

SBON comprised a KD-1/SB transmitter unit (left), which connected to a standard RF-10, and (one of four) PR-1/SB receiver/explosive units with vertical rod and wire aerial on a spool (right). The red spot on top of the receiver indicated the place of the internal explosive charge where a secondary external charge or detonation cord should be placed.

SBON Country of origin: Czechoslovakia

DATA SUMMARY

Organisation: Czech Army.

Design/Manufacturer: Tesla.

Year of Introduction: Mid-1980s.

Purpose: Special forces SHPz.

Receiver: PR-1/SB.

Circuit features: Crystal controlled superheterodyne.

Frequency coverage: 3 versions. Each with a different frequency in the 44-54MHz band. FM. Sensitivity <1uV.

Transmitter: KD-1/SB.

Basically a tone code generator unit connected to a standard RF-10 VHF FM set (See Chapter 273).

Aerial: Vertical rod aerial 1.5M comprising 5 sections or 8m wire aerial.

Power Supply: The KD-1/SB transmitter unit was powered from the associated RF-10; the PR-1/SB receiver by a rechargeable 7.2V 900mA NiCd battery.

Receiver battery operation time: 12 hours; in standby mode over 100 hours.

Dimensions (cm) and weight (g):

	height	length	width	weight
Transmitter KD-1/SB:	17.2	6.3	4.5	310
Receiver PR-1/SB:	17.4	13.6	5.1	1060

References:

Information for this chapter and most of the photographs courtesy Jozef Burda, OM0ASB, Slovakia, with many thanks. See his website at: www.sptech.sk

Internet sources:

<http://www.csla.cz/vyzbroj/spojovacicprostredky/sbonmr.htm>

<http://www.zelenavlna.com/node/18#>

REMARKS

SBON (Souprava Bezdrátového Odpalování Náloží = wireless charge firing kit) was a device designed for SHPz * special (parachute) forces. It was used for remote firing of explosive charges by means of a coded radio signal. It replaced in the mid 1980s the functionally similar BON system, which worked in conjunction with a Russian R-352 special forces radio set (See Chapter 196).

The SBON kit was composed of a KD-1/SB transmitter unit (used in combination with a standard unmodified RF-10), and PR-1/SB receiver/explosive units.

There were 4 receivers in a SBON kit:

- Marked A1 and A2: both receiving on channel 'A'.
- Marked B: receiving on channel 'B'.
- Marked C: receiving on channel 'C'.

The SBON kit allowed the simultaneous detonation of two loads (A1 and A2) and subsequently the independent detonation of two other (B and C) separately. The firing tone code was the same for all receivers in one kit, it was not possible to fire using a transmitter from another kit. Inside a receiver was space for a plastic explosive (PI Hx-30, PI Pn-10 or TNT), and an electric detonator. The detonator was connected to a couple of terminals next to the battery connector.

There was a time delay of 3 seconds between sending the firing tone code and detonating the charge in the receiver caused by transmitting and decoding. The receiver was secured against handling by unauthorized persons by means of a coded time fuse pin and the internal explosive charge. This made it practically impossible to deactivate it by the enemy.

The SBON-MR equipment was basically similar to the SBON. The receiver units had external terminals on the front panel for connecting an external electric detonator. This variation was primarily used for training purposes, for example to ignite smokestacks and flash explosives. Over 70 SBON kits are known to have been produced.

* SHPz = Skupina Hlbkoveho Priezku, translated: deep penetrating survey groups, specially trained small military groups for diversionary activities behind the enemy line.

KD-1/SB transmitter



Top view of KD-1/SB with detonate switch and socket to connect a RF-10.

