

C.P. Bourg

Sfida HCS Release Notes
Version 3.0.43
09/10/02

Produced by the Sfida HCS Software Team

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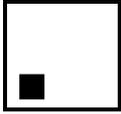
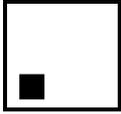


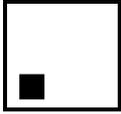
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Introduction

Revision 1.1 dated January, 7 1999 is used as starting base of this document. This matches with first specifications received from FSI Systems inc. Previous versions were implemented according to Xerox Limited FFIU specifications. These previous versions were not under revision control and are archived by date. If needed, information can be obtained by contacting the author of this document (Jean-Marc Revets).

Software Install Procedure

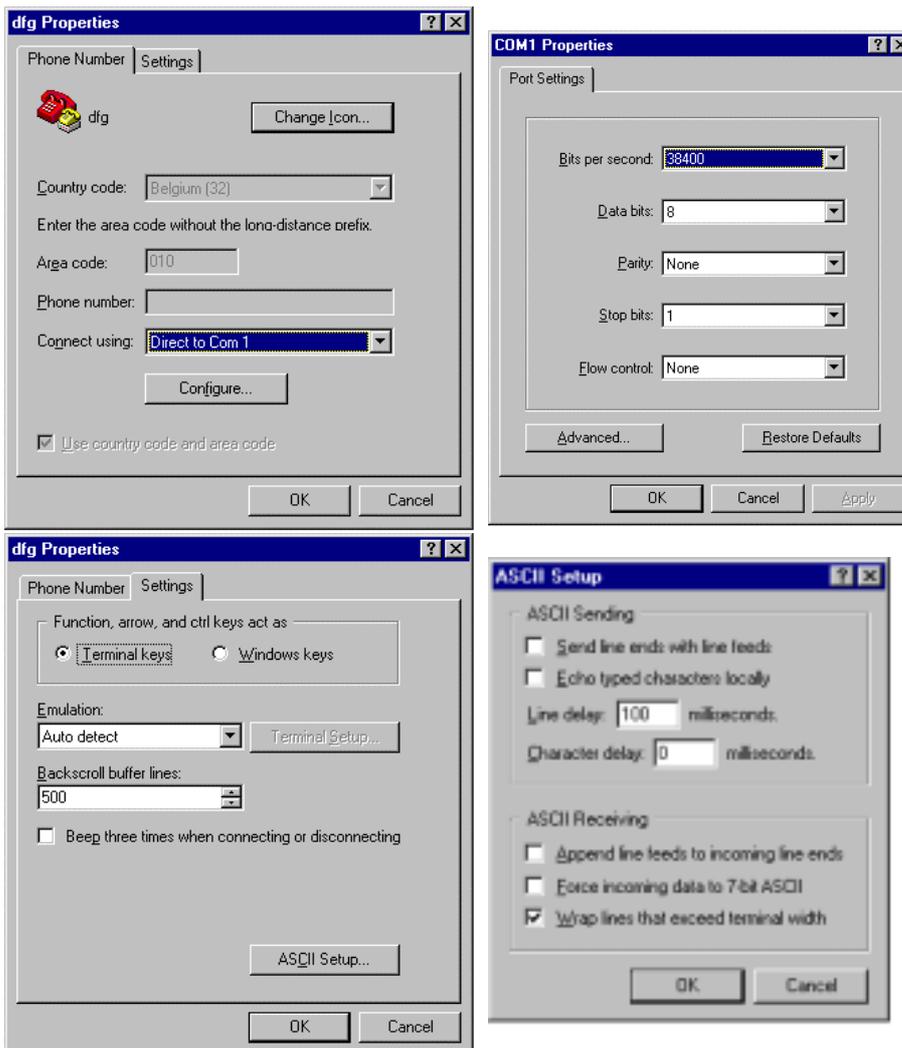
Required Hardware

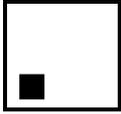
- Custom Serial Cable (Provided with HCS), PC with a serial port capable of 38400 baud.

Required Software

Note: These instructions are for a PC running Windows 95/98. Instructions may vary for other operating systems (Windows NT 4.0).

