



bizhubPRESS C7000/C7000P/C6000

Technical Training Course

IC-601 Image Controller Module

Welcome to the bizhub PRESS C7000/C7000P/C6000 Technical Training Course for the IC-601 Controller. This course will cover the IC-601 Image Controller Module installation, features and configuration.

To download these files, you must have [Adobe Acrobat](#) installed on your computer.

[bizhub IC-601 Workbook \(2.5 mb\)](#) 

[bizhub IC-601 Workbook \(2.0 mb\)](#) 

It should take you approximately 1.5 Hours to complete this course. 



NARRATION: Welcome to the bizhub PRESS C7000/C7000P/C6000 Technical Training Course for the IC-601 Controller. The IC-601 is a production-level capable image controller with many advanced connectivity and processing features. This course will cover the IC-601 Image Controller Module installation, features, and configuration. Please click the next button to continue.

Course Objectives

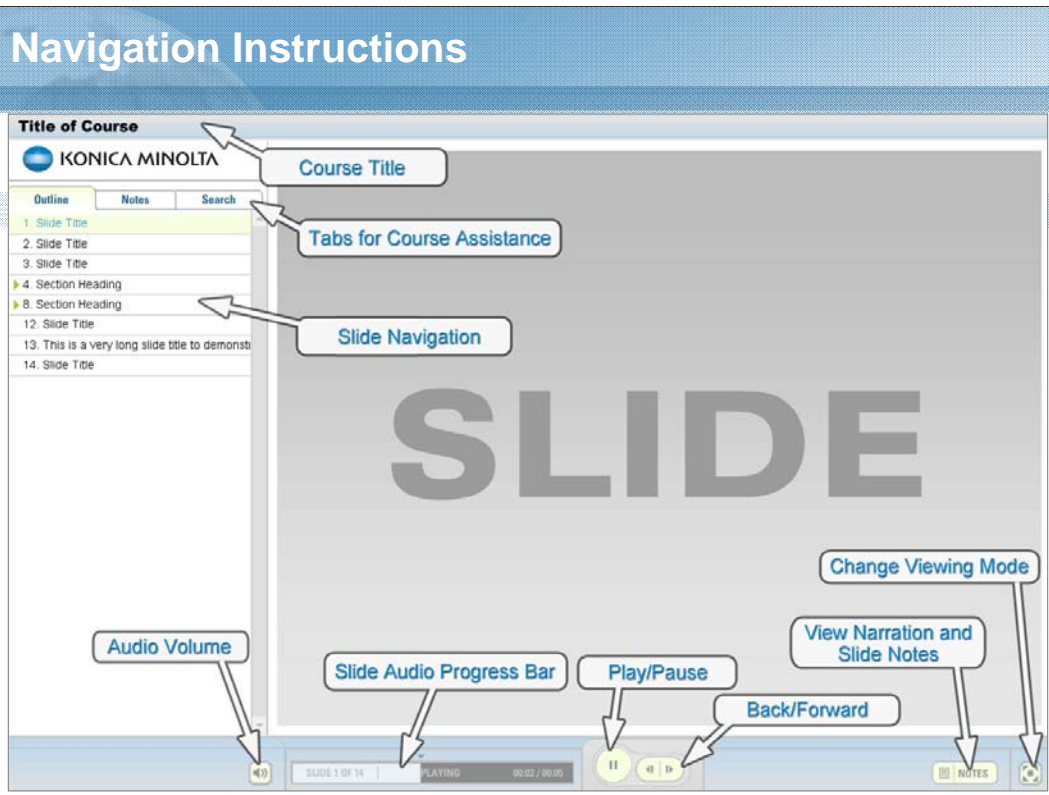


After this course you should have an understanding of:

1. Identify the purpose of the IC-601
2. Understand the installation of the IC-601
3. Identify the Printer functions for the controller
4. Identify the Scanner functions for the controller
5. Understand the new network functions available
6. Be aware of the service options and requirements



NARRATION: Upon completion of this course, you should be able to identify the purpose, installation and functions of the IC-601, including the printer, scanner and network functions available. You should also be aware of the service options and requirements.



Narration: This is the navigation for this course.

Lesson1 : IC-601 Ver.1.0

Topics covered in the lesson include:

- 1.1 Overview
- 1.2 Installation
- 1.3 Printer functions
- 1.4 Scanner functions
- 1.5 Network functions
- 1.6 Service
- 1.7 Relationship to Color Centro

NARRATION: This lesson introduces the IC-601 and describes the installation, printer, scanner and network functions available. It also presents the service requirements for the IC-601.

1.1 Overview

- Features of IC-601
- Configuration
- Print Data Flow
- Scan Data Flow

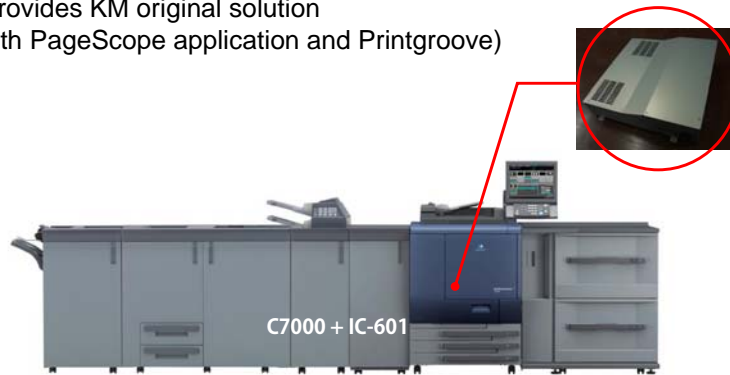
NARRATION: The overview information for this course will cover the IC-601 features, configuration, and print and scan data flow.

Features of IC-601

The IC-601 is an internally-developed product created as a response to the market need for production-level controllers.

Boasts the following features:

- 1200dpi / Max. 70ppm Print
- Provides KM original solution
(Works with PageScope application and Printgroove)



NARRATION: The IC-601 is a new production-level color controller created by Konica Minolta as a solution to the needs of the market. It has an impressive maximum dots per inch of twelve-hundred, and can produce seventy pages per minute. It also integrates with the PageScope and Printgroove solutions.

Configuration

IC-601 requires a PH-102 and HD-514 for full functional use of the system.

- **Purpose of PH-102 (Preview Kit)**

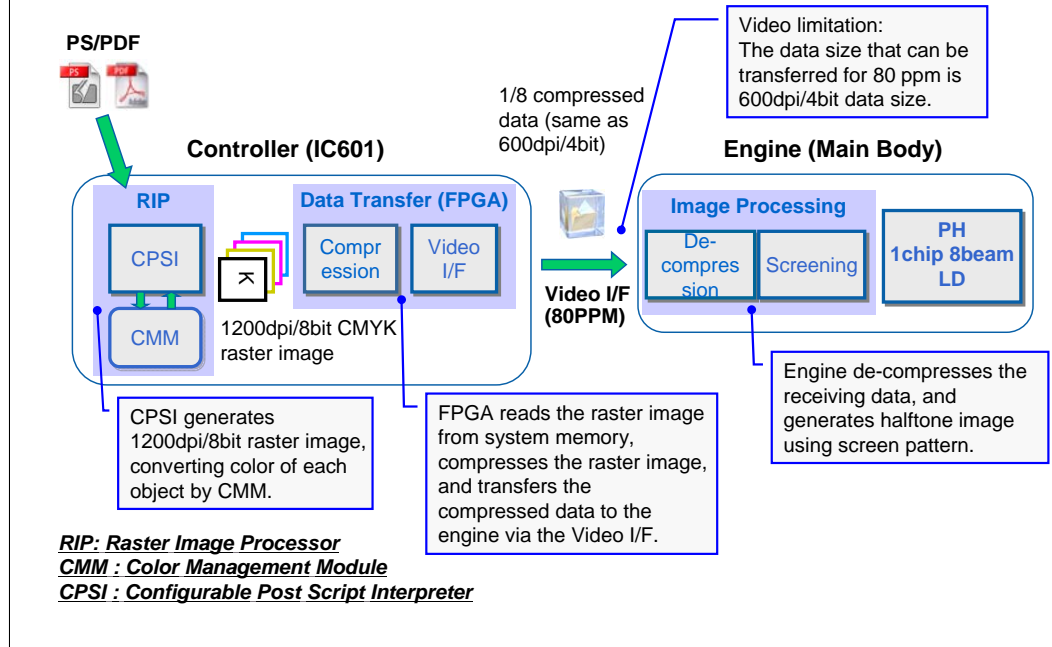
Preview and editing the held jobs in the engine HDD on engine operation panel.

- **Purpose of HD-514 (Hard Disk Kit)**

Printing, Holding the job in the engine HDD.

NARRATION: The IC-601 image controller requires a PH-102 and HD-514 for full functional use of the system.

Print Data Flow



NARRATION: This represents the print data flow for the IC-601 controller and attached engine. The controller receives PS/PDF via Network port or USB port. The CPSI generates 1200dpi/bit raster image, converting color of each object by CMM. FPGA reads the raster image from system memory, compresses the raster image, and transfers the compressed data to the engine via Video I/F. The video interface limitation is 600dpi/4bit for 80PPM. This exceeds the capacity of the Video I/F. Therefore, the controller is required to compress raster data. The engine de-compresses the receiving data, and generates halftone image with using screen pattern, then outputs.

Notes:

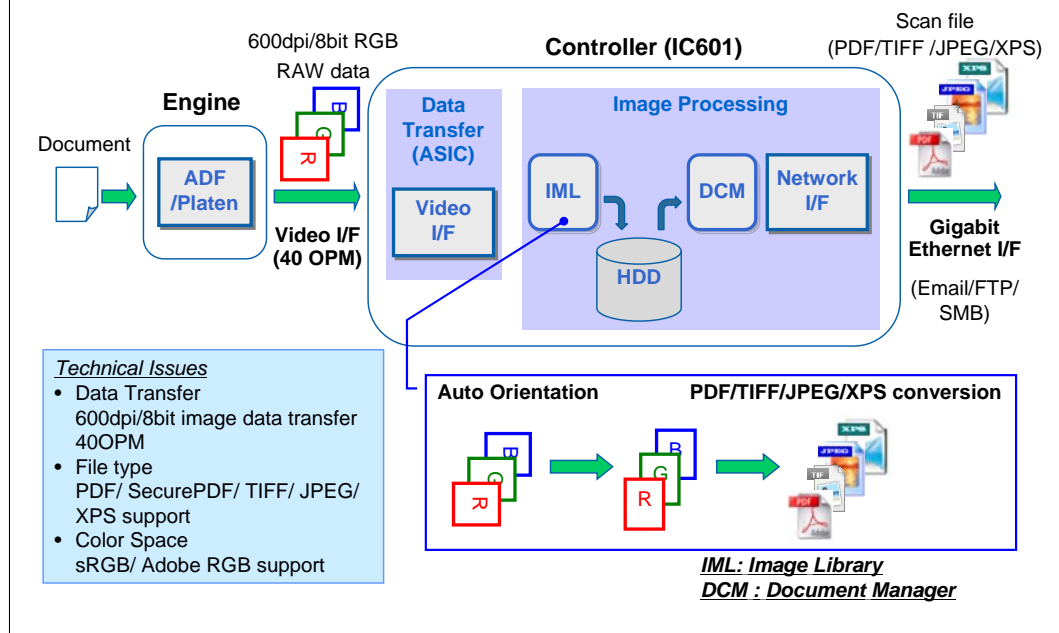
There are two technical issues related to print performance that are answered with the development of the IC-601.

The first is Data Transfer, while the second is RIP.

To achieve 1200dpi/8bit raster image data transfer at 80ppm, a new FPGA named CIELO was developed.

RIP speed for bitmap file printing was increased to surpass the offerings of many competitors' options.

Scan Data Flow

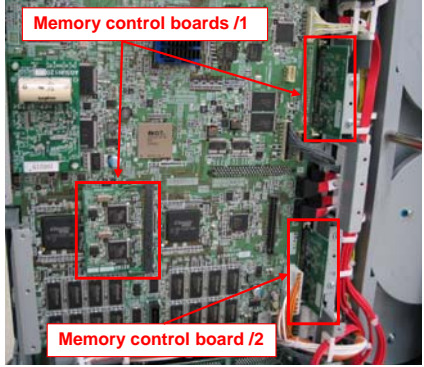


NARRATION: This is the scan data flow for the IC-601 and engine.

1.2 Installation

❖ Installation Manual PDF

- [PH-102 \(HD-514\)](#) 
- [IC-601](#) 

Notes for Installation	
PH-102 (HD-514)	<p>Be careful when installing memory control board /1 (A21GH103) and memory control board /2 (A21GH102). Installing at incorrect positions causes service calls.</p>  <p>DIPSW setting (HD-514 recognition setting) → Set DIPSW 02-0: ON (1)</p>

Note: The PH-102 and HD-514 are required for full use of the IC-601.

