



PoW radio # 2
 'Caterina' of
 Stalag X-B Sandbostel
 Country of origin:
 Italy

The original 'Caterina' is currently on permanent display in the Museum of Internment in Padova. Here shown is the earphone, remains of the LT cell, container for HT cells with copper and zinc elements, the actual receiver with original 1Q5 valve, and the aluminium mess tin ('Gavetta') in which the radio was concealed during the day.

DATA SUMMARY

- Organisation:** Italian PoWs interned in Stalag X-B, Sandbostel, Germany.
- Year of Introduction:** 1944/45.
- Purpose:** Secretly listening to the Allied news.
- Receiver:** Regenerative detector.
- Frequency coverage:** Medium wave.
- Valve:** 1Q5.
- Power source:** 1½V LT and 20-25V HT.
- Dimensions (cm):** Height 9, length 5, width 10.

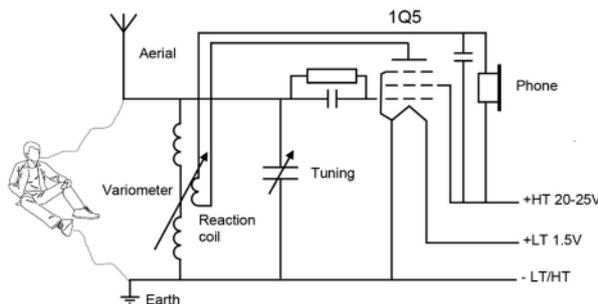
Remarks

This and the next chapter highlights principally the technical aspects of secret radio receivers constructed by Italian prisoners of war in various internment camps.

'Caterina' (named after a girlfriend of one of the constructors) was a small one valve secret medium wave radio built and operated by interned Italian officers in the notorious Stalag X-B (Sandbostel) and later in Stalag XI-B (Fallingbostel), both in North Germany, between 1944 and 1945. This group of Italian prisoners of war which refused to cooperate with the Germans were badly treated and denied much Red Cross support. Affectionately known as 'the radio of hope', it brought news about the progress of the war, giving the strength to resist and survive.

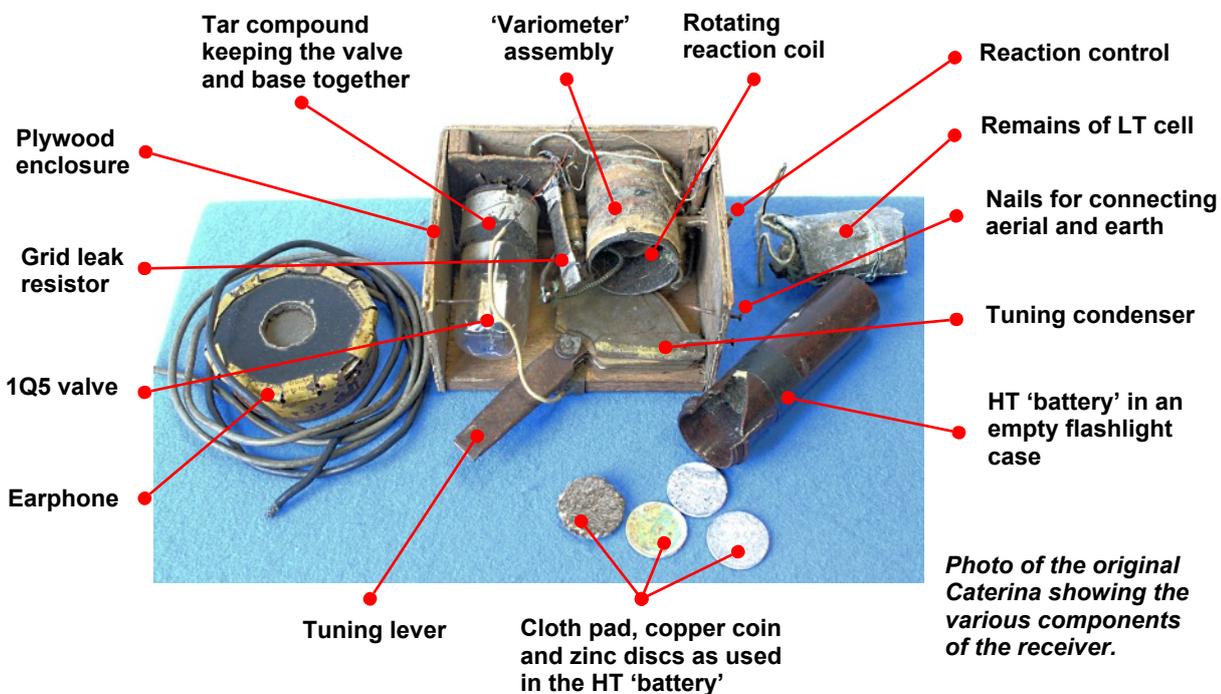
Caterina was constructed by Capt. Aldo Angiolillo, 2nd Lt. Oliviero Olivero and Lt. Martignano. It was based on a 1Q5 valve, with components made from scrap. Resistors were made from pencil graphite, a few lines of a pencil on dried margarine paper, fixed capacitors using aluminium foil and cigarette paper impregnated with candle wax. The enamelled copper wire for the coils was stolen from a dynamo of a German bicycle. The earphone comprised a magnet and wire from an electric razor, mounted in a tin. Tuning was accomplished by a variable condenser made of tin plates cut from flattened empty meat tins, separated by pieces of celluloid from playing card packs. The tuning lever was made from a tin strip covered with tar. The base for the 1Q5 valve was constructed from a piece of Masonite and tin strips. Packing material from Red Cross parcels was used to make the plywood enclosure. The HT battery was built-up from copper coins, zinc disks and cloth pieces from a blanket soaked in electrolyte (vinegar or ammonia), a pile placed in an empty round electric flashlight case. Life of this 'battery' was short, but enough to catch the news. It took almost a day's work to renew the HT battery.

