



cerenade

# Visual eMerge User Manual

# Contents

|  |           |
|--|-----------|
| <b>Introduction .....</b>                              | <b>1</b>  |
| Overview .....   | 1         |
| MMAFax.....  | 1         |
| SAPMerge Document Processing Schematic .....           | 2         |
| General Process.....                                   | 2         |
| <b>Visual eMerge Components .....</b>                  | <b>3</b>  |
| JCL File .....   | 3         |
| Configuration File .....                               | 4         |
| Log File .....   | 5         |
| Job Parameter File .....                               | 5         |
| Archive File .....                                     | 5         |
| Visual Forms .....                                     | 5         |
| Print Module .....                                     | 6         |
| Fax Module .....                                       | 6         |
| Envelope Stuffer .....                                 | 7         |
| Archiver .....   | 7         |
| <b>Parameter Settings in JCL File .....</b>            | <b>9</b>  |
| Parameter Settings in Job Parameters File (.JPR) ..... | 10        |
| <b>Visual eMerge User Interface .....</b>              | <b>12</b> |
| Job Queue Format .....                                 | 13        |
| Event Log Format .....                                 | 13        |
| Envelope-Stuffer Setup .....                           | 13        |
| Job Parameters Setup .....                             | 14        |
| Modifying Job Parameters .....                         | 14        |
| eMerge Fax Module .....                                | 14        |

# Introduction

Visual eMerge is a powerful program that allows organizations to eform-enable their paper-based business process. Each eform contains locations and, optionally, name-independent fields. These fields correspond to the data in one of two ways: by field tabbing order or by field naming order. When an application outputs data, Visual eMerge recognizes where to store this data by the tabbing order of the field in the form. While users can rearrange the location of fields on the eform, the data format remains the same.

With the Visual eMerge auto-attachment feature, the structure of the form does not need to change to accommodate an overflow of information. For example, the number of lines on an invoice can increase beyond the scope of a one-page invoice; Visual eMerge can generate multiple pages of the same invoice populated with the overflow data.

Visual eMerge can print on any printer supported by Microsoft Windows at a very high throughput rate and without the need for custom print drivers.

## Overview

The Visual eMerge User Manual gives an overview of the eMerge document print facility as it pertains to an SAP implementation. Visual eMerge takes data from an ASCII text file in comma delimited format (the JCL file) and merges it with an electronic form (such as those created with Visual eForms Designer), creating a document ready for printing or faxing based on parameter information supplied by eMerge job information or specific commands embedded in the original ASCII text data stream.