- Sf3039.m16 file
- HyperTerminal with following settings:





Procedure

1. Connect HCS Software Download Cable (provided) between PC serial port and HCS Serial port.
2. Start HyperTerminal (Start, Programs, Accessories, HyperTerminal, HyperTerminal).
3. Use File, Properties, Configure to setup the HyperTerminal settings to 38400 bits per second, 8 data bits, no parity, 1 stop bit, no flow control.
4. Use File, Properties, ASCII Setup to setup ...
5. Select the Connect button 
6. Set switch SW2 on the daughter board to position 0
7. Press Reset button SW1 on the daughter board. The HyperTerminal window should display the following:

```
Board Identifier: FF
Dip value: 0
Press any key to continue
```

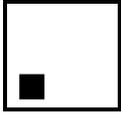
8. Press any key. The HyperTerminal window should display the following:

```
Hitachi monitor Rev: 1.0.0 date: 5/4/99
```

```
A      Check RAM
C      Compare FLASH content
D      Download motorola
E      Dump EEPROM
F      Check FLASH
H      This Help menu
I      Change board Identifier
M      Memory dump
R      Run program
```

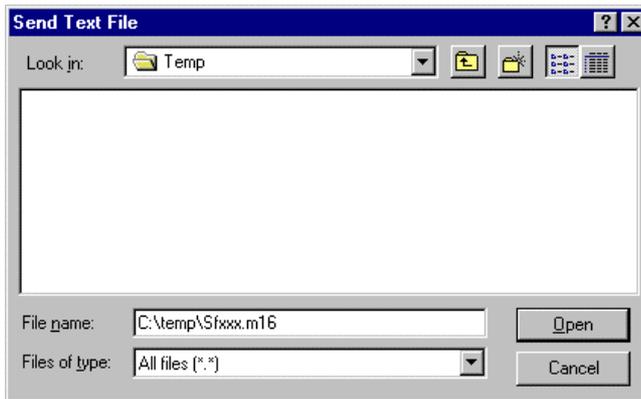
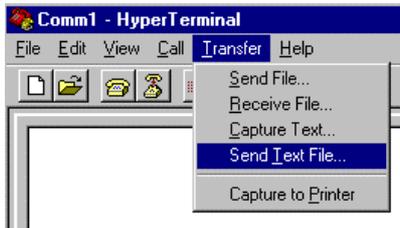
```
SH7032>
```

9. Press D for download

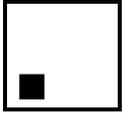


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10. In HyperTerminal, select *Transfer, Send Text File...*



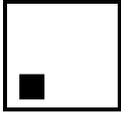
11. Select *Browse* button, and navigate to and double-click the software file, then click the *Send* button
12. When download is completed, the HyperTerminal window should display the following:
13. Set the switch SW2 to position 1 and press the RESET button SW1.
14. Disconnect HCS software Download Cable.



Helpful Information

Hardware Dependencies/Enablers

Software Dependencies/Enablers



New Features since 3.0.36

New Features in Release 3.0.37 (dated 16 April 2002)

Purpose: Release after first day of Workshop at XC to fix some problems in problem list from FX/XC.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Sample set stops delivering multiple Sheet Delivered with bad parameters
- Prevent error 212-252 to happen when clearing jam in stack area
- Fix Hard stop on all error added in 3.0.36. Now hard stop only on concerned errors

New Features in Release 3.0.38 (dated 17 April 2002)

Purpose: Release after second day of Workshop at XC to fix some problems in problem list from FX/XC.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Sheet Delivered holding feature for sample set made working
- Path manager module memory stack increased

New Features in Release 3.0.39 (dated 18 April 2002)

Purpose: Release after third day of Workshop at XC to fix some problems in problem list from FX/XC.

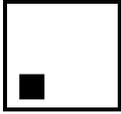
Compatibility: HCS B1 with unrolled sheet fix kit.

- At power up, also send Service Availability Purge/Bypass for delayed faults concerning stack area
- Clearance of sample set blinking display if not done on an End of Job
- Clearance of Top tray blinking LED if choosing sample set for a top tray job.

New Features in Release 3.0.43 (dated 10 September 2002)

Purpose: Release after discovery that Sheet Delivered messages were not being sent to IOT when Uncollate was selected.

- Sheet Delivered messages are now being sent to IOT if Uncollate mode is selected



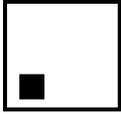
Software Areas Changed since Release 1.0

1.0 (dated 7 January 1999)

Purpose: This revision was released with P0 HCS sent at Xerox facility.

Compatibility: P0 HCS hardware compatible.

