FCO 512-00509A: Upgrade Magnus 400 Controller versions 1.02.392 and 1.04.393 to 1.05.394

Internal document number: 719-01013A Rev A

Product

- Kodak® Magnus™ 400
- Magnus® 400 E
- Magnus 400 Quantum

FCO priority

Next failure

Component Kodak Magnus 400 Controller software

Background

Upgrading the Kodak Magnus 400 Controller software from versions 1.02.392 and 1.04.393 to 1.05.394 installs the latest version software on the platesetter, including improved loading sequence parameters, but *without* the ability to use the new features included in version 1.05.394.

On platesetters with LDA configuration, when you upgrade the software you will be able to replace a faulty diode with any available diode in the laser diode array (LDA) using the improved cross-connection diode splicing method.

Note: To enable diode cross-connection, the LDA48_2 board (part number 503-00485A) must be installed on the platesetter.

Prerequisites

- Magnus 400 Controller 1.02.392 or 1.04.393
- LDA48 Board Assy Rev C (part number 503-00010C)
- FCO 512-00412A Tweezers assembly

Note: Magnus 400 Controller (Image disc) 1.14 *only*

Solution

Install the Magnus 400 Controller 1.05.394 software.

Time required Half-day

Parts required

Part Number	Part Name	Quantity
Software		
651-00902A	Magnus 400 Controller version 1.05.394 CD	1
651-00974A	FCO 512-00509A Upgrade Magnus 400 Controller versions 1.02.392 and 1.04.393 to 1.05.394 disc (FCO Updater)	1
Documentation		
719-01013A Rev A	FCO 512-00509A Upgrade Magnus 400 Controller versions 1.02.392 and 1.04.393 to 1.05.394	1

Procedure

Upgrading the Software

Note: To upgrade from Magnus 400 Controller 1.02.392 or 1.04.393 to version 1.05.394, it is not necessary to install a new image CD or to upgrade to a later version of Service Shell.

Before You Begin

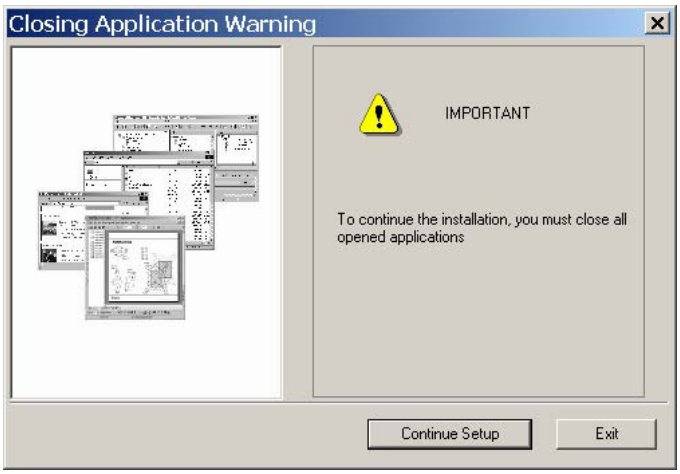
1. On the Magnus 400 Controller desktop, double-click the **MachineBackup** icon 

to save the registry and database files. See *Saving the Registry and Database Files* in the Magnus 400 Controller Cold Start Installation Guide (731-00804A).

   Note: For Magnus 400 Quantum platesetters with thermal 2 (TH2) heads, in addition to saving the registry and database files, you must also save the nonvolatile storage (NVS) parameters.
2. On the Operations toolbar, verify that the status indicator is **Ready**.
3. In the Magnus 400 Controller software, open the rear and right-side doors.
4. Quit the Magnus 400 Controller software, and close any other open software applications.

Upgrading the Software on a Magnus 400 (LDA) Platesetter

1. Insert the **Magnus 400 Controller Version 1.05.394** CD into the CD-ROM drive. When the Closing Application Warning dialog box appears, verify that all software is closed and click **Continue Setup**.



2. When the Magnus Family Installation Setup dialog box appears, click **Next**.

   The Customer Information dialog box appears.

