

SIGHT & SOUND NEWS

SIGHT & SOUND NEWS TWO NEW TELEVISION BOOKLETS OUT

NEW YORK, N. Y. (Special to RADIO NEWS): Two informative booklets bearing the same title—"Television"—were issued recently. One is published by the National Broadcasting Company, the other by its parent firm—the Radio Corporation of America. Each booklet features a description of the new art.

The NBC booklet is designed for distribution on the television tour conducted at frequent intervals every day at Radio City. In text and illustration it supplements the guide's lecture and the demonstrations seen on the tour. Ten questions most frequently asked by visitors are listed together with answers. A list of "significant dates from television's diary" is also included.

Questions and answers form almost the entire contents of the RCA booklet. Here, too, by dates, outstanding television achievements of the past are listed. A glossary of television terms is an added feature.

FACSIMILE DRAWS CROWDS

NEW YORK, N. Y. (Special to RADIO NEWS): Facsimile is drawing considerable attention at the New York World's Fair where RCA and Crosley are exhibiting their facsimile receivers.

Highlight of the RCA facsimile display is the publication of "The Radio Press," a daily radio-reproduced newspaper. It is issued under the editorial supervision of "The New York Herald Tribune."



Dr. P. C. Goldmark demonstrates CBS's synthetic reverberator to Hendricks.



It is hard to believe that television would make use of two tubes so far apart in size. A 6H6 compared to C-R.

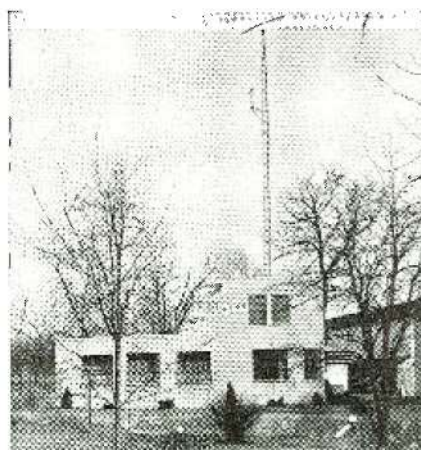
WALDORF-ASTORIA TO BE WIRED FOR TELEVISION

NEW YORK, N. Y. (Special to RADIO NEWS): With the installation of two television receivers in public rooms of the Waldorf-Astoria Hotel, New York, the management pointed out that, as far back as January 25, 1930, announcement was made that the entire 2,200 room hotel was being wired for television.

Some trade observers believe that the day is not far off when television will be featured in guest rooms of all leading hotels in the metropolitan area.

OPPORTUNITIES OPEN UP IN TELEVISION

CINCINNATI, Ohio (Special to RADIO NEWS): Attractive opportunities await qualified persons on both the technical and talent side of television, according



A wincharger tower installed for television purposes in Hathoro, Penn.

to James D. Shouse, vice-president of the Crosley Corporation, in charge of broadcasting.

"We will naturally have to feel our way when we do begin television broadcasting," Mr. Shouse said. "Meantime, we want to acquaint ourselves with those who can be called upon if and when their services are needed."

The point was made that, since television is an infant industry, without established precedents, a chance is offered to newcomers to grow up with the industry.

Crosley has leased the entire forty-eighth floor of the Carew Building, Cincinnati, for television studios. Considerable preliminary work has been done in preparing for video activity. Pending approval of a television broadcasting license Crosley engineers are conducting experiments with lighting and pick-up technique. It is interesting to note that the iconoscope camera in use was built by the firm's engineers in the laboratories of Station WLW.

I. N. C. USES METALLURGY TO SOLVE TELEVISION PROBLEMS

UPPER MONTCLAIR, N. J. (Special to RADIO NEWS): Metallurgy's help in solving television problems is detailed in a statement by the International Nickel Company.

Based on experiments made in conjunction with the Allen B. DuMont Laboratories, the report, in part, points out that the metal parts of a cathode ray tube attain temperatures up to 1850° F. during bombardment.

