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Imagery analysis report

Production Activity at Selected Soviet
Ground Forces-Associated Mobile Electronics
Equipment Plants (S)

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PRODUCTION ACTIVITY AT SELECTED SOVIET GROUND FORCES-ASSOCIATED MOBILE ELECTRONICS EQUIPMENT PLANTS (S)

ABSTRACT

1. (S/D) This report reviews production activity at 23 selected Soviet plants at which imagery-identifiable, ground forces-associated mobile electronics equipment is produced. It includes a list of the plants (Table 1); a plant location map (Figure 1); plant photographs (Figures 2 through 24); equipment observed at each plant, by year (Tables 2 through 24); methodology for naming and numbering unidentified equipment; names and descriptions for unidentified equipment (Figures 25 through 78 and Table 25); and pictures of selected unidentified equipment (Figures 25 through 78).

INTRODUCTION

2. (S/D) The Soviets have a dynamic ground forces-associated mobile electronics-equipment production program. Soviet box bodies initially seen on the ZIL-157 chassis (Figure 1 and Table 26) are now mounted on the newer ZIL-131, URAL-375, and other chassis. Of the 23 plants included in this report (Table 1), major construction has been observed at 14 during the past eight years.

3. (S/D) This report focuses on providing a base from which to view and follow the Soviet program, as it relates to ground forces-associated mobile electronics equipment, by providing the names and locations of known plants which produce an imagery-identifiable product (Figure 1 and Table 1); a photograph depicting each plant (Figures 2 through 24); a list of the equipment and the year it was observed at each plant (Tables 2 through 24); a system of naming and numbering unidentified equipment at these plants; descriptions—and pictures, where needed—of the unidentified equipment at these plants (Figures 25 through 78 and Table 25); and reference tables for equipment produced at the plants (Tables 27 through 32).

BASIC DESCRIPTION

4. (S/D) Each item of identified Soviet electronics equipment has been assigned a descriptive name (i.e., ZIL-131 generator van); a NATO name (i.e., BAR LOCK); and/or an R-designator (i.e., R-400). However, many pieces of unidentified electronics equipment were observed throughout the 23 plants included in this report. To avoid confusion when referring to various pieces of unidentified equipment, the following system of temporary designators was established.

5. (S/D) The temporary designator consists of three groups of alpha and/or numeric characters, with the groups separated by dashes. The first group consists of three characters and identifies the plant at which the unidentified piece of equipment was observed. The three characters are the first three letters in the plant/location name. Therefore, the Minsk plant is represented by MIN. When a city like Gorkiy, for example, contains more than one plant, the third letter is replaced by a number, indicating the order in which the plants were identified. Gorkiy Communications Equipment Plant, Lenin 197 Frunze 326 is, therefore, designated GO1 and Gorkiy Radar Plant Sormovo, GO2.

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6. (S/D) The second group of characters is either three numbers or three letters. Numbers are used when the vehicle chassis can be identified; i.e., 375 for URAL-375. If no specific vehicle chassis is identified, a three-letter equipment abbreviation is used; i.e., OBJ for "object."

7. (S/D) The third group consists of two numbers, sequentially assigned and beginning with 01. The sequence begins anew for each vehicle chassis type or equipment abbreviation and for each plant.

8. (S/D) Using this method of assigning a temporary designator, the first unidentified electronics vehicle on a ZIL-131 chassis observed at the Minsk plant would be MIN-131-01.

9. (S/D) This report consolidates the available imagery-derived information on 23 selected ground forces-associated, mobile-electronics plants and their products. The bulk of the information gathered is presented in figures and tables for clarity and ease of reference.

Table 1.
Selected Soviet Ground Forces-Associated Mobile Electronics Equipment Plants

This table in its entirety is classified SECRET/WNINTEL

Name & BE No	Abbrev	Geo Coords	Category
Alma-ata Electrotechnical Plant [redacted]	ALM	43-20-00N 076-57-20E	25X1
Dnepropetrovsk Electronics Plant 192 [redacted]	DNE	48-26-02N 034-58-22E	25X1
Gorkiy Communications Equipment Plant, Lenin 197 [redacted]	GO1	56-15-04N 043-58-10E	25X1
Gorkiy Radar Plant Sormovo [redacted]	GO2	56-20-40N 043-49-18E	25X1
Irkutsk Radio Equipment Plant [redacted]	IRK	52-15-59N 104-13-55E	25X1
Krasnoyarsk Radio Plant [redacted]	KR1	56-01-07N 092-51-16E	25X1
Krasnoyarsk Television Plant [redacted]	KR2	56-01-22N 092-47-50E	25X1
Kursk Vehicle Assembly Plant [redacted]	KUR	51-44-15N 036-15-30E	25X1
Leningrad Electronics Vehicle Plant [redacted]	LEN	59-53-05N 030-16-40E	25X1
Lianozovo Electronics Equipment Plant Vagonremont [redacted]	LIA	55-53-13N 037-32-53E	25X1
Liepaja Electronics Plant [redacted]	LIE	56-31-50N 021-00-38E	25X1
Minsk Electronics Plant PO Box 32 [redacted]	MIN	53-55-50N 027-37-50E	25X1
Novosibirsk Generator Plant [redacted]	NOV	55-03-00N 082-57-25E	25X1
Omsk Radio Plant, Kazitskiy 210 [redacted]	OMS	54-57-36N 073-23-26E	25X1

