

DOCUMENT READER
REGULA 70X4M.XXX-5A

User's Guide



FCC/Canada Radio Frequency Rules and Regulations

FCC Labeling for USA

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC ID: 2AOFE-7024M5A

ISED Labeling for Canada

This device contains license-exempt transmitter(s) / receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

IC code: 25676-70X4M5A

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Statement of compliance with safety standards:

The device complies with safety standards listed below:

IEC/EN/UL 62368-1, CSA 22.2. No 62368, IEC 62471, IEC 62479

OPERATING RESTRICTIONS

1. **ATTENTION!** CONSULT THIS USER'S GUIDE AT ALL STAGES OF DEVICE OPERATION.

2. When operating the device, do not remove any seals set by the manufacturer during the whole warranty period.

3. DO NOT SWITCH ON THE DEVICE IN CASE OF ITS MALFUNCTION!

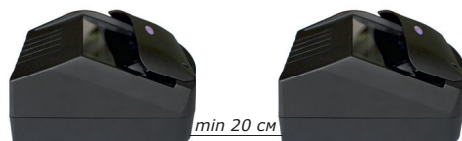
4. DO NOT PLACE ANY FOREIGN OBJECTS ON THE OBJECT GLASS OF THE DEVICE!

5. DO NOT USE THE DEVICE WHEN THE USB CABLE IS DAMAGED!

6. DO NOT DISMANTLE THE DEVICE AND ELIMINATE ANY MALFUNCTIONS OCCURRED DURING DEVICE OPERATION WITHOUT QUALIFIED ASSISTANCE.

7. Do not operate the reader if the object glass is dirty (see paragraph 3.3 of this User's Guide).

8. DO NOT OPERATE THE DEVICE AT A DISTANCE CLOSER THAN 20 CM TO OTHER RADIO-TAIL DEVICES INCLUDING SIMILAR DEVICES.



9. Changes or modifications not expressly approved by Regula Baltija, LTD could void the user's authority to operate the equipment.



This symbol means the product must not be as household waste, and should be delivered to an appropriate collection facility for recycling. For more information on disposal and recycling of this product, contact your local municipality service, or the shop where you bought this product.

CONTENTS

LIST OF ABBREVIATION	6
1 DESCRIPTION AND OPERATION	11
1.1 Device Function	11
1.2 Technical Characteristics	11
1.3 Delivery Set	12
1.4 Configuration and Operation	13
1.5 Marking and Sealing	15
1.6 Packaging	15
2 INTENDED USE	16
2.1 Operating Restrictions	16
2.2 Preparing the Device for Use	16
2.3 Device Use	18
3 TECHNICAL MAINTENANCE	20
4 SHIPPING, STORAGE AND UTILIZATION	22
4.1 Shipping	22
4.2 Storage	22
4.3 Recycling	22
5 MANUFACTURER'S WARRANTY	23
6 ACCEPTANCE CERTIFICATE	23
APPENDIX A. Device Calibration	24
APPENDIX B. Drivers Installation	26
APPENDIX C. Cover Replacement	27
APPENDIX D. Downloading Regula Document Reader SDK	29
APPENDIX E. Simplified EU Declaration of Conformity	30

LIST OF ABBREVIATION

SDK	- Software Development Kit
DR SDK	- Document Reader SDK
USB	- Universal Serial Bus
OCR	- Optical Character Recognition
MRZ	- Machine Readable Zone
VIZ	- Visual Inspection Zone
ISO	- International Organization for Standardization
PPI	- Pixels per inch – Image resolution
FDS	- Frontline Document System is a reference database, which contains pattern images of passports, identity and travel documents, driver's licenses and vehicle documents, as well as the data on the basic authenticity features of passports, IDs and travel documents, driver's licenses and vehicle documents at five levels of protection: printing design, ultraviolet 365 nm and 254 nm, infrared and special materials
PC/SC	- Personal Computer Smart Card Interface
ISO 7816	- ISO 7816-1,-2,-3,-4 Standards for ICC (Smart Cards)

This User's Guide (hereinafter referred to as the "Guide") applies to Regula 70X4M.XXX-5A Document Readers (hereinafter referred to as the "Device") intended for capturing full-page document images under white, infrared, ultraviolet and coaxial white light schemes,

The documents must meet ISO 7810 standard and be either of ID-1, ID-2 or ID-3 sizes

as well as for reading the text (OCR), graphic and biometric information from the document,

For documents with RFID-tags executed under ISO 14443A standard or for documents (Smart-cards) executed under ISO 7816 Smart Card Standard

verifying its authenticity features and transferring the obtained data to the user application.

The Document Reader "Regula 70X4M.XXX-5A" can be produced in one of the Modifications shown in table 1. The type of the modification is to be discussed with the Customer when preparing the sales agreement.

Table 1

Parametres Device modifications	White light	IR 870 nm	UV 365 nm	White coaxial	RFID reader	Smart- card reader
7004M.100-5A	•	•				
7004M.110-5A	•	•	•			
7004M.111-5A	•	•	•	•		
7024M.100-5A	•	•			•	
7024M.110-5A	•	•	•		•	
7024M.111-5A	•	•	•	•	•	
7034M.100-5A	•	•			•	•
7034M.110-5A	•	•	•		•	•
7034M.111-5A	•	•	•	•	•	•

This Guide contains the description of the Device structure, principle of operation, and operating rules.

