

Replica of the 'Burza' (Thunderstorm) transmitter (right), modulator unit (left), and original microphone (centre), built in 2005, currently on display in the Warsaw Uprising Museum.

Burza
'Thunderstorm'
(Armia Krajowa #10)
Country of origin:
Poland

DATA SUMMARY

Design/Maker: Włodzimierz Markowski

Year of Introduction: August 1944.

Purpose: Secret broadcast transmitter used during the Warsaw Uprising in 1944.

Frequency: 52.1M (5.758MHz).

Circuit features: Crystal oscillator, RF Power amplifier, external anode/screen-grid amplitude modulator.

Power: About 30W (Initially 18W).

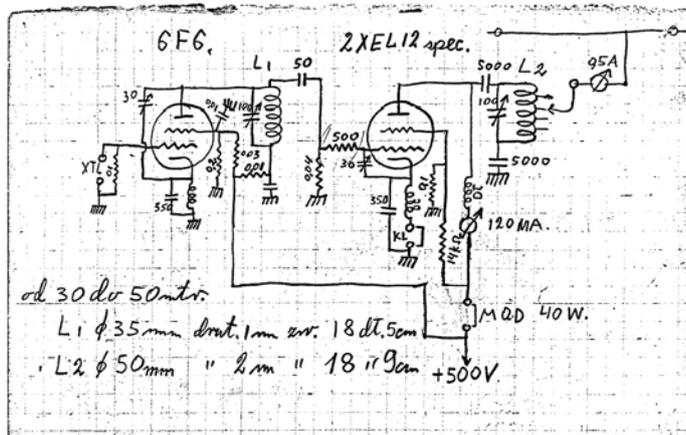
Valves: 6V6, EL12 Sp. (2x); Modulator 6J7, 6SN7, 6L6 (2x).

Aerial: Windom.

Power Supply: AC mains.

References:

- Document: Replika Powstańczej Radiostacji 'Burza', *Replica Uprising radio station 'Thunderstorm'*, Włodzimierz Markowski, Warsaw, 2005.
- History of radio station 'Thunderstorm', Adam Nogaj, SP5EPP.
- Documents and additional information courtesy Bogdan Szkuclarek, SP3LD, Poland.
- *Zolnierze Łacznoszej Warszawy* (Communications soldiers of fighting Warsaw), Kazimierz Malinowski, Warszawa, 1983, isbn 83-211-0378-2.



Original 1944 sketch of the transmitter circuit diagram drawn by Włodzimierz Markowski.

REMARKS

In 1943, during the planning of the Warsaw Uprising of August 1944, it was decided to construct a shortwave broadcast transmitter for providing news and developments to the Polish, but also messages and pleas for assistance to the Allies. This transmitter, named 'Błyskawica' (Lightning, see Chapter 299), was transported to Warsaw at the end of July 1944. On the day before the outbreak of the Warsaw Uprising, the transmitter was lost during transport. It was eventually recovered on the 2nd of August, unfortunately badly damaged by rain. As no alternative transmitter was available, Włodzimierz Markowski, who estimated that it would take a week or more to restore the ruined 'Błyskawica', undertook building a makeshift transmitter. Work on this transmitter, named 'Burza' (Thunderstorm), started that afternoon in the premises of the Warsaw Main Post Office building. It was completed on the late evening of the next day, the 3rd of August. Operating on 52.1M, it used a 30m long Windom aerial slung on two existing masts on the roof of the Post Office building. The first Burza broadcasts started shortly after the final tests and alignment of the transmitter with Armia Krajowa bulletins, messages relating to the current situation of the city, and requests for foreign aid to fighting Warsaw. This continued until the 8th of August when the more powerful 'Błyskawica' transmitter eventually was repaired. The British Home Office confirmed later that 'Burza' was received in London, and after the war Vladimir Markowski heard that his messages were received in New York.

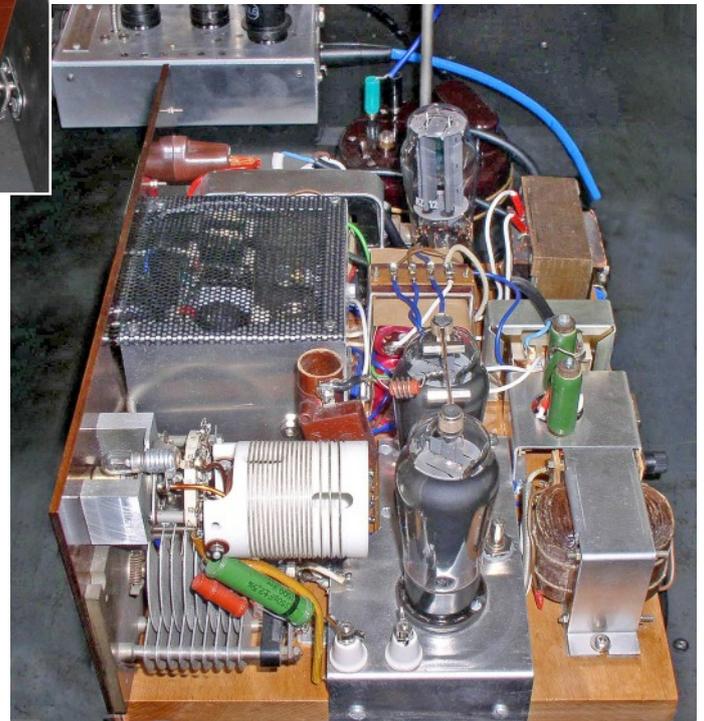
After the start of more professional broadcasts by the 'Błyskawica' (operating on 32.8M) editorial team, the 'Burza' transmitter was used to retransmit its programs on 52.1M, but still maintained broadcasting at other times. At the 28th of August the Main Post Office buildings were again target of heavy German artillery fire which eventually destroyed most of the building including 'Burza'.



Warsaw Main Post Office ruins after the Uprising.



Front panel view of the Burza replica (above). Similar to the destroyed 1944 original, it was built on a wooden baseboard with a Pertinax front panel, using as much as possible period components. The maker of the Burza replica was Zygmunt Seliga, SP5AYY, who also took the photographs.



Top view of the Burza replica transmitter showing in detail the RF output stage with the two parallel connected EL12-Special valves, tank coil, tuning capacitor and aerial tap switch (above).



Top view of the Burza transmitter at an exhibition (above).



Listening to radio broadcasts during the Warsaw Uprising fighting (above).



(2005) Włodzimierzem Markowski, SP3WM, who build the original Thunderstorm transmitter in August 1944, behind a replica made in 2005 (left).