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Orel Probable Electronics Component Production Plant	ORE	52-58-45N 036-06-00E	25X1
Podolsk Electronics Plant 710	POD	55-25-19N 037-33-07E	25X1
Rostov Electronics Plant 140, Electroap Arat	ROS	47-16-00N 039-43-46E	25X1
Slavgorod Electronics Plant	SLA	52-59-45N 078-38-30E	25X1
Sverdlovsk Radio Plant Hydrometeorological Service	SVE	56-51-11N 060-38-11E	25X1
Vladimir Auto Instrument and Electronics Van Plant	VLA	56-08-34N 040-24-32E	25X1
Voronezh Mining and Radio Vehicle Equipment Plant	VOR	51-40-45N 039-08-55E	25X1
Voshkar-Ola Optical and Radar Plant 297	YOS	56-38-12N 047-51-01E	25X1
Zaporozhye Radar Plant ZPE	ZAP	47-50-20N 035-13-45E	25X1

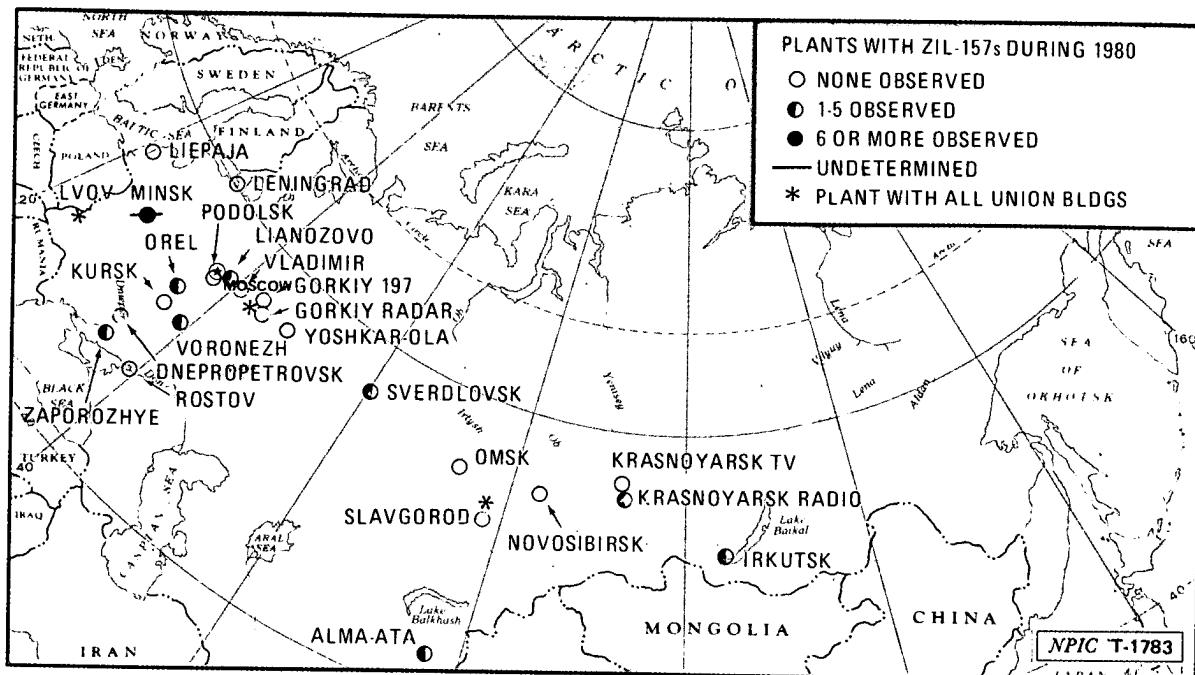


FIGURE 1. SELECTED PRODUCERS OF SOVIET GROUND FORCES-ASSOCIATED MOBILE ELECTRONICS EQUIPMENT IN THE USSR

SECRET**ACRONYMS AND ABBREVIATIONS**

Antenna	ANT	Radar	RDR
Armored personnel carrier	APC	Radio van truck	RVT
Chassis	CHA	Screen	SCR
Crate	CRA	Tank	TNK
Dish	DIS	Transporter-erector-tower	TET
Dome	DOM	Trailer	TRL
Electronics	ELC	Trough	TRO
Generator	GEN	Truck	TRK
Kapustin Yar	KY	Vehicle	VEH
Object	OBJ	Vehicle of unidentified function	VUF