The device (depending on the modification) along with supplied software can:

1. capture color images of a document with the resolution of 400 ppi, 470 ppi or 500 ppi under white, ultraviolet and white coaxial light and grayscale images under infrared light;

Supported graphic format: BMP, JPEG, JPEG-2000, PNG, TIFF

2. OCR of the data from MRZ of the documents under Doc 9303 ICAO and ISO 7501 standards: 2 lines of 44 characters, 2 lines of 36 characters and 3 lines of 30 characters;

3. evaluate MRZ print quality and verify its authenticity under Doc 9303 ICAO, ISO 7501, ISO 1831, ISO 1073-2 standards;

4. read 1D and 2D barcodes from a document image;

Supported bar-codes types: PDF-417, Codabar, Code 128, Code 39, Code 39 extended, Code 93, EAN-13, EAN-8, Interleaved 2 of 5 (ITF), Standard 2 of 5 (Industrial), Matrix 2 of 5, IATA 2 of 5 (Airline), UPC-A, UPC-E

5. identify the type and nationality of a document;

6. localize the holder's photo and signature (if any) of a document for the recognizable by the system types of documents;

7. OCR of the VIZ data from the documents, including non – ICAO standard documents;

8. read data from an RFID-chip under "Machine Readable Travel Documents. Technical Report. Logical Data Structure (LDS)" ICAO specification;

Supported access modes: Direct, BAC, EAC

Identification: Passive and Active

RFID-chip types: ISO 14443 types A and B

Data exchange rate: 106,212,424 or 848 Kbaud (asymmetric rates support)

9. read data from a contact Smart-card (under the control of Smart-card application);

ISO 7816 compatible, asynchronous (T0 and T1) smart cards are supported.

Data exchange rate: from 2 till 500 Kbaud

10. checking automatically the following authenticity parameters of the documents:

- UV-features:

- absence of luminescence of document material (UV dull paper check):
 - Blank Element
 - MRZ Element
 - Photo Element

- luminescence of UV protection fibers;
 - luminescence of UV patterns;
 - reading-out text luminescing under UV light and its comparison with the data retrieved from MRZ or VIZ (OCR Security Text).
 - IR-features:
 - MRZ printing contrast (IR B900 ink)
 - photo embedding type;
 - visibility or invisibility :
 - Blank Element
 - Filled-in document data
 - Photo
 - cross-checking of text data obtained from MRZ, VIZ, barcode, RFID-chip and Visa;
 - MRZ check-sums and MRZ completion accuracy;
 - IPI (invisible personal information) visualization
11. retrieve the specimens images and the description of a document from FDS information system database for comparative analysis (comparing with the scanned document);
 12. graphic interface **Readerdemo.exe**: English, Russian, Italian, Spanish, Lithuanian, Romanian, Arabic, Ukrainian, Latvian, French, Chinese, Polish.

The device works with the PC under the User application control and ensures the performance of functions, specified in **"Programmer's Guide. Document Reader"** and **"Programmer's Guide. RFID Reader"**

The User application intended for controlling the device must be developed on the bases of the libraries from the **Software Development Kits (SDK)** under the mentioned **Programmer's Guides**.

Test application **Readerdemo.exe** (see **"Test application (Readerdemo.exe)"**) is an example of the User application designed for testing the functions DR SDK and RFID SDK (supplied as a part of the DR SDK).

The user application design and organization of the user application interaction with the SDK software components are the exclusive responsibility of the Customer and is not described in this document.

Data reading-out from the contact Smart-cards is performed under the control of the Application, compatible with EMV CCS requirements for asynchronous smart cards and is not described in the present Guide.

PC minimal requirements:

- CPU: Intel Core i3 (Intel Core i5)
- OS: Windows 7 (Windows 10);
- RAM: 4 (8) GB;
- Video RAM: 32 (64) MB;
- Two USB 2.0 ports;
- HDD: 32 (120) GB.

Note:

optionally document reader can work under OS Linux.

The device is powered through the PC USB port.

The time required by the device for document reading and recognition may vary from 1 to 30 sec. It depends on several factors, such as:

- device modification,
- software settings concerning reading and authenticity verification,
- availability of RFID chip in a document and RFID chip characteristics,
- PC performance.

ATTENTION!

USE USB CABLE FROM THE DELIVERY SET ONLY
(2 CONNECTORS OF A TYPE AND 1 CONNECTOR OF B TYPE).

Only the user with the administrator's rights can prepare the PC for using it along with the device, install the software and test the device.

The customer must follow the safety rules adopted at the user's enterprise and the rules of this Guide.

1 DESCRIPTION AND OPERATION

1.1 Device Function

1.1.1 The device designed for capturing full-page document images under White, Infrared (IR), Ultraviolet (UV) and Coaxial white light schemes, for reading-out the text (OCR) and visual and biometric information from the document, as well as for verifying its authenticity features and transferring the obtained data to the user application.

1.1.2 Protection electric shock of the device corresponds to Class III by IEC 62368 (the device is protected from voltage or energy storage dangerous to life).

