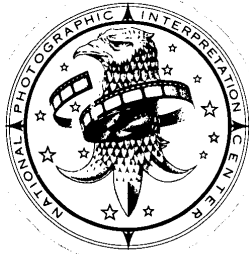
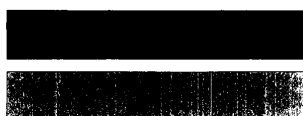


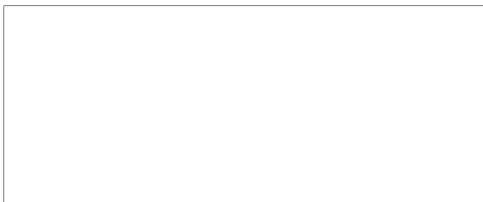
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**PHOTOGRAPHIC
INTERPRETATION
REPORT**

**NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER**

**PROBABLE GENERAL STAFF
RADCOM TRANSMITTING STATIONS**



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**DECEMBER 1971
COPY NO 123
5 PAGES
PIR-053/71**

GROUP 1: EXCLUDED FROM
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AND DECLASSIFICATION

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BASIC DESCRIPTION

Brest Probable General Staff RADCOM Transmitting Station/Bunkered/Hard

5. The transmitting station (Figure 2) consists of an antenna field containing aboveground permanently emplaced HF antennas, eight hardened (subsurface) antennas, a central control area, an administration and support area for permanently assigned personnel, and a construction support area.

6. The aboveground HF antenna field contains 14 double rhombic antennas, 16 dipole antennas, and four quadrant antennas. The capability of this HF antenna complement is extensive, both in frequency and range. It can transmit locally in an omnidirectional mode as well as point-to-point over intermediate and long distances. The propagation azimuths of many of the antennas are oriented toward other facilities probably associated with the Soviet General Staff command and control system, such as Military District Headquarters, Groups of Forces Headquarters, and the national command authority at Moscow.

7. The hardened antennas are arranged in four day/night pairs. Their azimuths are the same as those of some of the double rhombic and dipole antennas. No triple junction boxes such as have been observed at the hardened antennas at several HF national-level command and control transmitting facilities have been observed at the hardened antennas.⁵ Whether this indicates that

INSTALLATION OR ACTIVITY NAME				COUNTRY	
See Below				UR	
UTM COORDINATES	GEOGRAPHIC COORDINATES	BE NUMBER	COMBEX NO.	NIETS NO.	
NA	See below	See below	See below	See below	
MAP REFERENCE					
SAC. USATC 200, Sheet 0168-22HL, scale 1:200,000					
REQUIREMENT			NEGATION DATE (if required)		
NA			NA		
			NRC PROJECT		
			143321NI		

Installation Name	Geographic Coordinates
Brest Probable General Staff RADCOM Transmitting Station/Bunkered/Hard	52-25-20N 023-59-10E
Brest Probable General Staff RADCOM Station/Bunkered/Hard	52-21-00N 023-49-30E

ABSTRACT

1. This report describes two probable Soviet General Staff-related communications facilities, Brest Probable General Staff RADCOM Transmitting Station/Bunkered/Hard and Brest Probable General Staff RADCOM Station/Bunkered/Hard. The transmitting station contains an antenna field with aboveground high-frequency (HF) antennas, eight hardened antennas, a central control area, an administration and support area, and a construction support area. The propagation azimuths of many of the aboveground HF antennas are toward other facilities probably associated with the Soviet General Staff command and control system such as Military District Headquarters, Group of Forces Headquarters, and the national command authority at Moscow. Brest Probable General Staff RADCOM Station/Bunkered/Hard is similar to the transmitting station except it contains no aboveground HF antenna field. Its hardened antennas are oriented approximately the same as those at the transmitting station. Both of these facilities were observed in an early stage of construction in late September 1969, which is about the same general time as the reported reorganization of the Soviet General Staff communications system.

2. This report includes a location map, annotated photographs, and data on antennas.

INTRODUCTION

3. The Brest Probable General Staff RADCOM Transmitting Station/Bunkered/Hard is situated 23 nautical miles (nm) north-northeast of Brest, USSR (Figure 1). The Brest Probable General Staff RADCOM Station/Bunkered/Hard is 15 nm north-northeast of Brest and 8 nm south-southwest of the Brest transmitting station.

4. Photographic evidence indicates that since the mid-1960's hardened communications facilities have been extensively deployed in the Soviet Union. A number of these facilities are believed to be part of the Soviet General Staff command and control system, which was reportedly reorganized in 1968. Some of the facilities are apparently operational and some are still under construction. All, including those described in this report, are in areas of high military-command significance, such as Military District Headquarters, Groups of Forces Headquarters, and frontal commands. All contain one bunker and at least one hardened (subsurface) antenna. Some contain aboveground permanently emplaced HF antennas.

