

RS-804  
(Phobos)  
Country of origin:  
USA

## DATA SUMMARY

**Organisation:** CIA

**Year of Introduction:** Early 1980s.

**Purpose:** Agents one-way data link via the Marisat Satellite System.

**Transmitter:** One channel assigned in the uplink 275-310MHz. Downlink was 53.6MHz lower.  
Receive acknowledgement: A single prearranged channel in the downlink band.

The on-air time was approximately 4 seconds, with a maximum of 30 seconds. Maximum length of a message up to 1579 text characters.

**Receiver:** Confirmation upon successful transmission.

**Aerial:** Circular polarised patch aerial. (310/310/5mm)

**RF output:** 10W.

**Power Supply:** 12V NiCad battery or 220V AC mains.

**Size (mm):** Height 198, length 186, width 19. (Set only).

**Weight (kg):** 2.3. (Set only).

## Remarks

The RS-804 (known as 'Phobos' in the Warsaw Pact countries) was a miniaturised satellite based data terminal developed for American agents. A prepared message of up to 1579 characters could be sent by the agent directly to his base. Successful data reception was acknowledged, though no return message could be received.

Richard Osborne, First Secretary of the US Embassy in Moscow was under surveillance by the KGB when the Soviets intercepted burst data transmissions to the Marisat satellites in Moscow from late 1982 onwards.

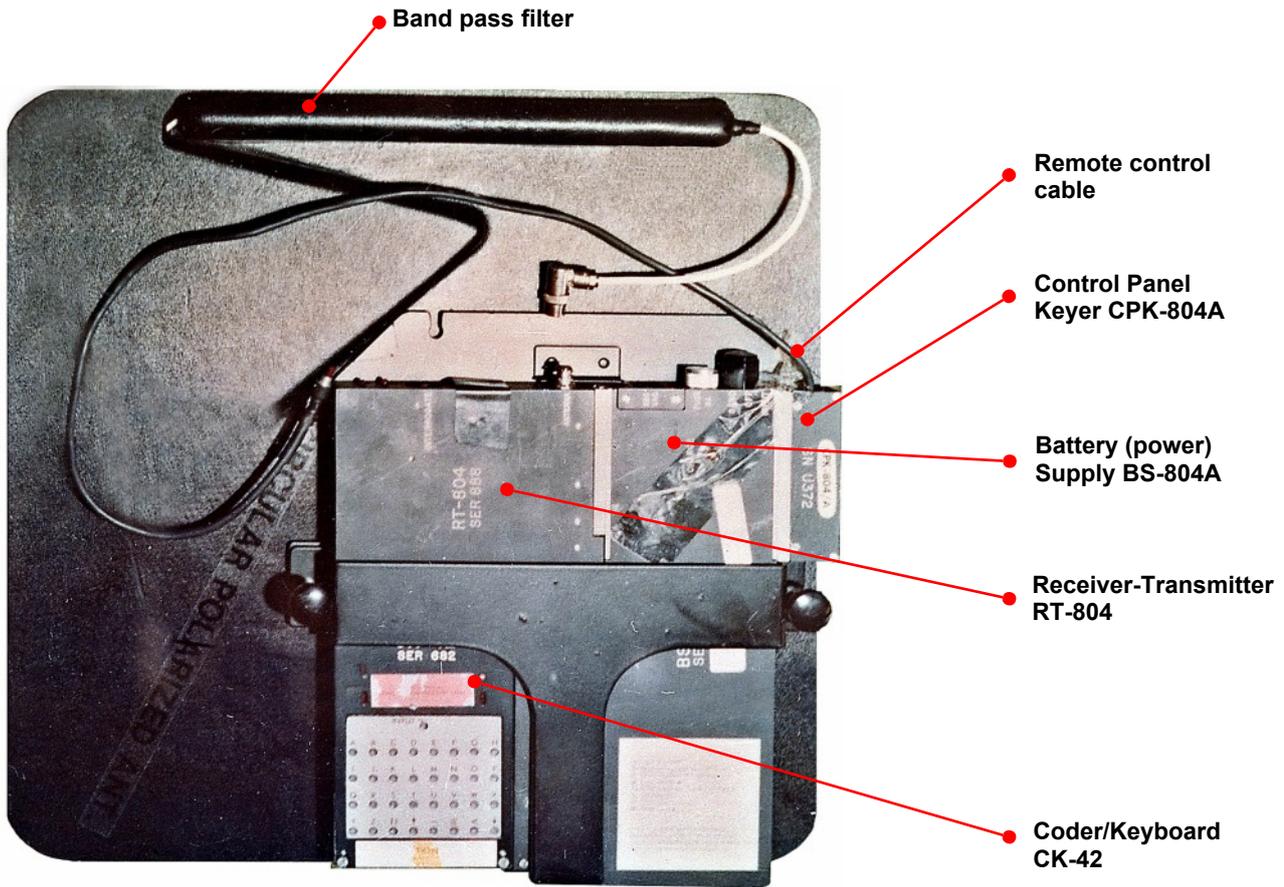
Soviet signal intelligence (Sigint) mapped these transmissions to the parks and forests around the Soviet capital. Osborne was arrested while on a walk with his wife and children upon confirmation from Sigint that transmissions took place. His RS-804 set was seized. (Actually the one shown in the photos of this chapter).

