



## RBZ Power Pack

Country of origin: USA

### DATA SUMMARY

**Organisation:** Probably, but not confirmed, SOE.  
**Design/Manufacturer:** Amy Aceves & King Inc, USA.  
**Year of Introduction:** 1945.  
**Purpose:** Mains power unit for RBZ receiver.  
**Power Supply:** 110/220V AC or DC. Output: 67.5V HT and 1.5V LT.  
**Valve:** 117L7-GT.  
**Size (cm):** Height 23, Length 5, Width 8.  
**Weight:** 0.9kg.

This supplement chapter is a follow up and should be read in conjunction with the 'Receiver RBZ' section in the 'USA' chapter of WftW Volume 4.

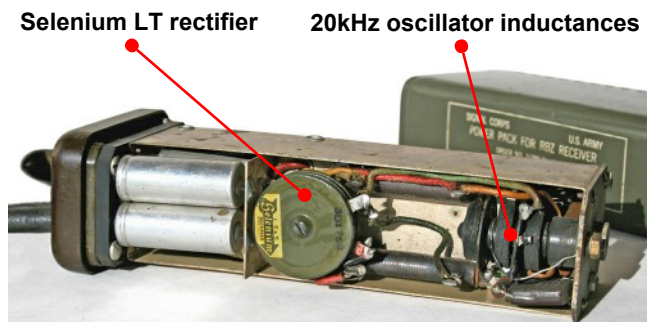
### REMARKS

RBZ receivers were known to be dropped to resistance forces in occupied countries. Once the special batteries were used, replacements were hard to obtain. An AC/DC mains power pack was developed for use with this receiver as a substitute, officially designated 'Power Pack for RBZ Receiver'. It had similar dimensions as the original battery box; the RBZ could be plugged in directly without any modifications. An interesting feature was the use of a 20kHz oscillator providing an efficient method to obtain 1.5V filament voltage from the high voltage mans.

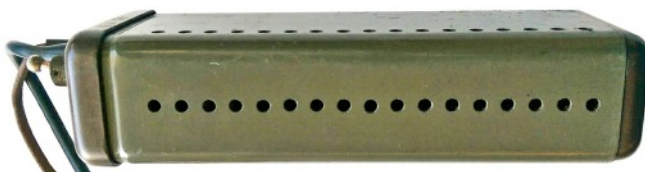
The mains power pack for the RBZ shown in this chapter was located in Norway along with a standard RBZ receiver. Another RBZ power pack was offered some time ago on an Internet auction site, though with an incorrect plastic cover and modified headphones connector plug.



Top view of the RBZ Power Pack showing the mains voltage switch, socket for connecting the RBZ, headphones cable/plug and mains cord.



Chassis view of the opened power pack as seen from either side.