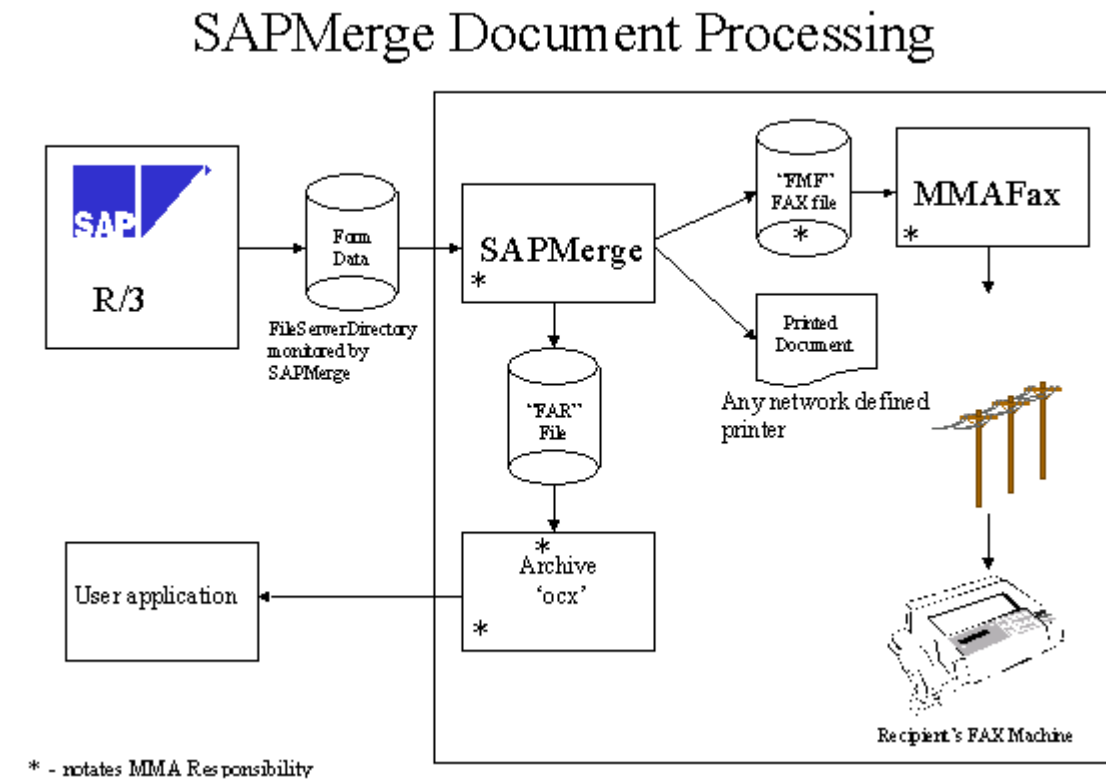
In addition, the 'merged' form and data can be saved as an archived file, from which a Cerenade supplied 'OCX' can be used to interact with a given form object. This can serve as a foundation for further document indexing/archiving or for use with custom applications.

Visual eMerge monitors a directory (JCLDIR) for JCL input data files. Once processed, the original file is moved to another directory (TEMPDIR) for user-specific handling. Control parameters for processing are stored in an eMerge.ini file.

## MMAFax

MMAFax provides standard fax software functionality, and is automatically started when eMerge processes a document to fax. Phone number prefixes and suffixes (for access codes) are supported, along with redial attempts and other standard dialing considerations. A log of all fax activity is created and all MMAFax controls are stored in a MMAFAX.INI file.

## SAPMerge Document Processing Schematic



### General Process

1. The user initiates an output request from within SAP (e.g., Invoice).
2. A corresponding ABAP program creates a JCL file, and copies it to the JCL repository on an NT machine.

---

**Note:** If the SAP is running in an environment other than Windows NT, then you can FTP the JCL file to the JCL repository on an NT machine. Alternatively, you may remote-mount the NT file system on the machine running SAP.

---

3. Visual eMerge, running on the NT machine, polls the JCL repository, fetches the electronic form referenced in the JCL files from the forms repository, populates the form with the data provided in the JCL file, sets the output parameters, sends the combined form and data to the designated output medium, and completes the process by logging the activity in the eMerge Log File.

# Visual eMerge Components

Visual eMerge consists of the following:

- JCL File
- Configuration File
- Log File
- Job Parameter File
- Archive File
- Electronic Forms
- Print Module
- FAX Module
- Envelope Stuffer
- Archiver

## JCL File

The JCL file is an ASCII file generated by an ABAP program that is executed on the SAP. The JCL file provides eMerge with the following information:

- the electronic form to use (e.g., Invoice, Bill of Lading, Statement, etc.)
- the data with which to populate the electronic form
- the action to take once the electronic form is populated with data (e.g., Print, Fax, etc.)

Visual eMerge includes 14 complex ABAP programs. Each ABAP program performs the following set of functions:

- extracts data from SAP tables
- adds formatting parameters to the data
- creates the JCL file

After the ABAP programs provided with eMerge are transported and customized, they can be used to automate the output processing of SAP for jobs such as the following:

- Invoice
- C of A

- Picking List
- Packing List
- Order Confirmation
- BOL
- Advanced Shipping
- Order Shipping
- Freight Forwarder
- Carrier Request for Service
- Priced Delivery Document
- Pro Forma
- Statement
- Debugging the Output Programs

## Configuration File

EMERGE.INI - this file resides in the WINNT directory. EMERGE.INI defines all directory structures required by eMerge. Following is a list of what you may find in EMERGE.INI and their definitions:

### [CONFIG]

Section Header for eMerge configuration parameters.

