

F1000

Photocopier Control Unit

Installer and User Guide

This page intentionally blank

Notices

Manufacturer's details

This product is designed and manufactured by:

TDSi Ltd.,
Sentinel House
Nuffield Road
Poole,
Dorset BH17 0RE
England

Telephone: + 44 (0)1202 666222
Fax: + 44 (0)1202 679730
E-mail address: info@tdsi.co.uk
Web site: www.tdsi.co.uk

Copyright notice

Copyright © 1999 Time and Data Systems International Ltd., Poole. All rights reserved.

This document, and any software supplied with it, may not be reproduced in any form or by any means in whole or in part without prior written consent of the copyright owners.

Patents granted in the UK, USA and principle countries of the world. Some of all of the following patents may apply:

435119 (USA)
417624 (Canada)
8226014, 8425238, 8326874 (UK)
Other patents granted and pending worldwide.

Policy

Time and Data Systems has a policy to continuously improve its products and reserves the right to change specifications, colours or prices of its products without prior notice.

Limitation of liability

The information in this document is provided for information purposes only, and, unless otherwise agreed, forms no part of any contract between you and TDSi. Whilst care has been taken to ensure that the information contained is reasonably complete and correct at the time of publication, TDSi accepts no liability for any errors or omissions which it may contain. Your use of this document is conditional on this limitation of liability.

Table of Contents

INTRODUCTION	5
TDSi F1000	5
EQUIPMENT PROVIDED	5
ADDITIONAL EQUIPMENT	6
TECHNICAL SPECIFICATION	6
INSTALLATION	7
WIRING AND CONNECTIONS	7
FEATURES AND FACILITIES	12
IDS	12
GROUPS	12
ACCOUNT MODES	12
PRICES	13
REPORTS	13
PROGRAMMING	14
POWERING UP	14
MASTER MODE	16
ACCOUNTS MENU	19
REPORTS MENU	27
CONFIGURE MENU	31
EVERYDAY USE	44
COPYING TRANSACTION	44
COMPLIANCE AND SAFETY NOTICES	46
COMPLIANCE WITH EC REGULATIONS	46
FCC REGULATIONS NOTICE	47
CSA EMC NOTICE	47
SAFETY NOTICE	47

Introduction

TDSi F1000

The TDSi F1000 is an account based photocopier control solution providing access control to photocopying facilities and allowing costs to be accounted against departmental budgets. Up to 1000 cards and/or PINs can be stored in the unit's memory. F1000 can also be configured to provide a means of prepayment for photocopying facilities.

F1000 includes a range of useful control features, such as card, PIN or card+PIN options, group and/or individual account limit policies and the facility to be attached to a printer for printed account reports.

F1000 is provided as either a keypad unit (for PIN only applications) or alternatively with a choice of either TDSi Microcard®, magnetic stripe or proximity card readers.

A variant of the F1000, TDSi 1000-Series, can additionally be used to provide access control through a door for up to 1000 card holders. For more information on this and other TDSi products, please contact TDSi.

Equipment Provided

The following is provided as part of every 1000-Series package:

- TDSi F1000 Controller
- Infra-red, Proximity or Magnetic-stripe reader (dependant on variant supplied)
- 20 User cards (10 Proximity)
- 12v Power Supply
- Installation kit (including photocopier interface cable)
- Installation and Operating Instructions

Additional Equipment

Printer (optional)

Serial printer for printing account, meter and set up reports. See page 27 for details on report printing.

Part Number:

tba

Copier/Wall Mounting Bracket (optional)

A universal mounting bracket is available, allowing an F1000 and associated reader (if required) to be mounted on either horizontal (e.g. copier) or vertical (e.g. wall) surfaces

Part Number:

tba

Floor Stand (optional)

Part Number:

tba

Technical Specification

Operating Temp	-20°C to +50°C
Dimensions (Controller) mm	120x100x42
Dimensions (Reader) mm	40x101x27 (if fitted)
Power Supply	10-14V DC 250mA max
Relay Contacts	2 x 1A 30V DC Changeover
Price Line Inputs	3 x opto-isolated
Printer Output	RS232

Installation

Wiring and Connections

Important installation notes

- It is essential that only screened cables are allowed to enter the F1000 casing.
- The shield of each cable must be grounded at one end only, usually under the clamping springs provided on the metal backplate of the casing.

However, if peripheral equipment (such as readers, etc) are mounted on a metal surface, ensure that the metal surface is grounded and that the ground wire is grounded at the peripheral end, not the controller end.

- The amount of exposed screen inside the casing must be kept to a minimum to reduce radiating length. The lengths of unscreened wire inside the casing must also be kept to an absolute minimum.
- Where possible, cable lengths should be at least 2 metres, allowing induced static to dissipate before it reaches the controller.

Connections

Pin	Label	Designation
1	0v	0v
2	12v	12v DC
3	0v	0v
4	12v	12v DC
5	R1no	Relay 1 Normally Open
6	R1c	Relay 1 Common
7	R1nc	Relay 1 Normally Closed
8	R2no	Relay 2 Normally Open
9	R2c	Relay 2 Common
10	R2nc	Relay 2 Normally Closed
11	Tam	Price Line 3 (opto board input)
12	DS	Price Line 2 (opto board input)
13	EG	Price Line 1 (opto board input)
14	0v	0v
15	IRDat	Infra-red data
16	MdW0	Mag data/Weigand data 0
17	McW1	Mag clock/Weigand data 1
18	IRLed	Infra-red LED emitter
19	LED	Indicator LED

Pin	Label	Designation
20	5v	Infra-red reader power
21	0v	0v
22	Gnd	Chassis earth
31	0v	0v
32	Tx	Transmit
33	Rx	Receive
34	Rts	Request to Send
35	Cts	Clear to Send
36	PL3	Price Line 3 +
37	PL3	Price Line 3
38	PL2	Price Line 2 +
39	PL2	Price Line 2
40	PL1	Price Line 1 +
41	PL1	Price Line 1
42	Tx	Transmit
43	Rx/Cts	Receive/ Clear to Send

Reader and Power Supply Connections

Power Supply Connections

The power supply should be wired into the following connections. Note, **positive** is denoted by the cable with the **white stripe**.

Wire	Connection
0v	1 or 3 (0V)
12V	2 or 4 (12V)

Note: secure cable shield under clamping spring. Keep cable shield lengths to a minimum.

Microcard Reader

The following connections are required to connect a TDSi Microcard reader:

Wire Colour	Connection
Yellow	15 (IRdat)
Blue	18 (IRLed)
Green	19 (LED)
Red	20 (5V)
White	20 (5V)
Black	20 (5V)

Note: secure cable shield under clamping spring. Keep cable shield lengths to a minimum.

Magnetic or TDSi Proximity Reader

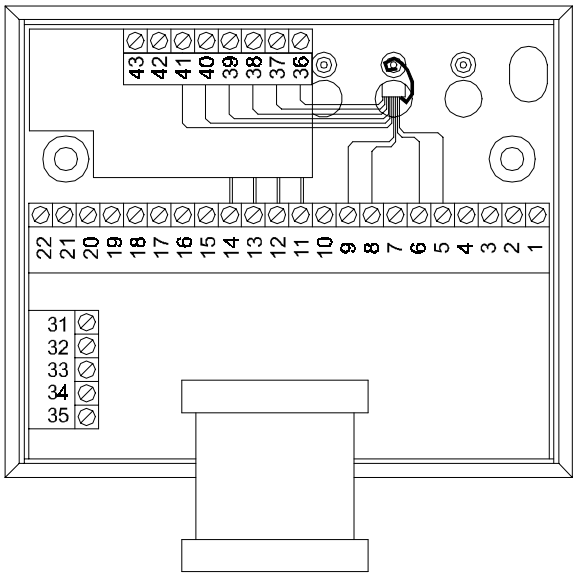
The following connections are required to connect a magnetic or TDSi Proximity reader:

Wire Colour	Connection
Yellow	16 (MdW0)
White	17 (McW1)
Blue	19 (LED)
Green	20 (5V)
Red	2 or 4 (12V)
Black	1 or 3 (0V)

Note: secure cable shield under clamping spring. Keep cable shield lengths to a minimum.

