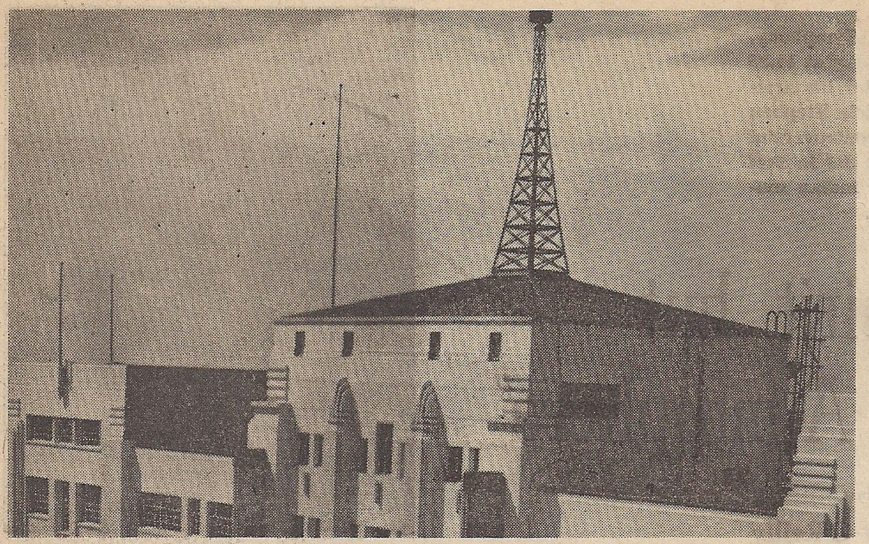

The steel lattice tower which was installed during World War II as a wartime emergency measure.

When Broadcast House Had a Rooftop Transmitter

by H. M. Watt

DURING World War II there was always the danger that landlines from the studios to outlying transmitters would be cut, through enemy action. It was therefore essential to have an alternative link by a direct relay station which was installed on Broadcast House itself, despite the scarcity of radio parts.

AN unusual view of Broadcast House (See Photo on this page) shows the symbolic steel lattice tower which was put into practical use during world War II for roof-top transmissions on the 68-metre band. Two tall poles (one shown in the background) were later erected to give the transmission aerial a greater length.

STIRRING DAYS

The transmitter, familiarly known by the engineers who improvised it as "the Flying Bedstead," was intended as a wartime emergency measure, but was maintained for years after the war.

Today, the 25-foot tower, situated on top of the main air conditioning chamber for Broadcast House, supports only a reception aerial.

But you have just to mention the tower and "the old 68 transmitter" to veterans of the SABC staff and their eyes light up reminiscently as they recall the stirring days late in 1940 when the hurriedly improvised short-wave transmitter went on the air.

The end of the "phoney war" in Europe, and the drastic turn which hostilities had taken, made it clear that wartime precautions were necessary against the vulnerability of broadcasting stations. There was always the danger that landlines from the studios to outlying transmitters would be cut, through enemy action and it was therefore essential to have an alternative link by a direct relay station. This station, it was decided, should be on Broadcast House itself.

The then Chief Engineer, Mr. W. Hilarius (who was later tragically killed in an air crash) took up the project enthusiastically and formed a team.

IMPROVISATION

Here is how one of the corporation's engineers who took part in the installation, described it: "Mr. Hilarius was an acknowledged expert on radio improvisation and we had lots of old gear lying around. We took the frame of the old JB transmitter which had done such good service at Railway Headquarters and in Stuttaford's Building, where broadcasting in South Africa began. Very little apart from the frame was used. There was a scarcity of valves and radio parts because of the war, but eventually we got the transmitter — Broadcast House's Own, you could call it — ready. It had a power of 400 watts, or nearly double that of JB.

"The tower — a copy of the one on Broadcasting House in London — was the obvious site for the transmission aerial, being probably the highest point on Commissioner Street at that time.

RECEPTION

"Right from the beginning our reception results throughout Johannesburg's flatlands were excellent, and thousands of listeners preferred our 68-metre broadcasts to those from Maraisburg. In our three-storey section of the building, we felt proud of our independent transmission on top."

The transmission continued throughout the war and until 1955, when the transmitter was no longer required and the Post Office wanted the wave band clear.

Years before it closed down the 68 Metre won the affection of cricketing enthusiasts by broadcasting the first ball-by-ball commentary of an international match. Despite the lower power, listeners as far afield as Durban and parts of the Free State could pick up the commentary when conditions were favourable. The innovation was a great success. There is controversy about which match this was, but it is believed to have been the South Africa-England test in Durban when the SABC incurred more public wrath than ever before — or since — by cutting off John Arlott's dramatic commentary before the last ball was bowled so that the 6 p.m. news bulletin could be broadcast!

BROADCASTING HISTORY

Another page of South African broadcasting history was "written" on the roof of Broadcast House in 1943, when experimental VHF-FM (Very High Frequency — Frequency Modulation) transmissions were made from a hut erected there. The transmitter was the first of its kind in the Commonwealth, outside of Britain. There were only a few FM sets in use in Johannesburg, but the results proved the feasibility of FM in South African conditions and were excellent.

The transmissions were carried for a few hours daily and continued for about six months. These were in the 50 megacycle range, with a strength of 120 watts.

Such transmissions have a horizon-to-horizon range because of the nature of the waves, but reception is of land-line clarity with the elimination of nearly all atmospheric noises. Instead of 50 megacycles, the standard for FM is now between 87.5 and 108 megacycles.