DOMINO

V100, V200 & V400

Operation and

Maintenance Manual

Amendment Record

Issue 1 January 2008

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PART 1 : HEALTH & SAFETY

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EC DECLARATION OF CONFORMITY

(In accordance with ISO/IEC 17050-1)

Issuer's Name: Domino UK Ltd

Issuer's Address: Bar Hill Cambridge CB23 8TU

Objects of the Declaration: V100, V200, V400 Printers. Standard and FHE V-Series Controllers

The Objects of the declaration described above are in conformity with the requirements of the following Directives:

- 89/392/EEC : Machinery Directive as amended by 91/368/EEC, 93/44/EEC, 93/68/EEC and 98/37/EEC
- 73/23/EEC : Low Voltage Directive as amended by 93/68/EEC
- 89/336/EEC : EMC Directive as amended by 92/31/EEC and 93/68/EEC

The Following Standards have been used to show compliance:

- EN 61000-6-1, 1997: Generic standards section 1: Immunity for residential, commercial and light industrial environments.
- EN 61000-6-2, 1997: Generic standards section 2: Immunity for industrial environments.
- EN 61000-6-4, 2001: Generic standards section 4: Emission standard for industrial environments.
- FCC part 15 subpart B
- EN 55011, 1998+A1+A2: Limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio frequency equipment.
- EN 61000-3-2: 1995+A1+A2, Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)
- EN 61000-3-3: 1995, Limits, limitation of voltage fluctuations and flicker in low voltage supply systems for equipment with rated current ≤ 16 A
- EN 61000-4-2, Electrostatic discharge requirements
- EN 61000-4-3, Radiated electromagnetic field requirements
- EN 61000-4-4, Electrical fast transient/burst immunity test; Basic EMC publication
- EN 61000-4-5, Surge immunity requirements
- En 61000-4-6, Immunity to conducted disturbances, induced by radio frequency fields.
- ENV 50204, 1995 Radiated electromagnetic field from digital radio telephones.

Signed for and on behalf of

Domino UK Limited, Bar Hill, Cambridge (December 2007)

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GENERAL SAFETY

The product is designed to conform to all current Machine Safety Regulations.

Note: Please read through this section before operating the machine.

This printer is designed for use with the following supply systems that conform to IEC 664 light industrial / domestic installation category II mains supply:

- 'TN' (any of following - TN-C, TN-S or TN-C-S) for example; a system having one or more points of the source of energy directly earthed, the exposed conductive parts of the installation being connected to that point by protective conductors.
- 'TT' for example; a system having one point of the source of energy directly earthed, the exposed conductive parts of the installation being connected to earth electrodes electrically independent of the earth electrodes of the source.

It is not suitable for connection to an 'IT' system for example; a system having no direct connection between live parts and earth, the exposed conductive parts of the installation being earthed. This therefore excludes any 'phase to phase' connected supplies such as may be available in some factories and / or countries. If either supply fuse (located on the rear of the Controller, below the supply connector) is replaced it **must** be replaced by a fuse 3.15/6.3AT - 230/115V – 50/60Hz - 300VA. Installation must only be performed by qualified Domino personnel. *For customer installations* authorisation must be obtained from Domino UK Ltd. All relevant Safety Procedures *must* be followed. *Failure to do so may invalidate warranty.*

The printer and its component parts must only be used for the purpose for which they were sold, and for which they are designed and constructed. No parts may be used for other functions.

Do not touch the printer or the controller with wet or damp hands.

Do not expose the printer or controller to rain.

Do not run the printer without ribbon material, as this may damage the print head.

ALWAYS disconnect the power to the machine before removing any covers. You must remove the plug from the mains power supply.

DO NOT insert body parts into the print head opening whilst the printer is powered as there is a danger that the mechanism will move without warning and present a crushing hazard.

DO NOT operate the machine with any covers removed. ALL covers must be in place using the appropriate number of fasteners. It is essential that electrical and non electrical connector dust covers (provided with the machine) are fitted to all unused connectors to protect against dust and dirt and possible static damage to internal components.

Ensure all reasonable safety precautions have been undertaken. However, please ensure that when working with / or around the machine, every care is taken to avoid potential hazards. ALWAYS take great care around the machine not to slip, trip or fall; especially if the machine is used in areas where the floor may be wet or greasy.

If non Domino ribbon is used, it is recommended that anti static properties are considered. Domino UK Limited cannot guarantee the safety and / or suitability of non Domino print ribbon.

Take care, in the unlikely event of an electronic fault causing an unexpected start up of printer drive motors, to avoid possible injury.

If a verification scanner is used on this machine, please follow the manufacturer's safety procedures. When fitting and / or operating the scanner, follow the specifications as stated in the appropriate Laser Safety Standards (IEC825).

Please read the Manufacturers Safety Data Sheet (MSDS) for Isopropanol before using the cleaning kit with any Domino product.

There is a danger of electrical shocks from the electrical outlet. All electronic checks must be performed by qualified personnel.

There is a non replaceable lithium battery mounted on the Industrial PC. Under no circumstances should this be replaced (it should last for several years). In the event of failure, please return the whole control board assembly to Domino for repair. Please note the following:

There is a danger of explosion if the battery is incorrectly replaced.

Only Domino recommended replacements must be used.

Used batteries should be disposed of according to the battery manufacturer's instructions.

The information above is correct to the best of our knowledge, information and belief at the date of this publication. The information given is designed only as guidance for safe handling use, processing, storage, transportation, disposal and release and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in text.

HAZARD INFORMATION

This section contains important notices. You must read these notices before using the printer. The hazard information is prioritised into warning and caution notices as follows:

Warning Notices

Warning notices denote a potential hazard to the health and safety of users. These notices clearly state the nature of respective hazard and the means by which it can be avoided.

Handling the V200

The Cassette handle is for removing the cassette only. It must not be used as a means of carrying or holding the printer as this may result in the printer becoming detached from the cassette causing a crushing hazard.

Airborne particles

Airborne particles and substances are a health hazard. Do not use high-pressure compressed air for cleaning purposes.

Heating element

The heating element and surrounding area become very hot during use. To avoid the risk of burns or damage to the print head, never touch the heating element area of the print head with your fingers.

Organic solvents

Cleaning fluid contains organic solvents, it is recommended to wear suitable goggles and clothes to avoid contact with the eyes and skin. Avoid inhalation of the vapour. Do not smoke in the presence of the vapour.

Lethal voltages

Lethal voltages are present within this equipment when it is connected to the mains supply. Only trained and authorised personnel may carry out maintenance work.

Observe all statutory electrical safety codes and practices. Unless it is necessary to run the printer, disconnect the printer from the mains electrical supply service before removing the cover or attempting any service or repair activity, otherwise death or personal injury may result.

Compressed air supply

To avoid the risk of injury to personnel or damage to the equipment, do not exceed the flow and pressure specification.

Battery replacement

Replaceable batteries should only be replaced using batteries of the same type and rating. Failure to do so may result in an explosion hazard.

Used batteries should be disposed of according to the battery manufactures instructions.

Fuses fire hazard

To ensure continued protection against the risk of fire, replace fuses with the specified type and rating only.

Caution Notices

Cautionary notices denote a potential hazard to the physical integrity of equipment / software but not a danger to personal. These notices clearly state the nature of the hazard and the means by which it can be avoided.

Damage to Print Head

	Changing the print head without setting the new resistance value may cause severe damage to the print head.

Loss of Counter Data

The counter values are not retained when the control box is switched off.

	The counter values are not retained when the control box is switched off.

Equipment Damage

	To avoid the possibility of electric shock hazard and damage to equipment. Do not fit or remove any connector on the printer while the printer is switched on.

Cable Routing

	To avoid damage to the cables or equipment, ensure that the cables are routed clear from any moving parts.

Mains Supply Voltage

	To avoid damage to the equipment, do not exceed the supply voltage stated in the manual.

Cleaning Materials for Print Head

	To avoid damage to the printer components, use only soft brushes and lint-free cloths. For cleaning we recommend using cleaning kit. Do not use high pressure air, cotton waste, abrasive materials, metallic objects or degreasing cleaning fluids (e.g., Benzene, acetone).

Spare Parts and Consumables

	To avoid the risk of damage to the print head use only Domino spares, parts and consumables.

Contact your supplier for details.

For sales and Service contact:

Domino UK Ltd.

Bar Hill

Cambridge CB23 8TU

Tel: (01954) 782551

Fax: (01954) 782874

PART 2 : INSTALLATION

CONTENTS

UNPACKING

The printer can be delivered with two different controllers:

- FHE (For Harsh Environment), or
- STD (Standard) Controller.

Before installation, it is important to check that the printer has not been damaged during shipment, and that all parts needed for the installation and operation of the printer are present.

Ensure that the following items are present.

STD Controller Inventory

Contents	Part No.
1 x STD Controller	VEP4065E
1 x Cable Printer Power and signal	VEY1196
1 x Cable for Main Power supply	VEYxxxx (Area Specific)
1 x Cable for I/O 15 pin connection	VEY0168
1 x Cable Serial	VEY1191
1 x V Series Manual	27864 (English)
1 x 128 Mb Compact Flash memory card	VEY0527

FHE Controller Inventory

Contents	Part No.
1 x FHE Controller	VEP4063E
1 x Cable Printer Power and signal	VEY1196
1 x Cable for Main Power supply	VEYxxxx (Area Specific)
1 x Cable for I/O 16 pin connection	VEY0195
1 x Cable Serial	VEY1193
1 x Encoder Adapter	VEY1197
1 x V Series Manual	27864 (English)
1 x 128 Mb Compact Flash memory card	VEY0527

FHE Optional Accessories Inventory

Contents	Part No.
Network Adapter	Type VEY1185N
Keyboard Adapter	Type VEY1185K
Network/Keyboard Adapter	Type VEY1185NK

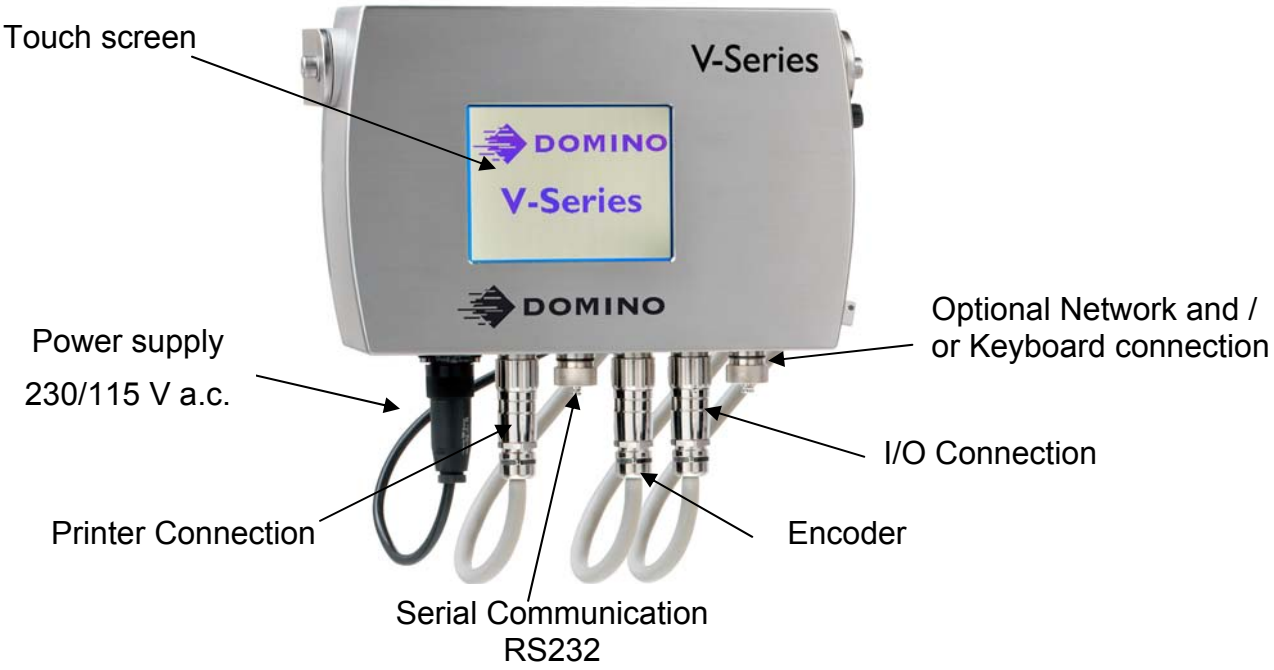
Printer Unit Inventory

Contents	Part No.
1 x Printer unit	Depends on type
1 x Cleaning kit	Type VPR0222
1 x Air pressure regulator[1]	Type VAS1001
1 x 3 meter 6mm air tube	Type VEY0786

[1] Not for V200 printer unit, as this model has a built in air regulator.

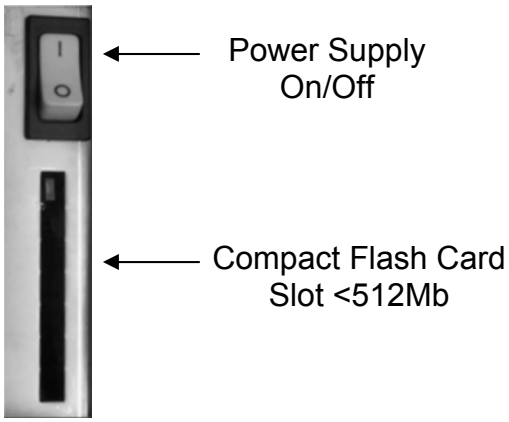
FHE Controller Main Parts

CONTROL BOX (front view)



Control box with touch screen, slots for the flash memory card, and all connectors for external input.

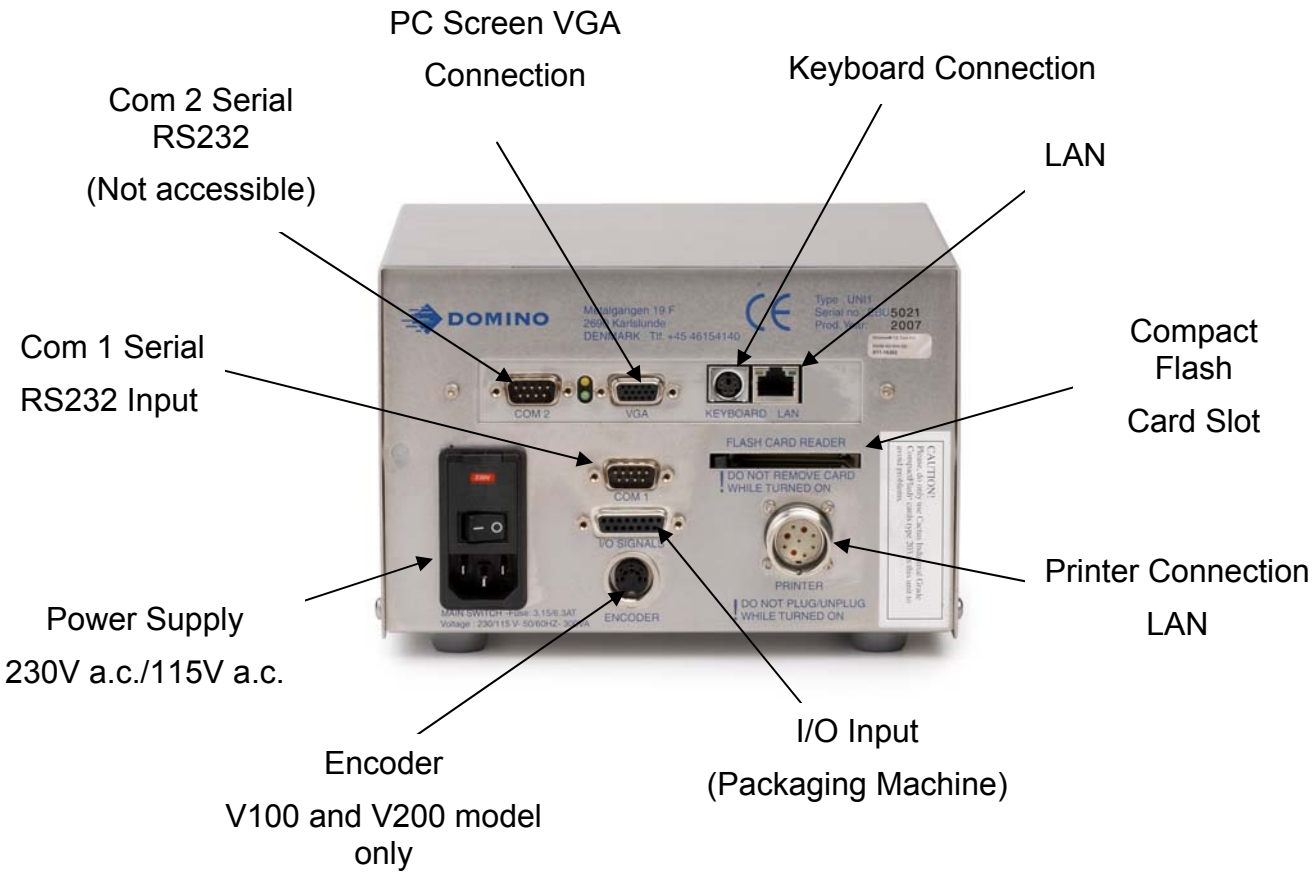
CONTROL BOX (right side)



STD Controller Main Parts

Control Box with the LCD touch screen display (IP20 Protection)

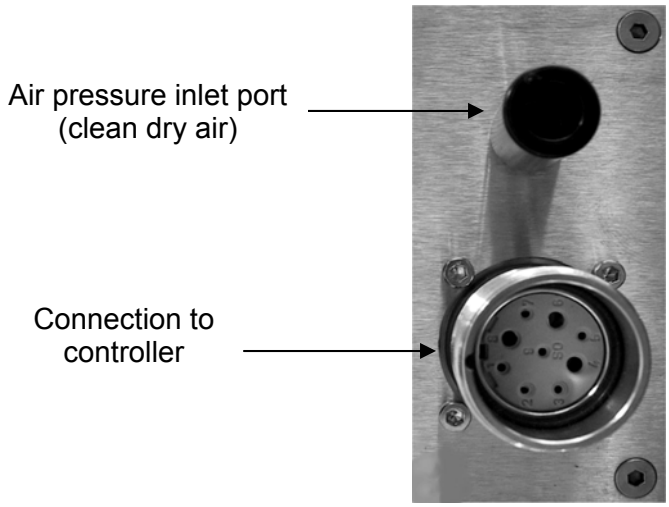
Allows the creation of labels, programming and electronically control machine handling and receive all internal service instructions in text and pictures. Label design can be previewed before printing, without having a printer connected.



V200 Printer Main Parts

V200 Printer Unit

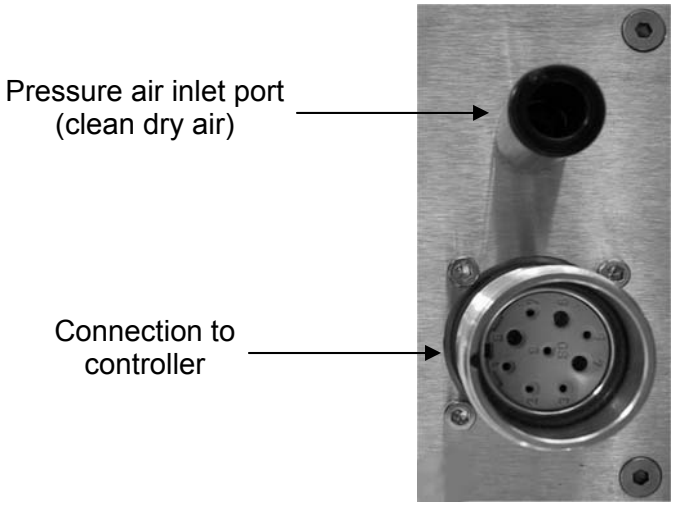
Printer Connections (rear view)



V100 Printer Main Parts

V100 Printer Unit

Printer Connector Plate (rear view)



V400 Printer main parts

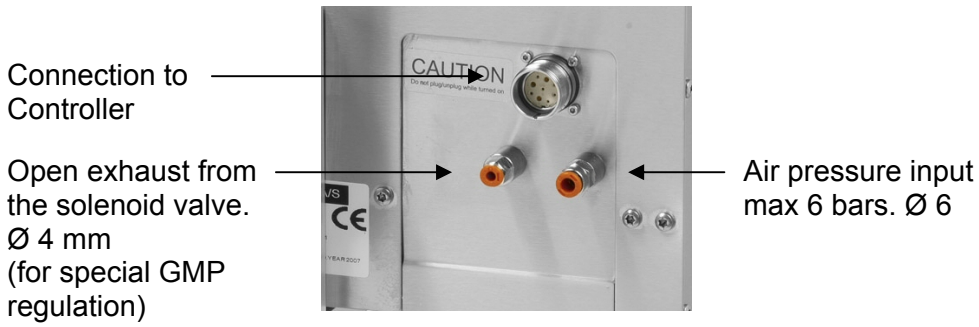
The system offers a wide range of printing options.

V400 Printer Unit

V400 Printer front view with cover removed

V400 (rear view)

V400 Connections (rear view)



V200 Printer - Optional Bracket

Standard Bracket System

The Standard Bracket System ensures a safe mounting of the printer on the packaging machine, and makes it easy to set up and adjust the printer according to requirements.

Type: VEP 56XXXX (where XXXX ranges from 400 to 1300mm).

Standard Intervals are 100mm

V100 Printer - Optional Bracket

Standard Bracket System

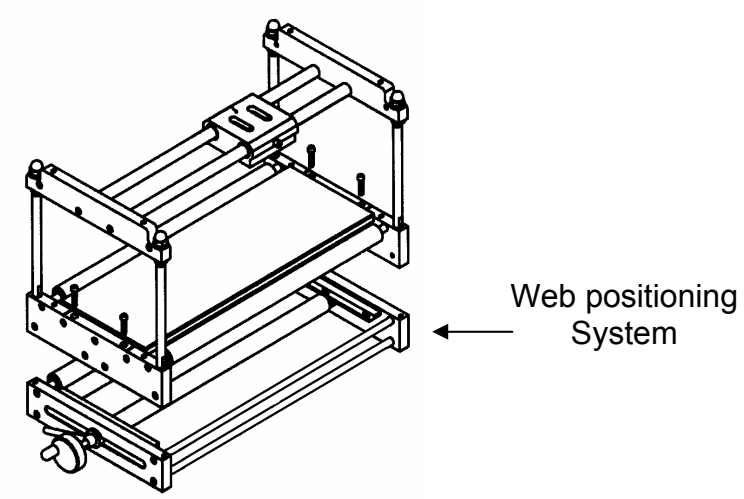
The Standard Bracket System ensures a safe mounting of the printer on the packaging machine, and makes it easy to set up and adjust the printer according to requirements.

Type: VEP 51XXXX: (where XXXX ranges from 400 to 1300mm.

Standard intervals are 100mm.

Bracket System with Optional Web Positioning System

The Web positioning system (shown here below the bracket) can be used in intermittent applications to vary the position of the web relative to the print position. It fits to the standard bracket system.

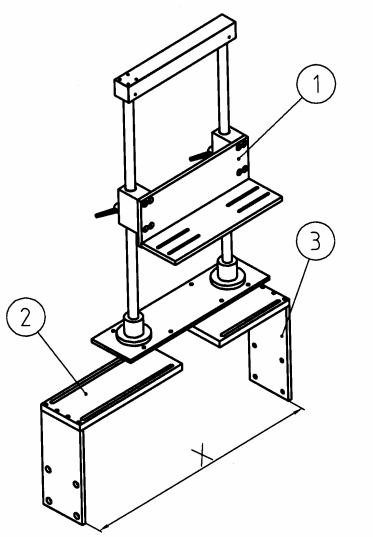


Web positioning system: Type: VASWP – XXXX (where X ranges from 400 to 1300mm).

Standard Intervals are 100mm

V400 - Optional Manual Bracket

Manual Bracket System



Bracket parts.

1. Mounting plate for the V400 printer
2. Packaging machine large mounting angle
3. Packaging machine small mounting angle

The Manual Bracket System ensures a safe mounting of the printer on the packaging machine, and makes it easy to set up and adjust the printer according to requirements.

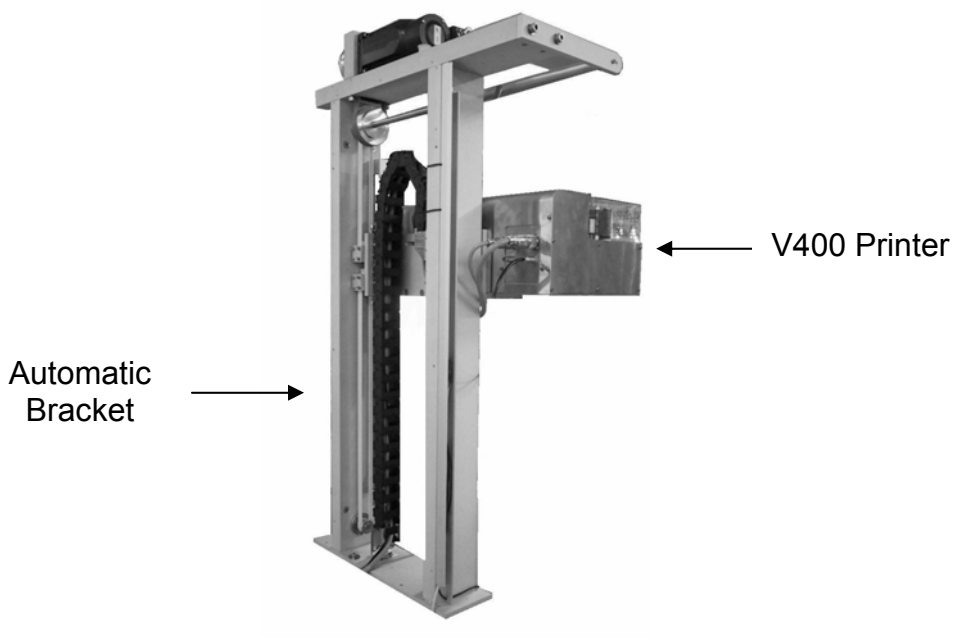
Bracket System for V400:

Type: VASHBTM100X (where X determines the width)

X Width	Min. Width	Max. Width
4	610 mm	750 mm
5	490 mm	630 mm
6	730 mm	870 mm

V400 - Optional Automatic Bracket

Automatic Bracket System



The automatic bracket system allows the V400 printer to print over a larger area during each printing cycle (whilst the material to be printed remains stationary)

The automatic bracket moves the printer vertically in steps after each horizontal stroke of the printer.

The bracket uses a stepper motor to drive the vertical movement and is controlled via a dedicated control module which uses signals from the V Series controller and packaging machine.

The automatic bracket comprises of unguarded moving parts and must be installed to ensure a safe operating environment.

The automatic bracket is supplied with installation guidelines and an operations manual.

MECHANICAL INSTALLATION

Installation Requirements

Ensure that the following services and control signals are available:

(1) Power - 115/230 Vac (+10%, -15%) 50/60Hz.

(2) Compressed Air - 6 Bar (max.), dry, uncontaminated.

(3) A print start signal - this has to be a volt free contact which closes when printing is required.

(4) Sufficient space for installation and operation.

(5) If using a V200 an encoder to monitor the substrate speed is required.

Installation

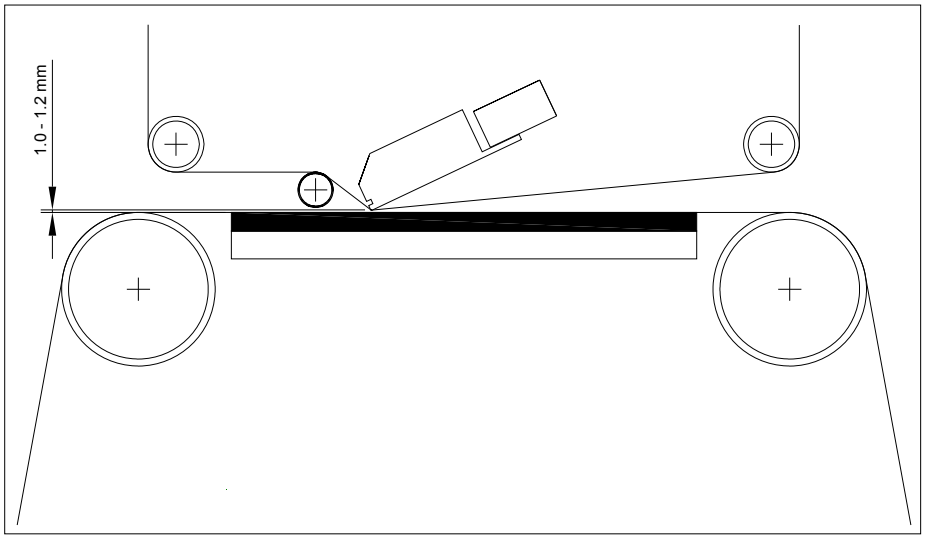
(1) Mount the printer in the bracket system.

Note: If mounting is a V200 ensure the print head is mounted on the top point of the rubber roller.

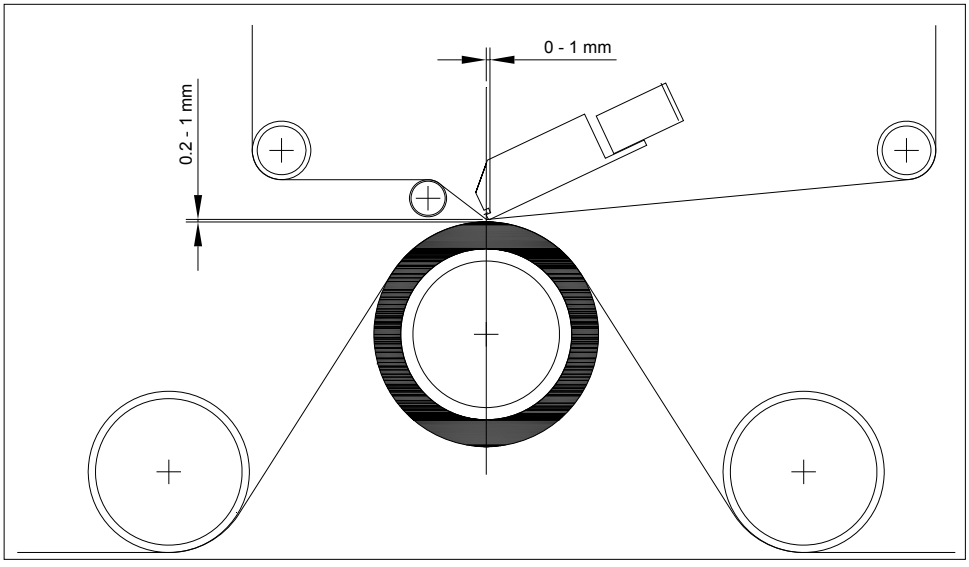
(2) Adjust the nuts on the 4 shafts of the bracket to the correct distance between the rubber plate / rubber roller and the print head.

- On the V100 printer the distance should be between 1 and 1.5mm
- On the V200 the distance should be between 0.2 to 1.0mm.

V100



V200



(4) Connect cables.

- Connect the main cable from the controller to the main supply
- Connect the printer cable between the printer and the controller
- Connect the air pressure to the printer and adjust to 2.5 Bar (5 inch printer: 3.5 Bar)
- If a V200, connect the encoder.

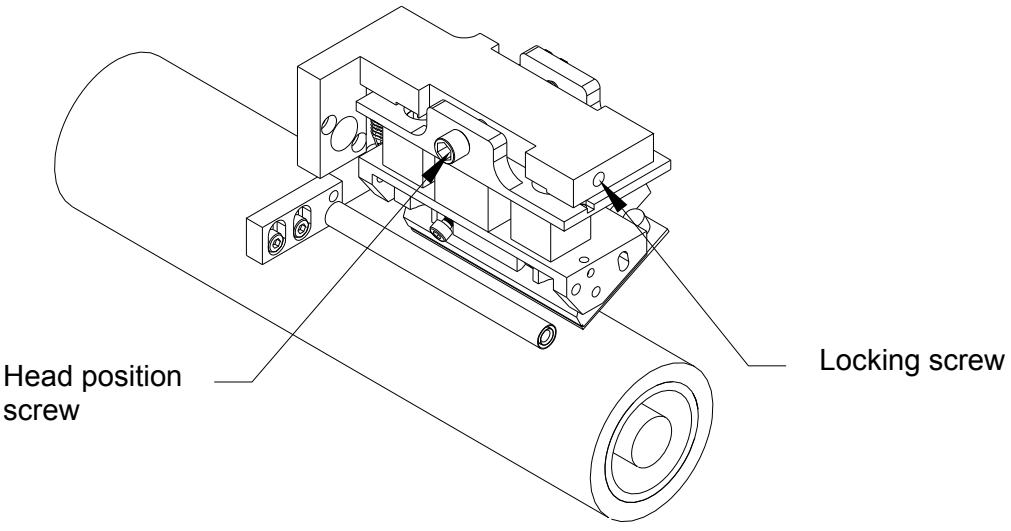
(5) Turn on the controller.

(6) Put ribbon on the cassette. Follow the instruction inside the cassette.

(7) Load the test design from the design library

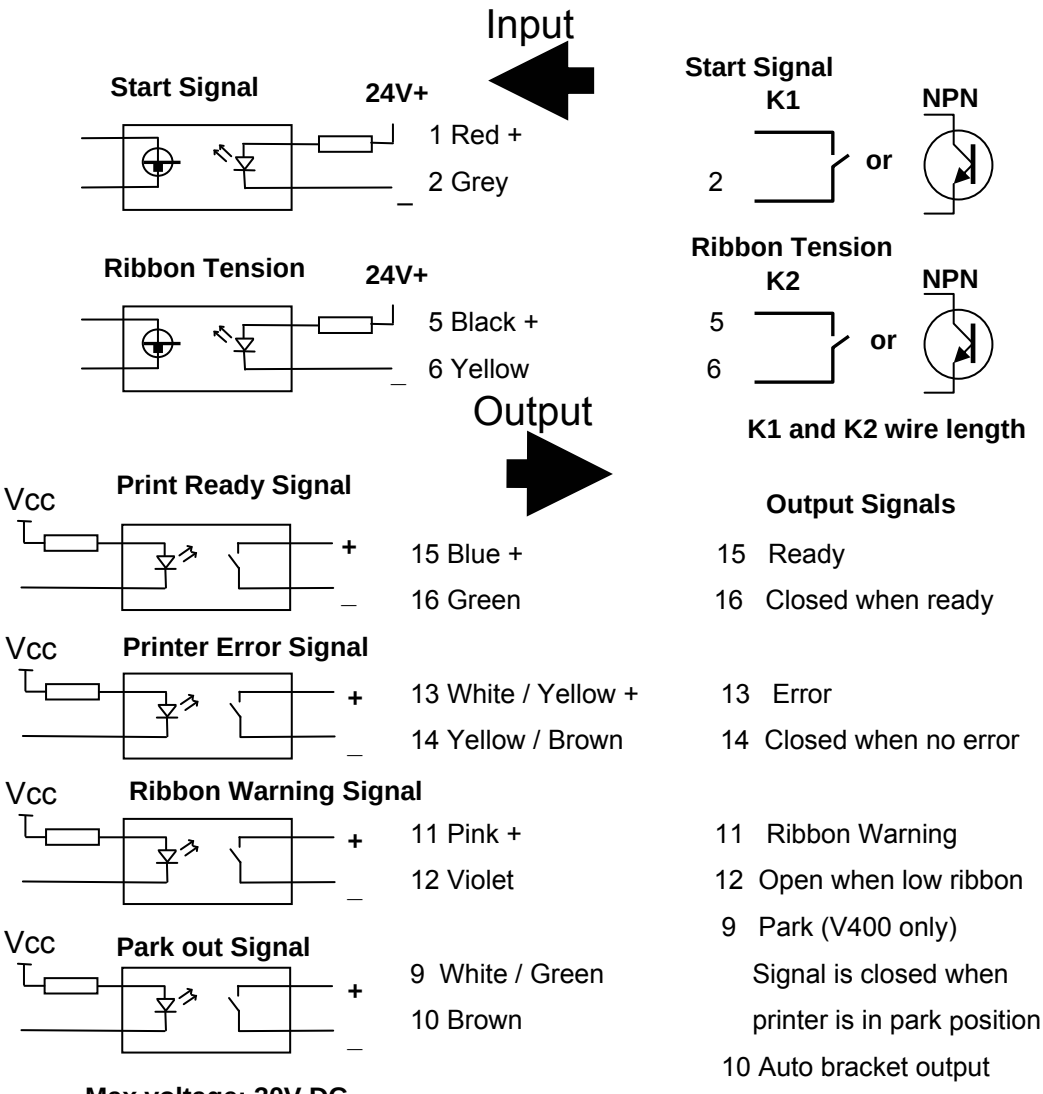
(8) Carry out a test print as described below.

- **V100 only** - when printing with the V100 printer push the test print (t) on the touch screen
- **V200 only** - when printing with an CM or V200 run the web on the packaging machine with 300 mm / s. (note: the start signal must be in continuous mode)
  - **Only V200 –** If the quality of the print is equal to the printout received with the printer then reduce the contrast until the quality is reduced (approximate 10% reduction)
  - **Only V200 –** Fine adjust the print head position according to the top point on the rubber roller. Do the adjustment in steps of a half turns on the screw, adjust, run and check again. The adjustment has to be tried in both directions depending on the quality of the packaging material; the contrast may need to be reduced several times in this procedure. Continue with this adjustment until the best result has been found. The mechanical adjustment of the printer has now been found and further adjustment of the printer is not needed anymore
  - **Only V200 –** Increase the contrast until an acceptable quality has been achieved.



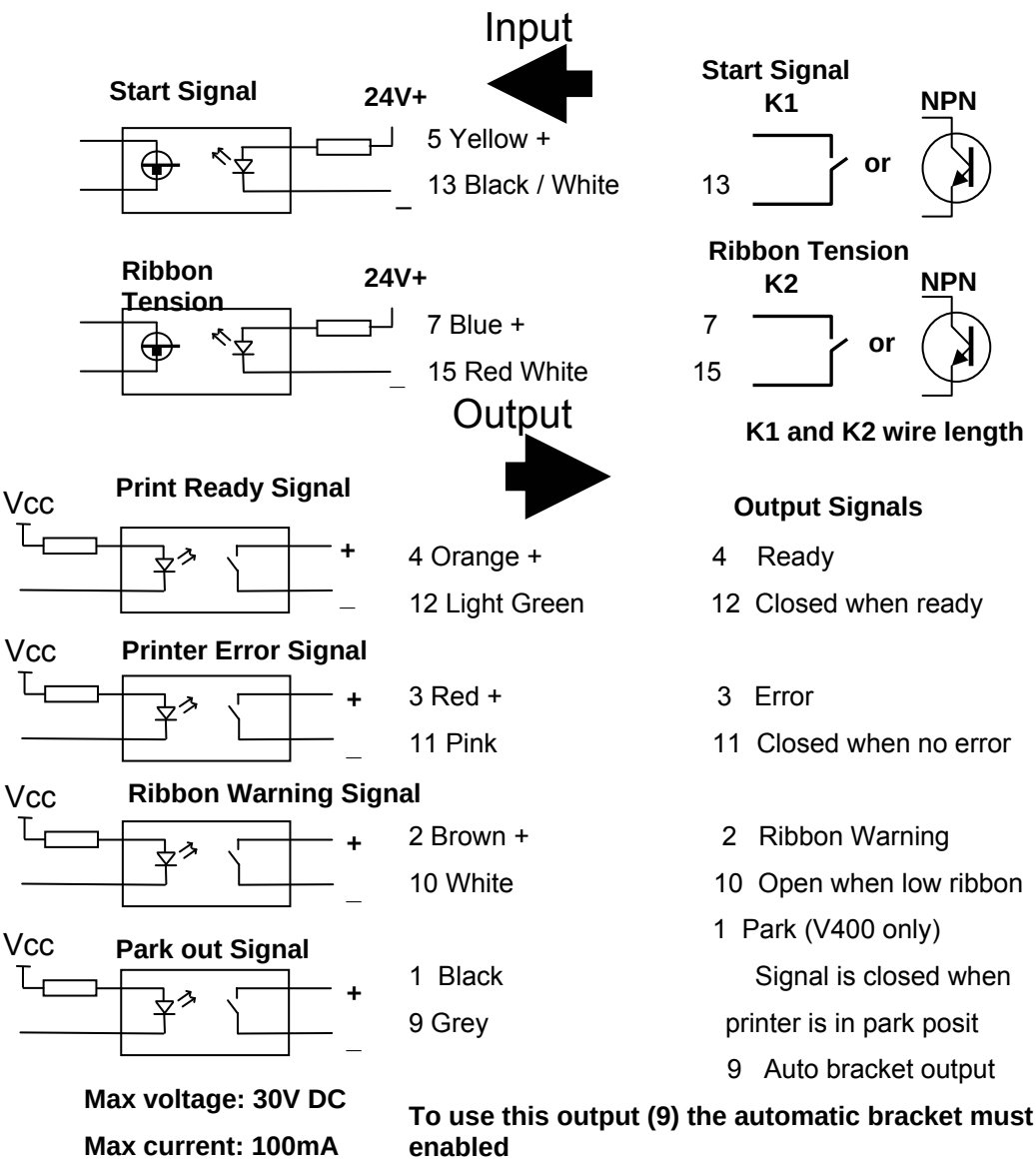
Electrical FHE controller I/O Connection to a host machine

Use Cable VEY0195



STD controller I/O Connection to a host machine

Use Cable VEY0168



Input Signals

Signal length min 50ms

Start Signal

K1 **NPN**

13 **or**

Ribbon Tension

K2 **NPN**

7

15 **or**

K1 and K2 wire length

Output Signals

4 Ready

12 Closed when ready

3 Error

11 Closed when no error

2 Ribbon Warning

10 Open when low ribbon

1 Park (V400 only)

Signal is closed when printer is in park posit

9 Auto bracket output

Max voltage: 30V DC

Max current: 100mA

To use this output (9) the automatic bracket must be enabled

SETTING UP THE FIRMWARE

Saved in Design

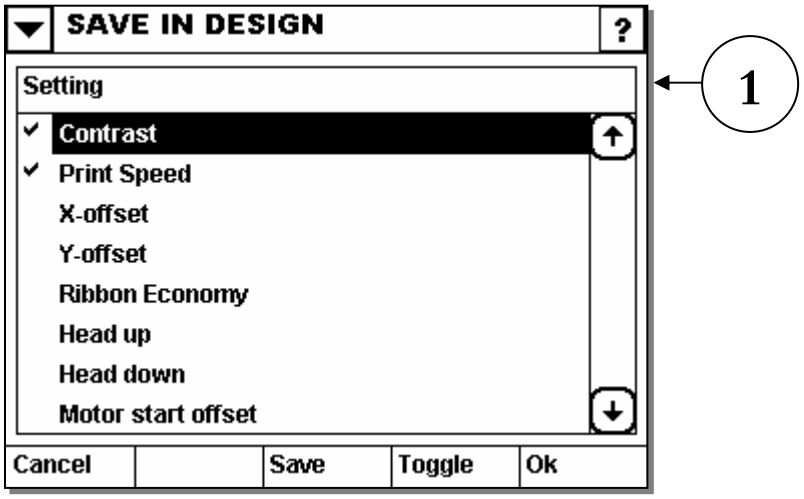
Find "Save in design" in the "Settings / Run" menu.

This menu allows you to define the settings you wish to save in the design. The menu is examined in detail below:

It can sometimes be useful to store some of the settings directly in the design files.

A scenario could be that design1 uses a low contrast setting but a high start pulse offset, while design2 requires a high contrast but a low start pulse offset. Instead of changing both contrast and start pulse offset every time the specific design is loaded, the optimal values for these settings can be stored with the design.

Use the menu below to define which setting you wish to be stored in the design files.



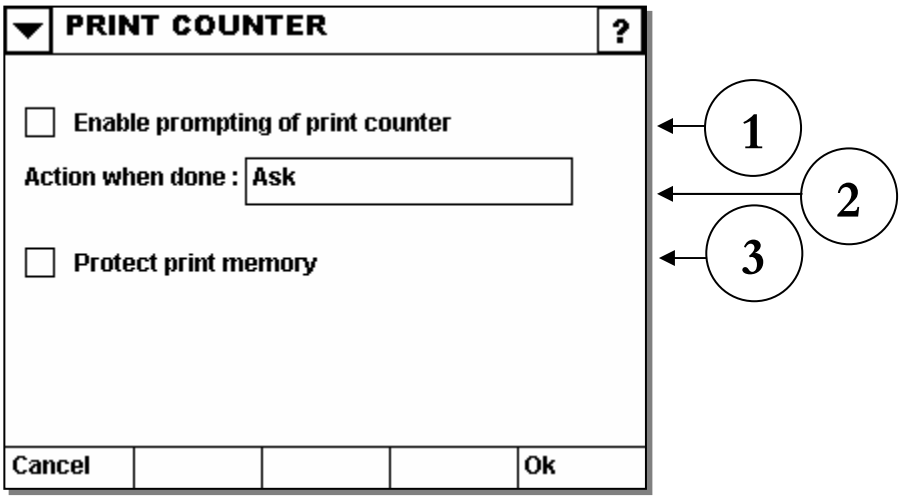
(1) Settings

This shows the user a complete list of all the settings in the printer that can be saved with the individual design. Pressing on the desired setting (in the example above: "CONTRAST") will select that item. By pressing the "Toggle" button (in the bottom right-hand corner), and then "Save", the selected setting will be saved with each individual design.

If "CONTRAST" is subsequently altered in a design and the design is then loaded, the CONTRAST value will update the global CONTRAST value.

Print Counter

The system supports the use of a print counter. That means it can be used to print a defined amount of prints.



(1) Enable prompting of print counter

If this check box is selected, the system will prompt the operator (when a job is manually started) for the number of prints to do. The printing will continue until manually ended (or the print is otherwise interrupted).

Please note that this setting only applies to a print job started on the printer itself. If a design is transferred, the sender determines the "number of prints".

(2) Action when done

Use this field to define what should happen when the required number of prints has been printed.

The options are:

- **Quit print**: Unloads the print job when the last print is printed.
- **Restart print**: Restarts the print job (a new number of desired prints must be selected)
- **Ask**: The operator is asked whether to restart or unload the job, when the last print has been printed.