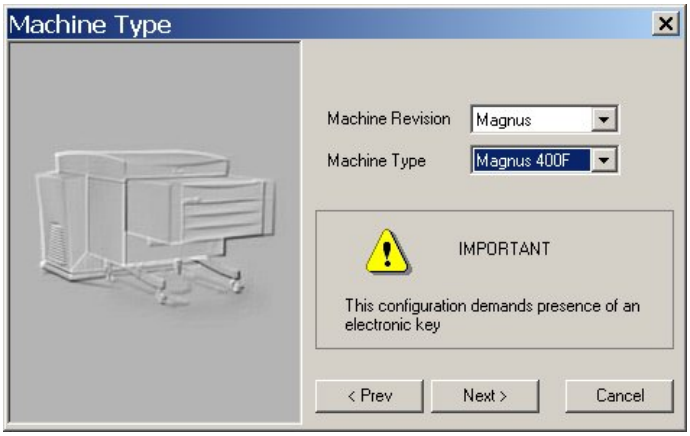


3. Type the following customer information, and then click **Next**.
   - **User Name**: (your user name)
   - **Company Name**: Kodak (or customer's name)
   - **Serial Number**: (the Magnus 400 platesetter serial number)

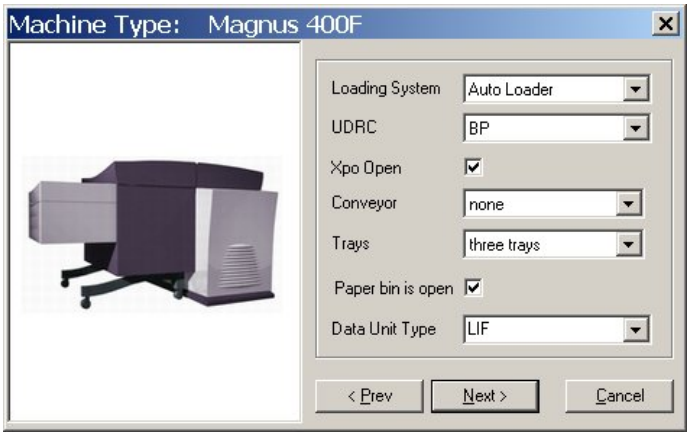
The Machine Type dialog box appears.



4. In the Machine Type dialog box, perform the following steps:
   a. The Machine Revision list is predefined and cannot be changed.
   b. In the Machine Type list, select the platesetter configuration that you are installing—for example, Magnus 400F.



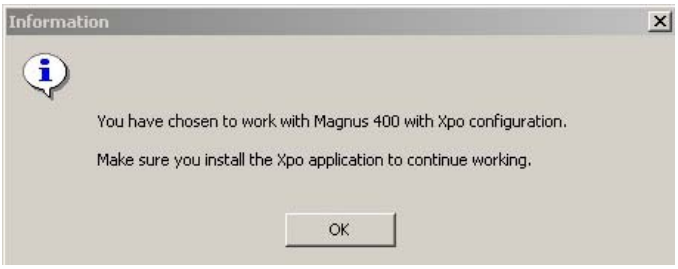
The Machine Type dialog box is refreshed, and the selected platesetter configuration appears in the title bar.



5. Perform the following steps, and then click **Next**.
   a. In the Loading System list, select Semi Automatic or Auto Loader.
   b. In the **UDRC** list, select **None**, **BP**, or **Other**.

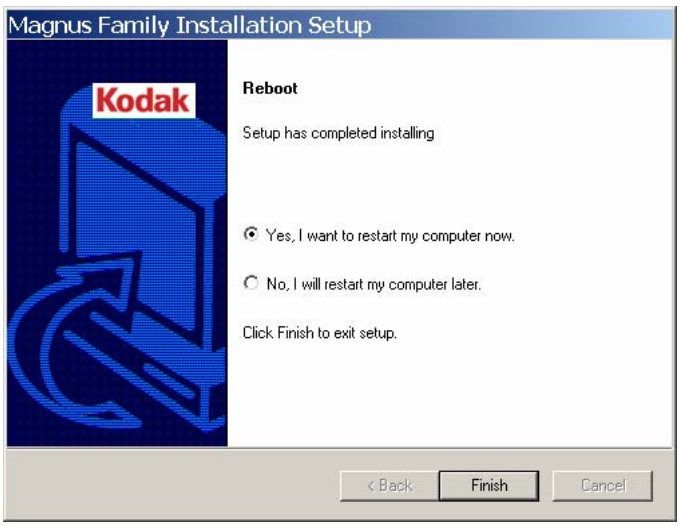
      Note: If you select BP, verify that the UDRC BP cable and the nozzle vacuum detector and wiring are installed on the platesetter.
   c. Select the **Xpo Open** check box.
   d. In the **Conveyor** list, select **none** or **Standard**.
   e. In the **Trays** list, select **one tray** or **three trays**.
   f. Select the **Paper bin is open** check box.
   g. In the **Data Unit Type** list:
      - If LIF Rev C is installed on the platesetter, select **LIF**.
      - If TSP is installed on the platesetter, select **TSP**.