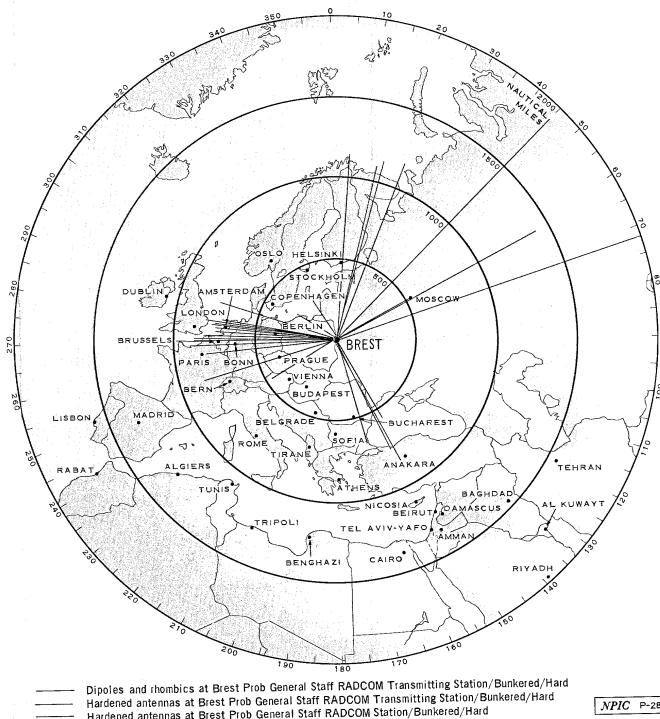


FIGURE 1. FORWARD PROPAGATION AZIMUTHS FOR BREST PROBABLE GENERAL STAFF RADCOM STATIONS/BUNKERED/HARD. Lengths of azimuth lines are not indicative of propagation range.

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Table 1. Data on HF Antennas at Brest Probable General Staff RADCOM Transmitting Station/Bunkered/Hard (Item numbers are keyed to Figure 2)

Item	Type of Antenna	Soviet Designator	Frequency Range (MHz)
1	Double rhombic	RGD $\frac{65}{2.8}$.0.6	4.5 - 9.37
2	Double rhombic	RGD $\frac{57}{1.7}$.1	2.67 - 6.88
3	Double rhombic	RGD $\frac{65}{2.8}$.0.6	4.2 - 10.5
4	Double rhombic	RGD $\frac{65}{2.8}$.0.6	6.0 - 15.0
5	Double rhombic	RGD $\frac{65}{2.8}$.0.6	4.5 - 9.37
6	Double rhombic	RGD $\frac{57}{1.7}$.0.5	2.76 - 6.88
7	Double rhombic	RGD $\frac{57}{1.7}$.0.5	2.76 - 6.88
8	Double rhombic	RGD $\frac{57}{1.7}$.0.5	6.63 - 16.52
9	Double rhombic	RGD $\frac{65}{2.8}$.0.6	4.2 - 10.5
10	Shunted dipole	VGDsh $\frac{25}{30}$.d	1.91 - 6.0
11	Shunted dipole	VGDsh $\frac{25}{20}$.d	1.91 - 6.0
12	Shunted dipole	VGDsh $\frac{25}{20}$.d	1.91 - 6.0
13	Shunted dipole	VGDsh $\frac{12.5}{18}$.d	3.84 - 12.0
14	Shunted dipole	VGDsh $\frac{25}{20}$.d	1.91 - 6.0
15	Shunted dipole	VGDsh $\frac{25}{20}$.d	1.91 - 6.0
16	Shunted dipole	VGDsh $\frac{12.5}{13}$.d	3.84 - 12.0
17	Shunted dipole	VGDsh $\frac{16}{15}$.d	3.0 - 9.37
18	Shunted dipole	VGDsh $\frac{25}{30}$.d	1.91 - 6.0
19	Shunted dipole	VGDsh $\frac{12.5}{30}$.d	3.84 - 12.0
20	Shunted dipole	VGDsh $\frac{8}{15}$.d	6.0 - 18.7
21	Shunted dipole	VGDsh $\frac{12.5}{14}$.d	3.84 - 12.0
22	Shunted dipole	VGDsh $\frac{20}{15}$.d	Unknown
23	Shunted dipole	VGDsh $\frac{12.5}{14}$.d	3.84 - 12.0
24	Double rhombic	RGD $\frac{57}{1.7}$.0.5	3.67 - 9.16
25	Dual shunted angle dipole	VGDsh-2U $\frac{12}{20}$.d	Unknown
26	Shunted dipole	VGDsh $\frac{12.5}{14}$.d	3.84 - 12.0
27	Shunted dipole	VGDsh $\frac{12.5}{14}$.d	3.84 - 12.0
28	Shunted dipole	VGDsh $\frac{25}{30}$.d	1.91 - 6.0
29	Shunted dipole	VGDsh $\frac{25}{30}$.d	1.91 - 6.0
30	Shunted dipole	VGDsh $\frac{20}{15}$.d	Unknown
31	Dual shunted angle dipole	VGDsh-2U $\frac{25}{30}$.d	Unknown
32	Dual shunted angle dipole	VGDsh-2U $\frac{12}{15}$	Unknown
33	Dual shunted angle dipole	VGDsh-2U $\frac{25}{30}$.d	Unknown
34	Double rhombic	RGD $\frac{57}{1.7}$.0.5	6.63 - 16.52
35	Double rhombic	RGD $\frac{57}{1.7}$.0.5	2.76 - 6.88
36	Double rhombic	RGD $\frac{57}{1.7}$.0.5	2.76 - 6.88
37	Double rhombic	RGD $\frac{57}{1.7}$.0.5	6.63 - 16.52