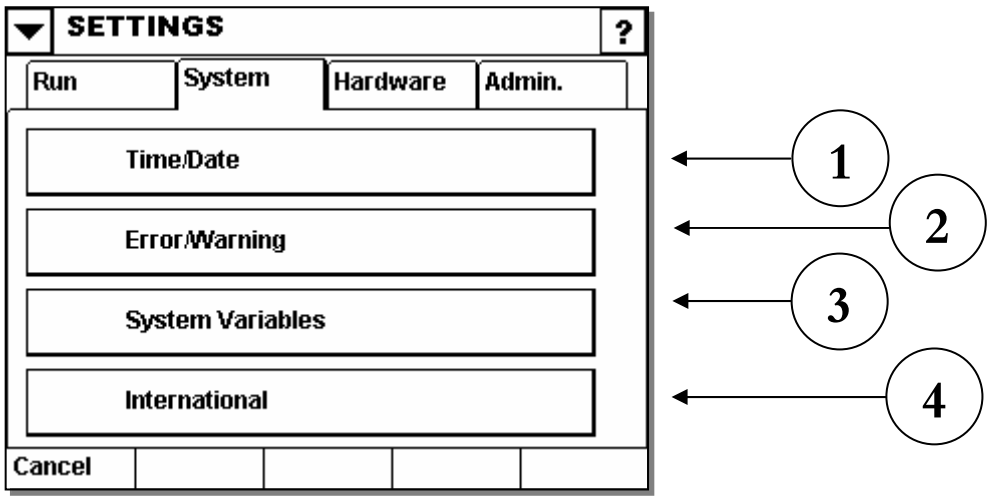
(3) Protect print memory

If enabled, a print in the print memory cannot be overwritten by an external source. To load another print job, the current job must be (manually) unloaded first.

System

The “System” menu is a configuration menu where the user must set up some of the information needed by the printer to function optimally. These include; date, language, keyboard layout, all of which should be configured in this menu.

This menu will normally only be used upon installation of the printer, and users are recommended to go through this menu before starting the printer for the first time.



(1) Time/Date

Here the user can set the time and date in the printer’s system. The time set in this menu is the time used by the printer when calculating the various types of RTC. See page 38.

(2) Error/Warning

The menu allows the user to define when the printer should send a ”Warning” or an ”Error”, e.g., when the printer should display a message when the ribbon is getting close to being used up. See page 39.

(3) System variables

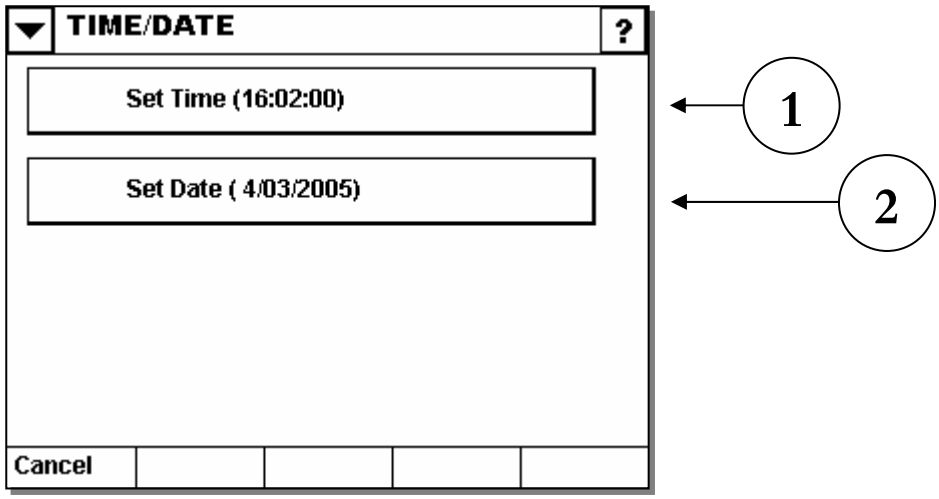
This menu is used to define the printer’s ID. If the printer is required to print its ID (MACHINE ID), this ID must be set before it can be inserted as a variable. See page 42.

(4) International

This menu allows the user to define keyboard set-up and printer language. See page 43.

Time / Date

The time and date in the printer can be set here.



(1) Set Time

Define the printer's time here. Pressing "Set Time" will allow the user to key in the local time.

(2) Set Date

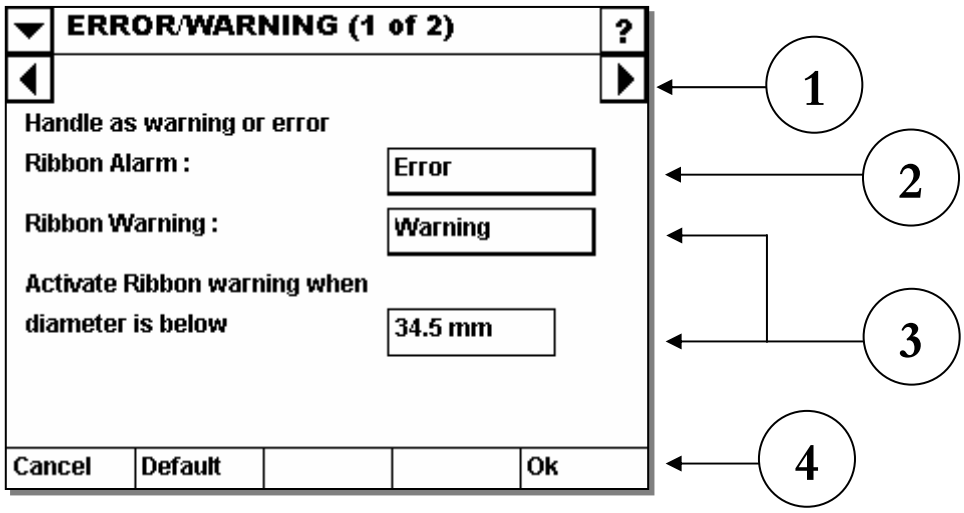
Set the date in the printer system here. Pressing "Set Date" will allow the user to alter the date.

Error / Warning

This menu allows users to determine when the printer should send a warning or error message. The difference between "Warning" and "Error" is that in the case of "Warning" the user will be informed on the screen but the printer will carry on operating.

In the case of "Error" the printer will display an error message on screen and stop operating.

To switch from "Error" to "Warning" simply press the button.



(1) The arrow keys

The "Error/Warning" menu contains two screens that the user can scroll between. By pressing the right-hand arrow key the user will come to the next screen display. By pressing the left-hand arrow key, the user will be returned to the previous screen display.

(2) Ribbon Alarm

When the ribbon is broken, the system has two independent ways of detecting the fault.

- A dancer arm activates the ribbon alarm sensor
- The ribbon roll has not rotated (measured by the ribbon warning sensor) even though a certain amount of ribbon was used.

(3) Ribbon Warning

When the ribbon roll is almost empty the ribbon-warning feature is activated (the ribbon warning output is activated).

By setting this feature to "Error" the printer will stop when the diameter of the ribbon roll is equal to the value set in the **"Activate ribbon warning when diameter is below:"** field.

This item is described below. If ”Ribbon Warning” has been set to ”Warning”, a warning will be displayed on screen when the ribbon has reached the diameter set in: **"Activate ribbon warning when diameter is below:"** (see next paragraph):

Activate ribbon warning when diameter is below

This menu is used to set the minimum diameter of ribbon roll. The menu is used together with “Ribbon Warning” (described above).

When ribbon diameter reaches the set value, the “Ribbon Warning” function is activated. The most suitable diameter is based on the printer’s speed and the size of the print.

(4) Default

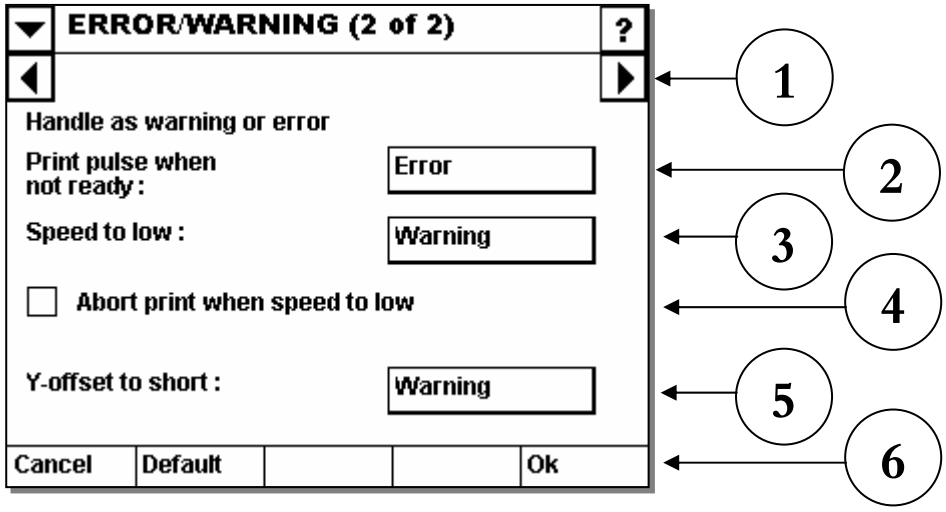
The default button allows you to reset a single setting to the factory default.

To do this, press the “default” button once.

Notice that the button is now reversed

When the default button is reversed, press the setting you wish to reset.

If you have accidentally pressed the default button, press it again to deselect it.



(1) The arrow keys

The “Error/Warning” menu contains two screens that the user can scroll between. By pressing the right-hand arrow key the user will come to the next screen display. By pressing the left-hand arrow the user will be returned to the previous screen display.

(2) Print pulse when not ready

If the packing or labeling machine sends a signal whilst the printer is calculating, an error/warning as follows can be set:

Error: If the printer is interrupted by a signal during printing, retraction, or calculating the next label, pause or not ready, it will stop.

Note: if the printer is interrupted by a signal during printing, retraction or calculating the next label, pause, not ready, it will ignore the signal. The system will first accept the next signal when it has finished calculating. Thus production will not halt if the printer's maximum speed is exceeded (but some products may miss a print).

(3) Speed too low

(CM-Types)

If the web speed is below 50 mm/s, a warning or error signal will be displayed on the screen, in accordance to the settings.

(4) Abort print when speed too low

(CM-Types)

By selecting the field, the printer will abort the current print if the speed is too low. If the setting is unselected the printer remains in its current print position and when the web is started again, the remains of the current print is finished.

(5) Y-offset too short

If the distance between the label start and the first line are too short, a warning or error signal will be displayed on the screen. If the Y-offset is too short the print head cannot print the first pixels and hence the print may not comply with the desired quality standards. The minimum Y-offset depends on the print speed and the actual design to print.

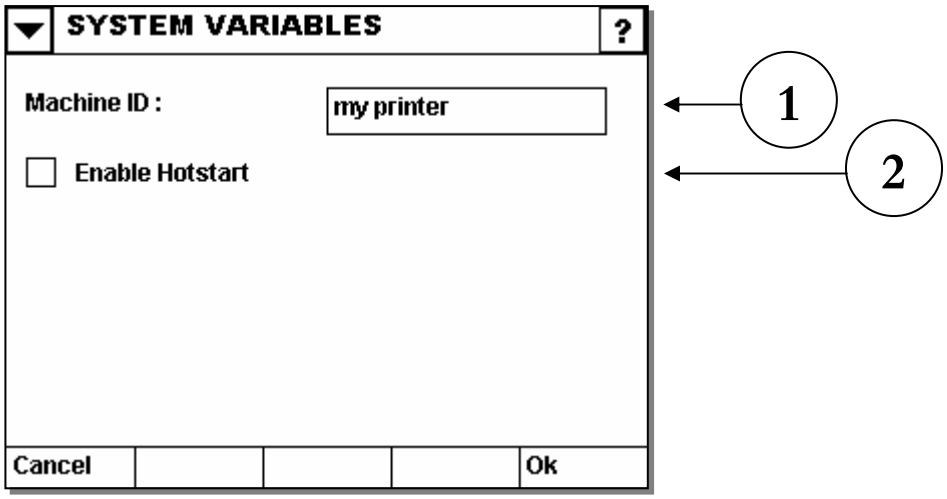
(6) Default

The default button allows the user to reset a single setting to the factory default. To do this press the "default" button once.

Notice that the button is now reversed. When the default button is reversed, press the setting you wish to reset.

If the default button was accidentally pressed, press it again to deselect it.

System Variables



(1) Machine ID

Use this setting to assign a name to the printer. It is this name that the machine id (identity) variable (page 133) refers to.

Please do not confuse the machine id with the host name (see page 55).

(2) Hotstart

The system has limited hot start functionality.

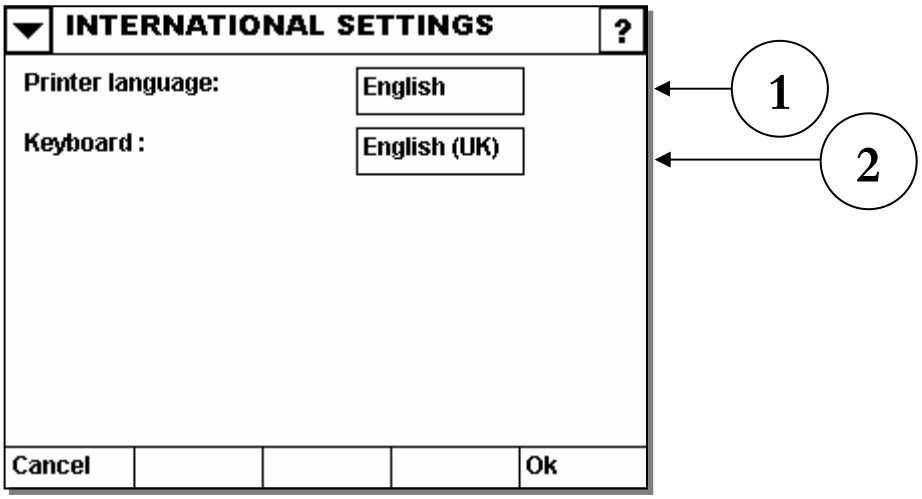
When ever a design is loaded, the name of the design and all entries for prompted variables are stored on the internal system drive. When the design is unloaded again, the information is purged from the internal system drive.

If the system is switched on, the internal system drive is searched for information about any design being printed. If such information is found, the design in question is loaded and any prompted variables will automatically be filled in.

Please note that any counters and real time variables in the design is initialised as it would be during a normal job load.

International

The screen below shows the ”International” menu



(1) Printer language

Defines the language the V Series Controller User Interface should use. By pressing on the “English” field in the above illustration, a dropdown list will be displayed from which the user may select the desired language.

(2) Keyboard

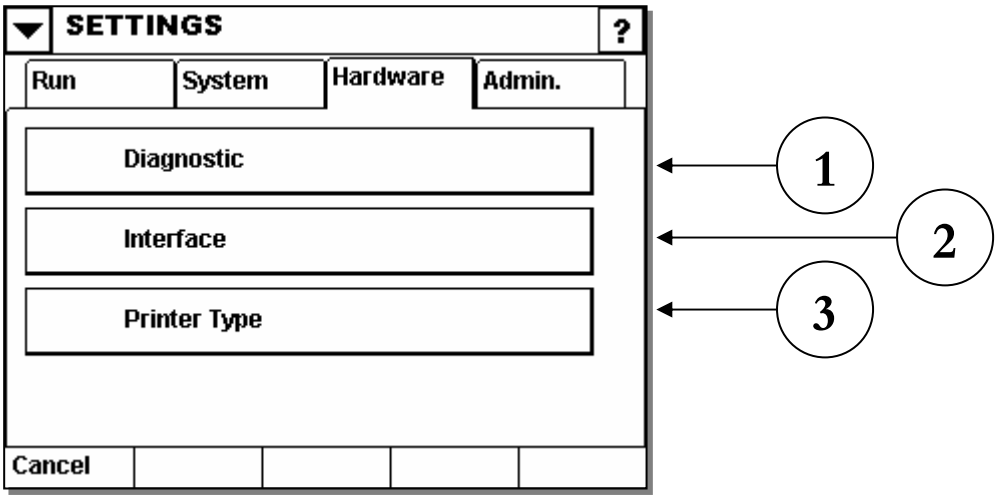
The user can set the keyboard appropriate to the printer language here. By pressing the “English (UK)” field in the above illustration, a dropdown list will be displayed from which the user can select the appropriate keyboard layout.

The keyboard is used when designing your print and it is therefore important that this setting is defined before beginning to design prints.

It is possible to temporarily change the keyboard layout when the keyboard is displayed.

Hardware

The next tab is the "Hardware" menu.



(1) Diagnostics

Should problems arise in connection with the printer, the ”Diagnostics” item allows the testing of some of the functions necessary for operation of the printer.

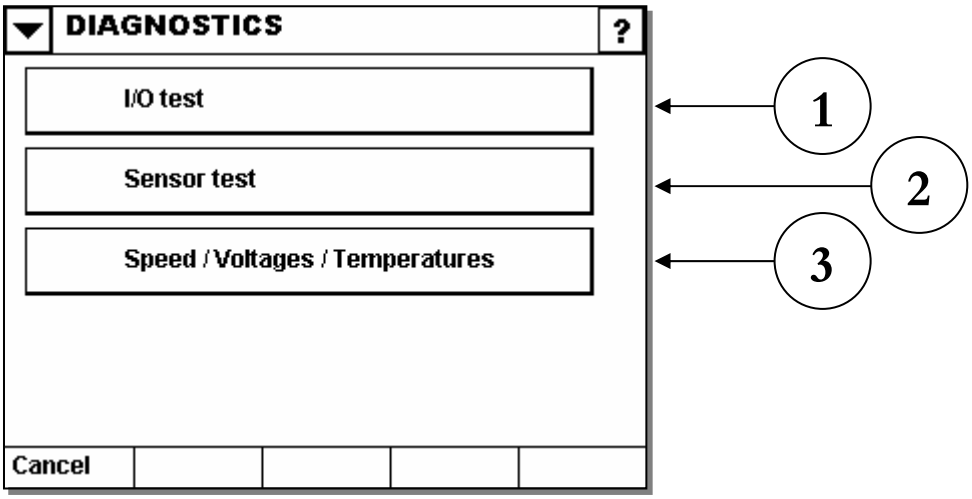
(2) Interface

All connections to the surrounding environment (be it a packaging machine or a PC) must be defined under “INTERFACE”.

(3) Printer Type

Select the printer model connected.

Diagnostics



(1) I/O test

Use this menu to verify the interface to the packaging machine.

(2) Sensor test

Use this menu to verify the sensors on the print unit.

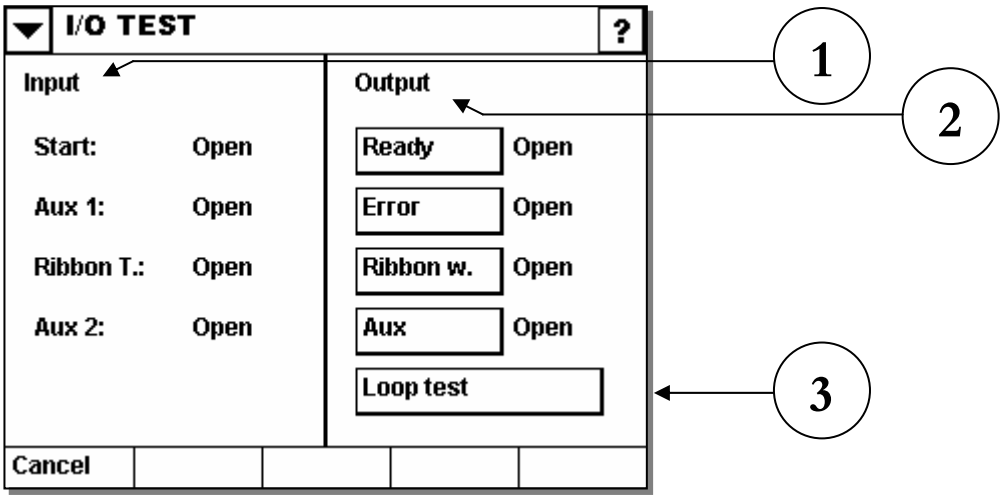
(3) Speed / Voltages / Temperatures

Use this menu to measure the speed of the web.

The menu will further display information about the voltage to the print head and stepper motors.

Finally, the menu will show the current temperature of the print head.

I/O Test



(1) Input

The input column shows the status of the four inputs to the system. Possible values are open or closed.

(2) Output

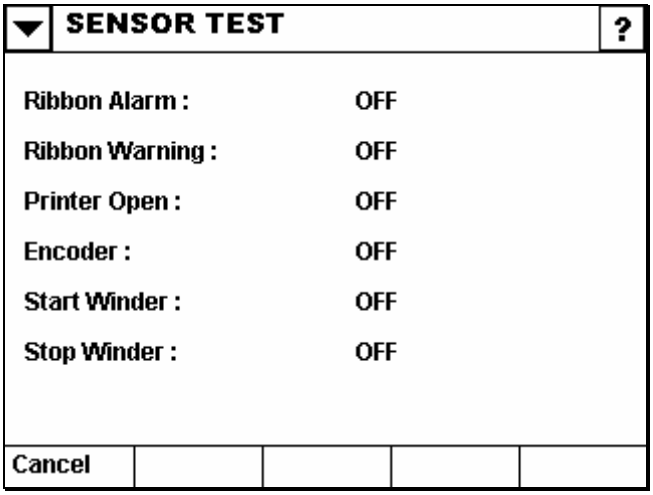
Use the buttons to force the output to either open or closed (simply press the output you wish to change).

(3) Loop test

The loop test requires the use of a special cable (loop cable) that will test the unit's input/output signals.

Sensor Test

The menu display reflects the actual printer attached (the screen below is for a V200 printer)



Ribbon Alarm

The ribbon alarm is activated if the dancer arm reached this reflective sensor. To manually activate the sensor, place something reflective in front of the sensor and verify that the sensor is activated.

Ribbon Warning

The ribbon-warning sensor monitors the rotation of the roll with unused ribbon. Use a piece of paper to block the fork sensor and verify that the sensor is activated.

On some models, the ribbon warning is a reflective sensor. On these models, simply turn the roll of unused ribbon and verify that the sensor is activated.

Printer Open

Open and close the cassette and verify that the sensor is activated.

Encoder

Activate the encoder and verify that the screen changes. The screen changes for each pulse from the encoder (12 pulses per mm).

The speed test can be used to verify the function of the encoder.

Start Winder

(V200 printer only)

Printer has a reflective sensor that monitors the second dancer arm's position. Place something reflective in front of the sensor and verify the sensor is activated.

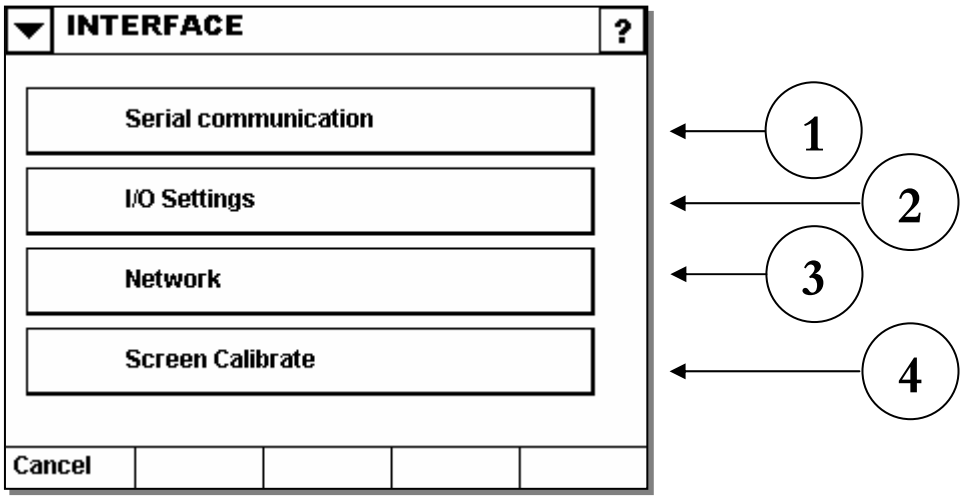
Stop Winder

(V200 Printer only)

Printer has a reflective sensor that monitors the second dancer arm's position. Place something reflective in front of the sensor and verify the sensor is activated.

Interface

All connections to the surrounding environment (be it a packaging machine or a PC) must be defined here.



(1) Serial Communication

Use the serial communication menu to define the behavior of the serial port of the system. The serial port can be used to connect a PC, scale or other device.

(2) I/O Settings

Use the I/O settings menu to set up the interface with the packaging machine.

(3) Network

Ethernet LAN Set-up, used to set-up IP address.

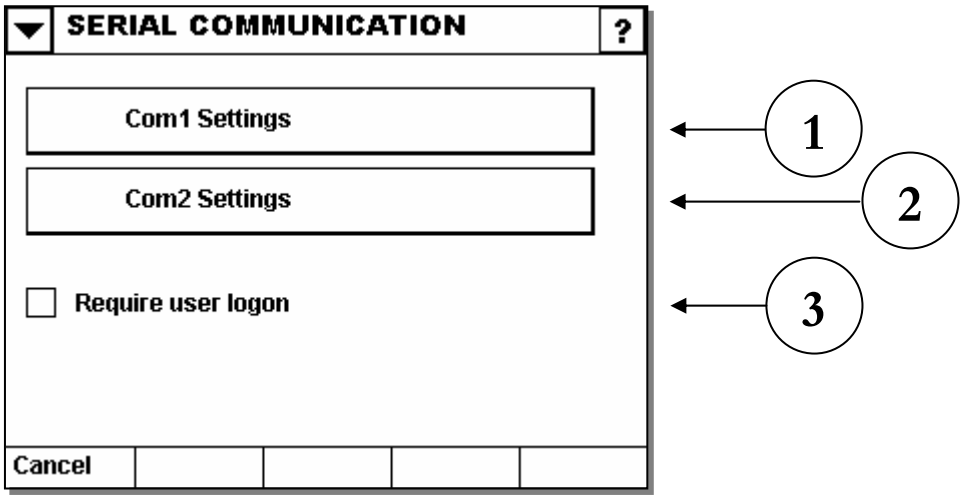
Ethernet can be used to transfer designs and to remotely control the printer.

(See page 53)

(4) Screen Calibrate

Make a manual update with a pointing device for the touch screen settings.

Serial Communication



(1) Com1 Settings

Use this menu to modify the baud rate, number of data and stop bits and also to modify the parity check.

Note: Hardware handshake is always enabled on this system.

(2) Com2 Settings

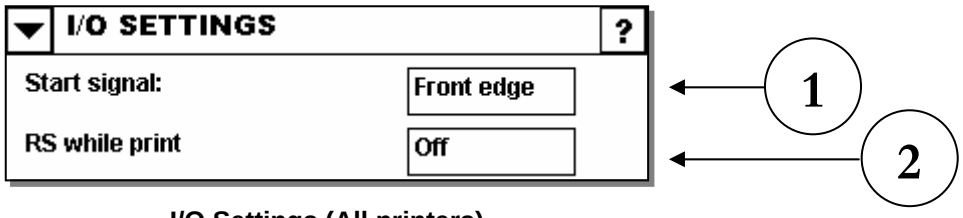
The Com2 port of the system is reserved for future use and this menu is disabled.

(3) Require user logon

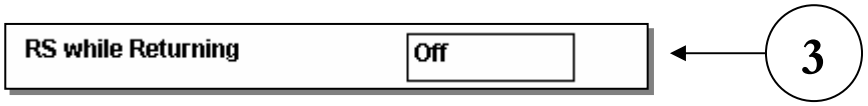
If this setting is enabled, no serial data is accepted before the sender has been authorised (user name and password of a user known to the system).

I/O Settings

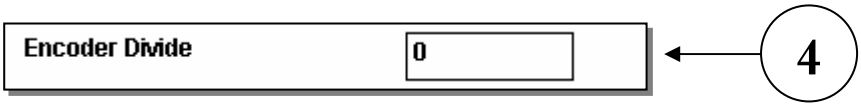
This menu display is as follows:



I/O Settings (All printers)



I/O Settings (V100 & V400 printers)



I/O Settings (V200 printers)

(1) Start signal

The signal can be set-up in three ways

- **Front edge:** After the start contact has been closed the printer makes 1 cycle, and waits for a new start signal. Open and close the start contact again for a new print cycle.
- **Level – triggered**: After the start contact has been closed, the printer prints until the start signal has been removed, and will then stop at the end of a print cycle.
- **Continuous:** Used for test purposes. Internal start signal whose interval is defined by the actual label length.

(2) RS while print

Defines whether the system should report back ready (or not ready) while printing.

(3) RS while returning

(V100 and V400 printers)

Defines whether the system should report ready (or not ready) while the print head is returning to its home position.

(4) Encoder Divide

(V200 printers)

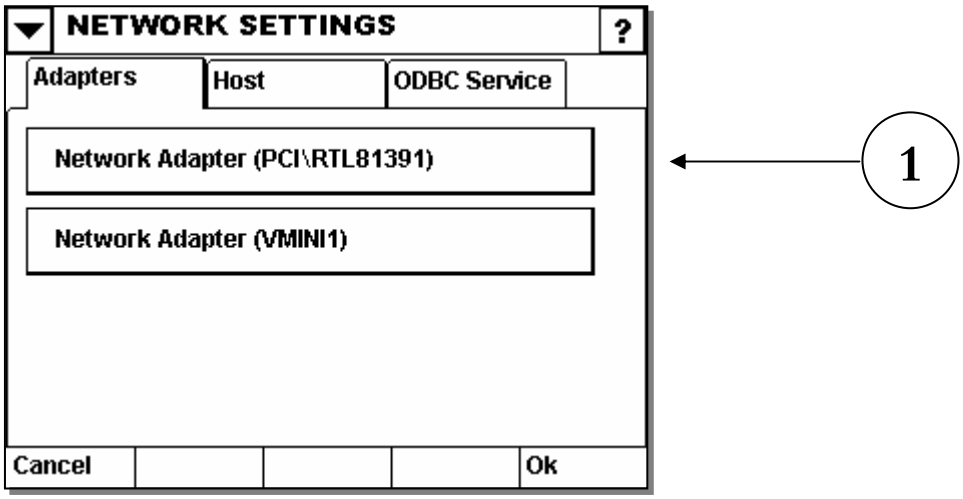
If set to zero, the encoder must give 12 pulses per mm.

If set to another value, the encoder must give 12 times that value pulses per mm. E.g. setting the value to 4 requires and encoder that gives 48 pulses per mm.

(The value zero and one requires the same encoder).

Network

The settings related to network is also divided into several screens.



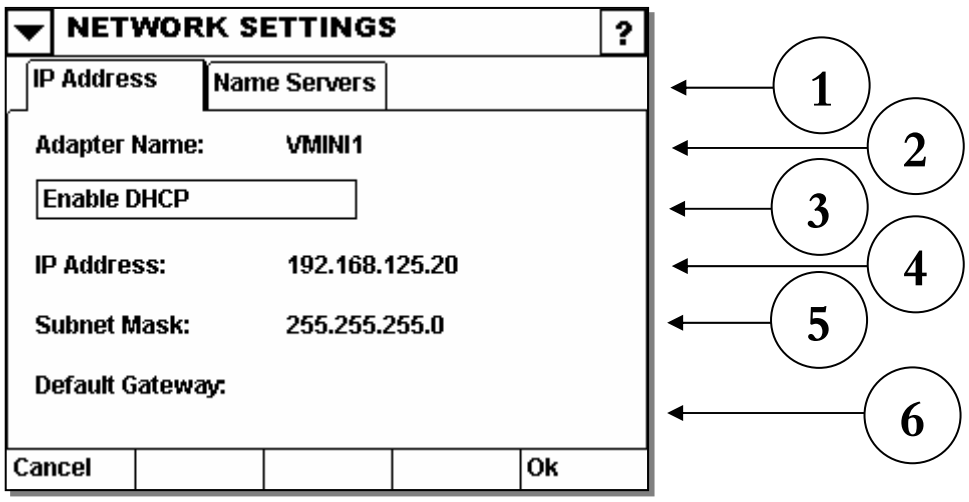
(1) Network Adapter

A list of available network adapters is shown. Press one of the available adapters to set it up.

Network IP Address

The settings related to network is also divided into several screens.

Please contact your local network administrator for guidelines on how to set up and use a local area network.



(1) Name Servers

Reserved for future use.

(2) Adapter Name

Shows the name of the adapter currently being edited.

(3) DHCP

Specifies whether the system should automatically fetch an IP address from a server, or if an IP address should be manually assigned to the printer.

(4) IP Address

The IP address currently assigned to the system is shown here if DHCP is active. If manual IP assigning is active, use this entry area to type in the printers IP address.

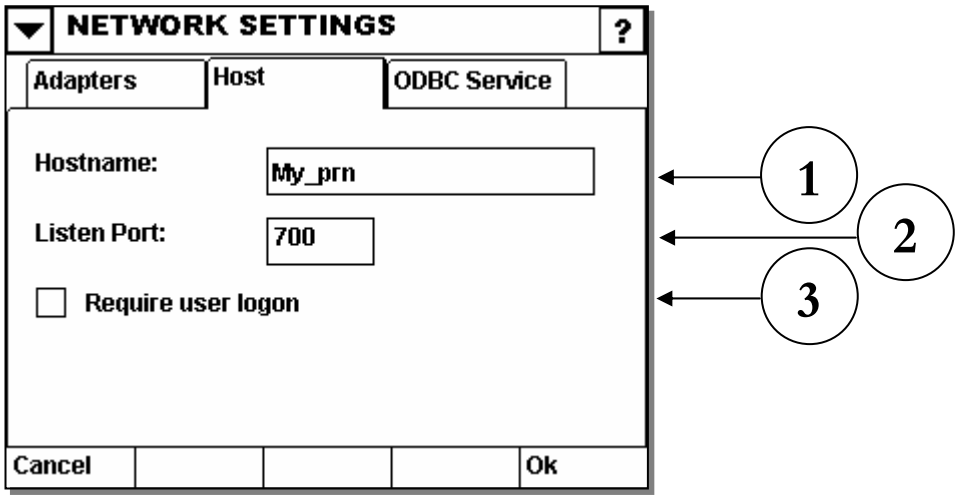
(5) Subnet Mask

The subnet in use is shown here if DHCP is active. If manual IP assigning is active, use this entry area to type in the printers subnet mask.

(6) Default Gateway

Reserved for future use.

Network Host Name



(1) Hostname

This is the printer's networking name. The printer can be found on the local area network using the hostname.

Note: Two printers cannot have the same name.

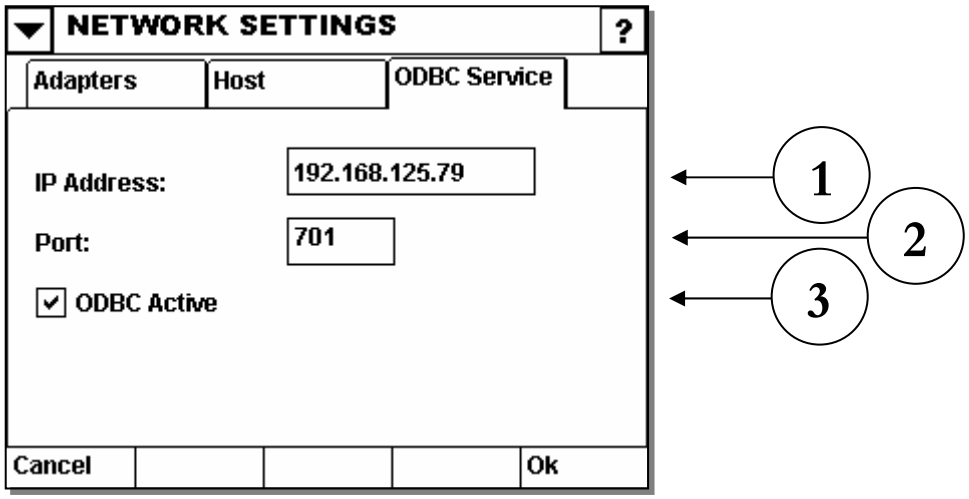
(2) Listen Port

Set this to 700.

(3) Require user logon

If this setting is enabled, no serial data is accepted before the sender has been authorised (user name and password of a user known to the system).

Network ODBC Service



(1) IP Address

Type in the IP address of the computer where the ODBC server application is running. You can type in the computers name instead of the IP address.

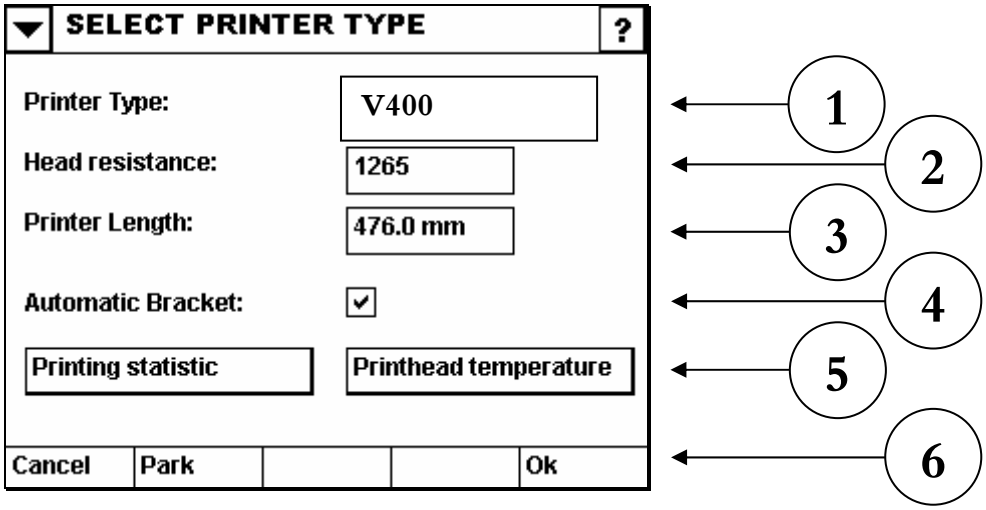
(2) Port

Set this to 701.

(3) ODBC Active

Specifies whether the printer will allow connections to the ODBC server application.

Printer Type



(1) Printer Type

Select the printer type the controller is connected to.

(2) Head Resistance

The resistance of the print head varies from head to head. Each time the print head is changed, the user must remember to key in the resistance of the print head. Print head resistance consists of 4 digits and is indicated on the bottom of the print head.

Caution: Setting an incorrect value may decrease the lifetime of the print head.

(3) Printer Length

(V400 printers)

This setting refers to the travel distance for the print head carrier, from the start point to the machine frame (minus 1 mm).

Caution: To avoid damage to the printer, please take time to measure the correct distance the print head carrier can move, before entering a value. If the setting is too high, the carrier will collide at high speed, with the printer frame and could potentially damage the printer.

(4) Automatic bracket

(V400 printers)

Note: If you want to use the V400 Automatic bracket system, mark the field.

When the printer has ended the last label print, the bracket system will start moving in accordance with the RDY signal.

(5) Printing statistic

Shows statistical information about print head and electronics.

Print head temperature

Use this menu to set a warm up temperature for the print head (requires a heating element in the print head).

The current temperature can be monitored here as well.

For applications where the ambient temperature is cold (less than 10 degrees Celsius) the print quality can sometimes improve if the heater is activated.

If no heater is installed (or you do not wish to use it) set the requested temperature to zero.

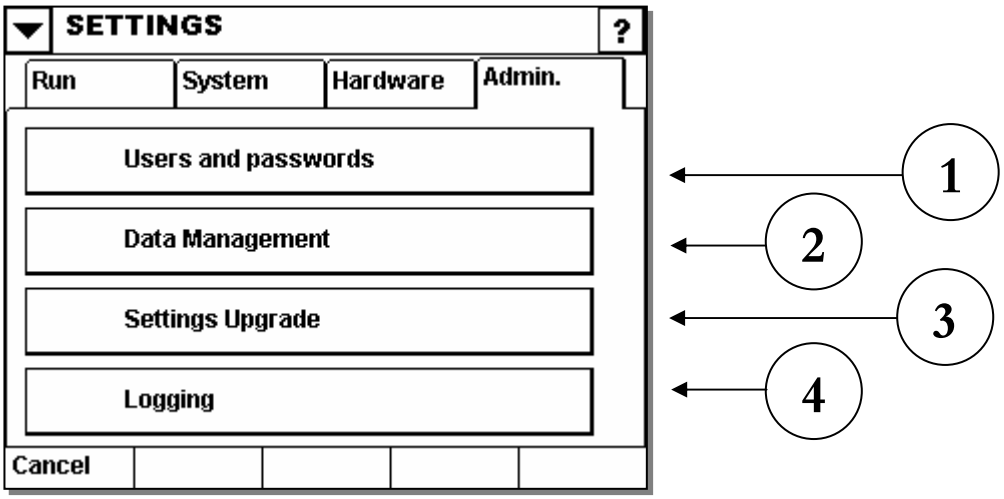
(6) Park

(V400 printers)

Moves the print head carrier to/from park position.

Admin

The last tab under "Settings" is "Admin". This menu allows a variety of user profiles to be set up as well as other administrative options.



(1) Users and Passwords

This menu is normally only for use by the person responsible for the running of the printer. This menu allows different printer users to be set up in the system, and these can be linked to various user groups. See page 60

(2) Data Management

This menu allows the user to access a list of all the printer's internal and external files. It is also possible to copy, rename, move, etc. all of these files.

This menu is also used to backup/restore data and to migrate data from the controller. See page 174

(3) Settings Upgrade

Used when upgrading or changing the V200 software.

Press the field "Settings Upgrade" and select "Allow Upgrade During next boot" followed by "Save". The menu also gives you the option of re-setting the printer to factory defaults. See page 208

(4) Logging

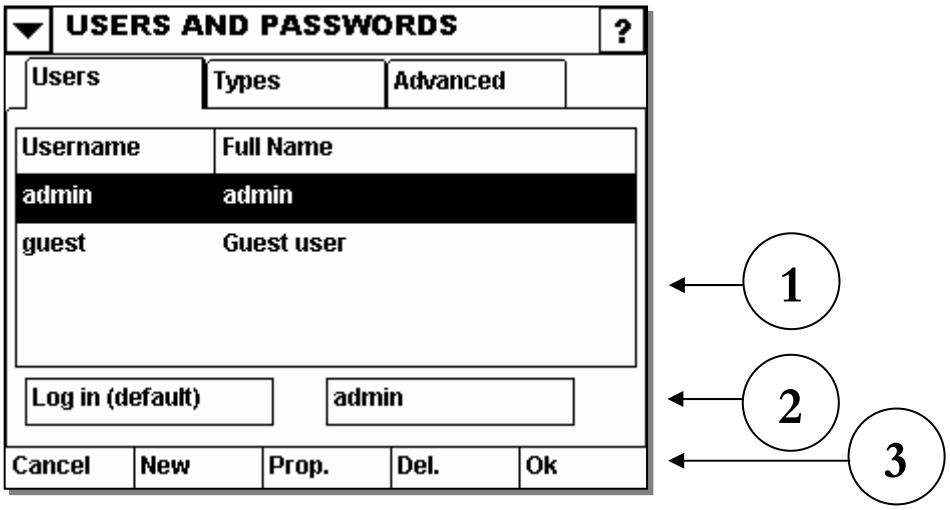
This menu allows the user to set the parameters to be saved in the printer's log file. These are parameters that, for example, can tell the administrator when the printer was last used and who used it. (See page 67).

Users and Passwords

This menu is used to set up individual users and user types.

Users

The menu is used to manage users.



(1) Username/Full name

The list shows the currently defined users that have access to the printer.

Username is the name that should be used when logging in, and "Full Name" is the actual name of the person.

(2) Log in (default)

Use the drop-down menu to select if the system should automatically log a specific user in, or if it is required that the operator always types in a password. In some companies, it will not be relevant for system users always having to log on using Username and Password.

If "LOG IN (default)" is selected, it will not be necessary to log on using username and password.

If this option is selected, another drop down appears to the right, containing all the users in the system. Use this drop down menu to specify which user should be logged in automatically at start up.

(3) New

Creates a new user.

Properties

Edits an existing user.

Delete

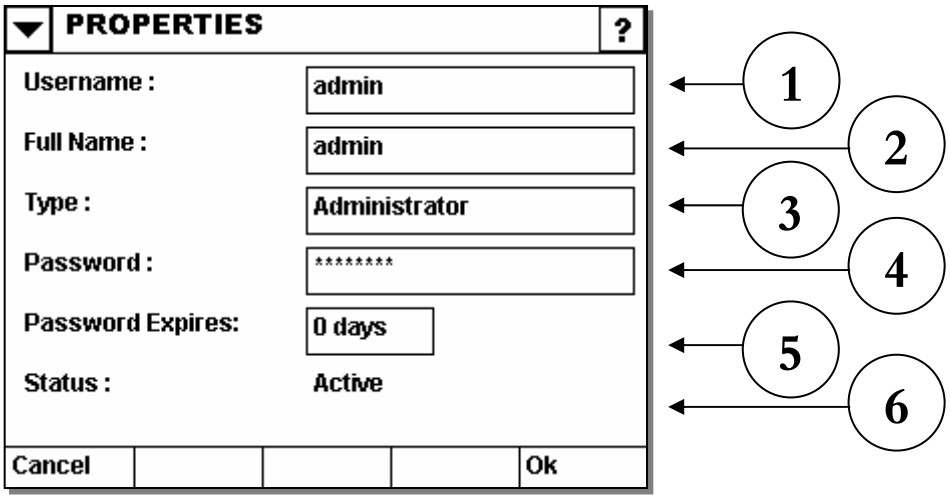
Deletes the selected user.

Note: You cannot delete the user that is currently logged in.

It is STRONGLY recommended to set up two administrators. If all administrators forget their password the unit must be returned for repair.

User Properties

When creating a new user (or editing an existing user) the menu below is displayed.



(1) Username

Type in the username. The username is used when logging in to the printer

(2) Full Name

The actual name of the user. Only used for descriptive purposes.

(3) Type

Use the drop down menu to select the user type (group) that the user is a part of.

See page 62 for information about managing user types.

(4) Password

Type in the new user's password. The first time the password is used, the user is forced to type in another password. When editing a user the actual password is replaced with 8 stars.

Note: If a user enters an incorrect password three times in a row the user is suspended. The administrator can issue a new password to a suspended user to reactivate the user again.

(5) Password Expires

If the password should expire after a certain number of days, you can define it here. If set to zero, the password never expires.

