

## The RST 101 – a Belgian Special Forces set

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This article describes an interesting little set that I acquired a year or so back, but don't know very much about.

The RST 101 is a transmitter/receiver built into a small aluminium case, about 7" x 3 3/4" x 5". According to the label, it was manufactured by MBLE of Brussels, a well known name in military radio. In looks and size it is a bit like the SR 128B, packed into a single container, and is probably of about the same vintage. A significant difference, however, is the use of mains valves throughout, which raises some interesting points about the power supply.

The receiver is continuously tuneable in three ranges, nominally 3 - 4.5, 4.5 - 7.5 and 7.5 - 12 Mc/s, although the edges can be stretched a bit. The transmitter tuning has two ranges, 3 - 6 and 6 - 12 Mc/s. The available modes are CW or AM on RECEIVE, and CW only on SEND.

The receiver, almost unbelievably, is a two valve TRF - with all the selectivity that one might expect. 6AG5 valves serve as detector and AF amplifier. The output is choke capacity coupled to a 1/4" jack plug, presumably for high impedance headphones.

Reaction is provided in the detector stage, enabling the gain to be varied. When advanced to the point of oscillation, this also provides a note for CW reception - as well as a low powered beacon for the benefit of any opposition that happen to be suitably equipped!

The transmitter comprises another 6AG5 as crystal controlled oscillator. In common with many sets of this type, there is no provision for netting to the receiver.

There are six switched channels, although the crystals themselves have disappeared. The crystals have HC6 pins, but the cases seem to have been a bit longer and must have been about FT-243 size. A table on the lid provides room for the operator to write in 12 frequencies. I imagine that the extra six were either spare crystals, carried elsewhere, or harmonics of the basic frequencies. On my set, in fact, there are no traces of writing on the upper range. The frequencies of channels 1 - 6 are still visible and range from 3075 to 8300 kc/s.

The PA is a pair of 6AQ5s, strapped in parallel. I have not been able to establish the power output, as the contacts of the send/receive switch on my set have burnt out (another little job for the long winter evenings) but it is presumably about 8 - 10 Watts. This is relatively high for a set of this size.

Resonance of the PA and aerial circuits is indicated by small torch bulbs. There is a built in Morse key, as

well as provision for an external one.

The set is well engineered, despite the simplicity of its design, and very compact. The case has a watertight cover, held in place by two spring clips, but the interior is not hermetically sealed. Mounted on the inside of the cover is a circuit diagram. Interestingly, the circuit references - and components, where marked - appear to be based on English (US) terminology, rather than French. This does slightly raise the question of the market that the set was intended for.

Two different power supplies seem to have been envisaged. One input plug, with three pins, powers only the receiver, and is marked with a sign for battery operation. The LT was presumably 6V. The HT must have been about 150V, as there is an OA2 voltage regulator in circuit when the alternate power supply is in use.

That supply seems to have been some form of generator, presumably driven by hand. Power is fed to a second, four pin, plug. It can supply both the receiver and the transmitter. I assume that the HT must have been about 250V in this case, as this is the rated figure for the valves in use.

The question remains - what was this set used for? It has all the look of a special forces set, such as the SR 128, although in terms of functionality and design it is closer to the Paraset, used in the early stages of WW2. Its power requirements are a bit curious. Lugging a generator on long range patrols might not have been much fun, even though the set itself weighs no more than 4 1/2 lbs. Perhaps it was more intended for operation from a relatively static but isolated outpost. Any further information on this point, or on the set generally, would be most gratefully received.

