



ICONOSCOPE images photographed at National Press Club demonstrations, here reduced from their 9x7½ inch frames. In left photo William Crago, WRC-WMAL announcer (left), is shown with George Porter, FCC assistant general counsel. Center picture shows little Jackie

Russell, son of Frank M. Russell, NBC Washington vice-president, engaging in conversation with his daddy at the Press Club. Right photo shows Gordon Hittenmark, WRC-WMAL announcer, with FCC Commissioner Paul A. Walker.

Television's First Roadshow Proves a Hit

Federal Officials Much Impressed By NBC-RCA

By MARTIN CODEL

TELEVISION's first road show, a seven-day stand in Washington, ended Feb. 2 with capital officialdom still enthusing over the "marvel" they witnessed and with RCA-NBC officials highly gratified over the public reaction. At least 5,000 persons, chiefly Government officials, diplomats and journalists, saw the demonstrations at both the sending and receiving ends and the comment invariably was favorable. In fact, though the executives in charge of the mobile television unit had to turn down invitations to bring it to other cities since it is needed in New York for World Fair preparations, they did promise to televise the next inauguration of the President of the United States in January, 1941—not far away as television time is measured.

A Washington Station?

There were many, however, who believed that Washington would get a local television station well ahead of that date in view of the importance of the capital as an originating point and in view of the tremendous success of the Jan. 27-Feb. 2 demonstrations. RCA-NBC will inaugurate public television with the opening of the New York World Fair April 30 and receiving sets will be placed on the New York market at that time. The service, due to the peculiar characteristics of the ultra-shortwaves, will be entirely local at the outset, the RCA-NBC emanations from the transmitter atop the Empire State Bldg. and the CBS transmitter atop the Chrysler Bldg. being receivable for a dependable radius of only about 50 miles.

Just as it has authorized its receiver manufacturing licenses to manufacture video sets under its patents, RCA has also authorized the manufacture of transmitter apparatus and has announced the availability of a new 1,000-watt visual broadcasting unit costing

about \$60,000 which can be purchased by any firm having FCC authorization to experiment with television [BROADCASTING, Oct. 15, 1938]. Thus far, though many tentative orders are said to have been placed, the only one definitely announced in addition to the RCA installation for CBS is that of WTMJ, Milwaukee.

The fact that capacity of the shortwave spectrum reserved for television is limited because of the width of the bands required, and the fact that television at the outset must necessarily be a purely local service due to naturally restricted ranges of transmission, are expected to retard any sudden blossoming of television on a nationwide scale. However, about a score of television broadcasting outlets have already been authorized by the FCC [BROADCASTING, 1939 Yearbook, page 325] and these, at least, are expected to proceed with

renewed vigor and enthusiasm as a result of the Washington experiments and especially after the public reaction in New York can be gauged.

New York Proving Ground

In other words, New York—and perhaps the several other cities which have television broadcasting this year—will be the proving grounds for the future course of American television. That there will be competition in the developmental phases at least, despite the restricted bands available, is assured in New York by the fact that both RCA-NBC and CBS will have stations operating and in other cities by the fact that such organizations as Allen B. DuMont Laboratories, Farnsworth Television Inc., General Electric Co., Philco Radio & Television Corp., Zenith Radio Corp., Don Lee Broadcasting System, First National Television Inc.

and several universities have or will have transmitters in operation.

Network television, it was indicated during the Washington demonstrations, may not be dependent upon the highly expensive coaxial cable but may develop from ultra-shortwave relays now the subject of experiments by RCA. Nor does television expect to rest its programming problem on films; the Washington demonstrations and the tests being conducted in the New York, Camden and other laboratories have proved that television can do on-the-spot and studio pickups of its own and with remarkably good results.

What the cabinet officers, members of Congress and others saw in Washington during the RCA-NBC demonstrations were 9 x 7½-inch images reflected on upright mirrors on a half-dozen receiving cabinets set up in a darkened anteroom of the National Press Club. The kinescope images were of 441 lines framed at the rate of 30 per second, interlaced to provide 60 exposures per second. This is the standard for cathode ray television which the Radio Manufacturers Assn. recently agreed upon and has asked the FCC to fix.