1.1.3 The device is intended for indoor use under the climatic conditions as follows:

- temperature – $-10...+50\text{ }^{\circ}\text{C}$
- relative humidity, max – 95 % (non-condensing)

1.1.4 The device is not intended for use in the fire risk and highly explosive conditions.

1.1.5 The protection class, ensured by the device body, corresponds to IP50 according to IEC 60529 regulations.

1.1.6 The device is not a measuring tool and is not subject to metrological testing and certification.

1.2 Technical Characteristics

The main technical characteristics are given in Table 2 below:

Table 2

Parameters and Characteristics	Parameter or Characteristic Value
Peak wavelength of the UV-light source, nm	365±3
Peak wavelength of the IR-light source, nm	870±10
Color of the visible light source, including coaxial	white (400–650 nm)
Viewing field, mm, min	128×88
Resolution in the viewing field 70X4M.XXX-5A, ppi	470 ±5 %
Frame size, Mpixels	5 (2592×1944 pixels)
Operating mode	continuous
PC interface	USB 2.0
USB-port supply voltage, V	5 ±5 %
USB-port supply current, A, max	0,95
RFID-tag reader parameters:	
RFID Frequency band, kHz	13 553–13 567
Antena max power	<60 dBuA/m@10m

Parameters and Characteristics	Parameter or Characteristic Value
RFID-tag reader parameters: Carrier frequency, MHz Supported standards Data exchange rate, Kbaud*	13,56 ISO14443 A/B 106, 212, 424, 848,
Smart card reader parameters: Supported standards: Data exchange rate, Kbaud Number of smart cards Smart cards type	ISO/IEC 7816-1,-2,-3,-4; EMV2000 4.1, Level 1 2-500 1 Asynchronous, T=0 and T=1
Weight, kg, max device device in packing (without a battery pack)	0,82 1,32
Dimensions of the device (without the cover), mm, max: 7004M.XXX-5A, 7024M.XXX-5A 7034M.XXX-5A	179×160×99 190×160×99

* – data exchange rate depends on the RFID-chip.

1.3 Delivery Set

Table 3

Document reader	1
USB cable 2A-B type*	1
User's Guide	1
Test-object 17.01.05	1
Test-object 17.01.05-01	1
Cover (small) 18.00.01	1
Software and documentation**: – User's Guide; – Document reader SDK; – Document reader Programmer's Guide; – RFID reader SDK; – RFID reader Programmer's Guide; – Test application (Readerdemo.exe) documentation.	1
Power Adapter/Universal Input: 90~264 V, 50-60 Hz (optional)***	1
Packaging 18.30.00	1

* – There are three (3) configurations of the cables: 1) 1,5 m (5 ft);
2) 1,8 m (6 ft) and 3) custom cable (specified by a customer).

** – Provided a link to the Internet resource.

*** – Power plug is supplied to be compatible with the standards
of the deployment region.

1.4 Configuration and Operation

1.4.1 Principle of operation

The device principle of operation is based on the conversion of document images captured under special lighting conditions into digital data, reading-out the RFID-tags and Smart-card data and subsequent data transfer to the PC for further processing.

1.4.2 Device configuration

The 70X4M.XXX-5A devices have similar form factors.

Modifications differ in the set of light sources, which can be added to the white light source (installed in all modifications), in-camera resolution (see Table 2), and in availability or absence of built-in units (see Table 1).

The device (fig.1 and 2) is produced in a plastic body **(1)**. An object glass **(2)** protected with a cover **(3)**, a clamp **(4)** for fixing documents, and indicator **(5)** of the device state, and the document processing results mounted on the top panel of the body **(2)**.

The device has an additional power supply socket **(6)**, a USB input socket **(7)**, and a HUB USB socket **(8)** located on the back panel.

Figure 1

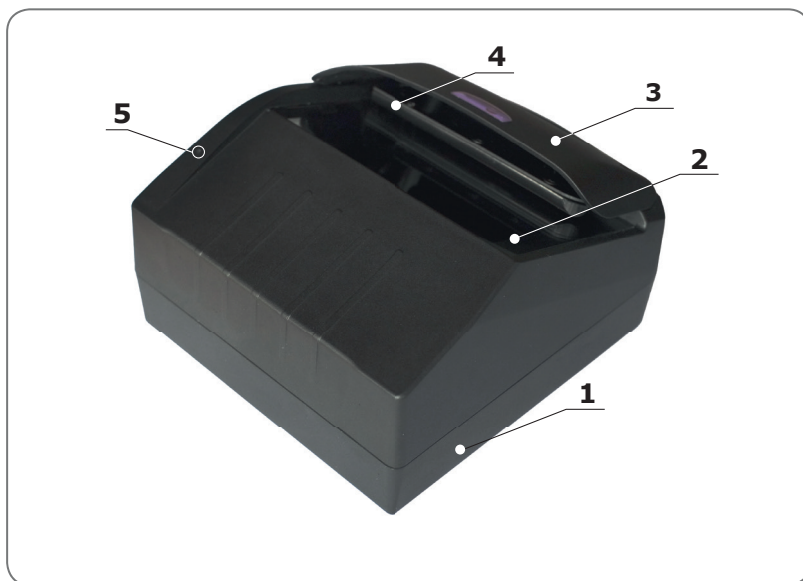


Figure 2



A standard USB cable (for connecting the device to a PC) can be connected to the socket (7).

