NCR *personaS*[88] ATMs

System Description

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Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Réglement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Information to User

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Revision Record

Date	Page	Description of Change
Mar 98	All	New publication

Contents

What Is The NCR *personaS88* ATM?

The NCR *personaS88* belongs to the new *personaS* series of NCR Automated Teller Machines (ATMs).

This new PC based ATM is designed to replace the existing generation of NCR Drive-up ATM by offering additional functionality and an even higher level of reliability.

The *personaS88* should be considered not as stand alone boxes, but as part of NCR's System Solution that combines hardware, software and networking capability to provide a total solution to your automation requirements.

The *personaS88* can run a range of application software products: NCR Direct Connect+ (NDC+) software, NCR's Terminal Management software and Software Management software.

The *personaS88* are (as far as is possible while offering additional functionality and higher levels of reliability) compatible regarding site preparation, cabling requirements, currency cassette types and printer media, with the previous 5688 generations of drive-up ATMs. This means that you can replace an existing 5688 ATM with a new *personaS88* with minimal disruption to your location. To facilitate a smooth transition from the old to the new, software migration facilities are available that allow you to migrate your existing applications to the new terminals.

What Services Can The *personaS88* ATM Offer?

The services offered by the multi functional *personaS88* cash dispensing ATMs are:

- Dispensing cash
- Account transactions
  - Transfers
  - Order cheque book
- Account enquiries:
  - Account balance
  - Next loan payment
  - Credit card limit
  - Interest rates.
- Deposits
- Document processing
- Coin dispensing
- Envelope dispensing
- Mini-statement printing - using a dual mode sideways receipt printer capable of printing a standard receipt or a statement of up to 20 lines of 60 characters

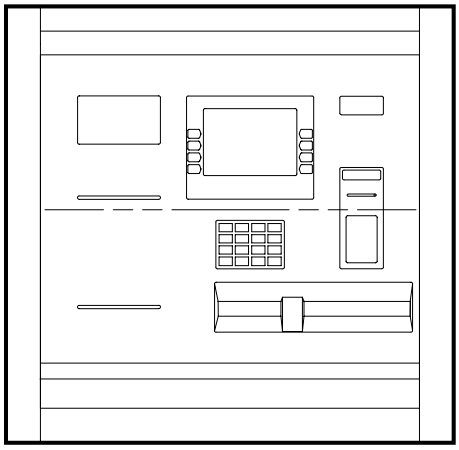
Many financial institutions provide a range of general financial services unconnected with personal accounts. NCR recognise this as a rapidly expanding area, and consequently the *personaS88* have been designed to allow you to provide these services as a secondary function. Examples of general financial services include insurance policies, stock market prices, share buying, and foreign exchange rates.

To allow cardholders and non-cardholders to make enquiries, personal account services could be combined with information services. A service like this could for example market a special interest rate on a certain type of account.

personaS88 Installation Locations

The *personaS88* is a drive-up ATM that may be installed in the following locations:

- On a drive-up island that must be a minimum of **1066.8 mm** (42in.) wide
- In a kiosk on an island or in other drive-up locations, for example in a car park
- In a first lane location, that is installed through an exterior wall of the bank to a drive-up lane.



Features And Options

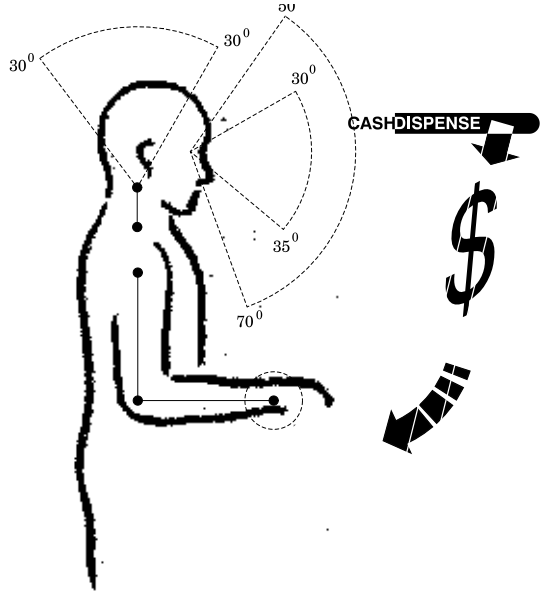
The following list shows the standard features available for the *personaS88* :

- Control electronics (includes a hard disk drive (1.2Gb (at present) and one 3.5 “ 1.44 MB flex disk drive)
- Currency cassettes:
  - Standard cassette - tamper indicating
  - Standard cassette
  - Standard cassette - wide bodied - tamper indicating
  - Standard cassette - wide bodied
- Note handler: 4 denominations
- Customization possibilities
- Display monitor:
  - Sunlight viewable colour with Function Display Keys (FDKs)
  - Sunlight viewable monochrome with FDKs
- Electronic logging
- Error handling and recovery
- Integrated security
  - Standard security
  - Various local national alternative securities
- Keyboard
  - Standard
  - Tactile
- Magnetic card reader or reader / writer
  - Card Return On Power Fail (CROPF) is available as a motorized card reader option.
  - Smart card capability is available as a motorized card reader option.
- Off-line operation
- State of health monitoring
- Supervisor interface.