Sets Already Obsolete

The cabinets were laboratory models, which engineers said were already practically obsolete, and each contained 38 tubes besides the 12-inch cathode ray tubes on which the images were formed. Assembly lines at Camden are preparing for the production of a variety of receiving sets framing images of varying sizes, according to the size of the tube, the largest at first to be the 12-inch tube demonstrated in Washington. A booklet distributed at the Washington demonstrations said the price of home receivers would probably range from \$100 to \$1,000, although the 9 x 7½ inch picture is expected to come in a set costing something less than \$500. Company executives say frankly they cannot even guess what the New York market will be, informal predictions varying from 10,000 to 50,000 sets for the remainder of 1939 after service of



FIRST from all angles was this television "ad". Showing the RCA advertisement for television cathode ray tubes as published on the back cover of the Jan. 15 BROADCASTING (the first ad of its type ever published), it was scanned by the RCA-NBC television camera during the Washington demonstrations, and flashed on the battery of televisions in the National Press Bldg., where it was witnessed, among others, by FCC officials, who promised no punitive action, though regulations prohibit advertising in experiments. The human "easel" is Gordon Hittenmark, NBC Washington announcer, who helped in demonstrations.

one or more hours per day is offered starting with the opening of the World Fair.

The only precedent they have to guide them is London, where for several years the British Broadcasting Corp., using EMI (Electrical & Music Industries Ltd.) apparatus of practically the same type as that developed by RCA, has been offering visual programs several hours each weekday and where less than 10,000 receiving sets have been sold. Most of these, it is said, are in hotel lobbies and other public places. Those who have seen the RCA-NBC pictures and the London pictures say there is little to choose between them.

Clear Despite Rain

The pictures shown in the National Press Club were extremely clear, even during the several days of cold and rain—so clear, in fact, that they drew excited "oh's" and "ah's" from the viewers as they saw persons they knew step before the microphones to be interviewed and as they saw clear panoramas of Washington's famed Mall, the Washington Monument and passing automobiles. The Feb. 1 program included shots of a platoon of cavalry from Fort Myers going through maneuvers on the Mall within range of the Iconoscope camera, and the pictures were so good that they augured good possibilities in the televising of sports and other outdoor activities.

The demonstrations were by invitations issued by NBC officials in Washington. First the invitees viewed the received images in the Press Club for 10 minutes; exactly 92 of these demonstrations were staged during the seven days. Then they were handed carnations which were badges entitling them to a free taxicab ride to the Mall, a half-mile away, where the two mobile units were located just in front of the Dept. of Agriculture Bldg.

There they were able to see how



RAIN AND COLD proved no deterrent to the television crew. Upper left photo shows crowds huddled under canopies to watch the video pickups; note the batteries of lights erected for the scanning during days of overcast skies. At upper right "Cameraman" Dick Pickard is wrapped, along with the Iconoscope, in oilskins as protection against the rain. Lower right shows Frank Mullen, RCA director of public relations, standing before the Iconoscope and an oilskin-protected mike to be televised as he talks on the telephone with a viewer of his image on the receivers in the National Press Club.



Enter 'Videoscope'

ENTER *Videoscope*, which is destined to be for television what the microphone is for aural radio. At least that appears to be the likely name selection for the television camera, which really isn't a camera at all. RCA-NBC engineers, who have been calling the device an "Ike" until a more appropriate name could be agreed upon, asked BROADCASTING to give it an etymological hand. Up popped the idea of *Videoscope*, which is faithfully descriptive of the apparatus. Thus, it appears, it will be *Videoscope* from now on—or just "Vid" for short.

the scanning was done, and there, starting with Speaker Bankhead of the House of Representatives the first day, several hundred persons including members of Con-

gress, the FCC and other notables, went before the Iconoscope and the microphone to be interviewed for those in the Press Club to see and hear. Each demonstration included a telephone conversation between a person being televised and someone in the Press Club viewing room.