Table 2.
Equipment Observed at Alma-ata

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
BTR-70	APC	1980
BTR-60/70	APC	1979-80
BTR-60	APC	1976-80
UAZ-469	UAZ-469	1972-80
R-403	UAZ-469	1976-80
ALM-469-01	UAZ-469	1979-80
KM-66 workshop	ZIL-131	1976-80
R-401-type RVT	ZIL-131	1977-80
Generator	2-axle trl	1971-80
BTR-60PB	APC	1976-79
Maintenance van	ZIL-157	1972-77
Chamfer-roofed maintenance van	ZIL-157	1975-77
KM-66 workshop	ZIL-157	1975-77
CATS EYE-type RVT	ZIL-131	1978-79
Small generator	1-axle trl	1977-78
BTR-50	APC	1980
ALM-APC-01	APC	1980
R-403	UAZ-69	1979
MZ-151/TZ-150 POL	ZIL-150	1977
ALM-157-01	ZIL-157	1977
ALM-131-02	ZIL-131	1979
TWIN EAR-type troposcatter antenna van	URAL-375	1978

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Table 3.
Equipment Observed at Dnepropetrovsk

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
Marker beacon	UAZ-452	1973-80
Generator van	ZIL-131	1979-80
KROSS-131	ZIL-131	1979-80
DNE-131-01	ZIL-131	1977-80
DNE-131-02	ZIL-131	1979-80
DNE-VAN-02	2-axle trl	1979-80
DNE-TRL-01	2-axle trl	1979-80
R-60/120 crates	—	1973-80
P-299M	GAZ-66	1972-74
R-406 transmitter/ receiver van	ZIL-157	1967-77
R-406 support van	ZIL-157	1967-77
Calibration, R-400/ R-404 mast truck	ZIL-157	1973-74
R-406 antenna trailer	2-axle trl	1967-77
DNE-TRL-02	2-axle trl	1972-76
SA-2, 3, & 5 guidance/ control van	2-axle trl	1967-77
R-406 antenna	—	1967-77
DNE-157-01	ZIL-157	1972
Generator van	ZIL-131	1974
DNE-375-01	URAL-375	1972
DNE-375-02	URAL-375	1973
DNE-VAN-01	2-axle trl	1979
DNE-ANT-01	—	1974
DNE-OBJ-01	—	1979

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Table 4.
Equipment Observed at Gorkiy 197

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
SPOON REST D	URAL-375	1978-80
transmitter/receiver van		
Electronics van	URAL-375	1978-80
SPOON REST D	URAL-375	1978-80
support van		
SPOON REST A	2-axle trl	1968-80
SPOON REST D	2 axles	1978-80
antenna trailer		
SPOON REST C	ZIL-157	1968-75
transmitter/receiver van		
SPOON REST C	ZIL-157	1968-75
support van		
SPOON REST C	2 axles	1973-75
antenna trailer		
Box-bodied van	KRAZ	1979
GO1-VAN-01	2-axle trl	1979
GO1-TRL-01	2 axles	1973

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Table 5.
Equipment Observed at Gorkiy Radar Plant

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
Vehicle	UAZ-452	1979-80
DO-EL-04-type van	URAL-375	1978-80
Electronics-associated cargo truck	URAL-375	1978-80
Generator	2-axle trl	1978-80
Meteorological van	2-axle trl	1975-80
DO-EL-06 generator/support van	2-axle trl	1979-80
Flat-roofed van	2-axle trl	1975-80
KY generator, type 4	2-axle trl	1979-80
KY generator, type 2	2-axle trl	1973-80
GO-2GEN-01	1-axle trl	1978-80
_____dome	—	1975-80
DO-EL-04 screen	—	1979-80
STONE CAKE	2-axle trl	1979-80
SWING BOX	2-axle trl	1975-79
Calibration, R-400/R-404 mast truck	Unk	1975
SPOON REST D transmitter/receiver van	URAL-375	1979
R-410 antenna trailer	2 axles	1979
Loaf-topped van	2-axle trl	1978
GO2-TRL-01	2 axles	1979
GO2-TRL-02	2 axles	1975
Dome	Tower	1975
GO2-DOM-01	2-axle trl	1979
GO2-SCR-01	—	1979
GO2-DIS-01	—	1979
GO2-DIS-02	—	1979
GO2-DIS-03	—	1979
GO2-DIS-04	2-axle trl	1979
GO2-TRO-01	—	1979
GO2-CRA-01	—	1979
R-122 (PRONG REST) antenna	—	1979

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Table 6.
Equipment Observed at Irkutsk

