



# Interstage List Creator V10.0.0



## Setup & Operation

Windows/Windows(64)/Linux(64)

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# Preface

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This document explains List Creator environment settings and operation, and form output.

The content of this document is the same for all operating systems.

## Structure of this Document

This document is structured as follows:

### **Part1 Forms System Operation**

#### **Chapter1 What is a List Creator Forms System?**

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This chapter explains the preparation and knowledge required before building and using a List Creator forms system.

### **Part2 Preparing the Environment**

#### **Chapter2 List Creator Environment Settings**

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This chapter explains how to set the List Creator environment settings.

#### **Chapter3 Set the Connector Link Environment**

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This chapter explains how to set the connector link environment.

#### **Chapter4 Remote Form Output Environment Settings**

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This chapter explains how to set the remote form output environment settings.

#### **Chapter5 Web Application Link Environment**

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This chapter explains how to set the Web application link environment settings.

#### **Chapter6 Preparing and Deploying Form Resources**

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This chapter explains the preparation and deployment of the form resources used when List Creator outputs forms and provides details related to information files.

### **Part3 Outputting Forms**

#### **Chapter7 Outputting Forms with List Creator**

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This chapter explains the prerequisites common to all output methods used by the List Creator form output function.

#### **Chapter8 Print**

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This chapter explains the support range for the List Creator print function and provides notes.

#### **Chapter9 Saving as PDF File**

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This chapter explains the support range for List Creator PDF conversion function and provides notes.

#### **Chapter10 Excel File Output**

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This chapter explains the support range for the List Creator Excel file output function and provides notes.

## **Chapter11 Connector Link Function**

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This chapter explains operations using the connector link function and provides notes.

## **Chapter12 Remote Form Output**

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This chapter explains operations using the remote form output function and provides notes.

## **Chapter13 Web Application Link Function**

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This chapter explains the following items related to the Web application link function (OWF file generation):

- Windows used when previewing and printing forms
- Use in Internet environments
- Notes

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## ***Documentation Road Map***

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Ensure to read the Documentation Road Map online manual before reading this document it provides information such as the organizational structure of the List Creator manuals, how to read them, notation rules, intended audiences and assumed knowledge, terminology correspondence tables and trademarks.

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# **Part1 Forms System Operation**

This part explains the flow of operations in forms systems that use List Creator, tasks required for preparation, and List Creator operation and security features.

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## *Chapter 1*

# *What is a List Creator Forms System?*

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This chapter explains the workflow and tasks required before building a List Creator forms system, and the knowledge required before using it.

## 1.1. Workflow from Form Design to Output

The table below shows the workflow for a forms output system that uses List Creator:

No.	Task		Refer to
1	Preparatory tasks and checking	Range of supported List Creator output features	=> "1.4 Resource and Environment Support Range" => "Part3 Outputting Forms"
		Points to note before building the system	=> "1.3 Points to Note before Use"
2	Environment settings	Setting the List Creator environment(*1)	=> "Part2 Preparing the Environment"
		Setting the environment for related products	Manuals of related products
3	Design forms and input data		Advanced Form Design in the online manual
4	Create user applications(*1)		Application Design in the online manual
5	Preparing and deploying form resources	Converting form encoding (if required)	=> "Chapter6 Preparing and Deploying Form Resources"
		Preparing form resources	
		Deploying form resources	
6	Operation(*1)	Outputting forms (executing user application)	Application Design in the online manual
		Operating the forms system	Setup & Operation (this document) in the online manual
7	Maintenance	Troubleshooting problems and error messages	Troubleshooting & Messages in the online manual
		Data collection tool for fault investigations	
		Form maintenance	Advanced Form Design in the online manual

\*1: Refer to the online manuals related to each of the List Creator features you wish to use. Refer to Documentation Road Map in the online manual for information on the List Creator suite of manuals and how to use them.

Depending on the features used and the configuration, other tasks may be required in addition to the ones listed above.

The sections below describe tasks required if specific features and output methods are used.

## 1.2. Tasks Required before System Operation

This section explains the tasks required before operating a forms system that uses List Creator. Perform the ones that are required for the features you are using and your system configuration.

### 1.2.1. Tasks Required per Feature

The preparation tasks required depend on which List Creator features are used to output forms. Note that List Creator environment settings that suit your requirements are required regardless of which features are used. Refer to the following for information on how to set these settings:  
=> ["Chapter2 List Creator Environment Settings"](#)

The table below shows the preparation tasks required in addition to List Creator environment settings:

Output features		Task	Refer to
Local output		–	
Distributed output	Connector link	Set the connector link environment.	=> <a href="#">"Chapter3 Set the Connector Link Environment"</a>
	Remote form output	Set the remote form output environment.	=> <a href="#">"Chapter4 Remote Form Output Environment Settings"</a>
Security	Audit trace log	–	
Data arrival monitoring		–	
ECM link		–	

–: No additional setting is required.

### 1.2.2. Tasks Required per Output Method

The preparation tasks required depend on the List Creator output method used to output forms. The table below shows the preparation tasks required for each output method:

Output method	How the output form is used	Task	Refer to
Print	Output to local printer	Define the local printer to be used	(*1)
	Output to remote printer	Define the network printer to be used	
Save as PDF file		Create a PDF document information file	=> "Chapter9 Saving as PDF File"
		Configure font embedding	
	PDF mail distribution	Configure PDF mail distribution environment	
		Create a PDF mail distribution information file	
When Web-based local printing is used	Configure the Web server	(*1)	
	Configure the Web client		
OWF file generation		Configure the Web server	=> "Chapter5 Web Application Link Environment"
		Configure the Web client	
Exce file output		Configure Excel file output	=> "Chapter10 Excel File Output"
		Create an Excel document information file	

\*1: Refer to the manuals provided with the system or product you are using, or refer to Help.

## 1.3. Points to Note before Use

This section contains information you should know before using List Creator.

### ● Operation tests in the output environment

Before starting actual operation of List Operator, perform a test printing of forms in the environment you want to use.

#### Barcode output

Before starting operation, output barcodes and make sure that they are legible. This is necessary because accuracy depends on paper, barcode reader, output device resolution and print quality.

#### Print/preview results

Print and preview results depend on the printer used – therefore it is essential to check the output results at the actual printer that will be used.

In addition, depending on the printer used to print forms, problems such as missing characters may occur. In this case, use the **Form Style Descriptor** window to make adjustments (such as increasing the field length of items with missing characters).

### ● Actions to take in case of problems

- List Creator enables input data to be saved in case problems occur, as well as logging, so that the causes of errors can be investigated using the data collection tool for fault investigations (refer to Troubleshooting & Messages in the online manual for details).
- List Creator enables collection of trace logs for investigations when problems occur. The trace log file size must be set to suit usage – if it is exceeded, then logs are overwritten in sequence, starting from the oldest. Therefore, if the data collection tool for fault investigations cannot be used to save trace log files as soon as a problem occurs, specify a size with enough safety margin.

The table below shows the size of the logs output in various circumstances, assuming that program trace is LEVEL 3 and network trace is LEVEL 1:

- Stand-alone mode/Web-based local printing mode

Form output interface	Log size (for one occurrence of form output)	
	Application server/Form output server	
	Windows	UNIX
Commands (prprint/prprintx)	6 KB	8 KB
Other interfaces	8 KB	

- Distributed output mode (Connector link mode)

Form output interface	Log size (for one occurrence of form output)		
	Application server	Form output server	
		Windows	UNIX
Command (prputex)	4 KB	6 KB	8 KB
Other interfaces	6 KB		

- Distributed output mode (Remote form output mode)

Form output interface	Log size (for one occurrence of form output)		
	Application server	Form output server	
		Windows	UNIX
Command (prputprt)	3 KB	6 KB	8 KB
Other interfaces	5 KB		

Use these values as a guide to estimate the file size, based on the form output count per day and the number of days trace log files are retained.

- If file transfer, such as FTP, is used to send form resources other than text files, ensure the transfer is in binary mode.

## 1.4. Resource and Environment Support Range

This section explains the supported range for resources handled by List Creator and for environments in which List Creator can be used.

### 1.4.1. Restrictions

This section explains restrictions you need to be aware of when using List Creator.

#### ● Regarding resource and file storage

This section explains the restrictions that apply to List Creator resource and file storage destinations.


Range for form names:

Japanese (double-byte characters and single-byte katakana characters) cannot be specified in file or directory names in the following cases:

- When output by UNIX based operating systems (referred to as UNIX hereafter).
- When distributed output is used and either the application server or the form output server runs UNIX.
- When output in an English environment (English locale).
- When distributed output is used and either the application server or the form output server has an English environment (English locale).
- When Web application link is used and either the server or client has an English environment (English locale).

Accordingly, also ensure that only alphanumerics are specified in form names.

When FM or FNP output is used, specify up to eight alphanumerics.

 To specify combination-form names, use the same range of characters that can be specified in form names.

Range for form resource reference destinations and form deployment destinations:

Form resource reference destinations and form deployment destinations can be specified using UNC specification (\\computerName\sharedName\directoryName) for List Creator form output. However, depending on the features used and the input data, notes and restrictions might apply when specifying these.

Refer to the following for details:

=> ["6.3 Specifying Form Resources and Form Output Destinations"](#)

Note that UNC specification cannot be used when performing form design and maintenance (if List Creator Designer is being used).

#### ● Regarding file and directory names

- The characters below cannot be used in file names (including extensions) and directory names:  
 \ ¥ / , ; \* ? " < > | # :
- For output in English environments (English locales), specify only 1-byte alphanumerics and symbols (ASCII range) in file names and directory names.



● **Regarding English environments (English locales)**

The restrictions below apply when List Creator is used in English environments (English locale):

Form definition information

Use single-byte alphanumerics and symbols (ASCII range) to define form definition information. If **Use Unicode** is selected under the **Form Descriptor** tab of the **Form Properties** window, Unicode characters can be used as the attribute of strings output to forms.

Input data

Only Unicode encoding can be used for input data.

Information files

Use single-byte alphanumerics and symbols (ASCII range) to describe the information files used for form output.

● **Regarding network environments**

In principle, operation within an intranet is supported (recommended) for List Creator.

Operation via Internet is supported in some cases – ensure that security measures like the following are implemented:

- If Web application link is used in an Internet environment, it can be used only in a network environment that uses the proxy reverse feature.
- If connector links and remote form output are used, only operations that cross firewalls within the intranet are possible.
- If data arrival monitoring is used, do not use operations that cross firewalls.

● **Regarding cluster operation**

List Creator does not support failovers.

Accordingly, if operating in a cluster, the List Creator service must be started in advance at both the active node and standby nodes.

In addition, when form resources are deployed, it is recommended to place them on a shared disk.

● **Regarding load balancing devices and software**

When connector link is used, List Creator can link to a load balancing device or load balancing software (Traffic Director).


Note the following points if these devices or software are used:

- The network configuration supports "Transparent mode".
- The following two types of session security are supported:
  - Cookie(Traffic Director)
  - Cookie(Servlet API 2.2)

● **Regarding input data size**

The following restrictions apply to the size of input data that can be used by List Creator:

Operating system	Upper limit for input data
Windows	4 GB
Linux	2 GB

	An error might occur during form output if the input data upper limit is exceeded.
Caution	

# **Part2 Preparing the Environment**

This part explains the environment settings for operating a forms system that uses List Creator, and also explains the preparatory tasks.

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## *Chapter2*

# *List Creator Environment Settings*

---

This chapter explains how to set the List Creator environment settings.

The List Creator environment settings are optional and are dependent on the functions and operations you intend to use.

## 2.1. Windows

For Windows, set the List Creator environment settings in the **List Creator Settings** Window and the form output environment settings file.

Also set the audit trace log environment settings in the environment settings file.

The table below shows the settings for each operation type and function. Refer to the explanations for the information to be set in accordance with the operation type and functions in use.

**Table 2.1** Operation types and the information to set in the environment settings

Information to be set Operation type and functions		List Creator environment settings window					Environment settings file (*1)	Form output environment settings file
		General	Network	Arrival monitoring	Event log	Trace log		
Stand-alone mode		Y	N	N	Y	Y	Y	Y
Remote form output mode	Application server	Y	Y	N	Y	Y	N	N
	Form output server	Y	Y	N	Y	Y	Y	Y
Connector link mode	Application server	Y	N	N	Y	Y	N	N
	Form output server	Y	N	N	Y	Y	Y	Y
Web-based local printing mode	PDF data output mode	Y	N	N	Y	Y	Y	Y
	Web application link mode	Y	N	N	Y	Y	Y	Y
Form Web service mode		Y	N	N	Y	Y	Y	Y
Data arrival monitoring mode		Y	N	M	Y	Y	Y	Y

M: Mandatory

Y: Required if operation is used

N: Not required

\*1: Use the environment settings file to set audit trace log settings.



**Note**

Only users who have Administrator rights can change environment settings. General users can only reference the settings.

The sections below explain how to set the environment settings.

### 2.1.1. Procedure for Starting the List Creator Settings Window

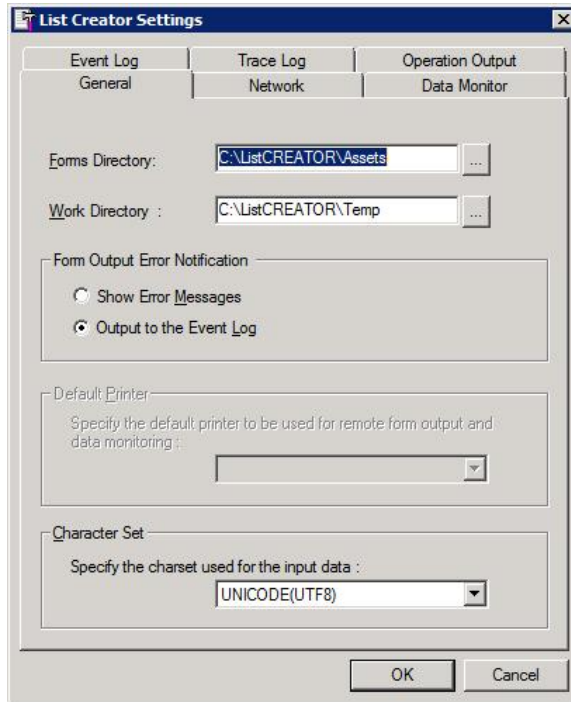
- 1) Log on to the computer.  
Log on to the computer using Administrator rights.
- 2) Select **List Creator >> Settings >> List Creator Settings**.  
The **List Creator Settings** window is displayed.
- 3) Set the settings. Refer to the tabs that suit your task for the settings content.
- 4) When the settings are completed, save the settings. Click **OK** on the **List Creator Settings** window.  
The settings are saved.
- 5) If a message asking you to restart the system is output, you must restart the system.

## 2.1.2. List Creator Settings Window

The sections below explain the items to be set at each tab of the **List Creator Settings** window.

### 2.1.2.1. General Tab

Set the shared information related to form output.



#### Forms Directory

For the directory that stores form definition information, specify a full path of up to 260 bytes, including the drive letter.


Some characters are not allowed in directory names. Refer to the following for details:

=> "1.4.1 Restrictions", "●Regarding file and directory names"


You can specify the directory by navigating to it and the clicking the button to the right of the field. The directory name must be 259 bytes or less.

When a form is output, the order of priority for enabling the form storage directory is as follows:

- 1) The form storage directory specified when the form is output
- 2) The form storage directory specified under this tab

 **Caution**

- When changing the form storage directory at the **List Creator Settings** window, close the **Form Descriptor List** window before performing this operation.
- Access permissions to allow users to create, read, change, and delete must be set in advance for the form definition information and form storage directory, otherwise operations such as displaying the **Form Descriptor List** window, or displaying, changing, or outputting forms, might fail.

 **Note**


If List Creator Designer is installed, the form storage directory can also be toggled from the **Options** window of the **Form Descriptor List** window. If the form storage directory is changed in one window, the change is reflected in the other window.

Work Directory

For the temporary directory that is created when a form is output, or the work files directory, specify a full path of up to 260 bytes, including the drive letter.

Some characters are not allowed in directory names. Refer to the following for details:  
=> "1.4.1 Restrictions", "●Regarding file and directory names"

You can specify the directory by navigating to it and the clicking the button to the right of the field. The directory name must be 259 bytes or less.



**Caution**

- Access permissions to allow users to create, read, change, and delete subdirectories and files must be set in advance for the directory specified as the work directory, otherwise transfer of form definition information, data files, media data files, and similar might fail, or output of forms might fail.
- Do not specify the same directory as the directory specified as the "Monitored Directory" under the **Data Monitor** tab.

Form Output Error Notification

Specify the error posting method to be used when an error has occurred during form output.


Immediately after installation, "Output to the Event Log" is selected. If you want to be notified via a message box, select "Show Error Messages".

Show Error Messages

Select this in order to be notified via a message box if an error occurs during form output.

Output to the Event Log

Select this in order to output to the event log if an error occurs during form output.



**Caution**

- Errors must be notified via a message box when an error occurs in the following circumstances:
  - During form preview
  - During form test printing
- Errors must be output to the event log when an error occurs in the following circumstances:
  - When monitoring data arrival
  - When using connector link
- The table below shows how the method for notifying of errors during form output differs depending on the type of form output interface being used.

Form output interface		Notification destination for errors at output (notification method)
<b>Command</b>	prprint	Either message box or event log can be specified. (*1)
	prprintx	
	prputprt (application server side)	Either message box or event log can be specified. (*2)
	prputprt (form output server side)	
Commands other than the above		
Java interface		Errors must be output to the exception class and the event log.
.NET interface		
Custom control		Either message box or event log can be specified. (*1)
CFX custom tag interface		Must be output to a Web browser.
COM interface		Must be output to the event log.

\*1: Specify at "Form Output Error Notification" under the **General** tab of the **List Creator Settings** window.

\*2: Specify the error message output method in the command options.

- When remote form output and connector link are used, errors are output at both the application server side and the form output server side.

In this case, errors output to the form output server side must be output to the event log.

Errors output to the application server side vary in accordance with the type of form output interface being used.

Default Printer

At the form output server, specify the "Default Printer" to be used for the following operation types and functions:

- Remote form output mode
- Connector link mode
- When data arrival monitoring is used


If the printer specification is sometimes omitted at the time of form output, ensure that the "Default Printer" is specified.

The following printers can be specified:

- Local printers

The order of priority for enabling the printer to be used is as follows:

- 1) The printer specified at time of form output
- 2) The printer specified in the **Form Work Information Properties** window
- 3) Default printer

 **Caution** The default printer cannot be set (is masked) for Windows Vista, Windows 7, and Windows Server 2008. Ensure that the printer name is specified at the time of form output.


The default printer varies in accordance with the operation type and computer logon status. The table below shows the default printer with various operation types and functions.

**Table2.2** Operation types/functions and the default printer

Operation type and functions	Computer logon status	Default printer
Stand-alone mode	N/A	The default printer used by the user who outputs the form.
Remote form output mode	The same user is logged on at both the application server and the form output server.	
	Different users are logged on at the application server and the form output server.	The List Creator default printer, as specified in the environment settings.
	No users are logged on at the form output server.	

Operation type and functions		Computer logon status	Default printer
Connector link mode		The same user is logged on at both the application server and the form output server.	The List Creator default printer, as specified in the environment settings.
		Different users are logged on at the application server and the form output server.	
		No users are logged on at the form output server.	
Web-based local printing mode	PDF data output mode	N/A	The default printer used by the user who outputs the form.
	Web application link mode	N/A	
When data arrival monitoring is used		N/A	The List Creator default printer, as specified in the environment settings.

N/A: Not affected by the computer logon status



**Caution** In the following cases, forms are output to the “The default printer used by the user who outputs the form” shown in [Table2.2 “Operation types/functions and the default printer”](#):

- If the specified printer cannot be found
- If output to the specified printer is not possible
- If output to the “The List Creator default printer, as specified in the environment settings” is also not possible


#### Character Set

Specify one of the following as the default character encoding for input data:

- Shift-JIS
- UNICODE (UTF16 Little Endian)
- UNICODE (UTF16 Big Endian)
- UNICODE (UTF8)

The order of priority for enabling a character encoding is as follows:

- 1) The character encoding specified when the form is output
- 2) The character encoding specified under this tab



**Caution**

- When the connector link function is used, the character encoding specification under this tab is disabled.
- The character encoding under this tab is enabled only when the input data format is “Variable Length”, “Fixed Length”, or “CSV Format”.
- When data arrival monitoring is used, the setting in the **List Creator Settings** window of the form output server is enabled as the character encoding for the data files being transferred.  
If the character encoding of the data file being transferred differs from the form output server, the output might not be correct.
- When forms are output in an English environment (English locale), specify any one



of the UNICODE settings as the input data character encoding.



Note

During remote form output, the character encoding specified at the application server side is enabled and passed to the form output server side.

### 2.1.2.2. Network Tab

Set the information related to List Creator communications.

If remote form output is used to output forms, these settings are required.

Refer to the following for the environment settings if remote form output is used:

=> "4.1.1 Network Tab"

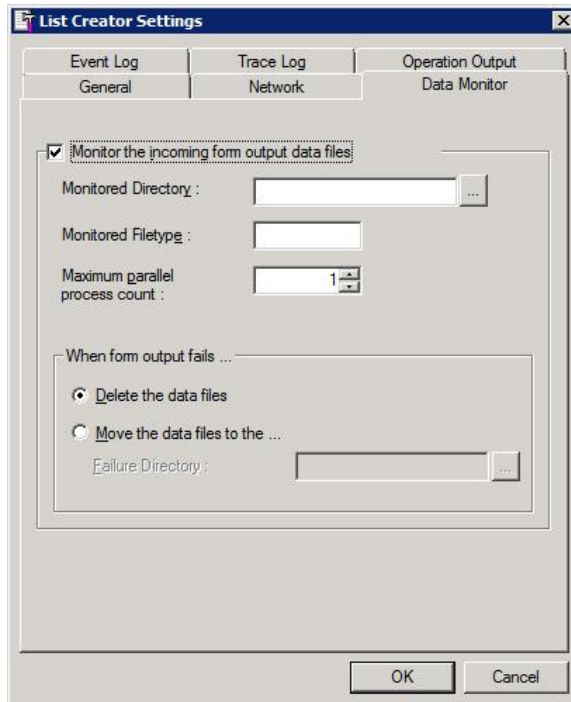


Caution

When connector link is used, the **Network** tab settings are not enabled.

### 2.1.2.3. Data Monitor Tab

Set these settings if data arrival monitoring is used.



#### Monitor the incoming form output data files

Select this item if you want to monitor the arrival of data files at a particular directory and output forms automatically when data files arrive.

When an application, FTP, or similar file transfer command stores a data file in the monitored directory, List Creator starts prprintx and outputs the form.

#### Monitored Directory

For the directory monitored for data file arrivals, specify a full path of up to 260 bytes, including the drive letter.

Some characters are not allowed in directory names. Refer to the following for details:

=> "1.4.1 Restrictions", "●Regarding file and directory names"

You can specify the directory by navigating to it and clicking the button to the right of the field. The directory name must be 259 bytes or less.



**Caution**

– The only directories that can be specified as the monitored directory are directories under a local computer fixed drive. If other directories are specified, an error occurs when **OK** is clicked.

The following devices are not considered to be fixed drives:

Removable media

- Network drives
- Disk drives
- RAM disks
- Drives of unidentified drive type

In addition, UNC specification is not possible.

– Set access permissions in advance for the monitored directory to enable “ListCREATOR Service” logon users to read and delete files. If read and deletion access permissions are not set, the data arrival monitoring process might fail.

– Do not set the same directory as the directory set as the “Work Directory” under the **General** tab.

### Monitored Filetype

Specify a data file extension of up to 10 bytes. To specify the extension .dat, for example, specify .dat without including the dot “.”.

Note that some characters cannot be used in data file extensions (file names). Refer to the following for details:

=> “1.4.1 Restrictions”, “●Regarding file and directory names”

### Maximum parallel processes count

If multiple data files have arrived, specify the maximum number of form outputs to be processed in parallel.

Specify a value in the 1 to 100 range.

### When form output fails ...

Specify whether data files are deleted or whether they are moved to a different directory when form output executed by prprintx ends abnormally. If the data files are moved to a different directory, specify the destination directory.

#### **Delete the data files**

Select if data files are to be deleted when a form is not output normally.

#### **Move the data files to the ...**

Select if data files are to be moved when a form is not output normally, and specify the destination directory.


#### **Failure Directory**

For the migration destination directory, specify a full path of up to 260 bytes, including the drive letter.


Some characters are not allowed in directory names. Refer to the following for details:

=> “1.4.1 Restrictions”, “●Regarding file and directory names”

You can specify the directory by navigating to it and clicking the button to the right of the field. The directory name must be 259 bytes or less.

 **Caution**

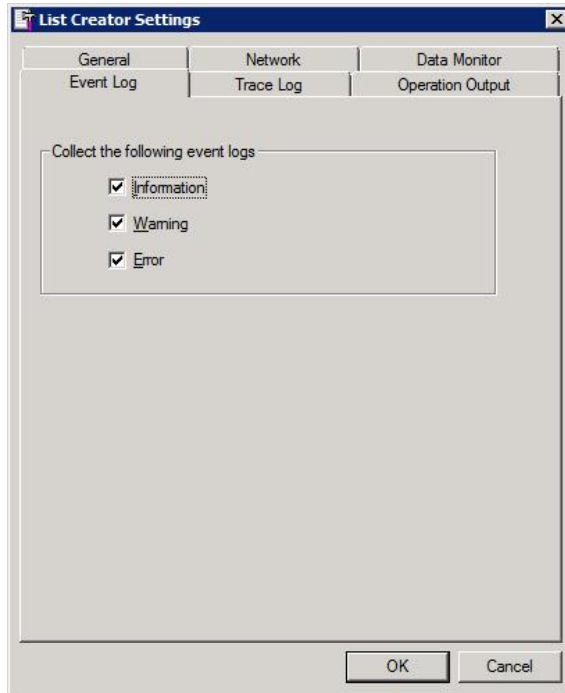
- If data file deletion or migration fails, the data files remain in the monitored directory. In this case an error is output to the event log. Resolve the error, then either delete or move the data files.
- If a file with the same name already exists in the migration destination directory when a data file is moved, the name is changed automatically using the following format:  
(numberStartingFrom1) dataFileName  
Example: If "sales form.dat" exists  
First occurrence => (1)sales form.dat  
Second occurrence => (2)sales form.dat  
The maximum number is 1000. If 1000 is exceeded, the name is not changed and the original file having the same name is overwritten.
- Set access permissions in advance for the migration destination directory to enable "ListCREATOR Service" logon users to create files. If create access permissions are not set, the file migration process might fail.
- If you want to copy data files to the monitored directory via a shared folder such as NFS or a Windows network drive, rather than using an application, FTP, or similar file transfer commands to transfer the files, follow the procedure below to copy the data files to the monitored directory. Operations are not guaranteed if the procedure below is not used.
  - 1) Create the data file with an extension other than "Monitored Filetype".
  - 2) Copy the data file to the "Monitored Directory".
  - 3) Change the extension of the data file copied in Step 2) to " Monitored Filetype".
- Use the character encoding specification under the **General** tab to specify the character encoding of arriving data files in advance.

 **Note**

If a form is output normally, the data file is deleted.

#### 2.1.2.4. Event Log Tab

Set the information related to collecting the event logs output by List Creator.



Collect the following event logs

Select which types of event logs output by List Creator you want to collect.

##### Information

Select this if you want to collect the event logs generated from normal operations, such as service startup.

##### Warning

Select this if you want to collect event logs concerning events which are not necessarily serious but which might cause problems in future.


##### Error

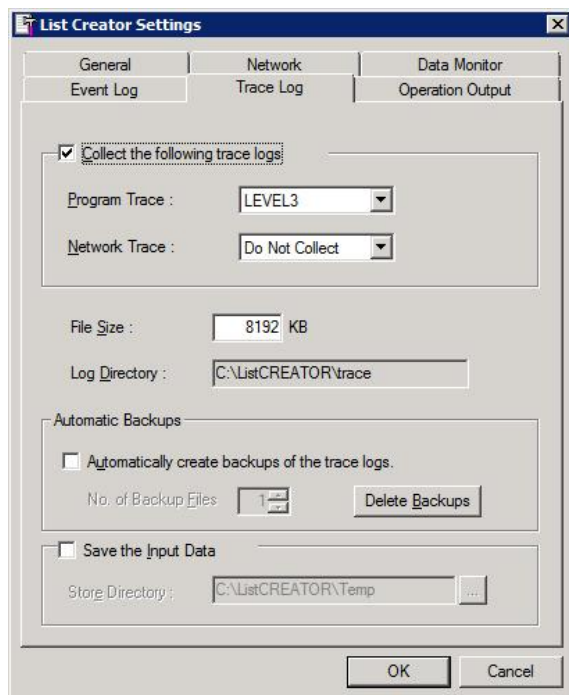
Select this if you want to collect the event logs generated by serious problems, such as the occurrence of form output errors.

#### 2.1.2.5. Trace Log Tab

Set the information related to collecting the trace logs used for investigation when problems occur and for saving input data.

Trace logs are for checking by Fujitsu technical support when problems occur and cannot be checked by users.

 Log files are created (updated) at the time of log output. If there is a shortage of disk space in the interval between completion of setting the environment settings and the output of logs, the settings are changed in accordance with the free space. In this case, an event ID "141" message from source "F3GBSVLG" is output to the event log (application).



Collect the following Trace logs

Select this item in order to collect trace logs for investigation when problems occur, and specify the level.

#### Program Trace

Specify the level for collecting program processing results and other information when forms are output.

Do Not Collect : Program traces are not collected.


LEVEL 1 to 3 : LEVEL 1 to LEVEL 3 are available for collecting program traces.  
The default value is LEVEL 3. This does not need to be changed.

#### Network Trace

Specify the level for collecting communication-related processing results and other information when forms, data files, media data files and similar are transferred via a network or similar.

Do Not Collect : Network traces are not collected.  
The default value is "Do Not Collect".

LEVEL 1 to 3 : LEVEL 1 to LEVEL 3 are available for collecting network traces.

 <b>Caution</b>	<p>Network trace log settings are disabled in the following cases:</p> <ul style="list-style-type: none"> <li>- When using connector link</li> <li>- When using COBOL application link</li> </ul>
---	---

File Size

Specify a value in the 64 to 99999 KB range as the trace log file size.

When the trace log is full, files are overwritten in sequence, starting from the oldest.

If the data collection tool for fault investigation cannot be used to save files as soon as a problem occurs, specify a size that creates a buffer.

Refer to the following for a guide to the sizes of collected logs:

=> "1.3 Points to Note before Use", "●Actions to take in case of problems"



Caution

When the file size is changed, the contents of previously collected trace logs are initialized.

#### Log Directory

The trace log file storage directory is displayed. The storage directory cannot be changed.



Note

If trace logs are collected, the log files below are created in the storage directory. The file size in the environment settings is used as the size of these log files.

- f3gbobsc.log (\*1)
- f3gbobscAuto\*.log (\*1) (\*2)
- f3gbmeft.log (\*1)
- f3gbmeftAuto\*.log (\*1) (\*2)

In addition, the log files below are created in the storage directory.

The size of this log file is fixed at 1024 KB.

- f3gbmiss.log (\*1)

Accordingly, the following amount of free disk space is required at the storage directory:

$$fileSize \times (numberOfSaveFiles + 1) \times 2 + 1024 \text{ KB}$$

\*1: For Windows(x64), the "f3gb" part of the file name is "f4gb".

\*2: One is created for each save file.

Before a log actually saves a save file, the "Auto" part of the file name is "Dummy".

Example: "f3gbobscDummy\*.log"

#### Automatic Backups

The automatic log save function saves files automatically when trace log files become full.

Set the information related to saving logs automatically.

##### Automatically create backups of the trace logs.

Select this item to save files automatically when trace log files become full, and specify the number of save files. Save files are created in the same directory as the trace log files.

##### **NO of backup files**

Specify a value in the 1 to 7 range as the number of files to be saved and kept. The number of files specified as the number of save files is saved. If the number of save files is decreased, files are deleted in sequence, starting from the oldest. The number of files deleted matches the size of the decrease.

##### Delete backups

Click this button to delete the trace log files that were saved automatically.

#### Save the Input Data

The input data save function saves to the form output server the input data specified at the time of form output.

If problems related to input data occur, the problems can be resolved quickly from the saved input data.

Set the information related to saving input data.

Select this item to save input data to the form output server, and specify the storage directory. Information such as the file name of the saved input data is output to the event log (application) in an event ID "1629" message from source "ListCREATOR".

Information relating to the saved input data can be checked in the event log.

### Store Directory

For the directory that stores input data, specify a full path of up to 259 bytes, including the drive letter.

Some characters are prohibited in directory names. Refer to the following for details:

=> "1.4.1 Restrictions ", "●Regarding file and directory names"

You can specify the directory by navigating to it and the clicking the button to the right of the field. The directory name must be 259 bytes or less.



It is recommended to save input data during application development in order to resolve problems quickly.

**Caution** However, take the following notes into account and investigate whether there are security issues when deciding whether or not to save input data. It is particularly important to investigate thoroughly the saving of input data during actual operation.

- If save input data is specified, the data specified at the user application is saved. Therefore, handle with care if the saved data includes sensitive information.

In addition, consider the security of the computer that saves the input data. Use the computer with measures such as restricting login users and directory access implemented.

- If "Save the Input Data" is selected, "Information", "Warning", and "Error" must be enabled in advance under the **Event log** tab.

- Ensure the user outputting the forms has read and write permissions for the directory to which input data will be backed up, otherwise input data cannot be backed up.

- Specify a directory at a local disk as the input data storage destination. Do not specify the following as the storage destination:

- Network drives
- UNC specification (\\computerName\sharedName\directoryName)
- Removable disks

Saved input data is not deleted automatically. When saved input data is no longer needed, delete it manually.

- When the amount of free space at the input data storage destination falls to 256 MB or less, an event ID "1631" message is output to the event log (application) from source "ListCREATOR".

In this case, input data is not stored. Either delete unnecessary files to guarantee space, or change the storage directory.

- If input data does not need to be saved, change the settings so that input data is not saved.

- Saving input data causes increased load on the computer and might affect performance during form output.

- Environment settings must be set at the Web client if input data is saved in Web-based local printing mode. Refer to the following for details:

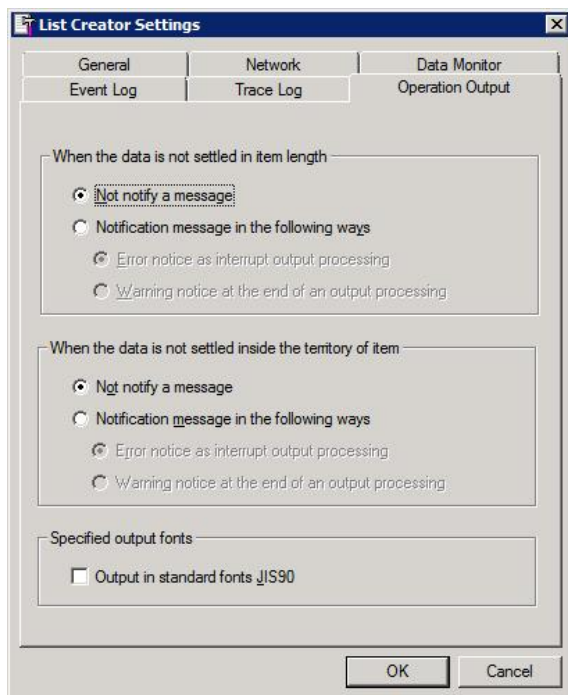
=> "5.2.3 Trace Log Environment Settings"

### 2.1.2.6. Operation Output Tab

Set information related to the operation when a form is output.

The environment settings at this tab must be set separately for each operating mode.

- Stand-alone mode, connector link mode, and remote form output mode  
The form output server environment settings are enabled.
- Web-based local printing mode  
The Web server environment settings are enabled.



When the data is not settled in item length

Specify the message output operation to be used if the data exceeds the field length range.

#### Not notify a message

Select if messages are not to be output.

#### Notification message in the following ways

Select if messages are to be output.

Messages are output in the following cases:

- If the data for a field exceeds the field length
- If the operation result of the operator specified for a field exceeds the field length  
(However, a message is not output if the digits after the decimal point in an operation result exceed the field length.)

#### **Error notice as interrupt output processing**

Select in order to output the message as an "Error" and to discontinue form output processing.




### Warning notice at the end of an output processing

Select in order to output the message as a "Warning" when form output processing is completed.

Messages are output using the method specified under the **General** tab at "Form Output Error Notification".

If the setting is to output messages to the event log, users can view the logs to check if the field length range has been exceeded.

 If "Output to the Event Log" is selected, collection of "Warning" and "Error" messages must be enabled in advance under the **Event log** tab.  
Caution

When the data is not settled inside the territory of item

Specify the message output operation to be used if the data exceeds the area length range.

### Not notify a message

Select if messages are not to be output.

### Notification message in the following ways

Select if messages are to be output.

Messages are output in the following cases:

- If the data for a field exceeds the area length

### Error notice as interrupt output processing


Select in order to output the message as an "Error" and to discontinue output processing.

### Warning notice at the end of an output processing

Select in order to output the message as a "Warning" when output processing is completed.

Messages are output using the method specified under the **General** tab at "Form Output Error Notification".

If the setting is to output messages to the event log, users can view the logs to check if the area length range has been exceeded.

 - If "Output to the Event Log" is selected, collection of "Warning" and "Error" messages must be enabled in advance under the **Event log** tab.  
Caution

- When Excel files are output, the "When the data is not settled inside the territory of item" setting is disabled. All data is output within the cell even if the area length range is exceeded.

- When COBOL application link is used, "When the data is not settled in item length" and "When the data is not settled inside the territory of item" are disabled.



Note

The message output destination when data exceeds the field length or area length is different from the "Form Output Error Notification" specification under the **General** tab.

Function/Form output interface	Notification destination for errors at output (notification method)
When prputprt performs remote form output	Must be output to the event log at the form output server side
During form preview	Must be output via a message box
<ul style="list-style-type: none"> <li>- When using connector link</li> <li>- When monitoring data arrival</li> <li>- When SAP R/3 RDI link is used</li> <li>- When Database Direct link is used</li> <li>- When sorting</li> <li>- When a query function is used for database linkage</li> <li>- When COM interface is used</li> </ul>	Must be output via the event log
<ul style="list-style-type: none"> <li>- When Java interface is used</li> <li>- When .NET interface is used</li> </ul>	<p>Errors must be output via the exception class.</p> <p>However, errors during form output are also output to the event log.</p> <p>If forms are output in remote form output mode or in connector link mode, errors are also output to the event log at the form output server side.</p>
When CFX custom tag interface is used	<p>Errors are displayed at the Web browser.</p> <p>However, errors during Database Direct link and during form output are also output to the event log.</p> <p>If forms are output in remote form output mode or in connector link mode, errors are also output to the event log at the form output server side.</p>

#### Specified output fonts

Specifying the Japanese character set, when outputting the form.

This option is effective for Japanese.

## 2.2. UNIX

For UNIX, execute the environment settings commands and the form output environment settings file to set the List Creator environment settings.

Also set the audit trace log environment settings in the environment settings file.

After execution of the environment settings commands, and after setting the environment settings file, restart the system to apply the settings.



Note

The contents set by the environment settings command or in the environment settings file can be enabled by stopping and restarting the List Creator service, without restarting the system. Refer to the following for the operation method:  
=> ["2.2.4 Starting and Stopping the List Creator Service"](#)

The table shows the information that must be set for each operation type. Refer to the explanations for the information to be set in accordance with the operation type.

**Table2.3** Operation types and the information to set in the environment settings

Operation type Information to be set	Stand-alone mode	Remote form output mode (*1)		Connector link mode (*1) (*2)		Web-based local printing mode		Form Web service mode
		Application server	Form output server	Application server	Form output server	PDF data output mode	Web application link mode	
Form Storage Directory	Y	Y	Y	Y	Y	Y	Y	Y
Work directory and network environment	N	Y	N	N	N	N	N	N
Users performing remote form output to Windows	N	Y	N	N	N	N	N	N
Port number for remote form output	N	Y	Y	N	N	N	N	N
Log environment for investigation when problems occur	Y	Y	Y	Y	Y	Y	Y	Y
Operating environment for output	Y	N	Y	N	Y	Y	Y	Y
Input data storage environment	Y	N	Y	N	Y	Y	N	Y
Audit trace log collection environment	Y	N	Y	N	Y	Y	Y	Y
Output font	Y	N	Y	N	Y	N	Y	Y
Form output information settings	Y	N	Y	N	Y	Y	Y	Y

Y: Required if operation is used

N: Not required


\*1: If operating in remote form output mode or connector link mode, set the environment settings, as required, at the application server side and the form output server side.

