

## **..The Microphone used for the Sydney Harbour Bridge Opening ceremony.**

*Compiled by David Burger, March 2007 with material from:*

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Press Release No. 94 (14/03/07) –  
Telstra's Sydney Harbour Bridge 75th birthday gift

Phil Burgess, GMD, Public Policy and Communication, Telstra.

Telstra has donated a rare microphone from its historical collection used to open the Sydney Harbour Bridge 75 years ago to the Sydney Powerhouse Museum - and it has created a bit of excitement.

The Reisz microphone is a rare example of Australian technology manufactured in 1930 and was used to broadcast the 1932 opening ceremony of the Sydney Harbour Bridge to thousands of people.

What has made the microphone especially significant is the signatures of all 10 dignitaries at the opening ceremony, including the NSW Premier John T Lang, NSW Governor Philip Game and the Bridge's Chief Engineer, JJC Bradfield.

Speaking at the official donation event, Telstra's Group Managing Director PP&C Phil Burgess said that Telstra was proud to share this wonderful piece of Australian history with the community on the 75<sup>th</sup> birthday of the Sydney Harbour Bridge.

"Every good piece of history has a story behind it and this microphone is no exception," Dr Burgess said.

"Thanks to the Powerhouse Museum, many more people will be able to see and understand the role it played in unveiling a great Aussie icon." Why did Telstra have the microphone in its historical collection? The microphone became one of a collection of microphones owned by Mr Philip Geeves who was announcing for AWA (Amalgamated Wireless Australia Ltd) on the day of the Sydney Harbour Bridge opening. AWA organised the broadcast of the ceremony. Mr Geeves later worked for the OTC (Overseas Telecommunications Commission). He donated his material to the OTC historical collection on his retirement.

Telstra then came into possession of this microphone through its acquisition of the OTC in 1993.

"It was appropriate to donate the microphone to the Powerhouse Museum for more Australians to enjoy," said Mr Brian Mullins, manager of Telstra's historical collection in Sydney. Powerhouse Museum Director, Dr Kevin Fewster said that

the microphone would be a valuable addition to the Museum's information technology collection.

"The microphone is significant in that it reflects an important occasion in Australian engineering and social history," Dr Fewster said. "In bearing the signatures side by side of Governor Philip Game and Premier Jack Lang, the microphone stands as a link to one of the most tumultuous periods in Australian and New South Wales politics."

Just two months after the signatures were engraved on the marble-cased microphone, the NSW Governor sacked the Lang Government after Premier Lang defaulted on loan repayments to the Commonwealth in favour of spending to stimulate the NSW economy.

The microphone will be on display at the Powerhouse Museum from March 14 2007. This coincides with the 75th Sydney Harbour Bridge anniversary celebrations. If you are in Sydney, or planning a visit, check out the Powerhouse Museum's display.

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The photograph of the carbon microphone below, has a date typed in at the top, May, 1932. The original writing was I believe, done with a fountain pen, later to be etched by some process.

The page was from the AWA Staff magazine "The Radiogram."

