

APPROVED

804.АЖБА.22001-01 34

INFORMATION READING PROGRAM

«SOMExplorer»

Operator Manual

804.АЖБА.22001-01 34-2

20 sheets

2020

## **GENERAL**

The information reading program SOMExplorer is designed to read information registered by the electronic data storage unit – DSU-2-XX (in Russian abbreviation as БХД-2-XX hereinafter referred to as DSU).

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## **1 PURPOSE OF THE PROGRAM**

The SOMExplorer information reading program is intended for:

- copying information from the DSU-2-XX unit via a USB channel;
- copying information from the DSU-2-18 unit via an Ethernet channel;
- view memory status on Bad-block;
- cleaning memory;
- reading a binary copy.

## 2 PROGRAM INSTALLATION SOMEplorer

2.1 Turn on the PC (with the 64-bit operating system Windows 7, 10 and with Service Pack 1 (SP1) and higher, if there is no installed information reading program “SOMEplorer” - 804. АЖБА.22001-01, install it from the Flash-card: 804.AЖБА.22001-01 90.exe, according to the operator's manual: 804.AЖБА.22001-01 34-2.

2.2 Run the file 804.AZHBA.22001-01 90.exe, the main installer window will appear on the screen, as shown in Figure 1.



Figure 1 – The main installer window

2.3 To continue installing the program in the main window, click the “Next>” button, and a window should appear (Figure 2). Specify in the window the directory in which the program will be installed (by default, the directory C:\Program Files\SOM\SOMEplorer is selected).

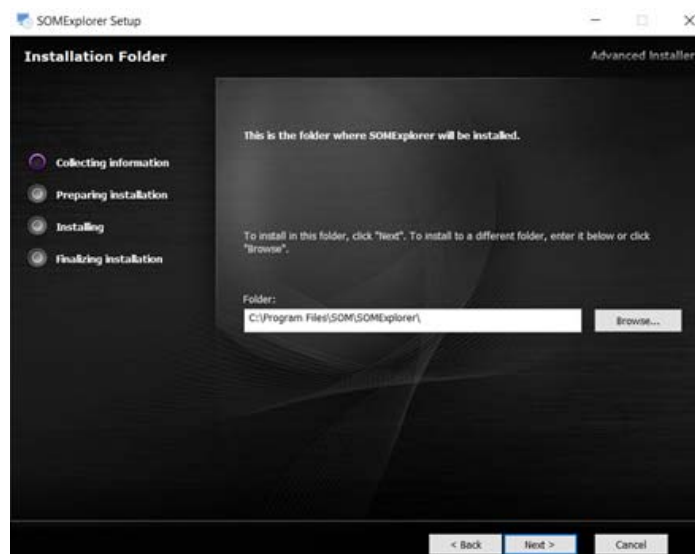



Figure 2 – Window for specifying the target directory

2.4 Click on the “Next>” button, and then on the “Install” button. The process of installing the program will go (Figure 3).



Figure 3 – Installation process

2.5 Then click on the “Next” button and the “Finish” button. As a result of installing the program, a shortcut will appear on the desktop , and the menu “Start->SOMExplorer” will appear on the menu.

### 3 COPYING INFORMATION FROM DSU-2-XX VIA A USB CHANNEL

3.1 Connect aircraft's regular harness of copying information to the USB port of PC (see TC №205 MM of DSU-2-450S).

**WARNING: WHEN USING THE REGULAR HARNESS OF COPYING INFORMATION, THE USB CONNECTOR MUST BE CONNECTED TO THE PC ONLY WHEN ON AN AIRCRAFT THE DSU POWER SUPPLY IS OFF.**

In this case, it is not required to use a separately executed harness of copying information АЖБА6.641.008 with disconnecting the X1 connector on the DSU. If it is necessary to work with DSU which was dismantled from an aircraft, a separately manufactured harness АЖБА6.641.008 is used (see TC №204 MM of DSU-2-450S).

On the desktop, click on the shortcut  or select the SOMExplorer main screen shown in Figure 4 in the SOMExplorer main menu.

