

Barcode & OCR Package - Intelligent Version

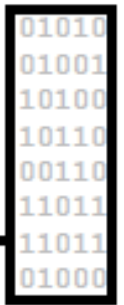
User's Manual Part I

**Barcode & OCR Package - Intelligent Version
Version 2.17**

**User's Manual Part I
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Ricoh Europe PLC

Preface



Barcode & OCR Package - Intelligent Version

User's Manual Part I

Version Number 2.17.0.20190607

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Chapter 1



1. Getting Started

1.1 Conventions Used in This Manual

Throughout the manual, you will find the following icon and typography conventions.



NOTE:
Most references to chapters, sections, tables, and figures are clickable hyperlinks.
To return to the previous position, click <Alt>+ "<-->".

1.1.1 Icon Conventions

At relevant points in the manual, icon symbols will appear to show you important information regarding Barcode & OCR Package - Intelligent Version.
Below are the icons used throughout this manual and their meanings:

Table 1-1: Icon Conventions

	NOTE: This symbol indicates precautions for operation and important points to consider when working with the software.
	WARNING: This symbol indicates potentially harmful situations to your computer's software that could result in damage or unnecessary work flow for your server.
	IMPORTANT: If this instruction is not followed, damage to the server or the data could occur. Please read carefully before continuing.

1.1.2 Typography Conventions

- The typography conventions used throughout this manual are as follows:
- **Courier** is used for computer code to implement.
 - An **arrow (→)** indicates the selection of a menu point and the following menu choice. For example, **File → Open** would mean to select File then choose Open from the menu choices.
 - **Bold** lettering indicates buttons, combo boxes, check boxes, and other dialogue box elements, as well as files, menus, and directions to open files and menus.
 - **<Angle Brackets>** are considered placeholders within the text. For example, **<IP address>** would be the particular IP address.

1.1.3 Figure Conventions

Red rectangles indicate the part of a figure that is referred to in the surrounding text.

All screenshots in this document were made with Windows XP. For newer Windows versions they may look different.

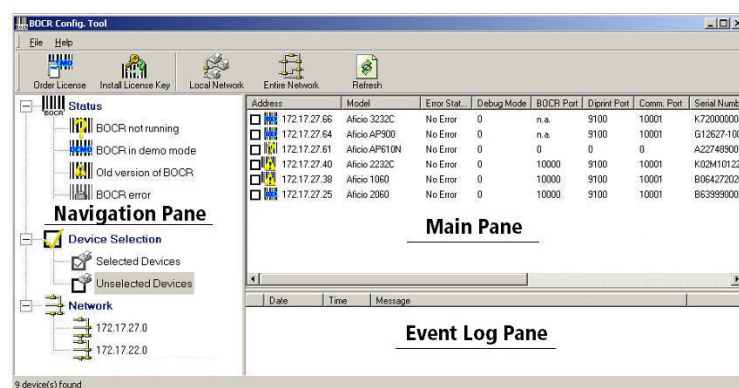
1.1.4 The BOCR Main Window

Throughout the text references will be made to the main window of BOCR. Below is a figure showing the names of the panes within the main window for your reference. There are three panes that display on the main window:

- Navigation pane
- Main pane
- Event Log pane

For further information please refer to Section 2.3.1 "Navigation in BOCRCT" on page 23.

Figure 1-1: BOCR Main Window



1.2 Manuals for This Solution

The Barcode & OCR Package - Intelligent Version is the featured solution of this manual, User's Manual Part I. For further information on this solution see the related manuals listed below:

- Barcode & OCR Package - Intelligent Version, User's Manual Part II

If you need one of these manuals, consult your Sales representative for further information.

1.3 Introduction

The Barcode & OCR Package – Intelligent Version (BOCR), a.k.a. "Intelligent Barcode System" (IBS), is a tool which was developed in order to print barcodes on supported printing devices. BOCR's main target is to enable devices to print barcodes of several types only using PCL commands.

To install, remove, configure and handle licensing operations of BOCR, the Barcode and OCR Package Config. Tool (BOCRCT) is needed. BOCRCT is explained in Section 2.1 "Introduction" on page 17. Please read this section before installing BOCR.

1.4 The Components

The components of BOCR can be divided into three parts:

Table 1-2: Components of BOCR

Location	Components	Description
Managing Station	BOCRCT	A Windows-based tool for configuring BOCR on the device. Also used for licensing purposes.
Device	BOCR (base) BOCR (main) CONVERT	The device-based part of BOCR, which converts BOCR font select commands sent to the device to barcodes on the printed documents. (The installation can only be done by Technical support.)
Issuing System	(system-dependent)	In the case of SAP systems (R/3, mySAP ERP), this is a device type and a tool for supporting the TCP raw printing.

1.5 The Mechanism

When a print job is sent to a printing device with BOCR installed and active, it gets processed by BOCR. If the data is PCL5, it gets further analyzed, and any barcoding related or special commands get processed.

Note: If a print job is sent too early after device reboot, its processing and ejection may take some time, even if the display already shows "Ready".

Different models have different controller architectures which have different implementations and behaviors of BOCR. The models are separated into two distinct **architecture types**:

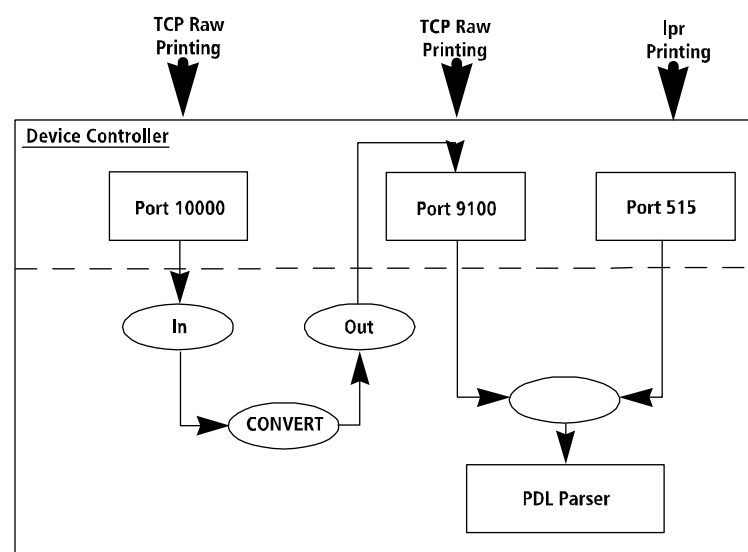
- Architecture Type A Models
- Architecture Type B Models

1.5.1 Architecture Type A Models

Print jobs for barcode printing have to be sent as TCP raw printing jobs to port 10000 (the default BOCR port setting), as other ports and protocols are not supported. The job is converted internally within the device, and is then sent to the Diprint port 9100.

The following diagram visualizes the connectivity situation at the device when the BOCR solution is used with Architecture Type A Models.

Figure 1-2: Architecture Type A Models



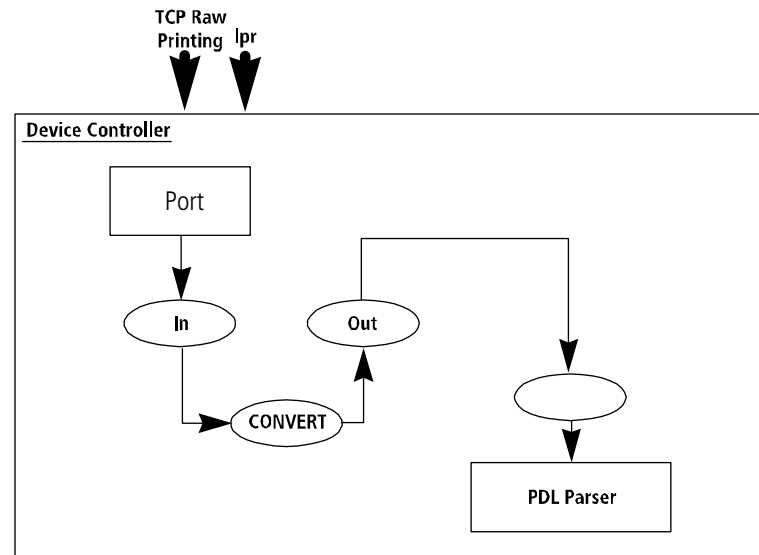
1.5.2 Architecture Type B Models

Print jobs for barcode printing can be sent via any port such as the TCP raw printing or lpr port. The job is converted internally within the device and is then sent to the PDL Parser.

Note that network traffic to any port (e.g. 5001) will thus be subject to the filtering.

The following diagram visualizes the connectivity situation at the device when the BOCR solution is used with Architecture Type B Models.

Figure 1-3: Architecture Type B Models



Note: (Byte mode versus Block mode)

By default, BOCR processes incoming data byte by byte. In order to speed up processing, the faster block mode may be activated. This requires that no status read-back is involved. For more information please contact Technical support.

Note: (Variants Bc & Bj)

There are 2 variants of Architecture Type B models:

- Type **Bc**: has 3 components, all C-based;
- Type **Bj**: is mostly Java-based (component "BOCR"), plus a small C-based core (component "BOCR.gps").

The use of just "B" refers to both variants collectively.

For some operations with Type Bj models 2 sub-variants need to be distinguished:

- the previous Type **Bjx** has a basic UI, whereas
- the newer Type **Bjs** has no UI.

The use of just "Bj" refers to both sub-variants collectively.

1.6 System Requirements

Printing barcodes using BOCR is fairly easy. BOCR can be used by all applications that are able to insert the corresponding BOCR PCL font select commands into the spooled PCL data stream.

1.6.1 Device Requirements

For the necessary requirements to install BOCR on the device, such as the minimum memory and correct firmware version, please contact Technical support.

For possible limitations, please refer to Section 3.1 "Limitations List" on page 51.

1.6.2 Issuing System Requirements

A platform (of an Issuing System) is supported if the printing architecture and barcode mechanism allow having a certain degree of control over the PCL font select commands. For Architecture Type A Models, TCP raw printing must be supported as well.

The following Issuing System platforms are supported:

- SAP systems (R/3, mySAP ERP)

For how to configure barcoding on a specific Issuing System, please refer to Part II of the BOCR User's Manual.

1.6.3 BOCRCT Managing Station Requirements

BOCRCT is installed on a Managing Station. For information concerning the Managing Station minimum system requirements needed for BOCRCT installation, please refer to Section 2.1.1 "Managing Station System Requirements" on page 17 in this manual.

1.7 Supported Devices

For information concerning the supported devices, please use the table below and refer to Volume 1, as found on your installation medium. The correct Model name is listed for every Device Class. For more detailed information on a particular Device Class, please refer to the corresponding Volume 3.

BOCR can be installed to HDD and, for some models, can also be installed to the SD Card. Please contact Technical support for further details.

Table 1-3: Device Classes

Device Class	Architecture Type	HDD-based System	SD Card-based System
DC13a/b	A	X	
DC16a/b	A	X	
DC17a/b	A	X	
DC17c/d	A	X	
DC19a/b	A	X	
DC20a/b/c	A	X	
DC23K/y/z	A	X	
DC27a/b/c	A	X	
DC28	Bc	X*	X*
DC29	Bc	X*	X*
DC30b/c	Bc	X	--
DC31K/a/b	Bc	X	--
DC32a/b	Bc	X	--
DC33	Bc	X	--
DC36b/c	Bc	X	--
DC36e/f	Bc	X	--
DC37b/c	Bc	X	--
DC37e/f	Bc	X	--
DC38a/b/c	Bc	X	--
DC38d/e/f	Bc	X	--
DC39a/b/c	Bc	X	--
DC39d/e/f	Bc	X	--
DC40a/b	Bc	X*	X*
DC42a/b	Bc	X	--
DC43c/d	Bc	X	--
DC44	Bc	X	--
DC45	Bc	X*	X*
DC46	Bc	--	X
DC47	Bc	X	--

Device Class	Architecture Type	HDD-based System	SD Card-based System
DC50	Bc	X*	X*
DC51	Bc	X*	X*
DC52	Bc	X	--
DC53b/c	Bc	X	--
DC53e/f	Bc	X	--
DC54b/c	Bc	X	--
DC54e/f	Bc	X	--
DC55	Bc	--	X
DC57	Bc	X*	X*
DC59	Bc	X*	X*
DC60	Bc	X	--
DC61	Bc	X	--
DC62	Bc	X	--
DC63	Bc	X	--
DC64	Bc	X*	X*
DC69	Bc	X	--
DC70	Bc	X*	X*
DC72	Bc	X*	X*
DC73	Bc	X	--
DC76	Bc	X*	X*
DC77	Bc	X	--
DC78	Bc	X*	X*
DC79	Bc	X	--
DC80	Bc	X*	X*
DC81	Bc	X	--
DC82	Bc	X*	X*
DC83	Bjs	X	--**
DC84	Bjx	X	--**
DC85	Bjx	X	--**
DC87	Bjx	X	--**
DC88	Bjx	X	--**
DC89	Bjx	X	--**
DC91	Bjx	X	--**
DC92	Bjx	X	--**
DC94	Bjx	X	--**
DC95	Bjx	X	--**
DC96	Bjx	X	--**
DC98	Bjx	X	--**
DC99	Bjs	X	--**
DC100	Bjx	X	--**
DC101	Bjs	X	--**
DC102	Bjs	X	--**
DC103	Bjx	X	--**
DC107	Bjx	X	--**
DC108	Bjs	X	--**
DC110	Bjs	X	--**
DC112	Bjs	X	--**
DC113	Bjs	X	--**
DC114	Bjs	X	--**
DC115	Bjs	X	--**
DC116	Bjs	X	--**
DC117	Bjs	X	--**
DC118	Bjs	X	--**
DC119	Bjs	X	--**
DC120	Bjs	X	--**
DC121	Bjs	X	--**
DC122	Bjs	X	--**
DC123	Bjs	X	--**
DC124	Bjs	X	--**

Device Class	Architecture Type	HDD-based System	SD Card-based System
DC125	Bjs	X	--**
DC126	Bjs	X	--**
DC127	Bjs	X	--**
DC128	Bjs	X	--**
DC129	Bjs	X	--**
DC130	Bjs	X	--**
DC133	Bjs	X	--**
DC134	Bjs	X	--**
DC135	Bjs	X	--**
DC140	Bjs	X	--**
DC141	Bjs	X	--**

**NOTE: (*)**

Whenever a HDD is present for usage, the BOCR system must be HDD-based.

NOTE: ()**

Architecture Types Bj do not support SD card-based BOCR systems.

1.8 Supported Barcode Types

For a list of supported barcode types and how to print these barcodes, please refer to Part II of the BOCR User's Manual.

1.9 Licensing

BOCR can be installed in Demo Mode free of charge. The BOCR works correctly, but the word "DEMO" is shown on each barcode while ensuring that the barcode can still be scanned or read and a watermark will be printed on each page.

**NOTE:**

If BOCR is installed in Demo Mode, a watermark will be printed on each page of every print job to this printer.

A license must be purchased for removing these marks. To order a license please refer to Section 2.4.2 "Order License" on page 34.

1.10 Status Read-back Integrity

Status read-back is a means to control the reliable and successful printout of a job on the target device. To achieve this, the device has to report on possible success or error conditions.

