



JetTrac Sort TM
Installation Guide
User Guide

Version 1.4
January 9, 2003

JETTRAC SORT™ REVISION HISTORY

Revision Number	Date	Comments
1.0	July 17, 1999	- Initial release of JetTrac Sort. Allows one sort key, either ascending or descending and either Numeric or Character Sort Keys
1.2	September 17, 1999	- JetTrac Sort expanded to allow up to three sort keys.
1.3	January 24, 2000	- Added License Manager
1.4	January 9, 2003	- Allows any string to top of a document

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1.0 INTRODUCTION

1.1 Purpose

This document is a guide to installing, configuring and using the JetTrac Sort™ Custom Agent. This document includes detailed instructions for installation and configuration of the Adobe Central Job Management Database and example files to help you see how the program works.

1.2 Overview

An Adobe Central job will print the documents in the same order that they appear in the input data file. If there is a requirement to print the documents in a different sort order, then JetTrac Sort™ can be run in order to re-sort the data prior to printing.

JetTrac Sort™ reads in the Field Nominated File that is created by the Adobe Central Transformation Agent, sorts the file according to the instructions in an INI file, then output a Field Nominated File in the proper sort order. Normally, the next process in the Adobe Central process is to run the Print Agent of Adobe Central to actually print the documents.

JetTrac Sort™ allows you to sort on three keys, either ascending or descending. You specify whether the sort key is Numeric or Alphanumeric.

JetTrac Sort™ is written in Java so it will run on any platform that supports the Java RunTime Environment (JRE). Instructions are provided in this document for downloading the Java Runtime Environment for your platform.

1.3 Organization of this Document

Section 1: Introduction

Section 2: Installation and Configuration Procedures for JetTrac Sort™

Section 3: Running JetTrac Sort™

1.4 Technical Support

If you need assistance in installing and configuring JetTrac Sort™, call Pro Technology Automation, Inc. at 805-527-1248 or email us at support@protechinc.com. Please note that the JetTrac Sort™ license fee does not cover installation, configuration, implementation or technical support so there may be an additional charge if you need those services. Please ensure you read these instructions carefully before calling for technical support.

1.5 Nomenclature Note

This document refers to Central. But it applies equally to all versions of JetForm Central and Adobe Central Output Server.

2.0 INSTALLATION AND CONFIGURATION OF JETTRAC SORT™

2.1 Installing Java

Refer to the document *What you need to know about Java and JetTrac Licensing* for installing the Java Runtime Environment (Java or JRE) and generating a site code for your site. It is available on the web at www.protechinc.com on the JetTrac page. If installing on a Windows platform, we highly recommend you use version 1.22 of the JRE, though in some cases, other versions will work. Contact us for further questions.

2.2 Installing JetTrac Sort

After the JRE is installed, you are ready to proceed to the JetTrac Sort files themselves. You will receive a zip file that contains the following files:

<u>Filename</u>	<u>Description</u>
JTSort.jar	Java program
JTSort.ini	INI file
JetTrac Sort User Guide.pdf	this document
Run JTSort.bat	sample batch file to test INI file
JTSort-testin.fnf	sample data file to test

2.3 Configuring the JetTracSort.ini file

A JetTracSort.ini file needs to be built for each Adobe Central application that you want to sort and will contain the instructions for how to sort that application. You can name the INI file anything you want and specify the INI filename in the Adobe Central Job Management Database as specified in this document.

To set up the INI file, open the JetTracSortTest.ini. It looks like this:

```
startrec
100
last|AA
first|AA
x|XX
~~
First Field name in each document
max records to sort
Sort key 1 (key field name|[Ascending/Descending][Alpha/Numeric])
Sort key 2 (key field name|[Ascending/Descending][Alpha/Numeric])
Sort key 3 (key field name|[Ascending/Descending][Alpha/Numeric])
Note 1: USE x|XX to not use a key. Uppercase XX MUST be uppercase.
Note 2: Alpha Sort order is numeric/uppercase/lowercase.
```

The part of the file that JetTrac Sort reads is above the ~~ code line. The lines below the ~~ code offer a brief explanation of what the corresponding line above controls.