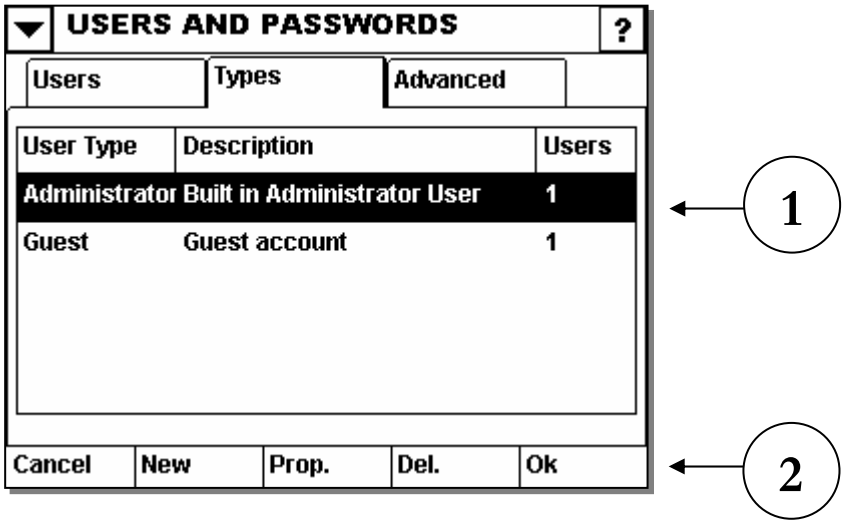
Note: If a user's password expires they are forced to change the password before a real login is accepted.

(6) Status

The status of the user (new user, Active user or suspended).

User Types

The menu used to manage user types.



(1) User Type List

The list shows the currently available user types.

The first column (User Type) shows the name of the user type.

The second column is an optional description of the user type.

The last column indicates how many users is a part of the group.

(2) New

Creates a new user type.

Properties

Edits an existing user type.

The user type "Administrator" and "Guest" is read-only and cannot be modified or deleted.

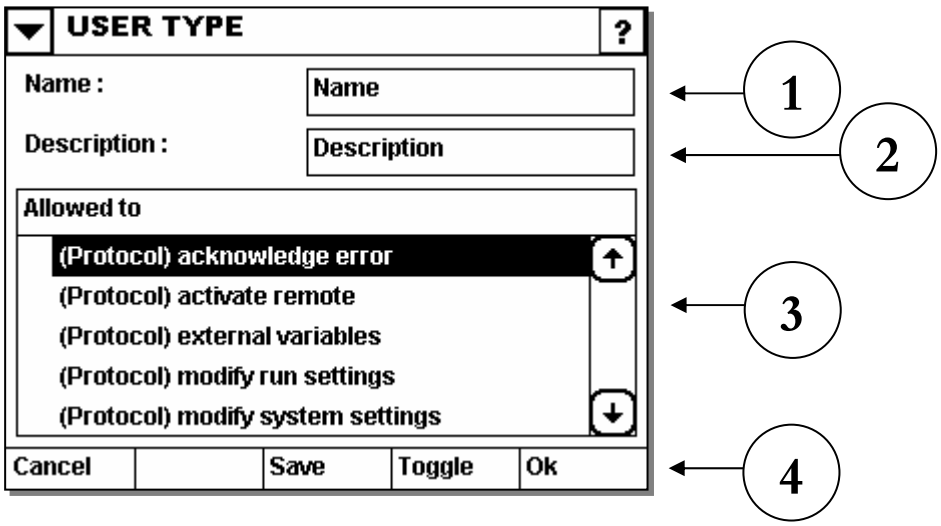
Delete

Deletes the selected user type.

Note: You cannot delete a user type that still has users assigned to that group. If you wish to delete a user type you must first modify all the users that are a part of that group to be a part of another group (or delete the users if desired).

User Type (Properties)

When creating a new user type (or editing an existing user type) the menu below is shown.



(1) Name

Type in the name of the user type.

(2) Description

Type in an optional description. It is recommended that this is used.

(3) Allowed to

This is a list of all security items that a user can have access to. Insert a check mark on those that the user type should have access to.

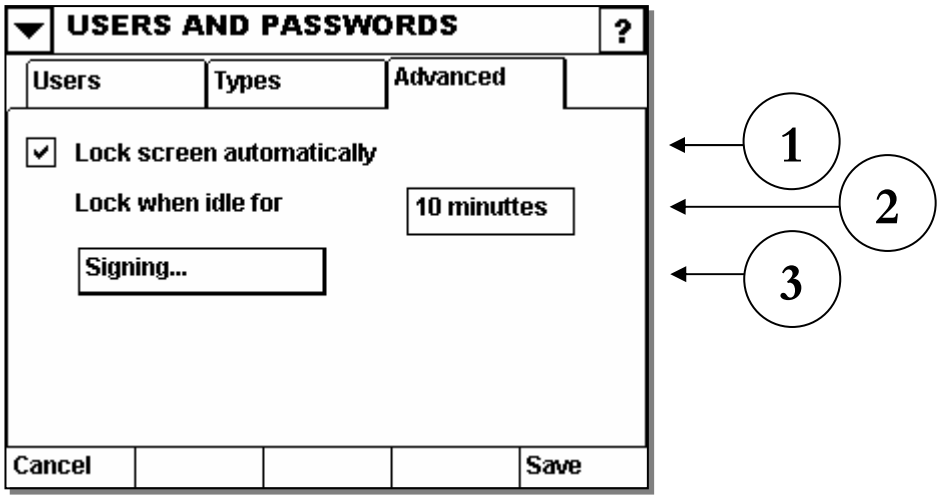
(4) Save

Saves the changes.

Toggle

Inserts (or removes) a checkmark on the security item that is selected.

Users and Passwords, Advanced



(1) Lock screen automatically

Specifies whether the screen should automatically lock (If a screen is locked, a valid username and password needs to be entered).

If a user is not authorised to the current screen, the screen will lock immediately.

(2) Lock when idle for

Specifies the number of minutes (of no operator action) before the screen locks.

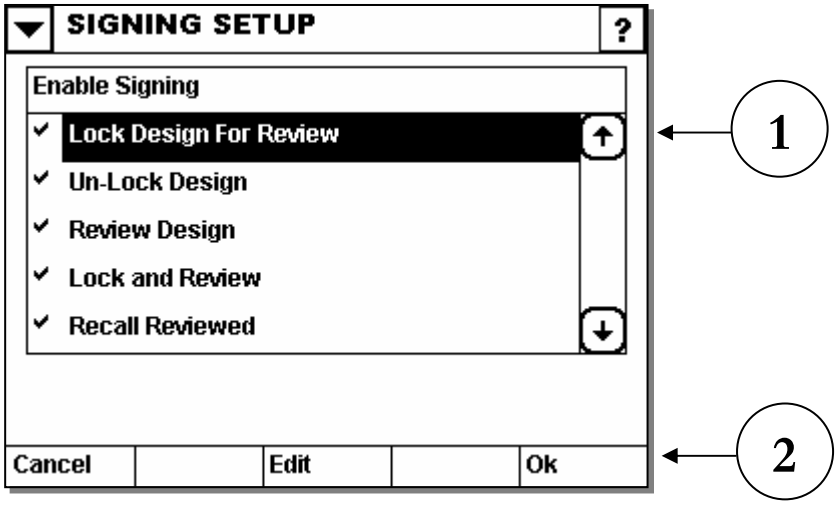
(3) Signing

The principle of signing is that whenever a critical operation is to take place, an authorised user must approve (sign) this.

The button "Signing…" allows the administrator to define which actions require a signature to execute.

Signing Setup

The screen below shows the menu used to modify which actions require a signature.



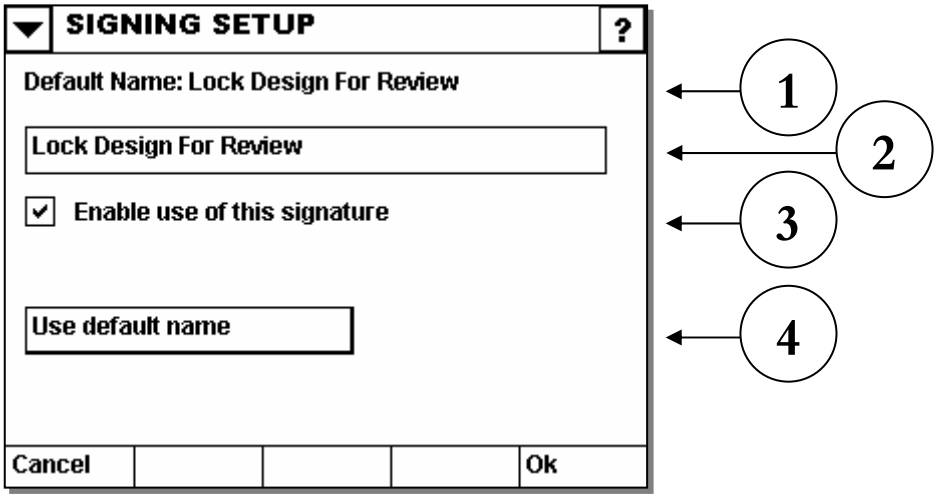
(1) List of signing operations

The list shows all operations that are viable for a signature. A check mark indicates that a signature is required.

(2) Edit

Edits the selected operation (see page 65).

The following screen is used to modify one signing operation



(1) Default Name

The default name of the operation - all operations have a unique default name.

(2) Current Name

Use this edit field to give the operation another name that better suits your needs.

(3) Enable use of this signature

Indicates whether a signature is required to perform this operation.

Only an authorised user can sign for the operation (see pages 60 and 62 for info on how to authorise a user).

(4) Use default name

Resets the current name of the operation to the default name.

Examples on Signing Setup in respect to design approval.

The process of design approval uses the following states:

(1) Draft (the designer can modify the design).

(2) Locked (the designer has locked the design)

(3) Reviewed (a reviewer has roughly approved the design)

(4) Approved (the person responsible for the designs have approved the design, and it can now be printed by the normal operator).

(5) Recalled (The design is scrapped and can no longer be used).

Once the approved state is reached the design cannot go back to the earlier states.

Signing operation	States used: Draft & Approved	States used Draft, Reviewed & Approved:	States used Draft, Locked, Reviewed & Approved
Lock Design for Review			✓
Review Design			✓
Lock and Review		✓	
Approve Design		✓	✓
Lock, Review and Approve	✓		

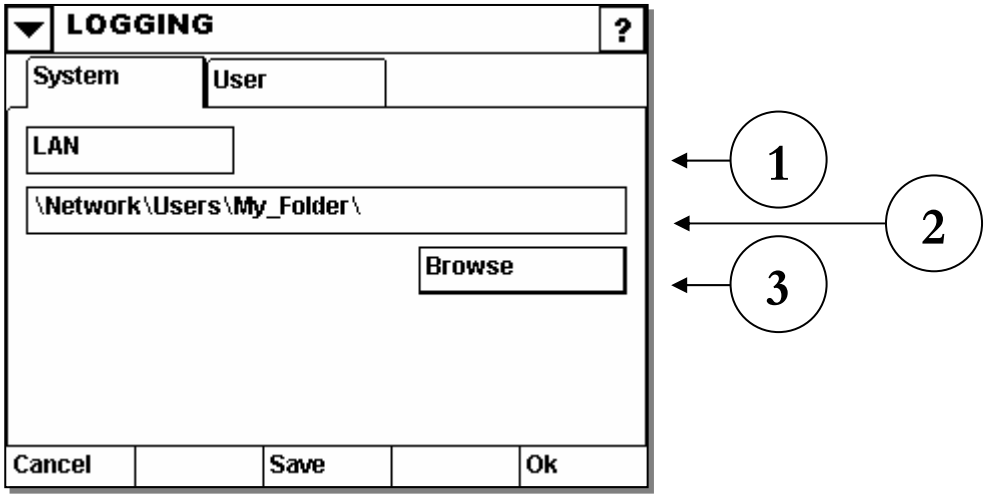
Logging

The system has two logs.

- System log: Used by the system (for CFR21 Part 11, the system log cannot be disabled)
- User log: Used for user related data.

System Log

Basically anything that happens is logged (i.e. an error is acknowledged, a design is being approved, a print job is started, user prompted information, modifying users etc.)



(1) LAN

Use the drop down to select the media to store the log file.

- LAN: The log file will be stored on a network share (using the path specified below)
- Internal: The log file will be stored on the internal memory card on a fixed location
- Disabled: No log file will be generated.

(2) Directory to store log file

(Only visible if LAN is selected)

The user may select the location where the file is to be saved. This can either be done by browsing the printer's file system or simply by writing the name of directory where the file is to be saved.

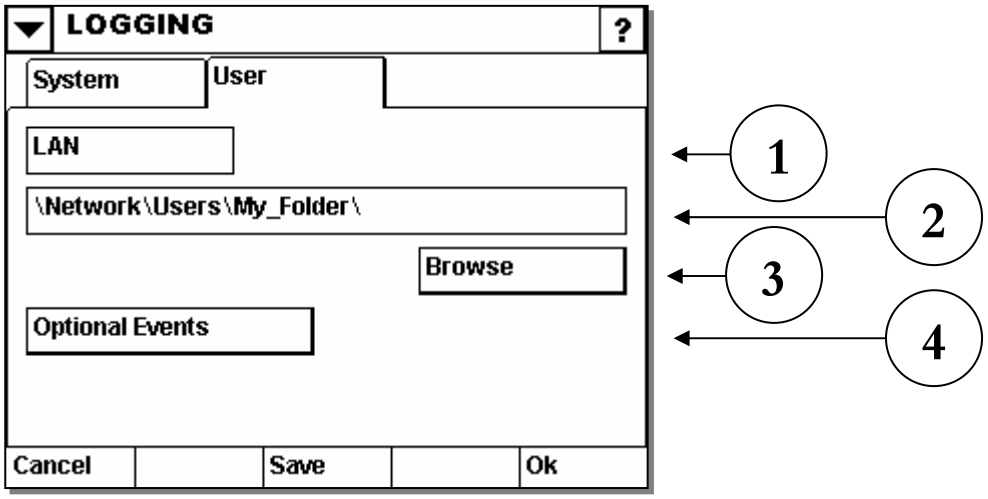
(3) Browse

(Only visible if LAN is selected)

Allows a search for the desired location to store the log file.

User Log

The user log is an optional log (meaning that the user is free to decide whether to activate this log or not). Also the user has a choice of selecting which items to log and which to ignore. At the time of writing, the user selectable items are all related to printed information in a design.



(1) LAN

Use the drop down to select the media to store the log file.

- LAN: The log file will be stored on a network share (using the path specified below)
- Internal: The log file will be stored on the internal memory card on a fixed location
- Disabled: No log file will be generated.

(2) Directory to store log file

(Only visible if LAN is selected)

The user may select the location where the file is to be saved. This can either be done by browsing the printer's file system or simply by writing the name of directory where the file is to be saved.

(3) Browse

(Only visible if LAN is selected)

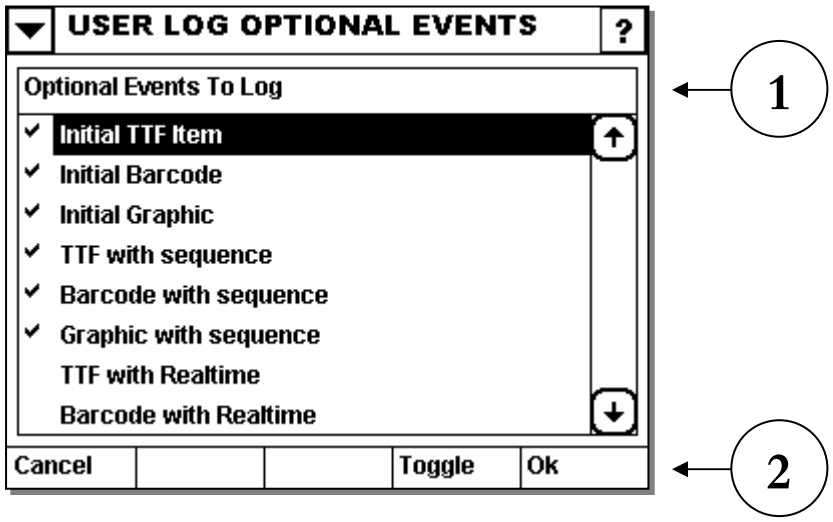
Allows a search for the desired location to store the log file.

(4) Optional Events

Use the menu to select which of the optional events you wish to be logged.

User Optional Log Events

The User log has the option of logging some optional events. Use this menu to define which of the optional events should be used.



(1) Optional Events to Log

The list shows the events that the user can choose to log.

(2) Toggle

Use the toggle button to set/remove a checkmark on the selected event.

In the example above, six different events are selected.

Please note that the log itself must also be activated for any log file to be generated.

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PART 3 : OPERATION

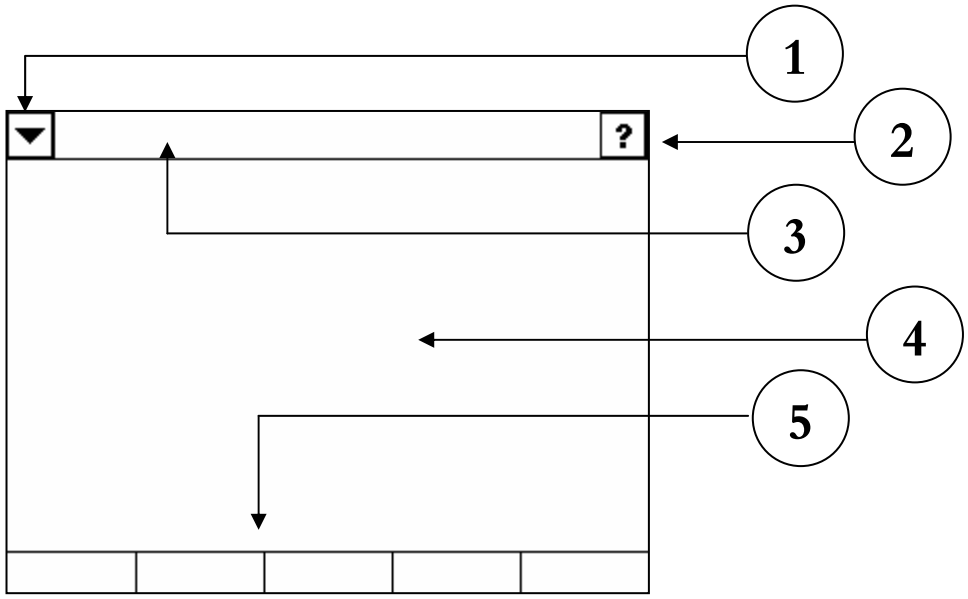
CONTENTS

SOFTWARE

User Interface

This section describes the user interface of the printer.

Components on the screen

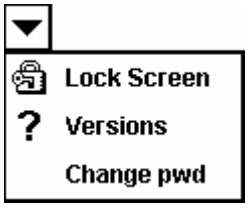


(1) System Menu

All screens (except pop up windows) have a System Menu button. Pressing the System Menu button opens up the System Menu. To close the menu again, pres the System Menu button once more.

The content of the System Menu depends on the actual context.

In this example the user can lock the screen, check firmware versions (see page 75) and change passwords.



(2) Help Button/Status indicator

The question mark is a built in help function. Pressing the question mark inverts the question mark to indicate that the help function has been activated. Then press the item for which you would like help.

If the screen has been locked, the question mark is replaced by a lock symbol to indicate that the screen has been locked.

(3) Title Bar

Displays the name of the current screen. Sometimes the title bar contains information about the current "operation (i.e., in the file explorer the title will change to "Copy" when a copy operation is in progress).

(4) Main area

This is where the actual screen information is placed.

The main area usually contains pictures, combo boxes, buttons and text.

(5) Menu Row

A series of buttons that change to reflect the current situation.

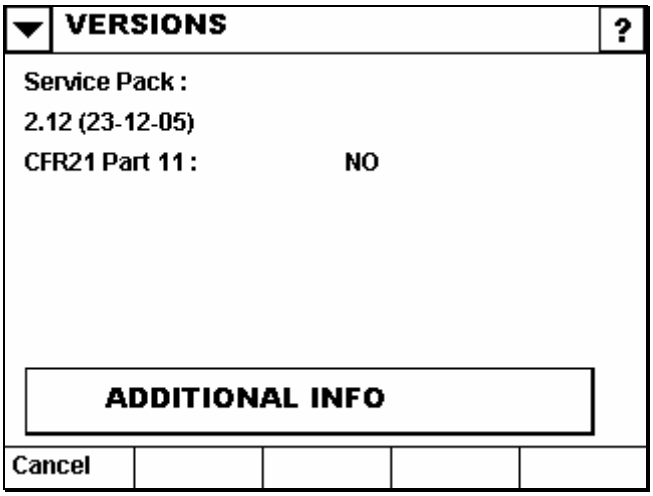
A Cancel button will discard any unsaved information or take you to the previous screen.

A Save button will save any unsaved information.

An Ok button will save any unsaved information and revert to the previous screen.

FIRMWARE VERSION

Example screen shot taken from firmware 2.12.



To check the actual firmware version on your controller, press the System menu (see page 73)) followed by "Version".

This will display the software version to which the V200 has been configured.

We recommend that the user make a note of this information before using the printer.

If the user should require assistance from the supplier, they will be asked to provide some of the information contained in this menu. Moreover, the user should be aware of possible updates to the printer software.

If the supplier has not automatically provided information about possible updates, it is recommended that the user contact the supplier for updates to the printer software at regular intervals.

TOUCH SCREEN KEYBOARD

The system has a built-in keyboard. The keyboard is activated when a string edit field is pressed.

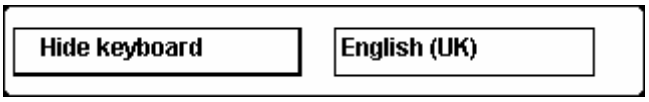
Using the Keyboard

The menu row of the keyboard can have the following option (depending on the context).

Keyboard

Use this button to change the keyboard layout temporarily, or to hide the keyboard for better view of the text.

The default keyboard can be configured according to the nationality of the country involved.



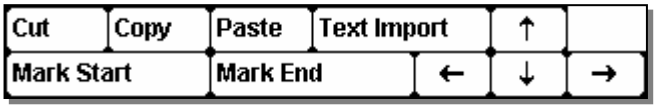
To set up the keyboard, refer to the following menu:

SETTINGS | System | International (Page 43)

Clip board

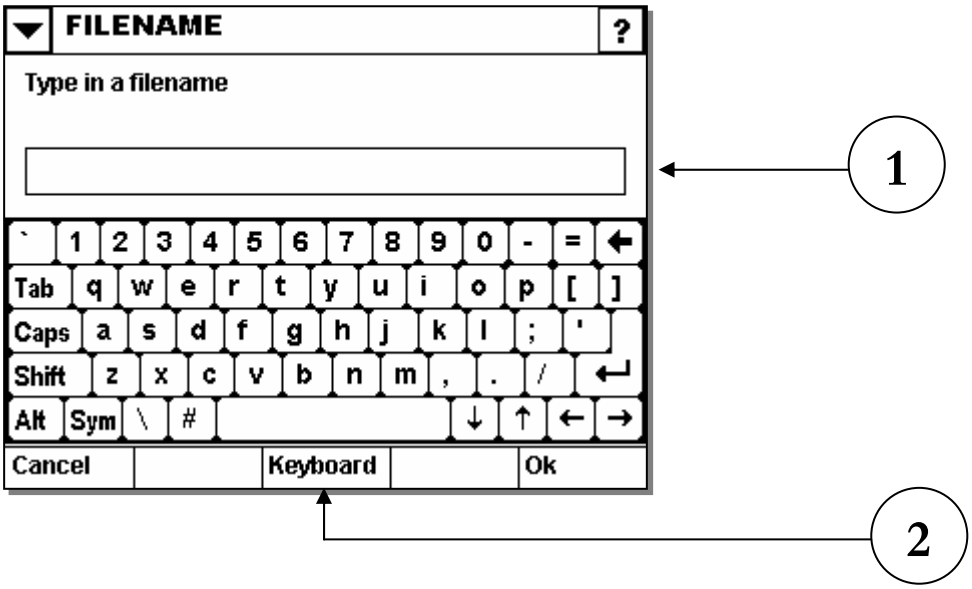
Allows user to import text from a text file, cut, copy and paste.

Only available in a multi-line edit field (see page 78)



Single Line Edit

Used for inputting a single line of text; in this example a filename.



(1) Edit area

Used for inputting a single line of text. In this example a filename.

(2) Keyboard

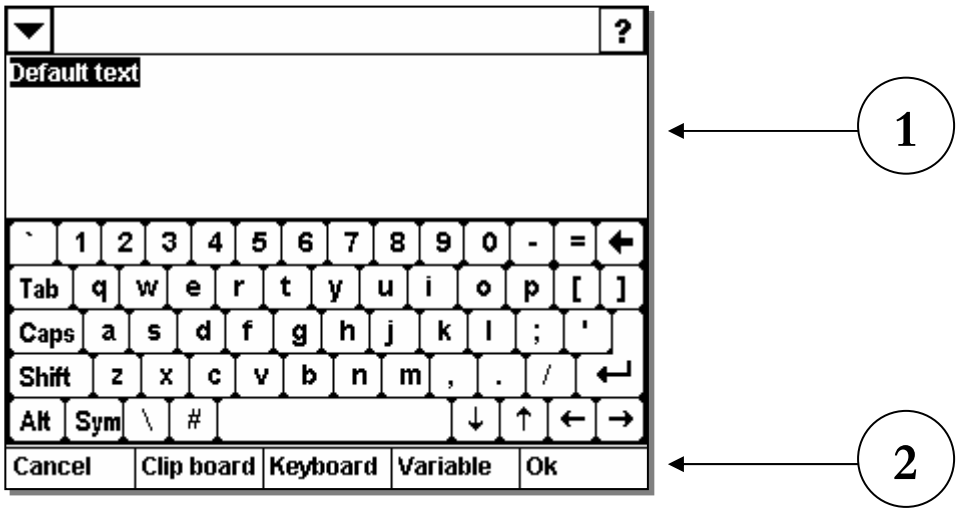
Use this button to change the keyboard layout temporarily, or to hide the keyboard for better view of the text.

See page 76.

Multi Line Edit

Used for inputting text. Used for example when creating designs.

Pressing the enter key on the keyboard inserts a line break in the text**.**



(1) Edit area

Used for inputting multiple lines of text. In this example a text field for a design.

(2) Clip board

Allows user to import text from a text file, cut, copy and paste. See page 76.

Variable

Allows the insertion of a variable at the current cursor position. Used when designing.

Keyboard

Use this button to change the keyboard layout temporarily, or to hide the keyboard for better view of the text. See page 76.

Symbol Keyboard

Pressing the “Sym” key on the keyboard changes the keyboard to show some commonly used symbols.

The user should note the extra keys that appear in the bottom left-hand corner. ”Prev” and ”Next” can be used to scroll backwards and forwards between the various symbols, as there are more than can be shown on the keyboard.

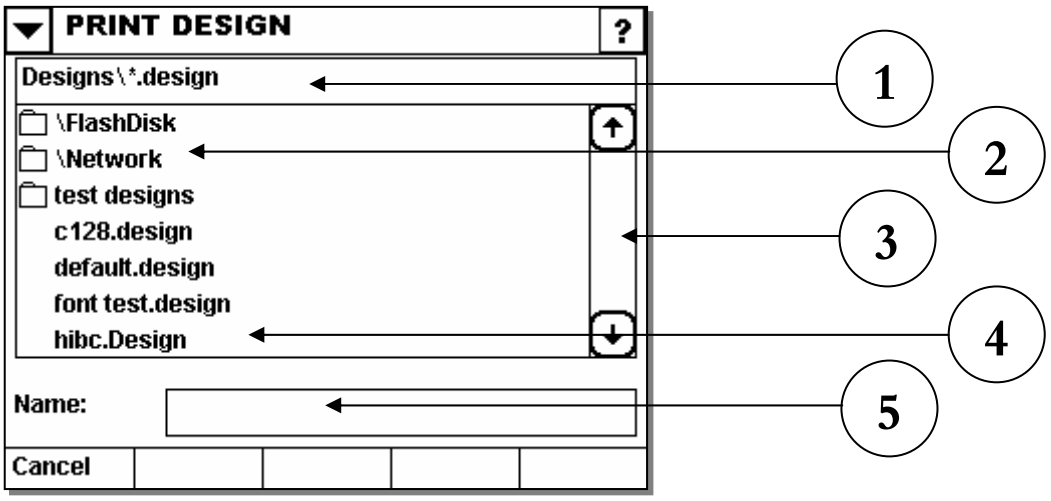
Press the “Sym” key again to close the symbolic keyboard.

USING THE EXPLORER

The Explorer is widely used in the system whenever file access is required.

This section briefly explains the basic behaviour of the explorer.

Basic Principle



(1) Path

This displays the current directory and the file mask.

(2) Directory

In order to organise the various files, it is possible to sort files into directories.

When a directory is involved, this is indicated with an icon. 🗀. To open a directory, press on the required directory you want and confirm the choice by pressing the "Ok" button.

To create a new directory, type a name in the name field. If no file exists with the name typed in a button labelled "MkDir" occurs in the menu row. Pressing this button creates a directory with the specified name.

Note the directory called "\FlashDisk". This directory symbolizes the external Compact Flash Card. If no external card is inserted, this directory is not visible.

Note the directory called "\Network". This directory symbolises the local area network (LAN).

(3) Scroll Bar

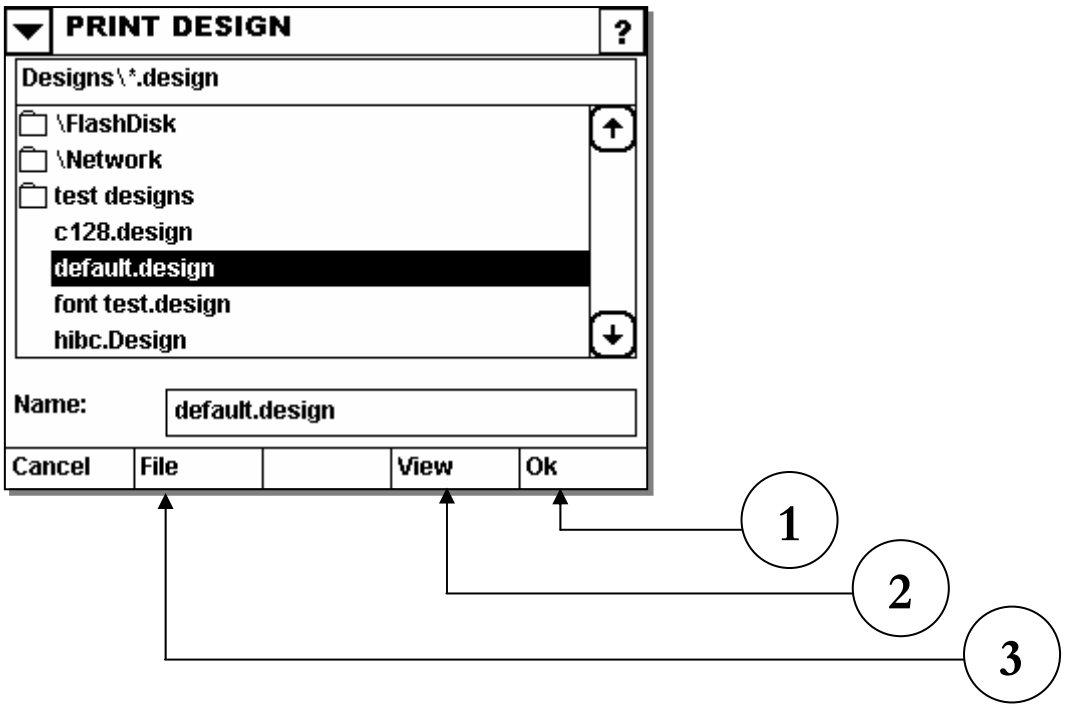
Scrolls the view.

(4) Files

The files in the current directory are listed below the directories. To select a file simply press it.

(5) Name

Alternatively, a name can be typed in using the keyboard.



(1) Ok

Pressing the Ok button activates the current function with the selected file. In this example the function is printing a design. Other functions include copy and move file.

(2) View

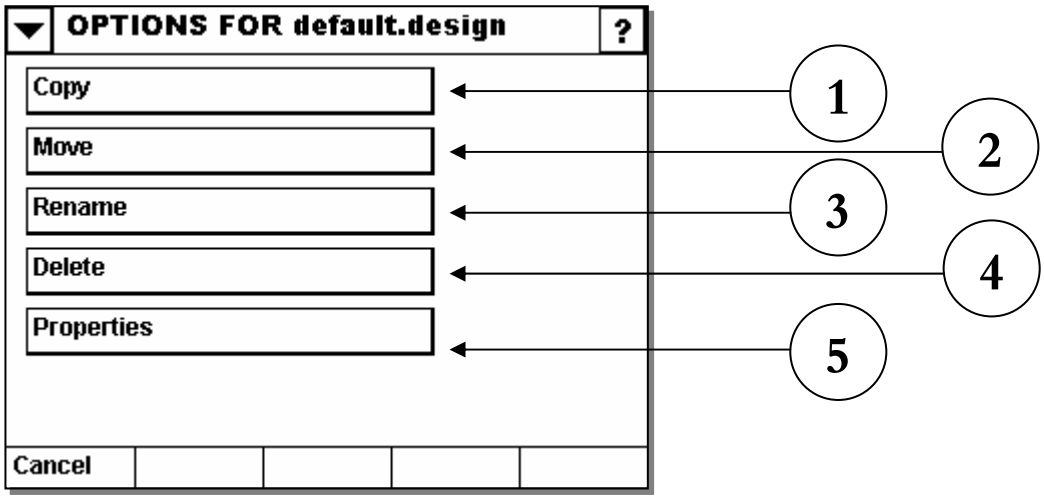
Certain files (includes design files and text files) can be viewed with an internal viewer.

(3) File

Pressing the "File" button shows some options for the selected file.

File Options

If a file is selected in the Explorer, pressing the file button displays the following menu.



(1) Copy

Pressing copy returns to the explorer in "Copy" mode. Notice the title changes to "COPY".

The firmware automatically suggests a name for the destination file.

Go to another directory and/or give the file a new name and press Ok.

After the file is copied, the explorer reverts to its previous directory and function.

(2) Move

Just as with Copy.

(3) Rename

Use the keyboard to give the file a new name

(4) Delete

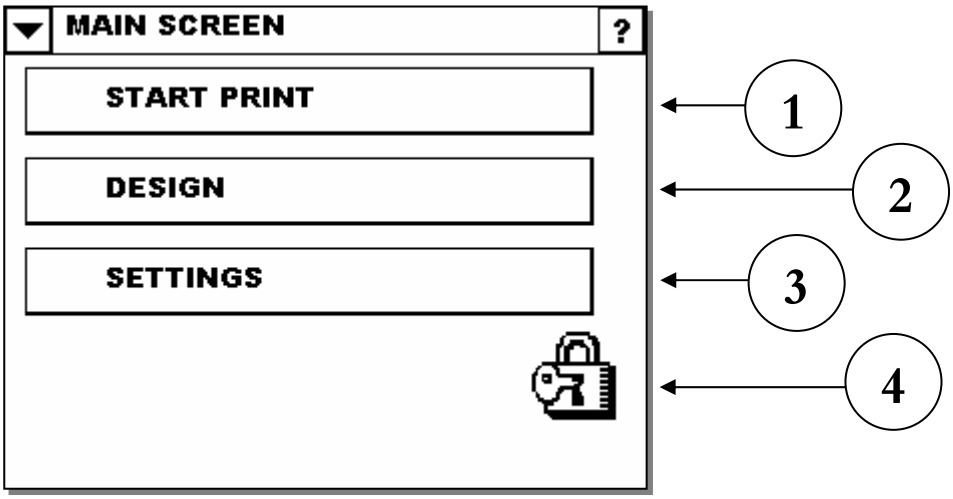
Deletes the file from the system. Note that the deleted file cannot be restored, and is thus deleted permanently.

(5) Properties

Shows size of selected file (or directory) and the available free space as well as the total capacity of the drive on which the file (or directory) is located.

MAIN MENU

The main menu is displayed when an authorized user is logged in.



(1) Start Printing

This menu allows access to the printer memory. In other words, if layouts have already been designed and stored on the accompanying flashcard, these can be selected and opened here.

See page no. 84.

The user should not use this menu to edit the stored designs; this is done using the "DESIGN" menu described below.

(2) Design

This menu allows the user to edit existing layouts, and to create new layouts.

Read more about this menu on page no. 88.

(3) Settings

This menu is mainly used when installing the printer and it is used to optimise the printer's performance in a number of ways. Through this menu, the user may correct and edit the V200's basic configuration.

Communication with peripheral equipment such as packing machines or labelling units is also administered via this menu. Many of the V200's functions are pre configured by the manufacturer, therefore the user should exercise caution when making changes in this menu.

(4) Security

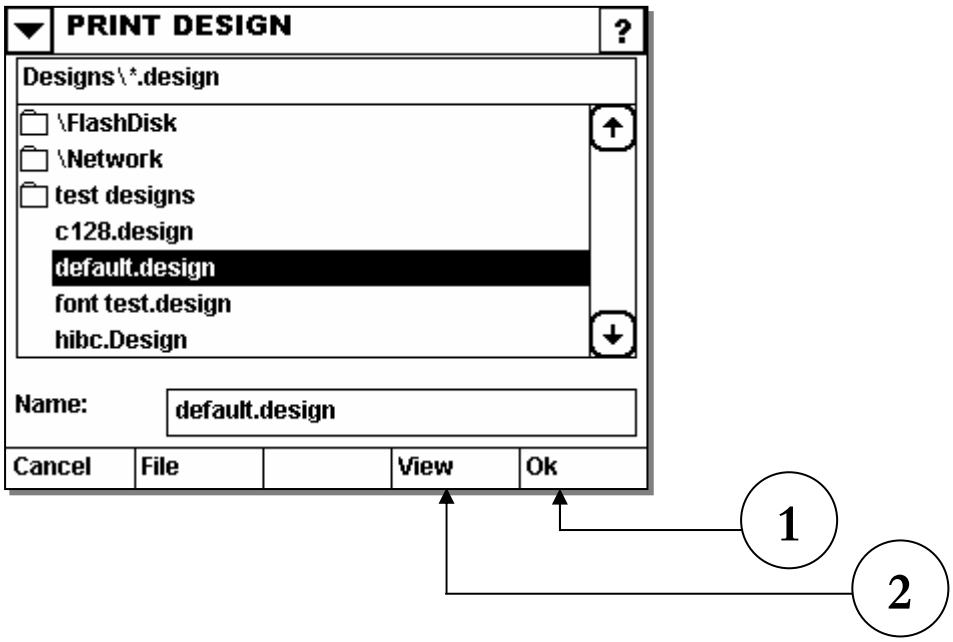
Use this button to log out. This is a common function for multi-user systems. Once logged out, the user must type in a user name and the corresponding password to log in again. Using the "SETTINGS" menu described on page no.60, the administrator can set up different users and their passwords.

PRINTING

Pressing ”START PRINT” in the main menu will call up the following display:

Locating the design

Use the explorer functions to locate the design you wish to print.



(1) Ok (Start Printing)

The "Ok” button on this display is not active until a selection has been made.

Once either a directory or a file has been selected, the "Ok” button can be used. If a design has been chosen and the "Ok” button pressed, the design will be loaded into RAM.

All variables will be initialised and any prompted variables prompted.

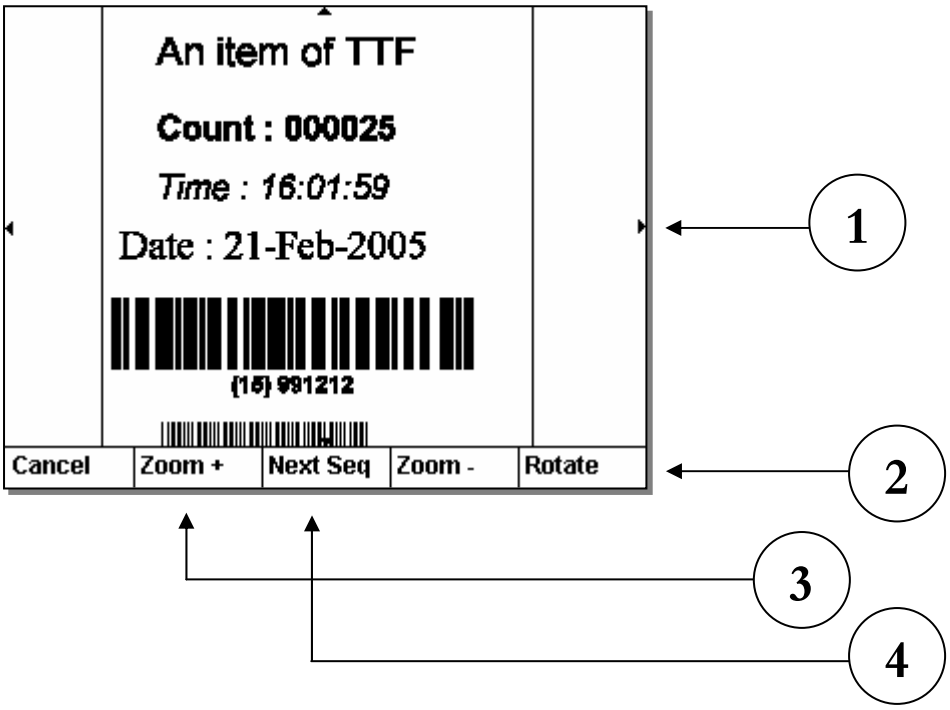
The printer is now ready for printing.

(2) View

This button allows you to view the selected design, described in detail on page no. 85.

View Design

The" View" button allows the previewing of the design before printing it.



(1) Scroll

At each side, there is a small arrow pointing to the edge of the display. The area of the display around these arrows is an active area and covering the arrow with one's finger will move the display in the opposite direction of the arrow (just like standard Windows scroll action).

(2) Rotate

This allows users to rotate their labels so they can be read. Note that this feature does not rotate the actual printout of the design, but only the image on screen in order to facilitate reading.

(3) Zoom + / -

If the design contains detail which is difficult to read, users can zoom in on individual parts of the design – and out again.

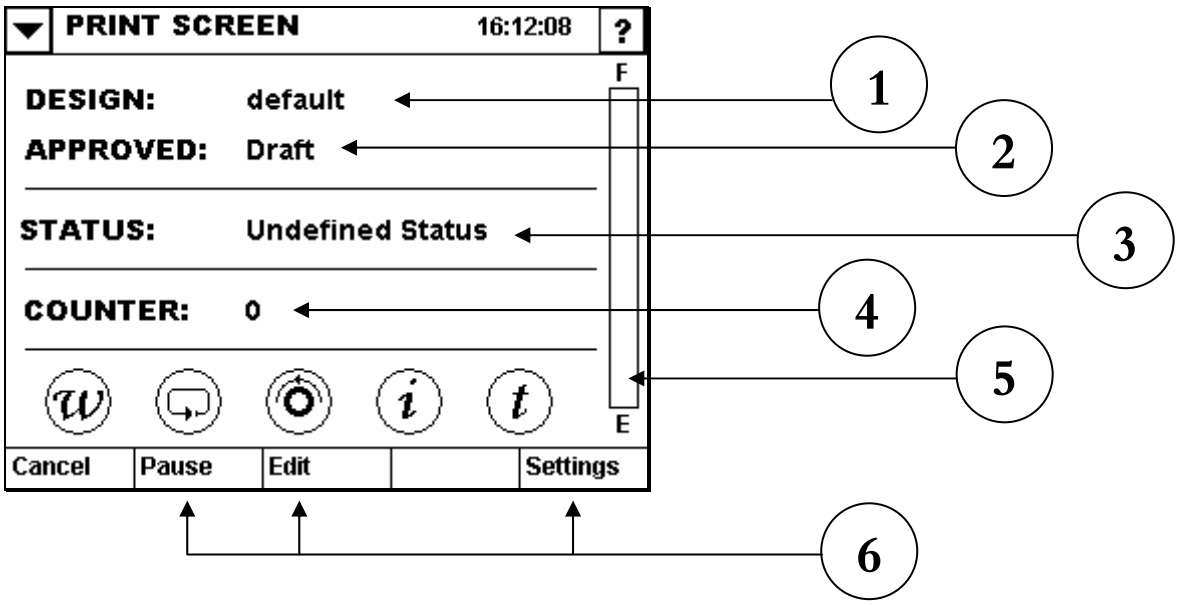
Note: This feature has no influence on the size of the design, but is only there to allow users to view details in the individual design.

(4) Init Vars / Next Seq

Shows the variable contents. By pressing "Next Seq" the program calculates the next set of values (i.e. for counters and real time variables), and shows the result on the screen.

Print Screen

This picture appears when a design is loaded and the unit is ready to print.



(1) Design

Show the name of the design being printed.

(2) Approved

If the design has been approved, the date of approval is shown. If the design is not yet approved, the state of the design is shown instead.

Note: Design statuses include Draft, locked, reviewed, approved and recalled.

(3) Status

Show the printer's current status. Printer status includes Ready, Printing, Paused, and (if no print unit is connected) Undefined Status.

(4) Counter

Shows the number of printed labels. If the print counter function is activated you can also see the number of requested prints.

(5) Remaining ribbon indicator

Shows the remaining ribbon. **F** = full roll (more than 400 metres ribbon remaining).

E = Empty roll.

Note: The remaining ribbon is measured during print and requires a number of prints before an accurate value is reached.

(6) Pause

Toggles the printer between pause and ready. For V400 Printers this corresponds to Park position.

Edit

Allow the modification of a design already stored on the system, create a new design or modify the design currently printed.

Settings

Allows modification of the run settings (like contrast) while the system is printing.

Save

A save button is shown if a setting (that is set to be stored in the design) has been modified (but not saved in the design). Pressing the save button saves the design with the updated setting. (Only applicable on draft designs).

Warning

This Symbol is shown when system is running abnormally. It is removed when system is running normally again.

Reload

The print is reloaded and any prompted variables are prompted again. Any Time/Date variable that is updated on job start is also recalculated.

Ribbon tension

Tensions the ribbon.

Info

Shows remaining ribbon (and gives an estimate for when you need to reload ribbon). Also shows web speed for printer models with an encoder. The info screen will also display the print heads current temperature (in Celsius).