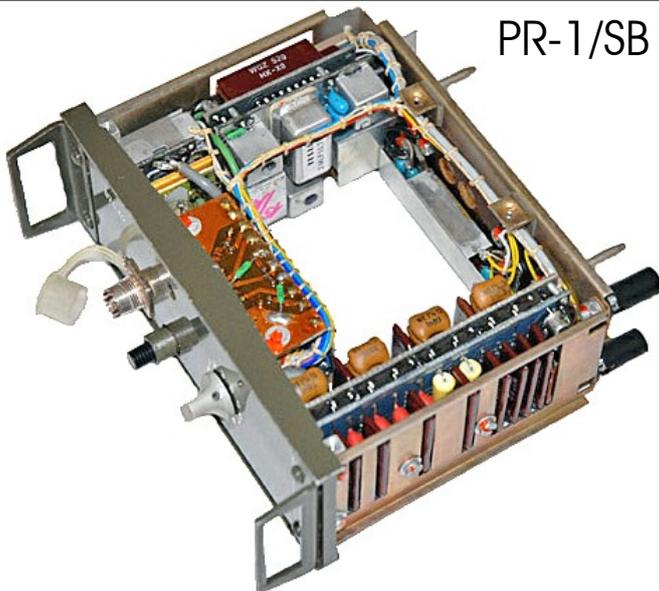


Test unit for the KD-1/SB.



KD-1/SB connected via a multi-core cable to the handset socket of a standard RF-10. It was suspended at the side of the set (right). The KD1/SB transmitter was actually a tone code generator for detonating the charge. The firing was initiated by rotating the switch on the top of the transmitter to the 'Detonate' position. One of the three designated channels must be set on the RF-10 to match the specific receiver(s) of the SBON kit. In a kit were 4 receivers.

PR-1/SB receiver



Internal view of a PR-1/SB receiver with top and bottom covers detached. An explosive charge with electric detonator fitted in the open space in centre. This detonator was connected to two black terminals located at the back of the chassis (on the picture bottom right).



Detail view of aerial socket and time fuse pin. Pulling out the pin activated the booby trap and the time lock of the radio (if both were activated). When these modes were active and the receiver unlocked, a mercury tilt switch was activated. An explosion occurred when the device was tampered with.



Front panel view of PR-1/SB receiver showing code switch, (covered) aerial socket and time fuse pin.



Top view of opened PR-1/SB showing the actual receiver (without explosive charge), rechargeable battery, cover and back cover screw.



A complete S-BON kit was stored in a container which was carried in a water resistant bag. It was comprised of:
Transmitter KD-1/SB.
Transmitter connecting cable.
Receiver PR-1/SB (4x).
Rechargeable battery (8x).
Rod antenna 1.5 m in 5 sections (4x).
Wire antenna 8m (4x).
Test unit.
User handbook.

SBON-MR

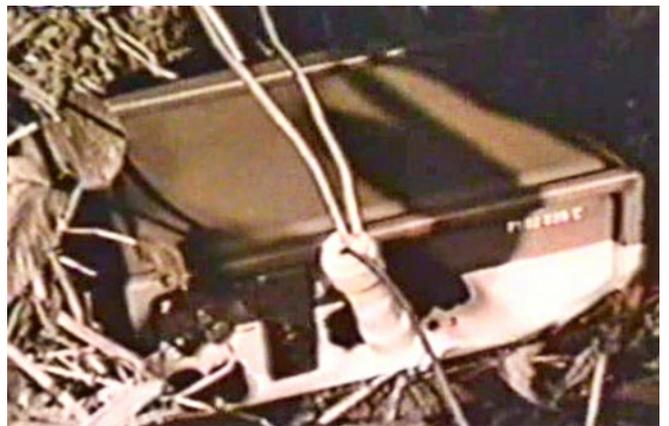
The SBON-MR kit was principally similar to the SBON. On the front panel of the receiver unit were two terminals to connect an external electric detonator. This variation was primarily used for training purposes.



BON



Russian R-352 special forces VHF FM radio used for activating and exploding the BON.



The BON receiver had most probably two electrical contacts leading to an external explosive charge. This photo came from an instruction film and might be the only illustration in existence as all BON units were destroyed when the SBON was introduced.