Photocopier Interface Connections

The following connections are required to connect a standard TDSi 12-core photocopier interface cable.



Wire Colour	Connection	Designation
Black	5 – R1no	Relay 1, Normally Open
White	6 – R1c	Relay 1, Common
Orange	36 – PL3	Price Line 3 +
Pink	37 – PL3	Price Line 3
Yellow	38 – PL2	Price Line 2 +
Violet	39 – PL2	Price Line 2
Brown	40 – PL1	Price Line 1 +
Red	41 – PL1	Price Line 1
Green	9 – R2c	Relay 2, Common
Blue	8 – R2no	Relay 2, Normally Open
Light Blue	No connection	
Grey	No connection	

RS232 Printer Connection

F1000 can be connected to a serial printer to provide printed reports. There are three possible ways to connect a serial printer to the F1000, depending on whether the printer has a “handshake”, and if so whether it is a hardware or software handshake.

TDSi Supplied Printer

The F1000 is pre-configured for the TDSi supplied serial printer, which provides a hardware handshake. The following firmware settings need to be made.

Baud Rate (see page 36): set to 9600 (this is the default setting)

Parity (see page 37): set to None (this is the default setting)

Flow Control (see page 37): set to CTS

Non-TDSi Supplied Printer

There are three possible ways to connect a serial printer to the F1000 controller, depending on whether the printer has a “handshake”, and if so whether it is a hardware or software handshake.

Baud Rate, Parity and Flow Control parameters within the controller are all programmable, allowing compatibility with the majority of serial printers. The printer must support the ANSI character set.

Transmission Speed

Communication speed within the controller is configured using the **Baud Rate** feature (see page 36). The printer must be capable of one of the following baud rates:

300, 600, 1200, 2400, 4800, 9600, 19200, 38400

Handshake

The type of communications handshake used between the printer and controller is configured using the **Flow Control** feature (see page 37).

If the printer provides a hardware handshake, **Flow Control** should be set to CTS.

If the printer provides a software handshake, **Flow Control** should be set to XON/XOFF.

If the printer does not provide a communications handshake, select a baud rate which is **slower** than the printers printing speed in terms of characters per second. This will prevent the possibility of buffer-overflow, which will result in lost characters.

PCB Connections

The F1000 is wired by default for use with printers providing a hardware handshake. To change this for use with a printer which provides a software handshake, change the link between connections 35 and 43 to the following:

Main PCB Connection	Opto/comms PCB Connection
33 (RX)	43 (RX/CTS)

Printer Connections – Hardware Handshake

Make the following connections between the F1000 and printer via the 3.5mm phono connector:

F1000	Printer
42 (TX)	Receive
43 (RX/CTS)	Handshake (normally RTS)

Note, connect 0v from printer to signal ground.

Printer Connections – Software Handshake

Make the following connections between the F1000 and printer via the 3.5mm phono connector:

F1000	Printer
42 (TX)	Receive
43 (RX/CTS)	Transmit

Note, connect 0v from printer to signal ground.

Printer Connections – No Handshake

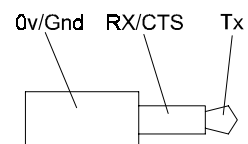
Make the following connections between the F1000 and printer via the 3.5mm phono connector:

F1000	Printer
42 (TX)	Receive

Note, connect 0v from printer to signal ground.

Phono Connector Wiring

Wire the phono connector for connection to the F1000 as shown below:



Features and Facilities

IDs

Each valid id accesses an account held within the memory of the unit. Each account holds details of the cardholders current balance, which increments as copies are taken. Up to 1000 id's can be stored within the memory of the controller. These can be either 8 digit card numbers, 4-8 digit PINs or a combination of both. It is also possible to assign a 4 digit PIN to a card for Card + PIN operation if required.

Cards numbers are added to and deleted from the memory of the unit using the **Add ID** and **Delete ID** features (see page 21). PINs are added and deleted using the **Add PIN** and **Delete PIN** features (see page 24).

Groups

Accounts can be subdivided into groups allowing varying copying limits to be applied to different groups of people. This also allows copying costs to be accounted for against different departmental or client budgets. Any number of groups can be set up.

Groups can be configured to limit the total value of copying in two ways. **Group Limits** can be set, whereby all copies taken by members of a group contribute toward the overall group total. Once the preset group limit is reached, no more copying is allowed by members of the group until the balances are reset. Alternatively, **Account Limits** can be set, whereby all accounts within the group have the same individual limit, for example, 1000 units. If required, the unit can be configured with no limits set.

Groups are configured using the **Group** feature (see page 19), which allows new groups to be added or existing groups to be edited. When adding id's using the **Add ID** or **Add PIN** features, you are given the opportunity to assign each id to a group.

Account Modes

Each group in F1000 can have its accounts defined in one of the following modes:

- Credit
- Debit

In Credit mode, the value in each account increments as copies are taken until the defined limit is reached. No more copying is allowed until the balance of the account (or group) is reset.

In Debit mode, the value in each account decrements from the defined account limit as copies are taken. This can provide a means of prepayment for copying facilities, where accounts can be preloaded with value and cards for these accounts sold, for example via a dispenser. Once the value in the account has been exhausted, the card can be returned and a new one purchased or the account recharged as necessary.

Prices

Up to 4 different copy prices can be set within F1000. Prices are in Units only and are set up using the **Prices** feature (see page 31).

F1000 can also be configured to charge on a time basis using the **Billing Timer** feature (see page on page 33). This allows a user definable number of units to be added to the account balance each time a user definable length of time elapses, e.g. 1 unit every 5 seconds. This is most commonly used for charging for time used on a computer or the internet.

Reports

F1000 provides the facility for connection to an RS232 serial printer, allowing reports to be printed.

The **Print Accounts** feature (see page on page 27) prints a list of the current account balances, subdivided by the appropriate groups. The report also give a Group balance summary.

Other reports available include **Print Meters** (see page on page 29), which details the total number of copies taken and **Print Set Up** (see page on page 30) which is a configuration report.

Reports are also available via the display (see page on page 28).

Programming

Powering Up

On initial power up, or after a reset, the display will show the following:

!DEFINE MASTER!
Digital

The interface for the reader type connected to the F1000 must be correctly configured. For magnetic stripe, proximity or keypad only installations, this should be set to **Digital**.

Where a TDSi Microcard® reader is attached, this must be set to **Infra Red**.

Press the 1 or 7 buttons on the keypad to scroll between the available options (Digital/Infra Red).

A “!” character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to select the displayed setting.

The display then shows:

!CLEAR ACCOUNTS!
OK? #=NO *=YES

Press the * key to clear the accounts and continue.

After a few seconds, the display shows:

00:00 01/01/96
!DEFINE MASTER!

At this point, either a Master PIN (4-digit) or Master Card can be defined, which will subsequently allow access to the Master programming menu.