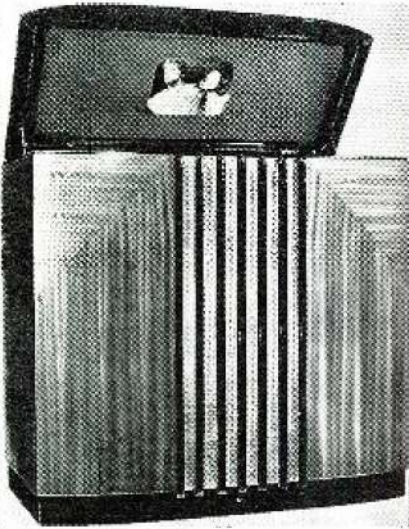
"The bombardment," the report states, "serves to free metal parts of gases. The construction and assembly of the cathode ray tube calls for exceptional accuracy. The girls assembling the metal parts must do their work with great care and accuracy. The parts must be very accurately positioned and spaced, since such details affect the quality of finished tubes. Also, the metal parts must be imbedded in the glass, which again calls for



Fight fans watch a telecast of the recent Baer-Nova fight in New York.

great skill on the part of workers familiar with glass working. The cathode ray tube plant must have skilled glass applicators to take care of the more intricate details of glass working. Were it not for the availability of pure nickel and certain nickel alloys the cathode ray tube would not be a practical reality today."

The metals used in the tubes, according to the statement, must possess a number of mechanical, electrical and chemical characteristics.



The General Electric Television Unit looks more like furniture than a set.

NINE NEW TELEVISION TUBES ANNOUNCED BY RCA

CAMDEN, N. J. (Special to RADIO NEWS): The RCA Manufacturing Company has announced a line of nine television receiving tubes for renewal sale in television service areas. The line includes four kinescope picture tubes, three amplifier pentodes and two half-wave, high-vacuum rectifiers.

L. W. Teagarden, manager of the RCA tube division, declared that, while many of the tubes used in video receivers have been available to amateurs and experimenters for some time, only with the introduction of television to the public in New York have



Prexy Throckmorton congratulates the inspector on the 1st Tele-set.



At the control desk of CBS's W2XAX, are a group of their tele-engineers.

television receiver tubes become a consumer item. He added that markets in other areas will follow as additional video stations begin operation.

NEW LIGHTING SYSTEM FOR RCA-NBC N. Y.

NEW YORK, N. Y. (Special to RADIO NEWS): The television studios of RCA-NBC Station W2XBS, New York are equipped with a new-type lighting system developed by William C. Eddy, NBC Video engineer.

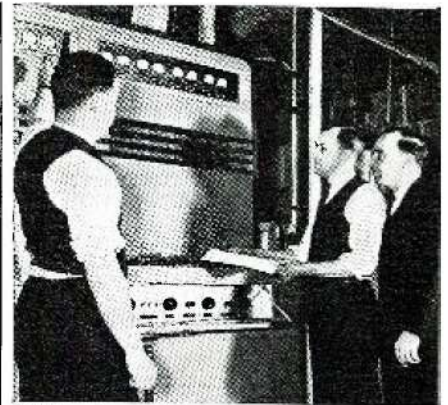
Actually, the lighting system has been in use for some time but the network saw fit not to ballyhoo the development during patent negotiations, according to an NBC spokesman. Patent rights are held by RCA and it is anticipated that the lighting method may be adopted for movie studio work.

The system utilizes multiple units of six lamps each. The units may be raised, lowered and tilted by ropes and pulleys from a central control board. Thus, action can be continuous and lights can be altered without the need of prop men passing before the cameras. The lights can be pre-arranged in very short time, and, following a cued continuity, the lighting engineer can manipulate the units with speed and precision.

INTRA-STORE TELEVISION NETWORK FOR NATIONAL ADVERTISERS

NEW YORK, N.Y.: A television network for department stores which will utilize the "tele-sales" sight-and-sound merchandising system to show shoppers the wares of national advertisers is being planned by the American Television Corp. The system was recently successfully demonstrated at Bloomingdale's in New York.