\*2: When COBOL application link is used, only the following information settings are enabled:

Operation type Information to be set	Connector link mode	
	Application server	Form output server
Form Storage Directory	Y	Y
Work directory and network environment	N	N
Users performing remote form output to Windows	N	N
Port number for remote form output	N	N
Log environment for investigation when problems occur	Y	Y
Operating environment for output	N	Y
Input data storage environment	N	Y
Audit trace log collection environment	N	Y
Output font	N	Y
Form output information settings	N	Y

Y: Required if operation is used

N: Not required

 **Note** The following settings are required if remote form output is used to output forms:

- Work directory and network environment
- Users who perform remote form output to Windows

Refer to the following for the environment settings if remote form output is used:  
=> ["Chapter4 Remote Form Output Environment Settings"](#)

## 2.2.1. Setting the Form Storage Directory

The directory that stores the form definition information used during form output can be set and displayed.

Execute `psetassetsdir` to specify the Form Storage Directory.

### 2.2.1.1. `psetassetsdir` command

#### ● Function

The form storage directory can be set when the form is outputted. And then, a current set value can be displayed.

It is necessary Reboot the system to change effectively in the setting.

#### ● Description format

The following shows the command description formats.

When you specify the Form Storage Directory.

```
psetassetsdir -s Form Storage Directory
```

When you display the Form Storage Directory.

```
psetassetsdir
```

#### ● Explanation

Explains the option.


### -s Form Storage Directory

Specify the Form Storage Directory in full path and can use 512 byte or less.


The following orders make Form Storage Directory effective at form output.

- 1) Form Storage Directory specified at output of form.
- 2) Form Storage Directory specified at the Environment Variable "OA\_ASSETS DIR".
- 3) Form Storage Directory specified at this command.

When this is omitted, the current Form Storage Directory is displayed.

 - Do not enter a "back slash (\)" at the end of a form storage directory name.

**Caution** - Set the Read/Write permission under the form storage directory.  
When there is no Read/Write permission, cannot output the form.

 - The form storage directory after the installation is "/var/opt/FJSVoast/assets"

**Note** - When specify this option command is ended if form storage directory or overlay directory "kol5" has already existed.  
If this option is specified the command is ended after change settings when specified form storage directory or work directory containing the overlay directory is existed.

- When overlay storage directory (kol5) containing the specified form storage directory or form storage directory does not exist, the message to press whether to make the directory is displayed. The directory is made when responding by "y" for the message, and the setting is changed. It does not change in the setting when responding by "n".

### ● Return value


Displays the return value

Return value	Definition
0	Ends without error
Excluding 0	Ends with error

## 2.2.2. Setting the Log Environment for Investigation when Problems Occur

The environment for collecting logs (program trace logs/network trace logs) for investigation when problems occur can be set and displayed.

Execute prsetlog to set the environment for collecting logs for investigation when problems occur.

 **Note** If operations involve the output of 1,000 or more forms per day, old trace logs might be overwritten and adequate investigation of problems might not be possible.  
For operations of this type, trace logs can be saved at any specified intervals so that the trace log information required for problem investigation can be collected.

### 2.2.2.1. prsetlog command

#### ● Function

This command can set the log (program trace log/network trace log) for investigation when the trouble occurs. And then, a current set value can be displayed.

It is necessary Reboot the system to change effectively in the setting.

The log for the investigation when the trouble occurs cannot confirm the content.



Caution

- When the trace log for a large amount of output is set to the Environment Setting file (/etc/opt/FJSVoast/conf/lc\_env.conf), the setting of the Environment Setting file becomes effective.
- The following priority levels make the Environment Setting of the log for the investigation when the trouble occurs effective.
  - 1) Trace log setting when a large amount of outputting it  
Setting by Environment Setting file (/etc/opt/FJSVoast/conf/lc\_env.conf).
  - 2) Environment Setting of log for investigation when trouble occurs.  
Setting by prsetlog command

## ● Description format

The following shows the command description formats.

[ ] indicates that this can be omitted.

When you specify value.

```
prsetlog [ -p Program trace level ]
          [ -n Network trace level ]
          [ -s file size ]
```

When you display the current specified value.

```
prsetlog -l
```

## ● Explanation

Explains the option.

When you specify value.

### -p Program trace level

The log collection level is specified.

#### **LEVEL1~3:**

There is a program trace level up to LEVEL1-LEVEL3.

An initial value is LEVEL3.

When this is omitted, the program trace level is not changed.

### -n Network trace level

Specified the collection level of processing result and other information on communication.

#### **NO\_GET:**

The network trace is not collected.

An initial value is "Not collect".

#### **LEVEL1, 2:**

There is a network trace level up to LEVEL1-LEVEL2.

When this is omitted, the network trace level is not changed.



Caution


In the following cases the network traces log setting is invalid.

- Using connector linkage function

**-s file size**

Specify the file size of trace log within the range of 64-99999KB.  
 When the trace log becomes full, it is overwrite sequentially from an old log.  
 When the file size is changed on the way, the content of the trace log collected.  
 Before it changes becomes invalid.

When this is omitted, the file size is not changed.

 - The log file size after the installation is 8192KB.

**Note** - When the trace log is collected, the following log files are created for the storage directory.

- The size of these log files becomes a size set to the Environment Setting file.
  - trslog
  - f3gbmeft.log

And then, following log files are created for the storage directory.

- f3gbmiss.log (The size is fixed by 1024 KB)

Therefore, the following capacity of an empty disk is necessary for the storage directory.

File size\*2+1024KB

When you display the current specified value.

**-l**

Specify this option, when a current setting value (program trace level, network trace level, size of the file (unit of Kbyte), and log file name) is displayed.

● **Return value**

Displays the return value.


Return value	Definition
0	Ends without error
Excluding 0	Ends with error

**2.2.3. Setting Operations at Output**

Settings can be set such that messages are output at the time of form output if, for example, data exceeds the field length or area length settings for form definition information.

**2.2.3.1. Setting the message posting action when data exceeds the field length range**

The message output action when data exceeds the field length range can be set and displayed.  
 Execute prsetdigitovermsg to set the message output action when data exceeds the field length range.

 **Caution** The settings for the message output action when data exceeds the field length range are not supported.

### 2.2.3.1.1. prsetdigitovermsg command

#### ● Function

This command can set the message notification operation when data is not fitted on the item length. It is not necessary Reboot the system to change effectively in the setting. In the following cases, the message is notified to the system log.

- When the data of the item exceeds the item length
- When the operation result of specification for the item exceeds the item length (However, it is not notified when the number of decimals exceeds the item length by the operation result.)

#### ● Description format

The following shows the command description formats.

When you specify value.

```
prsetdigitovermsg -s Error notification
```

When you display the current specified value.

```
prsetdigitovermsg -l
```

#### ● Explanation

Explains the option.

When you specify value.

##### -s Error notification

Specified whether to notify the message when data is not fitted on the item length.

##### **N:**

It is not notify.

##### **E:**

It notifies as "Error", and the output processing is interrupted.

##### **W:**

It notifies when the output processing ends as "Warning".



Note

The error notification after the installation is "N".

When you display the current specified value.

##### -l

Specify when you display the current specified value.

#### ● Return value


Displays the return value.

Return value	Definition
0	Ends without error
Excluding 0	Ends with error



### 2.2.3.2. Setting the message output action when data exceeds the area length range

The message output action when data exceeds the area length range can be set and displayed. Execute `prsetterritovermsg` to set the message output action when data exceeds the area length range.

 The settings for the message output action when data exceeds the area length are not supported.  
Caution

#### 2.2.3.2.1. `prsetterritovermsg` command

##### ● Function

This command can set the message notification operation when data is not fitted on the item length. It is not necessary Reboot the system to change effectively in the setting. In the following cases, the message is notified to the system log.

- When the data of the item exceeds the item length

##### ● Description format

The following shows the command description formats.

When you specify value.

```
prsetterritovermsg -s Error notification
```

When you display the current specified value.

```
prsetterritovermsg -l
```

##### ● Explanation

Explains the option.

When you specify value.

##### -s Error notification

Specified whether to notify the message when data is not fitted on the item length.

**N:**


It is not notify.


**E:**

It notifies as "Error", and the output processing is interrupted.

**W:**

It notifies when the output processing ends as "Warning".

 When the Excel file is output, the error notification does not become effective.  
Caution

 The error notification after the installation is "N".  
Note

When you display the current specified value.

`-l`

Specify when you display the current specified value.

### ● Return value

Displays the return value.

Return value	Definition
0	Ends without error
Excluding 0	Ends with error

### 2.2.3.3. Setting the Input Data Storage Environment

Storage environment information, including whether or not input data is stored at the form output server, and the storage destination directory to be used if input data is stored, can be set and displayed.

Execute `prsetdatalog` to specify the input data storage environment.

#### 2.2.3.3.1. `prsetdatalog` command

### ● Function

This command sets whether to save input data with the form output server. The directory can be changed the save when input data is saved ahead.

### ● Description format

The following shows the command description formats.

[ ] indicates that this can be omitted.

When you specify value.

```
prsetdatalog [-s Save operation of input data]
              [-p Save operation of input data directory path]
```

When you display the current specified value.

```
prsetdatalog -l
```

### ● Explanation

Explains the option.

When you specify value.

#### `-s Save operation of input data`


It is specified whether to save input data.

**0:**

The input data of the form is not saved.


**1:**


The input data of the form is saved.

 The Save operation of input data after the installation is "0".  
**Note**

**-p Save operation of input data directory path**

Specify the Save operation of input data directory with its full path within 512 Kbyte.

 - Do not enter a "back slash (\)" at the end of the save path name.  
**Caution** - Set the Read/Write permission under the save ahead directory.  
 When there is no Read/Write permission, cannot save input data.

 The Save operation of input data directory path after the installation is  
**Note** `"/var/opt/FJSVoast/tmp"`.

When you display the current specified value.


**-l**

Specify when you display the current specified value.

● **Return value**

Displays the return value.

Return value	Definition
0	Ends without error
Excluding 0	Ends with error

 **Caution** Input data is recommended to be saved to do a prompt solution of the trouble when the application is being developed.  
 However, please examine whether there is problem in security in consideration of the following notes, and judge whether to save it. Especially, the save under operation is necessary an enough examination.

- When specification that saves input data is done, the data specified by the user application is saved. Therefore, please note handling when important information on security is included in the saved data.  
 Moreover, the computer that saves input data must operate the limitation of the log in user and the directory access etc. in consideration of security correspondingly.
- Set the Read/Write permission under the save directory for form output user. When there is no Read/Write permission, cannot save input data.
- Specify the directory on a local disk the save of input data. Do not specify the following save ahead.
  - Remote mounted directory
  - Removal disks
- The saved input data is not automatically deleted. Delete the saved data when the data becomes unnecessary.
- When the free space the save of input data ahead becomes 256MB or less, the message ID "00631" is output to the system log. In this case, input data is not saved. Delete an unnecessary file or change the saved directory.

- Change the setting when the save of input data becomes unnecessary.



Note

Information on the file name etc. of the saved input data is output to the system log by the message ID "00629".

## 2.2.4. Starting and Stopping the List Creator Service

This section explains the List Creator service start and stop methods.

Usually the List Creator service is started when the system starts. Therefore, manual start and stop operations are not required.



- Execute this operation with system Administrator rights.
- Caution - Do not perform this operation while form output work is in progress.

### List Creator service start method

```
# /opt/FJSVoast/etc/rc.d/SKFJSVoast start
```

### List Creator service stop method

```
# /opt/FJSVoast/etc/rc.d/SKFJSVoast stop
```

### List Creator service restart method

```
# /opt/FJSVoast/etc/rc.d/SKFJSVoast restart
```



- Caution - When these commands are executed, the List Creator log service is started/stopped at the same time.
- Refer to the following for information on starting and stopping the connector link service:  
=> ["3.2 Starting and Stopping the Connector Link Service"](#)
- Refer to the ["Chapter9 Saving as PDF File"](#) for information on starting and stopping the PDF mail distribution service.

## 2.2.5. Editing Environment Settings Files

Use a text editor or similar to edit the environment settings file.



- Caution Stop the List Creator log service before changing the contents of the environment settings file. The changed environment settings file contents take effect after the List Creator log service is started.
- Note that, under UNIX, the List Creator log service is started when the List Creator service starts.
- Refer to the following for information on starting and stopping the List Creator service:  
=> ["2.2.4 Starting and Stopping the List Creator Service"](#)

The following files are the environment settings files:

- Windows

```
listCreatorInstal\Dir\conf\lc_env.conf
```

- UNIX

```
/etc/opt/FJSVoast/conf/lc_env.conf
```

Use the following character encodings to describe the environment settings file:

- Windows

Code the file using Shift-JIS encoding.

- UNIX

At installation, the file is described using EUC encoding. Change the encoding to suit the character encoding environment of the operating system in use.

By default, there are hashes (#) at the start of each line in the environment settings file to comment them out. Remove the “#” at the beginning of the line and review the values for the key. The format is “key=setting value”.

## 2.3. Specifying the Form Output Environment Settings File

The form output environment settings file specifies the settings that are common to the output of all forms created using List Creator Designer and output using the form output interface.

Specification of the settings common to all forms output in the form output environment settings file, and specification of the settings for individual forms in a form output information file, simplifies the management of function settings in accordance with operations.

Specify the form output environment settings file at the form output server.

### 2.3.1. Deploying the Form Output Environment Settings File

The following files are the form output environment settings files:

– Windows

- If the output method is not OWF file generation

```
/listCreatorInstal/Dir/conf/lc_prt_env.conf
```

- If the output method is OWF file generation

```
/listCreatorInstal/Dir/conf/lc_webprt_env.conf
```


– UNIX

- If the output method is not OWF file generation

```
/etc/opt/FJSVoast/conf/lc_prt_env.conf
```

- If the output method is OWF file generation

```
/etc/opt/FJSVoastw/conf/lc_webprt_env.conf
```

 Access permissions for the form output environment settings file are as follows:

- Windows
- Note** Administrators Full control  
Everyone Read and execute, read
- UNIX  
"644"

If the form output environment settings file cannot be accessed, or if there is a mistake in the synopsis, the form output environment settings file specifications are disabled.

### 2.3.2. Relationship between the Form Output Environment Settings File and the Form Output Information File

This section explains the relationship between the form output environment settings file and form output information files.

- The specifications in a form output information file take priority over those in the form output environment settings file.

- If different keywords are specified in the form output environment settings file and the form output information file, the values specified in both files are enabled.
- If a form output information file is not specified, the specifications in the form output environment settings file are used for operations.

## Chapter3


# Set the Connector Link Environment

This chapter explains how to set the connector link environment.

The tasks below are required in order to use the connector link.

These environment settings are required at both the application server and the form output server.

Procedure	Operation	Explanation
1)	Execute the batch file/shell used for setup. (Mandatory)	This must be executed after installation. After execution, the connector link service is started automatically.
2)	Stop the connector link service. (Mandatory if setting the environment settings file settings)	The connector link service must be stopped in order to set environment settings file settings.
3)	Set the environment settings file settings. (Optional)	Set if required. If not set, operations use the default values.
4)	Start the connector link service. (Mandatory if environment settings file settings were set)	The connector link service must be started if environment settings file settings have been set.
5)	Set the settings for using UNC specification for form resource reference destinations and form output destinations. (Optional)	Set if UNC specification is to be used for form resource reference destinations and form output destinations.

 Refer to the following for operations and notes related to the connector link:  
 => ["Chapter11 Connector Link Function"](#)

**Note** Note that List Creator environment settings are also required in order to use the connector link. Refer to the following for details:  
 => ["2.1 Windows"](#)  
 => ["2.2 UNIX"](#)



## 3.1. Executing the Batch File/Shell Used for Setup

### 3.1.1. Windows

Execute the setupCT.bat batch file to perform connector link setup. After setup is completed, the connector link service is started automatically.



Caution

- You must have Administrator rights to setup the connector link.
- If you are setting up the connector link on Windows Server 2008, execute the setupCT.bat batch file from the "Administrators: Command Prompt" window (started by clicking the **Start** menu, right-clicking the **Command Prompt** icon, then selecting **Run as administrator**)
- Before executing the setupCT.bat batch file, navigate to the file's directory.
- Paths containing spaces in the options must be enclosed in double quotation marks ("").
- When connector link setup is performed, the connector link service starts and thus the connector link can be used. However, the service does not start automatically when the computer is started - to change that, follow the steps below:
  - 1) From the **Start** menu, select **Programs >> Administrative Tools >> Services** to display the service list window.
  - 2) Select **ListCREATOR RemotePrint**.  
Right-click to display the properties, then select "Automatic" as the startup type.  
When the computer starts, the service **ListCREATOR RemotePrint** is started automatically. If you do not want this service to start automatically, select **Manual**.
  - 3) Select **ListCREATOR Connector**.  
Right-click to display the properties, then select "Automatic" as the startup type.  
When the computer starts, the service **ListCREATOR Connector** is started automatically.  
If you do not want this service to start automatically, select **Manual**.

The setupCT.bat batch file is stored in the following directory:

```
listCreatorInstalDir
```

[Synopsis]

This section shows the synopsis for executing the setupCT.bat batch file - [ ] indicates optional items.

```
setupCT.bat [javaInstalDir] listCreatorInstalDir
```

[Explanation]

This section explains the options.

*javaInstallDir* (optional)

J2SE install directory.

If this option is omitted, the List Creator Java execution environment is used to perform setup.



The name of the specified directory cannot contain "%".

Caution



Note

– The Java execution environment used by the customer can be specified as the List Creator Java execution environment.

The Java execution environments that can be used by List Creator are listed below (please note that patches required by the J2SE in use must be applied beforehand):

- Windows(x84)
  - J2SE 1.3.1
  - J2SE 1.4.2
  - J2SE 5.0
  - Java SE 6 and later

Note that 64-bit Java cannot be used.

- Windows(x64)
  - J2SE 5.0
  - Java SE 6 and later

Note that 32-bit Java cannot be used.

- Windows for Itanium
  - J2SE 1.4.2
  - J2SE 5.0 and later

Note that 32-bit Java cannot be used.

- J2SE 5.0 or later is required in an IPv6 environment.

*listCreatorInstallDir* (required)

List Creator install directory.



The name of the specified directory cannot contain "%".

Caution

## [Example]

Specify the command line as below, depending on whether *javaInstallDir* is specified.

- If *javaInstallDir* is omitted

The example below shows the command line when *javaInstallDir* is omitted and *listCreatorInstallDir* is "C:\ListCREATOR":

```
setupCT.bat C:\ListCREATOR
```

- If *javaInstallDir* is specified

The example below shows the command line when *javaInstallDir* is "C:\Interstage\JDK14" and *listCreatorInstallDir* is "C:\ListCREATOR":

```
setupCT.bat C:\Interstage\JDK14 C:\ListCREATOR
```

### 3. 1. 2. UNIX

Execute the shells below to perform connector link setup. After setup is completed, the connector link service is started automatically.

- setupAPS.sh (application server)
- setupFOS.sh (form output server)



- You must have Administrator rights to setup the connector link.

**Caution** - If the message below is output, the Java runtime library path must be set in the file used by the connector link:

Java Runtime library (libjvm.so) was not found. Please edit

/etc/opt/FJSVoast/conf/prputex.conf and add the full path of Java Runtime library (libjvm.so) to the JVM\_LIB\_PATH key.

Refer to *Troubleshooting & Messages* in the online manual for information on setup.

- Before executing setupAPS.sh or setupFOS.sh, navigate to the file's directory.

- After the connector link setup shell is executed, the connector link service is started automatically next time the computer starts.

Both setupAPS.sh and setupFOS.sh are stored in the following directory:

```
/opt/FJSVoast/remotepint
```

#### [Synopsis]

This section shows the synopsis for setupAPS.sh - [ ] indicates optional items.

```
sh setupAPS.sh [javaInstalDir]
```

This section shows the synopsis for setupFOS.sh - [ ] indicates optional items.

```
sh setupFOS.sh [javaInstalDir]
```

#### [Explanation]

This section explains the options.

#### *javaInstalDir* (optional)

J2SE install directory.

If this option is omitted, the List Creator Java execution environment is used to perform setup.



#### Note

- The Java execution environment in use by the customer can be specified as the List Creator Java execution environment.

The Java execution environments that can be used by List Creator are listed below (please note that patches required by the J2SE in use must be applied beforehand):

- Linux for Intel64
  - J2SE 5.0
  - J2SE 1.4.2
  - Java SE 6 and later

Note that 32-bit Java cannot be used.

- J2SE 5.0 or later is required in an IPv6 environment.

[Example]

Specify the command line as below, depending on whether *javaInstallDir* is specified.

- If *javaInstallDir* is omitted

The examples below show the command line when *javaInstallDir* is omitted:

- For setupAPS.sh

```
sh setupAPS.sh
```

- For setupFOS.sh

```
sh setupFOS.sh
```

- If *javaInstallDir* is specified

The examples below show the command line when *javaInstallDir* is *"/opt/FJSVawjbc/jdk14"*:

- For setupAPS.sh

```
sh setupAPS.sh /opt/FJSVawjbc/jdk14
```

- For setupFOS.sh

```
sh setupFOS.sh /opt/FJSVawjbc/jdk14
```



Note

The existence of the following processes can be used to check whether the connector link service has been started:

- /opt/FJSVoast/remoteprint/daemon/bin/f3gbrjdm
- /opt/FJSVoast/bin/fjsvoastctd

## **3.2. Starting and Stopping the Connector Link Service**

This section explains how to start and stop the connector link service.

### **3.2.1. Windows**

Follow the procedures below to start and stop the connector link service.

The operation procedures explained here are for the Windows Server 2003 application server.

#### To start the connector link service

- 1) From the **Start** menu, select **All Programs >> Administrative Tools >> Services**, then start the "ListCREATOR RemotePrint" service.
- 2) From the **Start** menu, select **All Programs >> Administrative Tools >> Services**, then start the "ListCREATOR Connector" service.

#### To stop the connector link service

- 1) From the **Start** menu, select **All Programs >> Administrative Tools >> Services**, then stop the "ListCREATOR Connector" service.
- 2) From the **Start** menu, select **All Programs >> Administrative Tools >> Services**, then stop the "ListCREATOR RemotePrint" service.

### **3.2.2. UNIX**

Specify the commands below to start and stop the connector link service.



- Execute this operation with system Administrator rights.

Caution - Do not perform this operation while form output work is in progress.

#### To start the connector link service

```
# /opt/FJSVoast/etc/rc.d/FJSVoastrmpr start
```

#### To stop the connector link service

```
# /opt/FJSVoast/etc/rc.d/FJSVoastrmpr stop
```


Usually the connector link service is started when the system starts, so manual start and stop operations are not required.


## 3.3. Setting the Environment Settings File

If required, change the environment settings.

### 3.3.1. Application Servers

This section explains the items that can be changed at application servers.

	<p>- Change environment settings while the connector link service is stopped. Changed environment setting values take effect after the service is started. Refer to the following for the service start and stop methods: =&gt; <a href="#">"3.2 Starting and Stopping the Connector Link Service"</a></p> <p>- Do not change any items in the environment settings file other than those mentioned in this manual.</p>
---	---

	<p>If the connector link is used in an environment where a firewall is enabled, configure so that ports used by List Creator are not blocked.</p>
---	---

#### ● RequesterProperty file

These are settings related to the RMI communication used internally by the connector link.

- Windows

*listCreatorInstallDir\remoteprint\requester\bin\RequesterProperty file*

- UNIX

*/etc/opt/FJSVoast/remoteprint/requester/bin/RequesterProperty file*

Item	Property	Default value	Settings range	Explanation
Port number for RMI	jp.co.pfu.ard us.model.jom. requester.rmi Port	3914	1 to 65535	TCP/IP port number used for List Creator internal RMI communication. RMI communication operates at the application server side. Change this value if this TCP/IP port number is used by other applications. The value must match the value set as the RMI port number in the DaemonProperty file.

#### ● DaemonProperty file

These are settings related to connector link communication.

- Windows

*listCreatorInstallDir\remoteprint\daemon\bin\DaemonProperty file*

- UNIX

*/etc/opt/FJSVoast/remoteprint/daemon/bin/DaemonProperty file*

Item	Property	Default value	Settings range	Explanation
Application execution command	jp.co.pfu.ard.us.model.jom.daemon.job.applicationRoot	/opt/FJSVoast/bin	–	Directory that contains the UNIX chmod command. Usually this property does not need to be changed, because during installation List Creator Connector creates a symbolic link to chmod – /usr/bin/chmod if the application server is Solaris, or /bin/chmod if the application server is Linux. Change this property only if chmod is in a different directory.
Port number for RMI	jp.co.pfu.ard.us.model.jom.daemon.responder.rmiPort	3914	1 to 65535	TCP/IP port number used for List Creator internal RMI communication. RMI communication operates at the application server side. Change this value if this TCP/IP port number is used by other applications. The value must match the value set as the RMI port number in the DaemonProperty file.

### ● DefaultPushJobInstruction file

These settings are for sending forms, data files, and similar, to the form output server.

– Windows

*listCreatorInstallDir\remoteprint\requester\data\DefaultPushJobInstruction file*

– UNIX

*/etc/opt/FJSVoast/remoteprint/requester/data/DefaultPushJobInstruction file*

Item	Property	Default value	Settings range	Explanation
Form output wait time	job.push.responderApp.timeout	0	0 to 3600	Number of seconds that the application server waits for completion of List Creator form output at the form output server. If form output is not completed within the specified time, the application server stops waiting for output completion. If 0 is set, the application server waits until output is completed. However, if form output does not complete, a timeout occurs in accordance with the transfer timeout settings (bufferTimeout, etc.) in the DefaultTransferProperty file.

### ● DefaultTransferProperty file

These settings relate to communication between the application server and the form output server. Change the settings to suit the network environment or similar.

– Windows

*listCreatorInstallDir\remoteprint\requester\data\DefaultTransferProperty file*

– UNIX

*/etc/opt/FJSVoast/remoteprint/requester/data/DefaultTransferProperty file*


Item		Property	Default value	Settings range	Explanation
Send destination port number		jp.co.pfu.atool.delivery.requester.transferPort	3913	1 to 65535	Reception port number of the form output server. Change this setting, if required. This setting must match the value set as the reception port number in the DaemonProperty file of the form output server.
Network load reduction settings	Partitioned transfer specification	jp.co.pfu.atool.delivery.requester.partitionedTransfer	false	true or false	Whether to use partitioned transfer of files, to avoid load on network bandwidth – in this type of transfer, files are split and transferred according to the specified interval. To use partitioned transfer, set this item to “true” – the default value is “false”, which causes the entire file to be sent in one transfer. Partitioned transfers require longer time to send files.
	Partitioned transfer interval	partitionedTransferInterval	5	0 to 2147483647	Partitioned transfer interval (in milliseconds).
Error retry	Error retry specification	jp.co.pfu.atool.delivery.requester.errorRetry	false	true or false	The following can be set: – Transfer a form resource, data file, or similar, from the application server to the form output server to implement a connector link. – Transfer a form resource, data file, or similar, from the application server to the form output server to generate a PDF file, OWF file, or Excel file or to implement a connector link. Set the error retry settings used when the transfer of form resources, data files, or similar, to the form output server fails or when collection of files generated at the form output server fails. To enable retry, set this item to “true” – the default value is “false”. If multiple files are being transferred, retry is enabled for each separate file.
	Error retry count	errorRetryCount	3	0 to 2147483647	Number of times to retry when a transfer or collection error occurs.
	Error retry interval	errorRetryInterval	10000	0 to 2147483647	Number of milliseconds to wait between retries when a transfer or collection error occurs.



Item		Property	Default value	Settings range	Explanation
Transfer timeout settings	Transfer timeout	bufferTimeout	60000	0 to 2147483647	Timeout period (in milliseconds) after connection from the application server to the form output server to wait for transfers from the latter. If a long processing time is expected at the form output server, set a longer time for this parameter and for the connection timeout property (transfer.bufferTimeout) in the DaemonProperty file at the form output server side.
	Transfer error retry count	bufferRetryCount	5	0 to 2147483647	Number of times to retry when a timeout occurs while connected.
	Transfer error retry interval	bufferRetryInterval	10000	0 to 2147483647	Number of milliseconds to wait between retries when a timeout occurs while connected.
Connection retry	Connection retry count	connectionRetryCount	0	0 to 2147483647	Number of times to retry when a connection error occurs.
	Connection retry interval	connectionRetryInterval	0	0 to 2147483647	Retry interval (in milliseconds) when a connection error occurs.


### 3.3.2. Form Output Servers

This section explains the items that can be changed at form output servers.



**Caution**

- Change environment settings while the connector link service is stopped. Changed environment setting values take effect after the service is started. Refer to the following for the service start and stop methods:  
=> ["3.2 Starting and Stopping the Connector Link Service"](#)
- Do not change any items in the environment settings file other than those mentioned in this manual.



**Note**

If the connector link is used in an environment where a firewall is enabled, configure so that ports used by List Creator are blocked.

#### ● DaemonProperty file

These are settings related to connector link communication.

- Windows

*listCreatorInstallDir\remoteprint\daemon\bin\DaemonProperty file*

- UNIX

*/etc/opt/FJSSvoast/remoteprint/daemon/bin/DaemonProperty file*

Item	Property	Default value	Settings range	Explanation	
Reception port number	receivePort	3913	1 to 65535	Port number used for file reception. Change this setting to suit the operating environment. The setting must match the value set as the send destination port number in the DefaultTransferProperty file of the application server.	
Maximum number of simultaneous connections permitted	transfer.maxReceiveConnection	64	1 to(*1)	Number of simultaneous connections that can be accepted. Connection requests that exceed this number are disconnected. Change this setting to suit the operating environment.	
Port number for RMI	jp.co.pfu.ard.us.model.jom.daemon.responder.rmiPort	3914	1 to 65535	TCP/IP port number used for List Creator internal RMI communication. Change this value only if this TCP/IP port number is used by other applications. The value must match the value set as the RMI port number in the RequesterProperty file and the DaemonProperty file of the application server.	
Connection timeout	Timeout time	transfer.bufferTimeout	60	0 to 2147483647	Timeout period (in seconds) after connection from the application server to the form output server to wait for transfers from the latter. If a long processing time is expected at the form output server, set a longer time for this parameter and for the transfer timeout property (bufferTimeout) in the DefaultTransferProperty file at the application server side.
	Retry count	transfer.bufferRetryCount	5	0 to 2147483647	Number of times to retry to connect when a timeout occurs while connected.
	Retry interval	transfer.bufferRetryInterval	10	0 to 2147483647	Number of seconds to wait between retries when a timeout occurs while connected.

\*1: There are no restrictions on the upper limit for the maximum number of simultaneous connections permitted. However, the virtual memory and other resources required at output time increase when the number of simultaneous connections increases. This makes generous machine specifications essential.

## 3.4. Settings for Using UNC Specification for Form Resource Reference Destinations and Form Output Destinations

For Windows, if UNC specification (\\computerName\sharedName\dirName) is used for form resource reference destinations and form output destinations, the "ListCREATOR RemotePrint" service logon user in the local system accounts must be changed to a user with Administrator rights.



- This setting must be used at servers that access UNC-specified files.

Caution - "ListCREATOR Connector" service logon users do not need to be changed.

- Read and write permissions for service logon users must be set in advance at form resource reference destinations and form output destination.
- If COBOL application link is used, create work files in the following directory :  
The directory specified in the LM\_WORKDIR environment variable  
If that variable has not been set, the directory specified in the TMP environment variable or the TEMP environment variable  
A COBOL application error occurs if the "ListCREATOR RemotePrint" service logon user does not have access rights for the above directory.  
If a "ListCREATOR RemotePrint" service logon user has been changed, specify in the LM\_WORKDIR environment variable a directory that the "ListCREATOR RemotePrint" service can access.



Note

In addition to the settings shown below, read and write permissions for application execution users must be set in advance at the form resource reference destinations and form output destinations.

The settings method for Windows Server 2003 application servers is explained below:

- 1) Select **Start >> All Programs >> Administrative Tools >> Services** - the **Services** window is displayed.
- 2) Select **ListCREATOR RemotePrint**.
- 3) Select **Action >> Properties** - the **ListCREATOR RemotePrint** window is displayed.
- 4) Select the **Log On** tab.
- 5) For **Log on as**, select **This account**.
- 6) For **This account**, specify a user with Administrator rights.
- 7) For **Password** and **Confirm password**, enter the password of the user specified in **This account**. Click **OK**.
- 8) If the service status is **Stopped**, select **Action >> Start**.  
If the service status is **Started**, select **Action >> Restart**.

## Chapter4

# Remote Form Output Environment Settings

---

This chapter explains how to set the remote form output environment settings.



Refer to the following for the operations and notes related to remote form output:

Note => ["Chapter12 Remote Form Output"](#)

## 4.1. Windows

This section explains the environment settings for using remote form output.


List Creator environment settings are also required when remote form output is used. Refer to the following for details:

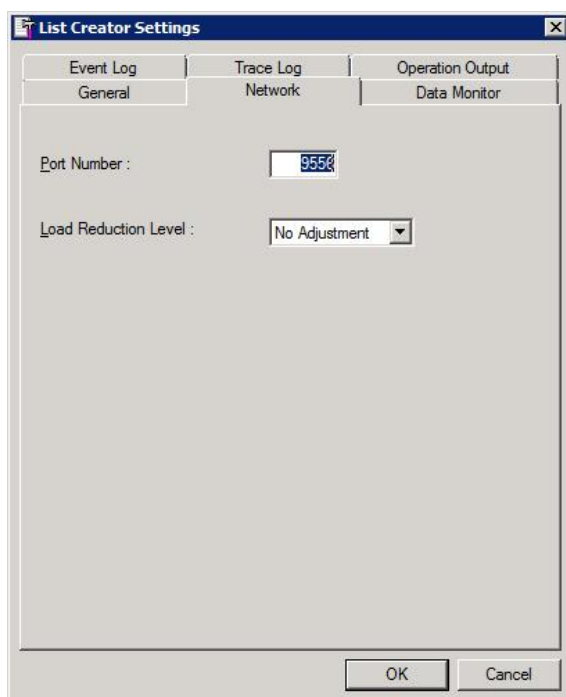
=> "2.1 Windows"

### 4.1.1. Network Tab

Set the information related to List Creator communications.


If remote form output is used to output forms, these settings are required.

 When connector link is used, the **Network** tab settings are not enabled.  
Caution



#### Port number

Specify the TCP/IP port number, in the 1 to 65535 range, to be used for List Creator communication. Specify the same TCP/IP port number for all computers to which remote form output connects. Usually the port number does not need to be changed.

 When operating in remote form output mode, the NetBIOS ports (1347, 138, and 139) and the SMB protocol port (445) are used in addition to the port numbers specified as explained above.  
Note

#### Load reduction level

To adjust the network traffic when the network transfers large amounts of data, such as data files, change the load reduction level.

List Creator transfers data in 8 KB units. Specify a load reduction level in order to adjust the interval between transfer of 8 KB of data and transfer of the next data.

Increasing the load reduction level slows data transfer but can reduce the load on the network.

No adjustment: No interval (data is transferred at the highest speed)

Level1 : 0.02 second interval

Level2 : 0.04 second interval

Level3 : 0.06 second interval

Level4 : 0.08 second interval

Level5 : 0.10 second interval

Level6 : 0.12 second interval

Level7 : 0.14 second interval

Level8 : 0.16 second interval

Level9 : 0.18 second interval

Level10 : 0.20 second interval

Usually this setting does not need to be changed. Adjust the setting to suit operations only if the network load is high and problems such as delays to other tasks arise.



Note

Usually, select **No adjustment**. It depends on the environment, but if 1 MB of data is transferred in a 10 Mbps LAN environment, transfer takes about 2.5 seconds if **No adjustment** is set, and takes around 10 times longer if Level 10 is set.

## 4.1.2. Remote Form Output User Settings

If the operations below are performed, set remote form output users before using remote form output.

If the circumstances below do not apply, remote form output user settings are not required.

- If remote form output is used, the form output server is Windows XP, and **Use simple file sharing (Recommended)** is set in the folder option settings
- If remote form output is implemented from a service process operating under the SYSTEM account
- If the firewall or router blocks 445/TCP port (Microsoft-ds (\*1))

\*1: This is the port number used for direct hosting SMB service communication, and is used for file and printer sharing, remote management, and similar.

Use prsetpasswd at the application server to set remote form output users.

### 4.1.2.1. password setting command (prsetpasswd)

This section explains the password setting command for remote form output user.

- prsetpasswd command



Note

- Only the user who has the Administrators authority can registration/delete remote form output user. Other user can only display remote form output user.
- Execute the password command from [Administrator : Command Prompt] when registration/deleting the remote form output user with Windows Server 2008.
- To start [Administrator : Command Prompt], it select [Run as administrator] from Right clicked [Command Prompt] icon in [Start] menu.

## ● Function

If remote form output is used, remote form output users can be setting.

It is also possible to display the current parameter.

Usually, user setting is not necessary.

When the following operation,

When you do the following operations, set the remote form output users by "prsetpasswd" command on application server before remote form outputting.

- When the form output server sets "Sharing a simple file is used (recommendation)" to the optional folder setting with a remote form is output at Windows XP.
- When you do remote form output from the service process that operates by the SYSTEM account.
- When you block 445/tcp port (microsoft-ds (\*1)) by the firewall and the router.

## ● Description format

The following shows the command description formats.

[ ] indicates that this can be omitted.

When you registration/change the user.

```
prsetpasswd -a
            -u user name
            [-p password]
```

When you delete the user.

```
prsetpasswd -x
            -u user name
```

When you display the registered user.

```
prsetpasswd -l
```

## ● Explanation

Explains the option.

When you registration/change the user.

### -a

Specify this option when the user registration or change user password.

### -u user name

Specify the username of registration/change user.

When you register the user, specify the user name registered on form output server.

The user name can use 48 characters or less including the Half-width spaces.

There is no case sensitivity so that is same user name.

### -p password

Specify the password of registration/change user.

The password can use 14 characters or less including the Half-width spaces.

If this option omitted, message is displayed to input of the password.



When -p option is specified, the password sentence is displayed as-is.

Caution

When you delete the user.

-x

Specify it when you delete the user.

-u user name

Specify the username of deleting user.

When you display the registered user.

-l

Specify it when you display the user's list.

The user's list is displayed in order of registration.

### ● Return value

Displays the return value.

Return value	Definition
0	Ends without error
Excluding 0	Ends with error

### ● Remark

- When the remote form output user is not set by this command when a remote form is output, it is necessary to register the same user as the application server in the form output server.
- This command is not possible to operate multiple users simultaneously.
- Register only one user for prsetpasswd command, when unites with one user account in form output server.
- Register only one user by the prsetpasswd command when you output a remote form by a common user name. In this case, when the user not registered outputs a remote form, it operates in the form output server by the user registered the first.
- Specify the -rmuserpasswd option by the prputprt command or the prassort command when keep effectively remote output user account.



## 4.2. UNIX

This section explains the environment settings for using remote form output.

List Creator environment settings are also required, in addition to the environment settings described in this section, when remote form output is used.

Refer to the following for details:

=> "2.2 UNIX" in "Chapter2 List Creator Environment Settings"

### 4.2.1. Setting a Work Directory and Network Environment

The work directory when remote form output is used and the load reduction level used to reduce network traffic can be set and displayed.

Use `prsetremenv` to specify the work directory and the network environment.



Note

The work directory and network environment set using this command do not take effect when connector link is used.

#### 4.2.1.1. `prsetremenv` command

##### ● Function

The work directory when a remote form is output and the load reduction level to reduce the network traffic can be set. And then, a current set value can be displayed.

It is necessary Reboot the system to change effectively in the setting.

##### ● Description format

The following shows the command description formats.

[ ] indicates that this can be omitted.

When you specify value.

```
prsetremenv [ -d work directory ]
             [ -c load reduction level]
```

When you display the current specified value.

```
prsetremenv -l
```

##### ● Explanation

Explains the option.

Setts the value.

##### -d work directory

Specify the work directory name or contain the work file directory.

Specify form file transferred to form output server or work directory name or directory name containing the work file within 512 bytes in the full path when remote form output.

When omitted, the work directory is not changed.



