Wisa
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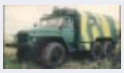

I'm not a spy, I walk around

73N6ME "Baikal-1ME" - an automated control system of the control gear ZRBR (rp)

On July 16, 2006 at 12:23:13 pm

73N6ME "Baikal-1ME"

automated control system for the command post of the anti-aircraft missile brigade (missile regiment)

Designed for automated control of the combat operations of the anti-aircraft missile brigade (regiment, compound), which is armed with anti-aircraft missile systems (SAM) S-300, Buk of all modifications and anti-aircraft missile systems (SAM), S-200, S-75, C -125 of all modifications, as well as for managing the KP air defense missile system "Polyana – D4" of all modifications and short-range air defense systems "Tor", "Tunguska" through the KP "Rankir" and controlling the electronic warfare AKUP-1, AKUP-22 and KP Iap "Rubezh -1M)".

Solved functional tasks:

- the distribution of targets in real time between subordinate anti-aircraft missile systems (air defense systems, air defense systems) and the issuance of target designations on them according to targets, taking into account their type and importance;

- coordination of hostilities of subordinate anti-aircraft missile systems taking into account the general air situation, condition and ammunition of subordinate weapons;

- reception, processing, display and documentation of information on the status and actions of subordinate anti-aircraft missile systems;

- receiving, processing, displaying and documenting information about the air situation from subordinate sources of radar information, automated target designation systems for subordinate anti-aircraft missile systems, superior, neighboring KP and air-based radar systems;

- interaction with command posts of neighboring anti-aircraft missile brigades (units) and guidance points for fighter aviation units (regiments);

- Autonomous and comprehensive (in conjunction with other means of ZBD) training staff.

Composition of interacting objects:

- a higher command post equipped with KSA: "Universal – 1E", "Polyana – D4M1";

- neighboring air defense systems equipped with KSA "Baikal – 1E", "Baikal – 1ME", "Senezh – ME", "Polyana – D4M1" - up to 2;

- sources of radar information (up to 3) equipped with KSA "Niva – E", "Foundation – 1E", "Foundation – 2E", "Foundation – ZE", "Mezh – M", "Osnova – 1E", "PORI– P1 "," PORI – P2 "," Field – E "," Field – ME ", radar with track output.

Managed Funds:

- SAM: S-Z00PMU, S-Z00V, Buk, S-200 - up to 5;

- SAM: S-Z00PMU, S-75, S-125 - up to 12;

- KP: "Rank", "Polyana – D4 (M, M1)" - up to 3;

- KP EW: AKUP – 1, AKUP – 22 - to Z;

- Interactive guidance point IA equipped with KSA "Boundary – 2 (M)", "Horizon" –1.

THE ACCOUNTING SYSTEM "BAIKAL – 1ME" INCLUDES:

- combat control cabin;

- power supply system;

- an autonomous power supply system installed on the chassis of the combat control cabin;

- communication cabin and spare parts;

- additional display facilities in various configurations (stationary or mobile options);

- antenna FL-95.

MAIN CHARACTERISTICS

The number of simultaneously processed air objects - 120

The number of simultaneously controlled air defense systems - 7

The number of simultaneously managed air defense systems - 24

The number of shooting channels - 255

Number of workstations - 5 (9)

Work limits:

in range, km - 1200

in height, km - 102.4

in speed, km / h - 9212

Reduction time, min. - 3

Target distribution cycle, s - 3

Number of data transmission channels:

duplex type - 14

simplex type - 4

type "tuff" - 12

Source: Vko.ru

Last Edit: October 23, 2012, 09:03:23 pm by Yary

Recorded by

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Re: 73N6ME "Baikal-1ME" - an automated control system for the control gear of air defense missile systems (RP)
" **Answer # 1:** September 21, 2012, 04:41:03 pm"

