

O-1-PT

Country of origin: England

DATA SUMMARY

Organisation: Polish Army in exile (England).
Design/Manufacturer: Polish Technical Platoon.
Year of Introduction: 1944-45.
Purpose: Monitoring Polish transmitters in England.
Receiver: Type O-1-PT.
Circuit features: Superheterodyne: RF, Mixer-oscillator, IF, detector/AF, AF output, BFO.
Frequency coverage: 3.5-16.5MHz in two ranges: 3.5-7.5MHz and 7.5-16.5MHz. IF: 460kHz.
Valves: 6SK7 (2x), 6SA7, 6SQ7, 6F6, 6J5.
Power Supply: 200/230/240V AC mains. Rectifier: 80.

REMARKS

The O-1-PT (Odbiornik-1-Pluton Techniczny) receiver was an AC mains powered receiver designed and built by the Polish Technical Platoon in England. They were used from 1944 onward to monitor the operation of Polish transmitters located in England. Apart from the user instructions booklet, which was found in the Royal Signals Museum archives, all the information on the O-1-PT and the Polish Technical Platoon came from 'Dziękuję wam rodacy', ('Thank you compatriots'), a book written by 5 authors, published in London, 1973. Unfortunately no O-1-PT receiver seems to have survived, neither an illustration.

'Thank you compatriots' were the first words of general Bor-Komorowski the commander of Armija Krajowa (Home Army) in a telegram for the personnel of Polish radio stations in the West after the Warsaw Uprising. An interesting part of this book is the chapter 'Communication in the West for Home Army purposes' by Major eng. Sabin Popkiewicz.

According to that chapter the Technical Platoon was separated from Radiotelegraphy Company on 02.12.1944 and subordinated directly to commander of Communications Battalion of Staff of the Commander-in-Chief (official English name: General H.Q. Signals).

Its workshop and storage were at Woodcroft near Watford.

The task of Technical Platoon was, among other duties, to repair and perform periodic maintenance on all devices and installations of the Battalion. In addition it designed and constructed new radio equipment for the Battalion and gave training and prepared instructions for personnel of the Battalion.

Commander of Platoon was Lieutenant Włodzimierz Kuliszkiwicz. Constructor – Michał Kasia (civil employee).

After December 1944 the platoon was accommodated in a building called Instede at Stanmore.

The Technical Platoon built 15 monitor receivers (most probably O-1-PT), 1 kW transmitter type KR/1000/C/MK (see Chapter 200), 5 antenna couplers, 5 instruments for testing crystals, 12 control devices for FT-300 transmitters. In addition modifications in one Collins transmitter, 3 FT-300 *) transmitters and 2 HRO receivers. Before December 1944 Technical Platoon also existed in the Radiotelegraphy Company (part of Radio Department of Staff of the Commander-in-Chief) and it had similar task as described above. There is no information when it was created, probably 13 May 1943 when Radio Department (after 25.08.1944 Communications Battalion) was separated from Radio Centre of Staff of the Commander-in-Chief. Before that date the Technical Platoon functioned as a Radio Workshop.