BOCR has status read-back integrity for Architecture Type B Models, with the following limitations:

- PCL-based status read-back (~*s_X echo command) is not supported.
- PJI-based status read-back via LPT or USB is not supported.

For Architecture Type A models, status read-back is not supported at all.

Note: When in block mode, BOCR may inhibit status read-back also on other ports.

1.11 Installation

There are three locations for the components to be installed in order to use BOCR. The information is listed below for how to install or where to go for further information for each component.

Table 1-4: Components to be Installed

Location	Component	Further Instructions
Managing Station	BOCRCT	Please refer to Section 2.2 "BOCRCT Installation" on page 18 in this manual.
Device	BOCR (base) BOCR (main) CONVERT	Please contact Technical support.
Issuing System		Please refer to BOCR User's Manual Part II.

1.12 Removal

Please refer to the following table for removal information:

Table 1-5: Components to be Removed

Location	Component	Further Instructions
Managing Station	BOCRCT	Please refer to Section 2.5 "BOCRCT Removal" on page 49 in this manual.
Device	BOCR (base) BOCR (main) CONVERT	Please contact Technical support.
Issuing System		Please refer to BOCR User's Manual Part II.

1.13 Upgrade

Please refer to the following table for upgrade information:

Table 1-6: Components to be Upgraded

Location	Component	Further Instructions
Managing Station	BOCRCT	Remove and install the new version again, by following the procedures below in the sections for Removal and Installation, respectively.
Device	BOCR (base)	Please contact Technical support.
	BOCR (main) CONVERT	Please refer to Section 2.4.6 "Upgrade" on page 40 of this manual.
Issuing System		Please refer to BOCR User's Manual Part II.

1.14 BOCR on the device

BOCR on the device is running as an Extended Feature, information about which can be seen and which can be stopped and restarted, from the device's operation panel. For corresponding procedures refer to the device's corresponding Operating Instructions. Please observe the following specific behaviour.

Note: (Components: BOCR and BOCR.gps) [Architecture Type Bjx only]

For Architecture Type Bjx, it appears as 2 separate Extended Features, named "BOCR" (Java-based) and "BOCR.gps" (C-based).

Note: For devices with Smart Operation Panel (SOP) the list of Extended Features may contain a lot of entries. Thus the BOCR related entries may be scattered across different pages, whence scrolling may be necessary to see each entry.

Note: (Stopping and re-starting BOCR)

In order for the status change to become effective, the device must be rebooted.

Note: (Stopping and re-starting BOCR.gps) [Architecture Type Bj only]

If the C application "BOCR.gps" needs to be stopped on a device,

- the status displayed in BOCRCT may appear incorrect (refer to limitation [LIM85MD]), and
- the device needs to be rebooted for the status change to become effective.

Note: (BOCR information screen) [Architecture Type Bjx only]

The Extended Feature "BOCR" has no proper information screen; refer to limitation [LIM41D].

Note: (No UI for Architecture Type Bjs) [Architecture Type Bjs only]

There is no BOCR related UI on the device panel. Corresponding operations need to be performed via Web Image Monitor (WIM).

1.15 BOCR interoperability & compatibility information

SSL / Encryption

There is no interference between BOCR and SSL. Also the processing of BOCR-specific command sequences embedded in the print job and the applying of convert.ini settings are not impaired, as decryption takes place before the convert filter.

Authentication

If authentication is enabled on a device, the issuing system must provide for injecting the necessary credentials into the print job data stream.

Interoperability with Streamline NX v2

It is possible to use SLNX and BOCR on the same device.

However, it is not possible to send BOCR print data directly to the device; it must be sent via the SLNX print queue on the SLNX server. Moreover:

BOCR print data needs to include the SLNX user authentication in the PCL data stream.

It is not possible to print a BOCR test page from BOCRCT when SLNX is installed on the device.

Interoperability with Streamline NX v3

It is possible to use SLNX and BOCR on the same device.

Although Secure Print with host print jobs is supported, IBS functionality will fail.

- With Device Direct Print, also IBS functionality is supported.

(However, it is not possible to print a BOCR test page from BOCRCT when SLNX is installed on the device.)

- Regarding Server Direct Print, please contact Technical Support.

Interoperability with Global Scan NX

It is possible to use GSNX and BOCR on the same device. No limitations are known.

Interoperability with Enhanced Locked Print

It is not possible to use Enhanced Locked Print v2 and BOCR on the same device.
It should be possible, however, with v1.

Chapter 2

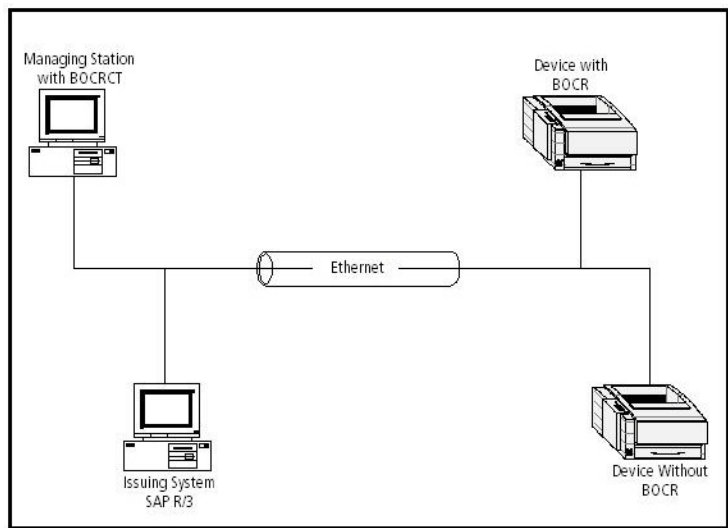


2. The Barcode & OCR Package Config. Tool

2.1 Introduction

The Barcode & OCR Package Config. Tool (BOCRCT) is discussed in this overview with a short diagram showing the connectivity situation between the Managing Station computer, the devices, and the Issuing System on the network. BOCRCT is a tool that was developed in order to configure BOCR systems.

Figure 2-1: Example Network Chart



The Managing Station runs BOCRCT and manages the BOCR systems installed on all devices. Through BOCRCT you are able to configure all devices that are compatible to BOCR and running in a network, and BOCR is able to find all compatible devices in this local network or beyond and displays them in one window. In this way you have a complete overview of the devices that can be configured.

2.1.1 Managing Station System Requirements

You need one Managing Station to install BOCRCT onto, and this Managing Station must meet the following requirements:

Table 2-1: Managing Station Hardware Requirements

Hardware Requirements
IBM compatible computer with minimum Pentium 233 MHz CPU, 300 MHz recommended.
14 MB of free HDD space.
Minimum 64 MB RAM, 128 MB RAM or higher recommended.

Access to the local TCP/IP network.

Table 2-2: Managing Station OS Requirements

Operating Systems

Windows XP SP2
Windows 7, Windows 8, Windows 10
Windows Server 2008 64-bit R2
Windows Server 2012 (64-bit)

2.2 BOCRCT Installation

BOCRCT is shipped on the installation medium together with the BOCR software that is installed on the device.

In order to start the installation of BOCRCT, run the **setup.exe** from the Installation medium and follow the instructions.



NOTE:

For installation on some Windows versions (Windows 8), you need to have administrator rights (e.g. via right mouse click on "setup.exe" -> "Run as administrator").



NOTE:

If you have an earlier version of BOCRCT installed, please remove this version before continuing.

The clean removal and reinstallation may require invoking setup.exe up to 3 times.

Note that you may not always be aware of previous installations on your PC.

We recommend to always use the latest version of BOCRCT - the most current version can handle even the oldest of devices supported by BOCR.



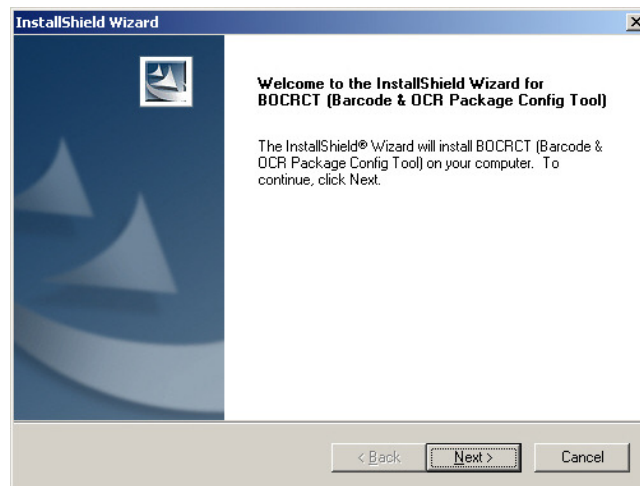
NOTE:

On Windows XP SP2, initially the User Account Control will display the message "An unidentified program wants access to your computer", thus indicating that it has no digital signature from its publisher. Press **Allow** to continue.

Afterwards, the Attachment Execution Service will issue a security warning "The publisher could not be verified". Press **Run** to continue.

A welcome page will be displayed.

Figure 2-2: Welcome Page

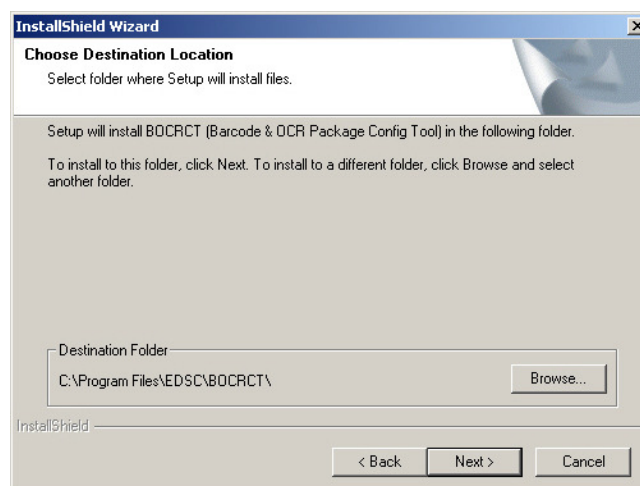


Press **Next**.

Then the License Agreement will be displayed. Accept it by pressing **Yes**.

The destination folder can be changed according to your preferences.

Figure 2-3: Choosing Destination



Choose a destination folder and click **Next**.



NOTE:

The default destination folder is "C:\Program Files\RICOH\BOCRCT".

On some Windows versions (Windows 8, and Windows 10), if the default folder is used, the subfolders will be created at two locations.

Under C:\Program Files\RICOH\BOCRCT\ all subfolders will be created.

In addition, the subfolders "config", "log", and "debug", will be also created under:

- (for a 32-bit system): C:\Users\<user name>\

AppData\Local\VirtualStore\Program Files\RICOH\BOCRCT\,

- (for a 64-bit system): C:\Users\<user name>\

AppData\Local\VirtualStore\Program Files (x86)\RICOH\BOCRCT\.

Only these latter will later contain the config, log, and debug files. The former will remain empty.

If a different folder is chosen, the subfolders will be created only there.

**NOTE:**

Depending on the Windows version, the default installation path for the "RICOH\BOCRCT\" subfolder may be (on English language systems) either

- (for a 32-bit system): "C:\Program Files\", or
- (for a 64-bit system): "C:\Program Files (x86)".

The setup progress is displayed in the following screen.

Figure 2-4: Copying in Progress

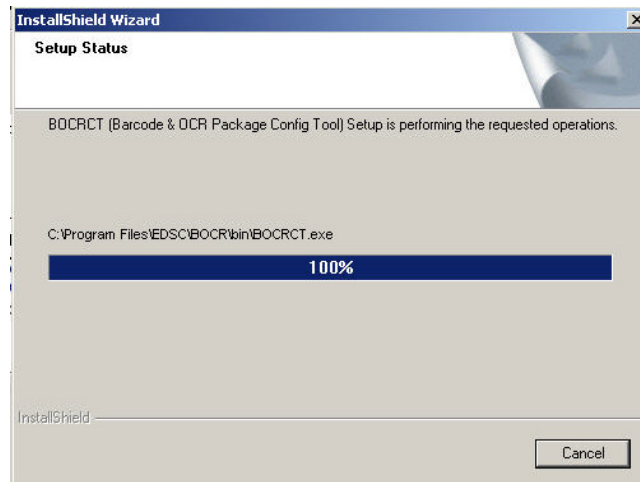
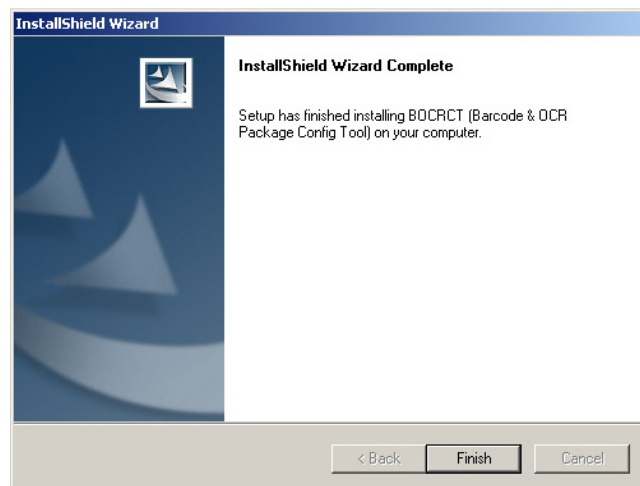
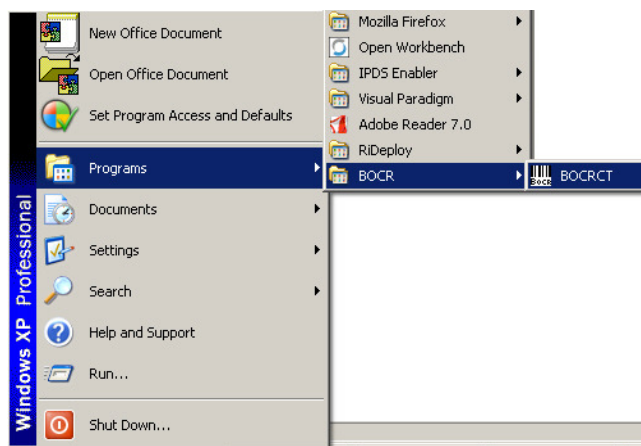


Figure 2-5: Installation Succeeded



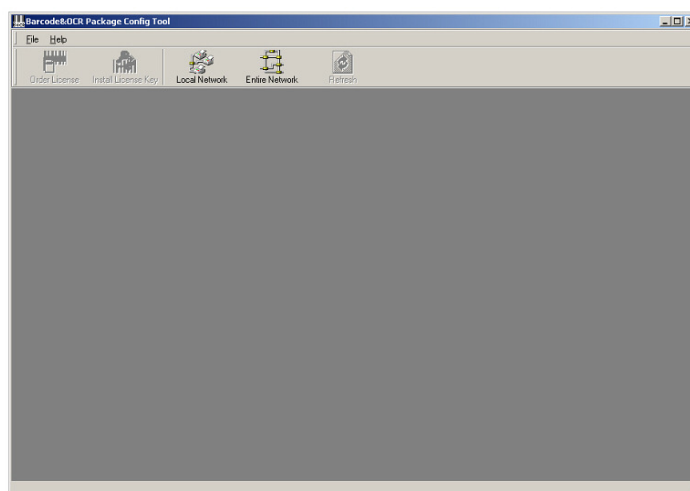
Click **Finish** to complete the installation.

