Kodak

# i9600 Application Software

## User's Guide

A-61505
CAT# 156 0945

# EASTMAN KODAK COMPANY SOFTWARE LICENSE AGREEMENT

Read the following terms and conditions carefully before using the enclosed software. Use of the software within this package indicates your acceptance of these terms and conditions. If you do not agree with them, you should promptly return the package in its entirety and your money will be refunded.

**License**

1. Grant of License. Eastman Kodak Company ("Kodak") grants you a license to use one copy of the enclosed software program(s) (the "Software") subject to the license restrictions set forth below.
2. Restrictions on Use. You may use the software only on one computer at a time. For each additional computer on which the Software is running at the same time, you will need an additional licensed copy of the software. You may copy the Software as necessary to use the Software as described above.
3. Transfer of the Software. You may permanently transfer the Software to another party if the other party agrees to accept the terms and conditions of this license and you retain no copies of the Software.
4. Copyright. The Software is owned by Kodak or its suppliers and protected by copyright laws and International treaties. You may not copy the Software other than as expressly provided in this license. You may not reverse engineer, decompile, or disassemble the Software.
5. Term. This license is effective until terminated. You may terminate it at any time by destroying the Software together with all copies in any form. It will also terminate if you fail to comply with any term or condition of this Agreement. You agree upon such termination to destroy the Software together with all copies in any form.

**Limited Warranty**

As evidenced by a copy of your purchase receipt, Kodak warrants (i) the Software will perform substantially in accordance with the accompanying written materials, and (ii) the media on which the Software is furnished will be free from defects in materials and workmanship under normal use.

Kodak does not warranty that the functions contained in the Software will meet your requirements or that the operation of the Software will be uninterrupted or error free. You assume responsibility for operation of the Software to achieve your intended results, and for installation, use, and results obtained from the Software.

**KODAK MAKES NO OTHER WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE**. Some states and countries do not allow the exclusion of implied warranties, so the above exclusion may not apply to you. This warranty give you specific legal rights and you may also have other rights.

**Limitations of Remedies**

Kodak's entire liability and your exclusive remedy shall be, at Kodak's option either (a) the repair or replacement of the Software or any media not meeting Kodak's "Limited Warranty" that is returned to Kodak or your dealer with a copy of your receipt, or (b) the return of the price you paid for the Software, provided you have proof of the purchase price you paid. These remedies are not available if the failure of the Software or media is the result of misuse, abuse, or a failure to follow the operating instructions in the accompanying written materials.

**IN NO EVENT WILL KODAK OR ITS SUPPLIERS OR DEALERS BE LIABLE TO YOU FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS, OR OTHER DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE SOFTWARE EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.** Some states and countries do not allow the limitation or exclusion of liability for incidental or consequential damages, so the above limitation may not apply to you.

**General**

If the Software was purchased in the United States, this Agreement is governed by the laws of the State of New York. If purchased outside the United States, this agreement is governed by the laws of the country in which it was purchased.

If you have any questions concerning this Agreement, contact your local KODAK representative.

**U.S. Government Restricted Rights**

The SOFTWARE and documentation are provided with RESTRICTED RIGHTS. Use, duplication, or disclosure by the Government is subject to restrictions as set forth in subdivision (b)(3)(ii) of the Rights in Technical Data and Computer Software clause 252.227-7013. Contractor/ manufacture is Eastman Kodak Company, 343 State Street, Rochester, New York, 14650.

**European Community Provisions**

If this Software is used within a county of the European Community, nothing in this Agreement shall be construed as restricting any rights available under the European Community Software Directive, OJ. Eur. Comm. (No. L. 122) 42 (1991).

**Document Imaging**

**EASTMAN KODAK COMPANY**

**ROCHESTER, NEW YORK 14650**

# Contents

# 1 Introduction

## About this guide

The *Kodak* i9600 Application Software provides a high-level interface to the *Kodak* i9600 Series Writers and *Kodak Imagelink* Document Archive Writer 4800. It also provides a set of functions for administrative tasks involved in using the software.

The *Kodak* i9600 Application Software provides menu options and toolbar buttons to help you use the software. In most cases, toolbar buttons are provided to do the same function as a menu option. For the purpose of this manual, procedures are provided using the menu options. If using the toolbar buttons is easier for you, click the toolbar button to perform the action instead of selecting a menu option.

## Organization

In addition to this chapter, this User's Guide is organized as follows:

Chapter 2, *Installing the Software:* Provides hardware and software system requirements, instructions for installing the application software and how to start and exit the software.

Chapter 3, *Using the Software:* Describes each window you can access from the Jobs and Media menu, including explanations of each field as well as procedures on how to run a job.

Chapter 4, *Administrative Functions*: Describes each window you can access from the Administration menu, including explanations of each field as well as procedures on how to set up Writers and job types. This chapter also provides information about system settings.

Chapter 5, *Troubleshooting:* Describes problems you may encounter while using the *Kodak* i9600 Application Software and provides a list of error codes.

Appendix A, *Input Methods*: Provides detailed information and examples regarding List files and Batch mode as well as information on how to create a List file.

Appendix B, *Using the Input Processor:* Provides information about the Input Processor and how to use it.

Appendix C, *Glossary:* Provides a listing of terms associated with the Writer and the application software.

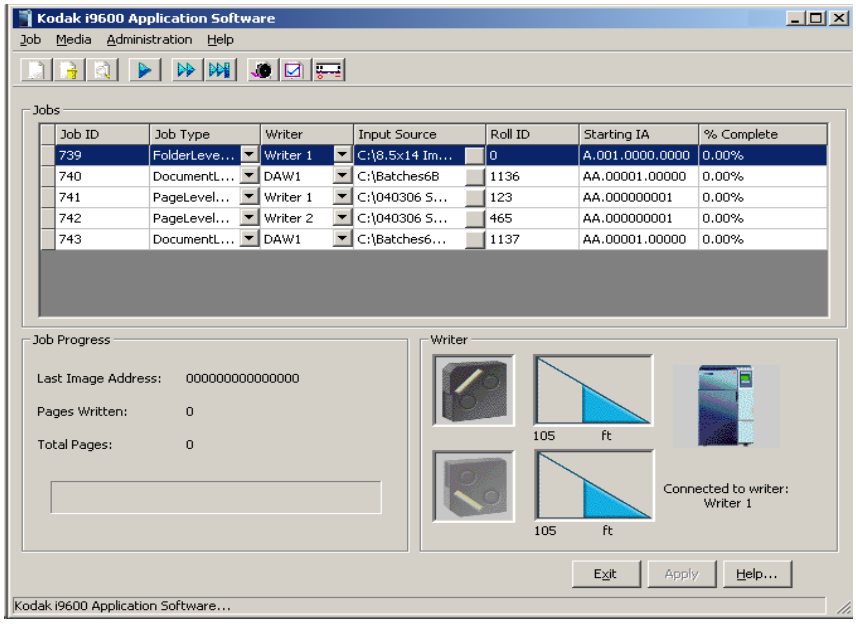
Appendix D, *Grouping, Image Addresses and Image Marks*

Appendix E, *Image File Specifications:* Details the specifications of the digital image files to be written to media.

## What is *Kodak* i9600 Application Software?

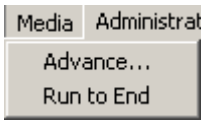
The *Kodak* i9600 Application Software is a Microsoft Windows application that provides a fully functional interface to the *Kodak* i9600 Series Writer and *Kodak Imagelink* Document Archive Writer 4800.

The *Kodak* i9600 Application Software main window provides access to the following menu options:

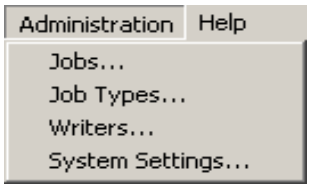



**Job menu**: Allows you to create or delete a job, run and stop jobs and view the current job settings. See Chapter 3, *Using the Software,* for more information.

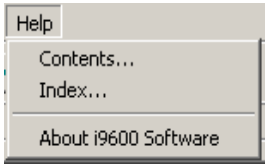

**Media menu**: Allows you specify an amount of media (in inches or meters) for the media to be advanced. See Chapter 3, *Using the Software,* for more information.




**Administration menu:** Use the Administration menu to set up a Writer and a new job type. You can also use the Job Type function to modify or delete existing job types. The System Settings function allows you to set or change system settings. See Chapter 4, *Administration Functions*, for more information.



**Help menu:** Provides on-line help for the *Kodak* i9600 Application Software. See Chapter 3, *Using the Software*, for more information.




## What you need to know

Users of the i9600 Application Software must understand the Microsoft Windows operating system, including basic Windows terms and functions, and the basics of microfilm technology, and image addressing.

For Windows, you must understand the following concepts. If you are not familiar with these terms, it is recommended you use the manuals accompanying your Windows software.

| | |
|---|---|
| Button | Icon |
| Click | Mouse |
| Close | Single-click |
| Dialog box | Pull-down menu |
| Double-click | Shift-click |
| Drop-down list | Single-click |

Navigating through Help files

## Getting technical support

Read this section before contacting Kodak for technical support.

The following information is needed when contacting Kodak technical support for the *Kodak* i9600 Application Software. This procedure is current as of the date of this guide, but it may change without notice as conditions require.

Response Center assistance is available as part of the Service Agreement. Refer to the Service Agreement Terms and Conditions for hours of availability.

Only a trained System Administrator should place the call to the Kodak Response Center. The following items will be requested:

- A K-number, located on the right side of the Writer, identifies the *Kodak* i9600 Series Writer.
- A brief description of the question or problem.
- A contact name and phone number where the contact/customer can be reached.

**Phone numbers:**

U.S. and Canada: 1-800-822-1414

International: 1-585-724-4675

The contact's name and phone number will be taken by a Response Center operator. A Response Center System Support Engineer will return the call.

The goal is to answer inquires on the first call. However, depending on the complexity of the question, it may be necessary to confer with other technical resources. Therefore, the inquiry may require follow-up contact.

Before calling the Response Center:

- Make sure you have a fresh battery in your media cassette.

# 2 Installing the Software

## System requirements

The following minimum hardware and software requirements are required to run the *Kodak* i9600 Application Software.

NOTE: Each Writer requires a dedicated host PC.

### Hardware

- 850 MHz Pentium IV processor
- 256 MB RAM (512 MB recommended)
- At least 20 Gigabytes (GB) hard drive or enough space to hold the desired number of image files. It is recommended that the hard drive is at least 2 ½ times the size of the largest job you are running.
- CD ROM drive
- Monitor, keyboard, mouse
- Ethernet adapter compatible with IEEE 802.3 Ethernet. 3Com EtherLink III has been tested and is recommended for interfacing with the Writer (only supports 10 mb)
- Cabling from PC to Writer (cross-over cable if directly connected)

NOTE: If using the Input Processor to transform your images (i.e., convert or rotate) a faster processor, RAM disk and more disk space is recommended.

### Software

Windows 2000 and XP Professional, Client and Server.

## Installing the software

To install the software:

1. Insert the installation CD in the CD-ROM drive.
2. Follow the on-screen instructions to install the *Kodak* i9600 Application Software.

## Defining units of measure

You can change the units of measure from English to metric or metric to English.

1. Select **Start>Settings>Control Panel>Regional Options**. The Regional Options window is displayed.
2. Select the Numbers tab.
3. Change the Measurement system as desired and click **OK**.

*IMPORTANT: If you have created job types and jobs and then change the units of measure, delete the previously created jobs and jobs types, otherwise you may have conflicting data in the database.*

## Starting the software

To start the *Kodak* i9600 Application Software or the Input Processor software:


Double-click on the *Kodak* i9600 Application Software icon on the desktop or from the Windows Start menu, select **Programs> Kodak>Kodak i9600 Application Software.**


Double-click on the *Kodak* i9600 Input Processor icon on the desktop or from the Windows Start menu, select **Programs>Kodak> Kodak i9600 Input Processor**.

## Exiting the software

To exit the application software:

- Click the Close box in the upper right-hand corner of the *Kodak* i9600 Application Software window or the *Kodak* i9600 Application Software Input Processor.

  ***or***

- Click the **Exit** button on the *Kodak* i9600 Application Software main window or the *Kodak* i9600 Application Software Input Processor.

# 3 Using the *Kodak* i9600 Application Software

This chapter provides an overview of the windows you can access when using the application software, as well as procedures for:

- Creating a new job
- Multi-roll processing
- Deleting jobs
- Viewing queued jobs
- Running and stopping jobs
- Viewing job settings
- Advancing media

See Chapter 4, *Administration Functions* for an overview of the Administration menu and procedures for setting up job types, defining a Writer and changing system settings.

## Creating your Reference Archive — overview

A Reference Archive system accepts data and digital image from multiple host systems as digital document images. It renders these images an unalterable, archival, human-readable images preserving the content, content and structure of the original record. The resulting analog record may be redigitized and served back to any system on-demand to provide immediate validation, permanent legal evidence and a foundation for deep disaster recovery.

The following steps provide a basic overview of what you need to do the write a job to film using the *Kodak* i9600 Series Writer and the *Kodak* i9600 Application Software.

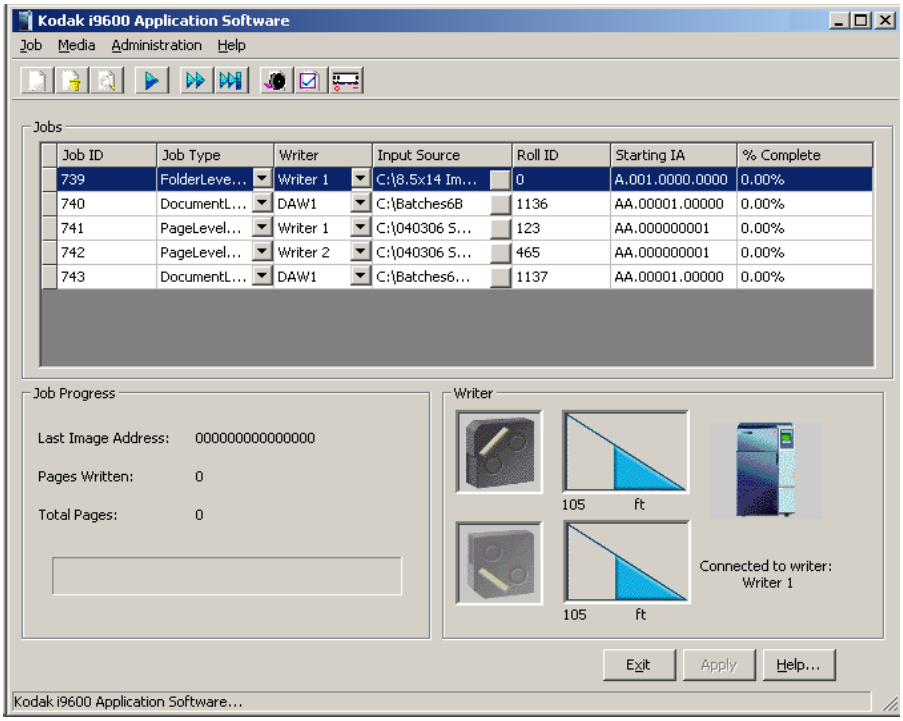
1. Gather the images you want to write to film that you want to be part of your Reference Archive (e.g., digitally-created documents/ scanned documents).
2. If necessary, convert the digital image files to the Writer-compatible TIFF image format or ASCII text files. See Appendix E, *Image Files Specifications*.
3. If you are writing a new job to film, access the Jobs Types dialog box and setup the parameters of the new job. See the sections entitled, “Jobs Types dialog box” and “Creating and modifying a job type” in Chapter 4.
4. Use the Input Processor to verify that your images are acceptable and reduce the possibility of errors during the writing process. If necessary, convert the images that you want to write to your Reference Archive. See Appendix B, *Using the Input Processor Software*.
5. Run the job. See the section entitled, “Running/stopping a job” in Chapter 3.

6. Process the film. See Chapter 3, *Using the Kodak i9600 Application Software*.
7. Verify the film quality to be sure all images are there and that the image quality is acceptable.
8. Mark the job as *Verified*. See the section entitled, “Viewing jobs in the system” in Chapter 4.
9. Optional, when the job has been successfully written to film, if you want you can delete the images after you have run and verified the job. See the section entitled, “Deleting a job type” in Chapter 4.

To begin:

- Click the i9600 Application Software icon on the desktop or, from the Start menu, select **Programs>Kodak>Kodak i9600 Application Software**.

The *Kodak* i9600 Application Software window displays all open jobs and their status. This window provides a menu bar, toolbar, a Jobs window listing the jobs currently in the system, a Jobs Progress area and a Writer status area.




NOTE: If desired, you can resize the Main window by:

- clicking on the Resize button.
- placing the mouse cursor on one of the edges or corners of the window and dragging the edge or corner up, down or diagonally to the desired size,
- double-clicking on the Title bar

The menu bar provides the following options:

**Job** — allows you create or delete a job, run and stop jobs, and view the current job settings.

**Media** — allows you to advance the media a specified amount or advance media to the end of the roll.

**Administration** — allows you to view the parameters associated with the selected Writer and job type, set up Writers and job types and provides access to the system settings.

**Help** — provides access to *Kodak* i9600 Application Software on-line help.

## Toolbar

The toolbar buttons provide the following options:

| | |
|---|---|
|  | When selected, will add a new job line to the main window. This is where you will select and enter information regarding a new job you want to create. |
|  | Deletes the selected job. |
|  | When selected, displays a visual representation of the job settings for the selected job. |
|  | Starts the selected job. |
|  | Advances the media the amount of millimeters or inches that is set up on the Media Advance dialog box. |
|  | When a job is running, the Start button is replaced with a Stop button. Click this button to Stop a job in progress. |
|  | Runs the media to the end of the roll. |
| **The following options are reset each time you launch the *Kodak* i9600 Application Software.** | |
|  | **Auto End of Roll** — when the job is finished, end of roll processing is automatically completed (usually writing trailer pages) and the message ***All images have been written. Do you want to write trailer pages?*** will ***not*** be displayed. |
|  | **Auto Job Complete** — automatically completes the current job ***without*** displaying the message ***Do you want to mark this job complete?*** |
|  | **Auto Add File Trailer at Job Completion** — automatically adds the film trailer to the roll when the job is finished (either completed manually or automatically) and after the auto end of roll. |

## Job menu

The Job menu contains the following options: New, Delete, View Job Settings and Run.


**New** — when selected, will add a new job line to the main window. This is where you will select and enter information regarding the new job you want to create, i.e., job type, input source, etc.

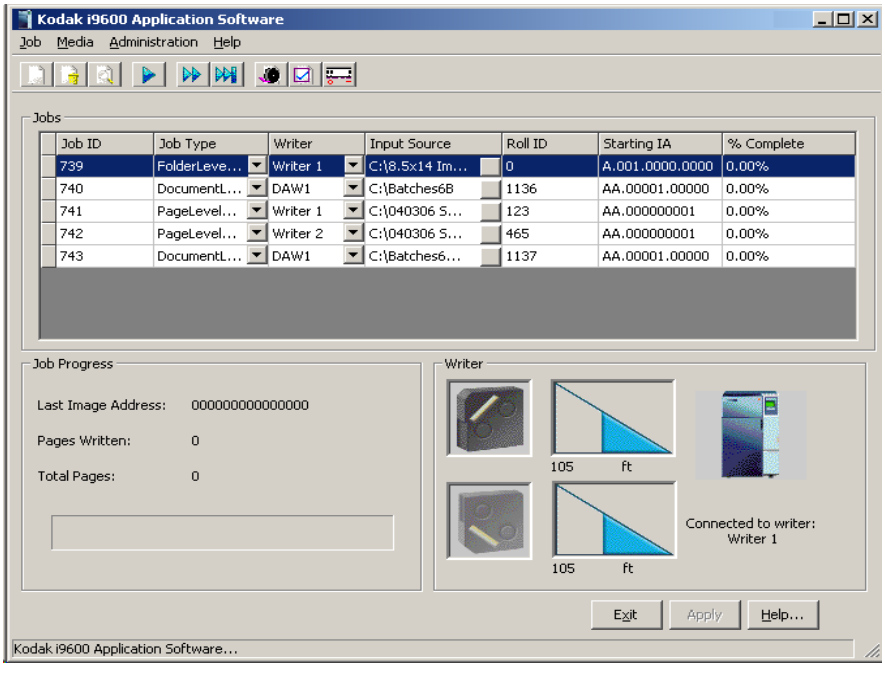
**Delete** — deletes the selected job. You can only delete one job at a time. Only jobs that have not yet been run can be deleted.

**View Job Settings** — when selected, displays a visual representation of the job settings for the selected job.

**Run** — starts the currently selected job.

## *Kodak* i9600 Application Software main window

When you select **New** from the Job menu, the *Kodak* i9600 Application Software window is populated with job setup fields. Following are descriptions of the fields on this window.




### Title bar and buttons


Displays the product name and window buttons. You can use the buttons at the top of the window to minimize or maximize the window. Click the Close button (X) to close the main window.

**Jobs section**

**Job ID** — this is a system-generated ID number which is incremented by 1 from the previously created job. You cannot change the Job ID.

**Job Type** — the drop-down list provides a listing of previously defined job types. Once a job type is selected, several fields are populated with the values associated with the selected job type.

**Writer** — the Writer associated with the selected job type will be displayed. If you want to select a different Writer, use the drop-down list to display the available Writers.

**Input Source** — enter a path (or browse) to a valid List file, Batch or Poll directory, if the one that was previously setup is not correct.

**Roll ID** — this field is populated with a value after a job type is selected. The value is the next available number for that job type based upon current records in the database. This value can be changed if desired, using any number (up to 8 digits). This field must contain a value.

**Starting IA** — this field is populated with the value from the job type you selected. This value can be changed if desired, but the value must comply with the parameters specified in the job type. As a job runs, this field changes to show the “Last Image Address” that was assigned.

**% Complete** — displays the percentage of the job that has been written to media (not updated as the job is being run).

NOTES:

- Once the job is removed from the queue, you can go to the **Administration>Jobs** option and select **Rerun Job** to place the job back in the queue if it needs to be re-run.
- Jobs displayed in the Jobs section can be sorted in ascending/ descending order by clicking on the column headings.

**Job Progress section**

**Last Image Address** — displays the image address of the last image processed.

**Pages Written** — displays the total number of pages written (each image).

**Total Pages** — displays total number of images for the selected job.

NOTE: The Progress meter at the bottom of the Job Progress section displays the status of the job that is currently running.

**Writer section**

Displays the amount of media remaining in the upper and lower cassette. This field is enabled upon a successful connection to the selected Writer. This is informational only and cannot be changed.

NOTE: Click the Writer icon to connect the Writer prior to running a job.

**Exit** — exits the *Kodak* i9600 Application Software.

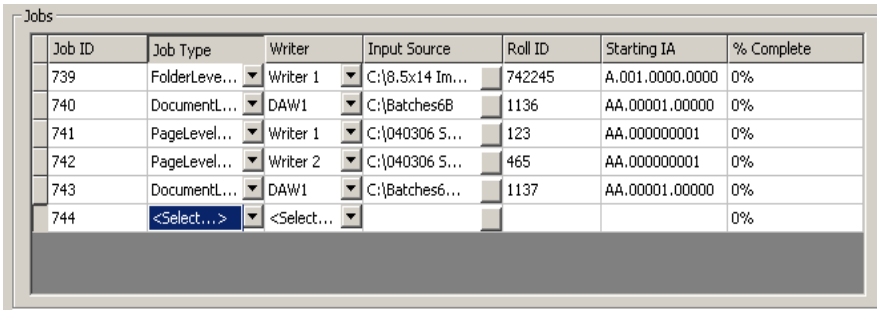
**Apply** — saves the changes you made on the *Kodak* i9600 Application Software main window.

**Help** — displays on-line help for the *Kodak* i9600 Application Software main window.

## Creating a new job

Before you begin make sure the media cassette(s) have been loaded with film and inserted correctly into the Writer. For more information about media cassettes, refer to the User's Guide for the *Kodak* i9600 Series Writers, A-61058 or the *Kodak Digital Science* Document Archive Writer 4800, A-61038.

1. Click the i9600 Application Software icon on the desktop or, from the Start menu, select **Programs>Kodak>Kodak i9600 Application Software**.
2. Select **Job>New**. The main window will be populated with the job types currently in the system and a new job row will be added to the bottom of the list.




3. Select a Job Type from the drop-down list. The Writer associated with the job type you selected will be displayed. If you need to change the Writer, use the drop-down arrow to select the Writer you want.

   NOTE: If you have a long list of job types, you can locate the job type quickly by continuously pressing the first letter of the name of the job type until you find the job type you are looking for.

4. If the Input Source is not correct, enter the correct file path in the Input Source field.
5. If the Roll ID is not correct, enter the correct roll ID.
6. If desired, select one, two or all of the End of Roll/Job Completion/ Add Trailer toolbar buttons.

7. Select **Job>Run**. The job will immediately start processing, unless the input method is Polling, then the application software will begin looking for Poll files.

If you selected one, two or all of the End of Roll/Job Completion buttons (in Step 6), you will not get the following messages upon completion of processing, ***All images have been written. Do you want to write trailer pages?***

- If you select **No**, the job fields remain populated with current job information and the connection to the Writer is maintained. You can specify a new input source and select **Run** to add more images to the same roll ID for that application, or select **Exit**.
- If you select **Yes**, a message will be displayed indicating that the roll is done, then the following message will be displayed, ***Should job 'job 1' be marked as COMPLETE?***
  - If you select **Yes**, the job status is updated in the database and job is removed from the queue.
  - If you select **No**, the job will stay in the queue and be marked as *Partial*.

## Multi-roll processing

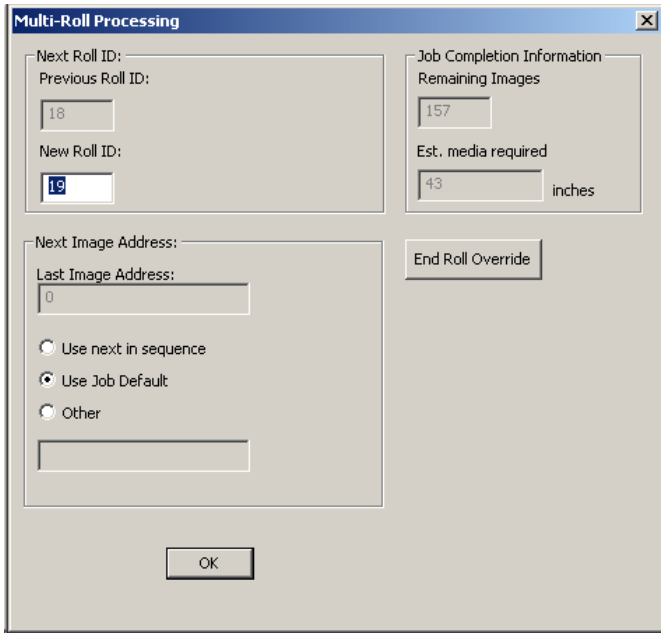
Multi-roll processing allows continuation of processing without having to setup and start another new job, and makes it unnecessary to batch images according to the capacity of a single roll.

The Multi-roll processing dialog box is automatically displayed when a single job contains more images than will fit on one roll of media and there is only 2 feet of media remaining on the roll.

NOTE: A 2-foot trailer is required at the end of a roll to facilitate successful retrievals, and the system does not allow splitting of multi-page documents across multiple rolls of media.

When the Multi-Roll processing dialog box is displayed:

1. Edit fields as necessary.
2. Click **OK** on the dialog box. A message box will be displayed prompting you to replace the roll of media.
3. Change the roll of media.
4. Click **OK**.




NOTE: If there is only 9 inches (16 mm) of media required to complete the job, select the **End of Roll Override** button. This will run more images.

**Previous Roll ID** — is informational only and shows the roll ID for the roll that was just finished.

**Next Roll ID** — can be changed if desired, but cannot be the same as any existing roll ID already associated with the current job type in the application's database.

**Last Image Address** — is informational only and shows the image address assigned to the last image on the roll that was just finished.

**Starting IA for the next roll** — can be one of the following:

- **Use next in sequence:** the IA (image address) assignment will continue from the previous roll, based upon the input type and image addressing parameters in the job type, and the level of the first image. In the previous example, the starting IA could be FF.006.000.000 or FF.005.002.000, depending on the image level.
- **Use Job default:** the IA assignment will start with the value specified in the job type, e.g., FF.001.000.000.
- **Other**: the IA assignment will start with the value specified in this field. The value must comply with the parameters specified in the job type.

NOTE: The Transfer file for each subsequent roll will be created in the same directory as the Transfer file for the first roll.

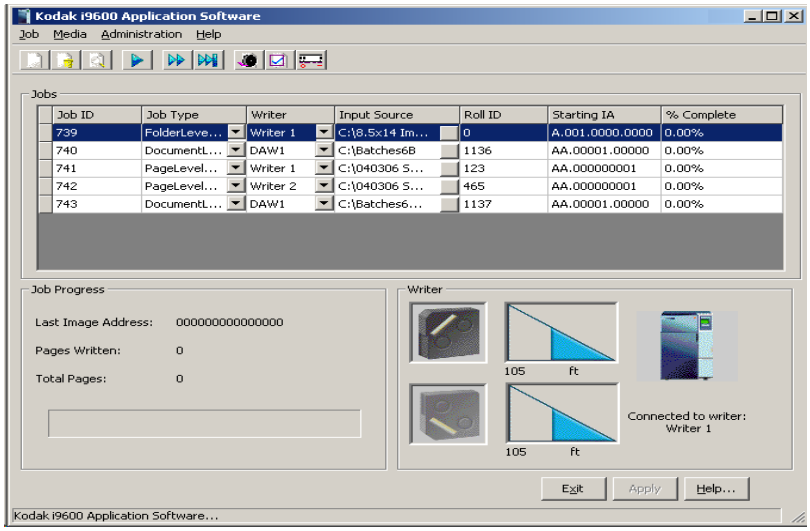
**Job Completion Information** — displays the following:

- **Remaining Images:** displays the number of remaining images that still need to be written on film.
- **Est. media required**: displays the approximate number of inches (or centimeters) needed on the film to complete the job currently running.

**End Roll Override** — select this option if you want to bypass the message that is displayed when the end of the film is approaching. Enabling this option allows you to write a few more images on the end of roll until only a small amount of film is left (about 1 to 2 feet). When the Writer reaches this point, it will stop.

## Deleting a job from the queue

When you delete a job, you are deleting the job from the queue and the database.

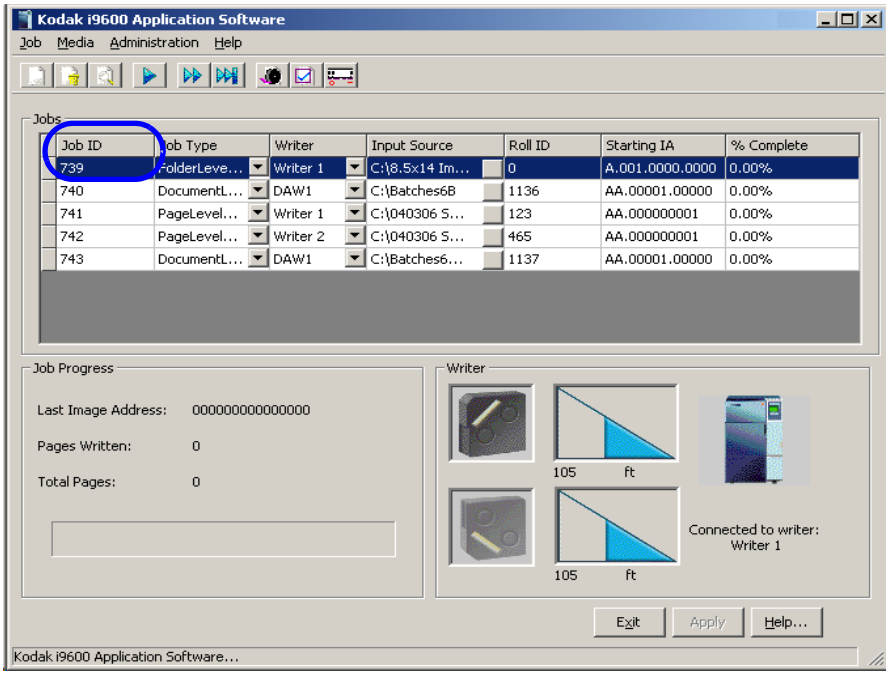



1. Click on the job ID associated with the job you want to delete from the Jobs list.
2. Select **Job>Delete**.
   - If the job is in progress, you cannot delete the job.
   - If the job is not in progress, you will be asked to confirm the deletion by clicking **OK** on the confirmation box.