## References:

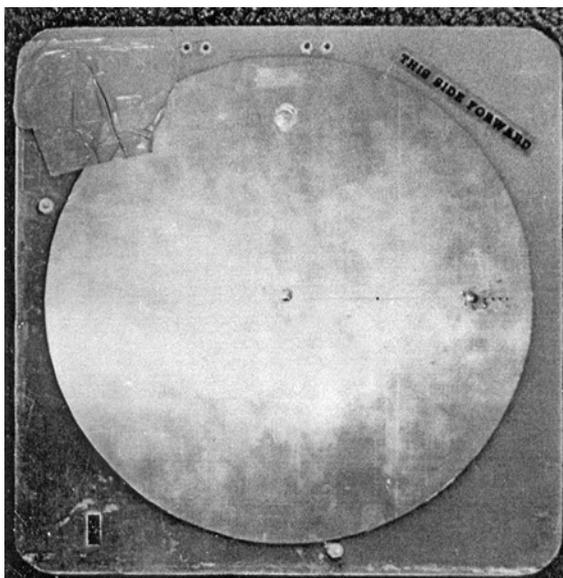
- Technical and operational data, b/w photo's courtesy Dr Jan Bury, Poland.
- IPN file # IPN BU 101304/953. *Agent radio communication equipment 'Phobos'...* (via Dr Jan Bury).
- Colour photographs Detlev Vreisleben, DC7KG, Germany.
- Thanks to Pete McCollum for his valuable suggestions on the nomenclature of the RS-804 components.
- BStU document MfS HA II Nr. 55310.

The RS-804 was comprised of the following components:

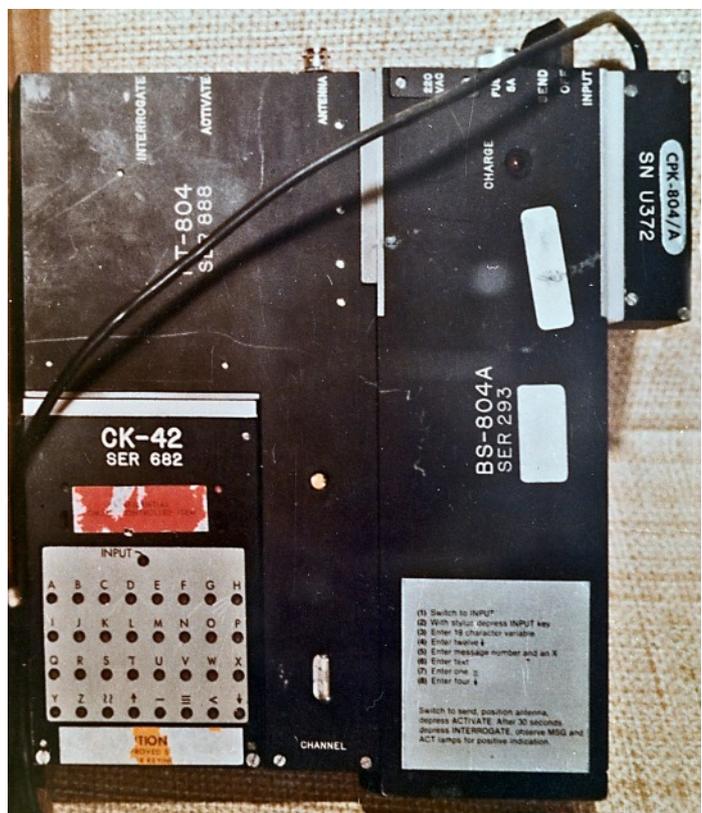
- RT-804 Receiver-Transmitter
- CK-42 CCI Coder/Keyer
- BS-804A Battery (power) Supply
- CPK-804/A Control Panel Keyer for a remote control -start button- when the set was operated from the attache case.
- A flat circular polarised aerial assembly and band pass filter.
- A non-metallic stylus for operating the CK-42
- One-time encryption passwords printed on a plastic sheet to be entered through the CK-42 coder.
- Cables and attache case for storage and transport.



General view of a complete RS-804 mounted on the aerial assembly.



Circular polarised patch aerial with cover detached seen towards the operating side.



Detail view of a RS-804 assembly.