Caution

- Do not enter a "back slash (\)" at the end of a work directory name.
- Set the Read/Write permission under the work directory.  
When there is no Read/Write permission, cannot output the form.



Note

- The work directory after the installation is `"/var/opt/FJSVoast/remdir"`.
- When specify this option command is ended if work directory or overlay directory `"kol5"` has already existed.  
If this option is specified the command is ended after change settings when specified work directory or work directory containing the overlay directory is existed.
- When overlay storage directory (kol5) containing the specified form storage directory or form storage directory does not exist, the message to press whether to make the directory is displayed. The directory is made when responding by `"y"` for the message, and the setting is changed. It does not change in the setting when responding by `"n"`.

#### -c load reduction level

When a remote form is output, data is transmitted in 8Kbyte in List Creator. When the interval until the following data is transmitted after the data of 8Kbyte is transmitted is adjusted, this option is specified. The load to the network can be lightened though the data transfer slows by raising the load reduction level.

**0:**

Not Adjust (Interval none (Data is transmitted at the high speed))

**1:**

Level 1 (0.02 seconds)

**2:**

Level 2 (0.04 seconds)

**3:**

Level 3 (0.06 seconds)

**4:**

Level 4 (0.08 seconds)

**5:**

Level 5 (0.10 seconds)

**6:**

Level 6 (0.12 seconds)

**7:**

Level 7 (0.14 seconds)

**8:**

Level 8 (0.16 seconds)

**9:**

Level 9 (0.18 seconds)

**10:**

Level 10 (0.20 seconds)

When this is omitted, load reduction level is not changed.

Not change the parameter usually. Adjust it when the problem occurs because the load of the network is high.



- The load reduction level after the installation is "0 (Not Adjust)".

**Note** - Select "0 (Not Adjust)" usually.

When you display the current specified value.

-l

Specify it when you display the current setting "work directory, load reduction level".

### ● Return value

Displays the return value.

Return value	Definition
0	Ends without error
Excluding 0	Ends with error

## 4.2.2. Setting Users for Remote Form Output to Windows

If remote form output to Windows is used, remote form output users can be added, changed, deleted, and displayed.

Use `prsetpasswd` at the application server (UNIX) to set remote form output users.



**Caution**

If the form output server uses UNIX, remote form output users do not need to be set using `prsetpasswd`. However, users who perform remote form output at the application server must be registered at the form output server.

### Remote form output user

Users who perform operations at the form output server (Windows) when remote form output is implemented are called remote form output users.

If remote form output to Windows is implemented, the remote form output users must be added in advance at each application server that performs remote form output.

Refer to the following and add the remote form output users at the application servers:


#### **Operation by a single user**

If you want just one user to perform operations at the form output server, regardless of which users perform remote form output, use `prsetpasswd` to add just one user.

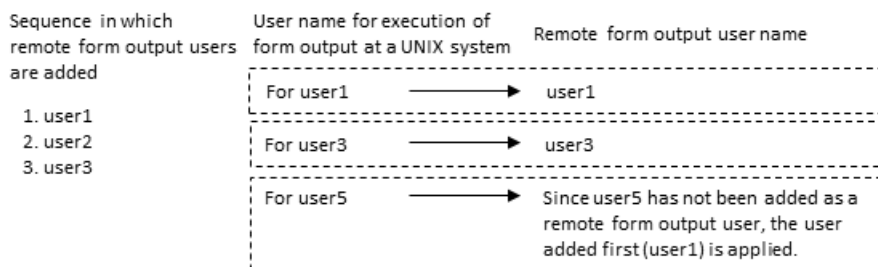
#### **Operation by multiple users**

If you want the users who perform operations at the form output server to be the same as the users who perform remote form output, use `prsetpasswd` to add all users who perform remote form output.

In this case, if a user who has not been added performs remote form output, operations at the form output server are performed by the user who was added first.

 **Caution** For a remote form output user name specified using prsetpasswd, define the same user name and password as a form output server (Windows) user name.

The example below shows the sequence in which remote form output users are added and the remote form output user names that are actually applied.




#### 4.2.2.1. prsetpasswd command

##### ● Function

This commands can registration/change/deletion/display the remote form output user when a remote form output to Windows.

It is necessary Reboot the system to change effectively in the setting.

 **Caution** When the form output server is running on UNIX, the remote form output user need not be set by this command. However, it is necessary to register the user who output a remote form on the application server into the form output server.

##### ● Description format

The following shows the command description formats.

When you registration/change the user.

```
prsetpasswd -a
            -u user name
            [ -p password]
```

When you delete the user.

```
prsetpasswd -x
            -u user name
```

When you display the registered user.

```
prsetpasswd -l
```

##### ● Explanation

Explains the option.

When you registration/change the user.

If execute the command, the message is displayed for request input the password.

##### -a

Specify this option when you register the user or you change password of registered user.

**-u user name**

Specify the user name that is registered/changed.

When the user is registered, the user name is form output server (Windows) is specified.

It can use within 47 characters for the user name in the alphanumeric character including the blank.


There is case sensitivity so that is different user name when two or more users operate the remote form output to Windows.

**-p password**

Specify the password of registration/change user.

The password can use 14 characters or less including the Half-width spaces.

If this option omitted, message is displayed to input of the password.

	When -p option is specified, the password sentence is displayed as-is.
Caution	

When you delete the registered user.

**-x**

When the registered user is deleted, specify this option.

**-u user name**

Specify the deleted user name.

When you display the registered user.

**-l**

When the list of the registered user is displayed, specify this option.

The user list is displayed in order of registration.

● **Return value**

Displays the return value.

Return value	Definition
0	Ends without error
Excluding 0	Ends with error

**4. 2. 3. Changing the Port Number**

Immediately after List Creator installation, "9556" is set as the port number used by the remote form output function. Follow the procedure below if you want to change the port number:

- 1) Log on to the computer.  
Log on to the computer as a system administrator.
- 2) Use a text editor to open the "/etc/services" file.
- 3) Search for the string "fjsvoast", and check that the row shown below is present.

To change the port number, change the "9556" value shown below.

fjsvoast 9556/tcp # List Creator
----------------------------------

If the row shown above is not present, add the above line to the file to set the port number.

- 4) Save the updated content (update the file), then close the text editor.
- 5) Restart the system.



Specify the same port number at the application server and `s` at the form output server.

Caution

## Chapter5

# Web Application Link Environment

---

This chapter explains the Web application link (when generating OWF files) environment settings.



Note

- Refer to the following for Web application link operation procedures and window details:  
=> ["Chapter13 Web Application Link Function"](#)
- Refer to ["Chapter9 Saving as PDF File"](#) in the online manual for the environment settings if PDF files are to be saved in Web-based local printing mode.

## **5.1. Web Server Environment Settings**

This section explains Web server environment settings.

### **5.1.1. MIME Type Settings**

The MIME type must be set at the Web server in order to use Web plugins.

Add the following MIME type to the Web server:

MIME type	Extension
application/x-owf	owf

Refer to the manual of the Web server you are using for information on how to add a MIME type to the Web server.

- Interstage HTTP Server :
  - Interstage Application Server online manual
  - Interstage Web Server online manual
- IIS 6.0 and later :

Start **Internet Services Manager** and right-click **Web Sites**. Select **Properties** to display the "Web Site Properties". Set the MIME type at **MIME Map** from the **HTTP Headers** tab.



**Note**

Different types of internet service managers might have different menu names, window strings, etc.

### **5.1.2. Web Server Access Log Settings**

If required, set a Web server access log.

Refer to the online manual or help of the Web server you are using for details related to access log settings.



## 5.2. Web Client Environment Settings

This section explains Web client environment settings.

### 5.2.1. Web Browser Environment Settings

The Internet Explorer environment must be set as the Web browser environment settings. The settings example shown here is for Internet Explorer 7.0.

#### Settings window display method

Start Internet Explorer, then select **Tools >> Internet Options** to display the settings window.

#### General settings

Click **Settings** from **Browsing history**, then on the displayed window select either of the following under "Check for newer versions of stored pages":

- Every time I visit the webpage
- Every time I start Internet Explorer

#### Security settings

Set any one of the following:

- From the Security tab on the settings window, select a zone and then set "Medium-high" as the "Security level for this zone".
- Click Custom level... button on the Security tab.  
At "ActiveX controls and plug-ins", select either "Enable", "Prompt", or "Administrator approved".
- For "Downloads", set "Enable".

### 5.2.2. Web Plugin Environment Settings

Web plugins must already be installed at the client computer.

This section explains how to install and uninstall Web plugins, and explains trace log environment settings.

Web plugins can be used with Internet Explorer.

#### ● Installing Web plugins

Follow the procedure below to install a Web plugin:

- 1) Use the following command to install a Web plugin:

```
listCreatorMedia\plugin\mf3gxpig.exe
```

- 2) If the client computer is an English environment, use the following command to install the Web plugin:

```
listCreatorMedia\plugin\english\mf3gxpig.exe
```

- 3) Follow the instructions displayed in the window to perform the install.



Caution

- Ensure that a user who has client computer Administrator rights installs the Web plugin at the client computer. Otherwise, some modules are not installed and the plugin might not operate correctly.  
The computer must be restarted after installation.
- The Web plugin cannot be installed if "OutputASSIST" or the Web plugin of ListCREATOR V10.0L30 or earlier is already installed at that computer.  
Uninstall "OutputASSIST" or the Web plugin of ListCREATOR V10.0L30 or earlier, and then install the Web plugin.
- If a Web browser is installed after installation of the Web plugin, install the Web plugin again as an overwrite.
- The install command sets the Web plugin install directory in the PATH environment variable but, if the PATH environment variable is long prior to this being set, for example, the install directory might not be set correctly. In this case, refer to the operating system manual and add the Web plugin install directory to the PATH variable. The default install destination for the Web plugin is "(systemDrive):\Program Files\Web\_Plugin".
- The directory below might not be deleted and might remain after installation. If so, delete the directory manually.
  - "pftXXXXtmp" under the directory specified in the TMP or TEMP environment variable (XXXX indicates any alphanumerics.)

## ● Uninstalling Web plugins

Follow the procedure below to uninstall a Web plugin:

- 1) Check that all Web browsers are closed.
- 2) From the **Control Panel**, double-click the "Add/Remove Programs" or "Program and feature" icon.
- 3) Select "OWF Web Plugin", then click "Change/Remove" or "Uninstall/Change" or "Uninstall".
- 4) Follow the instructions displayed in the window to perform the uninstall.



Caution

- Ensure that a user who has client computer Administrator rights performs the uninstall of a Web plugin installed at the client computer.
- Some files, directories, or similar, might not be deleted when the Web plugin is uninstalled if, for example, the Web browser is currently running. In this case, delete the following directories, files, and registries manually:
  - Delete the Web plugin install directory.  
The default install destination for the Web plugin is "(systemDrive):\Program Files\Web\_Plugin".
  - Delete the install folder "(%ProgramFiles%)\InstallShield Installation Information\{8AEDEC71-D28B-4C5C-B33B-4FC3F943A9E9}".  
Note that %ProgramFiles% indicates an environment variable. Usually it is the following folder:
    - (systemDrive):\Program Files
  - If Internet Explorer is being used, delete the registries.  
Start a registry editor (regedt32.exe or regedit.exe) and delete all the following

registry keys:

```
HKEY_CLASSES_ROOT\owd
HKEY_CLASSES_ROOT\owf
HKEY_CLASSES_ROOT\owf.File
HKEY_CLASSES_ROOT\MIME\Database\Content Type\application/x-oweb
HKEY_CLASSES_ROOT\MIME\Database\Content Type\application/x-owf
HKEY_CLASSES_ROOT\CLSID\{E628615A-EBC7-4646-8CA7-8F30D9C48D04}
HKEY_LOCAL_MACHINE\SOFTWARE\Fujitsu\ListCREATOR Web plugin
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Internet Explorer
    \Low Rights\ElevationPolicy
    \{24DD54A7-BC0E-4a0a-80A2-2F2A582157E3}
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion
    \App Paths\fgxplg.exe
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion
    \Uninstall\{8AEDEC71-D28B-4C5C-B33B-4FC3F943A9E9}
```

### 5.2.3. Trace Log Environment Settings

This section explains the environment settings for the Web plugin trace logs.

#### ● Starting the trace log environment settings window

Follow the procedure below to start the Web plugin trace log environment settings.

- 1) Use the following environment settings command to set the settings:

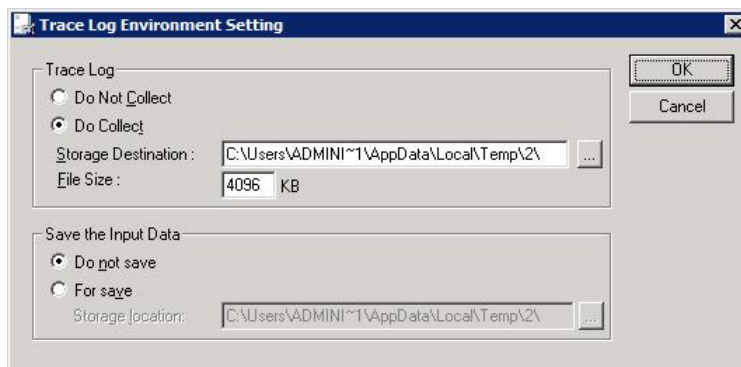
```
F3GXTRLG.exe
```

When the Web plugin is installed, the environment settings command is installed in the same location as the Web plugin.

The default install destination for the Web plugin is "C:\Program Files\Web\_Plugin".

#### ● Trace log environment settings window

For the user who started the environment settings command, set information related to collection of trace logs for investigation when errors occur and the storage of input data. If multiple users output forms, these environment settings must be set separately for each user.



## Trace Log

Specify whether or not to collect trace logs for investigation when errors occur. Trace logs are intended to be checked by Fujitsu technical support when problems occur and cannot be checked by the user.

**Do Not Collect**

Select if trace logs are not to be collected.

**Do Collect**

Select if trace logs are to be collected.


**Storage Destination**

Specify up to 259 bytes as the full path of the folder that stores trace log files. A local disk must be specified.

The directory name can be browsed and then specified by clicking the button to the right of the field.

**File size**

Specify a value in the 128 to 1024 KB range as the trace log file size.

	At the trace log file storage destination, attach read and write permissions for users who output forms. Trace logs cannot be collected if there is no read and write permissions.
<b>Caution</b>	

## Save the Input Data

Specify whether or not input data is stored when the Web client outputs forms.

The input data storage function stores the input data specified when forms are output.

If errors related to input data occur, they can be resolved quickly from the saved input data.

The file name and other stored input data information is output in a message box.

**Do not save**

Select if input data is not to be stored.


**For save**

Select if input data is to be stored.

**Storage location**

Specify up to 259 bytes as the full path of the folder that stores input data. A local disk must be specified.

The directory name can be browsed and then specified by clicking the button to the right of the field.

	During application development, storage of input data is recommended to enable quick resolution of problems.
<b>Caution</b>	However, take the following notes into account and check that there are no security issues when deciding whether or not to store input data. It is essential that storage issues are investigated thoroughly during operation.
	- If save input data is specified, the data specified at the user application is saved. Therefore, take care if the saved data includes sensitive information.
	In addition, consider the security of the computer that saves the input data. Implement

measures such as restricting login users and directory access.

- Ensure the user outputting the forms is assigned read and write permissions for the directory to which input data will be backed up. Input data cannot be backed up if the user does not have read and write permissions.
- Specify a directory at a local disk as the input data storage destination. Do not specify the following as the storage destination:
  - Network drives
  - UNC specification (`\\computerName\sharedName\directoryName`)
  - Removable disks
- When COBOL application link is used, input data cannot be stored. This setting is disabled.
- Saved input data is not deleted automatically. When saved input data is no longer needed, delete it manually.
- A warning message box is output if the free space at the input data storage destination is 256 megabytes or less.  
In this case, input data is not stored. Delete unnecessary files to ensure enough space, or change the storage directory.
- If input data does not need to be saved, change the settings so that input data is not saved.
- Saving input data causes increased load on the computer and might affect performance during form output.



Note

The default value for the trace log file storage destination and the input data storage destination is the TEMP directory. If a TEMP directory has not been set, the default is the Windows install directory.

Example: Windows Vista

C:\WINDOWS

The TEMP directory is the directory set in the Windows TMP or TEMP environment variable. The procedure below can be used to check the directory name set in the TMP or TEMP environment variable.

Note that the example shown here is for Windows Vista.

- 1) Select **Start >> All Programs >> Accessories >> Command Prompt**.
- 2) Enter the following command:

```
>SET
```

- 3) A list of Windows environment variables is displayed. Check the directory that is set for the TMP or TEMP environment variable.

Note that if both the TMP and TEMP environment variables are specified, the TMP environment variable takes priority.

```
TMP=C:\TEMP
TEMP=C:\TEMP
```

## *Chapter6*

# *Preparing and Deploying Form Resources*

---

This chapter explains the preparation and deployment of the form resources used when List Creator outputs forms and gives details related to information files.

## 6.1. Resources to be Prepared

In order to output forms, the resources required for form output must be prepared.

The resources used when List Creator outputs forms include the types in the table below.

Resources to be prepared

Form resources		Preparation requirement	Refer to
User applications		Mandatory (preparation is essential)	Online Manual: <i>Application Design</i>
Form definition information(*1)		Mandatory (preparation is essential)	Online manual: <i>Advanced Form Design</i> or <i>Designer Help guide</i>
Data files		Required only if data files are used as input data	
Information files	Substitute font information file	Required only if these files are used	=> "6.2 Information Files"
	Barcode correction information file		
	Form output information file		
	PDF document information file		
	PDF mail distribution information file		
	Excel document information file		
	ECM information file		
Other	Media data files	Only if ECM link is used	-
	PDF file attachment files		
	Files attached to mail when PDF mail is distributed		
	Mail template files used when PDF mail is distributed		
	Combination-form definition files	Only if combination-form output is used	Online manual: <i>Advanced Form Design</i>

\*1: Form definition information consists of the following files:

- *formName.pmd*
- *formName.ovd* (only if overlay is used)
- *formName.psf*
- *formName.bip*

The resources to be prepared for List Creator vary depending on factors such as the form definition information, functions, and output methods that are used. Preparation is not required for functions and files that are not used.

The deployment location of prepared resources varies in accordance with the operation circumstances.



Note

The handling of character encoding varies in accordance with the operating system running at the deployment destination, the functions in use, and the interface type. Therefore, care must be taken with character encoding when preparing and deploying form resources.

## 6.2. Information Files

This section explains the “information files” that can be used when the form output interface is used to output forms.

### 6.2.1. What are Information Files?

Information files contain the information that defines how forms are output when forms designed using List Creator Designer are output using the List Creator form output interface. This information defines the attribute (property) information at output time, operations at output time, etc.

Information is defined in the information files using a fixed method. Created information files are saved as text files. The saved information files are referenced, if required, when a form is output and the form is output in accordance with those definitions.

If the form output interface is used, detailed information concerning form output can be specified using the command options and classes (keys, methods, etc.) provided by the interface.

Accordingly, specify information files in the following circumstances:

- If multiple items of information are to be specified together in one specification
- If information that cannot be specified by **Form Work Information Properties** or the interface is to be specified

Specification of information files is not mandatory. Create these files only if required.

#### ● Information file types

The table below shows the types of information file that can be used.

Information files that can be used	Explanation
Substitute font information file	At form output, if a different font is substituted for the font defined in the form definition information, the substitute font information file specifies that substitution information.
Barcode correction information file	When barcodes are output in forms, the barcode correction information file specifies information for correcting the barcode output results to suit the output destination environment.
Form output information file	The form output information file specifies various types of information related to form output.
PDF document information file	When a form is saved as a PDF file, the PDF document information file specifies various information related to saving the PDF file. However, in the PDF document information file specified at the form output interface, describe only the output-related information that cannot be specified in <b>Form Work Information Properties</b> and in the interface.
PDF mail distribution information file	When a PDF file is distributed by mail, the PDF mail distribution information file specifies information related to mail distribution. This file does not describe all sections (and keywords) specified



Information files that can be used	Explanation
	in the PDF document information file. It only describes the <b>MLF_Mail</b> section and the <b>MLF_Message</b> section (keywords).
Excel document information file	When a form is output as an Excel file, the Excel document information file specifies information related to the Excel files being output. However, in the Excel document information file specified at the form output interface, describe only the output-related information that cannot be specified in <b>Form Work Information Properties</b> and in the interface.
ECM information file	The ECM information file specifies information related to the ECM link function, such as the file names and character encoding of ECM link files.

### ● Information file support range

The List Creator product that is being used and the output method determine which information files can be used, and which cannot.

The table below shows the information file support range.

Information file type	Output method					
	Print (*1)	e-rec ord	FAX transmi ssion	Save as PDF file	OWF file generati on	Excel file output
Substitute font information file	Y	N	N	Y	Y	Y
Barcode correction information file	Y	N	N	Y	Y (*2)	Y
Form output information file	Y	N	N	Y	Y	Y
PDF document information file	N	N	N	Y	N	N
PDF mail distribution information file	N	N	N	Y	N	N
Excel document information file	N	N	N	N	N	Y
ECM information file	N	N	N	Y	N	Y

Y: Can be specified, if required

N: Cannot be specified

\*1: Depending on the printer that is being used and the printer output method, some substitute fonts cannot be used when printing at a form output server using UNIX. Refer to the following for details:

=> "8.2 Print (UNIX)"

\*2: Enabled only when OWF files are being printed

The information file creation methods, deployment, character encoding, and specification methods are explained below.

### ● File names of information files

Any file names and extensions can be used for information files.

In the following circumstances, the file names specified for information files must not be the same as the file names of data files and form resources:

- When remote form output is used
- When connector link is used
- When OWF files are generated

If information files are used in English environment (English locale), use single-byte alphanumerics and symbols (ASCII) to create the file names of information files and the storage destination directory names.

### 6.2.1.1. Creation and Deployment of Information Files

Use a text editor to create information files.

Refer to the following for a description of the various files:

=> "6.2.2 PDF Document Information File"

=> "6.2.3 PDF Mail Distribution Information File"

=> "6.2.4 Excel Document Information File"

=> "6.2.5 ECM Information File"

Deploy the created information files to either the application server or the form output server, in accordance with the functions and operations being used.



Caution

Depending on the file creation tool (text editor) that is used, a BOM (Byte Order Mark) might be attached at the start of the created information file if the character encoding of the file is UNICODE (UTF8). If so, the first row of the information file might not be recognized correctly and cause an error or an unintended output result.

### 6.2.1.2. Character Encoding of Information Files

Use the character encoding below to create information files.

#### ● When deployed to an application server

##### Windows

Use single-byte alphanumerics and symbols (ASCII) to describe information files.

##### UNIX

Use single-byte alphanumerics and symbols (ASCII) to describe information files.



Caution

- When a Java interface is used to output forms in Web-based local printing mode, at only the FormsFile class, UNICODE (UTF16) can be specified as the input data character encoding.

However, even if the input data is described using UNICODE (UTF16), ensure that the information files specified at the Java interface are described using the character encoding specified at either of the following:

- setFileType method of the FormsFile class
- LANG environment variable and OA\_EUCTYPE environment variable

- Even if the input data is in UNICODE (UTF16), ensure that the characters use the encoding specified in the LANG environment variable and the OA\_EUCTYPE environment variable.

#### ● When deployed to a form output server

When deployed to a form output server, use single-byte alphanumerics and symbols (ASCII) to describe information files.



Caution

Use single-byte alphanumerics and symbols (ASCII) to describe information files used in an English environment (English locale).

## 6.2.2. PDF Document Information File

A PDF document information file is a text file that defines the information, such as PDF file specifications and operations, used when the form output interface is used to convert a form designed using List Creator Designer to a PDF file and save it to the specified storage destination.

However, the following restrictions apply to PDF document information files specified at the form output interface:

- Specify information related to PDF mail distribution in the PDF mail distribution information file.

Refer to the following for details:

=> ["6.2.3 PDF Mail Distribution Information File"](#)

- In the PDF document information file, specify only information that cannot be specified from the File tab of the Form Work Information Properties window of List Creator Designer or at the form output interface.

Refer to the following for the PDF document information file creation method, deployment, character encoding, and specification method:

=> ["6.2.1 What are Information Files?"](#)

Refer to ["Chapter9 Saving as PDF File"](#) for information on the synopsis, keywords, and values for PDF document information files.

## 6.2.3. PDF Mail Distribution Information File

A PDF mail distribution information file is used when the form output interface is used to convert form definition information designed using List Creator Designer to a PDF file and distribute it as mail.

A PDF mail distribution information file describes only the information related to PDF file mail distribution of PDF document information files, the **MLF\_Mail** section and the **MLF\_Message** section.

Refer to the following for the PDF mail distribution information file creation method, deployment, character encoding, and specification method:

=> ["6.2.1 What are Information Files?"](#)

Refer to the **MLF\_Mail** section and the **MLF\_Message** section from ["Chapter9 Saving as PDF File"](#) for information on the synopsis, keywords, and values for PDF mail distribution information files.

## 6.2.4. Excel Document Information File

An Excel document information file is a text file that defines the information, such as the Excel file specifications and operations, used when the form output interface is used to convert a form designed using List Creator Designer to an Excel file and save it to the specified storage destination.

However, the following restriction applies to Excel document information files specified at the form output interface:

- In the Excel document information file, specify only information that cannot be specified from the **File (Excel)** tab of the **Form Work Information Properties** window of List Creator Designer or at the form output interface.

Refer to the following for the Excel document information file creation method, deployment, character encoding, and specification method:

=> ["6.2.1 What are Information Files?"](#)

Refer to the ["Chapter10 Excel File Output"](#) for information on the synopsis, keywords, and values for Excel document information files.

### **6.2.5. ECM Information File**

An ECM information file specifies information related to the ECM link function, such as the file names and character encoding of ECM link files.

Refer to the following for the ECM information file creation method, deployment, character encoding, and specification method:

=> ["6.2.1 What are Information Files?"](#)

## 6.3. Specifying Form Resources and Form Output Destinations

For Windows, UNC specification (`\\computerName\sharedName\directoryName`) can be used for form resource reference destinations and form output destinations.

For UNIX, only local disks and remotely mounted directories can be specified.

### 6.3.1. Commands and Interfaces Specifiable using UNC Specification

The following commands and interfaces can be specified using UNC specification:

- Commands  
(`prprint`, `prputprt` (references from application server), `prputex`, `prview`, and `prtest`)
- Java interface
- .NET interface
- Custom control
- COBOL interface

### 6.3.2. Notes on Specifying Files and File Storage Destinations

The table below explains form resource storage destinations and form output destinations.

Operation type and functions		Storage destinations (output destinations) that can be specified		Storage destinations (output destinations) that cannot be specified	
		Application server	Form output server	Application server	Form output server
Stand-alone mode		<ul style="list-style-type: none"> <li>- Local disk</li> <li>- UNC specification</li> <li>- Directories mounted remotely</li> </ul>		<ul style="list-style-type: none"> <li>- Network drives</li> <li>- Removable disks</li> </ul>	
Distributed output mode	Remote form output mode	<ul style="list-style-type: none"> <li>- Local disk</li> <li>- UNC specification</li> <li>- Directories mounted remotely</li> </ul>	<ul style="list-style-type: none"> <li>- Local disk</li> <li>- Directories mounted remotely</li> </ul>	<ul style="list-style-type: none"> <li>- Network drives</li> <li>- Removable disks</li> </ul>	<ul style="list-style-type: none"> <li>- UNC specification</li> <li>- Network drives</li> <li>- Removable disks</li> </ul>
	Connect or link mode (*1) (*2)	<ul style="list-style-type: none"> <li>- Local disk</li> <li>- UNC specification</li> <li>- Directories mounted remotely</li> </ul>		<ul style="list-style-type: none"> <li>- Network drives</li> <li>- Removable disks</li> </ul>	
Web-based local printing mode		Same as for the stand-alone mode and distributed output mode. However, if UNC specification is used for form resource reference destinations and form output destinations via a Web server, access rights for the files and directories at the specified destination must be set at the Web server for the user who executes form output.			
Arrival monitoring		<ul style="list-style-type: none"> <li>- Local disk</li> </ul>		<ul style="list-style-type: none"> <li>- UNC specification</li> <li>- Network drives</li> <li>- Directories mounted remotely</li> <li>- Removable disks</li> </ul>	

- \*1: If form resources are deployed to the application server for forms output, form resources are sent from the application server to the form output server. If the operating systems at the application server and form output server are different, differences in specifiable path lengths and similar must be taken into account.

Refer to the following for the specifiable file path lengths when transferring files:

=> ["11.1 Points to Note when Building the Environment and During Operation"](#)

- \*2: Refer to the following for the environment settings when UNC specification is used for connector link form resource reference destinations and form output destinations:

=> ["3.4 Settings for Using UNC Specification for Form Resource Reference Destinations and Form Output Destinations"](#)

# **Part3 Outputting Forms**

This document explains form output using List Creator.

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## *Chapter7*

# *Outputting Forms with List Creator*

---

This chapter explains shared prerequisites and points to note for outputting forms with List Creator.



## 7.1. Output Precedence

List Creator enables you to output forms in a number of different ways, and also enables you to specify different information for each output method.

This section describes the output specification and output methods.

### ● When multiple methods of output are specified

The following order of precedence is followed when multiple methods of output are specified for one output instance:

- 1) Print
- 2) PDF file
- 3) OWF file
- 4) Excel file

For example, when you have specified output to a printer and also to PDF at the same time, the form is first output to the printer and then saved to the PDF file, according to the above precedence.

However, if an error occurs in one of the above outputs, the outputs below are not performed.

### ● Specifying with form work information and user applications

Form settings in List Creator can be performed using commands and applications when forms are output.

Some settings for form output can also be specified in form work information when designing the forms.

In this case, the precedence of the settings is as follows:

- 1) Specify when outputting the form (Specify with commands or user applications)
- 2) Specify in the **Form Output Methods** window

### ● Specifying with environment settings and user applications

It is also possible to set the form storage directory and other environment type information in the environment settings.

In this case, the precedence of the settings is as follows:

- 1) Specify when outputting the form (Specify with commands or user applications)
- 2) Specify in the environment settings window, environment settings command, and environment variables

## 7.2. Outputting from an Environment Different to the Design Environment

This section explains prerequisites and points to note when outputting forms from an environment that is different from that used for the design.

### 7.2.1. To Output Forms from an Operating System Different to the Design Environment System

If the operating environment used for design is different to that used for output (including previews), there may be differences in the alignment and pitch of the text.

You can use one of the following methods in the List Creator Designer to design forms that do not depend on the operating system by using Japanese fixed spacing fonts such as MS Mincho and MS Gothic.

– Specify Font Pitch

- With static fields, numeric fields, text fields, date fields, and time fields

Select the **Pitch** checkbox from the **Font** tab of the **Field Properties** window in the **Form Style Descriptor** window, and specify a size so the Japanese pitch is double the English pitch. For numeric fields and text fields, after changing the pitch, click **Recalculate** from the **Properties** tab to calculate the field length.

- With block static fields

Select the **Pitch** checkbox from the **Font** tab of the **Field Properties** window in the **Form Style Descriptor** window, and specify a size so the Japanese pitch is double the English pitch. After changing the pitch, reset the height and width in **Size** from the **Properties** tab.

- With overlay text

In the **Form Style Descriptor** window, specify **Font Pitch** from the **Font** tab of the **Field Properties** window.

– Specify text alignment

- With static fields, numeric fields, text fields, date fields, or time fields

In **Text Alignment** from the **Text Align** tab of the **Field Properties** window in the **Form Style Descriptor** window, specify either **Justify** or **Compress to Fit**.

- With overlay text

In **Text Alignment** from the **Text Align** tab of the **Overlay Text Properties** window in the **Form Style Descriptor** window, specify either **Justify** or **Adjust to Fit**.

### 7.2.2. Outputting Forms from an English Environment (English Locale)


List Creator can output forms in English environments (English locales) as well as in Japanese environments.

● **English environments (English locales)**

English environments (English locales) refer to the following environments:

- Windows

An environment using the English version of Windows and with the system locale (\*1) set to English.


 <b>Caution</b>	<ul style="list-style-type: none"> <li>- List Creator depends on the system locale, so do not change the system locale after the product has been installed.</li> <li>- In an English environment (English locale), List Creator will use English for its user interface even if the Windows display language (UI language) (*2) is set to Japanese.</li> </ul>
---	---

\*1: The "system locale" refers to the following language setting in the Windows **Control Panel** >> **Region and Language** settings:

**Language for non-Unicode programs**


\*2: The display language (UI language) refers to the following language setting in the Windows **Control Panel** >> **Region and Language** >> **Keyboards and Languages** settings:

**Display Language**

 <b>Caution</b>	<p>For Windows XP and Windows Server 2003, normally, the settings cannot be changed. The settings can only be changed in environments where Multilingual User Interface (MUI) is used.</p>
---	--

- UNIX

This is an environment where the LANG environment variable in the application is set to "en\_US.UTF-8".

 <b>Note</b>	<ul style="list-style-type: none"> <li>- For Solaris, the North American locale (including "en_US.UTF-8") must be installed in order to set "en_US.UTF-8" in the LANG environment variable.</li> <li>- The following command can be used to check whether a locale has been installed:             <ul style="list-style-type: none"> <li>• For Solaris 9 (9/04 Release or later) and Solaris 10 localeadm -lc</li> <li>• For Solaris 9 (earlier than 9/04 Release), Solaris 11, and Linux for Intel64 locale -a</li> </ul> </li> </ul>
--	---

● **Operations in an English environment (English locale)**

"Operations in an English environment (English locale)" refers to the following operations:

- When output in an English environment (English locale).
- When distributed output is used and either the application server or the form output server has an English environment (English locale).
- When Web application link is used and either the server or client has an English environment (English locale).

**7.2.3. Points to Note when Operating in an English Environment (English Locale)**

This section describes some points to note when operating in an English environment (English locale).

● **Points to note on file names for form resources**

- Specify the names of forms in form definition information using half-width alphanumerics and symbols (ASCII).
- Specify the file names of form resources (such as input data, media data, and information files, for example) and the storage directories using half-width alphanumerics and symbols (ASCII).
- Specify the names of output files (for PDF and Excel for example) and the output directories using half-width alphanumerics and symbols (ASCII).

● **Points to note when designing form definition information**

- Use only half-width alphanumerics (A to Z, a to z, and 0 to 9), half-width hyphens, and half-width underscores for field names.
- Use only half-width alphanumerics (A to Z, a to z, and 0 to 9), half-width hyphens, half-width periods, and half-width underscores for the data route names and tag names when the format of the input data is XML.
- The strings that can be specified for the attributes shown in the following table depend on what you have specified for Use Unicode from the **Form Descriptor** tab in the **Form Properties** window.
  - When **Use Unicode** is not checked  
You can specify half-width alphanumerics and symbols (ASCII).
  - When **Use Unicode** is checked  
You can specify Unicode characters.

Location			Attribute
<b>Field Properties window</b>	<b>Numeric Field</b>	<b>Formatting</b> tab (for numbers)	<b>Minus Sign</b>
		<b>Formatting</b> tab (for currency)	<b>Currency symbol</b>
		<b>Formatting</b> tab (for dates)	<b>String</b>
		<b>Dittoed Output</b> tab	<b>Ditto String (*1)</b>
	- <b>Text Field</b> - <b>Block Text Field</b>	<b>Dittoed Output</b> tab	<b>Ditto String</b>
	- <b>Static Field</b> - <b>Block Static Field</b> - <b>Date Field</b> - <b>Time Field</b>	<b>Properties</b> tab	<b>String</b>
	- <b>Radio Button</b> - <b>Check Box</b>	<b>Properties</b> tab	<b>Check Box</b>

\*1: With multipart table formats and free frame formats, underscores are output when you specify Unicode unique characters or surrogate pair characters.

- Specify the following field attributes using half-width alphanumerics and symbols (ASCII):

Location		Attribute
<b>Form Properties window</b>	<b>Form Descriptor</b> tab	<b>Paper Name</b>

Location		Attribute
Field Properties window	- Overlay Text - Block Overlay Text	Properties tab String
	- Numeric Field - Text Field - Block Text Field	Conditional Formatting tab Conditional Expression
	Radio Button	Radio Button tab Value for Selected State Value for Unselected State
	Check Box	Check Box tab Value for Selected State Value for Unselected State
Data Definitions window	- Data Definitions tab - Data Definitions (Report Header) tab - Extended tab	Paragraphs, String
Form Output Methods window	All tabs	All attributes (*1)

\*1: By default, the strings specified in the **File** tab when saving PDF files are in Japanese. Change them to suit the operating environment.

- Messages displayed when restricting viewing by URI
- Strings for mask display when viewing is restricted

- Do not select **Forbid certain characters from being line wrapped** from the **Line Wrapping** tab in the **Form Properties** window.

If you want to specify hyphenation behavior for block text fields, select **Use Unicode** in the **Form Properties** window, then select **Forbid certain characters from being line wrapped** from the **Line Wrapping** tab.

- Specify font names that do not include Japanese as the fonts for fields and overlay text (MS UI Gothic, for example).

For example, if you want to output fields in MS Mincho, define using MS UI Gothic, then specify MS Mincho as the replacement font for MS UI Gothic.

Specify replacement fonts from the **Print** tab of the **Form Output Methods** window or in the sub-statute font information file when outputting the form.

### ● Points to note regarding the combination-form names

- Specify combination-form names using half-width alphanumerics and symbols (ASCII).

### ● Points to note regarding input data

- Specify Unicode as the character code for input data.

### ● Points to note regarding information files

- Specify information files using half-width alphanumerics and symbols (ASCII).

### ● Points to note when outputting forms

- Specify the string data specified in the options and properties of the form output interface using half-width alphanumerics and symbols (ASCII).

## 7.3. When Data Exceeds the Field Length

### 7.3.1. Behavior when Data Exceeds the Field Length

- An invalid data error occurs if you specify input data for a numeric field that exceeds the range for characters and numbers as shown below.

Maximum 18 digits
Symbols + Integer + Decimals
Maximum 20 characters

- The following are not counted as a character or a digit:
  - When "0" appears at the front of the integer in the input data for a numeric field.
  - When "0" appears at the end of the decimal in the input data for a numeric field.
  - Half-width spaces at the end of input data for fields other than numeric fields.
- If the following is specified so that multiple methods are used for form output, the number of errors notified equals the number of errors multiplied by the number of output methods specified:
  - Windows  
Specify errors to be notified as **Warning** in the **Operation Output** tab in the **List Creator settings** window.
  - UNIX  
Specify errors to be notified as **Warning** using the `-s` option with the `prsetdigitovermsg` command or with the `prsetterritovermsg` command.
- When the following is specified and the results of the HEADSTR and TAILSTR operations already exceed the field length, the number of errors will be counted as two:
  - For Windows, specify errors to be notified as **Warning** in the **Operation Output** tab in the **List Creator settings** window.
  - For UNIX, specify errors to be notified as **Warning** using the `-s` option with the `prsetdigitovermsg` command
- When the format of the input data is XML, the length of the data displayed in the message may not necessarily match the length of the data in the XML.
- When barcode data with the following criteria exceeds the field length, the field length displayed in the message will be the field length minus 2:
  - When specified to use BASE64 encoded data for input data to Code 128/EAN-128 barcode fields when outputting forms.
  - When **Alternative text of Control Code** is specified for Code 128, EAN-128, QR Code (model 1), QR Code (model 2), QR Code (MicroQR), PDF417, or MaxiCode barcode fields.

### 7.3.2. Behavior when Data Exceeds the Field Length

- If **Normal** is specified for the text alignment for numeric fields, text is placed with leading spaces included, irrespective of what is specified for the edit format.  
If you have specified that a message be output when data exceeds the field length, the message is as follows:

Example: The length of the numeric field is "5" and the data "10" is output when the edit format is "ZZZZ9"

- **Message is output**

- **Message is not output**

The box represents the field length and the underscore represents spaces

- If the following is specified so that multiple methods are used for form output, the number of errors notified equals the number of errors multiplied by the number of output methods specified:

- Windows

Specify errors to be notified as **Warning** in the **Operation Output** tab in the **List Creator settings** window.

- UNIX

Specify errors to be notified as **Warning** using the `-s` option with the `prsetterritovermsg` command.

# *Chapter8      Print*

---

This section describes the functionality supported by the List Creator printing function and some points to note.



## **8.1. Print (Windows)**

This section describes the functionality supported when printing in a Windows environment, and some points to note when using VSP/VS/PS5000 series printers.

