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**KeyesCalc™**

**iSeries Spooled File  
to Spreadsheet**

Version 1, User's Guide

Computer Keyes, 21929 Makah Road, Woodway, WA 98020  
Tel: (425)776-6443 Fax: (425)776-7210 [www.ckeyes.com](http://www.ckeyes.com)

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# KeyesCalc

## Introduction

KeyesCalc can be used to convert spooled files into CSV spreadsheet format. The resulting CSV files can be used for any desired purpose, such as e-mailing, archiving, or posting on a website.

Spooled files must be standard \*SCS printer files. We provide a mapping tool so that you can map each spooled file field to the desired spreadsheet columns.

***For example:*** You can call our API to convert spooled files into CSV documents and have them placed directly into your IFS (Integrated File System). This would make it available to everyone with access to the IFS directory.

KeyesCalc includes an automatic output queue processing program. It will monitor an output queue called KCOUQT. When any spooled file appears in this output queue, in a "RDY" status, it will be automatically converted to a CSV file and placed in your IFS.

KeyesCalc can be integrated with KeyesMail to allow you to email your spooled files converted into spreadsheets.

## KeyesCalc Menu

The KeyesCalc can be run using commands, or from a menu. After the installation has completed (described on the following pages), you may use the menu.

### Displaying the Menu

1. Be sure that the KeyesCalc library is on your library list.  
Enter: ADDLIB KCLIB
2. Display the KeyesCalc Menu.  
Enter: GO KCMENU

## Installation Instructions

### Sign on as a Security Officer

The following installation procedure will require that you have \*ALLOBJ authority, when you restore the library as an update.

### Copying KeyesCalc Programs to a Library

You may place the **KeyesCalc** programs into any library that you wish. However, we suggest that you install the programs into a permanent program library called KCLIB.

#### Restoring Instructions:

1. Follow the instructions found in the **Readme.txt** file that you download from our website ([www.ckeyes.com](http://www.ckeyes.com)). It will use FTP to transfer Save File data to your IBM i.

2. *If this is a New Installation:*

```
Enter: RSTLIB SAVLIB(KC01LIB) DEV(*SAVF)
       SAVF(QGPL/KC01SVF) MBROPT(*ALL)
       RSTLIB(KCLIB)
```

*If you are Updating an Existing System:*

```
Enter: DLTLIB LIB(KCUPD)
```

Ignore any "Library not found" message.

```
Enter: RSTLIB SAVLIB(KC01LIB) DEV(*SAVF)
       SAVF(QGPL/KC01SVF) MBROPT(*ALL)
       RSTLIB(KCUPD)
```

### Updating an Existing System

If this is a New Installation, skip this step.

1. Be sure that the KeyesCalc library is on your library list.

```
Enter: ADDLIB KCLIB
```

2. Prompt the KeyesCalc Update program.

```
Enter: KCUPD/KCUPDATE then press F4 (Prompt)
```

3. Fill in the appropriate library names and press Enter:

```
KeyesCalc Program library . . .  kclib 
```

```
KeyesCalc Update library . . . .  kcupd 
```

4. At the end of the update process, the "Calc Conversion Setup" screen may appear. This will allow you to set default parameter values for the system, as desired.

Review/update the parameter values and press Enter.

## Creating the KeyesCalc Subsystem

Run this step for both a new installation and on updating an existing system. It will create or recreate the KC subsystem.

1. Be sure that the KeyesCalc library is on your library list.  
Enter: ADDLIBLE KCLIB
2. Run the Create KeyesCalc Subsystem program.  
Enter: CRTKCSBS then press Enter

## Installing KeyesCalc Tables

This step will install the appropriate translation tables into your KeyesCalc library. It selects the tables based on your system's Code Page.

1. Change your current library to the KeyesCalc library.  
Enter: CHGCURLIB *kclib*
2. Run the KeyesCalc Table program.  
Enter: KCTABLES

## Enter your KeyesCalc License number

The KeyesCalc programs will not function until they are activated with a license number. The license number is based on your iSeries or AS/400 serial number and the Logical Partition that you will be using. The Logical Partition can be seen on the KCLICENSE screen.