ATTENTION!

When using socket 8 **it is obligatory** to connect an additional power supply source to socket 6.

The power supply source + 5V, 3A can be delivered by customer request.

If other power supply sources are used, the Manufacturer is not responsible for the device safety and operation.

The use of socket 8, when operating the device, may affect the device.

The RFID reader is inside the device. The read-out area covers both passport pages.

A smart-card reader (9) located on the back panel of the device body (fig.2).

1.4.3 Device Operation

Operating modes (illumination) of indicator (5) are set by User's application (see Programmer's Guide DR SDK, chapter 6.8).

The device works with the PC in two modes:

- standby mode;
- scanning mode.

After the device is connected to the PC, indicator **(5)** fig. 1 will come on Yellow or Orange (provided that the device driver is already installed; see paragraphs 2.2.3.1 and 2.2.3.2).

After the device and the SDK software is initialized (see paragraph 2.2.3.3), the device will switch to the standby **mode**, and indicator **(5)** fig. 1 will come on Green. When putting the examined document (up to the stop to the left and back panels) on object-plate **(2)** fig. 1, the document edge overlaps photoelectric sensor. A sensor signal goes off, and the device starts **scanning** that is shown by indicator **(5)** fig. 1 with Orange or Red. At this stage the device will capture the document image under specified lighting conditions, read the RFID tags data and transfer the data to the PC. After that, the data is processed by the software components DR SDK and depends on the functions specified by the User's application (Programmer's Manual for DR SDK, paragraph 6). When the document processing finished, the device switches to the standby mode, and indicator **(5)** fig. 1 changes to Red or Green depending on the reading/scanning results.

The scanning mode can be also initialized by the user application command.

Data reading-out from the smart-cards is performed to the corresponding application after the smart-card is inserted up to the stop into slot **(9)** of the device (fig. 2).

1.5 Marking and Sealing

The device marking meets IEC 62368 and contains:

- CE marking;
- manufacturer's name and/or trade mark;
- manufacturer's model identification;
- manufacturer name and address;
- the serial number of the device according to the manufacturer's numbering system;
- the symbol for nature of supply;
- rated power supply voltage, V;
- rated current consumption, A;
- "Made in Latvia" inscription;
- FCC ID number;
- IC ID number;
- The WEEE symbol.

1.5.2 The seal is located on the bottom of the device.

1.6 Packaging

The package ensures device safety during its transportation and storage.

2 INTENDED USE

2.1 Operating Restrictions

2.1.1 The device must be used under the requirements specified in paragraph 1.1 of this Guide.

2.1.2 DO NOT USE THE DEVICE WITH A USB CABLE, DIFFERENT FROM THE SUPPLIED.

2.1.3 DO NOT SWITCH ON THE DEVICE IN THE CASE OF MALFUNCTION.

2.1.4 DO NOT DISMANTLE THE DEVICE AND CLEAR DEFECTS ARISEN DURING ITS USE WITHOUT ASSISTANCE.

2.1.5 Strictly observe the electric and fire safety rules when operating the device.

2.1.6 Do not remove the manufacturer's seals from the device parts during the warranty period.

2.1.7 Do not use the device in case it is not calibrated (see Appendix A), or its object-plate is dirty (paragraph 3 of this Guide).

2.1.8 Do not use the device closer than 20 cm (8 inches) from any light-emitting devices, including similar devices.

2.1.9 When operating the device, take measures to prevent condensation on the object-glass. When placing the device to a room with a higher temperature, keep it in this room for two-three (2-3) hours before its operation.

2.1.10 Do not use any additional power supply sources except for those that are supplied by the manufacturer.

2.2 Preparing the Device for Use

2.2.1 Safety measures

Strictly observe the requirements of paragraph 2.1 when preparing the device for use.

2.2.2 Putting the Device into Operation

1. Open the package, take out the device, and check the device completeness under paragraph 1.3.

2. Ensure the device has no mechanical damages, and the object-plate **(2)** is clean (fig. 1).

2.2.3 Preparing the Device for Operation

2.2.3.1 Adjusting the PC for operation with the device:

- 1) turn on the PC under the manufacturer's documentation;
- 2) load the OS and Log in as the PC Administrator;

- 3) make sure the PC hardware and software configuration meets the requirements specified in the Introduction of this User Guide;
- 4) install missing software components, if necessary (see Appendix B);
- 5) Download **Regula Document Reader SDK.exe** from the Internet resource (see Appendix D), run the installation file, and following the instructions of Installation Wizard install the device software (the device camera driver, Document reader SDK, RFID reader driver, and RFID SDK).

2.2.3.2 Preparing the Device for use

1. Perform the operations specified in paragraphs 2.2.2 and 2.2.3.1.
2. Connect the device to the PC using the USB cable. Connect two (2) sockets of A type of the cable from the delivery set to the PC, then connect the socket of B type of the same cable to the device. A message on detecting new devices on the USB bus and the Hardware Installation Wizard window will appear on the PC monitor; the system will start installing drivers automatically.
3. Wait until the Installation Wizard is finished and make sure indicator **(5)** comes on Yellow or Orange, which indicates that the installation of the device driver is successfully installed to the PC (Appendix B).

