AccXES Controller Software
Version 4.0 Build 118
August, 1999

Release Notes

XEROX
ENGINEERING
SYSTEMS
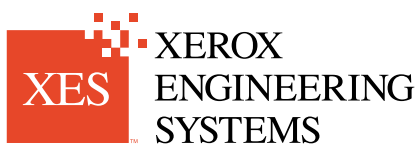
Revision History

Date	Author	Rev	Description
08/12/99	<JMG>	1.0	Original; derived from 117 release notes

Table of Contents

List of Abbreviations

Abbreviation   Description

AFR.................... Automatic Format Recognition

CALS .... Computer aided Acquisition and Logistics Support

CCITT............... International Consultative Committee on Telegraphy and Telephony

CGM .... Computer Graphics Metafile

CMYK .... Cyan Magenta Yellow blacK

DFI.................... Data Format Interpreter

DMA .... Direct Memory Access

DPS.................... Distributed Printing Services; renamed SDE.

DR..................... Discrepancy Report

EM .... Engineering Model; a hardware revision.

ESS .... Electronic Sub System

FLASH............... A term used to refer to re-programmable ROMs

FPU .... Floating Point Unit

FRAT .... Field Readiness Assessment Test

FRDT .... Field Readiness Demonstration Test

HP-GL................ Hewlett Packard Graphics Language

HP-PJL............... Hewlett Packard Printer Job control Language

HP-RTL .... Hewlett Packard Raster Transfer Language

IOT.................... Image Output Terminal

IPX..................... The Novell Netware Network Protocol

ISO.................... International Organization for Standardization

JPEG .... Joint Photographic Experts Group

LZW................... Lempel-Ziv-Welch

MB .... Megabyte(s)

NIC .... Network Interface Card

NVRAM............. Non-volatile RAM

ODA.................. Open Document Architecture

OS .... Operating System

PFIGS .... Portuguese, French, Italian, German, Spanish

POST .... Power On Self Test

PPM .... Pre-Production Model; another hardware revision.

PS....................... PostScript (specifically, Adobe PostScript™), a data format language

QA...................... Quality Assurance

RAM .... Random Access Memory

RGB .... Red Green Blue

RLE.................... Run Length Encoding

ROM .... Read Only Memory

RTC .... Real-Time Clock

RTOS .... Real Time Operating System. An OS with a deterministic kernel.

SCSI................... Small Computer System Interface

SDE.................... Software Development and Electronics; new name for DPS group.

SOL.................... Standard Operation Line-readiness

SRS .... System or Software Requirements Specification

TBD .... To Be Determined

TCP/IP .... Transmission Control Protocol/Internet Protocol; UNIX network stack layers

TIFF .... Tagged Image File Format

UEC .... Universal Escape Code; this is an escape sequence used by HP-PJL.

VDS .... Versatec Data Standard

VPI..................... Versatec Parallel Interface

VRF.................... Versatec Random Format

XES.................... Xerox Engineering Systems

Related Documents

Xerox Corporation, "Xerox Engineering Printers Windows NT PostScript Print Driver User Guide," 1998.
Xerox Corporation, "Xerox Engineering Printers Windows 95 PostScript Print Driver User Guide," 1998.
Xerox Corporation, "Xerox 8825/8830 System Introduction," 1998.
Xerox Corporation, "8830 Controller Setup Manual," 1998.

1. Introduction

This release provides ACCXES server firmware release 4.0 build 118 Multinational for Xerox 8825/8830 Printers and Xerox 8825/8830 Digital Document System (DDS). This release supports Adobe PostScript™ 3™ as an optional feature; this option requires license-enabled memory module hardware.

This document describes the following for AccXES server release 4.0:
- Supported system configuration
- Installation procedures and notes
- New AccXES functionality
- PostScript implementation notes

This document supplements the customer and service user manuals.

2. Release Deliverables

2.1 General

AccXES firmware release 4.0 provides several executables (e.g. PostScript and non-PostScript) designed to run on the AccXES 1.0 hardware platform and the AccXES 2.0 hardware platform. Each executable is capable of dynamically configuring to support the 8830, 8830 DDS, 8825, and 8825 DDS.

Table 1 - AccXES Executables for Release 4.0

Release Description	AccXES Hardware 1.0 Executable	AccXES Hardware 2.0 Executable
Release 4.0 without PostScript	• Requires 4 MB Flash • 1 set of floppy disks (4 disks) auto configures for 8830, 8830 DDS, 8825, 8825 DDS	• Requires 4 MB Flash • 1 set of floppy disks (4 disks) auto configures for 8830, 8830 DDS, 8825, 8825 DDS
Release 4.0 with PostScript	• Requires 8 MB Flash with license • 1 set of floppy disks (7 disks) auto configures for 8830, 8830 DDS, 8825, 8825 DDS • 8825/8830 (Printer-only) requires 48 MB RAM and 1or 2 GB hard disk • 8825/8830 DDS requires 64 MB RAM and 1 or 2 GB hard disk	• Requires 8 MB Flash with license • 1 set of floppy disks (7 disks) auto configures for 8830, 8830 DDS, 8825, 8825 DDS • 8825/8830 (Printer-only) requires 64 MB RAM and 1 or 2 GB hard disk • 8825/8830 DDS requires 64 MB RAM and 1 or 2 GB hard disk

A non-PostScript 4.0 release must be loaded into a 4 MB Flash and a Postscript 4.0 release must be loaded into an 8 MB Flash. Attempts to violate this will be ignored by the software upgrade feature (i.e. the upgrade will not be attempted when an inappropriate disk 1 is in the drive).