Ira A. Hirschmann, vice-president and sales director of Bloomingdale's said that this medium is the most important merchandising system to be offered to department stores in many years. Mr. Hirschmann remarked further that "the clarity and incisiveness with which merchandise is televised from our own studio and seen by customers on all floors simultaneously make the new medium a 'must' among selling methods."



RCA places the 1st television transmitter on sale. Price? \$100,000.00!

ADJUSTABLE TELEVISION ANTENNA DESIGNED

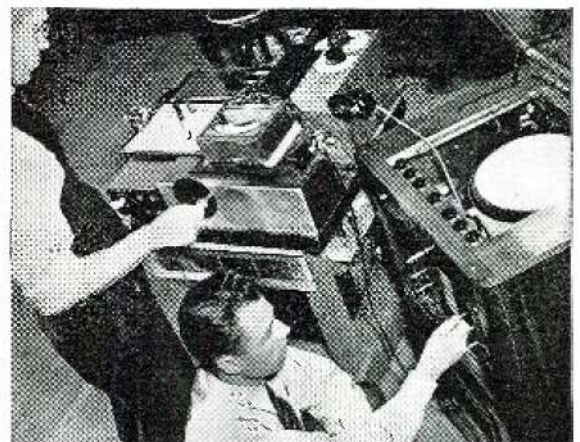
NEW YORK, N. Y.: The Technical Appliance Corp., of 17 E. 16th Street, New York City, has designed an adjustable television antenna constructed of heavy duraluminum rods held together with a sturdy center insulator. The antenna is of the di-pole type and mounting straps are provided for attaching to an iron pipe or wooden mast. Precision adjustments are possible in both horizontal and vertical planes.

TELEVISION OPENS NEW WORLD FOR TOTALLY DEAF

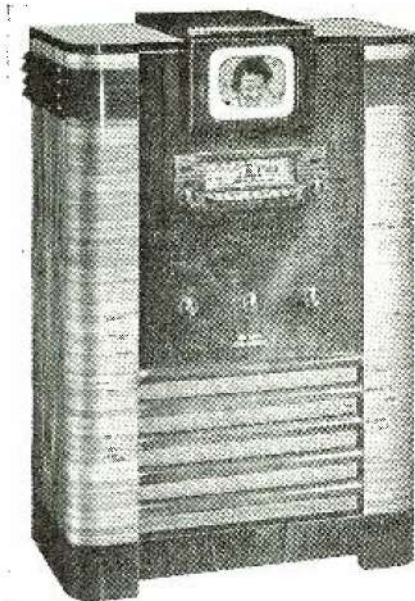
NEW YORK, N. Y.: Mrs. Evelyn Sass, national lip-reading champion in 1930, discovered during a visit to the General Electric television studio at the New York World's Fair that she was able to read the lips of the persons being televised. This is the first time that Mrs. Sass has been able to enjoy a broadcast.

It becomes apparent that if a telephone connection is accompanied by a televised picture Mrs. Sass will be able to understand because she will be able to read the lips of the person talking.

It is believed that this is an indication that television may open up an entirely new world of amusement and usefulness for the totally deaf.



Factory inspectors for RCA give one of the home television receivers its final checks.



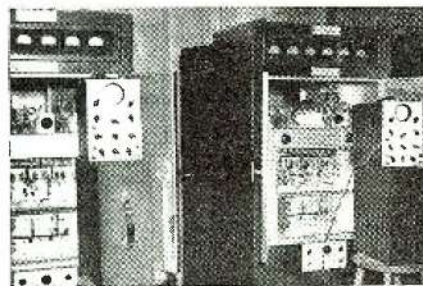
The new RCA-Victor Television Receiver Model TRK-5. It has 24 tubes.

MAJOR BOWES PRESENTED WITH TELEVISION SET

PASSAIC, N. J.: The presentation of the latest television set was recently made to Major Bowes by Allen B. DuMont, president of the Allen B. DuMont Labs., Inc. The television gift is most opportune since the television transmitter of the Columbia Broadcasting System will soon be going on the air with its experimental programs and Major Bowes will want to follow and study this latest radio development.