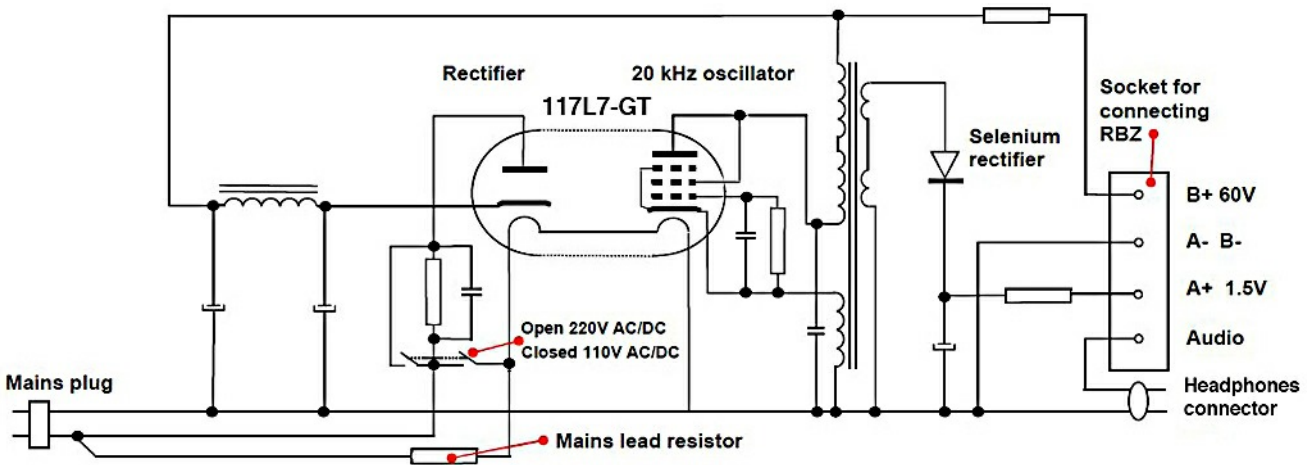


The green plastic case was identical to the receiver or battery pack but had 51 cooling holes (3 rows of 17 holes).

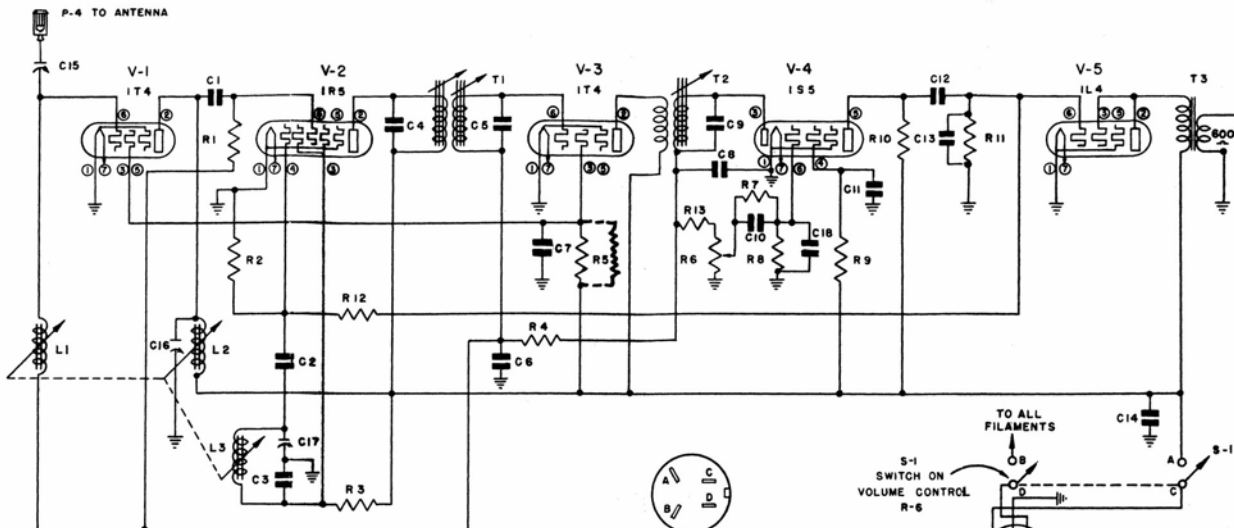


### References:

- Photographs and information by Gavin Pirie, Norway.



Reconstructed circuit diagram of the Power Pack for RBZ receiver. The unit comprised two separate circuits: a rectifier with 110/220V AC/DC switching providing HT for the RBZ receiver, and a 20kHz oscillator, which stepped down and rectified gave 1.5V DC for the valve filaments with a reasonable efficiency.



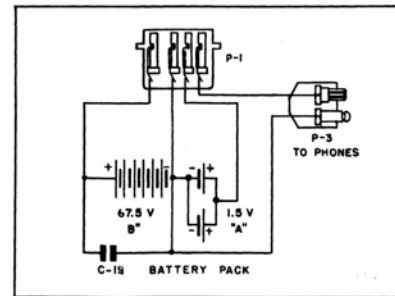
**R5 IS SHUNTED WITH A .1 MEG RESISTOR**