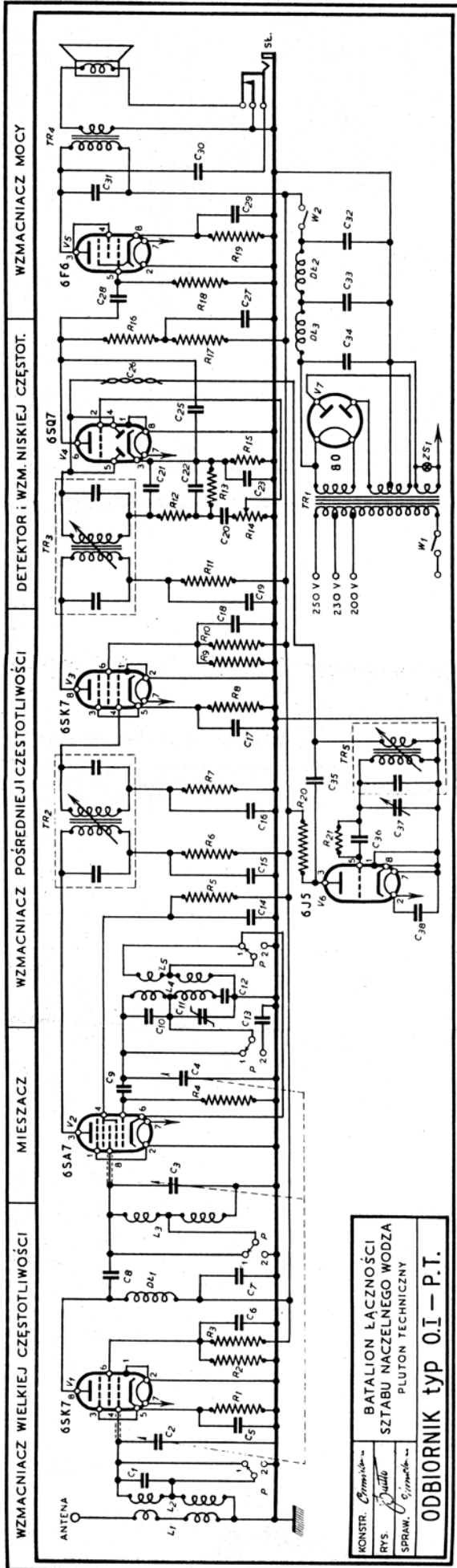
*) Three commercial Federal FT-300 point to point transmitters were acquired by the Polish under Lend-Lease arrangements.



Front cover of the O-1-PT monitor receiver user instructions. It was issued by Batalion Łączności Sztabu Naczelnego Wodza Pluton Techniczny (Communications Battalion of Staff of the Commander-in-Chief Technical Platoon).

References:

- 'Dziękuję wam rodacy', (Thank you compatriots) is a collective work which contains reports and memories of 5 officers: J. Srebrzynski, K. Bogacki, T. Rola, D. Tarnowski and S. Popkiewicz. It has two ISBN numbers: 0850650690, and 9780850650693, London, 1973.
- Roman Buja, Poland, translated the essential part of this book.
- With thanks to Bogdan Szkudlarek, SP3LD, Poland, who initially directed me to 'Dziękuję wam rodacy'.
- Instrukcje odbiornika O-1-PT, Batalion Łączności Sztabu Naczelnego Wodza Pluton Techniczny, (User Instructions Receiver O-1-PT), n.d.
- An original O-1-PT User Instruction is held in the Royal Signals Museum archives, Blandford Camp, Dorset, UK.



KONSTR. *Erminio*
 RYS. *Quillo*
 SPRAW. *Sinnick*
**BATALION ŁĄCZNOŚCI
 SZTABU NACZELNEGO WODZA
 PLUTON TECHNICZNY**
ODBIORNIK typ O.1 - P.1.