The following list shows the current, and future, major options that are available for the *personaS88* :

- Alarm system
- Customer lead through (media entry indicators)
- Digitized audio
- Disk drives:
  - A second 3.5 “ 1.44 MB flex disk drive
- Display privacy filter (colour monitor only)
- Electronics and file device security
- Encryptor
- FDK/Touch Screen mapping
- Integrated camera enable:
  - Film
  - Video
- Night deposit interface
- On-line operation
- Printers
  - Receipt (standard)
  - Receipt (sideways)
  - Journal
  - 40 column graphics receipt printer (thermal)
  - 40 column graphics journal printer (thermal)
- Private Audio Enable (Voice Assisted Leadthrough)
- Remote status indicator
- RS-232 device interface(s)
- Industry standard architecture (ISA).
- Envelope dispenser:
  - Standard capacity (160 to 250 envelopes)
- Envelope depository

Note Handling System



The note handling system of the *personaS88* comprises the following modules:

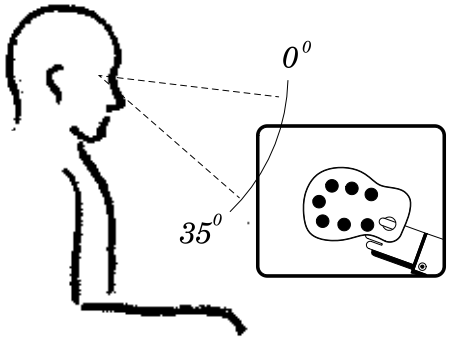
- Currency picker
- Currency cassettes
- Currency purge / retract bin
- Currency presenter.

The note handling system can present up to 40 bills, in any combination, from 1, 2, 3 or 4 currency cassettes. The bills are presented to the customer in a single bunch and are protected against dislodgment until they are removed by the customer. If the bills are not removed from the exit slot, they can be retracted into the ATM's currency purge bin.

As bills are picked and pass through the note handling system they are checked for size and singularity. If the bills fail these tests they are sent to the currency purge bin and the system automatically retries to pick the correct notes, the system will try a total of four times to pick the correct notes.

The note handling system's currency cassettes can be adjusted to hold all sizes of bills used in the world today. Four versions of currency cassette are available; a standard version with tamper indication, a standard version without tamper indication, a standard wide bodied version with tamper indication and a standard wide bodied version without tamper indication.

Display Monitor



The *personaS88* offer the following range of monitors:

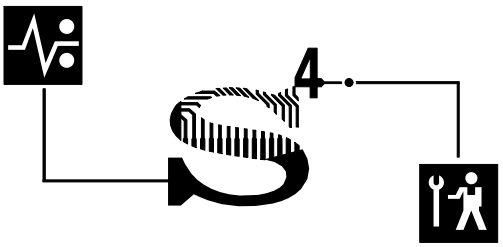
- 10 inch VGA colour display with Functional Display Keys (FDKs)
- 10 inch sunlight viewable VGA monochrome display with FDKs.

The graphics images that the ATM presents to customers can be generated by a standard PC package. You can use a standard PC graphics package to create images, and store them on a disk. The application can retrieve and display these images during customer transactions. On the monitor, computer generated graphics can have a dramatic effect: the screen's resolution and depth of colour are excellent.

Electronic Logging

If you are using an NDC+ application, you can set up an electronic log to keep a record on disk of all significant customer and supervisor activity. The electronic log can be used in place of, or complimentary to, a journal printer log.

Error Logging



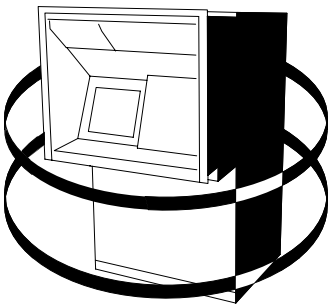
Error logging is the responsibility of the ATM's system software, known as the Self Service System Software (S4).

S4 handles error reporting and error recovery for all devices within the ATM. It handles most transient errors, and maintains a dynamic status report of the ATM's devices. S4 logs all errors in Non-Volatile Random Access Memory (NVRAM), with a code that lets you see the severity of the error. There are four severity levels:

- Routine conditions from which the terminal has recovered
- Warning conditions from which the terminal has recovered, but may require operator attention
- Suspend conditions that indicate possible customer tampering
- Fatal conditions that indicate a device failure requiring operator attention.

Error conditions are reported to the operator in text form using the ATM's state of health reporting system. The *personaS88* supports local language reporting, this allows error messages to be displayed in one of several languages.

Integrated Security

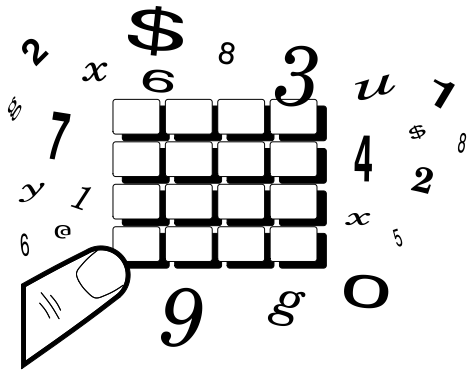


The integrated security enclosure of the *personaS88* houses the following modules:

- Currency dispenser
- Basic Alpha-Pinpad Encryptor (BAPE)
- Alarm systems
- Envelope depository.

The standard level of security is the integrated security enclosure available for the *personaS88*.