NARRATION: Be careful when installing the memory control boards /1 and /2. The IC-601 requires the PH-102 and HD-514 options to be installed to achieve its full potential. Click on the PDF links to download the related material.

1.3 Printer Functions

- Printer Specifications
- PS Plug-in Driver Overview
- PS Plug-in Driver Basic Panel
- PS Plug-in Driver Layout Panel
- Booklet Splitting
- Banner Print
- PS Plug-in Driver Finishing Panel
- PS Plug-in Driver Paper Panel
- Acquire Tray and Paper Data
- PS Plug-in Driver Cover Panel
- PS Plug-in Driver Page Settings Panel
- PS Plug-in Driver Tabs Panel
- PS Plug-in Driver Tab Settings Panel
- Needless Tab Ejection
- PS Plug-in Driver Color Mode Panel
- PS Plug-in Driver Color Management Panel
- PS Plug-in Driver Imaging Panel
- Screening
- Outline Settings
- Improvement in Outline processing
- (Reference) Samples of Outline processing
- PS Plug-in Driver Forms Panel
- PS Plug-in Driver Print Position Panel
- Crop Marks
- PS Plug-in Driver Stamp Panel
- PS Plug-in Driver Workflow Panel
- Secure Printing Procedure
- Hold Procedure
- PS Plug-in Driver Configure Panel

NARRATION: These are the available printer functions for the IC-601.

Printer Specifications

Item	Specifications
OS	TimeSys Linux 6.1
Resolution	1200dpi / 600dpi
PDL / PDF	PostScript 3 (CPSI v3019) / PDF v1.7 (PDF/X-1a, /X-3) / PPML v2.1 <i>*PCL5c/6(600dpi) and XPS will be supported in 2nd phase.</i>
Driver supported OS	PS Plug-in: Win : 2000 / Server 2003 / XP(32&64) / Vista(32&64) / Server 2008(32&64) / 7(32&64) Mac : Mac OS X(10.4 - 10.5x) / Intel Mac OS X(10.4 - 10.6x) PS PPD: Win : 2000 / Server 2003 / XP(32&64) / Vista(32&64) / Server 2008(32&64) / 7(32&64)
Paper Size	Standard : A6 to "13 x 19" Custom Size : 100.0 x 148.0 to 330.0 x 487.7(mm) <i>*Supports up to 330x1200 (mm) paper by changing DIPSW setting.</i>
Direct Print	PDF, PS, PPML
Paper Weight	64 to 300gsm

NARRATION: These are the printer specifications for the IC-601. Upon initial release PostScript 3, PDF 1.7 and PPML 2.1 are supported. The PCL5c/C and XPS printer drivers will be supported during the second phase of release. All flavors of Windows are supported.

Printer Drivers / Installation











❖ **The initial release of the IC-601 comes with the following drivers via CD/DVD or download.**

- ❖ PS Plug-in Driver that is installed through an installer.
- ❖ PPD that is installed through the add printer wizard or other OS procedures.

This WBT covers the PS Plug-in Driver specifications.







NARRATION: The initial release of the IC-601 comes with the PS Plug-in driver, and PPD.

PS Plug-in Driver Overview (1/2)

Tabs		Overview
	Basic	Sets options for frequently used basic print functions.
	Layout	Define how original documents are mapped on output sheets.
	Finishing	Sets finishing options for output paper.
	Paper	Selects Paper Tray and specify Paper Profile.
	Cover	Sets options for front and back Cover Page.
	Page Settings	Selects a set of properties such as Output Paper for each page individually.
	Tabs	Sets options for Tab Paper print.
	Tab Settings	Sets general options for Tab Paper.
	Color Mode	Sets options for Output Color and Color Bar.
	Color Management	Sets options for Color Conversion.

NARRATION: These are the available tabs for the PS plug-in.

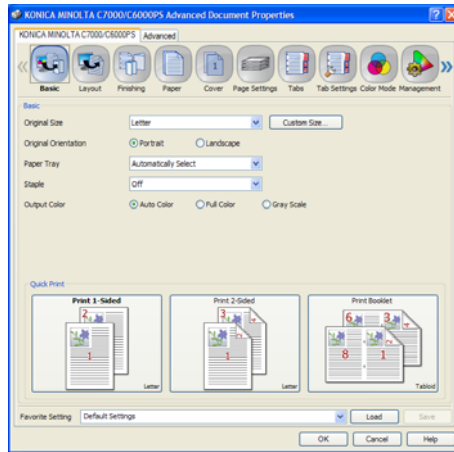
PS Plug-in Driver Overview (2/2)

Tabs		Overview
	Imaging	Controls the screen setting.
	Forms	Sets options for Overlay printing.
	Print Position	Sets options for Image Shift and Crop Marks.
	Stamp	Selects options to be inserted on the printed output; Date/Time, Page Number, Numbering.
	Workflow	Sets options for Send E-mail, User Authentication, Account Track, Print Mode, File Name.
	Configure	Sets Device Option and Miscellaneous Options.

NARRATION: These are additional available tabs for the PS plug-in.

PS Plug-in Driver Basic Panel

❖ Basic Panel



Description

Sets options for basic print functions.

Functions

Specifies the settings for [Original Size] [Original Orientation] [Paper Tray] [Staple] [Punch] [Output Color]

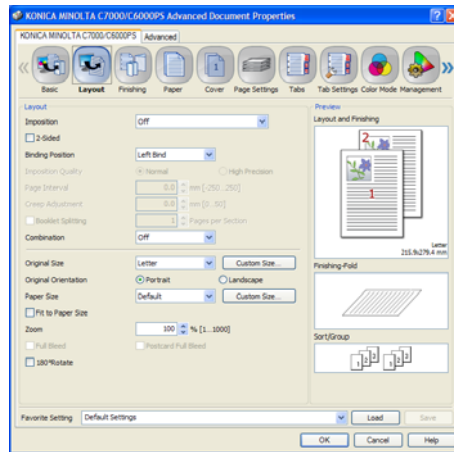
[Quick Print]:

Specifies how the original is to be printed: 1-Sided, 2-Sided, or Booklet. By clicking the button, the option is selected and the window is closed.

NARRATION: The basic PS Plug-in driver interface panel allows for the setting of functions and quick print options.

PS Plug-in Driver Layout Panel

❖ Layout Panel



Description

Defines how an original document is mapped on output page.

Functions

[Imposition]: Sets Imposition option (i.e. Adhesive Binding, Booklet).

[2-Sided]: Sets duplex printing.

[Binding Position]: Sets Binding position.

[Imposition Quality]: Increases the precision of the imposition settings. [High Precision] offers one more decimal digit.

[Page Interval]: Determines a fixed margin to be applied between two document pages of an imposition on a sheet.

[Creep Adjustment]: Compensates for creep; align bitmaps on the outer pages and the inner pages of a booklet.

[Booklet Splitting]: [Generate several booklets from one job.](#)

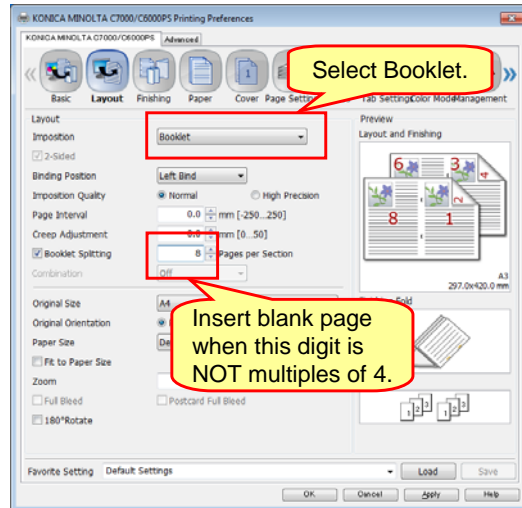
[Combination]: Defines the number of document pages to be printed on one output sheet of paper.

[Original Size] [Original Orientation] [Paper Size] [Fit to Paper Size] [Zoom] [Full Bleed] [180° Rotate] can also be set in this window.

NARRATION: The layout panel defines how the original document is mapped on the output page.

Booklet Splitting

Produces multiple Booklets from one job.
(Layout pane - PS Plug-in only)



**Pages per Section:
Number of pages per a Booklet**

e.g.

i. The job has 16 pages with a selection of 8 Pages per Section.

- 1st Booklet: P.1-8
- 2nd Booklet: P.9-16

Total of 2 Booklets will be produced.

ii. The job has 16 pages with a selection of 7 Pages per Section.

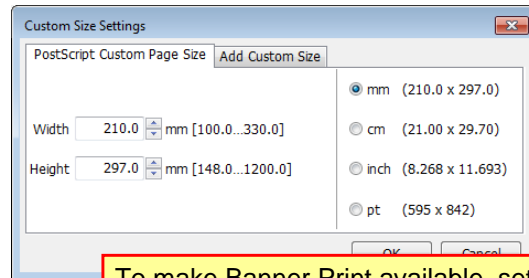
- 1st: P.1-7 & a Blank page
- 2nd: P.8-14 & a Blank page
- 3rd: P.15-16 & 6 Blank pages

Total of 3 Booklets will be produced.

NARRATION: This image identifies the booklet creation options on the panel.

Banner Print

Up to 330 x 1200 mm paper is supported. (requires to change DipSW setting)
(in the Layout pane)



To make Banner Print available, set DipSW as follows.
10-0→1

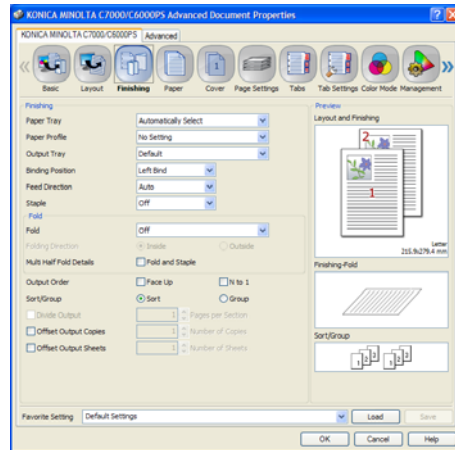
Note:

- Bypass Tray only
- Uncheck all Finishing options

NARRATION: This shows a banner print example in the layout pane. In order to enable Banner Printing, set the dip switch as indicated in the call-out box.

PS Plug-in Driver Finishing Panel

❖ Finishing Panel



Description

Sets finishing options for output paper.

Functions

[Paper Tray]: Selects the tray holding the paper for printing.

[Paper Profile]: Selects a paper type from predefined profiles.

[Output Tray]: Selects the tray to output the printed paper.

[Feed Direction]: Determines the direction of the paper when fed into the printer.

[Staple]/[Punch]/[Fold]: Sets finishing options.

[Output Order]: Selects the order of output paper.

[Sort/Group]: Selects if the jobs are output sorted or grouped.

[Divide Output]: Splits the job into smaller packets and have them stapled.

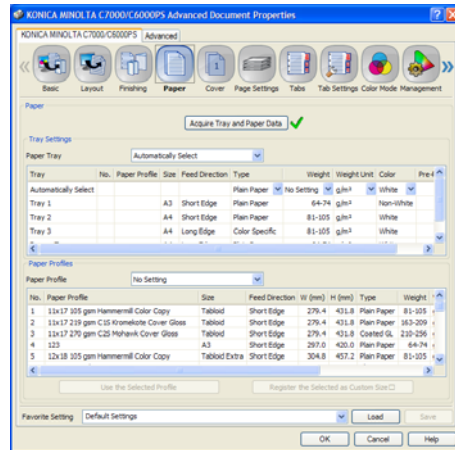
[Offset Output Copies/Sheets]: Multiple copies/sheets of a job are offset in the output tray.

[Pile Permission]: Determines if several jobs can be piled in the stacker when an LCT is installed.

NARRATION: The Finishing Panel sets finishing options for output paper. The functions are listed here.

PS Plug-in Driver Paper Panel

❖ Paper Panel



Description

Selects Paper Tray and specifies Paper Profile.

Functions

[Acquire Tray and Paper Data]: Collect Tray Setting and Paper Profile information defined in the main body.

[Paper Tray]: Selects the tray from which the paper is fed.