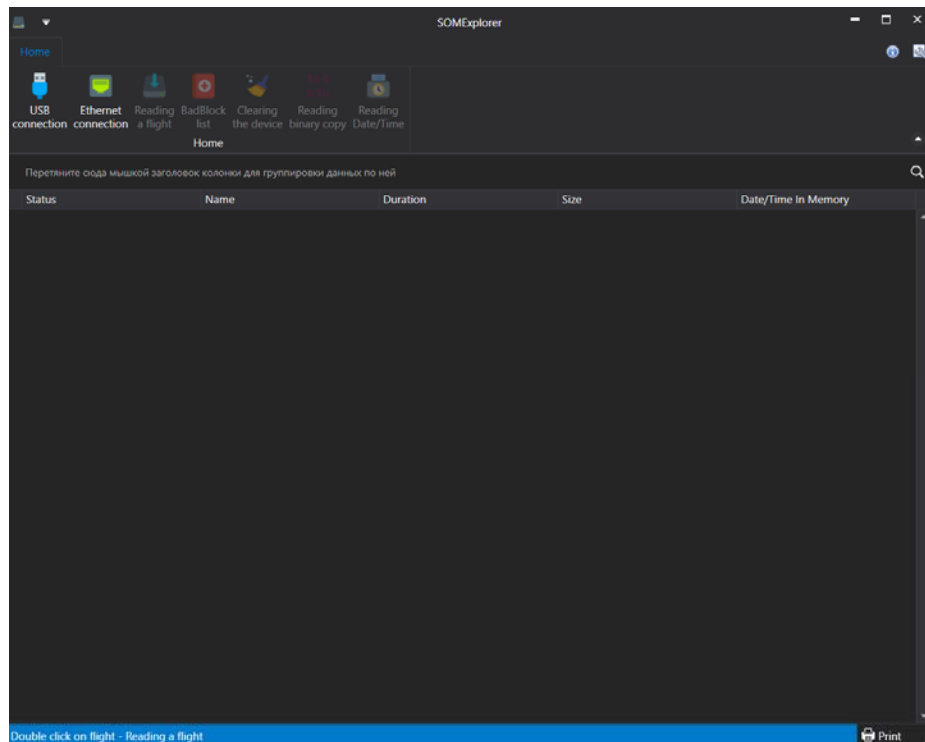

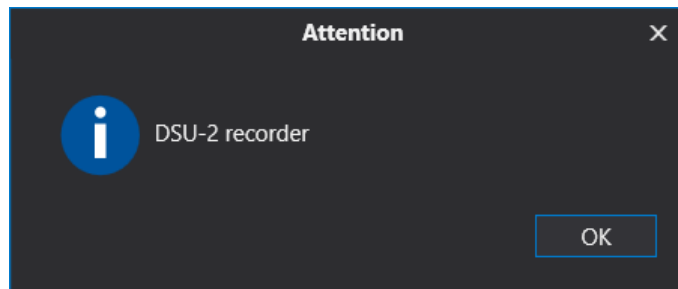


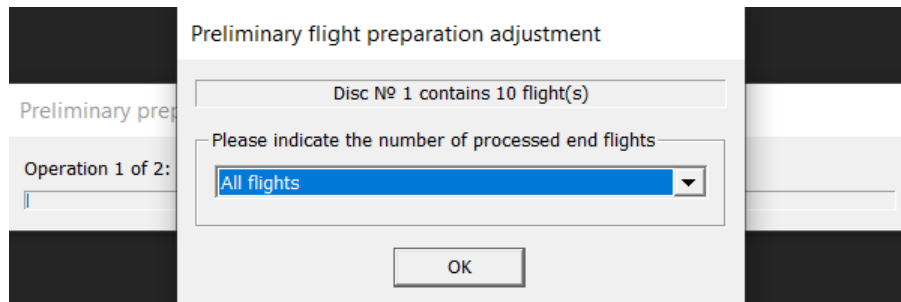
Figure 4 – The SOMExplorer Home Screen



3.2 Click on the  button for all modifications of the DSU, the window of the connected device will be displayed.



3.3 Click on the OK button. The “Pre-flight preparation” window will appear, in which the number of ultimate flights being processed will be indicated and then confirm with the button “OK”.