Keyboard Input



A *personaS88* application can accept input from a keyboard. This might be appropriate for entering confidential information such as Personal Identification Numbers (PIN), or for selecting items/features from the monitor.

Standard Keyboard

The standard numeric keyboard is a 16-key keyboard that can be configured as numeric, alphanumeric or functions keys, depending on requirements. Keyboard layouts compatible with existing 5088 Drive-up ATMs are available. Keyboards are supplied with stainless

steel keytips, and the choice of either a stainless steel or polycarbonate keyboard surround.

Besides the 16-key keyboard, an *personaS88* also has two rows of four Function Display Keys (FDKs) mounted alongside the monitor.

Tactile Keyboard

The *personaS88* may be configured with the tactile keyboard which has been designed to cope with the rigors of the self service environment, yet provide optimum usability.

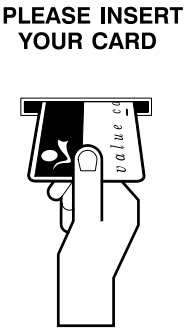
The tactile keyboard has the following features:

- Protruding keytips - which enable the visually impaired to feel the edge of individual keys and so determine the end of one key and the start of another
- Full travel, positive action keys - the full movement of the key confirms to the user that the key has been pressed firmly enough. The force needed to press the key is greatly reduced
- Increased character size - gives the partially sighted a better view of the keyboard legends
- Function key offset - the function keys, that is, the CANCEL key, ENTER key and so on, are offset from the numeric keyboard to give greater definition to the numeric area.
- Pip on No. 5 key - the number 5 key can be configured with a pip which locates the center of the keyboard.

FDK/Touch Screen Mapping

Function Display Key (FDK) / Touch Screen mapping enables the FDKs, that are at the side of the *personaS88* display, and the touch screen display to be software mapped down to the 16-key keyboard. This aids the visually impaired user by removing the need to search around the facia for the function keys or the touch screen.

Magnetic Card Operations



Customers can begin transactions by inserting a magnetic card into a card reader.

Magnetic cards can be used for security, for identifying customers, and for permitting access to restricted services. An application can use the information on the card to personalize transactions.

The software system supports the following card functions:

- Motorized card reader ISO track 2
- Motorized card reader / writer ISO tracks 1, 2, and 3 (track 3 write)
- Motorized card reader / writer ISO tracks 1, 2, and 3 (writes to all three tracks)
- Name extracted from ISO track 1 and displayed on screen or printed on a receipt
- Card ejected or captured by motorized card reader on completion of transaction
- Retract and capture of card by motorized card reader, under application control, if the customer fails to take card within a specified period
- Card return on power fail (this is an optional extra, not available when Smart Card feature is used). This feature ejects a card from a motorized card reader if the power should fail during a transaction. The card is subsequently captured if it is not removed from the card reader
- Smart card capability (an optional feature). This feature offers the functionality of smart card technology, for example increased security and data storage.

The card readers are available with either a standard open card capture container, or a latchfast card capture container. When the latchfast bin is removed from the terminal its entry slot is closed, and a sealed / locked door in the bin must be opened to remove the captured cards.

Off-Line Operation

Partial Off-line

You can configure your application to allow you to provide services to customers when communications with a Host computer is not available. To do this, the application makes use of an off-line subsystem, which records each transaction processed while the terminal is off-line. Details of transactions are recorded in an electronic log on disk.

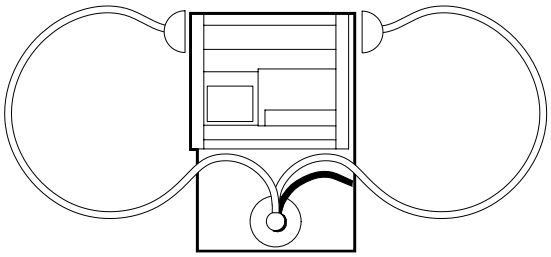
If power fails while a terminal is off-line, the current transaction data remains safe, because it is held in battery-backed NVRAM until the terminal recovers. When communications with the Host are restored, the *personaS88* can then transfer the electronic log to the Host. You can also print out the contents of the log on one of the ATM's printers.

Off-line operation is not a standard feature, since it requires your terminal to support High Order Communications (see ON-LINE OPERATION), and is not supported by NDC+ applications.

Full Off-line

A fully off-line *personaS88* has no communications link with a Host computer. The electronic log is recorded on microdiskette, and you must physically take it to a Host for reading. Under supervisor control, you can also print out the contents of the electronic log on one of the ATM's printers.

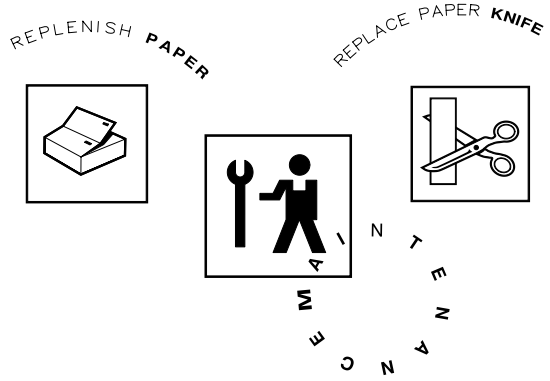
State Of Health Monitoring (Error Reporting)



The terminal software can monitor the status of all the replaceable / replenishable modules of the ATM and indicates the current health of the terminal. The state of health messages show if a module needs immediate replenishment, if it will shortly require replenishing, if it needs to be replaced immediately, or if it will need to be replaced shortly. This form of reporting maximizes ATM 'up' time by warning you in advance of any possible module failures and of any replenishment requirements.