### **8.1.1. Functionality Supported in Form Style Information/Form Work Information**

When forms are output in a Windows environment, there are no restrictions on which types of printers can be used. Any of the printers defined in Windows can be specified.

You can use all of the functionality available in both the form style information and the form work information when printing in a Windows environment.

You cannot use the following functionality when outputting on a Windows(x64) environment:

- Form format definition information
- OLE2 objects cannot be used as media data.

However, some features and notes presented here are not applicable with some printing devices. Check the functionality supported by your printer before use.

## 8.2. Print (UNIX)

You can specify how to output to a printer for printing when using UNIX.

Also note that the functionality supported in form style information and form work information depends on the type of output to the printer.

This section describes the types of output to printers that can be specified with List Creator, and the functionality supported for each of the output types and the points to note for each type.

### 8.2.1. Deciding How to Output to a Printer

You can specify the following methods when outputting to a printer when using UNIX:

- When the form output server is a Linux  
PostScript output

Specify how to output to the printer in the form output interface. Refer to the Application Design online manual for details.

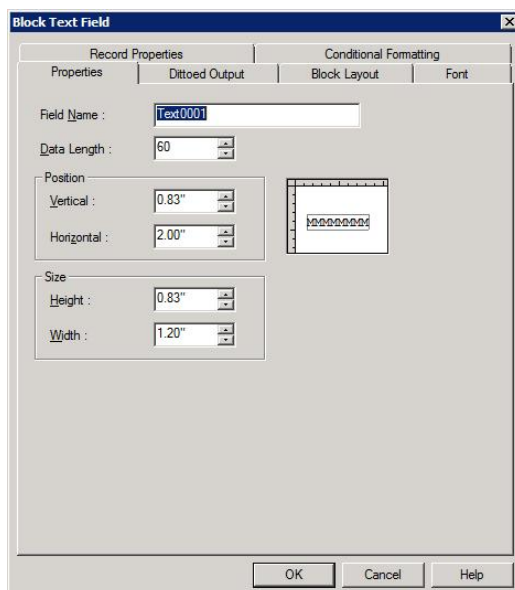
### 8.2.2. Points to Note for Printing when using UNIX

#### ● Defining field length

- If the input data is EUC and half-width kana is used, specify a length that is two times longer than the actual number of characters to be output for the field length. Also, if the input data is Unicode, make the field length three times the maximum number of characters for the data when the data is created using Unicode (UTF8). When there is a possibility of surrogate pairs being output, make the field length four times longer than maximum number of characters for the data.

If the field length is too short, strings may be cut off when output.

Field length is set in the **Properties** window displayed when you select the field to be changed in the **Form Style Descriptor** window, then select **Format >> Properties**.



### ● Combination-form output

- When outputting combination-forms, only the overlay in the form definition information defined first in the combination-form definitions is output (overlays defined after the first in the form definition information are not output).

- Do not use dot impact type printers wherever possible as they can cause printing problems such as reverse line feeds, and forms not being printed.

If you decide to use a dot impact type printer, develop your form definition information using combinations that eliminate reverse line feeds (ensuring the header body and footer are output in order from top to bottom, for example).

### ● Spool size

- List Creator can spool up to 4,294,967,295 pages.

However, even when the above page count is not reached, when the maximum size for spools shown below is reached, only that page count can be spooled.

- When the form output server is a Linux : 4GB

## *Chapter9      Saving as PDF File*

---

## 9.1. PDF Conversion Function Procedure

This chapter explains the configuration and the operation of the PDF conversion function.

### 9.1.1. Basic Operating Styles

#### 9.1.1.1. Output PDF Files Using List Creator

List Creator can be used on its own to create PDF files by using the following methods:

- Outputting PDF files
- Distributing PDF by email

These are explained in more detail below.

#### 9.1.1.1.1. Outputting PDF files

The List Creator form output interface can be used for PDF conversion by using the following methods:

- Specify output with commands or user applications
- Specify with the List Creator Designer when designing forms

#### ● Specifying output with commands or user applications

- For the command interface (prprint/prprintx)

Execute the following command option:

- Specify "file" in the -atdirect or -atmethod option.
- Specify the -keeppdf (PDF file name) option.

- For a Java interface

Specify the following parameter in the SetProperty method of the PrintProperties class:

- Specify "PDF" for the value of the ID\_DIRECTMETHOD or ID\_OUTPUTMODE.
- Specify the PDF file name in the ID\_KEEPPDF key.

- For a .NET interface

Specify the following properties in the PrintProperties class:

- Specify "OUTPUTMODE\_PDF" for the value of the DirectMethod property or OutputMode property.
- Specify the PDF file name to be generated in the KeepPdf property.

- For custom control

Specify the following properties in the PrctrlEx Control custom control:

- Specify "TRUE" in DirectMethod or OutputMode.
- Specify "TRUE" in the OutputFile property.
- Specify the PDF file name in KeepPdf.




Note

Refer to the Application Design online manual for information on commands and specification in user applications.

● Specify with the List Creator Designer when designing forms

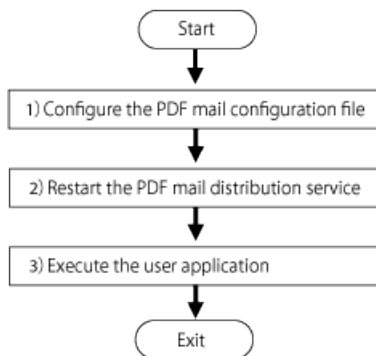
- 1) Select the form definition information to be output in the **Form Descriptor List** of the List Creator Designer, then select **File**, and then **Properties**.  
The **Form Output Methods** window will be displayed.
- 2) Select the File tab and select the **Save as PDF file** checkbox.
- 3) Specify the storage destination file name.

 Refer to the Advanced Form Design online manual for information on specification when designing forms.  
Note

9.1.1.1.2. Distributing PDF by email

PDF files that have been output using the PDF conversion function can be sent as email attachments. This is called PDF mail distribution.

The basic procedures for PDF mail distribution are shown below.



**Diagram9.2** Basic procedures for PDF mail distribution

- 1) **Configure** the PDF mail configuration file.
  - Edit the PDF mail environment settings file to specify the SMTP server address and the address of the sender.
  - The PDF mail environment settings file is a file for defining the environment related to sending email. Edit the file with a text editor.
  - The PDF mail configuration file is stored in one of the following locations:  
 Windows form output server  
`installDir\swmailenv.ini`  
 Linux for Intel64 form output server  
`/etc/opt/FJSVedoc/swmailenv.dat`
  - Set the following items:
    - SMTP server address  
 In the [MLF\_SMTPServer-default] section; Specify MLF\_SMTPServerAddress (setting field name).
    - Sender address  
 In the [MLF\_Default] section; Specify MLF\_EnvelopeFromAddress (setting field name).

For example: swmailenv.ini (swmailenv.dat if using a Linux for Intel64 form output server)

```

.....
[MLF_Default]
.....
    
```

```
MLF_EnvelopeFromAddress=LCowner@xxx.yyy.zzz.com
.....
[MLF_SMTPServer-default]
MLF_SMTPServerAddress=LCserver@xxx.yyy.zzz.com
.....
```

- Refer to the following for information on other settings in the PDF mail environment settings file:
  - => "9.1.2.9 List of PDF Mail Configuration File Keywords"
  - => "9.1.2.6 Setting the PDF Mail Distribution Information Files and PDF Mail Configuration Files"
  - => "9.1.2.7 PDF Mail Distribution Information File/PDF Mail Configuration File Examples"
  - => "9.1.2.10 PDF Mail Distribution Information File/PDF Mail Configuration File Examples"

2) Restart the PDF mail distribution service.

Restart the PDF mail distribution service to reflect the changes made in the PDF mail environment settings file.

Restart the PDF mail distribution service with the following procedure:

- Windows form output server
  - Start the "ListCREATOR SendMaild Service".
  - 1) Log in using Administrator rights, and select **Control Panel >> Administrative Tools >> Services**.
  - The window showing the list of services will be displayed.
  - 2) Select "ListCREATOR SendMaild Service".
  - 3) Select **Restart** to restart the service.
- Linux for Intel64 form output server
  - Log in as a superuser, and execute the following command to restart the PDF mail distribution daemon:
  - `/opt/FJSVedoc/etc/SKFJSVedocmail restart`

3) Execute the user application.

- List Creator form output interface
  - PDF mail distribution is also possible by specifying the destination address when outputting forms (the `-gpdfmailtoaddr` option when using `prprint`).

Example: When using a Windows form output server and `prprint`

```
prprint
-assetsdir "C:\data\sample"           (1)
-atdirect file                         (2)
-f "C:\data\sample\LC.dat"           (3)
"LC"                                   (4)
-keeppdf "C:\tmp\LC.pdf"             (5)
-gpdfmailtoaddr LCUser@xxx.yyy.zzz.com (6)
```

- (1): Specify the form storage directory
- (2): Specify the output method
- (3): Specify the input data file
- (4): Specify the form name
- (5): Specify the destination for the PDF file
- (6): Specify the address for the email destination

Refer to the *Application Design* online manual for information on designing applications.

## ● Creating the subject and body for the mail used in PDF mail distribution

Along with the PDF mail environment settings file, the following files are also necessary when sending email with a subject and body included with the PDF distribution:

- PDF mail template file
- PDF mail distribution information file (PDF document information file)

It is also possible to send different emails to different recipients by combining mail body templates and variables in the PDF mail template file.

The following describes the procedures for configuring the PDF mail template file and the PDF mail distribution information file (PDF document information file):

- PDF mail template file
 

This is a file for defining the subject of the PDF mail and the templates for the mail body. Edit the file with a text editor.
- PDF mail distribution information file (PDF document information file)
 

By defining variables in the [MLF\_Message] section, you can insert strings into the mail body template defined in the PDF mail template file. Create the file with a text editor. Specify the path of the PDF mail distribution information file (PDF document information file path) created when the PDF mail distribution command was executed.

A sample PDF mail template file is stored in the following location:

- Windows form output server
 

```
installDir\mail_template.txt
```
- Linux for Intel64 form output server
 

```
/etc/opt/FJSVedoc/mail_template.txt
```

The procedure for creating the mail subject and body for PDF mail distribution is described below.

### 1) Edit the PDF mail template file.

- The PDF mail template file is divided into <HEAD> and <BODY> sections. The content in the <HEAD> section becomes the mail header and the content in the <BODY> section becomes the mail body.
- Strings enclosed by the "\$" symbol are treated as variables. Put the content of variables into the [MLF\_Message] section of the PDF mail distribution information file. Lowercase alphanumerics can be used for variables.
- Use the yen character (¥) as an escape to include "\$", "<", ">", and "¥" in the text (i. e., "¥\$", "¥<", "¥>", and "¥¥").
- The following field names are ignored even if they are included in the <HEAD> section: Date, From, To, CC, BCC, Message-ID, MIME-Version, Content-Type, Envelope-ID, Disposition-Notification-To
- Specify "subject:" in the <HEAD> to specify the subject of the mail. Ensure the number of characters (halfwidth alphanumerics) in one line of the PDF mail template file does not exceed 3072. If characters exceed 3072 they will be ignored.
- Do not put anything else in the <HEAD> and <BODY> lines. Also, if the same mail header is specified more than once, it will be ignored.
- To add an empty line, use a space.



- An example of the PDF mail template file is shown below.

Example: *instalDir\mail\_template.txt*


```
<HEAD>
subject: $subject$
<BODY>
$message$
-----
Recipient: AA ZZ
Email address: LCuser@xxx.yyy.zzz.com
```

## 2) Create the PDF mail distribution information file (PDF document information file).

- Create the PDF mail distribution information file (PDF document information file when using the COBOL application link function) with a text editor and save to a suitable directory.
- Define the [MLF\_Message] section with the PDF mail distribution information file (PDF document information file) and set strings in the variables defined in the template.
- An example of the PDF mail distribution information file is shown below.

Example: *C:\tmp\listcreator.conf*

```
[MLF_Message]
subject=This is a test email
message=To XYZ Pty., Ltd.
message=Thank you for your continued support.
message=Here is the quotation for the equipment you enquired about.
```

 When using the COBOL application link functions, define the [MF-PDF] section in the PDF document information file, then define the [MLF\_Message] section.

Note

## 3) Execute the user application.

- List Creator form output interface

When outputting forms (the `-gpdfmailtoaddr` and `-gpdfmailconffile` options when using `prprint`), a PDF mail can be sent that has a destination and body set in the PDF mail distribution information file.

Example: Specifying the destination address and the PDF mail distribution information file

```
prprint
-assetsdir "C:\data\sample"           (1)
-atdirect file                         (2)
-f "C:\data\sample\LC.dat"           (3)
"LC"                                   (4)
-keeppdf "C:\tmp\LC.pdf"             (5)
-gpdfmailtoaddr LCuser@xxx.yyy.zzz.com (6)
-gpdfmailconffile "C:\tmp\listcreator.conf" (7)
```

(1): Specify the form storage directory

(2): Specify the output method

- (3): Specify the input data file
- (4): Specify the form name
- (5): Specify the destination for the PDF file
- (6): Specify the address for the email destination
- (7): Specify the PDF mail distribution information file

### 9.1.1.2. Using the Fonts from Form Output in PDF Files

You can use the fonts used when designing the forms in the PDF files. The following TrueType font files can be used:

- \*.ttf  
A True Type Font format file.
- \*.ttc  
A True Type Collection format file.
- \*.tte  
A True Type standard EUDC format file.



#### Note

- When end-user-defined characters are predefined, the end-user-defined character data is also available. Note that incorrect behavior may occur with some editors used for creating end-user-defined characters.
- The True Type fonts available are those implemented in the Unicode CMap table. Confirm with the provider of the font to check if their fonts are implemented in the Unicode CMap table.
- When fonts from the JIS2004 standard are used, the characters added between JIS X 0208:1990 and JIS X 0213:2004 may not be displayed correctly.  
However, when fonts are registered in the PDF font registration facility, embedding the fonts means that it is possible to use characters in the UCS2 range. Also refer to "Windows form output server" below for Windows environments.

Register fonts to List Creator with the following procedure:

#### ● Windows form output server

- 1) Install the fonts (into C:\WINNT\FONTS\, for example) used when designing the forms onto the system where List Creator is running.
- 2) Log in using Administrator rights, confirm that the PDF file conversion function is not being used, then select **Start >> All Programs >> List Creator >> Settings >> PDF Font Registration**. A window like the one below will be displayed.

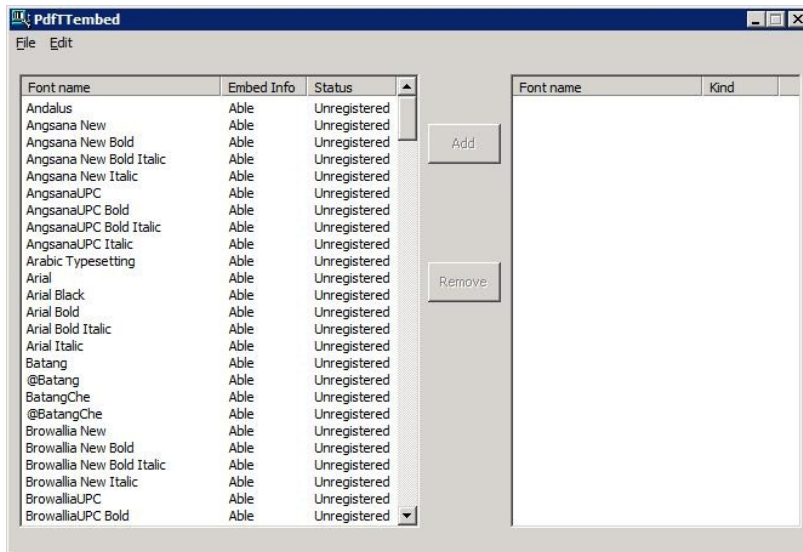
#### Embedding information

This follows the specifications made in the form definition information List Creator Designer, the specifications set when outputting forms, and the embedding specifications made for fonts specified by the PDF document information file.

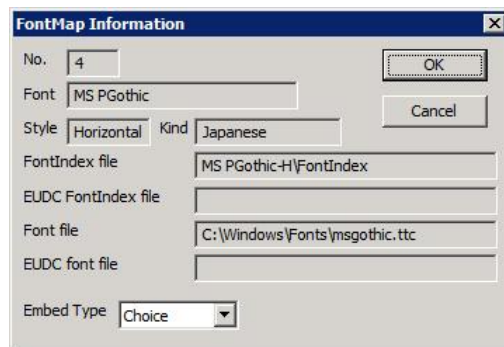
Refer to the "PDF-EMBED" item of the following for information on the range of characters embedded when fonts are registered in a PDF file:

=> ["9.1.2.4 Explanation of the PDF Document Information File Keywords used during Form Output"](#)

- 3) Select the fonts used when designing forms and click "Add". The font name and font type (Western or Japanese) will be displayed in the list on the right side of the window when registration is complete.



- 4) For more detailed information regarding the font, double-click on the font in the list on the right side of the window. The font details are displayed.



### Embedding

Follows the specifications made in the List Creator Designer or when outputting forms (PDF document information file specification or PDF file character embedding specification).

Refer to the "PDF-EMBED" field below for details.

=> "9.1.2.4 Explanation of the PDF Document Information File Keywords used during Form Output"

Mandatory:

When using Japanese fonts, the characters used are embedded. If NONE/FONT/JEF/FONT+JEF is specified in the List Creator Designer settings or when outputting forms, end-user-defined characters are not embedded.

All used characters are embedded otherwise.

All characters are embedded for Western fonts, irrespective of the List Creator Designer settings or settings when outputting forms.

Refer to the "PDF-EMBED" field below for details.

=> "9.1.2.4 Explanation of the PDF Document Information File Keywords used during Form Output"

No:

When using Japanese fonts, the specified characters are not embedded. If ALL/USER/FONT+USER/JEF+USER is specified in the List Creator Designer settings or when outputting forms, only end-user-defined characters are embedded. Characters are not embedded otherwise.

Characters are not embedded for Western fonts, irrespective of the List Creator Designer settings or settings when outputting forms.

Refer to the "PDF-EMBED" field below for details.

=> "9.1.2.4 Explanation of the PDF Document Information File Keywords used during Form Output"

Note that when using the List Creator form output interface, the settings when outputting forms (file selections and character embedding settings for PDF files) and in the List Creator Designer are valid in the following order of priority:

- 1) Specifying the PDF document information file when outputting forms (-in5 option when using prprint)
- 2) Specifying the character embedding for the PDF file when outputting forms (-gpdfembed option when using prprint)
- 3) Specifying settings in the List Creator Designer



Note

- If end-user-defined characters are associated with the fonts on a Windows system, the end-user-defined character font file is also automatically registered. The registered end-user-defined character fonts can be viewed in EUDC font File in the **Font Map Information** window.

- Substitute font settings will be required if "MS Mincho", "@MS Mincho", "MS Gothic", or "@MS Gothic" are registered as PDF fonts for form output.

When setting when outputting forms: From **Form Output Methods** of the List Creator Designer, locate the **Substitute Font Settings** in the **Print** tab, and set the **Descriptor Font Name** and the **Substitute Font Name** (pay special attention to fullwidth and halfwidth differences) to the same font name.

Refer to the Advanced Form Design online manual for information on setting substitute fonts.

For setting when outputting forms: Specify the Substitute Font Info file with the form output interface.

Refer to the Setup & Operation online manual for information on the Substitute Font Info file.

## ● Linux for Intel64 form output server

- 1) Transfer the font file (\*.ttf, \*.ttc, \*.tte) used during form design to the environment where List Creator is operating.
- 2) Log in as a superuser, confirm that the PDF file conversion function is not being used, then perform the registration, deregistration, and browsing processes with the following commands:

### Registering fonts

Execute the following command:

```
/opt/FJSVedoc/bin/entt -f ttfpath [-x N] [-e ttepath] [-v] -o S
```

-f ttfpath :

Specify the full path to the "\*.ttf" or "\*.ttc" file.

-x N :

When a "\*.ttc" file is specified, specify which font type is to be used with a number (Top: N=1).

This must be specified when registering a "\*.ttc" file (mandatory).

Note that if you do not specify this option, an error message will be displayed along with all of the font styles and their numbers as they are found in the "\*.ttc" file.

Specify a valid number and register again.

-e ttepath :

Specify the full path to the corresponding "\*.tte" file.

-v :

Specify when a Japanese font is to be registered as a vertical type face.

-o S :

Specify when setting embedding for each font separately (S=0 | 1 | 2). This allows you to change the embedding for each different font.

0 (not embedded):

When using Japanese fonts, the specified characters are not embedded.

When ALL/USER/FONT+USER/JEF+USER is specified in the List Creator Designer settings or when outputting forms, only end-user-defined characters are embedded.

Characters are not embedded otherwise.

Characters are not embedded for Western fonts, irrespective of the List Creator Designer settings or settings when outputting forms.

Refer to the "PDF-EMBED" field below for details.

=> ["9.1.2.4 Explanation of the PDF Document Information File Keywords used during Form Output"](#)

1 (Select):

Follows the specifications made in the List Creator Designer or when outputting forms (PDF document information file specification or PDF file character embedding specification) (default).

Refer to the "PDF-EMBED" field below for details.

=> ["9.1.2.4 Explanation of the PDF Document Information File Keywords used during Form Output"](#)

2 (mandatory):

When using Japanese fonts, the characters used are embedded.

When NONE/FONT/JEF/FONT+JEF is specified in the List Creator Designer settings or when outputting forms, end-user-defined characters are not embedded.

All used characters are embedded otherwise.

Characters that are used are embedded for Western fonts, irrespective of the List Creator Designer settings or settings when outputting forms.

Refer to the "PDF-EMBED" field below for details.

=> "9.1.2.4 Explanation of the PDF Document Information File Keywords used during Form Output"

Note that when using the List Creator form output interface, the settings when outputting forms (PDF document information file specification or PDF file character embedding specification) and in the List Creator Designer are valid in the following order of priority:

- 1) Specifying the PDF document information file when outputting forms (-in5 option when using prprint)
- 2) Specifying the character embedding for the PDF file when outputting forms (-gpdfembed option when using prprint)
- 3) Specifying settings in the List Creator Designer

### Displaying font registration status

Execute the following command:

```
/opt/FJSVedoc/bin/lstt
```

The following information for each font is output to the window:

Font number:Language:PDF font name:Embedding policy:Font name:

End-user-defined character font name

A display example is shown below.

```
# /opt/FJSVedoc/bin/lstt
4:jp:FUJ-MinchoTai:1:/tmp/f3baujm3.ttf:
5:jp:FUJ-GothicTai:1:/tmp/f3baujg4.ttf:
```


### Displaying font registration status

Execute the following command:

```
/opt/FJSVedoc/bin/rmtt fontIndex
```

fontIndex:

Specify the font number to be deregistered. The font number is the number that is displayed at the start of the line when lstt is executed.

-  **Caution**

  - If a vertical font was used in a form, register fonts that have the "@" mark in front of the font name.
  - PDF file conversion performance may deteriorate if you register a lot of fonts. Register only those fonts used in the form.
  - When using end-user-defined characters created with an end-user-defined character editor on a Windows system, also install the end-user-defined character font file (\*.tte) on the system where List Creator is operating.
  - When moving or deleting (uninstalling) registered font files, use the List

- Creator PDF font registration facility to delete the file first.
- You cannot embed fonts in PDF files if the fonts themselves do not allow embedding.
  - The character pitch and other attributes may be out of line if Western symbol fonts such as Symbol and Wingdings are used but not embedded.
  - When font attributes such as bold and italics are used, the design of characters in static fields and text fields may differ from what is displayed in the Preview window.
  - When you register fonts, used characters are embedded except if font embedding is specified as "Font Embedding : No Embedding" in the **PDF Options** window in Form Output Methods of the List Creator Designer.
  - Refer to the user agreements for the fonts you are using to see whether the fonts can be used in PDF files.
  - When forms are output with the List Creator form output commands (prprint) or the various interfaces (Java interface, for example), the following font mapping occurs for output, irrespective of the font registration:
    - MS Mincho : MS Mincho (when embedded: FUJ Minchotai)
    - MS Gothic : MS Gothic (when embedded: FUJ Gothic tai)
    - @MS Mincho : @MS Mincho (when embedded: @FUJ Mincho tai)
    - @MS Gothic : @MS Gothic (when embedded: @FUJ Gothic)
- If unregistered fonts are used, output is as follows:
- Japanese characters : MS Mincho (when embedded: FUJ Minchotai)
  - Japanese characters (vertical): MS Mincho (when embedded: @FUJ Minchotai)
  - Overlay text will be @ MS Mincho,  
however (when embedded: @FUJ Minchotai)
  - Single-byte alphanumerics: Windows form output server
    - MS Mincho (when embedded: FUJ Minchotai)
    - Linux for Intel64
    - MS Gothic: (when embedded: FUJ Gothic tai)
- If List Creator is reinstalled or upgraded on the server where the fonts were registered, delete the PDF fonts using the PDF font registration facility before uninstalling the older version. After reinstalling or upgrading List Creator, reregister the PDF fonts.

### 9.1.1.3. Printing PDF Files Remotely

It is possible to have PDF files that have been output by the PDF file conversion function automatically printed by clients in remote locations.

To print PDF files remotely, a folder needs to be created at the remote client to store the PDF files. Multiple folders can be created. Different printers can be specified for the printing of the PDF files in the folders, you can switch to a different printer by moving the PDF file to the appropriate folder.

Use the following procedure to configure PDF remote printing:

- 1) Configure a remote client using PDF remote printing environment settings.

Refer to the following for information on configuration:

=> ["9.1.3 PDF Remote Printing Environment Settings"](#)

2) Share the PDF remote printing environment settings folder.

The two methods for folder sharing are as follows:

- Folder sharing with Windows
- Folder sharing with FTP

Refer to the Windows OS manual or the FTP server manual for information on configuration.

## 9.1.2. Operation Styles that Require More Detailed PDF File Settings

### ● PDF document information file (when outputting forms)

A variety of additional details (but not the actual PDF file rendered content) can be included in PDF files by creating the necessary definitions in the PDF document information file.

In the PDF document information file, you can include comments, titles, authors, and dates of creation, also password keys and default settings can be set, all defined with different keywords within the PDF document information file.

### ● PDF mail distribution information file

Detailed settings for PDF mail distribution can be performed by specifying the necessary definitions in the PDF mail distribution information file.

The settings in the PDF mail distribution information file such as the destination, messages, and attachments can be changed for each email.

The settings in the PDF mail distribution information file have a higher priority than the settings in the PDF mail environment settings file. If the same keyword is specified in both files, the value in the PDF mail distribution information file is used.

### ● PDF mail configuration file

Basic settings for PDF mail distribution can be performed by specifying the necessary definitions in the PDF mail configuration file.

Restart PDF mail distribution (the daemon on Linux for Intel64) after specifying the settings in the PDF mail environment settings file.

#### 9.1.2.1. Setting the PDF Document Information File used during Form Output

### ● Settings for outputting forms with List Creator

There are many settings that can be specified with the various List Creator interfaces, but some details need to be first entered in a PDF document information file, and then that PDF document information file needs to be specified when outputting forms.

The following describes how to specify settings for each List Creator form output interface:

- For commands (prprint/prprintx)

Specify the PDF document information file path with the `-in5` option.

- For a Java interface

Specify the PDF document information file path for the value of the `ID_PDF_DOCENVFILE` constant in the `setProperty` method of the `PrintProperties` class.

- For a .NET interface

Specify the path of the PDF document information file in the `PdfDocEnvFile` property of the `PrintProperties` class.



- For custom control

Specify the path of the PDF document information file in PdfDocEnvFile of the PrctrlExControl custom control.

Refer to the following for information on the correspondence with the form output interface:  
=> ["9.1.2.3 List of PDF Document Information File Keywords used during Form Output"](#)

### 9.1.2.2. PDF Document Information File Format

The PDF document information file format is as follows:

- The character codes that can be used in the PDF document information file are.

- Windows form output server  
The line feed code in ASCII is CR+LF (0x0d+0x0a)
- When the form output server is a Linux  
The line feed code in EUC or UNICODE (UTF8) is LF (0x0a)

Enter according to the character code used when executing the user application, as follows:

Platform	Locale name	Code type
Linux	ja_JP.eucJP	EUC
	ja_JP.UTF-8	UNICODE (UTF8)

- A single command consists of **keyword**, **=**, **value**, and then **line feed**. Refer to the following for keywords that can be used:

=> ["9.1.2.4 Explanation of the PDF Document Information File Keywords used during Form Output"](#)

- The value is defined as the information after the "=" and before the line feed. Other character types that can be used are halfwidth and fullwidth, Japanese (JIS level 1 and level 2), and alphanumerics. If end-user-defined characters (User Defined Characters and JEF extension characters) are used, an error may occur in the PDF file conversion.
- An error occurs if a value is not specified.
- Strings not in keywords are treated as comments.
- If you set keywords multiple times, if this is not allowed only the last keyword and setting value will be treated as valid.
- Keywords other than [MF-PDF] can be omitted if they are to be specified when outputting forms.
- Keywords other than [PM-PDF] can be omitted if they are to be specified with the PDF document information file operation commands.
- Strings after a "#" are treated as comments.
- Spaces and tabs in front of "=" will invalidate the keyword. Spaces and tabs after "=" are treated as characters.
- Keywords are case sensitive. Pay special attention when entering them.
- Specify path names for files in the keywords up to 255 bytes, using halfwidth alphanumerics, and symbols, and JIS level 1 and level 2 kanji.

### 9.1.2.3. List of PDF Document Informatin File Keywords used during Form Output

The following table describes the keywords available in the PDF document information file and their correspondence to the parameters available in the List Creator form output interface.

Table9.1 List of PDF document information file keywords for form output

Keyword name	Function	Specify using the form output interface
[MF-PDF]	Declaration of PDF document information file for PDF conversion.	-
PDF-AES	PDF files are encrypted with AES encryption when ON is specified as the value.	-
PDF-ANOTATE	This is an Acrobat security information setting for granting/refusing permission to add and change comments and form fields.	Y (*1)
PDF-AUTHOR	This is used to describe the author of the Acrobat document information.	Y (*1)
PDF-AUTOPRINT	This is used to set the automatic print method on PDF files.	Y (*1)
PDF-BARBOX	If the barcode box is smaller than the default barcode width, the barcode is reduced to fit in the available box.	- (*1)
PDF-CENTERWINDOW	Specifying ON for the value displays document windows in screen center.	-
PDF-DATADIR	This can specify the path of the folder in which the file is to be when embedding files in PDF.	-
PDF-DATAFILE	Specify the path name of arbitrary data file to be embedded in PDF files.	Y
PDF-DIRCREATE	When ON is specified, the directory creation is performed if the directory described in the file path for creating the PDF file does not exist. When OFF is specified, a "PDF Creation Error" occurs.	-
PDF-DOCTITLE	When ON is specified, the strings specified in PDF-TITLE is displayed on title bar of the Acrobat. When OFF is specified, a PDF file name appears.	-
PDF-EMBED	This sets whether to embed characters in the PDF file.	Y (*1)
PDF-FITWINDOW	When ON is specified for the value, the document window size will be changed to adjust the size of the page appeared at the beginning.	-
PDF-FULLSCREEN	When opening files, Acrobat display can be set to full screen mode.	Y (*1)
PDF-HIDEMENUBAR	When opening files, display/hide Acrobat menu bar can be specified.	Y (*1)
PDF-HIDETOOLBAR	When opening files, display/hide Acrobat toolbar can be specified.	Y (*1)

Keyword name	Function	Specify using the form output interface
PDF-HIDEWINDOWUI	When ON is specified, user interface elements of document windows (scroll bar or control for navigation, etc.) will be hidden, and only the document contents will be displayed.	—
PDF-INITLAYOUT	This sets the page layout of PDF document when it is opened.	—
PDF-INITPAGE	This sets the page at which a PDF document should be opened.	—
PDF-INITZOOM	This specifies the display magnification of a PDF document when it is opened.	—
PDF-JPEGMODE	Set the mode for JPEG data conversion.	Y (*1)
PDF-JPEGQUALITY	This sets JPEG compression quality.	Y
PDF-KEY128	The PDF file is converted using a 128-bit encryption key.	—
PDF-LAYOUT	Sets the page layout of the PDF file.	—
PDF-LIMITURI	Set the URI permitting the viewing of PDF files that have URI viewing restriction set in the List Creator Designer.	Y(*1)
PDF-LIMITURICANCEL	Disables the URI viewing restriction set in the List Creator Designer.	Y
PDF-META	Metadata is generated from the document information and embedded in the PDF file when ON is specified as the value. Metadata is not embedded when OFF is specified.	—
PDF-MMR	This compresses binary data with MMR.	—
PDF-MODIFY	This is an Acrobat security information setting for allowing/disallowing the changing of documents.	Y (*1)
PDF-NOENCMETA	Embedded metadata in the PDF file is not encrypted when ON is specified. Embedded metadata is encrypted when OFF is specified.	—
PDF-NOOCRB	When ON is specified, the OCR-B fonts used in the PDF are not to be embedded. When OFF is specified, OCR-B fonts is to be embedded.	—
PDF-OPENPWD	This is used to describe the password required for opening the PDF file in the Acrobat.	Y
PDF-PAGEMODE	This is used to specify the display style of PDF document bookmark and thumbnail image.	—
PDF-PRINT	This is an Acrobat security information setting for allowing/disallowing printing.	Y (*1)

Keyword name	Function	Specify using the form output interface
PDF-RESOURCEPERPAGE	The PDF file resource dictionary is created for each page.	-
PDF-SECUPWD	This is used to describe the password required for changing the security information in the Acrobat.	Y
PDF-SELECT	This is an Acrobat security information setting for allowing/disallowing selection of text and graphics.	Y (*1)
PDF-SUBTITLE	This is used to describe the subject of the Acrobat document.	Y (*1)
PDF-TITLE	This is used to describe the title of the Acrobat document.	-
PDF-YENNONADJUST	The "0x005C" character code (Unicode) in PDF files is not converted to "0x00A5" when ON is specified as the value. The character is converted when OFF is specified.	-

Y: Can be specified with the form output interface

-: Cannot be specified with the form output interface

\*1: This can be specified in the **PDF Options** window of the List Creator Designer.

The **PDF Options** window can be displayed from PDF Options in the **File** tab of the **Form Output Methods** window.

\*2: This can be specified in the **Print Size** tab of the List Creator Designer.

The **Print Size** tab can be displayed from the **Form Style Descriptor Properties** window.

#### 9.1.2.4. Explanation of the PDF Document Information File Keywords used during Form Output

[MF-PDF]

##### Format

[MF-PDF]

##### Function

Declaration of PDF document information file for PDF conversion.

The commands following this keyword and the definition become effective. Therefore, declare this before any other keywords.

##### Value if omitted

This keyword may not be omitted.

##### Special note

If this keyword is used multiple times, all declarations other than the first are ignored.

PDF-AES

##### Format

PDF-AES={ ON | OFF }

##### Function

PDFs are encrypted with AES encryption.

##### **ON:**

Encrypted with AES encryption.

##### **OFF:**

Encrypted with RC4 encryption.

This keyword is invalid if PDF-KEY128=ON has not been set.

Example: PDF-AES=ON

##### When omitted

OFF

##### Points to note

- An error occurs when anything other than ON or OFF is specified.
- Only supported for Adobe Acrobat/Reader 7.0 or later.

PDF-ANOTATE

##### Format

PDF-ANOTATE={ ON | OFF }

### Function

This is an Acrobat security information setting for granting/refusing permission to add and change comments and form fields.

#### **ON:**

Addition/modification of comments and form fields refused.

#### **OFF:**

Addition/modification of comments and form fields permitted.

This keyword is invalid if PDF-KEY128=ON has been set. Set PDF-MODIFY=ADDANNOT to perform security settings for notes and form fields.

Example: PDF-ANOTATE=ON

### Value if omitted

OFF

### Special note

When a value other than ON or OFF is specified, an error occurs.

If a value other than OFF is specified, PDF-SECUPWD must also be used to set a security password. If a password is not set, the PDF-ANOTATE security setting will not be enabled and Acrobat Reader will allow comments and form fields to be added or changed.

## PDF-AUTHOR

### Format

PDF-AUTHOR=<up to 256 byte string including the linefeed code>

### Function

This is used to describe the author of the Acrobat document information.

It can be viewed from [File] - [Document Info] - [General] of Acrobat Reader 4.0 (from [File] - [Document Properties] - [Summary] for Adobe Reader 5.0 or Acrobat Reader 6.0). If the string contains 256 bytes or more, the file may not open correctly in the Acrobat.

Example: PDF-AUTHOR=PDF Author

### Value if omitted

The author information becomes blank.

## PDF-AUTOPRINT

### Format

PDF-AUTOPRINT={ OPN | OPN+CLS | OFF }

### Function

This is used to set the automatic print method on PDF files.

#### **OPN:**

This simultaneously displays print dialog box when opening the document, and the document can be printed.

**OPN+CLS:**

This simultaneously performs Automatic Print when opening the document (The document is printed out from the default printer).

**OFF:**

Does not perform automatic print.

Example: PDF-AUTOPRINT=OPN

**Value if omitted**

OFF

**Special note**

- When a value other than OPN, OPN+CLS, and OFF is specified, an error occurs.
- The keyword may not work depending on the Acrobat settings such as when JavaScript is disabled.

PDF-BARBOX

**Format**

PDF-BARBOX={ ON | OFF }

**Function**

If the barcode box is smaller than the default barcode width, the barcode is reduced to fit in the available box.

**ON:**

This describes the barcode to be fit in the barcode box.

**OFF:**

This describes the barcode in its default width.

Example: PDF-BARBOX=ON

**Value if omitted**

OFF

**Special note**

- An error occurs when anything other than ON or OFF is specified.
- This function is not available for the following barcodes:
  - Code 3 of 9 (EIAJ Compliant)
  - Customer barcode
  - EAN-128 (Convenience Store)
  - U.S. POSTNET (Delivery Point Code), U.S. POSTNET (ZIP+4 Code), U.S. POSTNET (5-Digit ZIP Code)
  - FIM A (U.S. Postal FIM), FIM B (U.S. Postal FIM), FIM C (U.S. Postal FIM)
- If the minimum module width is set, it might not fit within the size of the barcode field.

PDF-CENTERWINDOW

**Format**

PDF-CENTERWINDOW={ ON | OFF }

**Function**

**ON:**

This displays the document window in center of the screen.

**OFF:**

This follows the Acrobat settings.

Example: PDF-CENTERWINDOW=ON

**Value if omitted**

OFF

**Special note**

The keyword may not work depending on Acrobat settings such as when being displayed on a Web browser.

PDF-DATADIR

**Format**

PDF-DATADIR=<Folder path name for embedded file search>

**Function**

This can specify the path of the folder in which the file is to be when embedding files in PDF. When there are multiple folders (A maximum of 10) wanted to be searched, this keyword can be used multiple times. In this case, file search will be performed according to the order of folders.

Example: PDF-DATAFILE=C:\data

**Value if omitted**

Does not perform a folder search for embedding files.

**Special note**

- The order does not matter when specifying with "PDF-DATAFILE".
- Even if this keyword is used for 11 or more folders by mistake, folder search can be performed up to 10.

PDF-DATAFILE

**Format**

PDF-DATAFILE=<File path name for embed file>



### Function

Specify the path name of arbitrary data file to be embedded in PDF files. When embedding multiple data files, use these keywords multiple times (up to 99).

Example: PDF-DATAFILE=C:\data\sample.doc

### Value if omitted

Data files cannot be embedded.

### Special note

- Errors do not occur even if the same data file is specified multiple times, and the embedding is successfully performed for the number of specified times.
- For Acrobat 4.0, Acrobat Reader 4.0, and Acrobat Reader 5.0, the embedded data object cannot be extracted. Use Acrobat 5.0 or later, or Adobe Reader 6.0.
- For Acrobat 5.0, when the security option settings or encryption is used, the embedded data object cannot be extracted.
- For details on extracting the attached files, refer to the following.  
=> ["9.2.2.8 File Attachment Function"](#)

## PDF-DIRCREATE

### Format

PDF-DIRCREATE={ ON | OFF }

### Function

#### **ON:**

Directory creation is performed if the directory described in the file path for creating the PDF file does not exist.

#### **OFF:**

"PDF file creation error" occurs if the directory described in the file path for creating the PDF file does not exist.

Example: PDF-DIRCREATE=ON

### Value if omitted

OFF

### Special note

- When a value other than ON or OFF is specified, an error occurs.
- The privileges of the created directory are inherited from the parent directory.