   Note: When you click Next, a progress indicator appears, and then the following message appears. Click **OK**.



   The Magnus 400 Controller 1.05.394 software takes a few minutes to load.

   After the software is successfully installed, the Reboot dialog box appears.



6. Remove the **Magnus 400 Controller Version 1.05.394** CD from the CD-ROM drive and close all open platesetter doors.

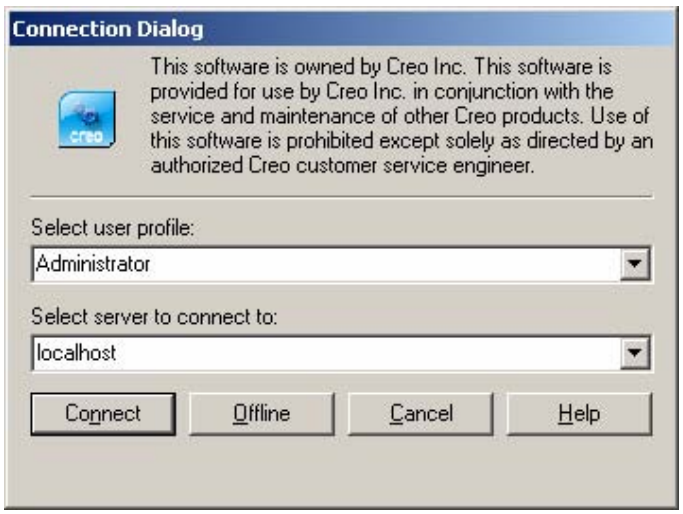
7. Select, **Yes, I want to restart my computer now** and click **Finish**.
8. For LDA configurations only: Install the Xpo 3.2 software. See Downloads on the Xpo for Magnus 400/Lotem 400 Xpose site on TechPlanet.
9. Add the LMCE board LP address to the host list.
   a. On the Magnus 400 Controller desktop, right-click **Start** and select **Explore**.
   b. In the Start Menu window, go to **C:\WINNT\system32\drivers**, and double-click the **etc** folder.
   c. In the C:\WINNT\system32\drivers\etc window, right-click and select **New > Text Document**.
   d. In Notepad, type the following text:

```
127.0.0.1       localhost
169.254.255.100 mce
```

Verifying Firmware Versions on a Magnus 400 LDA Platesetter

1. On the Magnus 400 Controller desktop, double-click the Service Shell Client icon .

   The Connection Dialog dialog box appears.



2. Click **Connect**.

   The Service Shell workspace appears.
3. On the left panel in the Service Shell workspace, click **Device Monitor**.
4. At the LMCE>> command prompt, type: `fw dir` and press ENTER.

   For platesetters with an LDA head (LMCE firmware), the following application versions should appear:

   - `MCE_MAIN: 1.04.01`
   - `MCE_LCA: 70.89`
   - `MCE_BOOT: 1.16.01`
   - `MCE_POST: 1.06`

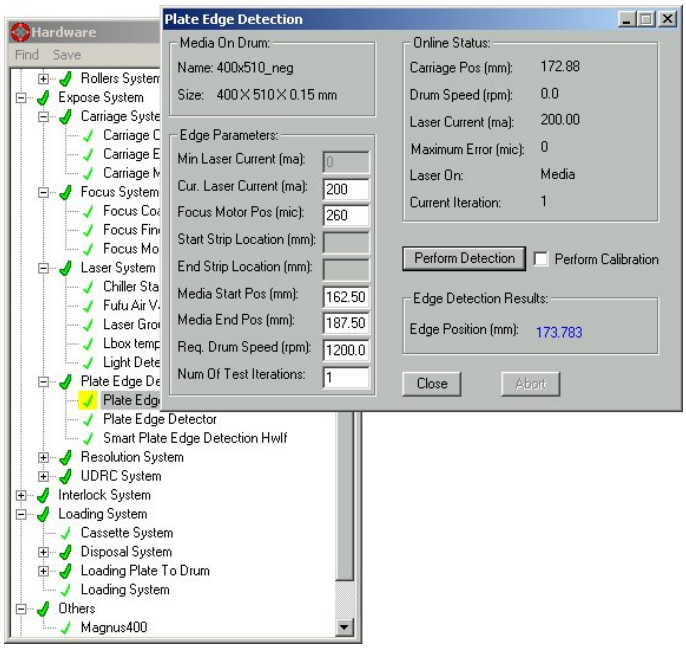
5. Quit the Service Shell workspace and start the Magnus 400 Controller 1.05.394 software.
6. If you do not have the correct firmware versions installed, see the *Magnus 400 Controller Cold Start Software Installation Guide* (731-00804A).