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
BTR-60	APC	1970-80
R-118 BM3	GAZ-66	1974-80
R-125	GAZ-66	1977-80
R-140 (formerly called the R-102M)	ZIL-157	1974-80
Generator van	ZIL-131	1974-80
R-409 CATS PAW	ZIL-131	1976-80
CATS EYE	ZIL-131	1976-80
LONG TRACK radar	ATT-type	1976-80
CATS EYE/FULL HOUSE	ZIL-131	1977
R-136	URAL-375	1979
KROSS-375	URAL-375	1980

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Table 7.
Equipment Observed at Krasnoyarsk Radio Plant

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
R-403	UAZ-469	1977-80
Vehicle	UAZ-469	1977-80
Vehicle	UAZ-452	1979-80
P-299M	GAZ-66	1979-80
Electronics van	GAZ-66	1977-80
KRA-VUF-01	ZIL-157	1978-80
PARK DRIVE utility van	ZIL-131	1977-80
PARK DRIVE transmitter/ receiver van	URAL-375	1977-80
PARK DRIVE/R-412 generator van	URAL-375	1977-80
R-412 antenna van	URAL-375	1977-80
Electronics van	URAL-375	1977-80
KING PIN-type trl	2 axles	1980
PARK DRIVE chassis	2-axle trl	1977-80
KR1-066-01	GAZ-66	1979
Electronics van	ZIL-157	1970-77
R-133 TWIN EAR	URAL-375	1978-79
FLAP WHEEL	URAL-375	1979
KR1-066-02	GAZ-66	1977
R-834M	ZIL-157	1977
R-330A	ZIL-157	1979
3-window electronics van	ZIL-157	1977
R-412 mast truck	ZIL-131	1977
Loaf-topped electronics van	ZIL-131	1977
SIDE PLATE	ZIL-131/ URAL-375	1977 1980
KR1-131-01	ZIL-131	1979
DO-EL-05	URAL-375	1977
FLAP WHEEL modified	URAL-375	1980
KR1-375-01	URAL-375	1979
KR1-375-02	URAL-375	1979
KR1-375-03	URAL-375	1979
KR1-375-04	URAL-375	1979
Prime mover and trailer	KRAZ	1980
PARK DRIVE dish	—	1977
KR1-TRL-01	2 axles	1980
KR1-OBJ-01	—	1979
KR1-VEH-01	Unk	1980

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Table 8.
Equipment Observed at Krasnoyarsk Television Plant

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
R-403	UAZ-469	1978-80
Vehicle	UAZ-469	1978-80
KR2-131-01	ZIL-131	1980
Long-range communi- cations-type set	URAL-375	1978-80
BTR-60	APC	1970-71
Vehicle	UAZ-69	1971
P-299M	GAZ-66	1978
DO-EL-01	URAL-375	1978
R-412 antenna van	URAL-375	1971
KR2-375-01	URAL-375	1980
LONG TRACK radar	ATT-type	1979
Generator	2-axle trl	1971

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Table 9.
Equipment Observed at Kursk

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)	
R-401/405	GAZ-66	1975-80	
R-405	GAZ-66	1975-80	
Generator van	ZIL-131	1975-80	
2-/3-window electronics van	ZIL-131	1975-80	
R-405 generator	1-axle trl	1979-80	
Generator trailer	1 axle	1975-80	
Generator trailer	2 axles	1979-80	
Loaf-topped generator trailer	2 axles	1979-80	
KY generator, type 4	2-axle trl	1975-80	
DO-EL-06 support/generator van	2-axle trl	1975-80	
KY generator, type 1	2-axle trl	1979-80	
KY generator, type 2	2-axle trl	1979-80	
R-401/405 generator trailer	1 axle	1975	
Electronics van	URAL-375	1975	
Prob 	—	1979	25X1
antenna dish sections			
	—	1979	25X1
prob radar reflectors			

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Table 10.
Equipment Observed at Leningrad

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
R-404 mast truck	ZIL-131	1977-80
R-400/404-associated van	ZIL-131	1977-80
R-136 (in sets of 4)	ZIL-131	1974-80
R-136 (5th vehicle)	URAL-375	1977-80
R-400/404 support van	ZIL-157	1974-76
R-110 (in sets of 4)	ZIL-157	1974-78
R-800-series RVT	ZIL-157	1974-77
Bus	—	1974-79
Generator van	ZIL-131	1976 & 77
DO-EL-01-type support van	URAL-375	1977 & 79
R-103-configured RVT	ZIL-131	1976
R-410-type transmitter/ receiver van	URAL-375	1977
COIN GRASS-associated RVT	URAL-375	1977
Bus with dome	—	1974
SPOON REST D antenna trailer	2 axles	1977
Cargo trailer	2 axles	1977

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Table 11.
Equipment Observed at Lianozovo