**FORMSDIR=C:\Program Files\eMerge\FORMSDIR**

Designates the directory where all the Electronic Forms reside.

**JCLDIR=C:\Program Files\eMerge\JCLFILES**

Designates the directory where JCL files are deposited.

**TEMPDIR=C:\Program Files\eMerge\TEMPDIR**

Designates the directory where JCL files are moved to after processing.

**LOGDIR=C:\Program Files\eMerge\LOGDIR**

Designates the directory where the eMerge log files are kept.

**JOBSCANFREQ=10000**

Frequency (in milliseconds) to scan the JCLDIR.

**MAXQJOBS=100**

Number of jobs queued for processing each time JCLDIR is scanned.

**JOBPARAMDIR=C:\Program Files\eMerge\JOBIDDIR**

Output processing parameters can be external to JCL files. If so, they reside in this directory.

**ARCHIVEDIR=C:\Program Files\eMerge\ARCHIVEDIR**

If a job needs to be archived as well, then the archived file resides in this directory.

**[ENVELOPE STUFF]**

Section Header for Envelope Stuffer parameters

## Log File

Visual eMerge keeps track of all of its activities in a log file (.LOG) in the log directory as defined by the LOGDIR in the EMERGE.INI file.

## Job Parameter File

CL files, as generated by the ABAP programs, can include data as well as output parameters. It is also possible for ABAP to generate JCL files which include only the data portion. These JCL files can then include the name of Parameter Files (\*.jpr), which include all the output parameters used by eMerge.

All Parameter Files **MUST** reside in JOBPARAMDIR as defined by EMERGE.INI.

## Archive File

Output parameters set in either the JCL file or the Parameter File can be archived as well as printed or faxed. The archived file (.FAR) will include both the form and data.

Using Archive API, The archived file can be interfaced from another application for further customization. Archive API can be obtained from Cerenade and is sold separately.

The archived file can be viewed using Visual Reader, which can be distributed free of charge.

All archived files are placed in ARCHIVEDIR as defined by eMerge.INI.

## Visual Forms

Visual eMerge uses pre-designed electronic forms to merge with the data contained in JCL files. These forms are created fast, are small in size, and can be printed to any printer, creating clean and professional output results. These electronic forms can be designed in Visual eForms Designer, which is included with this product.

The name of the form can reside in either the JCL file or in the corresponding Parameter File.

All Visual eForms **MUST** be copied to FORMSDIR as specified by eMerge.INI.

## Print Module

Print output commands can be set via one of the following methods:

1. ABAP generates all printer output parameters inside the JCL file.
  - See “Parameter Settings in JCL File” on page 9
2. Printer output parameters reside external to the JCL file in the Job Parameter File. Job Parameters Files reside in the directory as specified by JOBPARAMDIR in eMerge.INI.
  - JCL file must include the name of the Job Parameter File.
  - See “Parameter Settings in JCL File” on page 9.
3. Printer output parameters are set directly via eMerge user interface. Neither the JCL file nor the Job Parameter File contain this information; and if they do, they are overwritten by the parameters set directly via the eMerge user interface.
  - See “Visual eMerge User Interface” on page 12.

## Fax Module

Fax output commands can be set via one of the following methods:

1. ABAP generates all fax output parameters inside the JCL file.
  - See “eMerge Fax Module” on page 14.
  - See “Parameter Settings in JCL File” on page 9.
2. Fax output parameters reside external to the JCL file in the Job Parameter File. Job Parameters Files reside in the directory as specified by JOBPARAMDIR in eMerge.INI.
  - JCL file must include the name of the Job Parameter File.
  - See “Parameter Settings in JCL File” on page 9.
3. Fax output parameters are set directly via the eMerge user interface. Neither the JCL file nor the Job Parameter File contain this information; and if they do, they are overwritten by the parameters set directly via the eMerge user interface.
  - See “Visual eMerge User Interface” on page 12.
  - See “eMerge Fax Module” on page 14.