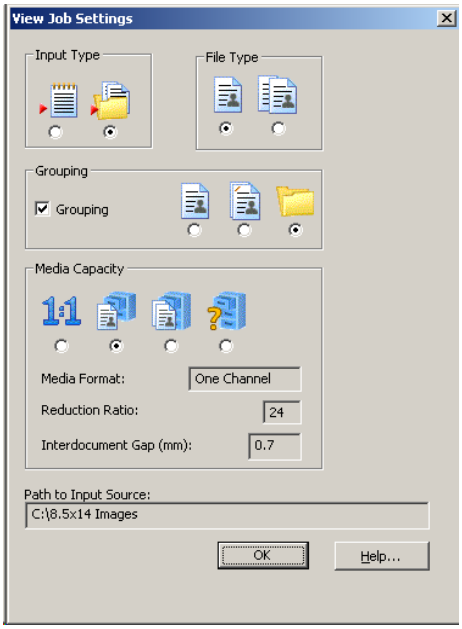
## Viewing job settings

The View Job Settings option allows you to see the values set for a selected Job Type. These settings cannot be changed using this option. To view the settings of a job:

1. On the *Kodak* i9600 Application Software main window select the Job ID for which you want to view settings. Only one job can be selected at a time.




2. Select **Job>View Job Settings**. The View Job Settings window will be displayed. The icons displayed on this window represent the settings for:
   - Input (input method, input type, file type)
   - Output (grouping, media capacity)




3. Close the window when finished.

## Running/stopping a job

You can only select and run one job at a time. To start a job:

1. Highlight the job you want to start from the Jobs list.

   NOTE: If you want to advance the media, select **Media>Advance** and enter the amount of media you want to advance in the dialog box. See the next section entitled, “Advancing the media” for more information about the Advance Media dialog box.

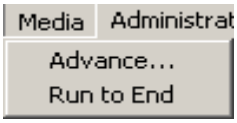
2. Select **Job>Run**. As the job begins to run, the # of Pages Written and an arrow goes around the Writer icon.

Jobs that are currently running can be stopped. To stop a job:

1. Select **Job>Stop**. The message, ***Are you sure you want to stop this job?*** will be displayed.
2. When you click **Yes**, the job will stop.

## Media menu

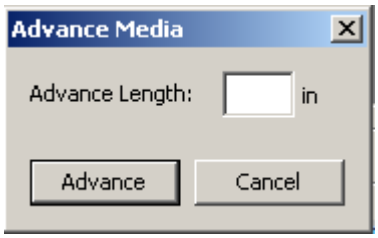
The Media option provides the functionality for advancing the media and running to the end of the media. The Media options will only be available after you select a job and connect to a Writer.




### Advancing media

To advance the media:

1. Select **Media>Advance**. The Advance Media dialog box will be displayed.




2. Enter the desired length of media to advance between jobs (from 26 to 2515 millimeters / 1 to 99 inches). The default is 26 mm / 1 in. Alpha characters and decimals are not acceptable.
3. Click **Advance**.

NOTE: If the amount entered is more than the amount of media remaining, an error message will be displayed.

### Run to end

When selected, will physically run the media completely on to the takeup spool.

To run to the end of the media:

1. Select **Media>Run to End**. The message ***Are you sure?*** will be displayed.
2. Click **OK** to continue. The Writer media status will be set to 0 feet/meters when the Run to End has finished.

## Help menu

**Help...** — the Help menu contains three options:

- **This window** — opens the Help dialog box to display the on-line help page that pertains to the currently active window.
- **Contents and Index** — opens the Help dialog box to display the first page of the on-line help with Contents and Index tabs.
- **About** — displays a window containing software copyright and version information about the *Kodak* i9600 Application Software.

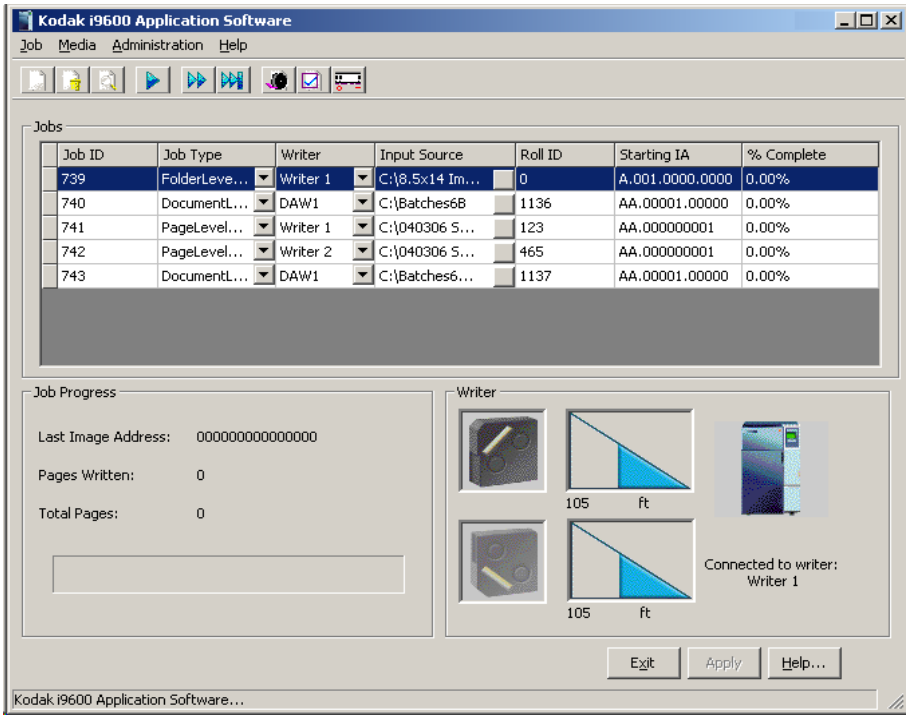
# 4 Administration Functions

This chapter provides an overview of the windows you will access when using *Kodak* i9600 Application Software, as well as procedures for setting up job types, defining a Writer, and changing system settings.

See Chapter 3, *Using the Software,* for an overview of the windows you can access when using the application software, as well as procedures for opening, deleting and running jobs.

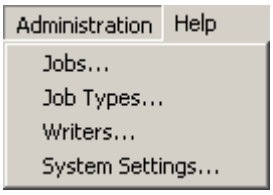
- Click the i9600 Application Software icon on the desktop or, from the Start menu, select **Programs>Kodak>Kodak i9600 Application Software**.

The *Kodak* i9600 Application Software window is displayed. This window displays all open jobs and their status.



## Administration menu

The Administration menu contains the following options:




**Jobs** — displays the Jobs dialog box. This dialog box provides a listing of all jobs in the database referenced by the Job ID number. Use this dialog box to delete and verify jobs.

**Job Types** — displays the Job Types dialog box which allows you create, modify and delete job types.

**Writers** — displays the Writers dialog box which allows you to set up, modify and delete *Kodak* i9600 Series Writers.

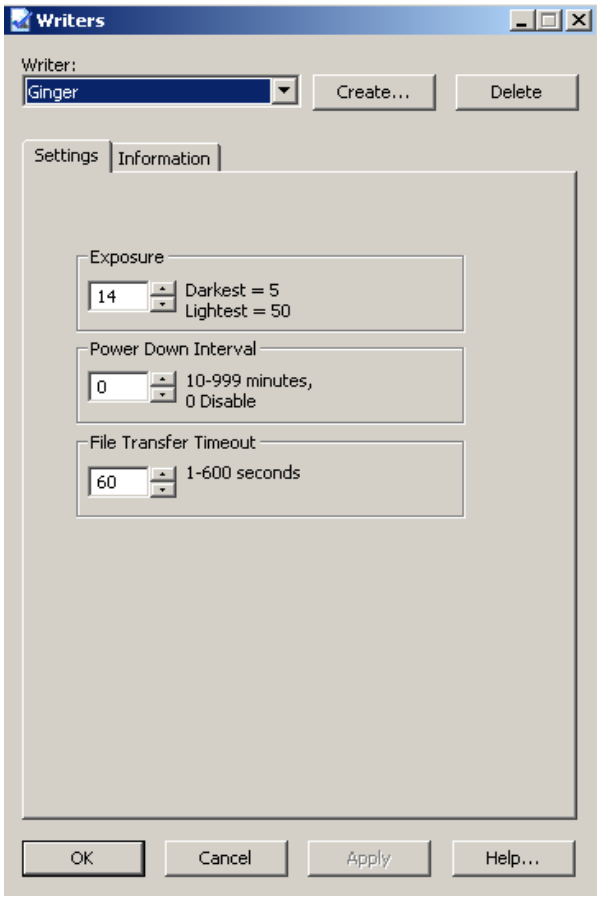
**System Settings** — displays the System Settings dialog box which allows you to set the Error Logging Level and Log File size and change Performance settings.

## The Writer dialog box

Before setting up job types, you must set up a *Kodak* i9600 Series Writer. The Writers dialog box allows you to set up a new Writer, modify Writer values or delete an existing Writer.

To access the Writers dialog box:

- Select **Administration>Writers**. The Writers dialog box provides the following options:




**Writer** — provides a drop-down list of Writers currently set-up in the system.

**Create** — displays the Create Writer dialog box which allows you to set up a new Writer in the system. See the section entitled, “Setting up a Writer” later in this chapter for procedures.

**Delete** — allows you to delete an existing Writer from the system.

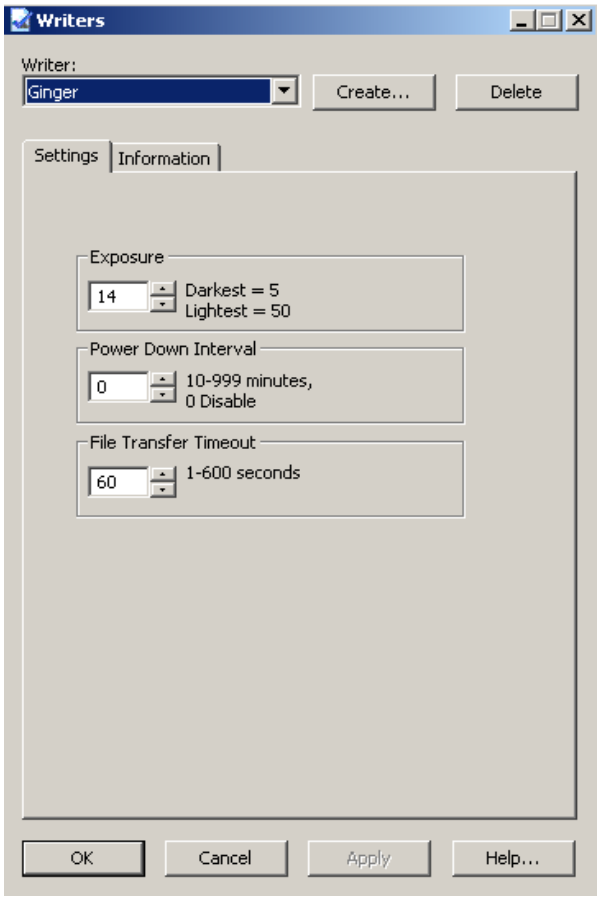
The following fields will contain a value only when a valid Writer is specified in the Writer field.

## Settings tab

**Exposure** — enter/select an exposure value from 5 (lightest) to 50 (darkest) to lighten or darken the images on media. The default value is 18 for an i9600 Series Writer and 14 for a 4800 Writer.

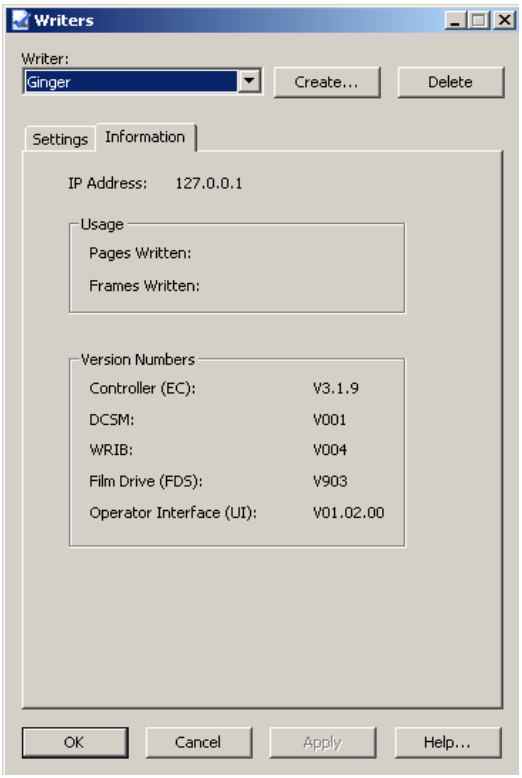
**Power Down Interval** — defines how many minutes must pass without activity before the Writer goes into power-saving mode. Value Range: 0 (disabled) and 10 to 999 minutes. The default value is 0.

**File Transfer Timeout** — enter/select the number of seconds (1 to 600) allowed for a file transfer between the application software and the Writer (any command file, image file, response file, status file). This value should be large enough to ensure the file transfer does not hang and there is adequate time for the transfer. The default is 60 seconds.



## Information tab

The information on this tab is from the currently connected Writer. It is for viewing purposes only and cannot be changed.




**IP Address** — the static IP address of the selected Writer is displayed.

**Usage** — displays the total number of pages written (each image) and frames written to media since the application software was installed. A frame includes the images in the width of the media. For example, with one channel media, one image is across the width of the media, which is considered one frame. With two channel media, two images are across the width of the media, and is also considered as one frame. This feature is only available on the i9600 Writer.

**Version Numbers** — displays the current version information for the Controller, DCSM Version, WRIB version, Film Drive, and Operator Interface. This information is used when service is performed on the Writer.

## Buttons on the Writers dialog box

**OK** — saves the values on the tabs and closes the window.

**Cancel** — closes the window without saving any changes.

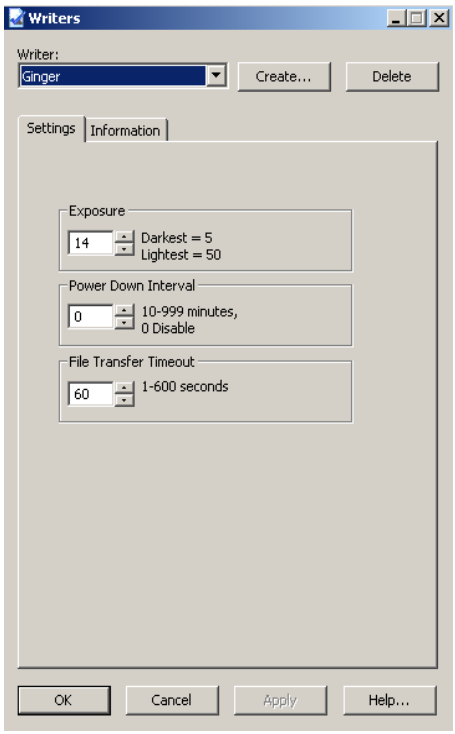
**Apply** — saves the values on the tabs, but does not close the window.

**Help...** — displays on-line help for the displayed window.

## Setting up a Writer

To set up a Writer:

1. Select **Administration>Writers**. The Writers dialog box will be displayed:




2. Select **Create**. The Create Writer dialog box is displayed:


3. Enter a Writer name. The name can be a maximum of 25 characters, and include any keyboard character except an ‘ (apostrophe) and | (the pipe character).
4. Enter the static IP address that was defined for the Writer during installation of the Writer. If you are not sure of the correct IP address, see your System Administrator.
5. Click **OK** to create and save the Writer. The Writer dialog box is redisplayed with current values obtained from the Writer.
6. If desired, select new Exposure, Power Down Interval, or File Transfer Timeout values.
7. Click **OK**.

## Modifying a Writer

To modify a Writer:

1. Select **Administration>Writers**. The Writers dialog box will be displayed.
2. Select the Writer you want to modify from the Writer drop-down list.
3. Change the values on the Settings tab as desired.
4. Click **OK**.

## Deleting a Writer

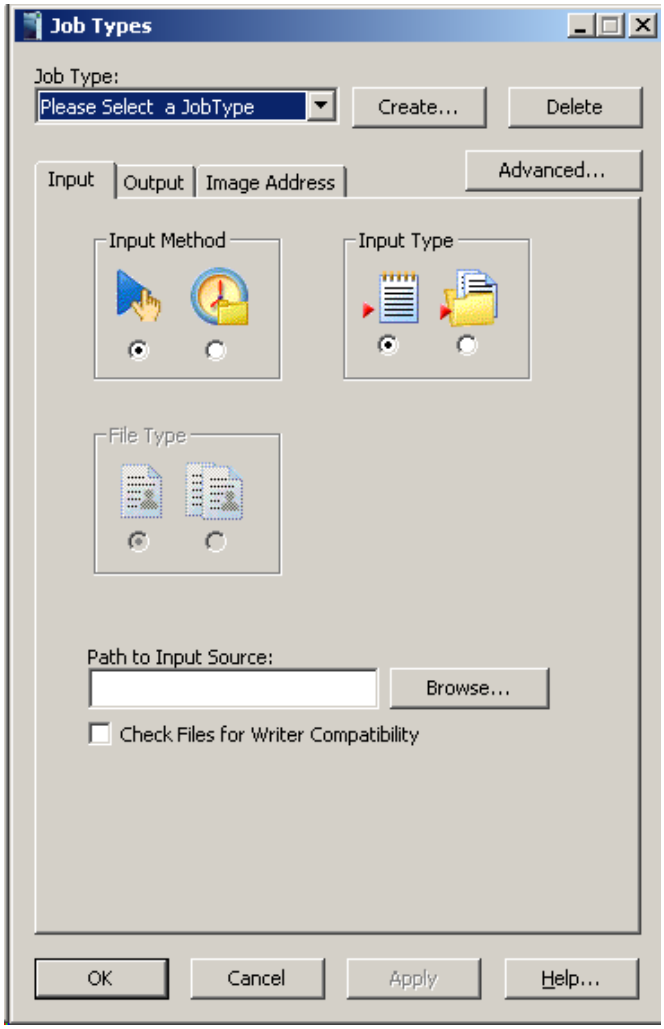
To delete a Writer:

1. Select **Administration>Writers**. The Writers dialog box will be displayed.
2. Select the Writer you want to delete from the Writer drop-down list.
3. Click **Delete**. The message ***Are you sure you want to delete this Writer?*** will be displayed.
4. Click **Yes** on the confirmation box.
5. Click **OK**.

## Job Types dialog box

A job type is a set of parameters that relates to how a collection of images will be written to media. The Job Types dialog box allows you to create, modify and delete job types. To access the Job Types dialog box:

- Select **Administration>Job Types**.
  The Job Types dialog box provides the following options:




**Job Type** — provides a drop-down list of existing job types currently set up in the system. Select an existing job type from the list or if you want to set up a new job type, click **Create** to display the Create Job Type dialog box. See the section entitled, “Creating and modifying a job type” later in this chapter for procedures. You must make an entry in this field. Once a job type is selected, several fields are populated with values from the job type template. Some default templates are provided with the application software.

## Input tab

**Input Method** — select an input method:

**Manual** — allows you to submit either a List file or Batch directory to run at a specific time. If you select this option, you must select an Input Type.

**Polling** — poll files are sorted according to the ASCII file sorting algorithm and are processed automatically in that order. The directory is where the Poll files reside, not necessarily where the image files reside.

**Input Type** — select either List file or Batch.

**List file**: an ASCII text file that contains the full pathname to each image file that is to be written to media. The order in which the images are written is determined by the order in which the image file pathnames appear in the file.

**Batch**: the image files within each directory are sorted according to the Windows ASCII file sorting algorithm and written to media in that order.

For more information regarding input methods and input types, see Appendix A, *Input Methods*.

**File Type** — select the type of file you will be providing as input. These options are not available if **List file** is selected. Two file types are supported: Single and Multi.

**Single**: if your TIFF file contains only one page, then it is a single-page TIFF file.

**Multi**: if your TIFF file contains more than one page, then it is a multi-page TIFF file.

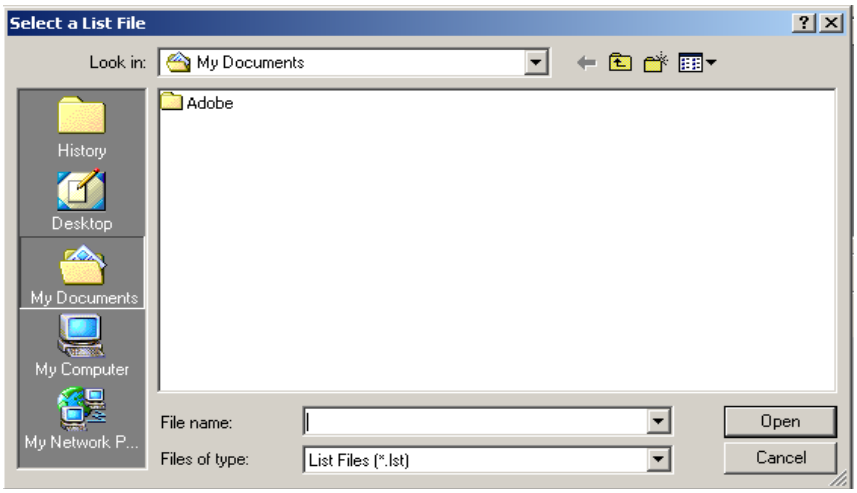
**Path to Input Source** — this field is populated with the selected job type parameters. You can edit this field is necessary.

**Check Files for Writer Compatibility** — enable this option if you want to validate images before sending a job to the Writer. If enabled, the Input Processor will:

- Check TIFF header tags for compatibility with the Writer.
- Check image sizes to ensure they will fit on the Writer.
- Alert you of any problems before writing images to the Writer.

**Browse** — when selected will display either the Select a List File window or the Browse for Folder window.

### Select a List File window




**Look in** — select the drive where the desired file is located.

**File Name** — select the file name from the list box. Once selected, the file name appears in the File Name text box.

**Files of type** — allows you to filter the output of the display window based on file extension. You can select any ASCII text file that is a valid List file.

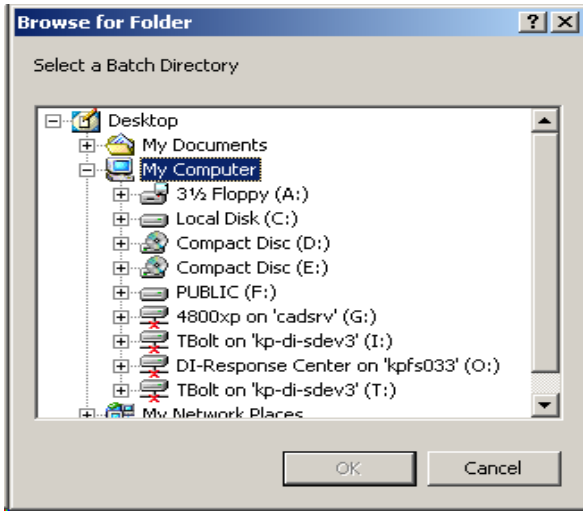
**Open** — click to accept the List file and close the Select a List File window.

**Cancel** — to ignore your selection and close the Select a List File window.

To select a file:

1. Select the desired Drive from the Look in list box.
2. Select the Files of type.
3. Select the desired List file.
4. Click **Open**.

### Browse For Folder Window




**Drive** — select the drive where the desired directory is located.

**OK** — click to accept the Batch or Poll directory and close the Browse For Folder window.

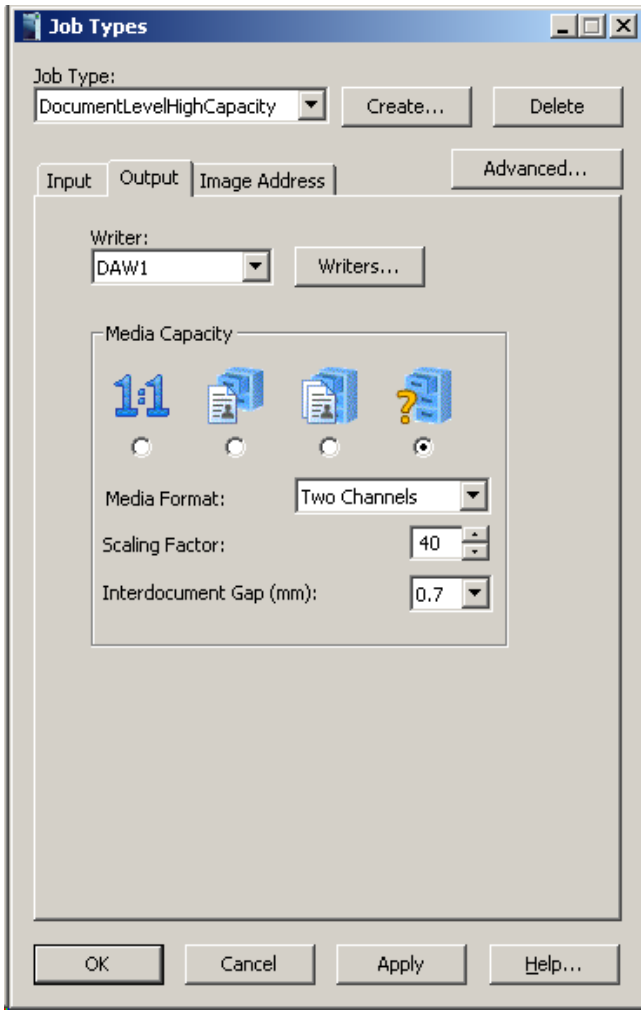
**Cancel** — to ignore your selection and close the Browse For Folder window.

To select a Batch or Poll directory:

1. Select the drive where the desired Batch or Poll directory resides.
2. Select the desired Folder.
3. Click **OK**.

## Output tab

**Writer** — provides a drop-down list of Writers currently set up in the system. Select an existing Writer from the list or if you want to set up a new Writer, click **Writers** to display the Writers dialog box. See the section entitled, “Setting up a Writer” earlier in this chapter for procedures.




**Media Capacity** — the Writer can write documents at 1:1 to 1/99X (99X) of their hard copy size. Reductions are achieved through image file scaling. See the illustration entitled, “Examples of scaling and image orientation on media” at the end of this section. Media capacity choices include: No scaling, Normal, High and Custom. The selected reduction ratio will be included at the end of the annotation.


**No scaling:** image size on the media is dependent on the digital resolution (dpi) and image size in pixels of the image file. Use this option when the images have already been sized to fit on the media. Also used for Full Frame format.

**Normal**: 24X, One Channel.

**High**: 40X, Two Channel.

**Custom**: allows you to select the desired media format and scaling factor.

NOTE: For in-depth information on Scaling, see the PDF file, entitled “Understanding Scaling” on the CD.

**Media format:** select either One Channel, Two Channel or Full Frame.

- **One Channel**: each frame contains only one image.
- **Two Channel**: a frame can contain one or two images. Images are written alternately to the A and B channels on the media. The number of images in any individual frame depends on the grouping and image level. If the grouping is page-level, each frame will contain two images. If the grouping is document-level or folder-level, the B channel will be left blank in any frame where a higher-level image follows the A channel image.

  NOTE: With optical film capture devices, Two channel is associated with front and back, since the fronts and backs of sheets of paper are directly imaged to media. With the Writer, the concept of front and back is not applicable since the input is electronic files, which do not contain fronts and backs, but rather are identified as single-page or multi-page.

- **Full Frame**: the image will imaged across the full width of the film. There will be no image marks. This option is useful when you are doing jacket film or if you have no need to do automated retrievals.

**Scaling Factor**: enter a scaling factor as a number from 0 to 99 (i.e., 32 would be 32X scaling factor).

**Interdocument gap** — enter a value from 0.6 mm to 5.0 mm to set the distance between images on media. The default is 0.7 mm. This value will always be measured in millimeters regardless of how the units of measure are set for your system.

NOTES:

- Reducing more than 60X may produce undesirable image quality and is not recommended.
- For **Normal, High,** and **Custom,** it is recommended that you enable **Exception Scaling**. Exception Scaling will automatically reduce any images that are too large so they fit on the film.

**Non-Full Frame - Standard scaling**

The maximum page widths and lengths accommodated by the Writer are listed below for standard scaling.

| Standard Scaling Factor | Maximum Width One channel | Maximum Width Two channel | Maximum Length 4800 | Maximum Length i9600 |
|---|---|---|---|---|
| 24X | 302 mm<br>11.9 in. | 149 mm<br>5.9 in. | 538 mm<br>21.2 in. | 1244 mm<br>48.9 in. |
| 32X | 403 mm<br>15.9 in. | 198 mm<br>7.8 in. | 718 mm<br>28.3 in. | 1659 mm<br>65.3 in. |
| 40X | 490 mm<br>19.3 in. | 241 mm<br>9.5 in. | 871 mm<br>34.3 in. | 2073 mm<br>81.6 in. |
| 50X | 632 mm<br>24.9 in. | 312 mm<br>12.3 in. | 1125 mm<br>44.3 in. | 2592 mm<br>102 in. |

**Non-Full Frame - No scaling**

Image size on the media is dependent on the digital resolution (dpi) of the image file. The maximum page widths and lengths accommodated by the Writer are listed below for no scaling.

| Image Resolution dpi | Effective Scaling Factor | Maximum Width One channel | Maximum Width Two channel | Maximum Length 4800 | Maximum Length i9600 |
|---|---|---|---|---|---|
| 100 | 77X | 977 mm<br>38.5 in. | 482 mm<br>19.0 in. | 1740 mm<br>68.5 in. | 4064 mm<br>160 in. |
| 200 | 39X | 490 mm<br>19.3 in. | 241 mm<br>9.5 in. | 871 mm<br>34.3 in. | 2032 mm<br>80 in. |
| 300 | 24X | 325 mm<br>12.8 in. | 160 mm<br>6.3 in. | 579 mm<br>22.8 in. | 1354 mm<br>53.3 in. |
| 400 | 19X | 246 mm<br>9.7 in. | 121 mm<br>4.8 in. | 436 mm<br>17.2 in. | 1016 mm<br>40 in. |
| 600 | 13X | 162 mm<br>6.4 in. | 78 mm<br>3.1 in. | 289 mm<br>11.4 in. | 677 mm<br>26.6 in. |

**Full Frame - Standard Scaling**

For i9600 Writers only.

| Standard Scaling Factor | Maximum Width | Maximum Length |
|---|---|---|
| 24 | 384 mm<br>15.1 in. | 1244 mm<br>48.9 in. |
| 32 | 512 mm<br>20.1 in. | 1659 mm<br>65.3 in. |
| 40 | 640 mm<br>25.1 in. | 2073 mm<br>81.6 in. |
| 50 | 800 mm<br>31.5 in. | 2592 mm<br>102 in. |

**Full Frame - No scaling**

For i9600 Writers only.