Master PIN

If you choose to use a Master PIN, type a 4-digit number on the keypad. Do this TWICE to confirm. When a key is pressed the LCD should illuminate and a short beep heard. The display will then change to:

Accounts	#=Quit
1 Group	

Important! You must remember the Master PIN. There is no means of “reminding” yourself if you forget it!

Master Card

To define a card as a Master Card, register a card in the reader. Do this TWICE to confirm. The display will then change to:

Accounts	#=Quit
1 Group	

Important! The Master Card must be kept in a safe and secure place!

Changing Master PIN/Master Card

The Function Cards feature (Configure menu, Utilities, option 2) will allow the Master PIN or Master Card to be redefined at a later date if required. See page on page 34 for further details.

Master Mode

Master Mode allows the F1000 to be programmed.

To enter Master Mode, enter the Master PIN or Master Card. The display shows:

Accounts	#=Quit
1 Group	

There are 3 menus within Master Mode:

- **Accounts** – Create/edit groups, add/delete cards/PINs, reset balances
- **Reports** – Print account/meter reports or view account/group balances on display
- **Configure** – communications settings, unit settings, copier settings, resets

The options available within each menu repeatedly scroll around on the lower half of the display, showing which functions are available and identifying the number to be pressed to select a particular function.

#=Quit/*=Next alternates in the top right hand corner of the display, denoting the functions of the # and * keys.

Press the * key to scroll between the **Accounts**, **Reports** and **Configure** menus.

Pressing the # key from within a function (e.g. Add IDs) quits the current function and causes the menu to step back one stage (to the **Accounts** main menu). Pressing the # key again quits Master Mode completely.

Master Menu Map

ACCOUNTS	REPORTS	CONFIGURE
1. Group	1. Print Accounts	1. Prices
2. IDs	2. View Account	2. Utilities
3. Reset Balances	3. View Group	3. Copier
	4. View Meters	
	5. Print Meters	
	6. Clear Meters	
	7. Print Setup	

Setting up the first account

- Type in the Master PIN or swipe the Master card to enter Master Mode
- From the Accounts menu, select 1 Group, and then select option 1 New Group. Follow the instructions on page 19 for details on creating a new Group.
- From the Accounts menu, select 2 IDs, and then select either option 1 Add ID (to add a card) or option 8 Add PIN (to add a PIN). Follow the instructions on page 21 for details on adding an ID.
- From the Configure menu, select 1 Prices. Follow the instructions on page 31 for details on setting up prices.
- Quit Master Mode.
- At the Use Card or PIN prompt, swipe the user card or use the keypad to enter the PIN. Access is granted and the copier is enabled.

Typical Set Up Scenarios

1 – Access Control

Example requirement:

All I want to do is prevent unauthorised personnel from using the photocopier. I have no interest in restricting or tracking how many copies are made, as long as the people making them are authorised to do so.

Typical unit set up:

In this scenario all the accounts can be assigned to the same group. Set up Group 1 with Group and Account Limits of zero, Credit account type. All accounts created will automatically be assigned to Group 1, and there will be an effective group limit of 99999999 units.

2 – Departmental/Client Accounting

Example requirement:

I want to track the amount of copying each department in my organisation does/is done on behalf of each client, and bill the appropriate departmental budget/client account accordingly.

Typical unit set up:

Set up a different Group for each department/client you wish to bill. Set up an account for each person in each department, and assign each account to the appropriate Group.

If there is a requirement to restrict the amount of copying each individual or group can do, set the appropriate Group and/or Account Limits when setting up the groups. If it is not necessary to restrict the volume of copying, leave the limits set to zero when the groups are defined.

3 – Individual Account Limits

Example requirement:

I want people in my organisation to be restricted to a certain number of copies each month.

Typical unit set up:

If everyone in the organisation will have the same copy limit, create one group with an appropriate Account Limit. Create a new group for every additional account limit required. If it is necessary for everyone to have a different limit, an individual group will be required for each person. This will restrict the maximum number of card holders to 500 (for each group added, the maximum number of accounts is reduced by one).

Reset the account balances each time the restriction period, in this case a month, has elapsed.

4 – Prepayment

Example requirement:

I want people wishing to use the copier to have to pay up-front for the copies they are going to make.

Typical unit set up:

Set up a group or number of groups with appropriate Account Limits. Select the account type as Debit.

Set up a number of accounts and assign each to the appropriate group. The cards able to access these accounts can then be sold either over the counter or from a dispenser. Once the value in the account has been exhausted the card can be returned and another paid for, giving access to a different, fully charged account.

Accounts Menu

1 Group		
	1 New Group	Create a new Group
	2 Edit Group	Edit limits of an existing group
2 IDs		
	1 Add ID	Add a new card account
	2 Delete ID	Delete a card account
	3 Add ID Block	Add a block of card accounts
	4 Delete ID Block	Delete a block of card accounts
	5 Freeze ID	Suspend an account
	6 Unfreeze ID	Reinstate a suspended account
	7 Freeze All IDs	Suspend all accounts
	8 Add PIN a/c	Add a new pin account
	9 Delete PIN a/c	Delete a pin account
3 Reset Balances		
	1 Reset Account	Reset the balance of an individual account
	2 Reset Group	Reset the balances of all the accounts in a specific group
	3 Reset All	Reset the balances of all the accounts

1 - Group

This menu contains a number of submenus which allow new groups to be created and the limits of existing groups to be edited. From the Accounts menu select 1.

1 – New Group

This feature allows new groups to be added into the memory of the unit. Groups may have either Group Limits and/or Account Limits set to limit the amount of copying and may be set up to work in either Debit or Credit modes. Any number of groups can be created, but for each group added, the total number of accounts available is reduced by one.

Group and Account Limits

- Group Limit All accounts in the group contribute to the overall group total. Once the group total reaches the Group Limit no more copying is allowed until the group balance is reset.
- Account Limit All accounts in the group have the same limit, e.g. 1000 units each.

It is possible to set up groups with both Group and Account Limits or alternatively with no limits at all.

Credit and Debit Modes

- Credit The balance of an account starts at 0 and increments as copies are taken. When the limit of the account is reached, no further copies are allowed.
- Debit The balance of an account starts at the Account Limit and decrements as copies are taken. When the balance reaches 0 no more copies are allowed.

Note: To use **Debit** mode, the group must be configured with an **Account Limit**. Group Limit cannot be used with accounts in Debit mode.

From the Group menu, press 1. Display shows:

Group Limit	001
New:	0

The Group Number is displayed in the top right hand corner of the display (e.g. 001). F1000 automatically selects the next available group number when a new group is added.

Type the new Group Limit on the keypad. If you make a mistake while entering a number, press the # key to scroll backwards.

Press the * key to enter the number or # to exit without entering a number. If you do not want to set a Group Limit, set to 0 and press the * key. Display shows:

A/C Limit	001
New:	0

Type the new Account Limit on the keypad. If you make a mistake while entering a number, press the # key to scroll backwards.

Press the * key to enter the number or # to exit without entering a number. If you do not want to set an Account Limit, set to 0 and press the * key. Display shows:

Group Type
Credit

Press the 1 or 7 buttons on the keypad to scroll between the available options (Credit/Debit).

A “!” character is displayed in the top right hand corner of the display if the option has been changed from the original setting. Press the * key to select the displayed setting. Display shows:

Create Group	001
Sure? #=No *=Yes	

Press the * key create the group or press the # key to abort.

