<u>Technical Bulletin #10a IDS Firmware Upload</u> <u>Procedure for Control PCB</u>

This procedure covers Windows based Dispensers only, for Dispensers running DOS, please refer to Vale-Tech Technical Support.

First identify which type of Controller Microprocessor is fitted to the Control Board as follows:



If the Controller Board is fitted with an ST10F167 Microcontroller Chip, use Procedure A.

If the Controller Board is fitted with an ST10F168 Microcontroller Chip, use Procedure B.

Procedure A.

1. Identify which COM port the Controller be programmed is connected to. This can be done by checking the InkManager Hardware Screen. The example below shows the Dispenser Port is COM2, and the Queuer Port is COM3. To program the IDS (Dispenser) Main Controller Board, use COM2, to program the Queuer Controller Board, use COM3. Close InkManager before continuing.

Settings 🔀
Handware Database Users Weights and Measures Defaults Reports Contig Visual Preferences System Handware : Dispenser Type : IDS10K w/queuer
Manual Blending Hardware : Manual Balance Port : COM1 Manual Balance Type : Vale - MkII V1.11 and above
Dispensing Hardware : Balance Port : COM1 Balance Type : Male - Mk/IVI.11 and above Dispenser Port : COM2
Queuer Hardware : Queuer Port : COM3
Bar-code Hardware : Default Label Printer : Label Scanner Port : COM4
CK Dencel (sc)

2. Using Windows Explorer, browse the C:\ drive for a Directory called LOAD

NOTE: The LOAD Directory will have been pre-loaded into the IDS PC, if not; contact Vale-Tech Technical Support for the Load files and copy them into a new directory called Load.

- 3. Open the Directory LOAD.
- 4. Browse the Directory LOAD for a File name called NT167Loader.exe.
- 5. Run the program by double clicking on the **NT167Loader.exe** icon/filename.
- 6. If any data is seen in the main window, select VIEW and then CLEAR.
- 7. Select BOARD and then COMM PORT SELECTION
- 8. In the InkManager Hardware Settings example shown above the Dispenser is on COM2, select COM2 in the tick-box in the NTLoader software, as shown below:

🗸 Untitled - NT167Loader			
File Edit View	Board Help	_	
	Erase 🕨	1	
	Connect Download To C167		
	Auto Program (F10)		
	Comm Port Selection 🔹	COMMI	
		✓ COMM2	
		COMM3	
		COMM4	
		COMMS	
		COMM6	

9. Select FILE and then OPEN

NOTE: Please ensure that you have the Vale-Tech **B_IDS.HEX** floppy disk before starting the next stage of the download procedure. If not, please try to obtain the version code from your original Controller Board. This can be done by resetting the Controller Board using SW1 and reading version code on the LCD display. The Queuer HEX file may be named differently, if in doubt, please contact Vale-Tech Technical Support with the Version Code.

- 10. Browse C:\ Drive for a File name called **B_IDS.HEX** (or Queuer HEX file), or **A:**\ Drive if stored on a floppy diskette.
- 11. Copy the file into the Load directory if it is not already there.
- 12. Select the Filename **B_IDS.HEX** (or Queuer HEX file) and then select **OPEN**

Open		x 4 0	? 🛛
ECOR IN: CORD	ICAD_2.HEX NT167Loader.exe PROGP.HEX RELOAD.HEX SHELL.HEX STATUS.HEX		
File name: B_IDS. Files of type: All Files	HEX (".")	•	Open Cancel

13. IDS Main Control PCB is in the right hand side cabinet of the IDS. Below shows the IDS Control PCB and the location of SW1 and JP9



14. Set JP9 to the ON position, or short the two pins with a Pin Header.

NOTE: JP9 on new style IDS Control PCB has a Yellow coloured switch (shown as Switch Type above), whereas the old style IDS Control PCB has two pins shorted with a pin header during programming only.

- 15. Press switch SW1
- 16. On the IDS PC select **BOARD** and then **AUTO PROGRAM**



- 17. When IDS Control PCB has completed programming, the following message will appear, **"PROGRAMING SUCCESSFUL".** Close NTLoader.exe.
- 18. On the IDS Control PCB Set **JP9** to **OFF** position or remove the Header Pin.
- 19. Press switch SW1 to re-set the controller.
- 20. The IDS is now reprogrammed with the **B_IDS.HEX** File.