REAR VIEW OF S-1 SHOWING CONNECTIONS.  
MEASURING FROM "A" TO GROUND - 66 VOLTS  
" " " " " " " " - 1.35 " " " " " " " " - 66 " " " " " " " " - 1.35 "

| ITEM | DESCRIPTION                    |
|------|--------------------------------|
| C-1  | .00015 MFD ± 30% MICA          |
| C-2  | 60 MMF MICA ± 20%              |
| C-3  | 95 MMF ± 5% SILVER MICA        |
| C-4  | IN IST. I.F. TRANS. 69MMF ± 1% |
| C-5  | IN IST. I.F. TRANS. 69MMF ± 1% |
| C-6  | .01MFD. ± 40% - 10% PAPER      |
| C-7  | .01MFD. ± 40% - 10% PAPER      |
| C-8  | .0001MFD MICA ± 20% MICA       |
| C-9  | IN 2ND. I.F. TRANS. 43MMF ± 1% |
| C-10 | .002 MFD. ± 20% PAPER          |
| C-11 | .01 MFD. ± 40% - 10% PAPER     |
| C-12 | .002 MFD. ± 20% PAPER          |
| C-13 | .00005MFD. ± 20% MICA          |
| C-14 | 25 MFD ± 50% - 0 PAPER         |
| C-15 | TRIMMER MAX. 50MMF. ANT.       |
| C-16 | TRIMMER MAX. 25 MMF. R.F.      |
| C-17 | TRIMMER MAX. 25 MMF. OSC.      |
| C-18 | 60MMFD. ± 20% MICA             |
| C-19 | .45MFD. ± 10% PAPER            |

| ITEM | DESCRIPTION                       |
|------|-----------------------------------|
| P-1  | POWER UNIT RECEPTACLE             |
| P-2  | POWER UNIT PLUG                   |
| P-3  | HEADPHONES CONNECTOR PLUG         |
| P-4  | ANTENNA PLUG RECEPTACLE           |
| R-1  | 2 MEG.Ω 1/4 W. ± 20% CARBON       |
| R-2  | 1 MEG.Ω 1/4 W. ± 10% "            |
| R-3  | 10,000Ω 1/4 W. ± 20% "            |
| R-4  | 3.3 MEG.Ω 1/4 W. ± 20% "          |
| R-5  | 1 MEG.Ω 1/4 W. ± 10% "            |
| R-6  | 1 MEG.Ω VOLUME CONTROL            |
| R-7  | 4.7 MEG.Ω 1/4 W. ± 20% CARBON     |
| R-8  | * EITHER 10 MEG.Ω 1/4 W. ± 20% "  |
| R-8  | (R47 MEG.Ω 1/4 W. ± 20% "         |
| R-9  | * EITHER 3.3 MEG.Ω 1/4 W. ± 20% " |
| R-9  | OR 2 MEG.Ω 1/4 W. ± 20% "         |
| R-10 | .25 MEG.Ω 1/4 W. ± 20% "          |
| R-11 | 1 MEG.Ω 1/4 W. ± 20% "            |
| R-12 | 3.3 MEG.Ω 1/4 W. ± 20% "          |

| ITEM | DESCRIPTION                     |
|------|---------------------------------|
| R-13 | 47,000Ω 1/4 W. ± 20% CARBON     |
| S-1  | D.P.S.T. SWITCH, PART OF R-6    |
| T-1  | 1ST. I.F. TRANSFORMER           |
| T-2  | 2ND. I.F. TRANSFORMER           |
| T-3  | AUDIO OUTPUT TRANSFORMER        |
| L-1  | ANTENNA COIL                    |
| L-2  | R.F. PLATE COIL                 |
| L-3  | OSCILLATOR COIL                 |
| V-1  | R.F. AMPLIFIER                  |
| V-2  | CONVERTOR (OSCILLATOR MIXER)    |
| V-3  | I.F. AMPLIFIER                  |
| V-4  | DIODE DETECTOR, AVC, 1ST. AUDIO |
| V-5  | 2ND. AUDIO, POWER AMPLIFIER     |



Circuit diagram of the RBZ receiver. Note that the headphones are connected via the battery box.