2 – Edit Group

This feature allows Group Limits to be edited.

From the Group menu, press 2. Display shows:

Group:	1
--------	---

Type in the number of the group you wish to edit. If you make a mistake while entering the number, press the # key to scroll backwards. Press the * key to edit the displayed group. Display shows:

Group Limit	001
New:	1000

Type the new Group Limit on the keypad. If you make a mistake while entering the number, press the # key to scroll backwards.

Press the * key to enter the number or # to exit without entering a number. If you do not want to set a Group Limit, set to 0 and press the * key. Display shows:

A/C Limit	001
New:	1000

Type the new Account Limit on the keypad. If you make a mistake while entering a number, press the # key to scroll backwards.

Press the * key to enter the number or # to exit without entering a number. If you do not want to set an Account Limit, set to 0 and press the * key.

2 – IDs

This menu contains a number of submenus which allow card and PIN accounts to be created, suspended and deleted. From the **Accounts** menu, select 2.

1 – Add ID

This feature allows card based accounts to be added into the memory of the F1000 and to be allocated to a group. A maximum of 1000 accounts (cards or PINs) can be stored in the units memory. Note, the maximum number of accounts is reduced by one for each group added.

From the **IDs** menu, press 1. Display shows:

Add ID
Number: 00000000

Enter the number of the ID to be added. To enter the id number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering a number, press the # key to scroll backwards.

Press the * key to create the account or # to exit without creating an account.

Once the card has been entered, the display shows:

Group:	1
Number:	03665383

Type in the group number you wish to the account to be allocated to and press the * key.

Note. If only 1 group has been created, the account is automatically allocated to Group 1 and the above display is not shown.

Card+PIN

Where Card+PIN access is required, the user allocates their own PIN the first time they use their card. For information on setting up Card + PIN see **Mode**, page 35.

2 – Delete ID

This feature allows accounts to be deleted from the memory of the F1000.

From the IDs menu, press 2. Display shows:

Del ID Number: 00000000

Enter the number of the ID to be deleted. To enter the id number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering the number, press the # key to scroll backwards.

Press the * key to delete the account or # to exit without deleting the account.

3 – Add ID Block

The feature allows a block of sequentially numbered accounts to be created.

From the IDs menu, press 3. Display shows:

Add ID Block From: 00000000

Enter the number of the first id in the block and press the * key. To enter the id number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering the number, press the # key to scroll backwards.

The display then shows:

Add: 12345678 To: 00000000

Enter the number of the last id in the block and press the * key. **Note, a maximum of 1000 ids can be stored in the controllers memory.** To enter the id number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering the number, press the # key to scroll backwards.

The display then shows:

Group: 1 To: 12345987

Type in the group number you wish to the accounts to be allocated to and press the * key.

Note. If only 1 group has been created, the account is automatically allocated to Group 1 and the above display is not shown. The display then shows:

Please Wait 12345678

The id number shown on the screen increases in blocks of 10 as the accounts are created. Depending on the number of ids being added, block validation may take several minutes. Once all accounts have been created, the unit will bleep once.

4- Delete ID Block

This function allows a block of sequentially numbered accounts to be voided from the memory of the F1000.

From the IDs menu, press 4. Display shows:

Del ID block
From:

Enter the number of the first id in the block and press the * key. To enter the id number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering the number, press the # key to scroll backwards.

The display then shows:

Del: 12345678
to:

Enter the number of the last id in the block and press the * key. To enter the id number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering the number, press the # key to scroll backwards.

The display then shows:

Please Wait
12345678

The id number shown on the screen decreases in blocks of 10 as the accounts are deleted. Depending on the number of ids being deleted, block voiding may take several minutes. Once all accounts have been deleted, the unit will beep once.

5 – Freeze ID

This feature allows lost or stolen cards to be suspended without the accounts balance being deleted from memory. From the IDs menu, press 5. Display shows:

Freeze ID
Number: 00000000

Enter the number of the ID to be suspended. To enter the id number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering the number, press the # key to scroll backwards.

Press the * key to freeze the account or # to exit without freezing the account.

6 – Unfreeze ID

This feature allows frozen accounts to be unfrozen and thus useable again. From the IDs menu, press 6. Display shows:

Unfreeze ID
Number: 00000000

Enter the number of the ID to be unfrozen. To enter the id number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering the number, press the # key to scroll backwards.

Press the * key to unfreeze the account or # to exit without unfreezing the account.

7 – Freeze All IDs

This feature is used to temporarily suspend all accounts. This can be used to effectively lock the unit and prevent any copies from being made, for example, out of regular working hours. From the IDs menu, press 7. Display shows:

Freeze All IDs
No

Press the 1 or 7 buttons on the keypad to scroll between the available options (NO/YES).

A “!” character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to select the displayed setting.

8 – Add PIN Account

This feature allows PIN based accounts to be added into the memory of the F1000 and to be allocated to a group. A maximum of 1000 accounts (cards or PINs) can be stored in the units memory. Note, the maximum number of accounts is reduced by one for each group added.

From the IDs menu, press 8. Display shows:

Add PIN a/c
Number: 0000

Type the number of the PIN to be added on the keypad.

If you make a mistake while entering a number, press the # key to scroll backwards.

Press the * key to create the account or # to exit without creating an account.

Once the PIN has been entered, the display shows:

Group: 1
Number: 1234

Type in the group number you wish to the account to be allocated to and press the * key.

Note. If only 1 group has been created, the account is automatically allocated to Group 1 and the above display is not shown.

PIN Length

It is possible to set PINs to be between 4 and 8 characters in length. This is achieved using the PIN Size feature, see page 39.

Lockout

F1000 can be configured to temporarily disable itself if 4 sequential wrong PINs are entered. This is set up using the Lockout feature (see page on page 42).

9 – Delete PIN Account

This feature allows PIN accounts to be deleted from the memory of the F1000.

From the IDs menu, press 9. Display shows:

Del ID
Number: 00000000

Type the PIN to be deleted on the keypad.

If you make a mistake while entering the number, press the # key to scroll backwards.

Press the * key to delete the account or # to exit without deleting the account.

3 – Reset Balances

This menu contains a number of submenus which allow account and group balances to be reset. From the Accounts menu, press 3. In the case of Credit accounts, the account balance will be reset to zero. In the case of Debit accounts, the account balance will be reset to the Account Limit.

1 – Reset Account

This feature allows the individual account balances to be reset. From the Reset Balances menu, press 1. Display shows:

Reset Account
Number: 00000000

Enter the number of the account of which you wish to reset the balance and press the * key. To enter the id number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering the number, press the # key to scroll backwards.

Display shows:

Reset Account
SURE? #=NO *=YES

Press the * key to reset the account balance or # to exit without resetting the account balance.

2 – Reset Group

This feature allows the balances of all accounts in a particular group to be reset. From the Reset Balances menu, press 2. Display shows:

Group 1

Enter the number of the group which you wish to reset the balance and press the * key. To enter the id number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering the number, press the # key to scroll backwards.

Note. If only 1 group has been created, the above display is not shown.

Display shows:

Group: 1 SURE? #=NO *=YES

Press the * key to reset the group balance or # to exit without resetting the group balance.

3 – Reset All

This feature resets the balances of all accounts from all groups. From the **Reset Balances** menu, press 3. Display shows:

Reset All SURE? #=NO *=YES

Press the * key to reset the all account and group balances or # to exit without resetting the balances.