Procedure B.

1. Identify which COM port the Controller be programmed is connected to. This can be done by checking the InkManager Hardware Screen. The example below shows the Dispenser Port is COM2, and the Queuer Port is COM3. To program the IDS (Dispenser) Main Controller Board, use COM2, to program the Queuer Controller Board, use COM3. Close InkManager before continuing.

Settings 🔀
Hardware Database Users Weights and Measures Defaults Reports Config Visual Preferences
System Hardware :
Dispenser Type : IDS10K.w/queuer
Manual Blending Hardware :
Manual Balance Port: COM1 Manual Balance Type: Vale - MkII V1.11 and above
Dispensing Hardware :
Balance Port: COM1 Balance Type: Male - MkII V1.11 and above
Dispenser Port : COM2
Queuer Hardware :
Queuer Port: COM3 -
Bar-code Hardware :
Default Label Printer:
Label Scanner Port : COM4
OK Cancel Appl

- 2. Launch ST 10 Flasher from the Start Bar All Programs Menu. If ST 10 Flasher is not there, install it, if you do not have the software, please contact Vale-Tech Technical Support for a copy.
- 3. If you see the following error message, it is not a problem, the software is not set to the correct COM yet.



4. Click OK and the following screen will be displayed:



5. The IDS Main Controller is in the right hand side cabinet, SW1 and JP9 can be seen in the photos below:



- 6. Set JP9 to the ON position, or short the two pins of the Pin Header.
- 7. Press the switch SW1.
- 8. Click on Set Port, set the COM port by clicking the radio button for the COM port for the Dispenser Port, in this example COM1, (this is not as shown in the Hardware screenshot above, but should be as seen in your configuration).



9. Click on the Initialise Port Button, the following response should be seen in the Message Window:



10. Click the Reload Monitor button and the following message will be displayed:

Misc :	Serial port	Auto Elate	
Status	Con Port	Actions	
Con Pot : 🔵 COt	Istisize Por	Save as default SatRomS1	
Manitar: 😑 🛛 K.	@ Com1 C Com3	Close Port	
	C Dom 2 C Dom 4		
Initializing 51		Send Null char	
Dait CHM1 at 51			
	Belowd Monitor Cancel	Apply	
*LORD MONITOR			
Description: In	itNomitor failed.		
Monitor: BSL: Mo	akaowledge Received.		
Reset your appl:	ication and reload the monitor.		
Com: Beceive: T	incout or Lost of data		
RESET your apply	ication and click on the RELEAD	button	
Frequency is an	1. Ho baukrate available		
Cannot set Com s	speed to \$698 banks. Bad freque	ncy or deviation to high	
Cannot set Con speed to 9600 hands. Bad frequency or deviation to high			
*Set can parameters:COH1, 9600 hands>OK			
*LORD MONTTOR	-CBK		

11. Click on the Com Port drop down menu and select 57600 as the baud rate, as shown below:

		Frank Flack Mr. 51358 Det Det Prigt	
Mac :	 Serial pert 	🔀 🎴 Auto Etase	
Statur	Con Pat	Actions	
Can Part: 🔵 CO	57600 💌 Initialize Port	Seve as default SeeRoar51	
Monitor : 😐 OK	@ Com1 C Com3	Close Port	
Initializing 51	C Con 2 C Can 4	Send Null char	
Tait COM1 at 57			
-LORD MUSITOR-	Reload Monitor Cancel	Apply	
Description: In	dithomitor failed.		
Nonitor: ESL: B	to aknowledge Received.		
Report your appl	ication and reload the monitor.		
Com: Receive: 1	incost or Lost of data		
RESET your appl	ication and click on the MELOAD by	rtton	
Frequency is m	dl. No bandrate available		
Cannot set Can	speed to \$600 houds. Bad frequency	y or deviation to high	
Connot set Con	speed to \$600 houds. Bad frequency	y or deviation to high	
*Set con parameters:CBM1, 9680 bauks>OK			
LORD HINTOR-	- MK		