You must contact Computer Keyes to get a valid license number. You may call or e-mail your request. Be sure to specify your name, company, and other contact information along with the serial number of your iSeries (AS/400) and logical partition, if you e-mail the request.

**Note:** You may use DSPSYSVAL QSRLNBR to display the serial number of your computer. You can see the Logical Partition on the screen below.

### Recording the KeyesCalc License Number:

1. Switch your current library to your KeyesCalc library, usually called KCLIB.  
Enter: CHGCURLIB *kclib*
2. Start up the program that will record your KC License.  
Enter: KCLICENSE
3. Key your KC License number in the field provided, then press Enter.

### KeyesCalc License Number:

Permanent:	_____	S#	-	_____
Temporary:	_____			_____
	_____			_____
	_____			_____

## **Calc Conversion Setup**

The Calc Conversion Setup (item 11 on KCMENU) is used to define a data area (KCDATA). The information is used in the conversion programs to direct how and where the spooled files should be converted. You can change the values in the data area at any time, and it will take effect immediately.

### **Default IFS Path**

This parameter specifies the default path that your converted documents will be sent to. All directories in the path must already exist. New directories are not created.

### **CSV Quote Character**

This parameter specifies the character you wish to use as the alpha variable delimiter (usually " or ').

### **CSV Comma Character**

This parameter specifies the character you wish to use as the variable separator (usually , or ;).

## Convert a Spool File into a Spreadsheet (KCCVTSPL)

This program is an API that can be used to convert spooled files. It places the resulting CSV file into a Stream File on your IFS, or onto a Network drive.

If you are sending the CSV to the IFS or a Network drive, all directories in the path must already exist except for the last one, which will be automatically created if it doesn't exist. If the stream file does not exist, it will be created. If it does exist, it will be replaced.

### To Path (TOPATH)

Specify the Path where the CSV file will be located. The Path must already exist (except for the last folder, which will be automatically created). For a Network drive, specify "/QNTC/server-name/directory".

### File Name (FILENAME)

Specifies the name of the CSV file to create.

### Spooled file (SPLFILE)

Specifies the name of the spooled file that you wish to convert. This comes from the name of the printer output file that is defined in the program that created it.

The spooled file attribute called "Front Side Overlay" must be set to the name of the KeyesCalc map that you define to create the CSV file.

### Job name (JOBNAME)

Specifies the name of the job that created the spooled file to be converted.

The possible values are:

\*

The job that issued this command is the job that created the spooled file.

**job-name**

Specify the name of the job that created the spooled file.

### Job number (JOBNR)

Specify the system-assigned job number.

### User (USER)

Specify the user name that identifies the user profile under which the spooled file was created.



## **Spooled file number (SPLNBR)**

Specifies the number of the spooled file, from the job whose data records are to be converted.

The possible values are:

### **\*ONLY**

Only one spooled file in the job has the specified file name; therefore, the number of the spooled file is not necessary.

### **\*LAST**

The spooled file with the highest number and the specified file name is used.

### **spooled-file-number**

Specify the number of the spooled file whose data records are to be converted.

## **From page number (FROMPAGE)**

You may select specific page numbers out of the spooled file to be converted.

## **To page number (TOPAGE)**

You may select specific page numbers out of the spooled file to be converted.

## Sample Code

The following code creates a spooled file. It then converts that spooled file into a CSV file and places it in the IFS folder called CSVFILES.

```
PGM

OVRPRTF    FILE(QPRINT) HOLD(*YES)
CALL       PGM(your-pgm)
DLTOVR     FILE(QPRINT)

KCCVTSPL   TOPATH('/CSVFILES') +
           FILENAME(Sample.CSV)
           SPLFILE(QPRINT) +
           JOBNAME(*) +
           SPLNBR(*LAST)

/* Monitor for Escape Message, indicating an error */
MONMSG     MSGID(CPF9898) EXEC(GOTO ERRORS)

SNDPGMMSGMSG('Printer file QPRINT was converted +
             to a CSV file and placed in CSVFILES') +
             MSGTYPE(*COMP)

ERRORS:    /* Error processing */

ENDPGM
```

## Output Queue Processing

The output queue called KCOUTQ can be monitored for spooled files that you wish to convert. As each spooled file becomes **Ready** in this output queue, it will be automatically processed into a CSV document.