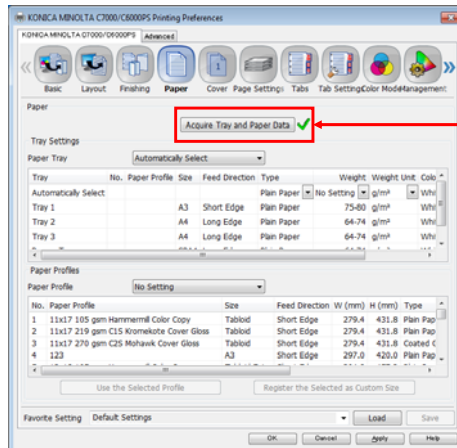
[Paper Profile]: Selects a Paper Profile registered in the printer.

[Register the Selected as Custom Size]: Adds the Custom Size specified in the Paper Profile to the PC so that it can be used as an Original Size or Paper Size without selecting a Paper Profile.

NARRATION: The Paper Panel selects the Paper Tray and specifies a Paper Profile. The functions are listed here. The Acquire Tray and Paper Data function information is described in more detail later.

Acquire Tray and Paper Data

This panel allows the Acquisition of information about the Tray Setting and the Paper Profile specified in the main body. (Paper panel - PS Plug-in only, via SNMP)

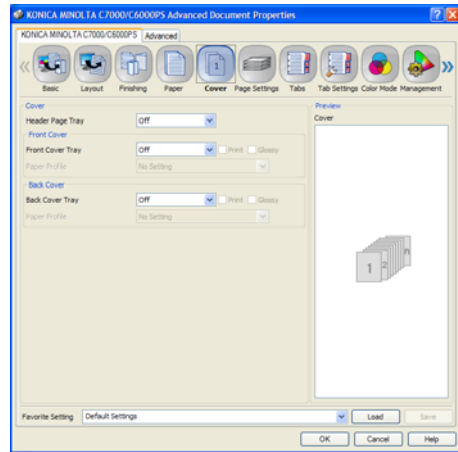


By clicking this button,
- Tray Setting
- Paper Profile
can be acquired.

NARRATION: This panel allows the Acquisition of information about the Tray Setting and the Paper Profile specified in the main body. Data is acquired by clicking on the “Acquire Tray and Paper Data” button.

PS Plug-in Driver Cover Panel

❖ Cover Panel



Description

The Cover Panel sets options for a front and back Cover Page.

Functions

[Header Page Tray]: Specifies Paper Tray for Banner Page to divide jobs.

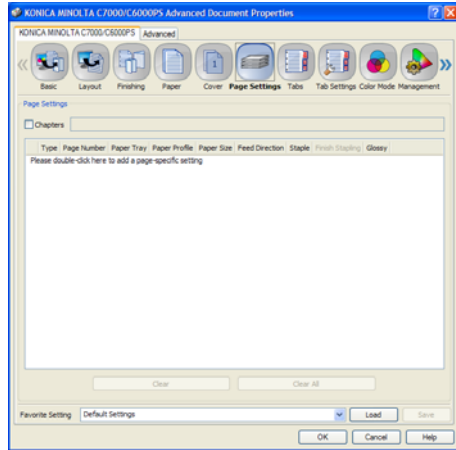
[Front/Back Cover Tray]: Specifies Paper Tray or PI Tray for Front/Back Cover.

[Perfect Binding]: Sets options for Cover page for Perfect Binding.

NARRATION: The Cover Panel sets options for a front and back Cover Page.

PS Plug-in Driver Page Settings Panel

❖ Page Settings Panel



Description

Used to select a set of properties, such as Output Paper, to be applied to each page individually.

Functions

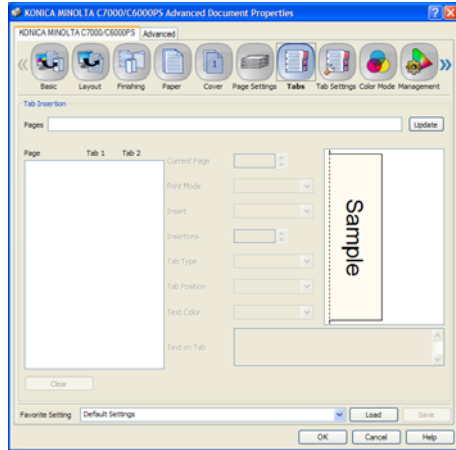
[Chapters]: Specifies the page to be printed on a front page of a sheet in duplex printing.

[Page-Specific Settings]: Specifies the settings (Paper Tray, Paper Size, Feed Direction, Staple, Punch) for each page.

NARRATION: Used to select a set of properties, such as Output Paper, to be applied to each page individually.

PS Plug-in Driver Tabs Panel

❖ Tabs Panel



Description

The Tabs Panel sets options for Tab Paper printing.

Functions

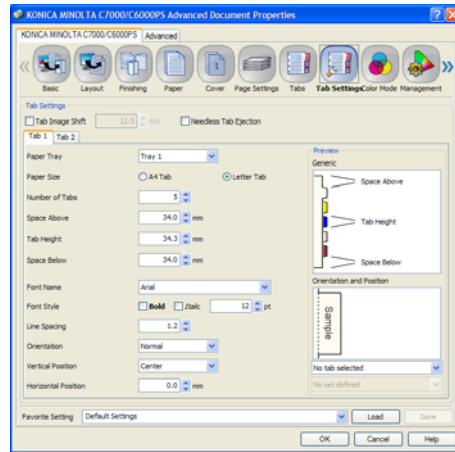
[Pages]: Determines the page number to insert a tab paper. By clicking [Update], the setting becomes effective and given page numbers appear in the tab list on the left.

In addition, specifies settings of [Current Page] [Print Mode] [Insert] [Insertions] [Tab Type] [Tab Position] [Text Color] [Text on Tab] in this window.

NARRATION: The Tabs Panel sets options for Tab Paper printing.

PS Plug-in Driver Tab Settings Panel

❖ Tab Settings Panel

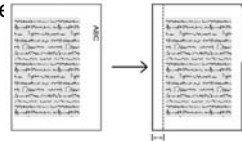


Description

The Tab Settings Panel sets general options for Tab Paper.

Functions

[Tab Image Shift]: When printing headlines directly from the original document, this shifts the printed image to the right so that the headlines will be printed on tab page.



[Needless Tab Ejection]: Ejects unused tab paper to the sub-tray of the same finisher.

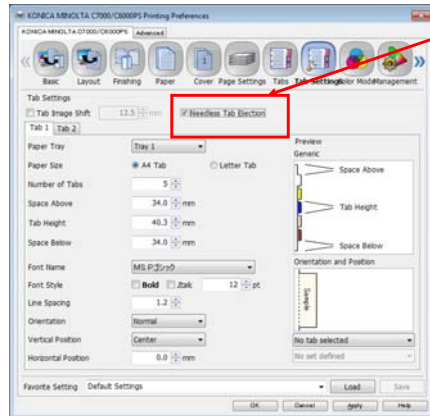
[Tab 1/2]: Define the below settings for two kinds of tab paper. [Paper Tray] [Paper Size] [Number of Tabs] [Space Above/Below] [Tab Height] [Font Name/ Style] [Line Spacing] [Orientation] [Vertical/Horizontal].

NARRATION: The Tab Settings Panel sets general options for Tab Paper.

Needless Tab Ejection (1/2)

This function ejects needless tab paper to the sub-tray of the same finisher. It is designed to prevent any remaining tabbed pages from being accidentally used for the next job.

(in the Tab Settings pane) (PS Plug-in only)



☒ Needless Tab Ejection

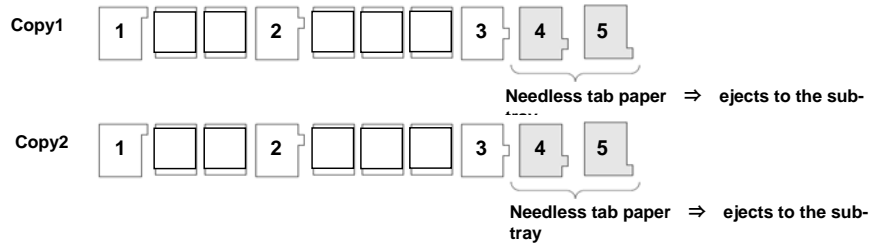
Note

- This function does not work if the FD sub-tray is selected as the output tray for the needless tab paper.

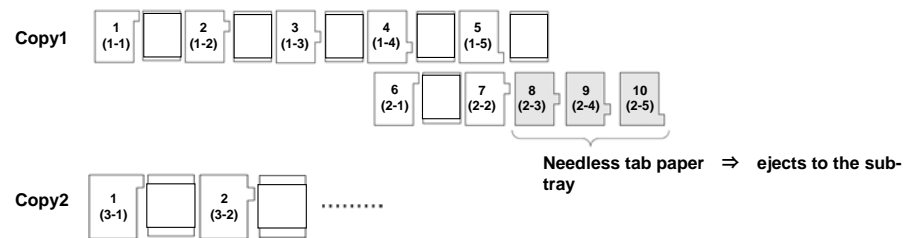
NARRATION: This is an example of the needless tab ejection option in the PS plug-in.

Needless Tab Ejection (2/2)

e.g.1) When Tab Paper is set to 5 and will be used 3 per copy



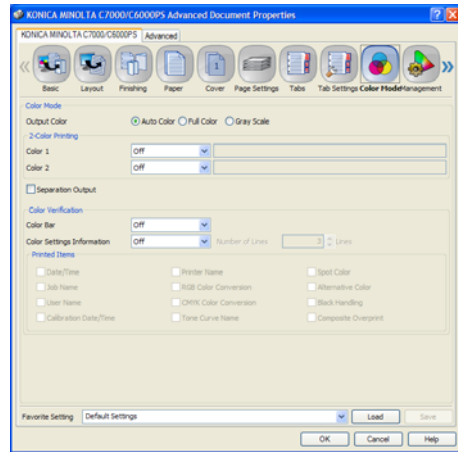
e.g.2) When Tab Paper is set to 5 and will be used 7 per copy



NARRATION: This is a continuation of the needless tab ejection option in the PS plug-in.

PS Plug-in Driver Color Mode Panel

❖ Color Mode Panel



Description

This panel sets options for the Output Color and Color Bar.

Functions

[Output Color]: Sets the color mode.

[2-Color Printing]: Selects Spot Color when print using only two colors.

[Separation Output]: Prints a document separately for each C, M, Y and K.

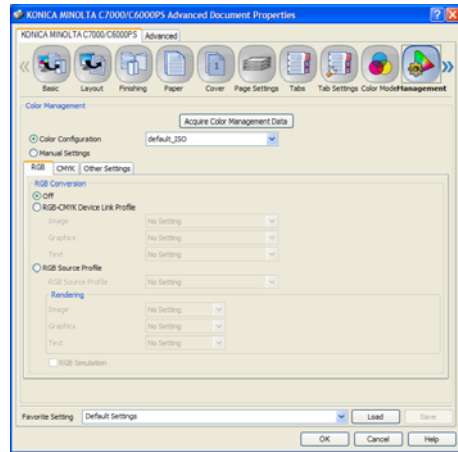
[Color Bar]: Defines the position where the Color Bar to verify the color is to be printed.

[Color Settings Information]: Specifies the print position and the number of lines where the color setting information is to be included.

NARRATION: This panel sets options for the Output Color and Color Bar.

PS Plug-in Driver Color Management Panel

❖ Color Management Panel



Description

The Color Management Panel sets options for Color Conversion.

Functions

[Acquire Color Management Data]: Acquires the information about Color Configuration defined by image controller.

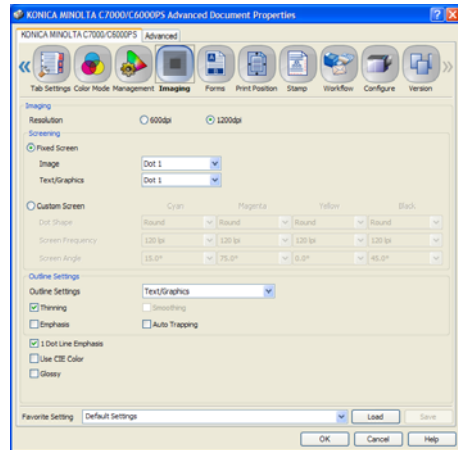
[Color Configuration]: Selects a set of Color Conversion settings stored in the controller.

[Manual Settings]: Defines the settings for color conversion manually, and will not use Color Configuration.

NARRATION: The Color Management Panel sets options for Color Conversion.

PS Plug-in Driver Imaging Panel

❖ Imaging Panel



Description

The Imaging Panel controls the screen settings.

Functions

[Resolution]: Selects resolution (600/1200 dpi).

[Fixed Screen]: Sets Screen Type separately for Image and Text/Graphics.

[Custom Screen]: Determines [Dot Shape], [Screen Frequency] and [Screen Angle] for each of the CMYK color.

[Outline Settings]: Sets [Thinning], [Emphasis], [Smoothing] or [Auto Trapping] to ON or OFF.