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
TET associated with SH-EL-01, SH-EL-02, & AN-EL-01 radars	Trl	1977-80
Loaf-topped electronics van	ZIL-157	1978-80
THIN SKIN B	KRAZ-255	1975-80
P-284M1	ATS-59 Mod	1978-80
LONG TRACK radar	ATT-type	1975-80
BACK NET/BACK TRAP radar	Trl	1979-80
4-m-long flat-topped trl	2 axles	1978-80
LIA-VEH-01	—	1978-80
SIDE NET radar	2-axle trl	1975-76
LIA-TRL-01	2 axles	1978
BEER CAN sail	—	1975

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Table 12.
Equipment Observed at Liepaja

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
P-299M	GAZ-66	1976-80
R-125	GAZ-66	1977-80
R-405	GAZ-66	1978-80
LIE-375-01	URAL-375	1976-80
LIE-375-02	URAL-375	1980
LIE-GEN-01	1-axle trl	1978-80
3-window van trl	2 axles	1976-80
LIE-VAN-01	2-axle trl	1977-80
LIE-VAN-02	2-axle trl	1980
R-401/405	GAZ-66	1976-78
TOP BALL-associated van	ZIL-131	1976-78
R-401/405 generator	1-axle trl	1976-78
R-110	ZIL-157	1977
R-100-series van	ZIL-157	1977
KROSS-131	ZIL-131	1979
LIE-131-01	ZIL-131	1977
4-window, chamfer-roofed electronics van	URAL-375	1977
KROSS-375	URAL-375	1980

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Table 13.
Equipment Observed at Minsk

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
KY generator, type 1	2-axle trl	1973—?
KY generator, type 2	2-axle trl	1973—?
Electronics van (approx 9 m long)	2-axle trl	1973—76
AV-1 van	2-axle trl	1974
Electronics van (approx 5 m long)	2-axle trl	1976

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Table 14.
Equipment Observed at Novosibirsk

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
APA-4	URAL-375	1976-80
Electronics-associated special generator	1-axle trl	1976-80
50-100-kw generator	2-axle trl	1976-80
30-50-kw generator	2-axle trl	1976-80
Loaf-topped generator	2-axle trl	1976-80
KY generator, type 1	2-axle trl	1976-80
KY generator, type 2	2-axle trl	1976-80
KY generator, type 3	2-axle trl	1976-80
NOV-TRL-01	2 axles	1980

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Table 15.
Equipment Observed at Omsk

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
Beacon marker	ZIL-131	1979-80
Loaf-topped electronics van	ZIL-131	1979-80
Generator van	ZIL-131	1978-80
OMS-131-01	ZIL-131	1979-80
OMS-375-02	URAL-375	1979-80
OMS-VAN-02	2-axle trl	1979-80
R-401/405	GAZ-66	1977-79
Beacon marker	ZIL-130	1977-78
2-window electronics van	ZIL-131	1977-79
2-window electronics van	URAL-375	1978-79
R-401/405 generator	1-axle trl	1977-79
CONE DISH van	2-axle trl	1977-78
Electronics van	ZIL-157	1979
KROSS-131	ZIL-131	1979
R-409 CATS PAW	ZIL-131	1978
3-window electronics van	URAL-375	1979
OMS-375-01	URAL-375	1979
OMS-VAN-01	2-axle trl	1979

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Table 16.
Equipment Observed at Orel

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
Electronics van trucks	Various	1971 - 80
Van trls	2 axles	1976 - 80
R-406	ZIL-157	1979
Electronics van	ZIL131	1979
KING PIN support van	URAL-375	1979
Electronics-associated special generator	1-axle trl	1979
Generator	2-axle trl	1979
KING PIN	2-axle trl	1979
R-406 antenna trailer	2 axles	1979

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Table 17.
Equipment Observed at Podolsk

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
Electronics van	Truck	1975 — 80
Electronics van trl	2 axles	1975 — 80
VOR-VAN-01	2-axle trl	1980
Generator	1-axle trl	1980

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Table 18.
Equipment Observed at Rostov

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
Generator van (modified)	ZIL-131	1977-80
R-400/404 set	ZIL-131	1978-80
R-834-associated generator	1-axle trl	1978-80
Electronics van	2-axle trl	1977-80
CONE DISH van	2-axle trl	1975-80
ADEH-5	—	1978-80
Calibration, R-400/404 mast truck	ZIL-157	1977-78
Generator van	ZIL-131	1975-77
van	2-axle trl	1979
R-600	—	1975-78
R-400/404 mast truck	ZIL-157	1976

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Table 19.
Equipment Observed at Slavgorod