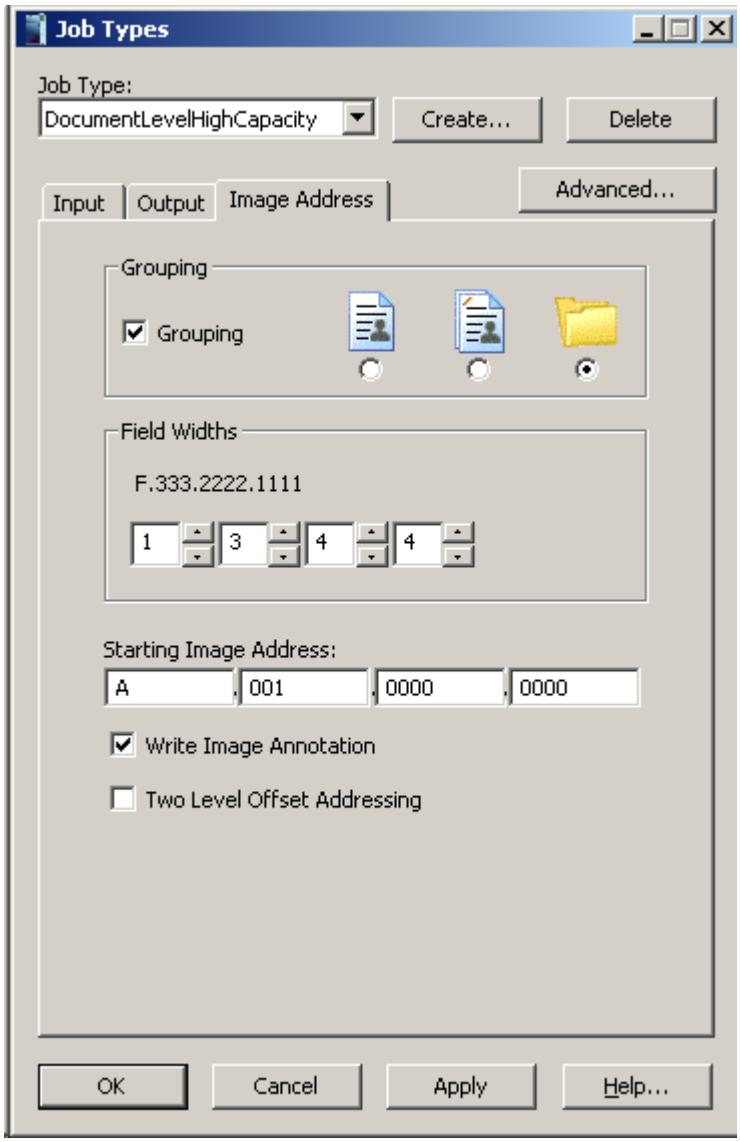
| Image Resolution dpi | Effective Scaling Factor | Maximum Width | Maximum Length |
|---|---|---|---|
| 100 | 77X | 1232 mm<br>48.5 ± in. | 4064 mm<br>160 in. |
| 200 | 39X | 624 mm<br>24.6 in. | 2032 mm<br>80 in. |
| 300 | 24X | 384 mm<br>15.1 in. | 1354 mm<br>53.3 in. |
| 400 | 19X | 304 mm<br>11.9 in. | 1016 mm<br>40 in. |
| 600 | 13X | 208 mm<br>8.1 in. | 677 mm<br>26.6 in. |

## Image Address tab

*The options on the Image Address tab are not available in Full Frame mode.*

Use the fields on the Image Address tab to control how image addresses are created, and at what level each image will be written to media. These values determine what will be accepted as a valid starting image address for a new job.

NOTE: The image address and scaling factor may be written on every image in human-readable characters placed between the image mark and actual image.




**Grouping** — images are grouped in order to facilitate ease of retrieval. If grouping is assigned in the job type, each image is assigned an image address that can be stored in an index database.

- If Grouping is not enabled, images are not assigned an image address, and image marks are not written in frames. Images cannot be retrieved with automatic methods. If provided, the Fixed field annotation will still be written to film.

- If Grouping is enabled, the Page-level, Document-level or Folder-level groupings will be available.

**Page-level**: images are not grouped. Every frame is written with a small image mark.

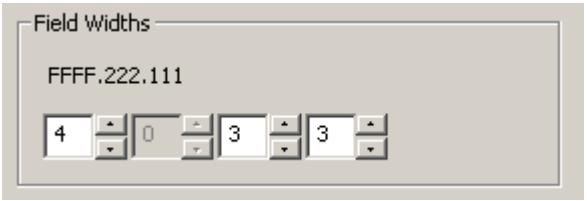
**Document-level**: images are grouped using a document-level hierarchy. The first frame within each group is written with a medium image mark. Subsequent frames within the group are written with a small image mark. Retrievals can be made of an entire group or individual images.

**Folder-level**: images are grouped using a folder-level hierarchy. The first frame within each group is written with a large image mark. Subsequent frames within the group are written with a medium or small image mark depending on the image level specified via the input method. Retrievals can be made of an entire group, document-level subgroup, or individual images.

**Field Widths** — an image address can have up to four segments depending on the Grouping selected. You must designate the maximum number of characters needed in each segment. For example, on a page-level roll with 10,000 images, the Page Level field width must be at least 5. The total for all enabled segments cannot exceed 12 but the maximum for each individual segment is 9.

NOTE: If you are experiencing 256 errors, one of your field widths is too small for the number of documents at that level. For example, if you are archiving a single-page TIFF job with 2 levels and you have a document level set to 3, and your job has more than 100 folders, you will get a 256 error because '100' will not fit in a field width of 2.

A field width must be specified for each enabled segment, except Fixed which is optional. If you select Page-Level grouping, page-level field width is enabled. If you select Document-Level grouping, page-level and document-level are enabled. If you select Folder-level grouping, Page-level, Document-Level and Folder-Level are enabled. The illustration below shows a document-level grouping with a fixed field width of 4, a document field width of 3 and a page field width of 3.



**Starting Image Address** — this field is populated with the value from the job type when a job type is selected. This value can be changed if desired, but the value must comply with the values specified in the job type.

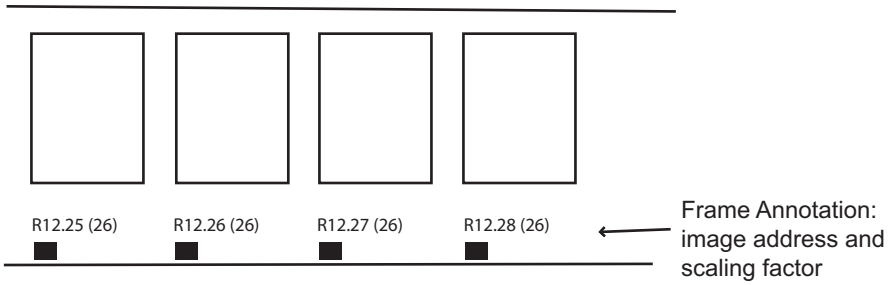
See Appendix D, *Grouping, Image Addresses and Image Marks* for detailed information.

**Write Image Annotation** — when enabled, the image address and reduction ratio of the current frame will be printed next to the image mark. This option is not available for Full Frame mode.

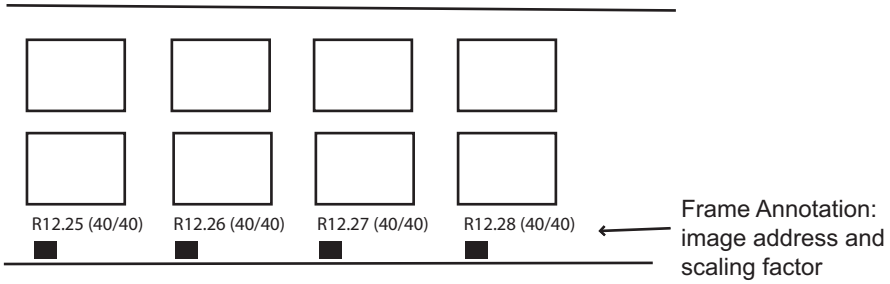
The format of the image annotation will be the Fixed field followed by the image address, followed by an indication of the reduction ratio. FFF.333.222.111[X/X]

[24] Simplex 24X
[40/40] Duplex 40X
[1:1] No scaling
[40/65] Duplex 40X when the B channel was exception scaled to 65X

**Example 1:** One channel, 24X reduction with frame annotation.




**Example 2:** Two channel, 40X reduction with frame annotation.

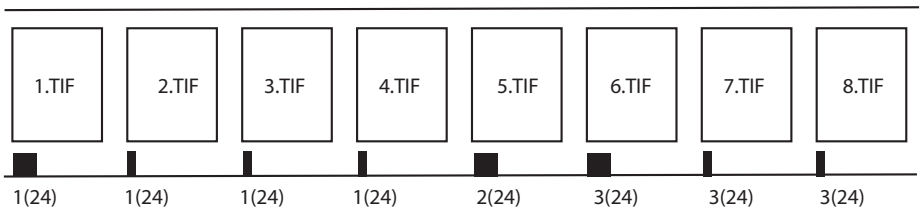


**Two-level Offset Addressing** — if selected, the image address that will be assigned under a level 2 image mark, will only have a portion of the image address that contains the level 2 address.

**Example 1: 2 level, Standard and 2 level, Offset**.

| Image File | Standard 2 level address | 2 level offset address |
|---|---|---|
| **C:\Images\.1TIF** | 1.0 | 1 |
| **-C:\Images\.2TIF** | 1.1 | 1 |
| **-C:\Images\.3TIF** | 1.2 | 1 |
| **-C:\Images\.4TIF** | 1.3 | 1 |
| **C:\Images\.5TIF** | 2.0 | 2 |
| **C:\Images\.6TIF** | 3.0 | 3 |
| **-C:\Images\.7TIF** | 3.1 | 3 |
| **-C:\Images\.8TIF** | 3.2 | 3 |

**Example 2: 2 level offset on film**



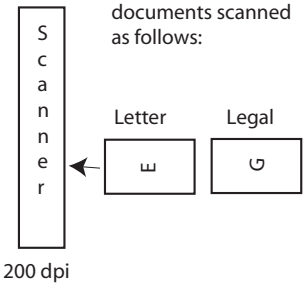

NOTE: The transfer file will only have a single level address, as shown above under the 2 level offset column.

**Example 3: Transfer File**

| | | | |
|---|---|---|---|
| **C:\Images\.1TIF** | 1 | 5678 | 1 |
| **-C:\Images\.2TIF** | 1 | 5678 | 1 |
| **-C:\Images\.3TIF** | 1 | 5678 | 1 |
| **-C:\Images\.4TIF** | 1 | 5678 | 1 |
| **C:\Images\.5TIF** | 1 | 5678 | 2 |
| **C:\Images\.6TIF** | 1 | 5678 | 3 |
| **-C:\Images\.7TIF** | 1 | 5678 | 3 |
| **-C:\Images\.8TIF** | 1 | 5678 | 3 |

## Examples of scaling and image orientation on media

Letter and legal size documents scanned as follows:




Original resulting values in the TIFF header tags:

Letter size
Image width = 1700
Image length = 2200

Legal size
Image width = 1700
Image length = 2800

These scanned images will print to media as follows:

Scaled to 24:1 One channel

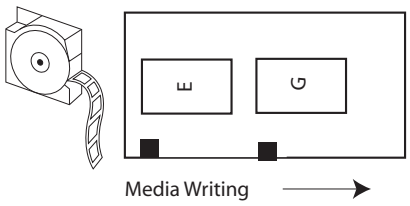



Figure 1

Original resulting values in the TIFF header tags:

Letter size
Image width = 1700
Image length = 2200

Legal size
Image width = 1700
Image length = 2800

Original resulting values in the TIFF header tags after rotating:
Letter size
Image width = 2200
Image length = 1700

Legal size
Image width = 2800
Image length = 1700

These scanned images will print to media as follows:

Scaled to 32:1 One channel

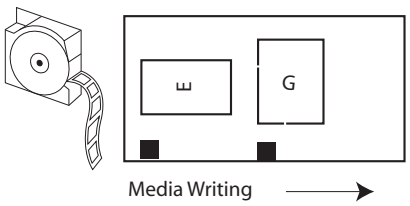
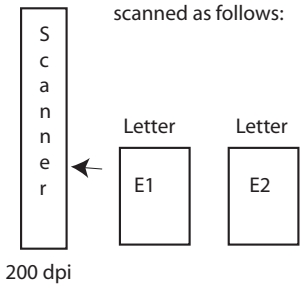



Figure 2

Letter size documents scanned as follows:




Resulting values in the TIFF header tags:

Letter size
Image width = 2200
Image length = 1700

These scanned images will print to media as follows:

Scaled to 24:1 One channel

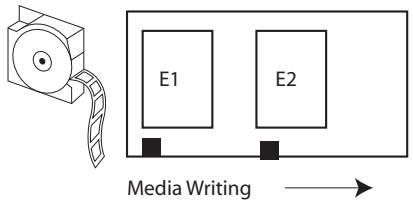
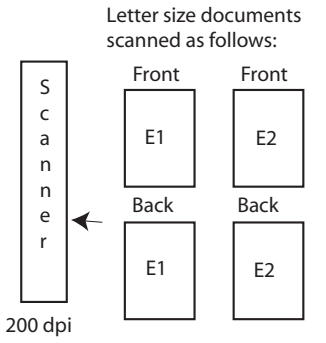



Figure 3

Letter size documents scanned as follows:




Rotated images resulting values in the TIFF header tags:

Letter size
Image width = 1700
Image length = 2200

These scanned images will print to media as follows:

Scaled to 40:1 Two channel

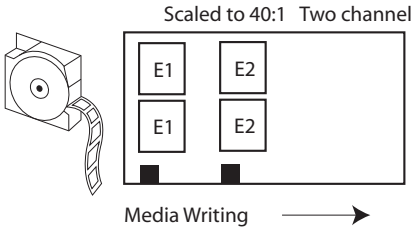
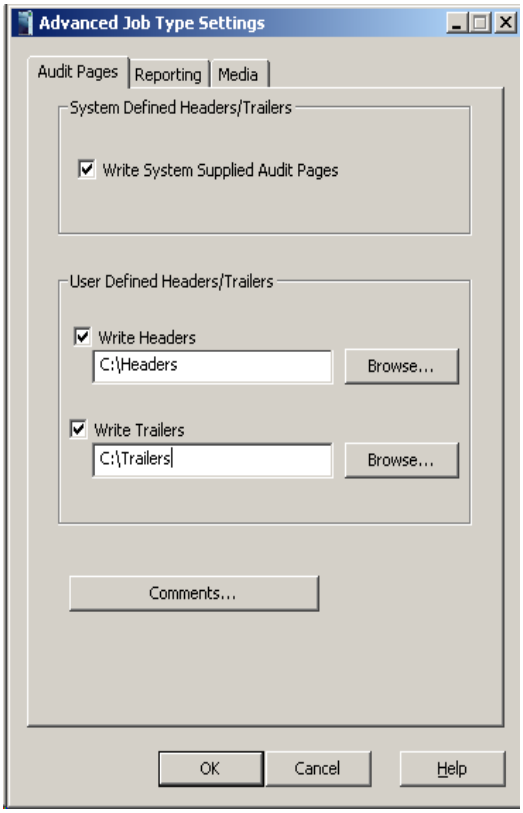



Figure 4

## Advanced Job Type settings dialog box

The Advanced button on the Job Types dialog box provides access to additional options you may want to set. The Advanced Job Type Settings dialog box provides three tabs: Audit Pages, Reporting and Media.




### Audit Pages tab

The Audit Pages tab allows you to write header and trailer information as well as add customized comments to the system generated header file.

Header and trailer pages are images that can be added to the beginning and end of a roll of media.

Header and trailer pages are not assigned an image address, do not appear in the transfer file, and the frame containing them does not receive an image mark.

Each header and trailer page input file must be either a TIFF image file, or a text file that conforms to the Writer's input file specifications. For more information, see Appendix E, *Image File Specifications*. The application software converts any text files to TIFF format prior to writing to media. If a directory contains multiple files, the files within the directory are sorted and written to media using the ACSII file sorting algorithm, so be sure to name the files accordingly in order to get the desired sequence on media.

**Write System Supplied Audit Pages** — when this option is enabled, the following documents are written to media unscaled:

- System Generated Header Page: this text file contains the job type, day, date, Writer name, input source path, roll ID and comments.
- Quality Target: a digitally created target that tests the writing elements of the writing array. Quality targets are written unscaled.
- Blank: a blank image generated by the application software.
- System Generated Trailer Page: this text file contains the job type, day, date, Writer name, input source path, roll ID and comments. This page may be written scaled or unscaled.

The system generated header and trailer page information is written in the following order:

- System Generated Header Page
- Quality Target - includes optional system quality targets
- Blank
- User Defined Header Page(s), if provided.
- All images written to media
- User Defined Trailer Page(s), if provided
- Blank
- Quality Target
- System Generated Trailer Page

**User Defined Headers/Trailers** — you can enable the **Write Headers** and/or **Write Trailers** options. If you enable one or both of these options, all pages will be automatically unscaled. You cannot scale header/trailer pages.

**Write Headers** — if checked, the header pages found in the Header Pages directory are written to media at the beginning of each roll unscaled prior to the first image designated via the input source. Enter the path to a directory name where the header images reside or select **Browse** to display the Browse For Folder window. All images in this location will be used as header pages.

**Write Trailers** — if the **Auto Add File Trailer at Job Completion** option is selected on the main screen and this option is checked, you will be prompted to write the trailer pages unscaled found in the Trailer Pages directory at the end of the roll after the last image designated via batch or list input. Enter the path to a directory name where the trailer images reside or select **Browse** to display the Browse For Folder window. All images in this location will be used as trailer pages.

**Comments** — select this option if you want to add comments to the system generated header pages. You can enter up to 255 characters of information in the Comments area.

## Reporting tab and Transfer pages

The Reporting tab allows you to specify the creation of Transfer files and configure the parameters associated with the Transfer files.

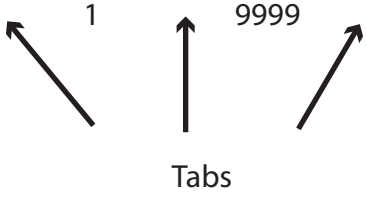
A Transfer file can be generated during the writing of images to media. It contains indexing information that can be uploaded to an image retrieval database. The location of the Transfer file is based on the location defined in the Path for Transfer file field. The filename will be (Roll ID).xfr.

NOTE: If the job is rerun or another job is run with the same Roll ID, the newest run of the job will overwrite any existing transfer files.

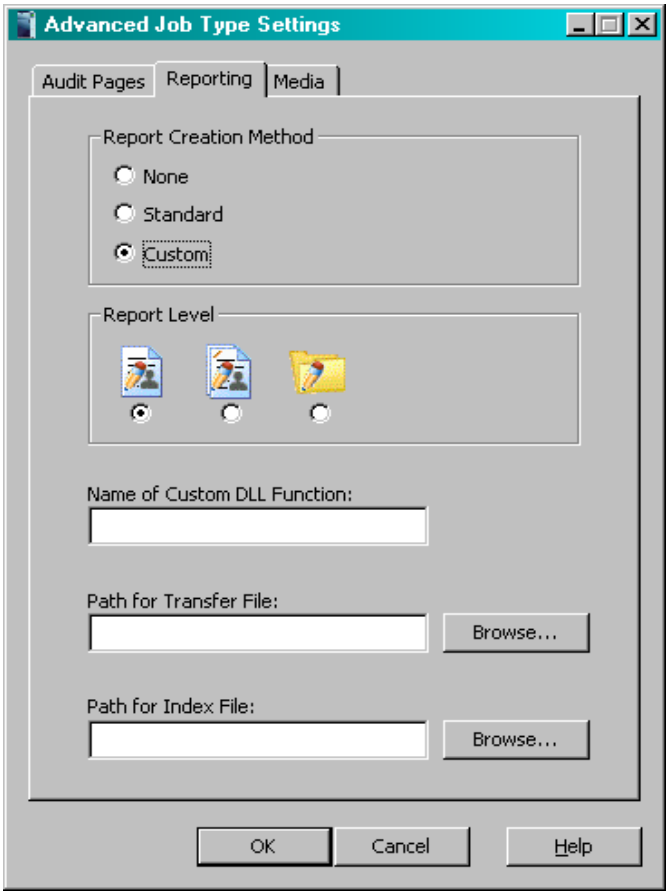
If a job spans more than one roll, the Transfer file for each subsequent roll will be created in the same directory as the Transfer file for the first roll. For example, when the transition from roll 1 to roll 2 occurs, the Transfer file <2.xfr> will be created in the directory <1>.

A standard or custom Transfer file can be generated. A standard Transfer file provides a cross-reference of input filename to Roll ID and image address. The page number within the input file is also listed. The fields are separated by tabs. See the document-level example below, using page-level reporting.

| Filename | Page No. Within File | Roll ID | Image Address |
|---|---|---|---|
| c:\input\abc.tif | 1 | 9999 | FF.001.000 |
| c:\input\abc.tif | 2 | 9999 | FF.001.001 |
| c:\input\xyz.tif | 1 | 9999 | FF.002.000 |



A custom Transfer file can be created via a user exit routine. This provides the capability to append additional data to the information in the standard Transfer file. For more information, see the *KODAK i9600 Application Software, Integrator's Guide,* A-61057.




Following are descriptions of the fields on the Reporting tab:

**Report Creation Method** — the following options for creating the Transfer file are available:

- **None**: a Transfer file will not be created.
- **Standard**: the system-defined standard Transfer file will be created.
- **Custom**: enables the Path to Custom DLL field, which allows you to select the path location of the custom DLL file.

**Report Level** — depending on the grouping, Transfer file entries can be done at the page-, document- or folder-level. Page-level yields a larger set of data than folder-level which yields the smallest set of data. Your retrieval requirements will dictate which reporting level to use.

- **Page-level**: the Transfer file will contain index information for every image on the media. Applicable to any grouping.
- **Document-level:** the Transfer file will contain index information for every image located in a folder-level and document-level frame on the media. Applicable to folder-level and document-level grouping.
- **Folder-level:** the Transfer file will contain index information for every image located in a folder-level frame on the media. Applicable to folder-level grouping.

**Name of Custom DLL Function:** the actual function name as it is defined in the C file of your custom DLL.

**Path for Transfer File:** the path location of the Transfer file. If no value is specified, the file will be placed in the standard location, e.g. c:\Program Files\Kodak\Kodak i9600 Application Software\"Job Type Name"\"Roll Number".

**Path for Index File**: the path location of the index data file containing information to be appended to the standard data in the Transfer file.

## Media tab

The Media tab provides options for image polarity, image borders, image management code and cassette usage.

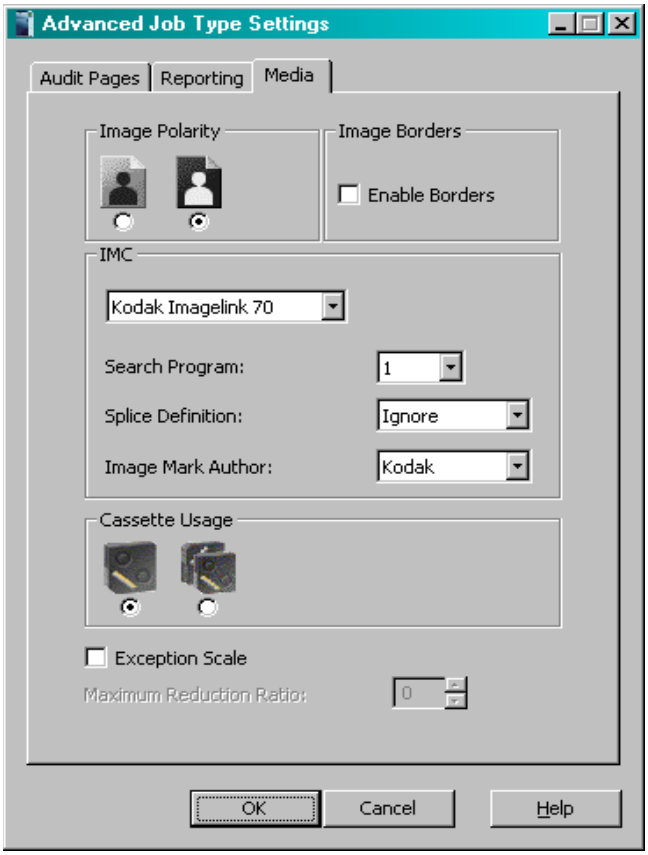


**Image Polarity** — the Writer has the ability to write images in a positive or negative image polarity.

**Positive**: black characters on a clear background.

- Retrieval equipment does not need the capability of inverting images for display on an optical screen.
- Lack of definitive borders may occur in some images on media. An image border can be placed around positive images during writing to media, to delineate the edges of the image.

**Negative**: clear characters on a black background.

- The default in traditional microfilm retrieval equipment.
- Minimizes the impact of dust or other contamination when displaying an image during retrieval.

**Image Borders** — when this option is enabled, a thin border will be placed around all images. Placing a border around images helps identify the boundaries on positive polarity images.

**IMC** — controls the type of IMC (Image Management Code) that will be written to the media preceding the images for every job where this option is enabled.

IMC capability includes lead-end and preset coding, which provide automatic setup parameters for the image retrieval device.

The drop-down list allows selection of IMC as implemented for various Kodak optical film capture devices. This facilitates integration of the Writer in environments where the retrieval devices support current Kodak IMC. The options are: Disable IMC, Kodak Imagelink 70 code, Enable RIM2000 code, or Random Batch. The default is Disable IMC.

NOTE: If Random Batch is selected, Search Program, Splice Definition and Image Mark Author are not enabled.

**Search Program** — if IMC is selected, a search program must be specified. The search program tells the retrieval device which channel(s) (A and/or B) contain image marks, the image mark sizes present on the media, and the image level represented by each image mark size. This allows the retrieval device to locate and count the image marks according to your needs. There are 31 search programs available for use when writing images to media but the Writer does not support creation of media for all of these. The drop-down list contains the search programs that are supported by the Writer. Available search programs are: 1, 3, 7, 10, 12 and 18.

The table below provides information about the supported search programs, to assist you in determining which program is appropriate based upon the media to be written and the retrieval needs.

NOTE: The Search Program field drop-down box contains a value of "1", but the table does not. Search program 1 is used for odometer-indexed media, which has special retrieval requirements and does not contain image marks.

| Index Format | Image Mark Location | Image Mark Sizes | How image marks will be counted during retrieval | Search Program |
|---|---|---|---|---|
| page-level | Channel A | Small | Count small image marks as page-level images. | 3 |
| document-level | Channel A | Small<br>Medium | Count small image marks as page-level images, and medium image marks as document-level images. | 10 |
| folder-level | Channel A | Small<br>Medium<br>Large | Count small image marks as page-level images, and both medium and large image marks as document-level images. | 12 |
| folder-level | Channel A | Small<br>Medium<br>Large | Count small image marks as page-level images, medium image marks as document-level images, and large image marks as folder-level images. | 18 |
| Any | Channel A | Any/All | Count all image marks as page-level images. | 7 |

**Splice Definition** — specifies how splices will be counted during retrieval. The drop-down list provides these splice definitions: Ignore Splices (default), Count splices as page-level, Count splices as document-level, or Count splices as folder-level.

**Cassette Usage** — select the number of cassettes to be written.

**One cassette**: writing to one cassette, either the top or the bottom.

**Two cassettes**: writing to two cassettes simultaneously. The i9600 Application Software will check to make sure that 2 cassettes are in the Writer and that both cassettes have approximately the same amount of film.

**Exception Scale** — if enabled, will automatically scale images that are too large to write to media. If you select this option, images will be scaled until either the image fits or the scaling factor exceeds the maximum reduction ratio. All frames that include a scaled image will be annotated. If the scaling factor exceeds the maximum reduction ratio, a message will be displayed and the job will stop. Images that are scaled will be written to media with an image border.

NOTES:

- This option should not be enabled if you are connected to a 4800 Archive Writer.
- For **Normal, High,** and **Custom,** it is recommended that you enable **Exception Scaling**. Exception Scaling will automatically reduce any images that are too large so they fit on the film.

**Maximum Reduction Ratio** — a number between 0 and 99 which indicates the maximum reduction ratio that can be applied to the image during writing. If this value is not set large enough, an error will be displayed. This value must be set greater or equal to the scaling factor set on the Output tab.

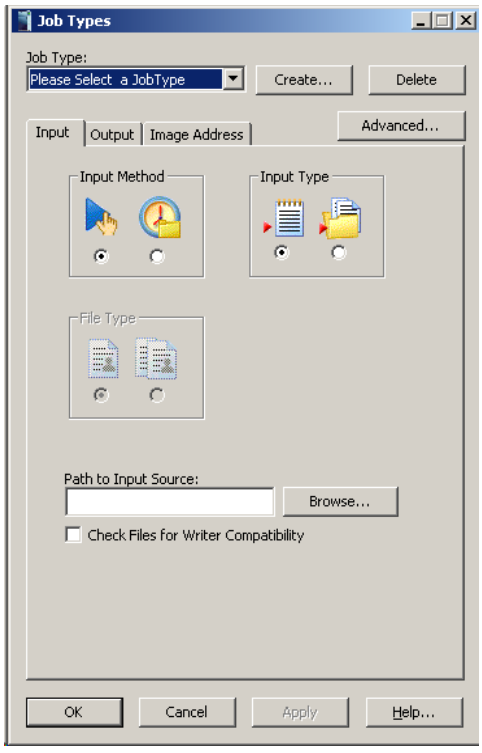
## Creating a job type

Job types are created and/or modified via the Administration menu option.

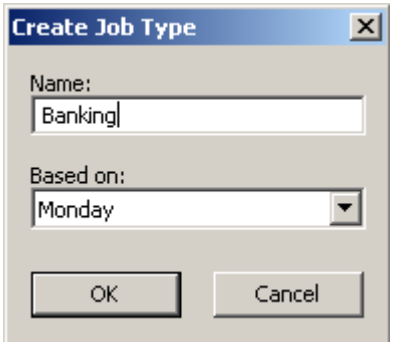
NOTE: If a job is not “Verified” and you attempt to make any changes, the following message will be displayed:


To create a job type:

1. Select **Administration>Job Types**.




2. Select **Create**. The Create Job Type dialog box is displayed.



3. Enter the desired job type name. The name can be a maximum of 50 characters, and include any keyboard character except an ‘(apostrophe) and | (the pipe character).
4. Select a Based on job type from the drop-down list of existing job types and click **OK**. All parameters from the selected job type are copied to the new job type.
5. Change any of the copied parameters or set new parameters as necessary on the other tabs on the Job Types dialog box. The fields on these tabs are described earlier in this chapter.
6. Click **OK** to save the job type and close the Job Types dialog box or **Save** to save the job type and keep the Job Types dialog box displayed.

## Modifying a job type

1. Select **Administration>Job Types**.
2. Select the job type you want to modify from the Job Type drop-down list.
3. Make the desired changes on the tabs in the Job Types dialog box.
4. Click **Apply** to save the changes and keep the Job Types dialog box open, or click **OK** to save the changes and close the Job Types dialog box.

NOTE: Any job in the queue, when set to a *Reverified* status and rerun, that uses this modified job type will use the new values.