Calibrating Edge Detection

Note: The following procedure is for Magnus 400 LDA configurations *only*.

In version 1.05.394, when performing edge detection, the **Height Start Image Area** parameter is no longer used for calibration purposes. Therefore, after upgrading the software, you must manually perform edge detection calibration.

1. Load a plate.
2. Perform edge detection and write down the returned edge detection value.

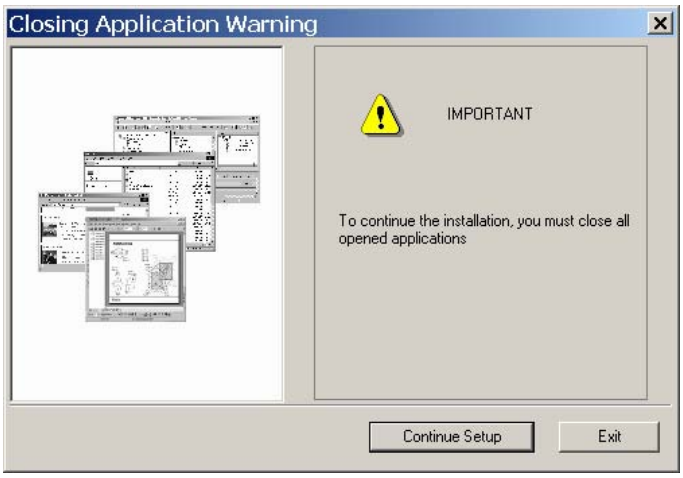


3. Open the rear door.
4. Measure the distance between the plate edge and the drum edge, using the following formula:

   <plate edge> – <distance between plate edge and drum edge> = <drum edge>
5. In the Magnus 400 Controller software, in the Hardware tree, go to **Others\Magnus400**. Right-click **Magnus400**, and select **Properties**.
6. In the Properties: Magnus400 dialog box, double click **+MACHINE**.
7. In the Properties: Magnus400/MACHINE dialog box, change the value of the **Drum Edge Position (mm)** to the new value.

Upgrading the Software on a Magnus 400 Quantum Platesetter

1. Insert the **Magnus 400 Controller Version 1.05.394** CD into the CD-ROM drive. When the Closing Application Warning dialog box appears, verify that all software is closed and click **Continue Setup**.



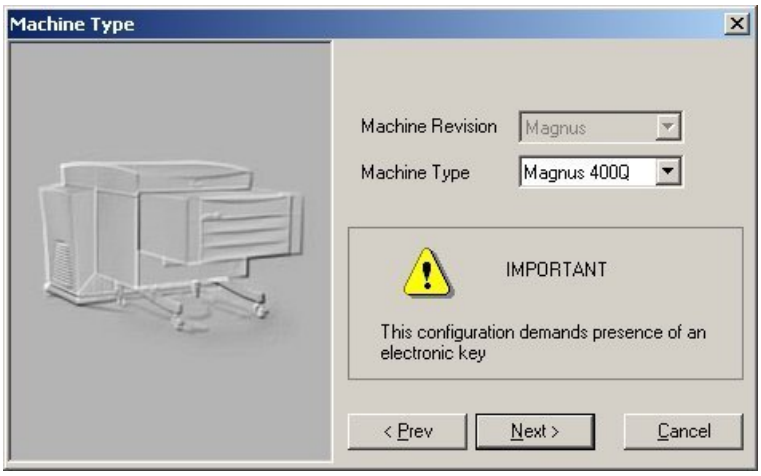
2. When the Magnus Family Installation Setup dialog box appears, click **Next**.

   The Customer Information dialog box appears.

