



Receiver Telesonic

Country of origin:
England



Top view of 'Receiver Telesonic' with headphones and external pick-up coil cable connected. The two dust covers are in stowed position.

DATA SUMMARY

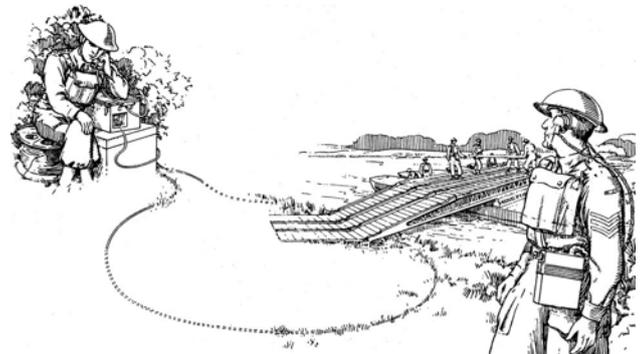
- Organisation:** SOE
- Design/Manufacturer:** M.E.C.
- Year of Introduction:** Probably 1944 or later.
- Purpose:** Overhearing of telephone conversation without physical contact to a line.
- Range:** Up to 200 Yards (In its original function!)
- Circuit Features:** Four stage AF amplifier. Pick-up coil wound on the outside of the case. High impedance headphones C.H.R. Double Mk. VI.
- Valves:** Hivac XH1.5V (3x); Hivac XP 1,5V.
- Power Supply:** LT: Battery, dry, lamp, electric 3V; HT: Battery dry HT 45V No. 4.
- Size (cm):** Height 15, length 18, width 6.
- Weight:** 2.3kg including batteries.

Remarks

Telesonic Equipment was used to maintain one way verbal contact from a central command post to dispersed Royal Engineers working parties such as bridge construction and similar operations. The noise of battle or just the necessity for absolute silence, coupled to a small range, without the use of wireless which could be picked up, led to the development of this system which was based on audio frequency induction. Amplified speech from an amplifier (known as 'Transmitter Telesonic') was radiated by a loop of cable of maximum 120 yards in diameter. The signal was picked up by a receiver ('Receiver Telesonic') which had a four stage amplifier and a special pick-up coil which was wound on the outside of the receiver case. Six receivers were issued with each transmitter.

Reported is the issue of Telesonic receivers to resistance groups in Europe for inductive overhearing (sometimes referred to as 'tapping') of telephone lines. Details of their actual use were not found.

The Telesonic receiver was a self contained unit housed in a small metal box, normally carried slung from the shoulder by a carrying strap, or made fast to the belt by the two webbing straps fitted at the back of the case as shown in the picture below.



Original application of Telesonic equipment, here shown as used during a bridging operation.



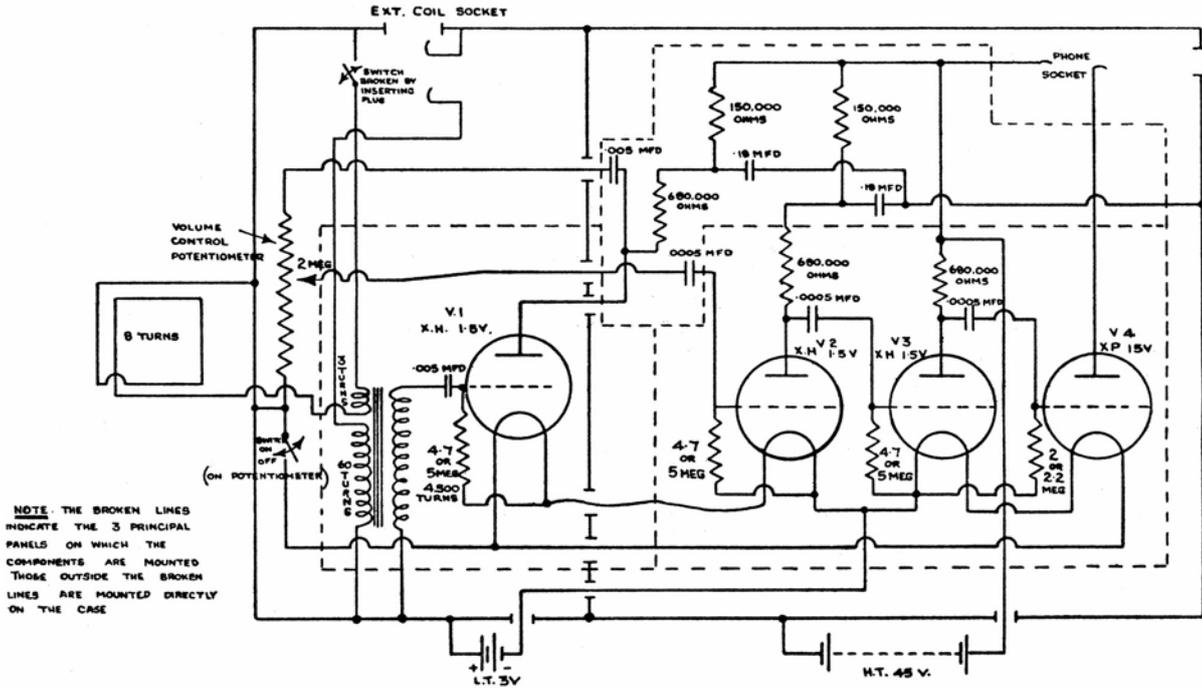
View on opened battery compartment on the top panel of Receiver Telesonic.



Back view of the Telesonic receiver showing the two webbing straps for carrying to the belt.

References:

- Photographs and info courtesy Eric Pierret, France.
- Handbook of the Telesonic Equipment, The War Office, Feb. 1944.
- Working Instructions, Telesonic Equipment, YA 4914, n.d.



Circuit diagram of the Receiver Telesonic. The pick-up coil, 9 turns of wire wound on the outside of the receiver box, was matched to the first amplifier valve via a transformer. This had a third winding for matching the external pick-up coil.

D Drum with cable for loop; **E** External pick-up coil; **F** Suppressor unit Telesonic.

The external pick-up coil known as 'Coil, motor, boat' was permanently fitted in a tug which was used for bridging. It was installed at the rear of the driver's seat, and connected to the Telesonic receiver by a screened cable.

Circuit diagram of Telesonic transmitter comprising a three stage amplifier with push-pull output. Automatic gain control, negative feedback and a calling facility were provided.

The information in this outlined section is provided just to give an impression of the original equipment, and has nothing to do with its use by resistance groups.