State of health text messages are displayed on the supervisor interface. The text can be in one of the several languages supported by the *personaS88*.

Supervisor Interface



The application software allows you to put your *personaS88* in a supervisor mode, where you can carry out replenishment and maintenance procedures.

The operator panel is the enhanced operator panel that has a 16 line display, two columns of four FDKs and a 16-key keyboard.

The software lets you define, which functions are to be restricted to supervisor mode, and which are always to be available.

Alarm Systems

The alarm system options offered on the *personaS88* incorporate alarm status monitoring capabilities. The signals from the detecting devices within the security enclosure are connected to the terminal's processor system and are available for connection into an external alarm system, including the Diebold external alarm system.

Three levels of alarm system are available:

- Basic alarm system
- Enhanced alarm system
- High security alarm system.

The basic alarm system detects certain mechanical and thermal attacks on the security enclosure. Opening the security enclosure door also triggers the basic alarm system.

The enhanced alarm system gives a more sensitive detection of an attack on the security enclosure using a seismic sensor. Opening of the security enclosure door or the diskette disk drive security cover is also monitored.

The high security alarm system is only available for the high security RAL 626/3, French C1, CEN grade A3 or CEN grade A5 security enclosures and is similar to the enhanced alarm system in functionality.

The following four signals are sensed in the ATM, when equipped with an enhanced or high security alarm system:

- Mechanical or thermal attack on the security enclosure
- Switch sensing safe door unlocked
- Switch sensing safe door open
- Microswitch sensing diskette disk drive security cover status.

and an output alarm signal is generated within the ATM for triggering an external alarm system.

Customer Lead Through (Media Entry Indicators)

The *personaS88* can be fitted with indicators that illuminate to indicate to your customers where and when they should insert magnetic cards and envelopes into the terminal.

Digitized Audio

The application can control digitized sequences of sound stored either on the *personaS88* fixed disk drive or in CD ROM. The digitized sound is converted into analogue sound that can be amplified for playback on the ATMs internal speakers.

When developing an application that is to use digitized audio, you require a digitized sound editor running on your development system. The editor can mix and match sounds to create sequences relevant to the current stage of a transaction. The sound sequence will typically be a spoken sentence.

Private Audio Enable (Voice Assisted Leadthrough)

This feature, used in conjunction with the digitized audio, can provide voice assisted leadthrough for those with impaired vision.

Up to 999 messages of voice leadthrough can be provided through a standard Walkman headset, which can be plugged into a socket located on the terminal facia. A head set is used rather than a telephone style handset to leave the user's hands free.

Disk Drives

The terminal software that runs an *personaS88* resides on a fixed disk drive. The software system allows the application to read from, and write to, files held on disk.

The terminal can have a maximum of one hard disk drive and two flex disk drives. The drives fitted as standard are:

- Hard disk drive capacity: 1.2Gb (at present)
- 3.5" flex disk drive capacity: 1.44 MB

with the option of fitting a second 3.5" flex disk drive capacity: 1.44 MB.

The two possible configurations of disk drives for the *personaS88* are as follows:

Fixed	1.44 MB
One	One
One	Two

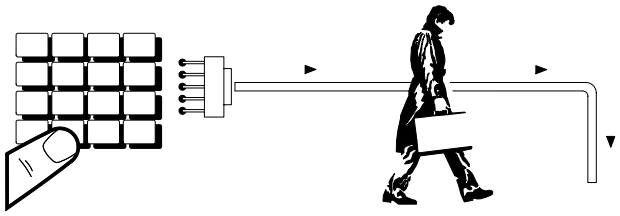
Display Privacy Filter

To reduce the viewing angle of the customer display, and thus increase customer privacy, a privacy filter can be fitted to the front of the colour display.

Electronics And Disk Drive Security

The disk drives and terminal control electronics can be provided with the capability to fit a tamper indicating seal, or padlock, to prevent unauthorized access to these devices.

Encryptors (Data Security)



Besides the physical security provided by the security enclosure option available for the *personaS88*, data security can be provided in two levels of data encryption:

- Encryptor Keyboard Controller (EKC)
- Basic Alpha-Pinpad Encryptor (BAPE).

Encryptor Keyboard Controller

The EKC provides the following functions:

- Password protected clear key loading
- Hierarchical key exchange
- DEA1 (DES) data encryption / decryption
- DEA1 (DES) based Personal Identification Number (PIN)encryption
- DEA1 (DES) based PIN verification
- X9.9 message authentication
- EKC authentication
- DEA2 (RSA) based on-line authentication and initial key loading
- ANSI X9.8 PIN block generation:
  - IBM local PIN verification
  - VISA type local PIN verification.

Unauthorized access or tampering with the EKC module causes the module to enter a secure, password only access mode.