2.2 Release Floppy Disk Contents

The deliverables for this release are:

• Release 4.0, Build 118 POSTSCRIPT executable for AccXES 2.1 controller hardware on seven (7) 3.5" floppy disks; this executable supports the 8825/8830 printer system configurations and the 8825/8830 DDS system configuration. The table below lists the names and sizes of the files on the floppies.

File Name	Disk	File Size
FILE0101.BIN	1	1327104
FINESS97.NFS	1	1148
FINESS97.UPD	1	1004

FILE0201.BIN	2	1327104
FILE0301.BIN	3	1327104
FILE0401.BIN	4	1327104
FILE0501.BIN	5	1327104
FILE0601.BIN	6	1327104
FILE0701.BIN	7	425984
FILE0702.BIN	7	515720

- Release 4.0, Build 118 NON-POSTSCRIPT executable for AccXES 2.1 controller hardware on four (4) 3.5" floppy disks; this executable supports the 8825/8830 printer system configurations and the 8825/8830 DDS system configuration. The table below lists the names and sizes of the files on the floppies.

File Name/Disk	Disk	File Size
FILE0101.BIN	1	1327104
FINESS97.UPD	1	626
FINESS97.NFS	1	728
FILE0201.BIN	2	1327104
FILE0301.BIN	3	1327104
FILE0401.BIN	4	212992
FILE0402.BIN	4	515720

- Release 4.0, Build 118 POSTSCRIPT executable for AccXES 1.0 controller hardware on seven (7) 3.5" floppy disks; this executable supports the 8825/8830 printer system configurations and the 8825/8830 DDS system configuration. The table below lists the names and sizes of the files on the floppies.

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FILE0401.BIN	4	212992
FILE0402.BIN	4	515784

3. Release Configuration

3.1 Controller Hardware

AccXES motherboard, revision 1.0 with:
- ◊   48 MB RAM, with 1GB HDD or larger
- ◊   Modified power harness and backplate
- ◊   P193R Engine Interface PMC installed
- ◊   3003XTP network interface card with firmware version XTP.6 installed
- ◊   Optional 10/100 Ethernet PMC (advanced network support)

AccXES motherboard, revision 2.0 with:
- ◊   64 MB RAM with 1 GB HDD or larger
- ◊   Modified power harness and backplate
- ◊   P193R Engine Interface PMC installed
- ◊   3003XTP network interface card with firmware version XTP.6 installed
- ◊   On-board 10/100 Ethernet

3.2 IOT and Folder

8830 IOT with firmware version: 01.05.09-13 or newer

8825 IOT with firmware version: 01.06.01-16 or newer

8825/8830 folder with firmware version: 2.85

3.3 Scanner and UI

7356 Scanner with firmware version: 0066

7346 Scanner with firmware version: 0066

Scanner Control Panel hardware, revision 1.0 with firmware version: 01.01.00.

3.4 AccXES Printer Drivers & Client Software

In general, this release of server firmware is compatible with the existing printer drivers and client software tools for 8825/8830 printers and 8825/8830 DDS.

In addition, the following new printer drivers are available to support PostScript:

➢   Xerox Engineering Printers Windows 95 PostScript Printer Driver for 8825/8830

➢   Xerox Engineering Printers Windows NT PostScript Printer Driver for 8825/8830

4. Release Installation

4.1 Installing the Non-PostScript Release

The non-PostScript release requires a set of four (4) floppy disks and is customer-installable. This installation follows the same procedure as used for previous AccXES server releases.

4.2 Installing the PostScript Release

4.2.1 Installing on a system running AccXES PostScript Version 3.0 or greater

This installation follows the same procedure as for previous non-PostScript AccXES server releases. The only difference is that there are seven floppies in the upgrade set instead of four.