73N6ME "Baikal — 1ME" ("Seliger")

automated control system

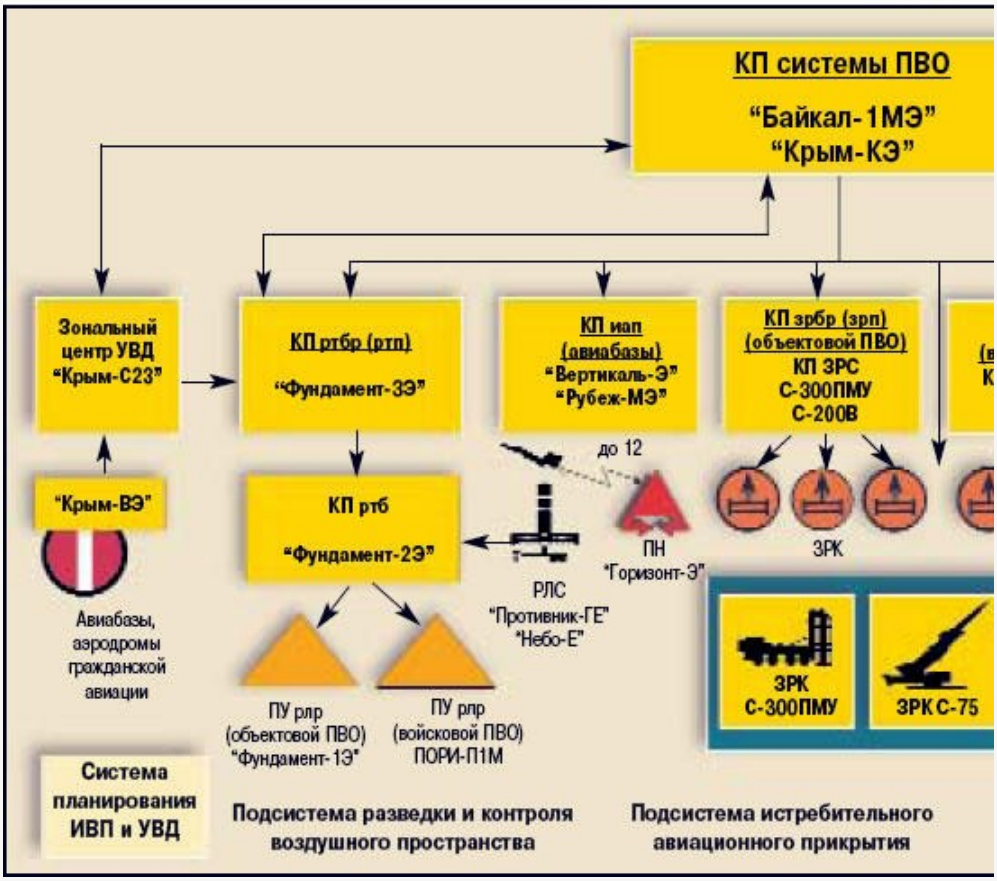
PURPOSE
The automated control system (ACS) 73N6ME "Baikal-1ME" is designed to control the operations of the anti-aircraft missile brigade (anti-aircraft missile regiment), and can also be used to control the connection (grouping) of air defense.

DEVELOPMENT AND PRODUCTION
The Moscow Scientific Research Institute of Instrument Automation developed and tested the modernized control system 73N6ME (ACS "Baikal-1ME"). The system is a further modernization of the automated control system of the Baikal-1E anti-aircraft missile brigade.
ACS "Baikal-1ME" is intended for automated control of the combat operations of the anti-aircraft missile brigade (anti-aircraft missile regiment), and can also be used to control the connection (grouping) of air defense.
During the modernization of the KSA "Baikal-1ME", the hardware of the complex was transferred to a new element base, and the software was transferred to the environment of basic secure information technologies with the expansion of combat capabilities.
Moreover, the development of new software was carried out using a single automated system for archiving a software product and a compilation system for specific software complexes.
KSA "Baikal-1ME" implements new combat control algorithms that adapt to the nature of the actions of enemy air assets and to a change in ground conditions. To correctly take into account the terrain, state border (line of contact) and ground conditions, digital maps are used in planning and in combat control.
Improving the validity of decision-making by operational personnel at various stages of military operations in the KSA is ensured by the automated solution of a set of informational, reference, informational and computational tasks, as well as tasks of evaluating the combat capabilities of a guided air defense group.
Depending on the configuration of the air defense group, the quantity, composition of weapons and the tasks performed by the group, the Baikal-1ME automated control system can be used as a KP of the air defense sector, KP of an air defense brigade or KP of an anti-aircraft missile brigade (anti-aircraft missile regiment).