## PDF-DOCTITLE

### Format

PDF-DOCTITLE={ ON | OFF }

Function

**ON:**

This PDF-TITLE string is displayed in the Acrobat title bar.

**OFF:**

This PDF file name is displayed in the Acrobat title bar.

Example: PDF-DOCTITLE=ON

Value if omitted

OFF

Special note

- For Acrobat 4.0, this function cannot be used.
- This keyword may not work depending on Acrobat settings or specification condition of other options such as when being displayed on a Web browser.

PDF-EMBED

Format

PDF-EMBED={ ALL | NONE }

Function

This sets whether to embed characters in the PDF file.

**ALL:**

Embeds all characters used in the document.

**NONE:**

Does not embed.

Example: PDF-EMBED=ALL

Value if omitted

NONE

PDF-FITWINDOW

Format

PDF-FITWINDOW={ ON | OFF }

Function

**ON:**

Change the document window size to adapt to the page size displayed in the beginning.

**OFF:**

This follows the Acrobat settings.

Example: PDF-FITWINDOW=ON

Value if omitted

OFF

Special note

The keyword may not work depending on Acrobat settings such as when being displayed on a Web browser.

PDF-FULLSCREEN

Format

PDF-FULLSCREEN={ ON | OFF }

Function

When opening files, Acrobat display can be set to full screen mode.

**ON:**

When opening a document, Acrobat displays it in full screen mode.

**OFF:**

When opening a document, it is displayed in the magnification specified in Acrobat settings.

Example: PDF-FULLSCREEN=ON

Value if omitted

OFF

Special note

- When a value other than ON or OFF is specified, an error occurs.
- The keyword may not work depending on the Acrobat settings such as cases when JavaScript cannot work or when being displayed on a Web browser.

PDF-HIDEMENUBAR

Format

PDF-HIDEMENUBAR={ ON | OFF }

Function

When opening files, display/hide Acrobat menu bar can be specified.

**ON:**

This hides the Acrobat menu bar when the document is active.

**OFF:**

This does not hide the Acrobat menu bar when the document is active.

Example: PDF-HIDEMENUBAR=ON

Value if omitted

OFF

Special note

- When a value other than ON or OFF is specified, an error occurs.
- This keyword may not work depending on the Acrobat settings.

PDF-HIDETOOLBAR

Format

PDF-HIDETOOLBAR={ ON | OFF }

Function

When opening files, display/hide Acrobat toolbar can be specified.

**ON:**

This hides the Acrobat toolbar when the document is active.

**OFF:**

This does not hide the Acrobat toolbar when the document is active.

Example: PDF-HIDETOOLBAR=ON

Value if omitted

OFF

Special note

- When a value other than ON or OFF is specified, an error occurs.
- This keyword may not work depending on the Acrobat settings.

PDF-HIDEWINDOWUI

Format

PDF-HIDEWINDOWUI={ ON | OFF }

Function

**ON:**

User interface elements of document windows (scroll bar or control for navigation etc.) will be hidden, and only the document contents will be displayed.

**OFF:**

This displays user interface elements of the document window.

Example: PDF-HIDEWINDOWUI=ON

Value if omitted

OFF

**Special note**

The keyword may not work depending on Acrobat settings such as when being displayed on a Web browser.

PDF-INITLAYOUT

**Format**

PDF-INITLAYOUT={ SINGLE | ONECOLUMN | TWOCOLUMN | DEFAULT }

**Function**

This sets the page layout of PDF document when it is opened.

**SINGLE:**

This displays pages in single page layout.

**ONECOLUMN:**

This displays pages in continuous layout.

**TWOCOLUMN:**

This displays pages in continuous facing layout.

**DEFAULT:**

This displays the layout of Acrobat default settings.

Example: PDF-INITLAYOUT=SINGLE

**Value if omitted**

DEFAULT:

PDF-INITPAGE

**Format**

PDF-INITPAGE=<Page number>

**Function**

This sets the page at which a PDF document should be opened.

Specify a positive integer.

When a larger number than the last page number is specified, the first page is displayed.

Example: PDF-INITPAGE=5

**Value if omitted**

1st page

PDF-INITZOOM

**Format**

PDF-INITZOOM={ Magnification of display | FIT | FITH | FITBH | DEFAULT }

### Function

This specifies the display magnification of a PDF document when it is opened.

Specify the decimal values in the range of 8 to 1600 with number.

When a value other than the above range is specified, an error occurs.

Besides specifying the magnification with numbers, the following values can be specified as well.

#### **FIT:**

This displays a whole page in magnification to fit in a window of both horizontal direction and vertical direction. When the necessary horizontal and vertical magnifications are different, adopt the smaller magnification, and center the page in window for the other direction.

#### **FITH:**

This displays pages in a magnification which sets their width in the window.

#### **FITBH:**

This displays pages in a magnification which fits the page's boundary box width into the window.

#### **DEFAULT:**

This displays a page in the magnification specified in Acrobat default settings.

Example: PDF-INITZOOM=150.5, PDF-INITZOOM=FIT

### Value if omitted

DEFAULT:

PDF-JPEGMODE

### Format

PDF-JPEGMODE={ CONVERT | LEAVE | PROGRCNV }

### Function

Set the mode for JPEG data conversion.

This setting allows you to set the quality when JPEG data that is input is compressed.

#### **CONVERT:**

JPEG data that is input is converted internally and output to PDF according to the PDF-JPEGQUALITY keyword.

#### **LEAVE:**

JPEG data that is input is not converted internally, and is output to PDF as is.

#### **PROGRCNV:**

When the JPEG data is progressive, it is converted to non-progressive.

Other JPEG data is not converted internally, and is output to PDF as is.

Example: PDF- JPEGMODE=LEAVE

When omitted

CONVERT

Points to note

- An error occurs when anything other than CONVERT, LEAVE, or PROGRCNV is specified.
- If LEAVE is specified and progressive JPEG data is used, the PDF file may not be viewable in Acrobat Reader 4.0.
- Use either CONVERT or PROGRCNV to convert progressive JPEG to non-progressive if compatibility with a variety of Acrobat/Adobe Reader versions is required after long periods of storage.

PDF-JPEGQUALITY

Format

PDF-JPEGQUALITY={ HIGH | MID | LOW | NONE }

Function

This sets JPEG compression quality.

**HIGH:**

The picture quality is high, but the compression rate is low.

**LOW:**

The picture degradation increases, but the compression rate increases.

**MID:**

MID is the setting between HIGH and LOW.

**NONE:**

The standard compression method without picture degradation can be achieved.

Example: PDF- JPEGQUALITY=HIGH

Value if omitted

HIGH

Special note

When a value other than HIGH, MID, LOW, or ONE is specified, an error occurs.

PDF-KEY128

Format

PDF-KEY128={ ON | OFF }

Function

**ON:**

The PDF file is converted using a 128-bit encryption key.

128-bit enables the use of the "PDF-PRINT", "PDF-MODIFY", and "PDF-SELECT" extended functions.

**OFF:**

The PDF file is converted using a 40-bit encryption key.

Example: PDF-KEY128=ON

**When omitted**

OFF (40-bit encryption)

**Points to note**

- An error occurs when anything other than ON or OFF is specified.
- Only supported for Adobe Acrobat/Reader 5.0 or later.
- For either 40-bit encryption or 128-bit encryption, specify the user password up to 32 bytes.

PDF-LAYOUT

**Format**

PDF-LAYOUT={ 1 | 2 | 4 | 9 }

**Function**

Sets the page layout of the PDF file.

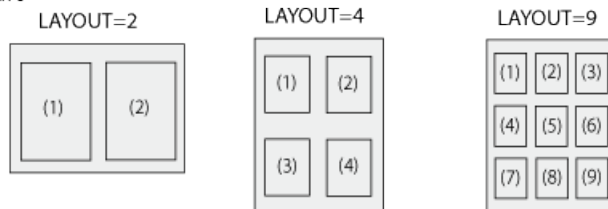
**1:**

Does not set the page layout.

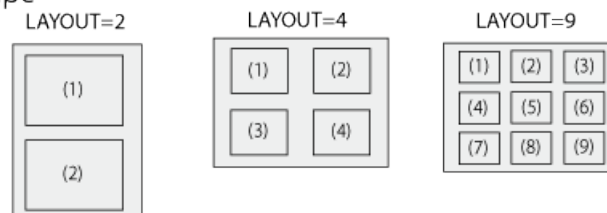
**2, 4, 9:**

The page numbers are placed on each page respectively.

portrait



landscape



Example: PDF-LAYOUT=4

**Value if omitted**

1

**Special note**

When a value other than 1, 2, 4, and 9 is specified, an error occurs.



## PDF-LIMITURI

### Format

PDF-LIMITURI= String of up to 512 characters, including line feed codes

### Function

Add the URI permitting the viewing of PDF files that have URI viewing restriction set in the List Creator Designer.

Viewing of the PDF file is permitted when the specified value matches the URI that is the reference of the PDF file.

It is also possible to permit more than one URI.

Example:

- Specifying the URI using a full path  
PDF-LIMITURI=http://www. xxx. yyy. zzz. com/sample. pdf
- Specifying the URI up to the domain  
PDF-LIMITURI=http://www. xxx. yyy. zzz. com/

### When omitted

URIs permitted for viewing in the List Creator Designer are enabled.

### Points to note

- For this keyword to be valid, URI viewing restriction must be set in the List Creator Designer. The settings for the URI viewing restriction are made by selecting the **Viewing Restrictions using URI** checkbox of the viewing restriction specified in the **PDF Options** window of the **File** tab of the **Form Output Methods** window in the List Creator Designer. If the URI viewing restriction is not set in the List Creator Designer, the viewing restriction will not be enabled if it is only set in the PDF document information file.
- Identifies whether a URI used to open a PDF file in a website that allows viewing by matching from the beginning of the string. This is not case sensitive.
- If websites that allow viewing (URIs) are set in both the List Creator Designer and the PDF document information file, only the URI specified in the PDF document information file is valid.
- This keyword may be used more than once if permission for more than one URI is set. If the keyword is used more than once, all specified URIs are valid. This keyword can be specified up to 99 times.
- Wildcards and regular expressions cannot be used as values.
- Only halfwidth alphanumerics, symbols, and spaces can be used in the value. Specify spaces using "%20". The following is an example of the use of halfwidth spaces:
  - When PDF-LIMITURI=http://www. xxx. yyy. zzz/xxxx dir/is specified  
PDF-LIMITURI=http://www. xxx. yyy. zzz/xxxx%20dir/

## PDF-LIMITURICANCEL

### Format

PDF-LIMITURICANCEL={ ON | OFF }

**Function**

Disables the URI viewing restriction set in the List Creator Designer.

**ON:**

Disables the URI viewing restriction setting.

**OFF:**

Does not disable the URI viewing restriction setting.

Example: PDF-LIMITURICANCEL=ON

**When omitted**

OFF

**Points to note**

- An error occurs when anything other than ON or OFF is specified.
- If this keyword is specified more than once, only the last one specified is valid.

PDF-META

**Format**

PDF-META={ ON | OFF }

**Function**

Metadata is generated from the document information and embedded in the PDF file.

**ON:**

Metadata is embedded in PDF files.

**OFF:**

Metadata is not embedded in PDF files.

Example: PDF-META=ON

**When omitted**

OFF

**Points to note**

- An error occurs when anything other than ON or OFF is specified.
- If this keyword is specified more than once, only the last one specified is valid.

PDF-MMR

**Format**

PDF-MMR={ ON | OFF }

**Function**

This compresses binary data with MMR.

**ON:**

This compresses binary data with MMR.

**OFF:**

The compression method is specified as standard.

Example: PDF-MMR=ON

Value if omitted

OFF

Special note

Depending on the data, the standard compression method improves the compression rate.

PDF-MODIFY

Format

PDF-MODIFY={ ON | OFF | ASMONLY | FFFILL | ADDANNOT }

Function

This is an Acrobat security information setting for allowing/disallowing the changing of documents.

**ON:**

This disallows the changing of documents.

**OFF:**

This allows the changing of documents.

The following settings are also enabled when PDF-KEY128=ON is set:

**ASMONLY:**

Permits only document assembly.

**FFFILL:**

Permits form field input or signatures.

**ADDANNOT:**

Permits creation of notes, form field input, or signatures.

The form for setting is shown below:

	Document modification	Creating notes and form fields	Form field input or signature	Document assembly
ON	N	N	N	N
OFF	Y	Y	Y	Y
ASMONLY	N	N	N	Y
FFFILL	N	N	Y	N
ADDANNOT	N	Y	Y	N

Y: Can be changed  
N: Cannot be changed

Example: PDF-MODIFY=ON

**When omitted**

OFF

**Points to note**

- An error occurs when anything other than ON, OFF, ASMONLY, FFFILL, or ADDANNOT is specified. Furthermore, an error occurs when ASMONLY, FFFILL, or ADDANNOT is specified when the PDF-KEY128=ON has not been set.
- When anything other than OFF is specified, ensure you set a password in PDF-SECUPWD to allow changes to the security information. If a password is not set, the security settings may not be enabled.
- Only supported for Adobe Acrobat/Reader 5.0 or later.

PDF-NOENCMETA

**Format**

PDF-NOENCMETA={ ON | OFF }

**Function**

Specify whether to encrypt metadata when metadata generated from document information in the PDF file is embedded.

**ON:**

Metadata is not encrypted.

**OFF:**

Metadata is encrypted.

Example: PDF-NOENCMETA=ON

**When omitted**

OFF

**Points to note**

- An error occurs when anything other than ON or OFF is specified.
- This is valid only when PDF-AES=ON is set and when PDF-META=ON is set.
- The specification of this keyword is ignored if PDF-AES=ON or PDF-META=ON has not been set.

PDF-NOOCRB

**Format**

PDF-NOOCRB={ ON | OFF }

**Function**

**ON:**

This does not embed the OCR-B fonts used in the PDF.

**OFF:**

This embeds the OCR-B fonts. When OCR-B fonts exist in the client setup, specify "ON" to reduce the file size.

Example: PDF-NOOCR=ON

**Value if omitted**

OFF

**Special note**

- When a value other than ON or OFF is specified, an error occurs.
- When "ON" is specified but the client does not have OCR-B fonts, the fonts will be replaced. Fonts may not be displayed properly depending on the OCR-B fonts or the replaced fonts installed in the client.

PDF-OPENPWD

**Format**

PDF-OPENPWD=<up to 32 byte string>

**Function**

This is used to describe the password required for opening the PDF file in the Acrobat. If characters other than alphanumeric characters or symbols are described, the file may not open correctly in Acrobat.

Example: PDF-OPENPWD=abcdefg&12345

**Value if omitted**

No password required to open document is set.

**Special note**

Be aware that the password is visible in text format in the PDF document information file.

PDF-PAGEMODE

**Format**

PDF-PAGEMODE={ NONE | OUTLINES | THUMBS | AUTO }

**Function**

This is used to specify the display style of PDF document bookmark and thumbnail.

**NONE:**

This does not display either bookmarks or thumbnails. The closed navigation pane will be displayed.

**OUTLINES:**

Regardless of having a bookmark, the PDF of which "bookmark" tab in the navigation pane opened will be displayed.

**THUMBS:**

The "page" tab in the navigation pane opened will be displayed.

**AUTO:**

When the bookmark is created:

PDF of which "bookmark" tab in the navigation pane opened will be displayed.

When a bookmark is not created:

The closed navigation pane is displayed.

Example: PDF-PAGEMODE=NONE

Value if omitted

AUTO

Special note

The keyword may not work depending on the Acrobat settings such as when being displayed on a Web browser.

PDF-PRINT

Format

PDF-PRINT={ ON | OFF | LOWRESO }

Function

This is an Acrobat security information setting for allowing/disallowing printing.

**ON:**

This disallows printing.

**OFF:**

This allows printing.

**LOWRESO:**

Only low resolution printing is permitted (valid only when PDF-KEY128=ON is set).

Example: PDF-PRINT=ON

When omitted

OFF

Points to note

- An error occurs when anything other than ON, OFF, or LOWRESO is specified.
- Furthermore, an error occurs when LOWRESO is specified when the PDF-KEY128=ON has not been set.

- When anything other than off is specified, ensure you set a password in PDF-SECUPWD to allow changes to the security information. If a password is not set, the security settings may not be enabled.
- Only supported for Adobe Acrobat/Reader 5.0 or later.

#### PDF-RESOURCEPERPAGE

##### Format

PDF-RESOURCEPERPAGE={ ON | OFF }

##### Function

Set the method for creating resource dictionaries.

The resource dictionaries contain the image and barcode information used in the PDF file. It may take a long time to display and print PDF files, depending on the applications and devices used for display and printing, if a lot of images and barcodes are used on each page of a PDF file. By creating a resource dictionary for each page, the display and printing performance of such PDF files can be improved. However, this will cause the size of the PDF file to increase by between 100 and 200 bytes.

##### **ON:**

The PDF file resource dictionary is created for each page.

##### **OFF:**

Only one resource dictionary per PDF file is created.

Example: PDF-RESOURCEPERPAGE=ON

##### When omitted

OFF

##### Points to note

- An error occurs when anything other than ON or OFF is specified.
- The size of the PDF file increases when ON is specified.
- Specify ON if the output PDF file uses a lot of images and barcodes and it takes time for display and printing in applications.

#### PDF-SECUPWD

##### Format

PDF-SECUPWD=<up to 32 byte string>

##### Function

This is used to describe the password required for changing the security information in the Acrobat.

If characters other than alphanumeric characters or symbols are described, the file may not open correctly in Acrobat.

This is case sensitive.

Example: PDF-SECUPWD=ABCDEFGH#67890

**Value if omitted**

No password required to change permissions and password.

**Special note**

Be aware that the password is visible in text format in the PDF document information file.

PDF-SELECT

**Format**

PDF-SELECT={ ON | OFF }

**Function**

This is an Acrobat security information setting for allowing/disallowing selection of text and graphics.

**ON:**

Text/graphic selection not allowed.

**OFF:**

Text/graphic selection allowed.

The following settings are also enabled when PDF-KEY128=ON is set:

**ACCESSIBILITY:**

Permit accessibility.

**COPY+EXTRACT:**

Permit copying and extraction of content.

Example: PDF-SELECT=ON

**When omitted**

OFF

**Points to note**

- An error occurs when anything other than ON, OFF, ACCESSIBILITY, or COPY+EXTRACT is specified. Furthermore, an error occurs when ACCESSIBILITY or COPY+EXTRACT is specified when the PDF-KEY128=ON has not been set.
- When anything other than off is specified, ensure you set a password in PDF-SECUPWD to allow changes to the security information. If a password is not set, the security settings may not be enabled.
- Only supported for Adobe Acrobat/Reader 5.0 or later.

PDF-SUBTITLE

**Format**

PDF-SUBTITLE=<up to 256 byte string including the linefeed code>



**Function**

This is used to describe the subject of the Acrobat document.

It can be viewed from [File] - [Document Info] - [General] of Acrobat Reader 4.0 (from [File] - [Document Properties] - [Summary] for Adobe Reader 5.0 or Acrobat Reader 6.0). If the string contains 256 bytes or more, the file may not open correctly in the Acrobat.

Example: PDF-SUBTITLE=This document contains necessary information for instillation.

**Value if omitted**

The subject information becomes blank.

PDF-TITLE

**Format**

PDF-TITLE=<up to 256 byte string including the linefeed code>

**Function**

This is used to describe the title of the Acrobat document.

It can be viewed from [File] - [Document Info] - [General] of Acrobat Reader 4.0 (from [File] - [Document Properties] - [Summary] for Adobe Reader 5.0 or Acrobat Reader 6.0). If the string contains 256 bytes or more, the file may not open correctly in the Acrobat.

Example: PDF-TITLE=PDF Conversion Function Installation Guide

**Value if omitted**

The title information becomes blank.

PDF-YENNONADJUST

**Format**

PDF-YENNONADJUST={ ON | OFF }

**Function**

Specify the conversion of the Unicode character "0x005C" found in PDF files.

**ON:**

"0x005C" is not converted to "0x00A5".

**OFF:**

"0x005C" is converted to "0x00A5".

For Unicode, the yen symbol is assigned to "0x00A5" and the backslash is assigned to "0x005C". In Japanese OS environments, however, the yen symbol is specified instead of the backslash, so it may be preferable to output the yen symbol with "0x005C" as well.

For this reason, List Creator makes it possible to convert characters specified with "0x005C" to "0x00A5" so that both "0x005C" and "0x00A5" output the yen symbol.

Specify ON if you wish to output a backslash with "0x005C", or otherwise output using the original character code.

Example: PDF-YENNONADJUST=ON

**When omitted**

OFF

**Points to note**

- An error occurs when anything other than ON or OFF is specified.
- Depending on the font, the yen symbol may be assigned to both "0x005C" and "0x00A5". This means that the backslash will not be output even if ON is specified.

**9.1.2.5. Setting the PDF Document Information File used during Form Output**

This section explains how to set the PDF document information file used during form output by providing examples.

**Setting items**

Define the following for PDF document information files:

PDF author	: PDF Author
PDF title	: List Creator
PDF subject	: PDF conversion function
Print	: Allow
Embedding fonts	: Embed end-user-defined character (User Defined Characters and JEF extension characters)

**Description Example**

```
[MF-PDF]
PDF-AUTHOR=PDF Author
PDF-TITLE=List Creator
PDF-SUBTITLE=PDF conversion function
PDF-PRINT=OFF
PDF-EMBED=JEF+USER
```

**9.1.2.6. Setting the PDF Mail Distribution Information Files and PDF Mail Configuration Files****●Specifying settings with List Creator**

There are many settings that can be specified with the various List Creator interfaces, but some functions need to be first entered in a PDF mail distribution information file, and then that file needs to be specified when outputting forms.

It is also necessary to configure the required fields in the PDF mail configuration file.

There are also additional explanations regarding the correspondence between ["9.1.2.8 List of PDF Mail Distribution Information File Keywords"](#) and the form output interfaces.

**9.1.2.7. PDF Mail Distribution Information File/PDF Mail Configuration File Examples**

The format for PDF mail distribution information files and PDF mail configuration files are as follows:

- Use halfwidth alphanumerics and symbols in PDF mail configuration files  
Note that for "MLF\_FromFullName" only, fullwidth characters, and the halfwidth symbols "." (period), "\_" (underscore), and "-" (hyphen), as well as the halfwidth space can also be used.
- The character codes that can be used in PDF mail distribution information files and PDF mail configuration files are as follows:

- Windows form output server

The line feed code in ASCII is CR+LF (0x0d+0x0a)

- When the form output server is a Linux

The line feed code in EUC or UNICODE (UTF8) is LF (0x0a)

Enter according to the character code used when executing the user application, as follows:

Platform	Locale name	Code type
Linux	ja_JP.eucJP	EUC
	ja_JP.UTF-8	UNICODE (UTF8)

A single command consists of **keyword**, **=**, **value** and then **line feed**. Refer to the following for keywords that can be used:

=> "9.1.2.9 List of PDF Mail Configuration File Keywords"

- The value is defined as the information following the "=" and before the line feed. Other character types that can be used are halfwidth and fullwidth, Japanese (JIS level-1 and level 2), and alphanumerics. If end-user-defined characters (User Defined Characters and JEF extension characters) are used, an error may occur in the PDF mail distribution.
- Strings not in keywords are treated as comments.
- If you set keywords multiple times, if this is not allowed only the last keyword and setting value will be treated as valid.
- Strings after a "#" are treated as comments.
- Spaces and tabs are ignored. Only spaces in file paths are valid.
- Keyword names are not case sensitive. Settings are case sensitive.
- When a value is left blank, the default value is used. The setting can be omitted if you want to use the default value.
- An error occurs if you do not specify mandatory keywords and values.
- Changes to the PDF mail environment settings file take effect after you restart the PDF mail distribution service or PDF mail distribution daemon.
- The procedures for restarting, starting, and stopping the PDF mail distribution service or PDF mail distribution daemon are described below.

#### How to restart the PDF mail distribution service

- Windows form output server

Start the "ListCREATOR SendMaild Service".

- 1) Log in using Administrator rights, and select **Control Panel >> Administrative Tools >> Services**.

The window showing the list of services will be displayed.

- 2) Select "ListCREATOR SendMaild Service".
- 3) Select Restart to restart the service.

- Linux for Intel64 form output server

Log in as a superuser, and execute the following command to restart the PDF mail distribution

daemon:

```
/opt/FJSVedoc/etc/SKFJSVedocmail restart
```

How to start the PDF mail distribution service

- Windows form output server

Start the "ListCREATOR SendMaild Service".

- 1) Log in using Administrator rights, and select **Control Panel >> Administrative Tools >> Services.**

The window showing the list of services will be displayed.

- 2) Select "ListCREATOR SendMaild Service".
- 3) Select Start to start the service.

- Linux for Intel64 form output server

Log in as a superuser, and execute the following command to start the PDF mail distribution daemon:

```
/opt/FJSVedoc/etc/SKFJSVedocmail start
```

How to stop the PDF mail distribution service

Stop the PDF mail distribution service with the following procedure:

- Windows form output server

Start the "ListCREATOR SendMaild Service".

- 1) Log in using Administrator rights, and select **Control Panel >> Administrative Tools >> Services.**

The window showing the list of services will be displayed.

- 2) Select "ListCREATOR SendMaild Service".
- 3) Select Stop to stop the service.

- Linux for Intel64 form output server

Log in as a superuser, and execute the following command to stop the PDF mail distribution daemon:

```
/opt/FJSVedoc/etc/SKFJSVedocmail stop
```

## ● PDF Mail Template File Format

The PDF mail template file format is as follows:

- Fullwidth and halfwidth Japanese characters (JIS level-1 and level 2), halfwidth alphanumerics, and halfwidth symbols can be used in the PDF mail template file.

- The character codes that can be used in PDF mail template files are as follows:

- Windows form output server

The line feed code in ASCII is CR+LF (0x0d+0x0a)

- When the form output server is a Linux

The line feed code in EUC or UNICODE (UTF8) is LF (0x0a)

Enter according to the character code used when executing the user application, as follows:

Platform	Locale name	Code type
Linux	ja_JP.eucJP	EUC
	ja_JP.UTF-8	UNICODE (UTF8)

- The PDF mail template file is divided into <HEAD> and <BODY> sections.

The content in the <HEAD> section becomes the mail header and the content in the <BODY> section becomes the mail body.

- Strings enclosed by the \$ symbol are treated as variables. Put the content of variables into the [MLF\_Message] section of the PDF mail distribution information file. Lowercase alphanumerics can be used for variables.

- Use the yen character (¥) as an escape to include "\$", "<", ">", and "¥" in the text (i.e., "¥\$", "¥<", "¥>", and "¥¥").
- The following field names are ignored even if they are included in the <HEAD> section:  
Date, From, To, CC, BCC, Message-ID, MIME-Version, Content-Type, Envelope-ID,  
Disposition-Notification-To
- Specify "subject:" in <HEAD> to specify the subject of the mail. Ensure the number of characters (halfwidth alphanumerics) in one line of the PDF mail template file does not exceed 3072. If characters exceed 3072 they are ignored.
- Do not put anything else in the <HEAD> and <BODY> lines. Also, if the same mail header is specified more than once, it will be ignored.

### 9.1.2.8. List of PDF Mail Distribution Information File Keywords

The table below describes the keywords available in the PDF mail distribution information file and their correspondence to the parameters available in the List Creator form output interface.

**Table9.2** List of PDF Mail Distribution Information File Keywords

Section Name	Keyword name	Function	Specify using the form output interface
[MLF_Message]	-	The List Creator mail template variable definition declaration.	-
[MLF_Mail]	-	The PDF mail distribution function declaration.	-
	MLF_ToAddress	Set the destination email address.	Y
	MLF_CCAddress	Set the email address of the recipient of a carbon copy (CC).	-
	MLF_BCCAddress	Set the email address of the recipient of a blind carbon copy (BCC).	-
	MLF_Attachments	Set the full path of files to be attached to the email apart from the generated PDF file.	-
	MLF_SMTPServer	Set the SMTP server section name.	Y
	MLF_FromAddress	Set the address name to put in the distributed email's From header.	Y
	MLF_FromFullName	Set the full name to put in the distributed email's From header.	Y
	MLF_EnvelopeFromAddress	Set the address of the mail to notify the email transmission status.	-
	MLF_EnvelopeID	A field called Original-Envelope-ID:setValue is added to the header of the mail sent to MLF_EnvelopeFromAddress to show the transmission status of the mail.	-

Section Name	Keyword name	Function	Specify using the form output interface
	MLF_TextTemplate	Set the path for the PDF mail template file.	–
	MLF_DeleteFile	Specify whether to delete PDF file and PDF document information file after Mail delivery.	–

Y: Can be specified with the form output interface

–: Cannot be specified with the form output interface

### 9.1.2.9. List of PDF Mail Configuration File Keywords

The keywords for the PDF mail configuration file are as follows:

**Table9.3** List of PDF Mail Configuration File Keywords (in the [MLF\_FixedItem] section)

Keyword name	Description (setting values)
MLF_QueueSavePath	Specify the path to the file used to save transmission queue content. The files attached to the mail (PDF) are stored in this path until transmission of the mail is complete.

**Table9.4** List of PDF Mail Configuration File Keywords (in the [MLF\_Default] section)

Keyword name	Description (setting values)
MLF_FromAddress	From: Specify the address to put in the header.
MLF_FromFullName	Specify the name to put in the header's From field.
MLF_EnvelopeFromAddress	Specify the address of the mail to notify the email transmission status.
MLF_EnvelopeID	Specify the ID used to determine which mail the distribution status is for when using DSN delivery status notification.
MLF_ReturnAddressFormat	Specify the form of the From: field in the transmitted message.
MLF_TextTemplate	Specify the full path of the PDF mail template file.
MLF_DeleteFile	Specify whether to delete information linkage files and attachments after an email is sent.
MLF_DSNOption	Set the notification condition for the DSN delivery status in the DSN.
MLF_UseRFC2231	Specify the transmission format for attached file names.
MLF_UseMDNotifications	Specify whether to request a delivery certificate. A header based on RFC2298 is appended when this option is set.
MLF_SendPartialSize	Specify the size in kilobytes of the divisions when mail is to be divided for transmission.

**Table9.5** List of PDF Mail Configuration File Keywords (in the [MLF\_SMTPServer-Settings name] section)

Keyword name	Description (setting values)
MLF_SMTPServerAddress	Specify the SMTP server address.
MLF_SMTPPort	Specify the port number for the SMTP service (smtp).
MLF_SMTPTimeout	Specify the number of seconds for SMTP server timeout.
MLF_ConnectionCacheNum	Specify the maximum number of connections that can be opened simultaneously.
MLF_MDNSendAddress	When a delivery certificate is requested, specify whether the address uses MAIL FROM.

### 9.1.2.10. PDF Mail Distribution Information File/PDF Mail Configuration File Examples

#### ● PDF mail distribution information file

This section provides PDF mail distribution information files examples.

Setting items

Define the following for the PDF mail distribution information file:

- (1) Recipient of the PDF mail distribution:

*LC-Receiver001@xxx.yyy.zzz.com*

- (2) Destination for the carbon copy (CC) of the PDF mail distribution:

*LC-Receiver002@xxx.yyy.zzz.com*

- (3) Destination for the blind carbon copy (BCC) of the PDF mail distribution:

*LC-Receiver003@xxx.yyy.zzz.com*

- (4) Address of the sender of the PDF mail distribution:

*LCowner@xxx.yyy.zzz.com*

Example

```
[MLF_Mail]
MLF_ToAddress=LC-Receiver001@xxx.yyy.zzz.com..... (1)
MLF_CCAddress=LC-Receiver002@xxx.yyy.zzz.com..... (2)
MLF_BCCAddress=LC-Receiver003@xxx.yyy.zzz.com..... (3)
MLF_EnvelopeFromAddress=LCowner@xxx.yyy.zzz.com..... (4)
```

#### ● PDF mail configuration file

This section provides PDF mail environment settings file examples.

Setting items

Define the following for the PDF mail environment settings file:

- (1) Address of the sender of the PDF mail distribution:

*LCowner@xxx.yyy.zzz.com*

- (2) FQDN name of the SMTP server used for PDF mail distribution:

*LCserver.xxx.yyy.zzz.com*

Example

```
[MLF_Default]
MLF_EnvelopeFromAddress=LCowner@xxx.yyy.zzz.com ..... (1)
[MLF_SMTPServer- default]
MLF_SMTPServerAddress=LCserver.xxx.yyy.zzz.com ..... (2)
```

### 9.1.3. PDF Remote Printing Environment Settings

This section describes the environment settings made for PDF remote printing.

#### 9.1.3.1. Overview of PDF Remote Printing Environment Settings

This section provides an overview of the environment settings for PDF remote printing.

In PDF remote printing, folders are setup on the remote client to store the PDF files distributed from the form output server. These folders are created on the remote client and configured to enable sharing from the form output server, or created on the form output server with sharing enabled for the client performing the PDF remote printing.

The PDF remote printing application installed on the remote client monitors the folder storing the PDF files, and when a file is stored in the folder, it prints the PDF file using the specified printer.

Different printers can be specified for the printing of the PDF files in the folders, you can switch to a different printer by moving the PDF file to the appropriate folder.

Adobe Acrobat/Reader 9.0 or later are required on the client in order to perform printing.

#### 9.1.3.2. Client Environment Settings

This section describes the procedure for configuring the remote client environment.

##### 9.1.3.2.1. Installing PDF remote printing applications

The PDF remote printing application is provided in the form of an installer (setup.exe).

The environment of the client is configured by installing this application and configuring its environment.

This application is retained as setup.exe in \English\pdfmprint on the List Creator product media.



Administrator rights are required for installation.

Caution

##### 9.1.3.2.2. Procedures for configuring PDF remote printing applications

With the PDF remote printing application, configure monitored folders to store the PDF files. Select **Start >> All Programs >> PDF Remote Print** to specify the settings.

- 1) Start the PDF remote printing application.
- 2) From the menu, select **File >> Entry Watched Folder Setting**.
- 3) Set each field in the **Entry Watched Folder Setting**.

Refer to the following for information on configuration:

=> ["9.1.3.2.5 Configuration window for the monitoring folders of PDF remote printing applications"](#)

- 4) Select a registered monitoring setting, then select **File >> Watch Start**.



### 9.1.3.2.3. Structure of monitoring folders for PDF remote printing applications

Three folders are created in the folder registered as the folder to be monitored by the PDF remote printing application.

- Drop folder (Monitoring)

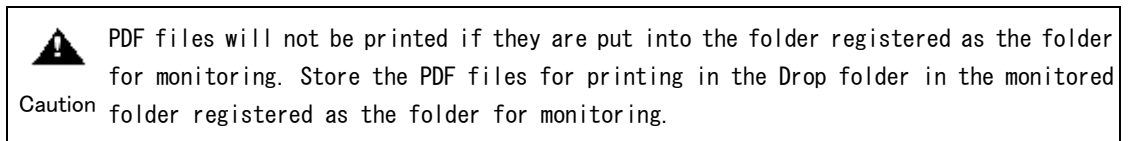
The folder used to store the PDF files to be printed.

- Print folder (Printing)

PDF files that have been printed are moved from the Drop folder to the Print folder.

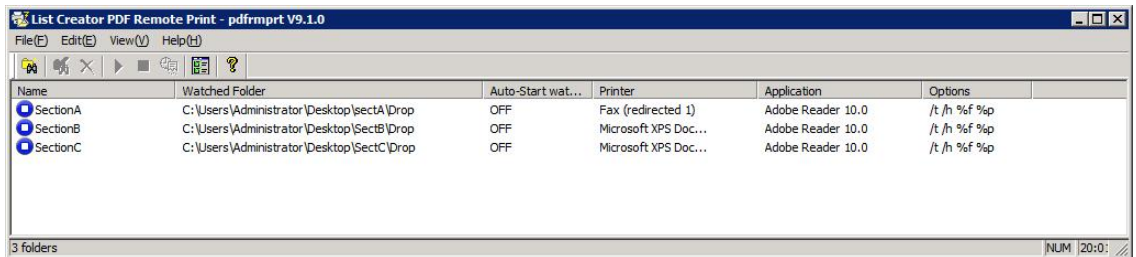
- Error folder (Error)

PDF files that had an error during printing are moved from the Drop folder to the Error folder.



### 9.1.3.2.4. Monitoring window for PDF remote printing applications

This section describes the Monitoring window for PDF remote printing applications.



PDF remote printing applications are operated using menus or toolbars.

#### ● Display item

This following describes the content displayed in the list in the Monitoring window.

##### Name

The monitoring setting name specified in the **Entry Watched Folder Setting** will be displayed.

##### Watched folder

The path to the monitoring folder where the PDF files are stored will be displayed.

##### Auto-Start watching

Displays whether monitoring automatically starts when the PDF remote printing is started.

Monitoring does not start automatically when the PDF remote printing starts if this is "OFF".

Select the monitoring setting and start monitoring manually.

##### Printer

The printer used to print the PDF file will be displayed.

##### Application

The application used when printing PDF files will be displayed.

##### Options

Options used when the specified application is run are displayed.

## ● Menu

The following explains the functionality available from the menus of the Monitoring window.

### File

#### Entry Watched Folder Setting

Opens the **Entry Watched Folder Setting** and enables registration of a new monitoring folder.

#### Watch Start

Starts monitoring of the selected monitoring folder.

#### Watch Stop

Ends monitoring of the selected monitoring folder.

#### Deletion expired file

PDF files that have been printed are saved in the Print folder in the monitoring folder. When a retention period has been set, PDF files in this Print folder whose retention period has expired are deleted.



Caution

When the retention period is set to "0" in the monitoring settings, this is disabled and files will not be deleted automatically. Confirm that it has been printed correctly, then delete.

#### Exit Application

Stops the PDF remote printing application.

### Edit

#### Edit Watched Folder Setting

Opens the **Entry Watched Folder Setting** and enables modifications to the selected monitoring settings.

#### Delete Watched Folder Setting

Deletes the select monitoring settings.

#### Preference Settings

Opens the **Preference Settings** window and enables you to change environment settings.

### View

#### Tool Bar

Toggle Tool Toolbar Show/Hide status.

#### Status Bar

Toggle Status Bar Show/Hide status.

### Help

#### About pdfmpnt

Version information relating to the PDF remote printing function will be displayed.

## ● Tool Bar

The following explains the functionality available from the toolbar of the Monitoring window:  
Refer to the menu for information on function details.

- [Entry Watched Folder Setting](#)
- [Edit Watched Folder Setting](#)
- [Delete Watched Folder Setting](#)
- [Watch Start](#)
- [Watch Stop](#)
- [Deletion expired file](#)
- [Preference Settings](#)
- [About pdfmpprt](#)

### 9.1.3.2.5. Configuration window for the monitoring folders of PDF remote printing applications

This section describes the **Configuration** window for the monitoring folders of PDF remote printing applications.

#### Name

Specify the settings name of the monitoring folder. You cannot specify a name that is used for another setting.

The setting name can be up to 256 characters and can use halfwidth alphanumerics, halfwidth symbols, and JIS level 1 and level 2 kanji.

#### Folder

Specify the path to the root folder using the Browse button. You cannot specify a folder that is used for another setting. The folder can be up to 230 characters and can use halfwidth

alphanumerics, halfwidth symbols, and JIS level 1 and level 2 kanji. You cannot specify the root folder of the drive (C:\, for example). Avoid specifying a folder on a network. Refer to the following for details:

=> ["9.1.3.2.7 Notes on PDF remote printing applications"](#)

The Drop, Print, and Error folders are generated automatically when you specify the root folder. Refer to the following for information on the structure of the folders:

=> ["9.1.3.2.3 Structure of monitoring folders for PDF remote printing applications"](#)

#### Auto-Start watching

Select to start monitoring automatically when the PDF remote printing application starts. The default is unselected.


#### Watch Stop Conditions

You can set monitoring to stop when PDF files that failed to print reaches a certain number of files.

Specify the number of PDF files stored in the Error folder as a condition for stopping printing. Specify a value between 0 and 999. Monitoring is not stopped if "0" is specified. The default is 0.

#### Printer


Specify the printer to be used for printing.

 - Network printers cannot be specified with the PDF remote printing function.  
**Caution** - If the user does not have sufficient permissions to print with a printer registered on the operating system, the printer will not appear in the list.

#### Application

Select Adobe Acrobat/Reader to use for printing. If a different application is to be used, select **Other** and enter the full path for the application.