Reports Menu

1 Print Accounts	Print a report of all the account balances, subdivided by Group
2 View Account	View the balance of a specific account on the display
3 View Group	View the balance of all accounts in a specific group on the display
4 View Meters	View the copy meters on the display
5 Print Meters	Print a report of the copy meters
6 Clear Meters	Reset the copy meters
7 Print Set up	Print a report of the unit configuration

1 – Print Accounts

This feature produces a printed report of all the account balances in memory. The accounts are subdivided by group and a summary of the group balances is also printed.

With the printer connected and switched on, select 1 from the Reports menu. The display shows:

```
Print accounts
Printing
```

The report is automatically printed. The display then shows:

```
Reset Balances
OK? #=NO *=YES
```

To reset all the account balances press the * key. To exit without resetting the account balances press the # key.

Report Format

Shown below is an example of a printed F1000 account report.

```
03/10/99 12:20 Unit No: 1
Report No: 00003
-----
Group: 1
Type: Credit
Group limit 1000
Account limit: 0
Group total: 386
-----
Account      Balance
03665355    367
00001234P   19
-----
```

Annotations:

- Unit id from which report was printed (set up using Unit Number feature, see page 34)
- Date and Time report was printed
- Incrementing sequential report number for audit purposes
- Group set up information
- Current Group balance
- List of account balances
- "P" denotes PIN account

Zero Balance Accounts

F1000 can be set up to either print or omit accounts with a balance of zero from a printed report. This can be set up using the Zero Balances feature. See page 35 for further details.

2 – View Account

This feature allows the balance of a specific account to be shown on the display. From the Reports menu, press 2. The display shows:

View account Number: 00000000

Enter the account number you wish to view and press the * key. To enter the account number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering a number, press the # key to scroll backwards.

The display shows:

03665355 367

Press the # key to quit back to the Reports menu.

3 – View Group

This feature allows the group and account balances of a specific group to be shown on the display. From the Reports menu, press 3. The display shows:

Group: 1

Type the number of the group you wish to view on the keypad and press the * key.

If you make a mistake while entering a number, press the # key to scroll backwards.

The display then shows:

Group: 1
Total 386

Press the * key to view the balance of first account in the group. The display shows:

03665355 367

Continue to press the * key to view the balance of other accounts in the group. Pressing the # key at any time quits back to the Reports menu.

4 – View Meters

This feature allows the copy meters to be shown on the display.

The copy meters record the total number of copies taken against each price.

From the Report menu, press 4. Display shows:

Meter 1: *Next 682

This is the total number of copies taken at Price 1 (prices are set using the **Prices** function, see page 31).

Press the * key to view the next meter. The display shows:

Meter 2: *Next
235

This is the total number of copies taken at Price 2. Continue to press the * key to view the meters for prices 3 and 4. A **Billing** meter also records billing timer transactions. For further information on **Billing Timer** see page 41.

5 – Print Meters

This feature provides a printed report of the copy meters.

With the printer connected and switched on, select 5 from the **Reports** menu. The display shows:

Print meters
Printing

The meter report is automatically printed.

Report Format

03/10/99 12:50
Report No: 00001

Meter 1: 683
Meter 2: 235
Meter 3: 97
Meter 4: 16
Billing: 0

Unit No: 1

Unit id from which report was printed (set up using Unit Number feature, see page 34)

Date and Time report was printed

Incrementing sequential report number for audit purposes

Meter Totals (number of copies taken at each price)

6 – Clear Meters

This feature resets the copier meters. From the **Reports** menu, press 5. The display shows:

Clear meters
SURE? #=NO *=YES

Press the * key to reset the copy meters or the # key to quit without resetting the meters.

7 – Print Setup

This feature allows a unit configuration report to be printed. With the printer connected and switched on, select 7 from the **Reports** menu. The display shows:

Print Setup
Printing

The report is automatically printed.

Report Format

03/10/99 12:51 Unit No: 1
Report No: 00001

F1000 V 1.0
Memory used: 0%
Unit type: Type 1
Unit mode: Card OR PIN
Zero balances: YES
Sense time: 0.00
Blind time: 0.0
Security delay: 1
Auto timeout: 120
Copier off delay: 0.0
Billing timer: 5
Lock out time: 1
Run limit: 0
PIN size: 4

Price 1: 1
Price 2: 2
Price 3: 4
Price 4: 7
Billing: 0

Unit id from which report was printed (set up using **Unit Number** feature, see page on page 34)

Date and Time report was printed

Incrementing sequential report number for audit purposes

Firmware issue version

Unit configuration parameters (see **Configure** menu, page on page 31, for further details)

Copy price settings (see **Prices**, page 31, for further details).

Configure Menu

1 Prices		
	1 Price 1	Sets copy price 1
	2 Price 2	Sets copy price 2
	3 Price 3	Sets copy price 3
	4 Price 4	Sets copy price 4
	5 Billing	Sets the timed billing price
2 Utilities		
	1 Unit number	Sets the unit id number
	2 Function cards	Allows various supervisor function cards to be created
	3 Zero balances	Sets printed reports to show or hide accounts with zero balances
	4 Mode	Card, PIN or Card+PIN functions on or off
	5 Baud rate	Configures the baud rate setting for printer communications
	6 Parity	Configures the parity setting for printer communications
	7 Flow control	Configures the flow control setting for printer communications
	8 Time	Set time
	9 Date	Set date
	0 More....	Set beep on/off, restore defaults, reset ids, pin length
3 Copier		
	1 Security delay	Reset the balance of an individual account
	2 Auto time out	Reset the balances of all the accounts in a specific group
	3 Copier delay	Reset the balances of all the accounts
	4 Sense time	
	5 Blind time	
	6 Unit type	
	7 Billing time	
	8 Lockout time	
	9 Run limit	

1 – Prices

This menu contains a number of submenus which allow the copy prices to be set up. Up to 4 prices can be set to charge for different copy types. A price can also be set for timed billing. All prices are in units.

Important

The number of copy prices available is dependent on the Unit Type configuration (see page 41).

From the Configure menu select 1.

1 – Price 1

This option allows the cost of the first copy price (normally A4) to be set. From the Prices menu, press 1. The display shows:

Price 1
New: 0

Use the keypad to type in the price you want to charge for the first copy price. The price can be any value from 0 – 99999999 units.

Press the * key to confirm price 1 or the # key to quit without making changes. Display returns to the **Configure** menu.

2 – Price 2

This option allows the cost of the second copy price to be set. From the **Prices** menu, press 2. The display shows:

Price 2	
New:	0

Use the keypad to type in the price you want to charge for the second copy price. The price can be any value from 0 – 99999999 units.

Press the * key to confirm price 2 or the # key to quit without making changes. Display returns to the **Configure** menu.

3 – Price 3

This option allows the cost of the third copy price to be set. From the **Prices** menu, press 3. The display shows:

Price 3	
New:	0

Use the keypad to type in the price you want to charge for the third copy price. The price can be any value from 0 – 99999999 units.

Press the * key to confirm price 3 or the # key to quit without making changes. Display returns to the **Configure** menu.

4 – Price 4

This option allows the cost of the fourth copy price to be set. From the **Prices** menu, press 4. The display shows:

Price 4	
New:	0

Use the keypad to type in the price you want to charge for the fourth copy price. The price can be any value from 0 – 99999999 units.

Press the * key to confirm price 4 or the # key to quit without making changes. Display returns to the **Configure** menu.

5 – Billing

This option allows the timed billing cost to be set. The billing timer can be used to credit/debit an account on a time basis, e.g. 1 unit every 5 seconds. The **Billing Time** feature, see page 41, determines at what time intervals the **Billing** charge is made.