## Envelope Stuffer

Visual eMerge adds proper OMR marks on the pages of a job. The Envelope Stuffer will use these OMR marks to distinguish the end of one job and start of another.

OMR mark settings can be set via one of the following methods:

1. ABAP generates all Envelope Stuffer parameters inside the JCL file.
  - See “Parameter Settings in JCL File” on page 9.
2. Envelope Stuffer parameters reside external to the JCL file in the Job Parameter File. Job Parameters Files reside in the directory as specified by JOBPARAMDIR in eMerge.INI.
  - JCL file must include the name of the Job Parameter File.
  - See “Parameter Settings in JCL File” on page 9.
3. Envelope Stuffer parameters are set directly via eMerge user interface. Neither the JCL file nor the Job Parameter File contain this information; and if they do, they are overwritten by the parameters set directly via the eMerge user interface.
  - See “Visual eMerge User Interface” on page 12.

## Archiver

Archive Parameters can be set via one of the following methods.

Archived files can be viewed, printed or faxed using Visual Reader, which is available for distribution free of charge from the Cerenade web site at [www.cerenade.com](http://www.cerenade.com)

Cerenade provides an Archive API, which can be used to interface the archived files via a third party application for further processing. Archive API is sold separately.

1. ABAP generates all Archive parameters inside the JCL file.
  - See “Parameter Settings in JCL File” on page 9.
2. Archive parameters reside external to the JCL file in the Job Parameter File. Job Parameters Files reside in the directory as specified by JOBPARAMDIR in eMerge.INI.
  - JCL file must include the name of the Job Parameter File.
  - See “Parameter Settings in JCL File” on page 9.

3. Archive parameters are set directly via eMerge user interface. Neither the JCL file nor the Job Parameter File contain this information; and if they do, they are overwritten by the parameters set directly via the eMerge user interface.

- See “Visual eMerge User Interface” on page 12.

## Parameter Settings in JCL File

ABAP programs constantly generate and deposit JCL files into a directory specified by the JCLDIR value in the eMerge.INI.

Formatting of the JCL file is as follows:

| Format | Description  |
|--------|--|
| \!     | End of a Job.<br><i>Parameters:</i> NONE   |
| \%     | Job-Parameters identifier. If set, current job parameters inherit those of the Job-Parameters-Id.<br><i>Parameters:</i> Job-Parameters-Id<br><i>example:</i> \%,"JPR001" |
| \f     | Form name identifier.<br><i>Parameters:</i> Form name without the extension<br><i>example:</i> \f,"TEST1"  |
| \p     | Printer name identifier. Embeds Printer Device.<br><i>Parameters:</i> Device-name, reserved, reserved<br><i>example:</i> \p, ",", " HP LaserJet 4/4M"                    |
| \x     | Fax Identifier.<br><i>Parameters:</i> Sender Name, Fax #, Recipient Name<br><i>example:</i> \x,"Sender","13106450599","Recipient"  |
| \m     | Mail Identifier. <b>RESERVED</b>   |
| \d     | Data Fields Identifier.<br><i>Parameters:</i> Field-values separated by commas<br><i>example:</i> \d,"F6","F7","F8","F9"   |
| \t     | Table Identifier. Embeds table data fields.<br><i>Parameters:</i> Cell-values separated by commas<br><i>example:</i> \t,"T1F1C1","T1F2C1","T1F3C1"                       |
| \#     | Page Number Field Identifier. For Custom Page Numbering.<br><i>Parameters:</i> Name of the field to hold the page number<br><i>example:</i> \#,"PAGE_1"                  |
| \o     | "Data ONLY" Identifier. No form to be printed.<br><i>Parameters:</i> NONE<br><i>example:</i> \o  |
| \i     | Enable Duplex Printing for this job ONLY.<br><i>Parameters:</i> NONE<br><i>example:</i> \i   |
| \e     | Enable Envelope-Stuffer for this job ONLY. Adds OMR marks on printed pages.<br><i>Parameters:</i> NONE<br><i>example:</i> \e   |