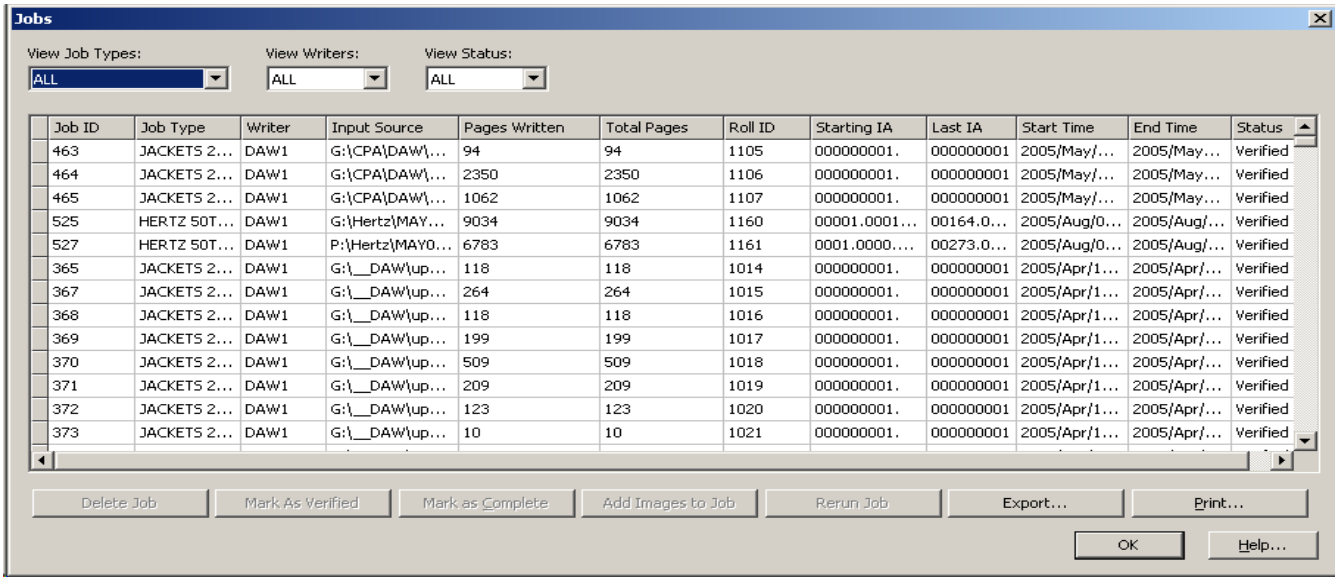
## Deleting a job type

To delete a job type:

1. Select **Administration>Job Types**.
2. Select the job type you want to delete from the Job Type drop-down list.
3. Click **Delete**. The message, ***Are you sure you want to delete the selected job type*** is displayed.
4. Click **OK** to continue with the deletion.

## Viewing jobs in the system

When you select **Administration>Jobs,** the Jobs dialog box is displayed:




This dialog box provides a listing of all jobs in the system. You can use the drop-down lists located at the top of the window (View Job Types, View Writers and View Status) to select only the jobs you want to view, or you can select several lines at a time by using the CTRL+A keys. If you use the CTRL+A key sequence, you must have a line highlighted first for this to work.

**Delete Job** — when selected, will remove the selected job from the system. Only verified jobs and their associated files can be deleted.

**Export** — when selected, will display the Export Jobs dialog box. A comma-delimited .txt file will be saved in the selected location. This file may be used to import data into a data management system.

**Mark As Verified** — verifying a job is used to facilitate job and roll tracking for quality control and audit purposes. Once a roll is successfully verified for image quality, etc., the job status can be changed to indicate that, and the job information can be removed from the job listing.

**Add Images to Job** — places the selected job in the Jobs queue to make it available to add images.

**Rerun Job** — places the selected job in the Jobs queue to make it available for running again and the image address is set to the initial value.

**Mark As Complete** — will change the status of the job to *Complete*. The job will no longer show up in the job queue on the Main window.

**Print** — prints the contents of the Jobs window.

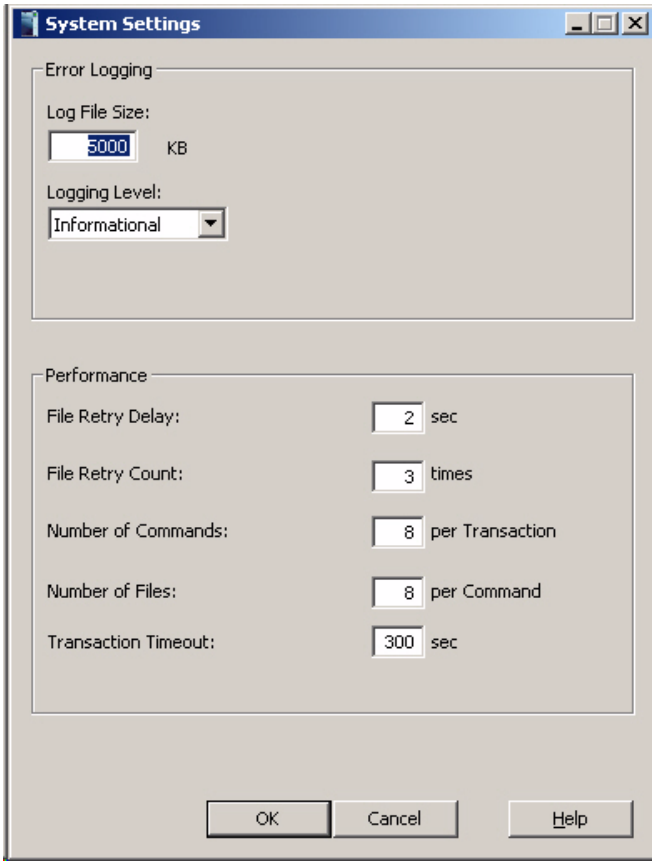
**OK** — saves the values and closes the window.

## System settings

The System Settings option on the Administration menu allows you to set values for error logging and system performance. To access the System Settings dialog box:

NOTE: After changing the Logging Level, you must restart the *Kodak* i9600 Application Software in order for the changes to take effect.

- Select **Administration>System Settings.**




**Error Logging** — provides the following Error Log options:

- **Log File size:** an entry in this field is required. Enter a whole number between 4,000 and 32,767 KB. The oldest errors in the Error Log file will be deleted in order to keep the size of the file less than this value.
- **Logging Level:** provides a drop-down list allowing you to select the level of errors you want to log.
  - Diagnostic: logs all diagnostic messages, as well as informational, warning, and default errors.
  - Informational: logs all informational, warning and severe errors.
  - Warning: logs all warning and severe errors.
  - Severe: logs only severe errors. These errors are serious and will halt the system. This is the default.

**Performance** — the parameters listed below are set to optimize performance.

During installation the values of these parameters are set to the default. For most job types, the defaults are sufficient and should only be changed to address a specific issue and after a thorough review of the following information.

- **File Retry Delay** — the amount of time (in seconds) to wait before attempting to copy an image file to the Writer again. This value is used in conjunction with the File Retry Count value to determine the total amount of time the application software will wait for the Writer to process existing commands and image files and make space available on its disk. Default: 2 seconds.

  The combination of the default File Retry Delay (2 seconds) and default File Retry Count (40 times) gives the Writer 6 seconds to finish processing commands and image files and make space for new commands and files. For most applications this is sufficient; however, when processing very large image files (greater than 750K), 6 seconds may not be enough. In this case, the File Retry Count needs to be increased. Increase the value in increments of 5 until the largest file can be processed without a 3034 error occurring. It is important not to set this to some arbitrarily large value, because in the event of an error, this can increase the time it takes to report the error. Setting File Retry Count to a value too small causes the 3034 error to occur more frequently.

  Generally, the File Retry Delay should be kept at the default. Decreasing this value causes the copy requests to become more frequent but also increases network traffic. Increasing this value may cause a loss of throughput.

  The product of File Retry Delay and File Retry Count must be a time interval larger than the time it takes to process the largest image file.

- **File Retry Count** — the number of times the application software will attempt to copy an image file to the Writer before giving up and signaling an error. This value is used in conjunction with the File Retry Delay value to determine the total amount of time the application software will wait for the Writer to process existing commands and image files and make space available on its disk. Default: 40.
- **Number of Commands** — the maximum number of print commands that can be active simultaneously. The maximum value depends on the Number of Files value since the product of the Number of Files and Number of Commands, cannot exceed 120. Default: 4.
- **Number of Files** — the maximum number of image files that a print command can contain. The maximum value depends on the Number of Commands value. The product of the Number of Files and Number of Commands cannot exceed 120. Default: 4.

The Number of Commands and Number of Files work together to maximize command and image throughput by minimizing the amount of time the Writer will have to wait for print commands. This is accomplished by ensuring that there are at least two commands active at once: the command currently being processed by the Writer, and the command on the Writer disk waiting to be processed. This results in four active commands:

- one command being built and copied to the Writer
- one response received from the Writer when a command is completed
- the two commands on the Writer (one waiting to be processed and one being processed)

This implies that the minimum value for Number of Commands is 4. This value is usually left at the default value of 4, which allows a few extra commands available if needed.

Image file size and Writer disk size must be considered when determining the appropriate value to enter for the Number of Files. To determine this value, use the following formula as a guideline:

$$\left\lfloor \frac{\text{Maximum available Writer disk space}}{\text{Number of Commands}} \right\rfloor \div \text{average image file size, rounded down}$$

- **Transaction timeout** — the maximum time (in seconds) the application software will wait for the Writer to process a command and send a response. Default: 180. This value may only need to be changed when the processing of a print command and its associated images takes longer than 90 seconds.

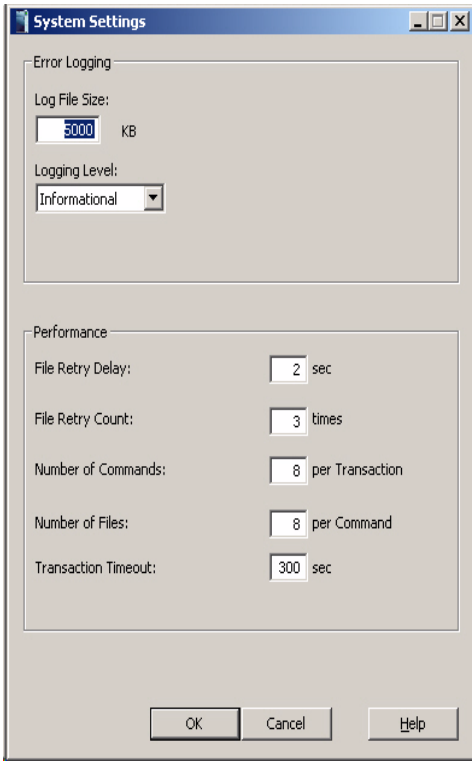
  The value of this parameter should always be about 30 seconds larger than the time specified by the Retry Delay and File Retry Count parameters.

  NOTE: If network performance seems to be an issue, the following values may optimize performance: 2000, 40, 4, 4, 300 respectively.

## Setting system values

Before setting or changing system values, refer to the previous section for detailed field information.

1. Select **Administration>System Settings**.




2. Enter a Log File Size. You must make an entry in this field between 4,000 and 32,767 KB.
3. Select a Logging Level. Choices are: **Diagnostic, Informational, Warning** and **Severe**.
4. Enter the amount of time to wait before attempting to copy an image file to the Writer again in the File Retry Delay field.
5. In the File Retry Count field enter the number of times the application software will attempt to copy an image file to the Writer before giving up and displaying an error.
6. Enter the maximum number of print commands that can be active simultaneously in the Number of Commands field.
7. Enter the maximum number of image files that a print command can contain in the Number of Files field. The maximum value depends on the Number of Commands value.
8. When finished, click **OK**.

## Features not supported in the i9600 Application Software

Unlike previous versions of software (AWIS) that supported the *Kodak* i9600 Series Writer, these features are incorporated within the software and cannot be changed by the end user.

- **Media Leader Length** — the set value for the media leader length is 0.91 meters (3 feet).
- **Image Mark Author** — determines the alignment of the image mark relative to the image, and the physical dimensions of each image mark size. The i9600 Application Software will use Kodak image marks. Kodak image marks have the leading edge of the image mark aligned with the leading edge of the image.

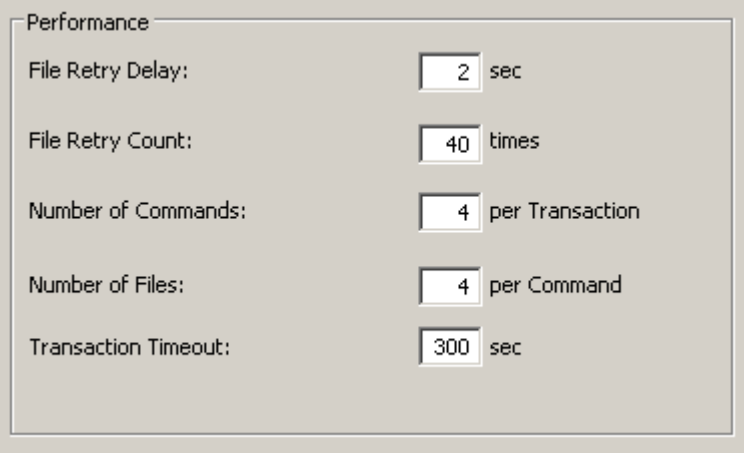
# 5 Troubleshooting

The Error Log can be found in “C:\Program Files\Kodak\Kodak i9600 Application Software\ki96as.log”. There is a link to this log from the program group that is labeled **KI96AS.log** that can be used to quickly view the log. When checking the log file for errors, scroll to the first error with the same time stamp as the last error. This begins the error and reporting sequence for the current error.

In general you should first look for error numbers from 100-999. If there is a sequence of errors at the same time then the 3-digit error will normally be the root cause of the problem which was posted by the Writer and the other 4-digit error numbers will be generated by the application software reacting to this error. All 3-digit error numbers originate in the Writer but may be caused by a software issue such as a bad TIFF file.

If there is no 3-digit error number, then there will often be a series of three errors such as 10xx,20xx,30xx (i.e., 1013,2017,3034). This is normal and caused by different parts of the application reporting a problem.

For general software errors the following Performance settings (which can be accessed by selecting **Administration>System Settings)** may improve reliability.




Often a TIFF file from the Input Source will be listed as a possible problem image in the error messages. However, the true problem file may be several files before this file in the input image stream. Depending on the size of your files, the Writer can hold many files in its internal memory that are waiting to be written to media. If an error occurs in the Writer, the i9600 Application Software may not know which file being processed caused the problem, therefore the last file that was sent to the Writer is suspect. If a bad input file is suspected then you should look at more than the last image that was sent to the Writer.

A good tool for determining a problem image is the Transfer or Report file (*.XFR). If the reporting level is set to **Page** then for every file that is successfully processed by the Writer there is a line added to the Transfer file. If there is a bad image and you have set up your Job Type to create a Transfer file that is reporting a the page level the bad input TIFF file is usually the next file in the input stream following the last file listed in the Transfer file.

Also, it is critical that the 9-volt batteries in the cassettes be replaced frequently. The low battery indicators on the cassette often do not indicate that there is a low battery condition soon enough to prevent communications errors with the Writer. If you are having unexplained communications errors (socket errors), the problem may be the batteries in your cassettes. The following is a general guideline to ensure the highest performance of your system:

- If you write 1 to 2 rolls average per day then replace your battery every 2 weeks.
- If you write 3 to 5 rolls average per day then replace your battery once a week.
- If you write more than 5 rolls average per day then replace your battery every 3 days.

Kodak is continually improving the reliability of the firmware within the Kodak i9600 Writers. Many problems have been corrected from previous versions. The Writer firmware is easy to update (just replace the DAW4800.exe or DAW9600.exe file in the host PC with a newer one) and corrects many issues. The most current version of our Controller firmware is June 2006 is v4.0.16. If you are on an older version of firmware, ask your Field Engineer to upgrade your firmware during his next visit. If you are experiencing problems, Kodak support can email a new version of firmware with instructions for upgrading your system.

NOTE: We do not recommend using the diagnostic error logging level; this is intended for use by Kodak Service.

Errors numbered 1000 through 9999 in the log file are application software errors. If the error was caused by an error on the Writer itself, an error numbered 100 through 999 may follow the application software error(s) in the log.

Writer errors 103 through 229 are recoverable by rebooting the Writer. If any of the other Writer errors are not recoverable by rebooting the Writer, call the Kodak Customer Response Center or your integrator.

Generally, 100-series errors are warnings/informational messages, 200-series errors are warnings/correctable situations, 300-series errors are development debug tools, 700-series are critical imaging chain errors, 900-series are other critical system errors.

NOTE: Errors that are displayed regarding the *Kodak* i9600 Series Writer or the *Kodak Digital Science* Document Archive Writer 4800 can also be found in the User's Guide for the *Kodak* i9600 Series Writers, A-61058.

## Setup problems

If you are having set up problems, refer to the following information:

**Cannot connect to the Writer**

1. If you cannot connect to the Writer from the application software, reboot the Writer and then reboot the workstation that the application software is running on.
2. Boot the Writer.
3. If you still cannot connect to the Writer, contact the System Administrator.

**Bad Image:** If a bad image is detected during writing of images to media, a dialog box provides the name of the bad file. You must replace this file with any good TIFF file (you may use a blank TIFF). The bad file must be replaced, it CANNOT be deleted**.**

NOTE: Running the input files through the Input Processor with the **Convert to Writer** option enabled, will help to identify non-compliant files prior to processing. For more information see Appendix B.

**Check Image Address:** If you receive image address format errors, the starting image address for all jobs needs to be verified before the job is started. If you encounter E256 errors, increase the image address field widths.

## Error log

The chart below defines the application software error numbers, the corresponding messages, and an explanation of what each error signifies. In certain cases, corrective actions are provided.

Key: %s Actual message contains character designator or file name(s).
%d Actual message contains numeric value.

| Code | Message | Description |
|---|---|---|
| 0 | Success | This is the normal return status for all operations. The error log will not usually contain any of these messages. |
| 1000 | Error opening file: %s. | The specified file cannot be opened. This usually happens when the application cannot open the file with the permissions it needs to have. A common reason for this error is that another application has the file **locked** by opening it for **one reader only**. This error may also be caused by a file or user permissions problem.<br>**Possible solutions:**<br>• Close all other applications (most notably any photo editing programs) on the host PC.<br>• Reboot the host to clear any locked files.<br>• Create a new directory on the host and move the input TIFF files to this directory. Use this new directory as the input source.<br>• Ensure that there is not a **Read Only** file named 'ATMP.TIF' in the root of the system drive.<br>• If the input files are on a network drive then move them to a local drive. |
| 1001 | Error copying file: %s to %s | The specified file cannot be copied. This can be caused by invalid source or destination file paths or by insufficient disk space on the destination drive.<br>This may also be caused by incorrect security settings on the files. The source file must be readable, the destination file must be writable and both files must not be in use or locked by another program. |
| 1002 | Error reading file: %s. | The specified file cannot be read. This can be caused by the file not existing, by other programs having the file locked, or by a corrupted file. This can also be caused by low memory conditions, where there is not enough memory to allocate a buffer for reading the file contents. |
| 1004 | No index data file specified | The application did not provide the name of an index data file. This is an informational message only. |
| 1007 | Failed to write to file: %s. | The file was successfully created, but a failure occurred in writing to the file. This may be caused by disk failures or running out of disk space. If the file is being written to the Writer drive, this error may be caused by the Writer being shut down or by an error occurring in the Writer that removes or corrupts the remote drive connected to the Writer. |
| 1008 | Failed to rename file: %s to %s. | An attempt to rename a file has failed. This may be caused by the destination file already existing, or by a failure of the disk the file resides on. |
| 1009 | Cannot write file %s: no data to write to it. | An internal program error has caused an attempt to write a zero-length data buffer to the file. |

| Code | Message | Description |
|---|---|---|
| 1010 | Error creating file%s. | Failed to create the specified file. This may occur if the disk the file is to be created on is corrupted, missing, or out of space. |
| 1011 | Error closing file%s. | Failed to close the specified file. This may occur if the disk is corrupted. |
| 1012 | Error code%d returned during attempt to create file%s. | Failed to create the specified file. This may occur if the disk the file is to be created on is corrupted, missing, or out of space. The error code is documented in the Microsoft Visual C++ documentation. Refer to the section on error codes returned from the file IO functions. |
| 1013 | Error code %d returned during attempt to read file %s. | Failed to read the specified file. This may occur if the disk the file is on is corrupted or missing. The error code is documented in the Microsoft Visual C++ documentation. Refer to the section on error codes returned from the file IO functions. This error could be related to problems with running two cassettes on with the Writer to Cassette communication.<br>Error code 59 is an unexpected Net error.<br>Error code 1117 is an IO error on device. |
| 1014 | Error code %d returned during attempt to write to file%s. | Failed to write to the specified file. This may occur if the disk the file is on is corrupted or missing. The error code is documented in the Microsoft Visual C++ documentation. Refer to the section on error codes returned from the file IO functions. |
| 1015 | Error code %d returned during attempt to close file %s. | Failed to close the specified file. This may occur if the disk the file is on is corrupted or missing. |
| 1016 | Error during attempt to create directory %s. | Failed to create temporary directory to place single-page TIFF files from multi-page TIFF files. |
| 1017 | Couldn’t send an input file specification to the Writer for file %s. | Socket error. Look for other errors with the same time stamp for the cause of the error. |
| 1018 | Couldn’t send an output file specification to the Writer for file%s. | Socket error. Look for other errors with the same time stamp for the cause of the error. |
| 1019 | Couldn’t get an input file specification acknowledgment from the Writer for file %s. | Socket error. Look for other errors with the same time stamp for the cause of the error. |
| 1020 | An input file specification contained an invalid filename: %s. | Socket error. Look for other errors with the same time stamp for the cause of the error. Look for 3-digit errors such as E916. |
| 1021 | The file %s is too large to fit on the Writer’s disk. | Socket error. Look for other errors with the same time stamp for the cause of the error. |
| 1022 | And input file specification acknowledgment contained an invalid value: %c. | Socket error. Look for other errors with the same time stamp for the cause of the error. |
| 1023 | Couldn’t get a file content acknowledge from the Writer for file%s. | Socket error. Look for other errors with the same time stamp for the cause of the error. |
| 1024 | Failure writing contents of file%s to Writer. | Socket error. Look for other errors with the same time stamp for the cause of the error. |
| 1025 | Couldn’t send the file content acknowledgment to the Writer for file%s. | Socket error. Look for other errors with the same time stamp for the cause of the error. |

| Code | Message | Description |
|---|---|---|
| 1026 | Couldn't write file%s to the Writer. | Socket error. Look for other errors with the same time stamp for the cause of the error. |
| 1027 | Couldn't read file%s from the Writer. | Socket error. Look for other errors with the same time stamp for the cause of the error. |
| 1028 | Couldn't get an output file specification acknowledgment from the Writer for file%s. | Socket error. Look for other errors with the same time stamp for the cause of the error. |
| 2000 | File open error | File could not be opened.<br>**Possible solutions:**<br>• Close all other applications (most notably any photo editing programs) on the host PC.<br>• Reboot the host to clear any locked files.<br>• Create a new directory on the host and move the input TIFF files to this directory. Use this new directory as the input source.<br>• Ensure that there is not a **Read Only** file named 'ATMP.TIF' in the root of the system drive.<br>• If the input files are on a network drive then move them to a local drive. |
| 2010 | Socket Error %d occurred | Socket error. Look for other errors with the same time stamp for the cause of the error. |
| 2011 | (none) | Could not connect to the Writer. Socket error. This error often occurs if the network definitions of the host have been deleted and reinstalled causing the Services file to be rebuilt.<br>**Possible solutions:**<br>• Check that the 'services' file (C:\WINNT\system32\drivers\etc\Services) has the following entries:<br>dawtis 5001/tcp<br>dawtos 5002/tcp<br>dawfis 5003/tcp<br>dawfos 5004/tcp<br>• Make a backup of the Services file and then move these four lines to the top of the file.<br>• Replace the battery in the cassette.<br>• Create a new Writer definition and remove any leading zeros from the IP address (i.e., 010.010.010.001 should be 10.10.10.1).<br>• Ensure that there is not a **Read Only** file named 'ATMP.TIF' in the root of the system drive.<br>• If the input files are on a network drive then move them to a local drive. |
| 2012 | Socket Error %d. Host sockets have been reset. | The Writer has reset the socket connection. |

| Code | Message | Description |
|---|---|---|
| 2013 | Socket Error %d. No socket data found. Check Services file. | Port and protocol information could not be found. The Services file may not have entries for the socket connections.<br>**Possible solutions:**<br>• Check that the 'services' file (C:\WINNT\system32\drivers\etc\Services) has the following entries:<br>dawtis 5001/tcp<br>dawtos 5002/tcp<br>dawfis 5003/tcp<br>dawfos 5004/tcp<br>Make a backup of the Services file and then move these four lines to the top of the file |
| 2014 | Socket Error %d. Host not found. Check Writer name. | The Writer name could not be found either in the host file or on the network. |
| 2016 | Can't find winsock.dll. | The winsock.dll is not on the system. |
| 3000 | Error writing command %s. | Failed to create a command file containing the specified command. This may be caused by the Writer being offline or inoperable. This problem can be corrected by making sure the Writer is online and the Writer disk is available. It may be necessary to reboot the Writer and to make sure the NFS connection to the Writer is working properly. |
| 3001 | Error sending command. | Failed to create a command file containing the specified command. This may be caused by the Writer being offline or inoperable. This problem can be corrected by making sure the Writer is online and the Writer disk is available. It may be necessary to reboot the Writer and to make sure the NFS connection to the Writer is working properly. |
| 3002 | Error creating semaphore. | Failed to create a semaphore file. This may be caused by the Writer being offline or inoperable. This problem can be corrected by making sure the Writer is online and the Writer disk is available. It may be necessary to reboot the Writer and to make sure the NFS connection to the Writer is working properly. |
| 3003 | Error creating thread. | Indicates a possible problem with the operating system. |
| 3004 | Error in Astring parse. | An internal programming error has occurred in the AWOL parsing routine.<br>**Possible solutions:**<br>• In the Performance setting in the System Settings under **Administration**, use the following settings:<br>File Retry Delay = 2<br>File Retry Count = 40<br>Number of Commands = 4<br>Number of Files = 4<br>Transaction Timeout = 300 |
| 3005 | Response file for GetErrorInfo command, no response value in file. | An empty Response file has been created by the Writer. This may be due to an internal fault in the Writer. This problem may be corrected by closing the application and restarting the Writer. |
| 3006 | Error creating semaphore | Indicates a possible problem with the operating system. |

| Code | Message | Description |
|---|---|---|
| 3009 | Error parsing response parameter number. | An internal programming error has occurred in the AWOL parsing routine in attempting to parse the response parameter number from the string. This has been seen when restarting a job after replacing a multi-page TIFF file with a single-page TIFF file in the job stream. |
| 3010 | Error parsing Archive Writer error number. | An internal programming error has occurred in the AWOL parsing routine in attempting to parse the error number from the response file. |
| 3012 | Parameter number out of range. | The parameter number contained in the response file is not valid. |
| 3013 | Image buffer full. | The internal image buffer is full. This is normal operation. |
| 3014 | Invalid Writer drive. | The application has supplied a drive letter that is invalid. Make sure the specified drive letter is correct. |
| 3016 | Command timed out. Command: %s. | The Writer has not responded to the command within the allowed period of time. This error may be caused by a large number of highly compressed files (all black) which are sent to the Writer. |
| 3018 | No more files. | This is a normal internal status indicating that no more files are available for processing. |
| 3021 | File mismatch.<br>Expected: %s, got: %s, original file: %s. | The response file returned by the Writer contains the wrong file specification. This error indicates a communication or other internal failure in the Writer and may be corrected by closing the application and restarting the Writer. |
| 3022 | No image address returned in response file for file %s. | The image log file returned by the Writer does not contain a valid image address where one was expected in the file. This error indicates a communication or operational failure in the Writer and may be corrected by closing the application and restarting the Writer. |
| 3023 | Can't open transfer file. | The transfer file cannot be opened. This may be caused by a corrupted hard disk or by an invalid path specified for the location of the transfer files. |
| 3024 | Can’t close %s file. | The transfer file cannot be closed. This may be caused by a corrupted hard disk or by an invalid path specified for the location of the transfer files. |
| 3027 | Rollname ‘%s’ is too long; name must be a maximum of %d characters, | More than 8 characters have been specified for the roll name. |
| 3030 | Failed to get remaining film. | The command to get the remaining film in the Writer cassette has failed. This could be caused by a low battery in the cassette or a communications failure with the Writer. |
| 3031 | Command buffer empty. | An internal programming error in the AWOL DLL has occurred. |
| 3032 | No more disk space. | There is not enough disk space on the Writer drive to create a file. |
| 3033 | Can't overwrite command. | This is an internal program status. |

| Code | Message | Description |
|---|---|---|
| 3034 | Failed to copy file %s to Writer. | A file cannot be copied to the Writer. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. This error could also be caused by a JPG compressed TIFF file being sent to the Writer.<br>**Possible solutions:**<br>• In the Performance setting in the System Settings under **Administration**, use the following settings:<br>File Retry Delay = 2<br>File Retry Count = 40<br>Number of Commands = 4<br>Number of Files = 4<br>Transaction Timeout = 300 |
| 3036 | Could not find response file, %s. | A request has been made for information from the Writer, the Writer has executed the command, but no response file was returned. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3037 | Error creating the film leader. | An error was returned from the Writer in attempting to create a film leader. This may be caused by a failure of the film cassette, by not having enough film in the cassette, or by an internal error in the Writer. Correct this problem by making sure the film cassette contains enough film and that the Writer communication link is working properly. |
| 3038 | Error in image address on cassette. | The film cassette contains an invalid image address. |
| 3040 | Error sending IMC command. | The IMC command could not be successfully sent to the Writer. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3041 | Error sending Image Frame command. | The command to set the next image frame could not be successfully sent to the Writer. This can be caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3042 | Error sending Leader Length command. | |
| 3043 | Error sending System command to Writer. | The System command could not be successfully sent to the Writer. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3044 | Error sending command to get remaining film. | The command to get the remaining film could not be successfully sent to the Writer. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |

| Code | Message | Description |
|---|---|---|
| 3045 | Error sending command to get the film status. | The command to get the film status could not be successfully sent to the Writer. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3046 | Error sending command to get the film cassette data. | The command to get the cassette data could not be successfully sent to the Writer. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3047 | Error sending command to set the diagnostic port. | The command to set the diagnostic port could not be successfully sent to the Writer. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3048 | Error sending command to set the status monitor port. | The command to set the status monitor port could not be successfully sent to the Writer. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3049 | Error sending command to set the image writing parameters. | The command to set the image writing parameters could not be successfully sent to the Writer. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3050 | Error sending command to set the disk emulation. | This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3051 | Error sending command to set the date and time in the Writer. | The command to set the internal date and time could not be successfully sent to the Writer. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3052 | Error sending command to set the frame annotation. | The command to set the frame annotation could not be successfully sent to the Writer. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3053 | Error getting command 42, get frame annotation. | The response file for the command to get the frame annotation does not contain a valid response. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3054 | Error getting command 19, get system command. | The response file for the command to get the Writer system parameters does not contain a valid response. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |

| Code | Message | Description |
|---|---|---|
| 3055 | Error getting command 4, get leader length. | The response file for the command to get the leader length does not contain a valid response. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3056 | Error getting command 11, get image frame. | The response file for the command to get the next image frame does not contain a valid response. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3057 | Error getting command 38, get IMC. | The response file for the command to get the IMC settings does not contain a valid response. This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3059 | Error code returned when trying to issue a SetNextTransactionNumber command. | This is caused by a failure of the communication link with the Writer or by an internal failure in the Writer. Correct this by closing the application and restarting the Writer. |
| 3064 | Expected to get response for page %d of file %s; instead got page %d. | This is an internal diagnostic message. |
| 3068 | Error getting command 57, get power down interval. | Error using command 57, get power down interval. Reboot Writer. |
| 3069 | Error getting command 58, set power down interval. | Error using command 58, set power down interval. Reboot Writer. |
| 3070 | Error getting command 60, get interdocument gap. | Error using command 60, get interdocument gap. |
| 3071 | Error getting command 59, set interdocument gap. | Error using command 59, set interdocument gap. |
| 3072 | Error getting command 20, get version numbers. | Error using command 20, get version number. |
| 3073 | Error sending command 40, get online status. | Error using command 40, get online status. |
| 3074 | Error sending command to advance film. | Error sending command 1, advance film. |
| 3075 | Could not successfully read status file, %s. | Failed reading status file. Reboot Writer. Look for a 3-digit error in the log, such as an E916 error. |
| 3078 | Could not convert text file %s to a TIFF file. | Problem converting text file to TIFF. |
| 3079 | Using the 'NumCommands' value of %d found in registry for total # of simultaneous Application print commands. | Informational message. The application software is using a value in the system registry that has been entered by a System Administrator or Kodak representative for purposes of performance enhancement. This value sets the number of simultaneous print commands that can be active. |
| 3080 | The 'NumCommands' value found in registry (%d) is either zero or exceeds system maximum of %d. Setting to system default of %d. | Warning message to indicate to System Administrator or Kodak representative that an invalid value has been entered into the system registry. This value is intended to enhance performance, but will not be used because it is outside of the allowable limits. System will use a default value instead of the illegal value found in the registry. |

| Code | Message | Description |
|---|---|---|
| 3081 | Using the 'NumFiles' value of %d found in registry for max number of image files per Application print command. | Informational message. The application software is using a value in the system registry that has been entered by a System Administrator or Kodak representative for purposes of performance enhancement. This value sets the maximum number of image files that can be sent in a single print command. |
| 3082 | The 'NumFiles' value found in registry (%d) fis either zero or exceeds system maximum of %d. Setting to system default of %d. | Informational message. The application software is using a value in the system registry that has been entered by a System Administrator or Kodak representative for purposes of performance enhancement. This value sets the maximum number of image files that can be sent in a single print command. |
| 3083 | The 'NumCommands' value (%d) multiplied by the 'NumFiles' value (%d) exceeds the system limit of %d. Using default values of %d and %d. | Warning message to indicate to System Administrator or Kodak representative that although valid NumCommands and/or NumFiles value(s) have been entered into the system registry, the two values together produce an invalid result. These values are intended to enhance performance, but will not be used because their product is outside of the allowable system limit. System will use default values for both fields. |
| 3084 | Setting number of simultaneous print commands to %d; max number of image files per command to %d. | Informational message indicating what ‘total print commands’ and ‘max image files per command’ values the application software will use. |
| 3085 | Unable to retrieve Application installation directory from registry. Debugging has been disabled. | Application installation directory is not in the registry. |
| 3087 | While forming a command, had to insert a print remaining command after file %s. | Moved Writer back to A channel when uneven amount of images is present for duplex film. |
| 3090 | The ‘FileWaitTime’ value found in registry (%lu) is invalid. Setting to system default of %ul. | The value in the registry is invalid. Using the default values. |
| 3091 | Using the ‘FileWaitTime’ value of %ul found in the registry. | Informational message only. |
| 3092 | The ‘TransactionTimeout’ value found in the register (%lu) is invalid. Setting to system default of %ul. | The value in the registry is invalid. Using the default values. |
| 3093 | Using the ‘TransactionTimeout’ value of (%ul) found in the registry. | Informational message only. |
| 3094 | The ‘Max File Retry Count’ value found in the registry (%lu) is invalid. Setting to system default of %ul. | The value in the registry is invalid. Using the default values. |
| 3095 | Using the ‘Max File Retry Count’ value of %lu found in the registry. | Informational message only. |
| 3096 | Error getting command 79, get file transfer interval. | Reboot the Writer. |
| 3097 | Error setting command 78, set file transfer interval. | Reboot the Writer. |

| Code | Message | Description |
|---|---|---|
| 4001 | Not enough film on roll. | There is not enough film on the roll to write the images. Correct this by increasing the amount of unexposed film in the cassette. |
| 4008 | Can't remove files from the Writer with flush command (58). Need to reboot to proceed. | See preceding error messages for root cause of problem.<br>A communication failure has occurred which prevents Command 58 from deleting files from the Writer directories.<br>**Possible solutions:**<br>• Replace the battery in the cassette.<br>• In the Performance setting in the System Settings under **Administration**, use the following settings:<br>File Retry Delay = 2<br>File Retry Count = 40<br>Number of Commands = 4<br>Number of Files = 4<br>Transaction Timeout = 300<br>• Close the application and restart the Writer. |
| 5000 | End of Image Writing. | This is a normal, successful condition. |
| 5001 | List file not found: %s. | The List file supplied by the application cannot be found. Correct this problem by specifying a valid List file. |
| 5002 | No more images in list. | Informational message. |
| 5006 | No images found in image list or image directory. | The application has specified a directory (in Batch mode) or a List file (in List mode) that contains no images to be written. |
| 5007 | No images found in Cover Page directory. | The application has specified a directory for cover (header) pages to be written which contains no images. |
| 5008 | No images found in Trailer Page directory. | The application has specified a directory for trailer pages to be written which contains no images. |
| 5009 | No images found in Image List File or in Image Directory. | The application has specified a directory (in Batch mode) or a List file (in List mode) that contains no images to be written. |
| 5012 | Inconsistency between Image Address Field Widths and/or Offset Addressing and/or selected filming Level. | |
| 5018 | SetCurrentFile, file at %d position in file list is %s; file expected at this position was %s. | This error will be posted if a List file is altered and a job restart is attempted. List files must not change for restarts. Images can be replaced if needed to correct the error. |
| 5019 | One or more images in file %s exceeds max file size for archive writer in simplex mode of %d bytes; total file size is %d bytes. | File too large for Writer in simplex mode.<br>Possible causes:<br>• Grayscale images may be present in Begin Roll processing directory.<br>• Application defined as single-page given multi-page input. |

| Code | Message | Description |
|---|---|---|
| 5020 | One or more images in file %s exceeds max file size for Archive Writer in duplex mode of %d bytes; total file size is %d bytes. | File too large for Writer in duplex mode. The i9600 Writers have a limit of about 4 meg per image in duplex mode and the DAW 4800 Writers have a limit of about 0.6 meg per image in duplex mode.<br>**Possible solutions:**<br>• Reduce the size of the individual image file that is too large.<br>• Run the job in simplex mode<br>• If using a DAW 4800 Writer, a memory upgrade can be purchased by contacting your Field Engineer. |
| 5021 | Memory reallocation error. | There is not enough memory to perform the current operation. This can be corrected by adding more memory to the computer, by specifying a larger page file size in Windows setup, by reducing the size of the image List file or by reducing the number of images in the batch directories. |
| 5022 | Image file not found: %s. | |
| 5023 | Error resetting file list. | The file specified by the application cannot be found in the List file (in List mode) or in the image directory (in Batch mode). This problem is corrected by verifying the List file or batch input directories contain the file specified by the application. |
| 5027 | No index page directory specified. | The application did not supply a path in the JobPath parameter for creating index pages. This is an internal programming error. |
| 5028 | No Writer path specified. | The application did not supply a valid Writer path. This is an internal programming error. |
| 5029 | Cannot open image log file: %s. | The image log file cannot be opened. This may be caused by insufficient hard disk space. |
| 5030 | Cannot write to image log file: %s. | The image log file cannot be written to. This may be caused by insufficient hard disk space. |
| 5031 | Cannot write to transfer file:%s. | The transfer file cannot be written to. This may be caused by insufficient hard disk space. |
| 5032 | Cannot allocate memory. | There is not enough memory to perform the current operation. This can be corrected by adding more memory to the computer, by specifying a larger page file size in Windows setup, by reducing the size of the image List file or by reducing the number of images in the batch directories. |
| 5034 | Error found in response file for file %s (page %d). Got Writer Error number %d. | An error has been detected in the response file for the filename specified. This may be caused by an internal error in the Writer. The interpretation of the error code should appear in the error log following this error.<br>NOTE: If this message is posted by the Input Processor, it is not an error but is a warning message that an extra TIFF Tag has been found in the image and will be ignored. |
| 5035 | %s is not a valid Digital Archive Writer path - the %s directory is missing. | The specified Writer path does not appear to be valid because the specified directory is missing. Correct this by closing the application and restarting the Writer. |
| 5036 | Cannot communicate with Writer (failed to set next transaction number). | Correct this by closing the application and restarting the Writer. |

| Code | Message | Description |
|---|---|---|
| 5038 | Not enough space on your hard disk. You need at least 5MB of free space. | You need at least 5MB of free space. Your hard disk does not have enough space for the application software to perform its normal operations. Correct this problem by increasing your free disk space. |
| 5039 | Archive Writer cannot be reset to continue processing. Please reboot the Writer. | The command to reset the Writer has failed. Close the application and restart the Writer. |
| 5040 | Film template requires two cassettes in Writer. | |
| 5041 | A cassette needs to be loaded into the Archive Writer. | There are no cassettes in the Writer. If you do have a cassette in the Writer, some kind of mechanical or electrical problem in the Writer has failed to detect the presence of the cassette. |
| 5042 | Cannot proceed until the Archive Writer is put in Online mode. | The Writer is currently set to Offline. Correct this by using the front panel buttons on the Writer to set the mode to Online. |
| 5043 | Writer in recoverable error state. Fix error above and restart. | This is an informational message indicating that the Writer may be restarted from the current error condition. |
| 5045 | Writer error has occurred. | Check previous error messages in error log file. |
| 5046 | The image address provided must have a “0” value for the Level 1 part of the image address. | Check addressing setup in the film template. |
| 5048 | Line %d of List file %s contains %d dashes preceding the filename; maximum number of dashes allowed is %d. | The application software encountered a line in the List file where there was more than the allowed number of dash characters preceding the file name. Each dash on a line indicates the file is to be indexed one level lower than the index level specified for the job. For a 2-level job, the maximum number of dashes on a line is two; for a 1-level job, it is one. For example, in a 2-level job, two dashes in a List file line entry would cause the file to be indexed at level zero (two level minus two dashes equals zero). Note that only the first line on which the violation was found is flagged here; the user should check the entire List file to ensure that all lines are correct.<br>Change the List file to meet the file specification requirements. |
| 5049 | Film template requires the upper cassette to be loaded into the archive Writer. | Put upper cassette in the Writer. |
| 5050 | Film template requires the lower cassette to be loaded into the archive Writer. | Put lower cassette in the Writer. |

| Code | Message | Description |
|---|---|---|
| 5051 | Upper cassette battery needs to be replaced. | Replace upper cassette battery. |
| 5052 | Lower cassette battery needs to be replaced. | Replace lower cassette battery. |
| 5053 | Upper cassette improperly inserted. | The upper cassette is installed incorrectly. Remove the cassette and install it properly. |
| 5054 | Lower cassette improperly inserted. | The lower cassette is installed incorrectly. Remove the cassette and install it properly. |
| 5055 | Cassette access door is open. | Cassette access door is open. |
| 5056 | Cassettes are on different sides. Please insert matching cassettes. | |
| 5057 | Unable to load language files on Writer. | Failed to load language files on the Writer. Reboot Writer. |
| 5058 | Unable to access registry. | Failed to access registry. Check registry entry. |
| 5059 | The controller version number on the archive Writer is %s. A version of %s or greater is needed to run with the application software. | Check the version numbers of the application software and the Writer and report the differences to Service. |
| 5060 | Bad ASCII character in text file %s. | Check ASCII file. Character not in character set 0-255. |
| 5061 | Line too long in text file %s. | Check ASCII file. The line is greater than 80 characters. |
| 5062 | Too many lines in text file %s. | Check ASCII file. There are more than 66 lines. |
| 5065 | The first line in List file %s must be specified to be indexed either at level %d or at level zero. | The first file specified in a List file must be indexed either at the job level or as a level zero image. In the List file specified in the error message, the first line contained a single dash, indicating the first file in a two-level job was to be indexed at level 1. This is not legal. If the List file is really a continuation of a previous job, the List file must be broken apart on document boundaries.<br>Fix the List file such that the first line in it has no dashes. |
| 5066 | Unable to open or read file %s to interrogate TIFF tags. Please check that file is present and is a valid TIFF file. | Check that file is present and is a valid TIFF file. |
| 5067 | An archive Writer is not mapped to drive %s. | Returned from Initialize if FindFirstFile call returns nonexistent path for the ArchiveWriterPath provided. This differentiates from 5035 where the drive provided is not an Writer, but it exists. |
| 5068 | Standalone AWOLArchiveWriter class method called with bad list type value: %d. | |
| 5069 | Image is too wide for the image frame. | The reduction ratio that was specified in the Job Type as not large enough to allow the image to fit across the width of the film and Exception Scaling was not enabled.<br>**Possible solutions:**<br>• Enable the **Exception Scale** option on Media tab of the Advanced Job Type Settings dialog box in the i9600 Application Software so that all too large images will automatically be reduced to fit across the width of the film.<br>• Increase the reduction ratio in the Job Type. |

| Code | Message | Description |
|---|---|---|
| 6000 | Sending command to get remaining film. | This is an internal diagnostic message. |
| 6001 | Application told us to terminate. | This is an internal diagnostic message. |
| 6004 | Opening transfer file and image data file. | This is an internal diagnostic message. |
| 6005 | Sending a group of images. | This is an internal diagnostic message. |
| 6008 | Write Images Method: %s. | This is an internal diagnostic message. |
| 6009 | Exiting WriteImages with return code %d. | This is an internal diagnostic message. |
| 6009 | Exiting WriteImages with return code %d. | This is an internal diagnostic message. |
| 7000 | Writer is idle. | |
| 7010 | Invalid restart mode. | Not a valid restart mode. |
| 8000 | No user exit DLL found “AWOLEXIT.DLL”. | No user exit named AWOLEXIT.DLL found in the Window’s system directory. |
| 8001 | User exit %s not found. | User exit name not found in AWOLEXIT.DLL. |
| 8002 | Error in user exit %s. | Error in user exit. Check text returned from user exit. |

## Writer errors

The chart below defines Writer error numbers, the corresponding error messages, and an explanation of what each error signifies.

| Code | Message | Description |
|---|---|---|
| 103 | FD Cassette Access Door Closed | The cassette access door was closed. |
| 200 | FD End Of Roll Warning | The film remaining in the upper cassette is equal to or less than 3 feet. |
| 201 | FD Ten Foot Warning | The film remaining in the upper cassette is equal to or less than 10 feet. |
| 202 | FD Fifteen Foot Warning | The film remaining in the upper cassette is equal to or less than 15 feet. |
| 203 | FD Film Breakage Upper Cassette | The film drive servo reported a loss of motion on the upper cassette's film encoder. Either the cassette is out of film or it is a hardware error. |
| 204 | FD Film Breakage Lower Cassette | The film drive servo reported a loss of motion on the lower cassette's film encoder. Either the cassette is out of film or it is a hardware error. |
| 205 | FD Out Of Film Upper Cassette | The film remaining in the upper cassette is equal to or less than 5 feet. |
| 206 | FD Out Of Film Lower Cassette | The film remaining in the lower cassette is equal to or less than 5 feet. |
| 207 | FD Low Battery Upper Cassette | The battery in the upper cassette is low. |
| 208 | FD Low Battery Lower Cassette | The battery in the lower cassette is low. |
| 209 | FD Loss Of Comm Upper Cassette | The battery in the upper cassette is dead or there is a hardware problem. |
| 210 | FD Loss Of Comm Lower Cassette | The battery in the lower cassette is dead or there is a hardware problem. |
| 211 | FD Cassette Access Door Open | The cassette access door was opened. |
| 212 | FD Upper Cassette Inserted Improperly | The upper cassette was inserted improperly. |
| 213 | FD Lower Cassette Inserted Improperly | The lower cassette was inserted improperly. |
| 214 | FD Invalid Num Cassettes | Configuring the number of cassettes required with an invalid number. |
| 215 | FD CP Invalid Fixed Length | Configuring the fixed length advance with an invalid length. |
| 216 | CD CP Invalid Message Data | Command Processor: error in message data invalid data was passed with a command. |
| 217 | CD CP Unknown Request | Command Processor: invalid command received. |
| 218 | FD CP Proc Illegal FDS Cmd | Unknown film drive request. |
| 219 | FD CP Invalid Leader Length | Advancing film or setting the leader length with an invalid amount. |
| 220 | FD CP Invalid Tension Length | Setting the tension length with an invalid amount. |
| 221 | FD Cassette Film lengths Differ | The film amounts between the upper and lower cassettes differ by more than 6 feet. |
| 222 | FD Cassette Image Address Differ | The image addresses in the upper and lower cassettes differ. |

| Code | Message | Description |
|---|---|---|
| 223 | FD Cassette Roll Numbers Differ | The roll numbers in the upper and lower cassettes differ. |
| 224 | FD Cassette Sides Differ U1 L2 | The upper cassette is on Side 1 and lower cassette is on Side 2. |
| 225 | FD Cassette Sides Differ U2 L1 | The upper cassette is on Side 2 and lower cassette is on Side 1. |
| 226 | FD End Of Roll Warning Duo Side A | The end of a roll for duo Side A has been reached. |
| 227 | FD End Of Roll Warning Duo Side B | The end of a roll for duo Side B has been reached. |
| 228 | FD Upper Cassette Not Present | The system is configured for two cassettes and the upper cassette is not present or the system is configured for one cassette and both cassettes are not present. |
| 229 | FD Lower Cassette Not Present | The system is configured for two cassettes and the lower cassette is not present or the system is configured for one cassette and both cassettes are not present. |
| 230 | EH WRIB Kvalue Too Big | WRIB error: PM2 K value too big. |
| 231 | EH WRIB Cannot Process Tiled Image | WRIB error: Cannot process tiled images. |
| 232 | EH WRIB Cannot Process G4 Multi-strip Image | WRIB error: Cannot process Group 4 multi-strip images. |
| 233 | FD Invalid Roll Number | An invalid roll number was entered. Either it was non-numeric or it was too long. |
| 234 | FD Invalid Job Number | An invalid job number was entered. Either it was non-numeric or it was too long. |
| 235 | EH IO Image Log Filename Invalid | |
| 236 | CC II File Opening Error | There was a problem with the image file processing in the Writer. This problem is often corrected by running images through the Input Processor with the **Convert to Writer** option enabled before archiving the images. Also ensure that you have Archive Writer Controller Firmware version 4.0.16 or higher. |
| 237 | CC II File Read Error | There was a problem with the image file processing in the Writer. This problem is often corrected by running images through the Input Processor with the **Convert to Writer** option enabled before archiving the images. Also ensure that you have Archive Writer Controller Firmware version 4.0.16 or higher. |
| 238 | EH IC Invalid Image Origin | Image Composition invalid image X, Y origin. |
| 239 | EH IC Invalid Image Scaling | Image Composition invalid image scaling. |
| 240 | EH IC Image Too Long | Image Composition of the scaled image is too long.<br>The reduction ratio that was specified in the Job Type was not large enough to allow the image to fit within the maximum length of the image frame and Exception Scaling was not enabled.<br>**Possible solutions**:<br>• Enable the **Exception Scale** option of the i9600 Application Software so that all 'too large' images will automatically be reduced to fit across the film.<br>• Increase the reduction ratio in the Job Type. |

| Code | Message | Description |
|---|---|---|
| 241 | EH IC Image Too Wide | Image Composition of the scaled image is too wide for frame.<br>The reduction ratio that was specified in the Job Type was not large enough to allow the image to fit within the maximum width of the image frame and Exception Scaling was not enabled.<br>**Possible solutions**:<br>• Enable the **Exception Scale** option of the i9600 Application Software so that all 'too large' images will automatically be reduced to fit across the film.<br>• Increase the reduction ratio in the Job Type. |
| 242 | EH IC Invalid Image Limits | Image Composition invalid image frame limits. |
| 243 | EH IC Invalid Image Orientation | Image Composition invalid image orientation. |
| 244 | EH IC Invalid Image Polarity | Image Composition invalid image polarity. |
| 245 | EH IC Invalid Image Resolution | Image Composition invalid image resolution. |
| 246 | EH IC Invalid Scaling Factor | Image Composition invalid image scaling factor. |
| 247 | EH DOS Disk Semaphore File Open Failed | This is a Writer internal error. |
| 248 | EH DOS Disk Init Transaction Failed | Could not instantiate a command given a semaphore file's contents.<br>**Possible solutions:**<br>• Replace the battery in the cassettes.<br>• Run the images through the Input Processor with the **Convert to Writer** option enabled before sending the images to the Writer.<br>• In the Performance setting in the System Settings under **Administration**, use the following settings:<br>File Retry Delay = 2<br>File Retry Count = 40<br>Number of Commands = 4<br>Number of Files = 4<br>Transaction Timeout = 300 |
| 249 | EH DOS Disk Failed to Read Semaphore File | This is a Writer internal error. |
| 250 | EH DOS Disk Command File Open Failed | Cannot open the host application interface manager's command file that was written. |
| 251 | EH DOS Disk Invalid Command Id | Command ID for a command is not one of the supported command IDs. |

| Code | Message | Description |
|---|---|---|
| 252 | EH DOS Disk Command Parameters Invalid | Parameters not valid for a command (e.g. wrong parameter IDs).<br>**Possible solutions:**<br>• Replace the battery in the cassettes.<br>• Run the images through the Input Processor with the **Convert to Writer** option enabled before sending the images to the Writer.<br>• In the Performance setting in the System Settings under **Administration**, use the following settings:<br>File Retry Delay = 2<br>File Retry Count = 40<br>Number of Commands = 4<br>Number of Files = 4<br>Transaction Timeout = 300<br>• Check that there are no input files that have a 0 length. |
| 253 | EH DOS Disk No Command Id | No command ID contained in the command file. |
| 254 | IA Invalid Format | There is a problem with the Job Type. |
| 255 | IA Invalid Data | Invalid image address data. |
| 256 | IA Field Overflow | Image address field overflow. Need to increase size of field for image address within the Job Type definition for this application. For example, if you have a batch Job Type with document-level grouping (2-level indexing) that has the second level Image Address field width set to 2 and you attempt to run a job that has more than 99 folders in the input directory, you will receive an error because the second level image address will be incremented to 100 which is greater than 2 characters in length. |
| 257 | IA Format Width | Image address field too wide. |
| 258 | IA Format Length | Image address length too long. |
| 259 | IA Format Definition | Incompatible image address format. There may be an alpha character in a non-fixed field in the image address. |
| 260 | IA Format Number | Invalid number of address fields. |
| 261 | IA Non-sequential Address | This is a warning message. The starting image address provided for the job is not sequential to the address read from the cassette. |
| 262 | Ls Language File Read Error | An error occurred while loading a language file. |
| 263 | PD Invalid Power-down Interval | Invalid power down interval was entered. |
| 264 | ST Invalid Time Format | The time parameter entered was in an incompatible format. |
| 265 | ST Invalid Date Format | The date parameter entered was in an incompatible format. |
| 266 | CD CP Command Not Allowed Off Line | A command was received from the host that is not valid in the off-line mode. |
| 267 | CD CP Command Not Allowed With Critical Error Condition | A command was received after the Writer reported a critical error but before the warning was corrected. |
| 268 | CD CP Command Not Allowed With Recoverable Error Condition | A command was received after the reported correctable error but before the warning was corrected. |
| 269 | CD CP Command Not Allowed With Warning Error Condition | A command was received after the Writer reported a warning but before the warning was corrected. |
| 270 | IC No File Specified | No image file was specified in the print image command. Specify an image file with the print image command. |

| Code | Message | Description |
|---|---|---|
| 271 | EH IO Image Log Size Exceeded | The image log file is at its maximum size. Rename the log file; remove the old log file. |
| 272 | EH NET Cant Add Host | Could not add a host to the Host table that exists. Check the command file being used for Set Network Specification and make sure it contains a valid host name and host IP address. |
| 273 | FD Verify Film Upper Cassette | This error can occur if the NV RAM in film cassette is reinitialized or if film cassette is left too long with a battery in it. To resolve this, run a small job through the application software which will reinitialize the cassette's memory.<br>A cassette is inserted in a film bay of the Writer that has not been previously used in an Archive Writer. It is possible that the cassette is an IL30/70 cassette. Verify the cassette inserted in the upper film bay is the proper cassette. |
| 274 | FD Verify Film Lower Cassette | A cassette is inserted in the lower film bay of the Writer that has not been previously used in an Writer. It is possible that the cassette is an IL30/70 cassette. Verify the cassette inserted in the lower film bay is the proper cassette. |
| 276 | CC II IMC Required Before Printing | The host is attempting to print a job with IMC enabled before sending the Writer IMC parameters and 'make IMC' command. Command the Writer to write IMC via the host application. |
| 277 | EH IC Type Invalid | An invalid film format was received from the host. Simplex or duplex should be specified. |
| 278 | EH IC Scaling Invalid | An invalid image scaling value was received from the host. |
| 279 | EH IC Origin Invalid | An invalid image origin was received from the host. |
| 280 | IA Invalid Level | An attempt to set the image level to an invalid value occurred. The value must be between 1 and x. Where x is the number of image levels used. |
| 290 | EH FT Transfer Timed Out | Failed to receive data packet before watchdog timed out. |
| 298 | FD 5 Meter Warning | The film remaining in the upper cassette is equal to or less than 5 meters. |
| 299 | FD 3 Meter Warning | The film remaining in the upper cassette is equal to or less than 3 meters. |
| 300 | CD CP Command Substitution Error | Command Decoder: command being over-written. Call Service. |
| 301 | CD CP Initialization Error | Command Processor: initialization error. Call Service. |
| 302 | CD CP MsgQ Receive Error | Command Processor: error getting message from queue. Call Service. |
| 303 | CD CP MsgQ Time Out Error | Timeout occurred waiting for message from queue. Call Service. |
| 304 | CD CP Invalid MsgQ Return Code | Unknown return code received for messageGet. Call Service. |
| 305 | CD CP Executing Uninitialized Command | Command Processor: command function not initialized. Call Service. |
| 306 | CD CP Error Checking Uninitialized | Command Processor: error checking function not initialized. Call Service. |
| 307 | CD CP Command Element Init Invalid Index | Index is not within the list of functions. Call Service. |
| 308 | CD CP Invalid Param Components Length | Command parameter length exceeds CD message size. Call Service. |
| 309 | FD Msg Init Data Length Error | Initializing a film drive message with data longer than the buffer size. Call Service. |

| Code | Message | Description |
|---|---|---|
| 311 | FD Cassette Data Release Failed | Cassette data semaphore. Give failed. Call Service. |
| 312 | FD Cassette Data Illegal Cassette Id | Cassette index is out of range. Call Service. |
| 313 | FD Cassette Status Reservation Failed | Cassette status semaphore. Take failed. Call Service. |
| 314 | FD Cassette Status Release Failed | Cassette status semaphore. Give failed. Call Service. |
| 315 | FD Cassette Status Illegal Cassette Id | Cassette index out of range. Call Service. |
| 316 | FD Message Send Error | Error sending to message queue. Ensure that the Archive Writer firmware controller version is 4.0.16 or higher. |
| 317 | FD CP Initialization Error | Film Drive Command Processor Task initialization error. Call Service. |
| 318 | FD CP MsgQ Receive Error | Film Drive Command Processor error getting message from queue. Call Service. |
| 319 | FD CP Cmd Time Out Error | Command response timer timed-out indicating that there was a problem with the film drive in the Writer.<br>**Possible solutions:**<br>• Replace the battery in the cassettes.<br>• Ensure that the door of the Writer is closing properly.<br>• Hardware problem with:<br>• door interlock switch<br>• cassette interface board<br>• Port #2 connector on the 100 board<br>• 100 or 1700<br>• Call Service. |
| 320 | FD CP Illegal FD State Error | Film Drive Command Processor is in an illegal state. Call Service. |
| 321 | FD CP MsqQ Send Error | This is an internal Writer error. Call Service. |
| 322 | FD CP Invalid MsgQ Return Code | Application Message Queue message. Get returned an invalid status. Call Service. |
| 323 | FD CP Cmd Check Array Full | No room in the queue for the current command's response parameters (command ID; requesters ID; response required; and response timeout). Call Service. |
| 324 | Received Invalid Message From FDS. | The command terminator received does not match one of the valid commands in the film drive. The memory of the cassette may be corrupted. Remove the battery from the cassette for 24 hours or reset the memory on the cassette board. |
| 325 | FD RH Receive Buffer Overrun | The film drive servo sent a message longer than the embedded controller's receive buffer. Call Service. |
| 326 | Film Drive Serial Port Read Error | Embedded Controller error reading a character from the serial port. Call Service. |
| 327 | FD RH MsgQ Send Error | Film Drive Response Handler task reported an error sending a message to a message queue. Call Service. |
| 328 | EH WRIB DOS Reserve Failed | WRIB error: DOS reserve failed. Call Service. |
| 329 | EH WRIB DOS Release Failed | WRIB error: DOS release failed. Call Service. |
| 330 | EH WRIB File Read Error | WRIB error: DOS file read error. Call Service. |
| 331 | EH WRIB Unknown Decompress Unblock | WRIB error: Unknown semaphore unblock reason. There is a problem with an image file. Run the images through the Input Processor with the **Convert to Writer** option enabled before sending the images to the Writer. |

| Code | Message | Description |
|---|---|---|
| 332 | EH WRIB Memory Reservation Failed | WRIB error: memory semaphore take. Call Service. |
| 333 | EH WRIB Memory Release Failed | WRIB error: memory semaphore give. Call Service. |
| 334 | EH WRIB Ram Frame Malloc Failure | WRIB error: RAM memory malloc failure. Call Service. |
| 335 | EH WRIB Max Images Per Frame Exceeded | WRIB frame failure: maximum images per frame exceeded. Call Service. |
| 336 | EH WRIB Frame Malloc Failure | WRIB error: memory malloc failure. |
| 337 | EH WRIB Invalid Image Index | WRIB error: image index invalid. |
| 338 | EH WRIB Frame Not Found In WRIB Memory | WRIB memory warning: frame to delete not found. |
| 339 | EH IO MsgQ Length Too Small | Image Output message queue length too small. |
| 340 | EH IO Invalid Post Print Command | This is an internal Writer error. Call Service. |
| 341 | EH IO Image Log Open Error | Image Output log open failure, file could not be opened. Call Service. |
| 342 | EH IO Image Log Close Error | Image Output log close failure, file could not be closed. Call Service. |
| 343 | EH IO Image Log Write Error | Image Output log write failure, write error. Call Service. |
| 344 | EH IO Initialization Error | Image Output initialization error. Call Service. |
| 345 | EH IO MsgQ Send Error | Image Output message queue send error. Call Service. |
| 346 | EH IO MsgQ Receive Error | Image Output message queue receive error. Call Service. |
| 347 | EH IO MsgQ Time Out Error | Image Output message queue timeout error. Call Service. |
| 348 | EH IO Invalid MsgQ Return Code | Image Output invalid message queue return value. Call Service. |
| 349 | EH IO MsqQ Length Too Small | This is an internal Writer error. Call Service. |
| 350 | EH IO Log Open Error | This is an internal Writer error. Call Service. |
| 351 | EH IO Log Close Error | This is an internal Writer error. Call Service. |
| 352 | EH IOLog Write Error | This is an internal Writer error. Call Service. |
| 353 | EH IO IA String Too Long | Image Output frame image address string is too long. Reduce the length of the image address in the Job Type. |
| 354 | EH IO Filename Too Long | Image Output frame image filename string is too long. Call Service. |
| 355 | EH IO Too Many Image Files | Image Output frame contains too many image files. Call Service. |
| 356 | EH IO Frame message Retrieve Index | Image Output invalid frame message index. Call Service. |
| 357 | CC II Memory Allocation Error | Image Input: memory allocation failure. Call Service. |
| 358 | CC II Disk Reserve Error | Disk reserve semaphore take error. Call Service. |
| 359 | EH IC MsgQ Send Error | Image Composition message queue send error. Call Service. |
| 360 | EH IC Initialization Error | Image Composition initialization failure. Call Service. |
| 361 | EH IC MsgQ Receive Error | Image Composition message queue receive error. Call Service. |
| 362 | EH IC MsgQ Time Out Error | Image Composition message queue time-out error. Call Service. |
| 363 | EH IC Invalid MsgQ Return Code | Image Composition invalid message queue return code. Call Service. |
| 364 | EH IC Unknown Message Command | Image Composition unknown message command. Call Service. |
| 365 | EH IC MsgQ Length Too Small | Image Composition message queue length too small.Call Service. |