Basic Alpha-Pinpad Encryptor

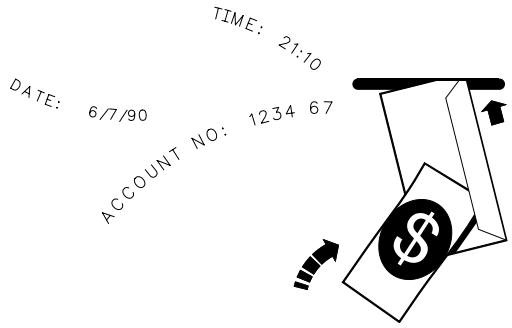
The BAPE provides a lower level of security than the EKC, with the functions available being a subset of the EKC functions:

- Key exchange
- DEA1 (DES) data encryption / decryption ECB mode
- DEA1 (DES) data encryption / decryption CBC mode
- DEA1 (DES) based Personal Identification Number (PIN) encryption
- X9.9 message authentication

- ANSI X9.8 PIN block generation:
  - IBM local PIN verification
  - VISA type local PIN verification.

Unauthorized access or tampering with the BAPE module causes erasure of the stored encryption keys.

Envelope Depository



The *personaS88* can be fitted with an envelope depository that can accept envelopes with contents up to **12.7 mm** (0.5 in.) thick. A printer built into the depository can print up to 80 alphanumeric characters along the envelope as it is transported to the depository bin. The data printed on the envelope is under application control.

Three versions of depository bin are available; a standard open bin, a standard open bin with an access door and a latchfast bin with an access door. If the ATM does not have the AUTO Supervisor feature fitted , or has the In-Service replenishment option fitted, the standard open bin with the access door can be emptied in-situ without taking the ATM out of service. When the latchfast bin is removed from the terminal its envelope entry slot is closed, and a sealed / locked door in the bin must be opened to remove the deposited envelopes either in-situ or in a secure area.

Envelope Dispenser

The motorized envelope dispenser has the capacity of between 160 and 250 envelopes, and has an adjustable back stop.

Note: The capacity is dependent on the thickness of the envelopes.

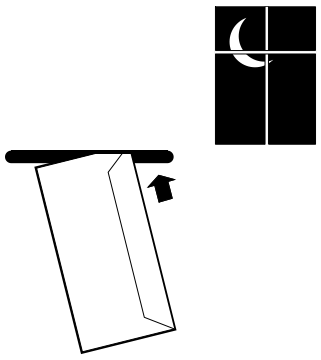
The motorized envelope dispenser can dispense one envelope through a slot in the fascia when instructed to do so by the application program. If the envelope is not removed from the fascia slot, in a predetermined time, it is retracted.

In this type of envelope dispenser the envelopes are not readily available to passers-by, this removes the possibility of anyone other than genuine customers removing envelopes. An envelope dispenser would normally be fitted along with an envelope depository or the document processing module.

Integrated Camera Enable

The capability is provided to install a third party film or video camera within the terminals.

Night Deposit Interface



An interface is available that permits a *personaS88* to control a remote night deposit safe. The interface is compatible with Mosler Magna, NCR 5285 and Diebold Securomatic night safes. This facility allows a customer to perform a night deposit transaction from a *personaS88*.

On-Line Operation

Network Connectability

personaS88 can operate in many major networks, including branch / store networks. You can set up your terminals to be remote or local to a Host. Depending on terminal configuration, you can connect an ATM to two Host devices.

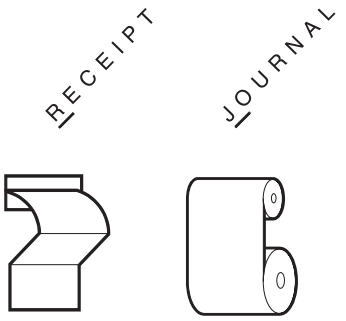
Communications Protocols

The Self Service System Software (S4) supports an extensive range of communication protocols including:

- NCR / ISO Async
- IBM 3275 Bisync
- IBM 3270 Bisync
- Burroughs TC500 Sync
- Burroughs TC500 Async
- SNA (3624) / SDLC
- SNA (LU 0) / SDLC
- X.25 (LAPB) / X.21 Bis
- SNA / X.25 (QLLC)
- IBM Financial Loop
- Token Ring.

A more complete list of the communications protocols supported by the *personaS88* can be found in NCR publication *"NCR Quick Reference Guide To Communications Manuals"* (D1-2215-A).

Printers



By making use of a printer, a *personaS88* can provide the customer with a permanent, printed record of transaction or enquiry details. Information like this is often useful for future reference, or to increase the customer's confidence.

The *personaS88* offers a range of printers:

- 40-column receipt printer
- 40-column dual mode sideways printing receipt printer
- 40-column journal printer
- 40-column graphics receipt printer (thermal)
- 40-column graphics journal printer (thermal)

Typically, an application can provide:

- Receipts
- Mini-statements (sideways printing receipt printer)
- Transaction details.

You can use preprinted stationery (paper that has a black mark printed on it to define form length, and in addition may have preprinted text) or blank paper in the 40-column printers. The *personaS88* supports the International and Arabic character sets, and three different character sizes, with a combination of character sizes printed on any line. Graphics characters can also be printed.

The dual mode sideways printing receipt printer allows you to produce mini-statements of between **112 mm** and **191 mm** (4.4 in. and 7.5 in.) in length on which up to 20 lines of 60 characters can be printed. The sideways printing printer supports the International character set and can be configured to print sideways or as a standard receipt printer.

Note: The size of the mini-statements depends upon the form length.