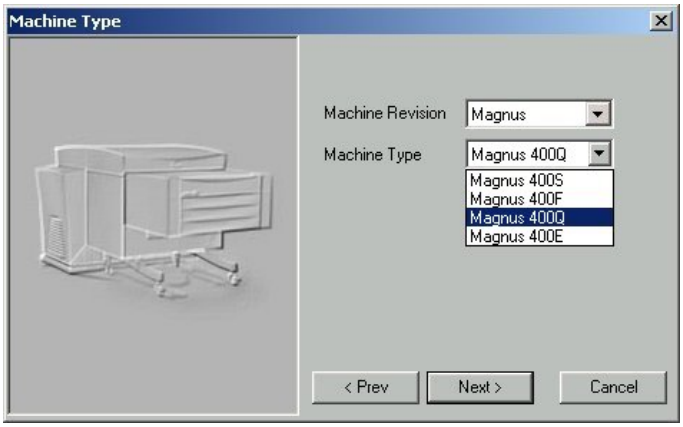


3. Type the following customer information, and then click **Next**.
   - **User Name**: (your user name)
   - **Company Name**: Kodak (or customer's name)
   - **Serial Number**: (the Magnus 400 Quantum platesetter serial number)

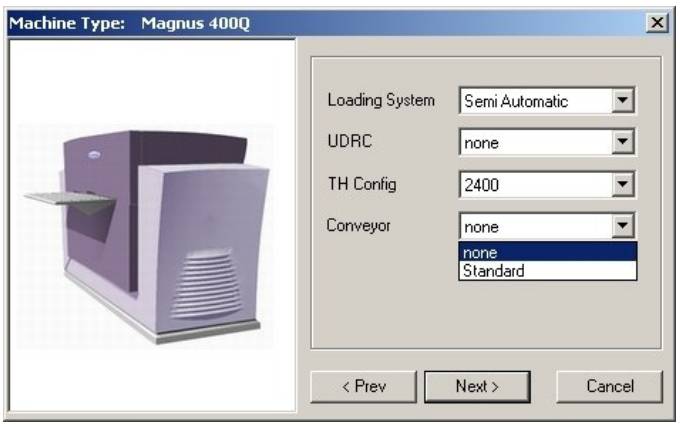
The Machine Type dialog box appears.



4. In the Machine Type dialog box, perform the following steps:
   a. The **Machine Revision** list is predefined and cannot be changed.
   b. In the **Machine Type** list, select **Magnus 400Q**.



The Machine Type dialog box is refreshed, and the selected platesetter configuration appears in the title bar.



5. Perform the following steps, and then click **Next**.
   a. In the Loading System list, select **Semi Automatic** or **Auto Loader**.
   b. In the **UDRC** list, select **None**, **BP**, or **Other**.

      Note: If you select BP, verify that the UDRC BP cable and the nozzle vacuum detector and wiring are installed on the platesetter.
   c. In the **TH Config** list, select **2400** or **2540**.
   d. In the **Conveyor** list, select **none** or **Standard**.

   The Magnus 400 Controller 1.05.394 software takes a few minutes to load.

   After the software is successfully installed, the Reboot dialog box appears.

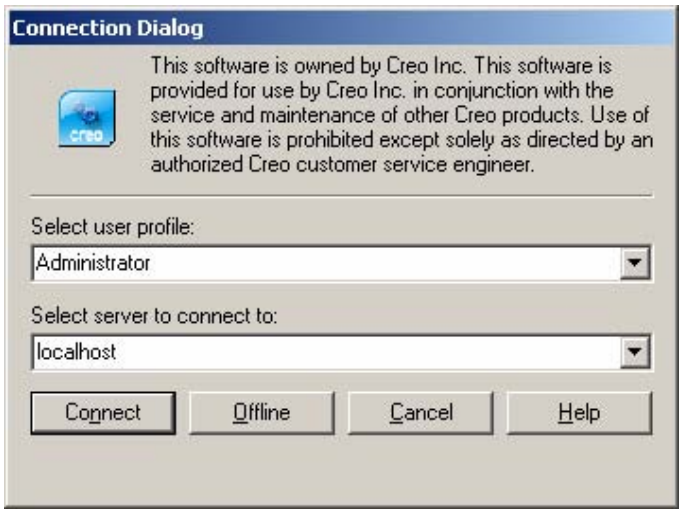


6. Remove the **Magnus 400 Controller Version 1.05.394** CD from the CD-ROM drive and close all open platesetter doors.
7. Select, **Yes, I want to restart my computer now** and click **Finish**.
8. If your platesetter is configured for center punch, to prevent image offset, you need to restore the Drum Edge Position (mm) parameter to its previous value (42).
   a. In the Hardware tree, go to **Others/Magus400**. Right-click **Magnus400**, and select **Properties**.
   b. In the Properties: Magnus400 dialog box, double-click **+MACHINE**.
   c. In the Properties: Magnus400\MACHINE dialog box, change the current value of the **Drum Edge Position (mm)** parameter to **42**.