4.2.2 Installing PostScript as part of an upgrade

- BEFORE INSTALLING THE UPGRADE KIT:
  ◊ From the printer user interface (on an 8830/8825), print ALL the test prints (configuration, settings, all pen palettes)
    ◊ SAVE THESE TEST PRINTS TO RECORD PARAMETER VALUES; VALUES MUST BE RE-ENTERED AFTER UPGRADE.
    ◊ VERIFY THAT THE CORRECT PRINT ENGINE (IOT) FIRMWARE VERSION AND CORRECT SCANNER FIRMWARE VERSION ARE INSTALLED (see sections 3.2 IOT and Folder and 3.3 Scanner and UI)
    ◊ From the printer configuration test print, also check the controller hardware version by noting the CPU. Use floppy disks labeled hardware revision 1.0 if the test print indicates "CPU: PPC607E - 166". Use floppy disk labeled hardware revision 2.0 if the test print indicates "CPU: PPC740 - 200".
  ◊ From the scanner user interface (on an 8830/8825 DDS), print a copier configuration print.
    ◊ SAVE THIS TEST PRINT TO RECORD PARAMETER VALUES; VALUES MUST BE RE-ENTERED AFTER UPGRADE.
    ◊ VERIFY THAT THE CORRECT SCANNER CONTROL PANEL FIRMWARE (01.01.00) IS INSTALLED.
- This release requires an 8 MB flash SIMM and boot floppy. Please refer to the instructions in the hardware kit (2.7.LF) for instructions on installation. A factory default reset will be required as part of this installation. THIS KIT MUST BE INSTALLED PRIOR TO UPDATING CONTROLLER FIRMWARE TO 4.0.
- Power off the system in the following order:
  ◊ 8830/8825 printer, AccXES controller, and scanner UI (if installed). [Note that the scanner UI does not have a power switch; the AccXES controller supplies power to the scanner UI.]
  ◊ 7356/7346 scanner (if installed)
- Insert the floppy disk labeled "AccXES Software Release version 4.0 Disk 1 of 7".
- Power on the system in the following order:
  ◊ 7356/7346 scanner
  ◊ 8830/8825 printer, AccXES controller, and scanner UI (if installed). [Note that the scanner UI does not have a power switch; the AccXES controller supplies power to the scanner UI.]
- The controller will detect the presence of the upgrade disk and prompt the user (via the printer operator control panel) through the installation process. When the controller has finished loading the contents of the update disks it will then reprogram the controller FLASH memory with the contents of the firmware upgrade.
  ◊ If the controller ignores the upgrade disk and boots without prompting the user through the upgrade procedure, the controller determined that the disk was not a valid upgrade disk; remove the disk and compare the controller hardware version to that noted from the configuration test print to ensure that 1.0 controller disks are being used with PPC607 CPUs and 2.0 controller disks are being used with PPC740 CPUs.
  ◊ NOTE: The "LOADING" message may be displayed for several minutes before the "UPGRADING FIRMWARE DONE" message is displayed. **DO NOT POWER OFF WHILE THIS MESSAGE IS DISPLAYED!**
- After the FLASH has been reprogrammed the printer operator control panel will display the following prompt:

```
UPGRADING FIRMWARE
DONE. REMOVE DISK AND [ENTER]
```

- Remove the disk from floppy drive and press [ENTER]. The controller will reboot and execute the new firmware.
- After the 8830/8825 boots on the new version, verify the upgrade by printing the TEST PRINT again.
- For an 8830/8825 printer, re-enter the parameters for the printer configuration and settings via the

printer user interface.
- For an 8830/8825 DDS also re-enter the parameters for the copier configuration via the scanner user interface.

4.3 Release Installation Notes for Service

4.3.1 Release 2.7LF Boot Floppy Usage

DO NOT INSTALL THE 2.7.LF BOOT DISK (part of the 2.7.LF upgrade kit) IN A MACHINE THAT IS RUNNING 3.0 CODE OR LATER.

The following sequence of events must be performed to recover:

1) Replace the 8 MB Application Flash with a new 2.7.LF 8 MB flash

2) Upgrade from floppies to 4.0

There is no reason to use the 2.7.LF BOOT DISK after performing the 2.7.LF upgrade.

Normally AccXES ships the entire application and boot flash programs on a set of diskettes so that a mismatch will not occur. However, in the case of the 2.7.LF upgrade, only the boot program is included.

4.3.2 Upgrading to Release 4.0 and Downgrading to 2.7 or Earlier

As described previously, the upgrade procedure for release 4.0 requires installation of an 8 MB application flash module, a boot floppy upgrade (2.7LF boot floppy disk), and an application flash upgrade (release 4.0 floppy disks). The installation procedure for the 8 MB flash module calls for removing the 4 MB flash module and saving it; the 4 MB flash module will have 2.7 or earlier application code loaded.

If a user or service technician removes the 8 MB flash and replaces the 4 MB flash after a system has been fully upgraded for release 4.0 with PostScript, the system will operate correctly. However, if the user or service rep then "upgrades" the system using 2.7 or earlier upgrade floppies, the system will function for that upgrade BUT the system can not be returned to release 4.0 code by re-installing the 8 MB flash. The entire 4.0 upgrade procedure must be repeated (installing new 8 MB flash with 2.7LF license file, 2.7LF boot floppy upgrade, release 4.0 application flash upgrade).

In summary, if it is necessary to re-install the 4 MB flash module after the 4.0 upgrade procedure is complete, DO NOT UPGRADE THE RE-INSTALLED 4 MB FLASH MODULE USING FLOPPIES.

5. Release Functionality

5.1 New and Modified Features

5.1.1 Release Version

The release version string is modified for launch to be "4.0". A build number (118) is also available and can be verified by performing a configuration test print.

5.1.2 Features:

5.1.2.1 Printer Job Accounting

Track usage of media by printer jobs in the same manner as copier jobs are tracked.

5.1.2.2 Mismatch Queuing

If a page of a job cannot be printed because the printer does not have the correct media installed, it will be placed on the mismatch queue. An asterisk will be displayed in the upper right corner of the printer UI to indicate that there are one or more pages in the mismatch queue.