- RTOS use
- CAN Incoming/outgoing mechanism
- Multiple CAN messages handling
- Low level CAN configuration
- Outgoing functions (compliant with first FFIU spec draft from FSI systems inc.) :
 - ◆ Pong
 - ◆ EndOfChain
 - ◆ ServiceAvailability
 - ◆ ServiceAccept
 - ◆ ConnectionRequest
 - ◆ SheetDelivered
 - ◆ ServiceReject
 - ◆ Fault
 - ◆ DeviceInfo (multiple CAN message)
 - ◆ NetworkAvailability
- Incoming functions (compliant with first FFIU spec draft from FSI systems inc.) :
 - ◆ ServiceRequest (multiple CAN message)
 - ◆ Ping
 - ◆ Connected
 - ◆ Initialise
 - ◆ CycleUp
 - ◆ CycleDown
 - ◆ DeleteJob
 - ◆ InfoRequest
- RS232 Incoming/outgoing mechanism
- Low level RS232 configuration
- HCS information structure (compliant with first FFIU spec draft from FSI systems inc.)
- Dolly Regulation Low level configuration and control (up, down, at bottom, at top)
- Dolly setup when home position reached, PWM setting
- Dolly regulation during process
- Flip Wheel Low level configuration
- Flip Wheel Interrupt code
- Flip Wheel Reset, setup and process trajectories use
- Flip Wheel Delay before (motor boost) and after flip
- Flip Wheel Trajectory definition
- Input / Output access Low level configuration
- Keyboard Low level configuration and protocol
- Maintenance protocol (according to document Sfida_Func_desc_04b.doc)
- Keyboard simulation (using PC with Simulation program under Win95)
- Machine control and debug using RS232
- Stepper motors interrupt and configuration
- Motors Pulse rate definition
- Motors Input/Output control (start/stop)
- Translation table motor control (start/stop)
- Offset Table Stepper motor interrupt and configuration
- Offset Table Motor control (start/stop/direction/reset according to paper format)
- Offset Table Trajectory definition (offset of 15 mm)
- Offset generated on sheet passing on switch, on demand using maintenance or debug



- Initialization process
- Debounced input mechanism
- Inputs filtering during process
- Low level micro-processor configuration
- Interrupt level definition
- I/O definition

1.1 (dated 13 May 1999)

Purpose: This release was left as simulator during Workshop at Xerox facility. This simulator runs on a single board with full CAN and RS232/422 communication functionality.

Compatibility: P0 HCS hardware compatible.

- CAN low-level bug fixes
- CAN Frame bit TX/RX bit used as specified in FFIU spec draft 4.1
- CAN functions format changed to meet FFIU spec draft 4.1
- NetworkAvailability removed
- StateInformation added
- SheetExit added
- ServiceRequest reduced to a single CAN frame.
- RS232 Written in a more modular form with RTOS use improvement.
- New device information storage according to FFIU spec draft 4.1
- Use of RS422 communication port with RS422 adapter and Keyboard simulator program under Windows 95.
- Use of new defined structures for Keyboard communication.
- RTOS bug fixes and improvement

1.2 (dated 12 August 1999)

Purpose: This release was left as simulator during debug session at FSI facility. This simulator runs on a single board with full CAN and RS232/422 communication functionality. From communication point of view, no fault case A compliant.

Compatibility: P0 HCS hardware compatible.

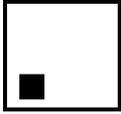
- Some CAN functions now control the HCS:
 - ◆ Connected
 - ◆ Initialise (StateInformation returned not relevant)
 - ◆ Service Request (destination parameter only used)
 - ◆ CycleUp (only starts motors and set selected path)
 - ◆ CycleDown (soft cycledown is only a delayed cycle down of 2.5 sec)
- Update of read inputs bug fix
- Some debug functions modified and bugs fixed.
- Delayed actions mechanism implemented and applied to simulated actions for FFIU SuperSim debug.
- Chained device activation

1.3 (dated 2 September 1999)

Purpose: This revision was released with P0+ HCS sent at Xerox facility. No fault case A compliant. HCS driven by SuperSim

Compatibility: P0+ HCS hardware compatible. P0 HCS hardware NOT compatible.

- ServiceRequest: offset table reset position according to paper format limits (2 different positions)
- CycleUp: handles new motors
- SheetExit: SheetDelivered sent after delay of 1 sec, and EndofSet bit generates an offset.
- Dolly presence security check
- Debug information modified
- Flip Wheel Interrupt code changed to free some resources. These resources are used to generate PWM for fans control.



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- New motors management by using keyboard
- Interrupt code changed to control new DC motor (using an E2pot for DC command control).
- Fan PWM control implemented.
- Speed regulation implemented

1.4 (dated 13 October 1999)

Purpose: Released after integration debug at Xerox facility.

B0 HCS specific code under development disabled

Compatibility: P0+ HCS hardware compatible. P0 HCS hardware NOT compatible.

- Some CAN debug information removed, also at low level.
- Flip Wheel Interrupt code bug fix.
- Flip Wheel Delayed actions bug fix.
- New keyboard communication with new protocol.
- Keyboard initialization
- Task priorities changed.
- Some resources protections added.
- Delay before offsetting added to improve stack quality on P0+ HCS
- Interrupt priorities bug fix.

1.5 (dated 26 October 1999)

Purpose: This revision was released with B0 HCS sent at Xerox facility.

Compatibility: B0 HCS hardware compatible. P0, P0+ HCS hardware NOT compatible.