3.4 The flight list shown in Figure 5 will be displayed

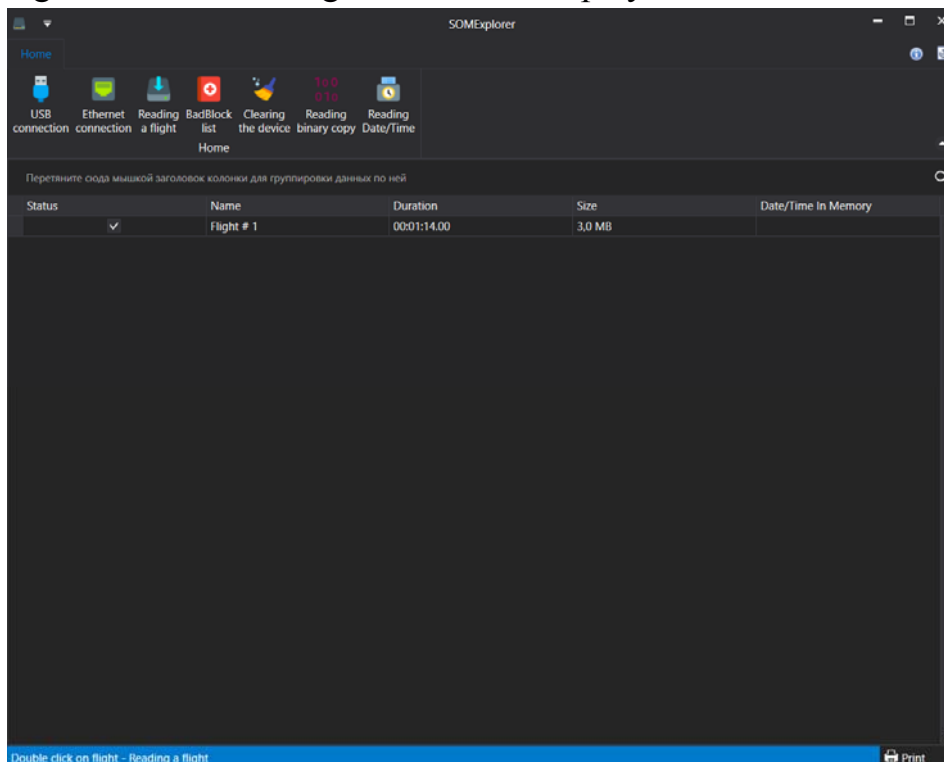
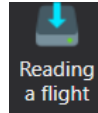
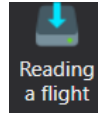


Figure 5 – Flight list recorded in DSU





3.5 Select a flight and press the  button or double-click the left mouse button on a flight to request a parameter description file, where you must specify the path to the file location, for example, with the name “DSU-2-450T.bop” (select the required parameter description file on the supplied Flash-card) and click the "Open" button. You can read all flights recorded in the memory of DSU-2-XX, for this you need to hold down the "Ctrl" key and select all flights with the left mouse button.

3.6. The “Additional Information” window will appear, shown in Figure 6.

Additional information

Please indicate additional information about the flight

Block name: Not specified	Aircraft name: Not specified
Aircraft Not specified	Block Not specified
Aircraft's serial number: Not specified	Date of 21 May 2020
Time of creation: 17:32:01	Flight Not specified
"To": Not specified	"From": Not specified

OK Cancel

Figure 6 – Composition of the additional information window

3.7 Fill in the fields in the “Additional Information” window with the necessary data on the example of Figure 7 below.

Additional Information

Specify additional information on the flight

Unit name: DSU-2-450C	Plane name: UTL-450
Traffic number: 11111	Unit number: KBKP251015
Plane factory number: 22222	Date of creating: 02 May 2020
Time of creating: 16:39:20	Flight number: 33333
To: Not specified	From: Not specified

OK Cancel

Figure 7 – Example of filling in additional information

Click the OK button. A file with the extension (\*.2rz) is generated. This file name can be renamed as desired (for one flight). If several flights were read, then the file names will have their own names, which can be renamed after reading.

3.8 Select a folder to save this file (s) or create a new one using the "Create Folder" button and click the "Save" button. The reading of the flight (s) shown in Figure 8 will begin.