Test print

Simulates reception of one start pulse and hence prints one label (used for test)

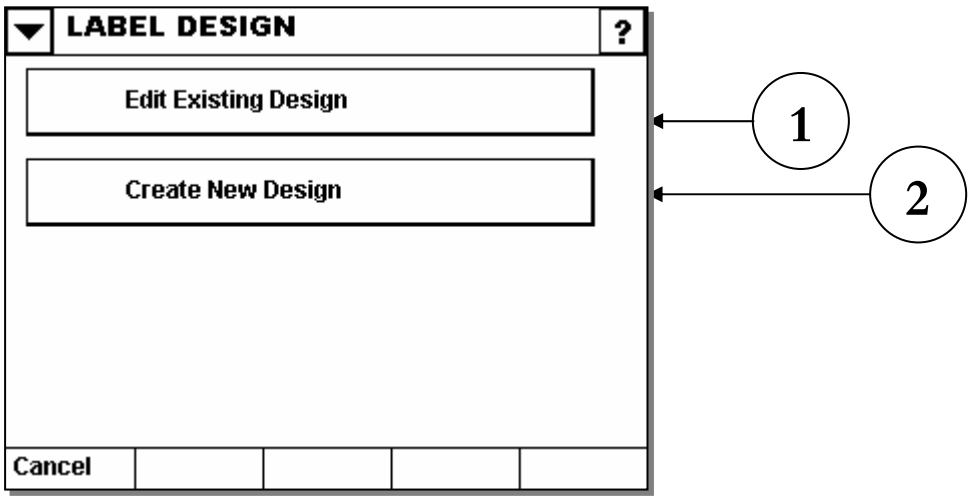
DESIGNING

The “DESIGN” menu is opened from the controller’s main menu.

Getting Started

This menu allows you to create new designs or edit and adjust existing ones. This menu is not used for loading designs, but is exclusively used as a design menu. Once you have completed the new design or edited and adjusted existing designs, you must save your changes, after which you can start printing using the ”START PRINT” menu which is described on page no. 83

The figure below shows the display called up by selecting “DESIGN” from the main menu.



(1) Edit Existing Design

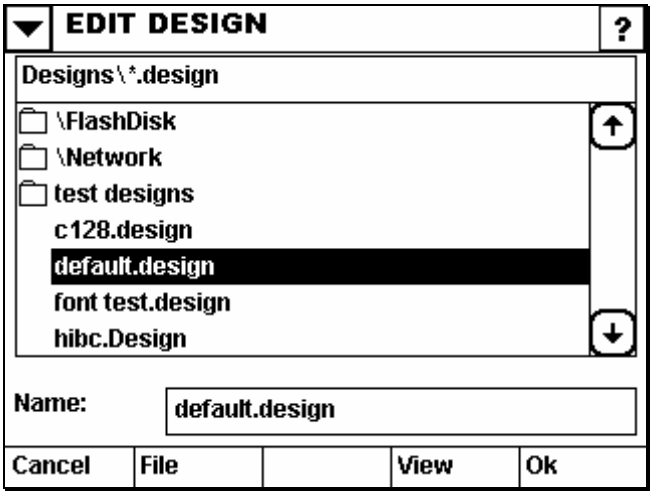
This menu allows the user to edit a design already created, and which has been saved to the V200’s memory card

(2) Create New Design

An entirely new design can be created from here.

Edit Existing Design

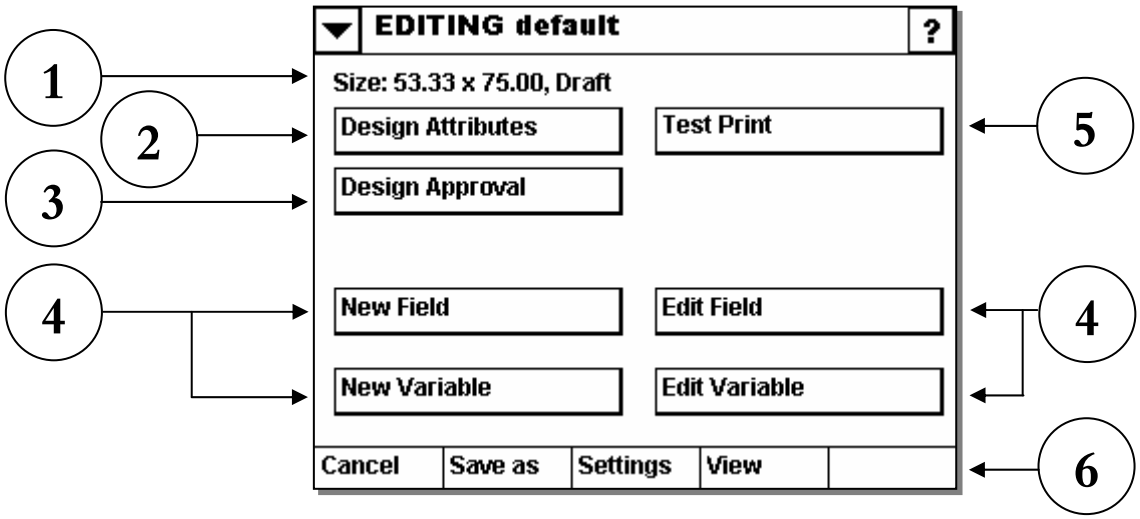
Selecting “Edit Existing Design” opens the explorer allowing the selection of the design to be edited. Once the design is selected, pushing “Ok” opens the design ready for editing.



The menus available after a design has been selected, are the same whether you choose ”Edit Existing Design” or ”Create New Design” is chosen. Therefore, the menus explained under ”Create New Design” also apply to ”Edit Existing Design”.

The Design Screen

The following screen is displayed after opening an existing design (named default). If "Create New Design" has been selected, the name would simply be "Untitled".



A design can contain fields, variables and settings.

A field is what you directly can see on the print out (i.e., text field or a barcode). If the information within a field needs to be updated a variable is required.

The information generated by a variable must be linked to a field to be printed. The variables in a design are automatically updated by the system as required.

(1) Quick info

Displays the design size and the design status

(2) Design Attributes

Use this button to modify the size of the design, and to activate the Cycle size function. See page: 92.

(3) Design Approval

Use this menu to approve the design. For maximum security it is recommended that only approved designs can be printed by the operator.

(4) New Field

Creates a new field. See page: 93.

Edit Field

Edit a field contained in the design. See page: 94.

New Variable

Create a new variable. See page: 112.

Edit Variable

Edit a variable contained in the design. See page: 113.

(5) Test print

Allows the designer to make some test prints. (Takes the user to the Print screen, see page no.86).

(6) Save As

This enables users to save the design using a new name.

Settings

This is a shortcut key to the "SETTINGS" menu described page no. 151. Only the "settings saved in Design" (see page no 35) can be modified here.

Please notice that any setting changed here does not affect the global settings until the design is loaded for printing.

View

Only visible when the design is saved on disc. It displays a preview of the design, using the internal viewer.

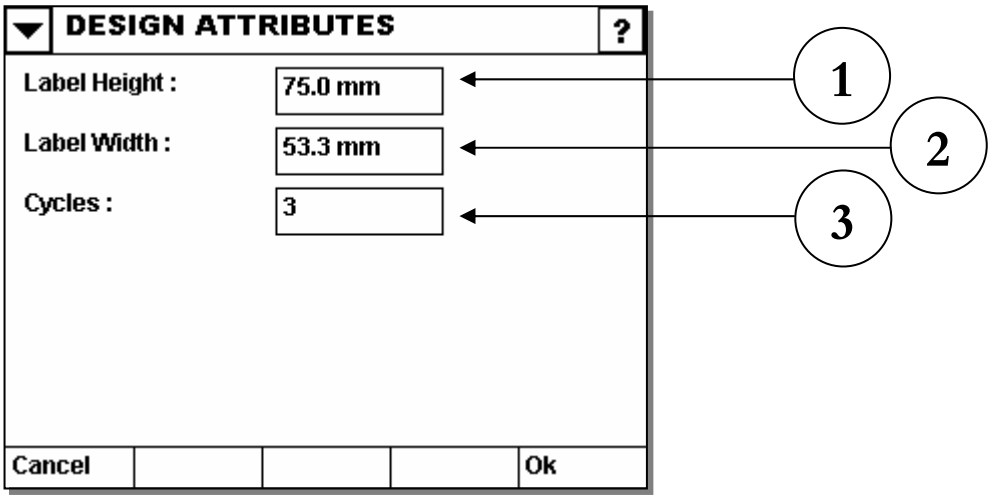
Save

Only visible when the design has been modified.

Saves the design using its current name. If the design has not been saved before then it behaves just like the Save As function (6)

Design Attributes

Having pressed "Design Attributes", the following screen display will appear:



(1) Label Height

The label length (in mm) is indicated here.

(2) Label Width

The label Width (in mm) is indicated here.

(3) Cycles

The number of cycles (copies) you want the printer to print in the printer's length direction is set up here.

The distance between these prints is determined by the label height.

Note: All variables are updated between the individual cycles.

Example:

Cycle size is set to 3

Label height is 75

Y-offset is 30

If the start pulse is sampled at 0mm the three prints will be printed at:

First print = 30 + 0*75 = 30mm

Second print = 30 + 1*75 = 105mm

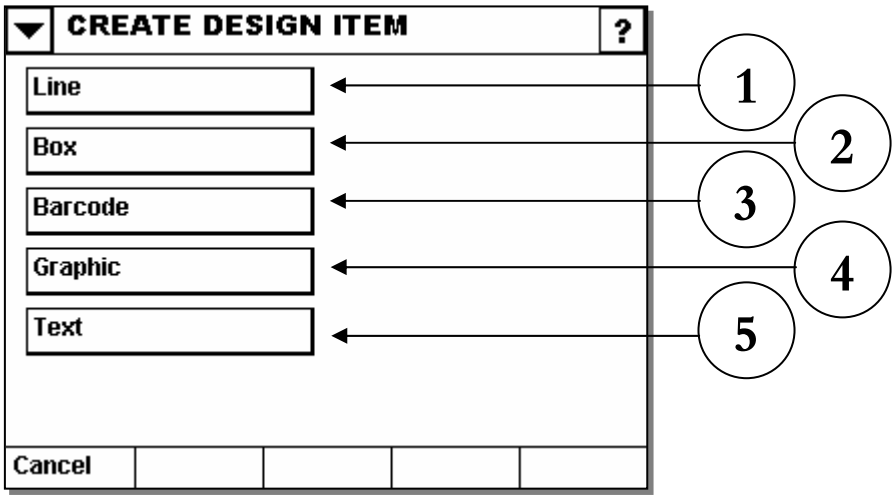
Third print = 30 + 2*75 = 180mm

Fields

A design contains two basic components: Fields and Variables. Fields should be thought of as the building blocks of the design. Without a field, nothing will be printed.

Inserting Fields

This feature allows the user to insert new fields in the design. The following fields can be inserted using this menu: Line, Box, Barcode, Graphic and Text.



Enter the different fields 1 – 5 for creation of the single program lines.

(1) Line

See page 95

(2) Box

See page 96

(3) Barcodes

See page 98

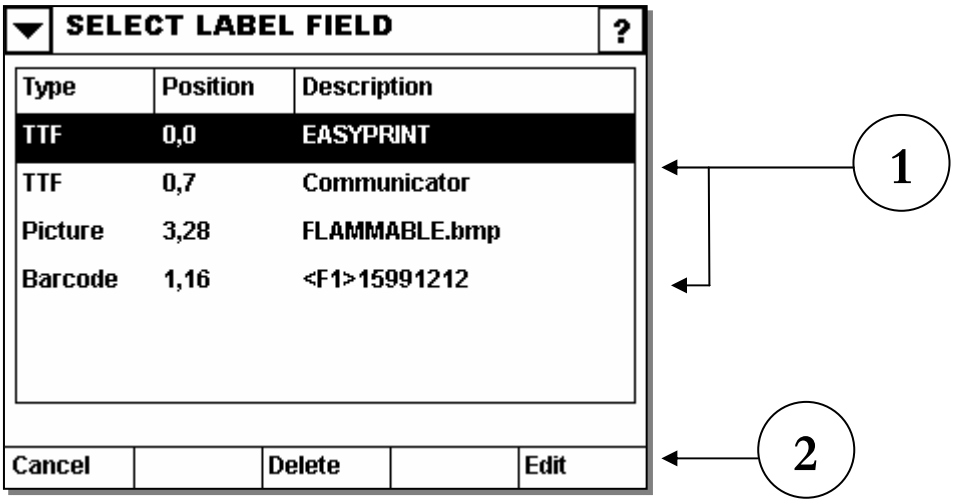
(4) Graphics

See page 104

(5) Text

See page 107

Editing Label Field



(1) Label Fields

This contains the list of fields in the design. The upper part of the screen shows the type, position and description of each field.

"Type" indicates the type of field.

"Position" shows where the individual fields are placed using x and y coordinates.

"Description" shows the first word in each field. Where a picture is involved the fieldname will be shown, where a barcode is involved the code's numerical values will be shown.

In the above example the design contains 4 fields (2 TTF items, 1 picture and 1 barcode).

(2) Edit

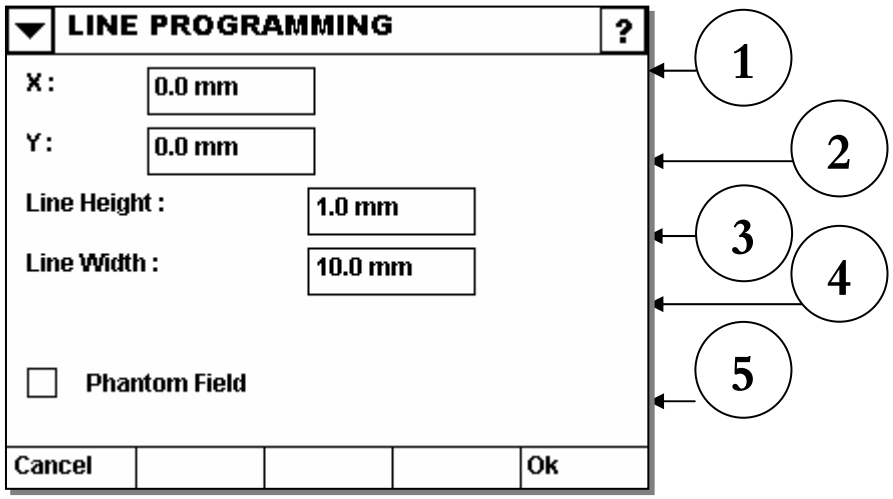
Once the desired field has been selected, edit this by pressing the "Edit" button.

Delete

This feature deletes the selected field from the design permanently. It should be noted that a deleted field cannot be restored.

Line

Here the user can insert a line in the design. The display below shows the user options offered by this feature.



A line should be considered as a filled box. In the above example, the line will start from (0,0) and end at (10,1)

(1) X

Defines the x-position (across the print head) of the field.

Numerical values can be entered.

(2) Y

Defines the y-position (longitudinally with the print head) of the field.

If this value is increased, the field will be moved in the writing direction. Numerical values can be entered.

(3) Line Height

This allows the height of the line to be indicated.

Numerical values can be entered.

(4) Line width

This allows the width of the line to be indicated.

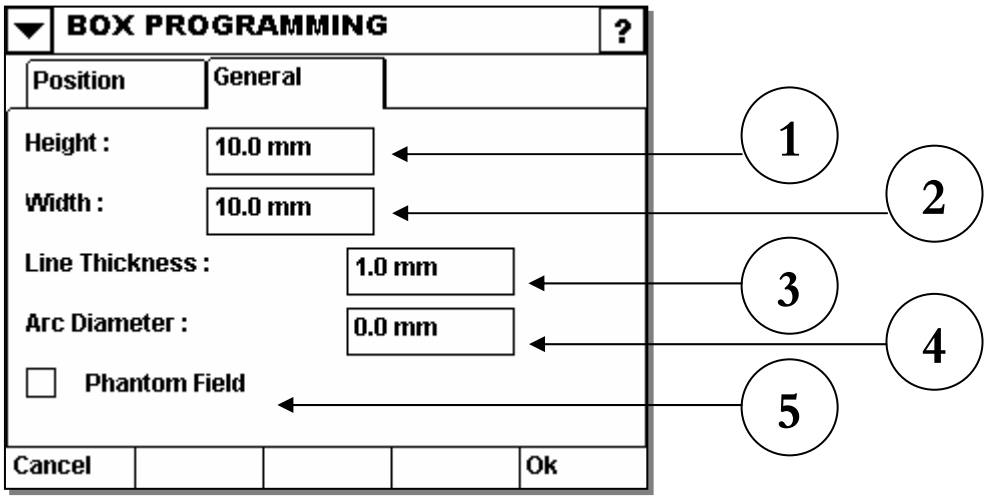
Numerical values can be entered.

(5) Phantom

Allows the item to be hidden during printing, i.e. it will not be printed.

Box

This allows the user to insert a box into the design. The display below shows the options available in this menu.



(1) Height

This allows the height of the box to be indicated.

Numerical values can be entered.

(2) Width

This allows the width of the box to be indicated.

Numerical values can be entered.

(3) Line Thickness

The thickness of the line surrounding the box can be entered here.

Numerical values can be entered.

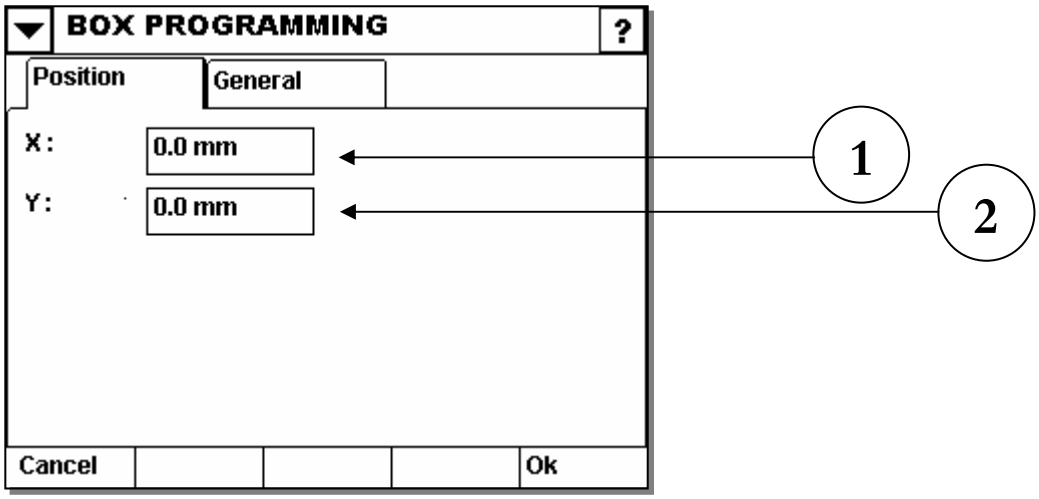
(4) Arc Diameter

The corners of the box can to be rounded using this value. Larger values give rounder corners.

Numerical values can be entered.

(5) Phantom

Allows the item to be hidden during printing, i.e. it will not be printed.



(1) X

Defines the x-position (across the print head) of the field.

Numerical values can be entered.

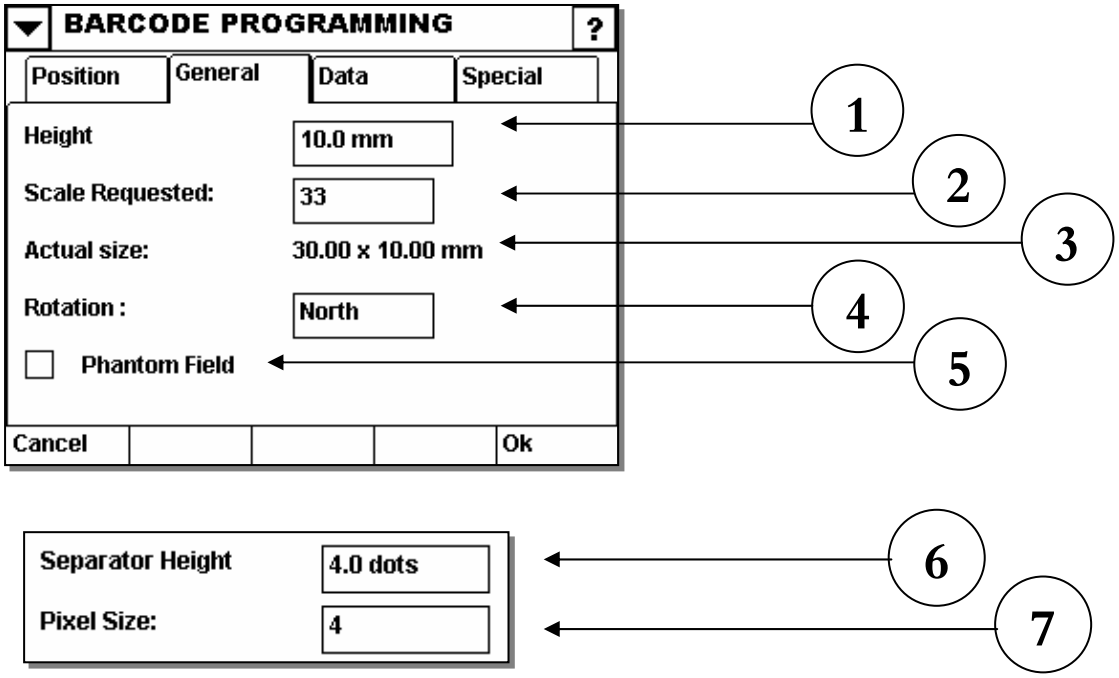
(2) Y

Defines the y-position (longitudinally with the print head) of the field.

If this value is increased, the field will be moved in the writing direction. Numerical values can be entered.

Barcode

All types of barcode can be inserted with the help of this menu.



(1) Height

This allows the height of the barcode to be indicated.

Note: This is not applicable for all types of barcodes.

Numerical values can be entered.

(2) Scale Requested

The scale defines the width of the barcode.

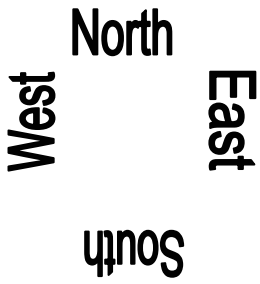
Certain barcode standards (i.e. for EAN128) define how large a 100% sized barcode should be. The narrow bars in the code must be an integer value and therefore the scales available are determined by the physical resolution of the print head.

(3) Actual size

Show the calculated size for the barcode in accordance to the **Scale** settings

(4) Rotation

The field can be rotated to 0, 90,180 and 270 degrees. Directions are stated as North, South, East and West. By pressing on a direction, a dropdown menu will appear, and the user can then select the desired rotation. In combination with the anchor point (see page 100) the field can be rotated to suit requirements.



(5) Phantom

Allows the item to be hidden during printing, i.e. it will not be Printed.

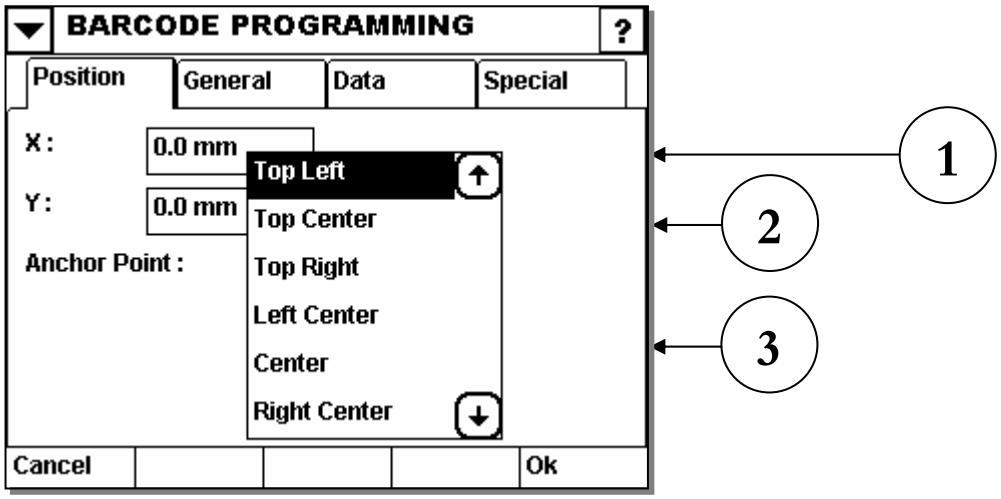
(6) Separator Height

GS1 DATABAR barcodes have the option of having a 2d composite component. Use the Separator height to define the separation thickness between the ordinary barcode and the 2d component.

The separator height must be between pixel size and 2 times pixel size.

(7) Pixel Size

GS1 DATABAR and Datamatrix codes do not use the Scale Requested parameter. Instead, the size of the narrow bars (or squares) can be defined with this number.



(1) X

Defines the x-position (across the print head) of the field.

Numerical values can be entered.

(2) Y

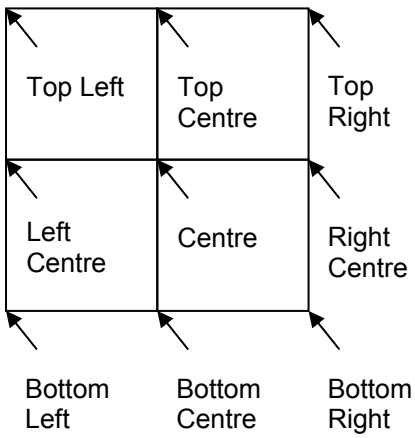
Defines the y-position (longitudinally with the print head) of the field.

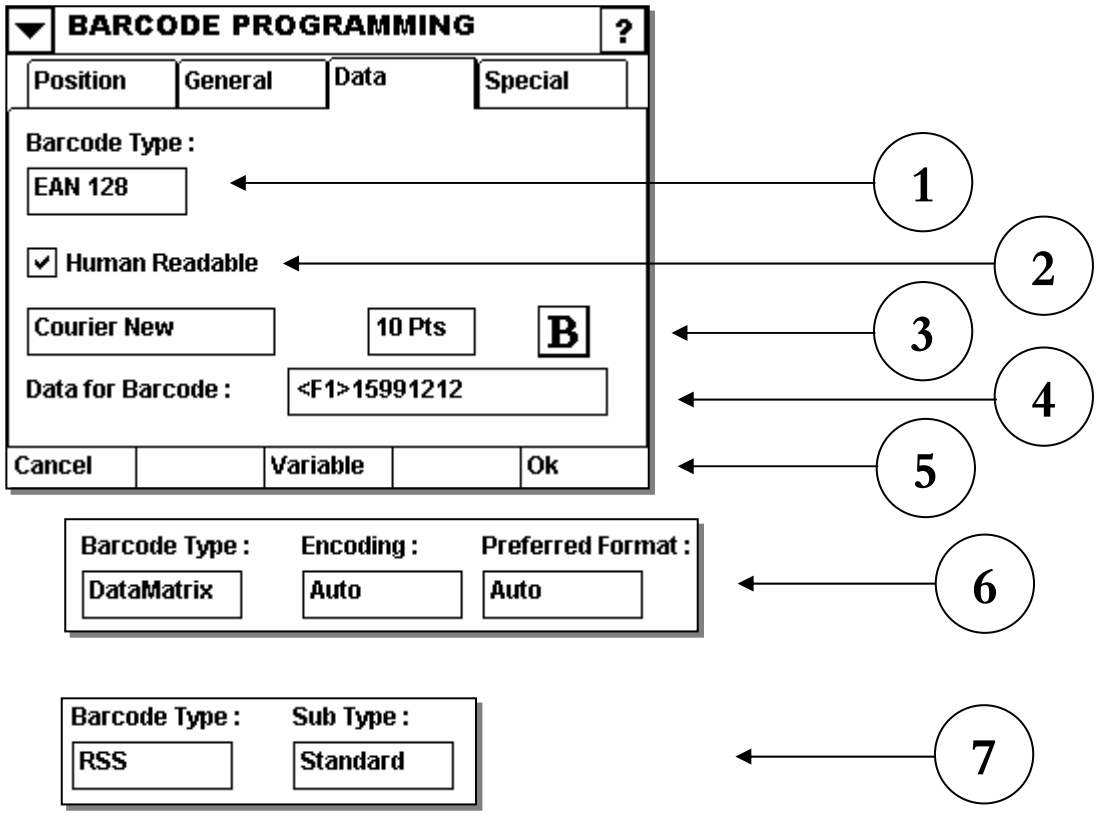
If you increase this value, the field will be moved in the writing direction. Numerical values can be entered.

(3) Anchor Point

(See also rotation on page 99)

Each field is surrounded by a virtual rectangle. The anchor point determines where the x and y coordinate touches this rectangle. The anchor point is also used as the point of rotation. The default is Top left.





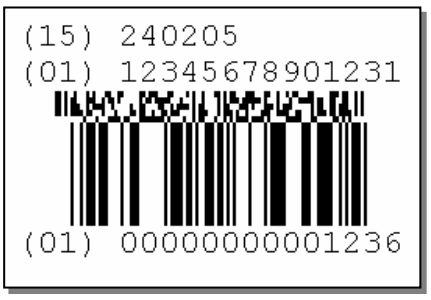
(1) Barcode Type

Use the drop down menu to select the desired type of barcode. In this example, an EAN128 has been selected. The type of barcode determines which options is available on the screen.

(2) Human Readable

If the user wishes to show the values contained in the barcodes, this box should be active. The human readable interpretation will be printed under the actual barcode.

Human readable interpretation for the 2d composite component will be printed above the code (one application identifier per line).



(3) Font type

If the "HUMAN READABLE" box is active, the user has the option of choosing the font used to show the barcode's human readable interpretation.

(4) Data for Barcode

The actual code should be entered here. By pressing this field, a keyboard will appear where the information can be entered.

Some barcodes (like EAN128 and GS1 DATABAR) use Application Identifiers (AI) to interpret the data. Use the code <F1> to separate a variable length AI with the next AI. EAN128 furthermore requires a <F1> as the first data.

The standard GS1 DATABAR can only encode the AI number 01 and hence you should only type in the data for this particular AI.

Use the | (commonly known as pipe) to separate the primary barcode with the 2d composite component.

Examples:

Type	Info	Meaning
EAN128	<F1>15240205	AI 15 with data 240205
EAN128	<F1>10asdf<F1>15991212	AI 10 (variable length) with data asdf and AI 15 with data 991212
EAN128	<F1>1599121210asdf	AI 15 with data 991212 and AI 10 (variable length) with data asdf
GS1 DATABAR	123|15240205	Primary: AI 01 with data 0000000000123 Secondary: AI 15 with data 240205

(5) Variable

The "INSERT VARIABLE" screen will show a list of previously created variables. Mark one and press "Insert" to insert the variable into the field. Optionally, press new to create a new variable.

(6) Special options for Datamatrix

If the selected barcode type is Datamatrix, you must select the encoding type and the preferred format.

(7) Special options for GS1 DATABAR

If the selected barcode type is GS1 DATABAR, you must choose the desired sub-type (Standard, Truncated, Stacked, Stacked Omni directional, Limited, Expanded).

On the special options page there are a number of options. The actual options available depend on the barcode selected.

Reverse

Selecting "Reverse" will convert the black lines of the barcode to spaces, and the gaps between the original black lines of the barcode will be printed instead.

Use this selection when using a white ribbon on black web material (this way the barcode will still look normal for a barcode scanner).

Frame

Draws a frame around the barcode.

Drop Down

Extend some of the bars (i.e. EAN13).

HIBC

Health Industry Bar Code. Special check digit.

Process tilde

Used with Datamatrix

Ratio

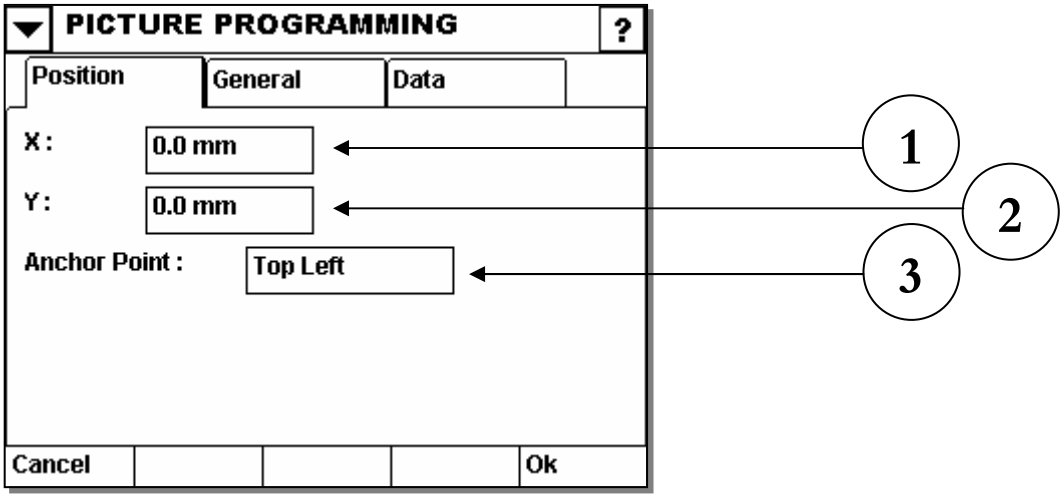
Determines the size relation between the narrow and wide bars.

Segment width

Determines the amount of data that can be filled into a GS1 DATABAR Expanded before the barcodes stacks.

Graphic

This feature allows the insertion of graphics fields in the design. Note that V200 only supports 1-bit BMP and PCX files and if graphics files are of a different format, these files must be converted using a standard picture-editing program.



(1) X

Defines the x-position (across the print head) of the field.

Numerical values can be entered.

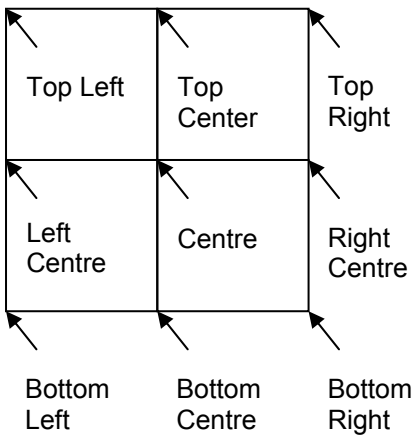
(2) Y

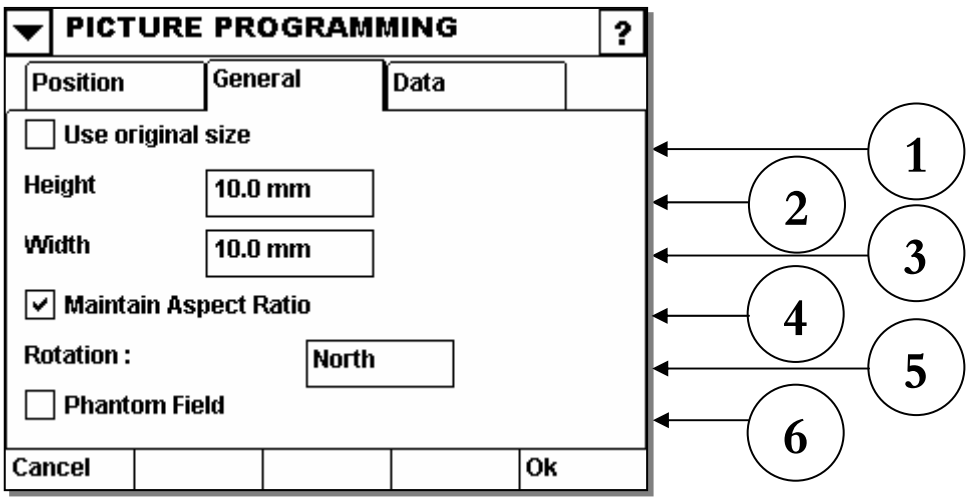
Defines the y-position (longitudinally with the print head) of the field.

If you increase this value the field will be moved in the writing direction. Numerical values can be entered.

(3) Anchor Point

Each field is surrounded by a virtual rectangle. The anchor point determines where the x and y coordinate touches this rectangle. The anchor point is also used as the point of rotation. The default is Top left. (See also rotation on page 105.)





(1) Use Original Size

Always uses the picture size in pixels (hence no rescaling is done in printer).

(2) Height

This allows the height of the graphics to be defined.

Numerical values can be entered.

(3) Width

This allows the width of the graphics to be defined.

Numerical values can be entered.

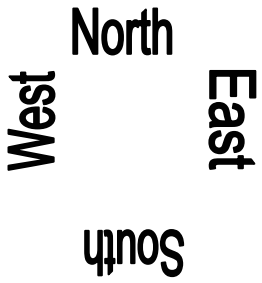
(4) Maintain Aspect Ratio

If active, the relationship between the graphics width and height is constant.

Deselecting this feature allows the image to be stretched out of proportion.

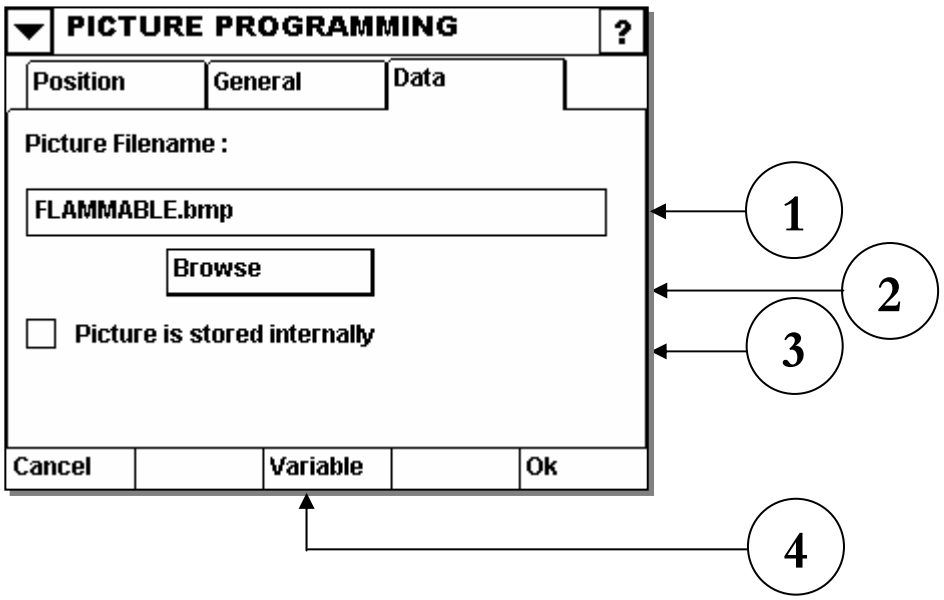
(5) Rotation

The field can be rotated to 0, 90,180 and 270 degrees. Directions are stated as North, South, East and West. By pressing on a direction, a dropdown menu will appear and the user can then select the desired rotation. In combination with the anchor point (see page 104) you can rotate the field to suit requirements.



(6) Phantom

Allows the item to be hidden during printing, i.e. it will not be printed.



(1) Picture File name

Here the user can enter the name of the graphics file that they wish to insert in the design. A press of the box where the name in the above illustration is written will reveal a keyboard on the display, where the name can be entered. This option may be used where the user already knows the name of the file wanted for insertion.

(2) Browse

This allows the user to access the directory where the graphics files are stored on the V200's memory card. The user can now view a list of the files and then simply press on the file they want and can confirm with an "Ok" action.

(3) Picture is stored internally

At the time of writing, this is merely an indication whether the image data is stored internally or if a link to an external file is used. The checkmark can only be set or cleared by EasyDesign and the Windows driver.

If a file is stored internally, less graphic files will clutter the file system.

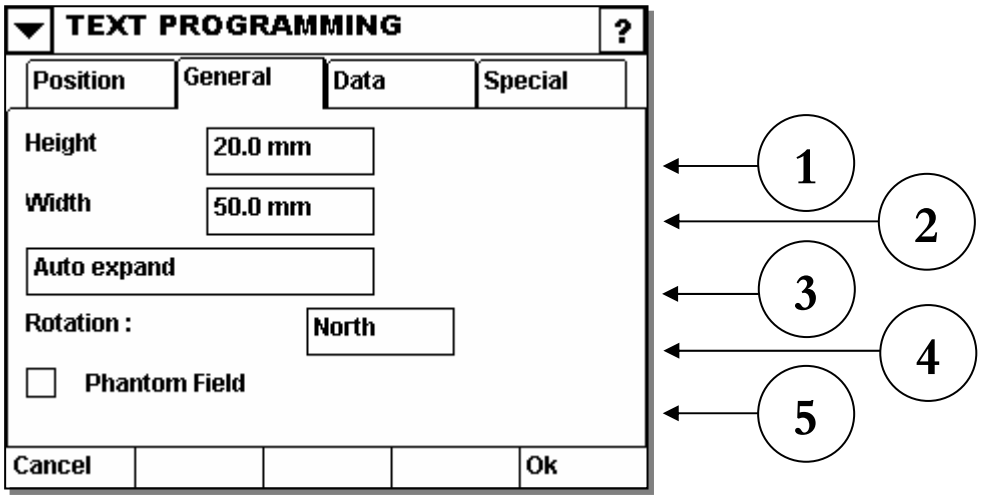
It is possible that functionality to set/clear the check mark will be implemented directly in the controller in a later version.

(4) Variable

The "INSERT VARIABLE" screen will show a list of previously created variables. Mark one and press "Insert" to insert the variable into the field. Optionally, press new to create a new variable.

Text

This menu is used to insert text in the design.



(1) Height

This allows the height of the text box to be defined.

Numerical values can be entered.

(2) Width

This allows the width of the text box to be defined.

Numerical values can be entered.

(3) Auto Expand, Size to fit, and Normal

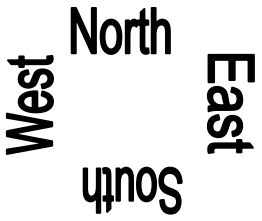
If "AUTO EXPAND" is selected, the text box will expand automatically, according to the amount of text keyed in by the user.

When "SIZE TO FIT" is selected, font size will be adjusted automatically, according to the amount of text keyed in by the user.

If "NORMAL" has been selected and the amount of text entered cannot fit in the specified rectangle a warning is issued. A design with such a warning cannot be printed.

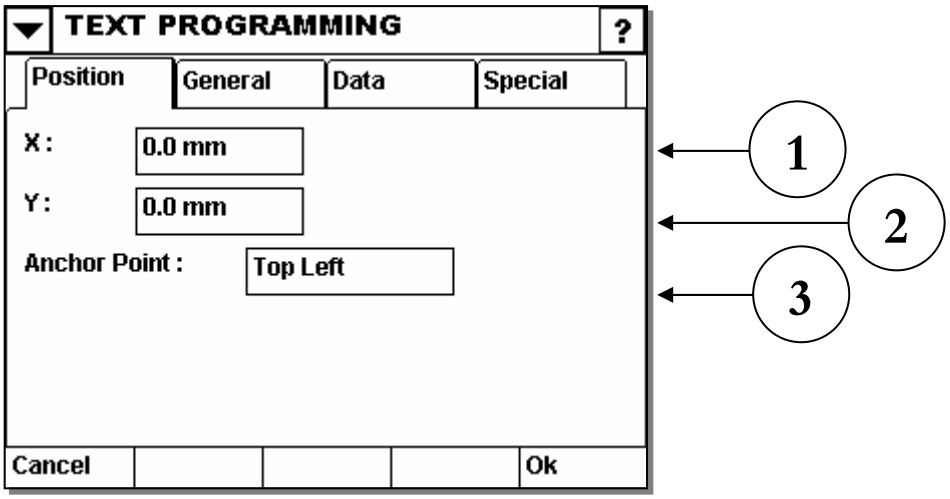
(4) Rotation

The field can be rotated to 0, 90,180 and 270 degrees. Directions are stated as North, South, East and West. By pressing on a direction a dropdown menu will appear, and the user can then select the desired rotation. In combination with the anchor point (see page 109) the field can be rotated to suit requirements.



(5) Phantom

Allows the item to be hidden during printing, i.e. it will not be Printed.



(1) X

Defines the x-position (across the print head) of the field.

Numerical values can be entered.

(2) Y

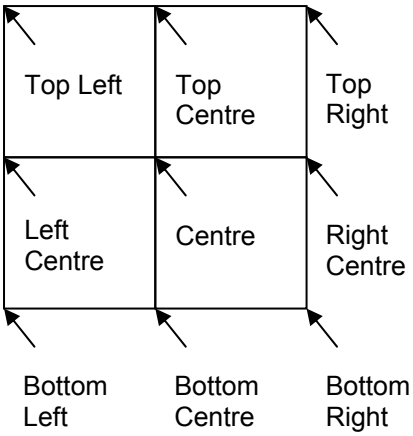
Defines the y-position (longitudinally with the print head) of the field.

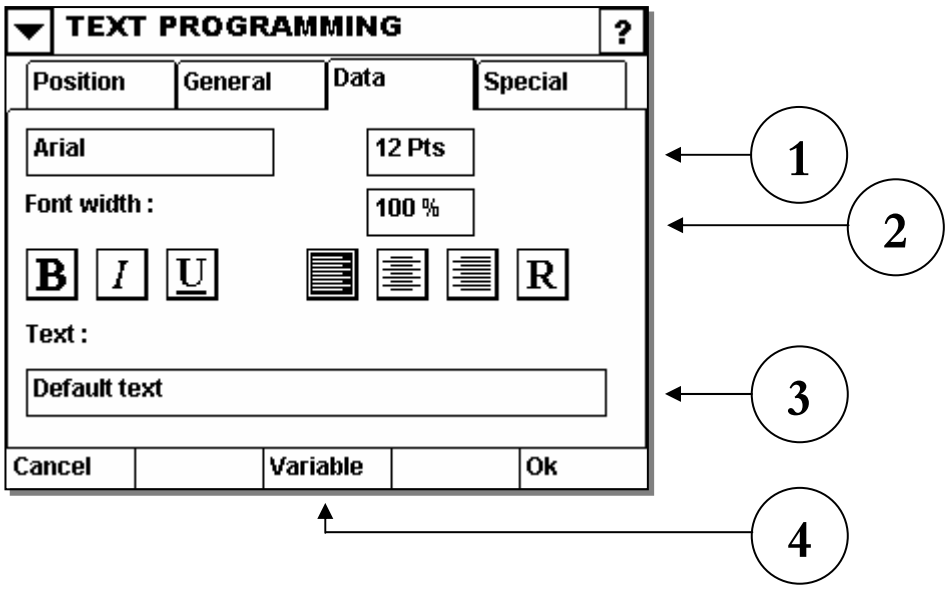
If this value is increased, the field will be moved in the writing direction. Numerical values can be entered.

(3) Anchor Point

(See Rotation on page 108)

Each field is surrounded by a virtual rectangle. The anchor point determines where the x and y coordinate touches this rectangle. The anchor point is also used as the point of rotation. The default is Top left.





(1) Font type

A dropdown menu allows the user to choose the font for this particular field. Additional True Type fonts can be installed in the printer.

(2) Font width

The width can be set in % from 1 to 200

(3) Text

Enter the actual text here. By pressing this field a keyboard will appear and the required text can be keyed in. Press "Ok" to exit.

(4) Variable

This will change to the screen "INSERT VARIABLE" where an already stored variable can be chosen, or a new one made by pressing " NEW ".

Font Attributes

The following options are available for manipulating the attributes of the font.