From the **Prices** menu, press 5. The display shows:

Billing	
New:	0

Use the keypad to type in the price you want to charge for the fourth copy price. The price can be any value from 0 – 99999999 units.

Press the * key to confirm price 4 or the # key to quit without making changes. Display returns to the **Configure** menu.

6 – Low Credit

Required for Unit Type 2 operation only.

This feature sets the account credit value at which the F1000 will disable the second relay in **Unit Type 2** operation (see page 41). This can be used to disable higher-cost transactions, while allowing lower cost copies to be made (i.e. those controlled by relay 1).

From the **Prices** menu, press 6. The display shows:

Low Credit	
New:	2

Use the keypad to type in the price you want to set as the low credit price. **Note!** the value listed refers to the price number in the price list (i.e. 1, 2 or 3) not the actual value. Press the * key to confirm or the # key to quit without making changes.

Important! Do not set Low Credit without also setting End Credit.

7 – End Credit

Required for Unit Type 2 operation only.

This feature sets the account credit value at which the F1000 will terminate the transaction (i.e. disable relay 1) in **Unit Type 2** operation (see page 41).

From the **Prices** menu, press 6. The display shows:

Low Credit	
New:	1

Use the keypad to type in the price you want to set as the end credit price. **Note!** the value listed refers to the price number in the price list (i.e. 1, 2 or 3) not the actual value. Press the * key to confirm or the # key to quit without making changes.

Important! Do not set End Credit without also setting Low Credit.

2 – Utilities

This menu contains a number of submenus which allow operational settings to be configured.

1 – Unit number

This feature allows an individual unit number to be set within each F1000. The unit number is printed at the top of all reports.

From the **Utilities** menu, press 1. The display shows:

Unit number	
New:	0

Use the keypad to type in a new id number. A value between 0 and 999 can be entered.

Press the * key to confirm the new unit number or the # key to quit without making changes. Display returns to the **Configure** menu.

2 – Function Cards

This feature allows supervisor function cards to be created. These give direct access to particular features without allowing access to the rest of the Master Menu, minimising the risk of other settings being accidentally altered. This feature can only be used where a card reader is fitted.

There are a number of function cards that can be created. From the **Function Cards** menu press the appropriate number to create the type of function card you need:

1 – Master Card

Creates a new Master Card or Master PIN. Note, this will **replace** the existing Master Card/PIN.

2 – Add ID Function Card

Creates a function card providing direct access to the Add ID feature (see page 21 for further details on using this feature).

3 – Print All Function Card

Creates a function card providing direct access to the Print All feature (see page for further details on using this feature).

4 – View Account Function Card

Creates a function card providing direct access to the View Account feature (see page 28 for further details on using this feature).

5 – Reset Balance Function Card

Creates a function card providing direct access to the Reset Balance feature (see page 26 for further details on using this feature).

6 – Delete Function Card

Deletes a function card from the units memory.

Example

To create an Add ID Function Card, press 2 from the **Utilities** menu, and then press 2 again to select Add ID Function. Display shows:

Add ID Func
Number: 00000000

Enter the number of the card you wish to define as the Add ID function card and press the * key.
To enter the account number, either swipe the card through the reader or type the number on the keypad.

If you make a mistake while entering a number, press the # key to scroll backwards. Any number of function cards can be created.

3 – Zero Balances

This feature provides the facility for accounts with zero balance to be shown or hidden in a printed account report. From the **Utilities** menu, press 3. The display shows:

Zero Balances
NO

In order for accounts with a balance of zero to be shown in a printed account report, Zero Balances must be set to **Yes**.

Press the 1 or 7 buttons on the keypad to scroll between the available options (NO/YES). The display shows:

Zero Balances !
YES

A “!” character appears at the top right hand corner of the display, indicating that the option has been changed from the original setting. Press the * key to accept the displayed setting or the # key to exit without making any changes..

For details on printing account reports, see **Print Accounts**, page 27.

4 – Mode

This feature defines by what method accounts can be accessed. From the **Utilities** menu, press 4. The display shows:

Mode
Card or PIN

PIN only entries will always be allowed, but only to access accounts created using the **Add PIN a/c** feature, see page 24. The unit can be configured to access accounts created using the **Add ID** feature (see page 21) in either card only or card + PIN modes.

Press the 1 or 7 buttons on the keypad to scroll between the available options:

- | | |
|------------------------|---|
| Card or PIN | Allows card only access to accounts set up using Add ID and/or PIN only access to accounts set up using Add PIN a/c |
| Card+PIN or PIN | Allows card+PIN access to accounts set up using Add ID and/or PIN only access to accounts set up using Add PIN a/c |

The display shows:

Mode	!
Card+PIN or PIN	

A “!” character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to accept the displayed setting or the # key to exit without making any changes.

Card+PIN

Once Card+PIN mode is activated, all accounts accessed with a card will require the user to define their own PIN4-digit PIN the next time they use their card. This is stored within the memory of the unit and becomes their PIN from then on.

Changing PIN

If the PIN is forgotten or needs to be changed, revalidate the card using the Add ID feature (see page 21). The display will show:

Add ID
Already valid

This will reset the PIN, allowing the user to redefine their PIN next time their card is used.

Wrong PIN

If a user makes a mistake while typing in their PIN when attempting to access their account, pressing the * key will cancel the entry and the PIN can be entered again.

Lockout

F1000 can be configured to temporarily disable itself if 4 sequential wrong PINs are entered. This is set up using the Lockout feature (see page on page 42).

5 – Baud Rate

This feature allows the communications speed to be set for communication with a printer. The baud rate of the 1000-Series controller must be set to the same baud rate as the printer connected.

From the Utilities menu press 5. Display shows:

Baud Rate
9600

Use the 1 key to scroll up or the 7 key to scroll down through the options available:

300
600
1200
2400
4800
9600
19200
38400

A “!” character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to confirm the new setting.

6 – Parity

From the Utilities menu press 6. Display shows:

Parity
No Parity

Use the 1 key to scroll up or the 7 key to scroll down through the options available:

No Parity
Even Parity
Odd Parity

A “!” character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to confirm the new setting or # key to cancel without making any changes.

7 – Flow Control

From the Utilities menu press 7. Display shows:

Flow control
None

Use the 1 key to scroll up or the 7 key to scroll down through the options available:

None
CTS
XONOFF
CTS+XONOFF

A “!” character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to confirm the new setting or # key to cancel without making any changes.

8 – Time

This feature allows the clock to be set to the correct time.

From the Utilities menu press 8. Display shows:

Time 00:23:58
New :

Using the keypad, type in the new time in 6 digit, 24 hour clock format (hhmmss). Press the * key to confirm the new setting or # key to cancel without making any changes.

9 – Date

This feature allows the date to be changed.

From the Utilities menu press 9. Display shows:

Date 17/05/99
New :

Using the keypad, type in the new date in 6 digit, European date format (ddmmyy). Press the * key to confirm the new setting or # key to cancel without making any changes.

0 – More

This provides access to an additional menu containing additional features:

1 – Key Beep

This feature allows the beeper (which sounds each time a button is pressed) to be turned on or off. From the **Utilities** menu press 0 (enters the **More** menu) and then press 1. Display shows:

Key Beep ON

Use the 1 key to scroll up or the 7 key to scroll down through the options available (ON/OFF). A “!” character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to confirm the new setting or # key to cancel without making any changes.