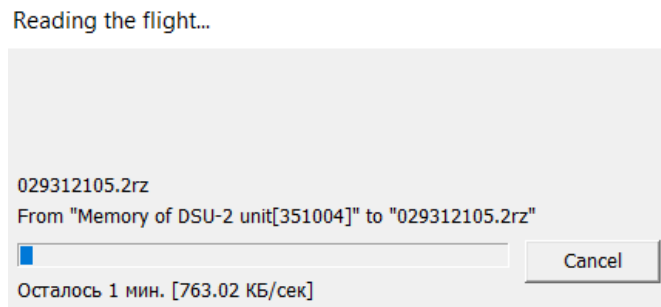


Figure 8 - The process of reading the flight (flights)

3.9 Disconnect the regular harness of copying information from the PC USB port and close the program.

## 4 COPYING INFORMATION FROM DSU-2-18 VIA AN ETHERNET CHANNEL (only for units equipped with this function)

4.1 When Windows 7 is installed on the PC, click the "Start" button and select "Control Panel". Then select "Network and Internet" (Figure 9).

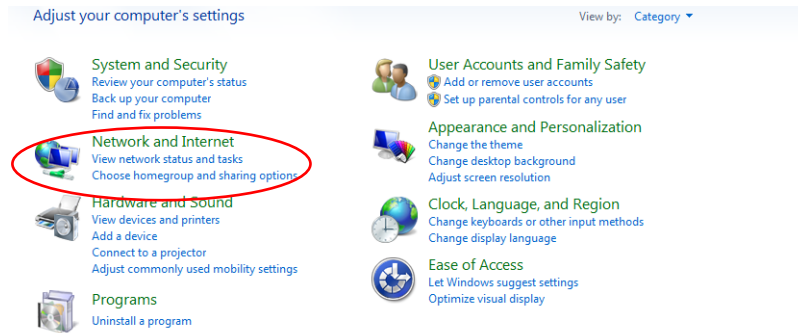


Figure 9 - "Network and Internet" window

4.2 In the window that appears, select the item "View network status and tasks" (Figure 10).

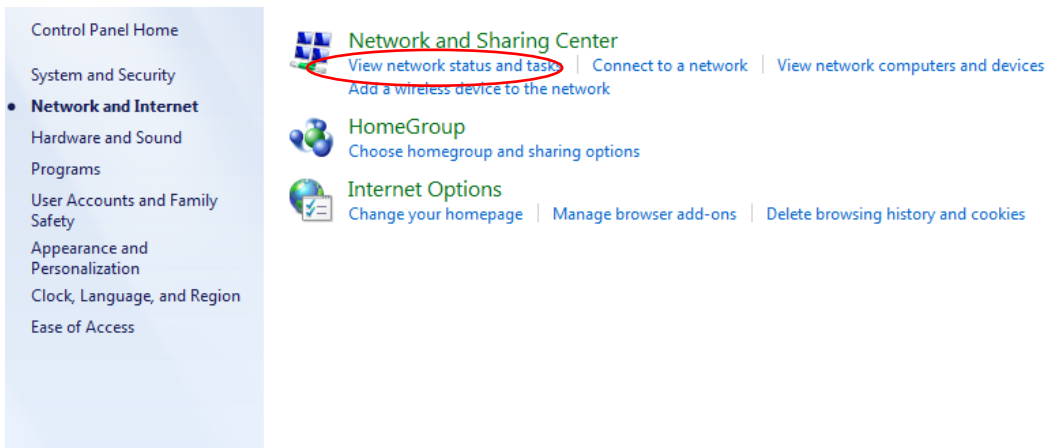


Figure 10 - The "View Network Status and Tasks" window

4.3 Next, select "Change adapter settings" according to Figure 11.

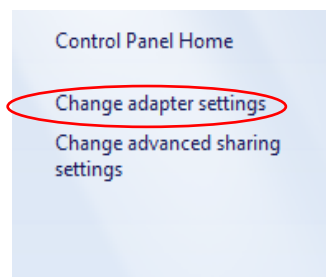


Figure 11 - "Change adapter settings" item

4.4 Right-click on the “Local Area Connection” icon and click on the “Properties” button.

4.5 In the window that opens, uncheck the box next to Internet Protocol Version 6, then select Internet Protocol Version 4 (TCP / IPv4), click the "Properties" button according to Figure 12.