[1 Dot Line Emphasis]: Emphasizes extra-fine line.

[Use CIE Color]: Uses CIE color space for grayscale printing.

[Glossy]: Activates printer's glossy printing effect.

NARRATION: The Imaging Panel controls the screen settings. The Fixed Screen, Custom Screen and Outline Settings are described in greater detail later.

Screening (1/3)

The Screening settings can be specified. They are applied to all Text, Graphics and Image data in the page. (in the Image panel)

Screening has two options.

- Fixed Screen
- Custom Screen

The screenshot shows a 'Screening' dialog box with two main sections: 'Fixed Screen' and 'Custom Screen'. The 'Fixed Screen' section is selected with a radio button. It contains two dropdown menus: 'Image' and 'Text/Graphics', both set to 'Dot 1'. The 'Custom Screen' section is unselected. It contains a table of settings for four colors: Cyan, Magenta, Yellow, and Black. The settings include 'Dot Shape' (all set to 'Round'), 'Screen Frequency' (all set to '120 lpi'), and 'Screen Angle' (Cyan: 15.0°, Magenta: 75.0°, Yellow: 0.0°, Black: 45.0°).

	Cyan	Magenta	Yellow	Black
Dot Shape	Round	Round	Round	Round
Screen Frequency	120 lpi	120 lpi	120 lpi	120 lpi
Screen Angle	15.0°	75.0°	0.0°	45.0°

NARRATION: The Screening settings can be specified. They are applied to all Text, Graphics, and Image data in the page.

Screening (2/3)

❖ Fixed Screen

- Fixed Screen
Different screens (Dot, Line) can be set for Image and Text/Graphics respectively.
(Resolution is 600dpi only)
- Common to Image and Text/Graphic:
Dot 1 / Dot 2 / Line 1 / Line 2 / Stochastic
* For Stochastic, the settings for Image and Text/Graphic should be the same.



Note

Requirements for Stochastic option:

- Resolution: 600dpi
- Set Thinning and Emphasis to OFF for Outline setting
- If Dot2 / Line1 / Line2 cannot be selected, make sure Screening is set to Restrict in the main body. If everything is OK, click Acquire Device Information in the [Configure] pane again to refresh the settings.

[Utility] - [User Setting] - [Image Quality Setting] - [01 Screen]

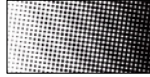


NARRATION: This example shows how fixed screen settings can be set for image and text respectively.

(Reference) FM Screen (Stochastic)

Here are the differences between AM Screen (Dot / Line) and FM Screen (Stochastic) tone settings.

AM Screen



Tone is expressed by the "size" of dot. Screen angle is available. When multicolor printing is selected, and moiré might appear.

FM Screen



Tone is expressed by the "density" of fine dot. Screen angle is NOT available. Moiré and Tone jump don't appear.

NARRATION: Here are the differences between AM Screen (Dot / Line) and FM Screen (Stochastic) tone settings.

Screening (3/3)

❖ Custom Screen (PS Plug-in only)

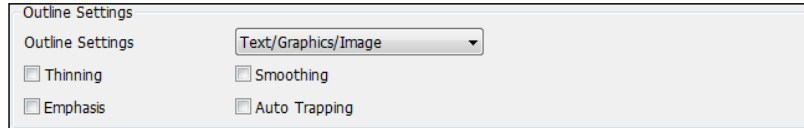
- Custom Screen
Below options for Cyan, Magenta, Yellow and Black can be set respectively.
- Dot Shape (21 types)
- Screen Frequency (27 types)
- Screen Angle (24 types)

	Cyan	Magenta	Yellow	Black
<input checked="" type="radio"/> Custom Screen				
Dot Shape	Round ▼	Round ▼	Round ▼	Round ▼
Screen Frequency	120 lpi ▼	120 lpi ▼	120 lpi ▼	120 lpi ▼
Screen Angle	15.0° ▼	75.0° ▼	0.0° ▼	45.0° ▼

NARRATION: This example shows the custom screen options set according to CYMK.

Outline Settings

The ON / OFF selection for Outline processing can be specified on the driver.
(in the Image pane)



Outline Settings

Outline Settings Text/Graphics/Image ▼

☐ Thinning ☐ Smoothing

☐ Emphasis ☐ Auto Trapping

Note

- Outline Settings is available only when Fixed Screen is ON.
- Requirements for Smoothing option
 - Resolution: 600dpi
 - Thinning: ON
- To make Auto Trapping available when Resolution is 600dpi, set Thinning, Smoothing and Emphasis to OFF.
- Thinning also works as Reversed text enhancement.
- Emphasis refers to Halftone text enhancement.

NARRATION: This shows how the state of outline processing can be specified through the driver.

Improvement in Outline processing

The effectiveness level (Strong/Weak) of Outline processing can be specified in the main body.

There are 4 kinds of settings for 600dpi and 2 kinds of settings for 1200dpi.

Skeletonization (600 / 1200dpi)

For "Text thinning / Reversed text enhancement."

Outline Emphasis (600 / 1200dpi)

For "Halftone text enhancement."

Process Black Sensitivity

This is the criterion to determine that C+M+Y is Process Black.

Selecting "Strong+" increases the areas that are determined to be Process Black.

Thin Line Prevention

When "Text thinning" is specified, using this function can prevent text from being effaced.

[Utility] - [User Setting] - [Printer Setting] - [01 Gray Text Outline]



NARRATION: The effectiveness level (Strong/Weak) of Outline processing can be specified in the main body. There are 4 kinds of settings for 600dpi and 2 kinds of settings for 1200dpi.

(Reference) Samples of Outline processing

Text thinning



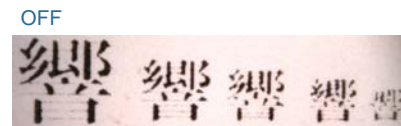
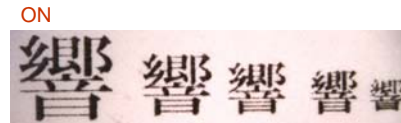
Reversed text enhancement



Halftone text enhancement



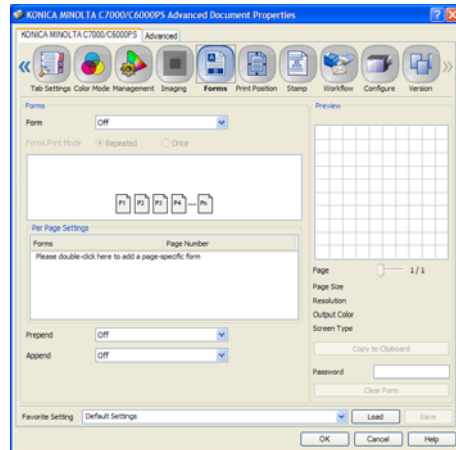
Thin Line Prevention



NARRATION: These images show samples of outline processing.

PS Plug-in Driver Forms Panel

❖ Forms Panel



Description

The Forms Panel allows for setting options for Overlay printing.

Functions

[Form]: Selects the Form from a list of all forms currently stored in the RIP. To create a form, select [Print Mode] > [Form] under [Workflow] tab.

[Forms Print Mode]: Selects [Repeated] or [Once].

[Per Page Settings]: Sets forms overlay per page individually.

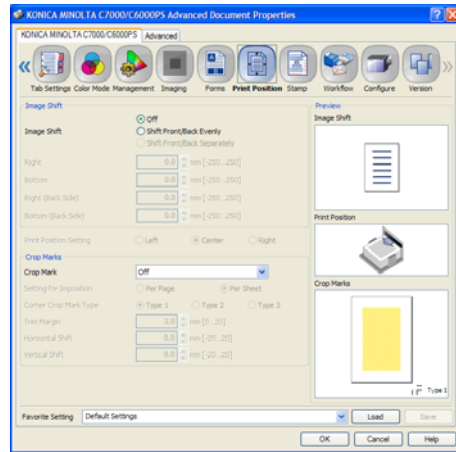
[Prepend]/[Append]: Determines that the pages of the selected form are prepended in front of the job or appended behind the job.

[Clear Form]: Deletes the selected form on the image controller. This function is enabled when the password for form deletion is entered. Default password is "password".

NARRATION: The Forms Panel allows for setting options for Overlay printing.

PS Plug-in Driver Print Position Panel

❖ Print Position Panel



Description

The Print Position Panel allows for setting options for Image Shift and Crop Marks.

Functions

[Image Shift]:

Defines the amount that the image is to be shifted on the paper.

[Print Position Setting]:

Specifies the print position if paper size is bigger than the Original size.

[Crop Mark]:

Print Crop marks. Defines the position and the type of Crop marks.

NARRATION: The Print Position Panel allows for setting options for Image Shift and Crop Marks. Crop marks will be described in more detail later.

Crop Marks

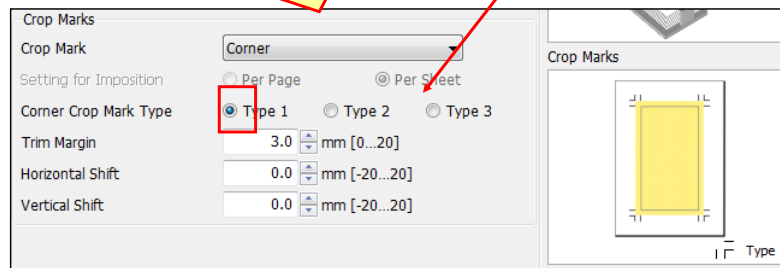
Crop Marks can be printed for Off-line finishing process.
(In the Print Position pane - PS Plug-in only)

Below options are supported

- Corner (4 places)
- Center (2 places)
- Corner/Center

Below three type of Crop Marks are supported. (Corner only)

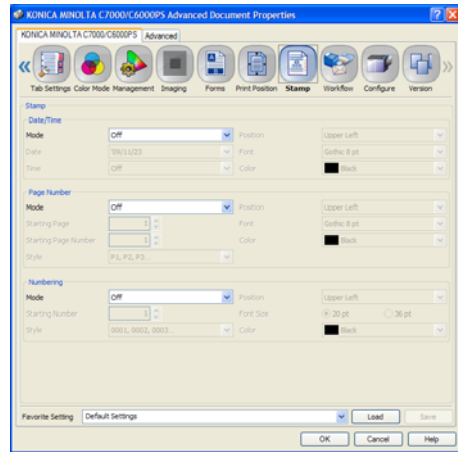
Type 1	
Type 2	
Type 3	



NARRATION: This image shows the possible settings for Crop Marks for off-line finishing.

PS Plug-in Driver Stamp Panel

❖ Stamp Panel



Description

The Stamp Panel can be used to select options to be inserted on the printed output.

Functions

[Date/Time]:

Inserts Date and Time into document.

[Page Number]:

Inserts Page Number into document.

[Numbering]:

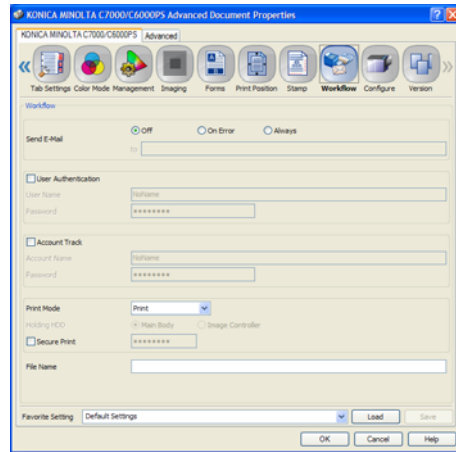
Inserts Number of copies into document.

For each Stamp selection, the position where to be inserted, Font and Color can be specified.

NARRATION: The Stamp Panel can be used to select options to be inserted on the printed output.

PS Plug-in Driver Workflow Panel

❖ Workflow Panel



Description

The Workflow Panel allows for the setting of options to Send an E-mail, provide User Authentication, and define Print Mode and File Name.

Functions

[Send E-mail]:

Sends an E-mail to the specified address after the print job completes.

[User Authentication]:

Enters User Name and Password when User Authentication is set to ON in the main body.

[Account Track]:

Enters Account Name and Password when Account Track is set to ON in the main body.

[Print Mode]: Sets Print mode

- [Print]: Regular print
- [Spool]: Spool the job on the main body.
- [Hold]/[Print and Hold]: Save the job on the main body.
- [Form]: Save the form on Image controller.

[Secure Print]:

Sets password for the job to perform secure print. [Default password is "password"](#).

[File Name]: The file name can be changed here.

NARRATION: The Workflow Panel allows for the setting of options to Send an E-mail, provide User Authentication, and define Print Mode and File Name.

IC-601 Secure Printing Procedure

Introduction

This is an example of the procedure for secure printing.

