



## VR 17

Country of origin: Finland

This Supplement is a follow up of the 'VR 17' section in the 'Finland' chapter of WftW Volume 4.

### DATA SUMMARY

**Organisation:** Military intelligence.  
**Design/construction:** Teliva, Valtion Sähköpaja, Leppävaara (Finnish state electrical workshops).  
**Year of Introduction:** 1962.  
**Purpose:** Long-range intelligence and guerrilla patrols.  
**Receiver:**  
**Circuit features:** Single conversion superhet, variable tuning with a 200kHz crystal calibrator and BFO. AM R/T, MCW and CW.  
**Frequency coverage:** 3-5MHz. IF 455kHz.  
**Transmitter:**  
 Crystal osc., RF power amplifier. CW only.  
**Frequency coverage:** Three switchable crystal controlled channels in the range of 3-5MHz.  
**RF output:** 1W.  
**Semiconductors:** Receiver: OC169 (8x); Transmitter: 2N1309, 2N1046.  
**Aerial:** Dipole.  
**Power supply:** 18V DC (4 x 4½ V flat flashlight batteries connected in series).  
**Size (mm):** Height 55, length 250, width 163.  
**Weight:** 2.8kg.  
**Aerial:** Dipole to be adjusted to frequency in use.  
**Accessories:** Morse key, headphones, two aerials on reels, test bulb assembly, aerial cord with throw weight.

### Remarks

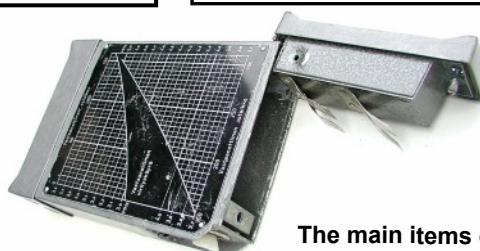
The Finnish VR 17, (LV 661) affectionately known as 'Sipi', was a self contained, fully transistorised and lightweight shortwave transmitter-receiver intended for wireless communication by long range patrols to their Base. It was powered by four standard 4½V flat flashlight batteries, connected in series, carried inside the set and accessible from the rear. The receiver was tuned by a fine tuning vernier, with a readout in numbers corresponding with a calibrated curve located at the top panel. The transmitter did not require tuning, apart from the fact that the aerial needed relatively accurate adjustment in length according to the operating frequency by folding back the ends. Issued were two lengths of aerial wire: 42m for 3.2MHz and 32m for 4.05MHz. These were wound on reels with a printed length/frequency table.

### References:

- Photos VR 17 courtesy Antero Tanninen, OH1KW, Finland.
- Photographs of the very rare VR 17 hand operated cipher unit were kindly taken by Reinhard Glogowski, Germany.
- Sipi-radion käyttöohje, (VR-17 user handbook), n.d.
- Wireless for the Warrior, Volume 4 'Clandestine Radio', Louis Meulstee, Wimborne, 2004, ISBN 0952063 36 0.

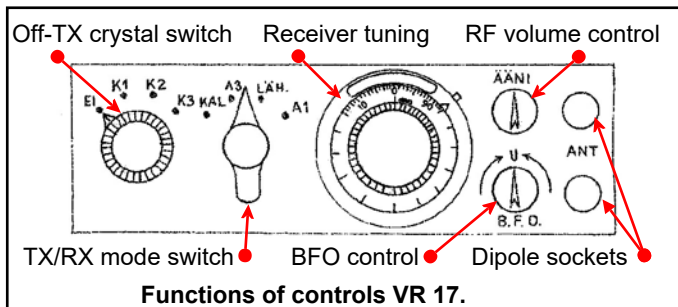


VR 17 transmitter receiver unit removed from its enclosure (left).