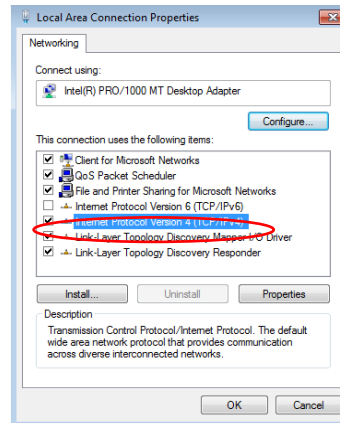


Figure 12 - Internet Protocol Selection Window

4.6 Put a checkmark “Use the following address” and fill in these fields highlighted in red corresponding to the example shown in Figure 13 and click “OK”. If it would already be registered there, then you need to change the IP and subnet mask of the computer in Windows 7 - the old one to the new one.

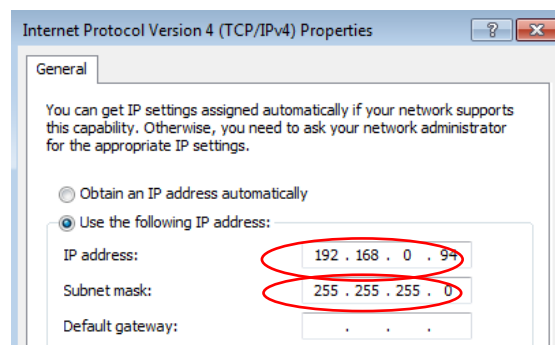


Figure 13 - An example of filling in the fields

Setup is completed.

4.7 With Windows 10 installed on your PC, you need to go into network connections. To do this, press the key combination Win + R and enter the command shown in Figure 14. Then click the “OK” button.

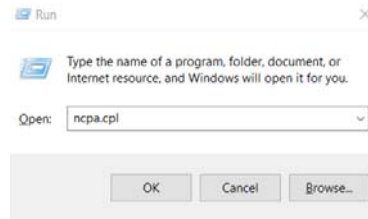


Figure 14 - A window for entering a command

4.8 In the list of connections, select Ethernet and right-click on it. In the drop-down menu, select "Properties", enter the window shown in Figure 15.

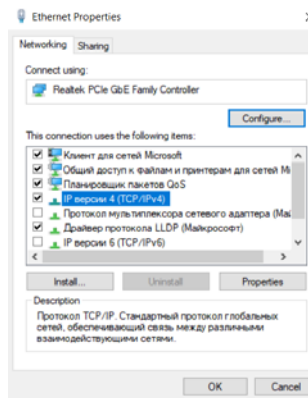


Figure 15 - Ethernet Property Window

4.9 In this window, select the “IP version 4 protocol” item and click the “Properties” button. Put a checkmark “Use the following address” and fill out these fields highlighted in red corresponding to the example shown in Figure 16 and click “OK”. If it would already be registered there, then you need to change the IP and subnet mask of the computer in Windows 10 - the old one to the new one.

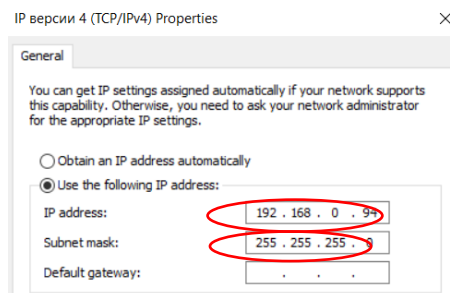




Figure 16 - An example of filling in the fields  
Setup is completed.

4.10 Connect the АЖБА6.641.020 harness to the control connector in the airplane cockpit and to the Ethernet connector, and then apply + 27V power to the unit.

4.11 On the desktop, click on the shortcut  or select in the SOMExplorer main menu the SOMExplorer main screen shown in Figure 4 will be displayed and press the  button. The flight list shown in Figure 17 is displayed.