After installation, BOCRCT can be started via the **Start** menu. To do this, select **Start → Programs → BOCR → BOCRCT**.

Figure 2-6: Starting BOCRCT

2.3 The Appearance of BOCRCT

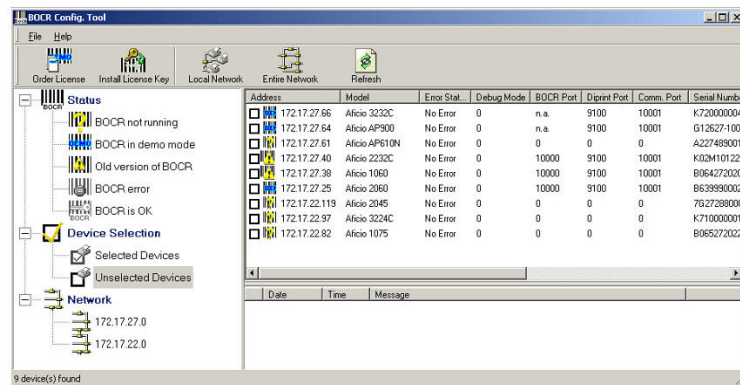
After starting BOCRCT, the main window will appear as shown in **Figure 2-7: BOCRCT Window After Starting**.

Figure 2-7: BOCRCT Window After Starting

There are no devices displayed. To work with BOCRCT, a network discovery must be done. Please refer to Network Discovery for further information on the device discovery process.

After a network discovery, BOCRCT's window resembles the following screen.

Figure 2-8: After Network Discovery



In the Navigation pane, several symbols are displayed. By clicking on one of these symbols, the Main pane will show only the corresponding devices.

The Main pane shows the following information for the individual devices displayed.

Table 2-3: Main Pane Information in BOCRCT

Column	Description
Address	IP Address of the device.
Model	Model name of the device.
Error Status	Current Error status of the device.
Debug Mode	Current Debug Mode of the device. For further information, refer to "Debugging".
BOCR Port	BOCR Port of the device. For Architecture Type A models only. Default: 10000.
Diprint Port	Diprint Port of the device. Default: 9100.
Communication Port	Communication port of the device. Default: 10001.
Serial number	Individual Serial number of the device.
Printer f/w ver.	Printer/Firmware firmware version of the device.
System f/w ver.	System firmware version of the device.
NIB f/w ver.	NIB/NCS firmware version of the device.
BOCR Base Ver.*	Version number of the BOCR (base) module of the BOCR system.
BOCR Main Ver.*	Version number of the BOCR (main) module of the BOCR system.
CONVERT Ver.*	Version number of the CONVERT module of the BOCR system.
Architecture	Architecture Type A or B. For further information, see Table 1-3 "Device Classes" on page 11.
Medium	Whether the BOCR system is HDD- or SD Card-based.



NOTE:

*If no version number is displayed, there is no BOCR installation or it is incomplete. (BOCR Main is needed to communicate with BOCRCT.)

2.3.1 Navigation in BOCRCT

This section explains how to navigate in BOCRCT.

2.3.1.1 Filter Functions

The symbols in the Navigation pane have filter functions. If you click on these symbols, you will see only the corresponding portion of all the discovered devices.

The meanings of the symbols are described in the table below.

Table 2-4: Status Symbols






Icon	Description
 BOCR not running	BOCR is not running or not installed on the device.
 BOCR in demo mode	BOCR is running in Demo Mode.
 Old version of BOCR	An older version of BOCR is running on the device.
 BOCR error	BOCR has a problem. You can see a description of the problem in the Event Log pane.
 BOCR is OK	BOCR is correctly licensed and running in Non-demo Mode. Limitation: Refer to [LIM85MD].

Table 2-5: Device Selection Symbols





Icon	Description
 Selected Devices	Shows only the devices already selected.
 Unselected Devices	Shows only the devices that are not selected.

Table 2-6: Network Symbols

Icon	Description
 172.17.27.0	Shows devices located in the specified network only.
	NOTE: A "broken connection" icon indicates that the communication with the device is currently failing.

2.3.1.2 Discovered Devices

In the Main pane you see the devices discovered by BOCRCT. You are able to sort the entries in this pane by clicking on the column headers.





Figure 2-9: Discovered Devices

Address	Model	Error State	Debug Mode	Printer Port	Comm. Port	Serial Number	System	NIB V/i
<input type="checkbox"/> 172.17.27.3	Aficio 1075	No Error	0	0	0	B0652720216	3.52	3.73
<input type="checkbox"/> 172.17.27.3	Aficio 2027	No Error	0	9100	20001	J0731500015	1.01	4.04
<input type="checkbox"/> 172.17.27.4	Aficio 2045e	No Error	4	9100	20001	J5936302132	2.36.2	4.05
<input checked="" type="checkbox"/> 172.17.27.4	Aficio 1232C	No Error	0	0	0	3184x10230	V2.06	3.74

2.3.1.3 The Event Log Pane

BOCRCT has a built-in Event Log. In the Event Log pane you see the event messages and their description.

Figure 2-10: Event Log Pane

	Date	Time	Message
	11/3/2003	9:05:47 AM	Reset of 172.17.27.49. (Please use refresh button to get the actual state.)
	11/3/2003	9:05:47 AM	Successfully sent data to 172.17.27.49
	11/3/2003	9:05:03 AM	Reset of 172.17.27.38. (Please use refresh button to get the actual state.)
	11/3/2003	9:05:03 AM	Successfully sent data to 172.17.27.38

Possible error messages in the Event Log are described below, with helpful hints for resolving the problem.

Table 2-7: Common Errors

Severity	Description	Recommended Reaction
Error	<IP address> BOCR reports error: <BOCR code>	Contact Technical support.
Error	Unable to create path <path>, cause <Windows code>	Check path.
Error	Unable to open file <filename>, cause <Windows code>	Check path and file.
Error	<IP address> protocol error.	Retry action (download debug) again.
Error	Unable to read file <filename>, cause <Windows code>	Check path and file.
Error	Transmission to <IP address> failed! BOCR reports syntax error.	Retry again. It may be that the file to upload is corrupted.
Error	Transmission to <IP address> failed! BOCR reports wrong file size.	Retry again. (Transmission of file incomplete.)
Error	BOCR indicates error in resetting <IP address>.	Reboot the device with <IP address> manually.
Error	Unable to open <IP address>, port <port>, cause <WSA code>.	Check that the device is online.
Error	<IP address> Send error has occurred. (<WSA code>)	Retry again.
Error	<IP address> Receive error has occurred (<WSA code>).	Retry again.
Error	Discovery of network address <IP address>/<subnet mask> failed.	Check your network settings.
Info	Reset of <IP address>.	Nothing to do, information only.
Info	<IP address> Download of debug files is finished.	Nothing to do, information only.
Info	File <filename> uploaded to <IP address>.	Nothing to do, information only.
Info	Successfully sent data to <IP address>	Nothing to do, information only.

I. For the meaning of the BOCR Codes refer to Appendix A1.

- II. Windows code is a common Windows error code.
- III. WSA Code is a Windows Socket Access error code.

2.3.2 Operating BOCRCT

In order to use BOCRCT, you have the choice between two different methods (plus keyboard shortcuts), which will be described in detail in this chapter:

- Local Network Discovery
- Entire Network Discovery

No matter which method you prefer, you will always find one unchanging behavior: in the menus and the toolbar only those items will be active that are actually applicable.






For example, the **Order License** button or list entry will only be active if you have already selected at least one device in the Main pane.

Note: On certain systems limitations may apply, refer to [LIM58M] in section 3.1.4.

2.3.2.1 Toolbar

The toolbar displays five main options within BOCR. The options are described below.

Table 2-8: The Toolbar

Icon	Description
 Order License	Ordering a License Key file for the selected devices.
 Install License Key	Installation of a License Key file on the selected devices.
 Local Network	Network discovery on the local network.
 Entire Network	Network discovery beyond the local network.
 Refresh	Refreshes the status of all discovered devices. If a device is not responding, it will be removed from the list.

2.3.2.2 The Menu Items

The BOCRCT menu items are displayed below. The tables following each section describe the functions you are able to use.

Figure 2-11: The Main Menu

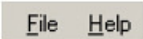


Figure 2-12: The File Menu

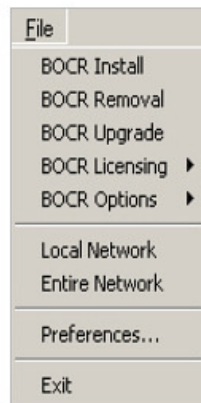


Table 2-9: The File Menu

Menu Item	Description
BOCR Install	Copies the installation file to the selected devices. This should only be done by Technical support.
BOCR Removal	Copies the removal file to the selected devices. This will remove the BOCR (main) and CONVERT modules and should only be done by Technical support.
BOCR Upgrade	Upgrades BOCR on the selected devices.
BOCR Licensing	Opens two separate license options. Refer to the BOCR Licensing Menu .
BOCR Options	Opens four separate options. Refer to the BOCR Options Menu .
Local Network	Starts a discovery in the local network.
Entire Network	Starts a network discovery of the local network and beyond.
Preferences	Offers enhanced discovery and communication settings.
Exit	Closes the BOCRCT application.

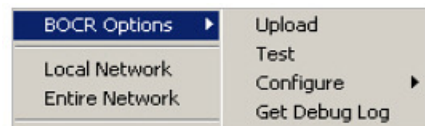
Figure 2-13: The BOCR Licensing Menu



The BOCR Licensing Menu

Menu Item	Description
BOCR Licensing → Order License	Orders a License Key file for the selected devices.
BOCR Licensing → Install License Key	Installs a License Key file to the selected devices.

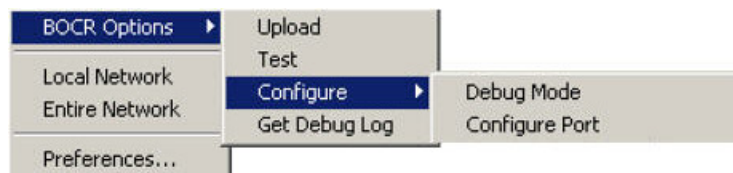
Figure 2-14: The BOCR Options Menu



The BOCR Options Menu

Menu Item	Description
BOCR Options → Upload	Uploads new files (fonts, program files) to the selected devices.
BOCR Options → Test	Prints test sheets on the selected devices.
BOCR Options → Configure	Opens two options. Refer to the BOCR Configure Menu .
BOCR Options → Get Debug Log	Downloads the Debug Logs from the device to the computer folder of your choosing.

Figure 2-15: The BOCR Configure Menu



The BOCR Configure Menu

Menu Item	Description
BOCR Options → Configure → Debug Mode	Sets the Debug Mode of the selected devices.
BOCR Options → Configure → Configure Port	Changes the Communication, BOCR, or Diprint Port(s) of the selected devices.

2.4 Working with BOCRCT

The fastest way to start BOCRCT is through the **Start** menu. To do this, select **Start → Programs → BOCR → BOCRCT**.

Prerequisites

Make sure that all targeted devices are running in the correct operation mode and are not busy otherwise.

2.4.1 Network Discovery

Before you can use BOCRCT, you must run a network discovery to find all the supported devices in your network(s). BOCRCT offers you two options:

- A Local Network discovery will search the local network only.
- With an Entire Network discovery you can search beyond the local network.

Note: When a BOCRCT network discovery is run, some firewall applications may erroneously issue a warning that BOCRCT attempts to connect to the Internet. In fact, however, it merely queries routers about their known networks; no actual connections to other remote stations are established. If a connection to the actual Internet

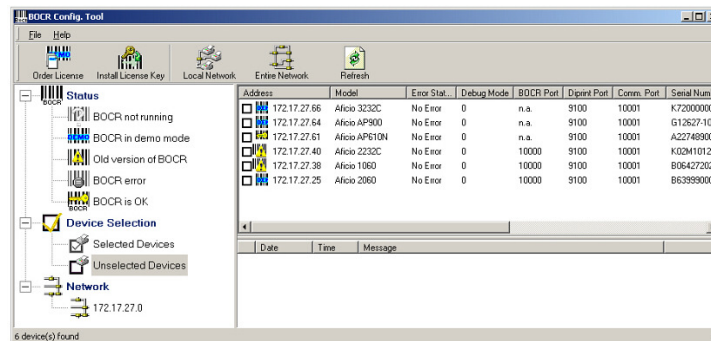
is unwanted, e.g. in a dial-up environment, the number of hops setting of the "Distance maximum" parameter should be correspondingly decreased. Otherwise, this warning may be safely ignored.

2.4.1.1 Local Network

To start the network discovery of the local network, click the **Local Network** toolbar button, or select **File → Local Network**.

After the discovery of the local network is finished, the following window will display.

Figure 2-16: Local Network Discovery

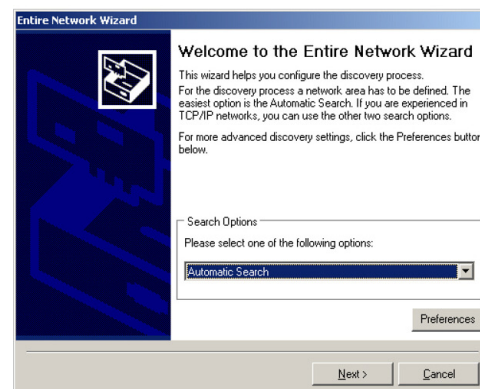


2.4.1.2 Entire Network

To discover networks beyond the local network, click the **Entire Network** toolbar button, or select **File → Entire Network**.

The Entire Network Wizard window will display:

Figure 2-17: Entire Network Wizard



You have three choices for the discovery:

- Automatic Search
- Automatic Network Search
- Manual Network Selection

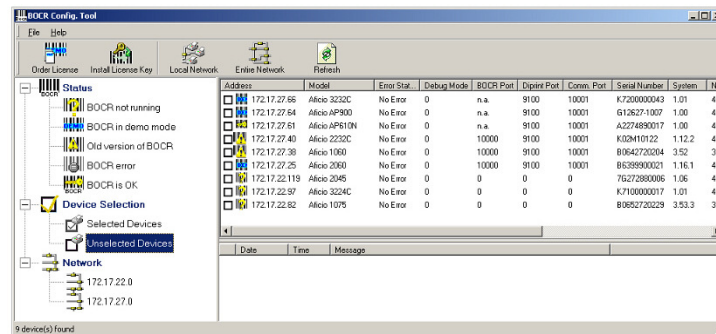
Manual Network Selection allows and requires to explicitly specify a list of all the networks that shall and will be searched for devices.

Automatic Network Search will discover networks automatically, using the RIP routing protocol, only bound by a maximum hop distance and possibly confined to a list of networks that can be optionally specified. The list of networks found is then displayed for possible further editing, before they will be searched for devices.

Automatic Search will do the same, except that it will start the device search right away, without the possibility of further editing the network list.

The result of an Entire Network discovery is shown in **Figure 2-18: Results of the Entire Network Discovery**.