Step through the interaction to see the steps.

These are the steps involved in the Secure Printing Procedure through the Operations Panel and Work Flow Pane:

1. Check Secure Print box in the Workflow pane, and enter password.
2. After the job is printed out, click Hold Job in the Job List panel in the main body.
3. Click Lock Release button on the left bottom corner of the window, and enter Password.
4. The job is unlocked and can be printed.

PROPERTIES

Allow user to leave interaction:

[Anytime](#)


Show 'Next Slide' Button:

[Show always](#)

Completion Button Label:

[Next Slide](#)

 Properties...

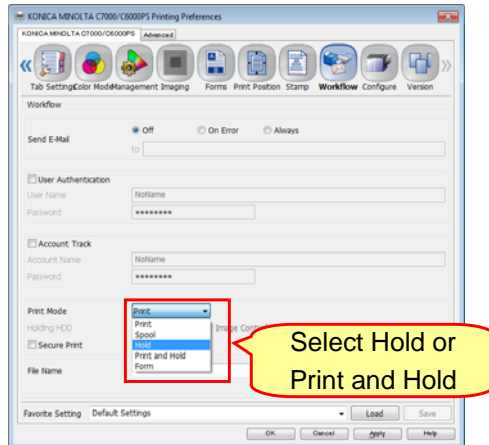
 Edit in Engage

Hold Procedure (1/2)

The procedure of Hold Printing

Steps

1. Select "Hold" or "Print and Hold" from the Print Mode list in the Workflow panel.



NARRATION: This is an example of the procedure for Hold Printing.

Hold Procedure (2/2)

Steps

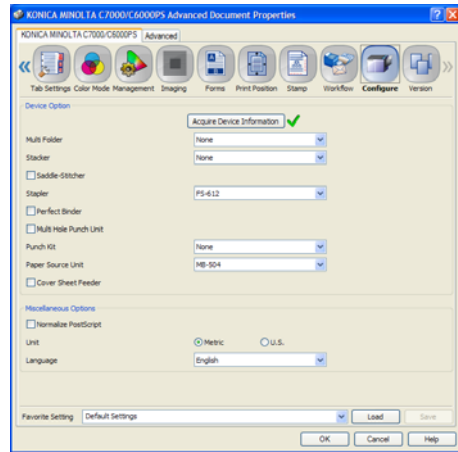
2. After the job is printed out, click Hold Job in the Job List pane in the main body. Choose appropriate file from the list and print.



NARRATION: This is a continuing example of the procedure for Hold Printing.

PS Plug-in Driver Configure Panel

❖ Configure Panel



Description

This panel allows an individual to configure the system.

Functions

[Acquire Device Information]: Acquires the information about device configuration.

[Normalize PostScript]: Sets this option to ON for applications, like Adobe PageMaker, that have their own PostScript driver.

[Unit]: Switches the measuring unit between Metric and Imperial.

[Language]: Selects the language in which the printer driver plug-in is displayed.

NARRATION: This panel allows an individual to configure the system to acquire device information, normalize PostScript, switch between Metric and Imperial, and select the display language.

1.4 Scanner Functions

- Scanner Specifications
- Scan to E-mail
- Scan to HDD
- Scan to FTP
- Scan to SMB
- Web Service Scan
- Job List

NARRATION: This section presents the scanner specifications and functions for the IC-601.

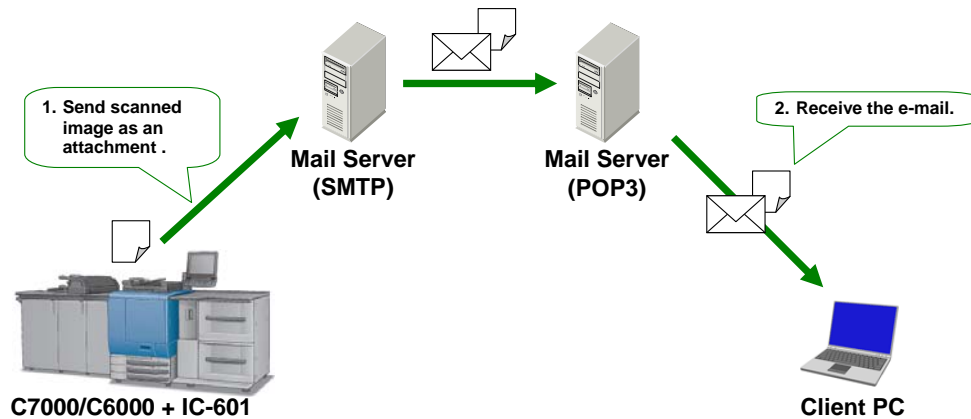
Scanner Specifications

Item	Specifications
Scan	Push Scan: Scan to E-mail / FTP / SMB Pull Scan: Scan to HDD / TWAIN / Web Service (WS Scan)
Scan Speed	40 ppm (A4 / 8.5x11, Simplex)
File Format	PDF (batch/segmented) / TIFF(batch/segmented) / XPS(batch/segmented) / encrypted PDF / JPEG
Resolution	200 / 300 / 400 / 600 dpi
Maximum number of address to register	E-mail (450) , HDD (150) , FTP (30) , SMB (30)
Maximum number of Scan file to send at one time	E-mail address: Up to 512 characters (including commas) in total HDD/FTP/SMB: 1 each
Group	Maximum number of Group to register: 100 Max. 50 addresses for E-mail/HDD/FTP/SMB can be registered for each group. (one each for HDD/FTP/SMB)
Scan Setting	Document Size, Image Quality, Magnification, Color, Color Space, Color Compression, Scan Size, Resolution, Simplex/Duplex, File Format, File Name, Address

NARRATION: These are the scanner specifications for the IC-601. The maximum number of register able E-mail addresses is 450.

Scan to E-mail

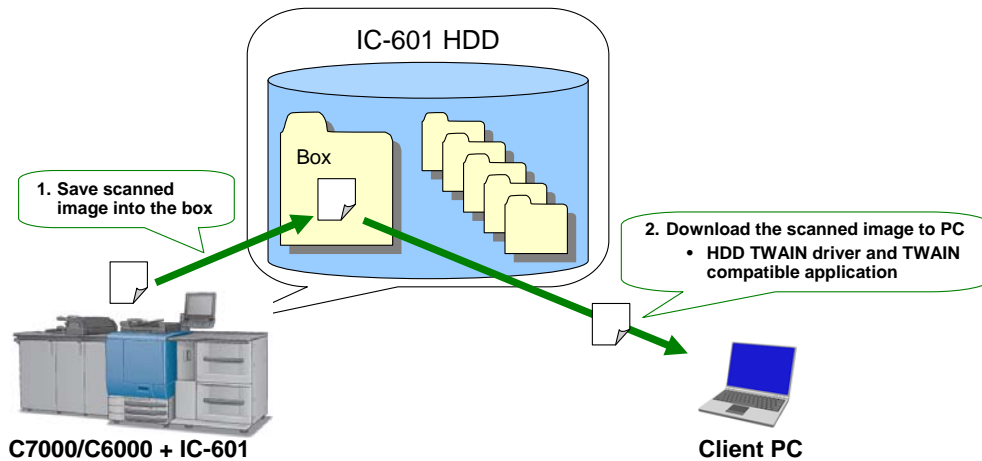
This is the process for sending a scanned image as an attachment to a specified e-mail address.



NARRATION: This is the process for sending a scanned image as an attachment to a specified e-mail address.

Scan to HDD

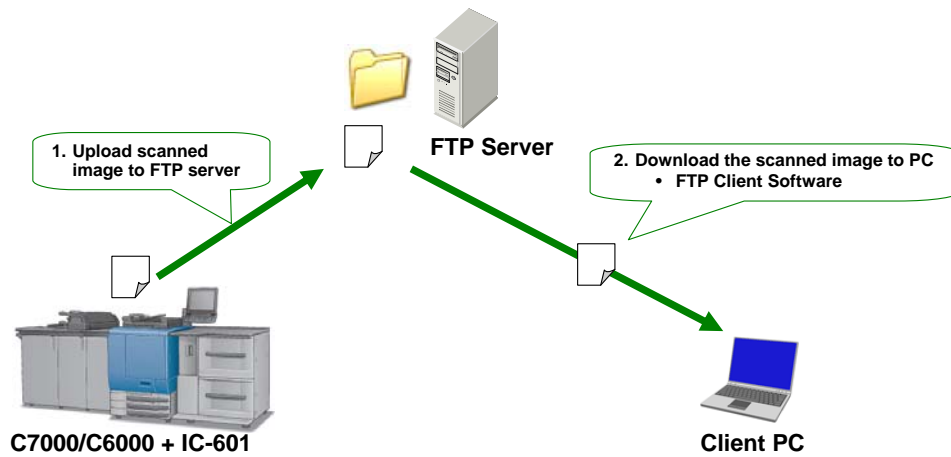
This option saves the scanned image into the box on the Image controller's HDD. The scanned image in the box can be downloaded to PC using HDD TWAIN driver.



NARRATION: This option saves the scanned image into the box on the Image controller's HDD. The scanned image in the box can be downloaded to PC using HDD TWAIN driver.

Scan to FTP

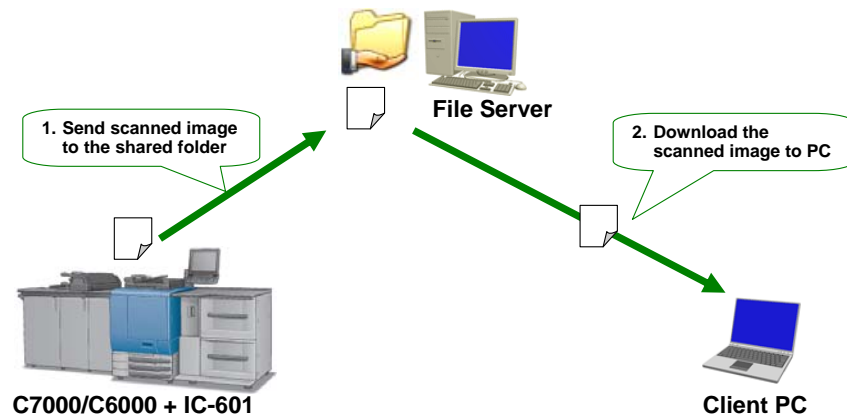
This process transmits scanned images to a specified folder on an FTP site.



NARRATION: This process transmits scanned images to a specified folder on an FTP site.

Scan to SMB

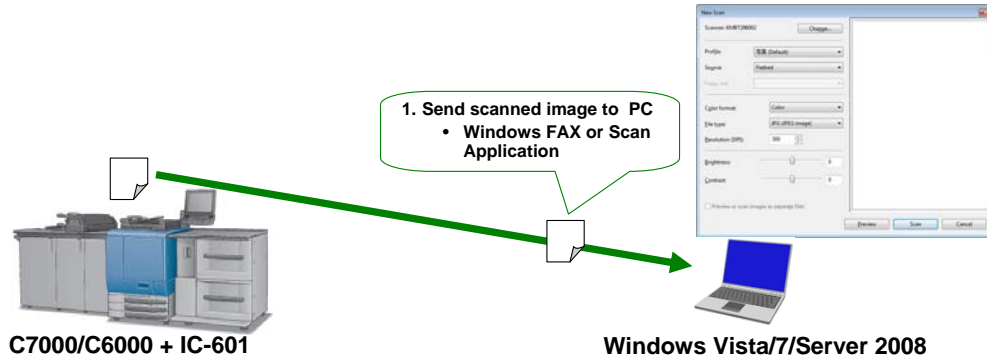
This process sends scanned images to a shared folder on the network.



NARRATION: This process sends scanned images to a shared folder on the network.

Web Service Scan

This allows the scanning of an image utilizing the web service from a PC (Windows Vista/7/Server 2008) on the network, and pulling the scanned data to that PC.



Note:

Web Service - Pull Scan supports JPEG file format only.

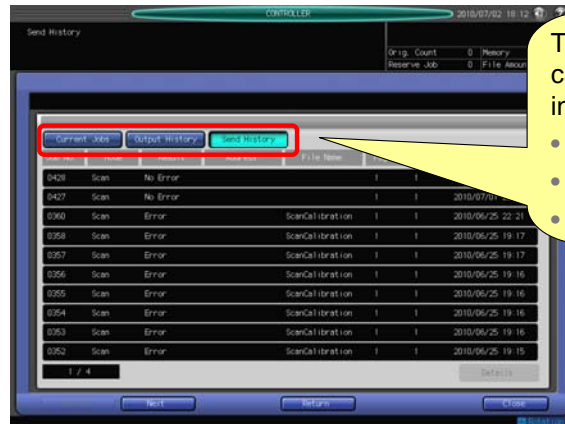
TIFF will be supported in the 2nd phase.