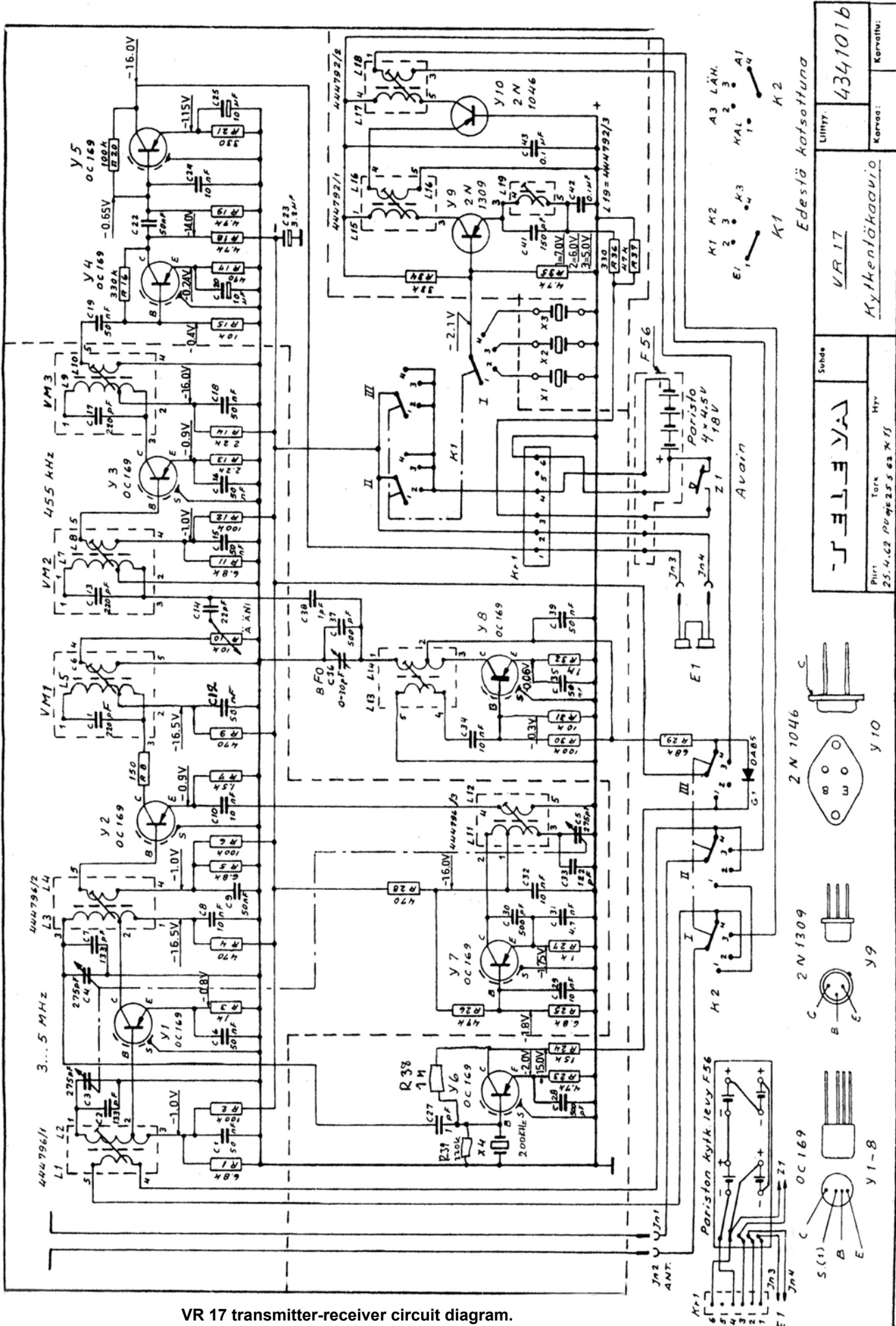


VR 17 rear view with battery compartment opened. Note the receiver calibration curves plate at the top panel (left).

The main items of a VR 17 'Sipi' station (below).



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VR 17 transmitter-receiver circuit diagram.

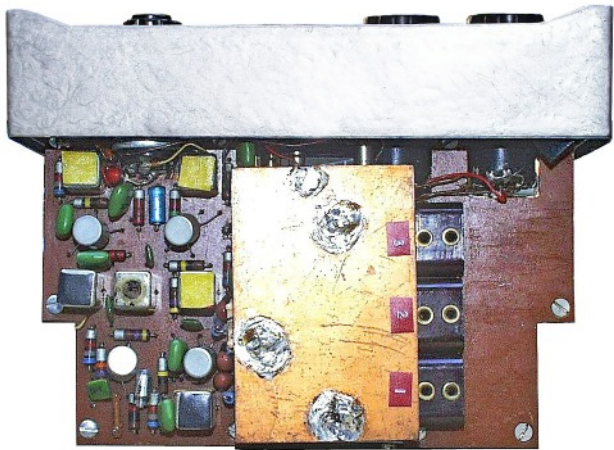
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Sunda		Luhty	Korvaus
- J E L L E Y A J		VR 17	434101b
Pluitt	Tork	Korvaus	
25.4.62	Puoppe 25.5.62 K.J.J.		

Edeslä katsottuna

Avain

Y1-8, Y9, Y10, K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11, K12, K13, K14, K15, K16, K17, K18, K19, K20, K21, K22, K23, K24, K25, K26, K27, K28, K29, K30, K31, K32, K33, K34, K35, K36, K37, K38, K39, K40, K41, K42, K43, K44, K45, K46, K47, K48, K49, K50, K51, K52, K53, K54, K55, K56, K57, K58, K59, K60, K61, K62, K63, K64, K65, K66, K67, K68, K69, K70, K71, K72, K73, K74, K75, K76, K77, K78, K79, K80, K81, K82, K83, K84, K85, K86, K87, K88, K89, K90, K91, K92, K93, K94, K95, K96, K97, K98, K99, K100



Internal view of VR 17 showing receiver board (left) and three crystal sockets for the transmitter (right).



Internal view of the VR 17 opposite side with the transmitter board (left) and receiver board with BFO section, AF output, and 200kHz calibrator crystal (right).

### Hand operated cipher unit.



Issued with VR 17 stations was a remarkable manually operated cipher unit. It was comprised of a retractable tape measure printed with the alphabet, numbers and symbols, and a rotating drum. Not a high security and unbreakable cipher system, but for simple field use under any weather condition, without mechanical or electrical complexity, suitably only for immediate and short term use.



Internal view of the VR 17 cipher unit showing the printed tape measure and drum.

Knob located at the left hand side of the cipher unit for rotating the drum. (Right)