| Code | Message | Description |
|---|---|---|
| 366 | EH IC Unknown Scaling Type | Image Composition unknown image scaling type. Call Service. |
| 367 | EH IC Overlapping Frame Images | Image Composition overlapping images in frame. Call Service. |
| 368 | EH IC DOS Reserve Failed | Image Composition DOS reserve failed. Call Service. |
| 369 | EH IC DOS Release Failed | Image Composition DOS release failed. Call Service. |
| 370 | EH IC File Delete Error | Image Composition image file delete error. Call Service. |
| 371 | EH IC Too Many Frame Pointers | This is an internal Writer error. Call Service. |
| 372 | EH IC Too Many Images In Frame | Image Composition has too many images in the frame. Call Service. |
| 373 | EH IC Trying To Insert Too Many Images Into Frame | Image Composition trying to insert too many images into frame. Call Service. |
| 374 | EH IC Invalid Blip Request | Image Composition invalid blip type. Call Service. |
| 375 | EH IC Memory Allocation Error | Image Composition memory allocation error. Call Service. |
| 376 | EH IC Invalid Blip Level | Image Composition invalid blip index level. Call Service. |
| 377 | EH IC Invalid Command Parameter | This is an internal Writer error. Call Service. |
| 378 | EH IC Unknown Message Command | This is an internal Writer error. Call Service. |
| 379 | EH DOS Disk Message Received No Transaction Active | Host application interface manager received a response from the Writer when a command was not being processed. Call Service. |
| 380 | EH DOS Disk Error In Retrieving Message | Host application interface manager error is receiving message from queue. Call Service. |
| 381 | EH DOS Disk Response Not Received In Time | Host application interface manager error is not receiving response from system to a command within a specified period of time. Call Service. |
| 382 | EH DOS Disk Invalid MsgQ Return Code | Host application interface manager unknown status in receiving from message queue. Call Service. |
| 383 | EH DOS Disk Failed To Create Directories | Cannot create the DOS file system directories. Call Service. |
| 384 | EH DOS Disk Failed To Create Disk | Cannot reserve the DOS file system. Call Service. |
| 385 | EH DOS Disk Message Send Failed | This is an internal Writer error. Call Service. |
| 386 | EH DOS Disk Disk Reservation Failed | Cannot reserve the DOS file system; cannot take semaphore protecting the file system. Call Service. |
| 387 | EH DOS Disk Disk Release Failed | Cannot release the DOS file system; cannot give semaphore protecting the file system. Call Service. |
| 388 | EH SCSI Invalid Script Inst Int | Invalid instruction reported from SCSI I/O controller. Call Service. |
| 389 | EH SCSI Invalid Script Entry Calculated | Internal programming error; could not determine what instruction the SCSI I/O controller should execute next. Call Service. |
| 390 | EH SCSI Message Receive Error | SCSI target driver error in receiving message from queue. Call Service. |
| 391 | EH SCSI Invalid Script Entry Requested | Internal programming error; determined an instruction for the SCSI I/O controller to execute that is not a valid instruction. Call Service. |

| Code | Message | Description |
|---|---|---|
| 392 | EH SCSI Invalid Script Inst Int Read | Invalid SCSI I/O processor instruction reported from the I/O processor. Call Service. |
| 393 | IA Sem Take Failed | This is an internal Writer error. Call Service. |
| 394 | EH Error Index Out Of Range | Error handler index out of range. Call Service. |
| 395 | IA Sem Take Failed | This is an internal Writer error. Call Service |
| 396 | EH Negative Index | Cannot process negative index. Call Service. |
| 397 | IA Sem Take Failed | Error entering IA critical region. Call Service. |
| 398 | IA Sem Give Failed | Error exiting IA critical region. Call Service. |
| 399 | IA Mem Alloc Failed | Unable to allocate memory for IA field. Call Service. |
| 400 | EH System Startup Failed | This is an internal Writer error. Call Service |
| 401 | EH Sys Config File Release Failed | This is an internal Writer error. Call Service |
| 402 | EH Sys Config File Reserve Failed | This is an internal Writer error. Call Service |
| 403 | CD MsgQ Send Error | Error sending to message queue. Ensure that the Writer Firmware controller version is 4.0.26 or higher. |
| 404 | CD Msg Data Length Error | Messaged data is longer than the message buffer size. Call Service. |
| 405 | EH Memory Unavailable | This is an internal Writer error. Call Service. |
| 406 | SCSI Error | This is an internal Writer error. Call Service. |
| 407 | SCSI Memory Full | This is an internal Writer error. Call Service. |
| 413 | CC IMC Blip Fail | This is an internal Writer error. Call Service. |
| 414 | CC IMC Annotate Fail | This is an internal Writer error. Call Service. |
| 415 | OI MsgQ Send Error | Error sending message to queue. Call Service. |
| 416 | OI Msg Data Length Error | This is an internal Writer error. Call Service. |
| 417 | OI Window Invalid Index | Window index is larger than the number of declared windows. Call Service. |
| 418 | OI State Invalid State | Key state received is larger than the number of declared states. The hard drive on the host computer may be full. |
| 419 | OI State Invalid Key | Key index received is larger than the number of declared keys. Call Service. |
| 420 | OI MP Initialization Error | OI message processor initialization error. Call Service. |
| 421 | OI MP MsgQ Receive Error | OI message processor error getting message from queue. Call Service. |
| 422 | OI MP MsgQ Time Out Error | OI message processor timeout occurred waiting for message from queue. Call Service. |
| 423 | OI MP Invalid MsgQ Return Code | This is an internal Writer error. Call Service. |
| 424 | UI MsgQ Receive Error | UI send: error getting message from queue. Call Service. |
| 425 | UI MsgQ Time Out Error | UI send: timeout occurred waiting for message from queue. Call Service. |
| 426 | UI Invalid MsgQ Return Code | UI send: unknown return code received from messageGet. Call Service. |
| 427 | UI Send Time Out Error | UI send: timeout waiting for command response from the UI. This may be a problem with the communications between the 500 and 600 boards in the Writer. Call Service. |

| Code | Message | Description |
|---|---|---|
| 428 | UI MsgQ Send Error | Error sending message to queue. Call Service. |
| 429 | UI Receive Initialization Error | Receive task initialization error. Call Service. |
| 430 | UI Serial Port Read Error | Embedded controller error reading the UI serial port. Call Service. |
| 431 | UI Receive Invalid Key Code | Receive unknown key code from the user interface. Call Service. |
| 432 | CC OI Param Data1 Not Found | Parameter data not found in the message received. Call Service. |
| 433 | CC OI Param Data2 Not Found | Parameter data not found in the message received. Call Service. |
| 434 | CC OI Param Data3 Not Found | Parameter data not found in the message received. Call Service. |
| 435 | CC OI Param Data4 Not Found | Parameter data not found in the message received. Call Service. |
| 436 | CC OI Param Data5 Not Found | Parameter data not found in the message received. Call Service. |
| 437 | CC OI Param Data6 Not Found | Parameter data not found in the message received. Call Service. |
| 438 | EH Memory Malloc Error | Error log memory malloc failed. Call Service. |
| 440 | EH IO No File To Append Image Log Entry | This is an internal Writer error. Call Service. |
| 441 | EH System Startup Failed | This is an internal Writer error. Call Service. |
| 442 | EH Sys Config File Release Failed | This is an internal Writer error. Call Service. |
| 443 | EH Sys Config File Reserve Failed | This is an internal Writer error. Call Service. |
| 444 | EH Set Environment Failed | This is an internal Writer error. Call Service. |
| 445 | EH WRIB Invalid Operating Parameters | This is an internal Writer error. Call Service. |
| 446 | Invalid Exception | This is an internal Writer error. Call Service. |
| 447 | EH Net Cant Create NFS daemon | This is an internal Writer error. Call Service. |
| 448 | EH Net Cant Export File System | This is an internal Writer error. Call Service. |
| 449 | IC Memory Malloc Error Struct | The image parameter data structure could not be created. Call Service. |
| 450 | IC Memory Malloc Error Field | The image parameter data field could not be created. Call Service. |
| 451 | PD Sem Give Failure | Unable to give semaphore to indicate system activity. Call Service. |
| 452 | EH NET Cant Add Gateway | Could not add a gateway to the Gateway table that exists in the gateway destination list. Call Service. |
| 453 | EH NET Cant Create Nfsdaemon | Failure of nfsdInit within NetworkInitializationManager. Call Service. |
| 454 | EH NET Cant Export File system | Failure of nfsExport within NetworkInitializationManager. Call Service. |
| 455 | ST Unable To Read System Clock | The embedded firmware could not read/set the system clock. An error was returned from one of the system time/date routines. Call Service. |
| 456 | ST Unable To Set System Clock | The embedded firmware could not read/set the system clock. An error was returned from one of the system time/date routines. Call Service. |
| 457 | ST Unable To Set System Time | The embedded firmware could not read/set the system clock. An error was returned from one of the system time/date routines. Call Service. |

| Code | Message | Description |
|---|---|---|
| 458 | ST Unable To Set System Date | The embedded firmware could not read/set the system clock. An error was returned from one of the system time/date routines. Call Service. |
| 459 | Diagnostic Serial Port Read Error | Diagnostic serial port read error. Call Service. |
| 460 | LT MP Initialization Error | LT MP Initialization error. Call Service. |
| 461 | LT MP MsgQ Receive Error | LT MP MSGQ receive error. Call Service. |
| 462 | LT MP Invalid MsgQ Return Code | MP invalid MSGQ return error. Call Service. |
| 463 | LT App Data Recv Error | LT APP data receive error. Call Service. |
| 464 | LT App Data Recv Invalid MsgQ Return Code | LT APP data invalid MSGQ return code. Call Service. |
| 465 | LT MP Unknown Scc Request | LT MP unknown SCC request. Call Service. |
| 466 | LT MsgQ Send Error | LT MP MSGQ send error Call Service. |
| 467 | LT MP Cmd Time Out | LT MP CMD timeout. Call Service. |
| 468 | LT MP Unknown Scc Msg 55 Prog Num | LT MP unknown MSG 55 program number. Call Service. |
| 469 | LT MP Unknown Scc Msg 52 Data Type | LT MP unknown MSG 52 data type. Call Service. |
| 470 | EH Aim Reservation Failed | Unable to take AIM semaphore. Call Service. |
| 471 | EH Aim Release Failed | Unable to release AIM semaphore. Call Service. |
| 472 | EH DOS Disk Expected Priority Transaction | Writer is expecting a priority transaction and host sent normal transaction. Call Service. |
| 473 | EH Transaction Already Active | The host tried to initiate a command using a transaction number of a currently active transaction. May be posted with E248 or E709 errors. See these errors for more information. |
| 474 | EH Aimend Couldnt Signify Transaction Completion | Writer lost communication with host. Call Service. |
| 475 | EH NET Cant Initialize Gateways | Failure to add gateway to Gateway table. Call Service. |
| 476 | EH NET Cant Create Socket | Failure to create socket. Call Service. |
| 477 | EH NET Cant Accept Transactions | Failure to accept connection on the input or output socket. Call Service. |
| 478 | EH NET Cant Read In Socket | Failure to read from the input socket. Call Service. |
| 479 | EH NET Cant Write Out Socket | Failure to write to the output socket. Call Service. |
| 480 | EH II Too Many Image FDS | This is an internal Writer error. Call Service. |
| 481 | EH FT Cant Transfer File | This is an internal Writer error. Ensure that the Writer firmware controller version is 4.0.16 or higher. |
| 700 | EH WRIB Unexpected Pm2 Status Change | WRIB PM2 unexpected status. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer. |
| 701 | EH WRIB Unexpected Image Decompression Done | WRIB unexpected Image Decompression Done. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer. |

| Code | Message | Description |
|---|---|---|
| 702 | EH WRIB Unknown WRIB Interrupt | WRIB unknown interrupt. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 703 | EH WRIB Unexpected Image Print Error | WRIB unexpected Image Print Error. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>Call Service - possible problem with the WRIB board. |
| 704 | EH WRIB Unexpected Input FIFO Half Full | WRIB unexpected input FIFO half full. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>Call Service - possible problem with the WRIB board. |
| 705 | EH WRIB No Images In Frame | WRIB unexpected input FIFO half full. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>Call Service - possible problem with the WRIB board. |
| 706 | EH WRIB Memory Full Too Long | WRIB download failure. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>Call Service - possible problem with the WRIB board. |
| 707 | EH WRIB Frame Too Large | WRIB download failure: frame dimensions outside limits. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 708 | EH WRIB Unknown Memory Full Exception | WRIB error: invalid memory result. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |

| Code | Message | Description |
|---|---|---|
| 709 | EH WRIB Download Unknown Status Change | WRIB error: unknown download status change. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 710 | EH WRIB Image Download Timeout | WRIB download failure: image download timeout. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 711 | EH WRIB Image Decompression Timeout | WRIB download failure: image decompression timeout. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 712 | EH WRIB Image Decompression Failure | WRIB download failure: image decompression failure. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 713 | EH WRIB FIFO Full Timeout | WRIB download failure: FIFO full timeout.The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 714 | EH WRIB Pm2 Status Error | WRIB download failure: PM2 status error. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 715 | EH WRIB Unknown Decompress Exception | WRIB error: decompress exception. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |

| Code | Message | Description |
|---|---|---|
| 716 | EH WRIB Unknown FIFO Exception | WRIB error: FIFO exception. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 717 | EH WRIB Unknown Retry Error | WRIB error: retry error. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 718 | EH WRIB Output Unknown Status Change | WRIB error: frame output unknown status change. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 719 | EH IO Frame Print Timeout | Image Output failure: frame printing timeout. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 720 | EH IO WRIB Print Error | Image Output failure: WRIB print error. The Writer had a problem processing a TIFF file.<br>**Possible solutions:**<br>• Run the input images through the Input Processor with the **Convert to Writer** option enabled before sending images to the Writer.<br>• Call Service - possible problem with the WRIB board. |
| 721 | Id Invalid Film Remaining Flag | This is an internal Writer error. Call Service. |
| 722 | EH IC Annotation String Truncated | This is an internal Writer error. Call Service. |
| 900 | FD CP Comm Failure Error | This is an internal Writer error. Call Service. |
| 901 | FD Motor Failure | 1700 board hardware or motor failure. The error is reported if any of the motor voltage; current; or speed signals. Call Service. |
| 902 | FD Invalid Command Received | Unknown or unimplemented command received by film drive servo from the embedded controller. Call Service. |
| 903 | FD Counter Oscillator Error | 1700 board hardware failure. Call Service. |
| 904 | FD Aper Encoder Error | 1700 board hardware failure. Call Service. |
| 905 | FD Freq Multiplier Error | 1700 board hardware failure. Call Service. |
| 906 | FD Servo Feedback Encdr Err | 1700 board hardware failure. Call Service. |

| Code | Message | Description |
|---|---|---|
| 907 | FD Servo Amplifier Error | Change the battery in the cassette. Motor hardware failure. Motor belt tension is too high. The drive fingers on the film drive coupler may be broken off. Drive pin may be broken, interlock failure. Call Service. |
| 908 | FD Micro Controller Error | 1700 board hardware failure. Change the battery in the cassette. Call Service. |
| 909 | FD Aper Source Switch Error | 1700 board hardware failure. Call Service. |
| 910 | FD Stop After Source Switch | 1700 board hardware failure. Call Service. |
| 911 | FD Diag Switches On | The 1700 PCB's dip switch pack S2 switch 1 has been moved to the On position. |
| 912 | FD Upper Supply Ecndr Error | 1700 board hardware failure. Call Service. |
| 913 | FD Lower Supply Ecndr Error | 1700 board hardware failure. Call Service. |
| 914 | FD Freq Multiplier Error | 1700 board hardware failure. Call Service. |
| 915 | FD Shutter Failed To Open | The shutter did not open within the specified time interval. Call Service. |
| 916 | FD Shutter Failed To Close | The shutter did not close within the specified time interval. Call Service. |
| 917 | FD Async Shutter Change | Unexpected change in the shutter position. Call Service. |
| 918 | FD Invalid M Value | An invalid motor speed setting was sent to the film drive servo. |
| 919 | FD Cassette Data Update Error | A cassette reported an error with the data sent by the film drive servo. The problem could be caused by a weak battery in the cassette or a dirty IR transmitter or receiver. Replace the cassette battery. If the problem persists, call Service. |
| 920 | FD Servo Reset | Either the Reset button was pressed, the film drive servo reset due to loss of power, or a hardware error occurred. Call Service. |
| 921 | Received Unknown Async Error From FDS | 1700 board hardware/software error. Call Service. |
| 922 | EH DOS Disk Command File Close Failed | Cannot close command file. Call Service. |
| 923 | EH DOS Disk Status File Write Failed | Cannot write status file. Call Service. |
| 924 | EH DOS Disk Response File Write Failed | Cannot write response to a file. Call Service. |
| 925 | EH DOS Disk Command File Delete Failed | Cannot delete command file. Ensure that the Archive Writer controller firmware is version 4.0.16 or higher. |
| 926 | EH DOS Disk Semaphore File Delete Failed | Call Service. |
| 927 | EH SCSI Invalid Dma Status | Invalid status reported from SCSI I/O controller. Call Service. |
| 928 | EH SCSI Unknown Dma Status | Unknown status reported from SCSI I/O controller. Call Service. |
| 929 | EH SCSI Invalid SCSI Status | Invalid status reported from SCSI I/O controller. Call Service. |
| 930 | EH Aimstart MsgQ Retrieve Error | This is an internal Writer error. Call Service. |
| 931 | EH Aimstart MsgQ Send Error | Could not add a host to the Host table that exists on the boot line. Call Service. |

| Code | Message | Description |
|---|---|---|
| 932 | EH DOS FileOpen Failed | These are internal Writer errors. Call Service. |
| 933 | EH Aimwd Cannot Start Watchdog | |
| 934 | EH Aimwd Cannot Stop Watchdog | |
| 935 | EH Aimwd Reservation Failed | |
| 936 | EH Aimwd Release Failed | |
| 937 | EH Aimwd Cannot Give Timeout Semaphore | |
| 938 | FTP Buffer Malloc Failed | |
| 939 | FTP Connection Failed | |
| 940 | FTP Data Malloc Failed | |
| 941 | FTP Transfer Failed | |
| 942 | FTP Local File Create Failed | |
| 943 | EH Cant Create FT Daemon | |
| 944 | EH Cant Delete FT Daemon | |
| 945 | EH Cant Create FT Watchdog | |
| 946 | EH Cant Delete FT Watchdog | |
| 947 | EH FT Cant Close File | |
| 948 | EH FT Cant Delete File | |
| 949 | EH FT Cant Start Transfer Timer | |
| 950 | EH FT Cant Stop Transfer Timer | |
| 951 | Check host | |
| 952 | Check host | |
| 953 | Missing TIFF Tag : XRESOLUTION | There was a problem with a TIFF file that was sent to the Writer. A required TIFF tag was missing from the image data. Correct the noted problem with the file and rerun the job. |
| 954 | Missing TIFF Tag : YRESOLUTION | |
| 955 | Missing TIFF Tag : COMPRESSION | |
| 956 | Missing TIFF Tag : TYPE3OPTIONS | |
| 957 | Missing TIFF Tag : TILEWIDTH | |
| 958 | Missing TIFF Tag : TILELENGTH | |
| 959 | Missing TIFF Tag : TILEOFFSETS | |
| 960 | Missing TIFF Tag : TILEBYTECOUNTS | |
| 961 | Missing TIFF Tag : IMAGEWIDTH | |
| 962 | Missing TIFF Tag : IMAGELENGTH | |
| 963 | Missing TIFF Tag : STRIPOFFSETS | |
| 964 | Missing TIFF Tag : STRIPBYTECOUNTS | |

# Appendix A Input Methods

The *Kodak* i9600 Application Software reads image files from a disk drive (usually a drive that is shared on the network) and sends them to the Writer. Input methods allow you to sequence image files as desired on media. Following are the supported input methods:

- Manual — List file and Batch
- Poll mode

## Batch

In this method, image files are read from a directory specified by the input source path. The presence of subdirectories and the number of subdirectory levels, in conjunction with the grouping and media capacity selections, determines the sequencing of images on media at the desired level. The sequencing of images within a level is done via the ASCII file sorting algorithm. The directory structure required to provide the desired results on media is dependent on input file type (single-page or multi-page TIFF).

- For **page-level** grouping with single-page or multi-page TIFF files, the directory must contain only the TIFF files and no subdirectories. (See Examples 1 and 4 in this section.)

  NOTE: With multi-page TIFF files the hierarcy will be lost.

- For **document-level** grouping with single-page TIFF files, the directory must contain one or more subdirectories one level down, each of which contains TIFF files. Within each subdirectory, the first image (Normal media capacity) or first two images (High media capacity) will be written as document-level, and subsequent images will be written as page-level. (See Example 5 in this section.)
- For **document-level** grouping with multi-page TIFF files, the directory must contain only the TIFF files and no subdirectories. The first image (Normal media capacity) or first two images (High media capacity) of each file will be written as document-level, and subsequent images will be written as page-level. If single-page files are included, they are processed as multi-page files with only one page and written as document-level. (See Example 9 in this section.)

- For **folder-level** grouping with single-page TIFF files, the directory must contain one or more subdirectories one level down, each of which contains one or more subdirectories that contain TIFF files. For the first sub-subdirectory within each subdirectory, the first image (Normal media capacity) or first two images (High media capacity) will be written as folder-level, the next image (Normal media capacity) or next two images (High media capacity) will be written as document-level, and subsequent images will be written as page-level. For all subsequent sub-subdirectories within each subdirectory, the first image (Normal media capacity) or first two images (High media capacity) will be written as document-level and subsequent images will be written as page-level. (See Example 6 in this section.)
- For **folder-level** grouping with multi-page TIFF files, the directory must contain one or more subdirectories one level down, each of which contains TIFF files. For the first file within each subdirectory, the first image (normal media capacity) or first two images (high media capacity) will be written as folder-level, the next image (normal media capacity) or next two images (high media capacity) will be written as document-level, and subsequent images will be written as page-level. For all subsequent files within each subdirectory, the first image (normal media capacity) or first two images (high media capacity) will be written as document-level and subsequent images will be written as page-level. (See Examples 8 and 10 in this section.)

NOTES:

- Images with no grouping are not supported with the Batch input method.
- If Media Capacity either High or Custom Two Channel and the grouping is document-level or folder-level, the B channel will be left blank in any frame where a higher-level image follows the A channel image, or where a folder-level or document-level image follows a folder-level or document-level image.

## List file

In this method, the image files to be written to media must be listed in a file using full pathnames. Files are read and written to media in the same order as they appear in the List file.

Grouping is specified with the use of one or more dashes. A pathname not preceded with a dash(es) specifies the highest level per the grouping selected. Each dash preceding a pathname represents one image level below the highest level.

NOTE: With document- or folder-level grouping the first pathname in the List file must be specified at the highest level, or enter a valid path and image name to begin immediately with no grouping.

The List file structure required to provide the desired results on media is dependent on input file type (single-page or multi-page TIFF).

- For page-level grouping with **single-page** or **multi-page** TIFF files, the maximum number of dashes that can precede a pathname is 1. Pathnames with no dash result in page-level images, and pathnames with 1 dash result in images with no grouping. (See Examples 1 and 4 in this section.)

  NOTE: With multi-page TIFF files the multi-page grouping will be lost.

- For document-level grouping with **single-page** TIFF files, the maximum number of dashes that can precede a pathname is 2. Pathnames with no dash result in document-level images, pathnames with 1 dash result in page-level images, and pathnames with 2 dashes result in images with no grouping. When Media Capacity is either High or Custom, Two Channel, each document-level file, that is followed by a page-level file, will be paired with that page-level file and both will be written as document-level. All subsequent files, until the next document-level designation, will be written as page-level. (See Examples 2 and 5 in this section.)
- For document-level grouping with **multi-page** TIFF files, the maximum number of dashes that can precede a pathname is 2. A pathname with no dashes results in the first image (Normal media capacity) or first two images (High media capacity) of the file being written as document-level, and subsequent images being written as page-level. A pathname with 1 dash results in all images of the file being written as page-level. A pathname with 2 dashes results in all images of the file being written as images with no grouping. (See Example 7 in this section.)

  NOTE: The inclusion of dashes with multi-page TIFF files will cause the multi-page grouping to be lost.

- For folder-level grouping with **single-page** TIFF files, the maximum number of dashes that can precede a pathname is 3. Pathnames with no dash result in folder-level images, pathnames with 1 dash result in document-level images, pathnames with 2 dashes result in page-level images, and pathnames with 3 dashes result in images with no grouping. (See Example 3 in this section)

NOTES:

- Use of Grouping should be limited and is not recommended since the images cannot be retrieved with automatic methods.
- If media capacity is High or Custom, Two Channel and the grouping is document- or folder-level, the B channel will be left blank in any frame where a higher-level image follows the A channel image, or where a folder-level or document-level follows a folder-level or document-level image.

## Creating a List file

List files can be created using a text editor or customer-defined program. List file creation is not part of the i9600 Application Software.

List files must conform to the following specifications:

- A separate line must be used for each image file.
- Each line must include the full pathname of the file, and the .tif file extension.
- Grouping level changes are specified by prefixing the full pathname of a file with dashes. For more information, see the previous section entitled, “List file”.
- No spaces are allowed between the dash(es) (denoting a level change) and the pathname.
- c style comments are allowed using a double backslash ( // ) at the beginning of the comment.

NOTE: Use of no grouping should be limited and is not recommended since the images cannot be retrieved with automatic methods.

## Examples

The following examples illustrate most requirements for archiving. The examples provide summaries followed by detailed explanations and use of the default values.

### Example 1

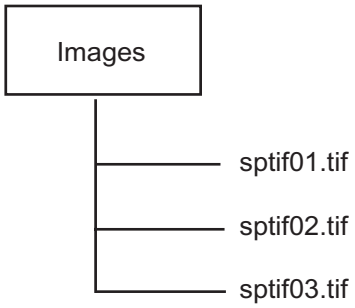
**Job Type Setup**

| | |
|---|---|
| Grouping: | Page-level |
| File Type: | Single-page TIFF files |
| Media Capacity: | Normal |
| Starting Image Address: | XYZ.00001 |
| Input Method: | List |

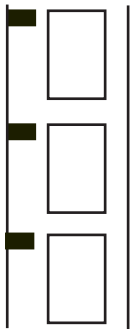
**List file**

c:\images\sptif01.tif
c:\images\sptif02.tif
c:\images\sptif03.tif

**Batch Directory**




| Image File | Image Address |
|---|---|
| c:\images\sptif01.tif | XYZ.00001 |
| c:\images\sptif02.tif | XYZ.00002 |
| c:\images\sptif03.tif | XYZ.00003 |



## Example 2

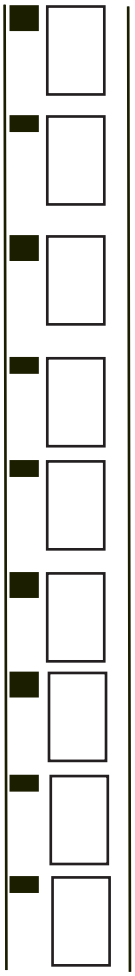
### Job Type Setup

| | |
|---|---|
| Grouping: | Document-level |
| File Type: | Single-page TIFF |
| Media Capacity: | Normal |
| Starting Image Address: | FIX.001.000 |
| Input Method: | List (filenames must appear in this order, not numeric-alpha) |

### List file

| Level | List file |
|---|---|
| Document | c:\smith\sptif01.tif |
| Page | -c:\smith\sptif02.tif |
| Document | c:\jones\sptif01.tif |
| Page | -c:\jones\sptif02.tif |
| Page | -c:\jones\sptif03.tif |
| Document | d:\acct\sptif01.tif |
| Document | d:\deed\sptif01.tif |
| Page | -d:\deed\sptif02.tif |
| Page | -d:\deed\sptif03.tif |

| Image File | Image Address |
|---|---|
| c:\smith\sptif01.tif | FIX.001.000 |
| -c:\smith\sptif02.tif | FIX.001.001 |
| c:\jones\sptif01.tif | FIX.002.000 |
| -c:\jones\sptif02.tif | FIX.002.001 |
| -c:\jones\sptif03.tif | FIX.002.002 |
| d:\acct\sptif01.tif | FIX.003.000 |
| d:\deed\sptif01.tif | FIX.004.000 |
| -d:\deed\sptif02.tif | FIX.004.001 |
| -d:\deed\sptif03.tif | FIX.004.002 |



## Example 3

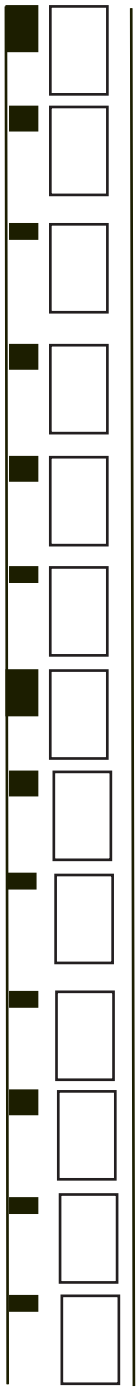
### Job Type Setup

| | |
|---|---|
| Grouping: | Folder-level |
| File Type: | Single-page TIFF |
| Media Capacity: | Normal |
| Starting Image Address: | FIX.001.000.000 |
| Input Method: | List (filenames must appear in this order, not numeric-alpha) |

### List File

| Level | List file |
|---|---|
| Folder | c:\acct3\jones\spjones01.tif |
| Document | -c:\acct3\jones\spjones02.tif |
| Page | --c:\acct3\jones\spjones03.tif |
| Document | -c:\acct3\smith\spsmith01.tif |
| Document | -c:\acct3\elm\spelm01.tif |
| Page | --c:\acct3\elm\spelm02.tif |
| Folder | d:\deeds\1900\1920\sp01.ti |
| Document | -d:\deeds\1900\1920\sp02.tif |
| Page | --d:\deeds\1900\1920\sp03.tif |
| Page | --d:\deeds\1900\1920\sp04.tif |
| Document | -d:\deeds\1900\1921\sp01.tif |
| Page | --d:\deeds\1900\1921\sp02.tif |
| Page | --d:\deeds\1900\1921\sp03.tif |

| Image File | Page within Grouping | Image Address |
|---|---|---|
| c:\acct3\jones\spjones01.tif | 1 | FIX.001.000.000 |
| -c:\acct3\jones\spjones02.tif | 2 | FIX.001.001.000 |
| --c:\acct3\jones\spjones03.tif | 3 | FIX.001.001.001 |
| -c:\acct3\smith\spsmith01.tif | 1 | FIX.001.002.000 |
| -c:\acct3\elm\spelm01.tif | 1 | FIX.001.003.000 |
| --c:\acct3\elm\spelm02.tif | 2 | FIX.001.003.001 |
| d:\deeds\1900\1920\sp01.tif | 1 | FIX.002.000.000 |
| -d:\deeds\1900\1920\sp02.tif | 2 | FIX.002.001.000 |
| --d:\deeds\1900\1920\sp03.tif | 3 | FIX.002.001.001 |
| --d:\deeds\1900\1920\sp04.tif | 4 | FIX.002.001.002 |
| -d:\deeds\1900\1921\sp01.tif | 1 | FIX.002.002.000 |
| --d:\deeds\1900\1921\sp02.tif | 2 | FIX.002.002.001 |
| --d:\deeds\1900\1921\sp03.tif | 3 | FIX.002.002.002 |