2.2.3.3 Testing the device operation

1. Prepare the PC and the device for operation under the instructions specified in paragraphs 2.2.3.1 and 2.2.3.2.
2. Start **Readerdemo.exe** application using the shortcut on the desktop;

All operations with the Test Application must be performed under the instructions specified in the "**Test Application (Readerdemo.exe)**" documentation (see *Document Reader SDK\Doc\Test Application (en).pdf* in the SDK installation folder – by default C:\Program Files\Regula);

3. Initialize the device and make sure that in 10-15 seconds, indicator **(5)** colors will change to Green, indicating that the initialization is successfully completed.

CAUTION:

During device initialization **Readerdemo.exe** checks conformity of the device firmware version and **Document Reader SDK** version . If necessary Readerdemo.exe offers to update device firmware.

4. Scan the document. Place the document on object-plate **(2)** fig. 1 *up to the stop to the left and back panels*. The device will switch to the *reading mode* for 1-3 seconds, and the document image will be displayed in the application window.

The data from the Smart-Card embedded in the document will be read automatically if the corresponding applications of the Test application **Readerdemo.exe** are selected.

5. In case the color rendering is distorted, calibrate the PC display chromaticity under the manufacturer's instructions.

2.3 Device Use

2.3.1 The device must be controlled by the Test application **Readerdemo.exe** or by the User application developed on the basis of the Document reader SDK libraries according to the instructions of the **Programmer's Guide** (see **Doc\Programmer's Guide (en).pdf** in the SDK installation folder) and the RFID reader SDK according to the instructions of the **Programmer's Guide** (see **Doc\Programmer's Guide (en).pdf** in the SDK installation folder).

2.3.2 The customer is responsible for developing the user application and ensuring its interaction with DR SDK and RFID SDK software components.

2.3.3 Order of the Device Use

1. Start the PC and the device for operation under the instructions specified in paragraphs 2.2.3.1 and 2.2.3.2. If operating the device at the temperature lower than +5 C°, to avoid condensate precipitation on the device object-glass the PC must provide continuous supply for its USB-ports ("Green USB" mode must be deactivated).

2. Load the user application and initialize the device. Calibrate the device, if necessary.

3. Select the scanning mode: automatic (the scanning cycle starts automatically when the document overlaps photoelectric sensor) or manual (the scanning cycle begins on the user application command).

4. Set necessary scanning modes.

5. Read the document information by placing the document on object-plate **(2)** fig. 1 *up to the stop to the left and back panels*.

CAUTION:

ENSURE A STATIONARY POSITION OF THE DOCUMENT ON THE DEVICE OBJECT-PLATE DURING THE WHOLE SCANNING CYCLE, I.E. WHILE INDICATOR 5 (FIG. 1) IS FLASHING OR -ANGE OR RED.

6. To read the data from the smart-card do the following:

- run the corresponding application;
- insert the smart-card up to the stop into slot **(9)** with contact spaces turned to the device (fig. 2);

- perform the actions specified in the corresponding application.

2.3.4 Finishing the Device Operation

- 1) Close the user application;
- 2) Turn off the PC or disconnect the device from the PC, if necessary.

3 TECHNICAL MAINTENANCE

3.1 Technical maintenance and repairs of the device must be carried out by the manufacturer's specialists or the authorized organizations.

3.2 DO NOT DISMANTLE THE DEVICE OR CLEAR THE DEFECTS ARISEN DURING ITS USE WITHOUT ASSISTANCE.

3.3 Maintenance

3.3.1 The owner is responsible for device maintenance.

3.3.2 At least once per day (or as far as the object-plate needs cleaning) the owner must wipe the external surface of the device body with a soft cleaning cloth moistened with alcohol or special tissue paper for cleaning PC monitors;

3.3.3 Maintenance: Remove dust and dirt from the external surface of the body and object-plate with sprays of compressed air for optical devices (Defender CLN 30802, Fellows FS-99795, FIS F-1007S MICRO DUSTER , etc.), as well as with a soft cloth (that does not leave fluff) moistened in alcohol or with specialized tissues for screen cleaning (wet or dry).

3.3.4 Do not wipe plastic parts with acetone or other solvents not mentioned in paragraphs 3.3.3 and 3.3.4.

3.4 Device Calibration

3.4.1 The device does not require calibration as it is calibrated by the manufacturer. The calibration data is stored in the NVRAM of the device.

3.4.2 It is recommended to calibrate the device at least once per 6 months (see Appendix A) to compensate for possible changes in light conditions when scanning the documents.

Signs of failure	Possible reason	Repairing methods
1. When initializing the device, the message "Remove the document" appears on the PC screen	Failure of the sensor of document presence	Remove the document, if it is on the desktop
		Remove dust and dirt from the object-plate surface and particularly in the zone of the sensor of document presence (paragraph 3.3)
		If serviceability is not restored, switch on the document video detection mode.