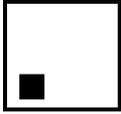
- CAN New hardware management.
- Some CAN debug information modified.
- New improved regulation mechanism for Dolly
- Delay before flip changed.
- I/O matching new hardware
- Keyboard Shortcuts implemented to show keyboard ability:
 - ◆ 0: Stop all motors.
 - ◆ 1: Start in proof tray
 - ◆ 2: Start in bypass
 - ◆ 3: Start in Stacker
 - ◆ 8: Some digit flashing on display
 - ◆ 9: Display off
 - ◆ #: All LED's on
 - ◆ C: All LED's off
- Please wait LED and Ready to open LED active
- RS232 Debug functions modified to manage new hardware.
- Fans start at full speed for 2 seconds then slow down to steady speed (changed to full speed).
- Speed regulation disabled because, with new hardware, generates unacceptable speed variation (to be fixed).
- New Offset Table reset matching new hardware
- Dolly management implemented (go down when open key pressed, go up when door closed).
- Door lock managed.
- Debug information modified
- New setup according to new hardware and new dolly regulation.
- Interrupt priorities bug fix.

2.0.1 (dated 22 November 1999)

Purpose: This revision adds a burn-in test mode, a bug fix in the next device detection, a delay in soft cycle down and a jam detection.

Compatibility: B0 HCS hardware compatible. P0, P0+ HCS hardware NOT compatible.

- Offset Table Reset zero position modified.



- CAN messages only handled if device powered by FFIU (not by diagnostic switch)
- Next device detection bug fix.
- Some debug information modified.
- Jam Detection New feature implemented
- Some Keyboard LEDs handled during process
- Software revision displayed at initialization (instead of keyboard revision)
- Burn-in test mode added
- Offset mechanism reviewed
- Delay before flip modified

2.1.1 (dated 1 December 1999)

Purpose: This revision adds maintenance using the keyboard (see maintenance document)

Compatibility: B0 HCS hardware compatible. P0, P0+ HCS hardware NOT compatible.

- JAM clearance bug fix
- All Keyboard commands described in maintenance document implemented

2.2.1 (dated 20 December 1999)

Purpose: This revision adds Case A features, some changes matching new hardware, some bug fixes

Compatibility: B0 HCS with new flip wheel mechanism hardware compatible. P0, P0+ HCS hardware NOT compatible.

- New profile according to new flip wheel mechanism
- Old simulated sheet delivered removed
- Case A support for Connection Request, Finisher Mode
- Shutdown (soft) made after last sheet delivered
- CAN transmit on error no more endless
- Zero position moved 5 mm inside the machine
- New zero positioning mechanism (to match new paper format limits)
- Sheet offset synchronized with last sheet of a set.
- Case A ability of start of set.
- Case A features implemented
- Keyboard Backspace effective.
- LED maintenance control added
- Case A mode can be set using keyboard
- Tasks initialization for burn-in mode bug fix

2.2.2 (dated 20 december 1999)

Purpose: This revision gives the ability to execute the old flipping wheel trajectory to test new software on not upgraded HCS

Compatibility: B0 HCS with new flip wheel mechanism hardware compatible. P0, P0+ HCS hardware NOT compatible.

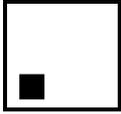
- Old flip wheel profile added.
- New maintenance code using keyboard.

2.2.3 (dated 03 february 2000)

Purpose: This revision was sent to show first error codes sent to IOT by HCS to determine the need or not of a workshop.

Compatibility: B0 HCS with new flip wheel mechanism hardware compatible. P0, P0+ HCS hardware NOT compatible.

- Flip Wheel Reset new profile adapted to new hardware
- Jam Detection faults sent to IOT
- Top Cover open and Door open faults sent to IOT
- Modules for service control implemented (1 task per module)



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- Dolly going up timing check added
- Keyboard displayed info bug fix
- Debug information modified
- Offset position restored after a hot reset

2.2.4 (dated 07 february 2000)

Purpose: This revision was sent for testing during travel to Xerox facility for Workshop. Fault clearance and Service availability check added.

Compatibility: B0 HCS with new flip wheel mechanism hardware compatible. P0, P0+ HCS hardware NOT compatible.

- Service Availability real check implemented
- Fault clearance added

2.2.2B (dated 11 february 2000)

Purpose: This revision released after 2.2.4 to test new offset stepper motor ramps with a known and well tested revision (2.2.2). 2.2.3 and 2.2.4 do not include these new ramps.

Compatibility: B0 HCS with new flip wheel mechanism hardware compatible. P0, P0+ HCS hardware NOT compatible.

- New Offset Table Stepper motor trajectory.

2.2.5 (dated 12 february 2000)

Purpose: This revision was released after workshop in Webster.

Compatibility: B0 HCS with new flip wheel mechanism hardware compatible. P0, P0+ HCS hardware NOT compatible.