Convert text to bold

Convert text to italics

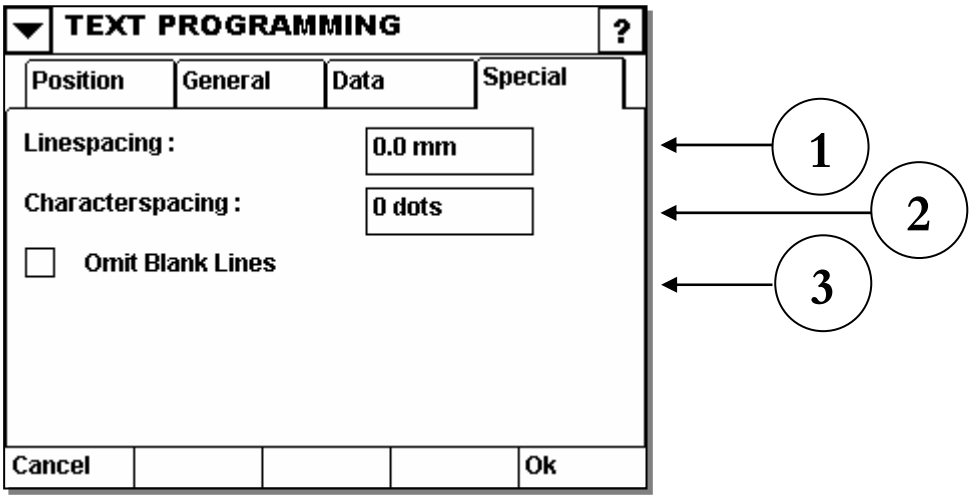
Underline text

Align text to left

Align text to centre

Align text to right

Inverse. All text is normally printed out against a plain background. Selecting this option will reverse the situation, printing out the background while leaving the text as empty space.



(1) Line spacing

This provides an adjustment (in mm) for the space between lines. This allows you to make lines closer together or further apart.

(2) Character spacing

The distance between two characters can be set from 0 to 10.

(3) Omit Blank Lines

When activated, any line which contains just blanks, will be omitted from the design item.

This is particularly of use for address labels.

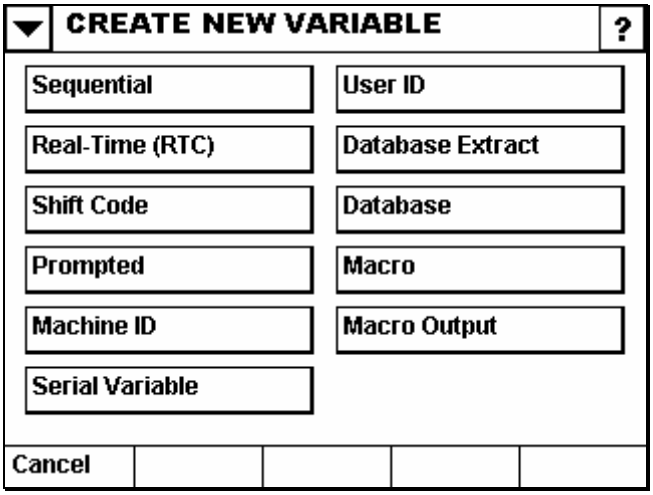
Variables

A design contains two basic components: Fields and variables. Variables must be used if the information in a field needs to be updated (either run time or at job load).

Inserting variables

If the user wishes to set up a new variable, they can do so using the New Variable menu. The user will then obtain a complete list of the various pieces of variable data that can be set up.

The display below shows a list of the possible variables:



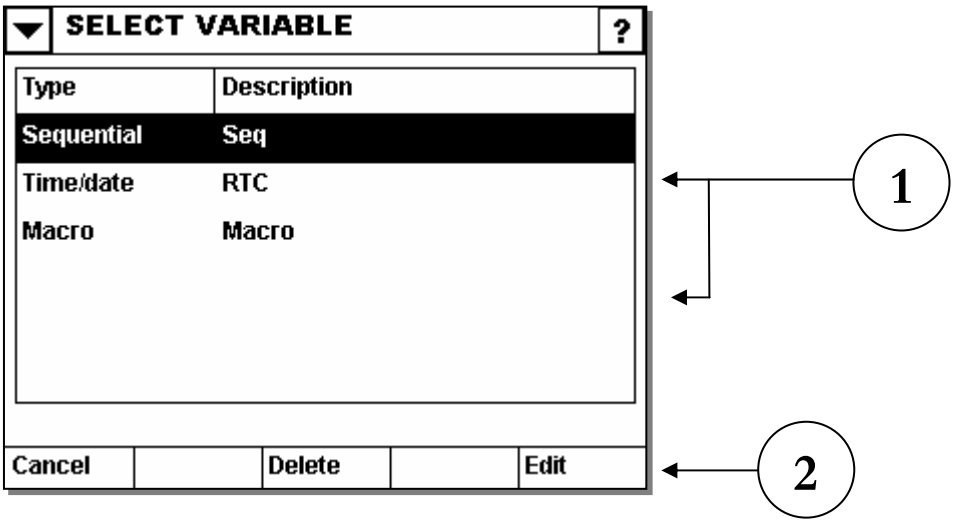
It should be noted that this menu can only be used for setting up the actual variable, and that it must subsequently be inserted in the desired field.

Press the button for the variable type you wish to insert.

Heading	See page
Sequential	114
Real-Time	118
Shift Code	129
Prompted	131
Machine ID	133
Serial Variable	135
User ID	134
Database Extract	149
Database	145
Macro	138
Macro Output	144

Edit a Variable

Selecting "Edit Variable" will enable you to access a complete list of the fields contained by the design.



(1) Existing Variables

This is where the list of variables contained in the design can be found. The upper part of the screen shows the type and description of each variable.

"Type" indicates the type of variable.

"Description" shows the name of the variable.

In the above example the design contains 3 variables (1 Sequential, RTC and 1 macro).

(2) Edit

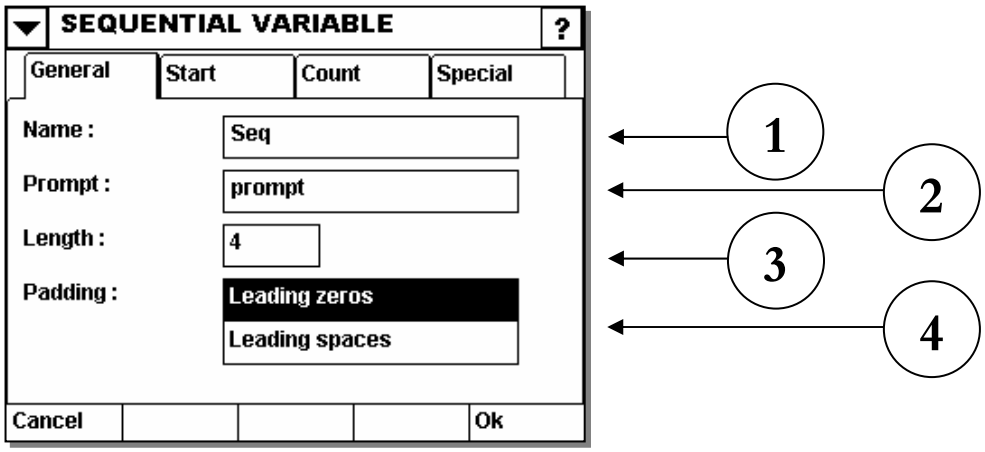
Once the desired variable has been selected, this can be edited by pressing the "Edit" button.

Delete

This feature deletes the selected variable from the design permanently. It should be noted that a variable (once deleted) cannot be restored.

Sequential Variable

The variable "Sequential" is a counter, and three displays below illustrate and explain the various features contained by the variable.



(1) Name

The name of the variable is entered here. Pressing the keyboard will call up a keyboard where the user simply keys in the desired name and finishes with "Ok".

Note: No two variables can have the same name. Also if the name of an already used variable is changed, the fields in which the variable is used must be manually updated.

(2) Prompt

When starting a design that contains a variable that needs to be entered before the design can be started, the "prompt" feature allows you state the text that should appear on the screen. In this example the function depends on whether "Fixed Start" (page no. 115) is active. If "Fixed Start" has been selected, the user will not be asked for any input.

(3) Length

The maximum number of digits that may appear in the counter are defined here. In the above example, the figure has been set to 4, and therefore the counter will never exceed a string of 4 figures. Depending on the option chosen in "PADDING" the print will appear as in the following examples:

Example 1: **0004**

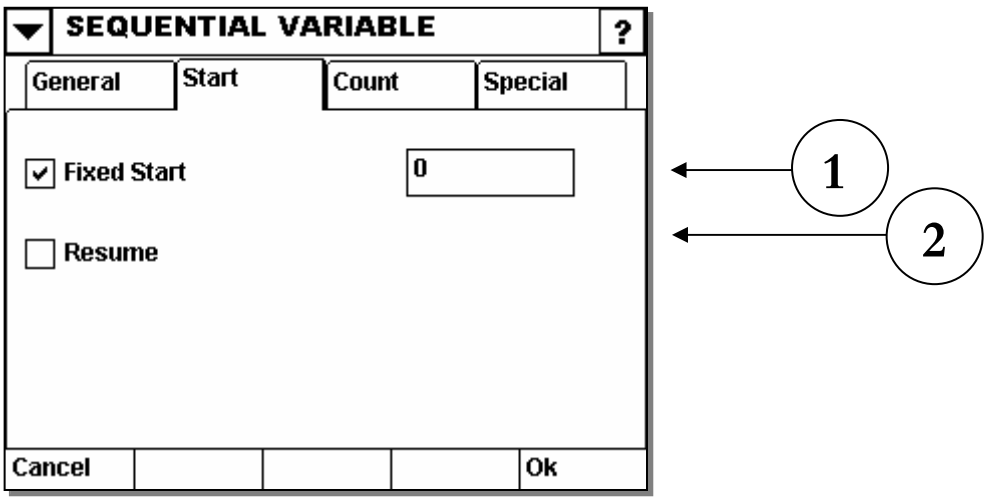
Example 2: **4**

(4) Padding

In connection with the above example, you can define here whether or not to fill in all the spaces of the number string. There are two options available:

Leading Zeros, or, Leading Spaces.

”Leading Zeros” fills in zeros in front of the count sequence fulfilling the length defined. Thus “Leading Zeros” has been selected in **example 1** and “Leading Spaces” in **example 2**, which will simply leave a gap in front of the number instead of zeros.

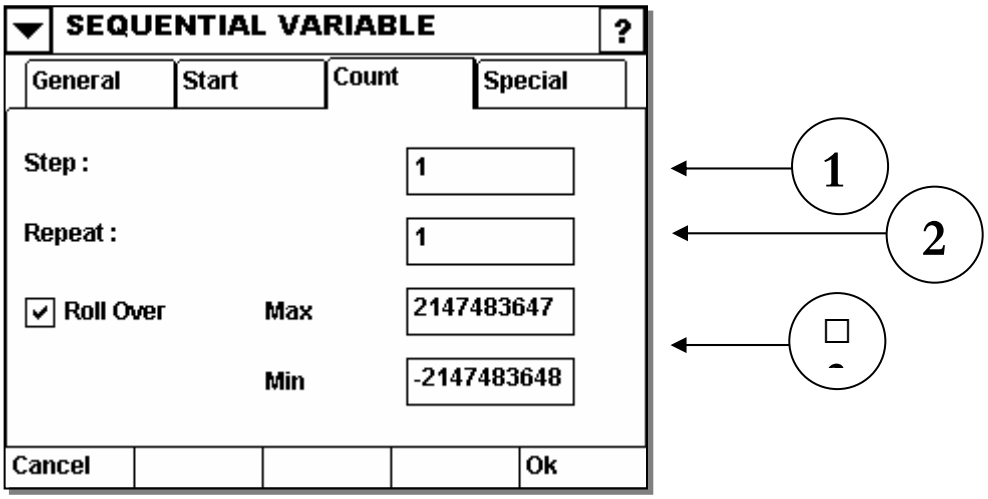


(1) Fixed Start

The user can type in the number from which the counter should start. In the example above the printer will start at 0. If fixed start is not active, the system will prompt the operator for a start value.

(2) Resume

If resume is activated, the sequential variable will remember the last printed value and resume from that value the next time the design is printed. In the field where the start value is typed in, you can see the value at which the counter will resume.



(1) Step

The number of increments the counter must do at each print must be inserted here. In the example above this interval has been set to 1, i.e. 1,2,3,4,5,6…X.

Had the interval been set to 5 the number sequence would have been 10,15,20…X

(2) Repeat

Here you can state how many times a single number should be repeated. In the example above the number has been set to 1, which means that the counter will only repeat an individual number once, i.e. 1,2,3,4,5,6…X.

If, on the other hand, 3 had been entered here the number sequence would then have been 1,1,1,2,2,2,3,3,3,4,4,4,5,5,5,6,6,6…X

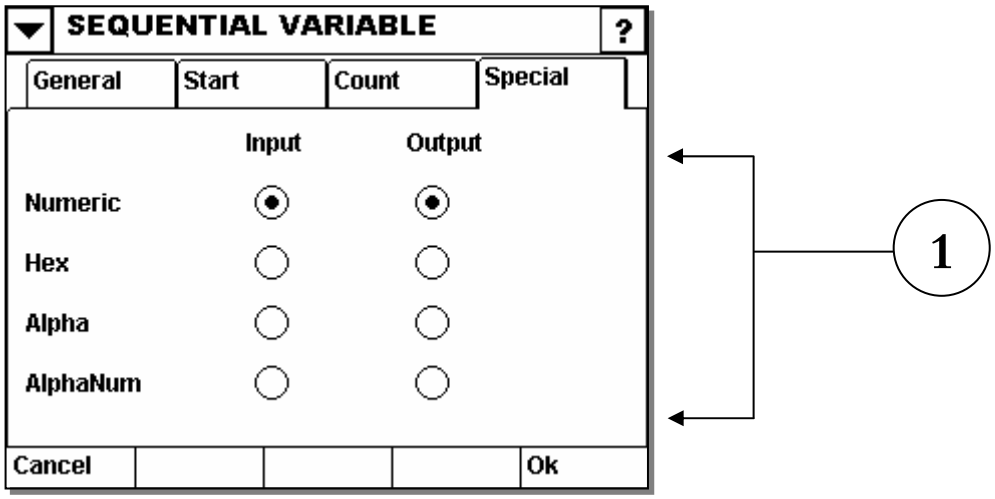
(3) Roll Over

”Roll Over” allows the user to define a “range” in the counting feature.

The user can enter two values in the “Min” and “Max” fields, which determine the interval in which the variable should count.

In the above example the printer will count up to and including 2147483647. The next print will be -2147483647. In other words, the printer has jumped back in the sequence. Naturally it could also jump forward in the sequence (useful if counting backwards).

It is only possible to alter the numerical value when the box to the left of the text is active.



(1) Numerical system

Under this tab, the user can set the numerical system.

In most cases, INPUT/OUTPUT will be set to the same numerical system.

But this feature allows you differentiate between what is keyed in and what is actually printed.

Numeric (base 10): 0…9

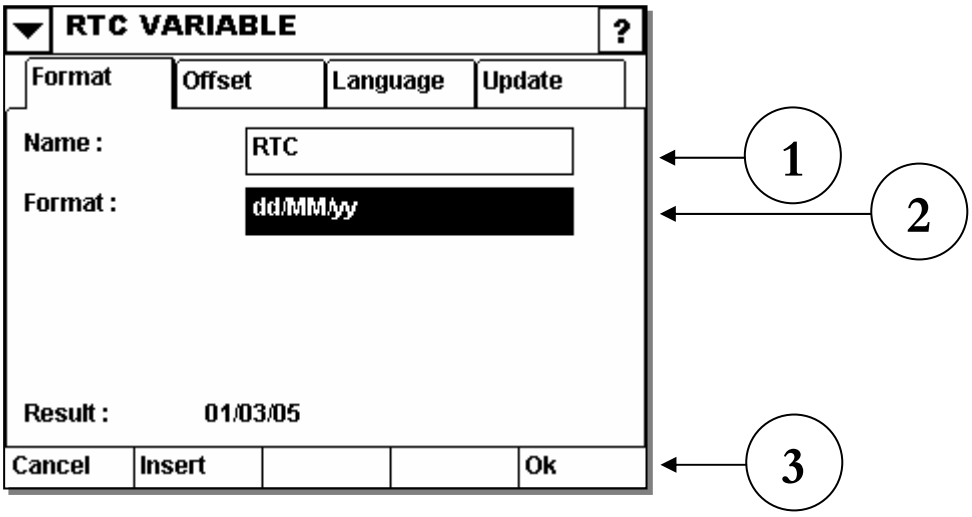
Hex (base 16): 0…9,A…F (Hex 2B = 2*16+11 = 43)

Alpha (base 26): A…Z (Alpha CA = 2*26+0 = 52)

AlphaNum (base 36): 0…9,A…Z (AlphaNum 2B = 2*36+11 = 83)

Real Time Clock (RTC)

The RTC feature allows you to insert a date and/or time.



(1) Name

The name of the variable is entered here. Pressing the keyboard will call up a keyboard where the user simply keys in the desired name and finishes with "Ok".

Note: No two variables can have the same name. Also if you the name of an already used variable is changed, the fields in which the variable is used must be manually updated.

(2) Format

Use this box to key in the format the RTC has to display.

Below is a list of all possible formats.

Use single quotation marks to type in standard text.

(3) Insert

Press **insert** to enter the date / time format input menu see page no. 125.

Supported date formats

Value	Description
d	Day of month as digits with no leading zero for single-digit days.
dd	Day of month as digits with leading zero for single-digit days.
ddd ⋆	Day of week as a three-letter abbreviation.
dddd ⋆	Day of week as its full name.
M	Month as digits with no leading zero for single-digit months.
MM	Month as digits with leading zero for single-digit months.
MMM ⋆	Month as a three-letter abbreviation.
MMMM ⋆	Month as its full name. .
y	Year as last two digits, with no leading zero for single-digit year.
yy	Year as last two digits, with a leading zero for years less than 10.
yyyy	Year represented by full four digits.

For example, to get the date string "Wed, Aug 31 06" use the following format string: "ddd',' MMM dd yy".

⋆

You can add a letter in front of the date and month, and the result will be written in upper or lowercase.

Example:

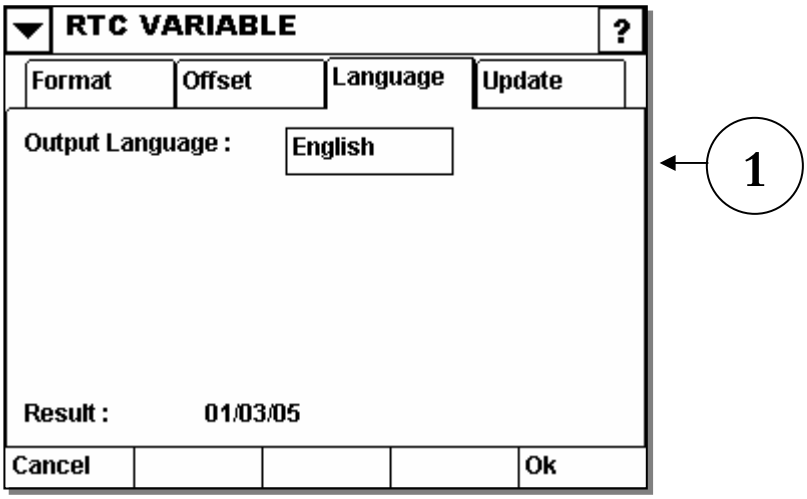
Write MONDAY (MON) in Uppercase	Use “U” write UMMM
Write MONDAY (mon) in Lowercase	Use “L” write LMMM
Write MONDAY (Mon) First character in uppercase, and rest in lowercase	Use “u” write uMMM

Supported time formats

Value	Description
h	Hours with no leading zero for single-digit hours; 12-hour clock
hh	Hours with leading zero for single-digit hours; 12-hour clock
H	Hours with no leading zero for single-digit hours; 24-hour clock
HH	Hours with leading zero for single-digit hours; 24-hour clock
m	Minutes with no leading zero for single-digit minutes
mm	Minutes with leading zero for single-digit minutes
s	Seconds with no leading zero for single-digit seconds
ss	Seconds with leading zero for single-digit seconds
t	One character time marker string, such as A or P
tt	Multi character time marker string, such as AM or PM
For example, to get the time string "11:29:40 PM", use the following picture string: "hh':'mm':'ss tt"	

Supported special formats

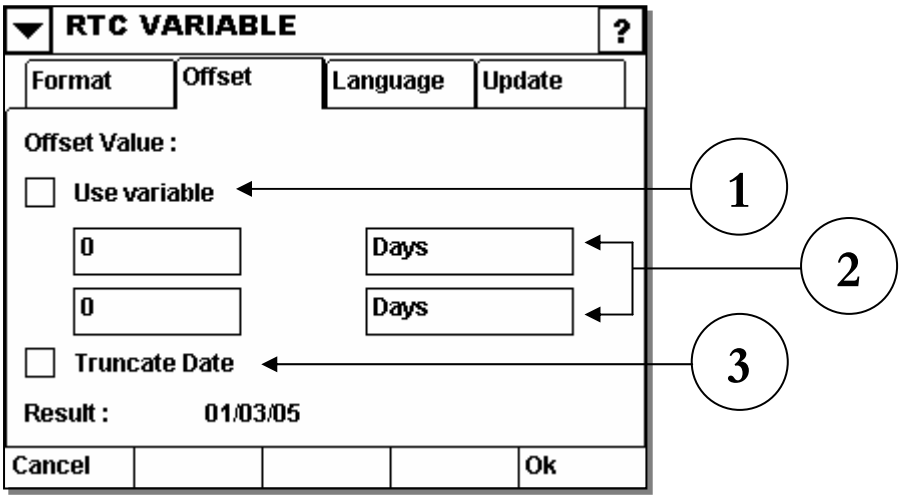
Value	Description
doy	Day of year
DOY	Day of year (always three digits)
woy	Week of year
WOY	Week of year (always two digits)
Dow	Day of week (Sunday=0, Monday=1…Saturday=6).



(1) Output Language

To define the date or month with letters, this menu allows a choice of various languages.

	English	Spain	Finland	Italy
Example	November	Noviembre	Marraskuu	Nobembre



(1) Use Variable

Specifies whether to use a fixed offset, or (optionally) use a variable as input (i.e. a prompted variable so the operator can type the desired offset at print time).

(2) Offset Value and Type

If the user requires an RTC showing an earlier or later date than the current one, an "offset" may be entered here. The value entered will determine how many years, months, weeks, days, hours or minutes the RTC should skip.

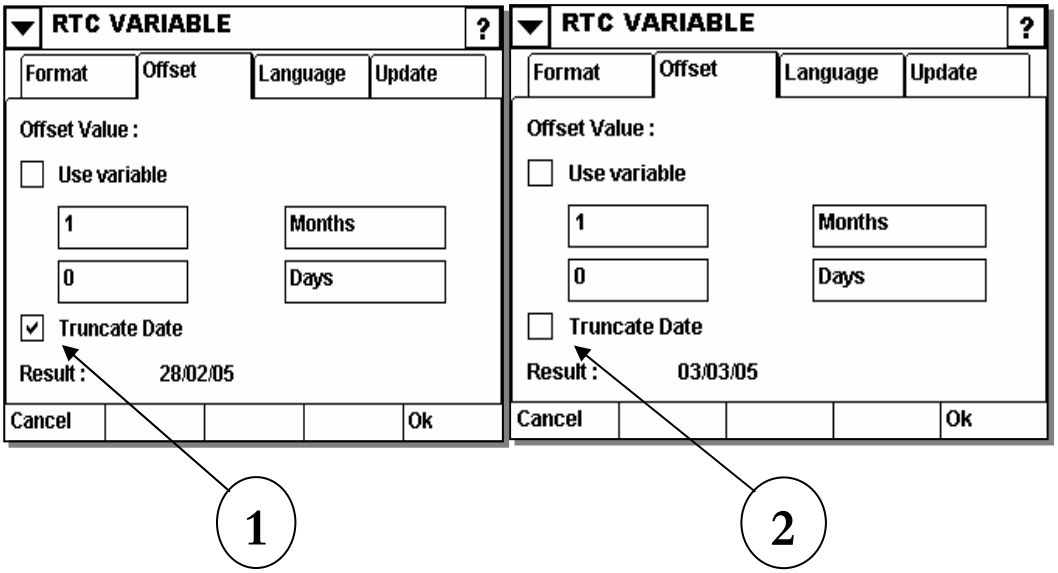
Offset Type

If an "Offset Value" has been entered, this menu is used to define the units of time the RTC should skip in. You can choose between years, months, weeks, days or hours. E.g. if the year is 2002 and you have set the "Offset Value" to 5, and "Year" has been selected as "Offset Type", 2007 will be printed out.

(3) Truncate Date

Example: Actual date 31.01.2005

Wanted: 1 month offset date.



RTC variable always uses the correct numbers of days in a specific month.

The "Truncate Date" settings determine the behaviour when an illegal date (like 31st of February) is reached.

If "Truncate Date" is active, the day is set to the maximum day in the specific month.

If "Truncate Date" in inactive, the date enters the next month.

Truncate Date is only active for offsets with months and years.

The different types of offset are applied in the following order:

Year

Month

Week, Day, Hours and Minutes.

Example: Current day = 31.01.2005, plus 1 month = 31.02.2005

(1) Truncate Day active:

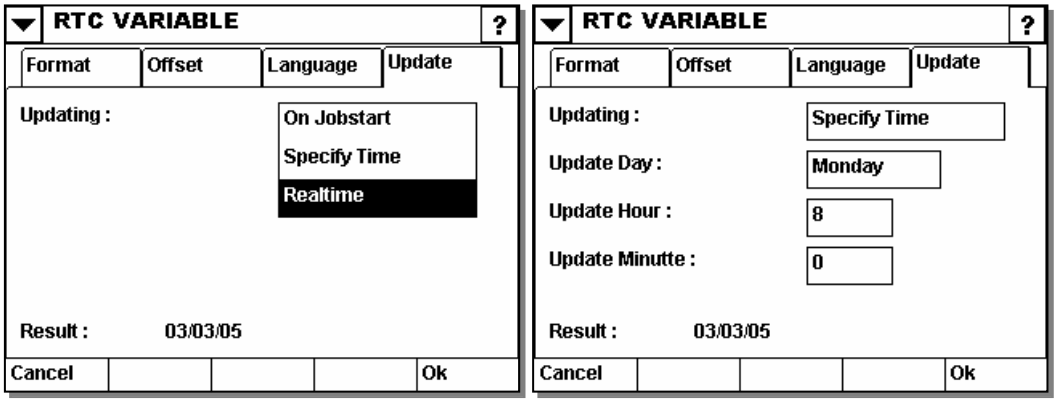
Since 31.02.2005 is an invalid date, it is truncated to

Date: 28.02.2005

(2) Truncate day inactive

Since 31.02.2005 is an invalid date, it goes to

Date: 03.03.2005



Update

The time can be updated in three ways:

- **On Jobstart**
  When the label is loaded into the printer memory the actual time when loading will be stored and this time will be printed at each label when printing.
- **Real-time**
  If the RTC is required to be updated after every print, this box must be activated. Printing speed will not be affected if this option has been selected.
- **Specify Time**
  Day and time can be specified for when the variable should be updated.
  This is done by going back to the specified day, and then calculate the offset:

Actual day is Wednesday. Update should be done on Mondays.

The variable will update the output as if today was Monday.

This way an entire week's production that is made on a single day can be simulated.

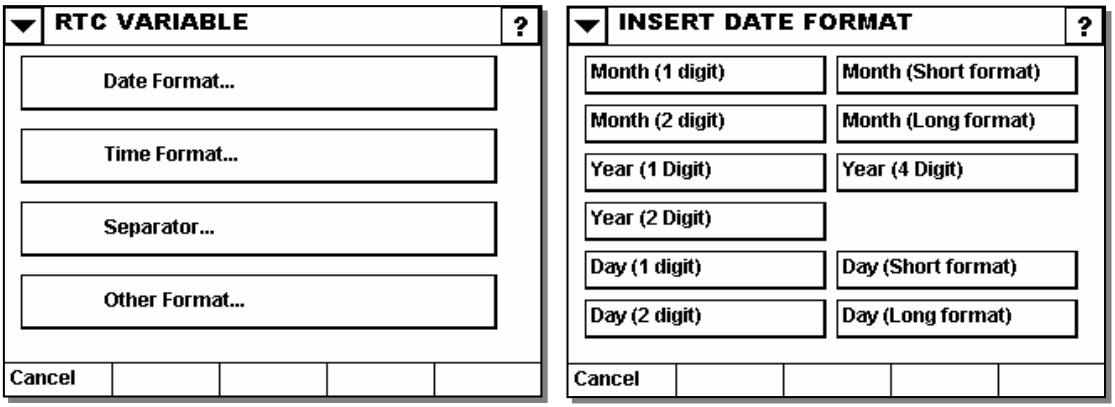
Example:

Actual day:	**Monday the 12 Jan 2006**
Update Day:	**Friday**
Friday (9th) output is:	**Friday 9 Jan 2006**
Saturday (10th) output is:	**Friday 9 Jan 2006**
…	**…**
Thursday (15th) output is:	**Friday 9 Jan 2006**
Friday (16th) output is:	**Friday 16 Jan 2006**

This menu can be used instead of typing the data format from the keyboard.

The Menu can be reached by pressing "Insert" (see page no. 118 and then:

Press Data Format Menu



Insert Data Format Menu

This menu allows the user to choose between the following pre-defined formats:

(The following date has been used as a basis: 02-01-2003)

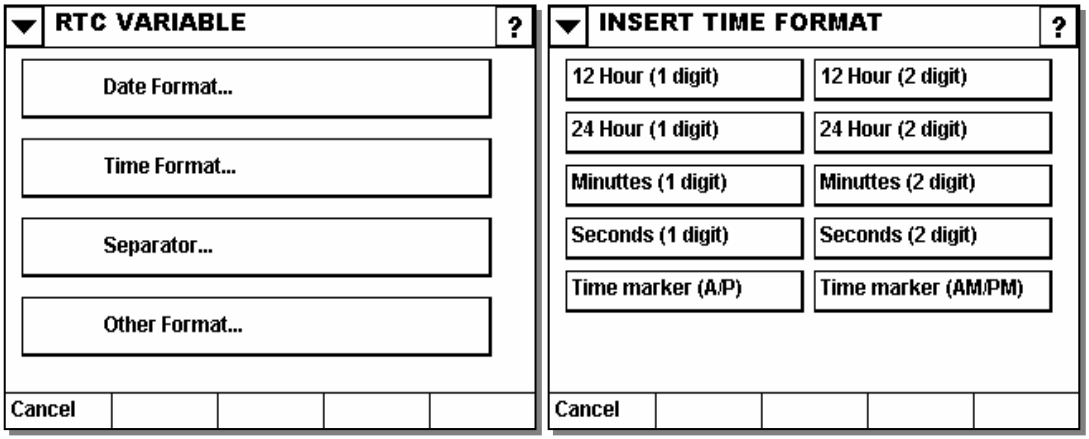
To alter the case of the short and long formats please see page 119

Month (1 Digit):	**1**
Month (2 Digit):	**01**
Year (1 Digit):	**3**
Year (2 Digit):	**03**
Year (4 Digit):	**2003**
Day (1 Digit):	**2**
Day (2 Digit):	**02**
Month (Short format):	**Jan**
Month (Long format):	**January**
Day (Short format):	**Thu**
Day (Long format):	**Thursday**

This menu can be used instead of typing the data format from the keyboard.

The menu will be reached by pressing "Insert" see page no. 118 and then:

Press Time Format Menu



Insert Time format menu

Here, pre-defined time formats can be inserted.

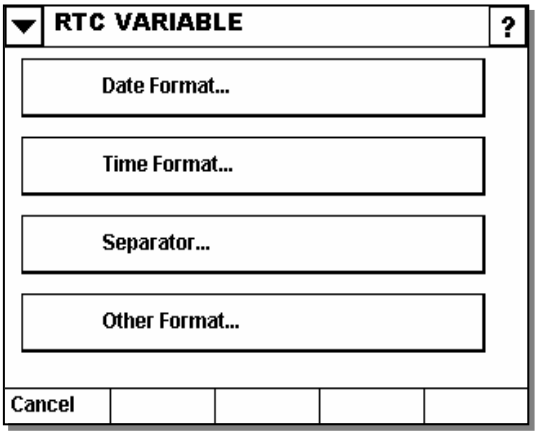
(The following time has been used as a basis: 13.05.15 (01.05.15 PM))

12 Hour (1 digit):	**1**
12 Hour (2 digit):	**01**
24 Hours (1 digit):	**13 (must use 2 digits to print 13)**
24 Hour (2 digit):	**13**
Minutes (1 digit):	**5**
Minutes (2 digit):	**05**
Seconds (1 digit):	**15 (must use 2 digits to print 15)**
Seconds (2 digit):	**15**
Time Marker (A/P):	**P**
Time Marker (AM/PM):	**PM**

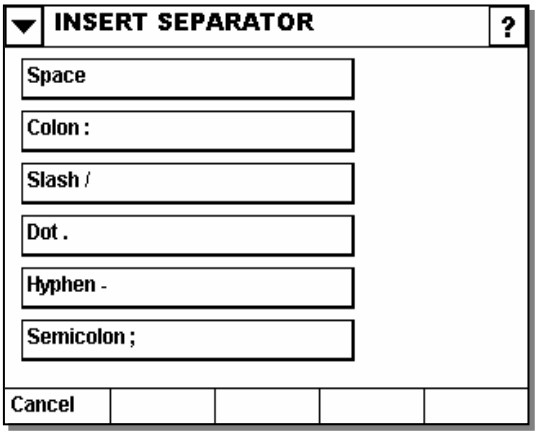
This menu can be used instead of typing the data format from the keyboard.

The menu will be reached by pressing "Insert" see page no. 118 and then:

Press Separator



Menu



Insert Separator Menu

The menu allows the user to select the character required as a separator in the RTC format. The following pre-defined options are available:

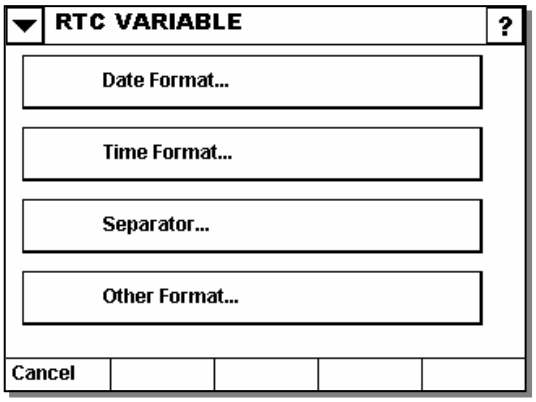
Note: Other separators may be used, but these must be keyed in manually.

Space	**Inserts a space**
Colon	**Inserts a :**
Slash	**Inserts a /**
Dot	**Inserts a .**
Hyphen	**Inserts a –**
Semicolon	**Inserts a ;**

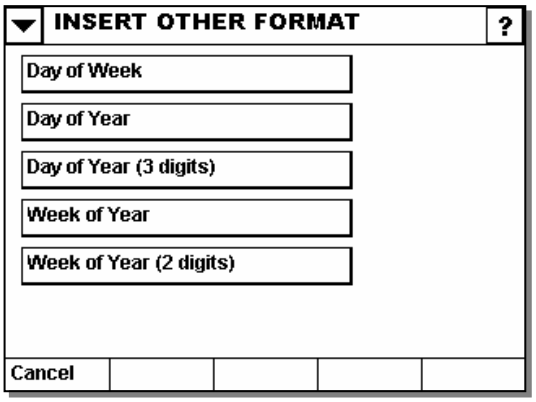
This menu can be used instead of typing the data format from the keyboard.

The menu will be reached by pressing "Insert" see page no. 118 and then:

Press Other Format



Menu



Insert Other Format

This menu allows the insertion of the following formats:

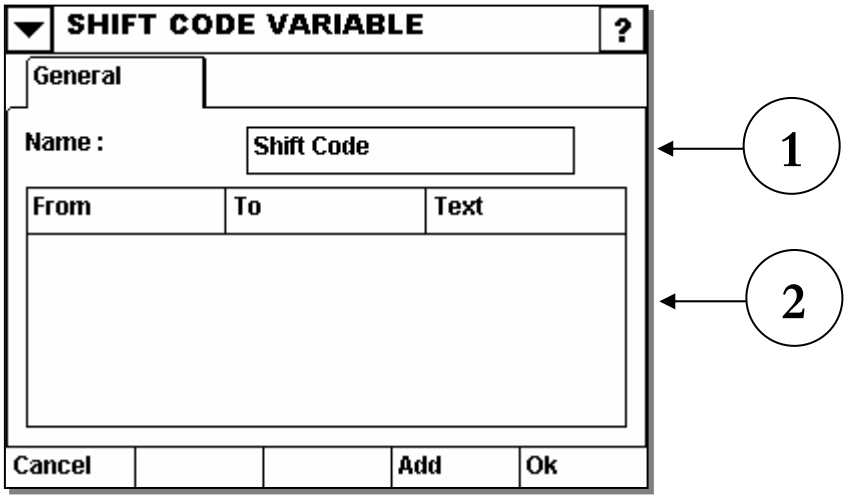
(The following date, which is a Tuesday, is used as a basis: 06-01-2003)

Day of Week:	**1**
Day of Year:	**6**
Day of Year (3 digits):	**006**
Week of Year:	**1**
Week of Year (2 digits):	**01**

Shift Code

A shift code variable is used to print a line of text that depends on the actual time (e.g. Print "Day Shift" between 8:00 and 16:00). The shift code variable is updated in real time.

Note: The variable does not verify that no shifts overlap. (If two shifts overlap, the first shift that matches the current time is selected). The variable does not verify that all timeslots is defined. (If no matching shift is found, the output is blank).



(1) Name

The name of the variable is entered here. Pressing the keyboard will call up a keyboard where the user simply keys in the desired name and finishes with "Ok".

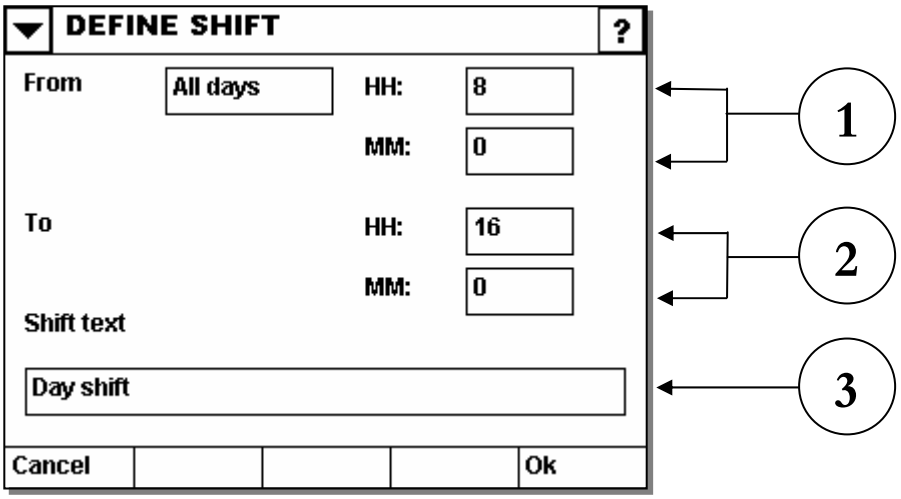
Note: No two variables can have the same name. If the name of an already used variable is changed, the fields in which the variable is used must be manually updated.

(2) Shift List

This is a list of currently defined shifts.

Pressing the "Add" button allows the creation of a new shift definition.

This menu allows the user to define the text for one particular time slot.



(1) From

Set the time slots start time. Pressing "All days" specifies that all days should be treated the same way. Alternatively, the individual days of the week can be selected.

HH and **MM** define the actual time and stands for hours and minutes, respectively.

In the example shown, the start time has been set at 08.00 and applies to every day of the week.

(2) To

Set the time slot end time. If a specific day is selected as start time, you must also select a specific day as end time.

HH and **MM** define the actual time and stands for hours and minutes, respectively.

In the example shown, the stop time has been set to 16.00 and applies to every day of the week.

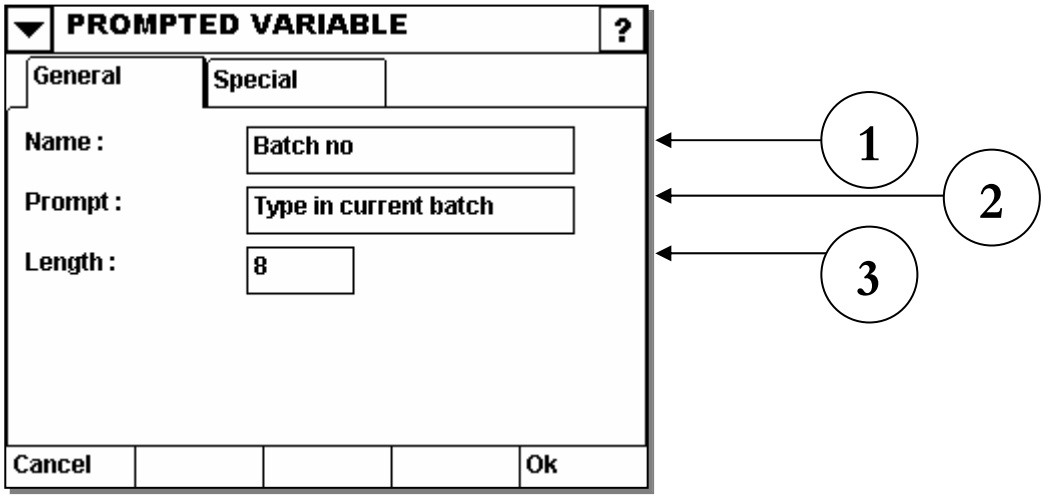
(3) Shift Text

The actual "Shift Code" should be entered here. The text entered is the text that will be printed in the time period set. Pressing the field in which "Day Shift" appears will call up the keyboard and the user can then key in another text.

Prompted Variable

This menu allows the user to set up a variable that must be keyed before the printer can start a job. When a job is to be started, a short message will appear on the display which the user must answer before the printer can start up.

The Message to appear on the display is defined using this menu, and other attributes may be defined at the same time to provide greater assurance that the user does not enter inappropriate information at the start of a print run.



(1) Name

The name of the variable is entered here. Pressing the keyboard will call up a keyboard where the user simply keys in the desired name and finishes with "Ok".

Note: No two variables can have the same name. If the name of an already used variable is changed, the fields in which the variable is used must be manually updated.

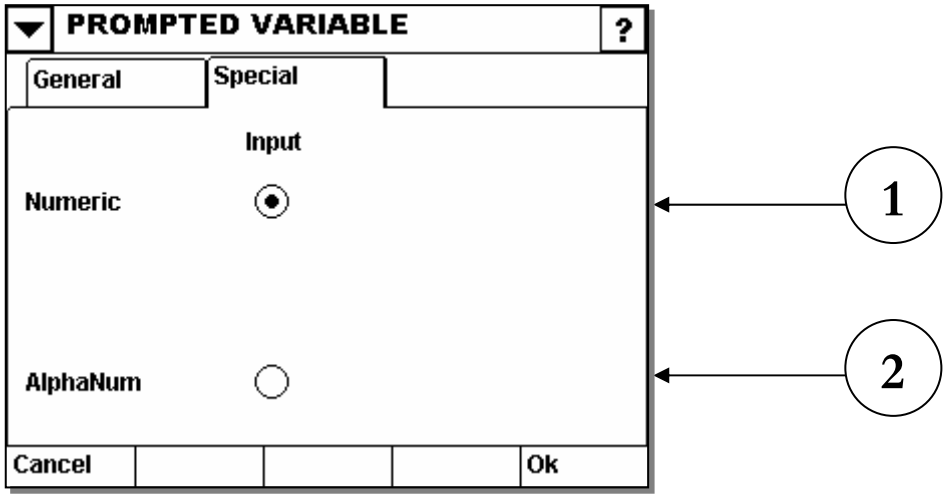
(2) Prompt

Enter the actual message, which should appear on the display when the printer is started. The user must answer the message accurately before the printing can commence.

The variable name is also shown on the display when the user is prompted.

(3) Length

The maximum number of letters is set here. For example, if it is known in advance, that all answers consist of a maximum of eight digits, then only enter a maximum of eight digits.



(1) Numeric

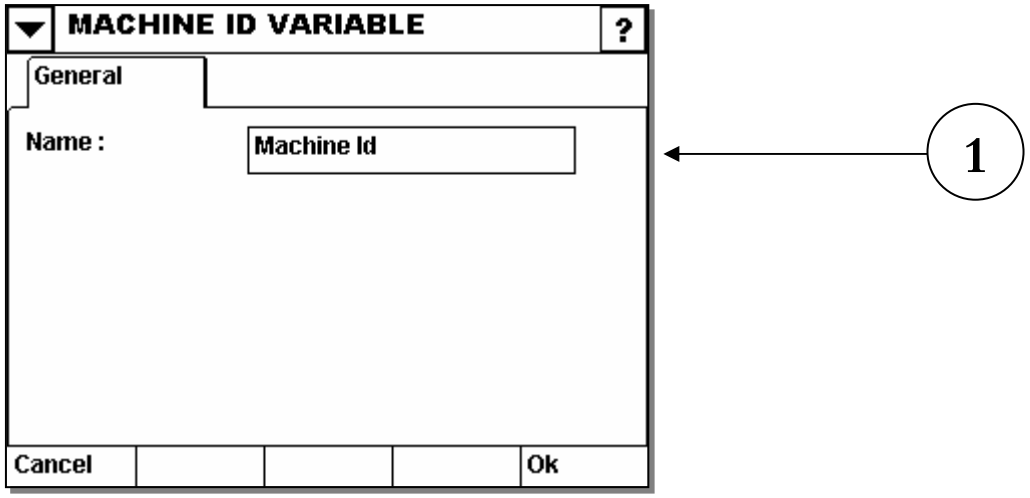
If it is known in advance, that only numerical values should be entered, this option should be selected. It will then be impossible to key in letters.

(2) AlphaNum

In cases where it is necessary to enter both digits and letters, this option should be selected.

Machine ID

In the V200 it is possible to name the printer to give it an ID (identity). Be aware that this menu does not name the printer; this should be done in the "SETTINGS/SYSTEM/SYSTEM VARIABLE" menu (page 42). This menu merely sets up and names the variable with reference to the Machine ID.