| Format | Description  |
|--------|--|
| \a     | Enable Archiving for this job ONLY.<br><i>Parameters:</i> NONE<br><i>example:</i> \a                                   |
| \j     | Change printer tray for this job ONLY.<br><i>Parameters:</i> LOWER or UPPER<br><i>example:</i> \j,"LOWER or \j,"UPPER" |
| \c     | Number of copies to print (collated).<br><i>Parameters:</i> Number of copies to print<br><i>example:</i> \c,"3"        |

## Parameter Settings in Job Parameters File (.JPR)

Job parameters do not necessarily need to reside in the JCL file. The ABAP programs will be much cleaner if they do not have to include job parameters in the JCL file. However, the JCL file must identify the JPR file to be used (See sample #1.)

Visual eMerge supports external parameter settings via a Job Parameter File (See sample #2), which resides in the directory specified by JOBPARAMID value in the SAPMERGE.INI.

### Sample #1: a typical JCL file generated by ABAP program

```
\%, "FY00127"
\d
"PENNZOIL.BMP", " "
"Pennzoil Products Company"
"3333 Midway Street, Shreveport, LA 71109"
```

**Line 1:** “\%” identifies the use of an external Job Parameter file (see sample #2). “FY00127” - the JPR file to be used for the output parameter setting.

**Line 2:** “\d” identifies the beginning of data for this job.

**Sample #2: FY001127.JPR file used in Sample #1 above.** *This JPR file resides in the directory specified by JOBPARAMID value in the SAPMERGE.INI*

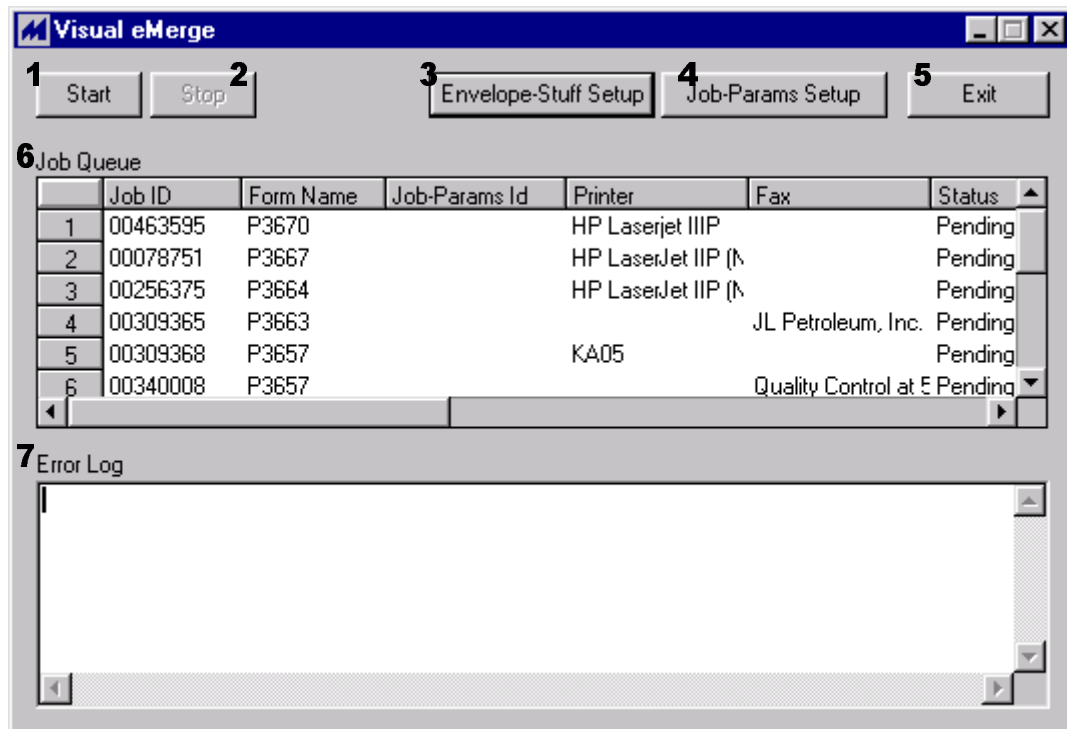
```
\f, "P3675"  
"\x, "Sender", "6450599", "Recipient"  
\p, "HP LaserJet IIP", "", ""  
\#, "PAGE_1"  
\c, "1"
```