TECHNICAL DESCRIPTION
ACS "Baikal-1ME" is supplied in two versions:
- mobile
- stationary.
The 73N6ME automated control system (Baikal-1ME code) implements new combat control algorithms.
The automated control system "Baikal-1ME" provides the solution to the following tasks:
- coordination of hostilities of subordinate anti-aircraft missile systems and systems, aviation and electronic warfare systems, taking into account the general air situation, condition and available ammunition;
- receiving, processing, displaying and documenting information about the status and military operations of subordinate assets;
- receiving, processing, displaying and documenting information about the air, ground, chemical, meteorological conditions from subordinate sources of radar information, automated target designation systems for subordinate anti-aircraft

missile systems, superior and neighboring airborne control and radar means;
- the distribution of aerodynamic and ballistic targets in real time between subordinate anti-aircraft missile systems (air defense systems, air defense systems) and the issuance of target designations for them according to goals, taking into account their type and importance;
- automatic allocation of sectors of responsibility of active assets at the initial stage of work and a change in their distribution in the process of repulsing a strike of IOS;
- interaction with command posts of neighboring air defense groups, CP anti-aircraft missile compounds (parts), CP fighter aviation regiments (air bases) and aviation guidance points;
- Conducting autonomous and comprehensive (together with other air defense systems) training exercises;
interaction with KSA air traffic control.