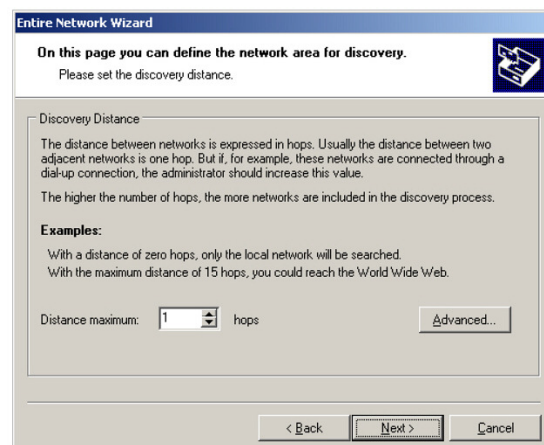
Figure 2-18: Results of the Entire Network Discovery



2.4.1.2.1 Automatic Search

If you choose **Automatic Search** and click **Next**, the next window shows the Discovery Distance window, which enables you to select how far the discovery will search, in terms of hops.

Figure 2-19: Selection of Hops



You can set the number of hops the discovery will be limited to.

Possible hops values are:

Table 2-10: Hops Values

Parameter	Description	Default	Min	Max
Distance maximum	Maximum number of hops	1	0	15

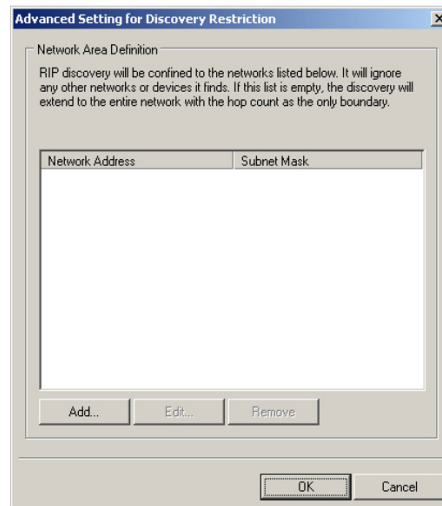


NOTE:

A value of greater than 1 may lead to prolonged network search and could negatively affect network performance.

By clicking **Next**, the "Advanced setting" window is displayed. It allows to further restrict the discovery by specifying a list of networks. Only those networks and their subnets will be discovered, still subject to the specified hop distance. You need to enter the IP address and subnet mask for each network. Ensure that you type these correctly. If they are syntactically incorrect or invalid, a corresponding message box will be displayed.

Figure 2-20: Allowed Networks

**NOTE:**

The entries made in the Network Area Definition will be stored and restored when reopening BOCRCT. If they are not valid or desired anymore, you may wish to remove them.

By clicking **Next**, BOCRCT will begin to discover networks and search for devices in those it finds.

If no networks are found within the specified hop distance or among those explicitly specified, a corresponding message box will pop up. Otherwise those found will be immediately searched for devices.

For each explicitly specified network that was not found, an entry "Discovery of network address <IP address>/<subnet mask> failed" will appear in the Error Log pane.

If a particular network is not appearing after you performed a search:

- ① Check that the network's IP address and subnet mask were not mistyped. Otherwise, the network may not exist.
- ② Look at the configuration of the firewall or router. If you have a particular configuration, some networks may be invisible.

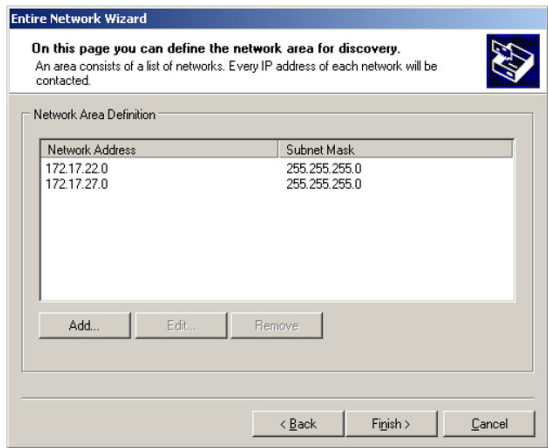
If a network continues to not appear, contact Technical support and/or the local network administrator.

2.4.1.2.2 Automatic Network Search

If you choose the Automatic Network Search option, BOCRCT looks for all networks within the specified hop range. In addition, it is possible to further restrict the discovery by explicitly specifying a list of networks, as described in the section "Automatic Search" above.

After the discovery has finished, before any devices will be searched, the window below will show all the networks found. In this dialog you can further manually add, edit and remove networks which BOCRCT shall then eventually search for devices. Ensure that you enter the correct IP addresses and subnet masks for the networks you wish to have searched. If they are syntactically incorrect or invalid, a corresponding message box will be displayed.

Figure 2-21: List of Networks to be Searched for Devices



NOTE:
The entries made in the Network Area Definition will be stored and restored when reopening BOCRCT. If they are not valid or desired anymore, you may wish to remove them.

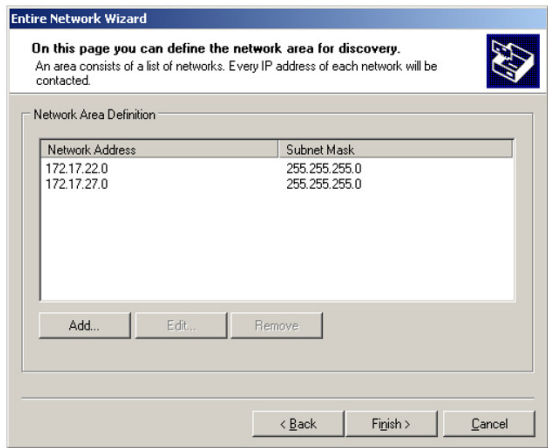
Clicking **Finish** starts the device search.

If this list is empty and **Finish** is clicked, BOCRCT will not search anything.

2.4.1.2.3 Manual Network Selection

If you choose the Manual Network Selection option, BOCRCT has the dialog, as shown in **Figure 2-22: List of Networks to be Searched for Devices**, appear without discovering any networks beforehand. In this dialog you can and need to manually specify all the networks that are to be searched for devices.

Figure 2-22: List of Networks to be Searched for Devices



NOTE:
The entries made in the Network Area Definition will be stored and restored when reopening BOCRCT. If they are not valid or desired anymore, you may wish to remove them.

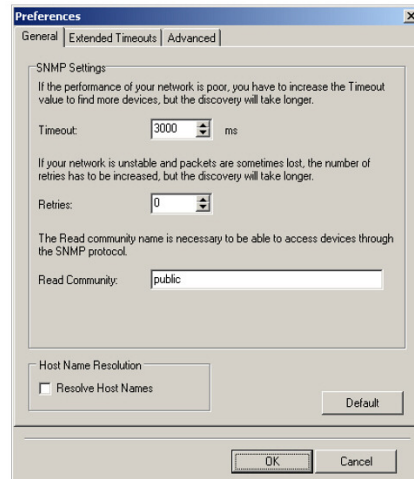
Clicking **Finish** starts the device search.

If this list is empty and **Finish** is clicked, BOCRCT will not search anything.

2.4.1.3 Preferences

In the Preferences dialog you can edit advanced communication and discovery settings. To open the Preferences dialog, select **File → Preferences**. The Preferences dialog will display.

Figure 2-23: The Preferences Dialog



2.4.1.3.1 The General Tab

Parameters and possible values are described in the table below.

Table 2-11: General Settings

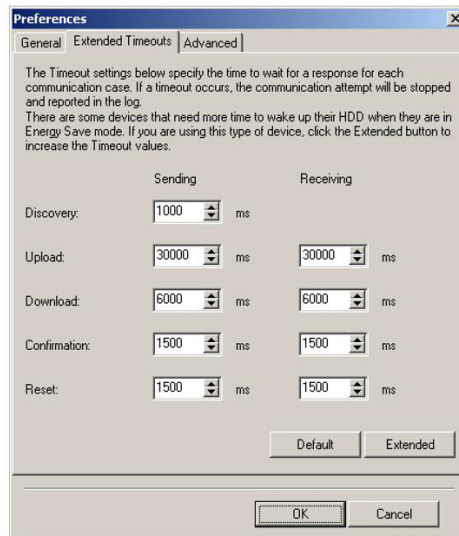
Parameter	Description	Default	Min	Max
Timeout	The time BOCRCT waits for an answer from a device in milliseconds.	3000	1000	40000
Retries	How often BOCRCT retries to connect to a device after a timeout.	0	0	10
Read Community	The SNMP read community. Standard value is public.	public	-	-
Resolve Host Names	If this setting is selected, BOCRCT will try to resolve the Host names of the devices, and will display them in the Main pane of the BOCRCT window.	false	-	-

If **Default** is clicked, all the settings in this tab will be reset to their default values. How the 'Resolve Host Names' will be handled depends on your Windows setting.

2.4.1.3.2 The Timeouts Tab

These timeout settings specify the time the BOCRCT waits for the reply from the device for the given communication cases. If the communication time exceeds the Timeout value, the communication is considered to have failed, and an error will be reported in the Event Log. For the most part, you will not need to change these settings.

Figure 2-24: The Timeouts Tab



Possible timeout values are shown below, in milliseconds:

Table 2-12: Timeout Settings

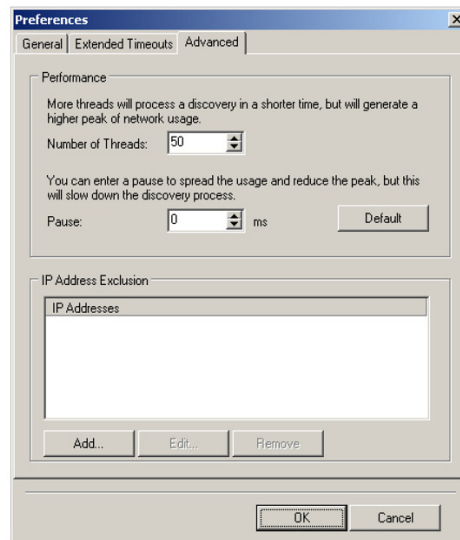
Parameter	Description Timeout when ...	Default	Min	Max
Discovery - Sending	... sending data in Discovery.	1500	1000	40000
Upload - Sending	... sending data in Upload.	40000	1000	40000
Upload - Receiving	... receiving data in Upload.	40000	1000	40000
Download - Sending	... sending data in Download.	8000	1000	40000
Download - Receiving	... receiving data in Download.	8000	1000	40000
Confirmation - Sending	... sending data in Confirmation.	12000	1000	40000
Confirmation - Receiving	... receiving data in Confirmation.	12000	1000	40000
Reset - Sending	... sending data in Reset.	8000	1000	40000
Reset - Receiving	... receiving data in Reset.	8000	1000	40000

If **Default** is clicked, all Timeout settings will be reset to their default values. A timeout value should be increased if a device's response time is not fast enough, maybe due to a slow network connection, so the response is lost and the device thus remains undetected.

2.4.1.3.3 The Advanced Tab

The Advanced tab settings enable you to change the number of threads or pauses in a discovery. The Advanced tab is displayed below.

Figure 2-25: The Advanced Tab



Possible settings for performance are described below.

Table 2-13: Advanced Settings

Parameter	Description	Default	Min	Max
Number of Threads	Number of subprocesses which simultaneously run a discovery.	50	1	99
Pause	A pause is set to decrease the network load during the discovery.	0	0	10000
IP Address exclusion	A list of IP addresses that are to be excluded from the discovery.	-	-	-

If **Default** is clicked, all Advanced tab settings will be reset to their default values.

2.4.2 Order License

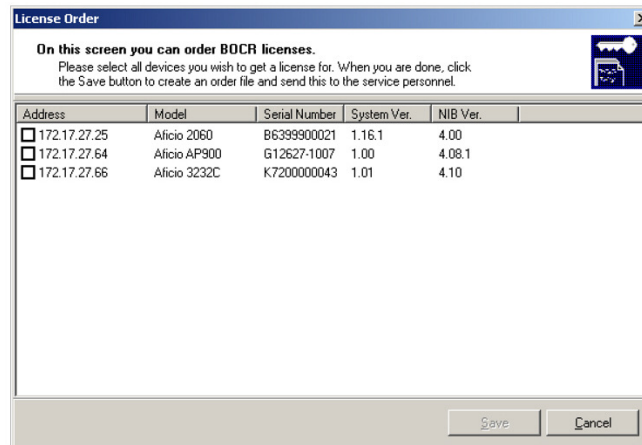
BOCR runs in Demo Mode when first installed. For full functionality, you must order a License Key file. The Operating company needs, at the least, the serial numbers of the devices to create the License Key file. After searching the network, you can create the License Order file with BOCRCT, which automatically contains the serial numbers and the device names, the firmware version, the System version and so on. This file should then be sent to the Operating company.

Note: If the serial number is obtained and communicated manually, be aware of possible trailing blanks. Use the BOCRCT tool to have them treated correctly.

To create a License Order file, you:

- ① Turn on the devices and make a BOCRCT discovery of the network where the devices reside. For further information on the device discovery options, please refer to Network Discovery in this manual.
- ② Select all devices for which you want to order a License Key by selecting the devices' check boxes in the Address column. You must select at least one device.
- ③ You can either select **File → BOCR Licensing → Order License** or click **Order License** in the BOCRCT toolbar.

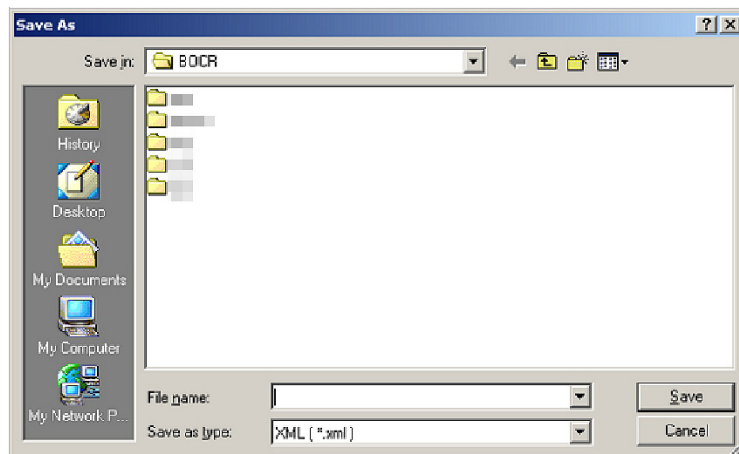
Figure 2-26: Device Selection for a License Order File



Click **Save**.

- ④ In the following window, type in a file name and select the folder for where to save the file.

Figure 2-27: Saved License Order File



Click **Save**.

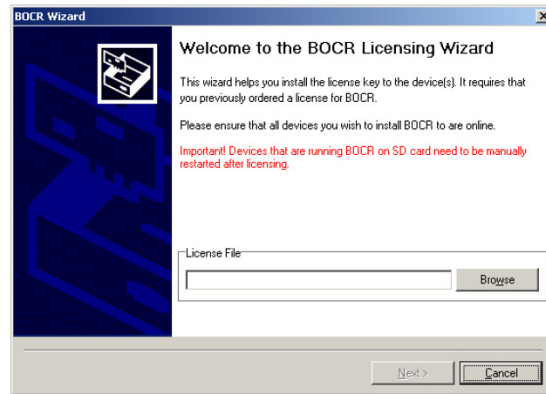
The saved file should then be sent to the Operating company to get a License Key file for the selected devices.