Signs of failure	Possible reason	Repairing methods
2. The device does not detect the document placed up to the stop of the left and back panels of the desktop	Autoscanning mode is switched off	Switch on the autoscanning mode
	The document has a protective cover which affects the proper positioning of the device	Take off the protective cover
	A document corner is either folded or torn	Start the scanning cycle manually

4 SHIPPING, STORAGE AND UTILIZATION

4.1 Shipping

4.1.1 The device must be transported in the manufacturer's package.

4.1.2 The device can be transported by any covered vehicles except sea transport and at any distance, provided that the rules adopted for a selected mode of transport are observed. In case the device is transported by air, it shall be stored in hermetic and heated compartments.

4.2 Storage

4.2.1 The device must be stored in the manufacturer's package in the locations under the following conditions:

- air temperature, °C: -25...+50;
- relative air humidity, %, max.: 95 (non-condensing).

4.2.2 The air of the location where the device is stored must not contain corrosive or active substances.

4.3 Recycling

4.3.1 When the device serviceability expires or its operational capability is lost, the device must be recycled under the rules adopted at the user's enterprise, provided that the safety measures are observed.

4.3.2 The persons who passed the briefing on industrial safety are allowed to recycle the device.

4.3.3 The industrial wastes obtained as a result of the device recycling are considered to be non-dangerous.

5 MANUFACTURER'S WARRANTY

5.1 The warranty period is **12 months** and can be extended up to **60 months** from the date of sale.

5.2 Storage period is ____ months from the date of manufacturing.

5.3 The average lifetime of the device is seven (7) years.

5.4 The device lifetime determined by the manufacturer is true only if the terms of use, operation, storage, and transportation of the device are observed by the customer. The device actual lifetime may exceed the lifetime determined by the manufacturer provided that the device is used in accordance with the rules of operation.

5.5 Authorized service centers can perform preventive maintenance and defining operational device capability. Preventive maintenance and diagnostics are carried out by service centers for a free.

5.6 The manufacturer does not recommend using the device after its lifetime expiry without preventive maintenance at an authorized service center, as in this case, the device may be hazardous to the health or property of the customer.

6 ACCEPTANCE CERTIFICATE

(to be completed by the manufacturer)

Document Reader Regula 70_4_ _ _ - _ _

Nº _____

(serial number)

Seal

Address for mailing claims with regard to the quality of the device:

«Regula Baltija» Ltd.
97, A. Pumpura Street, Daugavpils,
Republic of Latvia, LV-5404,
Phone: +371 654 31 299
Fax: +371 654 31 290
E-mail: regula@regula.lv
Web: www.regulaforensics.com

APPENDIX A

Device Calibration

A.1 The device calibration is intended for ensuring both accurate color rendering of the object on the scanned images and software compensation of the document lighting unevenness and symmetrical distortions.

A.2 Calibration procedure

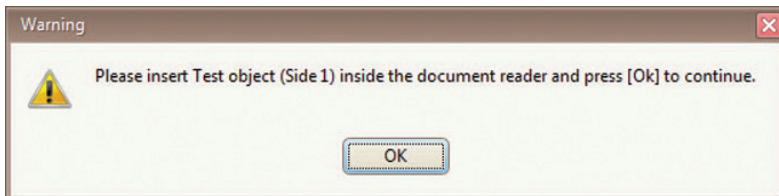
1) Prepare the device for operation according to paragraph 2.2.3.

2) Execute DR SDK command **RPRM_Command_Calibration** (see Programmer's Guide, paragraph 6.5) in User application or execute Test Application Readerdemo.exe menu command **"File\Device\Calibrate..."** (see "Test Application (Readerdemo.exe)" documentation). Operation order.

Note:

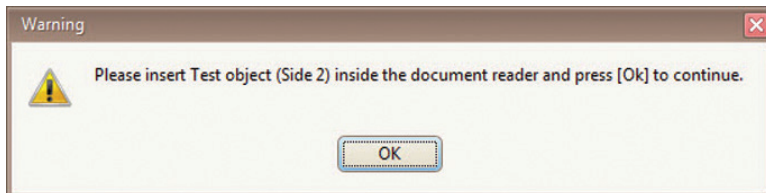
If this is the first calibration to be performed, Document Reader SDK will automatically display request for calibration.

3) After DR SDK dialog window is displayed



place **"Test-object Side 1"** (with its white side downwards to the glass) on the reader object-plate up to the stop against the left and back panels. Press "OK" button.