SERVICEMEN JAM TELEVISION MEETING

NEW YORK, N. Y.: Four hundred servicemen jammed the auditorium of



Dual transmitters installed at W2XVT for DuMont Labs., of Passaic, N. J.

the Electric & Gas Association of New York recently, while 150 others were unable to gain admittance to the series of meetings called by Allen B. DuMont Labs. of Passaic, N. J.

Dr. Goldsmith, head of the DuMont research activities, discussed general television principles and the present television broadcast situation.

Reception from a test transmitter, together with the effect of various control adjustments were among the

(Continued on page 54)

The VIDEO Reporter

by SAMUEL KAUFMAN

IT'S much too soon to even guess what historians will have to say about the New York World's Fair. But it's a safe bet that the exposition will be best remembered by future generations as American television's birthplace.

Previous video progress, of course, will not and should not be ignored. There were many years of laboratory achievements that preceded—and made possible—the sensational television displays that proved to be literal eye-openers at Grover Whalen's World of Tomorrow supershow.

The Fair came into the television picture

in more than a figurative sense with the opening ceremonies being the subject of the first regularly-scheduled sight-and-sound transmission in the New York area. But you've already read about that. That, in itself, while important, is not the outstanding video phase of the exposition. The real television highlights—the features that will go down in the new art's history as epoch-making—are the radio manufacturers' displays which reveal not only how advanced television is today but also an idea of progress we can anticipate in subsequent seasons.

THE Radio Corporation of America, General Electric, Westinghouse and Crosley (the latter in conjunction with DuMont) are the television makers showing their video wares.

The RCA display is more inspiring than the others, chiefly because it gives visitors a peek into future developments as well as demonstrations of current products. There is, for instance, big-screen television; this demonstration is similar to tests conducted before the Institute of Radio Engineers at a much earlier period, but its showing before Fair visitors is the first time the development can be viewed by the general public. Even more startling than big-screen television is the operation of a "flask" television set. And that's a thing we'll tell you more about.

Still bearing the label of "laboratory product," according to our special RCA guide, the "flask" unit produces a very brilliant image on a flat screen suspended in the bowl-shaped end of a huge cathode-ray tube. The design of the tube may be revolutionary. So's the price! Our guide said it costs \$600 to produce at this time. Hence we can see why it's still under the laboratory classification. At any rate, the tube is not on the laboratory shelf. At the Fair, it's out in the open where visitors can see it. And that may be a sign that the "flask" may be utilized in home television sets at an earlier date than anticipated.

The brilliance of the image is the most impressive part of the "flask" demonstration.

Although greenish in hue, the picture is a close approximation to home movies—a comparison television engineers themselves use as a standard.

Glass-sided receivers are not new. The idea of putting glass walls on sets for demonstration purposes goes back to early radio days. And, in television, too, many dealers use the idea for the sight-and-sound models they're trying to sell. But, at the Fair, RCA carries the transparent cabinet idea the limit by having an entire de luxe television console encased in glass and a molded plastic material which permits an X-ray view of the set from

any angle. Anyone desiring chassis details needs but a glance at this transparent set and he'll "see through" the subject instantly.

A group of television sets receives the special World's Fair and dealer demonstration programs emanating from the RCA-NBC Empire State Building transmitter. At other times, films are transmitted over wires from a behind-the-scenes pick-up point in the building itself.

G.E. and Westinghouse feature television studios at their respective Fair buildings. Visitors are invited to step up and be televised while their friends look-in via receivers in other parts of the structures. Crosley, too, was planning such a setup but it wasn't in operation when the Video Reporter visited the firm's building. Only receivers were being demonstrated at the then incomplete display and a sign proclaimed that the showing was in conjunction with DuMont. The latter is the

New Jersey firm partly backed by Paramount Pictures.

WE had a chat with Gilbert Seldes, CBS television program director, upon his return from a hasty survey of the British video scene. Seldes is pursuing the policy of going steadily about his task of developing visual entertainment without any advance ballyhoo.

He did not seem enthused over the idea of a mobile television transmitter for Columbia's New York sight-and-sound station. Rather, he's favoring the adoption of the London method of building a permanent coaxial loop which would provide permanent pick-up facilities for Columbia—and NBC, too, for that matter—throughout the Times Square amusement sector.