NARRATION: This allows the scanning of an image utilizing the web service from a PC (Windows Vista/7/Server 2008) on the network, and pulling the scanned data to that PC.

Job List

❖ Check Scan/Print Jobs

The job history can be viewed via the Send History window shown under MACHINE > CONTROLLER > Job List.



The below history categories can be checked in the list:

- Current Jobs
- Output History
- Send History

NARRATION: The job history can be viewed via the Send History window shown under MACHINE > CONTROLLER > Job List.

IC-601 Quiz One

Question 1 of 2

Point Value: 10

What are the maximum number of HDD addresses that can be registered for the IC-601 Image Controller?

- ☐ 150
- ☐ 450
- ☐ 50
- ☐ 30

PROPERTIES

On passing, 'Finish' button:

[Goes to Next Slide](#)

On failing, 'Finish' button:

[Goes to Next Slide](#)

Allow user to leave quiz:

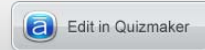
[At any time](#)

User may view slides after quiz:

[At any time](#)

User may attempt quiz:

[Unlimited times](#)



1.5 Network Functions

- Controller NIC Setting
- DHCPv6
- LLMNR Setting
- DFS Setting
- Direct Hosting Setting
- Publication Service
- LDAP Setting
- IEEE802.1X Authentication Setting
- LLTD Setting

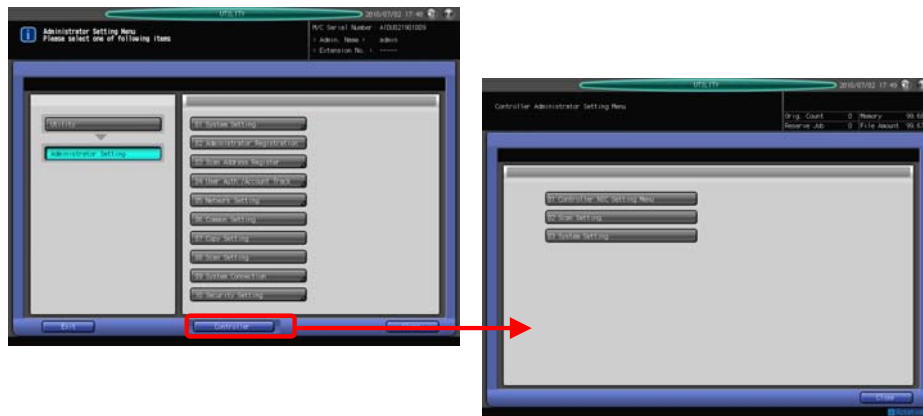
NARRATION: This section describes the various network functions available to the IC-601.

Controller NIC Setting

The network setting for the IC-601 Image Controller can be changed in the Controller NIC Setting window.

Controller NIC Setting window:

UTILITY > Administrator Setting > Controller > Controller NIC Setting Menu



NARRATION: The network setting for the IC-601 Image Controller can be changed in the Controller NIC Setting window.

DHCPv6 (1/3)

The IC-601 supports IPv6 address auto configuration using a DHCPv6 Server.

❖ IPv6 Address Auto configuration

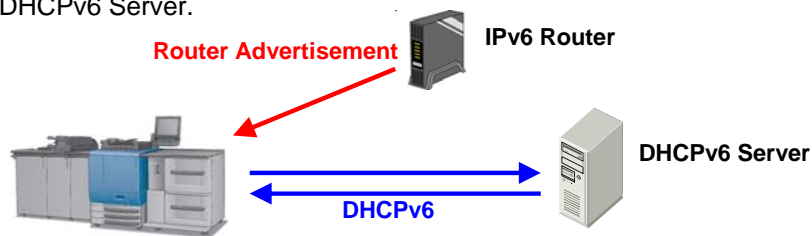
IC-601 supports two ways to get an IPv6 address automatically:

- **Stateless Auto configuration**

Configure IPv6 address automatically by using Prefix informed from router and IC-601's MAC address.

- **Stateful Auto configuration**

Receives a specified IPv6 address and optional information about settings (DNS Server address, DNS Search Domain, and SNTP Server address) from the DHCPv6 Server.



NARRATION: The IC-601 supports IPv6 address auto configuration using a DHCPv6 Server. It supports both stateless and stateful IPv6 address acquisition methods.

DHCPv6 (2/3)

The employed auto configuration method will be defined by the value of the M or O flags, which are contained in the Router Advertisement, and periodically distributed by the Router.

The IPv6 address setting method is specified with M flag, while the Optional information setting method is specified with the O flag.

M flag	O flag	Configuration method
0	0	IPv6 Address will be generated automatically using Prefix contained in Router Advertisement. Optional information must be set manually. DHCPv6 Server won't be used. (Stateless Address Auto configuration)
0	1	IPv6 address will be generated automatically using Prefix contained in Router Advertisement. Optional information will be retrieved from DHCPv6 Server. (Stateless DHCPv6)
1	0	IPv6 address will be generated automatically from DHCPv6 Server. Optional information must be set manually. This combination is rarely used.
1	1	Both IPv6 Address and Optional information will be generated automatically from DHCPv6 Server. (Stateful Address Auto configuration)

NARRATION: The employed auto configuration method will be defined by the value of the M or O flags, which are contained in the Router Advertisement, and periodically distributed by the Router. The IPv6 address setting method is specified with M flag, while the Optional information setting method is specified with the O flag.

DHCPv6 (3/3)

This is the location of the IPv6 DHCP Setting window:

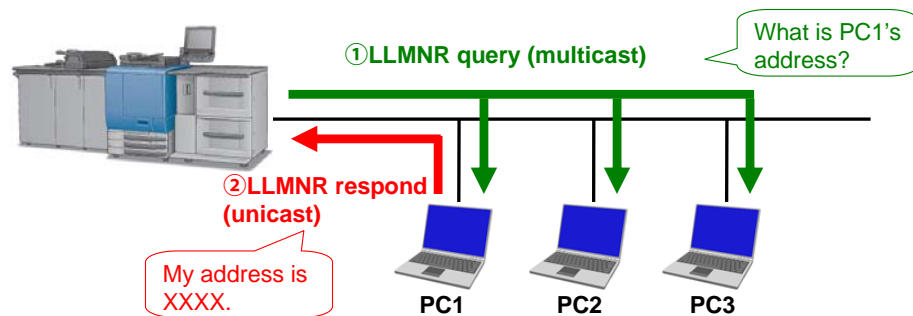
Controller NIC Setting Menu > TCP/IP Setting > IPv6 DHCP Setting (Default: Enable)



NARRATION: This is the location of the IPv6 DHCP Setting window.

LLMNR Setting (1/2)

LLMNR (Link-Local Multicast Name Resolution) is a protocol employed to perform Name Resolution (Convert Computer name to IP address) for the computers on the same network, functioning in a non DNS Server environment. It works for both IPv4 and IPv6 environments. NBT (NetBIOS over TCP/IP) was used to perform Name Resolution under the IPv4 environment. However, NBT is not supported in the IPv6 environment. In response, LLMNR must be used to perform Name Resolution. LLMNR is supported under Windows Vista / 7 / Server 2008.

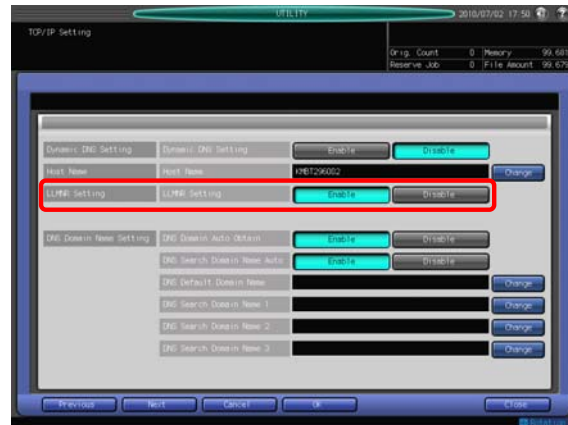


NARRATION: LLMNR (Link-Local Multicast Name Resolution) is a protocol employed to perform Name Resolution (Convert Computer name to IP address) for the computers on the same network, functioning in a non DNS Server environment.

LLMNR Setting (2/2)

This is the location of the LLMNR Setting window:

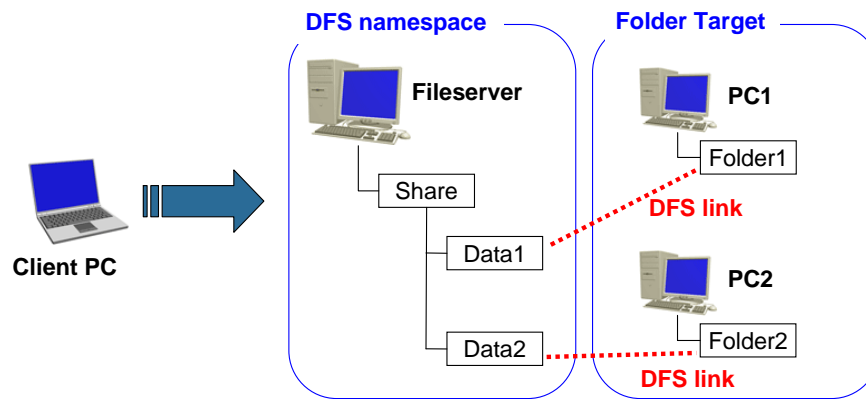
Controller NIC Setting Menu > TCP/IP Setting > LLMNR Setting (Default: Enable)



NARRATION: This is the location of the LLMNR Setting window: Controller NIC Setting Menu > TCP/IP Setting > LLMNR Setting (Default: Enable)

DFS Setting (1/3)

The IC-601 Image controller supports DFS environments as a destination of Scan to SMB. Distributed File System (DFS) allows shared folders on multiple computers to be organized into folders under a virtual tree structure. In DFS namespace, a virtual folder has a target and provides network path to the shared folder on other computer. When a user accesses the virtual folder, their computer actually accesses the folder target.

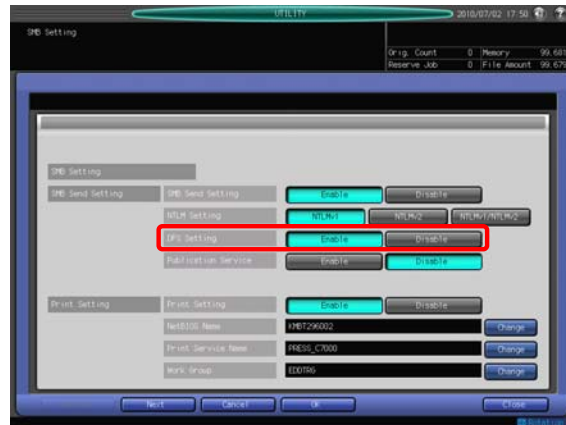


NARRATION: The IC-601 Image controller supports DFS environments as a destination of Scan to SMB. A Distributed File System (DFS) allows shared folders on multiple computers to be organized into folders under a virtual tree structure. In DFS namespace, a virtual folder has a target and provides network path to the shared folder on other computer. When a user accesses the virtual folder, their computer actually accesses the folder target.

DFS Setting (2/3)

DFS Setting window:

Controller NIC Setting Menu > SMB Setting > DFS Setting (Default: Enable)

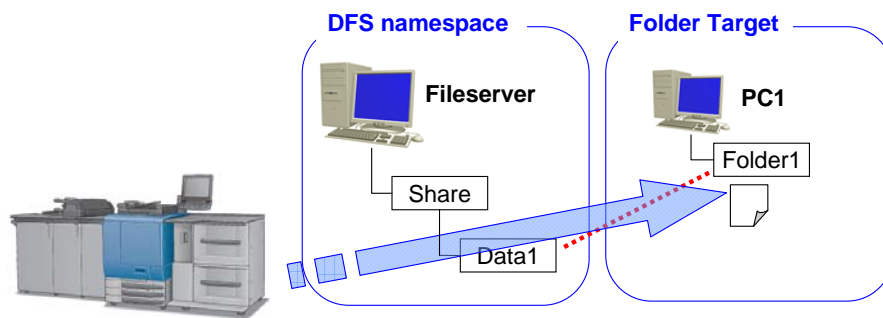


NARRATION: This is the location of the DFS setting window.

DFS Setting (3/3)

❖ Scan to SMB process

1. Access to the virtual folder “\\FileServer\Share\Data1” in DFS namespace.
2. Get an UNC path “\\PC1\Folder1” for folder target.
3. Send a scan file to “\\PC1\Folder1”.