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
Electronics van	GAZ-66	1972-79
Electronics van	ZIL-131	1977-79
Generator	2-axle trl	1970-79
3-window, chamfer-roofed electronics van	GAZ-66	1970-77
Flat-roofed electronics van	GAZ-66	1976-77
R-330A-type RVT	ZIL-131	1976-77
Loaf-topped electronics van	ZIL-131	1970-77
R-834 generator	1-axle trl	1972-77
3-window (staggered), chamfer-roofed electronics van	ZIL-131	1971
3-window, chamfer-roofed electronics van	ZIL-131	1971
R-401/405 generator	1-axle trl	1976

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Table 20.
Equipment Observed at Sverdlovsk

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
BTR-60/70	APC	1976-80
Robotron	UAZ-452	1975-80
3-window electronics van	GAZ-66	1976-80
Cargo truck	GAZ-66	1978-80
VP-associated electronics truck	ZIL-157	1978-80
Division-level company commander's vehicle	ZIL-157	1974-80
Electronics van	ZIL-157	1972-80
SA-6 battery commander's vehicle	ZIL-131	1979-80
R-409 CATS PAW	ZIL-131	1979-80
DO-EL-04-type electronics van	URAL-375	1977-80
4-window electronics van	URAL-375	1974-80
SVE-375-01	URAL-375	1979-80
SVE-375-02	URAL-375	1979-80
Generator	2-axle trl	1974-80
END TRAY	2-axle trl	1972-80
FIRE CAN	2-axle trl	1974-80
CONE DISH van	2-axle trl	1976-80
SA-2, 3, & 5 guidance control van	2-axle trl	1972-80
KM-1 set	2-axle trl	1974-80
KH-1 van	2-axle trl	1977-80
Loaf-topped electronics van	2-axle trl	1978-80
Rowboats	—	1976-80
WHIFF/WHIFF BRICK/SHIP WHEEL	2-axle trl	1974-79
R-118 BM3	GAZ-66	1979
FOLD PLATE	ZIL-131	1977
Loaf-topped electronics van	ZIL-131	1974
FRONT PLATE	URAL-375	1979
R-325	URAL-375	1979
SVE-375-03	URAL-375	1979
SVE-375-04	URAL-375	1977
2-window electronics van	URAL-375	1979
BREAD BIN	1-axle trl	1979
SVE-GEN-01	1-axle trl	1979
VP-associated trl	2 axles	1979
SV-3 van	2-axle trl	1977
VP-2 van	2-axle trl	1979
SVE-VAN-02	2-axle trl	1979
 dish	—	1977
— dish	—	1979
— dish	—	1979
SVE-CRA-01	—	1979

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Table 21.
Equipment Observed at Vladimir

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
VLA-066-01	GAZ-66	1978-80
R-410 mast truck	ZIL-131	1970-80
R-410M mast truck	ZIL-131	1979-80
R-410 utility van	URAL-375	1973-80
Generator	2-axle trl	1970-80
R-406 antenna trl	2 axles	1978-80
SQUASH BRICK	2-axle trl	1978-80
KING PIN	2-axle trl	1978-80
R-408 antenna trl	2 axles	1978-80
R-410 antenna trl	2 axles	1970-80
R-410M antenna trl	2 axles	1979-80
Prime mover	ZIL-157V	1970-72
R-834	ZIL-157	1972-73
R-410M mast truck	ZIL-131	1973-74
R-410M antenna trl	2 axles	1973-74
TWIN PAN transmitter/ receiver van	2-axle trl	1970-72
TWIN PAN antenna trl	2 axles	1970-72
R-406-associated van	ZIL-157	1979
Prime mover	MAZ-500	1979
R-834 generator	1-axle trl	1973
Flat-topped van	2-axle trl	1979

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Table 22.
Equipment Observed at Voronezh

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
FULL HOUSE receiver van	ZIL-157	1976-79
KROSS-131	ZIL-131	1976-79
AR-EL-01, type 1	URAL-375	1976-79
AR-EL-01, type 2	URAL-375	1977-79
E-305V crane	—	1978-79
R-834 generator	1-axle trl	1967-79
Generator	2-axle trl	1976-79
AR-EL-01 support van	2-axle trl	1976-79
VOR-VAN-01	2-axle trl	1979
Motor transport set (prime mover & trl)	KRAZ-255	1978-79
R-122	ZIL-157	1976-77
R-140	ZIL-157	1976-78
4-rib cargo truck	ZIL-157	1976-77
4-window electronics van	URAL-375	1976-77
Cargo truck	KRAZ-255	1976-77
Communications van	UAZ-452	1977
R-142	GAZ-66	1979
P-299M	GAZ-66	1977
R-103	GAZ-66	1976
Cargo truck (POL related)	GAZ-66	1977
Loaf-topped van with poss STICK TREE	ZIL-131	1977
Intercept van	ZIL-131	1979
AR-EL-01(BOX TOP)	URAL-375	1979
Intercept trl	1 axle	1977
Mast sections	—	1977

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Table 23.
Equipment Observed at Yoshkar-ola