2.4.3 Install License Key File

You will receive the License Key file in an e-mail from the Operating company.
To load the License Key to the selected devices, you:

- ① Turn on the devices and make a BOCRCT discovery of the network where the devices reside. For further information on the device discovery options, please refer to Network Discovery in this manual.
- ② Select all devices for which you want to install the License Key File by selecting the devices' check boxes in the Address column. You must select at least one device.
- ③ You can either select **File → BOCR Licensing → Install License Key** or click **Install License Key** in the BOCRCT toolbar.

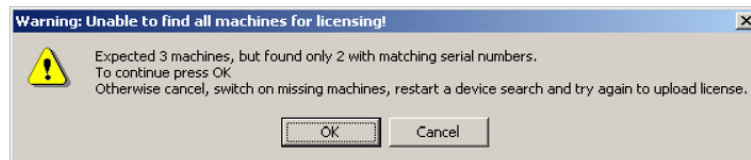
Figure 2-28: Select a License Key File



- ④ Browse to and select the License Key file you received from the Operating company. Then click **Next**.

If not all devices are available (online) that are included in the License Key file, you will receive the following message.

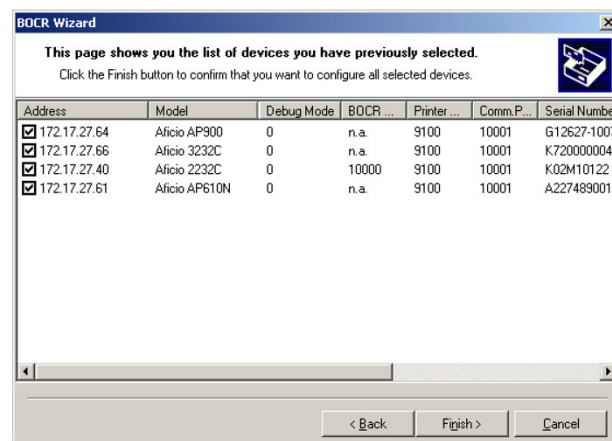
Figure 2-29: Warning - Not All Devices Available



To install the License Key File only to the available (currently online) devices, click **OK**. Otherwise click **Cancel**, get all the devices online, and try again.

- ⑤ You can clear any preselected device, if you do not want to install a License Key file to it, by deselecting the device's check box in the Address column.

Figure 2-30: Selection of Devices for License Key Installation



To start the License Key installation to all selected devices, click **Finish**.

- ⑥ For SD Card-based BOCR system devices, ensure that you restart them after the upload of the License Key file has finished.
(This may not be necessary for newer models.)

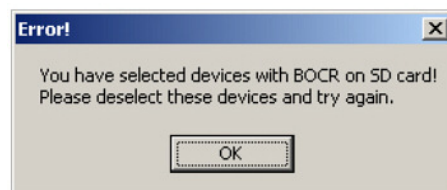
2.4.4 Upload

BOCRCT is able to upload files to devices where BOCR is running. These files could be, for example, new fonts or updated binaries. Only files with a special signature can be uploaded. You would receive these files from the Operating company. The Upload option is available only for devices with HDD-based BOCR systems. To upload a file to one or more devices, you:

- ① Turn on the devices and make a BOCRCT discovery of the network where the devices reside. For further information on the device discovery options, please refer to Network Discovery in this manual.
- ② Select all devices on which you want to upload the file by selecting the devices' check boxes in the Address column. You must select at least one device.

If an SD Card-based BOCR system device is selected, an error message will appear.

Figure 2-31: Error Message - SD Card-based BOCR System Devices



- ③ Select **File** → **BOCR Options** → **Upload** in the BOCRCT toolbar.

Figure 2-32: Upload File Selection



Click **Browse** to select the upload file you received from the Operating company. Click **Next**.

- ④ The next dialog shows information about the selected upload file.

Figure 2-33: Upload File Information

BOCR Wizard

This page shows you information on the selected upload file.
Push the Next button, if you want to upload this file.

Creator:

EDSC

Date:

29/08/2003 16:54:52

File Description:

This file is used for uploading font file OCRB

< Back

Next >

Cancel

Click **Next**.

⑤ You can clear any preselected device, if you do not want to upload the file to it, by deselecting the device's check box in the Address column.

Figure 2-34: Selection of Devices for Uploading a File

BOCR Wizard

This page shows you the list of devices you have previously selected.
Click the Finish button to confirm that you want to configure all selected devices.

Address	Model	Debug Mode	BOCR ...	Printer ...	Comm. P...	Serial Number
<input checked="" type="checkbox"/> 172.17.27.64	Alicio AP900	0	n.a.	9100	10001	G12627-1007
<input checked="" type="checkbox"/> 172.17.27.66	Alicio 3232C	0	n.a.	9100	10001	K7200000043
<input checked="" type="checkbox"/> 172.17.27.40	Alicio 2232C	0	10000	9100	10001	K02M10122
<input checked="" type="checkbox"/> 172.17.27.61	Alicio AP610N	0	n.a.	9100	10001	A2274890017

< Back

Finish >

Cancel

To start uploading the file to all selected devices, click **Finish**.



NOTE:
Once uploading has started, you are not able to cancel the process.

2.4.5 Test

You can print out a three page test document to check that BOCR is working correctly. A sheet from this document is shown below as a sample.

Figure 2-35: Test Sheet

paceline Marketing GmbH

German Post Leicode
1234567890123 6

German Post Identcode
123456 678901 6

Danish Post

French Post
RA 1234 5678 5FR

USPS POSTNET 5
USPS POSTNET 9
USPS POSTNET 11
Dutch Kix
Australian 4-state 37
Australian 4-state 52
Australian 4-state 67
Singapore 4-state
OCR-A1
OCR-B
PDF 417
Error Indication
Err: 9

Paceline Marketing GmbH
Postfach 1
D-70308 Stuttgart/GF
Internet: www.paceline.de
e-Mail: sales@paceline.de
Tel.: 07141 925-42228 12
Fax: 07141 925-42228 13

Marking - Promotion - ANZ-Admin - Funds Management

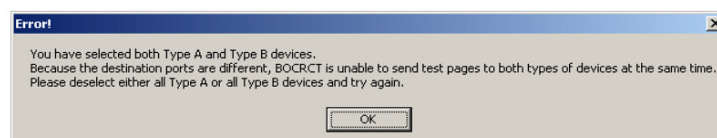
Note: This test sheet cannot be printed if authentication is active on the device.

To print the test sheets, you:

- ① Turn on the devices and make a BOCRCT discovery of the network where the devices reside. For further information on the device discovery options, please refer to Network Discovery in this manual.
- ② Select all devices for which you want to print out a test sheet, by selecting the devices' check boxes in the Address column. You must select at least one device.

If Architecture Type A and Type B models are selected at the same time, an error message will appear:

Figure 2-36: Error Message - Architecture Type A and Type B Models



- ③ Select **File** → **BOCR Options** → **Test** in the BOCRCT menu. Click **Next**.
- ④ In the dialog below, you may change the BOCR port or the Diprint Port, depending on the architecture of the selected model(s), to which the test sheet job will be sent.

The following ports will be used depending on the architecture type.

- Architecture Type A Models - BOCR Port
- Architecture Type B Models - Diprint Port

Figure 2-37: Configuration of the Test Sheet for Architecture Type A Models

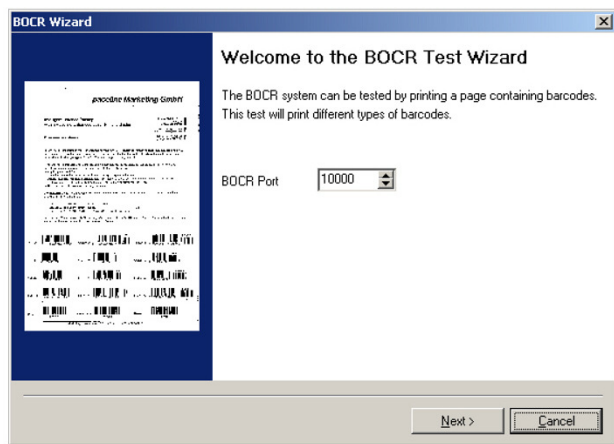
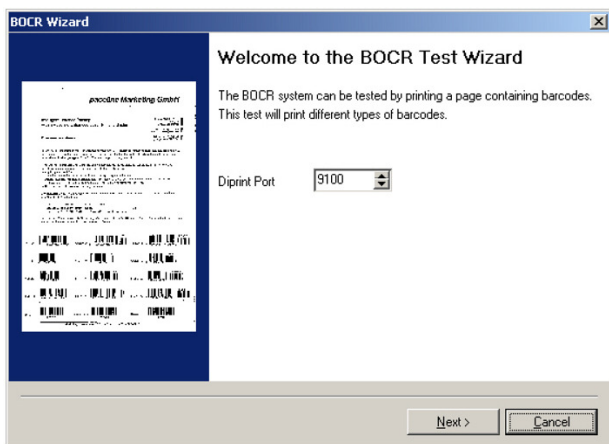


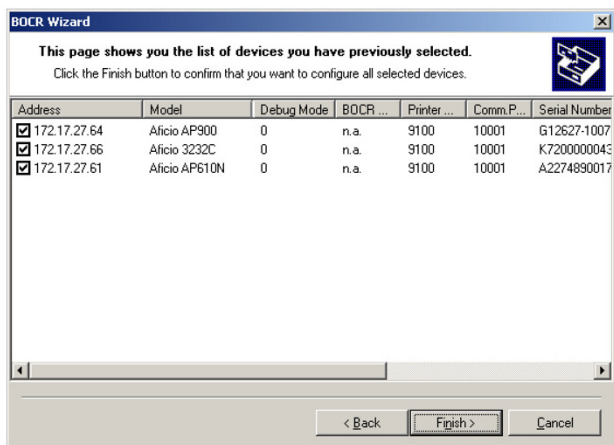
Figure 2-38: Configuration of the Test Sheet for Architecture Type B Models



Click **Next**.

- ⑤ You can clear any preselected device(s) on which you do not want to print the test sheet, by deselecting the devices' check boxes in the Address column.

Figure 2-39: Selected Devices for Printing Test Sheets



To print out the test sheets on all selected devices, click **Finish**.

2.4.6 Upgrade

The Upgrade option is available only for HDD-based BOCR systems. (Refer to Section 1.7 "Supported Devices" on page 11.) The following modules of BOCR can be upgraded.

Table 2-14: Possible Upgrades

Module	Procedure
BOCR (base)	Please contact Technical support.
BOCR (main)	Please follow from Section 2.4.6.1 "Upgrading the BOCR (Main) Module" below.
CONVERT	Please follow from Section 2.4.6.2 "Upgrading the CONVERT Module" on page 42.



NOTE:

For upgrading SD card-based BOCR systems and Architecture Type Bj systems, please contact Technical support.

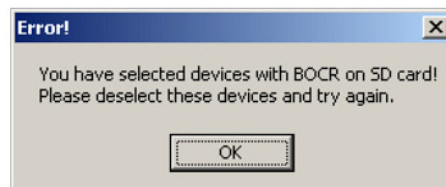
2.4.6.1 Upgrading the BOCR (Main) Module

BOCRCT sends an upgrade file to each targeted device. Each device must then be manually restarted. To upgrade the BOCR (main) module, you:

- ① Turn on the devices and make a BOCRCT discovery of the network where the devices reside. For further information on the device discovery options, please refer to Network Discovery in this manual.
- ② Select all devices for which you want to upgrade the BOCR (main) module by selecting the devices' check boxes in the Address column. You must select at least one device.

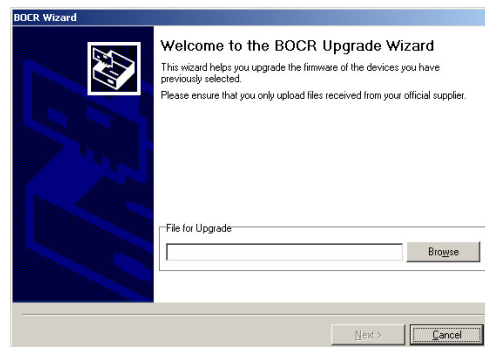
If an SD Card-based BOCR system device is selected, an error message will appear:

Figure 2-40: Error Message - SD Card-based BOCR System Devices



- ③ Select **File → BOCR → Upgrade** in the BOCRCT menu.

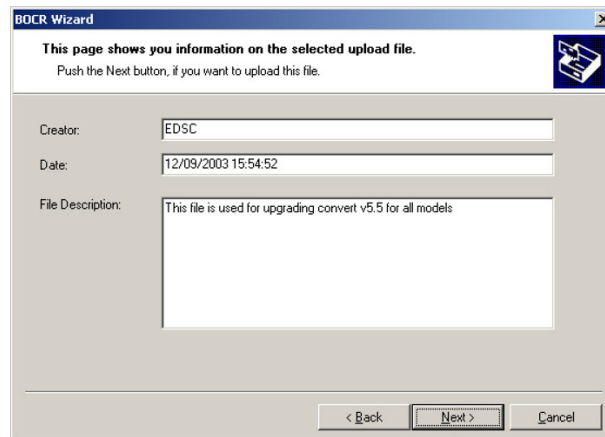
Figure 2-41: Upgrade File Selection



- ④ Browse to and select the BOCR upgrade file. Click **Next**.

The next dialog displays information about the selected upgrade file.

Figure 2-42: Upgrade File Information



BOCR Wizard

This page shows you information on the selected upload file.
Push the Next button, if you want to upload this file.

Creator: EDSC

Date: 12/09/2003 15:54:52

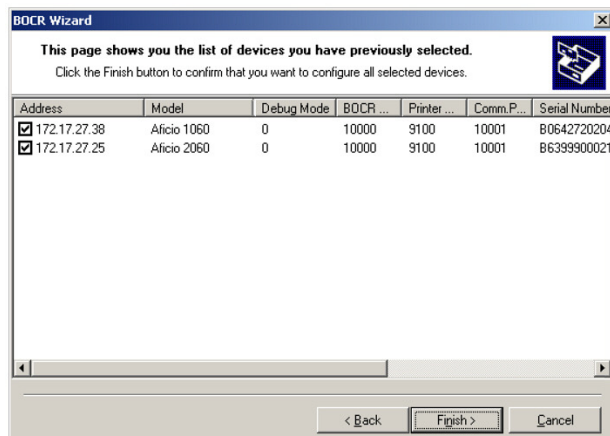
File Description: This file is used for upgrading convert v5.5 for all models

< Back Next > Cancel

Click **Next**.

- ⑤ You can clear any preselected devices if you do not want to upgrade BOCR on them, by deselecting the devices' check boxes in the Address column.

Figure 2-43: Selection of Devices for Upgrade



BOCR Wizard

This page shows you the list of devices you have previously selected.
Click the Finish button to confirm that you want to configure all selected devices.