However, it does seem that NBC will have a program edge on CBS until the latter has a relay station on wheels. It's the only means—under ordinary conditions—of picking up special event programs a considerable distance from the main transmitter. And

(Continued on page 55)



Harry R. Lubeke, Director of W6XAO's television station demonstrating one of the Don Lee Tele-Receiver.

to X-rays. For dental photography the buzz lasts only a few seconds. But when treatments are being given it may go on for as much as an hour.

Another semi-medical device, the electric warming pad, is a potential source of sporadic buzz. The better makes are interference-proofed. But inferior types kick up an incredible din for their modest wattage.

Until manufacturers saw the light, oil burners were among the worst offenders in the intermittent buzz department. Now their ignition systems are filtered. However, thermostats and other controls sometimes fail to open circuits promptly, causing arcs that may last two or three minutes.

The most notorious source of hit-skip QRN is the diathermy machine. Using considerable radio-frequency power, it generally turns up on one of the short-wave channels, hovers there a few moments, then flits to another spot. For this reason it seems sporadic. Actually, it produces a constant a.c. buzz, only the carrier frequency shifting.

Other equipment produces a somewhat similar effect. An a.c. buzz, either steady or sporadic, often appears in only one part of a receiver's tuning range, or will show definite peaks along the dial. Sometimes this is due to variations in receiver sensitivity, again to the type of radiation. It is not uncommon to find a.c. noises with harmonic peaks, starting in the

broadcast band and extending through the short waves.

What can or should be done when the characteristics of a given noise have been noted?

Today interference hunting is a specialty. Few swls or even hams are prepared to track down bad cases of QRN arising outside their homes. But nine cases out of ten, the source is on the listener's premises. In a majority of these the trouble can be corrected easily by applying a suitable filter or repairing defective equipment.

If no source of noise can be found in the home the indicated move is to ask the cooperation of the utility. And, please note, cooperation is a two-way street.

The professional interference hunter is in much the same position as a detective. If he is to get the culprit, he must have clues to follow. In his own interest, it is up to the listener to supply all the clues he can.

So a report of interference should take the form of a log, preferably covering several days, and showing the exact time when the noise occurs, along with its audio characteristics. Armed with such a report, the professional interference hunter can set about his job intelligently.

It must be remembered, too, that the utility cannot squelch noises beyond its control. It may not be able to persuade Aunt Minnie to discard her violet-ray or Uncle Elmer to stop shaving while the Aussies are coming in. Even so, there's a sour satisfaction in knowing who deserves the cussing when man-made QRN rears its ugly head above a signal.

-30-

Sight and Sound News (Continued from page 37)

demonstrations. The meeting lasted three hours.

TELEVISION ADOPTS WINCHARGER TOWER

HATBORO, Pa.: The Hahn-McPherson Industrial Design Laboratories here are using a Wincharger antenna tower for television. A Johnson 5 meter television type antenna is installed on the extreme tip with a special ratchet and pawl attachment to give a 360-degree rotation. The tower is marked by a red marker light due to the proximity of the laboratory to Pitcairn Aviation Field.

FREE OPERATING TELEVISION COURSES GIVEN BY BAIRD

SYDENHAM, England: Baird Television, Ltd., has opened free fortnightly courses in large screen television at its factory here to supply the demand for experienced operators. Four lecturers are in attendance and a diploma is awarded for proficiency. A section of the factory has been set aside for the

classes in theory, practice and general operation of theater entertainment in the Television field. Baird Television recently installed large screen television in the Gaumont British theaters.

RCA RELEASES COMMERCIAL FACTS ABOUT TELEVISION RECEIVERS

CAMDEN, N. J.: In a recent bulletin RCA has listed commercial facts about their television receivers. The sets described are the Models TT-5, TRK-12, TRK-9, and TRK-5.

ELECTRICAL ASSOCIATION SPONSORS PHILLY'S PREMIER TELEVISION DEMONSTRATION

PHILADELPHIA, Pa.: Under the sponsorship of The Electrical Association of Philadelphia, the first large scale public demonstration and exhibition of television was recently completed at the Franklin Institute in this city. Co-operating with the association were RCA and Bell Telephone of Pennsylvania and the Philadelphia Electric Company.

