasure for me to do business with this service-dealer. And I am confident that his identification with the town is complete in every respect.

Poor store identification, on the other hand, is not only bad for the community, but it's a negative reflection on the industry. It should be apparent that a poor store location, careless store maintenance, inadequate test apparatus, and run-down, worn-out, dilapidated trucks all add up to doing business the hard way. They surely cast a dark shadow over any service operation where such conditions exist.

(2) **Have you staked out a local area which you can cover in a manner consistent with your available manpower and facilities?**

It is nice to be all things to all people, and I believe some service-dealers try to be just that in serving an area that is too large and too scattered for efficient coverage. The large company

with adequate trucks and manpower may be able to do it; but 85% of the total TV-service work in the United States is performed by one-man shops or those with no more employees than three. In such a circumstance, it is good business to recognize the practicality of the situation by concentrating efforts in a selected locale.

Hence, may I advise that you stake out a territory consistent with your ability to serve it. Then concentrate on getting all the business you can handle in your own "backyard." The reasoning behind this is obvious, for the real pay-off in TV servicing is the number of completed service jobs per man, per day. Don't travel *too* far for a repair job; it could cost you more than you can recover from your customer.

It is not difficult to lay out a workable market area. Maps and data are easily obtained, and your own practical experience will stand you in good stead. Get the biggest map of your community that you can buy, hang it on the wall, stake out your business "district" in bold lines, and then advise your customers and prospects that they are in your market territory and that you are in business to serve them. Will it pay off in dividends? Why shouldn't it? It's common sense and good business.

(3) **How many TV households are in the market area you cover?**

Acquire as much information as you can about the people in your community. It will help you estimate how many service calls will be recorded on

your books annually. (At present, figure an average of 1.4 service calls per home per year, at an average billing price of \$20 to \$22.)

Data regarding the number of homes, as well as income levels, are available from several sources, including the city hall, newspapers, and local chambers of commerce. Use this kind of information to guide your planning of your manpower and facility requirements and the operating strategy which is so important to every business.

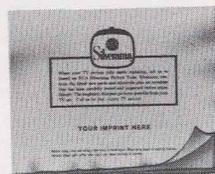
(4) **What is your market penetration in the area?**

You will not be able to measure your firm's market penetration unless you mark out a specific area to cover. (I might add that even when an area has been so designated, it may not be possible to obtain reliable information regarding competitors' activities.) However, this point is important if it does no more than stimulate your competitive instinct to be a leader in the business and the community.

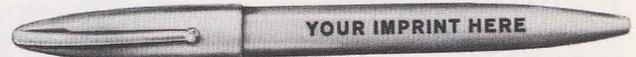
(5) **Who are your major competitors?**

Knowledge of the number, composition, and tactics of your competitors is another essential factor in a well-run business. We can learn from competitors' strong points as well as from their mistakes. Therefore, get a line on your competition for the consumer's servicing dollars. Guide your shop, regardless of its size, in such a manner as to capitalize on competitive weaknesses and to profit from their strength.

Competition is as fundamental to the electronics servicing business as it



Chamois Cloth (1D1098)



Ball Point Pens (1D1099)

New RCA Promotion Sets Fast Pace for Silverama Sales

(Continued from page 4)

(3) Chain-nose pliers (1D1115)—with slender, smooth jaws. Inside length is 1-3/32 inches.

(4) Flat-nose pliers (1D1116)—with flat, smooth jaws. Inside length is 1-3/32 inches.

(5) Round-nose, round-jaw pliers (1D1117)—with round, smooth jaws. Inside length of 3/4 inch tapers to 1/32 inch at points.

• Handy carton opener (1D1127)—

another professional service aid. Designed for rugged use, this easily gripped cutter will help you open cartons quickly without damage to contents. The blade can be adjusted for penetrating cartons of double thickness.

* * *

There you have it—the details on RCA's latest Silverama promotion program. Your next move is to your RCA picture-tube distributor's.

is to any other segment of the American economy. Competition, as such, cannot be eliminated even if we wished it so; but we certainly can outsmart and outperform those who operate with blinders on.

(6) What means do you employ to advertise and promote your firm as an electronics service-dealer?

The dealer's store in my town is well identified with window valances, displays, and local newspaper advertising. But, he has yet to mail me a piece of literature about the products he sells or the services he renders. He has never followed up a service job with a "seasonal special," and he apparently is completely unaware that at no time are the electronic gadgets in my household completely trouble free. All that is needed is a little prodding, and a service job is in the making *before* my set completely stops working.

"Ask the man for the order" is a fundamental rule of salesmanship. It also applies to electronics servicing. Let your customers know that you are still in business; show them that you are interested in top performance for their electronic gadgets. It will surely pay off in "plus" business for you and the industry.

(7) How many individual customer folders are in your files?

The customer folder, or file record, is as important a record as any in your business. In total, they represent your past sales and they are, most assuredly, the backbone of any business you do in the future.

Can you look with pride and pleasure at your customer records? Do they represent a fair share of the total service business in your community? They are not just ordinary files. They are the key to your progress, for they represent repeat business and a cushion on which to bring in new customers. Treat these files well; use them as they are intended to be used—as an historical record of your experiences with every customer, and as a prospect list for the future.

(8) How many completed service jobs does your firm average per day?