Address	Model	Debug Mode	BOCR ...	Printer ...	Comm.P...	Serial Number
<input checked="" type="checkbox"/> 172.17.27.38	Aficio 1060	0	10000	9100	10001	B0642720204
<input checked="" type="checkbox"/> 172.17.27.25	Aficio 2060	0	10000	9100	10001	B6399900021

< Back Finish > Cancel

Click **Finish** to start the upgrading process on all selected devices and to close the Upgrade Wizard.

- ⑥ Turn each device off and on again. This completes the upgrading process.

2.4.6.2 Upgrading the CONVERT Module

The CONVERT module is the core filter module. It is called up by BOCR (main) and runs for every print job. For upgrading the CONVERT module, an upgrade file has to be sent to the device using BOCRCT. BOCRCT then restarts the device and the CONVERT module is updated automatically.

The procedure of upgrading the BOCR (main) and CONVERT is the same, with the only difference for the latter being that you do not need to restart the device.

2.4.7 Debugging

Although Debugging is available for both HDD-based BOCR systems and SD Card-based BOCR systems (Section 1.7 "Supported Devices" on page 11), it is not possible to configure both types at the same time. Please configure the Debug Mode separately for the HDD- and SD Card-based BOCR systems.

BOCRCT can enable or disable a Debug Mode at a device. Two options are available:

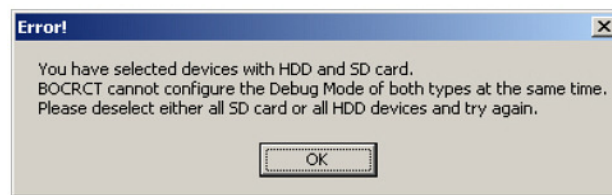
- Barcode debugging -- sets the Debug Mode of the CONVERT module.
- Crash analysis -- sets the Debug Mode of the BOCR (main) module.

To configure debugging, you:

- ① Turn on the devices and make a BOCRCT discovery of the network where the devices reside. For further information on the device discovery options, please refer to Network Discovery in this manual.
- ② Select all devices for which you want to enable the Debug Mode by selecting the devices' check boxes in the Address column. You must select at least one device.

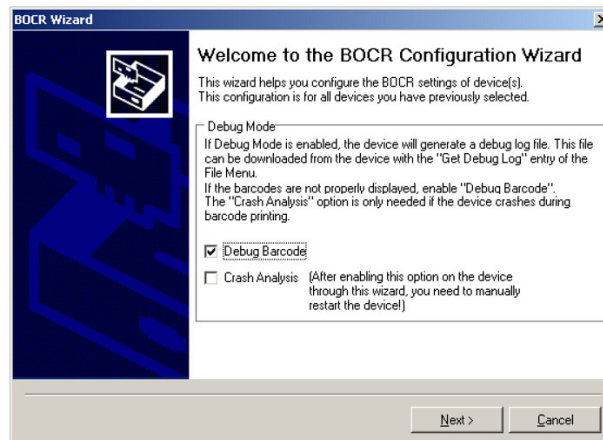
If HDD- and SD Card-based BOCR system devices are selected at the same time, an error message will appear.

Figure 2-44: Error Message - HDD- and SD Card-based BOCR Systems



- ③ Select **File → BOCR Options → Configure → Debug Mode** in the BOCRCT menu.

Figure 2-45: Debug Mode



The following table describes the various options of Debug Mode you can set the devices to:

Table 2-15: Debug Mode Numbers

Number	Debug Mode
0	Debugging off (default)
1	Debug Barcode on, Crash Analysis off
2	Debug Barcode off, Crash Analysis on
3	Debug Barcode on, Crash Analysis on

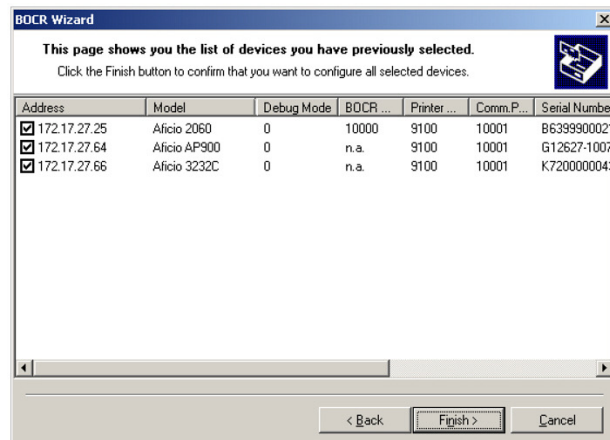
Select the desired Debug Mode(s). Then click **Next**.

For HDD-based BOCR systems, follow from step ④.

For SD Card-based BOCR systems, follow from step ⑤.

- ④ You can clear any preselected device(s) for which you do not want to set the Debug Mode by deselecting the devices' check boxes in the Address column.

Figure 2-46: Selection of Devices for Debug Mode



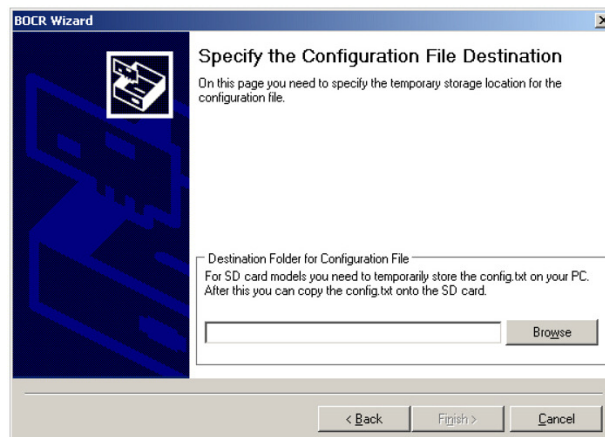
Click **Finish** to start applying the changes to all selected devices and to close the Configuration Wizard.

After sending the changed debug settings to a device, BOCRCT will send a Reset Request to BOCR. As BOCR is unable to reset the BOCR (main) module, the device must be manually restarted to activate the new Crash analysis setting on the device.

Go to step ⑨.

- ⑤ For SD Card-based BOCR system devices, the window below will appear.

Figure 2-47: Destination for the Configuration File



- ⑥ In case of multiple SD cards, first copy the file **config.txt** to a folder on your PC's hard disk.

Click **Browse** and select a suitable folder.

- ⑦ Then click **Finish** to save the **config.txt** file to that folder and to close the Wizard.

- ⑧ For each device, do the following:

Turn off the device, remove the SD Card from the device, and insert it in your SD Card writer.

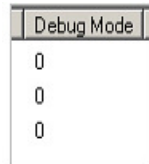
Then copy the file **config.txt** into the folder **\SDK\50462976** on the SD Card.

Place the SD Card back into the device, and turn the device on.

⑨ You are finished.

On the BOCRCT Main pane in the Debug Mode column you can see which debug mode the BOCR system on each device is set to:

Figure 2-48: Debug Mode



NOTE:

For SD Card-based BOCR systems, the debug information will be lost when the device is turned off.

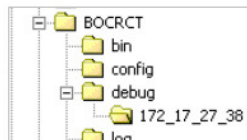
NOTE:

As writing the debug log requires frequent HD access, the printing speed may go down.

2.4.7.1 Get Debug Information

If a Debug Mode is enabled, BOCRCT can retrieve the debug information from BOCR and store it in a file. This file will be saved in the **debug** subfolder of the BOCRCT installation folder and will be named with the IP address of the device.

Figure 2-49: Folder of Debug Information



NOTE:

The default BOCRCT installation folder is "C:\Program Files\RICOH\BOCRCT".

On some Windows versions (Windows 8, and Windows 10), if this default folder was used for the BOCRCT installation, the subfolders will be created at two locations.

Under C:\Program Files\RICOH\BOCRCT\ all subfolders will be created.

In addition, the subfolders "config", "log", and "debug", will be also created under:

- (for a 32-bit system): C:\Users\<user name>\

AppData \ Local \ VirtualStore \ Program Files \ RICOH \ BOCRCT \,

- (for a 64-bit system): C:\Users\<user name>\

AppData \ Local \ VirtualStore \ Program Files (x86) \ RICOH \ BOCRCT \.

Only the latter will later contain the config, log, and debug files. The former will remain empty.

If a non-default folder was specified for the BOCRCT installation, the subfolders will be created only there.

To download the debug information, select **File → BOCR Options → Get Debug Log**.

There are these files:

- **log**BOCRCT.log:

device-independent; constantly being generated / cannot be disabled;

- **debug**<IP address>* (LOG_FILE.txt, ibsdebug.txt, *.prn):

BOCR on device; device-specific; only generated when debug enabled [X]; needs to be explicitly downloaded from the device;

Note: (Capturing print job data)

The incoming and outgoing print job data is captured in two files, "in_data.prn" and "out_data.prn". These may be empty if the job ends with a UEL (esc%-12345X). In that case these 9 bytes need to be manually removed from the job before capturing. This is no longer necessary with convert v11.3 and higher.

Note: (Security advice)

The log and debug files contain information which may be considered sensitive, related to the network layout, individual printer devices, and print job data of sensitive documents. Note, though, that most of this information and even beyond, may also be easily obtained by running a network sniffer. Log and debug files should only be provided to and generated upon the explicit request by Technical support, which may happen after a problem has been reported. Even though they will only be used for debugging purposes, it is recommended to avoid using print jobs with sensitive character. In order to minimize the risk of misuse, BOCRCT should only be provided to and used by designated persons (system administrators).

2.4.8 Configure Port

BOCR and BOCRCT do not use standard ports (such as 161 for SNMP) (except for the Diprint port) for communication. It might happen that one or more of the ports are already in use by an application for other purposes. The BOCR preset port then conflicts with these applications. To solve this problem, BOCRCT can change these ports. There are three ports of interest in BOCR that could potentially have to be changed:

- the BOCR port
- the Diprint port
- the Communication port

Although the Configure Port is available for both HDD- and SD Card-based BOCR systems, it is not possible to configure the ports for both types at the same time. Please do it separately for the HDD-based and the SD Card-based BOCR system devices.

The possible values for the ports are:

Table 2-16: Possible Port Values

Parameter	Description	Default	Min	Max
BOCR port (Architecture Type A Models Only)	Port to send the barcode print jobs to.	10000	1024	65535
Diprint port	Port used internally by BOCR and BOCRCT, and (for Architecture Type B Models only) the port to send the barcode print jobs to.	9100	1024	65535
Communication port	Port of BOCRCT-BOCR communication.	10001	1024	65535

If the Communication port or the BOCR port is set to a port number that is already in use, BOCR will automatically search for an alternative port. After a refresh of the BOCRCT, the alternative port will be displayed in BOCR's main window.

The Communication port has to be of a higher value than the BOCR port, due to a limitation in BOCR.

2.4.8.1 BOCR Port

The port where the barcode print jobs are sent to.

**NOTE:**

For Architecture Type B Models, the BOCR port is not used.

2.4.8.2 Diprint Port

BOCRCT also uses this port for uploading files (License Key file, upgrades, fonts, ...). If the Diprint Port setting on a device changes, the Diprint Port setting of BOCR must be changed to the same value. The **Diprint Port** setting of BOCR has to match the **Diprint Port** setting on the device, where it is used for TCP raw printing (usually 9100) and to where all print jobs are sent by BOCR.

When the Diprint Port setting needs to be changed, do so first on the device, then set it to the same value on BOCRCT.

A mismatch of both settings makes BOCR unable to print out barcode files (for Architecture Type A Models only), and BOCRCT unable to upload files (License Key file, upgrades, fonts). For further information on how to change the Diprint Port on a device, please contact Technical support.

2.4.8.3 Communication Port

The port on which BOCR and BOCRCT communicate with each other.

2.4.8.4 The Procedure to Configure the Ports

To change the port settings on one or more devices:

- ① Turn on the devices and make a BOCRCT discovery of the network(s) where the devices reside. For further information on the device discovery options, please refer to Network Discovery in this manual.
- ② Select all devices for which you want to apply the port changes by selecting the devices' check boxes in the Address column. You must select at least one device.

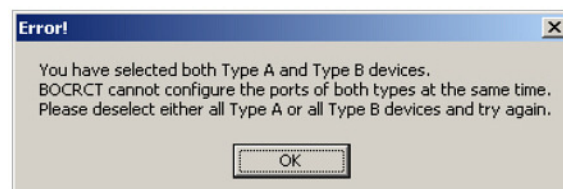
You need to apply the procedure separately for:

- Architecture Type A devices (having HDD-based BOCR systems)
- Architecture Type B devices with a HDD-based BOCR system
- Architecture Type B devices with an SD card-based BOCR system

- ③ Select **File → BOCR Options → Configure → Configure Port** in the BOCRCT menu.

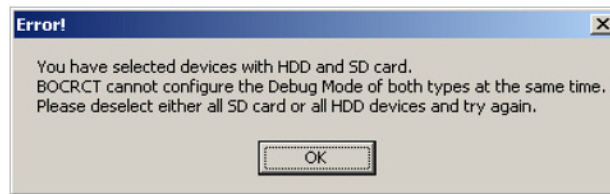
If Architecture Type A and Type B Models are selected at the same time, an error message will appear.

Figure 2-50: Error Message - Architecture Type A and Type B Models



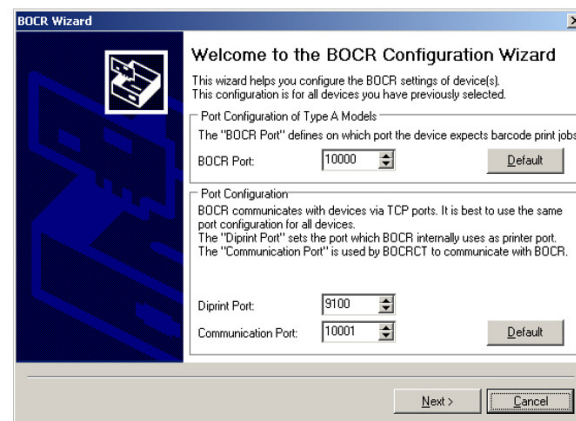
If HDD- and SD Card-based BOCR systems are selected at the same time, an error message will appear.

Figure 2-51: Error Message - HDD- and SD Card-based BOCR Systems



- ④ The following window will appear.

Figure 2-52: Configuration of Ports



Note: For Type B Architecture models and for SD card-based BOCR systems, the BOCR Port section is not shown.

Specify the correct desired values of the port numbers. Then click **Next**.

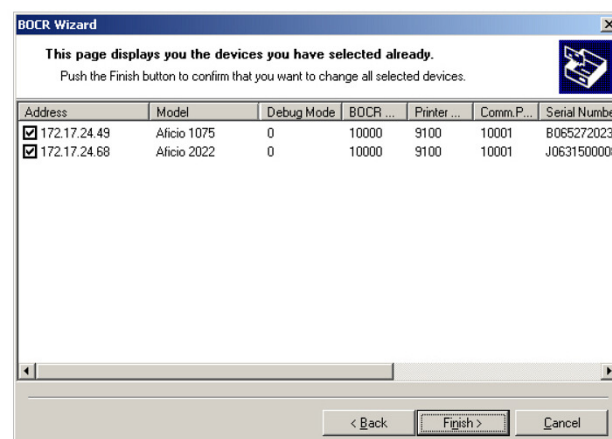
Note: Upon an invalid entry for a port number, an error message is issued. Erroneously,
 - no error message is issued for an invalid value <1024,
 - an error message is issued for the valid value of 1024.