4) After DR SDK dialog window is displayed



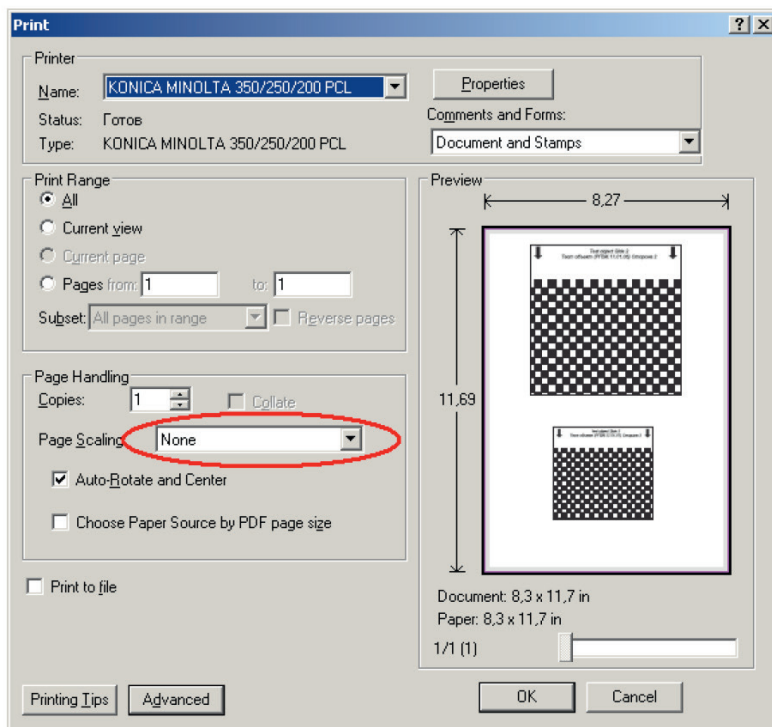
place **"Test-object Side 2"** ("chess board") on a reader objectplate up to the stop against the left and back panels. Press "OK" button. In case **"Test-object Side 2"** is not included in the delivery set (device had been purchased before DR SDK version 4.0 was released), make it on your own.

For this purpose:

a) print out the **"test object #2.pdf"** file from the folder **C:\Program Files\Regula\Document Reader SDK\Doc** on a thick white paper sheet using a **laser** printer.

Note:

Before printing it out, make sure the page scaling mode is switched off.



b) cut out **"Test-object Side 2"** (**** **17.01.05**) along the marked lines.

APPENDIX B

Drivers Installation

After installation of the Document Reader SDK (paragraph 2.2.3) the device drivers will be located in the catalog C:\Program\Files\regula\Drivers.

B.1 RFID-reader Driver Installation

After installation of the Document Reader SDK, connect the document reader to the USB-port of the computer. The OS will detect a new device "Regula RF-reader" and automatically install its driver.

B.2 Camera Driver Installation

After the Document Reader SDK is installed, connect the document reader to the USB-port of the computer. The OS will detect a new device and will automatically install its driver.

Restart your PC if the system requires it after the driver's installation.

B.3 Installation of Smart card reader's driver

Before running the application for contact smart-card operation, install the PC/SC driver of the smart-card reader. Each computer requires the driver installation only once when you prepare your PC to operate with 7034M.XXX-5A. To install the PC/SC driver of the smart-card reader, please, perform the following actions:

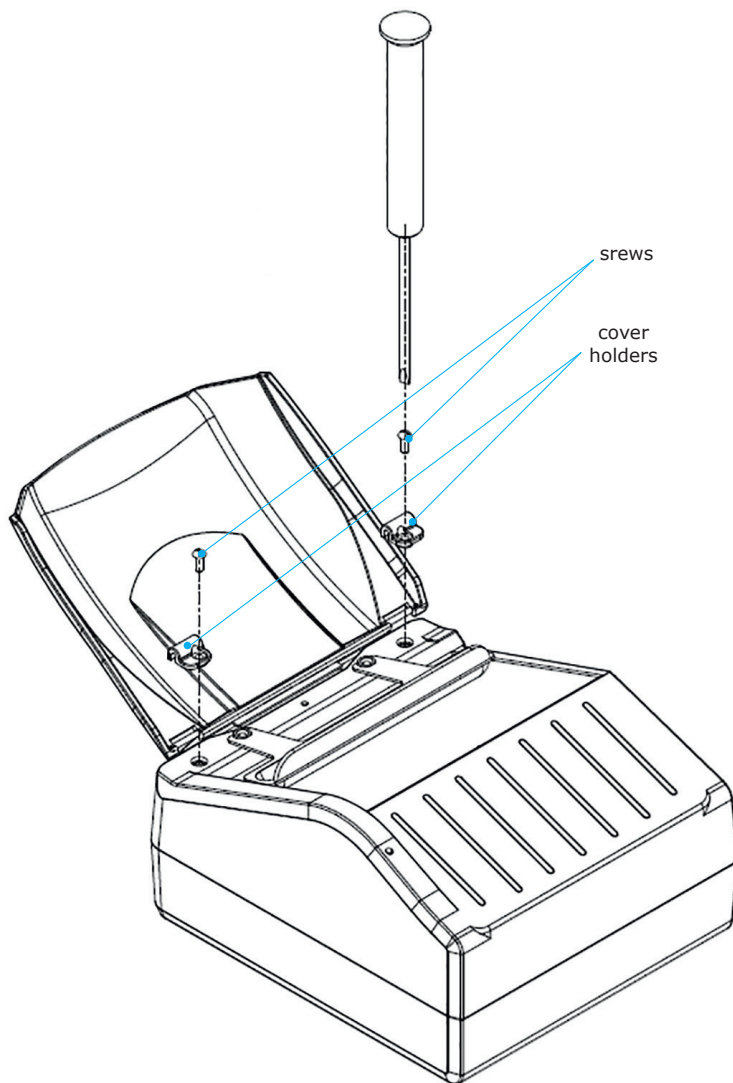
- 1) Insert the device USB cable into the PC. Windows operating system will automatically start searching and installing the PC/SC driver.
- 2) After the driver is installed, open "Start"->"Control panel"->"System"->"Equipment"->"Devices manager" and make sure the Smart Card to read the device is available in the Manager's window.