- New Offset Table Stepper motor trajectory.
- Keyboard Ready LED managed
- Service Availability check bug fixed
- CAN Pong command moved to interrupt code for faster response timing
- Swap of sheet width and length parameter according to the SOD
- Dolly unexpected stop bug fix
- All SOD faults implemented
- New faults codes added (not in SOD, need FX agreement)
- Only first detected jam code displayed and sent to IOT
- Error codes shown on keyboard display
- Diagnostic mode entry allowed when powered by IOT (fault code sent to IOT)

2.2.5D (dated 21 february 2000)

Purpose: This revision was released as a 2.2.5 demo version which has “double flip” bug fix and jam detection disabled.

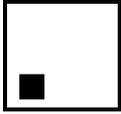
Compatibility: B0 HCS with new flip wheel mechanism hardware compatible. P0, P0+ HCS hardware NOT compatible.

- Initialization sequence back to 2.2.4 (no real service availability check)
- “Double flip” problem fixed
- Tray can not be lowered while in diagnostic mode bug fix
- Jam detection disabled

2.2.6 (dated 23 february 2000)

Purpose: This revision was released for first 5 ECAT machines.

Compatibility: B0 HCS with new flip wheel mechanism and with new table exit sensor position hardware compatible. P0, P0+ HCS hardware NOT compatible.



- Swap of sheet width and length parameter to be able to work with the Supersim, this is NOT SOD compliant. Supersim bug found preventing to do complete paper tests.
- New Table Exit Sensor support
- Offset done on wrong sheet for sets of more than 2 sheets bug fix
- Great paper format false jam bug fix

2.2.6B (dated 13 march 2000)

Purpose: This revision is sent untested to correct Case A output selection bug.

Compatibility: B0 HCS with new flip wheel mechanism hardware compatible. P0, P0+ HCS hardware NOT compatible.

- Burn-in bug fixed and offset frequency changed.
- Unknown error (link = 000) bug fixed.
- NVM support for Case A selection storage.

2.2.7 (dated 14 April 2000)

Purpose: This revision was used for High Volume Testing and fully Case A compliant.

Compatibility: ECAT machine only. Case A mode SOD/IFD's compliant

- Timings changed to match hardware changes i.e. new sensors positions. This includes new delay before starting flip wheel.
- Service Availability check restored and improved.
- Special Service Availability added for Case A restart after jam.
- Case A Service Request override bug fix.
- Transparencies support added.
- HCS initialized when Top Cover is closed.
- Service check during Cycle Up, if not ready no start and return to standby state.
- Jam detection page info clear bug fix.
- RTOS security improved.
- When stack path selected, table area LED on instead of flip area LED.
- Tray down authorized at Power On or in diagnostics mode.
- On jam, input diverter/clutch changed after sheet leaving input sensor to keep top tray path clear.
- On full, tray lowers automatically and door unlock.
- Error 212-900 added (paper remain at start-up).
- High FAN voltage prototype board support.

2.2.8 (dated 15 May 2000)

Purpose: This revision corrects 2 bugs and add some new features. Running at DRUPA.

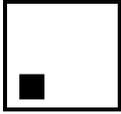
Compatibility: ECAT machine only. Case A mode SOD/IFD's compliant

- Elevator stuck down bug fix.
- Offset table does not home after init bug fix.
- New error code 212-254 for Offset home error.
- New error code 212-544 for area 5 baffle sensor open.
- Force reset at cycle up if destination changed at UI (case A related).
- Local UI stack LED flashes on nearly full.
- With error 212-900, LED's corresponding to area with paper under sensor flash.
- When jam detected, all concerned jam area's LED's flash.
- Stack related errors are not reported when HCS is sending sheets to Top Tray (only for case A).

2.2.8B (dated 14 June 2000)

Purpose: This revision ignores bad error reporting from hardware (Tray fuse report) which was preventing an error recovery.

Compatibility: ECAT machine only. Case A mode SOD/IFD's compliant



- Fuse report error ignored.

2.2.9 (dated 16 June 2000)

Purpose: This revision is a pre-release for full function release, allowing more testing before integration.

Compatibility: ECAT machine only.

- Offset on wrong page in full function mode bug fix.
- Paper stack cleared before opening of the door for easier tray removal
- Some StateInformation and ServiceAvailability messages added for IFD compliance
- Jam detection windows 100 ms wider for paper test in full function mode.
- Cycle down improved in case of jam.
- Ready LED correctly handled.
- Mimic display LED's behavior back to previous situation matching description document received.
- New diagnostics codes and control implemented.
- New error codes according to new SOD/emails.
- Fuse report error still ignored.
- Routines for new sheet acceleration hardware test.

2.2.10 (dated 21 June 2000)

Purpose: This revision fixes problems found during integration workshop (end of June).