One of the two mobile units carried the scanning apparatus and the other the transmitter, but these stood about 200 feet away from the actual scanning setup. Ordinarily the two telemobiles, as they are called, are to be used for remote pickups, such as man-on-the-street interviews, to relay to a central transmitting point—in the case of New York to the Empire State Bldg.

No Video Interference

In this instance the mobile transmitters, operating on 177 mc., transmitted direct to the specially constructed antenna atop the National Press Bldg., which was in line of sight of the antenna on one of the mobile units. Accom-

panying sound was alternated on 37.6 and 40.6 mc., according to conditions, and it was a peculiar fact that diathermy interference was experienced occasionally only on the audible frequencies and not on the u.h.f. visual relay band which was 6000 kc. in width.

Even during the heavy rains the images came through clearly. During three of the days the scanning had to be done under protective



THE MASTHEAD and part of the cover page of BROADCASTING were televised during the RCA-NBC demonstrations in Washington. At right Gordon Hittenmark, NBC Washington announcer, is shown holding the magazine in front of the Iconoscope; great care had to be exercised



to place it in precise position before the scanner. At left is an untouched photograph of the reproduced image as it appeared on the Kinescope. Some of the detail was lost in the photographing and in making this cut. Exact size of the reproduced image was 9 x 7½ inches.

canopies before batteries of lights, and announcers, apparatus, interviewees and all had to be clad in raincoats for protection against the weather. The announcing burden was borne by members of the NBC Washington staff, chiefly by Gordon Hittenmark, William Crago and Bryson Rash with occasional relief from Dorian St. George, George Wheeler, Ed Rogers, George Gunn, Jack Roney and Bud Barry.

No makeup was used and the directors, headed by Warren Wade with Thelma A. Prescott as his aide and Carleton Smith of the Washington executive staff making arrangements, were able to study scanning and production technique under all sorts of conditions. Exceptionally adapted to televising, it was found, were the features and personality of Gordon Hittenmark, whose informal and pleasing manner augur well for his future when television becomes a regularly established service.

Both RCA and NBC sent large contingents of officials to watch the reactions to the demonstration, and of course large crews were needed to man the apparatus, which went through all seven days without a breakdown. Heading the technical crew was O. B. Hanson, NBC vice-president and chief engineer, flanked by R. M. Morris, development engineer; R. E. Shelby, television supervisor; H. C. Gronberg, television engineer; T. Buzalski, chauffeur-mechanic, and the engineers attached to the telemobile units—Harold See, A. E. Jackson, R. W. Pickard, S. L. Peck, R. J. Plaisted and E. C. Wilbur.

On hand for nearly all of the tests were C. W. Farrier, NBC television coordinator; N. E. Kersta, his assistant, and T. H. Hutchinson, manager of television programs. With them from New York came Frank Mullen, RCA director of public relations; Clay Morgan, NBC director of public relations; Vance Babb, NBC press division manager; Leif Eid, press division; Burke Crotty, photo editor, and William Haussler and Sidney Desfor, photographers.

The Washington staff of both RCA and NBC devoted much of their time to the demonstrations, including Frank M. Russell, NBC vice-president; Oswald F. Schuette, RCA; Kenneth H. Berkeley, manager of WRC-WMAL; Carleton Smith and Fred Shawn, assistant managers; Stanley Bell, in charge of the Press Club crowds; Mary Mason, home economics specialist, and Phoebe Gale, publicity.

Blackstone May Add

BLACKSTONE PRODUCTS Co., New York (Aspirin) is using six weekly spot announcements on WSB, Atlanta, on a 52 week schedule. Radio plans for some of the company's other products are now being considered. Randall Co., New York, handles the account.

Tums Expands on Blue

LEWIS-HOWE MEDICINE Co., St. Louis (Tums), on Feb. 17 will expand its program of Liberty short stories, featuring Bert Lytell, now on WJZ, New York, to a network of 42 NBC-Blue stations. The program is heard Fridays, 7-7:15 p. m. H. W. Kastor & Sons Adv. Co., Chicago, handle the account.