2 – Restore Defaults

This feature restores the unit to factory default settings.

From the **Utilities** menu press 0 (enters the **More** menu) and then press 1. Display shows:

Restore def. SURE? #=NO *=YES

Press the * key to restore the default settings or press the # key to abort.

Pressing the * key causes the following display to be shown:

SYSTEM RESET #=YES *=NO

Press the # key to reset the unit. Press the * key to abort.

Note, the functions of these keys are reversed from normal for this operation!

Pressing the # key returns the unit to factory default settings. See page 14 for details on how to configure the unit from this point.

Note! At this point the accounts have NOT been cleared from the memory of the unit. You are given the opportunity to either save or delete these during the initial configuration. See page 14 for further details.

3 – Clear Accounts

This feature deletes all the accounts and groups from the memory of the unit.

From the **Utilities** menu press 0 (enters the **More** menu) and then press 3. Display shows:

!CLEAR ACCOUNTS!
OK? #=NO *=YES

Press the * key to clear accounts/groups or the # key to abort.

4 – PIN Size

The feature is used to set the number of digits used for PIN-only transactions. From the **Utilities** menu press 0 (enters the **More** menu) and then press 4. Display shows:

PIN size
New: 4

The PIN size can be configured to be between 4 and 8 digits. Type the new PIN length on the keypad and press the * key to confirm or press the # key to exit without making any changes.

Note, this setting does not affect PINs used for Card + PIN. These will always be 4 digits in length.

3 – Copier

This menu contains a number of submenus which allow various copier interface parameters to be configured. Options within this menu should only be altered by an engineer.

1 – Security Delay

This feature sets the length of delay between the user pressing a button on the keypad to end copying and the transaction being terminated by the unit. Dependant on the copier type and speed, it may not be appropriate to terminate the transaction immediately, as a copy could be made while the transaction is being terminated and the value would not be deducted.

From the **Copier** menu, select 1. The display shows:

Security Delay
New : 0

Use the keypad to type in a new security delay time (0-250 seconds). Press the * key to confirm the new setting or the # key to exit without making any changes.

2 – Auto Timeout

This feature sets the time after which the unit will automatically end a transaction if no copies are being made.

From the **Copier** menu, select 2. The display shows:

Auto Timeout
New : 120

Use the keypad to type in a new security delay time (0-250 seconds). Press the * key to confirm the new setting or the # key to exit without making any changes. If set to 0 the Auto Timeout function is disabled.

Timed Billing

If the Billing Timer feature (see page 41) is being used to charge an account on a time basis, Auto Timeout should be set to 0, unless you wish to limit the amount of time available.

3 – Copier Delay

This feature sets the length of time the unit delays disabling the copier following termination of a transaction. It is sometimes necessary to delay disabling the copier if it is designed to jam if disabled early in the copy cycle. This can occur if the F1000 terminates the transaction because there is insufficient credit remaining in the account to complete the job.

From the Copier menu, select 3. The display shows:

Copier Delay
New : 0.0

Use the keypad to type in a new copier delay time (0-25 seconds). Press the * key to confirm the new setting or the # key to exit without making any changes.

4 – Sense Time

This feature sets the pulse detection time. The sense time should normally be set to 0, unless there is a particularly noisy signal from the copier.

From the Copier menu, select 4. The display shows:

Sense Time
New : 0.00

Use the keypad to type in a new sense time (0-2.5 seconds). Press the * key to confirm the new setting or the # key to exit without making any changes.

5 – Blind Time

This feature sets the length of time the unit will ignore additional pulses after an initial input pulse is received. This can often be useful a second pulse which can sometimes occur when making A3 or larger copies. Blind Time should normally be set to 0.

From the Copier menu, select 5. The display shows:

Blind Time
New : 0.0

Use the keypad to type in a new sense time (0-25 seconds). Press the * key to confirm the new setting or the # key to exit without making any changes.

6 – Unit Type

This feature sets the mode of operation of the price line inputs. F1000 can be interfaced with the copier to accept billing inputs in two different ways:

Unit Type 1

In this mode of operation, energising the Price Line inputs 2 and 3 in different (binary) combinations determines which price in the price list is deducted when price line 1 is pulsed. For example, if both price lines 2 and 3 are energised, price 4 will be selected; energising price line 3 alone will select price 2, and so on. See **Prices**, page 31 for details on setting prices.

This mode of operation is preferred as the F1000 can display the price of the copy before a copy is made and a transaction can be terminated if there is insufficient credit as soon as price lines 2 or 3 are activated (i.e. when the paper size is selected on the copier).

Unit Type 2

In this mode of operation, pulsing one the Price Line inputs (1, 2 or 3) will deduct different prices in the price list. For example, pulsing price line 1 deducts Price 1, pulsing price line 2 deducts Price 2 and pulsing price line 3 deducts Price 3 (see **Prices**, page 31 for details on setting prices). If two pulses occur simultaneously the price positioned highest in the price list will be deducted.

This mode of operation is less preferable as the F1000 must terminate a transaction if the credit in an account falls below the value of the most expensive copy, even though there maybe enough credit remaining to make copies at lower prices.

To help overcome this problem, it is possible to select which price is used as the credit value below which the second relay output is disabled – **Low Credit**, and the credit value below which a transaction will be terminated – **End Credit**. See page 33 for details on these features.

To select the Unit Type, from the Copier menu, select 6. The display shows:

Unit Type Type 1

Use 1 or 7 buttons on the keypad to scroll between the available options (Type 1/Type 2). Press the

* key to confirm the new setting or the # key to exit without making any changes.

Unit Type Type 2	!
---------------------	---

A “!” character displayed in the top right hand corner of the display denotes that the option has been changed from the original setting. Press the * key to confirm the new setting or the # key to exit without making any changes.

7 – Billing Time

The billing timer can be used to credit/debit an account on a time basis, e.g. 1 unit every 5 seconds. This option determines at what time intervals the Billing charge is made. The **Billing** feature, see page 33, determines how much is charged each time a billing pulse is made.

From the Copier menu, select 7. The display shows:

Billing time New: 0

Use the keypad to type in a new sense time (0-250 seconds). Press the * key to confirm the new setting or the # key to exit without making any changes.

8 – Lockout Time

This feature determines the length of time the unit will be locked, or disabled, in the event of 4 sequential incorrect PIN entries. This is applicable to both PIN only and Card + PIN modes.

From the Copier menu, select 8. The display shows:

Lockout time
New: 1

Use the keypad to type in a new sense time (0-250 seconds). Press the * key to confirm the new setting or the # key to exit without making any changes.

If the lockout time is set to 0, the feature will be disabled, and there will be no restriction on the number of PIN attempts that can be made.

9 – Run Limit

This feature sets the maximum number of copies that can be made in one transaction at the copier. This can be particularly useful on busier copiers where it is preferred to divert larger print runs to other machines.

From the Copier menu select 9. Display shows:

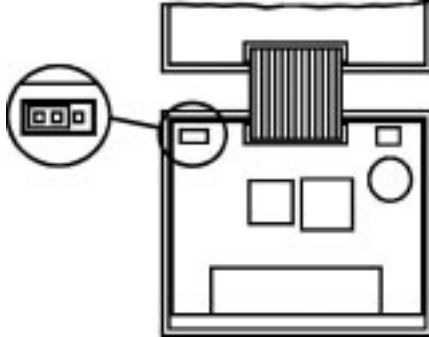
Use the keypad to type in a new run limit (0-999 copies). Press the * key to confirm the new setting or the # key to exit without making any changes.