Jobs in the mismatch queue can be viewed and deleted from the printer UI.

Mismatch queuing can be enabled or disabled from the printer UI. If a print job contains multiple page sizes, enabling this feature could result in the pages printing out of order if one media size is not available at the time of printing.

5.1.2.3 7346 Scanner Support

The new 7346 scanner is supported by this release.

5.1.2.4 I/O Download of AccXES Upgrades (controller, IOT and scanner firmware, IOT languages)

Support for downloading firmware upgrades to the controller, IOT, and scanner as well as new IOT languages from the network has been added. Upgrade files are submitted to the printer just like any other job.

The system will not attempt to upgrade any portion unless the entire system (controller, IOT and scanner) is idle.

Note: If the IOT does not support downloading firmware upgrades neither the IOT firmware nor the IOT languages will be upgraded. This will not affect the upgrading of either the controller or the scanner.

Note: The scanner must be connected and powered on in order for its firmware to be upgraded.

5.1.2.5 Menu Panel Lockout

The system administrator can selectively disable individual menu trees of the printer UI.

5.1.2.6 Software Feature Keys

The following features can be enabled by downloading a feature key to the controller:

- Scan to Net

- Job Accounting

5.1.2.7   Plot Nesting

Plot nesting will place multiple pages from one or more printer jobs on the same page to maximize paper usage. All pages that are nestable will be nested onto the widest roll of media installed in the printer.

Plot nesting can be enabled and disabled.

5.1.2.8   WebPMT

A web based Printer Management Tool is available via the 10/100 BaseT Ethernet port for displaying the job queue, managing the default settings, and gathering job accounting reports.

5.1.2.9   Improved Auto Width

The edge detection algorithm has been enhanced to be more accurate and reduce the number of false edges detected.   An additional level of protection against false edge detection has also been added by separating auto width and auto center features.   Now, auto width detection can be enabled while disabling the auto centering function. This allows the system to declare edges which are more than ½" off center as failures and prompt the user for the correct size.   The system defaults for both auto width and auto center are enabled.

When used in conjunction with version 66 scanner firmware, the user will notice fewer image clips, image shifts, and incorrect roll selection than with previous versions of AccXES.

5.1.3 Current Engineering Updates

This release includes the following current engineering modifications:

- Cannot print 60 foot CalComp plot [CDT 604, CDT 666, RFA 21622]

- Round-off errors in printing parameters on test pages [CDT 684]

- Horizontal lines and dots along band boundaries are clipped [CDT 335]

- VRF generates inverse copy count within multiple copy [CDT 628, RFA 21616]

- Auto-rotation problems when scanned image doesn't fit [CDT 667, RFA 21625]

- ISO A2 rotated incorrectly by 180 degrees [CDT 331, RFA 21585]

- Transparency and merge control issues [CCDT 31, CCDT 157, CDT 321]

- SCSI connection on rev 2 controller fails for long plots [CDT 281, CDT 300, CDT 302, RFA 21568, RFA 21572]

- HP-GL/2 transparency fails for certain bitmaps [CDT 783]

- Part of border missing from HP-GL/2 file rotated 180 degrees [CDT 785]

- RTL graphics alignment problems [CDT 807]

- Missing image on plot (single context mode) [CDT 768, RFA 21645]

- HP RTL Y Offset command doesn't reset seed line [CDT 812]

- User interface does not work consistently with previous versions [CDT 1031]

- Undesired roll selection behavior [CDT 1026, RFA 21667]

- Some 300 DPI RTL images are rendered with periodic single pixel white lines.

    This problem was introduced in the AccXES 4.0 release build 106 by a CE change.

- Some vector plots with lines drawn along the page clip window are rendered without these lines.

This problem was introduced in the AccXES 4.0 release build 106 by a CE change.

- Unrecognized CalComp commands [CDT 1093, RFA 21681]

- Trouble editing pen palettes from Printer UI [CDT 1186]

- Time stamp on labels gains 1 hour/week [CDT 1160, RFA 21697]

5.1.4 Adobe PostScript™ 3™ and License Control

The PostScript implementation is certified by Adobe Systems Incorporated. The minimum hardware configuration to execute the PostScript DFI is 8 MB Flash ROM, 64 MB RAM (48 MB for version 1.0 hardware in a printer-only configuration), and a 1 GB or larger hard disk.

The PostScript DFI supports most pre-existing AccXES job and page processing features including auto size selection, labels, raster stamps, and page composition. User interface support will be provided for the following parameters and features:

➢ PostScript default media size: this parameter specifies the sheet size to use for those PostScript jobs that do not specify an output size. This parameter can be set via the printer user interface menu or via HP PJL.

➢ PostScript test print: this feature demonstrates the PostScript interpreter is functioning correctly by printing an internally generated PostScript test page. This feature can be selected via the printer user interface menu.

➢ Selectable Disk Partitioning. Using the printer UI, the user can affect the disk partitioning to optimize the disk for PostScript. This optimization reduces the disk partitions allocated for other system functions (spooling, etc) to give more disk memory to PostScript. This may be necessary to successfully process some PostScript files. When the disk partitioning parameter is changed from the printer UI, the AccXES controller will automatically reboot itself to cause the disk to be re-partitioned.