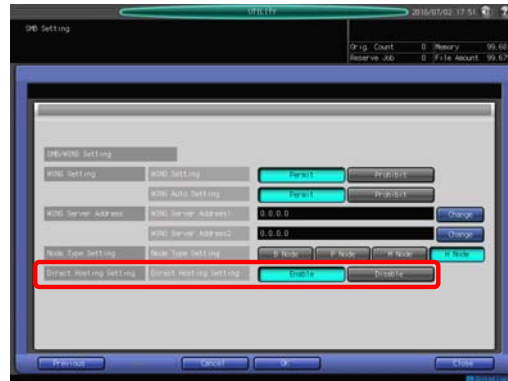


NARRATION: This is the scan to SMB process.

Direct Hosting Setting

Direct Hosting of SMB allows TCP/IP communication without routing through NetBIOS. Direct Hosting of SMB uses port 445. The Direct Hosting Setting must be set to Enable when using the Scan to SMB or SMB Print function in an IPv6 environment.

Direct Hosting Setting window:
Controller NIC Setting Menu > SMB Setting > Direct Hosting Setting (Default: Enable)

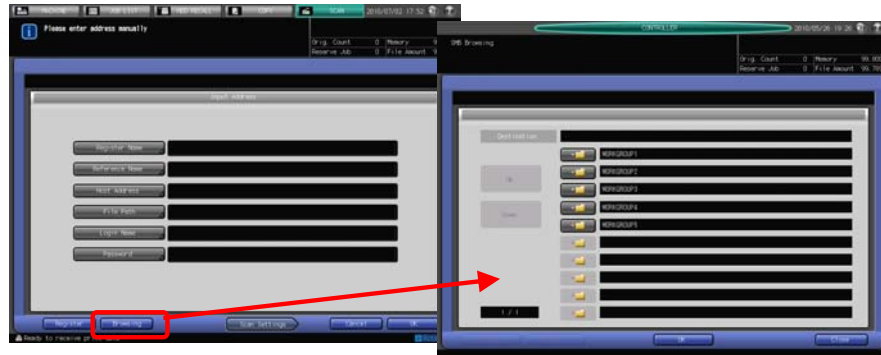


NARRATION: The Direct Hosting of SMB allows TCP/IP communication without routing through NetBIOS.

Publication Service (1/2)

The Publication Service is a protocol that detects devices on the same network without using NBT (NetBIOS over TCP/IP). It is supported under Windows Vista / 7 / Server 2008.

When the Publication Service is set to Enable, SMB browsing is available, even when NBT is disabled. IC-601 can receive up to 512 results by SMB browsing for the NBT and Publication Service. If IC-601 has already received 512 results by NBT, the Publication Service will not work.

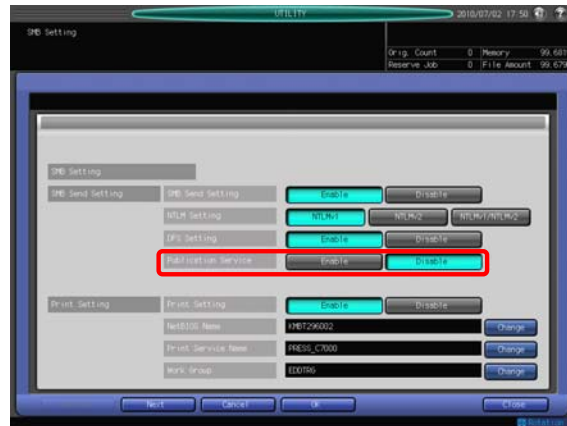


NARRATION: The Publication Service is a protocol that detects devices on the same network without using NBT (NetBIOS over TCP/IP). It is supported under Windows Vista / 7 / Server 2008.

Publication Service (2/2)

Publication Service setting window:

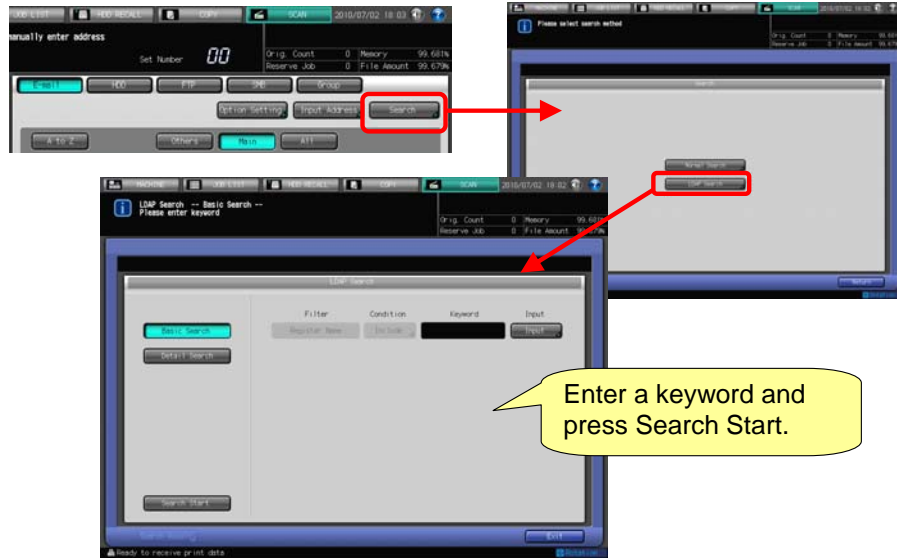
Controller NIC Setting Menu > TCP/IP Setting > SMB Setting > Publication Service
(Default: Disable)



NARRATION: The location of the Publication Service setting window is Controller NIC Setting Menu > TCP/IP Setting > SMB Setting > Publication Service.

LDAP Setting (1/2)

Browse to Scan to E-mail address from LDAP Server.



NARRATION: These are the steps for scanning to an E-mail address.

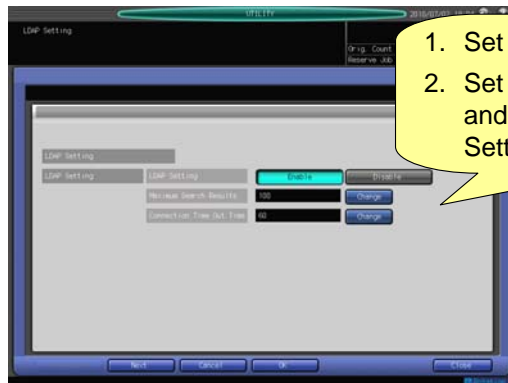
LDAP Setting (2/2)

Preparation:

Set 15 -7 to ON (1) from Service Mode > System Setting > Software DIPSW Setting

LDAP Setting window:

Controller NIC Setting Menu > LDAP Setting (Default: Disable)



1. Set Enable for LDAP Setting.
2. Set Server Address, Search base and Authentic method in LDAP Setting window.

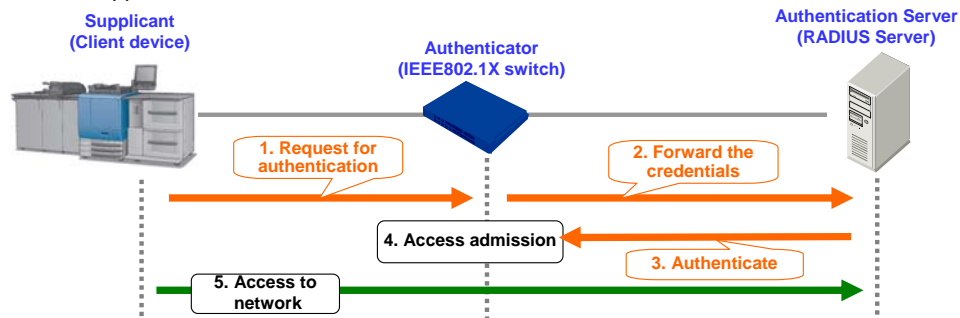
NARRATION: These are the settings for enabling the LDAP settings.

IEEE802.1X Authentication Setting (1/3)

IEEE802.1X is a set of standards that allows only the authorized user to access the network. By authenticating networked devices, unauthorized access is deterred.

Configuration

- Authentication Server: Determines if the credentials received from Authenticator are valid and allows the client to access to network.
- Authenticator: Forwards the request from Supplicant to Authentication Server for verification. Based on the result from Authentication Server, connect or disconnect the access from Supplicant.
- Supplicant: Client device that wishes to attach to the network.



NARRATION: IEEE802.1X is a set of standards that allows only the authorized user to access the network. By authenticating networked devices, unauthorized access is deterred.

IEEE802.1X Authentication Setting (2/3)

❖ Authentication Method

- **EAP-MD5**

Authenticate using User ID and Password. Challenge-response authentication in MD5 is used to encrypt Password.

- **EAP-TLS**

The Supplicant and Authentication Server authenticate each other by credentials. It uses neither User ID nor Password. First, the Supplicant verifies the Server Certificate issued by the Authentication Server. Then, the Authentication Server verifies the Client Certificate issued by the Supplicant. If it is determined to be valid, authentication is successful.

- **EAP-TTLS/EAP-PEAP**

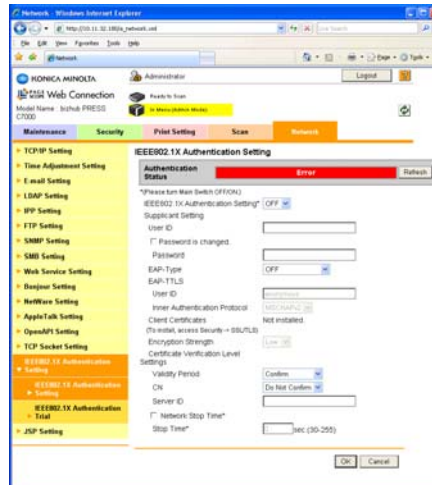
Authenticate using User ID and Password inside an encrypted tunnel. First, credentials issued by the Authentication Server is used to encrypt a Communication pathway for the Supplicant and Authenticate Server. Authentication data is exchanged inside the encrypted tunnel. Challenge-response authentication, such as EAP-MSCHAP v2, is used to encrypt Authentication data.

NARRATION: These are the potential authentication methods available for IEEE802.1X.

IEEE802.1X Authentication Setting (3/3)

❖ IEEE802.1X Authentication Setting window

PSWC Admin Mode > Network > IEEE802.1X Authentication Setting

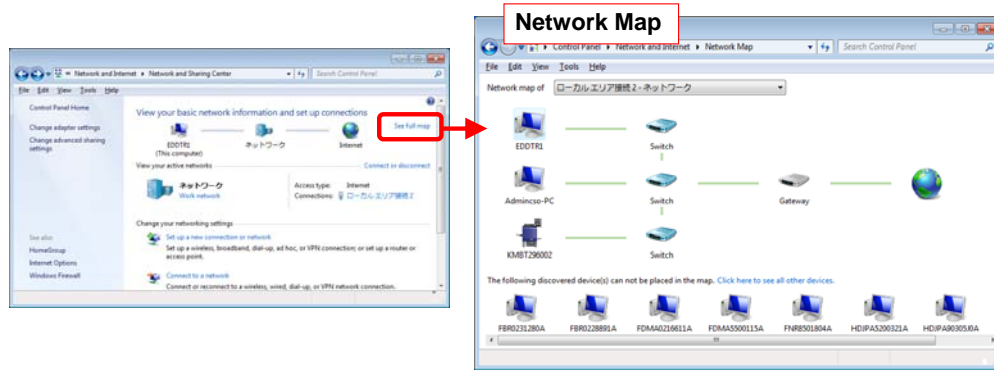


NARRATION: This is the authentication setting window for IEEE802.1X under PageScope Web Connection Admin Mode.

LLTD Setting (1/2)

LLTD (Link Layer Topology Discovery) is a protocol to detect a computer or device on the network through the Data Link Layer. It has been supported from Windows Vista.

Network Map collects information on the computers and devices on a LAN using LLTD, and map a network configuration diagram.



NARRATION: Link Layer Topology Discovery is a protocol used to detect a computer or device on the network through the Data Link Layer.

LLTD Setting (2/2)

LLTD Setting window:

Controller NIC Setting Menu > Detail Setting > LLTD Setting (Default: Enable)



NARRATION: This is the LLTD setting control window.

1.6 Service

- Overview
- Disassembly and Assembly
- IC-601 Service Mode
- Log Acquisition and Data Capture
- Error Codes

NARRATION: This section explains the service information for the IC-601 Image Controller.

Overview (1/3)

❖ Hardware configuration

The hardware configuration of IC-601 is as follows.

Item	Description
CPU	Intel Core2Duo E7400 2.8GHz
Memory	4GB (Standard: no option)
SSD*	2GB x 1 (SATA)
HDD	250GB x 2 (SATA)
Host Interface	Ethernet and USB
Network Interface	RJ-45 Ethernet (1000BASE-T/100Base-TX/10Base-T)

NARRATION: This is the hardware configuration for the IC-601 Image Controller.