**Line 1:** “\f” identifies the name of the form to be used. “P3675” - name of the form as it resides in the FORMSDIR.

**Line 2:** “\x” identifies the fax parameters to be used.

## Visual eMerge User Interface

After you have clicked the Start button, Visual eMerge works without any further setup or user intervention. The eMerge User Interface can be used to start or stop jobs, view the current status of jobs, and to modify job and envelope stuffing parameters.



1. Start/resume the eMerge process.
2. Stop eMerge process.
3. Set parameters for envelope stuffing - see “Envelope-Stuffer Setup” on page 13.
4. Overwrite the parameters defined in the parameter file - see “Job Parameters Setup” on page 14.
5. Exit eMerge.
6. Jobs to be processed - see “Job Queue Format” on page 13.
7. Log of job activities - see “Event Log Format” on page 13.

## Job Queue Format

The following information is displayed for every job that is queued for processing via eMerge:

| Field          | Description  |
|----------------|--|
| Job ID         | Name of the JCL file without the .JCL extension                    |
| Form Name      | Name of the form to be merged with data                            |
| Job-Params ID  | Job Parameter ID (e.g., name of the Job Parameter File)            |
| Printer        | NT Printer Name  |
| Fax            | Fax recipient and fax Number                                       |
| Status         | Job Status (Pending, Processed, Failed, etc.)                      |
| Copies         | Number of copies to be printed.                                    |
| Printer Tray   | Printer Tray to be used (e.g., Upper, Middle, Auto, etc.)          |
| Duplex-Special | Check Box - Printed pages in Duplex format or not                  |
| Page-# Field   | Name of the field on the form to hold the auto page numbering      |
| Envelope Stuff | Check Box - Add OMR marks on the forms for Envelope Stuffer or not |
| Archive        | Check Box - Archive the merged result or not                       |

## Event Log Format

The following information is displayed for every job that has finished processing:

08/13/98 07:22:39 - 00777555(P3675) \*\*\* Started \*\*\*

08/13/98 07:22:40 - 00777555(P3675) \*\*\* Printed \*\*\*

08/13/98 07:22:41 - 00777555(P3675) \*\*\* Sent to Fax Server \*\*\*

08/13/98 07:22:41 - 00777555(P3675) \*\*\* Archived \*\*\*

This information presents the following: date and time the job was processed, the JCL file name, the form name, and the process status.

## Envelope-Stuffer Setup

Visual eMerge supports envelope stuffers by printing pre-defined set of OMR marks on each page that it prints. Envelope stuffers scan the OMR marks to determine where one set of forms start and end. Pages are then folded and stuffed into envelopes according to these OMR rules.

## Job Parameters Setup

Job Parameters can be included in the JCL file or they can reside external to the JCL file in the Job Parameters (JPR) file.

JPR files are ASCII files that can be generated using the "Job-Params Setup" in the eMerge user-interface or they can be created using notepad. Formatting of a JPR file is the same as that of a JCL file.

### >To create a JPR file using the interface provided within eMerge

1. Click the "Job Params Setup" button. Job-Parameters Setup dialog is displayed.
2. Set the proper parameters.
3. Save and Exit.

## Modifying Job Parameters

While jobs are queued in eMerge before they are processed, their output parameters can be changed. These changes overwrite the settings defined by the JCL and JPR files.