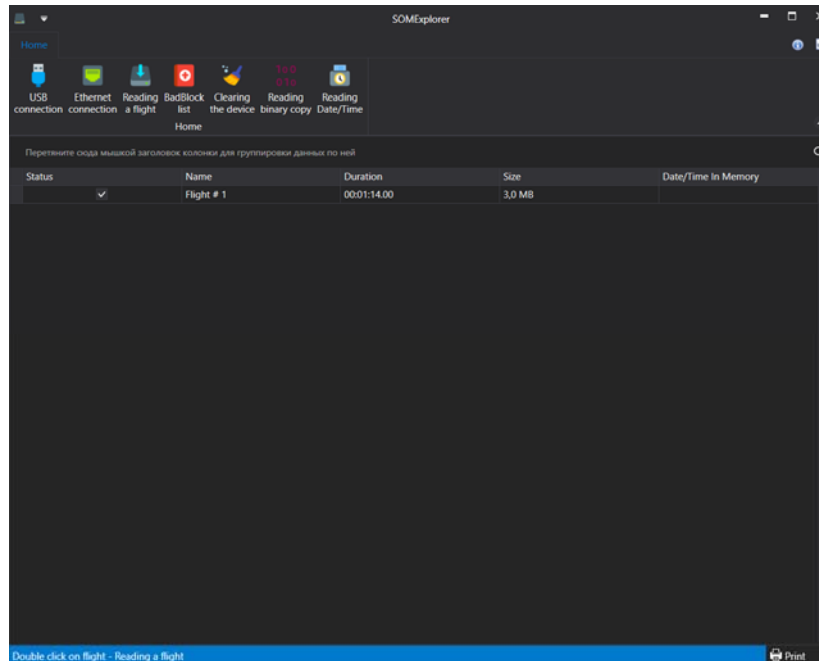
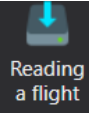
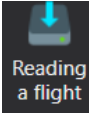


Figure 17 - List of flights recorded in BCD

4.12 Select a flight and press the  button or double-click the left mouse button on a flight to request a parameter description file, where you must specify the path to the file location, for example, with the name “DSU-2-18.bop” (select the required parameter description file on the supplied Flash-card) and click the "Open" button or by double-clicking the left mouse button on a flight, a request for the parameter description protocol is called up, you must specify the path to the location of the protocol with, for example, the name "DSU-2-18.bop" and click the "Open" button. You can read all flights recorded in the memory of DSU-2-XX, for this you need to hold down the "Ctrl" key and select all flights with the left mouse button.

Press the  button, then the request for the parameter description file is called up, where you need to specify the path to the file location, for example with the name “DSU-2-450C.bop” (select the required parameter description file on the supplied Flash-card) and click the “Open” button.

4.13 The “Additional Information” window will appear, shown in Figure 18.

Additional information

Please indicate additional information about the flight

Block name: Not specified	Aircraft name: Not specified
Aircraft: Not specified	Block: Not specified
Aircraft's serial number: Not specified	Date of: 21 May 2020
Time of creation: 17:32:01	Flight: Not specified
"To": Not specified	"From": Not specified

OK Cancel

Figure 18 – Composition of the additional information window

If necessary, fill in the fields in the “Additional Information” window with the necessary data on the example of Figure 19 below.

Additional information

Please indicate additional information about the flight

Block name: DSU-2-18	Aircraft name: AN-124
Aircraft: 111111	Block: KBKP351002
Aircraft's serial number: 222222	Date of: 22 May 2020
Time of creation: 15:31:48	Flight: 33
"To": Not specified	"From": Not specified

OK Cancel

Figure 19 – Example of filling in additional information

4.14 Click the OK button. A file with the extension (\* .2rz) is generated. Select a folder to save this file and click the "Save" button. Reading of the selected flight will begin. The speed and process of loading data is presented at the bottom of the window.

Speed: 117,28 kb/s Data loading 0,4 Double click on flight - Reading a flight

After reading the flight, a message appears stating that the flight has been saved according to Figure 20 below.

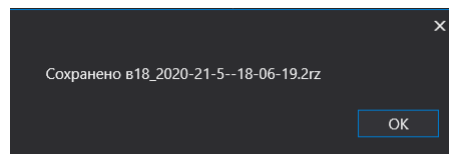
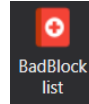
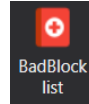