After processing a spooled file, it will be removed from the output queue unless you specify \*YES on the *Save spooled file* attribute using an OVRPRTF command.

### Starting KeyesCalc Out Queue Processing (STRKCOUQ)

This program is used to start a program that will automatically convert spooled files into CSV files. It will monitor an output queue called KCOUTQ, converting any spooled file that is in a "RDY" status.

The CSV files will be placed in a location of your choice.

### File Naming

Unique member names will be automatically generated for the output file as it processes each spooled file. The names will be made up of the original spooled file name plus a date and time stamp.

### End KeyesCalc Out Queue Processing (ENDKCOUQ)

This program is used to end the program that is monitoring the KCOUTQ output queue. The program (CHKKCOUQ) runs in the KCSBS subsystem converting all spooled files that go into a "RDY" status in the KCOUTQ output queue. You can end the program using this command.

## Work with Map Members

Spooled files need a map member to define how they are converted to CSV spreadsheets. The *Work with Map Members* program (shown below) can be used to maintain your map members. This program can be started from the KeyesCalc menu (Item 12) or using the KCMAP command.

WRKMAPC	<b>Calc Map Members</b>	Date
user-id		Time
	File: CALCMAP	Position to: _____
Options: 2=Edit	3=Copy	4=Delete
	5=Display	7=Rename
		8=Chg Desc
<b>Opt</b>	<b>Member</b>	<b>Description</b>
-	SLMAP	Sample Sales Report
-	SLCOPY	Sample Sales Report
F3=Exit F6=Add Mbr F12=Cancel F17=Top F18=Bottom		Bottom

Option **2** (Edit) may be used to change existing map members.

Option **3** (Copy) may be used to copy a map member to another name.

Option **4** (Delete) may be used to remove entries that are no longer needed.

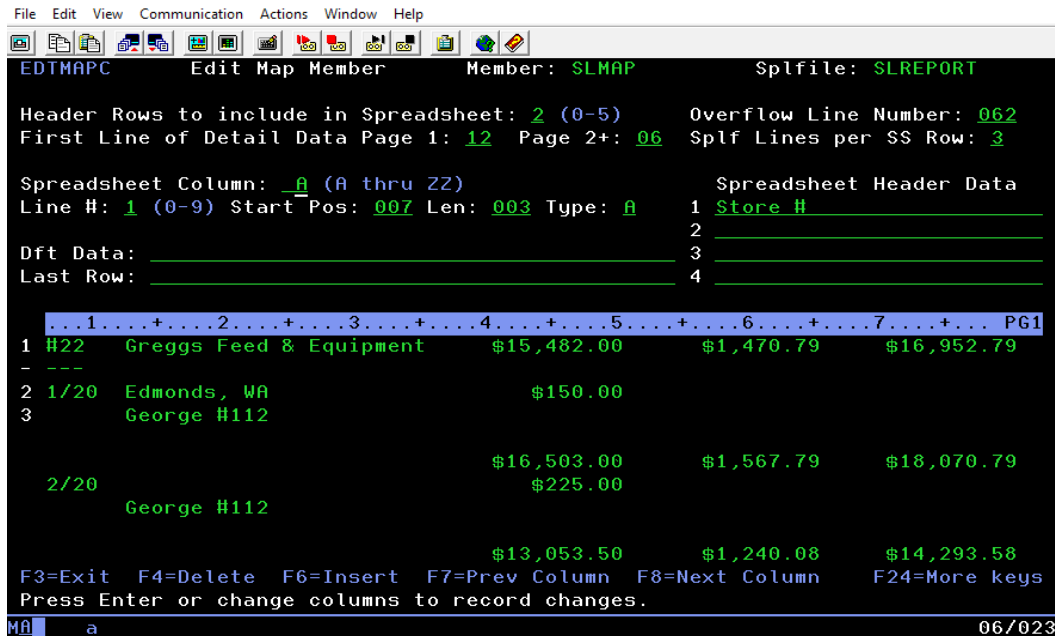
Option **5** (Display) may be used to display a map member.