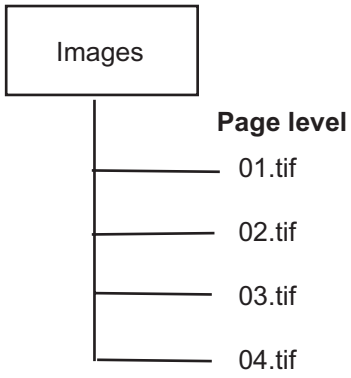


**Example 4**

**Job Type Setup**

| | |
|---|---|
| Grouping: | Page-level |
| File Type: | Single-page TIFF |
| Media Capacity: | High |
| Starting Image Address: | FIX.001 |
| Input Method: | List or Batch |

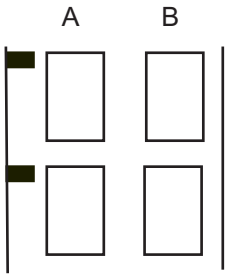
**Batch Directory**




**List file**

c:\images\01.tif
c:\images\02.tif
c:\images\03.tif
c:\images\04.tif

| Channel | Image File | Image Address |
|---|---|---|
| A | c:\images\01.tif | FIX.001 |
| B | c:\images\02.tif | FIX.001 |
| A | c:\images\03.tif | FIX.002 |
| B | c:\images\04.tif | FIX.002 |

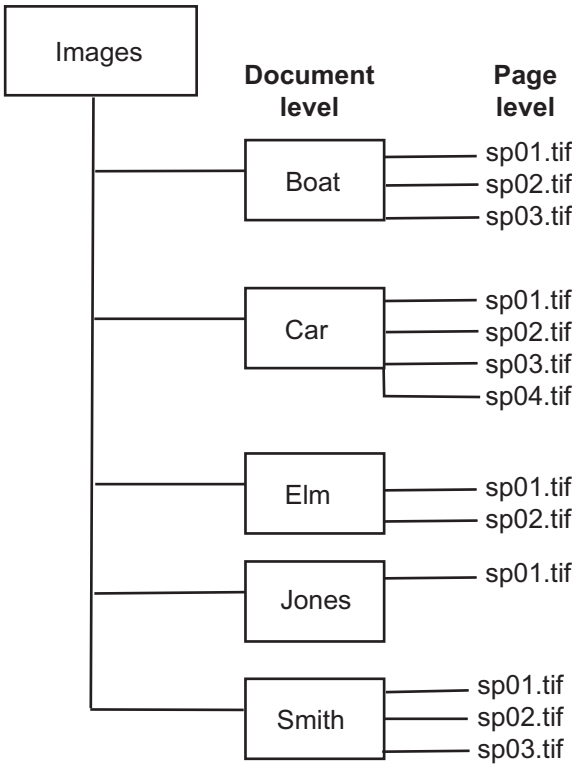


## Example 5

### Job Type Setup

| | |
|---|---|
| Grouping: | Document-level |
| File Type: | Single-page TIFF |
| Media Capacity: | High |
| Starting Image Address: | FIX.001.000 |
| Input Method: | Batch or List |

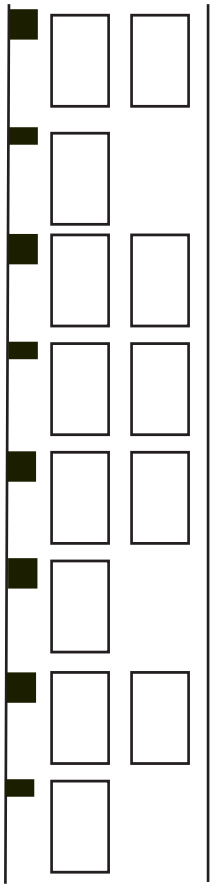
### Batch Directory



### Equivalent List File

| Level | List file |
|---|---|
| Document | c:\images\boat\sp01.tif |
| Page | -c:\images\boat\sp02.tif |
| Page | -c:\images\boat\sp03.tif |
| Document | c:\images\car\sp01.tif |
| Page | -c:\images\car\sp02.tif |
| Page | -c:\images\car\sp03.tif |
| Page | -c:\images\car\sp04.tif |
| Document | c:\images\elm\sp01.tif |
| Page | -c:\images\elm\sp02.tif |
| Document | c:\images\jones\sp01.tif |
| Document | c:\images\smith\sp01.tif |
| Page | -c:\images\smith\sp02.tif |
| Page | -c:\images\smith\sp03.tif |

| List Level | Image Address Level | Channel | Image File | Page within Grouping | Image Address |
|---|---|---|---|---|---|
| Doc | Doc | A | c:\images\boat\sp01.tif | 1 | FIX.001.000 |
| Page | Doc | B | c:\images\boat\sp02.tif | 2 | FIX.001.000 |
| Page | Page | A | c:\images\boat\sp03.tif | 3 | FIX.001.001 |
| Doc | Doc | A | c:\images\car\sp01.tif | 1 | FIX.002.000 |
| Page | Doc | B | c:\images\car\sp02.tif | 2 | FIX.002.000 |
| Page | Page | A | c:\images\car\sp03.tif | 3 | FIX.002.001 |
| Page | Page | B | c:\images\car\sp04.tif | 4 | FIX.002.001 |
| Doc | Doc | A | c:\images\elm\sp01.tif | 1 | FIX.003.000 |
| Page | Doc | B | c:\images\elm\sp02.tif | 2 | FIX.003.000 |
| Doc | Doc | A | c:\images\jones\sp01.tif | 1 | FIX.004.000 |
| Doc | Doc | A | c:\images\smith\sp01.tif | 1 | FIX.005.000 |
| Page | Doc | B | c:\images\smith\sp02.tif | 2 | FIX.005.000 |
| Page | Page | A | c:\images\smith\sp03.tif | 3 | FIX.005.001 |

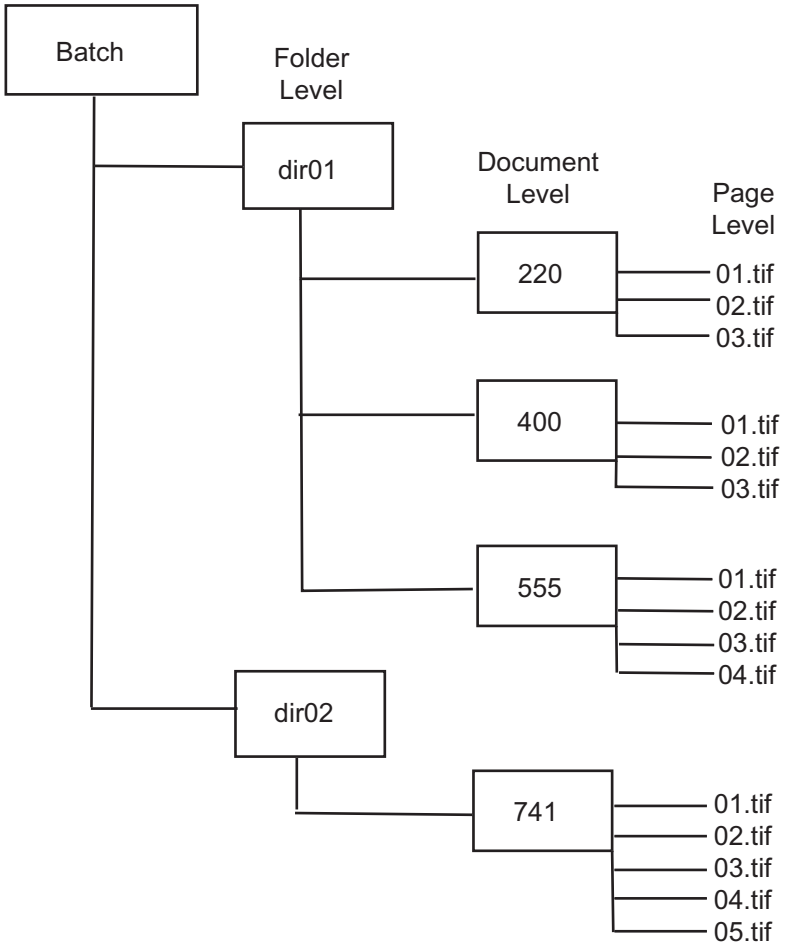


## Example 6

### Job Type Setup

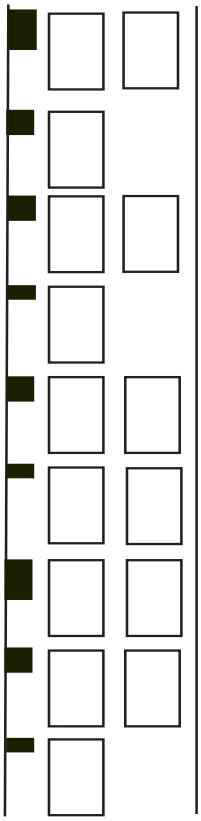
| | |
|---|---|
| Grouping: | Folder-level |
| File Type: | Single-page TIFF |
| Media Capacity: | High |
| Starting Image Address: | FIX.001.000.000 |
| Input Method: | Batch |

### Batch Directory



## Batch Example

| List Level | Image Address Level | Channel | Image File | Image Address |
|---|---|---|---|---|
| Folder | Folder | A | c:\Batch\dir01\220\01.tif | FIX.001.000.000 |
| Doc | Folder | B | c:\Batch\dir01\220\02.tif | FIX.001.000.000 |
| Page | Doc | A | c:\Batch\dir01\220\03.tif | FIX.001.001.000 |
| Doc | Doc | A | c:\Batch\dir01\400\01.tif | FIX.001.002.000 |
| Page | Doc | B | c:\Batch\dir01\400\02.tif | FIX.001.002.000 |
| Page | Page | A | c:\Batch\dir01\400\03.tif | FIX.001.002.001 |
| Doc | Doc | A | c:\Batch\dir01\555\01.tif | FIX.001.003.000 |
| Page | Doc | B | c:\Batch\dir01\555\02.tif | FIX.001.003.000 |
| Page | Page | A | c:\Batch\dir01\555\03.tif | FIX.001.003.001 |
| Page | Page | B | c:\Batch\dir01\555\04.tif | FIX.001.003.001 |
| Folder | Folder | A | c:\Batch\dir02\741\01.tif | FIX.002.000.000 |
| Doc | Folder | B | c:\Batch\dir02\741\02.tif | FIX.002.000.000 |
| Page | Doc | A | c:\Batch\dir02\741\03.tif | FIX.002.001.000 |
| Page | Doc | B | c:\Batch\dir02\741\04.tif | FIX.002.001.000 |
| Page | Page | A | c:\Batch\dir02\741\05.tif | FIX.002.001.001 |



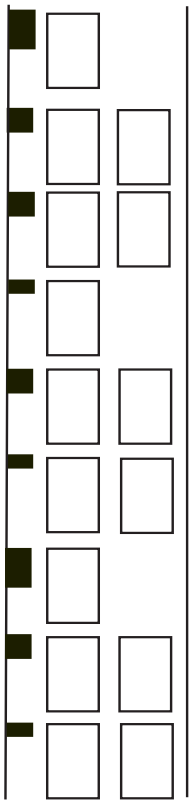
### List Example

In List mode, the image layout rules are different. If you start a level 3 document with a single page tif, the system writes only this image in the A channel of the first frame, leaving the B channel blank. The first image of a 3-level job is the first page of the first document in that folder. The system does not know if the first single page tif is its own document or the first page of a longer document. The system has been set to always treat the first level 3, single page tif as its own document.

### Equivalent List File

```
c:\Batch\dir01\220\01.tif
-c:\Batch\dir01\220\02.tif
--c:\Batch\dir01\220\03.tif
-c:\Batch\dir01\400\01.tif
--c:\Batch\dir01\400\02.tif
--c:\Batch\dir01\400\03.tif
-c:\Batch\dir01\555\01.tif
--c:\Batch\dir01\555\02.tif
--c:\Batch\dir01\555\03.tif
--c:\Batch\dir01\555\04.tif
c:\Batch\dir02\741\01.tif
-c:\Batch\dir02\741\02.tif
--c:\Batch\dir02\741\03.tif
--c:\Batch\dir02\741\04.tif
--c:\Batch\dir02\741\05.tif
```

| List Level | Image Address Level | Channel | Image File | Image Address |
|---|---|---|---|---|
| Folder | Folder | A | c:\Batch\dir01\220\01.tif | FIX.001.000.000 |
| Doc | Folder | B | c:\Batch\dir01\220\02.tif | FIX.001.000.000 |
| Page | Doc | A | c:\Batch\dir01\220\03.tif | FIX.001.001.000 |
| Doc | Doc | A | c:\Batch\dir01\400\01.tif | FIX.001.002.000 |
| Page | Doc | B | c:\Batch\dir01\400\02.tif | FIX.001.002.000 |
| Page | Page | A | c:\Batch\dir01\400\03.tif | FIX.001.002.001 |
| Doc | Doc | A | c:\Batch\dir01\555\01.tif | FIX.001.003.000 |
| Page | Doc | B | c:\Batch\dir01\555\02.tif | FIX.001.003.000 |
| Page | Page | A | c:\Batch\dir01\555\03.tif | FIX.001.003.001 |
| Page | Page | B | c:\Batch\dir01\555\04.tif | FIX.001.003.001 |
| Folder | Folder | A | c:\Batch\dir02\741\01.tif | FIX.002.000.000 |
| Doc | Folder | B | c:\Batch\dir02\741\02.tif | FIX.002.000.000 |
| Page | Doc | A | c:\Batch\dir02\741\03.tif | FIX.002.001.000 |
| Page | Doc | B | c:\Batch\dir02\741\04.tif | FIX.002.001.000 |
| Page | Page | A | c:\Batch\dir02\741\05.tif | FIX.002.001.001 |



## Example 7

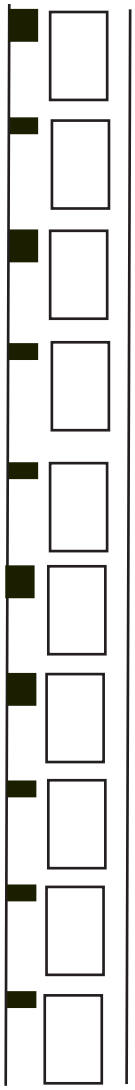
### Job Type Setup

| | |
|---|---|
| Grouping: | Document-level |
| File Type: | Multi-page TIFF (document-level grouping) |
| Media Capacity: | Normal |
| Starting Image Address: | FIX.001.000 |
| Input Method: | List |

### List File

c:\images\2mp.tif
c:\images\3mp.tif
c:\images\1mp.tif
c:\images\4mp.tif

| Image File | Page within Image File | Image Address |
|---|---|---|
| c:\images\2mp.tif | 1 | FIX.001.000 |
| c:\images\2mp.tif | 2 | FIX.001.001 |
| c:\images\3mp.tif | 1 | FIX.002.000 |
| c:\images\3mp.tif | 2 | FIX.002.001 |
| c:\images\3mp.tif | 3 | FIX.002.002 |
| c:\images\1mp.tif | 1 | FIX.003.000 |
| c:\images\4mp.tif | 1 | FIX.004.000 |
| c:\images\4mp.tif | 2 | FIX.004.001 |
| c:\images\4mp.tif | 3 | FIX.004.002 |
| c:\images\4mp.tif | 4 | FIX.004.003 |

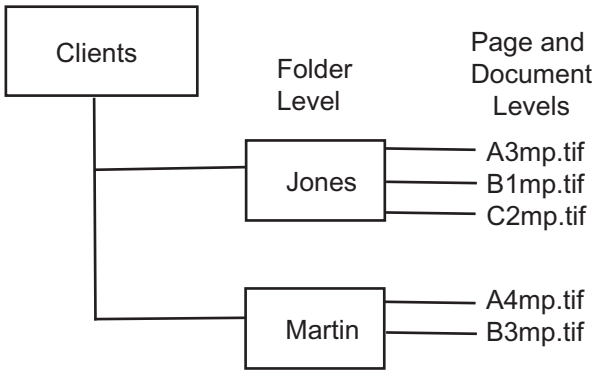


## Example 8

### Job Type Setup

| | |
|---|---|
| Grouping: | Folder-level |
| File Type: | Multi-page TIFF (document-level grouping) |
| Media Capacity: | Normal |
| Starting Image Address: | FIX.001.000.000 |
| Input Method: | Batch |

### Batch Directory

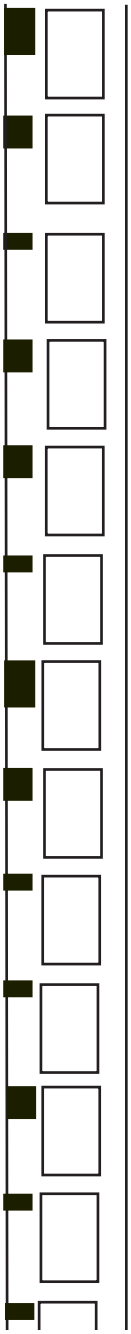


**Equivalent List File**

c:\clients\Jones\A3mp.tif
-c:\clients\Jones\B1mp.tif
-c:\images\Jones\C2mp.tif
c:\clients\Martin\A4mp.tif
-c:\clients\Martin\B3mp.tif

NOTE: To keep clients segregated add a document-level dash (-).

| Image File | Page within Image File | Image Address |
|---|---|---|
| c:\clients\Jones\A3mp.tif | 1 | FIX.001.000.000 |
| c:\clients\Jones\A3mp.tif | 2 | FIX.001.001.000 |
| c:\clients\Jones\A3mp.tif | 3 | FIX.001.001.001 |
| -c:\clients\Jones\B1mp.tif | 1 | FIX.001.002.000 |
| -c:\clients\Jones\C2mp.tif | 1 | FIX.001.003.000 |
| c:\clients\Jones\C2mp.tif | 2 | FIX.001.003.001 |
| c:\clients\Martin\A4mp.tif | 1 | FIX.002.000.000 |
| c:\clients\Martin\A4mp.tif | 2 | FIX.002.001.000 |
| c:\clients\Martin\A4mp.tif | 3 | FIX.002.001.001 |
| c:\clients\Martin\A4mp.tif | 4 | FIX.002.001.002 |
| -c:\clients\Martin\B3mp.tif | 1 | FIX.002.002.000 |
| c:\clients\Martin\B3mp.tif | 2 | FIX.002.002.001 |
| c:\clients\Martin\B3mp.tif | 3 | FIX.002.002.002 |

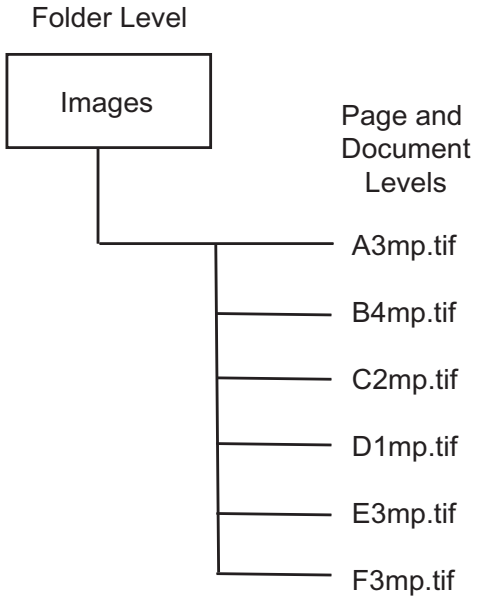


## Example 9

### Job Type Setup

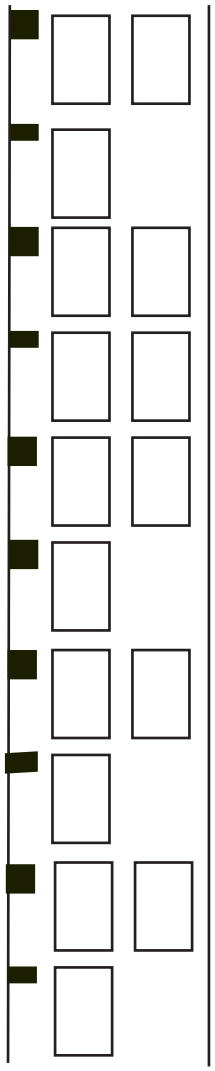
| | |
|---|---|
| Grouping: | Document-level |
| File Type: | Multi-page TIFF (document-level grouping) |
| Media Capacity: | High |
| Starting Image Address: | FIX.001.000 |
| Input Method: | Batch |

### Batch Directory



**List File**
c:\images\A3mp.tif
c:\images\B4mp.tif
c:\images\C2mp.tif
c:\images\D1mp.tif
c:\images\E3mp.tif
c:\images\F3mp.tif

| Image Address Level | Channel | Image File | Page within Image File | Image Address |
|---|---|---|---|---|
| Doc | A | c:\images\A3mp.tif | 1 | FIX.001.000 |
| Doc | B | c:\images\A3mp.tif | 2 | FIX.001.000 |
| Page | A | c:\images\A3mp.tif | 3 | FIX.001.001 |
| Doc | A | c:\images\B4mp.tif | 1 | FIX.002.000 |
| Doc | B | c:\images\B4mp.tif | 2 | FIX.002.000 |
| Page | A | c:\images\B4mp.tif | 3 | FIX.002.001 |
| Page | B | c:\images\B4mp.tif | 4 | FIX.002.001 |
| Doc | A | c:\images\C2mp.tif | 1 | FIX.003.000 |
| Doc | B | c:\images\C2mp.tif | 2 | FIX.003.000 |
| Doc | A | c:\images\D1mp.tif | 1 | FIX.004.000 |
| Doc | A | c:\images\E3mp.tif | 1 | FIX.005.000 |
| Doc | B | c:\images\E3mp.tif | 2 | FIX.005.000 |
| Page | A | c:\images\E3mp.tif | 3 | FIX.005.001 |
| Doc | A | c:\images\F3mp.tif | 1 | FIX.006.000 |
| Doc | B | c:\images\F3mp.tif | 2 | FIX.006.000 |
| Page | A | c:\images\F3mp.tif | 3 | FIX.006.001 |

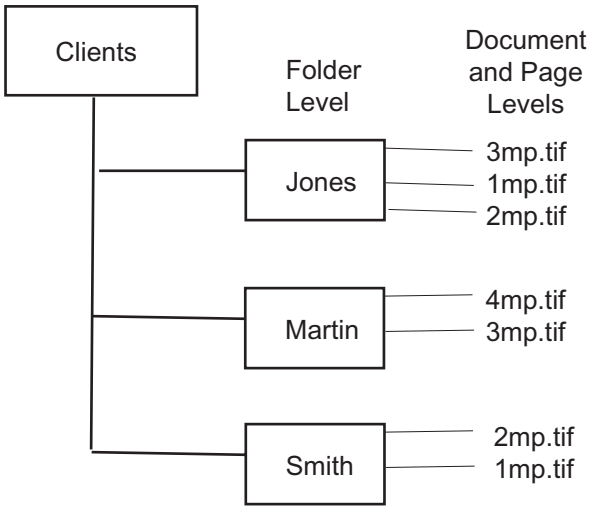


## Example 10

### Job Type Setup

| | |
|---|---|
| Grouping: | Folder-level |
| File Type: | Multi-page TIFF (document-level grouping) |
| Media Capacity: | High |
| Starting Image Address: | FIX.001.000.000 |
| Input Method: | Batch or List |

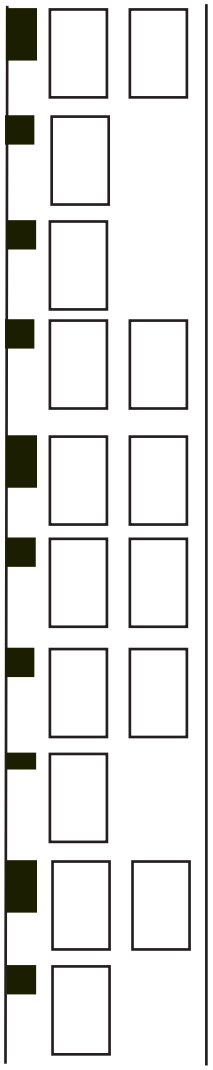
### Batch Directory



**List File**

c:\clients\Jones\3mp.tif
-c:\clients\Jones\1mp.tif
-c:\clients\Jones\2mp.tif
c:\clients\Martin\4mp.tif
-c:\clients\Martin\3mp.tif
c:\clients\Smith\2mp.tif
-c:\clients\Smith\1mp.tif.

| Image Address Level | Channel | Image File | Page within Image File | Image Address |
|---|---|---|---|---|
| Folder | A | c:\clients\Jones\3mp.tif | 1 | FIX.001.000.000 |
| Folder | B | c:\clients\Jones\3mp.tif | 2 | FIX.001.000.000 |
| Doc | A | c:\clients\Jones\3mp.tif | 3 | FIX.001.001.000 |
| Doc | A | c:\clients\Jones\1mp.tif | 1 | FIX.001.002.000 |
| Doc | A | c:\clients\Jones\2mp.tif | 1 | FIX.001.003.000 |
| Doc | B | c:\clients\Jones\2mp.tif | 2 | FIX.001.003.000 |
| Folder | A | c:\clients\Martin\4mp.tif | 1 | FIX.002.000.000 |
| Folder | B | c:\clients\Martin\4mp.tif | 2 | FIX.002.000.000 |
| Doc | A | c:\clients\Martin\4mp.tif | 3 | FIX.002.001.000 |
| Doc | B | c:\clients\Martin\4mp.tif | 4 | FIX.002.001.000 |
| Doc | A | c:\clients\Martin\3mp.tif | 1 | FIX.002.002.000 |
| Doc | B | c:\clients\Martin\3mp.tif | 2 | FIX.002.002.000 |
| Page | A | c:\clients\Martin\3mp.tif | 3 | FIX.002.002.001 |
| Folder | A | c:\clients\Smith\2mp.tif | 1 | FIX.003.000.000 |
| Folder | B | c:\clients\Smith\2mp.tif | 2 | FIX.003.000.000 |
| Doc | A | c:\clients\Smith\1mp.tif | 1 | FIX.003.001.000 |

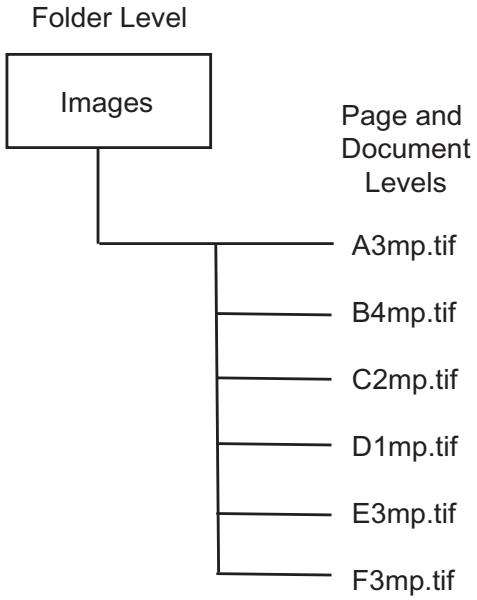


## Example 11

### Job Type Setup

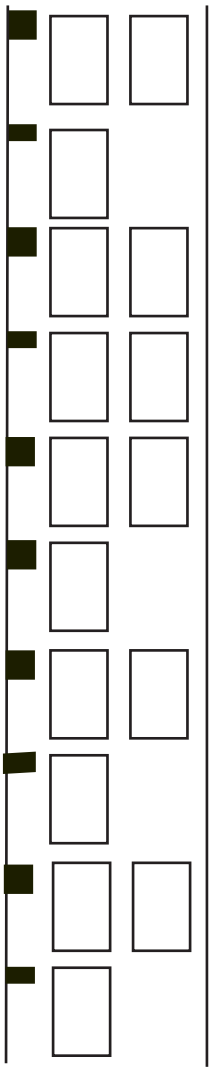
| | |
|---|---|
| Grouping: | Document-level Offset Addressing |
| File Type: | Multi-page TIFF (document-level grouping) |
| Media Capacity: | High |
| Starting Image Address: | FIX.001.000 |
| Input Method: | Batch |

### Batch Directory



**List File**
c:\images\A3mp.tif
c:\images\B4mp.tif
c:\images\C2mp.tif
c:\images\D1mp.tif
c:\images\E3mp.tif
c:\images\F3mp.tif

| Image Address Level | Channel | Image File | Page within Image File | Image Address |
|---|---|---|---|---|
| Doc | A | c:\images\A3mp.tif | 1 | FIX.001 |
| Doc | B | c:\images\A3mp.tif | 2 | FIX.001 |
| Page | A | c:\images\A3mp.tif | 3 | FIX.001 |
| Doc | A | c:\images\B4mp.tif | 1 | FIX.002 |
| Doc | B | c:\images\B4mp.tif | 2 | FIX.002 |
| Page | A | c:\images\B4mp.tif | 3 | FIX.002 |
| Page | B | c:\images\B4mp.tif | 4 | FIX.002 |
| Doc | A | c:\images\C2mp.tif | 1 | FIX.003 |
| Doc | B | c:\images\C2mp.tif | 2 | FIX.003 |
| Doc | A | c:\images\D1mp.tif | 1 | FIX.004 |
| Doc | A | c:\images\E3mp.tif | 1 | FIX.005 |
| Doc | B | c:\images\E3mp.tif | 2 | FIX.005 |
| Page | A | c:\images\E3mp.tif | 3 | FIX.005 |
| Doc | A | c:\images\F3mp.tif | 1 | FIX.006 |
| Doc | B | c:\images\F3mp.tif | 2 | FIX.006 |
| Page | A | c:\images\F3mp.tif | 3 | FIX.006 |



## Poll mode

In Poll mode, the application software searches for a Poll file, which is created by some other means external to the application software and placed in a polling directory that is specified during job type setup. The Poll file must be an ASCII text file, e.g., a Notepad file.

Poll files can be setup to:

- **Check Contents for Path** — indicates that the very first line of the Poll file contains a directory path. If selected, the i9600 Application Software opens each Poll file, reads the first line, and uses the character string as a directory path. This path is a complete path to either a List file or a Batch directory. If there are no contents in the Poll file, the Poll file is processed as per the Filename as Path-Ignore Contents option.
- **Filename as Path-Ignore Contents** — indicates that the name of the Poll file (minus its extension) is used as a Batch directory. If selected (or inferred as described in Check Contents for Path), the i9600 Application Software looks at the name of the Poll file and then CD to that directory and uses it as a Batch directory.
- **Contents is Listfile** — indicates the Poll file is a List file.

When the Writer is integrated with a scanner, Poll mode facilitates simultaneous scanning and writing of images, without the need of an intermediate, manual batching step. If the Poll file is valid, the Poll file extension is changed to .done immediately. If the Poll file is invalid, its extension will be changed to .err and polling resumes.

When using Poll mode, you must select a Poll directory. The application software will poll the selected directory, locate and open any files and read the first line, which must contain a valid full path name to either an input List file, input Batch directory or a TIF file.

- If the first line of the file is a valid List file path name, that List file is processed.
- If the first line of the file is a batch directory path name, that batch is processed.
- If the first line of the file is a valid path to a TIF file, the Poll file is processed as a List file. The TIF file must have a .tif extension.

The List file or Batch directory will be processed with the selected job type and must be compatible with those job type settings.