Every electronics service business is tied hand and foot to the number of service jobs completed per man, per day, per week, per year. The number of completed jobs required per day for your shop depends on several basic factors in your operation. They are: your selling price for labor, the hourly wage rate of employees, material and related costs, the overhead structure, and your profit objective. Information on the interaction and effect of these prime fac-

RCA Institutes Home Study School Offers New Course in Transistors

A new home study course titled "Transistors," designed for service technicians and others with a knowledge of the fundamentals of electronics, is one of a list of courses available through RCA Institutes Home Study School, according to George F. Maedel, President.

The new course consists of 10 lessons. Beginning with a review of the fundamental physics of semiconductor devices, the lessons take the student through such subjects as transistor characteristics, ratings, and parameters, equivalent circuits, impedance matching, how to calculate operating voltages and currents, stage gains, and transistor operation at high frequencies. The average student is expected to be able to complete the 10 lessons

of the course within a 12-month period.

Mr. Maedel said that other lessons will be added to the course as developments in the semiconductor field warrant, and that eventually it will consist of 20 lessons.

As is the case with other RCA Institutes Home Study School courses in Electronic Fundamentals, Television Servicing, Color Television, and Electronics for Automation, tuition for the new Transistors course is based on each individual lesson unit requested, with no obligation to complete the course.

A free booklet describing the new course is available by writing Department TA, RCA Institutes Home Study School, 350 W. Fourth St., New York 14, N. Y.

tors must be developed for each individual business.

Based on a purely statistical analysis, it appears that the average number of completed jobs for the 150,000 service technicians engaged in the industry is quite low. Our records indicate about 600 jobs per year per man, which is slightly better than 10 a week. If this figure has any validity, then there seems to be ample room in the industry for improvement in this vital area.

The requirement for completed jobs will vary by individual shop. Some firms may require as many as eight per day per man. Others may do with as few as three or four or less.

(The importance of this requirement in a one-man shop is probably negligible, for in this instance the individual is setting a pace which is presumably geared to his particular income needs. Like one of the dealers I know, during the hunting season each year, an "out-on-call" sign will be posted on his door. Yes, you're right; it's the "call of the wild" every year, as everybody knows.)

For the shop that has to meet a weekly payroll, however, it is another matter. Here, the number of jobs completed, and the revenue turned in, must be in proper ratio to each man's wages and the total cost and overhead structure. Failure to follow this is likely to lead to another kind of sign: "Out of Business."

(9) What is your firm's non-productive time experience?

The problem of non-productive time for a productive worker is not peculiar to the electronics service business. Your pay scale is based on an eight-hour

day; but how many productive hours do you get for eight hours pay? I have had figures quoted as low as 5½ hours, others at 6.7 hours. In any case, non-productive time is a cost factor that must be controlled—first, by having information regarding its source and, secondly, by corrective action to keep the ratio at a minimum.

The areas to watch in connection with non-productivity are the men's check-in time in the morning and evening, errors in dispatching, faulty information regarding customer complaints, failure to have proper parts, call-backs, pickup time for parts, etc. You are familiar with all these problem areas and, in repeating them, I am only calling attention to their frequency and significance from the standpoint of their effect on your profit objectives.

* * *

The future of the electronics service industry rests solidly on a firm foundation of 56-million television sets and countless other electronic devices. As in any other industry, the service industry is not free from its share of frustrations, bickering, manpower shortages, and many other problems of a similar nature. I do not want to minimize these factors; but take them in stride, for in the long run their significance is minor in relation to the opportunities that are afforded to every enterprising electronics service-dealer.

If electronics servicing is your business, then give it the three p's: professionalism, pride, and profits—professionalism for your business and technical competence, pride for your position in the business community, and profits for your efforts.



The Most Trusted Name in Electronics
RADIO CORPORATION OF AMERICA

Compliments of Your
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RCA

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Sound Tape
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Technical Publications

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Get ALL Basic Color-TV Test Patterns From This ONE Low-Cost Generator



RCA WR-64A

COLOR-BAR / DOT / CROSSHATCH GENERATOR

Here is the low-cost, lightweight, high-quality instrument that gives you all essential Color-TV test patterns: Color-bar signals for checking, adjusting and troubleshooting Color-TV circuits; dot and crosshatch pattern signals for adjusting convergence in color receivers and for adjusting linearity and overscan in *either color or black-and-white receivers*. Designed for in-the-home or shop servicing.

ONLY **\$189.50***

*User Price (Optional)

SIMPLICITY: Only three operating controls! Provides RF output... connects directly to antenna terminal of receiver. No external sync leads needed.

STABILITY: Crystal controlled signals assure accuracy and dependability. Patterns are rock-steady, free from "jitter" and "crawl"

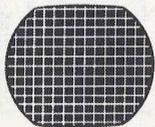
PORTABILITY: Weighs only 13 pounds. The ideal test instrument for proper in-the-home color-TV adjustment and servicing.

FLEXIBILITY: Extra wide range on chroma control... "standby" position on function switch... fixed number of dots and bars... "on-off" control on sound-carrier.

GENERATES:



Color-Bar Pattern... Ten bars of color including R-Y, B-Y, G-Y, I and Q signals spaced at 30° phase intervals for checking phase and matrixing, and for automatic-frequency and phase alignment.



Crosshatch Pattern... A crosshatch of thin sharp lines for adjusting vertical and horizontal linearity, raster size, and overscan.
Dot Pattern (not illustrated) permits accurate color convergence.

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ELECTRON TUBE DIVISION
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Harrison, New Jersey



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