Figure 20 - Flight Preservation Message

## 5 SCAN MEMORY FOR BAD-BLOCKS



5.1. To view the memory status, press the  button. The window shown in Figure 21 will be displayed.

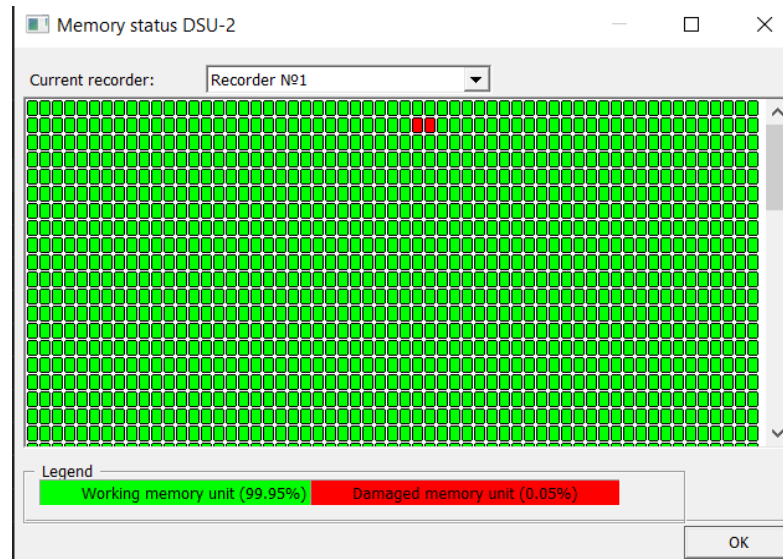



Figure 21 - The memory window of the block

5.2 The maximum allowable number of Bad Block should not exceed 10%. If the number of Bad Block is more than 10%, this DSU must be returned to the DSU supplier (manufacturer) for repair..



## 6 CLEANING THE MEMORY OF DSU-2-XX

6.1 To clear the memory of the DSU-2-XX, you must press the  button, after which the window with password entry shown in Figure 22 will be displayed (this password is provided upon request in a separate letter).