Option **7** (Rename) may be used to rename a map member.

Option **8** (Chg Desc) may be used to change the description of a map member.

## Edit Map Member

Use this screen to define map members for converting a spooled file to a CSV spreadsheet.



### Header Rows to include in Spreadsheet:

If you would like header data placed into the spreadsheet, you may include 0 to 5 header rows at the top. You may define the header values as you define each column.

### Overflow Line Number:

Last line of spooled file data before it overflows to the next page.

### First Line of Detail Data Page 1:

Key in the starting line number of the spooled file where the detail data begins on page 1.

### Page 2+:

If subsequent detail data starts on a different line, enter that here.

### Splf Lines per SS Row:

Specify how many spooled file lines make up 1 row of spreadsheet data.

### Spreadsheet Column:

Each spreadsheet column that you wish to include must be defined independently. Columns are labeled A through ZZ. You may switch between

columns using F7 and F8 keys, or type the desired column in this field and press Enter.

**Line #:**

If there is more than 1 line of spooled file data per spreadsheet row, use this field to designate which line in the spool file data contains the data to be extracted for the current column.

The value must be 1-9 and may not exceed the (Splf Lines per SS Row) specified above.

**Start Pos:**

This is the start position of the data you wish to extract from the spooled file into the currently selected spreadsheet column. If you press the Enter key, you can confirm your selection in the spooled file data at the bottom of the screen.

**Len:**

This is the length of the data you wish to extract from the spooled file into the currently selected spreadsheet column. If you press the Enter key, you can confirm your selection in the spooled file data at the bottom of the screen.

**Type:**

Specify the type of data going into the current spreadsheet column.

A=Alpha, N=Numeric, D=Date, F=Formula.

**Spreadsheet Header Data:**

Up to 4 lines of header data can be entered for each column in the spreadsheet. The number of rows that will be exported to the spreadsheet is controlled by the value entered previously at the top.

**Dft Data:**

Data entered here will be placed into the spreadsheet column on any row that contains blank spooled file data for that column. It can be used to enter constant data or a formula.

Special characters #c, #f, #p, can be used to specify the current row, first row, or previous to current row in the spreadsheet, respectively.

Example: =SUM(A#c:B#c) This sample formula would sum columns A and B for the current row.

**Last Row:**

Data entered here will be placed into the current spreadsheet column after the last row of data. It can be used to enter constant data or a formula.

Special characters #c, #f, #p, can be used to specify the current row, first row, or previous to current row in the spreadsheet, respectively.

Example: =SUM(A#f:A#p) This sample formula would sum all of column A from the first detail row to the previous to last row.

**Spooled File Data:**

This portion of the screen shows the sample data that will be selected from the spooled file to fill the current column of the spreadsheet being defined.

This data will shift as you Enter the (First Line of Detail Data), (Line #), (Start Pos), and (Len) fields, to show you the data that is being selected.

You can toggle between page 1 and page 2 of the spooled file data to verify accuracy for each page by pressing the F9 key.

**F3=Exit**

Exits the program after recording any changes to the map member.

**F7=Prev Column**

Switches the selected column to the previous column. If on column A, this will switch to the last column that has been defined.

**F8=Next Column**

Switches the selected column to the next column.

**F9=Toggle Page 1/2**

Switches between Page 1 and Page 2 of spooled file sample data, so you may verify how each column is defined.

**F12=Cancel**

Cancels changes made to the current screen since the last Function Key or Enter Key was pressed.

**F15=ReplaceSp1f**

Used to change the sample spooled file displayed.

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