RS-232 Device Interface

One or two RS-232 interfaces can be provided to allow you to connect either of the following devices to your ATM:

- Remote security camera
- Remote card access device.

The remote devices may be up to **15 m** (50 ft.) from your *personaS88*.

Remote Status Indicator

The remote status indicator uses three lamps to keep bank staff up to date with the status of a terminal. The indicator can be located up to **75 meters** (245 ft.) away from the terminal.

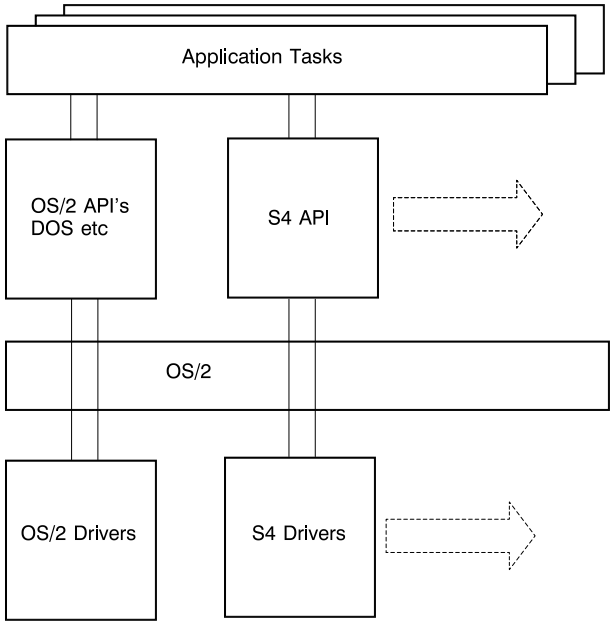
System Architecture

The *personaS88* can support the Industry Standard Architecture (ISA).

The System Software

The Self Service System Software (S4) is specially developed software that runs using the industry standard operating system OS/2. OS/2 provides a multitasking environment that S4 uses to run all the application tasks, such as high order message handling and transaction logging, concurrently. This ensures speedy and efficient operation of the whole system, and even though the ATM is performing many other functions simultaneously, the customer using the ATM will not be aware that anything else is going on.

S4 consists of many executable files, device drivers and dynamic link libraries. The application accesses S4 through an application programming interface (api) called ADI. Features such as memory services are available through ADI. Another api, called the FMIF (file management) interface, is provided to access the file system. The application can make use of these services, or make use directly of the OS/2 operating system "DOS" api.



The Application Software

Besides the Self Service System Software (S4), which provides the *personaS88* operating system, the *personaS88* can run on NCR Direct Connect Plus Software (NDC+)

Besides the above customer application products, a *personaS88* can also run the following system application products:

- Terminal Management
- Software Management (SM/SWDA and SM/DME).

NCR Direct Connect+ Software

NCR Direct Connect+ (NDC+) software can provide:

- NCR Native Mode operation
- NCR Native Mode operation plus an interface to the terminal management software
- Diebold 910/911 emulation.

To use the terminal management interface your Host system must pass messages to the terminal management software.

NDC+ is supplied as object modules from which you build load disks using a disk build utility. The software characterizes the terminal so that it is able to perform various functions defined by table and screen data downloaded from the network Host processor.

The software presents a well defined message level interface to the Host processor.

Terminal Management System

The Terminal Management System is the umbrella name given to the suite of products provided by NCR to aid the management of Self-Service Terminals.

The Terminal Management System consists of software that runs in the ATM Operations Centre (on a Host system) and software that runs on the terminals themselves. This combination of central and remote software enables the Financial Institution to manage the condition of their Self-Service Terminals more effectively.

The Terminal Management System will report on the terminal's performance, and will also allow the interrogation of the terminal by the central site.

In addition, State Of Health changes will be automatically forwarded to the central Terminal Management System software for processing. This includes the situation where a fault has occurred but also includes pre-emptive alerts indicating that a condition, which affects downtime of the terminal will occur soon.

The Terminal Management System includes a product that incorporates a knowledge-base. This product will, on be cause of the fault and give a recommended course of action.

Software Management Application

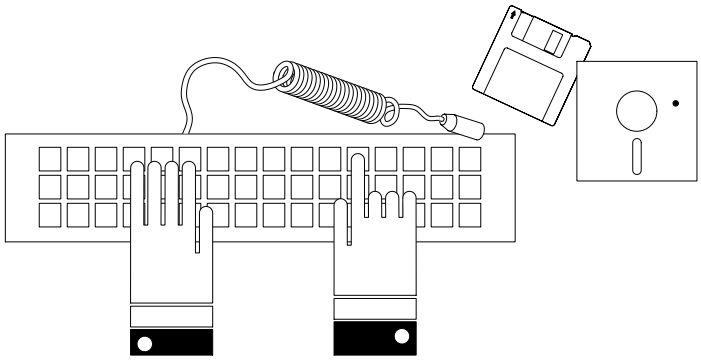
Software Management is a means of collecting operating software and data files from a development PC or terminal, storing and managing these files at the Host, distributing them to a network of NCR *personaS* terminals, and then installing these files on command from the Host.