Overview (2/3)

❖ Power

IC-601 has 2 power switches.

Soft Switch

Turns OFF by a long press (for about 5 seconds).

Turns ON by a short press (for about 1 second).



The main power.
ON/OFF switch of the
DC power.

Hard Switch

If the sub power of the engine is turned OFF, even with the power of IC-601 ON, a communication error occurs in the IC-601 and the IC-601 automatically changes to Sleep mode.

The IC-601 starts up automatically when the sub power of the engine turns ON.
Be aware that the controller does NOT start up by itself.

NARRATION: These are the power placement switches for the IC-601 Image Controller.

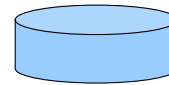
Overview (3/3)

❖ Roles of SSD and HDD

IC-601 has 1 SSD and 2 HDDs.

<Role of SSD>

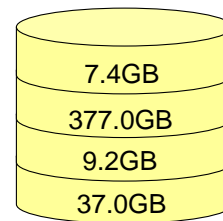
- Firmware (Operating System / System SW)



2GB

<Roles of HDD>

- Parameter : Configuration Information
- Document : Scan to HDD Job
- Font : Font data storage
- Spool : Job spool, etc.



Parameter
Document
Font
Spool

The 2 HDDs can NOT be exchanged because they are RAID built-in.

Document & Spool : RAID 0 (Striping)

Parameter & Font : RAID 1 (Mirroring)

500GB (250GB x 2)

NARRATION: These are the roles of the SSD and HDD for the IC-601. The SSD is used for firmware storage, while the HDD is used to store configuration information, scanning information, font files and spooled jobs.

Disassembly and Assembly (1/2)

❖ Parts list of IC-601

The parts list of IC-601 is as follows.

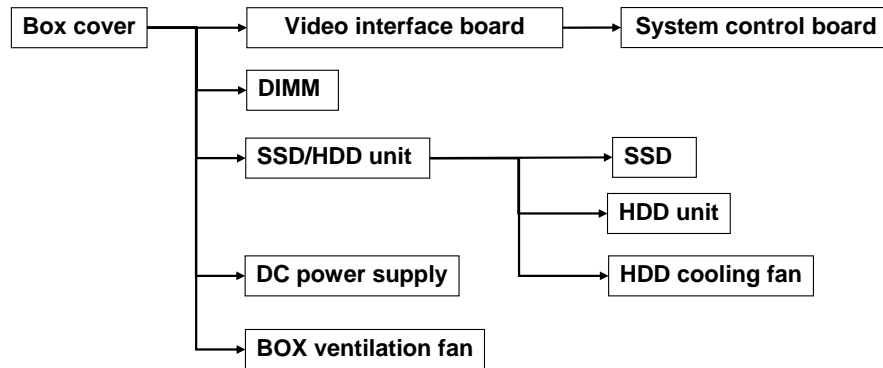
No.	Parts Name
1	Box cover
2	SSD
3	HDD unit (HDD1 / HDD2 / a metal plate)
4	SSD holding metal plate (A metal plate to hold No.2 on No.3)
5	HDD cooling fan (FM3)
6	DIMM
7	Video Interface Board (VIB)
8	System Control Board (SCB)
9	BOX ventilation fan (FM1)
10	DC Power Supply (DCPS)

NARRATION: This is the parts list for the IC-601.

Disassembly and Assembly (2/2)

❖ Procedures of disassembly and assembly

Procedures of disassembly and assembly are as follows.



[Refer to the Service Manual for details.](#)

NARRATION: These are the procedures for the assembly and disassembly of the IC-601. Please refer to the service manual for additional details.

IC-601 Service Mode (1/10)

❖ Overview of IC-601 Service Mode

IC-601 has an independent screen other than the one of the main body.
(Footer part of Service mode: [\[Controller\]](#))

Menus are as follows.

No.	Menu Name	Description
01	System Setting	Dip-SW settings for IC-601.
02	Firmware Version	To confirm versions of ROM / HDD / PS / PPML.
03	ISW	2 ISWs; Internet ISW / USB Memory ISW.
04	IC HDD format	All, Document, Parameter, Font, and Spool.
05	CSV file Import/Export	To comply with Menu languages. Usually unused.
06	Font backup	To backup and restore User Fonts.

NARRATION: This is an overview of the IC-601 service mode.

IC-601 Service Mode (2/10)

❖ System settings (Dip-SW)

Dip-SW settings for IC-601 are as follows.

DIPSW	Bit	Function	Setting Value (values in red = default)		
3	0	Change of the scanner compression method	0 : MMR 1 : MH		
6	0	Updating interval of the count information	6-1: 0	6-0: 0	10 minutes
			6-1: 0	6-0: 1	1 minute
			6-1: 1	6-0: 0	0 minute
			6-1: 1	6-0: 1	60 minutes

MH / MMR : Both are compression formats of TIFF.

MH : The compression format of the initial stage. Its compression rate is low, but it is compliant with old applications.

MMR: Its compression rate is higher than the one of MH. It may NOT be compliant with old applications.

NARRATION: These are the system dip switch settings for the service mode.

IC-601 Service Mode (3/10)

❖ Firmware versions

The following 4 kinds of versions can be confirmed.

- ROM : a DB version of IC-601 system firmware
- HDD : a DB version of setting information and others in HDD
- PS : a version of PS module itself
- PPML : a version of PPML module itself

If any trouble occurs in the field, escalate it, and include data regarding the 4 versions noted above to BT via CSES.

NARRATION: There are four types of firmware versions to verify for the IC-601. These include ROM, HDD, PS, and PPML.

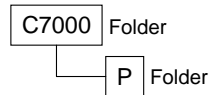
IC-601 Service Mode (4/10)

❖ ISW (USB ISW)

IC-601 is compliant with 2 kinds of ISWs; 'USB Memory ISW' and 'Internet ISW'.

<USB Memory ISW>

1. Create a folder, 'C7000', directly under the USB Memory route.
2. Create a folder, 'P', in the folder, 'C7000'.
3. Save the IC-601 firmware in the folder, 'P'.



The IC-601 firmware is saved. (.BIN and .sum)

4. Connect a USB memory to IC-601.
5. Select [USB Memory ISW] on the Operation Panel, and execute.
(about 5 minutes)
6. If the ISW process is completed properly, IC-601 should restart automatically.

NARRATION: This is the procedure for using a USB for ISW under the IC-601.

IC-601 Service Mode (5/10)

❖ ISW (Internet ISW)

IC-601 is compliant with 2 kinds of ISWs; 'USB Memory ISW' and 'Internet ISW'.

<Internet ISW>

1. Execute 'Program server setting' on the Operation Panel.
2. Execute Internet ISW.
3. If the ISW is completed properly, IC-601 should restart automatically.

Note: On IC-601 1st, [the Proxy server setting is achieved with the proxy.ini file.](#)
(On the next version, the setting should be available on the Operation Panel.)

NARRATION: This is the Internet ISW process.

IC-601 Service Mode (6/10)

❖ ISW (Internet ISW)

(Additional Information) Executing Internet ISW via the Proxy server

<Creation of proxy.ini>

Create the proxy.ini file, which includes the following information. (On Notepad, etc.)

[Proxy]	
UseProxy= <u>protocol</u>	protocol=no: Connecting to the program server directly protocol=ftp: Using the ftp proxy protocol=http: Using the http proxy
ProxyAddress= <u>address</u>	address: The IP address of the proxy server
ProxyPortNum= <u>port</u>	port=1~65535: The port number of the proxy server
ProxyAccount= <u>username</u>	username: The user ID for the HTTP proxy authentication (Up to 32 English one byte characters)
ProxyPassword= <u>password</u>	password: The password for the HTTP proxy authentication (Up to 32 English one byte characters)

<Writing of .ini>

1. Save the proxy.ini file to an empty USB memory location.
2. Connect the USB memory to IC-601 with the [MACHINE] tab displayed.
3. Writing is successfully completed if [Controller] on the Operation Panel flashes redly (2 times).
(There is no method to confirm the written contents on the 1st.)

NARRATION: This is proxy server information for using the Internet ISW.

IC-601 Service Mode (7/10)

❖ IC HDD format

The IC-601 HDD can be formatted.

Format types are as follows.

Menu Name	Description
All	Formats all areas (the following 4 types).
Document	Deletes the Scan to HDD.
Parameter	Deletes the IC-601 setting information. (e.g. network settings, default settings for each port, etc.)
Font	Deletes the user fonts.
Spool	Deletes the log files, etc. (Usually there is no need to format this area.)

NARRATION: These are the format options for the HDD of the IC-601.

IC-601 Service Mode (8/10)

❖ Input and output of CSV files

A function to support languages other than the basic 9 languages (J, EFIGS, SC/TC, and K) .

Basically, it is not used.

If you wish to use this function, please contact the Support Division via CSES.

NARRATION: This is an optional import/export data format.

IC-601 Service Mode (9/10)

❖ Font Backup

Backing up and restoring user fonts downloaded into IC-601 are available.

<Preparation>

Use the FTP command.

Switch the FTP server setting of IC-601 to [ON].

<Creation of a Backup file>

1. Execute the backup in [06. Font backup]
2. Backup data are created in HDD of IC-601.

<Download>

1. Open the command prompt on the PC.
Go to a directory to save the data.
2. Access IC-601.(e.g. [ftp 10.11.32.180](ftp://10.11.32.180))
3. Log in with ID : fontbackup / Pass:sysadm .
4. Download the backup file by inputting 'get fontbackup'.

NARRATION: It is possible to backup and restore user-downloaded fonts in the IC-601.
This is the process for font backup.

IC-601 Service Mode (10/10)

❖ Restoring font data

Backing up and restoring user fonts downloaded into IC-601 are available.

<Restore>

1. Open the command prompt on the PC.
Go to the directory which has the data.
2. Send as a print job to the controller with an lpr command.
ex. `lpr -S 10.11.32.180 -P printer fontbackup`

NARRATION: This is the process for font restoration.

Log Acquisition and Data Capture

❖ IC-601 functions of log acquisition and data capture

<Preparation>

The following 2 kinds of key files are necessary.

- showallog : a file to acquire defective logs
- getcapture : a file to acquire captures

Save either key file above to an empty USB memory location, and connect to IC-601.

<Data Acquisition>

The following data can be acquired.

- Defective log: Logs [right before connecting the USB memory](#) are acquired.
- Capture: Data of jobs processed [after connecting the USB memory](#) are acquired.

[Acquisition of the controller log](#) 

NARRATION: These are the IC-601 functions of log acquisition and data capture. Defective and Jobs processed logs are acquired before and after attaching USB memory.

Error Codes

❖ Error codes of IC-601

The following are the major error codes related to the IC-601.

Error Code	Description	Measure
C-00-001	Unrecognizable SSD	Checking the SSD connection, or exchanging the SSD.
C-00-002	Specification mismatch of SSD-HDD	Formatting the HDD.
C-00-003	Version mismatch of SSD-HDD	
C-00-004	Unrecognizable HDDs (both 2 HDDs)	Checking the HDD connection, or exchanging the HDD.
C-00-005	Unrecognizable HDD (either HDD)	
C-00-010	Serial number mismatch of HDD	Formatting the HDD.
C-00-013	Malfunction of HDD (partition system or file system)	Formatting the HDD, or exchanging the HDD.
C-00-020	Malfunction of HDD (Start failure of RAID structure)	
C-00-021	Malfunction of HDD (Access failure to a file)	

NARRATION: The following are the major error codes related to the IC-601.

1.7 Relationship to Color Centro

❖ Color Centro provides manual color calibration options for the IC-601 and engine

Color Centro is a software application that works with the IC-601 and connected engines to:

- Provide manual calibration for color production to maintain quality between jobs
- Provide specialized color management functions for Spot Color and Alternate color
- Color management and profiles



NARRATION: Color Centro provides manual color calibration options for the IC-601 and connected engine that focus on control of calibration for specific needs and printing processes, such as Spot Color, Alternate Color and Color Management.

Course Completion

Congratulations, you have completed the bizhub PRESS C7000/C7000P/C6000 Training Course for the IC-601 Image Controller Module.

You should now have a good understanding of the following:

- Identifying the purpose of the IC-601
- Understanding the installation of the IC-601
- Identifying the Printer functions for the controller
- Identifying the Scanner functions for the controller
- Understanding the new network functions available
- Awareness of the service options and requirements for service

NARRATION:

Congratulations, you have completed the bizhub PRESS C7000/C7000P/C6000 Training Course for the IC-601 Image Controller Module.

Please click the Final Assessment button to complete the final assessment and the course.