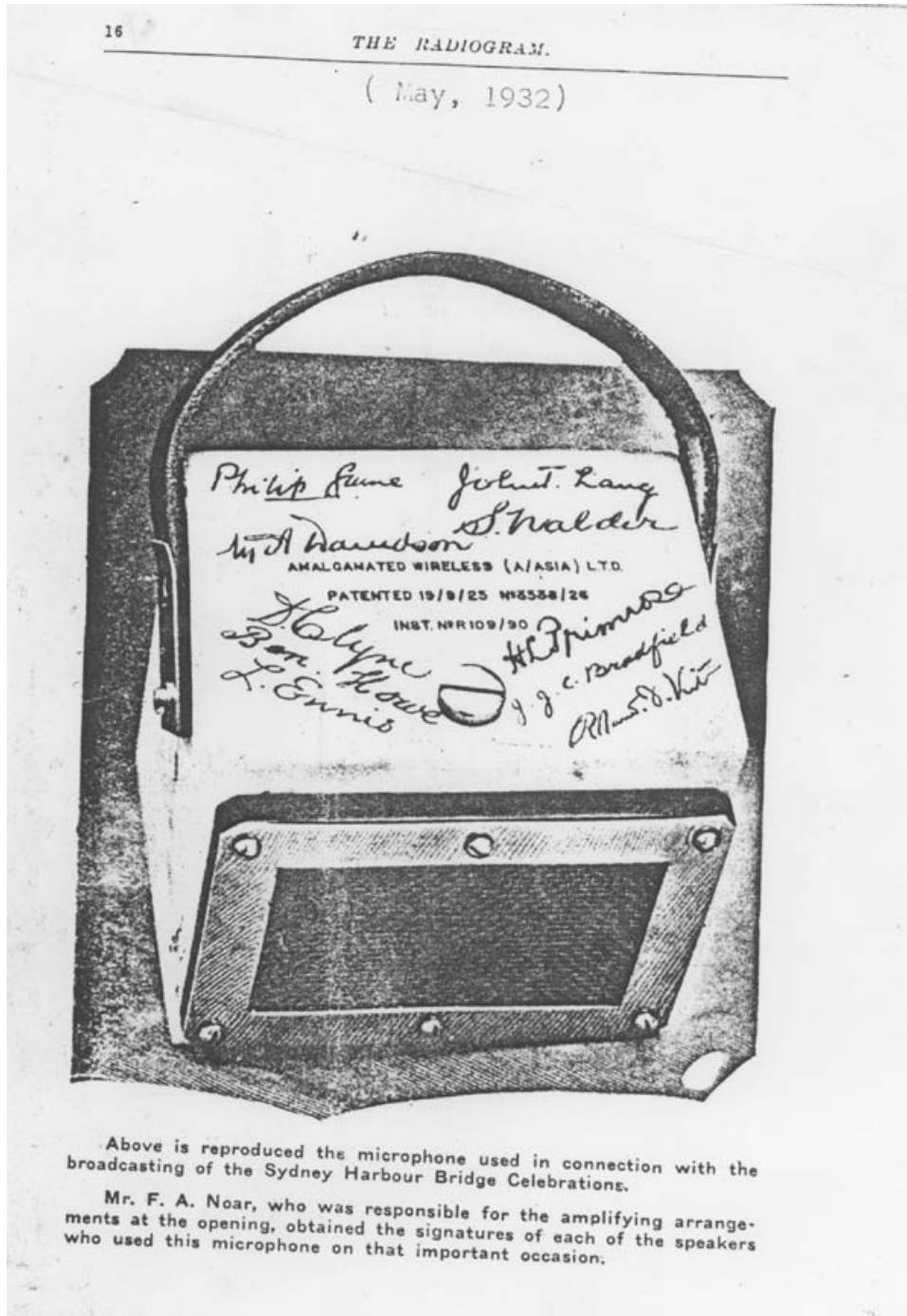
Reference to a Mr. F. A. Noir as having got the signatures on the microphone may not be absolutely correct. The boss of the PA Hiring Dept, Dave Curry, now deceased, (in my time with that division in the mid 1960's to mid 70's) told me that he was on sound duty that day and that he got the signatures. Mind you, he wasn't the boss at that time, so the manager always got the credit!

There are some photos located in the Hood collection ( Google "hood photo collection awa public address systems").. These show a PA set-up in the Sydney Town Hall, before they got a permanent sound system. They used 4-5 foot horn speakers on stands each side of the stage and, I believe a battery operated (12V) valve amplifier. They were situated in Knox Street down Broadway, where he used to borrow the fruitmongers horse and cart to get the sound gear to the Town Hall.

When AWA did win the Town Hall contract, it was a low-level sound system with small clusters of cone speakers around the columns holding up the side balconies. There were separate speakers in the hall before you entered the main hall, used for smaller functions. A rack of amplifiers, mixer unit, turntables were housed in an operating box and then later on, along with the ABC technicians later on. Dr. Ern Benson and AWA engineer designed a new speaker system (fore-runner for the original Sydney Opera House speaker system) which incidentally, won the Prince Philip design award.

This system comprised a column of 22, 12" loudspeakers (two to a box) mounted vertically in each corner of the stage end. Further in at the sides to the centre were two columns, each about 9 feet high and 2 feet wide, with a combination of 9" x 6", &" x 5" and four, Trebex horn tweeters. They sure moved the air!