Compatibility: HCS B1

- Paper width and length definition changed (Supersim info not correct). This allow to pass all formats of paper.

2.2.11 (dated 22 June 2000)

Purpose: This revision fixes problems found during integration workshop (end of June).

Compatibility: HCS B1

- Automatic hard down implemented.
- Top tray full make top tray LED blink and full limit reduced to 100 sheets
- Error 212-900 that appears only once bug fixed.
- Device information updated
- Support of the FeatureMode command and IFD Purge state described in IFD implemented.
- Second level in display priority implemented

2.2.12 (dated 22 June 2000)

Purpose: This revision fixes problems found during integration workshop (end of June).

Compatibility: HCS B1

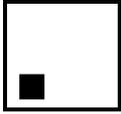
- Error 212-900 not at power on bug fix.
- ServiceAvailability repeated several times bug fix.
- No stacker initialization when top tray is selected.
- Error 212-154 changed to 254.

2.2.12B (dated 23 June 2000)

Purpose: This revision fixes problems found during integration workshop (end of June). Sent to FX for IOT SW test.

Compatibility: HCS B1

- New errors not displayed correctly on local UI bug fix.



2.2.13 (dated 23 June 2000)

Purpose: This revision fixes problems found during integration workshop (end of June).

Compatibility: HCS B1

- Error 212-100 implemented (timeout set to 500 ms).
- Revision display time at startups changed to 8 seconds

2.2.14 (dated 23 June 2000)

Purpose: This revision fixes problems found during integration workshop (end of June).

Compatibility: HCS B1

- Service not available not sent after switching to diagnostic mode bug fixed.

2.2.15 (dated 27 June 2000)

Purpose: This revision is full function release for B1 HCS hardware level. Note there was a 2.2.15 version dated 25 June that introduced new bugs just because of bad compiling. New compile fixed those

Compatibility: HCS B1.

- Small paper format bug fix (only appeared at maximum feed rate)
- After sending a job to top tray, Next offset information misplaced so offset not correct for 2 next sets. Fixed
- Pulse command of input diverter routines implemented but not active (just for test).
- Change of destination after end of purge not done bug fixed
- Full top tray sheet counting while stacking bug fixed

2.2.16 (dated 3 July 2000)

Purpose: This revision is full function release for B1 HCS hardware level at the end of integration workshop (end of June).

Compatibility: HCS B1.

- HCS only initialize when command received or in burn-in mode
- If tray not close to the top when raise asked, StateInformation command with parameter Almost Available sent
- Additional debug information sent through RS232

2.2.17 (dated 7 July 2000)

Purpose: This revision is full function release for B1 HCS hardware level at the end of integration workshop (end of June).

Compatibility: HCS B1.

- Offset bug fix

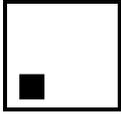
Note: due to critical timing for non volatile memory access, this revision does not run on some daughter boards (watchdog timing very short) and may continuously reset the program.

2.2.18 (dated 25 July 2000)

Purpose: This revision fixes problems found during tests at FX site.

Compatibility: HCS B1.

- FX HCS trouble list #10 fix: After a purge, sheet number and copy number are correct and marked as scratch sheet.
- FX HCS trouble list #11 fix: same reason as #10.
- FX HCS trouble list #12 fix: when Cycle up received while tray is descending does not make it ascending
- FX HCS trouble list #16 fix: HCS does not stop outputting B4 paper to the Top Tray
- FX HCS trouble list #18 fix: Device information changed to allow printing of 8.5x13 SEF paper
- FX HCS trouble list #19 fix: 212-150 not declared after a purge.
- FX HCS trouble list #26 fix: no 212-190 after a resume following a 212-105



- FX HCS trouble list #27 fix: error 212-541 not cleared before tray reaches lowest position.

3.0.1 (dated 3 July 2000)

Purpose: This revision is the same as 2.2.16 except it supports the unrolled sheet fix kit. Must be run on a machine with the kit installed.

3.0.18 (dated 10 August 2000)

Purpose: This revision is the same as 2.2.18 except it supports the unrolled sheet fix kit. Must be run on a machine with the kit installed. Last revision number identical as the same program that does not support the unrolled sheet fix kit.

Compatibility: HCS B1 with unrolled sheet fix kit.

- See 2.2.18
- New Non Volatile Memory access routines to avoid watchdog reset.

3.0.19 (dated 18 august 2000)

Purpose: This revision was not supposed to be released.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Internal test functions for fan PWM control.