When you have selected **Other**, the path to the application can be up to 256 characters and can use halfwidth alphanumerics, halfwidth symbols, and JIS level 1 and level 2 kanji.

 Adobe Acrobat/Reader is not displayed in the menu if Adobe Acrobat/Reader 9.0 or later are not installed.  
**Caution**

#### Options

Specify the options used when the specified application is run.

Application	Options
Adobe Acrobat	/t /h %f %p
Adobe Reader	/t /h %f %p
Other	Not applicable

Replacement text	Location
%f	PDF file to be printed

Replacement text	Location
%p	Printer



Do not change the options specified for Adobe Acrobat/Reader.

Caution

#### Keep Day (days)

Specify the number of days printed PDF files are retained in the Print folder. Specify a number of days between 0 and 365. The files are not deleted if 0 is specified.

Files whose retention period has expired are deleted by running "Deletion expired file". The default is 7.

#### Start Time

Specify the time to start deleting the files whose retention period has expired while monitoring. Specify times between 00:00 to 23:59.

Note that if monitoring is stopped, the files whose retention period has expired will not be deleted when the specified time is reached. The default is 00:00.



Caution

PDF files that have been printed will not be deleted automatically if you have not set a retention period for PDF remote printing. Ensure no load is put on disk space by setting a retention period and frequently running "Deletion expired file".

#### Advanced Settings

Perform advanced settings for PDF remote printing applications.

##### Watching Interval

Specify the monitoring interval for folder monitoring. The load on the system can be reduced by specifying a high value when immediate output is not required or the number of times PDF files are stored is low. Specify a value between 1 and 600000 in milliseconds. The default is 1000.

##### Printing Interval

Specify to pause between the completion of one printing job and the starting of the next. Specify a value between 0 and 600000 in milliseconds. The default is 0.

##### Start Application before printing

Specify to have the specified application start before starting printing. This must be specified for Adobe Acrobat/Reader. The default is selected.

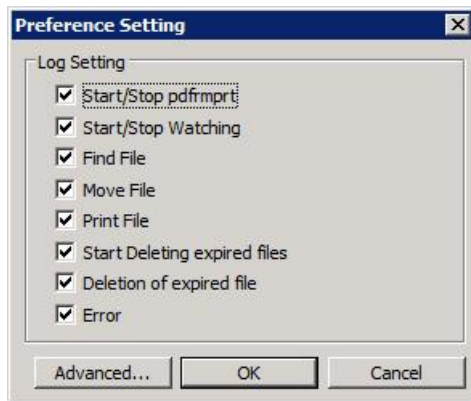
#### 9.1.3.2.6. Environment settings window for PDF remote printing applications

This section describes the **Preference Settings** window for PDF remote printing applications.

In this window, select the messages output by the PDF remote printing application to the event log. This allows you to just output those messages necessary for your style of operation.

Refer to the following for information on the messages output to event logs:

=> ["9.1.3.2.8 Error messages from PDF remote printing applications"](#)



#### Start/Stop pdfmprt

Select when startup and shutdown of the PDF remote printing application is to be output to the event log. The default is selected.

#### Start/Stop Watching

Select when startup and shutdown of the monitoring folder is to be output to the event log. When there is more than one monitoring folder, messages are output separately for each of the monitoring folders starting monitoring. The default is selected.

#### Find File

Check for output to the event log when PDF files are detected in the monitored folder. When there is more than one PDF file in the monitoring folder, messages are output separately for each of the PDF files processed. The default is selected.

#### Move File

Check for output to the event log when PDF files are moved to the monitored folder. In the monitoring folder, PDF files that have been printed are moved to the Print folder and those where an error occurred are moved to the Error folder. When there is more than one PDF file in the monitoring folder, messages are output separately for each of the PDF files processed. The default is selected.

#### Print File

Check for output to the event log when PDF files in the monitored folder are printed. When there is more than one PDF file in the monitoring folder, messages are output separately for each of the PDF files processed. The default is selected.

#### Start Deleting expired files

Select when the time for the startup of the function for deleting files whose retention period has expired is to be output to the event log. The function for deleting files whose retention period has expired is executed at the time set for the monitoring folders or can be performed manually from the menu. Messages are output separately for each of the monitoring folders where the function for deleting files whose retention period has expired is started. The default is selected.

#### Deletion of expired file

Select when files whose retention period has expired are deleted is to be output to the event log. When there is more than one PDF file deleted, messages are output separately for each of the PDF files processed. The default is selected.

## Error

Selected when an error that has occurred is to be output to the event log. The default is selected.

## Advanced...

Perform advanced environment settings for PDF remote printing applications.

### Log Setting

Specify to output debug messages to the event log. Only specify this when there is a special reason to do so, such as after a problem has occurred. The default is unselected.

### Printing Serialization

When **All** is selected, each of the monitoring folders will be checked in turn, then when the PDF files have finished printing, the next folder will be checked.

When **Every watched folder** is selected, the monitoring folders are checked independently. This means that if there are multiple monitoring folders simultaneously containing PDF files, the printing of the PDF files happens simultaneously. With some applications, trying to print simultaneously may result in printing not being performed correctly. Specify **All** unless there is a particular reason not to do so. The default is **All**.

### Setting of Deleting expired files

Files whose retention period has expired are deleted completely when you select **Delete**. Select **Move to Recycle Bin** when files whose retention period has expired are to be moved to the Recycle Bin. The default is **Delete**.

## 9.1.3.2.7. Notes on PDF remote printing applications

This section provides additional notes regarding PDF remote printing applications.

- Printing is determined to have been successful when the application used for printing is launched successfully. This means that files in the Print folder may not have actually been successfully printed. In this case, to complete printing, either move the file to the Drop folder again or restart printing manually.
- When a file that is not a PDF file is detected in the Drop folder, it is moved to the Error folder.
- If a file that appears to be an incomplete PDF file is detected in the Drop folder, processing waits for the remainder of the file to be transmitted rather than attempting to start printing or treating it as an error. If it appears as if the remainder of the file will not be transmitted, delete the file manually.
- Do not use the application specified in the monitoring settings while PDF remote printing is running.
- When Adobe Acrobat/Reader dialogs appear automatically (such as for automatic updates and license confirmation), printing may fail. Disable these dialogs by performing the appropriate settings.
- Adobe Acrobat and Adobe Reader cannot be specified simultaneously when registering an application in the monitoring settings. When you register Adobe Acrobat, any places where Adobe Reader is set in other monitoring settings also automatically change to Adobe Acrobat. The reverse is also the case when you register Adobe Reader, with all Adobe Acrobat occurrences changing to Adobe Reader.

- When you register multiple monitoring settings, it is recommended to keep the number of folders that will start monitoring simultaneously to about 20. If you require more than 20 folders, check the system resource usage on the remote client and ensure there is no problem with this style of operation.
- If a file with a path name exceeding 260 characters is detected in the Drop folder, monitoring of that folder stops. Delete the file or change its name to restart monitoring.
- When files in Print or Error folders are moved, the names are modified to pdfmprt%d (%d being a number up to 10 digits) to avoid overwriting files in the destination folder. When files detected in the Drop folder have full paths of 258 or 259 characters, they cannot be moved to the Print folder or deleted with the existing name, so the same naming rule is applied.
- If a folder on a network is specified as the monitoring folder, monitoring may fail depending on the network status. In this case, resolve the network problem and then start monitoring. Monitoring does not stop if there is a disconnection, server failure, network load, or some other problem with the folder on the network, instead it waits for the network to recover. Error logs continue to be output with each monitoring pass. In an environment where the network is inadequate, increase the monitoring interval and increase the maximum log size of the event log to prevent overflow.

#### 9.1.3.2.8. Error messages from PDF remote printing applications

This section describes the error messages that are output by PDF remote printing applications and the required action.

Errors are sent to the event log by PDF remote printing applications. The source of the event log is "ListCREATOR pdfmprt".

**Table9.6** Event log of the ListCREATOR pdfmprt

Event ID	Message body	Cause and action
1	pdfmprt is started.	The PDF remote printing application has started.
2	pdfmprt is stopped.	The PDF remote printing application has stopped.
3	[%1] Watch is started. (%4)	Monitoring of the monitoring folder has started. The monitoring name is displayed for %1. For %4, "Auto" is displayed if startup is automatic and "Manual" is displayed if startup was manual (from a menu, for example).
4	[%1] Watch is stopped. (%4)	Monitoring of the monitoring folder has ended. The monitoring name is displayed for %1. For %4, "Auto" is displayed if startup is automatic and "Manual" is displayed if startup was manual (from a menu, for example).
5	[%1] File is detected. (%2)	A PDF file has been detected. The monitoring name is displayed for %1. The full path to the PDF file is displayed for %2.
6	[%1] "%2" is moved to the %3 folder. [%1] "%2" is moved to the %3 folder. (as %4)	The PDF file has been moved. The monitoring name is displayed for %1. The PDF file name is displayed for %2. The destination folder is displayed for %3. When printed, "Print" is displayed. When there is an error, "Error" is displayed. For %4, the name after modification is shown if the file



Event ID	Message body	Cause and action
		name changes when it is moved.
7	[%1] "%2" is printed.	A PDF file has been printed. The monitoring name is displayed for %1. The name of the PDF file that was printed is displayed for %2.
8	[%1] Deleting expired files is started. (%4)	Started to delete the files whose retention period has expired. The monitoring name is displayed for %1. For %4, "Auto" is displayed if execution is automatic due to a time setting in the monitoring settings, and "Manual" is displayed if execution was manual (from a menu, for example).
9	[%1] "%2" is deleted.	Files were deleted due to their retention period having expired. The monitoring name is displayed for %1. The PDF file name is displayed for %2.
10	[%1] %2[FILE LINE]	An error occurred when printing the PDF file with an application. The monitoring name is displayed for %1. Details appear for %2.  Resolve the issue depending on the following: - "File access error. (%s)": Check file access permissions. - "Print error. (%s)": Check if an error has occurred on the printer. - "Folder is being watched.": Check if the folder is being monitored by another PDF remote printing program. - "File is not PDF. (%s)": Check if the file in the folder is a valid PDF file. - "Too long file name. (%s)": The path name for the PDF file is too long. Delete the file or change its name to restart monitoring.
11	Debug: %2	The following debug message is output: Details are displayed for %2. Record the content of this message and the operations performed and contact Fujitsu technical support.

## 9.2. Notes on Operation

This section provides notes for using the PDF conversion function.

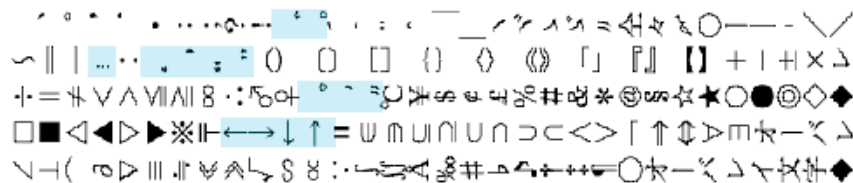
### 9.2.1. Precautions when Creating Applications

#### 9.2.1.1. Displaying Characters

- The way PDF files are displayed depends on the environment of the client system when fonts are not embedded in the PDF file, and may be displayed incorrectly.
- If text is bolded, text may not be clear when you zoom in using Acrobat or may not be output correctly when printed. This can be resolved by embedding the fonts.
- When vertical characters (fonts marked with @) are used, the characters highlighted in the diagrams below change position or become horizontal on a Windows or Macintosh system.

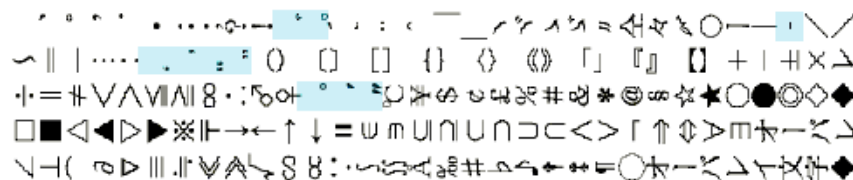
- When displayed in Windows without embedding

Example:



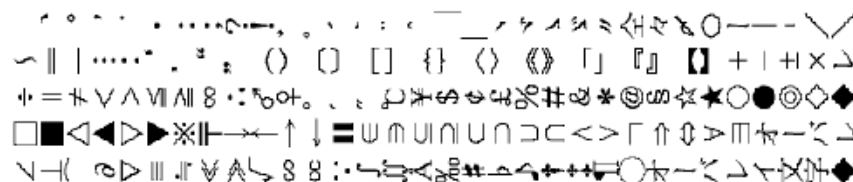
- When displayed in Macintosh without embedding

Example:



- When displayed in Windows and Macintosh after embedding

Example:



- When fonts are embedded in the PDF file the file size increases according to the number of characters used.

### 9.2.1.2. Generation of Working Files

Working files are generated when PDF files are being generated. The size of the working files depends on the form being output, but is approximately two to four times the size of the PDF file that is eventually generated. These working files are deleted after generating the PDF file.

PDF files will not be generated correctly if there is insufficient space or permissions for the following folders:

- List Creator form output interface  
Windows form output server: *instal/Dir\TEMP*  
Linux for Intel64 form output server: /var/tmp

Refer to the following when distributing PDF files by email:

=> ["9.2.4 Notes on Distributing PDF Emails"](#)

### 9.2.1.3. Full Screen Display

If PDF-FULLSCREEN=ON (full screen display) is set, the toolbar and menu bar are not displayed, irrespective of the settings for PDF-HIDETOOLBAR (hide or show the toolbar) or PDF-HIDEMENUBAR (hide or show the menu bar).

In this case, use one of the following procedures to close a PDF file displayed in full screen:

- For Acrobat 7.0, Select **Edit >> Preferences >> General >> Full Screen (Edit >> Preferences >> Full Screen** for Acrobat 8.0 and later) and if **Escape key exits** is selected, the titlebar will be displayed when the ESC key is pressed.
- Ctl+L (Command+L on Macintosh) also exits the full screen mode.

## 9.2.2. Notes on Adobe Reader

### 9.2.2.1. Acrobat Reader Versions

The PDF files generated with the PDF conversion function use the following specifications:

- Portable Document Format Reference Manual Version 1.4 (published by Adobe Systems Incorporated)
- There are certain restrictions with PDF files created with the PDF conversion function, depending on the Adobe Acrobat/Reader version being used.

**Table9.7** Adobe Reader version limitations

PDF conversion functions with limitations	Adobe Acrobat/Reader 4.0	Adobe Acrobat/Reader 5.0	Adobe Acrobat/Reader 6.0	Adobe Acrobat/Reader 7.0	Adobe Acrobat/Reader 8.0	Adobe Acrobat/Reader 9.0
128-bit encryption	N	Y	Y	Y	Y	Y
AES encryption	N	N	N	Y	Y	Y
Viewing restriction function	M	M	Y	Y	Y	Y
PDF auto print function	Y	Y	Y	Y	M	M

- When displaying PDF files with 128-bit encryption, use Adobe Acrobat/Reader 5.0 or later. For other types (40-bit encryption) use Adobe Acrobat/Reader 4.0 or later.

- Display performance may be slower when displaying PDF files with a large number of pages in Adobe Acrobat/Reader 5.0 or later.
- PDF files that have had viewing restrictions set cannot be reset using Adobe Acrobat/Reader 5.0 or earlier.
- A print dialog box will be displayed when printing PDF files automatically using Adobe Acrobat/Reader 8.1.3 or later.
- As security options may not be enabled for Adobe Reader 7.0 to Adobe Reader 7.0.4, use Adobe Reader 7.0.5 or later and set the PDF file security option for modifying the password. Refer to the following for information on the password for modifying PDF file security options.
  - ["9.1.2.1 Setting the PDF Document Information File used during Form Output"](#)
  - Online manual: Application Design

#### 9.2.2.2. PDF File Limitations

According to PDF language specifications, the display in Adobe Acrobat may not be correct when the following limits are exceeded:

Maximum number of pages in a PDF file	Approximately 8000 pages (no overlay)
Valid range for coordinates s	Approximately -32000 to +32000 points
Maximum string length	Approximately 4,095 characters

#### 9.2.2.3. Searching in PDF Files

When the search facility in is to be used, searches for halfwidth alphanumerics may not be performed correctly.

PDF files generated using the List Creator PDF conversion function and the List Works link function may exhibit the following behavior when displayed in Adobe Acrobat/Reader.

- Halfwidth alphanumerics cannot be searched for correctly.  
(Search may be possible by putting spaces between the halfwidth alphanumerics)
- Spaces are inserted between characters when halfwidth alphanumerics are copied.

This behavior is caused by an internal Adobe Acrobat/Reader process. The following work arounds may be effective.

- In the properties for the field that include the target string in the form definition information, clear the selection of **Pitch** in the **Font** tab to generate PDF files, or convert the halfwidth characters to fullwidth to generate the PDF file.
- Use an alternative PDF viewer or use a full text search plug-in for Adobe Acrobat produced by a third-party developer.

#### 9.2.2.4. Shading

When shading is used to draw objects, blurring may occur under some zoom conditions for.

#### 9.2.2.5. Dashed Lines

When dashed lines are used to draw objects, they may be irregular under some zoom conditions for.

For Adobe Acrobat/Reader 5.0 or Adobe Reader 6.0 or later, there may be irregularities in the start positions for dashed line patterns.

#### 9.2.2.6. Display of Document Information in Acrobat

- For Adobe Reader, "preventing the file from editing (changing)" and "adding/changing annotations and form fields" are set unconditionally to "Not Allowed".
- Only 32 bytes of the PDF file password and the security level in the PDF files are used. The password may not function correctly if characters outside the ASCII range are used.
- If characters other than Japanese (JIS level-1 and level 2, including JIS non-kanji) or alphanumerics are used in the following fields in the PDF file document information, they may not be displayed correctly:
  - Title
  - Subtitle
  - Author

#### 9.2.2.7. Printing PDF Files

- When printing PDF files, the files may not be printed the same way as they are displayed in Adobe Acrobat, depending on the environment. This can be avoided by selecting **File >> Print >> Print as image (File >> Print >> Advanced >> Print as image** for Adobe Acrobat 8.0 or later).
- Images may not be printed as expected when compared to the PDF file that was generated if you set the **File >> Print >> Fit to Printable Area** option in Adobe Acrobat because of resizing.
- When printing from Adobe Reader, the paper size used is that of the printer set in **File >> Print Setup (File >> Print Setup** for Adobe Reader 8.0 or later), according to Adobe Reader specifications.

In this case, change the paper size used for printing by selecting **File >> Print Setup (File >> Print Setup** for Adobe Reader 8.0 or later) in Adobe Reader.

If the paper size cannot be changed dynamically, select the Windows default printer from the Windows **Printer Setup** window, then use the **Print Setup** window for that printer to change the paper size.

#### 9.2.2.8. File Attachment Function

Use Adobe Acrobat 5.0 or later to extract files attached to PDF files created using the file attachment function. Extraction is not possible with Adobe Acrobat/Reader 4.0, or Adobe Acrobat/Reader 5.0.

Use the following procedure to extract attached files:

For Adobe Acrobat 5.0

- 1) Select **File >> Properties >> Embedded Data Objects** from the menu.
- 2) In the **Embedded Data Objects** dialog box, select the file to extract and click **Export**.
- 3) Specify a destination to save to.

For Adobe Acrobat/Reader 6.0

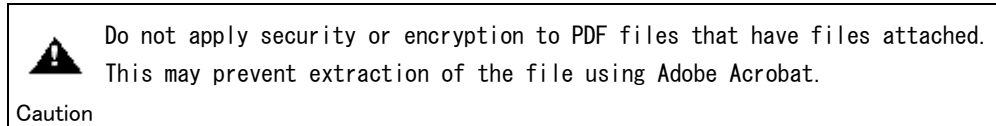
- 1) Select **Document >> Attach a file** from the menu.
- 2) In the **Attach a file** dialog box, select the file to extract and click **Export**.
- 3) Specify a destination to save to.

For Adobe Acrobat/Reader 7.0

- 1) Select **View >> Navigation Panels >> Attachments** from the menu.
- 2) In the **Attachments** tab, select the file to extract and click **Save**.
- 3) Specify a destination to save to.

For Adobe Acrobat/Reader 8.0 or later

- 1) Select View >> Navigation Panels >> Attachments from the menu.
- 2) In the Attachments panel, select the file to extract and click Save.
- 3) Specify a destination to save to.



### 9.2.2.9. Image Transparency Function

- When masking binary monochrome images, a desirable masking result may not be achieved. This can be avoided by modifying the image and saving again.
- When outputting forms created with the List Creator Designer, the image transparency field supports two color bitmaps, TIFFs, and PNGs. If unsupported images are used, the following error will occur, and the images will have no transparency:  
" Error During PDF Output. Check the PDF Conversion Function Log Information for Error Details. Detail Code: [9M]"

### 9.2.2.10. Adobe Acrobat JavaScript Configuration

The Adobe Acrobat JavaScript needs to be enabled in order to use the PDF automatic printing function and the PDF restriction of viewing function.

The following describes how to check if Adobe Acrobat JavaScript is enabled:

Note that the procedure described here is for Adobe Acrobat 7.0/8.0/9.0.

- 1) Start Acrobat.
- 2) Select Edit >> Preferences.  
The Preferences window will be displayed.
- 3) Select JavaScript from the Categories on the left of the Preferences window.
- 4) Confirm that the Enable Acrobat JavaScript checkbox is selected in the panel on the right of the Preferences window.  
Select the checkbox if it is not selected.

## 9.2.3. Notes on Barcodes

- Text printing for barcodes cannot be specified for customer barcodes and U. S. POSTNET barcodes. Disable text printing for barcode fields when designing the forms.
- Division of QR codes will be disabled.
- Use a printer with a resolution of at least 600 dpi when printing PDF files that use barcodes.
- The precision of barcodes depends on the paper, reader, and resolution and condition of the output device, so before starting actual operations ensure the barcode can be read.
- Keep the field length within 128 characters when outputting Code 128. There is a form output error if a field length greater than 128 characters is specified.

The default when generating PDF files is the narrow bar width recommended in the JIS and EAN specifications. For code types where the narrow bar width is not specified, the barcodes will be output with a narrow bar width of 0.264mm, meaning that the size specified in barcode fields when designing the form may not be used for output.

To output the barcode field with the specified size, either specify PDF-BARBOX=ON in the PDF document information file (Explanation of the [PDF Document Information File](#) Keywords used

during Form Output), or specify **Adjust barcodes to fit field sizes** in the **File** tab from the **PDF Options** window in Form Output Methods in the List Creator Designer.

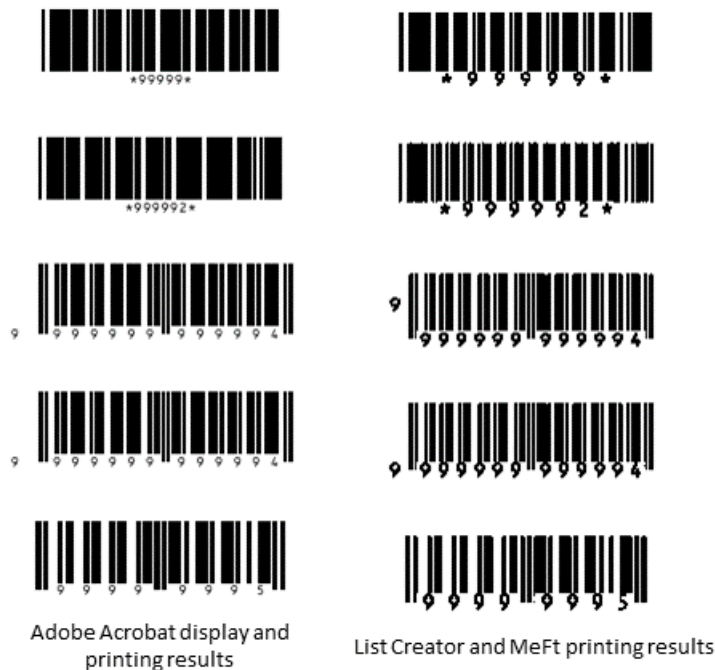
The above operation may mean that the width of white and black bars, the narrow bar width, and the gaps between characters may be smaller than the sizes specified by JIS. Test this with your printers and barcode readers to ensure reading is possible before using in actual operations.

Note that for the following barcodes, the **Adjust barcodes to fit field sizes** setting is disabled:

- Code 3 of 9 (EIAJ Compliant) (\*1)
- Customer barcode
- EAN-128 (Convenience Store)
- U.S. POSTNET (Delivery Point Code), U.S. POSTNET (ZIP+4 Code), U.S. POSTNET (5-Digit ZIP Code)
- FIM A (U.S. Postal FIM), FIM B (U.S. Postal FIM), FIM C (U.S. Postal FIM)

\*1: The values set in the **EIAJ Barcode Settings** in the barcode field properties in the List Creator Designer are valid with Code 3 of 9 (EIAJ standards).

- The spacing of characters in the text portion of barcodes will be uneven.
- The size of the text in the barcode is relative to the width of the barcode.
- PDF417 barcodes do not support Truncated PDF417 or Micro PDF417 formats.
- The quiet zones in JAN Standard barcodes are drawn with the same 11 modules on both sides.



## 9.2.4. Notes on Distributing PDF Emails

### 9.2.4.1. Creation of Working Files

The following working files are created when distributing emails:

- Windows form output server  
*installDir\mailqueue*
- Linux for Intel64 form output server  
*/var/opt/FJSVedoc/mailqueue*

These temporary files are automatically deleted, but they may remain if an error occurs.

If the error allows retries, retransmissions are attempted every 30 seconds, up to a maximum of 60 times. The working file is deleted when the cause of the error is resolved.

If the address of the recipient is incorrect, the working file will remain and will need to be deleted manually.

#### 9.2.4.2. Compatibility between Form Output Methods and Email Clients

The information specified when defining form work information in List Creator or when outputting forms is passed to the related software.

The following table shows where the form work information defined in List Creator will be displayed in the windows of the related software.

Refer to the following when distributing PDF files by email:

=> ["Table9.8 Email Software"](#)

**Table9.8** Email Software

Email information	Content specified in the List Creator Form Output Methods or when outputting forms
Email recipient (address)	1) Address of the recipient of the PDF mail distribution specified when outputting forms
	2) Address of the recipient specified in the PDF mail distribution information file specified when outputting forms
Mail sender (address)	1) Address of the sender of the PDF mail distribution specified when outputting forms
	2) Address of the sender in the PDF mail distribution information file specified when outputting forms (MLF_FromAddress keyword in the [MLF_Mail] section)
	3) Address of the sender in the PDF mail distribution information file specified when outputting forms (MLF_EnvelopeFromAddress keyword in the [MLF_Mail] section)
	4) Address of the sender in the PDF mail distribution environment settings file (MLF_FromAddress keyword in the [MLF_Default] section)
	5) Address of the sender in the PDF mail distribution environment settings file (MLF_EnvelopeFromAddress keyword in the [MLF_Default] section)
Mail sender (name)	1) Name of the sender of the PDF mail distribution
	2) Name of the sender in the PDF mail distribution information file specified when outputting forms (MLF_FromFullName keyword in the [MLF_Mail] section)
	3) Name of the sender in the PDF mail distribution environment settings file (MLF_FromFullName keyword in the [MLF_Default] section)



## *Chapter10 Excel File Output*

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This appendix explains how to use Excel file output and some points to note about it.

## 10.1. Excel File Output

This section provides an overview of Excel file output.

### 10.1.1. Feature Overview

List Creator Excel file output (hereafter referred to as "Excel file output") outputs forms to files in Microsoft Office Open XML Formats (hereafter referred to as "Excel files"), which can be used in Excel 2000 and later. Refer to the About the List Creator online manual for information on the software required.

#### Description

Excel file output

#### Features

- This feature incorporates its own Excel file generation engine, so no further software is required to output Excel files.
- Forms can be output to an Excel file just as if they were printed, with each page output on a separate sheet. This is useful when data is to be used at the page level.
- With multipart table format forms, detailed data would otherwise be output to several sheets can be output to a single sheet, so that the entire output can be used for analysis.
- Resources being used for printing and saving as PDF can be reused for outputting to an Excel file.
- Data output to Excel files can be protected by specifying a sheet protection password and a workbook protection password.

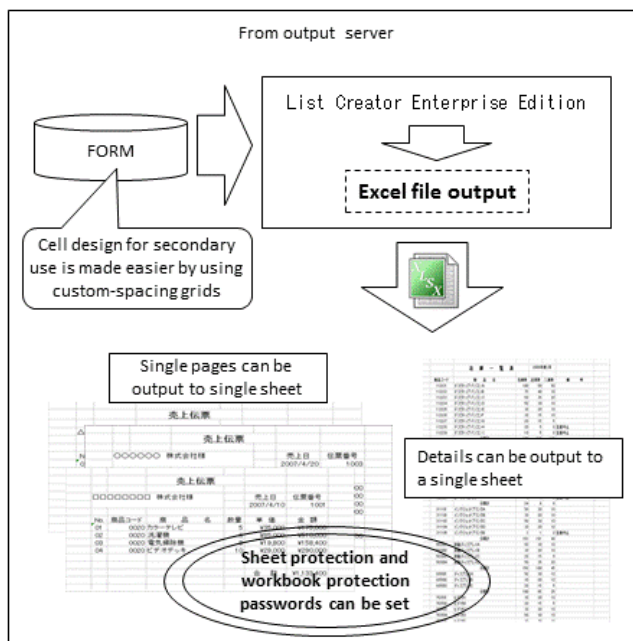


Diagram10.1 Overview of Excel file output

#### 10.1.1.1. Fujitsu's Own Excel File Generation Engine

The field information (font, alignment, editing format, etc.) and printing information (page size, page orientation, etc.) defined in the form definition information can be output as an Excel file. This feature also enables the output of barcodes, embedded media, and overlays so that Excel files designed using the Form Style Descriptor can be output.

Furthermore, titles, subtitles, and authors can be set as document information for the Excel file, making it easy to clarify its use and purpose. Also, when multiple sheets are output they can be individually named in order to allow easy identification.

Refer to the following:

=> ["10.3.2 Correspondence between Form Definition Information and Excel Files"](#)

Using custom-spacing grids in List Creator Designer means that the size of the cells output to the Excel file can be specified with grid sizes.

When form definition information has been designed with fixed-spacing grids, List Creator automatically generates cells based on the length of the fields that are placed and the intervals between the placed fields.

Refer to the Advanced Form Design online manual for information on the grid feature.

#### 10.1.1.2. Output Single Pages to Single Sheets

The output data is output to different sheets using the height of the print area specified in the Form Style Descriptor window of List Creator Designer. This means that data can be output for each sheet, so the data in forms with fixed formats, such as docketts and pay slips is output at the page level and the data is available for secondary uses.

#### 10.1.1.3. Output Detailed Data on a Single Sheet

With multipart table format forms, detailed data can be output without changing the sheet. As the detailed data is output to one sheet, irrespective of the print area, the data is easily collated and analyzed and is available for secondary uses.

Specify **Output without changing a sheet with the height of a print range** for the output of the details if you want the detailed data to be output continuously. The detail output format can be specified when designing the forms or when outputting the form.

Refer to the Advanced Form Design and the Application Design online manuals for information on how to specify when designing forms and outputting forms, respectively.

#### 10.1.1.4. Reuse of Resources being Used for Printing and Saving as PDF

The form definition information used for printing and for saving as PDF can also be used for outputting to an Excel file, without making any changes.

Refer to the following for information on features supported when outputting Excel files:


=> ["10.3.2 Correspondence between Form Definition Information and Excel Files"](#)

#### 10.1.1.5. Data Protection

If the data in Excel files is to be shared, specify a sheet protection password or a workbook protection password – these are specified in the Excel document information file.

Refer to the following:

=> ["10.2.2.4 Specifying in Excel Document Information Files"](#)

 <b>Caution</b>	<p>Data protection is not suitable for protecting highly sensitive data. For that, restrict access to the Excel file itself by using features offered by the operating system, such as account controls, directory access control, etc.</p>
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## 10.2. Using Excel File Output

This section describes how to use Excel file output.

### 10.2.1. Outputting Excel Files

It is necessary to specify how the form is output and the name of the file when outputting Excel files. You can specify form output and file names in one of the following ways:

- Using the form output interface when outputting forms
- Using List Creator Designer when designing forms

 **Note** If you specify the form output and the file name using both the form output interface and List Creator Designer, the content specified in the former has precedence.

#### ● Specify by using the form output interface when outputting forms

- With commands (prprint, prprintx, prputprt, prputex)
 

Execute the following command option:

  - 1) Specify "excel" using the -atdirect or -atmethod option.
  - 2) Specify the Excel file name using the -keepxlsx option.
- With a Java interface
 

Specify the following key in the setProperty method of the PrintProperties class:


  - 1) Specify "EXCEL" in the value for the ID\_DIRECTMETHOD key or ID\_OUTPUTMODE key.
  - 2) Specify the Excel file name in the ID\_KEEPPXLSX key.
- With a .NET interface
 

Specify the following properties in the PrintProperties class:

  - 1) Specify "OUTPUTMODE\_EXCEL" in the value for the DirectMethod property or OutputMode property.
  - 2) Specify the Excel file name in the KeepXlsx property.
- With Custom control
 

Specify the following properties in the PrctrlEx Control custom control:

  - 1) Specify "TRUE" in the value for the DirectMethod property or OutputMode property.
  - 2) Specify "TRUE" in the OutputExcel property.
  - 3) Specify the Excel file name in the KeepXlsx property.

 **Note** Refer to the Application Design online manual for information on the form output interface.

#### ● Specify with the List Creator Designer when designing forms

- 1) Select the form definition information to be output in the **Form Descriptor** List window of the List Creator Designer, then select **File >> Properties**.  
The **Form Output Methods** window is displayed.
- 2) From the **File (Excel)** tab, select the **Output as Excel File** checkbox.
- 3) Specify the storage destination file name.



Refer to the Advanced Form Design online manual for information on operations with List Creator Designer.

## 10.2.2. Specifying Document and Security Information

Titles, subtitles, and authors can be specified as document information using the Excel file output feature. Furthermore, a sheet protection password and write protection password can be specified as security information.

The document information and security information can be specified as shown below:

- Specify using the Excel document information file
- Specify using the form output interface
- Specify in the document information setting window from the **File (Excel)** tab in the **Form Output Methods** window

Furthermore, the settings that can be specified depend on the method chosen, as shown below:

**Table10.1** Methods that support document and security information

Information \ Method used	Excel document information file	Form output interface	Form work information properties
Title	Y	Y	N
Subtitle	Y	N	Y
Author	Y	N	Y
Sheet protection password	Y	N	N
Workbook protection password	Y	N	N

The priority of the different methods is as follows:

- 1) Form output interface
- 2) Excel document information file
- 3) Form work information

The sub-sections below describe the Excel document information file, which is used when outputting Excel files using the List Creator form output interface.



- Refer to the Application Design online manual for information on the form output interface.

**Note** - Refer to the Advanced Form Design online manual for information on form work information.

### 10.2.2.1. Format of the Excel Document Information File

The syntax of the Excel document information file is described below:

```
[MF-XLSX]
keyword=value
```

Observe the following rules for the keywords and values:

- Section names and keywords must be in uppercase.
- Unrecognized keywords will be treated as comments - refer to ["Table10.2 Excel document information file sections and keywords"](#) for details.

- Lines starting with # are considered as comments.
- Lines with a space or tab before the equals sign will be treated as comments.
- If a section ([MF-XLSX] in the example above) is declared more than once, only the first declaration is valid.
- If a keyword is declared more than once, only the last value specified is valid.

Half-width and full-width characters, Japanese (JIS level-1 and level 2), and alphanumerics can be used. Note that text may not be displayed correctly if you use JEF extended characters or user-defined characters.

### 10.2.2.2. Sections and Keywords in Excel Document Information Files

This section lists the sections and keywords in the Excel document information file.

**Table10.2** Excel document information file sections and keywords

Section and keyword names	Description	Supported by form output interface
[MF-XLSX]	Excel document information file header.	N
XLSX-SHEETPWD	Sheet protection password.	N
XLSX-SAVEPWD	Workbook protection password.	N
XLSX-TITLE	Title.	Y
XLSX-SUBTITLE	Subtitle.	N(*1)
XLSX-AUTHOR	Author.	N(*1)
XLSX-CTLWMSG	Whether to output repeated warning messages.	N
XLSX-OFFICE	Increases the maximum number of sheets output.	N
XLSX-EXTFUNC	Extended features to output.	N
XLSX-MDASHARE	Shares image data in the embedded media fields.	N
XLSX-STRSTYLE	Text formatting.	N
XLSX-JUSTPAGEPRT	Page printing adjustments.	N
XLSX-HATCHDRAWMODE	Fill drawing mode.	N
XLSX-LINEDRAWMODE	Line drawing mode.	N

\*1: Can also be specified in the **File (Excel)** tab of the form work information property window in List Creator Designer.

The list below explains the sections and keywords.

#### ● Section

[MF-XLSX]

##### Format

[MF-XLSX]

##### Description

Header of the Excel document information file.

Keywords and their definitions occurring after this section are valid. This must be declared before the keywords.

##### When omitted

This cannot be omitted.

##### Points to note

If this section is specified more than once, only the first declaration is valid.

## ● Keywords

XLSX-SHEETPWD

### Format

XLSX-SHEETPWD=*upTo15Alphanumerics*

### Description

Declares the sheet protection password, which will protect all sheets.

This will be set as the password to enter in the **Password to unprotect sheet** field in the Excel **Protect Sheet** dialog box. Note that in **Allow all users of this sheet to list**, the **Select locked cells** and **Select unlocked cells** check boxes will be enabled.

For example: XLSX-SHEETPWD=abc

### When omitted

Sheets will not be protected.

If the keyword is specified but no value is specified, then the sheet will be protected without a password.

### Points to note

- he text is case-sensitive.
- An error will occur if non-alphanumerics or more than 15 characters are specified.
- The password appears as text in the Excel document information file, so make sure the file is stored appropriately.

XLSX-SAVEPWD

### Format

XLSX-SAVEPWD=*upTo15Alphanumerics*

### Description

Declares the workbook protection password.

This is password that Excel creates when the user selects **Save As >> Tools >> General Options**, and enters the **Password to modify** field.

For example: XLSX-SAVEPWD=xyz

### When omitted

The workbook protection password is not set.

An error will occur if the keyword is specified with no value.

### Points to note

- The text is case-sensitive.
- An error occurs if more than 15 characters are specified or if characters other than alphanumerics are specified.
- The password appears as text in the Excel document information file, so make sure the file is stored appropriately.

XLSX-TITLE

**Format**

XLSX-TITLE= *upTo2036CharsIncludingLinefeeds*

**Description**

Declares the workbook title.

This will be set in the **Title** field of the **Summary** tab in the **Properties** window in Excel.

For example: XLSX-TITLE=Sales dockets

**When omitted**

The form name is set.

An error occurs if the keyword is specified but no value is specified.

**Points to note**

- The title can be up to 1,024 characters or 2,036 bytes long (including line feed character). If the specified string is longer than 1,024 characters, only 1,024 characters will be used for the title. Furthermore, if the size of the specified characters exceeds 2,036 bytes (including line feed characters), then the string expressed by the first 2,035 bytes will be used. However, an error occurs if a character is only partly expressed at the 2,035th byte.
- If a title is specified in the form output interface, the value specified with this keyword is not used.

XLSX-SUBTITLE

**Format**

XLSX-SUBTITLE=*upTo2033CharsIncludingLinefeeds*

**Description**

Declares the workbook subtitle.

This will be set in the **Subject** field of the **Summary** tab in the **Properties** window in Excel.

For example: XLSX-SUBTITLE=November Sales

**When omitted**

The value specified in the **File (Excel)** tab of the form work information property window in List Creator Designer is set.

An error will occur if the keyword is specified with no value.

**Points to note**

The subtitle can be 1,024 characters or 2,033 bytes long (including line feed code). If the specified string is longer than 1,024 characters, only 1,024 characters will be used for the title. Furthermore, if the size of the specified characters exceeds 2,033 bytes (including line feed codes), then the strings expressed by the first 2,032 bytes are used. However, an error occurs if a character is only partly expressed at the 2,032th byte.



XLSX-AUTHOR

**Format**

XLSX-AUTHOR=*upTo2035CharsIncludingLinefeeds*

**Description**

Declares the workbook author.

This will be set in the **Author** field of the **Summary** tab in the **Properties** window in Excel.

For example: XLSX-AUTHOR=ABC Pty., Ltd.

**When omitted**

The value specified in the **File (Excel)** tab of the form work information property window in List Creator Designer is set.

