

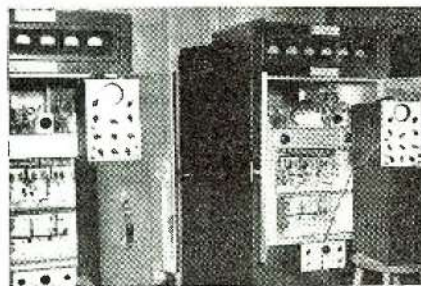
The new RCA-Victor Television Receiver Model TRK-5. It has 24 tubes.

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

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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

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

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.

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The Video Reporter

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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
47 South Street, Mt. Vernon, N. Y.

**HAVING TROUBLE
WITH
INTERMITTENTS?**
Read **RADIO NEWS**
For **SEPT. & OCT. 1939**

Get 5 and 10 ON YOUR AUTO RADIO



Easily installed between antenna and your present auto radio, the new GUTHMAN U-39 converter brings you the 5 and 10 meter amateur bands well spread out over its dial, and with all the tuning stability needed to hold signals on these bands after you've tuned them in.

Only 6" x 4 1/8" it is the answer for the amateur desiring 5 and 10 meter mobile operation. It's equally good to bring 5 and 10 meter coverage to older communication receivers as well.

This new 5-10 meter converter—and the new U-36, 6 band mobile phone c.w. transmitter-permanent station exciter—were definite hits at the trade show. See them at any up-to-the-minute jobber's—or write for GUTHMAN catalog of these and many other "hot" items.



Remote Control Your Transmitter

Here's another valuable section of the continued article featuring the

940 TRANSMITTER
COMING TO YOU IN THE
SEPTEMBER ISSUE
RADIO NEWS

RADIO NEWS, Dept. RN 101
608 S. Dearborn St., Chicago, Illinois

Enclosed find \$1.00. Send me RADIO NEWS for one year (12 issues) and rush me a copy of the 1939 RADIO & TELEVISION DATA BOOK without charge. (If renewal, check here . If you are a serviceman, please check here .)

Name

Address

City..... State.....

Under the plan, anyone with two bits can send any one of nineteen standard messages to friends or relatives.

Here's Number Seventeen: "Greetings from the World's Fair. Have just seen the first Television demonstration. It is wonderful."

And quite similar is Number Eighteen: "Television has just arrived. Have just witnessed first demonstration at World's Fair."

For a personal touch, you can use Number Nineteen: "Just seen Television at World's Fair. Wish I could use it to see you."

If the radiograms seem to have a commercial television flavor, it's nice to note that RCA Communications permits the word "Love" or the word "Regards" to be added to any of its fixed World's Fair greeting texts.

MUCH interest has been centered around the television patent policies of RCA—the firm holding so many of the essential patents. Here's the firm's statement on television and facsimile as announced in its new book, "Patent Policies of the Radio Corporation of America":

"In view of the advances that have been made in television and facsimile transmission of pictures respectively of moving and still objects, RCA has not only sold and offers to sell apparatus for such purposes to others, but it has also offered licenses for television and facsimile transmitters to competitors who are capable of producing reliable apparatus of this character."

The statement adds that "about 50 receiver manufacturers are already licensed by RCA for television and facsimile broadcast receivers, and eleven tube manufacturers for tubes for use therein."

ALFRED H. MORTON—"Doc" to everyone at NBC—who has been the network's vice-president in charge of managed and operated stations, was recently assigned as vice-president in charge of television. This appointment reveals the major importance attached to the new art by the chain. Television is no longer a novelty or merely a laboratory topic. This is reflected in executive appointments as well as program plans. Until recently, programs were in the hands of the engineering departments. Now the best of entertainment production names are being recruited for the video art.

TELEVISION for theatres may soon be in use in the U.S.A. The idea has been tried in England and, as a matter of fact, was attempted in this country many years ago. But the Baird Television interests of London now see the field ripe for a thriving business in New York, and I. C. Javal, one of their executives, arrived in New York late in April to start it.

The big problem in television for theatre audiences is that of copyright. Can a theatre charge for entertainment sent over the air free? It may be likely that theatres carrying such a service may eventually have their own transmission which, in the case of prizefights, football games, etc., may be profitable ventures.

HIGHLIGHT of recent New York television transmissions is the exceptional high-quality of programs picked up by mobile sight-and-sound unit. True, the outdoor pickups often lack the composition details and contrasts offered by studio pickups. In the latter, though, lights are under the production man's control. He can't control Old Sol, but it seems that the sun has been very accommodating, nevertheless. Outdoor pickups have compared very favorably with newsreel shots—and you must remember that the latter have the advantage of laboratory doctored before being shown.

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Bench Notes

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caused by twisted voice coil mountings. The normal quality from these fourteen-inch speakers is pleasing to

most ears—but not after wet air gets to work on the thin paper stock.

The last *Temple* I picked up gave out the familiar choky tone. I hauled the three pieces of the chassis to the shop, replaced the cone, and hooked it up for a pre-delivery test. Then I discovered the fault was an open cathode resistor! In other words—I had thrown away the price of a cone.

This resistor is mounted on the rear wall of the chassis behind the first audio socket. Wire-wound, 2,000 ohms, opened at the end clamp. Costs less than a speaker cone, and can be easily checked with a bridging resistor you know is good. The value required for trial is not critical. If you have no resistors with you, use any low resistance meter between ground and the cathode connection. If you have no meter, put your two hands across these two points—body resistance, between two dry hands is close enough to two thousand ohms—but be sure you don't mistake plate for cathode!

On second thought: Perhaps it's better to buy a meter or a resistor, and save your hands for future jobs. If I ever feel I must earn my living with my hands, I'll go back to the farm.

The Reader's Right

Dear Mr. Ward:

I agree with you whole-heartedly. Started in business six years ago. Shopped around, but no one would show me anything but catalog sheets. Nevertheless, I jumped into the puddle and bought what I thought I'd need. The scope—for instance—was supposed to have a thousand uses; I'm able to find only five. The way things are run now, we never know WHAT instruments to choose.

The way things stand, I wouldn't buy another instrument if I lost 50% of my trade.

Paul B. Smith,
Versailles, Kentucky.

Here's a deplorable condition—one which the Serviceman's "College" suggestion (June BENCH NOTES) was intended to correct. On one hand, manufacturers with instruments well worthy of purchase and use; on the other, servicemen turning from the market because information has not been properly presented to them.

Other comment received since the June announcement indicates that other servicemen are in a state which may best be described as one of violent agreement. The response, however, has not come in sufficient volume to warrant furtherance of the idea at the present time.

Sooner or later the profession will establish some proving-ground for equipment, where operating notes and comparisons will be made for the guidance of the repairman-purchaser. Until then, it appears that we servicemen either believe it is better to wait for television to reshape the profes-