# Appendix B Using the Input Processor Software

## Overview

The *Kodak* i9600 Application Software program group contains an icon for the Input Processor. Using the Input Processor to check your images first will reduce the possibility of errors when the files are being written to *Kodak* Reference Archive Media. The Input Processor performs the following functions:

- Checks TIFF header tags for compatibility with the Writer.
- Runs a decompression check on TIFF files to ensure there will be no decompression errors during processing.
- Converts multi-strip TIFF images to TIFF Group 4 compression type allowing them to be processed by the Writer.
- Calculates the media usage.
- Optionally rotates images.
- Optionally creates a List file
- Optionally changes text files to TIFF files.

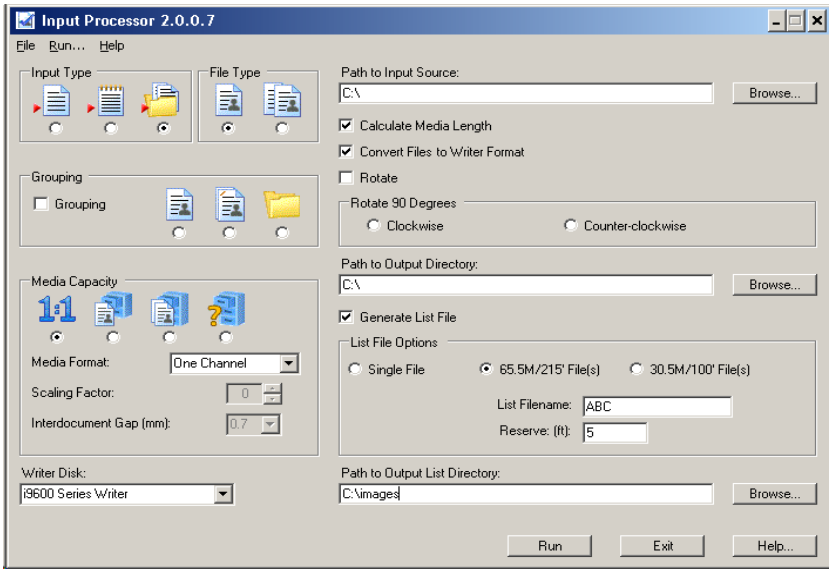
The Input Processor **does not** convert files from other formats or rescale images. These functions are available through 3rd Party vendors. Refer to the Value Pack Software CD for more information.

## The Input Processor window

Detailed explanations for the fields on the Input Processor window (Input Type, Grouping, Media Capacity, etc.) can be found in Chapter 4 in the section entitled, “Job Types dialog box”.

To access the Input Processor window:

- Double-click on the Input Processor icon on the desktop or select **Programs>Kodak>Kodak i9600 Input Processor**. The Input Processor window will be displayed:

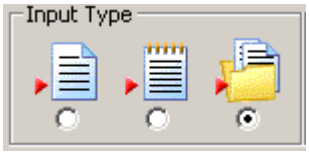


The following provides information about the options on the Input Processor window. See the next section for procedures on how to use this window.

The Input Processor window contains the following:

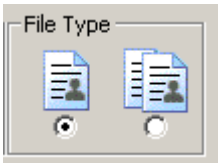
**Input Type** (required) — Individual file, List file, or Batch directory.

Poll mode is not applicable to the Input Processor. If your application uses Poll mode, select whichever List file, Batch directory or individual file corresponds to the item indicated by the Poll file in Poll mode.



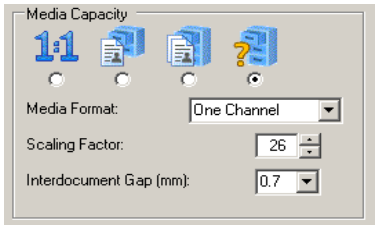

**Grouping** (required) — enable or disable grouping. If enabled, page-level, document-level, folder-level are available selections.


**File Type** (required) — Single- or Multi-page TIFF.




**Media Capacity** (required) — select one of the following:

- **1:1 (no scaling):** image size on the media is dependent on the digital resolution (dpi) of the image file.
- **Normal**: One Channel using 24X scaling factor.
- **High**: Two Channel using 40X scaling factor.
- **Custom**: allows you to select either one channel or two channel and a scaling factor from 0 to 99X. 0 is the default.
  - **Media Format** — select One Channel, Two Channel or Full Frame.
  - **Scaling Factor** — select a scaling factor from 0 to 99X. See the PDF file, *Understanding Scalin*g on the CD for more information.




**Interdocument gap** — enter a value from 0.6 mm to 5.0 mm to set the distance between images on media. The default is 0.7 mm. This value will always be measured in millimeters regardless of how the units of measure are set for your system.

**Path to Input Source** — Full path to the Individual file, List file or Batch directory.

**Calculate Media Length** — check this option if you want to know the amount of media your job will use. When this option is unchecked, it reduces processing time.

**Convert Files to Writer Format (optional)** — if this option is selected, a copy of the original image is created, converted and saved in the specified output directory. The originals remain in their original location. If the file is a text file, it will be converted to TIFF format and a .tif extension will be appended to the file name.

An output directory must be specified or an error will be displayed.

- **Rotate option** — check this option to rotate the files either 90° clockwise or 90° counterclockwise. Every image in the batch will be rotated.
- **Path to output directory** — directory where the converted TIFF images will be stored. If you do not make an entry in this field, a message will be displayed indicating there is an invalid path to the output directory. You must specify a path if your original images are located on read-only media.
- **Generate List File** — check this option to generate a List file if you want to run the final job in List mode. Disable this option if your job type is set up for Batch.

**List File Options**

- **Single file** — creates one continuous List file.
- **66 M/215' File(s)** — when selected, the Input Processor will limited the number of images contained in the List file to a maximum length of 66 meters/215 feet, less the amount of film saved for headers, trailers, etc., without breaking document boundaries. If any images remain, a second List file will be created and put in the same directory as the first List file.
- **30.5M/100' File(s)** — when selected, the Input Processor will limited the number of images contained in the List file to a maximum length of 30.5 meters/100 feet, less the amount of film saved for headers, trailers, etc., without breaking document boundaries. If any images remain, a second List file will be created and put in the same directory as the first List file.
- **List Filename** — enter the name for the List file. The first List file will be <List Filename>Roll01, <List Filename>Roll02, etc.
- **Reserve (ft).** — determine how many feet/meters of film you want saved for writing headers, trailers, leaders, etc.

**Writer Disk** drop-down box — checks all TIFF images to ensure that the file size of any single image is not too large for the Writer to handle.

## Buttons on the Input Processor window

**Browse buttons:** used to display the File Selection window for the List file input, or Directory Selection window for Batch input. After you select a file name or directory name, the window disappears and the full path is displayed in the Input Source Path text box.

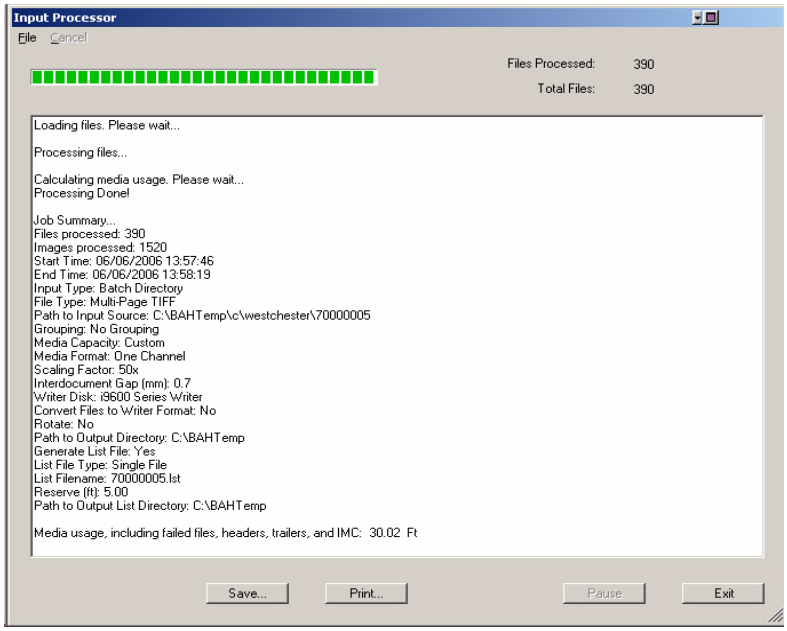
**Run** — when selected, the name of the file being checked will be displayed and the Progress meter will start. When the Input Processor has completed a job, either an error report or a ***No errors encountered*** message will be displayed in the Log box.

**Exit** — allows you to exit the Input Processor.

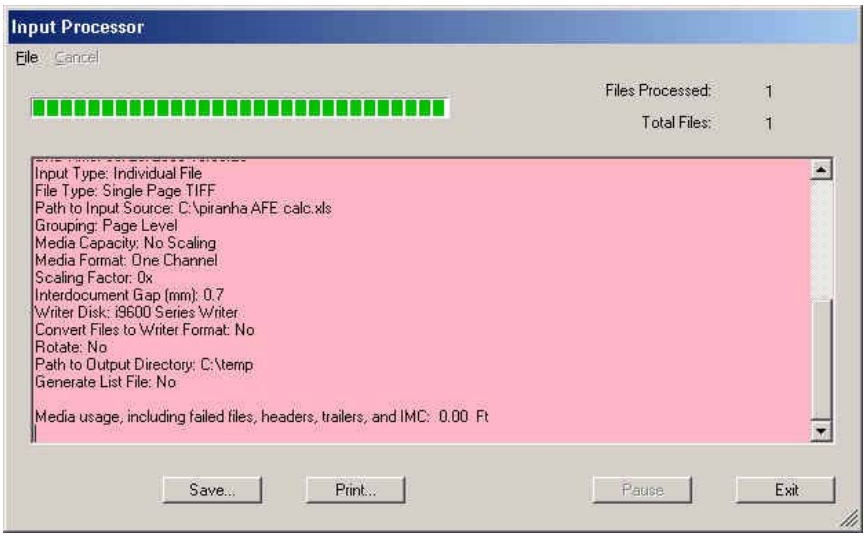
**Help** — displays on-line help for the Input Processor window.

**Progress** — when **Run** is selected, the Progress meter indicates the percentage of files in the List or Batch directory that the Input Processor has completed preprocessing. The Progress meter will scroll 3 times while it is checking images. Any errors that are encountered are displayed in the box under the Progress meter. You can save or print this listing.

If no errors occur, the media calculation will be displayed:



If an error does occur, the Input Processor screen will be displayed with a pink background indicating that an error was encountered during the verification of images**.**




**Save** — displays the Save As dialog box which allows you to save the log.

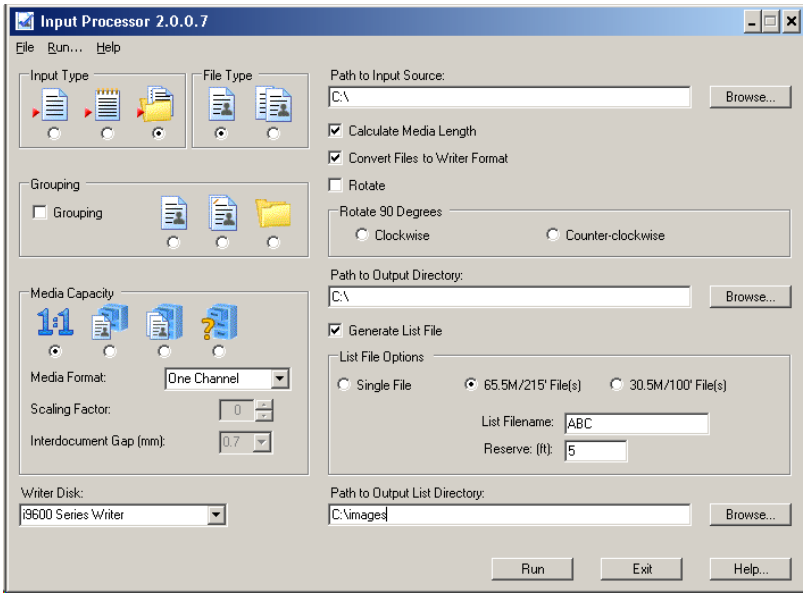
**Print** — displays the Print dialog box which allows you to print the log.

**Exit** — exits the Input Processor software.

## Using the Input Processor

When you make selections on the Input Processor window, set the selections the same way your job in the *Kodak* i9600 Application Software selections are set. If you do not set your selections the same way, the media usage calculation will be incorrect.

1. Double-click on the Input Processor icon, or select **Start> Programs>Kodak>Kodak i9600 Input Processor**.




2. Select the **Input Type** you will be using when running your job.
   - If you select **Individual file** or **List file,** the File Type will be disabled.
   - If you select **Batch**, select the **File type**: Single- or Multi-page TIFFs.
3. Enable or disable **Grouping**: If Grouping is enabled, Page-Level, Document-Level or Folder-Level options are available. The fields will be populated with information for the selected job type, or if **Grouping** is disabled, the fields will be populated with default job type settings.
4. Select the **Media Capacity**: 1:1, Normal (One channel, 24X), High (Two Channel, 40X), or Custom. If you select **Custom**, select either One Channel or Two Channel from the Media Format drop-down list and select the desired Scaling Factor (0 to 99X).
5. Specify the full path to the List file, Batch directory or Individual file, or click **Browse** to display the File Selection window for the List file input, or Directory Selection window for Batch input.
6. Select the **Convert files to Writer format** option, if you want to convert your images to a Writer format.

NOTE: Multi-page text files will be converted to a multi-page TIFF file and split into pages of 79 columns and 66 lines. If **Rotate** is selected, the batch of images will be rotated.

7. Select either the **Rotate 90 degrees Clockwise** option or **Rotate 90 degrees Counterclockwise** option if you want to rotate all images.
8. Select an output path where you would like the converted images to reside and click **OK**.

   When a file is converted, an output directory must be entered (the filename refers to the name, extension, path and drive letter). If output directory is not specified, an error will be displayed.

   *IMPORTANT:If your target path is the same as your input path, your images will be overwritten.*

   When you select **Convert files to Writer format** and provide an output directory, a copy of every image in the List file or Batch directory will be placed in this directory whether the image needs to be converted or not. In addition, a new List file will be placed in the output directory (unless you are not generating a List file).

   This new directory structure separates files whose immediate filename and extension match. An example of renaming follows:

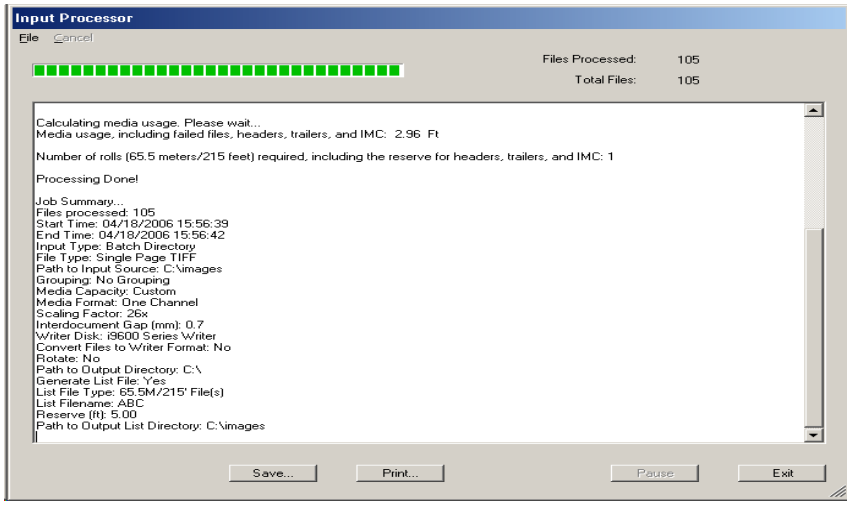
   Target directory: C:\Images

   Source files: C:image1.tif
   C:image2.tif
   D:image1.tif
   D:image1.doc

   Target files after conversion:
   C:\Images\C\image1.tif
   C:\Images\C\image2.tif
   C:\Images\D\image1.tif
   C:\Images\D\image1.doc.tif

   The conversion process also optionally creates a List file and lists all the converted files in addition to creating and populating a new directory structure. The list file is placed in the target directory, at the top level of the newly created structure.
9. If you want to create a List file, click **Generate List File** and select one of the List File options: **Single file, 66M/215' File(s)** or **30.5M/100' File(s).**

10. Click **Run**. The checking process will begin and a Status window will be displayed. The Progress meter scrolls 3 times while it is checking images. When completed, the log information will be displayed in the Status window.




NOTES:

- If you need to stop the Input Processor before completion, click **Stop**.
- If an error occurs, the Input Processor screen will be displayed with a **pink** background indicating that an error was encountered during the verification of images.

If there are no errors and you checked the **Calculate Media Length** option on the main Input Processor window, the media usage will be calculated for the batch of images. This calculation will include the user defined interdocument gap. When running this batch using the i9600 Application Software, extra media will be needed for the following:

–leader length
–header and trailer pages
–IMC
–Media advance(s)
–system generated header and trailer information.

NOTE: The effects of Exception Scaling are not included in the film length calculation.

11. Click **Save** to save the log to a text file in the specified location or **Print** to print a copy of the log.
12. Click **Exit** to return to the main Input Processor window.

# Appendix C Glossary

**Advance** — Instructs the Writer to advance the media the distance specified by the Advance Length parameter entered by the user.

**AWIS** — Archive Writer Interface Software, the previous version of interface software that supported the *Kodak* i9600 Series Writers and the *Kodak Imagelink* Document Archive Writer 4800.

**Beginning of Roll Processing** — When a new roll of media is required, the application software initiates the beginning of roll processing, which includes creating a media leader and optionally writing Image Management Code (IMC), system-generated audit pages, header pages, and quality target files.

**Digital Scaling** — internal process used by the Writer to achieve the desired scaling factor.

**Document level** (*formerly referred to as two-level)* — Images are grouped, using a document-level hierarchy. The first frame within each group is written with a medium image mark. Subsequent frames within the group are written with a small image mark. Retrievals can be made of an entire group or individual images.

**End-of-Roll Processing** — When the user indicates the roll of media is complete, the application software initiates end-of-roll processing, which optionally includes writing trailer pages.

**Error Handling** — In a situation where an image file cannot be written to media, the application pauses and provides the user the name of the invalid image file. The user can manually replace the bad image file with a good one. When the user restarts the writing process, it begins with the replacement image file.

**Error Log** — This file contains error information logged by the application software.

**Folder-level** (*formerly referred to as three-level)* — Images are grouped, using a folder-level hierarchy. The first frame within each group is written with a large image mark. Subsequent frames within the group are written with a medium or small image mark depending on the grouping specified via the input method and input type. Retrievals can be made of an entire group, second-level sub-group or individual images.

**Grouping** *(formerly referred to as indexing*) — indicates page-level, document-level and folder-level.

**Header Pages** — Optional customer-supplied image files that can be written to the beginning of the media. These images may or may not be grouped.

**IMC** — Image Management Code. Code written at the beginning of a roll of media, which allows automatic setup of the retrieval device.

**Job** — A batch of work defined by the image set to be written to media.

**Job Types** *(formerly referred to as film template)* — A set of parameters that relates to how a collection of images will be written to media.

***Kodak* i9600 Application Software** — The software application that controls the Writer.This software provides a high-level interface to the *Kodak Digital Science* Document Archive Writer 4800 and the *Kodak* i9600 Series Writers. Also referred to as *application software.*

**Page-level** *(formerly referred to as single-level)* — Images are not grouped, every frame is written with a small image mark.

**Roll ID Management** — When a new roll of media is required by the Writer, the application software prompts for a new roll identifier and verifies that the name does not currently exist in the i9600 Application Software database.

**Run to End** — Runs the media to the end of the physical roll.

**Scaling Factor** — digital equivalent of traditional reduction ratio.

**Status Reporting** — The application software displays the following information:

- Remaining media in both cartridges
- Last image address written
- Percentage of the input file collection written
- Number of images written

**TIFF** — Tagged Image File Format. A standard format for storing image data in a file. Image data is stored as CCITT G3, G4, JBIG or uncompressed. Single- and multi-page TIFF files are supported by the Writer. Multi-strip and tiled TIFF files are not supported, but the Input Processor can be used to convert multi-strip images to single-strip images.

**Trailer Pages** — Optional customer-supplied image files that can be written to the end of the media. These images may or may not be indexed.

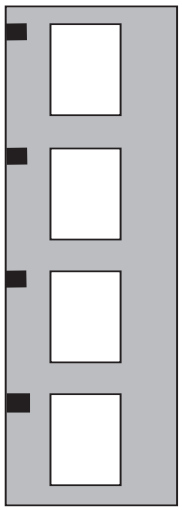
**Transfer File** — An optional file created during the writing of images to media. The information in this file can be used by an external application to update an external database. At a minimum, it contains the original image file name, roll number and the image address assigned to the image. The name of the Transfer file is the same as the roll name, with an extension of .xfr.

**Writer** — The name of the hardware that writes image files to media. The official name is *Kodak* i9600 Series Writers. Two models are available: *Kodak* i9610 Writer: writes at 4800 scan lines per second and *Kodak* i9620 Writer: writes at 9600 scan lines per second.

# Appendix D Grouping, Image Addresses and Image Marks

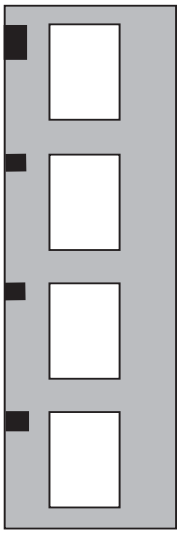
Images can be grouped in order to facilitate ease of retrieval. If grouping is specified, each image is assigned an image address that can be stored in an index database. An image mark is also written in each frame on the left edge of the media, for use by the retrieval device. An image mark can be small, medium or large. The grouping determines image mark sizes used, and whether images are written ungrouped, or in groups using a document or folder hierarchy. The following grouping is supported by the Writer:

| Index Format | Sample Image Address Sequence |
|---|---|
| Grouping, disabled | Images are not assigned an image address, and image marks are not written in the frames. Images cannot be retrieved with automatic methods. |
| Page-level | 1, 2, 3, 4 |
| Document-level | 1.0, 1.1, 1.2, 2.0, 2.1 |
| Folder-level | 1.0.0, 1.1.0, 1.1.1, 1.1.2, 1.2.0, 1.2.1, 2.0.0. |



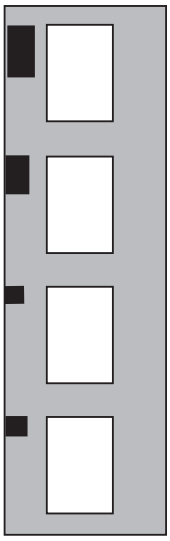
**Page-level** — images are not grouped. Every frame is written with a small image mark.

**Page-level**
**Media Capacity is either Normal or Custom**
**(One Channel)**



**Document-level** — images are grouped using a document-level hierarchy. The first frame within each group is written with a medium image mark. Subsequent frames within the group are written with a small image mark. Retrievals can be made of an entire group or individual images.

**Document-level**
**Media Capacity is either Normal or Custom (One Channel)**



**Folder-level** — images are grouped using a folder-level hierarchy. The first frame within each group is written with a large image mark. Subsequent frames within the group are written with a medium or small image mark depending on the grouping specified via the input method and file type. Retrievals can be made of an entire group, second-level subgroup, or individual images.

**Folder-level**
**Media Capacity is either Normal or Custom (One Channel)**

Images should be grouped any time it is necessary to indicate a relationship between images for retrieval purposes. For example, the document-level grouping could be used to maintain the page relationship of individual multi-page files. The folder-level grouping could be used to maintain both the page and file relationships of multi-page files within a folder.

NOTE: Grouping can be done with One Channel or Two Channel media format, but the assigned image addresses will be different. When the media format is One Channel, each image is assigned a unique image address. When the media format is Two Channel, images paired in a frame are both assigned the same image address.

If you want to pack the media with as many images as possible, the job type should specify High media capacity, and page-level grouping, and the images should be oriented such that the shortest side of each image will be written parallel to the edge of the media.

Image addresses contain 1, 2 or 3 fields, depending on the grouping. The fields are delimited with a period. The image address increments as images are written to media, based on the grouping level. The image address may begin with a fixed field containing alphanumeric characters. Only the fixed field may contain alphas. The fixed field will be the same for every image on a roll. Image addresses may contain up to 12 characters. The maximum field size for any field of the image address, including fixed field, is 9 characters (8 in the fixed field if alphas are being used).

## Grouping

The Writer supports three grouping levels (page-, document- and folder-level). The number of levels allowed is dependent on the grouping that is selected. An image or an entire job can also be designated as “Grouping, disabled”, which is written to media with no assigned image address, and the frame does not receive an image mark.

Use of **Grouping, disabled** should be limited as the images (or entire jobs) are not retrievable by automated methods. Appropriate use includes images used for media test and quality control purposes that are not part of the retrieval index database.

# Appendix E Image File Specifications

This appendix details the specifications of the digital image files to be written to media. The Writer receives images to write to media from the application software through an Ethernet network interface. The application software only accepts image files in TIFF image format or ASCII text files.

## TIFF file format

The TIFF image file format header contains data that identifies it as a TIFF file. The remaining data in the file are sets of TAG data followed by image data. The TAG data contains information, such as image length and width. Each TAG has a unique number followed by a value field. The TAG numbers used below have been accepted and published in the TIFF Standards document (*TIFF 6.0 Specification,* Aldus Corporation, June 3, 1992; search for TIFF6.PDF at http:// www.adobe.com). If there is more than one set of TAG and data sections, it is a multi-page TIFF file.

## TIFF input file specifications

Image files accepted by the Writer must conform to the following specifications:

- Baseline conformance with the TIFF 6.0 Specification, including extensions for Group III, IV and JBIG compression types. Group IV compression is recommended.
- Bi-tonal.
- Single- or multi-page.
- Single-strip only. Rows per strip must equal image length. (TAG #278 must equal TAG# 257)

The TIFF tag fields that **must** be designated are:

- **X Resolution** — numeric; measured in pixels. TAG #282
- **Y Resolution** — numeric; measured in lines. TAG #283
- **Compression type** — note that options must also be specified when using Group III compression. TAG #259
- **Image width** — numeric; measured in pixels. TAG #256
  Application software validation occurs on the scaled image width, which is derived from this value and the desired scaling specified in job type setup. Valid scaled image width values are:

  1 to 3888 pixels (One Channel)
  1 to 1920 pixels (Two Channel)
  1 to 4864 pixels (Full Frame)

NOTE: The Input Processor may be used to verify TIFF tags, compression types, TIFF types and image dimensions.

**Image length** — numeric; measured in lines. The application software validation occurs on the scaled image length, which is derived from this value and the desired scaling specified in job type setup. Valid scaled image length values:

- 4800 Writer — 1 to 6900 lines
- i9600 Series Writers — 1 to 16,000 lines

The following TIFF tag fields **should** be designated. If not, default values will be used. This may or may not result in the image being correctly represented.

| TAG # | Field | Default |
|---|---|---|
| 258 | Bits per sample | 1 |
| 296 | Resolution unit | Inches |
| 262 | Photometric interpretation | 1=black |
| 278 | Rows per strip | =image length |

## TIFF compression types supported

The following compression types are supported:

- TIFF type 1 — no compression
- TIFF type 2 — CCITT Group III, 1-dimensional
- TIFF type 3 — CCITT T4 bi-level encoding
- TIFF type 4 — CCITT T6 bi-level encoding (recommended)
- JBIG — JBIG compression

### Using JBIG compressed files

A JBIG compressed image file consists of a 20-byte header followed by the image data*. For use in the Writer the JBIG header and image data should not be modified. However, in order for the system to read and decompress these files, they must be enclosed in a TIFF file format wrapper.

The TIFF tags/fields that **must** be designated in the TIFF wrapper are:

- **X resolution** — must be provided; it cannot be derived from the JBIG file header. Numeric; measured in pixels. TAG #282
- **Y resolution** — must be provided; it cannot be derived from the JBIG file header. Numeric; measured in lines. TAG #283
- **Compression type** — must be: 34461 (0x8765). TAG #259
- **Image width** — set to the 'Xd' field found in the JBIG header. TAG #257
- **Image length** — set to the 'Yd' field found in the JBIG header. AG #257

* ITU-T Recommendation T.82, "Information Technology - Coded Representation of Picture and Audio Information - Progressive Bi-level Image Compression", 03/93.

- **Rows per strip** — must be the same as the image length for a compliant single-strip TIFF with compression. (TAG #278 must equal TAG #257)
- **Strip offsets** — must point to the JBIG 20-byte header. TAG #273
- **Strip byte counts** — must be the number of bytes in the JBIG file. TAG #279
- **JBIG header and image data —** the JBIG header must be incorporated as the first 20 bytes of the JBIG image data.

The bits-per-sample, resolution unit and photometric interpretation (if not present) should be designated, but if not, will be set to the default values shown earlier.

## Restrictions for JBIG compression

The JBIG compressed file must be a single-strip only. Multi-strip images are not supported.

- The following bits must be 0 in the JBIG header:
  - Order field: HITOLO, SEQ, ILEAVE, SMID
  - Options field: TPDON, DPON, DPPRIV, DPLAST
- The P field in the JBIG header must be 1 (single-plane only).
- The TIFF tag field of JBIGOptions is not supported.

## TIFF maximum file sizes

The Writer has an internal CPU with its own operating system. This CPU has no mass storage device (such as a hard drive) so its memory is organized into system and data storage areas. The data storage area is configured as if it were an external storage device (a DOS RAM disk). This is where image data is buffered before being written to media.

When Custom media capacity or Two Channel is used, the image storage space is divided between the two images.

- ***For the 4800 Archive Writer*** the maximum file size line limit is 6900.
- ***For the i9600 Writer*** the maximum file size line limit is 16,000.
- ***For the 4800 Archive Writer (Simplex):*** 1 MB file size, 8 MB with Expanded Memory.
- ***For the 4800 Archive Writer (Duplex):*** 500 KB file size, 4 MB with Expanded Memory.
- ***For the i9600 Writer (Simplex)***: 8 MB file size
- ***For the i9600 Writer (Duplex)***: 4 MB file size

## Blank TIFF image (blank.tif)

Depending upon the desired grouping of images on media, it may be necessary to insert a space between images or groups of images on the media. A 1 KB blank image (blank.tif) is provided to use as a spacer. This blank.tif can be found in the install directory for the i9600 Application Software (usually c:\Program Files\KI96AS). This file is designed to process quickly and efficiently.

## Text input file specifications

ASCII text files must conform to a maximum of 66 lines and 80 characters per line. Files which exceed these limits will be processed by the system, but will be truncated and the truncated data will not be written to media. Text files are often used as header and trailer pages. The application software converts any text files to TIFF format prior to writing to media.

Text files exceeding 66 lines or 80 characters wide may be split and converted to TIFF files using the Input Processor. The Input Processor will wrap lines if the **Convert to Writer Format** option is selected. See Appendix B, *Using the Input Processor* for more information.

## Image file names

All file names must conform to the Windows NT file naming convention. Long file names, up to 255 characters (including the directory path), are allowed.

TIFF files do not need the ".tif" extension. The data in the TIFF file header verifies that it is a TIFF formatted file.

The required extension for text files is ".txt" (not case sensitive).

***Examples***

\image123.tif
c:\pollcache\Electronic Microimager\batch001\00000001.tif
c:\app1\image File 234.001
f:\titles\monroe\image1.tif
c:\BeginRoll\application1\start.txt

Eastman Kodak Company
343 State Street
Rochester, NY 14650 USA

PN 9E4542

Kodak

www.kodak.com/go/docimaging