An error will occur if the keyword is specified with no value.

**Points to note**

The author can be 1,024 characters or 2,035 bytes long (including line feed code). If the specified string is longer than 1,024 characters, only 1,024 characters will be used for the author. Furthermore, if the size of the specified characters exceeds 2,035 bytes (including line feed codes), then the strings expressed by the first 2,034 bytes are used. However, an error occurs if a character is only partly expressed at the 2,034th byte.

XLSX-CTLWMSG

**Format**

XLSX-CTLWMSG={ 0 | 1 }

**Description**

Declares whether to output repeated warning messages every time they are issues or only once per workbook.

**0:**  
Output once per workbook

**1:**  
Output every time

Example: XLSX-CTLWMSG=0

**When omitted**

0 (Output once per workbook)

An error will occur if the keyword is specified with no value.

**Points to note**

- When "0" (that is, output once per workbook) is specified, the relevant warnings are output only on their first occurrence in a workbook.
- The relevant warnings are as follows.  
Refer to the Troubleshooting & Messages online manual for information on messages.

Warning:M2X:00000017:Limit excess occurred(number of lines)., *title, sheetName*

Explanation:

The maximum number of lines has been exceeded. Output will continue on the next sheet.

Warning:M2X:00000000:Overwrite of data occurred., *title, sheetName, rowNumber, columnNumber, partitionName*

Explanation:

There was an attempt to overwrite data in a cell.

Warning:M2X:00000000:Overwrite of data occurred., *title, sheetName, rowNumber, columnNumber, partitionName, overlayCharacters.*

Explanation:

There was an attempt to overwrite the overlay data in a cell.

Warning:M2X:00000000:Limit excess occurred(number of characters of format)., *title, sheetName, rowNumber, columnNumber*

Explanation:

The maximum number of display format characters has been exceeded. The standard display format will be used.

Warning:M2X:00000000: Print information is abnormal., *title, sheetName, printInformation*

Explanation:

The print area exceeded the maximum. The print area will not be set.

Warning:M2X:00000000: Sheet name is invalid., *title, invalidSheetName, automaticallyGeneratedSheetName*

Explanation:

The sheet name is invalid. The default sheet name will be used.

## XLSX-OFFICE

### Format

XLSX-OFFICE={ 0 | 1 }

### Description

Declares whether to increase the maximum number of sheets output.

**0:**

Up to 1,000 sheets can be output

**1:**

Up to 9,999 sheets can be output

Example: XLSX-OFFICE=0

### When omitted

The settings in the Excel environment settings file are used.

If omitted in the Excel environment settings file, then "0" (maximum of 1,000 sheets can be output) is used.

An error will occur if the keyword is specified with no value.

#### Points to note

- It is possible that the maximum number of styles can be exceeded when the maximum 9,999 sheets is output. If this occurs, adjust so that the maximum number of styles is not exceeded. Refer to the following for the maximum values for styles.  
=> ["10.4.1.2 Maximums for Styles in Excel Files"](#)
- Refer to the following:  
=> ["10.2.3.3 Correspondence between Excel Environment Setting Files and Excel Document Information Files"](#)

### XLSX-EXTFUNC

#### Format

XLSX-EXTFUNC=[[, ]MDA][[, ]OVL][[, ]BCD][[, ]PR1] [[, ]NON]

#### Description

Declares whether to output extended features.

##### **MDA:**

Outputs embedded media.

##### **OVL:**

Outputs overlay.

##### **BCD:**

Outputs barcodes.

##### **PR1:**

Applies printing information (paper size, orientation, scaling)

##### **NON:**

No extended features are output.

Example: XLSX-EXTFUNC=OVL,MDA

#### When omitted

The settings in the Excel environment settings file are used.

If omitted in the Excel environment settings file, then no extended features are output.

An error will occur if the keyword is specified with no value.

#### Points to note

- If you specify "NON" (no extended features are output) and another value, then no extended features will be output.
- Refer to the following:  
=> ["10.2.3.3 Correspondence between Excel Environment Setting Files and Excel Document Information Files"](#)

XLSX-MDASHARE

**Format**

XLSX-MDASHARE={ 0 | 1 }

**Description**

Declares whether to share image data in the embedded media fields.

If the image data file specified in the embedded media field is the same as the previously specified image data file, the image data is shared.。

**0:**

Share

**1:**

Do not share

Example: XLSX-MDASHARE=0

**When omitted**

The settings in the Excel environment settings file are used.

If omitted in the Excel environment settings file, then "0" (share) is used.

An error will occur if the keyword is specified with no value.

**Points to note**

- Using "0" (share) means that the number of image data files in an Excel file is reduced when the same image data is used, so this can reduce the size of the file.

The image data file is judged to be the same file when all of the following conditions are met:

- File name (full path)
- Date file was updated
- File size

However, the content of the file is not compared, so if the image data in the output Excel file is not what you wanted, specify "1" (do not share).

- This keyword is invalid in the following cases and cannot be changed:

- Image data is not shared when specified with a URL.
- Overlay images are always shared.

- Refer to the following:

=> ["10.2.3.3 Correspondence between Excel Environment Setting Files and Excel Document Information Files"](#)

XLSX-STRSTYLE

**Format**

XLSX-STRSTYLE={ 0 | 1 }

**Description**

Declares the formatting for text.

This keyword is valid for text fields, block text fields, and OCR-B fields.

**0:**  
Text

**1:**  
Standard

Example: XLSX-STRSTYLE=0

#### When omitted

The settings in the Excel environment settings file are used.

If omitted in the Excel environment settings file, then "0" (text) is used.

An error will occur if the keyword is specified with no value.

#### Points to note

- If "1" (standard) is specified, strings over 256 characters will not be replaced with hash symbols (#).  
Refer to the following:  
[=> "10.4 Notes on Using Excel File Output"](#)
- Refer to the following:  
[=> "10.2.3.3 Correspondence between Excel Environment Setting Files and Excel Document Information Files"](#)

XLSX-JUSTPAGEPRT

#### Format

XLSX-JUSTPAGEPRT={ 0 | 1 }

#### Description

Declares whether to make adjustments so that the data fits on one page for printing.

However, when Output without changing a sheet with the height of a print range is specified, pages with a landscape orientation are adjusted to fit on one page, but it may not be possible to fit portrait orientation pages on one page when there are too many rows.

This keyword is valid when "PR1" is specified in XLSX-EXTFUNC (output extended features).

**0:**  
Do not adjust

**1:**  
Adjust

Example: XLSX-JUSTPAGEPRT=0

#### When omitted

The settings in the Excel environment settings file are used.

If omitted in the Excel environment settings file, then "0" (do not adjust) is used.

An error will occur if the keyword is specified with no value.

**Points to note**

- When "1" (adjust) is specified, the scaling setting in Form Style Descriptors is invalid and the Scaling settings in Page Setup in Excel will be Fit to 1 page(s) wide by 1 tall. In this case, the print area of the Form Style Descriptor is set in the print area item of the Sheet tab in Page Setup.

However, if Output without changing a sheet with the height of a print range is specified, the setting becomes "1 page(s) wide by "blank" tall", and the print area is not set.

Refer to the following for information on print area settings:

=> ["10.3.2.6 Printing Information"](#)

- If "1" (adjust) is set for forms with barcodes, check beforehand to ensure that the barcodes can be read under actual conditions.
- Refer to the following:  
=> ["10.2.3.3 Correspondence between Excel Environment Setting Files and Excel Document Information Files"](#)

## XLSX-HATCHDRAWMODE

**Format**

XLSX-HATCHDRAWMODE={ 0 | 1 }

**Description**

Declares the fill drawing mode when fill (100% fill) and fill (not 100%) are specified for the same cell.

**0:**

Fill (100% fill) and fill (other than 100%) are overlaid with transparency

**1:**

Fill (100% fill) and fill (other than 100%) are not transparent

Example: XLSX-HATCHDRAWMODE=0

**When omitted**

The settings in the Excel environment settings file are used.

If omitted in the Excel environment settings file, then "0" (fill (100% fill) and fill (other than 100%) are overlaid with transparency) is used.

An error will occur if the keyword is specified with no value.

**Points to note**

- When "0" is specified, both fills are valid and are output overlaid with transparency. If 1 is specified, the fill output last is used.
- Refer to the following:  
=> ["10.2.3.3 Correspondence between Excel Environment Setting Files and Excel Document Information Files"](#)

## XLSX-LINEDRAWMODE

**Format**

XLSX-LINEDRAWMODE={ 0 | 1 }

**Description**

Declares how lines are drawn when lines are specified to overlap with cell borders.

**0:**

One set of lines is made invalid.

**1:**

Lines with the same attributes (line type, color) are valid.

For example: XLSX-LINEDRAWMODE=0

**When omitted**

The settings in the Excel environment settings file are used.

If omitted in the Excel environment settings file, then "0" (make one set of the lines invalid) is used.

An error will occur if the keyword is specified with no value.

**Points to note**

- This setting is also valid with overlay lines.
- When "1" is specified, the lines specified for cells on the borders of pages in multiple page documents can be output when printing Excel files.
- Refer to the following:  
=> ["10.2.3.3 Correspondence between Excel Environment Setting Files and Excel Document Information Files"](#)

**10.2.2.3. Example of an Excel Document Information File**

This section explains Excel document information files examples.

**Setting items**

Make the following definitions in the Excel document information file:

- (1) Workbook author: ABC Pty., Ltd.
- (2) Workbook title: Sales docket
- (3) Workbook subtitle: November Sales
- (4) Sheet protection password: abc
- (5) Workbook protection password: xyz
- (6) Output extended features: Overlay, Barcodes, Printing information
- (7) Increase number of sheets: Output a maximum of 9,999 sheets

**Example**

An example is shown below:

[MF-XLSX]	
XLSX-AUTHOR=ABC Pty., Ltd.	(1)
XLSX-TITLE=Sales docket	(2)
XLSX-SUBTITLE=November Sales	(3)
XLSX-SHEETPWD=abc	(4)
XLSX-SAVEPWD=xyz	(5)

XLSX-EXTFUNC=OVL, BCD, PR1	(6)
XLSX-OFFICE=1	(7)

#### 10.2.2.4. Specifying in Excel Document Information Files

The Excel document information file is specified with the List Creator form output interface. The following describes how to specify for each form output interface.

- With commands (prprint, prprintx, prputprt, prputex)  
Specify the path of the Excel document information file with the inexcelinfofile option.
- With a Java interface  
Specify the path of the Excel document information file in the value of the ID\_XLSX\_DOCENVFILE key in the setProperty method of the PrintProperties class.
- With a .NET interface  
Specify the path of the Excel document information file in the XlsxDocEnvFile property of the PrintProperties class.
- With custom control  
Specify the path of the Excel document information file in the XlsxDocEnvFile property of the PretrlEx Control custom control.



Refer to the Application Design online manual for information on the form output interface.  
**Note**

### 10.2.3. Specifying in the Excel Environment Settings File

The Excel environment settings file is where you can make settings common for all Excel file output.

Specify settings that will be used for all Excel file output in the Excel environment settings file. For individual Excel file output settings, specify in the Excel document information file. This makes it easy to manage the various features.

#### 10.2.3.1. Location of the Excel Environment Settings File

The Excel environment settings file is located in the following directory.

Directory	Windows : <i>instalDir</i> \conf UNIX : /etc/opt/FJSVxlsx/conf
File name	lc_xlsx_env.conf
Access privileges	Windows : Administrators Full control : Everyone Read and execute, read UNIX : 「644」

An error occurs when access to the Excel environment settings file is not possible or if there is an error in the syntax.

Refer to the *Troubleshooting & Messages* online manual for information on errors that may occur.

#### 10.2.3.2. Syntax of the Excel Environment Settings File

The syntax of the Excel environment settings file is the same as the Excel document information file.

Refer to the following for information on keyword formats and descriptions:

=> ["10.2.2 Specifying Document and Security Information"](#)



Keywords that can be specified in the Excel environment settings file are listed below.

**Table10.3** Excel environment settings file keywords

Keyword name	Description
<a href="#">XLSX-OFFICE</a>	Increases the maximum number of sheets output.
<a href="#">XLSX-EXTFUNC</a>	Extended features to output.
<a href="#">XLSX-MDASHARE</a>	Shares image data in the embedded media fields.
<a href="#">XLSX-STRSTYLE</a>	Text formatting.
<a href="#">XLSX-JUSTPAGEPRT</a>	Page printing adjustments.
<a href="#">XLSX-HATCHDRAWMODE</a>	Fill drawing mode.
<a href="#">XLSX-LINEDRAWMODE</a>	Line drawing mode.

### 10.2.3.3. Correspondence between Excel Environment Setting Files and Excel Document Information Files

The following explains the correspondence between Excel environment settings files and Excel document information files:

- Settings in the Excel document information file have precedence over the ones in the Excel environment settings file.
- When different keywords are specified in the Excel environment settings file and the Excel document information file, both values are valid.
- When there is nothing specified in the Excel document information file, operation will be according to the values specified in the Excel environment settings file.

## 10.3. Excel Files Output

This section describes the content of the Excel files output.

### 10.3.1. Outline of the Excel Files Output

This section provides an overview of the Excel files output.

#### 10.3.1.1. File Format

The files output are in Microsoft Office Open XML format with the .xlsx extension, which was introduced in Excel 2007.

Install the Microsoft Office Compatibility Pack for Word, Excel, and PowerPoint File Formats to use these files in Excel 2000, Excel 2002, and Excel 2003.

#### 10.3.1.2. Workbooks

You can set titles, subtitles, and authors - refer to the following for details:

=> ["10.2.2 Specifying Document and Security Information"](#)

#### 10.3.1.3. Sheets

Sheets with up to 65,536 rows and 256 columns can be generated.

If the detail output format is not specified as **Output without changing a sheet with the height of a print range** when designing the forms or when outputting forms, the print area (one page) defined in the form definition information is generated as one sheet. Otherwise, partitions that exceed the height of the print area can be output - however, when the partition exceeds the 65,536th line in the sheet, List Creator automatically generates a new sheet and the partition is output to it.

Initially, up to 1,000 sheets can be output. This can be raised to 9,999 sheets by declaring XLSX-OFFICE=1 in either the Excel document information file or Excel environment settings file. An error occurs when the maximum number of sheets is exceeded and the Excel file is not output. Design the data so that the specified number of sheets for output does not exceed the maximum number of sheets.

Refer to the *Troubleshooting & Messages* online manual for information on errors that may occur.

Names can also be set for generated sheets. If no name is set, the sheets will be named Sheetn (where n is an integer).

Refer to the following for information on sheet names:

=> ["10.3.4 Sheet Names"](#)

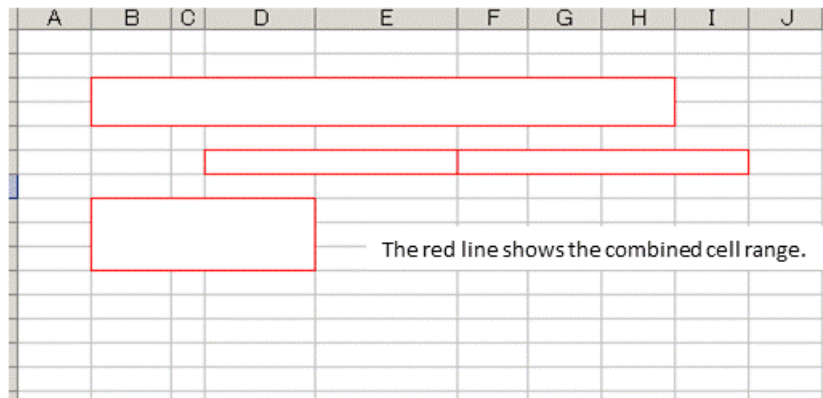
#### 10.3.1.4. Line Height, Column Width

When outputting forms created with custom-spacing grids

Grid spacing is used as is for the row height and column width. Note that the grid spacing unit (dt, that is, dots) (calculated at 720dpi) is different from the unit used for row height and column width in Excel (pixels).

Use the following formula to find the height of the rows and width of the columns in the Excel files output:



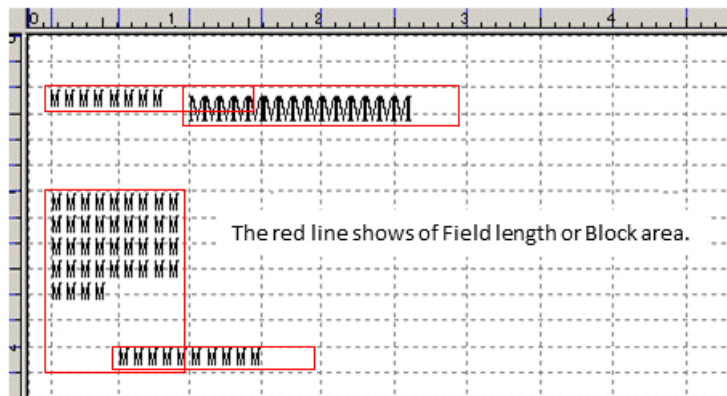


**Diagram10.3** Output to an Excel file (when fields are defined as spanning multiple cells)

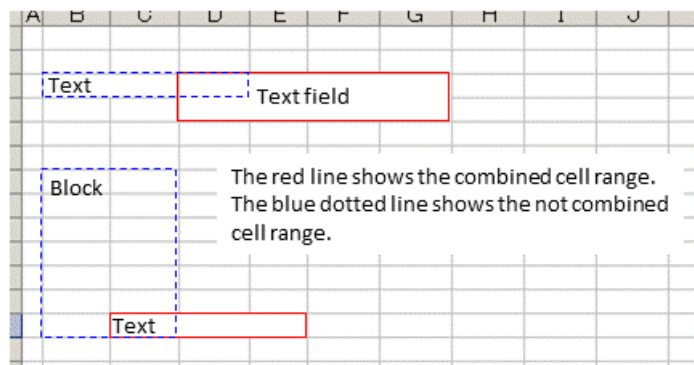
If different fields defined as spanning multiple cells overlap, these cells may not be merged when the Excel file is output. In this case, the alignment attributes specified for the files are invalid, and the alignment set in cell formatting will be Left for horizontal alignment and Top for vertical alignment. There may also be cases where not all input data can be displayed in the Excel file.

If a form is designed as shown in diagram 10.3, an Excel file such as the one shown in diagram 10.4 is output.

Define fields so that they do not overlap in order to display all data.



**Diagram10.4** Example of field definition in Form Style Descriptor - 2



**Diagram10.5** Output to an Excel file (different fields are defined as spanning multiple cells that overlap each other)



Cells will not be merged when the base point (the point at the top left) of a field is within the merge area of a cell.

**Note** In diagram 10.5, the area delimited by the blue line is the merge area, and the base point of the field delimited by the red line is inside it, so the cells delimited by the blue line will not be merged. Furthermore, as the cells of the fields in the blue lines will not be merged, the merge area of the fields delimited by the red lines will no longer overlap with the merge areas of other fields, and so the cells will merge.

### 10.3.1.7. Security Information

A sheet protection password and write protection password can be set – refer to the following for details:

=> ["10.2.2.4 Specifying in Excel Document Information Files"](#)

## 10.3.2. Correspondence between Form Definition Information and Excel Files

This section explains the correspondence between form definition information and Excel files. The field attributes and printing information of the form definition information are set in the **Style (Format Cells)** and **Page Setup** items in the Excel file. The following shows the form definition information that is set.

### ●Field attribute in the form definition information

- Fonts
- Alignment
- Editing format
- Lines
- Fill

### ●Printing information in the form definition information

- Page size
- Page orientation
- Print area
- Scaling

There are some points to note about the maximum values for Style (Format Cells) settings in Excel files. Refer to the following for details:

=> ["10.4.1.2 Maximums for Styles in Excel Files"](#)

### 10.3.2.1. Fonts

The font attributes in the form definition information are set in the font item of the style in the Excel file.

Refer to the table below for information on the correspondence between font attributes and styles in Excel files.

**Table10. 4** Correspondence between font attributes in form definition information and styles in Excel files

Font Attributes for Form Definition Information		Styles in Excel files	Remarks
Category		(Fonts)	
Japanese font		Font name (*1)	
English fonts			(*2)
Rotate text 90 degrees anticlockwise			(*3)
Style		Style	
Size		Size	
Color		Color	
Underline		Underline	
Strikethrough		Strikethrough in Effects	

\*1: When the font does not exist on the computer where the Excel file is to be displayed or printed, printing and display follows Excel specifications

\*2: Valid only in numeric fields

\*3: A @ is added to the front of the font name (for example, if MS Mincho is set as the font in the form definition information, the font name will be set as @MS Mincho)

### 10. 3. 2. 2. Alignment

The alignment attributes in the form definition information are set in the alignment item of the style in the Excel file.

Refer to the table below for information on the correspondence between alignment attributes and styles in Excel files.

**Table10. 5** Correspondence between alignment attributes in form definition information and styles in Excel files

Position attributes of form definition information		Styles in Excel files	Remarks	
Category		(Alignment)		
Text alignment	Not specified	Horizontal position	Left (Indent), or Right (Indent)	(*1) (*2)
	Justify		Distributed (indent)	(*1)
	Equal Spacing		Center justified	(*1)
	Center		Left (Indent), or Right (Indent)	(*1) (*2)
	Compress to fit		Right (Indent)	(*3)
	Reverse		Right (Indent)	(*1)
	Right justified		Distributed (indent)	(*1)
	Automatically adjust character width			
Text direction	Left to right	Direction	0 degrees	
	Right to left			
	Top to bottom		-90 degrees (minus 90 degrees)	
	Bottom to top		90 degrees	

\*1: Vertical alignment is set as Top, irrespective of the text alignment.

\*2: If text alignment is "none" or "compressed", then horizontal position is set to **Right (Indent)** for numeric fields, and **Left (Indent)** for non-numeric fields. If the text alignment is

“reversed”, then horizontal position is set to **Left (Indent)** for numeric fields, and **Right (Indent)** for non-numeric fields.

\*3: If compression is specified, the text control item in the alignment section of the styles in the Excel file will be set to **Shrink to fit**.



**Note** With block text fields, block static fields, and block overlay text fields the text control item in the alignment section of the styles in the Excel file will be set to **Wrap text**.

If the orientation is **Top to Bottom** or **Bottom to Top**, however, the specified text alignment will be set in the vertical position of the styles in the Excel file. The styles set in vertical position of the Excel file are shown in the table below.

**Table10.6** Correspondence between text direction and alignment in form definition information and styles in Excel files

Position attributes of form definition information		Styles in Excel files		Remarks
Text direction	Text alignment	(Alignment)		
Top to bottom	Not specified	Vertical position	Top or Bottom	(*1) (*2)
	Justify		Distributed	(*1)
	Equal Spacing		Center	(*1)
	Center		Justify to top or bottom	(*1) (*2)
	Compress to fit		Justify to top or bottom	(*1) (*3)
	Reverse		Bottom	(*1)
	Right justified		Distributed	(*1)
	Automatically adjust character width			
Bottom to top	Not specified	Vertical position	Justify to top or bottom	(*1) (*3)
	Justify		Distributed	(*1)
	Equal Spacing		Center justified	(*1)
	Center		Justify to top or bottom	(*1) (*3)
	Compress to fit		Justify to top or bottom	(*1) (*2)
	Reverse		Top	(*1)
	Right justified		Distributed	(*1)
	Automatically adjust character width			

\*1: Horizontal alignment is set as **Left (Indent)**, regardless of the text alignment.

\*2: This is set to **Bottom** for numeric fields and **Top** for other fields.

\*3: This is set to **Top** for numeric fields and **Bottom** for other fields.

### 10.3.2.3. Editing Format

The editing format of fields in the form definition information is set as the display format in Excel files.

However, the editing format specified in the field may be invalid, and the editing format specified in the form may not be output.

10.3.2.3.1. Numeric fields (numbers and currency) and text fields (postal codes)

The display format in Excel is generated using the format below:

*positiveValueFormat;negativeValueFormat;zeroValueFormat*

Refer to the table below for information on the correspondence between editing format items in form definition information and display formats in Excel files.


**Table10.7** Correspondence between editing format items in form definition information and display formats in Excel files

Form Definition Information		Display Format in Excel files	Remarks
Category	Editing format		
Numeric	9999999	000000;000000	(*1) (*5)
	-9999999	000000;-000000	(*1) (*2) (*3) (*5)
	+9999999	+000000;-000000;000000	(*1) (*2) (*3) (*5)
	9999999-	000000_-;000000-	(*1) (*2) (*5)
	9999999+	000000+;000000-;000000_-	(*1) (*2) (*5)
	9999999CR	000000_C_R;000000"CR"	(*1) (*2) (*5)
	9999999DB	000000_D_B;000000"DB"	(*1) (*2) (*5)
	999, 999 ***, **9	000, 000;000, 000	(*1) (*5)
	-999, 999 -***, **9	000, 000;-000, 000	(*1) (*2) (*3) (*5)
	+999, 999	+000, 000;-000, 000;000, 000	(*1) (*2) (*3) (*5)
	999, 999- ***, **9-	000, 000_-;000, 000-	(*1) (*2) (*5)
	999, 999+ ***, **9+	000, 000+;000, 000-;000, 000_-	(*1) (*2) (*5)
	999, 999CR ***, **9CR	000, 000_C_R;000, 000"CR"	(*1) (*2) (*5)
	999, 999DB ***, **9DB	000, 000_D_B;000, 000"DB"	(*1) (*2) (*5)
	ZZZZZZ9	0;0	(*1) (*5)
	-ZZZZZZ9	?????0;-?????0	(*1) (*2) (*3) (*5)
	+ZZZZZZ9	+?????0;-?????0;0	(*1) (*2) (*3) (*5)
	ZZZZZZ9-	0_-;0-	(*1) (*2) (*5)
	ZZZZZZ9+	0+;0-;0_-	(*1) (*2) (*5)
	ZZZZZZ9CR	0_C_R;0"CR"	(*1) (*2) (*5)
	ZZZZZZ9DB	0_D_B;0"DB"	(*1) (*2) (*5)
	ZZZZZZZ	#;#	(*1) (*5) (*6)
	-----9	0;-0	(*1) (*2) (*3) (*5)
	++++++9	+0;-0;0	(*1) (*2) (*3) (*5)
	-ZZZZZZZ	?????#;-?????#	(*1) (*2) (*3) (*5) (*6)
	+ZZZZZZZ	+?????#;-?????#;#	(*1) (*2) (*3) (*5) (*6)
	ZZZZZZZ-	#_-;#-	(*1) (*2) (*5) (*6)
	ZZZZZZZ+	#+;#-;#_-	(*1) (*2) (*5) (*6)
	ZZZ, ZZ9	#, ##0;#, ##0	(*1) (*5)
	---, --9	#, ##0;-#, ##0	(*1) (*2) (*3) (*5)
+++ , ++9	+#, ##0;-#, ##0;0	(*1) (*2) (*3) (*5)	



Form Definition Information		Display Format in Excel files	Remarks
Category	Editing format		
	ZZZ, ZZ9-	#, ##0_-;#, ##0-	(*1) (*2) (*5)
	ZZZ, ZZ9+	#, ##0+;#, ##0-;0_-	(*1) (*2) (*5)
Numeric	ZZZ, ZZ9CR	#, ##0_C_R;#, ##0"CR"	(*1) (*2) (*5)
	ZZZ, ZZ9DB	#, ##0_D_B;#, ##0"DB"	(*1) (*2) (*5)
	-ZZZ, ZZ9	???, ??0;-???, ??0	(*1) (*2) (*3) (*5)
	+ZZZ, ZZ9	+???, ??0;-???, ??0;0	(*1) (*2) (*3) (*5)
Currency	¥¥¥, ¥¥9	¥#, ##0;¥#, ##0	(*1) (*4) (*5)
	ZZZ, ZZ9¥	#, ##0¥;#, ##0¥	(*1) (*4) (*5)
	-¥¥¥, ¥¥9	¥#, ##0;-¥#, ##0	(*1) (*2) (*3) (*4) (*5)
	+¥¥¥, ¥¥9	+¥#, ##0;-¥#, ##0;¥0	(*1) (*2) (*3) (*4) (*5)
	¥---, --9	¥#, ##0;¥-#, ##0	(*1) (*2) (*3) (*4) (*5)
	¥+++ , ++9	¥+#, ##0;¥-#, ##0;¥0	(*1) (*2) (*3) (*4) (*5)
	---, --9¥	#, ##0¥;-#, ##0¥	(*1) (*2) (*3) (*4) (*5)
	+++ , ++9¥	+#, ##0¥;-#, ##0¥;0¥	(*1) (*2) (*3) (*4) (*5)
	-ZZZ, ZZ9¥	???, ??0¥;-???, ??0¥	(*1) (*2) (*3) (*4) (*5)
	+ZZZ, ZZ9¥	+???, ??0¥;-???, ??0¥;0¥	(*1) (*2) (*3) (*4) (*5)
	¥¥¥, ¥¥9-	¥#, ##0_-;¥#, ##0-	(*1) (*2) (*4) (*5)
	¥¥¥, ¥¥9+	¥#, ##0+;¥#, ##0-;¥0_-	(*1) (*2) (*4) (*5)
	ZZZ, ZZ9-¥	#, ##0_-¥;#, ##0-¥	(*1) (*2) (*4) (*5)
	ZZZ, ZZ9+¥	#, ##0+¥;#, ##0-¥;0_-¥	(*1) (*2) (*4) (*5)
	ZZZ, ZZ9¥-	#, ##0¥_-;#, ##0¥-	(*1) (*2) (*4) (*5)
	ZZZ, ZZ9¥+	#, ##0¥+;#, ##0¥-;0¥_-	(*1) (*2) (*4) (*5)
	¥¥¥, ¥¥9CR	¥#, ##0_C_R;¥#, ##0"CR"	(*1) (*2) (*4) (*5)
	ZZZ, ZZ9CR¥	#, ##0_C_R¥;#, ##0"CR"¥	(*1) (*2) (*4) (*5)
	ZZZ, ZZ9¥CR	#, ##0¥_C_R;#, ##0¥"CR"	(*1) (*2) (*4) (*5)
	¥¥¥, ¥¥9DB	¥#, ##0_D_B;¥#, ##0"DB"	(*1) (*2) (*4) (*5)
	ZZZ, ZZ9DB¥	#, ##0_D_B¥;#, ##0"DB"¥	(*1) (*2) (*4) (*5)
	ZZZ, ZZ9¥DB	#, ##0¥_D_B;#, ##0¥"DB"	(*1) (*2) (*4) (*5)
	Postcode	000-0000	[<=999]000:[<=99999]000-00;000-0000
000 0000		[<=999]000;000-00	

- \*1: When the number of digits in decimals is specified, the format for decimals is applied to each value format, according to the editing format for decimals – if zero suppression is not specified for decimals, then ".000" is appended (assuming that the number of decimals is 3), otherwise ".0??" is appended (assuming that the number of decimals is 3)
- \*2: Color information for negative values must be specified before the data (for example, "#, ##0;[color3]-#, ##0")
- \*3: If a negative value symbol is specified, it will replace the "-" character
- \*4: If a currency symbol is specified, it will replace the "¥" character
- \*5: When **Suppress If Zero** is specified, ";#" is added to the zero value format (which will be overwritten if already specified).
- \*6: If **Suppress If Zero** is not specified, but zero suppress in the decimals has not been set, ";#" is added to the zero value format.

 The content specified for Float Sign/Currency Symbol Before Value will not be used, and the leading currency symbol or sign will be displayed in the floating position.

Caution

### 10.3.2.3.2. Numeric fields (dates) and date fields

Refer to the table below for information on the correspondence between date editing format items and display formats in Excel files.

**Table10.8** Correspondence between date editing format in form definition information and display formats in Excel files

Form Definition Information		Display format in the Excel file
Category	Editing format	
Year	YYYY	yyyy
Last two digits of the year	YY	yy
Month in English	MMMM	mmm
English month (abbreviated)	MMM	mmm
Month	MM	mm
Day	DD	dd
Day of the week in English	WWW	ddd
English week day (abbreviated)	WWW	ddd
Day of week	SS	aaa

### 10.3.2.3.3. Time field

Refer to the table below for information on the correspondence between time editing format items and display formats in Excel files.

**Table10.9** Correspondence between time editing format in form definition information and display format in Excel files

Form Definition Information		Display format in the Excel file
Category	Editing format	
時	HH	hh
分	MM	mm
秒	SS	ss

### 10.3.2.4. Lines


Refer to the table below for information on the correspondence between line attributes and styles in Excel files.

**Table10.10** Correspondence between line attributes in form definition information and styles in Excel files

Line Attributes in form definition information		Styles in Excel files (Line, Style)
Line type	Line weight (in points)	
Solid	Less than 1	Solid (fine)
	More than 1, but less than 2	Solid (thin)
	More than 2, but less than 3	Solid (medium)
	More than 3	Solid (thick)
Dotted	(*1)	Dotted
Dashed	Less than 2	Broken (thin)
	More than 2	Broken (medium)
Dashed dotted	Less than 2	Dashed dotted (thin)
	More than 2	Dashed dotted (medium)

Line Attributes in form definition information		Styles in Excel files
Line type	Line weight (in points)	(Line, Style)
Long dashed	Less than 2	Broken (thin)
	More than 2	Broken (medium)
Long dash dot	Less than 2	Dashed dotted (thin)
	More than 2	Dashed dotted (medium)
Long dash dot dot	Less than 2	Dash dot dot (thin)
	More than 2	Dash dot dot (medium)
Custom	Less than 2	Broken (thin)
	More than 2	Broken (medium)
Double	(*1)	Double
Wave 1	(*1)	Solid (fine)
Wave 2	(*1)	Solid (fine)
Line color		Styles in Excel files
Basic (Black, Green, Red, Yellow, Blue, Pink, Aqua, White, Gray, Dark green, Dark red, Dark yellow, Dark blue, Dark pink, Dark aqua, Dark gray) Extended colors (1 to 16 custom colors)		(Line, Color) Line color specified by the form definition information

\*1: All line thickness values that can be specified in the form definition information

 <b>Caution</b>	Up to 24 custom colors can be used in a workbook. It is possible that this number could be exceeded when outputting multi-forms. When the maximum number of custom colors has been used, fields using custom colors after this are displayed in black.
---	--

### 10.3.2.5. Fill

Refer to the table below for information on the correspondence between fill attributes and styles in Excel files.

**Table10.11** Correspondence between fill attributes in form definition information and styles in Excel files

Fill attributes in form definition information	Styles in Excel files
Type (density)	(Cell shading, Pattern)
None	No Color
5.0%	6.25%
10.0%	
12.5%	
20.0%	25%
25.0%	
30.0%	
37.5%	

Fill attributes in form definition information	Styles in Excel files
Type (density)	(Cell shading, Pattern)
40.0%	50%
50.0%	
60.0%	
62.5%	
70.0%	
75.0%	75%
80.0%	
87.5%	
90.0%	
100%	
Color	Styles in Excel files (Cell shading, Color)
Basic (Black, Green, Red, Yellow, Blue, Pink, Aqua, White, Gray, Dark green, Dark red, Dark yellow, Dark blue, Dark pink, Dark aqua, Dark gray) Extended colors (1 to 16 custom colors)	<ul style="list-style-type: none"> <li>- When type is 5.0 to 90.0%: Specified color is set as the pattern color</li> <li>- When type is 100%: Specified color is set as the background color</li> </ul>



Note

The fill output due to the conditional formatting of text fields defined in Form Style Descriptor is output with the following fill attributes.

- Background color - Type: 100%, Color: Color specified in the form definition information
- Fill - Type: Fill specified in the form definition information, Color: Gray



Caution

Up to 24 custom colors can be used in a workbook. It is possible that this number could be exceeded when outputting multi-forms. When the maximum number of custom colors has been used, fields using custom colors after this are displayed in black.

### 10.3.2.6. Printing Information

The printing information in the form definition information is set in Page Setup in the Excel file.



Caution

"PR1" needs to be specified in the extended feature output in the Excel document information file or Excel environment settings file to set print information. Refer to the following for information on output of extended features:  
=> ["10.2.2.2 Sections and Keywords in Excel Document Information Files"](#)

Refer to the table below for information on the correspondence between printing information and page setup in Excel files.

**Table10.12** Correspondence between printing information in form definition information and page settings in Excel files

Attributes relating to pages in the form definition information		Page settings in the Excel file	Remarks
Page size		<b>Paper size</b> in the <b>Page</b> tab	(*1)
Page orientation		<b>Orientation</b> in the <b>Page</b> tab	
Print area		<b>Print area</b> in the <b>Sheet</b> tab	(*2)
Scaling	Scaling to	<b>Scaling</b> in the <b>Page</b> tab	
	Adjust to (automatic)	<b>Fit to check box</b> in the <b>Page</b> tab	(*3)
	Adjust to (any)	<b>Scaling</b> in the <b>Page</b> tab	(*4)
Compatibility	LP Compressed Print	<b>Orientation</b> in the <b>Page</b> tab	(*5)

\*1: Custom page sizes and paper names will be ignored (A4 paper size will be used).

\*2: Print area is set when "Custom printing size (automatic)" is specified in the scaling item and when page printing adjustments is specified in the Excel document information file or Excel environment settings file, but it is not set if **Output without changing a sheet with the height of a print range** is specified as the detail output format.

\*3: "Horizontal 1 by vertical 1" is set by default, but "Horizontal 1 by vertical (blank)" is set if **Output without changing a sheet with the height of a print range** is specified as the detail output format.

\*4: Scaling calculated from the custom printing size and the paper size is set - the ratio between height and width is always preserved.

\*5: Scaling down is invalid and the orientation is set to landscape.

### 10.3.3. Outputting Details

There are the following two ways of outputting details.

- Output by changing to a new sheet when the height of the print area is reached
- Output without changing a sheet with the height of a print range

The default is **Output by changing to a new sheet when the height of the print area is reached**.

To set the output of detailed data to **Output without changing a sheet with the height of a print range**, in the definitions of the form work information in List Creator Designer, either specify **Output without changing a sheet with the height of a print range** in **Output method of detail** or specify when outputting the form with the command option or with the user application. Refer to the Advanced Form Design or Application Design online manuals for information on how to specify.

The items specified in Output without changing a sheet with the height of a print range are valid only for the form definition information of multipart table formats. The settings are invalid for form definition information that is not for multipart table formats, and sheets are changed according to the height of the print area.

### 10.3.4. Sheet Names

This section describes sheet names.

### 10.3.4.1. Specifying Sheet Names

Specify sheet names in one of the following ways:

- Using the form output interface when outputting forms
- Using List Creator Designer during form design



- Refer to the Application Design online manual for information on specifying with the form output interface.

**Note** - Refer to the Advanced Form Design online manual for information on operations with List Creator Designer.

### 10.3.4.2. Notes about Sheet Names

This section explains some points to note about sheet names.

- Specify sheet names with 31 characters or less. One surrogate pair character is counted as two characters.
- If sheet names are not specified, they will be named Sheetn (where n is an integer).
- The following characters cannot be used in sheet names, according to Excel specifications. Neither half- nor full-width versions are permitted.  
The characters below will be replaced with half-width spaces:  
: ¥ / ? \* [ ]
- Neither half-width nor full-width single quotes are permitted before or after sheet names, according to Excel specifications - such characters will be replaced with half-width spaces. Single quotes may be used within the sheet name.
- Sheets names are suffixed with a sequential integer (for example, (2) or (3)) if they already exist. The same sheet name refers to sheet names where all characters and text forms are exactly the same. This includes full-width and half-width forms, uppercase and lowercase.



**Caution** When the string used for the sheet name is made the same form (full-width, alphabet uppercase, full-width kana), and the strings match, these sheet names will not receive numbers (for example, (2) or (3)).

- Sheets names will be truncated to 31 characters - if the resulting name is the same as previously specified sheet names, numbers are added, (for example, (2) or (3)).
- If a sheet name is specified by "Specify input data field name for Excel file Sheet Name." when outputting a form, the following applies:
  - The input data value output when the specified field is first output to each sheet becomes the sheet name.  
Furthermore, if the specified field is a hidden field, the first input data value in the specified non-output field becomes the sheet name.
  - It is not possible to specify as field data names the group items and the configuration items of the group items where **Use Group Item Name** was selected as the treatment of group items in the **General** tab of the data definitions window.
  - If the specified field does not exist in the form, or if an input data value is not specified (null character or half-width space), sheet names are not set. The sheet will be named Sheetn (where n is an integer).

- The following cannot be used as sheet names and no sheet name is set if you try to specify them. The sheet will be named Sheetn (where n is an integer). In this case, a message indicating that the sheet name is invalid is displayed.