PostScript is a licensed option. If the license is not present on the 8 MB flash module, PostScript will not be enabled to run.

5.1.5 Bug Fixes

Build number 118 is a very minor update from build number 117. The single change is an improvement in the ethernet driver 10/100 auto-negotiating algorithm. It compensates for systems that take longer to respond to the negotiation pulses.

5.2 Implementation Notes

5.2.1 PostScript Disk Partition

When PostScript is enabled, AccXES will partition the hard disk at initialization to include space for use by the PostScript implementation.

When the user changes the POSTSCRIPT PARTITION parameter, the disk is re-partitioned and some types of data are lost before the system reboots:

➢ Jobs in the printer input job spooler (all systems)

➢ Copy sets (8830 DDS)

➢ Scan to net files (8830 DDS/release 2.5 or greater)

NOTE: When the POSTSCRIPT PARTITION parameter is changed on an 8830 DDS, the scanner must also be power-cycled. TBD – J. Ball – when should that occur (timing)?

For printer only configurations (8825/8830) or for 8830 DDS systems with a 2 GB or larger hard drive or larger, "POSTSCRIPT PARTITION = NORMAL" will provide adequate performance for all features, including PostScript. The user may alternately chose to increase the disk space allocated to PostScript by selecting "POSTSCRIPT PARTITION = OPTIMIZED". Performance for other features will remain largely unaffected.

A user may notice that some PostScript jobs fail when "POSTSCRIPT PARTITION = NORMAL". The user may chose to increase the disk space allocated to PostScript by selecting "POSTSCRIPT PARTITION = OPTIMIZED". For this selection, the disk space available for some features is decreased. The impact on the user will depend on the size of the disk in the system and the particular jobs or features executed by the user.

The user may notice the following after choosing "POSTSCRIPT PARTITION = OPTIMIZED":

➢ large TIFF files with tags at the end may not print

➢ copy set size will be smaller than before optimizing the PostScript partition

➢ fewer scan to net files can be stored than before optimizing the PostScript partition

5.2.2 Default PostScript Page Size

If a PostScript job does not specify a page size either by using a compatibility operator such as "letter" or "a4" or by using the setpagedevice operator /PageSize parameter, the page size used is the one specified by the Default PostScript Page Size parameter available via the printer user interface or via HP-PJL.

5.2.3 AccXES Parameters and PostScript

The PostScript DFI will support most pre-existing AccXES job and page processing features including auto size selection, labels, raster stamps, and page composition. The following table details the interactions between the PostScript interpreter and currently available AccXES server features. As is the case with all the other data formats supported by the AccXES server, the priority scheme used when selecting the final value of the job processing parameters controlled by the data format, HPPJL and printer OCP is: (highest) PostScript value - HPPJL value - printer OCP value (lowest).

Table 2 – Selecting Printer Features or Parameters for PostScript Jobs

AccXES Printer Feature	PostScript Language Support/ Select via PostScript Printer Driver	Select via Printer Front Panel Interface	Select via HP-PJL
Communication ports parameter control	No	Yes	Yes
Banner pages and PostScript Jobs	No	Yes	Yes
Diagnostic pages and PostScript Jobs	No	Yes	Yes
Error pages and PostScript Jobs	No	Yes	Yes
Folder	Yes	Yes	Yes
Image scale mode: line vs. photo	No	No	No
AccXES pen palettes	No	No	No

Collation	Yes	Yes	Yes
Number of copies	Yes	Yes	Yes
Plot labeling (uses AccXES fonts NOT PostScript fonts)	No	Yes	Yes
Plot mirroring	No	Yes	Yes
Plot rotation - 0, 90, 180, 270, auto	No	Yes	Yes
Plot margins and justification	No	Yes	Yes
Plot scaling - numeric, auto	No	Yes	Yes
Page composition and PS jobs	No	No	Yes
PS jobs as raster stamps; PS jobs and printer-resident raster stamps	No	Yes	Yes
Media (page) size	Yes	Yes	Yes
Media Type	Yes	Yes	Yes
Media Location	Yes	Yes	Yes
Undersize/oversize margins	No	Yes	Yes
Media Mismatch	No	Yes	Yes
Orientation	No	Yes	Yes
Auto paper selection modes - drawn area vs. plot specified	No; always uses plot-specified	No	No
Job priority	No	Yes	Yes
Vector (Graphics) Halftoning	No	No	No

5.2.4 Interaction between PostScript Copies, Collation, and Finishing Options

The PostScript language supports the ability to modify copies, collation, and finishing options; the AccXES implementation of PostScript supports this functionality with the following resulting behavior:

1. For a single data format job* which contains a PJL header and a PostScript file, the copies, collation, and finishing parameters specified in the PostScript file take precedence for the job and behave according to PostScript Language Reference Manual. [If PostScript collation parameter is true, PostScript copies is a job parameter – if PostScript collation is false, PostScript copies is a page parameter.]