The fields in the ini file are set up as follows:

Line # Description

- 1 First Field or ^string in each document. JetTrac Sort needs to know where each document begins and ends in the file, so it can break documents apart and then patch the stream back together. If a field is the first thing in each of your documents, you can just enter the field name on this line. If a different string that starts with ^ is the first thing in each of your documents, enter the entire string, including the ^.
- 2 The maximum number of records possible. This is for Java memory allocation. This sets the maximum number of lines seen in each document, as a FNF stream. A good value to use is 1000. If you get memory allocation errors, increase this number until the problem goes away.
- 3-5 Sort key fields. These fields are where you tell JetTrac Sort what order you want you documents placed into. You enter the field, whether the sort should be ascending or descending, and also if the data should be handled as numeric or alphanumeric. For example, if the field you wanted to sort was CheckAmount and you wanted a descending ordered field using numeric sort, your line 3 would read:

CheckAmount|DN

When two or more fields, in this case “CheckAmount” contain the same value, they will be placed into the output file in the same order as when they came in. If you want to control the order of how documents are sorted that have the same value for the primary key listed on line 3, you can specify another field to do a “sub-sort” on line 4. For all documents that have the same value in the field listed in line 3, the order of the fields listed in line 4 will be the determiner. For further clarification, if there are more than one document that have the same value in the fields listed on lines 3 and 4, then a third sort key is provided to further sort the results.

Each field is followed by the pipe character and the two-character code for order and type on the same line. If using less than three sort keys, you must fill the extra lines with x|XX in order for JetTrac Sort to run.

Sort Order and Data Type is a two-digit field. The first digit can be either A for Ascending or D for Descending. The second digit can be either N for a Numeric field or A for a Alphanumeric field. Therefore the possible values for Line 3 of the INI file are AN (Ascending Numeric), DN (Descending Numeric), AN (Ascending Alpha) and DA (Descending Alpha). By picking sort alphanumeric, numbers are still sorted, but the sort order is numeric first, followed by uppercase letters, then lowercase letters.

2.4 The JetTrac Sort Command Line

JetTrac Sort is a Java program and must be run from within the Java Runtime Environment. Refer to section 2.1 for more information on acquiring and installing Java. Assuming that you already have Java installed on your system, the format of the command line is:

```
java -jar -DJETTRACLF=[path to sort.lic file] [path to JTSort.jar file] [input fnf] [output fnf] [ini file] [log file]
```

A sample is:

```
java -jar -DJETTRACLF=c:\JetTrac\license\sort.lic c:\JetTrac\JTSort\JTSort.jar testin.fnf testout.fnf JTSort.ini jfserver.log
```

Section 2.6 will instruct you how to implement this command line for use with Adobe Central.

2.5 The JetTrac Sort License File

As with all JetTrac products, JetTrac Sort is protected from piracy by the JetTrac License Manager system. This system locks JetTrac Sort for use exclusively to one server or system in your organization. It works in this manner:

1. You run JetTrac SiteCode on your computer and generate a unique site code file for your system.
2. You send that site code file to Pro Technology Automation.
3. Pro Technology uses your site code file to generate a product license key file.
4. Pro Technology sends the product license key file back to you.
5. When JetTrac Sort runs, it scans the system and compares the tokens it finds with the tokens found in the license key file, and if they match, it runs normally.

Refer to the document *What you need to know about Java and JetTrac Licensing* for further information.

2.6 Configuring the task in the Job Management Database

To add the JetTrac Sort custom agent in **Adobe Central Control** for Windows platforms:

1. Start **Adobe Central Control** by picking it from the Start menu.
2. Add a new **Task** by clicking on **File, Job Management Database, Tasks**.
3. Create a new task by clicking **New Task**. Set up the Task Definition with the following information:

Task ID:	JTSort
Program name:	java
Program options:	-jar -DJETTRACLF=c:\jettrac\license\sort.lic c:\JetTrac\JTSort\JTSort.jar @InFile @OutFile @MDFName @LogFileName
Comment:	JetTrac Sort Custom Agent by Pro Technology

4. Click **OK** to save the Task Definition. Close out of the Task Definition window.
5. Now you must create a job step that calls the JetTrac Sort task. This would be one of the job steps in the complete job you are setting up.

If, for instance there is a job that runs a JFTrans step and then a JFMerge, then we will need to split the job into at least two jobs. JetTrac Sort would run after the JFTrans step. The JFMerge step will then be put into a new job.

The job will be named according to what we give the name of the job in the ini file, explained in section 2.3 above. This would allow each of the output files created by JetTrac Sort to be individually picked up and processed one-by-one by Adobe Central. The newly created split files would then print to the printers assigned in the JTSort.ini file.