If the run limit is set to 0, the feature will be disabled, and there will be no restriction on the number of copies that can be made.

Hardware Reset

If you forget the Master PIN/lose the Master Card or the unit cannot be reset from the menu system, it is possible to reset the unit manually.

Remove the cover of the unit. With the ribbon cable attached to both front and rear casing, locate the reset jumper on the inside of the front casing as shown below:



With the power connected, remove the jumper and momentarily connect across the middle and right hand pins. The unit will beep. Replace the jumper in its original position.

The display shows:

SYSTEM RESET	
# =YES	* =NO

Press the # key to reset the unit. Press the * key to abort.

Note, the functions of these keys are reversed from normal for this operation!

Battery Jumper

The memory of the unit **cannot** be reset by removing the battery jumper. The battery is used to back up the clock function only. Memory of the F1000 controller is stored in eeprom and does not therefore require battery backup.

Everyday Use

Copying Transaction

The normal display that a user will see when approaching an F1000 to do some copying is:

12.59	20/10/99
Use card or PIN	

At this point the user may either swipe their card through the reader (if fitted) or type their PIN on the keypad.

If a mistake is made while typing in a PIN, pressing the # key cancels the attempt, and allows the PIN to be re-entered.

If the card or PIN is valid.....

.... the following display will briefly be shown:

Credit available
1000

followed by:

Price	1
Credit	0

Note, the value shown as **Credit available** will be dependant on the limits set and current balance of the account in question.

If the users account is a **Credit** account, the balance will increment as copies are made. A **Debit** account will decrement as copies are taken.

Card + PIN mode

If **Card + PIN** mode is configured (see page 35), the first time the user swipes their card they will be presented with the following message:

12.59	20/10/99
Enter NEW PIN	

The user should then type in a 4 digit PIN. This PIN will be requested each subsequent time the card is used. The display will then revert to the above.

If the card or PIN is not valid.....

..... the display will show the following:

12.59	20/10/99
03568975	Denied

Note, the card number is replaced by a series of *'s in the case of a PIN entry.

Lockout

In either PIN only or Card + PIN modes, 3 successive incorrect PIN entries will cause the unit to be locked for the specified lockout time (see page 42 for details on setting up the Lockout feature).

The display will show the following:

12.59	20/10/99
Locked	

When the unit is locked no photocopying is allowed. It is possible to enter Master Mode by swiping the Master Card through the reader or entering the Master PIN. This will reset the locked condition.

After the lockout time has expired, the display will shown the following:

12.59	20/10/99
Unlocked	

Normal use is resumed.

Ending a Transaction

A copying transaction can be terminated by pressing any of the buttons on the keypad, or swiping any card through the reader. When a transaction is terminated, the following display is shown, detailing the total number and value of copies taken during the transaction:

Total	13
Value	26

A transaction will also be terminated automatically if the copier is idle for a specified period of time. See Auto Timeout, page 39 for details on setting this feature.

Compliance and Safety Notices

Compliance with EC Regulations



The TDSi F1000 conforms to the EC EMC Directive - 89/336/EEC, and the Low Voltage Directive 73/23/EEC as amended by 93/68/EC.

Test results show the product meet the requirements of the following EMC specifications when installed as a system according to TDSi installation instructions:

EMC Emissions: EC Spec. EN55022-1994, Level B - General Use

EMC Immunity: EC Spec. EN55024-1998

The equipment meets the requirements of the Low Voltage Directive by compliance with the safety specification for IT Equipment - EN 60950.

Limitations on the intended operating environment.

The equipment is intended for use in revenue control applications in a wide range of configurations. It is intended to control the use of third party equipment attached at the control interface. Such third party equipment, and all cabling must be of suitable design and installation to ensure that the overall system complies with the requirements of the EC EMC directive.

Guidance notes for the installation and use of TDSi equipment must be strictly followed. Due to the wide range of access control products TDSi notes cannot cover all possible type and combinations of equipment that may be assembled to form a total system.

TDSi exercise due diligence to ensure that its equipment is suitable for use in the stated applications, but ultimate responsibility for the compliance of a complete system must rest with the prime contractor at a site where local conditions may require additional EMC precautions to be taken.

FCC Regulations Notice

This equipment complies with the requirements in part 15J FCC for a Class A computing device. Operation of this equipment in residential areas may cause unacceptable interference to radio and television reception requiring the operator to take whatever steps are necessary to correct the interference.

CSA EMC Notice

This digital apparatus does not exceed the Class B Limits for radio frequency emissions from digital apparatus set out in the radio interference regulations of the Canadian Department of Communications.

Le present appareil numerique n’emet pas de bruits radioelectriques depassant les limites applicable aux appareils numeriques de la Class B prescrites dans les reglement sur le brouillage radioelectrique edicte par le Ministere des Communications du Canada.

Safety Notice

Low Voltage 10 - 14v DC operation

Product description

These notes apply to TDSi F1000 products with or without associated token readers when mounted on or near equipment that they are controlling, and with the mains powered 12v DC power supply situated away from the F1000, and connected by the 12v DC supply lead. The power supply is separately connected to a 230v mains supply.

Rating

The F1000 control unit is powered from a 12v, 1A, DC supply which is provided by a remotely mounted mains driven power supply. The mains supply must be connected to a 230v, 50Hz mains supply and draws a maximum supply current of 400mA.

Safety

These products are designed to comply with the provisions of the international standard EN 60950 which covers safety of IT equipment.

WARNING: Disconnect the mains supply from any associated equipment before removing the covers or making connections to the equipment.

All regulations and requirements MUST be must strictly followed to prevent hazards to life and property both during and after installation, and during any subsequent servicing and maintenance.

It is essential to comply with the local wiring regulations and to use mains cable appropriate for use in that installation.

The electrical installation of the equipment must include convenient means to isolate the equipment from mains supply.

Siting and fixing of equipment

The equipment may be installed indoors, out of doors, or in damp or exposed conditions provided it is carefully installed and sealed to the manufacturer's instructions.

To ensure mechanical stability the equipment must be secured using appropriate fasteners or brackets to a wall, pillar or other part of the building structure, or to associated stable equipment.

The equipment must not be sited near to sources of excessive heat. It is designed for use in ambient temperatures ranging from -20c to 55 degrees C, but a heating element should be fitted for operation below 0 degree C.

Connecting a low voltage DC supply to the equipment

Always use a fully approved mains power supply to provide the 10- 4V DC supply to the F1000 equipment. Install the power supply in accordance to the manufacturer's instructions.

Fit TDSi recommended suppression capacitors to the mains supply input of the PSU.

Ensure that the F1000 chassis is connected to a solid system earth point.

Connecting signal wiring to associated equipment

The TDSi F1000 Control Unit when powered from an external low voltage 10 - 14v DC supply must be connected to other equipment forming part of an overall control system using signal wiring connections made with screened cable with the screen securely connected to an earth point at the controlled equipment end and at earth points within the F1000 equipment. Where individual remote equipment is locally earthed it is permissible to disconnect the cable screen earth connection at one end of the cable.

Internal fuse rating

There are no replaceable fuses fitted with the F1000 equipment. The mains driven power supply to which the unit is connected should be suitably fused for the application according to the supplier's instructions.

Lithium battery

Caution!

Danger of explosion if battery is incorrectly replaced.

F1000 is fitted with a non-replaceable Lithium Battery. Do not attempt to replace the battery.

In case of battery failure replace complete PCB assembly.

Dispose of battery assembly according to the manufacturers instructions.