Verifying Firmware Versions on a Magnus 400 Quantum Platesetter

1. On the Magnus 400 Controller desktop, double-click the Service Shell Client icon .

   The Connection Dialog dialog box appears.



2. Click **Connect**.

   The Service Shell workspace appears.

3. On the left panel in the Service Shell workspace, click **Device Monitor**.

4. At the `Quantum>>` command prompt, type: `fw dir` and press ENTER.

   For platesetters with a TH2 head (TMCE firmware), the following application versions should appear:

   - `MCE_MAIN: 1.40.00`

     Note: To use variable mainscan resolution (VMR), you must install firmware version 1.40.02 and a VMR dongle (part number 638-00068).

   - `MCE_LCA: 70.89`
   - `MCE_BOOT: 1.16.01`
   - `MCE_POST: 1.06`

5. Quit the Service Shell workspace and start the Magnus 400 Controller 1.05.394 software.

6. If you do not have the correct firmware versions installed, see *Installing NVS Parameters on a Magnus 400 Quantum* (731-01006A).

Test

After you complete the upgrade installation, the **Drum To Plate After Extra For x.xx (mm)** parameters revert back to 0 values. To ensure that each plate size attaches correctly to the drum, run several loading sequences, each time with a different plate size and adjust the value for each **Drum To Plate After Extra For x.xx (mm)** parameter, accordingly. See *MCU/MCU II Loading System Parameters*.

MCU/MCU II Loading System Parameters

The multi-cassette unit (MCU)/MCU II loading system parameters for the Magnus 400 Controller 1.05.394 software are listed in tables on the following pages. The parameters, which are grouped according to the series of movements (stages) performed by the platesetter during the loading sequence, are located in the registry at the following locations:

- Table 1: Loading system setup parameters: **\Magnus400\IO OBJECTS\Loading System\Loading System Setup**
- Table 2: Paper disposal parameters: **\Magnus400\IO OBJECTS\Loading System\Load Plate\Paper Disposal Stage**
- Table 3: Cassette entry to punch entry parameters: **\Magnus400\IO OBJECTS\Loading System\Load Plate\From Cassette To Punch Entry Stage**
- Table 4: Punch entry to drum entry parameters: **\Magnus400\IO OBJECTS\Loading System\Load Plate\From Punch Entry To Drum Entry Stage**
- Table 5: Drum entry to drum parameters: **\Magnus400\IO OBJECTS\Loading System\Load Plate\From Drum Entry to Drum Stage**

Loading System Setup

Table 1: Loading system setup parameters

Parameter	Default	Minimum	Maximum
Centering HP Speed	25	20	25
Enable FlyOff Detection(0=No, 1=First Loading, 2=Always)	1	0	2
Enable Pre-Loading Detectors Check [Yes=1,No=0]	1	0	1
High Speed	40	15	40
Is Mask Air Pressure Check No=1/Yes=0	0	0	1
Load Head Gripper Location (mm)	–218	–222	–214
Max Media Height Size For Small Plate	250	220	300
Max Media Width Size For Small Plate	350	300	400
Min Media Height For Operate All Valav (mm)	635	600	700
Min Media Height For Operate Middle Valav (mm)	330	300	400
Normal Speed	20	5	20
Sleep After Extra to Bar Flag Det [mSec]	500	0	3000
X HP Speed	15	10	15
Y Extra to Bar Flag Det For 0.15 (mm) Rel	7	5	12
Y Extra to Bar Flag Det For 0.3 - 0.2 (mm) Rel	10	5	12
Y Extra to Bar Flag Det Speed	5	3	5
Y HP Speed	15	10	15

Parameter	Default	Minimum	Maximum
Y Max Up (mm)	1	0	2
Y to Bar Flag Det Speed	8	3	10
Y To Read Paper Metal Det [mm] Rel	–15	–30	–6
Enable Detecting no Plate	0	0	1