6. From the main screen of Adobe Central Control, click File, Job Management Database, Jobs. You will get a list of all jobs you have set up in Adobe Central. We will assume that you already have a job set up and you are adding a Sort step. Click on the Job that you want to split, then click “New Step”. The New Job Step screen will appear. Following are the fields that you need to fill in:

Task ID – from the drop down list, select JTSort

Input File – the value that goes here would be a single letter which is the output from the previous job step. If your current job had two steps, JFTRANS and JFMERGE, then the output from JFTRANS was “A”. If you now want to sort this file, then the Input file for JetTrac Sort would be A. If you have questions about how this works, contact your Adobe Central support person.

Output file – This would be the letter directly following the letter used for Input File.

On Error – Select S to Stop the Job if there is an error in JetTrac Sort

Form File – this field would contain the fully qualified INI filename that you have set up for JetTrac Sort, e.g. c:\JetTrac\JTSort\JTSort.ini

Preamble file – This should be *

Printer Name – leave it as *

Macro Number – leave it at 1

Load Flag – leave it at T

Comments – type in a description like “Splitting batch for printer load balancing”

7. Close all windows, get back to the main Adobe Central Control screen and update the Job Management Database by clicking on Control, Reload Job Management DB. When asked if you want to save changes to the Job Management Database, click Yes.

3.0 RUNNING JETTRAC SORT™

3.1. Submitting transaction files to Adobe Central Control

To submit a transaction file to Adobe Central Control, you place a data file into the Adobe Central Collector Directory. There are a number of ways to do this depending on the platform that you are running Adobe Central. You can FTP the file, use the Adobe Print Processor, use Named Pipes or simply copy the file.

3.3. What JetTrac Sort™ does

When JetTrac Sort™ is run, it reads through the Field Nominated File based on the definition in the INI file. It looks for the record number of the beginning of each document in the input file and places this record number in a temporary sort file. The Sort Key is also stored in this sort file, linked to the record number. Once the complete input file has been read and processed, the sort file is sorted, then the output file is written in the sorted sequence based on the record numbers in the sort file.

3.4. Log File

JetTrac Sort™ conforms to all requirements as a Custom Agent. It writes a status to the log file and creates the JETFORM.RSP. Here is a sample entry in the log file for a successful match:

```
19990717163615 JetTrac Sort : Status 0, processing completed, 12 records sorted
```

Here is a sample entry in the log file when there is a problem. In this case, the INI filename specified did not exist.

```
19990717163736 JetTrac Sort: Status 1, Unable to access INI file: JetTrac SortTest.ini
```

3.5. JetTrac Sort Operating Parameters

Here are the parameters of JetTrac Sort 1.0:

- a. The number of “documents” JetTrac Sort will produce is limited to 10,000. A document is defined as a logical set of records in the input file that define one document, e.g. a check, invoice, statement, etc.
- b. No data line will look like a field name, e.g. no data lines will start with ^field or ^global
- c. For numeric keys, the number of digits after the decimal point is fixed throughout the file for the key field values, e.g. you can't have one sort key value with 2 digits after the decimal point and another sort key value with 1 digit after the decimal point.

- d. The Sort Key value does not have to have a decimal point if it is a numeric value.
- e. JetTrac Sort™ ignores \$ (dollar signs), spaces and commas in the Sort Key.
- f. JetTrac Sort™ is able to accommodate leading or trailing plus or minus signs.

3.6. Testing JetTrac Sort™ from a batch file

Included with the installation of JetTrac Sort™ is a sample data file (JetTrac SortTest.dat) and a batch file. If you have installed JetTrac Sort™ in the recommended location of c:\JetTrac\JetTracSort, then all you need to do is double-click the batch file Run JetTrac Sort.bat. A DOS box will come up and show the processing messages of JetTrac Sort as follows:

```

JetTrac Sort 1.4 - Sort JetForm Central field nominated files
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----- Initialization -----
Input   file: JetTrac Sorttestin.dat
INI     file: JetTrac Sorttest.ini
Output  file: JetTrac Sorttestout.dat
----- Processing -----
Total of 13 records read from input file.  Sorting in progress...
Records sorted, writing output file.
----- Processing Completed -----
JetTrac Sort : Status 0, processing completed, 13 records sorted

```