

# APPENDIX A: USER EXIT PROGRAMS

## *Monitor Exit Programs*

A SpoolOrganizer Monitor can call user written programs at certain times during execution. The user is free to perform a wide range of tasks at these points. To activate an exit program select the option to Define Monitors on the Administrator Menu. The Exit programs are parameters of the Monitor. Specify the name of the program to call, or \*NONE. The user must insure the exit programs end normally and return to the Monitor. The Monitor does not monitor for CPF messages. This is because the monitor assumes if an error occurs the user does not want the Monitor to continue executing.

**Note:** Source for example programs are in file **BRODERICK/BSOSRC**, members **BSOMX1-4**.

**WARNING:** The monitor task (and therefore the User Exit Programs) executes with **QSECOFR** authority.

The exit programs and the parameters passed to them are:

### **Exit Program 1: Program Initiation**

Exit Program 1 is called when the Monitor is started, before any spool entries are processed. This program can be used to open any files or initialize any variables. The parameters passed to it are:

<b>Parm</b>	<b>Type</b>	<b>Len/Dec</b>	<b>Description</b>
Monitor	Char	10	<b>Monitor Name</b>
Usr Dta	Char	1024	<b>User Data.</b> This parameter will be available to all exit programs. The Monitor will not change the contents of this variable.

### **Exit Program 2: Before Processing Options**

Exit Program 2 is called immediately before performing the Processing Options Specified for the spool entry. It is called after any attribute changes to the spool entry (via Attribute Change Specs) have been made. Thus the user can process the spool entry before the Monitor. The parameters passed to it are:

<b>Parm</b>	<b>Type</b>	<b>Len/Dec</b>	<b>Description</b>
Monitor	Char	10	<b>Monitor Name</b>
Usr Dta	Char	1024	<b>User Data.</b> This parameter will be available to all exit programs. The Monitor will not change the contents of this variable.
SplAtr2	Char	15360	<b>Spool Entry Attributes.</b> See file <b>BRODERICK/BSOSRC</b> , mbr <b>SPLAOFF2</b> for a layout of this parameter. You may also refer to IBM documentation for

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API Format SPLA0200 for more information.

AtrChg	Char	512	<b>Attributes specified on the user Attribute Change record.</b> See “Attribute Change Area Layout” below for a description and layout.
SplAtr1	Char	512	<b>Spool Entry Attributes in the pre-3.0 format.</b> See file <b>BRODERICK/BSOSRC</b> , member <b>SPLAOFF1</b> for a layout of this parameter.
UsrSpc	Char	128	<b>Specifies the Selection Spec which the spool entry matched.</b> See “User Selection Spec Layout” below for a layout.
Do Proc	Char	1	<b>Do processing options.</b> Instructs the monitor to continue performing the processing options. Specify <b>Y</b> to tell the monitor to perform the options, <b>N</b> to tell the monitor not to perform the processing options.

**Note:** If **Y** is specified, Exit Program 3 will not be performed.

**WARNING:** If the user specifies **N** to Do Processing Options, the user must insure the spool entry is not still in the outq in a ready status when control is returned to the Monitor.

## Exit Program 3: Before Move/Print Spool Entry

Exit Program 3 is called after moving the spool entry to the online database, and immediately before deleting or moving the spool entry to the specified outq(s). Thus the user can process the spool entry before the Monitor deletes them. The parameters passed to it are

<b>Parm</b>	<b>Type</b>	<b>Len/Dec</b>	<b>Description</b>
Monitor	Char	10	<b>Monitor Name</b>
Usr Dta	Char	1024	<b>User Data.</b> This parameter will be available to all exit programs. The Monitor will not change the contents of this variable.
SplAtr2	Char	15360	<b>Spool Entry Attributes.</b> See file <b>BRODERICK/BSOSRC</b> , mbr <b>SPLAOFF2</b> for a layout of this parameter. You may also refer to IBM documentation for API Format SPLA0200 for more information.
AtrChg	Char	512	<b>Attributes specified on the user Attribute Change record.</b> See “Attribute Change Area Layout” below for a description and layout.