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the hardened antennas at Brest are for receiving, transceiving, or transmitting only cannot be ascertained from photography.⁵

8. The central control area contains a rectangular bunker

9. The administration and support area contains one administration building, two barracks buildings, one messhall, and three other support buildings. The construction support area contains one probable administration building, three barracks, one messhall, and five other support buildings.

10. The transmitting station was first observed in an early stage of construction in late September 1969, which is within the general period of the reported reorganization⁴ of the Soviet General Staff communications system.

Brest Probable General Staff RADCOM Station/Bunkered/Hard

11. This station (Figure 3) is very similar to the Brest transmitting station and was constructed during the same general period; however, it contains no aboveground HF antenna field.

12. The eight hardened antennas are arranged in four day/night pairs, and their azimuths of propagation are approximately the same as at the transmitting station. Slight differences in azimuths are probably attributable to photographic interpretability, which was limited by vegetation and certain cultural features.

13. The control area contains a rectangular bunker

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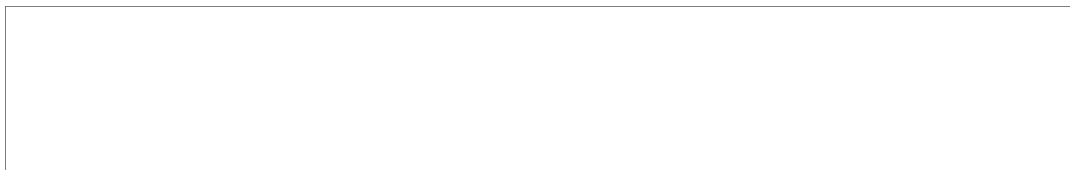
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14. The administration and support area contains one administration building, five barracks buildings, one messhall, and ten other support buildings.

15. The construction support area contains one administration building, five barracks buildings, one messhall, and 12 other support buildings.

16. The absence of aboveground HF antennas at this facility is not understood at this time. It is possible that the facility is served by a remote antenna field or by mobile deployed communications equipment; neither possibility can be confirmed or denied from available photography.

REFERENCES



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MAPS OR CHARTS

SAC. US Air Target Chart, Series 200, Sheet 0168-22HL, scale 1:200,000

DOCUMENTS

1. NPIC. [redacted] PIN-115/71, *Hardened Antennas Under Construction at Kiyev and Ust-Ordynskiy Bunkered Command Posts*, Aug 71 (TOP SECRET RUFF)

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2. NPIC. [redacted] PIN-130/71, *Hardened Antennas at Radomyshl Bunkered Command Post*, Sep 71 (TOP SECRET RUFF)

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3. NPIC. [redacted] PIN-134/71, *Hardened Antennas at Yarshevichi Bunkered Command Post*, Sep 71 (TOP SECRET RUFF)

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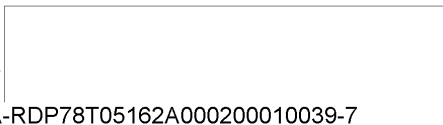
5. NPIC. [redacted] PIN-096/71, *Hardened Antennas at Chekhov Command and Control Facility/Hard*, Jul 71 (TOP SECRET CHESS RUFF [redacted])

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REQUIREMENT

NPIC/IEG/MSD/DMEB Project 143321NI



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