- When a sheet name starting with "Sheet" has been specified
- When the same sheet name has already been specified when the characters forms (full-width, alphabet uppercase, full-width kana) in the string used as the sheet name are matched

- The following shows examples of names set when the specified sheet names are invalid:

- When the form name is to be used as the sheet name

Specify the command option with the following format with prprint in the form output interface.

```
-xlsxsheetname FORM
```

#### ● When outputting forms with "SHEET total" and "sheet subtotal"

When form names are used as sheet names for output to multi-forms, the sheet name changes when the form changes.

However, as the sheet name is specified to start with "Sheet", this is invalid.



#### ● When multi-forms are output with the form names "SALES RANKING" and "sales ranking"

When form names are used as sheet names for output to multi-forms, the sheet name changes when the form changes.

However, when the strings "SALES RANKING" and "sales ranking" are matched to uppercase, they become the same name and the sheet name specified last is rendered invalid.



Refer to the Troubleshooting & Messages online manual for information on messages.

Note

- When outputting combination-forms, the sheet names set using the sheet name setting option of prprint in the form output interface will be as follows:

- When the options for setting sheet names (-xlsxsheetname and -xlsxsheetnameitem) are not specified:

When there are multiple Form Style Descriptors with sheet names (sheet names specified in the **File (Excel)** tab of the form work information property window) specified in them to be used for combination-form output, the sheet name that appears first in the Form Style Descriptor in the input data will be used.

- When the -xlsxsheetname option is specified

When FORM is specified, the combination-form name is used as the sheet name.

When FIXED is specified, the fixed string specified in FIXED is used as the sheet name.

- When the -xlsxsheetnameitem option is specified

The first data value output in the field specified with this option is used as the sheet name.

However, if another sheet name is specified at the same time, the data value specified with this option may not be used sometimes.

When specified at the same time as the -xlsxsheetname option, then if the item specified in the Form Style Descriptor that first appears in the input data exists, the combination-form name and the specified data values are linked with a hyphen (-) and then become

the sheet name. If the field specified does not exist in the Form Style Descriptor that first appears in the input data, the data value specified in this option is invalid. When the form work information sheet name is used, and the specified field is found in the relevant Form Style Descriptor, the data values are joined by a hyphen (-) and used as the sheet name. If the field specified does not exist in the Form Style Descriptor, the data value specified in this option is invalid.



## 10.4. Notes on Using Excel File Output

This section describes some points to note regarding Excel file output.

### 10.4.1. Maximum Values when Outputting Forms

This section describes maximum values when outputting forms.

#### 10.4.1.1. Excel File Maximum Values

The maximum values for Excel files when outputting forms are described in the table below.

**Table10.13** Maximum values in Excel files

Field	Maximum	Remarks	
Number of sheets in a workbook	1,000	(*1)	
Number of styles in a workbook	3,989	(*2)	
Number of columns on a sheet	256	(*3)	
Number of lines on a sheet	65,536	(*4)	
Column width	14,025	Unit: Dots calculated on 720dpi	
Line height	4,090	Unit: Dots calculated on 720dpi	
Number of characters in a cell	10,000	Unit: Number of characters	
Number of colors in a workbook	Basic and Extended colors	16	(*5)
	Custom colors	24	
Line types	12	(*6)	
Fill types	6	(*7)	

- \*1: When outputting a page per sheet, the default maximum is 1000 pages, which can be increased to 9,999 by declaring the keyword XLSX-OFFICE in the Excel document information. When the maximum is exceeded, an error occurs and the Excel file is not output.
- \*2: The number of styles in a workbook is the sum of the fonts, alignments, editing formats, lines, and fill.
- \*3: When fields are output beyond the maximum, a message is output indicating that fields beyond the maximum number of columns have been output.
- \*4: When fields are output beyond the maximum, a message is output indicating that fields beyond the maximum number of lines have been output.
- \*5: The maximum number of basic and extended colors in a workbook is 16. A maximum of 24 custom colors can be used, this being the sum of custom colors used for fonts, lines, and fill. It is possible that this number could be exceeded when outputting multi-forms. When the maximum number of custom colors has been used, fields using custom colors after this are output in black.
- \*6: Refer to the following for information on lines:  
=> ["Table10.10 Correspondence between line attributes in form definition information and styles in Excel files"](#)
- \*7: Refer to the following for information on fill:  
=> ["Table10.11 Correspondence between fill attributes in form definition information and styles in Excel files"](#)



Note

Refer to the Troubleshooting & Messages online manual for information on messages.

#### 10.4.1.2. Maximums for Styles in Excel Files

The maximum values for styles in Excel files when outputting forms are described in the table below.

**Table10.14** Maximum values for styles in Excel files

Field	Maximum	Remarks
Fonts	490	(*1)
Alignment	3,989	(*2)
Display format	206	(*3)
Lines	3,989	(*4)
Fill	3,989	(*5)

\*1: Refer to the following for information on fonts:

=> "[10.3.2.1 Fonts](#)"

\*2: Alignment can never exceed the maximum. Refer to the following for information on alignment:

=> "[10.3.2.2 Alignment](#)"

\*3: Refer to the following for information on the correspondence between display format and editing format:

=> "[10.3.2.3 Editing Format](#)"

\*4: Refer to the following for information on lines:

=> "[10.3.2.4 Lines](#)"

\*5: Refer to the following for information on fill:

=> "[10.3.2.5 Fill](#)"

## *Chapter11 Connector Link Function*

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This section explains how to use the connector link function and some points to note.



Refer to the following for information on environment settings for the connector link function:

Note => ["Chapter3 Set the Connector Link Environment"](#)

## 11.1. Points to Note when Building the Environment and During Operation

This section explains points to note when building the environment for the connector link function and during its operation.

### ● Points to note when building the environment

- High-reliability remote printers and remote printers cannot be used as the output device.
- Configure the network so that the computer name and the host name of the TCP/IP is the same.
- Refer to the following for information on points to note regarding form resources and specifying output destinations for form files:  
=> "6.3 Specifying Form Resources and Form Output Destinations"
- Assign the user of the connector link function (Windows logon user) permissions for creating, reading, modifying, and deleting subdirectories and files in the directory that will be the transfer destination for forms, data files, and media data files.  
If the permissions for creating, reading, modifying, and deleting have not been set, the transfer of forms, data files, and media data files, and the output of forms, may fail. The following shows the locations of the directories used to receive forms, data files, and media data file:
  - Windows  
In the List Creator installation directory on the form output server
  - UNIX  
In "/opt/FJSVoast/remoteprint" on the form output server
- The following working directory on the form output server must have enough space available to temporarily store forms that have been transferred:
  - Windows  
*installDir*\remoteprint\daemon\data>ListCREATOR
  - UNIX  
/var/opt/FJSVoast/remoteprint/daemon/data/ListCREATOR

### ● Points to note when using an application server

- Access permissions for forms (PDF files, OWF files, and Excel files) put on the application server are as follows:
  - Windows  
Members of the Everyone and Administrators group have full control.
  - UNIX  
owner:root, access permissions are 666.
- When files are transferred from the application server to the form output server, the maximum path length that can be specified is as follows:

Form output server \ Application server	Windows	Linux
Windows	188 bytes. The length of the List Creator installation directory on the form output server (*1)	259 bytes
Linux		4006 bytes

\*1: When the installation directory for List Creator is "C:\ListCREATOR", the length will be 188 bytes - 14 bytes = 174 bytes.

### ● Points to note about the form output server

- When using the connector link function to output forms, List Creator operates with the following user rights on the form output server.

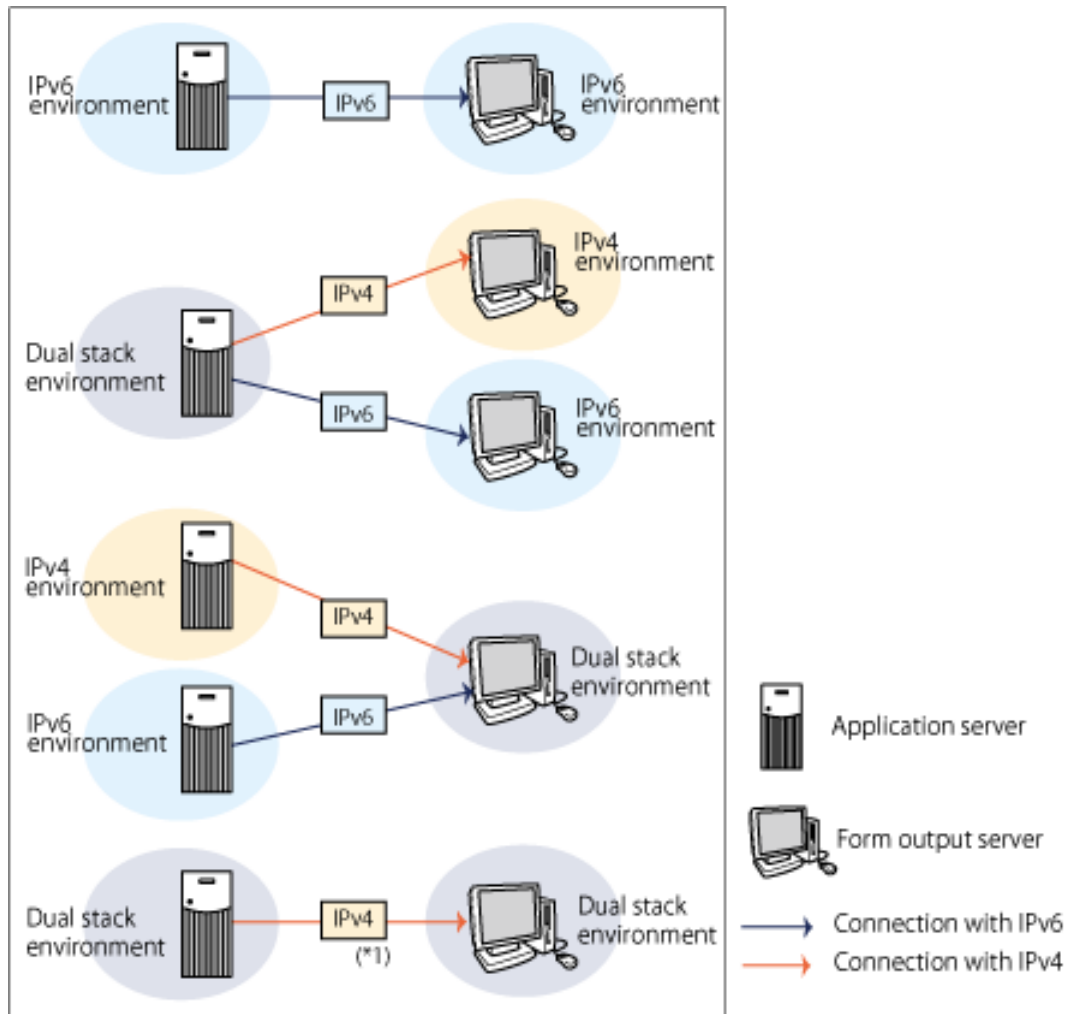
- Windows  
User rights of the logon user for the connector link function service
- UNIX  
User rights for the connector link function service
- Access rights for forms (PDF files, OWF files, and Excel files) output by the form output server are as follows:
  - Windows  
The access rights of the folder are inherited by the PDF files, OWF files, and Excel files.
  - UNIX  
owner:root, access rights are 644.
- Forms, data, and files in the middle of being transferred when there is a transmission error remain on the form output server. These files will be deleted after 24 hours.
- The number of processes that can simultaneously communicate with a single form output server depends on the environment configuration file ("maximum permissible connections" in the DaemonProperty file).  
When the number set when setting up the environment is exceeded, form output processing may be cancelled.  
Also, when there are multiple application servers for a single form output server, the combined maximum number of simultaneous communications from each of the application servers is determined by the environment configuration file ("maximum permissible connections" in the DaemonProperty file).
- When the form output server is Windows, user defined characters may not be output.
- **General** tab of the List Creator Settings will be grayed out and unable to be selected. Ensure the name of the printer used for printing is specified when outputting forms.

### ● Form output results and notification of errors

- If an error occurs in List Creator while outputting forms, look at the following information on the form output server and resolve the cause of the error. The content of the error is not notified to the application server.
  - Windows  
Event log (Application log)
  - UNIX  
Syslog

### ● Operation in an IPv6 environment

- The connector link function can operate in both IPv4 and IPv6 environments.  
It is even able to operate in an environment with both IPv4 and IPv6 (dual stack environment).  
The following describes the network environments (combinations of application servers and form output servers) supported when the connector link function is operating in an IPv6 environment:



\*1: When the application server and form output server are both dual stack environments, connect to the form output server using IPv4.

- When either the application server or the form output server is running on the Windows Server 2003 operating system, operation is only possible in an IPv4 environment.

### ● Regarding load balancing devices and software

Note the following points if you are using a load balancing device (IPCOM) or load balancing software (Traffic Director).

- The network configuration supports "Transparent mode".
- The following two types of session guarantee are supported:
  - Cookie (Traffic Director)
  - Cookie (Servlet API 2.2)

## Chapter12 Remote Form Output

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This section explains how to use the remote form output feature and some points to note.



Refer to the following for information on environment settings for the remote form output feature:

Note => ["Chapter4 Remote Form Output Environment Settings"](#)

## 12.1. Points to Note when Building the Environment and During Operation

This section explains points to note when building the environment for the remote form output feature and also when in operation.

### ● Points to note when building the environment

- High-reliability remote printers and remote printers cannot be used as the output device.
- When the form output server is Windows, configure the network so that the computer name and the TCP/IP host name are the same.
- Configure a remote form output user on the application server when running the following types of operations:
  - When the application server runs the following operations on Windows
    - When remote form output is performed on a Windows XP form output server by setting Use simple file sharing (Recommended) in Folder Options
    - If remote form output is implemented from a service process operating under the SYSTEM account
    - When 445/TCP port (microsoft-ds (\*1)) is blocked by a firewall or router
      - \*1: This is the port number used for direct hosting SMB service communication, and is used for file and printer sharing, remote management, and similar.

Refer to the following for information on remote form output user settings:

=> ["4.1.2 Remote Form Output User Settings"](#)



Caution

To enable the remote form output user set with the `prsetpasswd` command when remotely outputting forms, specify the `-rmuserpasswd` option using the `prputprt`.

- When the application server is running on UNIX and remote form output is to a Windows form output server
  - Refer to the following for information on remote form output user settings:
  - => ["4.2.2 Setting Users for Remote Form Output to Windows"](#)
- The default printer depends on the logon status of the form output server as follows:
  - When the application server runs on Windows
    - Refer to the following for details:
    - => [Table 2.2 "Operation types/functions and the default printer"](#)
  - When the application server runs on UNIX
    - When logged on as the same user as the remote form output user
      - The printer normally used by the remote form output user is used.
    - When logged on as user different to the remote form output user
      - The default printer specified in the List Creator environment settings window is enabled.
    - When not logged on
      - The default printer specified in the List Creator environment settings window is enabled.
- Refer to the following for information on printer settings that are used normally:
  - => ["2.1.2.1 General Tab"](#)
- When the form output server is running on Windows Vista/Windows 7/Windows Server 2008, the "Default Printer" option in the **General** tab of the List Creator Settings will be grayed out and unable to be selected. Make sure the name of the printer used for printing is specified when outputting forms.
- Assign the following users permissions for creating, reading, modifying, and deleting subdirectories and files in the directory (specified as the working directory in the environment settings for the form output server) that will be the transfer destination for forms, data files, and media data files.
  - User executing remote form output command or user application, remote form output user



If the permissions for creating, reading, modifying, and deleting have not been set, the transfer of forms, data files, and media data files, and the output of forms, may fail.

### ● Points to note about the form output server

- Forms transferred to the form output server have access permissions set as follows:
  - Windows:  
The forms receive the same access permissions as the transfer destination directory (specified as the working directory in the environment settings for the form output server).
  - UNIX:  
The owner is given read and write permissions, other users are given read permissions (set to 644).

### ● Points to note when there are multiple application servers for a single form output server

- When there are multiple application servers using different character codes (Shift-JIS on application server A, EUC (U90) on application server B, etc., for example) outputting forms remotely to one form output server, divide the forms up by application server, even if the forms they are using are the same. There may be garbling of characters in the output if the form names are the same.

### ● Form output results and notification of errors

- When the form output server is Windows, and the user is not logged on, user defined characters may not be output.
- Error information is recorded on the form output server as follows when an error occurs on the form output server during remote form output.
  - Windows: Recorded to the event log.
  - UNIX : Recorded to the syslog.

When the application server runs on Windows, errors are normally output to the event log when an error occurs. It is possible to specify to output to a message box using a command option with the `prputprt` command.

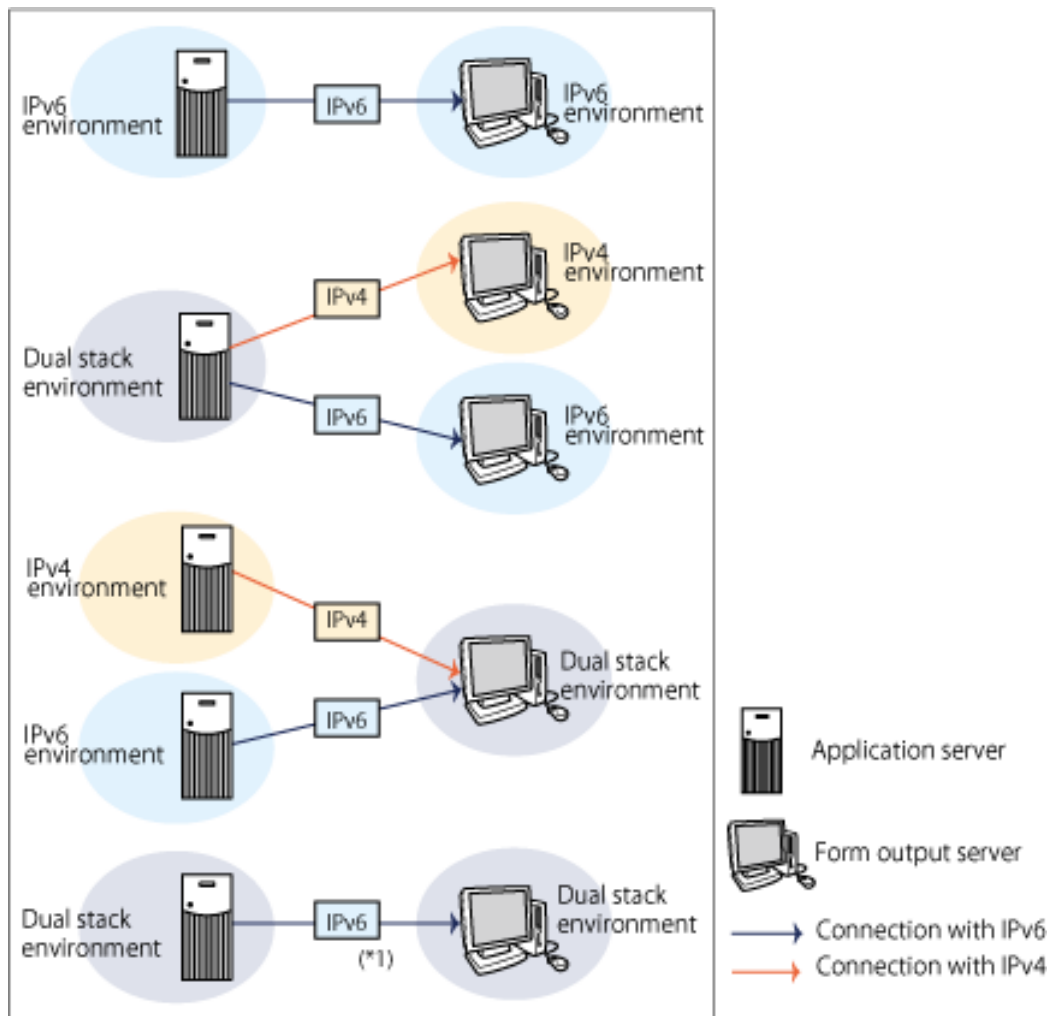
When the application server runs on UNIX, errors are normally output to the standard error output when an error occurs. It is possible to specify to output to both standard error output and the syslog using a command option with the `prputprt` command.

Refer to the Application Design online manual for details.

- When the form output server is running on Windows Server 2003, Windows Server 2008, Windows Vista, or Windows 7, error information may not be recorded to the event log during form output or when collecting 'audit trace logs. If this is the case, set as follows to record to the event log:
  - For Windows Server 2003  
Make the remote form output user part of the Administrators group.
  - For Windows Server 2008, Windows Vista, and Windows 7  
Make the remote form output user on the form output server part of the Administrators group, then set the remote form output user on the application server.  
The `-rmuserpasswd` option must be specified with the `prputprt` command or `prassort` command when remotely outputting forms from Windows to Windows.

### ● Operation in an IPv6 environment

- The remote form output feature is able to operate in both IPv4 and IPv6 environments. It is even able to operate in an environment with both IPv4 and IPv6 (dual stack environment). The following describes the network environments (combinations of application servers and form output servers) supported when the remote form output feature is operating in an IPv6 environment.



- \*1: When the application server and form output server are both dual stack environments, connect to the form output server using IPv6 when possible.
- For this reason, take one of the following actions if List Creator V9.3.0 is used as the form output server:
- Disable IPv6 settings on the form output server so that connections to the form output server use IPv4
  - Specify an IPv4 address for the computer name of the form output server to be communicated with
  - When either one of the application server or form output server is running on the Windows Server 2003 or Windows XP operating system, operation is only possible in an IPv4 environment.

## Chapter13 Web Application Link Function

---

This chapter describes the following items regarding the Web application link function (OWF file generation):

- The windows used to preview and print forms
- Use in Internet environments
- Notes



- Refer to the following for information on environment settings for the Web application link function:  
**Note** => "[Chapter5 Web Application Link Environment](#)"
- The supported output functions when using the Web application link function (OWF file generation) are the same as when printing with the Windows version.  
Refer to the following for functionality supported and points to note:  
=> "[8.1 Print \(Windows\)](#)"

## 13.1. Window Reference for the Web Plugin

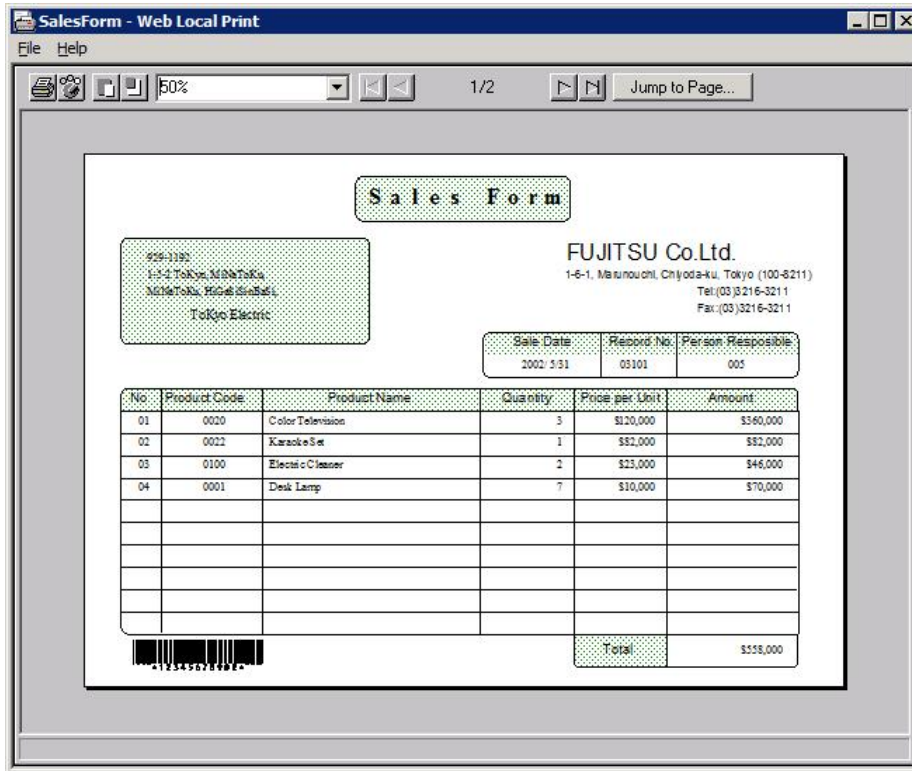
The Web application link function uses a Web plugin to preview and print forms. This section describes the **Preview** window and associated windows of the Web plugin.

- Preview Window of the Web Plugin
- Print Window
- Printer Specification Window
- Page Selector Window

### 13.1.1. Preview Window of the Web Plugin

This section describes the Preview window of the Web plugin.

Preview window of the Web application link function



#### 13.1.1.1. Web plugin toolbar

This section explains the toolbar of the **Preview** window.

Number	Name	Explanation
1)	Print	Click to print the form being previewed. Click the button to display the Print window. You can specify some of the attributes used for printing in this window. Refer to the following for information on the window: => "13.1.2 Print Window"
2)	Printer Specification	Click to specify the printer used in previews. A window where you can specify the printer is displayed.
3)	Zoom Out	Reduce the display size of the form being previewed.
4)	Zoom In	Increase the display size of the form being previewed.

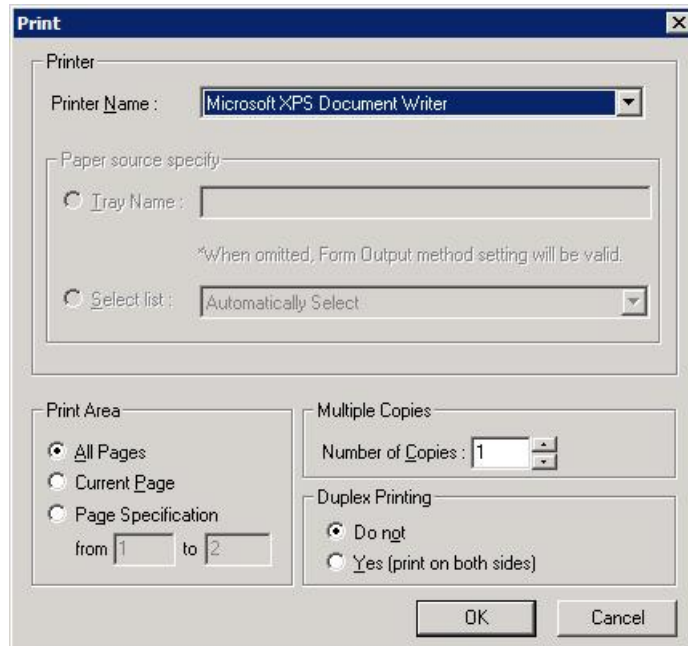
Number	Name	Explanation
5)	Zoom	Display the form being previewed at the specified zoom rate (between 30% and 200%).
6)	First Page	Displays the first page in the form.
7)	Previous Page	Displays the page before the page currently being displayed.
8)	Page Number	The current page number is displayed as "current page number/overall number of pages".
9)	Next Page	Displays the page after the page currently being displayed.
10)	Last Page	Displays the last page in the form.
11)	Jump to Page	Select to specify the page number to display. Click the button to display the window for selecting the page.



### 13. 1. 2. Print Window


Click **Print** to display the **Print** window.

**Print** window of the Web application link function



- Caution**
- Items specified when outputting the form or specified in the form are invalid after specifying fields in this **Print** window.
  - If **None** or **Use the printer settings** is set for paper feeding in the **Form Output Methods** window, the form is output according to the settings in the properties for the printer driver.
  - Settings made in this window will be invalid when changes are made to the following items in the form output interface when outputting multiforms:
    - Specify paper feed
 When the paper feed method or paper feed name specified for each form is enabled, the paper feed method or paper feed name specified for the form is enabled.

- Duplex printing  
When the side specified for printing is enabled for each form, the side specified for printing is enabled for the form.
- The starting page and ending page numbers specified when generating the OWF file are not reflected in the printing range in this window.  
If you want to perform Web-based local printing and specify the start and finish pages with the form output interface, specify **PRINT** as the start mode when starting the Web plugin using options or properties, then specify **Don't display Print Window** in the **Print** window.

-  **Note**
- If the paper feed name is not specified in the **Print** window, the feeding methods are enabled in the following order of precedence:
    - 1) Paper feed method and paper feed name specified by switching the paper feed method or paper feed name in the form output interface
    - 2) Paper feed name specified in the paper feed name in the form output interface
    - 3) Paper feed method specified in the paper feed method in the form output interface
    - 4) Information specified from the **Print** tab of the **Form Output Methods** window.
  - Apart from starting from the **Preview** window, this **Print** window can be displayed as follows:
    - When using the form output interface  
Specify **PRINT** as the operating mode when starting the Web plugin using options or properties, and specify **Display Print Window** in the **Print** window.
    - When using COBOL application link  
Use an initialization file to specify **PRINT** as the operating mode when starting the Web plugin, and specify **Display Print Window** in the **Print** window.

### 13.1.3. Printer Specification Window

Click **Printer Specification** from the tool bar to display the **Printer Specification** window.

**Printer Specification** window of the Web application link function



### 13.1.4. Page Selector Window

Click **Page Selector** from the tool bar to display the **Page Selector** window.

**Page Selector** window of the Web application link function



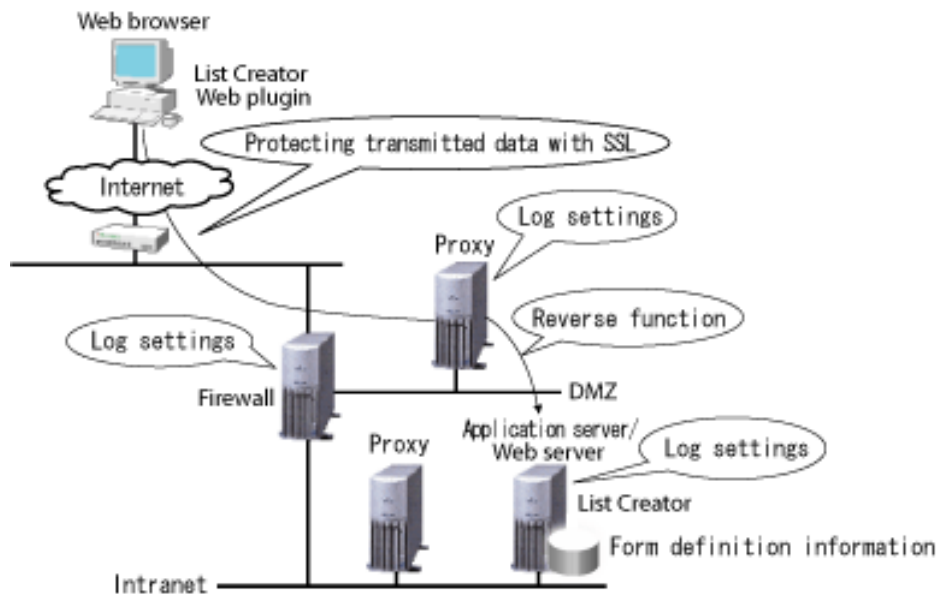
## 13.2. Use in an Internet Environment

This section explains using the Web application link function in an Internet environment.

### 13.2.1. Compatible Environments

The Web application link function can only be used in an Internet environment if the network environment uses a reverse proxy function.

Below is a configuration diagram:



Note

The reverse proxy function allows access to internal Web server resources from Web clients outside the firewall. This function means that resources can be shown as internal Web server resources on the firewall or resources on proxy servers outside of the firewall, thereby ensuring information about the internal Web server is not breached.

### 13.2.2. Security

When using the Web application link function in a network environment that is connected to the Internet, there is the danger of illegal access causing unwanted modifications and damage to the system and resources, or information breaches. For this reason, when constructing a system, it is necessary to adopt defensive measures, such as using user authentication and encrypted communication on the Web server, and having the application assign user restrictions.

In this way, security can be ensured through a combination of appropriate settings and operation for the application that has been created and for the operating environment as a whole.

#### ● Protecting resources

“Resources” include programs, data-related resources (such as databases and data files), and the various definition and information files that are required for programs to run. Protect resources from illegal access and activity by restricting access using operating system functions, dedicated programs, or the authentication mechanisms provided by the Web server. Protect particularly important resources within an intranet environment with a firewall in place.

Do not directly publicize the Web server. Use the reverse proxy function to enable access to the Web server resources.

## ● Guidelines for creating applications

### 1. Pre-checks and processing result notifications

For processes that involve interactive processing, design these processes so that mistakes can be detected by performing pre-checks and processing and access result notifications relating to important data. Recording logs can also be useful for analyzing processing.

### 2. Anonymity

Take particular care to consider the risk of security breaches that enables real objects or the real names of users to be identified.

### 3. Checking the interface

For external interfaces, prevent security holes from being created by taking into account issues such as buffer overflows (buffer overruns) and cross-site scripting. An effective way to prevent buffer overflows is to examine information such as the length, type, and attributes of the input data for external interfaces. Cross-site scripting can be prevented by ensuring that dynamically generated pages do not include unintended tags. For example, one method is to escape meta-characters when pages are output.

### 4. Repeated execution

Consider measures such as specifying the maximum number of requests that can be received from a given remote server within a certain time period.

### 5. Recording audit logs

Consider methods for analyzing and tracing any security breaches that might occur, by recording security-related events via the audit log functions of the Web server, proxy server, or the operating system, or by configuring the application to output logs.

### 6. Establishing security rules

An effective way to create a robust application that prevents security vulnerabilities is to identify important resources to be protected from security threats and then establish particular rules for accessing resources and designing interfaces.

Protect connections over the Internet by encrypting communications data. One way to encrypt communications data is to use SSL to encrypt the HTTP messages that are transferred between Web browsers and the Web server.

Refer to the following for information on SSL:

=> ["13.2.3 Protecting Transmitted data with SSL"](#)

## ● Virtual paths

When using the Web application link function during operation of the system, do not publicize the virtual path (/ListCREATOR) from the proxy server.

## 13.2.3. Protecting Transmitted data with SSL

This section explains how to protect transmitted data using SSL.

### ● What is SSL?

The communications protocols used by standard Web servers are not usually concerned with security, so data can be intercepted on the network and tampered with.

By using the Secure Sockets Layer (SSL), the communications protocol of the Web server is replaced with the SSL protocol, thus avoiding these dangers and enabling safe communications between Web servers and Web browsers.



Perform the following tasks to use SSL:

- Enable SSL on the proxy or Web server and the Web browser.

## ● Tasks for enabling SSL

### Proxy or Web server environment settings

Use the following procedure to setup SSL on the proxy or Web server:

- 1) Create a certificate and private key.
- 2) Register the certificate on the proxy or Web server.
- 3) Set the resources to be protected and the authentication type (server authentication/client authentication).

Refer to the manuals for details.

- Refer to the manual for the proxy for details.
- Refer to the following if the Web server is an Interstage one:
  - Notes in the Interstage Application Server online manual regarding security with SSL
  - Notes in the Interstage Web Server online manual regarding security with SSL
- If the Web server is IIS 6.0 or later, refer to [certificate], in the help for IIS.



Menu names and onscreen text may be different for different types of Internet service managers.

Note

### Web browser environment settings

Use the following procedure to setup the environment on the Web browser in order to use SSL:

- Register the certificate from the certifying authority.
- Request a client certificate to be issued and registered (when using SSL3.0 client authentication).

Refer to the manual for the Web server and the help for the Web browser for details.

## **13.3. Notes**

Note the following points when using the Web application link function:

### **13.3.1. Notes on the Web Application Link Function**

Take note of the following when installing Web plugins:

- Install and uninstall the Web plugin on the client computers using Administrator rights. Restart the computer after installation.
- When you want to use newer features by installing a newer version of the List Creator on the application server or Web server, all install the newer version of the Web plugin. The new features will not work if you continue to use the older version of the Web plugin.
- The Web plugin will not work if a MIME type has not been set on the Web server to be used. Refer to the following for information on how to set MIME type:  
=> "5.1.1 MIME Type Settings"
- If authentication for the Web server has been set, the authentication window is displayed each time you start the Web plugin.
- Control with JavaScript is not possible if the Web plugin is embedded in an HTML page with the EMBED tag.
- OWF files are accumulated in the cache of the Web browser.
- When OCR-B fonts or fields are to be used, and "OCR-B FJ" OCR-B font of the OCR-B fonts for Windows are used, then when output with the "OCR-B FJ 10cpi (True Type)" OCR-B font, the output will be lower by about 0.1mm.
- Refer to the following for information on the **Print** window for the Web plugin.  
=> "13.1.2 Print Window"

### **13.3.2. Notes on Previewing and Printing**

Take note of the following when previewing or printing forms:

#### ● **Previewing**

- In the **Preview** window, the white area is the print area set in the **Form Format Definition** window. It is not an example of the page.
- When previewing a form with 10,000,000 pages or more, the page number for the current page is not displayed correctly in the toolbar of the **Preview** window.
- Bitmap data being previewed may be displayed with a color different to that intended, or it may not be displayed at all. If this occurs, change the color palette number of the display driver or change the color number in the bitmap. This has no effect on the output of the form.
- The preview and printing results depend on the printer. Use the same printer as will be used for printing when previewing output results. To specify the printer to be used for previewing, specify the printer with the form, specify the printer as the default printer, or change to the printer in the **Preview** window. Furthermore, always check output results on the printer to be used.
- Characters may be cut off by some printers when previewing or printing forms. If this occurs, make the field where the characters are cut off larger in the **Form Format Definition** window.
- When previewing in an environment where a printer has not been defined, the display driver is used to produce the preview, so the display results may not be correct.
- When previewing in an environment where a printer has not been defined and barcode fields are defined for the form (barcode type is EAN-128 (Convenience Store)), previewing is not possible and the following error occurs: "An error occurred during the output process of the barcode field.Detail Code[47]".

- Even if multi-up printing is specified, only one column per page is displayed in the **Preview** window (multi-up printing works when actually printing).
- When **Increase partition height to show entire contents** is specified for multipart table format or free frame format forms, there may be a difference in the number of pages seen when previewing and the actual number of pages.
- When a paper name that is unavailable on the printer is specified and **# 10 Env** is specified as the paper size, the preview displays a blank page.  
If printing proceeds using these same settings, a blank page is output.
- In the **Preview** window, scrolling using the mouse wheel is not possible.  
Furthermore, scrolling cannot be released when it is started by click the wheel button on the mouse. Release scrolling by performing the following procedure:
  - 1) Click on another window or the desktop.
  - 2) Click back in the Preview window.
  - 3) Click the wheel button on the mouse.

## ● Printing

- To overlap shading, print the shading using transparency mode. However, transparency mode cannot be enabled for some printer drivers.  
If overlapping hatching is printed using a printer driver where transparency mode is disabled, the hatching that has been defined in a downwards direction for the line direction will be printed on top because it is printed last, which means that the hatching underneath will not be printed.
- Forms may not be output using the specified font size, shading, or lines, depending on the printer device, the printer driver and the resolution.
- Text may become garbled if non-kanji double-byte characters are printed using the device font for the printer.
- If forms are printed using device fonts, they will not always be output using the specified font size.
- If duplex (double-sided) printing is performed with multi-up printing, forms may be printed on only one side of the paper even through the printer allows duplex printing.

## ● Precedence of default values in the Print window

- The default values in the **Print** window are enabled in the following order:
  - 1) Specify using the form output interface
  - 2) Specify in the Form Output Methods window

It is possible to modify so that the content specified in the **Form Output Methods** window are not used as the default (same behavior as V9.1.0 and earlier).

Perform the procedure below to change the operating environment file of the form output server, then output the form (generate the OWF file).

- 1) Open the following operating environment file in a text editor:

When the form output server is a Windows server

```
instal\Dir\configw.bip
```

When the form output server is a UNIX server

```
/etc/opt/FJSVoastw/conf/configw.bip
```

- 2) Add the following line to the end of the file:

```
WP_PRTDLGCM Y
```

Delete the added line to initialize the values specified in the **Form Output Methods** window.

● **System environment (spooling)**

- If there is not enough space in the system's spool directory, forms may not be output or only output partially when you try to output forms.  
In this case, increase the capacity of the spool directory before outputting the form again.
- If a form is output and then the print request is canceled during spooling, depending on the printer driver being used, processing time may be excessive, and the following error may occur:  
"An error occurred while outputting the form. (Error Code:86)".

● **Points to note when designing forms**

- If the operating environment used for design is different to the one used for output (including previews), there may be differences in the alignment and pitch of the text.  
Refer to the following for details:  
=> ["7. 2. 1 To Output Forms from an Operating System Different to the Design Environment System"](#)