3.0.20 (dated 25 August 2000)

Purpose: This revision fixes problems found during tests at FX site.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Fan PWM change according to type of paper, size and weight: If paper is coated and weight ≤ 150 gsm and size < 250.0 mm: voltage = 13.4V. If paper is coated and weight ≤ 150 gsm and size ≥ 250.0 mm: voltage = 12.4V.
- Unrolled sheet fix kit support in burn-in sequence.
- FX HCS trouble list #22 fix: Entering in diagnostics state only allowed in standby state.
- FX HCS trouble list #23 fix: jam error message replaced by error 212-900 if jam is the consequence of another error. (Note there is still a problem with the mimic display in that case).
- FX HCS trouble list #28 fix: 212-900 appear at power on
- FX HCS trouble list #29 fix: Closing door during top tray job does not freeze the IOT anymore
- FX HCS trouble list #30 fix: Some local fail errors cannot be cleared without POPO (not yet all of them).

3.0.21 (dated 29 August 2000)

Purpose: This revision fixes problems found during tests at FX site.

Compatibility: HCS B1 with unrolled sheet fix kit.

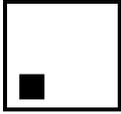
- Offset table position not reset if needed during service request / cycle up bug fix.
- FX HCS trouble list #15 fix: Ready LED not on after closing top cover.
- FX HCS trouble list #20 fix: At power on with door open, HCS does not go to standby state.
- FX HCS trouble list #21 fix: Error 212-251 declared after closing top cover with door open.
- FX HCS trouble list #25 fix: After power on with top cover open, no fault clearance.
- FX HCS trouble list #30 fix: Remaining local fail errors cannot be cleared without POPO.

3.0.22 (dated 17 October 2000)

Purpose: This revision fixes problems found during tests at FX site.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Fan PWM voltage changed to 17V if paper is uncoated and weight ≤ 150 gsm and size ≥ 250.0 mm.
- Speed regulation restored.



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- Pulse command of ipt and output diverter activated.
- Tasks not blocked if CAN messages can not be delivered.
- Burn-in sequence modified to see sheet acceleration transition.
- Test routines for another main motor controlled by PWM.
- If flip wheel error detected (with wheel in correct position), stack service does not become available after cover opened/closed.
- FX HCS trouble list #13 fix: When stack tray is ascending, HCS starts a top tray job without waiting for the tray to reach the top.
- FX HCS trouble list #23 fix: When 212-900 is issued following another error, mimic LED light on.
- FX HCS trouble list #25 fix: All services are declared available when closing cover after power on.
- FX HCS trouble list #31 fix: Top cover and door debouncing to avoid initialization interrupt.
- FX HCS trouble list #32 fix: HCS turn to purge not detected state at cycle down if purge failed.
- FX HCS trouble list #33 fix: No top tray jam LED clear when removing sheets from the top tray.
- FX HCS trouble list #34 fix: Immediate harddown on 212-190.

3.0.22B (dated 1 March 2001)

Purpose: alpha release to fix a problem at nearly full.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Not working!

3.0.22C (dated 13 March 2001)

Purpose: alpha release to fix a problem at nearly full.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Not working!

3.0.22D (dated 15 March 2001)

Purpose: Release to fix a problem at nearly full.

Compatibility: HCS B1 with unrolled sheet fix kit.

- IOT not blocked when HCS nearly full (appeared after IOT SW improvements)

3.0.22E (dated 20 April 2001)

Purpose: Release to support DFA.

Compatibility: HCS B1 with unrolled sheet fix kit.

- New multitasking kernel library (release 4)
- Bypass sheet delivered on trail edge replaced by a sheet exit on lead edge.
- 2 steps added at flip wheel reset trajectory because of wheel hardware profile
- Delay added in non volatile memory writing because non volatile memory chip changed

3.0.23 (formerly 3.0.22F) (dated 3 August 2001)

Purpose: Release to fix an offset reset not correct problem.

Compatibility: HCS B1 with unrolled sheet fix kit.

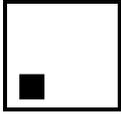
- Under some circumstances, offset table was not reset at correct position

3.0.24 (dated 19 November 2001)

Purpose: Closes points from FX problem list and improvements.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Faults hold until IOT is ready to receive these ones
- Help motor regulation by changing control value when changing destination (needs a factory setup)



- Ensure acceleration kit not activated when it should not (after a change of destination)
- Setup abort exits correctly to prevent IOT freezing
- Flip wheel not moving error detection added
- Diverter startup delay set to 2000 ms
- Service availability management improved
- No fatal error recovery without Power Off Power On
- Burn-in stops on flip wheel zero error

3.0.25 (dated 13 December 2001)

Purpose: DFA problems fix and Job streaming support.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Job streaming support
- New Revision Send/Display method implemented
- DFA problems by XC fixes

3.0.26 (dated 22 January 2002)

Purpose: fixes purge not working and scratch sheet numbers to 0.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Purging works.
- Scratch sheets are sent to the top tray, no longer stacked
- Scratch sheet sheet and copy number set to 0
- Revision on display with dots

3.0.27 (dated 23 January 2002)

Purpose: To allow running of AOS or N-set jobs.