APPENDIX C

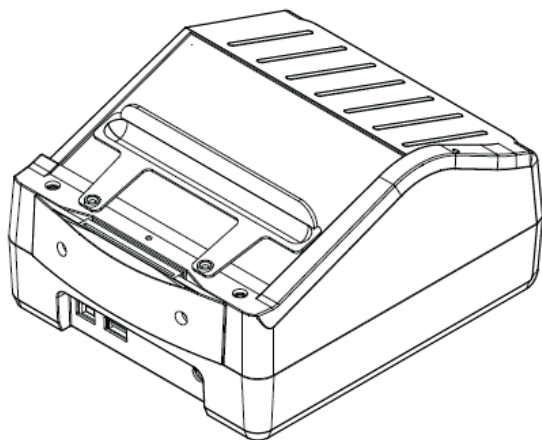
Cover Replacement

Replacement of the device large cover with the small one:

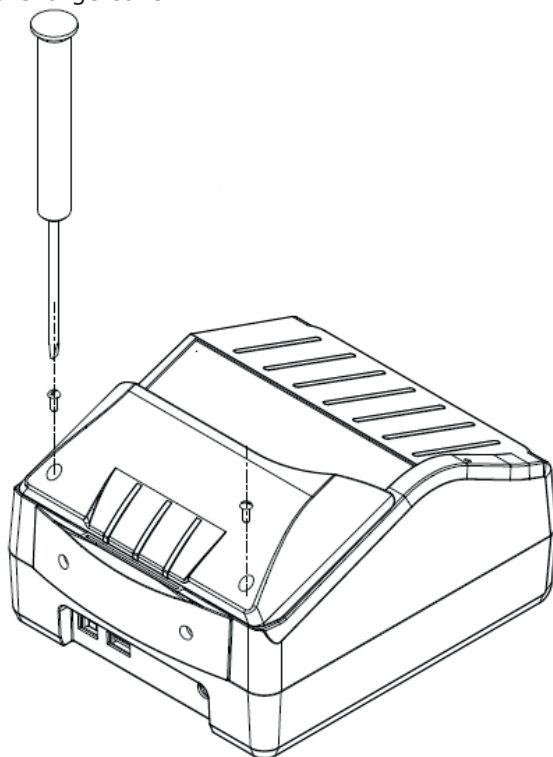
- 1) raise the large cover and remove the two screws;



- 2) take off the cover and cover holders;



- 3) install the small cover RGVI 18.00.01 and fix it using the two screws of the large cover.

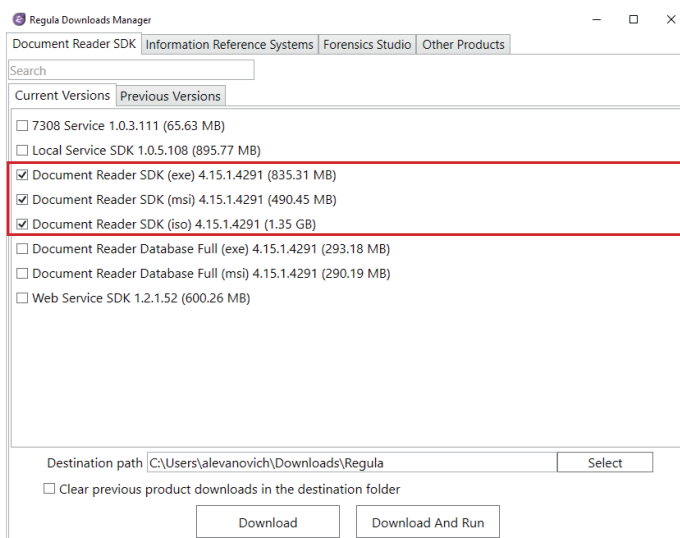


APPENDIX D

Downloading Regula Document Reader SDK

1. Follow the link <http://downloads.regulaforensics.com/work/utils/Regula.DownloadManager.exe> and download the software **Regula Downloads Manager**.
2. Run **Regula Downloads Manager** and select Document Reader SDK to be downloaded. Select the required folder in the Destination field.

Figure D1



Downloads Manger

3. Click the button **Download** or **Download and Run** to start downloading the software.

APPENDIX E

Simplified EU Declaration of Conformity

Hereby, Regula Baltija Ltd. declares that the radio equipment type Document Reader Regula 70X4M.XXX-5A is in compliance with Directive 2014/53/EU (RE-D) and Directive 2011/65/EU (RoHS II). The full text of the EU declaration of conformity is available at the following internet address:
http://pasts.regula.lv/info/cert/70x4M-5A/70X4M5A_DoC.pdf



97, A.Pumpura Street, Daugavpils,
Republic of Latvia, LV-5404,
Phone: +371 654 31 299 Fax: + 371 654 31 290
E-mail: regula@regula.lv; web: www.regulaforensics.com