Though heavily jammed by the Germans, listening to Allied news from London usually took place between 21:00 and 23:00 when the lights were out. The news was spread each morning; an English translation reached other international groups of PoW's in Sandbostel.



Reconstructed circuit diagram of the Caterina receiver based on reminiscences of the constructor, users and witnesses. Inside the tuning coil, made from a shaving soap container, was the rotating reaction coil, (this assembly was referred to as a 'variometer') which affected the coarse setting of the reaction. Lt Olivero's body was 'connected' between the aerial and earth causing a variable degrading of the tuning circuit and thus the fine adjustment of the critical reaction point.

A colour painting by an unknown artist shows Lieut. Olivero operating the radio literally with hands and feet (right). The phone pressed to his left hand ear under a dishcloth resembling a turban, one hand to write, the other hand on the tuning control. The reaction point, where the radio was in its most sensitive state, was controlled by taking the aerial lead between his teeth and moving his left hand boot connected to the earth lead to the damp floor.



Close up view of the variable condenser used in the Caterina radio. It was constructed from flattened pieces of empty meat tins and celluloid sheets as insulator.



The earphone was made from an empty Nescafe tin, a piece of thin flattened tin as diaphragm, plus wire and a magnet from an electric razor.

Over the years a number of Caterina replicas were built by radio amateurs. Static displays with realistic details, but also full working models, shown in YouTube films (See References).

'Caterina' Replicas



A very close looking static reconstruction of Caterina made by Mr. Renzo Casagrande around 2004.



Two fully functioning Caterina replicas built by 'Angelee 7'.

Caterina replica built by a hitherto unknown constructor.



Museum of Internment.

Opened in 1955 and renovated in 2014, the museum houses documentation, photos and objects describing the life of Italian deportees in concentration camps, including the original 'Caterina', 'Gelina' and 'Caterina' of Stalag Kestochan which are on permanent display. The museum, located in Padova, N. Italy, is an inseparable part of the 'Tempio nazionale dell'internato ignoto'. Since 2007, the museum has been run by the Association of the Former Internees (A.N.E.I.). Highly recommended is a visit to the museum and/or the website <http://www.museodellinternamento.it/>

Do not miss the 'Radio-Caterina' website and the YouTube compilation made by Maurizio Grillini IZ4BBD. See the References for URLs.

A detailed view of the construction of a replica and demonstration of a working Sandbostel 'Caterina' (2 variations), and a replica of the 'Gelina' of Zeithain can be watched in YouTube videos by 'angelee7'.

It should be noted that more secret radios in the camps mentioned in this chapter were operational, commercial broadcast receivers cunningly hidden, but most were eventually discovered by the Gestapo.

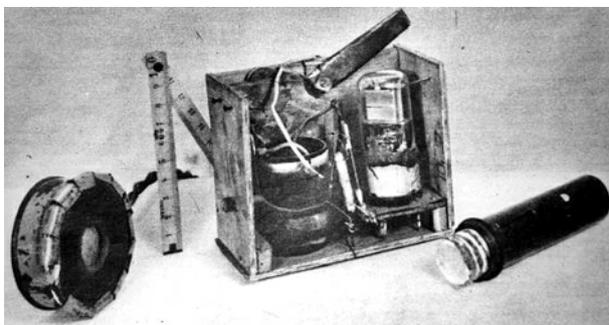


Photo of the Caterina taken in secret at Stalag X-B.

References:

Photographs of the Caterina taken by the Museum of Internment were published with kind permission from the President of A.N.E.I Padova, Brig. Gen. (R) Maurizio Lenzi.

The Internet website 'Radio-Caterina' was one of the primary sources of information when putting this chapter together. Gathered in this site are documents relating to secret radio receivers used by Italian prisoners of war.

- Radio-Caterina website <http://www.radio-caterina.org/> (Italian language)

- The Caterina YouTube video by Maurizio Grillini: <https://www.youtube.com/watch?v=C4v78NxOMkg>

- Interesting videos on working replicas by 'angelee 7'
<https://www.youtube.com/watch?v=lpIziMBgNJA> (Caterina)
<https://www.youtube.com/watch?v=oSNOTSXivNk> (Caterina)
<https://www.youtube.com/watch?v=k47beph0IAw> (Gelina)