Compatibility: HCS B1 with unrolled sheet fix kit.

- A new job with same JobId overwrites the old job to allow to run AOS or N-set jobs
- Scratch sheets sheet and copy numbers restored as received in sheet exit.

3.0.28 (dated 25 January 2002)

Purpose: Release to fix 3 minor problems found in 3.0.27.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Tray down not interrupted by a cycle up for bypass job
- Almost available service request sent when bypass cycle up received
- Services that are already available not repeated
- Sample set to the top tray basic present (under development)

3.0.29 (dated 29 January 2002)

Purpose: Release to fix mixed media problem and add sample set feature.

Compatibility: HCS B1 with unrolled sheet fix kit.

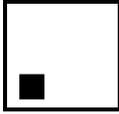
- Fixes the Mixed Media problem
- Sample set to the top tray feature added

3.0.30 (dated 11 February 2002)

Purpose: No fix.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Fix for Service Unavailable at initialize NOT WORKING.



3.0.31 (dated 12 February 2002)

Purpose: fixes Service Unavailable at Initialize.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Fix for Offset/Stack Service Unavailable at initialize

3.0.32 (dated 18 February 2002)

Purpose: Release to fix some problems in problem list from FX/XC.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Sheet delivered bad parameters are now correct (Good/Scratch sheet, Destination, Sheet/Copy number)
- Almost available service request sent when Offset/Stack cycle up received
- Prevent sending of Available Services while in Diagnostics mode

3.0.33 (dated 11 March 2002)

Purpose: Release to fix some problems in problem list from FX/XC.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Change errors report CAN address for errors delayed if detected at power up (but test revealed at wrong CAN address).
- Errors 212-253 and 212-254 not reported if during a bypass job running
- Service unavailable restored when going into diagnostic mode

3.0.34 (dated 13 March 2002)

Purpose: Release to fix some problems in problem list from FX/XC.

Compatibility: HCS B1 with unrolled sheet fix kit.

- Fix bad sheet info in sheet delivered when sheet is rotated
- Delayed errors sent with right CAN address
- Ready light ON if no table setup asked

3.0.35 (dated 25 March 2002)

Purpose: Release to fix some problems in problem list from FX/XC.

Compatibility: HCS B1 with unrolled sheet fix kit.

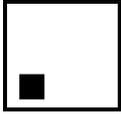
- Service availability report completely reviewed to report it when it must and not do it twice.

3.0.36 (dated 26 March 2002)

Purpose: Release to fix some problems in problem list from FX/XC.

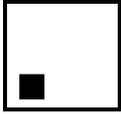
Compatibility: HCS B1 with unrolled sheet fix kit.

- Sheet delivered not sent to the top tray if running bypass with stack errors not cleared.
- Sheet delivered held when sending a sample set to the top tray until last stack sheet delivered
- Service unavailable sent on delayed errors



Caveats

Key Word	Caveat	Workaround



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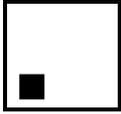
Released File name and size

FILE DESCRIPTOR

SIZE

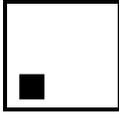
Sf3039.m16

627,606 bytes



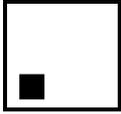
Non Volatile Memory Settings

Address (dec)	Setup Value (dec)	S/W Level Cut-in	Description
0			Validity Check Key
9	1		Data Integrity Flag
10	1		Case A Destination selection
11	666		Acceleration Delay
15	500		Deceleration Delay
19	0		Clutch Acceleration Delay
23	0		Clutch Deceleration Delay
24	HW link		FAN default PWM value
25	HW link		PWM Motor Level 0
27	HW link		PWM Motor Level 1
29	HW link		PWM Motor Level 2
31	HW link		PWM Motor Level 3



HCS Software problems closed since release 2.2.5

Problem Number	Problem Description	Solution Type	Status History
2.2.6	Offset made on wrong sheet with sets greater than 2 sheets	Fixed	
	Great paper format always cause a jam "sheet stuck"	Fixed	
2.2.6B	Case A destination selection does not activate the right path	Fixed	
	Faults with code 000 appear	Fixed	
	Burn-in stops after about 5 min	Fixed	
2.2.7	Jam detection does not work with transparencies	Fixed	
2.2.8	Elevator stuck down	Fixed	
	Offset does not home	Fixed	
2.2.9	Offset not correct in full function	Fixed	
2.2.10 – 3.0.39	See HCS integration problem list	Fixed	
	See XC Problem list	Fixed	



HCS Open problems in release 3.0.39

Problem Number	Key Word	Problem Description	Status
		Fuse report bad reporting ignored	Under investigation

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