(1) Name

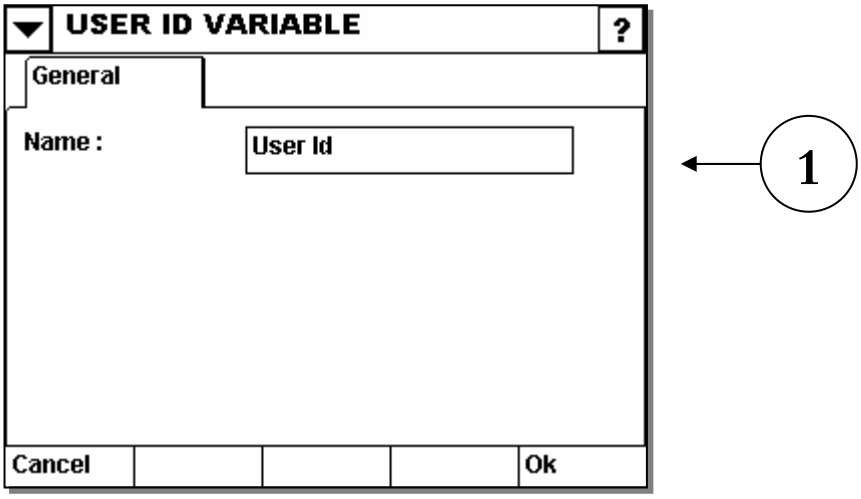
The name of the variable is entered here. Pressing the keyboard will call up a keyboard where the user simply keys in the desired name and finishes with "Ok".

Note: No two variables can have the same name. If the name of an already used variable is changed, the fields in which the variable is used must be manually updated.

User ID

This menu is used to indicate who has used the printer. If various usernames and passwords have been allocated to different users, the User ID menu can read off the username used when starting the printer and the V200 will print this username.

It should be noted that the "User ID" menu is only used to set up and name the variable. The name that is printed is based on Log In.



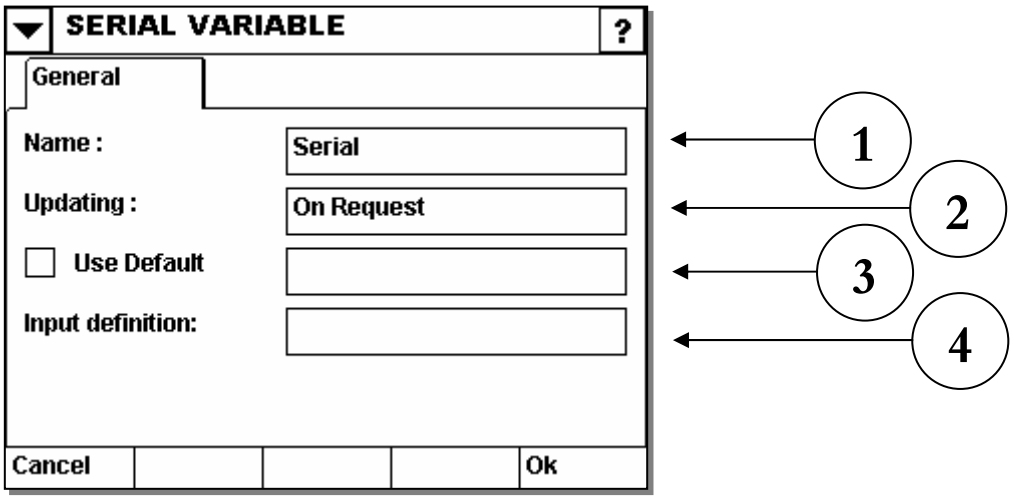
(1) Name

The name of the variable is entered here. Pressing the keyboard will call up a keyboard where the user simply keys in the desired name and finishes with "Ok".

Note: No two variables can have the same name. If the name of an already used variable is changed, the fields in which the variable is used must be manually updated.

Serial Variable

This menu is used for setting up a data transmission of variables from an external PC to the printer.



(1) Name

The name of the variable is entered here. Pressing the keyboard will call up a keyboard where the user simply keys in the desired name and finishes with "Ok".

Note: No two variables can have the same name. If the name of an already used variable is changed, the fields in which the variable is used must be manually updated.

(2) Updating

Can be set up in five different ways:

1) On Request:	When the value is sent the variable is updated and the printing will continue with this value until a new value is sent.
2) Each Print:	A new value has to be send for each print (buffer capacity 1000 Values).
3) Each print (No Buffer):	A new value has to be sent for each print.
4) First Time Only:	One (and only one) variable is received. The variable does not change until the print job is loaded again.
5) Weight Input:	Use this setting where the input is generated by a scale and the input needs to be delayed a certain amount of prints. Choosing this setting shows the "Buffer size" input field where you set the delay. For each print pulse the internal buffer (FIFO) is updated. No prints are made until the internal buffer is filled (because the product associated with the weight is not yet under the printer).

(3) Use Default

The user can enter a stored variable as default setting, by marking the field and write
The chosen "start contents" this function is only available when using
"on request ".

(4) Input definition

This field can be used if the input device (i.e. scale) is not compatible with the protocol used by the controller. Note that the input definition only affects the serial interface and not the LAN interface.

Four types of entries are supported

- \xNN: A single character. NN is the key code of the character. Use this form to input a character not found on the keyboard (like SOH, ETB, STX and ETX)
- \vNN: NN characters to be printed
- \dNN: NN characters as "don't care"
- Clear text: There must be a direct match between the text and the info that the device sends.

Note: NN is to be considered a number in the range from zero to 255 entered as a hexadecimal. As an example, number 77 (decimal) should be typed in as 4D (hex).

Example 1:

The V SERIES CONTROLLER expects data in the following format:

[SOH]FillSerialVar=[STX]VarName[ETX],[STX]Value[ETX][ETB]

This can be achieved by the following input definition:

\x01FillSerialVar=\x02Serial\x03,\x02\v06\x03\x17

Explanation:

\x01 (SOH = Hex 01)

FillSerialVar= (Must make an exact match)

\x02 (STX = Hex 02)

Serial (We assume that this particular variable is called "Serial")

\x03 (ETX = Hex 03)

, (Must make an exact match)

\x02 (STX = Hex 02)

\v06 (The input data is exactly (Hexadecimal)6 characters)

\x03 (ETX = Hex 03)

\x17 (ETB = Hex 17)

Note: If you use the software libraries, the transfer is UNICODE, as opposed to the given example (which is in ANSI).

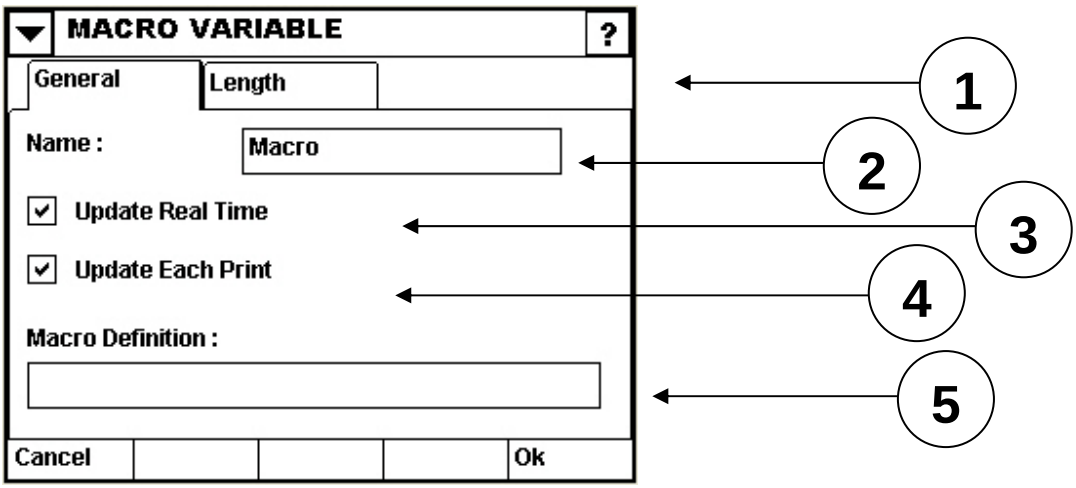
To make the input definition UNICODE you need to put an \x00 after each character.

(Result:
\x01\x00F\x00i\x00l\x00l\x00S\x00e\x00r\x00i\x00a\x00l\x00V\x00a\x00r\x00=\x00\x02\x00S\x00e\x00r\x00i\x00a\x00l\x00\x03\x00,\x00\x02\x00\v01\x00\v01\x00\v01\x00\v01\x00\x03\x00\x17\x00).

Also if the input definition fails it will be ignored, therefore, if the above has been tried using the libraries you cannot not verifyl if you typed in the input definition incorrectly.

Macro Variable

A macro is a special kind of variable that can be utilized when you need more power than the standard variable supplies. The macro variable contains a programming environment in which you can transfer information between other variables and perform (advanced) calculations.



(1) Fixed Length

Length: Max characters for the variable.

Pad with characters to fill out spaces until max length is reached.

(2) Name

The name of the variable is entered here. Pressing the keyboard will call up a keyboard where the user simply keys in the desired name and finishes with "Ok".

Note: No two variables can have the same name. If the name of an already used variable is changed, the fields in which the variable is used must be manually updated.

(3) Update Real Time

If checked the variable is updated whenever there is some idle time.

This check mark is enabled as default.

(4) Update Each Print

If checked the variable is updated once after each print. (Just like a sequential variable).

This check mark is enabled as default.

(5) Macro Definition

In this field you type in some lines of code that determines the behaviour of the macro. See the following pages for how to make a macro definition.

Variables in a macro

The macro programming language recognises six different kind of variables:

- **System variables**: These variables are controlled by the system and can only be read from the macro. A system variable is identified by the use of less than (<) and greater than (>) signs. The following system variables are supported:
  <**seq**>: Read by the macro to determine if it is a sequential update (performed once after each print) or a real time update (when ever there is some idle time in the system).
  <**machineid**>: Contains the name of the printer
  <**userid**>: User name of the user that is logged in.
  <**HH**>: Current hour
  <**mm**>: Current minute
  <**ss**>: Current second
  <**dd**> Current day in month
  <**dow**> Current day of week
  <**MM**>: Current month
  <**yyyy**>: Current year
- **Printer variables**: This relates to variables already created in the current design you are editing. Generally these variables can only be read from the macro. A printer variable is identified by the use of left curly brace ({) and right curly brace (}). Example: {name of some variable}
- **String variables**: Internal macro variable used for storage of text information. The macro has access to 20 string variables named s0 to s19. All string variables (s0 to s19) are initialised when a print job is started, but are otherwise treated as a "static local variable"
- **Integer variables**: Internal macro variable used for storage of integer values. The macro has access to 20 integer variables named d0 to d19. All integer variables (d0 to d19) are initialised when a print job is started, but are otherwise treated as a "static local variable".
- **Floating point variables**: Internal macro variable used for storage of floating point values. The macro has access to 20 floating point variables named f0 to f19. All floating point variables (f0 to f19) are initialised when a print job is started, but are otherwise treated as a "static local variable"
- **Output variables**: Used to place "the result" of the macro. This is required for a macro to do anything useful. You can use a Macro output variable to store the result or you can use a special name called output. Example: output="The meaning of life is 42".

Flow of execution control

How to control the program flow:

The macro programming language contains statements to control the flow of execution:

- **Labels**: A label is some kind of bookmark that you can insert anywhere in the macro definition. A label does not consume CPU time when encountered. The label statement required for branching. A label is inserted by first typing a colon followed by a name. Example: " :MyLabel"
- **goto**; Moves the point of execution to a label anywhere in the macro definition. Example: goto MyLabel
- **Boolean test**: compares two values and yields either true or false. Only numbers can be tested. Use the operators >, < and == (double equal sign) to perform the test
  Example1: 1<2 yields true (1 is less than 2)
  Example2: 2==3 yields false (two is not equal to 3)
- **if then**: Tests a Boolean expression and executes the then statement depending on the test. Example: if d1>1 then goto MyLabel

Calculations

How to perform calculus

- **Equal operator**: Used to store a result in a variable (that can be an internal variable or an output variable). A macro does not do anything unless you store a result somewhere. When mixing two variable types (like string and integer) the macro tries to translate the source variables data to the destination variables type. Thus allowing us to insert an integer value in a text variable and vice versa
  Example d1 = "123 some text" Yields d1 to be the value 123
  Example s1 = d1 Yields s1 to have the value "123"
- **+-*/**: Standard mathematical operators work on integers and floating point variables. Example d1 = d1 + 1 (increments d1 with 1)
- **String concatenation**: Concatenate two strings using the + operator.
  Example: s1=s1 + s2;
- **Boolean operators**:
  Logical AND (&): Example 1 & 0 = false
  Logical OR: (|): Example 1 | 0 = true
  Logical XOR: (^): Example 1^0 = true
- **Modulo: (%):** Returns the remainder of an integer division: Example: 17 % 3 = 2 (since 17-5*3=2)
- **Formatting output**: Use the format function to make the result look the way you like it. The format function uses the standard c format function so any c programmer should be familiar to this function
  Example: s1 = format("num:%.4d, float:%.3f",12, 4.345234)
  Yields s1 = "num:0012, float:4.345"

Macro text examples

```
//A remark is ignored when the macro executes.
//Text written after two slashes '//' is considered a remark.

// How do I work with strings
s0 = "String"
s1 = "A string is created with quotation mark"
s2 = "A 2nd sting variable"
s3 = "text1"
// Text with forced newline c style "\n"
s4 = "text1\nText2\ntext3\\"

// You can also use s5 to s18
s19 = "Last string variable"

// How do I work with integers
d0 = 0
d1 = 100
d2 = 300
// You can also use d3 to d18
d19 = 13000

f0 = 0.005
f1 = 1.234
f2 = 2.345
// You can also use f3 to f18
f19 = 19.43223

// This is how I get a result
s5 = s3 + s4
output = s5
// output: text1text1\nText2\ntext3\\
```

Macro if/then examples

```
A remark is ignored when the macro executes.
//Text written after two slashes '//' is considered a remark.


// How do I work with 'if/then'
if d1 > 20 then d1 = 1

if d1 < 1.05 then
   d1 = 1.00
```

Macro arithmetic examples

Macro label examples

Macro goto examples

Macro calculus examples

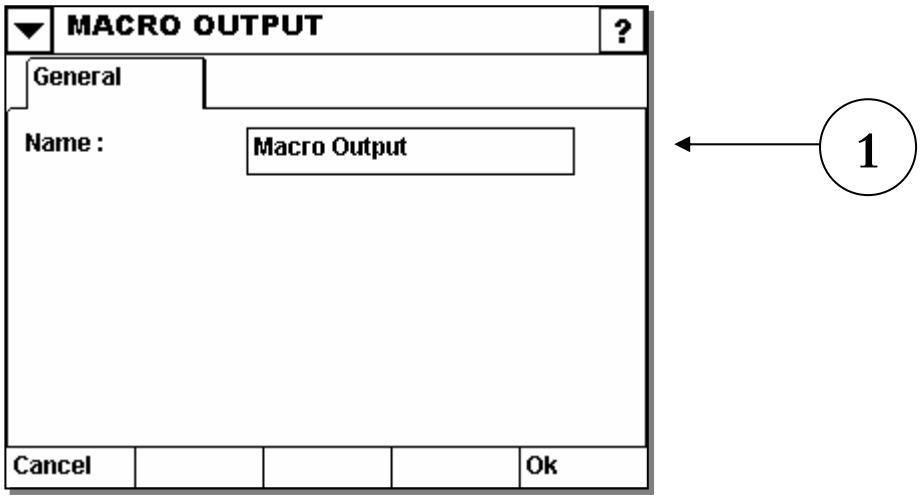
```
//Standard arithmetic: +,-,*,/,=,<,>
//A statement consists of a destination
//variable, an equal sign, a source and
//optionally an operator and a second source
d2 = d1
//Or
d1 = d1 + 1


// goto and label example
d1 = 0
// How do I declare a new label
:MyLabel
//taste of arithmetic
d1 = d1 + 1
// How to jump to a label
if d1 < 19 then goto MyLabel
//this will keep jumping until d1 is 19


// How to output the result
output = d1


// floating point support +, -, * and /
f1 = 3.45 * 4.56
f2 = 3.45 / 2.00

// Integers supports in addition &, |, ^ and %
d2 = d1 % 7
d3 = d1 % d0
```

Macro converting examples

```
//Import a decimal value from another variable
d1 = {RTC_dd}

//Initialises a string variable
s1 = ""
:loop
//check if we are done
if d1=0 then goto done

//gets the least significant digit
d2 = d1 % 10
//prepares d1 for next loop
d1 = d1 / 10

//maps the digit to an Arab number
//The correct Arab characters may not be seen here if this editor cannot
//display the characters
if d2==0 then s2 = "?"
if d2==1 then s2 = "?"
if d2==2 then s2 = "?"
if d2==3 then s2 = "?"
if d2==4 then s2 = "?"
if d2==5 then s2 = "?"
if d2==6 then s2 = "`"
if d2==7 then s2 = "´"
if d2==8 then s2 = "^"
```

Macro Output Variable

A macro output variable can be used to store a result from a macro.



(1) Name

The name of the variable is entered here. Pressing the keyboard will call up a keyboard where the user simply keys in the desired name and finishes with "Ok".

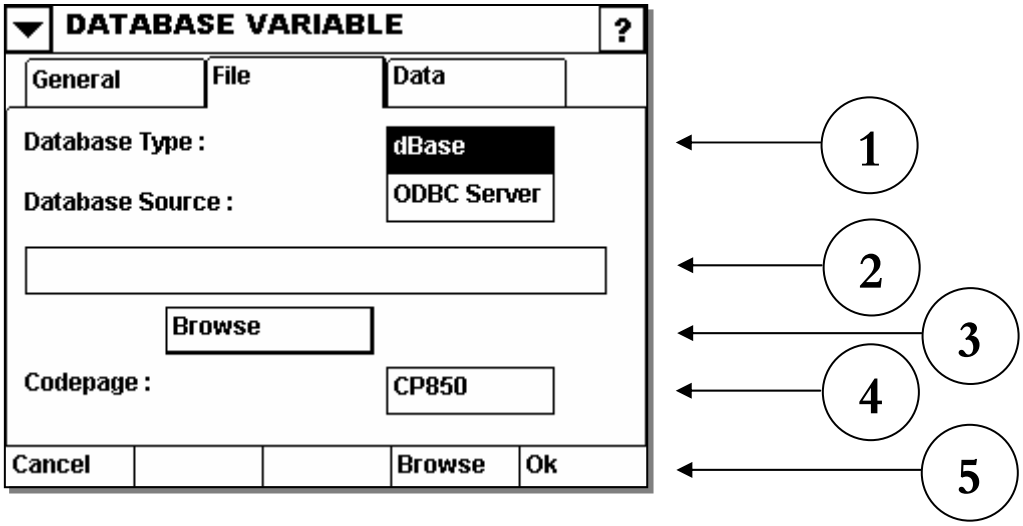
Note: No two variables can have the same name. If the name of an already used variable is changed, the fields in which the variable is used must be manually updated.

Database Variable

The printer supports the use of databases.

Currently two kinds of databases are supported.

- Native support for dBaseIV
  The database file itself can be stored locally or on a network shortcut
  + Real time look-up in database
  + High-speed printout with changing text like addresses
  - No support for UNICODE
- ODBC via a server located on the LAN (Recommended for updating at job start)
  The databases that the controller can connect to are managed by an ODBC server application that must run on a separate PC on the LAN. The database file does not need to be located on the ODBC server PC (please refer to general ODBC documentation).
  + Real time look-up in database
  + Supports most databases
  - Update time depends on unknown factors like LAN.



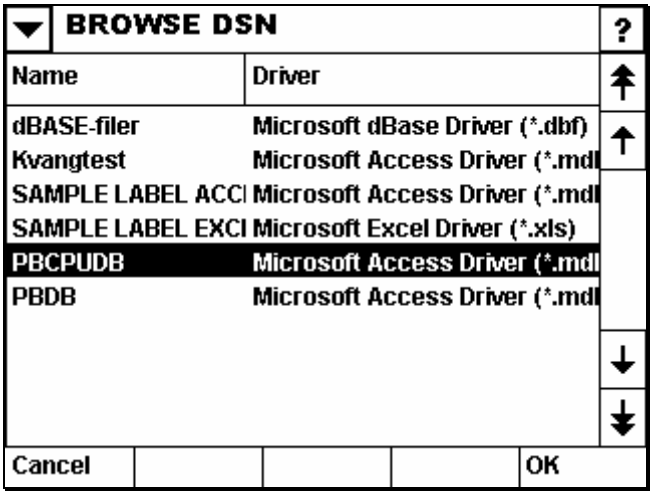
(1) Database type

Use this setting to determine whether to use a dBase database or to connect to the ODBC server. The screen layout will change depending on this setting.

(2) Database source

Type in the name (and path) of the database you wish to use.

(3) Browse/List DSN



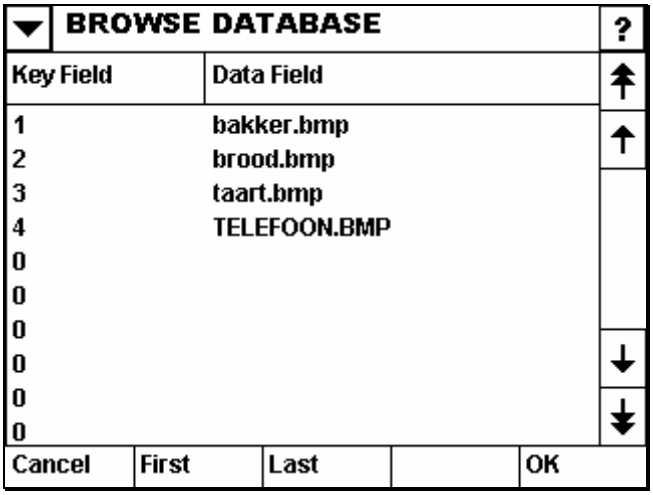
Use browse to search for dBase files accessible by the controller.

Use List DSN to connect to the ODBC server and select a database.

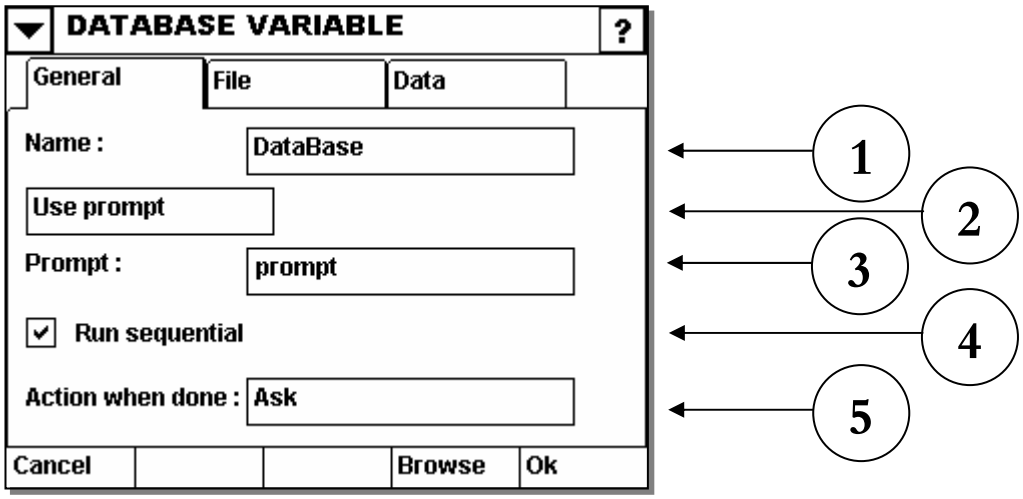
(4) Codepage

A dBase database requires that you specify which codepage was used when the database was created.

(5) Browse



Browse through the database already selected.



(1) Name

The name of the variable is entered here. Pressing the keyboard will call up a keyboard where the user simply keys in the desired name and finishes with "Ok".

Note: No two variables can have the same name. If the name of an already used variable is changed, the fields in which the variable is used must be manually updated.

(2) Use prompt

When the database is initialised you can select whether the operator should select the entry to print or (alternatively) the database can use another variable to select the entry to print. If a variable is selected as input the database variable will be updated whenever the source variable is updated.

(3) Prompt

This is a question that the database variable will ask the operator. (If variable is selected as input you must use this entry to select the source variable).

(4) Run sequential

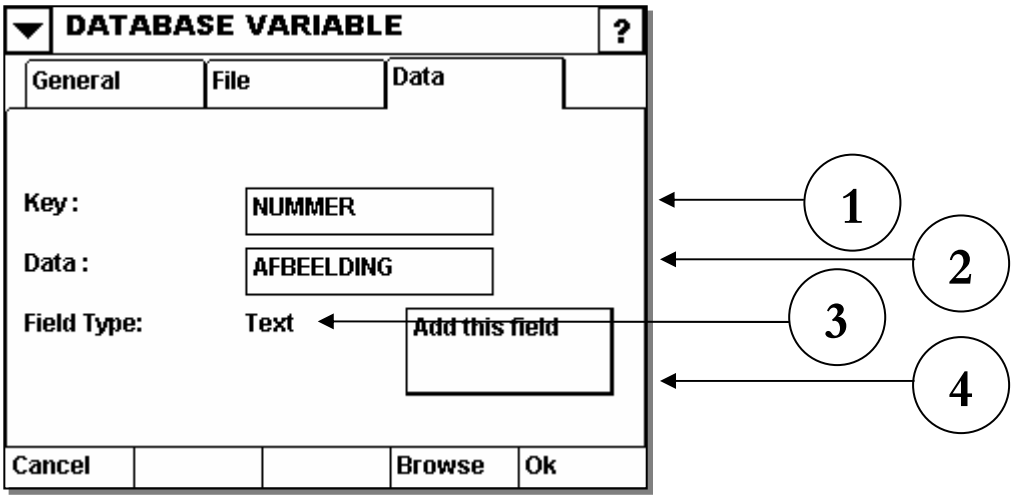
Use this option when all entries in the database are to be printed.

The first entry is still selected as normal. For each print, the database will automatically advance to next entry.

(5) Action when done

This option is only available when the Run sequentially option is selected.

- Quit print: Unloads the print job when the last entry is printed
- Restart print: Restarts the print job (must select a new starting entry)
- Ask: The operator is asked whether to restart or unload the job when the last entry has been printed.



(1) Key

Given an entry value the database searches the key field for a match. Usually a unique identifier is used as the key field.

The list of available fields is automatically updated to reflect the currently selected database.

(2) Data

This is the column where the data required to print is located.

The list of available fields is automatically updated to reflect the currently selected database.

(3) Field Type

Shows the data field type (Text or Floating point).

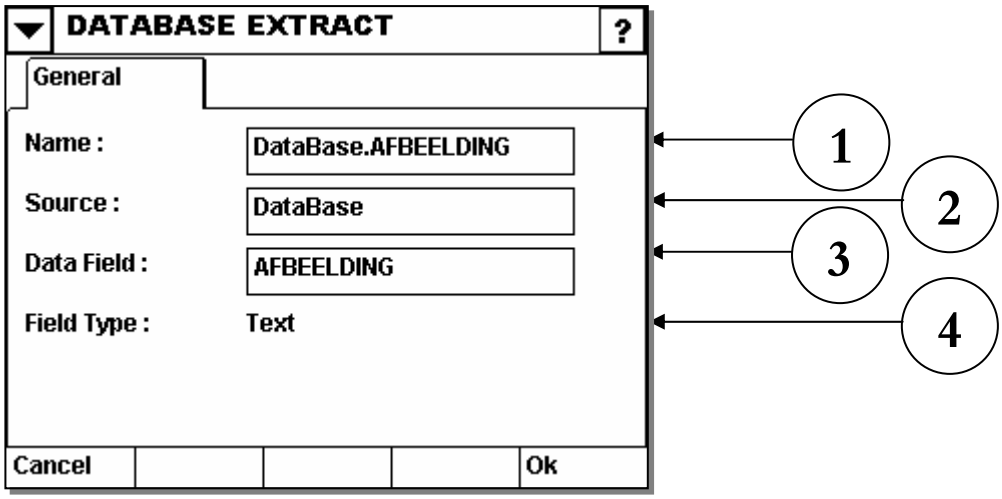
(4) Add this field

Use this shortcut to quickly add a Database Extract variable (page 149).

The Database Extract variable is automatically filled in with the currently selected options.

Note: It is highly recommended to use the Database Extract variable (when multiple columns are required) instead of defining multiple database variables. This is due to the fact that for every (dBase) database variable, the entire database is loaded into RAM and there is no point in loading the same database several times.

Database Extract Variable



(1) Name

The name of the variable is entered here. Pressing the keyboard will call up a keyboard where the user simply keys in the desired name and finishes with "Ok".

Note: No two variables can have the same name. If the name of an already used variable is changed, the fields in which the variable is used must be manually updated.

(2) Source

The source database variable that the Database Extract variable is connected to.

(3) Data Field

This is the column where the data required to print is located.

The list of available fields is automatically updated to reflect the currently selected database.

(4) Field Type

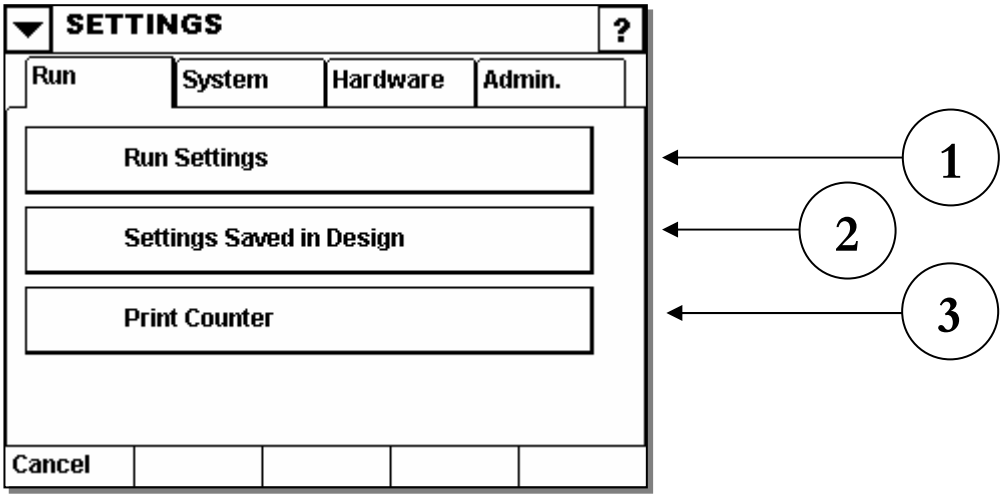
Shows the data field type (Text or Floating Point).

SETTINGS

This is extensive menu is used to define the general settings for the printer.

The main "Settings" menu is illustrated below as seen by an administrator.

There are four tabs at the top of the display: **"Run"**, **"System"**, **"Hardware"** and **"Admin"**. Each menu (tab) will be examined point by point in this section.



(1) Run Settings

Can be used to alter all those parameters that directly affect the printing process.

Moreover, all these functions can be altered while the printer is working. The following section will examine the "Run Settings" menu point by point.

The Run Settings menu allows the user to alter parameters under the following menus: **Quality, Economy, Position and Technical.**

(2) Settings saved in design

The selections of settings should be stored in the design. If a setting is stored in a design, these settings can be defined whilst editing the design.

When a design with settings is loaded to the printer, the global settings are updated.

If a setting is **NOT** stored in the design the global values is used.

(3) Print Counter

Marking the fields " Enable printing of print counter" will set up a prompted variable in the start printing mode asking "**Enter number of prints**".

When the printer has printed the wanted number of labels the printing will be stopped, and has to be restarted or stopped, depending on your choice.

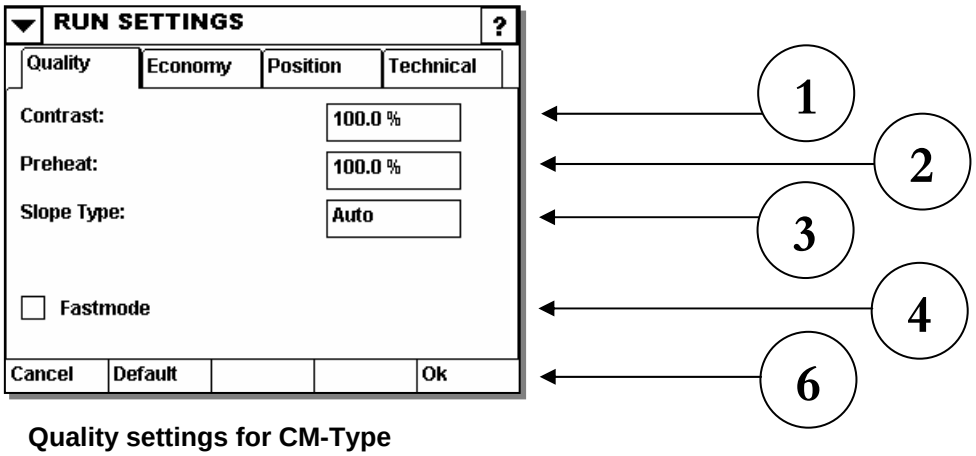
Press the field " **Action when done**" to choose between Ask, Restart and Quit Printing.

Run

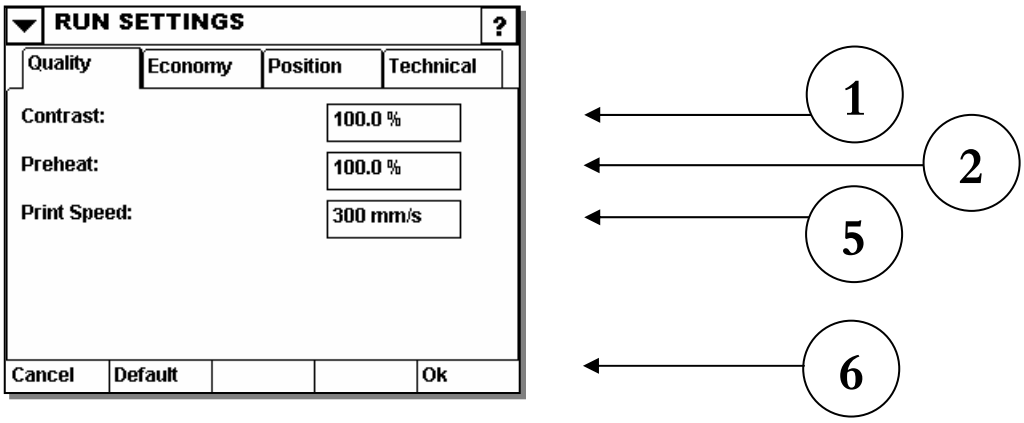
Run Settings Quality

The illustration shows how the "Run Settings" display is divided up into tabs.

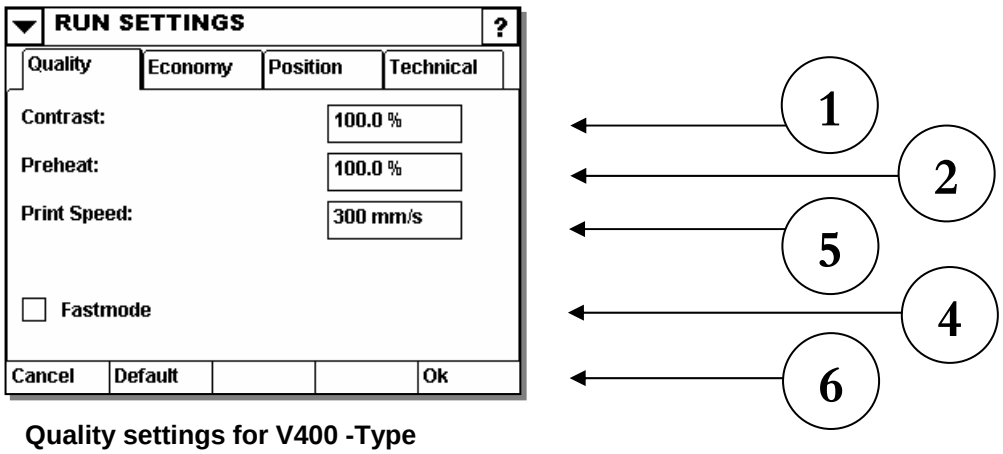
The "Quality" tab allows the alteration of those parameters that will normally affect the quality of printing. It should be noted that other parameters such as "Economy" can also influence quality.



Quality settings for CM-Type



Quality settings for V100-Type



Quality settings for V400 -Type

(1) Contrast

(**CM, V100 and V400**)

Controls the temperature at which the print head prints. It is recommended to set this between 80%-100%. The higher the value, the hotter the temperature used by the print head to print. The contrast required is largely dependent on the type of material being printed upon, and the type of ribbon used.

If a low quality ribbon is used, it may be necessary to increase the contrast, also note that the life of the print head can be considerably reduced.

(2) Preheat

(**CM, V100 and V400**)

The preheat settings can be used to increase / decrease the heat to the print head as additional adjustment range to the Contrast setting.

Theory:

During printing the single dots will be heated up in accordance with the label design.

Every time a dot has been fired, this will be stored in a history memory chip and used for the calculation of the next print.

The preheat function make it possible to add or remove a part of the power calculation (temperature), which is necessary to use for printing the next dot.

This is can be used to make a final print quality adjustment, in accordance with the needs (speed, web surface condition etc.).

(3) Slope Type

(**CM**)

Controls the acceleration/deceleration of the ribbon motor. The acceleration/ deceleration is determined by the speed of the web; A higher web speed yields a slow and smooth acceleration, whereas a low web speed yields an almost instantaneous acceleration.

When slope type is set to auto, the printer will monitor the current web speed and calculate an appropriate acceleration.

Under some circumstances, it is not possible to measure the web speed (if printing during the web's acceleration) and possibly ending up with a broken ribbon,

For cases like this, set it to manual and type in the maximum web speed in the edit box that appears just below.

(4) Fast Mode

(**CM and V400**)

Fast mode actually reduces the resolution in the printing direction, and hence allows the system to print in excess of 1000 mm/second.

Reducing the resolution can impact the print quality, but in reality the transfer of ink to the web is often improved and the total print quality is improved.

When printing at speeds above 700 mm/second, it is recommended to test if enabling fast mode improves the print quality.

(5) Print Speed

(**V100 and V400**)

Use this setting to define the printing speed.

(6) Default

The default button allows the reset of a single setting to the factory default.

To do this press the "default" button once.

Notice that the button is now reversed

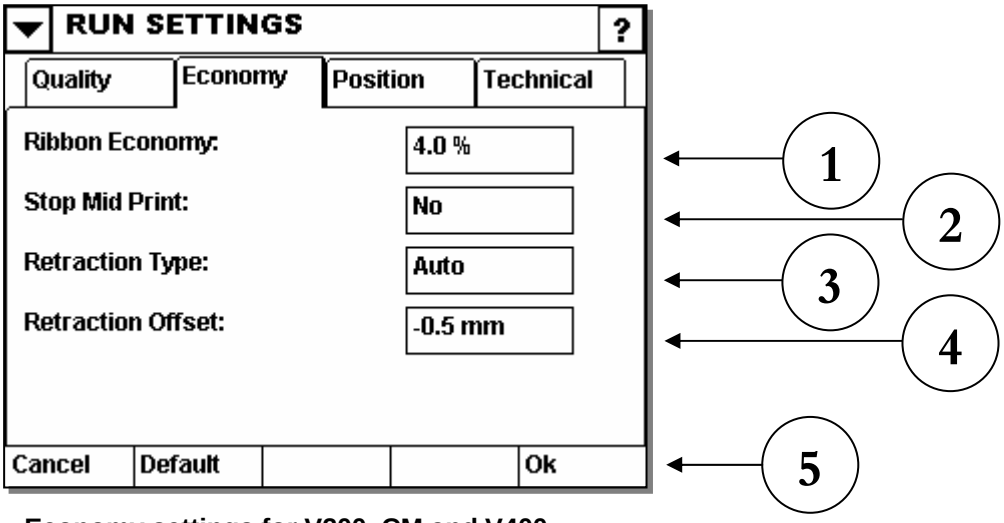
When the default button is reversed press the setting you wish to reset.

If the default button is accidentally pushed, press it again to deselect the button.

Run Settings Economy

The "Economy" tab enables the definition of some of the parameters that have a direct cost-savings effect for the end-user. All of the values entered in this menu will therefore influence the consumption of ink ribbons. The illustration below shows the settings under "Economy" tab:

Note: The V100-Type does not have any settings under Economy.



Economy settings for V200, CM and V400

(1) Ribbon Economy

This feature uses the FADING technique, which is one the printer's patented features. If this menu is set to 0%, the printer will use exactly the same area of ribbon as the area of the actual print, i.e. a 1:1 ratio. By increasing the value of "Ribbon Economy", the consumption of ribbon will be reduced, but this will not in any way affect the actual print, i.e. the size of the print will keep to the original size.

Overleaf is an example of what a used ribbon and the actual print looks like if about 60% has been entered:

The higher you set "Ribbon Economy" the lower the print quality. This feature very much depends on the type of material being printed on. There are very few cases where you cannot use the FADING technology, and all users are recommended to experiment in its use when installing the printer.

The printer and the print head cannot be overloaded in any way by entering high values in this menu, but if you increase the Ribbon Economy, we recommend you to reduce the contrast settings in accordance to the needs, thus increasing the lifetime of the Print head.

Note: A high air pressure will cause the web to drag the ribbon (due to friction) and can cause a "flopping" noise.

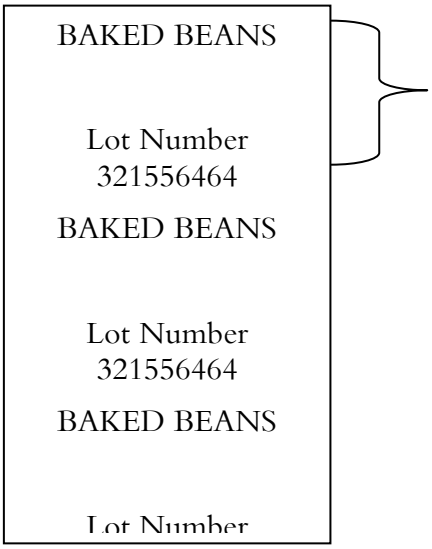
Ribbon consumption/Print result

Ribbon Economy set to 60%

(2) Stop Mid Print

It might be that the design contains text lines spaced widely apart. The resultant space between the lines is a straightforward waste of ribbon.

See the below example:



The bracket is related to the size of the print and it is obvious that that there is a great waste of colour ribbon between the upper part (BAKED BEANS) and the lower part (Lot Number)

If "Stop Mid Print" is set to "YES", the printer's print head will be raised between "BAKED BEANS" and "Lot Number" and ribbon feed will also be stopped, i.e. no ribbon is wasted.

We recommend this feature be always set to "YES". If quality problems should occur at high speeds in the middle of the print, this may be due to having selected the "YES" mode and the print head and the ribbon does not have sufficient time to lift up/return or to accelerate and decelerate. The user should therefore be aware that reduced print quality in the middle of the design at high speeds could be due to having set this option to "YES".

Retraction Type

This menu is extremely important in reducing consumption of ribbon.

A thermo-transfer printer (of the type that V200 is) normally works at very high speeds, and in many cases the ribbon will be pulled a few millimetres too far with a resultant waste of ribbon. To compensate for this, the V200 can pull the ribbon either way and thus compensate for the extra ribbon that can get pulled at high speeds.

The "RETRACTION" feature defines how much the printer should pull back the ribbon. This feature can either set to OFF, MANUAL or AUTOMATIC.

If it is set to **OFF,** there will be no reverse feed of the ribbon**.**

If it has been set to **Manual**, the user must define the number of millimetres the printer should pull back the ribbon. It is recommended to measure the desired pull back before entering a value in order to avoid entering an overly high value causing prints to overlap on the ribbon.

If this item is set to **Automatic**, you must enter a "Retraction Off Set", which is used to fine-tune the ribbon pull back.

"Retraction Offset" is recommended to be –0.5.

Retraction Offset

Retraction Length

This menu being displayed on the screen depends on how "Retraction Type" has been set.

If "Retraction Type" has been set to "off", the field is hidden.

If "Retraction Type" has been set to "Manual", "Retraction Length" must be set in this field.

If "Retraction Type" has been set to "Automatic", "Retraction Offset" must be set in this menu.

(2) Default

The default button allows the reset of a single setting to the factory default.

To do this press the "default" button once.

Notice that the button is now reversed

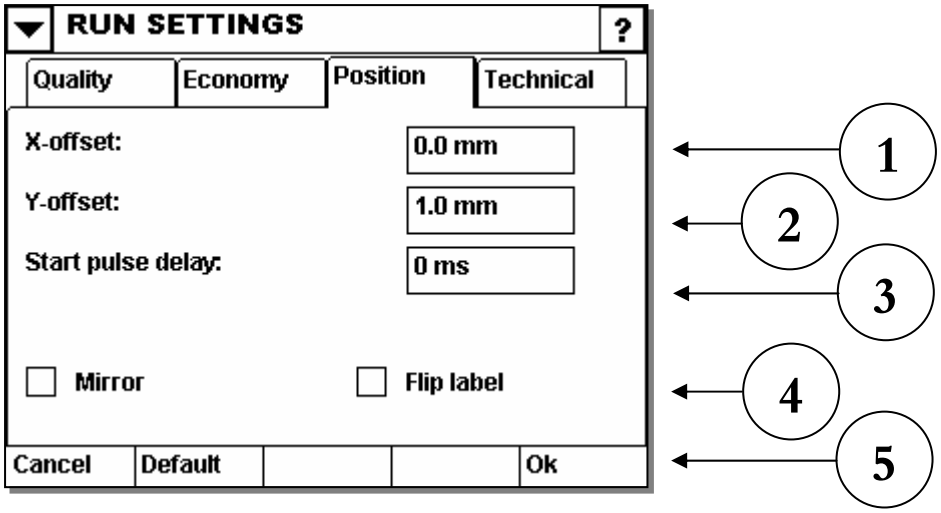
When the default button is reversed press the setting you wish to reset.

If the default button is accidentally pressed, press it again to deselect the button.

Run Settings Position

Under the "Position" tab in "RUN SETTINGS" the user can alter the position of the print, enter a delay for the signal the printer receives from the packing machine, laterally reverse the print and rotate the print through 180 degrees.

The illustration below shows the "Position" tab menu.



(1) X-Offset

X-Offset displaces the print across the print head. By entering a minus value the print will be displaced towards the middle of the printer, and entering a positive value will displace the print away from the middle of the printer.

Note: The width of the print head must not be exceeded.

(2) Y-Offset

Y-offset is a virtual white space area pre pended to the printout. If Y-offset is too small there may not be enough time to move the print head into print position.