Paper Disposal Stage

Table 2: Paper disposal parameters

Parameter	Default	Minimum	Maximum
Delay For Y Up (Mili Sec)	0	0	2000
Operate Vacuum During Paper Disposal	0	0	1
Time To Sleep After Extra In cassette [mSec]	500	0	2000
Time To Wait For Clips are Full Open [mSec]	500	0	1000
X Paper Disposal Final(mm)	660	620	680
X Paper in disposal (mm)	625	600	645
X Paper in disposal speed	5	2	10
X Paper Position In Cassette For Cst 1(mm)	322	317	348
X Paper Position In Cassette For Cst 2(mm)	175	160	195
X Paper Position In Cassette For Cst 3(mm)	32	24	60
X Prepare To Paper Disposal (mm)	600	560	620
X Prepare To Paper Disposal Speed (mm)	40	20	40
Y Down To Paper Disposal Speed	12	5	15
Y Down To Paper Disposal(mm)	102	90	135
Y Extra to catch paper (mm) Rel	4	3	8
Y High Up Speed	15	5	15
Y Prepare To Paper Disposal(mm)	82	70	100
Y to Bar Flag Det. Speed For Paper	7	1	10
Y Up After Extra To Catch Paper (mm) Rel	5	2	6
Y Up Before Down To Paper Disposal (mm)	0	–20	0
Y Up for Init Catcher (mm) Rel	–25	–30	–24

Cassette to Punch Entry

Table 3: Cassette to punch entry parameters

Parameter	Default	Minimum	Maximum
Centering Speed	1	1	5
Centering Wait Dis (mm) Rel	10	0	20
Max Media WSize Ramp Up After Punch [mm]	625	600	650
Measure Centering Tolerance (mm)	3	1	4
Min Media Width Size To Operate Paper Disposal During Loading Plate [mm]	450	400	600
Min Media WSize Ramp Up After Punch [mm]	550	500	600
Min Plate High Size For Centtering wait distance[mm]	763	700	770
Number of Plate BackWard Seperations	4	1	5
Prepare Y to catch Plate Speed	5	2	7
Sleep in Punch Short Detctor [Msec]	500	500	2000
Time To Sleep After Plate Seperation [mSec]	0	0	2000
Time To Wait In Punch Before Stop Paper Dis[Msec]	500	0	3000
Wait For Fufu For Tray2 msec	500	0	3000
Wait For Fufu msec	500	0	3000
X Backward For 0.15 plate [mm] Rel	16	5	20
X Backward For 0.2 plate [mm] Rel	16	5	20
X Backward For 0.3 plate [mm] Rel	16	5	20
X Do Plate Sep Speed	5	2	7
X for Centering (mm)	820	800	840
X for Centering Final (mm)	833	810	855
X for Centering Speed	40	10	40
X Pick Up Plate Before in Punch (mm)	750	735	765
X Plate Forward in Cassette For 0.15 (mm) Rel	1	1	3
X Plate Forward in Cassette For 0.2 (mm) Rel	2	1	3
X Plate Forward in Cassette For 0.3 (mm) Rel	2	1	3
X Position in Cassette For Cst 1(mm)	315	310	325
X Position in Cassette for Cst 2(mm)	175	160	180
X Position in Cassette for Cst 3(mm)	30	22	33
X Pre Extra To Short Pins For 0.15 (mm) Rel	48	20	54
X Pre Extra To Short Pins For 0.2 (mm) Rel	48	20	54

Parameter	Default	Minimum	Maximum
X Pre Extra To Short Pins For 0.3 (mm) Rel	48	20	54
X To Fufu Off Cassette 1 (Rel)	110	50	200
X To Fufu Off Cassette 3 (Rel)	200	100	300
Y Above Air Nozzle In Tray 1(mm)	181	178	184
Y Above Air Nozzle In Tray 2(mm)	110	107	113
Y Above Air Nozzle In Tray 3(mm)	37	34	40
Y After Plate Seperation [mm] Rel	3	3	10
Y Down After Centering to catch Plate For 0.15 (mm) Rel	7	3	10
Y Down After Centering to catch Plate For 0.3 - 0.2 (mm) Rel	10	3	13
Y Down After Centering to catch Plate Speed	5	2	6
Y for Centering (mm)	89	85	90
Y In Punch Speed	15	10	16
Y Movement for 0.15 plate [mm] Rel	0	0	4
Y Movement for 0.2 plate [mm] Rel	0	0	4
Y Movement for 0.3 plate [mm] Rel	0	0	4
Y Plate High Up In Cassette For 0.15 (mm)	0	0	5
Y Plate High Up In Cassette For 0.2 (mm)	0	0	5
Y Plate High Up In Cassette For 0.3 (mm)	0	0	5
Y Plate High Up In Cassette Speed	1	1	3
Y Plate Up In Cassette_1 (mm)	150	135	150
Y Plate Up In Cassette_2 (mm)	85	70	85
Y Plate Up In Cassette_3 (mm)	20	15	30
Y Prepare To Take Out Plate From Cst 1(mm)	160	158	162
Y Prepare To Take Out Plate From Cst 2(mm)	70	68	72
Y Prepare To Take Out Plate From Cst 3(mm)	25	23	27
Y Ramp Position mm	90	85	95
Y to bar flag det. Speed In Cassette	15	10	16
Y to short pins (mm)	86	85	90
Y to short pins Speed	10	5	10
Y Up For Centering (mm) Rel	–15	–20	–10