However, when they wanted more room for updating the organ...the speaker system of AWA was discarded, and they put in a centralised system, e.g., a speaker cluster, hanging from the ceiling above, and just in front of the stage.



# BIG BRIDGE BROADCAST.

C. 1932 (MAY?)

## TECHNICAL DETAILS.

THE broadcasting of the Sydney Harbour Bridge opening ceremony was notable for the fact that one microphone was sufficient for all the broadcasting stations in Australia as well as a battery of public address loud-speakers, talkie films and gramophone records.

The Bridge Celebrations Committee arranged that in the hands of Amalgamated Wireless should be left the control of the broadcast with the particular intention of avoiding the multiplicity of microphones which is usually a feature of a gathering of such importance.

It was the task of the engineers of A.W.A. to devise means to ensure a circuit from which all the broadcasting stations interested could take a "split" without reacting upon each other.

A single microphone served for all the speakers at the official ceremony. The output passed into a two-stage amplifier placed by A.W.A. under the dais, and from that point the service was split into eighteen channels, each controlled by a Radiotron UX112A valve.

To each of these services a signal was given at a certain predetermined level of volume which had been agreed upon by consultation between A.W.A. and the engineers of the broadcasting stations. Each station was thus in a position to amplify the service at a point behind the dais or to pass it on to their own studios for further control. Each station had a separate microphone at the rear of the dais, so that the announcers of the several stations could add special matter of their own choice upon the main service and fade the latter in or out as they wished.

The talkie companies were given an elevated position on the other side of the road, the wires to their stands running across the road in pipes which were covered with asphalt.

In addition to the single microphone for the principal speakers, another microphone was situated in the corner of the dais for the Governor, who announced the various speakers. A third microphone was placed in a corner for the official announcer, who described the proceedings.

One of the "splits" served the public address system installed by A.W.A., a special amplifier being used which gave a 60-watt undistorted output obtained from four Radiotron UV211 power valves in push-pull circuit. These valves were fed from a pair of Radiotron UX245 valves in push-pull preceded by a single Radiotron UY227. The high

tension for this amplifier was obtained by a pair of Radiotron UX866 Mercury Vapour Rectifiers.

From the power amplifier 25 A.W.A. public address loud-speakers were fed. These speakers were carried on electric light standards on the Bradfield Highway and on Observatory Hill. As these speakers were dynamic, they required field excitation. To accomplish this, all the field windings were connected in series, direct current being obtained from the City Council's mains and broken down with carbon filament lamps.

In Hyde Park A.W.A. also established a battery of six loud-speakers on top of the Company's public address vehicle. These were operated from an amplifier and this service kept the crowd advised while they were waiting for the pageant to move off. A Radiola 55E served to receive the speeches through 2FC.

The whole arrangement passed off excellently, both in respect of the broadcasting, the talkies and the public address speakers.

## A.W.A. ANGLO-AUSTRALIAN RADIOPHONE.

### Australia Speaks to the Sister Dominion.

(By H.F.C.)

Precisely at 1300 G.M.T. on February 11, Traffic, Sydney, called Traffic, London: "We want to book a serial from Daily Telegraph, Sydney, calling Ottawa, Mr. Bennet, Prime Minister, wanted as soon as possible."

Fifteen minutes later, the Daily Telegraph, Sydney, was in touch with Mr. Bennet, at Ottawa, Ontario.

They had an excellent conversation lasting three minutes 40 seconds; the revenue period being three minutes ten seconds. This reveals the high quality of the circuit employed, and the speed at which communication can be effected between the remotest points in the Empire.

Precisely at 1505 G.M.T., a Melbourne subscriber talked with a friend in Vancouver, via London and New York. The circuit was simply ideal at the moment, the total talking time being all revenue time. This condition is interesting when one considers that speech was conducted over two radio channels at different frequencies, over a total distance of approximately 17,800 miles, 4,600 representing wire line. This call probably constitutes the longest revenue call on record, from a viewpoint of landwire and radio combined. The two systems work well together indeed, we might well say it is now possible to connect any Australian subscriber with any other subscriber across the oceans.