In order for job parameters to be modified, eMerge must be in STOP or PAUSE mode.

In the following example, you will turn ON the Archive settings of three jobs.

1. Click on the STOP button.
2. Select the three jobs by clicking on their Selection Button.
3. Right-click on the selection.
4. Select Modify. "Job-Parameters Setup" dialog is displayed.

## eMerge Fax Module

Visual eMerge sends all fax requests to MMAFax. MMAFax queues the requests and processes them one at a time.

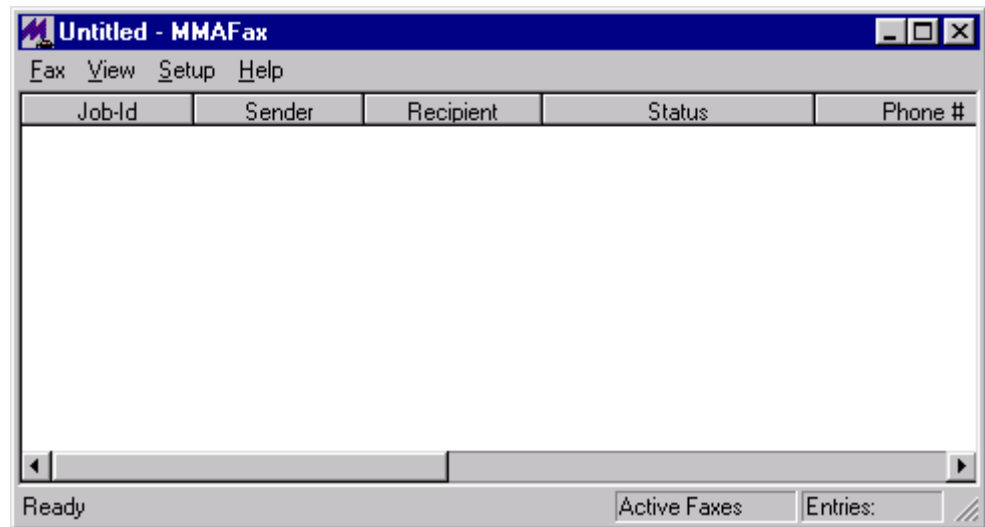
Fax parameters that can be set via eMerge or MMAFax:

| User-Configurable Parameters | Parameters are Set in:    |
|------------------------------|---------------------------|
| Fax Phone Number             | JCL or Job Parameter file |
| Sender Name                  | JCL or Job Parameter file |
| Recipient Name               | JCL or Job Parameter file |



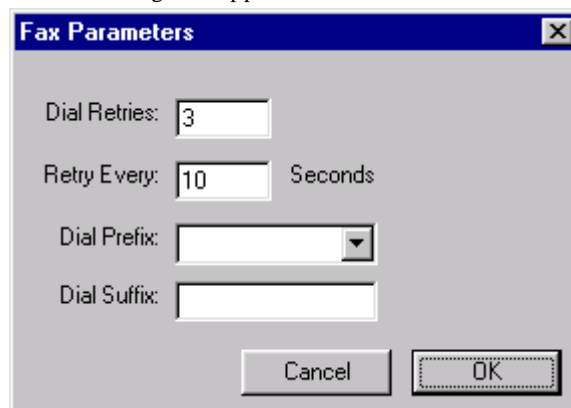
| User-Configurable Parameters | Parameters are Set in:     |
|------------------------------|----------------------------|
| Dial Retries                 | MMAFax - Setup Menu Option |
| Retry Frequency (in seconds) | MMAFax - Setup Menu Option |
| Dial Prefix                  | MMAFax - Setup Menu Option |
| Dial Suffix                  | MMAFax - Setup Menu Option |

>Setting fax parameters in MMAFax



1. On the **Setup** menu, click **Fax Parameters**.

The **Fax Parameters** dialog box appears.



2. Enter data in given fields, and then click the **OK** button.

Visual eMerge uses these parameters when faxing jobs.