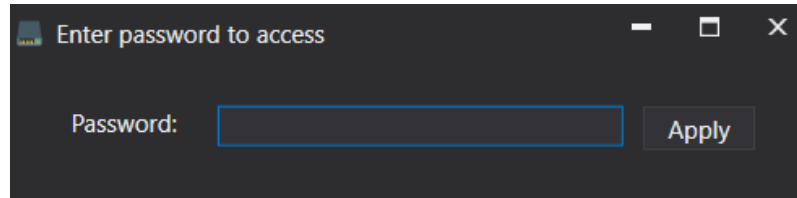


Figure 22 - A window for entering a password to confirm cleaning

6.2 Press the  button, the window shown in Figure 23 will be displayed.

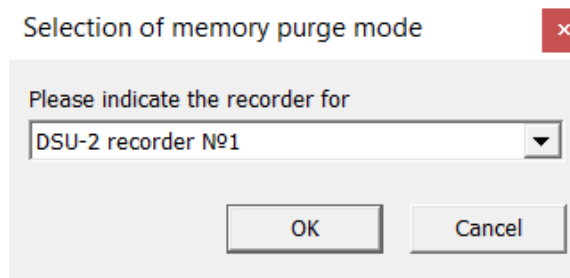


Figure 23 - Block memory selection window

6.3 Press the “OK” button, after that a message about “Confirmation” will be displayed (Figure 24).

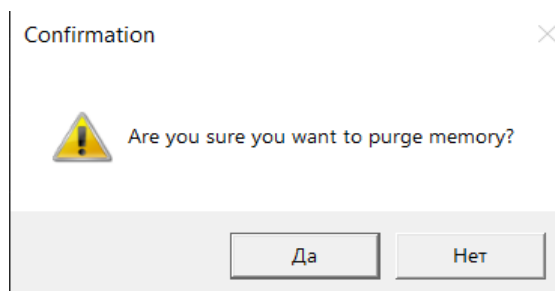


Figure 24 - Memory Clear Confirmation

6.4 After confirmation with the “Yes” button, the process of cleaning the DCU-2-XX memory begins.

6.5 When the memory cleaning is completed, the message shown in Figure 25 is displayed.

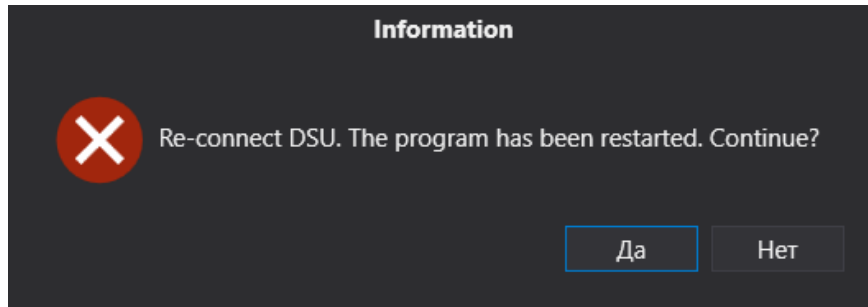

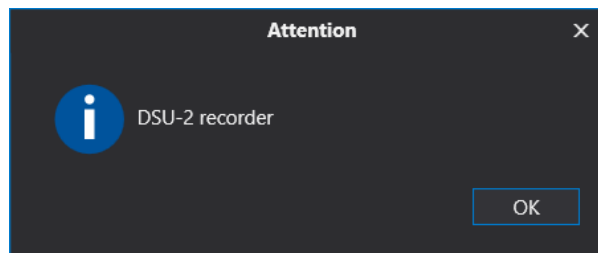


Figure 25 – DSU-2-XX Power Switch Message


6.6 Click the "Yes" button. Then remove and reconnect USB connector to PC. Enable the SOMExplorer program and press the  button, the window of the connected device will be displayed.



6.7 Click the OK button. The block memory must be empty.

## 7 READING A BINARY COPY

7.1. Reading a binary copy is carried out only on the recommendation of a representative of DB CD “KB KP”.

7.2 To read a binary copy, press the  button and select the address range shown in Figure 26.

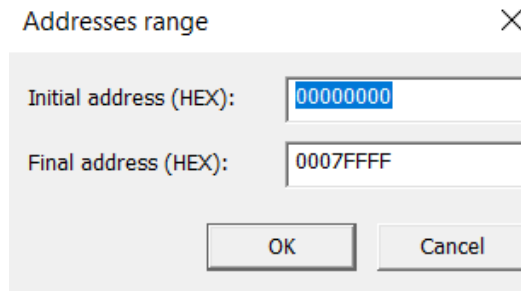


Figure 26 - Address Range

7.3 Press the “OK” button. Select a folder to save this file and click the "Save" button. A file with the extension (\*.bin) will be generated. The process of reading the binary copy shown in Figure 27 will go.

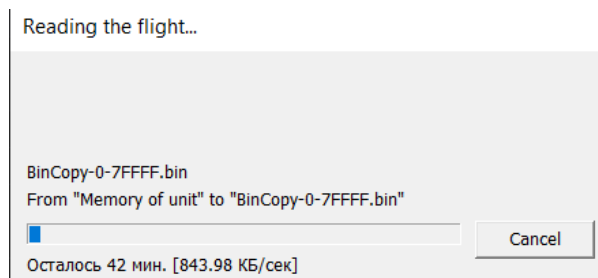

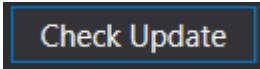


Figure 27 - The process of reading a binary copy

## 8 SOFTWARE SETTINGS

8.1 When you click on the  button, information about the developer will be displayed (Figure 28), and also there you can check the latest update; if you have Internet, you need to click on the  button.

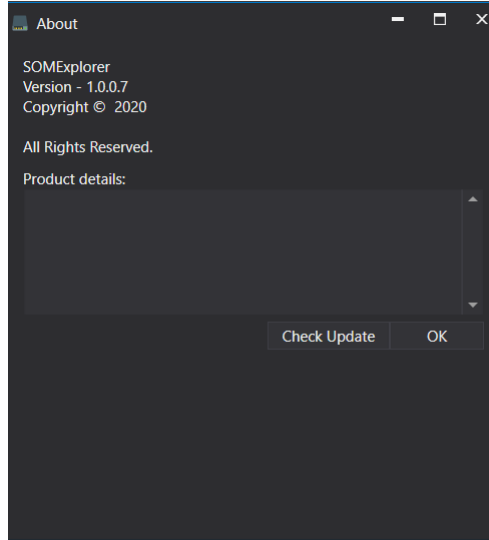


Figure 28 - Developer Information

8.2 If the developer has updated the program, then the process of comparing software versions will start and then update, shown in Figure 29.

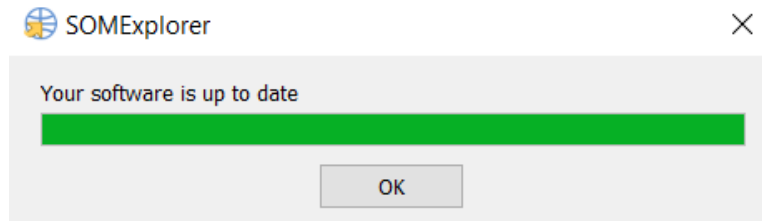


Figure 29 - The update process