2. For a multiple data format job* which contains a PJL header, file 1 is any data format EXCEPT PostScript, and files 2 to N are any data format including PostScript, the PJL header parameters for copies, collation, and finishing take precedence for all files in the job. If file 2 or later is a PostScript file which specifies collation or finishing, those PostScript values for collation and finishing are ignored; if the PostScript file specifies copies, that value is applied to the PostScript file only.

3. For a multiple data format job* which contains a PJL header, file 1 is PostScript job that specifies copies, collation or finishing, the PostScript values for collation and finishing take precedence for ALL the files in the job and behave according to PostScript Language Reference Manual [see item 1].

Note: If banner pages are enabled for BEFORE the job the job is treated as a multiple data format job with the banner page being file 1.

5.2.5 PostScript Scaling

The AccXES implementation of PostScript has several limitations with respect to numeric scaling. These limitations depend on the width and length of the original document, the scale factor, and the available PostScript memory. The following tables describe the limitations.

Limitations of the 8 MB PostScript systems (48 MB – 72 MB total AccXES memory)

Paper Width	Max Input Length (in.) at Scale Factor			
	200%	400%	800%	999%
11"	480	120	30	24
12"	480	120	30	24
17"	480	120	30	12
18"	480	120	30	12
22"	240	60	15	12
24"	240	60	15	12
30"	240	60	15	6
34"	240	60	15	6
36"	240	60	15	6

Limitations of the 12 MB PostScript systems (96 MB – 104 MB total AccXES memory)

Paper Width	Max Input Length (in.) at Scale Factor			
	200%	400%	800%	999%
11"	600	150	37.5	30
12"	600	150	37.5	30
17"	600	150	37.5	15
18"	600	150	37.5	15
22"	300	75	18.75	15
24"	300	75	18.75	15
30"	300	75	18.75	7.5
34"	300	75	18.75	7.5
36"	300	75	18.75	7.5

Limitations of the 16 MB PostScript systems (128 MB total AccXES memory)

Paper Width	Max Input Length (in.) at Scale Factor			
	200%	400%	800%	999%
11"	720	180	45	36
12"	720	180	45	36
17"	720	180	45	18
18"	720	180	45	18
22"	360	90	22.5	18
24"	360	90	22.5	18
30"	360	90	22.5	9
34"	360	90	22.5	9
36"	360	90	22.5	9

Limitations of the 32 MB PostScript systems (192 MB total AccXES memory)

Paper Width	Max Input Length (in.) at Scale Factor			
	200%	400%	800%	999%
11"	960	240	60	48
12"	960	240	60	48
17"	960	240	60	24
18"	960	240	60	24
22"	480	120	30	24
24"	480	120	30	24
30"	480	120	30	12
34"	480	120	30	12
36"	480	120	30	12

Additional Comments:

➢ The limitations do not behave linearly. For example, in the last table, the maximum input length for an 11 inch wide document set for 300% scaling is NOT 600 inches. The maximum length for 11 inch wide document at 300% scaling is no less than 240 inches, the next highest scaling factor shown in the table.

5.2.6 Using the 8825/8830 PostScript Printer Driver

The user can select a media or page size or a media source. If the user selects a media source (roll 1, 2, or 3), the default PostScript PageSize selected at the printer will take affect. The recommendation is for the user to select a media size and set media source to AUTO.

5.2.7 Printing PostScript Files Using Document Submission Tool

1   If the PostScript file <u>does not</u> contain the settings for: Collation, Folding, or Copies

The settings within Document Submission Tool will always take precedence over what the default settings are in the 8830 or 8825 and will apply to the PostScript file.

2   If the PostScript file is the <u>first</u> file within the Document Submission Tool Document List and contains the settings for: Collation and Folding

The settings within the PostScript file will always take precedence over what is set within Document Submission Tool and the settings within the 8830 and 8825. These settings will also be used as JOB parameters and pertain to EVERY file within the Document Submission Tool Job.

3   If the PostScript file is the <u>first</u> file within the Document Submission Tool Document List and contain the settings for: Copies and Collation

The Collate=False setting within the PostScript file will always take precedence over what is set within Document Submission Tool, 8830 and 8825.

When Collate=False is used in combination with the Copies setting in a PostScript file, the Copies setting affects ONLY that PostScript file within the Document List.

If the setting for collation is true (e.g. Collate=True) the copies setting within the PostScript file is applied to EVERY file within the Document Submission Tool Job.

4   If the PostScript file is <u>NOT the first file</u> within the Document Submission Tool Document List and contains settings for: Collation, Folding, and Copies

The settings within the Document Submission Tool will always take precedence over what is set within the PostScript file, the 8830 and the 8825. The Document Submission settings will be considered JOB parameters and be applied to EVERY file within the Document List.

The setting for copies within the PostScript file is applied to ONLY the PostScript file regardless of the copies setting within Document Submission Tool.