(3) Start Pulse offset

There may be reasons to displace the print in the Y direction, but are prevented from doing so by the fact that printing starts in the middle of the packing machine signal.

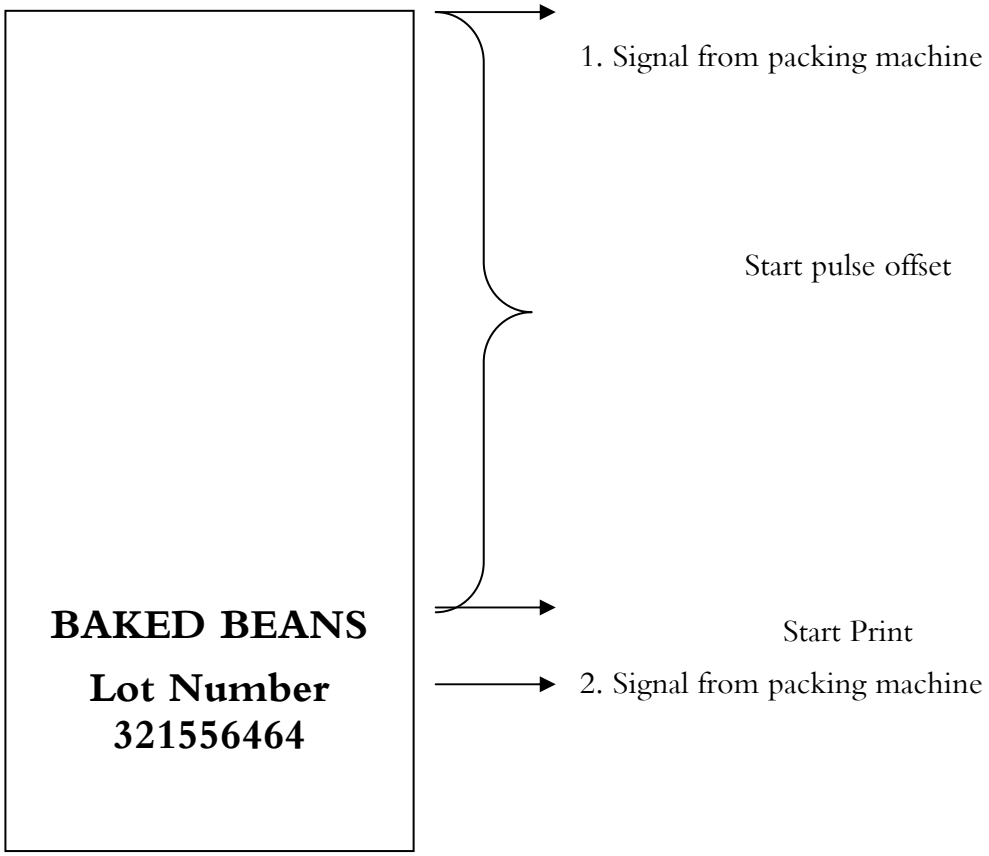
Should this occur, an error or warning will be displayed on the screen and the machine will only print every other print. The solution to the problem is that instead of using the traditional Y-Offset, the Start Pulse offset should be used.

This function displaces the print like an ordinary Y-Offset, but does allow the printer to receive a start signal from the packing machine "firing" in the middle of printing.

Note: The offset is defined in mm (millimetres) for CM types and in ms (milliseconds) for IM and V400 types.

In the example shown below, the print would normally be interrupted by the second signal, with the result that the printer will only print every other print. By setting Delay Type instead, the printer will not be interrupted in the middle of printing and will print each print in the right position.

Note: This function should only be selected if the packing machine sends a signal while the printer is printing.



(4) Flip label

Mirror

Both the "Flip label" and the "Mirror" feature produces a mirror image of the print and may be used to advantage if printing on the inside of transparent material.

The Flip label function produces a mirror image around the X-axis and the Mirror function produces a mirror image around the Y-axis.

The total 180 degrees rotation is produced when the Mirror and Flip label function are activated at the same time.

Original

Mirrored

Flipped

Flipped and mirrored

(5) Default

The default button allows you to reset a single setting to the factory default.

To do this press the "default" button once.

Notice that the button is now reversed

When the default button is reversed press the setting you wish to reset.

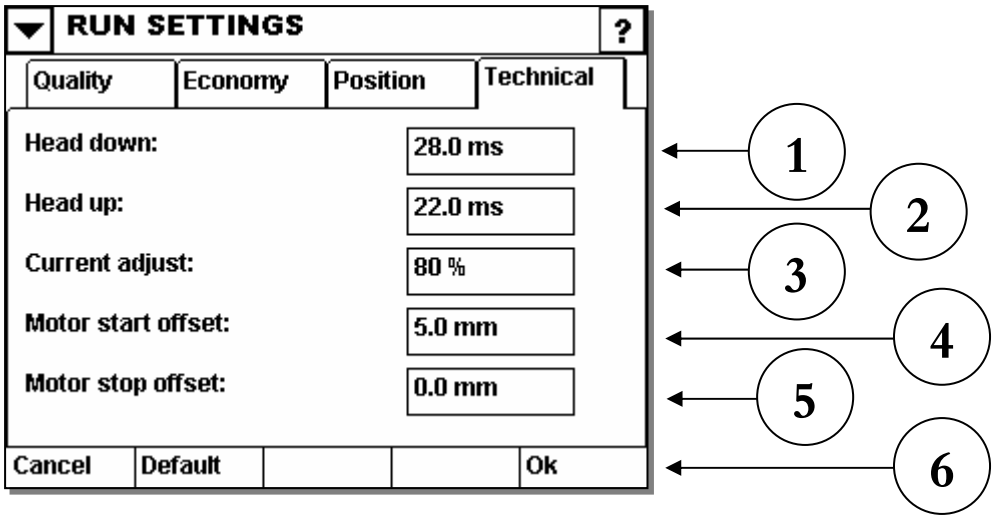
If the default button is pressed accidentally, press it again to deselect the button.

Run Settings Technical

The last tab in "RUN SETTINGS" is the "Technical" tab.

As the V200 calculates the optimum settings for the application itself, the user will never have to make any great adjustment to this menu.

Below is an illustration of the "Technical" tab screen:



(1) Head Down

An air valve controls the V200's print head movement. When the print head must be lowered, i.e. at the start of a print, the V200 software sends a signal to this valve, thus lowering the print head.

There is normally a short (mechanical) delay from the time of sending the signal until the print head is physically lowered. To compensate for this delay, the "Head Down" value can be increased, thus causing the signal to be transmitted earlier, i.e. the number of milliseconds the user defines for this setting is the number of milliseconds earlier that the signal will be sent. If the first part of the print is missing, it is usually because this setting is too low.

The normal value of this setting is default set between 25 and 30 milliseconds depending on printer type.

(2) Head up

An air valve controls the V200's print head movement. When the print head must be raised, i.e. at the end of a print, the V200 software sends a signal to this valve, thus raising the print head.

There is normally a short (mechanical) delay from the time of sending the signal until the print head is physically raised. To compensate for this delay, the "Head Up" value can be increased, thus causing the signal to be transmitted earlier. If the last part of the print is missing, it is usually because this setting is too high.

The normal value of this setting is default set between 10 and 22 milliseconds depending of printer type.

(3) Current adjust

This item allows the adjustment of the power to the stepper motor pulling the ribbon. If the stepper motor is having problems pulling the ribbon, this may be due to insufficient current to the motor, and the value should be increased. At high speeds it may be necessary to increase the current to the stepper motor.

If the printer is running very slowly, the stepper motor will not need much current. If this value is set too high relative to the speed, the stepper motor will start to vibrate, resulting in small horizontal lines being printed across the direction of writing.

Note: In the vast majority of cases it is not necessary to adjust the current. The recommended setting is 80%

(4) Motor start on offset

Here the user can define when the step motor should start pulling the ribbon relative to the start of the print. To get the best quality the ribbon should be moving when the print head is lowered. If the ribbon is not mowing when the print head is lowered a black line may occur at the start of the print.

The default setting is sufficient in most applications. At extremely high speeds (+1000millimetres/second) or printing on rough material like paper, it may be advantageous to increase this value.

Note: V100 types do not have this setting.

(5) Motor stop offset

This setting defines when the stepper motor must stop pulling the ribbon relative to when the print head is raised. This best quality is achieved when the ribbon stops at exactly the same moment that the print head is raised, or by allowing the ribbon to be moving when the print head is raised. If the ribbon is not moving while the print head is still lowered, undesirable smudging of the material being printed will occur. By increasing this value the pull on the ribbon will be increased. The recommended setting for this item is 0millimetres, and seldom needs to be adjusted by the user. At extremely high speeds (+1000millimetres/second) or printing on rough material like paper, it may be beneficial to increase this setting very slightly.

(6) Default

The default button allows you to reset a single setting to the factory default.

To do this press the “default” button once.

Notice that the button is now reversed

When the default button is reversed, press the setting you wish to reset.

If the default button is accidentally pressed, press it again to deselect the button.

PART 4 : MAINTENANCE & FAULT FINDING

CONTENTS

PREVENTATIVE MAINTENANCE

Maintenance Scheme

Quick/regular checks

- Check and Clean Print head (each time the ribbon is replaced or at least once a day)
- Check that the Ribbon is tracking through the cassette correctly. (Pull the ribbon through by hand and visually check to see if the ribbon is creasing across the width of the ribbon)
- Check that Contrast/speed settings are site standard. This will ensure that the print remains at good quality, and may also highlight any potential problems. For example, if the contrast is unusually high, it may be because the Print head needed cleaning and the contrast had been set high to compensate for this
- Check air is set to the recommended pressure
- Check condition of Platen/Roller rubber. Clean or replace if necessary. The platen rubber needs to be smooth, flat and free from debris
- Check for wear or internal debris
- The connection between the printer and controller must be firmly connected before the power is switched on.

Monthly Checks

- Check condition of the Ribbon Guide Rollers. Check bearings are smooth
- Check tension setting of Ribbon un-winder brake
- Check clutch pad, and replace if necessary
- Check condition of carriage drive belt and associated components, pulleys, bearings, retainers and shafts
- Check air cylinder
- Check brake for wear.

LOADING RIBBON

In this example a V400 is used.

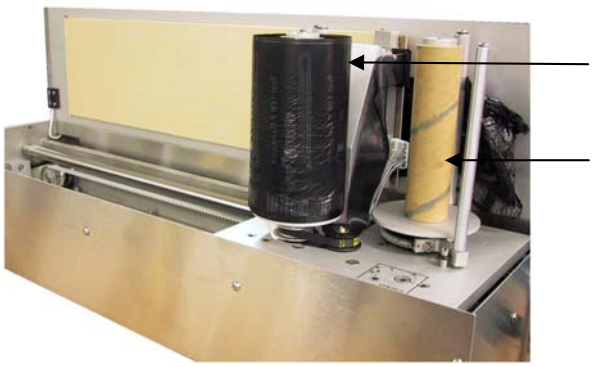
Printer mounted

The carrier is shown in the start position.

(1) Press on "PARK" button on the Controller (V400 only); this will always bring the carrier to the opposite position which makes it easy to change the ribbon material.

(2) Remove the cover/cassette from the printer (use both hands if required)

Printer open

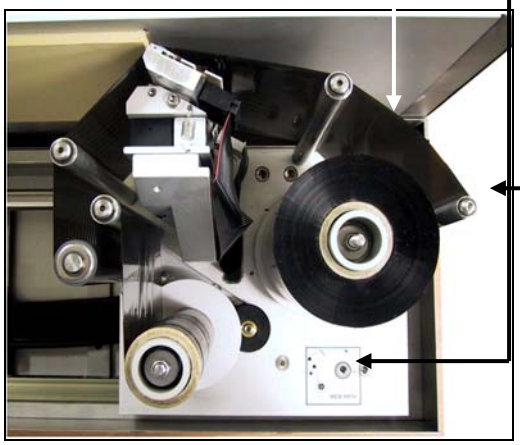


(3) Remove the used ribbon material on the rewind roll.

(4) Remove the empty core from the unwind roll and place it on the rewind roll.

(5) Clean the print head with the recommended Domino VPR0222 cleaning kit.

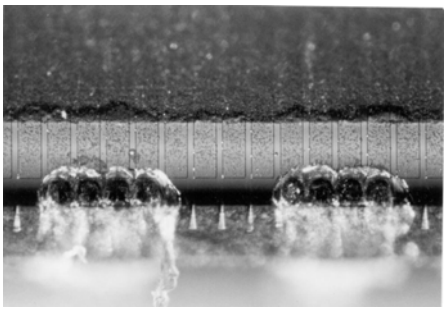
New Ribbon roll installed



(6) Install the new ribbon; follow the instructions on the label.
(7) Adjust the tension arm as needed.
(8) Replace the cover on the printer
(9) Press "PARK" on the Controller which brings the carrier to the start position (V400 only)
(10) Press "Ribbon Tension" on the Controller Box, to tighten up the ribbon material
(11) Remember, always to use Domino ribbon material.

CLEANING THE PRINT HEAD

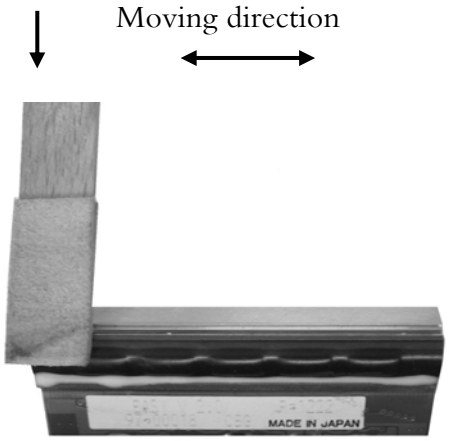
Destroyed print head



Some of the dots on the print head can get destroyed during use. Overheated dots can even result in an explosion of the ceramic material as shown on the picture.

Follow the instructions below to prevent this and prolong print head life.

Cleaning tools

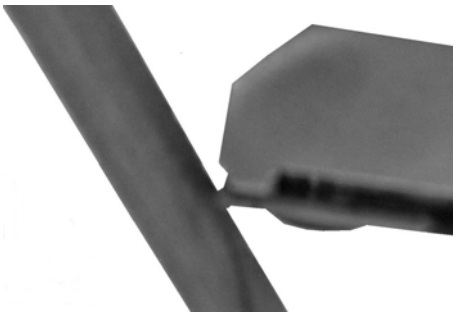


During the printing operation the print head temperature will be increased, and label debris, adhesive and scraps of paper will melt and clog the surface at the corner of the print head.

The dirty print head will result in poor print quality or can even result in total print head destruction.

Note: Do not try to solve the problem by increasing the contrast settings.

Print head



Angle. 35 - 55 degrees

Always use Domino Cleaning tool Kit

Part No. VPR0222

Contents:

- Cleaning tool pen
- Cleaning solution

Remove the top cap of the bottle and spray a part of the solution on the soft part of the cleaning tool pen until it gets wet,

Move the pen from side to side over the print head as shown on the pictures.

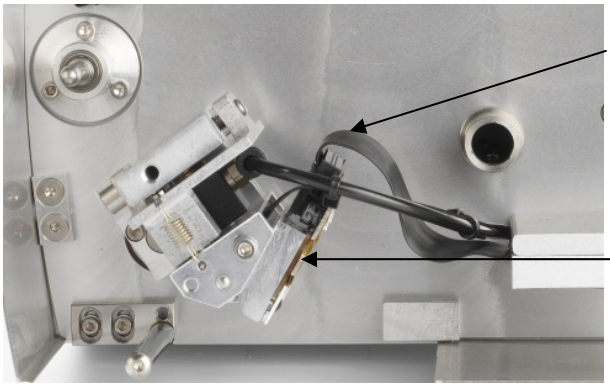
REPLACING THE PRINT HEAD

In this example a V200 is shown

Warning: Ensure printer is switched off and disconnected from the Mains supply.

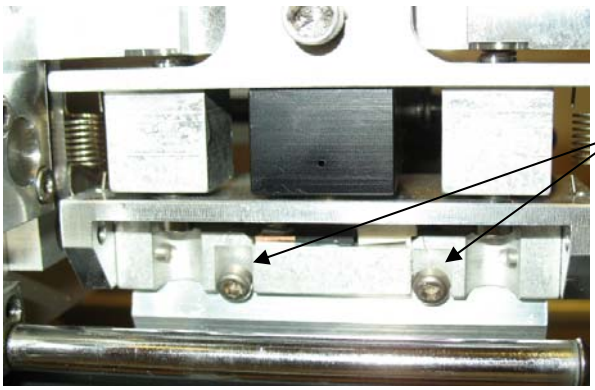
Remove the ribbon cassette from the printer by pulling the handle to release the cassette. Remove the unit and set aside.

Take of the surrounding cover by first unscrewing the knurled screws and carefully lifting the cover off the chassis.



Disconnect the flat print head cable from the IDC connector by gently pulling it off squarely to avoid damaging the connector pins.

Swivel the print head assembly to allow easy access to the 2 screws that hold the print head in place.



Using a 2.5 mm Allen key loosen the screws and remove the print head

Caution: The print head will be hot if the printer was in use before this operation.

Replacement Print head assembly

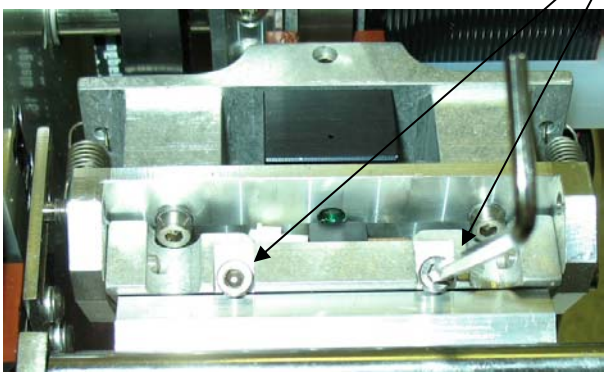
Note: Do not handle the new print head assembly by touching the printing edge.

Make a note of the resistance of the print head printed on the new unit. This is needed to update the value entered into the software.

Resistance value = 1342

Fit the new print head to the printer and ensure the head is pushed up flush against the mounting plate.

While holding the print head in this position tighten the 2 screws using a 2.5mm Allen key.



Clean the print head using the Domnio cleaning kit Part VPR0222 (see page 169: Cleaning the Print Head)

Refit the outer cover. Screw in the 2 Knurled retaining screws and replace the ribbon cassette

Switch on the printer and wait for it to initialise.

From the Main Menu press: Settings, Hardware, Printer type, Head resistance.

Then via the on-screen keypad enter the resistance value (in this example 1342).

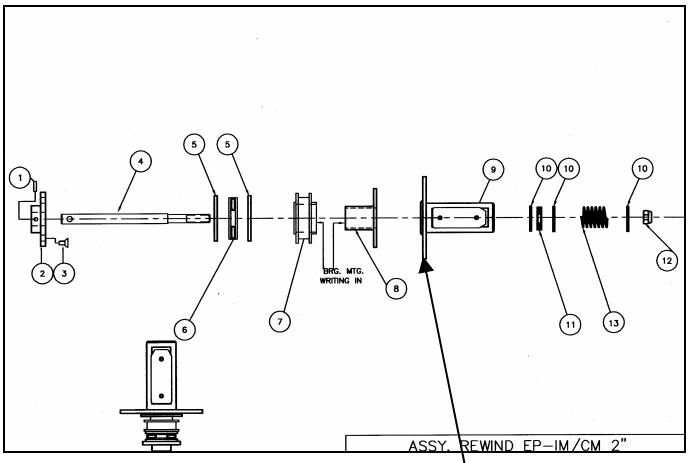
Press OK, Save, OK and then Cancel to return to the Main Menu

TENSION CONTROL

At regular intervals it is recommended to verify the tension of the ribbon by performing a lubrication of the re-winder and adjusting the brake system on the un-winder.

Note: Tension control does not apply for the V200 printers

Lubrication of the re-winder

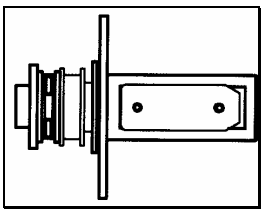


Remove the parts as shown, grease the cork wascher as explained below, and be sure to re-assemble all parts in the reverse order.

Apply a small amount of silicon lubricant on the cork and remove all redundent lubricant before assembling.

Cork washer

Rewind assembly



VAS2004

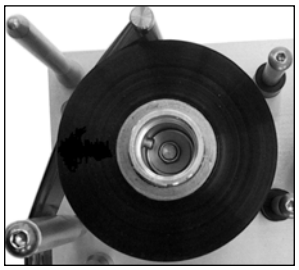
Recommended maintenance period:

Every 3 months or in accordance to the needs.

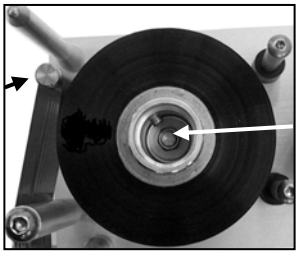
Ribbon un-wind roll adjustment

Note: this example shows a left hand printer

The ribbon roll and arm in Start position

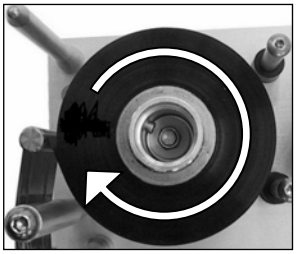


Ribbon roll in start position, the arm is moving



Draw

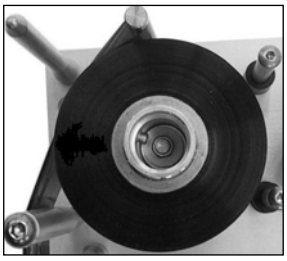
The ribbon roll and the arm is moving



1. Install the ribbon roll on the unwind roll.
2. Pull the ribbon steadily. At the same time tighten the screw 2 (8mm key to the right) in the centre of the roll, until you can move the arm 1 with the ribbon, without moving the ribbon core itself.
3. The screw has to be adjusted until the ribbon roll starts turning around, when the arm reaches the 3 o'clock position (left hand) or 9 o'clock (right hand) – at this point the roll has been adjusted correctly.

Note: Do not try to tighten the centre screw anymore as this will only damage the ribbon tension system.

The Ribbon roll and the arm in start position

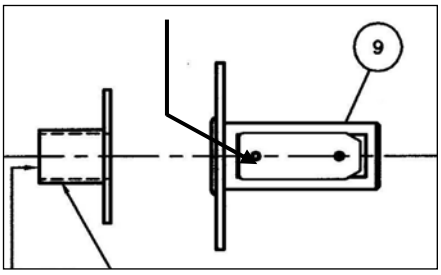


4. When releasing the ribbon material, the arm has to go back to the top position, to ensure correct functioning of the foil alarm signal.

Re-adjust the rewind roll, if necessary

Ribbon rewind roll adjustment

1



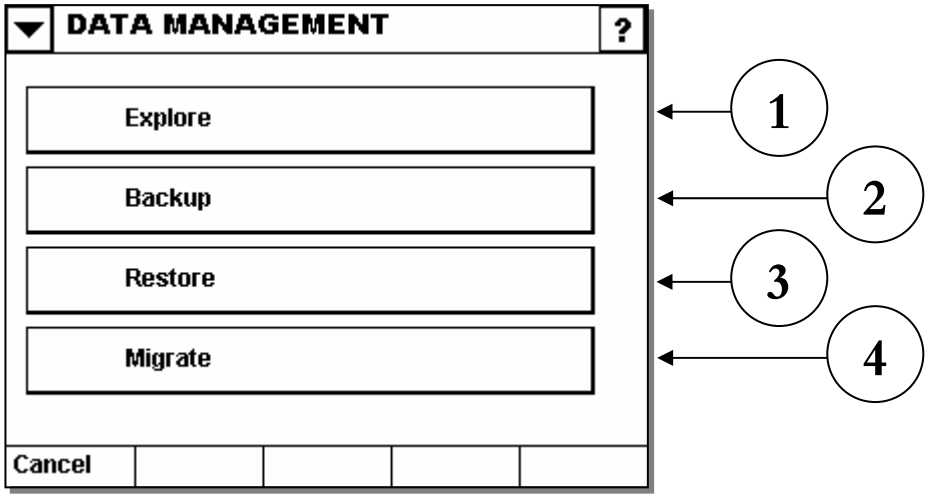
1. Ensure correct lubrication of the cork disk 1 before adjustment. See page 170

2. Place the ribbon material on rewind roll
3. Adjust the centre screw 2 (8 mm top Key) according the instructions below.

4. Connect a spring balance to the ribbon material, and pull the ring ↓
5. The release moment (1) should be approximately. 0.6 – 0.7 Kg.
6. Once moving the gauge should indicate approximately 0.500 Kg (2) for correct adjustment.

DATA MANAGEMENT

Find "Data Management" in the "Settings | Admin" menu.



(1) Explore

Use this button to explore the contents of the internal memory card and (if available) the external memory card.

See page 80 for more info about using the explorer

(2) Backup

Use the backup wizard to take a backup of the system to either the external memory card or the network. See page 175.

(3) Restore

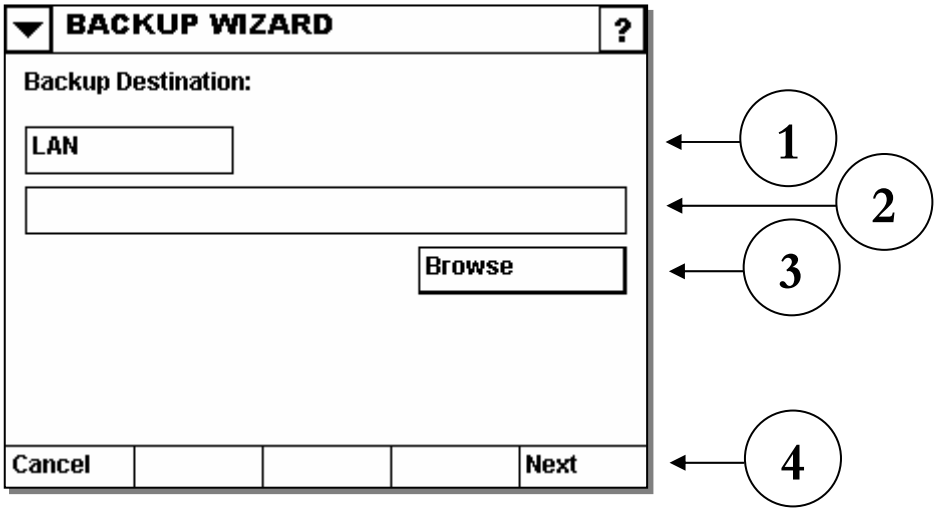
Use the restore wizard to restore previously backed up data to repair the system. See page 179.

(4) Migrate

Use the migrate wizard to move data from the system to either the external memory card or the network. Use the migrate function to free up space on the internal memory card.

Backup

Backup wizard step one: Select destination.



(1) Destination

Use the drop down menu to select the destination media. LAN (Local Area Network) can be chosen or the external memory card.

To use the LAN, a working network shortcut must be available.

To use the external memory card, one must be inserted into the system before switching on the V Series Controller.

(2) Path

Type in the path where the data is to be placed.

A blank path indicates the root folder (only viable when using the external memory card).

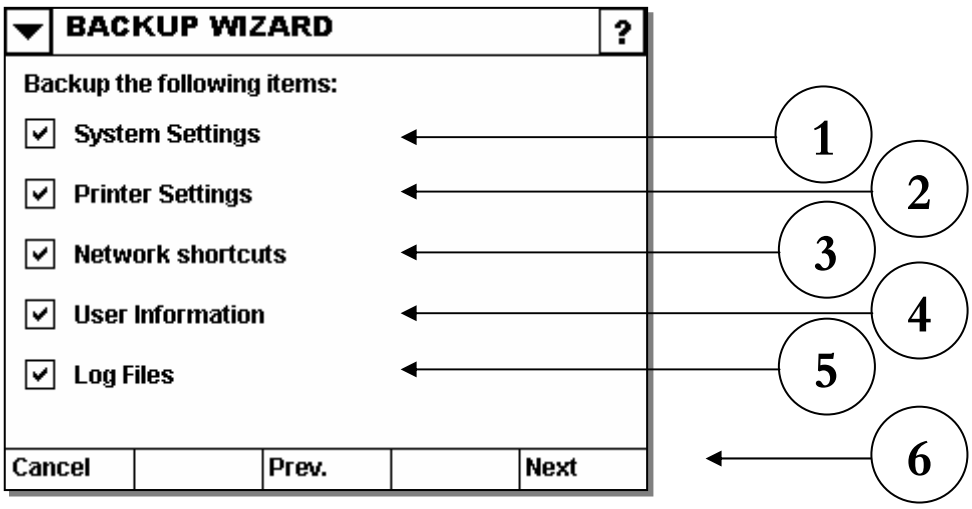
(3) Browse

Browses the media selected allowing easy selection of the correct path.

(4) Next

Verifies the destination media and path, if accepted, the wizard takes the user one step further.

Backup wizard step two: Select items for backup.



(1) System Settings

Includes all normal settings (E.g. network, serial, IO etc.)

(2) Printer Settings

Printer (run) settings includes Quality settings, Economy settings etc.

(3) Network shortcuts

Information about any network shortcuts that have been created. (Both active and non active).

(4) User Information

Information about the users (and user types) that has access to the system.

(5) Log Files

The log files stores information about all important events.

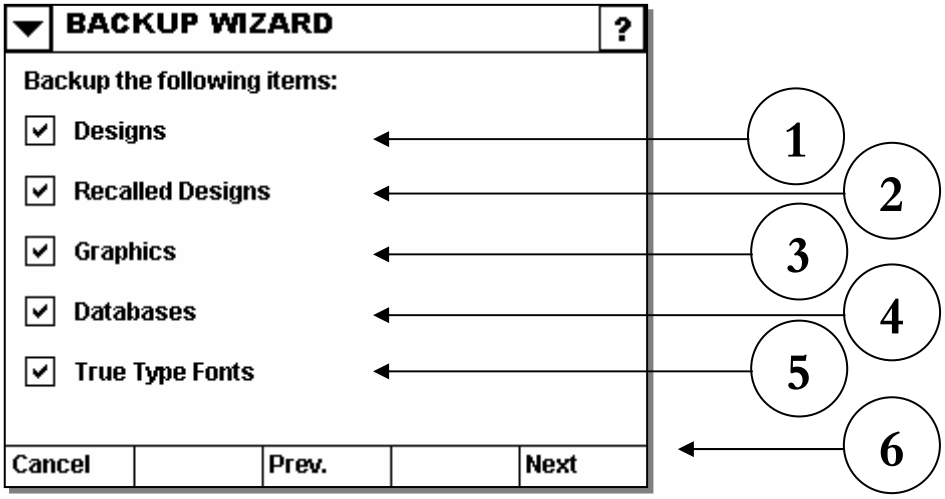
(6) Previous

The wizard takes you one step backwards.

Next

The wizard takes the user one step further.

Backup wizard step three: Select more items for backup.



(1) Designs

Label design stored on the internal memory card.

(2) Recalled Designs

Old designs that are no longer used.

(3) Graphics

Graphics used within the designs.

(4) Databases

Any dBase file the user has stored on the internal memory card.

(5) True Type Fonts

Any user installed true type font.

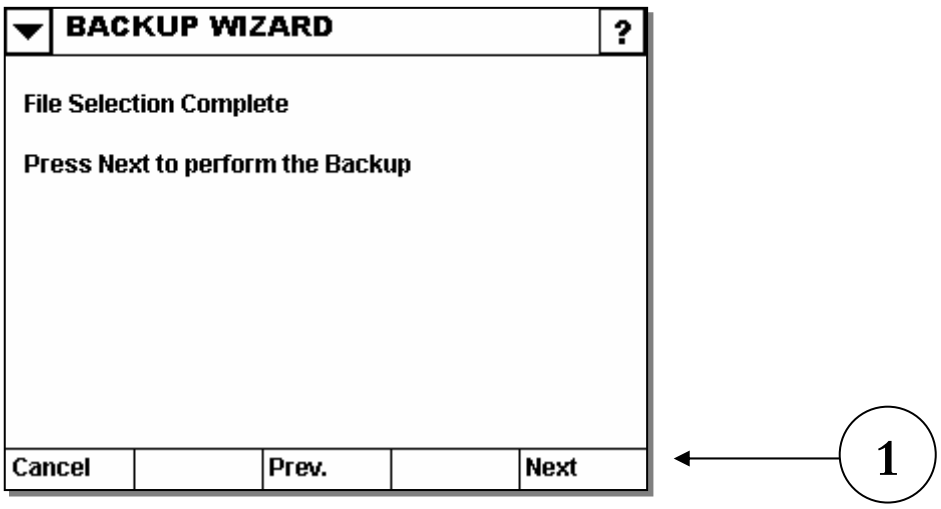
Previous

The wizard takes you one step backwards.

Next

The wizard takes the user one step further.

Backup wizard step four: Ready to start.



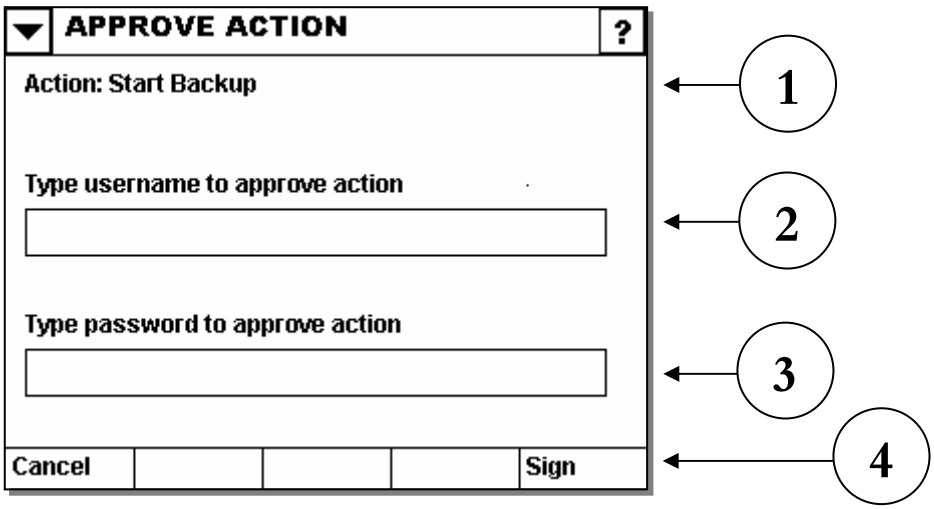
(1) Previous

The wizard takes the user one step backwards.

Next

The wizard takes the user one step further.

Signature required.



(1) Action

The name of the operation that requires a signature.

(2) Username

Type in the username of a user authorised to perform the operation

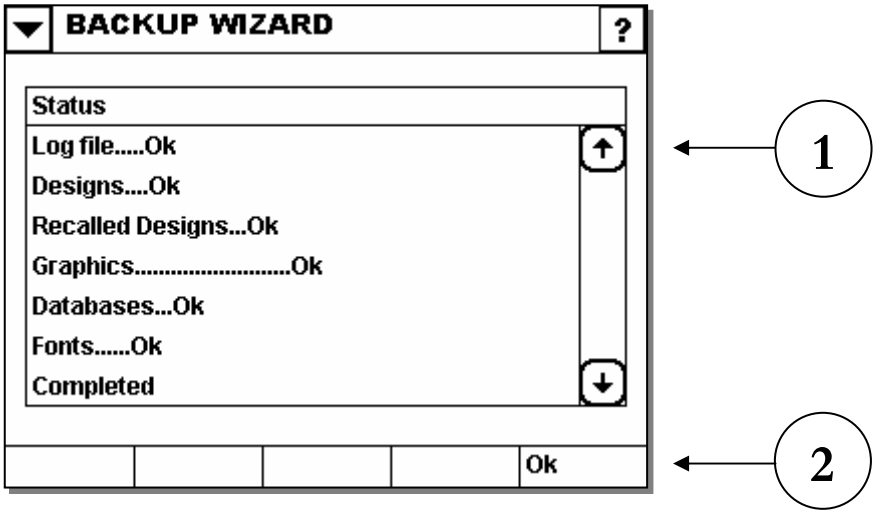
(3) Password

Type in the user password.

(4) Sign

Signs the operation and hence moves on one step further.

Backup wizard step five: Backup in progress.



(1) Status

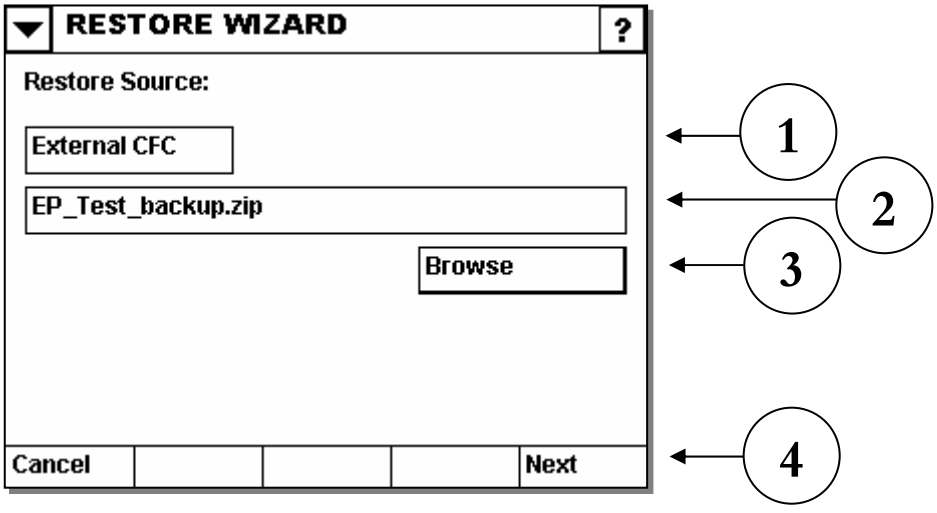
Shows the progress so far.

(2) Ok

The Ok button is hidden until the wizard has completed the operation.

Restore

Restore wizard step one: Select source.



(1) Source

Use the drop down menu to select the source media. Choose LAN (Local Area Network) or the external memory card.

To use the LAN a working network shortcut must be available.

To use the external memory card one must be inserted into the system.

(2) Path

Type in the name of the file that contains a valid backup.

A blank path indicates the root folder (only viable when using the external memory card.

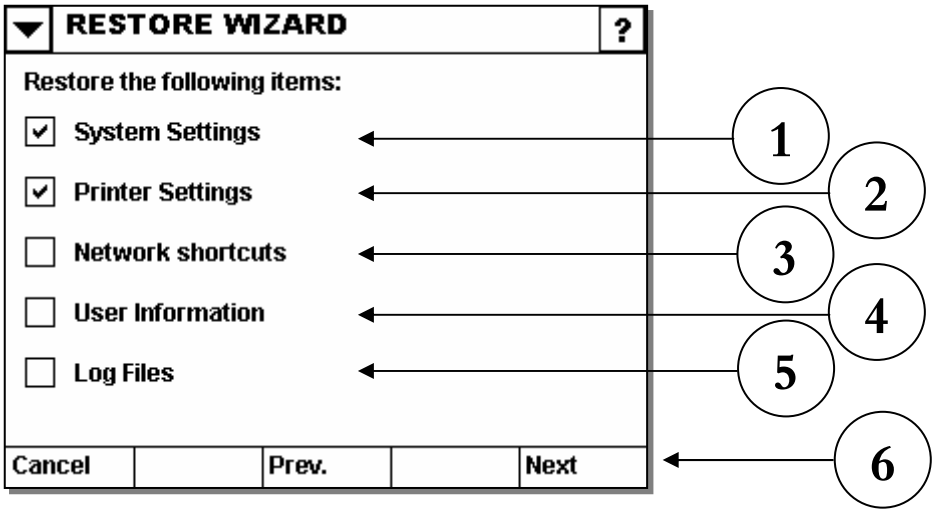
(3) Browse

Browses the media selected allowing the user to easily select the correct path.

(4) Next

Verifies the source file. If accepted, the wizard takes one step further.

Restore wizard step two: Select items to restore (only items in the backup can be selected).



(1) System Settings

Includes all normal settings (E.g. network, serial, IO etc.)

(2) Printer Settings

Printer (run) settings includes Quality settings, Economy settings etc.

(3) Network shortcuts

Information about any network shortcuts that have been created. (Both active and non active).

(4) User Information

Information about the users (and user types) that have access to the system.

(5) Log Files

The log files stores information about all the important events.

(6) Previous

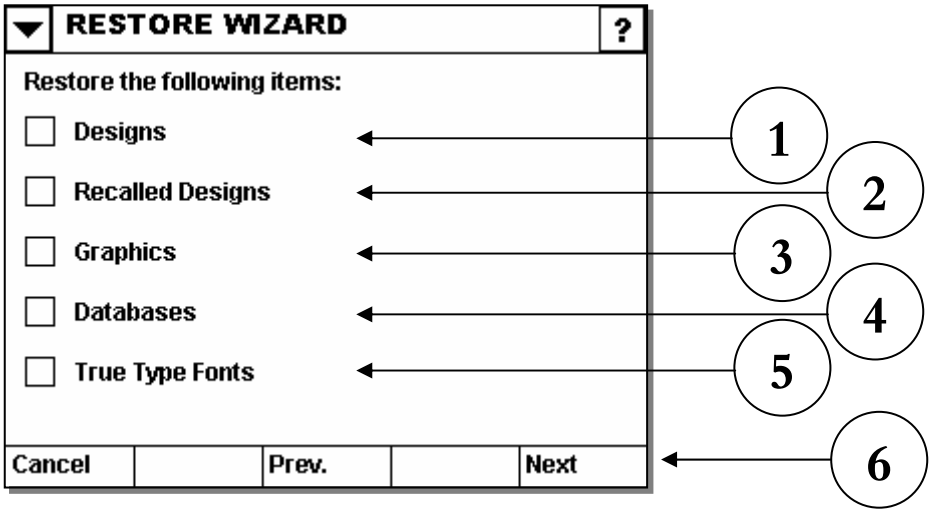
The wizard takes one step backwards.

Next

The wizard takes one step further.

Restore wizard step three:

Select more items to restore (only items in the backup can be selected).



(1) Designs

Label design stored on the internal memory card.

(2) Recalled Designs

Old designs that are no longer used.

(3) Graphics

Graphics used within the designs.

(4) Databases

Any dBase file the user has stored on the internal memory card.

(5) True Type Fonts

Any user installed true type font.

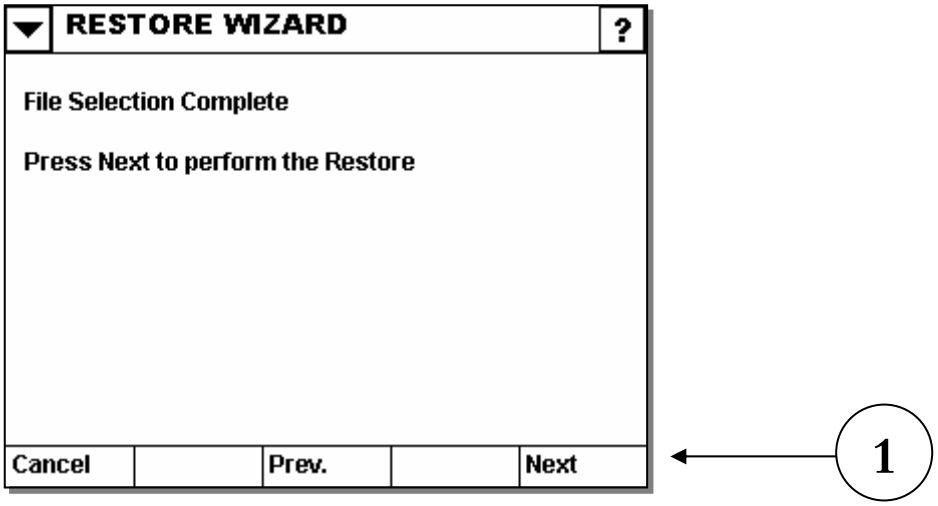
(6) Previous

The wizard takes one step backwards.

Next

The wizard takes one step further.

Restore wizard step four: Ready to start.



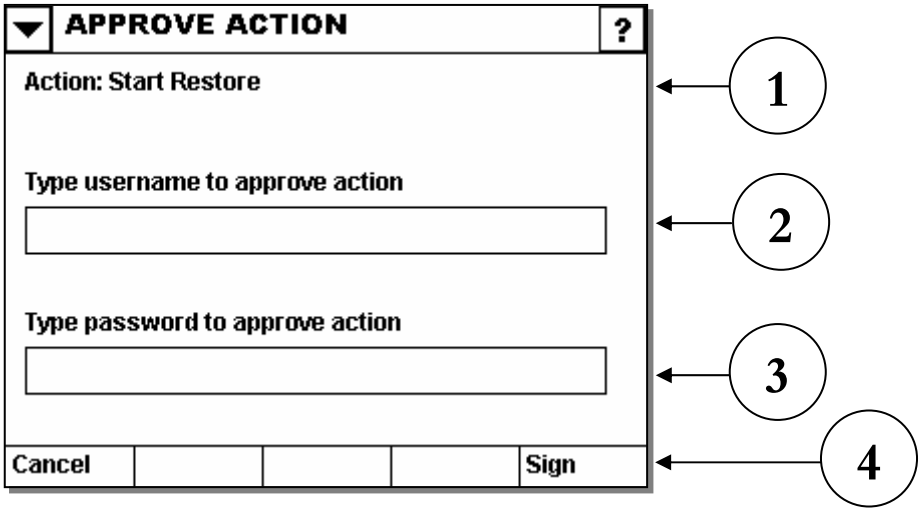
(1) Previous

The wizard takes one step backwards.

Next

The wizard takes one step further.

Signature required.



(1) Action

The name of the operation that requires a signature.

(2) Username

Type in the username of a user authorised to perform the operation

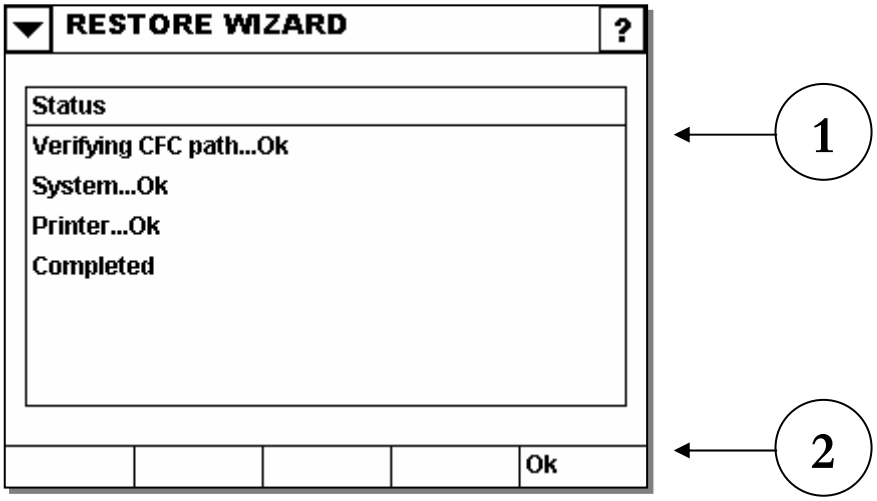
(3) Password

Type in the password for the user.