Software Management offers several benefits. For example:

- It is a significantly more cost effective method installing files on each terminal in a network, Software Distribution saves both media and manpower, and reduces the time required to install new software / data on a terminal.
- It makes it easier to manage and control a network of terminals, using the Host's centralized management facilities. This increased manageability makes it viable to distribute software and / or data much more frequently than is typically done today.
- It gives you greater flexibility, by letting you download software and data files when the network is quiet. You can install files simultaneously across your whole network of terminals when it suits you. Also, multiple versions of software can be held at the terminal (depending on disk space) and installed when required.

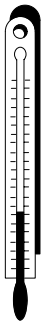
To use Software Management your Host system must have either IBM Netview / DM or NCR SWDA installed.

The Development Environment



The development environment is the combination of hardware and software that you need to develop an application and to build a working load disk suite. Typically application programs are developed on PC workstations, and then debugged on an ATM. Full details of the hardware and software required to migrate or develop an application can be found in the relevant software migration or programmer's manual.

Operating Environment



The *personaS88* are designed to operate in an outdoor environment that is within the following limits:

- Normal operating range (Interior to wall):
  - Temperature: 10°C to 40°C (50°F to 104°F)
  - Temperature change rate: 10°C / hour (18°F / hour)
  - Relative humidity: 20% to 80%
  - Relative humidity change rate: 10% / hour
  - Dew point temperature restriction: 26°C (79°F) maximum
- Normal operating range (Exterior to wall):
  - Temperature: -35°C to 50°C (-30°F to 122°F)
  - Temperature change rate: 10°C / hour (18°F / hour)
  - Relative humidity: 20% to 80%
  - Relative humidity change rate: 10% / hour

Fuller details of the environmental requirements for the ATMs are provided in:

- *"NCR personaS88 ATM Site Preparation"* (B006-0000-6066).

Appendix A

Publications Guide

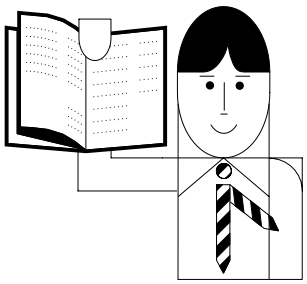
Introduction

To assist you to use and maintain your *personaS88*, NCR have produced a range of publications which covers all aspects of terminal ownership. This guide contains details of all these publications, and how you can order copies of them.

The publications can be divided into three categories:

- Customer publications - intended for customer management, operator supervisors, operators, educational / training and field support personnel
- Field engineering publications - intended for rework, field support and educational / training personnel
- Software publications - intended for those personnel responsible for the production of terminal applications.

Customer Publications



The following list shows the customer publications available for the *personaS88*. A brief description of the contents of each publication is given after the list.

- *"NCR personaS88 ATM Site Preparation Manual"* (B006-0000-6066)
- *"NCR personaS88 ATM Installation Manual"* (B006-0000-6067)
- *"NCR personaS88 ATM Operator's Manual"* (B006-0000-6068).

NCR *personaS*^{88} ATM Site Preparation Manual (B006-0000-6066)

This site preparation manual provides the information required to prepare a site prior to the installation of a vestibule (through-the-wall) NCR *personaS*$_{88}$.

The subjects covered are:

- An overview of the ATM
- Dimensions and service clearances
- Hole in wall requirements
- Floor requirements
- Customer responsibilities
- Environmental specifications
- Power and grounding requirements
- Cable specifications
- Transient protection
- Media specifications
- Planning check list
- List of installation accessories.

NCR *personaS*^{88} ATM Installation Manual (B006-0000-6067)

This publication is intended for NCR, or NCR customer, personnel who are required to install an NCR *personaS*$_{88}$.

The aim of this publication is to allow you to take your ATM from its point of delivery and to install the ATM in the required location.

NCR *personaS*^{88} ATM Operator's Manual (B006-0000-6068)

This publication is intended for NCR customer personnel who are responsible for the day-to-day operation and maintenance of either a *personaS*$_{88}$.

The function of this manual is to allow you to maintain your ATM in an operational state by providing you with the procedures you will require to replenish the various devices which make up your ATM.

Field Engineering Publications

The following publications are associated with the *personaS88*:

- NCR 56XX/*personaS* Self Service Financial Terminals Hardware Module Descriptions (D2-0198-A)
- NCR 56XX/*personaS* ATMs Service Aids Mini Manual (FM-0547)
- NCR 56XX/*personaS* ATMs Module Replacement Manual (D2-0488-A).

NCR 56XX/*personaS* Self Service Financial Terminals Hardware Module Descriptions (D2-0198-A)

This publication describes the hardware modules of the NCR *personaS88* self service financial terminals. Each chapter is dedicated to a single module which it describes under the following headings:

- General description - an overview of the module's operation
- Theory of operation - detailed description to component level of the functioning of the module using schematic diagrams
- Service aids - explains fault finding on the module using diagnostic tests and gives cable information.

This publication is primarily intended for use at a rework centre and provides all the information required to repair any of the modules in your terminal.

NCR 56XX/*personaS* ATMs Service Aids Mini Manual (FM-0547)

The Service Aids Mini Manual (SAMM) contains the field service information required for an on-site repair of a *personaS88*. The contents of this publication are an extract from the hardware module description publication.

NCR 56XX/*personaS* ATMs Module Replacement Manual (D2-0488-A)

This manual gives information to help NCR Field Engineers to identify a faulty module or sub-module in a *personaS88* and to remove and replace that module or sub-module. This manual is intended to replace the Module Replacement Procedures section of the field engineers training course formerly prepared by UKTEC training personnel.