Punch Entry to Drum Entry

Table 4: Punch entry to drum entry

Parameter	Default	Minimum	Maximum
X After DoPunch For 0.15	705	700	710
X After DoPunch For 0.2	705	700	710
X After DoPunch For 0.3	705	700	710
X Extra To Short Pins For 0.15 (mm) Rel	2	2	4
X Extra To Short Pins For 0.2 (mm) Rel	3	2	4
X Extra To Short Pins For 0.3 (mm) Rel	3	2	4
X Move X Upto Wheels For 0.15 (mm)	0	–10	10
X Move X Upto Wheels For 0.2 (mm)	0	–10	10
X Move X Upto Wheels For 0.2 (mm)	0	–10	10
X Near to Drum For 0.15 Seq (mm)	900	880	910
X Near to Drum For 0.2 Seq (mm)	900	880	910
X Near to Drum For 0.3 Seq (mm)	900	880	910
X Pick Up Plate Before In Drum (mm)	750	735	765
X Prepare In Drum Speed	15	10	15
X Speed Extra To Short Pins	3	2	4
Y In Drum For 0.15 (mm)	10	0	35
Y In Drum For 0.2 (mm)	30	0	35
Y In Drum For 0.3 (mm)	30	0	35
Y Min Media WSize to Go Up After Punch [mm]	550	400	700
Y Prepare To Drum Speed	15	10	15
Y Up After DoPunch for 0.15	85	75	90
Y Up After DoPunch for 0.2	85	75	90
Y Up After DoPunch for 0.3	85	75	90
Y Up For Backward After Centering (mm) Rel	–15	–20	–10
Y Up Prepare To Drum	–4	–12	–2

Drum Entry to Drum Stage

Table 5: Drum entry to drum stage parameters

Parameter	Default	Minimum	Maximum
Drum To Plate After Extra For 0.15 (mm)	0	0	2
Drum To Plate After Extra For 0.2 (mm)	0	0	2
Drum To Plate After Extra For 0.3 (mm)	0	0	2
Thickness For 0.15 Seq (mm)	0.15	0.15	0.15
Thickness For 0.2 Seq (mm)	0.2	0.2	0.2
Thickness For 0.3 Seq (mm)	0.3	0.3	0.3
X In Drum Final For 0.15 Plates (mm) Rel	6	0	16
X In Drum Final For 0.2 Plates (mm) Rel	6	0	16
X In Drum Final For 0.3 Plates (mm) Rel	6	0	16
X In Drum Final Speed	1	1	3
X In Drum For 0.15(mm)	1006	1000	1012
X In Drum For 0.2(mm)	1006	1000	1012
X In Drum For 0.3(mm)	1006	1000	1012
X In Drum Speed	10	4	10
X Run Away From Plate On Drum	300	1	700
Y After Extra to Drum (mm)	0	0	10
Y Before Extra to Drum (mm) Rel	0	0	10
Y Down After Plate Drop For 0.15 (mm) Abs	10	0	40
Y Down After Plate Drop For 0.2 (mm) Abs	30	0	40
Y Down After Plate Drop For 0.3 (mm) Abs	30	10	40
Y Up Before Back Abs (mm)	16	10	25

FCO Updater Utility

After completing the FCO procedure, insert the FCO Updater Utility CD into the CD-ROM drive and run the utility.

See also	MCU II Plate Loading Sequence and Parameters Guide Magnus 400 Controller 1.05.394 Release Notes
Technical contact	Mario Amir
Date submitted	01 Jun 2008
Last updated	