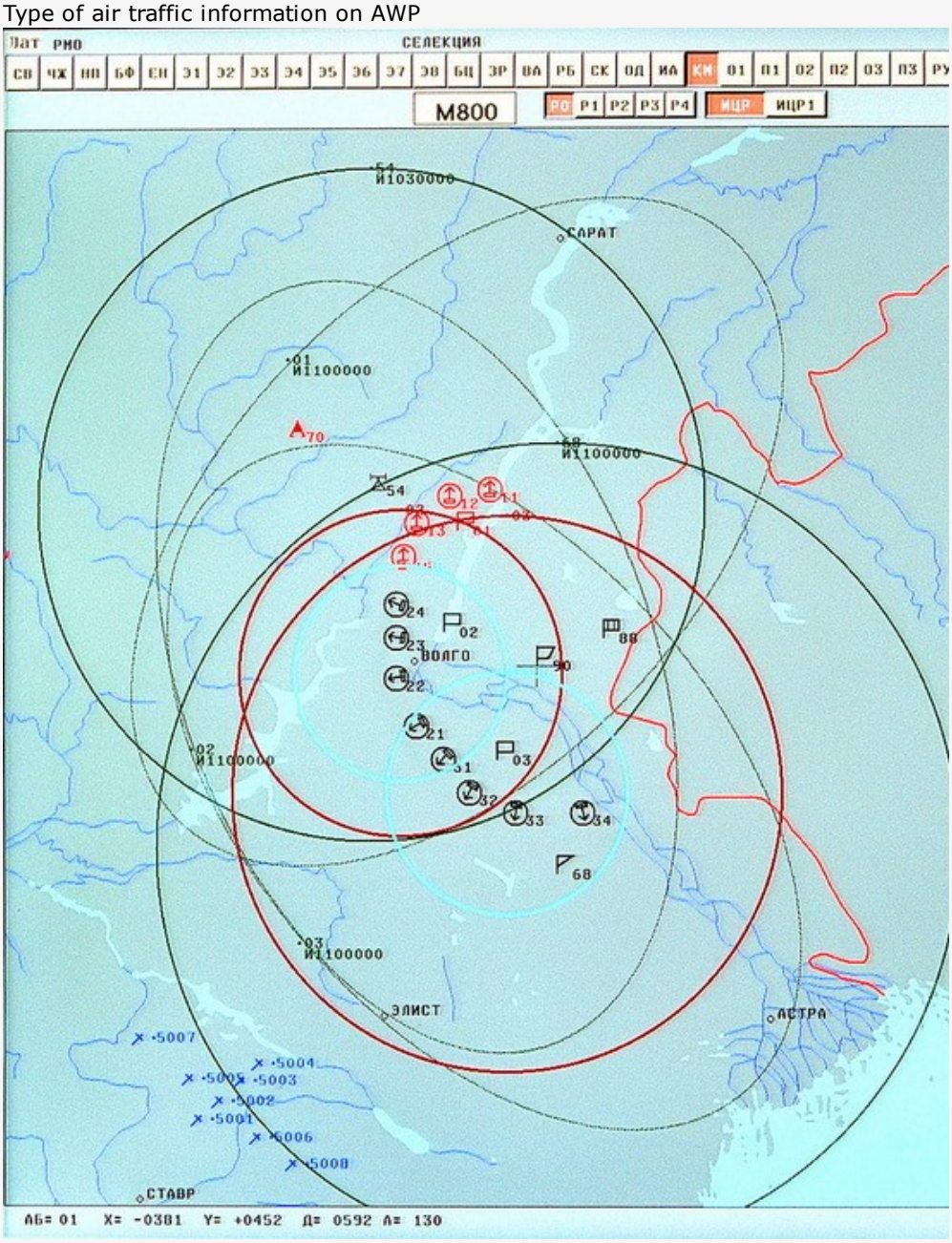
Рис.1. Структур
при прим



The main characteristics of the ACS "Baikal-1ME"
The Baikal-1ME automated control system provides simultaneous automated control of anti-aircraft missile brigades (regiments), the control gears of which are equipped with the automatic control systems Baikal-1ME, Vector-2VE, Polyana-D4M1, Senezh-E of all types.
The system provides automated control of the combat operations of air defense forces and assets as part of:
- eight anti-aircraft missile regiments (groups of divisions) of air defense, equipped respectively with anti-aircraft missile systems (SAM) of the S-200VE, S-300P type of all modifications (comprising up to 24 divisions (SAM) in any combination);
- eight anti-aircraft missile regiments of air defense, equipped respectively with anti-aircraft missile systems (SAM) S-200VE, S-300V, S-300P of all modifications, comprising up to 24 divisions (SAM) in any combination;
- eight anti-aircraft missile divisions of military air defense equipped with S-300V, S-300VM, Buk-M1-2, Buk-M2 air defense systems;
- three fighter aviation regiments (air bases) equipped with complexes of automation equipment (KSA) of the Rubezh-ME type;
- three battalions of electronic warfare equipped with automated complexes such as AKUP-1.
In addition, the system provides direct control of:
- Six anti-aircraft missile air defense divisions equipped with S-300P air defense

systems of all modifications;
- four unified battery command posts of the Rangir military air defense systems of all types, which control the short-range anti-aircraft missile systems like Tor, Tunguska, Strela-10 and their modifications;
- ten air defense systems S-75, S-125 of all modifications.
The automated control system "Baikal-1ME" provides a solution to the problems of controlling forces and air defense systems in time close to real.
The user interface is focused on minimizing the console operations required to change information models, call data, enter commands and reports.
The interacting objects are the neighboring air defense brigades, regional air traffic control centers, as well as the KP of air defense of neighboring states within the framework of the joint air defense system of the CSTO countries.

Type of air traffic information on AWP



The system provides the simultaneous reception and processing of information about 500 air objects from a higher command post, units and units of the Air Force air defense, equipped with control automation:
- one superior command post equipped with a KSA of the type Universal-1E, Polyana-D4M1, Baikal-1ME;
- one radio engineering brigade (regiment) equipped with a KSA of the "Foundation-3E" type;
- from two radio engineering battalions equipped with KSA of the "Foundation-2E" type;
- from three radar companies equipped with KSA "Foundation — 1E";
- from three radars having a track output of information about air objects;

- from one aircraft of a long-range radar watch for detection and guidance of type A-50;
- from eight CPs of managed regiments (groups of divisions, divisions) equipped with multi-channel air defense systems.

The system provides simultaneous automated interaction with control units and parts equipped with automated air defense control systems:
- with one superior command post equipped with a KSA of the type Universal-1E, Baikal-1ME, Polyana-D4M1;
- with two KP anti-aircraft missile brigades (regiments) of the air defense of the Air Force "Baikal-1ME", "Vector-2VE", "Senezh-E" of all modifications and anti-aircraft missile brigades of the military air defense "Polyana-D4M1", "Bastion-3E";
- with two control centers of fighter aviation regiments (air bases) and guidance points of the type "Rubezh-ME".