Software Publications

The following list shows some of the main software publications associated with the *personaS 88*. A brief description of the contents of each publication is given after the list.

- Self Service Platform Software, Overview (B006-0000-4587)
- Self Service Platform Software, Programmer's Guide (B006-0000-4588)
- Self Service Platform Software, C Programmer's Reference Guide (B006-0000-4589)
- The NCR Self Service Platform Software, Programmer's Bookset (B006-0000-0355)
- Self Service System Software - Building A Load Disk (B006-0000-1797)
- SM/SWDA User's Manual (B006-0000-2446)
- NCR Quick Reference Guide To Communications Manuals (D1-2215)
- Trouble Shooting On A Development Terminal (B006-0000-2561)
- NDC+ General Description (ST-2117-52)
- NDC+ Programmer's Overview (B006-0000-2485)
- NDC+ Programmer's Reference Manual (B006-0000-2486)
- NDC+ Supervisor's Reference Manual (B006-0000-2487).

Self Service Platform Software Overview (B006-0000-4587)

This publication supports all versions of S4 up to S4 7.03 as well as all versions of S4i up to S4i 3.04.

Self Service Platform Software, Programmer's Guide (B006-0000-4588)

This is a publication for programmers developing or modifying a Transaction Processing Application to run on NCR *personaS* Self Service Terminals. It should also be read by employees and customers who wish to understand more about the underlining structure of the Self Service Platform Software.

Self Service Platform Software, C Programmer's Reference Manual (B006-0000-4589)

This publication provides Application Development Engineers, System Analysts and C Programmers with the necessary information to be able to design, develop or modify applications that are to run on the 56XX/*personaS* range of Self Service Terminals.

Pascal Programmer's Reference Manual (B006-0000-4590)	This publication provides Application Development Engineers, System Analysts and Pascal Programmers with the necessary information to be able to design, develop or modify applications that are to run on the 56XX/*personaS* range of Self Service Terminals.
Self Service System Software -Building A Load Disk (B006-0000-1797)	This is a guide to using the Self Service System Software Build Load Disk utility. It provides a step-by-step description of the utility's menus and explains how to build a load disk. The load disk is a set of 3.5 "microdiskettes used to create or update a 56XX/*personaS* terminal's fixed disk.
SM/SWDA User's Manual (B006-0000-2446)	This publication is an introduction to NCR SWDA Software Management system. In this publication we explain what software distribution is, and how you use it. We also list the manuals that you can then turn to for more detailed information.
NCR Quick Reference Guide To Communications Manuals (D1-2215)	This publication tells you which software, hardware and manual(s) to order for the communications protocol(s) that you want to use.
Trouble Shooting On A Development Terminal (B006-0000-2561)	This publication is designed for software developers writing or setting up terminal applications, and provides information on how to deal with problems with those applications.
NDC+ General Description (ST-2117-52)	This publication provides a brief and general description of the current and future features of NDC+, the 4th generation NDC software that drives the new family of NCR Self Service Financial Terminals (SSFT). In the main, it discusses the terminal application and the software system it resides in. It also introduces other complementary applications, which will enhance the performance and manageability of the terminal and networks.
NDC+ Programmer's Overview (B006-0000-2485)	This publication provides a programmer's introduction to NDC Plus and identifies the elements of an NDC Plus system. Included in this manual are details of what a programmer needs to do to create an NDC system.
NDC + Programmer's Reference Manual (B006-0000-2486)	This publication is aimed at programmers. It provides information on NDC states, screens, Financial Institution Tables and customization parameters. Also included are details of the messages passed between an NDC Plus system and a host.

NDC+ Supervisor's Reference Manual (D1-2487-B)

This manual is aimed at supervisors and provides instruction on the NDC supervisor functions which are required for the day-to-day operation of an NDC Plus system.

How To Order Publications

To order a copy or copies of any NCR publication you should complete a documentation order form, and then submit this form using one of the following methods:

World Wide Orders (i.e Non-U.S.A.)

- Contact your local NCR office for ordering information
- Mail the order form to:
  IPP-Brussels
  Rue de la Fusse
  50 Raketstraat
  B-1130 Brussels
  Belgium
- Electronic mail : Christel.Depooter@OTC.NCR.COM
- Telecopy (fax) : +32-2-727-95-50
- Visit website at :
  http://wwisnt/INFOPROD/order.htm (Access available to NCR sites only)
- Telephone : +32-2-727-95-49

U.S.A. Customers

- Submit the order form to your local NCR office
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  1529 Brown and Caldwell Streets,
  Dayton,
  Ohio,
  U.S.A., 45479
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- Call VOICEplus, 622-3727 or 1-513-445-3727
- Telecopy (fax) the order form to 1-513-445-7791
- Visit website at:
  http://wwisnt/INFOPROD/order.htm (Access available to NCR sites only)
- Call the toll-free number, 1-800-543-2010

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Title: NCR personaS88 ATM System Description

Number: B006-0000-6065 **Release** 01.00.00 **Date:**

NCR welcomes your feedback on this publication. Your comments can be of great value in helping us improve our information products.

You may send your comments, electronically, to the Information Products Department at Dundee. See over for details.

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Examples	5	4	3	2	1	0
Illustrations	5	4	3	2	1	0
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