Z E S T A W I E N I E
 części składowych odbiornika typ O-1-PT

Nr. kolejn.	Wyszczególnienie		Nr. lampy	Czynność w obwodzie
K O N D E N S A T O R Y				
C-1	10 mmF	mica	V1	dla zakresu 2-go
C-2, 3, 4	5-175 mmF	powietrzny	V1, V2	strojenie główne
C-5	0.1 mF 400 V	papier	V1	obejściowy dla katody
C-6	0.1 mF 400 V	"	V1	" " ekranu
C-7	0.1 mF 400 V	"	V1	" " anody
C-8	50 mmF	"	V1, V2	sprzęgający
C-9	50 mmF	mica	V2	"
C-10	10/15 mmF	"	V2	dla zakresu 2-go
C-11	5/20 mmF	trimer	V2	" " 1-go
C-12	1550 mmF	"	V2	padar
C-13	2000 mmF	papier	V2	padar
C-14	0.1 mF 400 V	"	V2	obejściowy dla ekranu
C-15	0.1 mF 400 V	"	V2	" " anody
C-16	0.01 mF 400 V	"	V3	filtr siatkowy
C-17	0.1 mF 400 V	"	V3	obejściowy dla katody
C-18	0.1 mF 400 V	"	V3	" " ekranu
C-19	0.1 mF 400 V	"	V3	" " anody
C-20	0.05 mF 400 V	"	V4	sprzęgający diode-trio
C-21, 22	100 mmF	mica	V4	filtr dla diody
C-23	25 mF 50 V	elektrolit	V4	" " katody
C-25	0.0005 mF 400 V	papier	V4	obejściowy dla anody
C-26	5 mmF	(spłeciony drut)	V6, V4	sprzęgający
C-27	0.05 mF 400 V	papier	V4	obejściowy dla anody
C-28	0.1 mF 400 V	"	V4, V5	sprzęgający
C-29	25 mF 25 V	elektrolit	V5	obejściowy dla katody
C-30	0.1 mF 400 V	papier	V5	sprzęgający na słuchawkę
C-31	0.0005 mF 400 V	"	V5	"
C-32	16 mF 450 V	elektrolit	V7	filtr prostowniczy
C-33, 34	8 mF 450 V	"	V7	"
C-35	0.01 mF 400 V	papier	V6	sprzęgający
C-36	375 mmF	mica	V6	sprzęgający siatkowy
C-37	15/25 mmF	obrot. powietrzny	V6	strojenie na telegraf
C-38	0.1 mF 400 V	papier	V6	obejściowy żarzenia
O P O R Y				
R-1	470 om 0.5 W	stały	V1	katodowy
R-2	250000 om 0.5 W	"	V1	upływowo ekranu
R-3	100000 om 0.5 W	"	V1	spadkowy ekranu
R-4	100000 om 0.5 W	"	V2	siatkowy oscylatora
R-5	27000 om 0.5 W	"	V2	spadkowy ekranu
R-6	1000 om 0.5 W	"	V2	filtr anodowy
R-7	2 Mgom 0.5 W	"	V3	" siatkowy
R-8	470 om 0.5 W	"	V3	katodowy
R-9	100000 om 0.5 W	"	V3	upływowo ekranu
R-10	80000 om 0.5 W	"	V3	spadkowy ekranu
R-11	1000 om 0.5 W	"	V3	filtr anodowy
R-12	50000 om 0.5 W	"	V4	" diody
R-13	1 Mgom 0.5 W	"	V4	obciążenie diody
R-14	0.5 Mgom	potencjometr	V4	siła odbioru
R-15	1000 om 1 W	stały	V4	katodowy
R-16	100000 om 0.5 W	"	V4	spadkowy anody
T R A N S F O R M A T O R Y , D Ł A W I K I , C E W K I				
Tr1	Transformator sieciowy 0-200, 230, 250 V, 2x260 V, 5 V/2 A, 6.3 V/3 A.	V7	zasilanie odbiornika	
Tr2, 3	Transformator 460 kc/s	V2/V3, V3/V4.	filtr częstotliwości pośredniej	
Tr4	Transformator głośnikowy	V5	wyjściowy na głośnik	
Tr5	Transformator 460 kc/s	V6	oscylator na telegraf	
Dł1	Dławik 2.5 mH 80 mA	V1	dławik W.Cz.	
Dł2, 3	Dławik M.cz. 12 H, 75 mA	V7	filtr prostowniczy	
L1	Cewka antenowa	V1	sprzężenie anteny	
L2	Cewka siatkowa	V1	1 i 2 zakres obwód W.Cz.	
L3	"	V2	1 i 2 zakres obwód międzylampowy	
L4	"	V2	1 i 2 zakres oscylatora	
L5	" sprzęgająca	V2	1 i 2 zakres oscylatora	
R Ó Ż N E				
S1	Gniazdko typu 'Jack'	V5	wyjście na słuchawkę	
W1	Wyłącznik 250 V, 5 A razem z potencjometrem R14		wyłącznik sieciowy, główny	
W2	Wyłącznik błyskawiczny 220 V, 5 A		wyłącznik napięcia anodowego	

Circuit diagram and list of components of the Polish Technical Platoon receiver type O-1-PT. There are two oddities in the circuit diagram: there is no AVC or RF gain control, and no apparent means to disconnect the BFO.