Visitors were permitted to handle and try out the equipment and material. Over a million paid tickets were distributed for attendance.

HIGHEST TELEVISION RADIATOR COMES TO HOLLYWOOD

LOS ANGELES, California: Harry R. Lubcke, world-famous Director of Television for the Don Lee network and Station W6XAO, announced that this city will soon have the highest television radiator in the nation.

"Plans for the new site of Station W6XAO call for antennae at least one hundred feet above the transmitter building overlooking Hollywood. Since the mountain recently purchased by Thomas S. Lee is 1700 feet high, the streamlined antennae will surpass the altitude of New York's Empire State building one and one-half times. Other eastern stations, hampered by the lack of suitable mountain sites, have established their radiators many miles from population centers. The Don Lee station site is only two and one-half miles from Hollywood Boulevard & Vine Street," said the distinguished scientist.

NEW TELEVISION PICK-UP TUBE ANNOUNCED

CAMDEN, N. J.: Owners of television receiving sets in the New York area may before long have the pleasure of viewing pictures of clearer detail than have heretofore been possible anywhere in the world. This will happen when a new television pick-up tube, described last night before the Institute of Radio Engineers by Harley A. Iams and Albert Rose of the RCA Laboratories at Harrison, N. J., is ready for public service. The new device is regarded by scientists as one of the greatest single improvements in television since the invention of the Icono-



HIGH SENSITIVITY and low noise level have made the "HQ-120-X" radio's outstanding low priced receiver. The variable selectivity feature, permits the operator to tune out strong stations and pull in the weak distant stations that would normally be buried in QRM. Remember, the weak stations are there, but it requires a sensitive and selective receiver to get them. If you want the best in high frequency performance, use an "HQ-120-X." Send for booklet!

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scope or "television eye." It is applicable to transmission, and therefore necessitates no change in existing receivers to accomplish the improvement.

NATION-WIDE TELEVISION SERVICE PREDICTED WITHIN FIVE YEARS

SCHENECTADY, N. Y. (Special to RADIO NEWS): According to Dr. W. R. G. Baker, head of the television department of the General Electric Company, within the next five years, hundreds of television transmitters will probably be built and installed—millions of receivers may be in use in homes by 1944. He declared that television ultimately would become an "electronic Peddler" bringing daily to housewives an animated presentation of a store's wares in a fashion made possible by no other medium. Instead of going to the motor shows to see the new models paraded and demonstrated, we will sit in our living room and see this done in a more convincing and dramatic fashion. Our wives and daughters will see the season's new hats and gowns paraded on live models. Television broadcasts over telephone wires, a feat considered utterly impossible, may soon become a reality if experiments now being conducted secretly are successful. Already visual telecasts such as the photo-account of the "Six Day Bicycle Races" in New York, have been successfully transmitted for short distances over specially set-up telephone wires, thus opening the way for possible nation wide network telecasts in the future.

Many dx'ers are of the opinion that a new field for dx may be opened with the widespread adoption of television and believe the day may not be too far distant when dx viewers will treasure QSL cards confirming distant "squints" the same as they do for today's conventional auditory reception.

-50-

The Video Reporter

(Continued from page 37)

special event programs—news and sports—are even more important in television than in sound broadcasting. True, the studio offerings will remain the backbone of the program structure. But the special event pickups are the things that will draw the heaviest audiences and actually "sell" the public on the idea of owning video receivers.

IN England, "O.B." stands for "Outside Broadcast" and the latter term applies to what Americans call "remote control." At Radio City, "O.B." is an abbreviation also in constant use, and it stands for O. B. Hanson, vice-president and chief engineer. But, in effect, it seems that the application of the initials on each side of the Atlantic amounts to pretty close the same thing. That's because the NBC video lads, under Hanson, are

stepping lively these days providing a wide variety of remote sight-and-sound pick-ups that are real eye-openers.