For HDD-based BOCR systems, follow from step ⑤.

For SD Card-based BOCR systems, follow from step ⑥.

- ⑤ You can clear the preselected devices for which you do not want to change the ports by deselecting their check boxes in the Address column.

Figure 2-53: Selection of Devices for Changing Ports

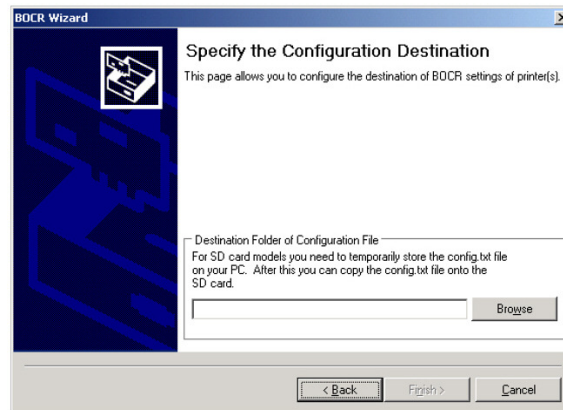


Click **Finish** to start applying the changes to all selected devices and to close the Configuration wizard.

Go to step ⑩.

⑥ For SD Card-based BOCR system devices, the following window asks you to specify the folder where the file **config.txt** shall be stored.

Figure 2-54: Destination for the Configuration File



⑦ In the case of multiple devices, it is more convenient to first store the file **config.txt** to a folder on your PC's hard disk.

⑧ Click **Browse** and specify the location of the destination folder.

Then click **Finish** to save the **config.txt** file to that folder and to close the Wizard.

⑨ For each device, do the following.

Turn off the device, remove the SD Card from the device, and insert it in your SD Card writer.

Then copy the file **config.txt** into the folder **\SDK\50462976** on the SD Card.

Place the SD Card back into the device, and turn the device on.

⑩ You are finished.

2.5 BOCRCT Removal

Please select BOCRCT in the **Add/Remove Programs** menu option in your computer's Control Panel and follow the instructions of the Removal Wizard.

Note: In the case of some Windows versions (Windows 8, and Windows 10), you may additionally need to manually remove BOCRCT folders from under
- (for 32-bit systems): C:\Users\<user>\AppData\Local\VirtualStore\Program Files\RICOH\BOCRCT, or
- (for 64-bit systems): C:\Users\<user>\AppData\Local\VirtualStore\Program Files (x86)\RICOH\BOCRCT, respectively.

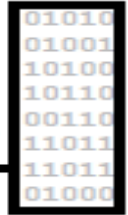
Note: When BOCRCT is being uninstalled, and if write-protected files or directories reside in the installation directory of BOCRCT, these elements will not be deleted, and no notification message of this fact will be issued.

Note:

On Windows 8.1 and Windows 10, the uninstallation of BOCRCT is not possible via the Start menu ("Uninstall" is greyed out), nor via Control Panel (no "Uninstall" option).

As a workaround, simply run "setup.exe" of BOCRCT, and confirm to uninstall.

Chapter 3



3. Limitations

3.1 Limitations List

3.1.1 Limitations regarding the Issuing System

- **[LIM01SD]** (Architecture Type A Models Only) In order to print barcodes, print jobs have to be sent using the TCP raw printing protocol. The TCP/IP port number must be specified as an integer value between 1024 and 65535 that is not used for any other purpose on the target device (such as 9100). This may be an issue on some platforms that have no native TCP raw printing support mechanism (such as SAP systems (R/3, mySAP ERP)). The initial BOCR port number is 10000.

For other limitations related to the Issuing System, refer to Part II of the BOCR User's Manual.

3.1.2 Limitations regarding Barcoding

- **[LIM11CB]** It cannot be guaranteed that the barcodes generated by BOCR will be readable by all barcode reading devices. Some readers may require some adjustment in the barcode size parameters.

- **[LIM12CB]** Resolution is 600 dpi only.

- **[LIM13CB]** Printing barcodes is only possible with a PCL 5 data stream.

- **[LIM14CB]** The product is not 100% compatible with HP JetCAPS/JetMobile. For details refer to Part II of the BOCR User's Manual.

- **[LIM15B]** For some models, the SD card version does not support the special OCR-A characters hook, fork, and chair under Unicode. In case of need, please contact Technical support, or use the HDD version if available.

- **[LIM16B]** For PCL5 print jobs with SBCS Shift-JIS encoding (~&t31P), please use convert v11.10 or higher. (This is currently only available for new models from BOCR v2.10 and higher. For older models, please contact Technical support to request a patch.).

For other limitations related to barcode and OCR text printing, refer to Part II of the BOCR User's Manual.

3.1.3 Limitations regarding BOCR on the device

- **[LIM21D]** Print jobs which could not be completed because the power of the device was turned off may not be printed after the device is turned on again (as the print job is not saved on the HDD). For Architecture Type A Models only, this may happen while the job is still being processed between port 10000 and port 9100. Only after passing through port 9100 the job is saved to the HDD.

- **[LIM22D]** The installation procedure of BOCR on the device requires a service engineer. This is due to the installation mechanism. The different models require different methods for installation and removal.

- **[LIM23DC]** The performance of the print job using BOCR will not be as high as printing without BOCR.

- **[LIM24D]** Different device models require different versions of the device-based portion of BOCR. Please contact Technical support.
- **[LIM25DC]** When BOCR is installed on a device, status read-back from other print jobs via the parallel or USB port may not work.
- **[LIM26D]** If the BOCR application is installed on a device, other SDK applications might not be installable nor executable simultaneously. Please contact Technical support for known (in)compatibilities.
- **[LIM27D]** If you want to change the system base media of a BOCR system, for example from SD Card to HDD, you need to completely remove the current installed BOCR version first, then reinstall BOCR.
- **[LIM28D]** Due to the limitation in the devices (except for Device Class DC27a/b/c and all Type B models), the device will never go to the highest power-saving mode, as it would disable access to the HDD. All other power-saving modes will be allowed.
- **[LIM29D]** For Device Classes DC27a/b/c and all Type B models, it is not possible to have BOCR and BOCRCT work if the encryption or security feature is enabled.
- **[LIM30D]** (Architecture Type A Models Only) USB, Centronics, serial and lpr ports are not supported.
- **[LIM31D]** (Architecture Type A Models Only) A device which has a Wireless LAN card is not supported.
- **[LIM32D]** (Architecture Type A Models Only) The device's access control function (which allows to restrict access to the device by IP address) is ineffective when printing via the BOCR port.
- **[LIM33D]** (Architecture Type B Models Only) USB, Centronics and serial ports may not work properly. Please contact Technical support.
- **[LIM34C]** (Architecture Type B Models Only) While BOCR is running in Demo Mode, any PCL5 print jobs (from any other applications as well) will bear the demo watermark.
- **[LIM39C]** (Architecture Type B Models Only) Applications on the device using TCP ports and status read-back may not work properly. In particular, BOCR cannot coexist with native IPDS (port 5001).
- **[LIM40D]** BOCR may not work on devices running software that inhibits or otherwise controls TCP ports. Please contact Technical support for known incompatibilities.
- **[LIM41D]** (Architecture Type Bxx Models Only) BOCR has no proper information screen. Attempting to access it, either
 - via the "BOCR" button on the Home screen, or
 - via the "Check" button at the "BOCR" entry on the Extended Features list (via the [Information] hard key), results in a "... Please wait ..." screen being displayed infinitely.This can be safely ignored. To exit from it, press e.g. the [Printer] or [Home] hard key. Primarily, one should avoid to use these buttons. The "Check" button can be hidden via [User Tools] (hard key) --> "Edit Home" (button) --> "BOCR" (icon) --> "Delete Icon" (button).
- **[LIM42D]** For some device models, sending a file containing multiple jobs may cause slow printing behaviour. In case of occurrence, please contact Technical support.
- **[LIM43D]** For some device models, sending a PDF file directly to the device may result in the delayed ejection of the first page. In case of occurrence, try upgrading the device firmware.
- **[LIM44D]** For some device models, the HDD Directory List (part of the PCL Config. Page) may fail to list both the Status Indication Files and the folder 0:\pcllibs and its contents. Hence, these cannot be used to check the status nor as a criterion for successful installation. This is a device firmware problem and not related to BOCR. This affects all Device Classes DC103 and newer. Printing this list via PCL command "<esc> | p4T", instead of via the menu, may still work.

- **[LIM45D]** Certain ill-conditioned print jobs may cause BOCR to fail with an SC899 service call error. In case of occurrence, please restart the device, refrain from re-sending the respective job, and contact Technical support.
- **[LIM46D]** On devices of Device Class DC83 or DC108 with BOCR installed with convert version v10.01 or lower, the ejection of the first page of a job may be extremely slow. Please use convert v10.04 or higher.
- **[LIM47D]** For print jobs with a PDL (page description language) unknown to BOCR, it does not switch to passthrough mode. For RPCS, this causes a "SC 920-004" service call. As a workaround, apply a replace rule in "convert.ini" that forces passthrough mode upon its detection, e.g. "@PJL ENTER LANGUAGE[]=[]RPCS". This may lead to a slow-down of the printing speed, though. This is a limitation of convert v11.10 and lower. For more information, refer to the "[Installation Note (*F2)]" in the ReadMe file. Contact Technical support, if help is needed. This has been fixed in convert v11.3 and higher.

Furthermore, any BOCR-independent limitations of the device may apply.

3.1.4 Limitations regarding the Managing Station

- **[LIM51M]** BOCRCT is limited to being used with no more than 1000 devices running BOCR.
- **[LIM52M]** If you install BOCR on a device only partially, that is with some associated modules missing, the entries in the columns "BOCR Base Ver.", "CONVERT Ver." and "BOCR Main Ver." in BOCRCT for this device will be empty. (BOCR Main is required for communication with BOCRCT.)
- **[LIM53M]** To perform a discovery in multiple class C networks with the same address prefix (e.g. 192.169.*.0) you have to specify a separate entry (192.169.xxx.0, 255.255.255.0) for each of these networks. A wildcard notation is not supported.
- **[LIM54M]** With newer versions of the RIP protocol, not all networks may get discovered in the Automatic (Network) Search. In that case these networks need to be explicitly specified manually.
- **[LIM55M]** Some routers may return the network number as "...255..." instead of "...0...", which is then accordingly displayed by BOCRCT.
- **[LIM56M]** Class A and class B networks cannot be discovered automatically, only class C networks.
- **[LIM57M]** Only the RIP protocol is supported for the automatic discovery of networks. Further, RIP v2 is not supported, only RIP v1.
- **[LIM58M]** (system-specific behaviour):
 - On some systems it may be necessary to run BOCRCT.exe as Administrator.
- **[LIM59M]** For some device models, when the IPDS protocol is active, the device may show a service call (SC899) error when port 5001 gets probed by BOCRCT. As a workaround, consider using the tool "IBS-CC" (from www.stethos.com), instead of BOCRCT. Otherwise, please contact Technical Support.

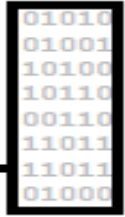
3.1.5 Other Limitations

- **[LIM81MD]** The detection of BOCR by BOCRCT on a device can only work properly if it can communicate with BOCR. For this purpose, BOCR must be running on the device. Otherwise, BOCRCT cannot distinguish between BOCR being not installed or not running.
- **[LIM82MD]** BOCRCT may not detect a device properly while the device is busy, for example when receiving a Fax. Moreover, communication may fail when the device is in User Tools mode.
- **[LIM83MD]** BOCRCT cannot detect devices of models with SNMP v3, if SNMP Encryption is activated.

- **[LIM84MD]** For Device Class DC27a/b/c and all Architecture Type B models, the HDD will be allowed to go to the highest power-saving mode. In this mode for these type of devices, with the Debug Mode turned on to capture Debug Log data, certain functionalities of BOCRCT (for example discovery of devices, capturing debug log data onto HDD, uploading debug files, refreshing the status of the device, changing the configuration data of the device, and uploading a license file) and BOCR (printing barcode) will not work. To allow functionality during the highest power-saving mode for these Device Classes, it is necessary to turn off the Debug Mode.

- **[LIM85MD]** (Architecture Type Bj Models Only) If the C application "BOCR.gps" is stopped on a device, the status displayed in BOCRCT will still misleadingly show "BOCR is OK", because BOCRCT cannot become aware of this event.

Chapter 4



4. Troubleshooting and Support

4.1 Troubleshooting

<p>[Q 01] BOCR icon in BOCRCT main window is still in BOCR-Not-Running mode even after installation.</p>	<ol style="list-style-type: none"> 1. Was the device turned off and on after the installation? 2. For DC13a/b and DC16a/b, ensure that the Extended Features option is set to On for the device. 3. For DC17a/b, DC17c/d, DC19a/b, DC20a/b/c, DC23K/y/z, and DC27a/b/c, ensure that the BOCR package program is highlighted for the startup of the Extended features menu on the device.
<p>[Q 02] BOCRCT displays the error: The network subsystem is not ready for network communication! Please contact your system administrator before restarting BOCRCT.</p>	<p>Your operating system does not satisfy BOCR's requirements. Please ensure that the TCP protocol and Winsock 2.0 are installed.</p>
<p>[Q 03] BOCR error icon is shown and the error code is set to 1 on BOCRCT.</p>	<p>The BOCR port is already in use by another application (most likely by the device application). Check the Diprint port setting of the device to ensure that it matches to the Diprint port setting specified by BOCRCT.</p>
<p>[Q 04] BOCR error icon is shown and the error code is set to 62 on BOCRCT.</p>	<ol style="list-style-type: none"> 1. The Diprint port is misconfigured. Select and use the BOCRCT menu File → BOCR Options → Configure → Configure Port. 2. Ensure that the device application is running.
<p>[Q 05] BOCR error icon is shown and the error code is set to 64 on BOCRCT.</p>	<p>The IP address of the device is not unique. Please create a unique IP address for the device.</p>
<p>[Q 06] BOCR error icon is shown and the error code is set to 68 on BOCRCT.</p>	<p>An SD Card-based BOCR system has been installed, although the device is equipped with an HDD (See Section 1.7 "Supported Devices" on page 11). Remove the BOCR with the removal procedure, and delete the folder "SDK\50462976" and all files in the folder on the SD Card with your SD Card writer. Then install the BOCR as a HDD-based BOCR system.</p>

[Q 07] BOCR error icon is shown and the error code is set to 69 on BOCRCT.	An SD Card has been inserted to the wrong SD Card slot, or the HDD module has been installed to the SD Card medium for a device equipped with both HDD and SD Card. (See Section 1.7 "Supported Devices" on page 11) Remove the BOCR with the removal procedure, and delete the folder " \\SDK\\50462976 " on the SD Card with your SD Card writer. Then install BOCR as an SD Card-based BOCR system.
[Q 08] BOCR error icon is shown and the error code is set to something other than 1, 62, 64, 68 or 69 on BOCRCT.	Restart the device. If the problem persists, contact Technical support.
[Q 09] After installing the license.pjl file, the icon in BOCRCT is shown as "BOCR in demo mode".	1. After installing the license.pjl file, it is necessary to click Refresh in BOCRCT. 2. Verify that the license.pjl is valid.
[Q 10] The devices in the device list continuously reject communication. The Diprint port displayed in BOCRCT is different from 9100. "Unable to open <IP address>, port <port number>" is logged for every communication attempt (configure port, test file printing).	The Diprint Port Setting of BOCR was previously set to a value that does not correspond with the device's Diprint Port setting. The Diprint port must be changed in the device (Contact Technical support) to match the setting that is displayed in BOCRCT.
[Q 11] Even after refreshing BOCRCT, the icon is shown as "BOCR in Demo mode" on BOCRCT.	Verify that the license.pjl is valid.
[Q 12] All the barcodes on the printout have "DEMO" on it.	BOCR is running in Demo Mode. To get rid of the "Demo" on barcodes, it is necessary to obtain and install a proper license.pjl file.
[Q 13] BOCR Icon shows "Old Version of BOCR" on BOCRCT.	After upgrading the BOCRCT software, the particular device still has an old version of BOCR running on it. We recommend to update to the latest version.
[Q 14] There is ERR XX (where XX is some number) below a barcode printout.	There is an error in the data of the barcode. Refer to Part II of the BOCR User's Manual to find out the cause of the error and correct the data accordingly.
[Q 15] Nothing happens when I run File→BOCR Options→Test to print out the test sheets.	Ensure that BOCR is up and running on the selected device(s) on the BOCRCT screen. Click Refresh to get the latest status. Ensure that the security/encryption feature is disabled.
[Q 16] It takes a long time to cancel the discovery process.	This can occur because the creation of threads cannot be interrupted directly. If the discovery process is cancelled, BOCRCT waits until the thread creation finishes and after that the cancel message is processed.
[Q 17] BOCRCT outputs Error: Unable to export results! Cannot write to the specified file or folder.	Please check if your output folder exists or if there is a write-protected file with the same name in this folder.

