

TUNED IN

Ken Taylor, Museum volunteer and member of Oxford and District Amateur Radio Society (ODARS), explores how objects in the Marconi Collection worked.

Dame Nellie Melba's Microphone



Origin: England

Date Created: 1920

Provenance: Presented by the Marconi Corporation

Materials: Mahogany, brass, ebonite, cloth, nickel, wood

Inv: 54651

The Marconi C100L appears to be very similar to the GEC Peel-Connor instrument, which in turn may derive from an American Western Electric model.

It is a carbon-button type originally designed for telephones, and performed poorly with music or vocals outside of the normal register of conversational speech.

Sound waves funnelled through the mouthpiece cause a loosely mounted aluminium diaphragm to vibrate. This in turn applies pressure to a chamber containing carbon granules whose electrical resistance varies in accordance with the vibrations. A current passing between electrodes attached to the chamber will thus convert the sound waves into an electrical signal.



Dame Nellie Melba's Microphone (Inv: 54651)

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This particular microphone was used in the very first broadcasts from the Marconi factory in Chelmsford in 1920 including the famous concert by Dame Nellie Melba, who signed and dated it.

The Marconi engineers fabricated the cone from the wood of cigar boxes.



*Dame Nellie Melba's Microphone,
Chelmsford, 1920*



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