It's nothing at all for a crew of eleven to hop in the mobile unit of W2XBS and hie to a ball-park or sports arena for a new television "first." The NBC lads have been working fast, apparently trying to get in as many "firsts" as possible before W2XAN—the CBS station—takes to the air. But the scope for new television offerings is so wide that there's no doubt the Columbia men will do plenty of program trail-blazing of their own.

The Video Reporter recently observed a baseball game pick-up and the flexibility of a single camera to cover an entire overtime game was amazing. A few flaws were noted, but that's to be expected in the early stages of the new art. And what is more, slight imperfections are not readily discerned by a public that is astounded at the technical marvels of television. This doesn't mean that production men can afford to be careless. But there are many things that can be best learned by experience alone.

THE use of an ordinary telephone line for conveying television impulses part of the distance between the pick-up point and the transmitter is more important to the industry than any other video feat of 1939. At this point, we must hastily add that we're referring to that part of 1939 from the turn of the year to the time we're writing these lines; this is an essential qualification, considering the rapid strides that can be expected in television.

NBC presented a pick-up by this method and, all in all, the experiment—if you insist on calling it that—was a success. Some viewers were critical of the pictures, others were enthused. But all trade observers concurred that the program was one that may lead to the solution to the ever-present problem of how television can be "net-worked" in the United States.

Bringing television to the small towns and villages beyond the "guaranteed" reception areas mapped out by big-city television broadcasters is essential from the viewpoint of public service as well as the all-important angle of selling video receivers to the rural residents. The high cost of coaxial cables to link nation-wide television chains caused engineers to delve deeply in the subject and the recent actual "on-the-air" test program of a bicycle race relayed from Madison Square Garden to Radio City over ordinary lines (using newly developed amplifiers of the Bell Telephone Laboratories) proved that telephone wires can be used at least a mile. And that's a beginning!

Engineers were modest about the transmission, but even the ultra-conservative experts we approached expressed the belief that, at long last, the \$5,000-a-mile coaxial cable bogey that has hampered plans for practical television networking is beginning to be routed.

THE FCC Television Committee's recommendation that the Commission "neither approve nor disapprove" the video standards proposed by the Radio Manufacturers Association was not a surprise. Even though many trade figures and television enthusiasts were disappointed, the committee action need not be interpreted as a severe setback. There is still considerable clash in the industry itself over the establishment of standards.

The FCC video group requested that the public be informed that the Commission, although failing to approve the standards, does not believe them to be objectionable "as a phase of a rapidly developing service."

"The public," the committee adds, "should also be informed that the Commission desires to be free to prescribe better performance for the transmitters it may license in the future when and if such improvements are proved to be in the interest of the public."

Patents, scarcity of channels, interference and receiver costs were among the factors cited in the report. But the one factor that can do much to retard television progress is mention of a premature acceptance of television.

Actually, the committee didn't say "No" to the RMA standards. But it didn't say "Yes" either. This does not infer indecision; rather, it indicates that caution is being taken to avoid costly industrial blunders. It's not a course all would prefer, particularly with the lead England took in television—and the American industry has been anticipating passing the British video sales total in short time. This may still be done while U.S.A. television remains under the experimental label—a tough merchandising handicap.

After all, "experimental" is just a word. Television can soar onward and upward under that classification even though the going is made a wee bit rougher.

A SUBTLE type of television exploitation was introduced by the Radio Corporation of America at the New York World's Fair. It's a clever idea whereby RCA Communications comes indirectly to the aid of RCA Manufacturing in applying a television plug to the pre-written greeting variety of radiogram which can be sent from the Fair to points in the U.S.A. for twenty-five cents.

THESE RELAYS USED IN RADIO NEWS "All-Purpose" TRANSMITTER AND RECEIVER



The dependability, responsiveness, low power consumption and long life, characteristic of Ward Leonard Relays, have prompted their use in the Radio News model set. This means that no better Relays are obtainable.

Ward Leonard Remote Control, Antenna Changeover, Push-to-talk, Safety, Time Delay, Overload, Underload and Keying Relays are described in Circular 507B. Send for it.



WARD LEONARD ELECTRIC COMPANY

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INTERMITTENTS?
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For SEPT. & OCT. 1939**