EXAMPLES:

With Copies and Collation set in DST and a PostScript file is first in the Document List.

```
1. Your settings within Document Submission Tool are:
      Copies=2
       and the Documents within the Document List are:
      <PostScript file>
      <Non-PostScript file #1>
      <Non-PostScript file #2>

    Your output is:
     6 copies of  - <PostScript file>
     2 copies of  - <Non-PostScript file #1>
     2 copies of  - <Non-PostScript file #2>

   This is caused by the PostScript file containing the settings:
      Collation=False
      Copies=3

2. Your settings within Document Submission Tool include:
      Copies=2
       and the Documents within the Document List are:
      <PostScript file>
      <Non-PostScript file #1>
      <Non-PostScript file #2>

    Your output is:
     1 copy of  - <PostScript file>
     1 copy of  - <Non-PostScript file #1>
     1 copy of  - <Non-PostScript file #2>
     1 copy of  - <PostScript file>
     1 copy of  - <Non-PostScript file #1>
     1 copy of  - <Non-PostScript file #2>
     1 copy of  - <PostScript file>
     1 copy of  - <Non-PostScript file #1>
     1 copy of  - <Non-PostScript file #2>

   This is caused by the PostScript file containing the settings:
      Collation=True
      Copies=3
```

With Folding set in DST and a PostScript file is first within the Document List.

```
3. Your settings within Document Submission Tool include:
      Fold  ISO - 210mm
       and the Documents within the Document List are:
      <PostScript file>
      <Non-PostScript file #1>
      <Non-PostScript file #2>

    Your output is:
     1 copy - <PostScript file>
     1 copy - <Non-PostScript file #1>
     1 copy - <Non-PostScript file #2>

     ALL files NOT folded.

This is caused by the PostScript file containing a setting to NOT fold
the documents and send the documents to the bridge.
```

```
4. Your settings within Document Submission Tool are:
     Fold - Folder Bypass
      and the Documents within the Document List are:
     <PostScript file>
     <Non-PostScript file #1>
     <Non-PostScript file #2>

   Your output is:
    1 copy - <PostScript file>
    1 copy - <Non-PostScript file #1>
    1 copy - <Non-PostScript file #2>

    ALL files are FOLDED.
```

This is caused by the PostScript file containing a setting to fold the documents and NOT to send the documents to the bridge.

With Collation set in DST and a PostScript file is first within the Document List.

```
5. Your settings within Document Submission Tool include:
     Collation = ON
     Copies=3
      and the Documents within the Document List are:
     <PostScript file>
     <Non-PostScript file #1>
     <Non-PostScript file #2>

   Your output is:
    3 copies - <PostScript file>
    3 copies - <Non-PostScript file #1>
    3 copies - <Non-PostScript file #2>
```

   This is caused by the PostScript file containing a setting to NOT collate the documents.

```
6. Your settings within Document Submission Tool are:
     Collation = OFF
     Copies=3
      and the Documents within the Document List are:
     <PostScript file>
     <Non-PostScript file #1>
     <Non-PostScript file #2>

   Your output is:
    1 copy - <PostScript file>
    1 copy - <Non-PostScript file #1>
    1 copy - <Non-PostScript file #2>
    1 copy - <PostScript file>
    1 copy - <Non-PostScript file #1>
    1 copy - <Non-PostScript file #2>
    1 copy - <PostScript file>
    1 copy - <Non-PostScript file #1>
    1  ript file containing a setting to collate the documents.
    2  Scan to Net Preview Image Files in JPEG Format
```

5.2.8 Preview images for scan to net operations are stored in a JPEG compressed format.

NOTE: The JPEG algorithm is the sixth public release of the Independent JPEG Group's free JPEG software. The JPEG software is the work of Tom Lane, Philip Gladstone, Luis Ortiz, Jim Boucher, Lee Crocker, Julian Minguillon, George Phillips, Davide Rossi, Ge' Weijers, and other members of the Independent JPEG Group. IJG is not affiliated with the official ISO JPEG standards committee.

5.2.9 Using the WebPMT

The webPMT allows the user to view and administer the AccXES controller's print queue and parameters settings via a web browser. The following list will help the user understand the operation of the webPMT better.

- **"Show Active Jobs" checkbox does not persist.**

  Once you select the "Show Active Jobs" checkbox on the webPMT Job Queue page, it will revert back to the unchecked state anytime you leave the Job Queue page for another page and then return to the Job Queue page.

  This is due to the "stateless" nature of http webPMT transactions. The web server has no knowledge of user selections once the page has been returned to the client (user). The "Show Active Jobs" checkbox is not a global parameter that is maintained within the printer.

- **String value of "0" cannot be assigned to text fields.**

  This affects the following fields: NETWORK-EtherTalk Zone, NETWORK-NetBeui Group, NETWORK-NetBeui Remark, NETWORK-IPX Primary Server, NETWORK-IPX NDS Tree, NETWORK-IPX Context Name, PRINTER SETUP-Plot Label-label.

  A bug in the server treats a null entered string as having a length=1 and a value="0". Thus, the webPMT cannot distinguish between a text entry of "0" and a text entry of NULL. Since being able to blank out a text field string is a much more common operation, it takes precedence over entering "0".

- **Receive "Printer has been updated" message even though no changes were made.**

  If the user presses the "Update Printer" button the webPMT will return a message that the printer was updated.

  Because of the "stateless" nature of the http protocol and the fact that no events are generated (html) when text values are entered or items are selected, the webPMT cannot distinguish a page that has been modified from one that has not been modified. When the "Update Printer" button is pressed, all the data on the form is gathered and sent to the server. If the data is valid, the printer is updated and the message is returned.

