ITEM NO. 9
FILE NO. XI - 1

TELEVISION IN FRANCE

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COMBINED INTELLIGENCE OBJECTIVES SUB-COMMITTEE

LONDON — H.M. STATIONERY OFFICE

TELEVISION IN FRANCE

Reported by
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ALSOS Mission
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CIOS Black List Item - 9
Instruments and Devices.

COMBINED INTELLIGENCE OBJECTIVES
SUB COMMITTEE
G-2 Division SHAEF (Rear)

of 8' the quality was comparable with that of an ordinary cinema.

During the demonstration, films and a live scene from the studio were shown on both the 450 and the 1050 line systems. The improvement in the increase in entertainment value of the 1050 line picture was most marked. The same type of iconoscope was used in the 1050 and 450 line systems.

5. Both the 450 and 1050 line systems were interlaced. It was stated, but not explained, that they had a system of interlacing by changing the phase of the synchronising signals and avoid the necessity of using an odd number of lines. No schematics of the system were available.

6. All the equipment was very well made in final form, and there was no lash-up appearance about any of the equipment. A large part of the synchronising generators were installed in duplicate. A control position with push-button control enables the outputs of any one up to six cameras to be mised. The control position also had two cathode ray tubes, one of which showed the picture being sent out, while the other one was available for the picture under preparation.

7. The synchronising pulses of both 560 and 1050 line systems were in the black and 50 frames per second are employed.

8. The cameras used were quite neat-looking devices, and as well as I can remember, rather smaller than those in use at Alexandra Palace. On the one model of camera, the operator surveys the picture through a view finder, while on the other camera, he looks at the picture being transmitted on a cathode ray tube.

9. The technical work of the Compagnie de Compteurs is under the direction of Mr. Barthelmy. Compagnie de Compteurs has evidently invested a terrific amount of money in television research and a large building is devoted wholly to this work. They have enormous laboratories and test position, and in addition, have a fair-sized studio and test theatre in the building.

All transmissions were sent over wire circuits. It was stated that the 1050 line systems required a band

width over the wire circuits of 12 Mc/s, and preferably 15 Mc/s. I talked to Mr. Barthelmy about the carrier frequency which would be necessary to carry such a band width, and he said that they had made successful transmissions with a carrier frequency of 150 Mc/s. This seemed rather a low frequency to me, but Mr. Barthelmy assured me that the transmission on this frequency was quite good, although it would probably be better to use a high frequency from the point of view of band width.

Electrostatic lenses were used in all the iconoscopes but magnetic lenses were used in the projection tube.

(B) A visit was made to the studios of the RDF, which are located in a large apartment building about 400 yards from the Eiffel Tower where the transmitter is located.

The following points were noted:

1. The transmitter in the Eiffel Tower was in use up to the 16 August and transmitted pictures for German troop hospitals, and also in some way was tied up with the German Air Warning system. Details of this tie-up were, however, a bit vague, but in as much as it was said that the transmitter always came on after the Air-warning had sounded, it would seem that it was in some way used for jamming our signals. The transmitter was damaged by the Germans before they left, but is now being repaired.

2. I talked to various people about what the intentions were of the RDF to re-start a television transmission and got very contradictory replies. Some people said that they thought it would be in service again before Christmas, but Mr. Schaeffer, who is the General Administrator of the RDF, said that he did not think it would be in operation for some time, and that for his part, he hoped it would not start for at least two years. He said that he did not consider that they were yet in a state to start transmissions properly, and that he was very much averse to having television rushed into service. The general impression I have is that if television starts within the next two years, it will surely start up on 450 line transmissions, and that although the 1050 line transmissions are well ahead, they are not yet ready to be put into service.

3. They have a large television studio which was built to the order of the Germans and has an auditorium

with 250 seats, which is fitted with about 30 5-KW Floodlights, the usual theatrical appurtenances, and has a large control room at the back. The control room has facilities for mixing the outputs of up to six cameras, and has enormous cathoderay tubes for looking at the various pictures. There is also there a push-button operated system of light control, and facilities for the control operator to talk to any of the cameras are also given.

4. All the television eqipment in this building is of German manufacture, made by the Fernsch AG. Demonstrations of film transmissions with 441 line interlaced transmission gave a very good definition, and the quality was comparable with that of film transmissions from A.P.

5. The television cameras were removed by the Germans, but they had left the film equipment. This consisted of a fairly elaborate cine projector and a pick-up, which consisted of an orthicon, fitted with a photo-cell, followed by an electron multiplier amplifier built into the orthicon. A novel feature of this device was that two pictures were focussed on the screen of the orthicon and scanned separately. Electrostatic lenses were used on this orthicon.

6. Three additional studios were being actively worked on during our visit. Two of these were small studios about 30' x 15', and one was a large studio about 130' x 60' x 25' high, and was being constructed with a small swimming pool in the middle of the floor about 15' x 19'. They thought that the availability of a sheet of water for television broadcasts, would enable them to put on more interesting programmes, and also to get nice lighting effects by reflection from the water.

7. We also saw an area about 150' x 60' x 15' high, which is at present in use as a garage, but which is intended to convert into a television studio.

8. No-one either at the Compagnie de Compteurs or at the RDF seemed to have done any work with color broadcasting, nor did they seem to think that color Television was very interesting.

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