OUTSIDE AND IN during the RCA-NBC television demonstrations in Washington. In upper picture, FCC Chairman McNinch is shown being televised on the Mall; note Washington Monument in background, to which the Iconoscope was pointed at the outset of each 10-minute demonstration. Lower photo shows part of the crowd viewing received images on some of the Kinescope receivers set up in the National Press Club, where thousands observed the sight and sound broadcasts.

'WE WERE VERY SUCCESSFUL'

Statement by C. W. Farrier, NBC Television Coordinator

In this pioneer demonstration of television, we have subjected our field staff and the mobile television station to their severest tests. We made pickups and broadcasts under the most adverse of weather conditions, ranging from the bitterly cold winds of the first two days through the downpours that succeeded. Light was seldom stable for more than a few minutes at a time. After the first heavy rain, the NBC staff hurriedly bought large, varicolored beach umbrellas to protect announcers and televised guests from the inclement weather. Our camera was put under an oiled silk hood and the microphone was protected by a cellophane envelope.



Mr. Farrier

The field crew of seven engineers had their first experience in setting up their equipment and televising under far from ideal conditions, any one of which may be encountered once we go on the air regularly. Outdoor television like radio, must be on the spot when news is in the making and the program must go on the air regardless of weather conditions. Our equipment was remarkably stable throughout two weeks of tests and demonstrations. Not one minute was lost through equipment failure.

If we can judge by crowd reaction, we were very successful here. The most common comment we heard was that the images were very much brighter and clearer than had been anticipated; some persons were very surprised to learn that today's television images were not streaked with light. Evidently the common impression of television is that it is still a stunt rather than a medium ready to give wide public service in entertainment and information. I hope we have dispelled that idea.

Looked It Over

BROADCASTERS visiting Washington for FCC hearings, or coming especially for the occasion, were prominent among those viewing the RCA-NBC television demonstrations and in several instances were themselves televised. Among those seen at the demonstrations were Earl J. Glade and Eugene Pack, KSL, Salt Lake City; E. K. Cargill, WMAZ, Macon, Ga.; Hope Barroll and Robert Maslin, WFBR, Baltimore; Harold C. Burke, Leslie H. Peard Jr., R. C. Embry, William Herson and Edward Codel and Rev. G. E. Lowman, WBAL, Baltimore; George E. Heiges, WPIC, Sharon, Pa.; Paul Porter and James Middlebrooks, CBS. In addition, most of the staff of the FCC attended the demonstrations and many were televised, including several commissioners, attorneys and engineers. For most of the FCC personnel, it was their first glimpse of television.

FOREIGN PROGRESS IN VIDEO SHOWN

PROGRESS toward the adoption of common standards for television services is reported in a review of television abroad during 1938 issued Feb. 3 by the International Telephone & Telegraph Co. on the basis of data gathered by its associated companies in Europe.

Great Britain, France and Germany, it is stated, all adopted positive modulation and uniformity of synchronizing signals but the number of lines used in building up the cathode ray images varies—405 in England, 455 in France, 441 in Germany and 441 in Italy. The British Broadcasting Corp. is offering a four-hour daily service in London, and England at present is the only country with a regular television service and with sets actually on the market.

Paris has a new Government station operating from the Eiffel Tower, transmitting about two hours each weekday and using studio and film subjects. Italy has ordered a Fernseh scanner from Berlin, where last August the new standard was the basis of showings at the Radio Exhibition. About 70 video receivers were in operation in Berlin during the show, most of them by Fernseh.

New Video Film

PARAMOUNT PICTURES Corp., Hollywood, has developed a special soft process negative for television reproduction. It will replace the present ordinary movie film which is said to be too heavy for that purpose. Belief was expressed that sepia tints or mauve will eventually replace black-and-white for telecasting.

RKO Pictures in Hollywood has completed a 1,000-foot synopsis of its current film hit "Gunga Din", consisting chiefly of closeups and medium close-up shots, with special sound effects, to be used for television. It will be shipped to NBC in New York for tests and then televised over the RCA-NBC station.