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
ACRV-M-1974	APC	1979-80
P-299M	GAZ-66	1979-80
2-window electronics van	ZIL-131	1979-80
4-window electronics van	ZIL-131	1979-80
FLAP WHEEL	URAL-375	1979-80
Gable-roofed van	2-axle trl	1978-80
SA-2, 3, & 5 guidance control van	2-axle trl	1978-80
PAT HAND	Ganiff	1970-79
Electronics van	ZIL-157	1970-78
Van trl	2 axles	1970-71
3-window electronics van	GAZ-66	1979
Electronics van	GAZ-66	1979
4-window electronics van	URAL-375	1979
YOS-375-01	URAL-375	1979
YOS-CHA-01	1 axle	1979

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Table 24.
Equipment Observed at Zaporozhye

This table in its entirety is classified SECRET/WNINTEL

Name	Chassis	Year(s)
TET	Unk	1979-80
Vehicle	UAZ-69	1976-80
CHEESE BRICK	GAZ-63	1979-80
P-299M	GAZ-66	1976-80
PAT HAND-type collimation vehicle	ZIL-157	1976-80
R-400/404 collimation mast truck	ZIL-157	1976-80
Prime mover	MAZ-535	—
ODD PAIR generator	2-axle trl	1975-80
ODD GROUP antenna platform	2-axle trl	1977-80
ODD PAIR	2-axle trl	1975-80
KING PIN	2-axle trl	1979-80
ODD PAIR	2-axle trl	1975-80
transceiver van		
Flat-topped van	2-axle trl	1979-80
ZAP-VAN-01	2-axle trl	1977-80
ODD GROUP	2-axle trl	1977-80
generator/support van		
SIDE NET	2-axle trl	1975-76
Loaf-topped van	2-axle trl	1977 & 79
ZAP-VAN-02	2-axle trl	1979
ZAP-VAN-03	2-axle trl	1979

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Table 25.
Description of Designated Unidentified Equipment Not Shown in This Report

This table in its entirety is classified SECRET/WNINTEL

DNE-VAN-01	A flat-roofed, [] van with 5 sets of top skylights	25X1
DNE-TRL-02	A 2-axle, loaf-topped electronics van/generator observed between 1972 and 1976	
DNE-ANT-01	An antenna mast observed only in 1974	
GO1-VAN-01	An apparently plain, flat-topped, [] van observed only in 1979	25X1
GO2-DOM-01	A [] dome mounted on an 8-m meteorological-type van trailer	25X1
GO2-SCR-01	A [] radar screen/reflector, nearly identical to the Siemens MPDR-45 gap-filler radar from West Germany	25X1
GO2-DIS-01	A [] dish with a clipped/flat edge	25X1
GO2-DIS-02	A [] dish	
GO2-TRO-01	A [] prob trough antenna	25X1
GO2-CRA-01	Wedge-shaped crates measuring [] on the sides, [] across the bottom, & [] in thickness	25X1 25X1
LEN-375-01	A URAL-375 similar to the 5th vehicle associated with the R-136 & an unidentified vehicle, reported at Emba on []	25X1
LEN-TRL-01	A [] trailer	25X1
LIE-VAN-01	An apparently plain, 8-m van trailer	
OMS-131-01	A steeply chamfer-roofed ZIL-131 van similar to the KVGS & KTGS cable layers on the URAL-375 chassis	
OMS-375-02	A URAL-375 similar to the OMS-375-01 (Figure 63); however, rectangular boxes are arranged in tandem down the center of the OMS-375-01, while on the OMS-375-02, the rear box is absent, & the rear third of the van is covered with light-toned prob canvas	
VLA-066-01	A flat-roofed, low-bodied GAZ-66 with a prob antenna laid diagonally on the roof from the left rear corner of the van to near the right front corner	

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Table 26.
ZIL-157s Observed at Electronics Plants, by Year

This table in its entirety is classified SECRET/WNINTEL

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Alma-ata	—	—	•	•	•	•	•	•	0	0	□
Dnepropetrovsk	•	•	•	•	•	•	•	•	□	□	0
Gorkiy 197	—	—	—	•	•	•	—	0	0	0	0
Gorkiy Radar	—	—	—	0	0	0	0	0	0	0	0
Irkutsk	—	—	—	—	•	•	•	•	□	□	□
Krasnoyarsk Radio	•	•	•	•	•	•	•	•	•	□	□
Krasnoyarsk TV	0	0	0	0	0	0	0	0	0	0	0
Kursk	—	—	—	—	—	0	0	0	0	0	0
Leningrad	—	—	—	—	•	•	•	•	•	0	0
Lianozovo	—	—	—	—	—	0	0	0	□	□	□
Liepaja	—	—	—	—	—	0	0	□	0	0	0
Minsk	—	—	—	0	0	0	0	0	—	—	—
Novosibirsk	—	—	—	—	—	0	0	0	0	0	0
Omsk	—	—	—	—	0	0	0	0	0	□	0
Orel	•	•	•	•	•	•	•	•	—	—	□
Podolsk	—	—	—	—	—	•	•	•	□	□	0
Rostov	—	—	—	—	—	0	□	□	□	0	0
Slavgorod	0	0	0	0	0	0	0	0	0	0	0
Sverdlovsk	—	—	•	•	•	•	•	•	•	□	□
Vladimir	•	•	•	•	0	0	0	0	0	0	0
Voronezh	—	—	—	—	—	—	•	•	•	□	□
Yoshkar-ola	•	•	•	•	•	•	•	•	□	0	0
Zaporozhye	—	—	—	—	—	□	□	□	□	□	□