- **When a new Pen Pattern is loaded into the custom user pattern slots (50-63) the new pattern does not show up in the Pen Pattern table.**

  After loading a new pen pattern to one of the custom user slots, the user must press the Refresh button on the Pen Patterns page to force the browser to capture the new pattern from the printer instead of from the browser cache area. A subsequent return to the Pen Patterns page will display the new pattern correctly. (See note below).

- **Pen Patterns page may not refresh correctly in Netscape only.**

    After loading any of the custom user patterns (50-63), the user must press the Refresh button on the browser in order to view the pattern just loaded (for both Netscape and Internet Explorer). Once the user exits the Pen Patterns page and then returns to it, the custom pattern should automatically be displayed. This does not occur when using Netscape.

    Due to the way caching is implemented in Netscape, each time the user returns to the Pen Patterns page, the Refresh button on the browser must be pressed to display the current custom patterns correctly.

- **When querying for all accounts (-1 option), Job Accounting tables may not load properly when using Netscape.**

    Loading very large accounting tables under Netscape can cause the webPMT application to crash, or depending on the client computer, can take extremely long times to load the data.

    This appears to be a problem with table rendering in the Netscape browser. This is not a problem when using Internet Explorer 4.0. If the user must use Netscape and experiences this problem, an alternative is to save the account information directly to disk by using the user interface at the printer. Once saved, this file can be viewed with any common text editor.

- **No error message is displayed if an invalid stamp file is uploaded to the printer.**

    If the user tries to upload a stamp file that contains an invalid format, the webPMT will report that the file was uploaded successfully.

    The webPMT has no knowledge of the validity of any file that is sent to the printer. File validation and error handling is done on the printer by the AccXES controller. The webPMT only reports that the file was sent to the printer successfully – not that a raster stamp was actually created. Note that if the raster stamp was not created, it will not appear in the webPMT stamp list.

- **The webPMT user manual seems to imply that a maximum of 5 users can access the printer at any one time.**

    This is not correct. The webPMT can support many users. The confusion in the documentation arose from early technical statements regarding the fact that the webPMT will accept as many as 5 requests for connections before further requests are rejected. This value is per process – the webPMT server supports concurrent multiple processes. Each process would need to be busy with clients, and each process queue would need to be full (with 5 pending and not yet processed) requests before any connections would be rejected.

- **The printer password appears in the location (address) bar of the web browser.**

    When a user types in a password in the text box, an asterisk is displayed for each digit entered. But when the "Update Printer" or "Submit" button is pressed, the password value is displayed on the web page in the location bar of the browser.

    The initial release of the web server only supports http "GET" protocols. The result of this is that any data entered on any field of a web page will show up in the location box of the browser once the "Update Printer" or "Submit" button is pressed.

- **There is a Pen Pattern discrepancy: the old PMT and the printer test page have patterns 0-64. The webPMT has patterns 0-63.**

  The webPMT indeed has one less available custom user pattern slot. This should be corrected in a future release. As a result, user patterns are limited to slots 50-63.

- **Modifying the print job priority with the webPMT reports that the priority was changed successfully but the job queue on the webPMT main page shows the original priority unchanged.**

  If a user modifies the job priority, the webPMT only guarantees that the parameter in the printer that specifies the job priority value has been changed successfully. It does not guarantee that the printer will be able to accommodate the new priority. It is the case that most of the time, the print job will be at a point in the printing process at which any new priority request is ignored.

- **Cannot load Pen Palette (.XPP) files that were saved using the old PMT client software.**

  The webPMT will report Pen Palette load failures when attempting to load Pen Palette files that were saved using the old PMT software.

  The old PMT stores RGB values in reverse order compared to that of the webPMT and PJL spec, and therefore, to maintain reliability, does not handle old PMT .XPP files.

- **The webPMT returns an error page: "Server Error – 503" when pressing the Update Printer button on the Printer Defaults->Printer Setup->Plot Labels page.**

  This error page is generated because the **Plot Label** field contains a label length that exceeds the maximum length supported by the webPMT. The current version of the webPMT can reliably handle plot label lengths of 255 characters. Label lengths greater than 255 characters can cause the update to fail.

5.2.10 Appletalk port creation on windows NT

When creating an appletalk port on a Windows NT computer the setting for "Capture the port" MUST be "OFF". If this setting is "ON" Windows NT may send non-printable postscript packets to the printer that can cause it to issue error pages.

5.2.11 Manual Feed is ignored for page composition jobs

Although the media source of "Manual Feed" can be specified for composition jobs it will be treated as AUTO. If an appropriate roll of media is available it will be printed on that media otherwise the job will mismatch until the correct roll media is installed.

5.2.12 Manual Feed type must be set appropriately

When sending jobs to the manual feed shelf it is important that the media type of the job being sent matches the setting on the printer. If the printer expects to feed bond pages in the manual feed shelf and a job is submitted for vellum, the page will mismatch and prompt for the correct type.

5.2.13 Labels and Raster Stamps not positioned correctly on Manual Feed Page.

If labels or raster stamps are applied to a manual feed page they are positioned as if placed on a 36" wide document regardless of the specified page size.