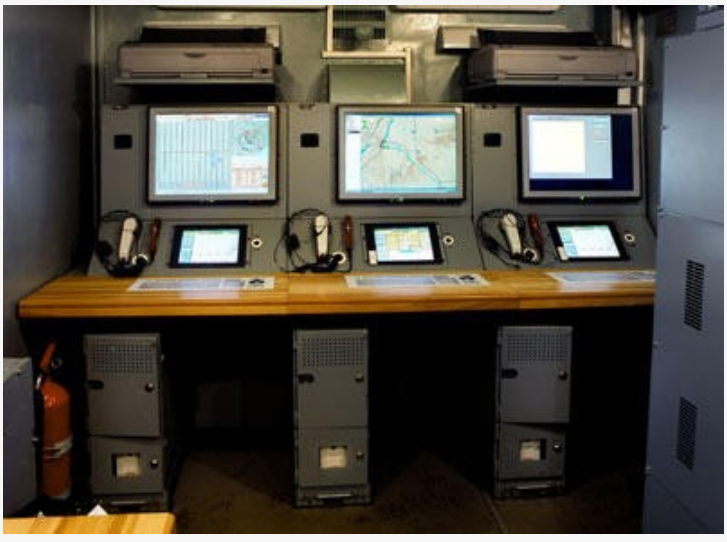
Options and scope of delivery

ACS "Baikal-1ME" is supplied in two versions:
- mobile
- stationary.

The mobile version includes:
- combat control cabin (KBU) 87S6ME
- and a display cabin (KO) 42L6ME with additional jobs.

The 87S6ME combat control cabin is designed to fulfill the functional tasks of the KP AS "Baikal-1ME" in full and includes five operator workstations.

The display cabin (KO) 42L6ME incorporates six additional operator workstations. It is delivered at the request of the customer. The jobs of the KO 42L6ME operators are identical to the jobs of the 87S6ME combat control cockpit and are combined into a single local area network.



Operator jobs (RMOs) are universal in their purpose, which allows them to perform the functional duties of combat crew from any workplace.
ACS "Baikal-1ME" can be used as a command post of an air defense brigade, a command post of an anti-aircraft missile brigade (anti-aircraft missile regiment), or a command post (air defense group (group)).
In the application of the automated control system "Baikal-1ME" as the automatic control system of the air defense brigade or automatic control system of the air defense connection (grouping), the 42L6ME display cabin is supplied with the aim of increasing the total number of RMO to 11 (with the possibility of increasing).
The equipment is housed in a unified sealed box body of a modular design type KK6.2 with an integrated power supply system and a filter-ventilation unit (FVUA-100A-24). Autonomous operation of the equipment can be provided by an industrial network with a voltage of 380 V or from a diesel generator with a power of 15 kW.
Internal dimensions of a body, (mm):
length - 5500;
width - 2400;
axis height - 1800;
side wall height - 1350.
The mobile units are equipped with a life support system that provides protection against dust and chemical pollution, the ventilation system operates in a recirculation mode without using outside air, and a KAMAZ-6350 multi-purpose vehicle with an 8x8 wheel arrangement is placed on the chassis (the transport base can change upon request).
The mobile automated control system "Baikal-1ME" is transported on its own, as well