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SplAtr1	Char	512	<b>Spool Entry Attributes in the pre-3.0 format.</b> See file <b>BRODERICK/BSOSRC</b> , member <b>SPLAOFF1</b> for a layout of this parameter.
UsrSpc	Char	128	<b>Specifies the Selection Spec which the spool entry matched.</b> See “User Selection Spec Layout” below for a layout.
Do Dlt	Char	1	<b>Do move/delete.</b> Instructs the monitor to perform the delete or move. Specify <b>Y</b> to tell the monitor to perform the delete or move, <b>N</b> to tell the monitor not to perform the delete or move.

**WARNING:** If the user specifies **N** to Do Delete or move, the user must insure the spool entry is not still in the outq in a ready status when control is returned to the Monitor.

## Exit Program 4: Monitor Termination

Exit Program 4 is called at Monitor termination. The parameters passed to it are:

<b>Parm</b>	<b>Type</b>	<b>Len/Dec</b>	<b>Description</b>
Monitor	Char	10	<b>Monitor Name</b>
Usr Dta	Char	1024	<b>User Data.</b> This parameter will be available to all exit programs. The Monitor will not change the contents of this variable.

## Attribute Change Area Layout

**Note:** When evaluating a user Attribute Change Description, the Monitor separates changes that will cause a job to be submitted from changes that can be performed by the Monitor. If no submit is required the contents of the Attribute Change Area are used. If a Submit is required, the Spool File Attributes are used. The placement of User Exit Programs is between this identification and the actual change. Therefore the Spool File Attributes and the attributes that can be changed directly are both passed to User Exit programs 2 and 3. The exit programs must change both parameters if the intent is to change the spool entry's attributes via these exit programs.

**Note:** All changes made by the Attribute Change Description are reflected in the Spool File Attributes passed to the exit programs.

All fields are ten character long and will contain **\*SAME** if no change was specified by the Attribute Change Description. Numeric attributes will be edited decimal, **10** digits, with leading zeros and decimal points if a change has been requested. The order of the attributes is listed below.

**Align**  
**Print quality**

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**Form Feed**  
**Multiup**  
**Duplex**  
**Form type**  
**Copies**  
**Starting page**  
**Ending Page**  
**Number of File separators**  
**Schedule**  
**Hold**  
**Save**  
**Output priority**  
**User data**  
**Front overlay name**  
**Front overlay library**  
**Front overlay offset down**  
**Front overlay offset across**  
**Back overlay name**  
**Back overlay library**  
**Back overlay offset down**  
**Back overlay offset across**

## User Selection Spec Layout

The layout of the selection specification passed by the Monitor is as follows:

<b>Pos</b>	<b>Type</b>	<b>Len</b>	<b>Description</b>
1	Char	1	M=Monitor, S=Selection Spec
2	Char	10	Monitor Name
12	Char	10	Selection Spec ID field
22	Zone	8,0	Selection Spec Sequence Number

## *Bundle Manager Exit Programs*

The Bundle Manager calls the program **BRODERICK/BSOBX1** prior to adding each Bundle entry to a Bundle. The user can use this program to modify spool entry attributes. The parameters passed to **BSOBX1** are defined in source file **BRODERICK/BSOSRC**, member **BSOBX1**.

The Bundle Manager calls the program **BRODERICK/BSOBX2** for each page when processing Bundle Entries which have Partial Print options specifying type **U** (User Exit Program). The user can write this program to describe the desired pages within the spool entry. The parameters passed to **BSOBX2** are defined in source file **BRODERICK/BSOSRC**, member **BSOBX2**.

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## *Archive Exit Program*

The **ARCOLE** and **ARCARCFDTA** commands call User Exit program **BRODERICK/BSOAX1** after the archive is completed. Information passed to this program can be used as input to a third party Tape Management system. The parameters passed to **BSOAX1** are defined in source file **BRODERICK/BSOSRC**, member **BSOAX1**.

## *Banner Page Exit Programs*

The Banner Page generation routines call User Exit Program **BSOCX1** to generate the grid for the large block letters printed. The user can modify the characters generated. The parameters passed to **BSOCX1** are defined in source file **BRODERICK/BSOSRC**, member **BSOCX1**.

The Banner Page generation routines call User Exit Program **BSONX1** to allow the user to change the characteristics of the Banner page. The user can change the data printed on the Banner page using this exit program. The parameters passed to **BSONX1** are defined in source file **BRODERICK/BSOSRC**, member **BSONX1**.