



General view of a BV-613 receiver which was principally similar in appearance to the BV-611 and BV-612. A carrying handle on the top panel was not fitted on the BV-613.

**DATA SUMMARY**

**Design/Manufacturer:** Philco GB.  
**Year of Introduction:** 1941.  
**Purpose:** Invasion alarm receiver.  
**Frequency coverage:** 200-500kHz.  
**Circuit features:** Superheterodyne. RF, Mixer/osc, IF, Det/AVC/AF, AF output. IF: 125kHz.  
**Sensitivity:** 5µV.  
**Valves:** ARP34 (2x), ARTH2, AR21, VT52, 6X5G.  
**Aerial:** 8m wire and earth lead.  
**Power Supply:** 6V accumulator. Consumption 4.8A. (Probably 6/12V with the BV 612).  
**Dimensions (cm) and weight:** (Set only). Height 26.7, length 21.6, width 18.4; weight 7.9kg.



Top view of BV-613 chassis with loudspeaker cover detached.

BV-611 and BV-612  
 Country of origin:  
 England

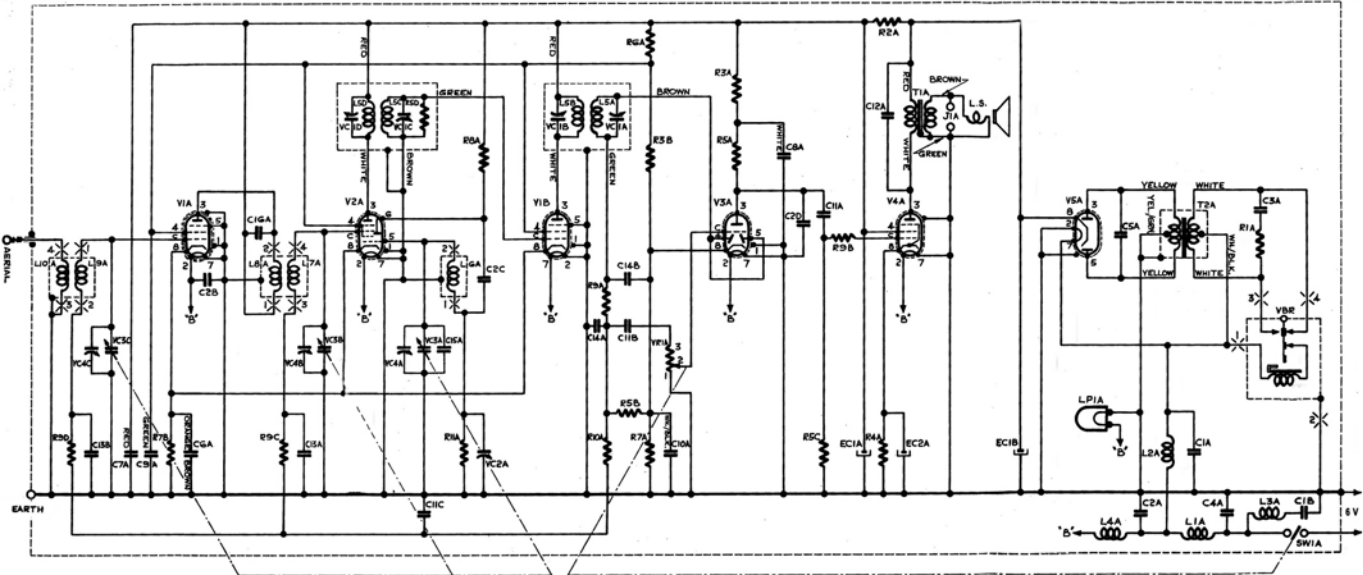
This supplement chapter is a follow up and should be read in conjunction with the Army broadcast reception sets section in WftW Volume 3.

**REMARKS**

The BV-611 and BV-612 were portable receivers, produced early in Word War 2, for listening in the field to (imminent) German invasion alarms, broadcast by long wave radio stations. The self contained receiver was housed in a metal enclosure, included a vibrator power pack and loudspeaker, powered by a 6 Volt accumulator. This assembly was stowed into a web carrier with side pockets for spare valves, aerial wire and headphones. The design was based on that of a pre-war Philco GB commercial car radio receiver. Although not confirmed, it is believed that the BV-612 was similar to the BV-611, with the exception that it could be powered from a 6 or 12V accumulator, selectable by an internal switch. The receiver was made in 1941, hence no EMER's exist, though Ordnance servicing instructions were included in the Working Instructions. The much later produced and identical looking Receiver Broadcast BV-613 (see photo left) was a welfare broadcast receiver operating on medium wave.



Working Instructions card of Reception Set Philco BV-611 and BV-612.



Circuit diagram of Reception Set Philco BV-611 (ZA 11579).

References:

- Reception Set Philco BV-611 and BV-612 Working Instructions, ZA 16099, WO 988, n.d. (Card)
- Reception Set Philco BV-611 (6 volt operation), Working Instructions, WO 987, n.d.
- EMERs Telecommunications, Receiver Broadcast, BV-613, Data Summary, E740, May 1945.
- *Wireless for the Warrior, Volume 3 Reception Sets*, Louis Meulstee, Wimborne, 2004, isbn 0952063 35 2.

General view, top of chassis and circuit diagram of the Philco GB Model AR-6 commercial car radio (probably equivalent of Philco USA model 817).

This is believed to be the model after which the BV-611, 612 and 613 were developed. Apart from the absence of the car radio remote control unit, British Service type valves were used.

**SCHEMATIC MODEL AR-6**  
**LF. = 455 KC**

A schematic diagram for the Philco Model AR-6 car radio. It shows a power supply section with a 17V4 rectifier tube and a 1000µF capacitor. The main circuit includes a detector and oscillator (V1A), a detector and oscillator (V2A), a detector and oscillator (V3A), and a detector and oscillator (V4A). The diagram also shows various resistors (R1A through R10A), capacitors (C1A through C14A), and a speaker (L.S.). The circuit is connected to an antenna (ANT.) and ground (EARTH).

NOTE: THIS SIDE OF 'A' BATTERY GROUNDED TO CASE (FRAME OF CAR)