as by rail, air and water.
The stationary version includes 11 operator workstations with the possibility of increasing to 32 RMO and is deployed in an engineering-prepared room with a total area of about 30 square meters. m. The functional purpose and characteristics of the equipment used in the stationary and mobile versions are the same and in case of failure of the stationary air defense CP, the mobile version of the Baikal-1ME automated control system can be used.
The stationary set of the automated control system "Baikal-1ME" is delivered in packaging and transported by rail, road, air and water.
The equipment is housed in a unified sealed body — a van of modular design with an integrated power supply system and a filter-ventilation unit.
The scope of delivery of ACS "Baikal-1ME" includes:
a) the main scope of supply:
- combat control cabin (KBU) 87S6ME;
- a set of operational documentation.
b) additional scope of delivery:
- display cabin (KO) 42L6ME with additional workplaces;
- set of mounting parts.
The 87S6ME combat control cabin is designed to fulfill the functional tasks of the Baikal-1ME automated control system in full with an operational staff of five people.
The composition of the control cabin 87S6ME:
a) computer complex (VK), which includes:
- central computing complex (CVC);
- control device for data exchange (USOD);
- Communication device management (CSS);
b) a switching station (product 15E1383 — SK — 87S6M) intended for use as a terminal, transit and transit-terminal station in a communication network. The switching station (SC) provides:
- work in analog, digital and analog-to-digital communication networks;
- providing users with dial-up channels;
- automatic channel matching to users on the network;
- the integration of switching, channeling and the formation of fiber-optic and electrical communication lines;
- automatic reservation of communication subsystems;
- product layout for the specific requirements of the communication center;
- the formation of types of channels and paths:
- four-wire PM channels;
- asynchronous digital channels with a data transfer rate of 48 kbit / s;
- channels for operation at the RS232 interface;
- synchronous digital channels and paths with a transmission speed of 2048 kbit / s;
- fiber-optic linear paths with signal rates of 2048 and 8448 kbit / s for operation on single-wire and multi-wire optical cables;
- electric linear paths with a signal transmission rate of 8448 kbit / s for operation on an electric cable;
- telegraph channels;
- the possibility of forming two-wire subscriber lines for connecting telephones with pulse dialing.
c) product 31YU6ME intended for exchanging telecode and digitized speech information with S-300P air defense systems. Product 31YU6ME provides transmission and reception of telecode information in three types of communication:
- over the air;
- on standard tone frequency channels;
- over physical wired communication lines.
d) a set of equipment for the exchange of voice information (set 11Ya6ME), intended for the exchange of voice messages with the S-300P air defense system, which provides:
- five simultaneous voice communication channels in full and standby modes;
- sending selective and circular calls to subscribers;
e) five automated workstations designed for operators to perform functional tasks regardless of the physical number of the workplace.
f) a complex of operational command communication equipment designed for negotiating product operators with each other and with external subscribers with registration of negotiations.
g) LAN network switch - provides an Ethernet network environment connecting subscribers. All Gran-PS communication panels, external Gran-BVS communication

units, the KIMP PC system unit are connected to it;
h) the block of external relations "Gran-BVS" provides pairing:
- with standard tonal frequency channels in two and four-wire termination formed by analogue - transmission systems via cable and radio-relay lines;
- with digital channels at the junction of C1 — FL — BI;
- with telephone equipment;
- with two-wire automatic telephone exchanges with pulse and frequency dialing.
i) the radio station P-833B, designed to provide radio communications of ground control points with aircraft both in stand-alone use and as part of communication systems.
j) equipment of consumers of satellite navigation systems SN — 99, designed to measure current values of navigation parameters and current time using signals from satellite navigation systems GLONASS and NAVSTAR.
Many foreign countries have shown steady interest in the Baikal-1ME automated control system.
It is in demand for command and control of air defense units in neighboring countries when creating automated control systems for air defense forces based on the use of new Russian technologies.

TACTICAL AND TECHNICAL CHARACTERISTICS

SOURCES OF INFORMATION

- http://pvo.forum24.ru/?1-2-0-00000015-000-0-0-1343057076
- Photo: Anatoly Shmyrov

046une.jpg (24.9 KB, 400x330 - viewed 547 times.)

046unU.jpg (20.62 KB, 250x341 - viewed 3453 times.)

046uny.jpg (23.57 KB, 400x293 - viewed 3560 times.)

046unw.jpg (109.44 KB, 800x716 - viewed 3555 times.)

046unD.jpg (106.57 KB, 870x530 - viewed 3817 times.)

046unt.jpg (334.81 KB, 930x704 - viewed 3415 times.)

046unq.jpg (153.01 KB, 800x605 - viewed 707 times.)

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Do what you must, and whatever happens ...

Yary
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Veteran

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Re: 73N6ME "Baikal-1ME" - an automated control system for the control gear of air defense missile systems (RP)

" **Answer # 2:** October 19, 2012, 07:30:14 pm"

Automated control system (ACS) "Baikal-1ME" (Seliger)

Baikal 1-ME arms-expo.ru 1.jpg (167.57 KB, 475x340 - viewed 608 times.)

Baikal 1-ME arms-expo.ru 2.jpg (165.97 KB, 475x380 - viewed 607 times.)

Baikal 1-ME arms-expo.ru 3.jpg (257.14 KB, 475x581 - viewed 572 times.)

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