<p>[Q 18] BOCRCT outputs Error: Unable to export results! One or more export style sheets are corrupt.</p>	<p>Please check if your files in the Templates folder are corrupt by comparing the XSL files in the Templates folder. If this message appears more than one time, or if the files do not correspond, reinstall BOCRCT.</p>
<p>[Q 19] BOCRCT outputs Error: Unable to export results! One or more export style sheets files could not be found.</p>	<p>Please check if your files in the Templates folder are missing by comparing the XSL files in the Templates folder. If this message appears more than one time, or if the files do not correspond, reinstall BOCRCT.</p>
<p>[Q 20] BOCRCT outputs Error: Save configuration Exception <number></p>	<p>An error occurred when saving. Try again. If the error occurs again, restart BOCRCT.</p>
<p>[Q 21] It takes a very long time for BOCRCT to complete the discovery process.</p>	<ol style="list-style-type: none"> 1. Reduce the Retries and increase the Timeout values in the File→Preferences menu. 2. Increase the Number of threads in the File→Preferences→Advanced menu.
<p>[Q 22] Some devices that support BOCR are not discovered by BOCRCT.</p>	<ol style="list-style-type: none"> 1. Ensure that the devices are turned on and connected to the same network as BOCRCT. 2. It may be necessary to adjust some parameters in the File→Preferences menu, especially in less reliable networks. 3. Ensure that the Entire Network Automatic Search's Distance Maximum is set to an appropriate value. 4. It may be necessary to disable the security or encryption feature. <p>If a network is not appearing after you do a search:</p>
<p>[Q 23] The Device Discovery does not discover devices you know are in the network, or no network is found that matches your definition.</p>	<ol style="list-style-type: none"> 1. Check that the network IP address and subnet mask are not mistyped. Otherwise, the network may not exist. 2. Look at the configuration of the firewall or router. If you have a particular configuration, some networks may be invisible. <p>If the network continues to not appear, contact Technical support and/or your local network administrator.</p>
<p>[Q 24] The BOCRCT icon shows "BOCR is OK", but printing fails.</p>	<p>[Architecture Type Bj only] Check on Web Image Monitor (WIM), or (only for Architecture Type Bjax) on the device's operation panel, that "BOCR.gps" has not been stopped. Refer to limitation [LIM85MD] for more information.</p>
<p>[Q 25] BOCRCT outputs Error: Installation file does not match the selected device(s)!</p>	<p>The PJL file has an incorrect or no entry for the targeted device model. Pls contact Technical support.</p>
<p>[Q 26] The print job is lost.</p>	<p>This may happen on some old models or on models with an old version of its mod file, if the job is sent too soon after reboot (even if the display says "Ready"). Ensure that the latest version of the mod file is used. Otherwise, please contact Technical support.</p>

[Q 27] BOCRCT incorrectly shows the status of BOCR on a device as "BOCR not running".	BOCRCT shows "BOCR not running" for a device. But BOCR on the device is working correctly, and WIM correctly shows "BOCR = Starting up" and "BOCR.gps = Waiting". (This also does not change after a device reboot or a new BOCRCT search.) The reason may be a timeout in the reply from the BOCR Communication port (e.g. 10001) to the BOCRCT search. This may be caused by additional software on the device, which may have additional ports open or generally slow down system behaviour. Check the file BOCRCT.log for an entry like "nnn.nnn.nnn.nnn:10001 recv timeout". In that case, try increasing one or more of the timeout values, as described in section 2.4.1.3.2 "The Timeouts Tab".
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For other symptoms or problems related to barcodes, please refer to the Troubleshooting section of BOCR User's Manual Part II.

4.2 Support

If you need BOCR support, please contact Technical support.

Appendix



A. Appendix

A.1 BOCR Error Codes

The following table describes the error codes of BOCR on the devices, as shown in the Error State column of BOCRCT and on the PCL Config Page (ERR_CODE=XX, where XX is the error code number), and corresponding suggested actions to be taken.

If there is no error, the text "No Error" is displayed.

The text "No PCL5 !" indicates that BOCR cannot be installed on this device, unless the PCL5 option is installed first.

Table A-1: Error Codes

Error Code	Description	Suggested Action
0	No Errors	No action necessary.
1	IBS Port Binding Failure. Port already used is likely.	Check to ensure that the BOCR port is not already used by another application. If the problem persists, contact your Technical support.
2	Connection to printer port failure.	Contact Technical support.
3	IBS Removal Complete. IBS not running but this is normal.	No action necessary.
4	IBS (main) Replacement or Upgrade File is found invalid. It was removed.	Contact Technical support.
5	CONVERT Replacement or Upgrade File is found invalid. It was removed.	Contact Technical support.
6	Copying IBS Exec from public to private failed.	Contact Technical support.
7	ibs.main does not exist in public and private.	Contact Technical support.
8	Config file contains a blank line.	Contact Technical support.
9	Config file does not exist when data is being retrieved.	Contact Technical support.
10	IBS being installed via VAS. Needs to be restarted.	Restart the device. If the problem persists, contact Technical support.
11	Error that caused the BOCRCT thread to end. (pthread_detach)	Contact Technical support.

Error Code	Description	Suggested Action
12	Error that caused the BOCRCT thread to end. (pthread_create)	Contact Technical support.
13	Error that caused the BOCRCT thread to end. (pthread_attr_init)	Contact Technical support.
14	Error that caused the BOCRCT thread to end. (listen failure)	Contact Technical support.
15	Error that caused the BOCRCT thread to end. (fopen failure)	Contact Technical support.
16	Error that caused the BOCRCT thread to end. (fseek failure)	Contact Technical support.
17	Error after the BOCRCT thread is started.	Contact Technical support.
18	Error before the BOCRCT thread is started.	Contact Technical support.
19	Configuration File contains a blank file.	Contact Technical support.
20	pipe() failed in ibs.main.	Contact Technical support.
21	Shared Memory could not be obtained. (shmget() failure in ibs.main).	Contact Technical support.
22	Shared Memory could not be obtained. (shmat() failure in ibs.main).	Contact Technical support.
23	Semaphore Value could not be initialized. (semctrl failure)	Contact Technical support.
24	*SemID could not be allocated (malloc failure)	Contact Technical support.
25	execl command for ibs.main failed. Program stopping.	Contact Technical support.
26	fork() failure. Too many processes running already.	Contact Technical support.
27	semop() for signalling failed. Program stopped.	Contact Technical support.
28	semop() for waiting failed. Program aborted.	Contact Technical support.
29	stat() failed in giveExecPermission.	Contact Technical support.
30	chmod() failed in giveExecPermission	Contact Technical support.
31	pipe() failed in callProc. Program stopped.	Contact Technical support.
32	fopen() failed in stringInFileExist.	Contact Technical support.
33	convert module in public found invalid and does not exist in private. Program stopped.	Contact Technical support.
34	convert module in public found invalid. Ignored and deleted.	Contact Technical support.
35	pthread_mutex_unlock failed.	Contact Technical support.
36	pthread_mutex_lock failed.	Contact Technical support.
37	copying file failure.	Contact Technical support.

Error Code	Description	Suggested Action
38	malloc() failure in for BOCRCTData.	Contact Technical support.
39	uninstall.ini file invalid. Removed.	Contact Technical support.
40	PUB_IBS_DIR could not be opened. Program stopping.	Contact Technical support.
41	Shared Memory could not be obtained. (shmget() failure in ibs.main).	Contact Technical support.
42	Shared Memory could not be obtained. (shmat() failure in ibs.main).	Contact Technical support.
43	Running convert failed. Program stopping.	Contact Technical support.
44	initialize() failed.	Contact Technical support.
45	convert returns number of strings fewer than expected.	Contact Technical support.
46	malloc() failure for licenseKey.	Contact Technical support.
47	Number of arguments passed to ibs.main incorrect.	Contact Technical support.
48	Convert does not exist in public and private. Program stopping.	Contact Technical support.
49	Writing to configuration file failed.	Contact Technical support.
50	Creating default configuration file failed. Program stopping.	Contact Technical support.
51	Config file contains a blank line. Program stopping.	Contact Technical support.
52	Config file does not exist for processing data. Program stopping.	Contact Technical support.
53	Send() failed for sending the first character to the device.	It is normal to have this error temporarily. But if the error persists and printing does not occur, contact Technical support.
54	pthread_attr_init() failure.	Contact Technical support.
55	pthread_create() failure.	Contact Technical support.
56	send() failed for sending middle of data stream.	It is normal to have this error temporarily. But if the error persists and printing does not occur, contact Technical support.
57	sendprntdata() failure.	Contact Technical support.
58	gethostname() failure.	Contact Technical support.
59	The OCR_A Font file does not exist in either the private or the public area. The OCR may not work properly.	Contact Technical support.
60	The OCR_B Font file does not exist in both the private and public areas. The OCR may not work properly.	Contact Technical support.

Error Code	Description	Suggested Action
61	The OCR_B Font file does not exist in both the private and public areas. The OCR may not work properly.	Contact Technical support.
62	The printer port is busy or incorrectly specified. This could be a critical error.	1. The printer port is misconfigured. Use the BOCRCT's menu File → BOCR Options → Configure → Configure Port . 2. Ensure that the device application is running. 3. If the problem persists, contact Technical support.
63	TCP Protocol is disabled. It will not be possible to run the application.	Enable the TCP protocol on the device.
64	IP Boot Error occurred. This means that the IP address is invalid or not unique.	Change the IP address of the device to a unique one.
65	Problem with memory or the HDD. Program is stopped.	Contact Technical support.
66	mkdir fail.	Contact Technical support.
67	debug file send error	Contact Technical support.
68	Install media type error	Contact Technical support.
69	Wrong SD Card slot	Contact Technical support.
70	One or more of the *.MAC files no longer exist in both the private and the public area. The corresponding fonts may not work properly.	Try reinstalling the install2_xx.PJL file. Otherwise, contact Technical support.

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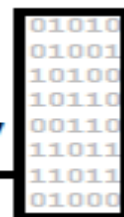
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Glossary



Glossary

Term	Definition
Architecture Type A/B Model	Different device models with different controller architectures which have different implementations and behaviors of BOCR. Broadly speaking, Type A models are older models, whereas Type B models are newer. For the latter there is a further distinction into variants Bc and Bj (Bjx, Bjs). For more detailed information please refer to Table 1-3 "Device Classes" on page 11.
BOCR	Acronym of "Barcode & OCR Package - Intelligent Version". In a narrower sense, the portion of it that runs on the device.
BOCR (base)	BOCR (base) is installed in the device, and this module is launched when the machine starts, and runs BOCR (main).
BOCR (main)	The core module of BOCR installed in the device. For example, communication with BOCRCT is accomplished through this module.
BOCR Port	(For Architecture Type A Models only) The port where the print job is sent to. Default port number is 10000.
BOCR System	BOCR installed and running on a device.
BOCR.gps	For Architecture Type Bj, the C-based portion of BOCR on the device.
BOCRCT	Acronym of "BOCR Control Tool".
Client	A network station requesting services from servers.
Communication Port	Port used for communication between BOCRCT and BOCR. Default port number is 10001.
CONVERT	The core module of BOCR installed in the device to convert the input print data stream to barcode data.
Diprint port	The TCP port used for TCP raw printing (also known as "Direct Printing"). This is a setting on the device with a corresponding setting on BOCR which must match to the device setting.
DNS	(Domain Name System) System to map or resolve names into IP addresses.
HDD	(Hard Disk Drive) Part of the computer or device which permanently stores data.
HDD-based BOCR System	A device with BOCR installed and running on the HDD.
Hop	Term used to measure the distance between networks, with the normal distance between two adjacent networks being one hop. Normally, the number of routers between two networks.
Host name	A string that can be used instead of a numeric IP address to identify a device. A DNS Server is able to resolve these strings into numeric IP addresses.
Installation Medium	The medium (CD, Zip file) on which the installation files are distributed.
IP	(Internet Protocol) IP is a protocol by which data is sent from one station to another across networks.
IP address	An IP address is a 32-bit number that identifies a sender or receiver of a packet in IP communication.
Issuing System	The system that initiates the printing request.

Term	Definition
LAN	(Local Area Network) A LAN is a group of computers and associated devices that share a common communications line or wireless link and typically share the resources of a server within a small geographic area (for example, within an office building).
LPR	(Line Print(er) Request(er)) A printing protocol.
Managing Station	A computer that BOCRCT is installed and runs on, that manages all BOCR systems installed on devices in a network.
MHz	(Megahertz) Speed unit of the CPU.
Network Discovery	The process of discovering all active stations (especially devices) in a network.
OCR-A/B	(Optical Character Recognition.) A typeface to enable machine reading of text.
PCL	(Printer Control Language) A printer language by HP.
Port	In an IP network a port is a number assigned to user sessions, server applications and services of a computer. Example: LPR port is 515.
Protocol	A standard way of communicating across a network.
Router	Network station routing packets from one network to another.
SD Card-based BOCR System	A device with BOCR installed and running on an SD Card.
Server	A network station offering a service to clients.
SNMP	(Simple Network Management Protocol) Protocol needed for managing network stations.
System Base Media	The media type (HDD or SD Card) to which the system is installed and where it is running.
TCP	(Transmission Control Protocol) A part of the TCP/IP protocol stack.
TCP Raw Printing	A printing protocol using plain TCP. (Also known as Direct Printing)
Type A/B Device	A device whose model has Architecture Type A or B.