0 No ZIL-157s observed
 □ 1—5 ZIL-157s observed
 • Over 5 ZIL-157s observed
 — Presence of ZIL-157s was undetermined

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Table 27.
Electronics Vehicles by R Number and Plant
This table in its entirety is classified SECRET/NOINTEL

[illegible]

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This table in its entirety is classified SECRET//NF/NTEL

[illegible]

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Table 29.
Electronics Vehicles by Chassis, Van Body Type, and Plant
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[illegible]

Table 30.
Antennas, Dishes, Screens, and Radars by Name and Plant
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Plant	Antenna (in Antenna) Sections	ADRI 15	BEEF CAN SAIL	Dish	Dish	Dish	Dish	Dish	Cable Spool (dished)	PARK DRIVE Dish	Dome	Dome	PHONO RST	RAD 1120	RAD 90	Reflector	Reflector	Reflector	Screen	QU-EL-04 Screen	Trough	TRIM BOX	BLACK NET/BLACK TRAP	BARI LOCK	FLAN WHEEL	LONG TRACK	ODD GROUP (QU-EL-00)	ODD PAIR	PAT HAND	SPEL 01 TEST	SIDE NET	SPOON RST A	SPOON RST C	SPOON RST D	STONE CAKE	TRIM SKIN B		
Almalyk																																						
Dnepropetrovsk																																						
Gorkiy 197																																						
Gorkiy Radar																																						
Irkutsk																																						
Krasnovorsk Radio																																						
Krasnovorsk TV																																						
Kursk																																						
Leningrad																																						
Lianozovo																																						
Lipzala																																						
Mosk																																						
Novosibirsk																																						
Omsk																																						
Orel																																						
Podolsk																																						
Rostov																																						
Slavgorod																																						
Sverdlovsk																																						
Vladimir																																						
Voronezh																																						
Yoshkar-ola																																						
Zaporozhye																																						

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25X1
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Table 31.
Electronics Vans and Trailers by Name and Plant
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[illegible]

Table 32.
Electronics Trailers by Axle and Configuration and Armored Personnel Carriers by Plant
This table in its entirety is classified SECRET.WNINTEL

Plant	M-1974 ACIV	BTR-60	BTR-60PB	BTR-60/70	BTR-70	Und APC	1 axle Gun	Und 1 axle Gun	2 axle Gun	2 axle Small Gun	2 axle Medium Gun	2 axle Leaf topped Medium Gun	2 axle Small Trl	2 axle Medium Trl	2 axle Flat topped Medium Trl	2 axle Cable roofed Medium Trl	2 axle Leaf topped Medium Trl	2 axle 3 window Medium Trl	Und 2 axle Medium Trl	2 axle Large Trl	2 axle 3 window, Large Trl	2 axle 7 window, Large Trl	Und, 2 axle Large Trl	Und 2 axle, 8.2m win	Und Flat topped 2 axle, 8.2m Van	Und Chamber roofed 2 axle, 8.2m Van
Alma-ata	x	x		x	x	x	x	x								x							x			
Dnepropetrovsk						x																				
Gorkiy 197							x					x							x							
Gorkiy Radar																										
Irkutsk																				x						
Krasnoyarsk Radio																										
Krasnoyarsk TV	x								x											x						
Kursk										x							x									
Leningrad											x															
Lianozovo														x											x	
Liepaja								x																		
Minsk																					x					
Novosibirsk										x	x															
Omsk																										
Orel						x			x					x												
Podolsk						x															x					x
Rostov																										
Slavgorod						x					x															
Sverdlovsk				x				x	x						x		x				x					x
Vladimir						x				x																
Voronezh									x																	
Yoshkar-ola	x																									
Zaporozhye												x		x			x				x	x			x	x

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REFERENCES

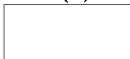
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MAPS OR CHARTS

DMA. US Air Target Chart, Series 200, Various Sheets, scale 1:200,000 (UNCLASSIFIED)

(S) Comments and queries regarding this report are welcome. They may be directed to 
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