12. Click on Save as default, then click on Apply, the following message is displayed:

ST10 Flasher tool	
File Canfig Dump About	
Target File to program	Flash operations
Cpu: ST10F168 NONE	BarkCheck Bogart & Veily
Frequency (MHz): 20 Nohedle loaded, no info Misc :	Erace Flach
Pater.	
Con Pot : COM1 57600.N.8.1 Set Pget	Dump F SetRom51
Manitor: OK Beized Manitor	Set Salue
Thit COM1 at 57680 bauks	
Init COM1 at 57640 hands *LORD MENTION>EREGOR Bescription: Initionator failed. Homitor: BSL: No absorbedge Received. Recet your application and reload the monitor. Com: Beceive: Timeout or Lost of data RESET your application and click on the RELORD 1 Frequency is well. No bandrate available Cannot set Com speed to 9600 hands. Bad frequence Cannot set Com speed to 9600 hands. Bad frequence *Set com parameters:(COM1, 9600 hands>OS.	button ry or deviation to high cy or deviation to high
Init COMI at 57600 hands "LORD MENTION>ESSOR Bescription: Initionitor failed. Monitor: BSL: No akaewLedge Received. Recet your application and relead the monitor. Com Receive: Timeout or Lost of data RESET your application and click on the RELORD of Programy is sull. No houstrate available Cannot set Com speed to 9600 hands. Bad frequent Cannot set Com speed to 9600 hands. Bad frequent "Set com parameters:COMI, 9600 hands>OM "LORD MENTION>OM	hutton cy or deviation to high cy or deviation to high
Init COMI at 57600 hands *LORD MENTION>EDBOD Description: Initionitor failed. Nomitor: BSL: No absorbedge Received. Receive: Size of absorbedge Received. Receive: Timeout or Lost of data RESET your application and click on the RELORD I Frequency is well. No bandrate available Cannot set Con speed to 9600 hands. Bad frequent "Set con parameters:COMI, 9600 hands>OK *LORD MENTIOR>OK	button cy or deviation to high cy or deviation to high

NOTE: Please ensure that you have the Vale-Tech **B_IDS.HEX** floppy disk before starting the next stage of the download procedure. If not, please try to obtain the version code from your original Controller Board. This can be done by resetting the Controller Board using SW1 and reading version code on the LCD display. The Queuer HEX file may be named differently, if in doubt, please contact Vale-Tech Technical Support with the Version Code.

13. Click File, then Open, locate the B_IDS.HEX file or a Queuer HEX file, this may be in the Load directory, on a Floppy disk or CD-ROM.

fex file selection		2
File name: B_IDS.HEX	Folders: c:\load	0K.
BIDSHEX ERASEDHEX ERASE1HEX ERASE2HEX ERASE3HEX HEXLOADHEX LDAD_2HEX PROGPHEX	ि ८\ ि Load	Cancel
List files of type: Heafile ("HEX)	Drives:	 Network
ONTTOR>EXPROR		

14. Select the file and click OK, the following message will be shown:

🖊 ST10 Flasher tool			
Pile Config Dump About			
Target	File to program	Flash operations	
Cpu: ST10F168	B_IDS.HEX	BlankCheck	Program & Venily
Frequency (MHz): 20 Misc :	Size = 8500 bytes. Programming time = 2 s. Block(s): 0	Erace Flash	 Erase before Prg Auto Erase
Status		Compare	
Com Part : COM1 57600,N,8	Set Pgrt	Dump	E SelRonSt
Manilar: 😑 OK	Eeload Monitor	Get <u>S</u> tatus	
Frequency is null. No be Cannot set Can speed to Cannot set Can speed to *Set can parameters:COEL *LOAD EDHITOR>OK *Set can parameters:COEL *LOAD HEXFILE:C:\Load\B_ *FILE DEPO FOR FILE:B_ID Size = #500 bytes. Programming time = 2 s. Block(s): 0	udrate available 9600 bauds. Bad frequency 9600 bauds. Bad frequency 4, 9600 bauds>OK 4, 97600 bauds>OK 1DS.HEX>OK 6.HEX	or devistion to or devistion to	high high
C			2

15. Click on the Program & Verify button, the Message Window will be updated as shown below:



- 16. The Controller is now programmed, close ST 10 Flasher.
- 17. Set JP9 to the Off position, or remove the Pin Header and press SW1.

Perform a reset in InkManager each time InkManager is started up, and specifically after the controller is reprogrammed.

If you require further assistance, please contact Vale-Tech Ltd Technical Support by email on support@vale-tech.co.uk