(4) Sign

Signs the operation and hence takes one step further.

Restore wizard step five: Restore in progress.



(1) Status

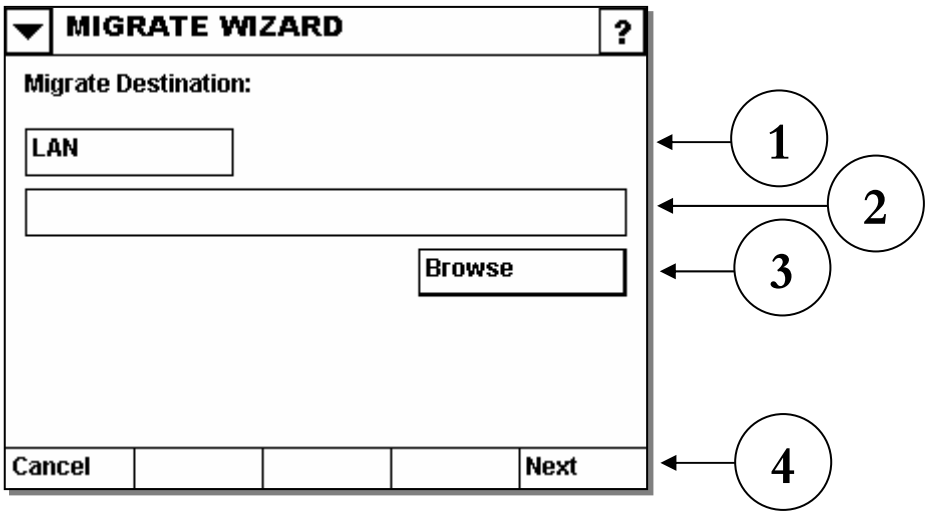
Shows the progress so far.

(2) Ok

The Ok button is hidden until the wizard has completed the operation.

Migrate

Migrate wizard step one: Select destination.



(1) Destination

Use the drop down menu to select the destination media. Choose LAN (Local Area Network) or the external memory card.

To use the LAN a working network shortcut must be available.

To use the external memory card one must be inserted into the system.

(2) Path

Type in the path where the data is to be placed.

A blank path indicates the root folder (only viable when using the external memory card.

(3) Browse

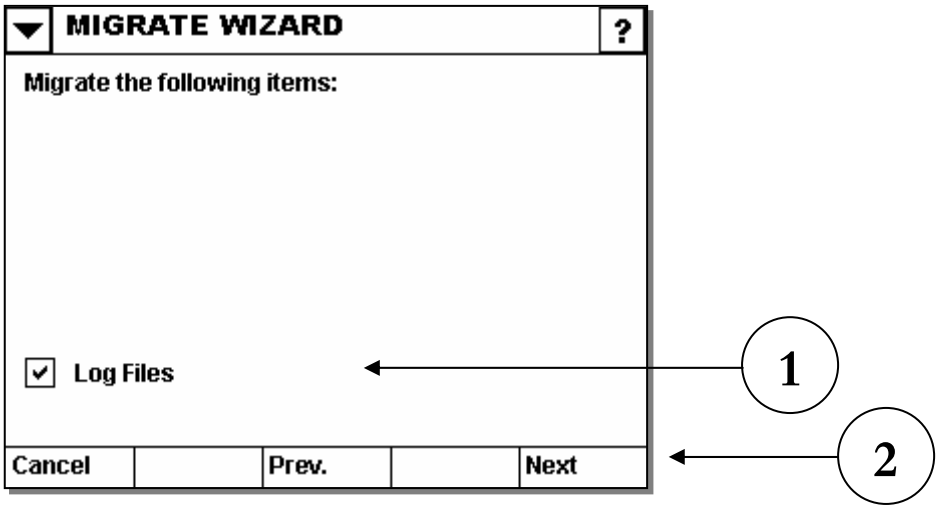
Browses the media selected allowing easy selection of the correct path.

(4) Next

Verifies the destination media and path. If accepted, the wizard moves on one step further.

Migrate wizard step two:

Select items for migration (not all items may be migrated).



(1) Log Files

The log files stores information about all the important events.

(2) Previous

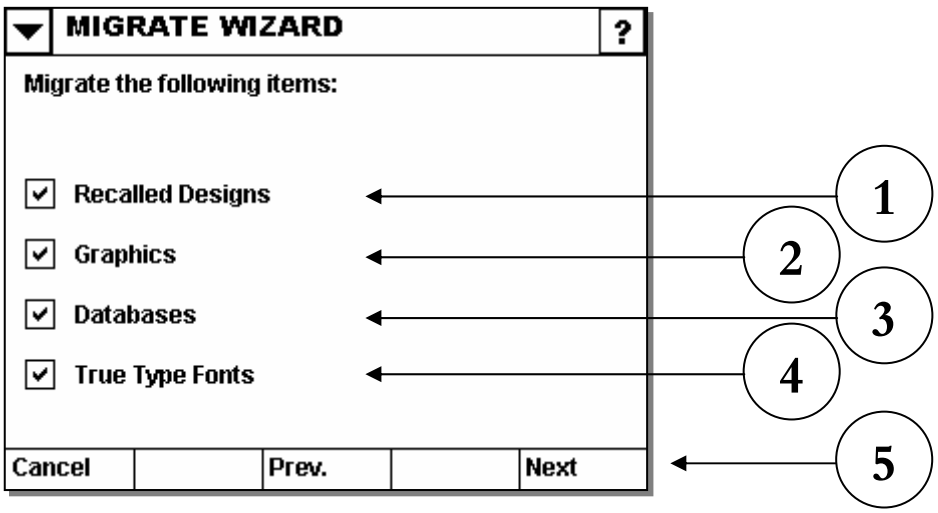
The wizard takes one step backwards.

Next

The wizard takes one step further.

Migrate wizard step three:

Select more items for migration.



(1) Recalled Designs

Old designs that are no longer used.

(2) Graphics

Graphics used within the designs.

(3) Databases

Any dBase file the user has stored on the internal memory card.

(4) True Type Fonts

Any user installed true type font.

(5) Previous

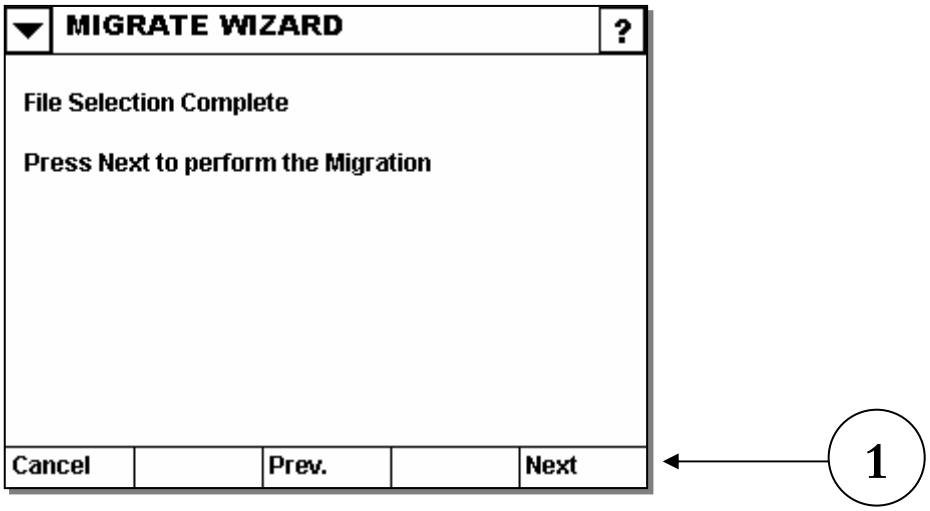
The wizard takes one step backwards.

Next

The wizard takes one step further.

Migrate wizard step four:

Ready to start.



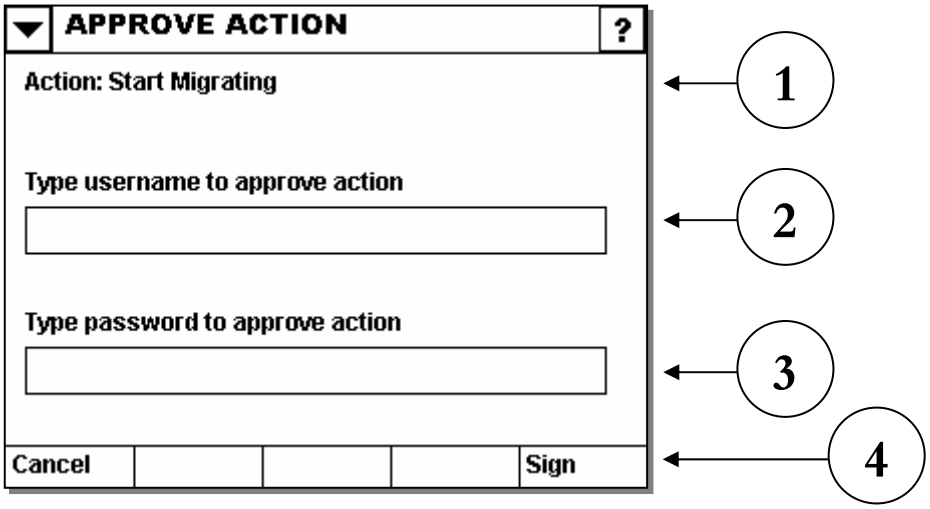
(1) Previous

The wizard takes one step backwards.

Next

The wizard takes one step further.

Signature required.



(1) Action

The name of the operation that requires a signature.

(2) Username

Type in the username of a user authorized to perform the operation

(3) Password

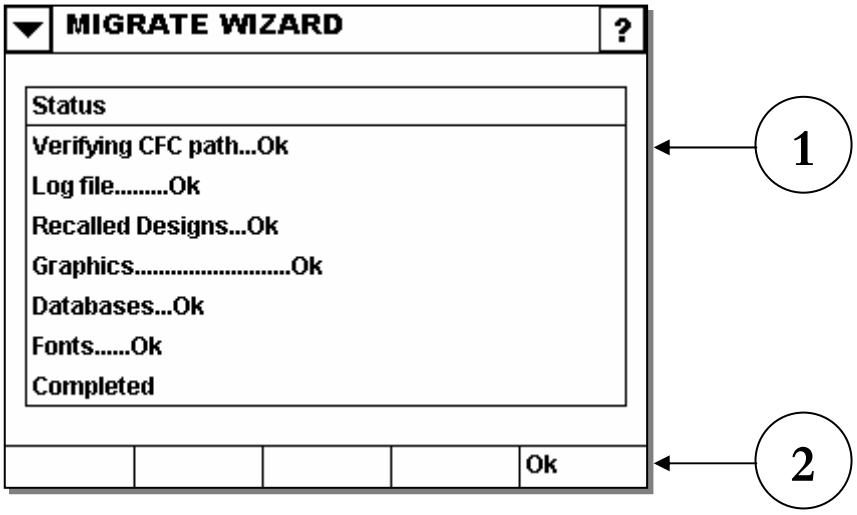
Type in the password for the user.

(4) Sign

Signing the operation takes the user one step further.

Migrate wizard step five:

Migration in progress.



(1) Status

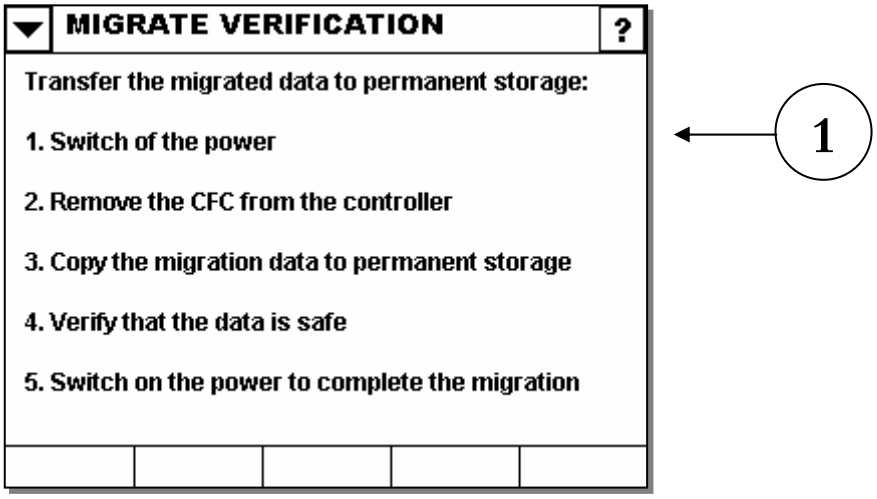
Shows the progress so far.

(2) Ok

The Ok button is hidden until the wizard has completed the operation.

Migrate wizard step six:

Migration verification.



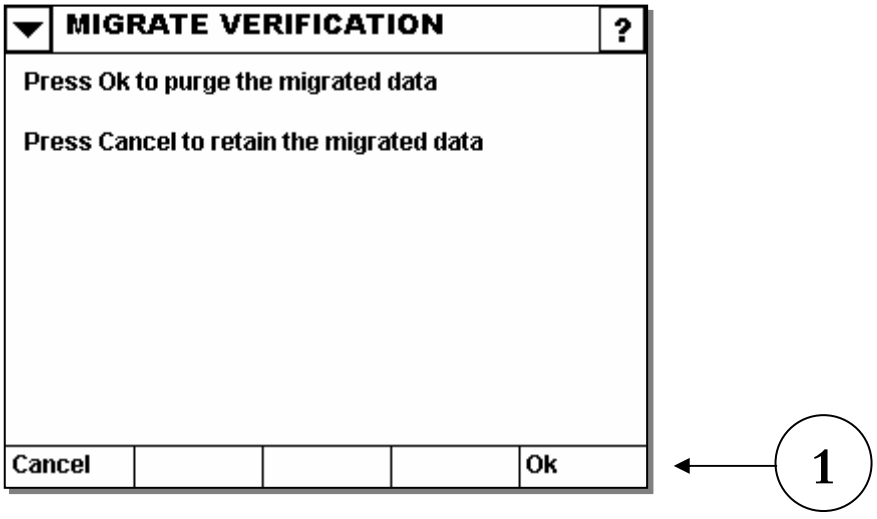
(1) Migrate Verification

Follow instructions on the screen.

Shut down the system to remove the memory card.

Migrate wizard step seven:

Migration completion.



(1) Cancel

Indicates to the system that the migration has failed and all data must be retained.

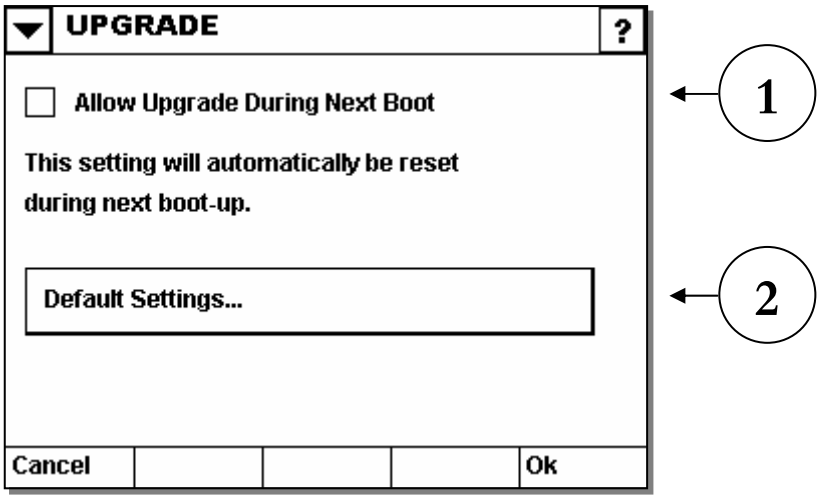
Ok

Indicates to the system that the migrated data is safely stored on permanent storage and therefore may be purged from the system.

UPGRADING FIRMWARE

Before upgrading the internal software to other versions, the firmware must be allowed to upgrade.

The next time you restart the Control Box with a new flash card with the new versions, the program will be changed and all parameters updated in accordance to the new version.



(1) Allow Upgrade

Press the field on the screen that mark the field and allow upgrading to new software next time you restart.

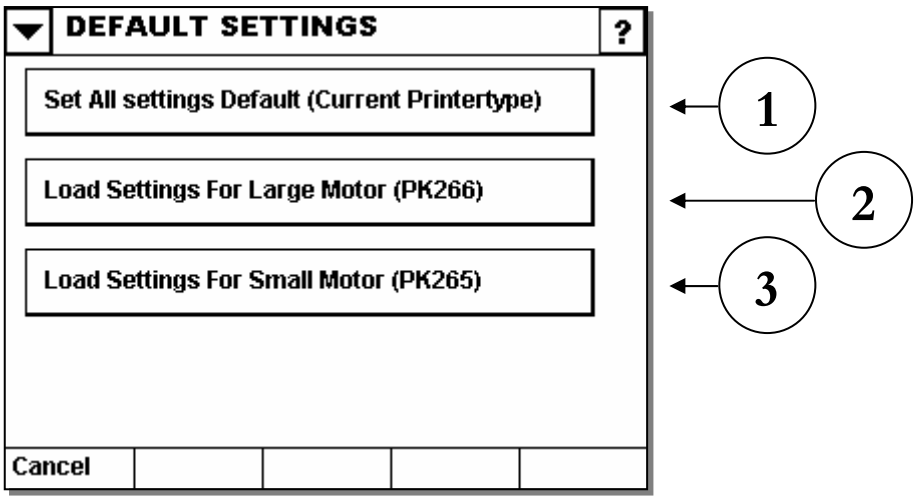
Then press Ok

(2) Default Settings…

Shows a menu that allows you to reset the system to factory defaults.

You will not damage anything by entering the menu.

Default Settings



(1) Set All Settings Default

Resets ALL run settings to factory defaults.

This is an alternative to reset just a single run setting (which may sometimes be a better solution). Please see page 153.

(2) Load Settings for Large Motor

Enables the controller to use the stepper motor PK266.

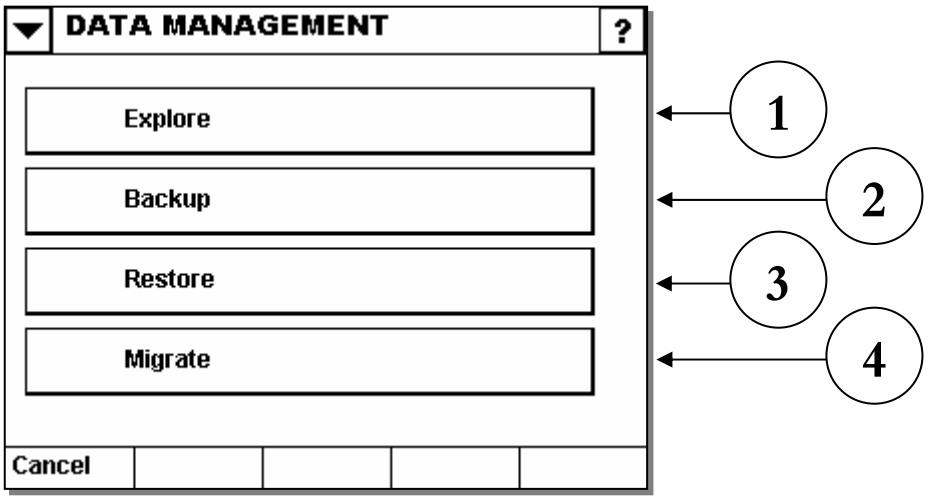
Use this button if you have physically modified the printer.

(3) Load Settings for Small Motor

Enables the controller to use the stepper motor PK265.

This button must be used if the firmware has been updated and the printer is equipped with the stepper motor PK265.

Data Management



(1) Explore

Use this button to explore the contents of the internal memory card and (if available) the external memory card. See page 80 for more info about using the explorer

(2) Backup

Use the backup wizard to take a backup of the system to either the external memory card or the network. See page 175.

(3) Restore

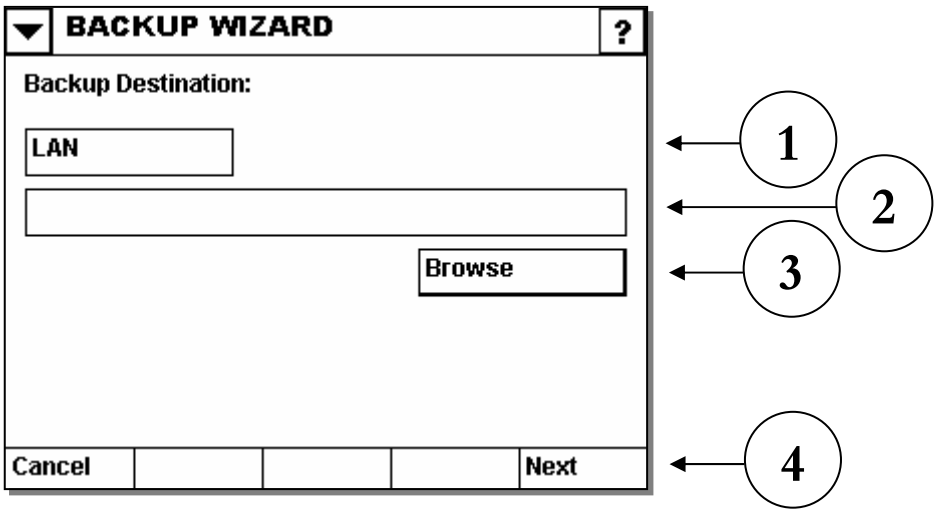
Use the restore wizard to restore previously backed up data to repair the system. See page 179.

(4) Migrate

Use the migrate wizard to move data from the system to either the external memory card or the network. Use the migrate function to free up space on the internal memory card.

Backup

Backup wizard step one: Select destination.



(1) Destination

Use the drop down menu to select the destination media. You can choose LAN (Local Area Network) or the external memory card.

To use the LAN you must have a working network shortcut.

To use the external memory card you must first insert one into the system.

(2) Path

Type in the path where you want the data to be placed.

A blank path indicates the root folder (only viable when using the external memory card.

(3) Browse

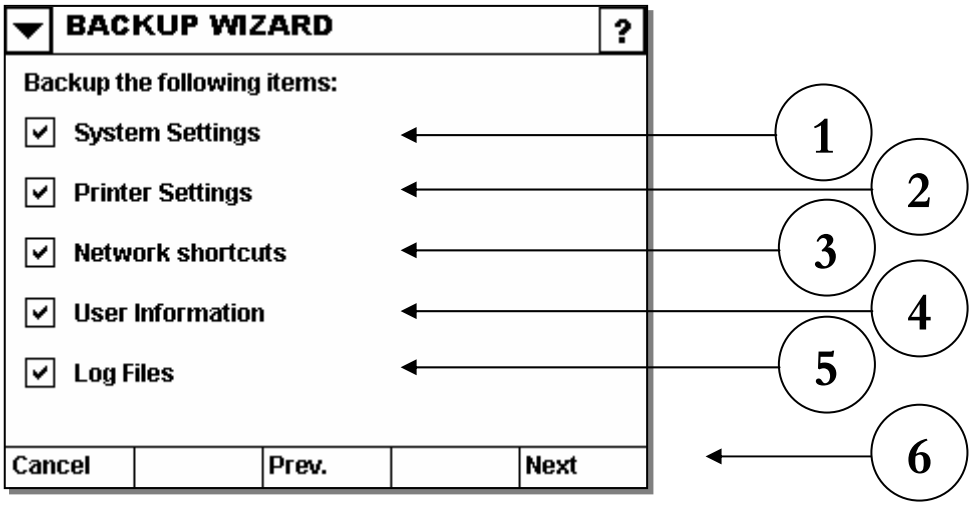
Browses the media selected allowing easy selection of the correct path.

(4) Next

Verifies the destination media and path. If accepted, the wizard takes one step further.

Backup wizard step two:

Select items for backup.



(1) System Settings

Includes all normal settings (E.g. network, serial, IO etc.)

(2) Printer Settings

Printer (run) settings includes Quality settings, Economy settings etc.

(3) Network shortcuts

Information about any network shortcuts that have been created. (Both active and non active).

(4) User Information

Information about the users (and user types) that has access to the system.

(5) Log Files

The log files stores information about all the important events.

(6) Previous

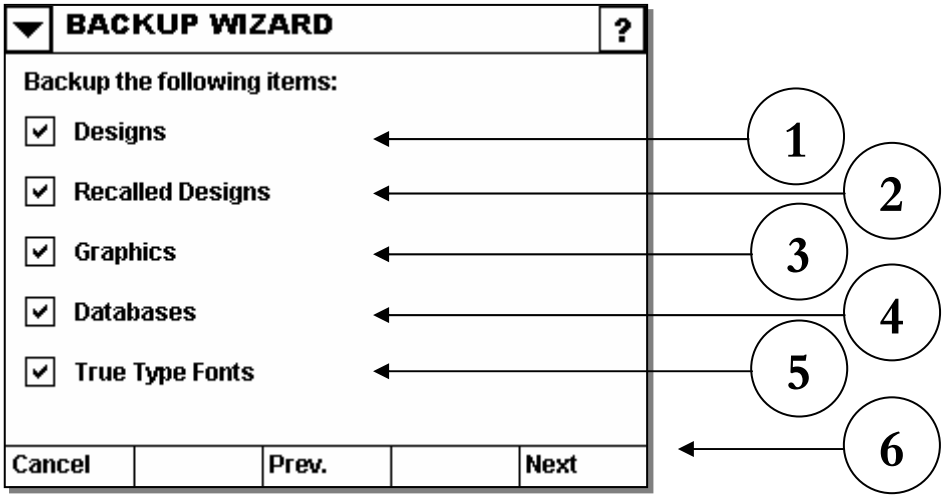
The wizard takes one step backwards.

Next

The wizard takes one step further.

Backup wizard step three:

Select more items for backup.



(1) Designs

Label design stored on the internal memory card.

(2) Recalled Designs

Old designs that are no longer used.

(3) Graphics

Graphics used within the designs.

(4) Databases

Any dBase file the user has stored on the internal memory card.

(5) True Type Fonts

Any user installed true type font.

(6) Previous

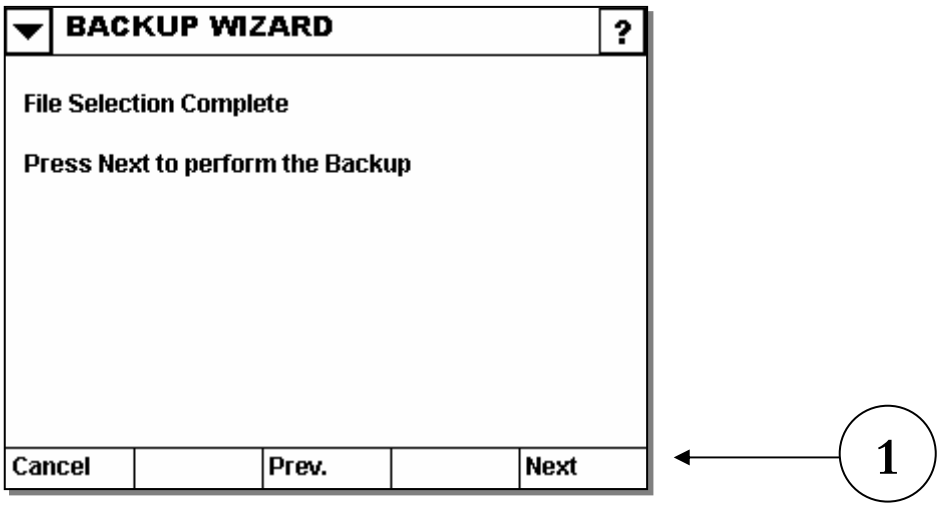
The wizard takes one step backwards.

Next

The wizard takes one step further.

Backup wizard step four:

Ready to start.



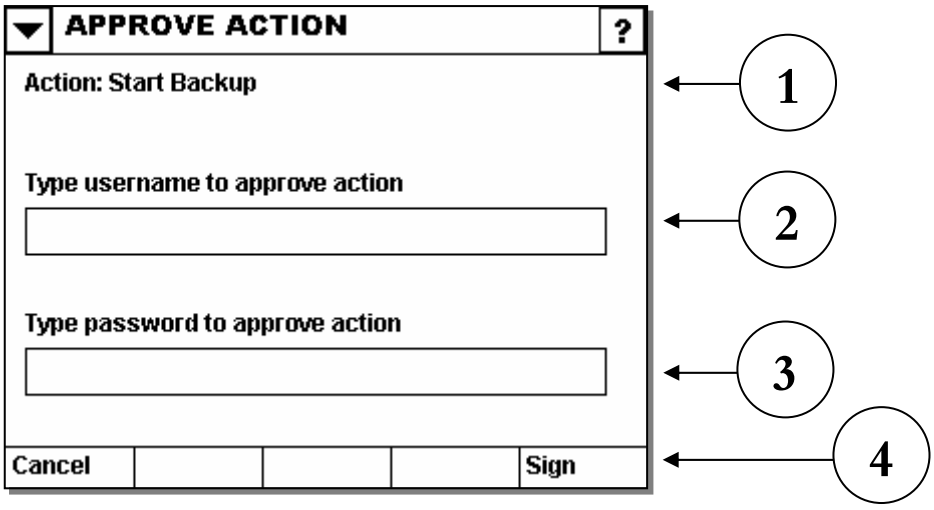
(1) Previous

The wizard takes one step backwards.

Next

The wizard takes one step further.

Signature required.



(1) Action

The name of the operation that requires a signature.

(2) Username

Type in the username of a user authorised to perform the operation

(3) Password

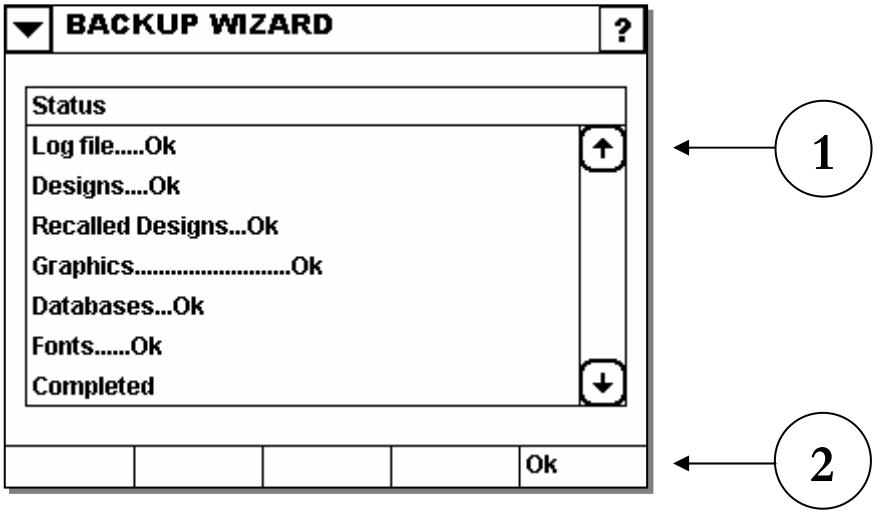
Type in the password for the user.

(4) Sign

Signs the operation and hence takes you one step further.

Backup wizard step five:

Backup in progress.



(1) Status

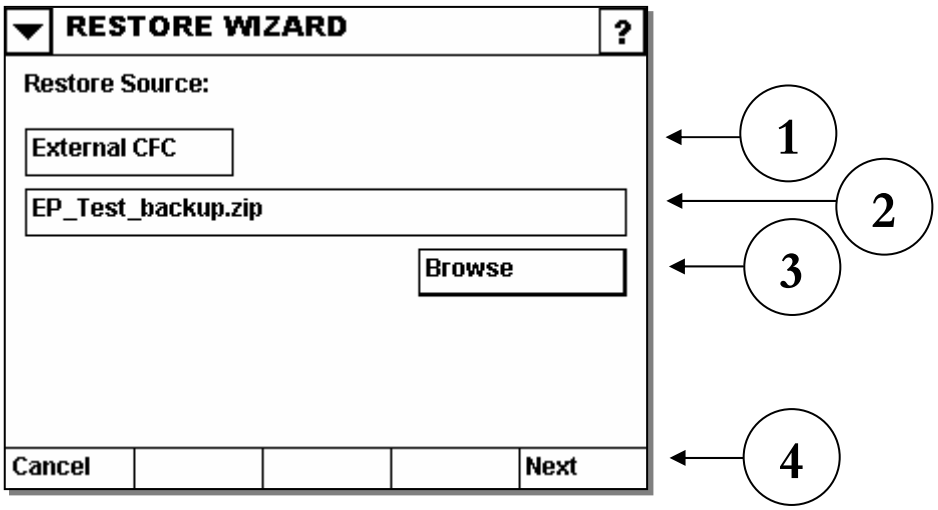
Shows the progress so far.

(2) Ok

The Ok button is hidden until the wizard has completed the operation.

Restore

Restore wizard step one: Select source.



(1) Source

Use the drop down menu to select the source media, choose LAN (Local Area Network) or the external memory card.

To use the LAN the user must have a working network shortcut.

To use the external memory card, ensure one is inserted into the system.

(2) Path

Type in the name of the file that contains a valid backup.

A blank path indicates the root folder (only viable when using the external memory card.

(3) Browse

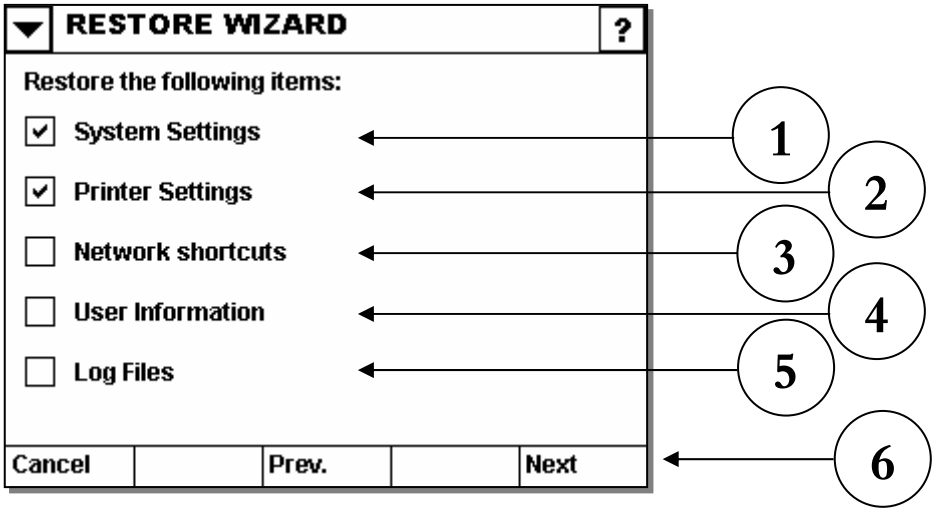
Browses the media selected allowing the user to select the correct path.

(4) Next

Verifies the source file. If accepted, the wizard takes one step further.

Restore wizard step two:

Select items to restore (only items in the backup can be selected).



(1) System Settings

Includes all normal settings (E.g. network, serial, IO etc.)

(2) Printer Settings

Printer (run) settings includes Quality settings, Economy settings etc.

(3) Network shortcuts

Information about any network shortcuts that have been created. (Both active and non active).

(4) User Information

Information about the users (and user types) that has access to the system.

(5) Log Files

The log files stores information about all the important events.

(6) Previous

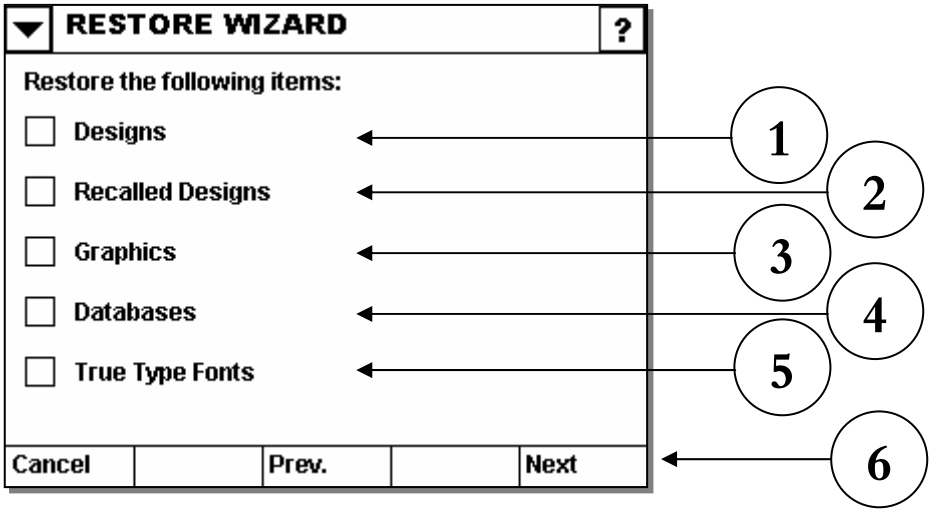
The wizard takes one step backwards.

Next

The wizard takes one step further.

Restore wizard step three:

Select more items to restore (only items in the backup can be selected).



(1) Designs

Label design stored on the internal memory card.

(2) Recalled Designs

Old designs that are no longer used.

(3) Graphics

Graphics used within the designs.

(4) Databases

Any dBase file the user has stored on the internal memory card.

(5) True Type Fonts

Any user installed true type font.

(6) Previous

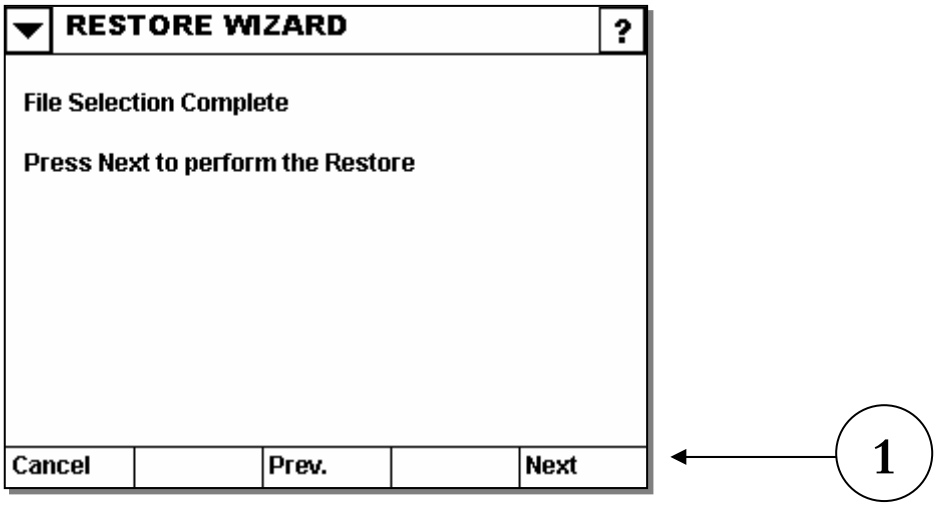
The wizard takes one step backwards.

Next

The wizard takes one step further.

Restore wizard step four:

Ready to start.



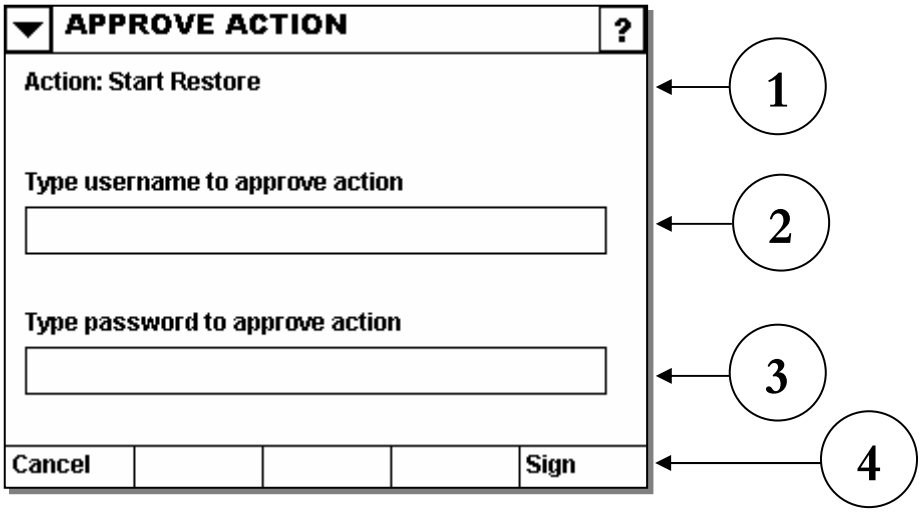
Previous

The wizard takes one step backwards.

Next

The wizard takes one step further.

Signature required.



(1) Action

The name of the operation that requires a signature.

(2) Username

Type in the username of a user authorised to perform the operation

(3) Password

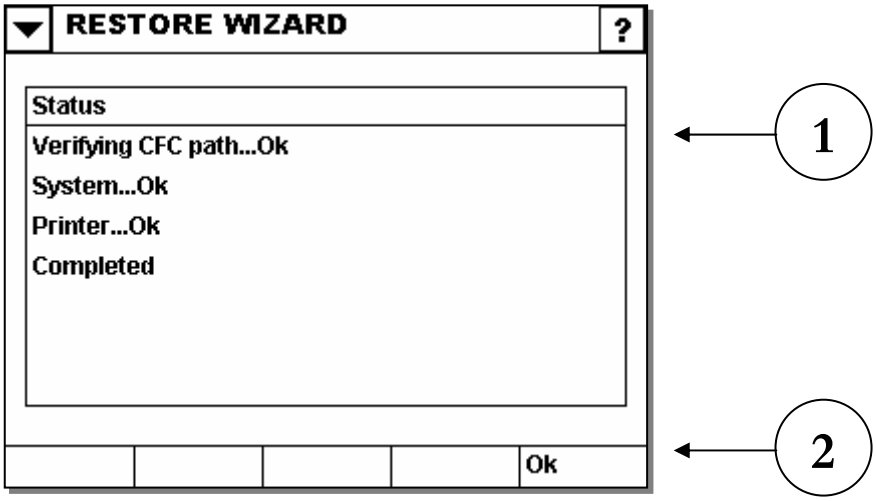
Type in the password for the user.

(4) Sign

Signs the operation and hence takes you one step further.

Restore wizard step five:

Restore in progress.



(1) Status

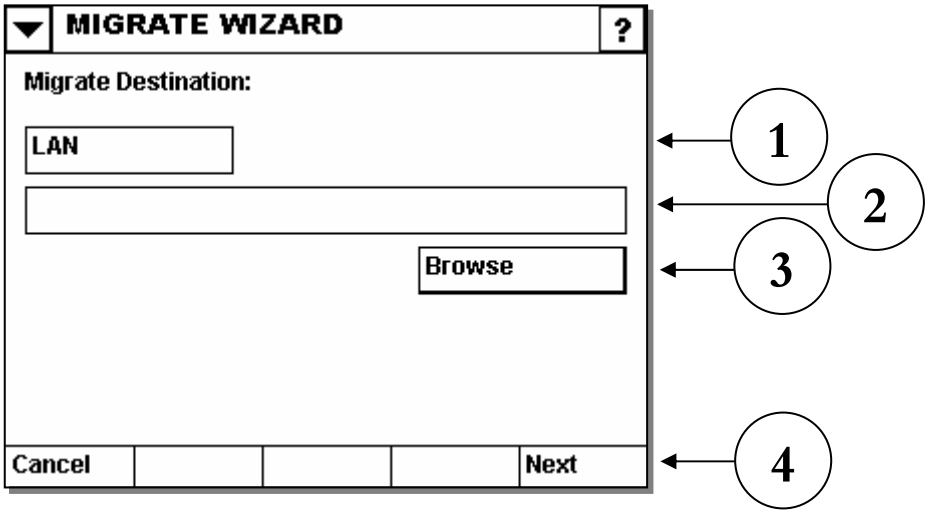
Shows the progress so far.

(2) Ok

The Ok button is hidden until the wizard has completed the operation.

Migrate

Migrate wizard step one: Select destination.



(1) Destination

Use the drop down menu to select the destination media. Choose between LAN (Local Area Network) or the external memory card.

To use the LAN there must be a working network shortcut.

To use the external memory card, ensure one is inserted into the system.

(2) Path

Type in the path where you want the data to be placed.

A blank path indicates the root folder (only viable when using the external memory card.

(3) Browse

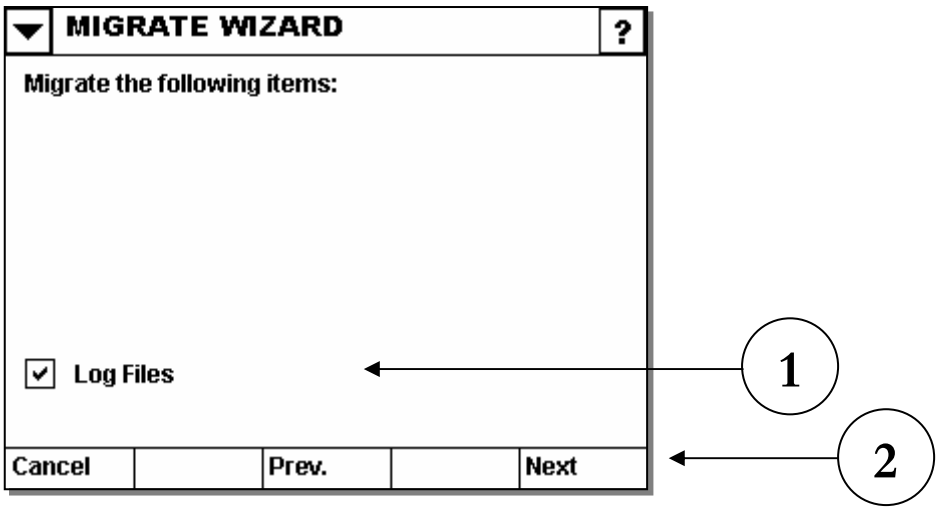
Browses the media selected allowing easy selection of the correct path.

(4) Next

Verifies the destination media and path. If accepted, the wizard takes one step further.

Migrate wizard step two:

Select items for migration. (Not all items may be migrated).



(1) Log Files

The log files stores information about all the important events.

(2) Previous

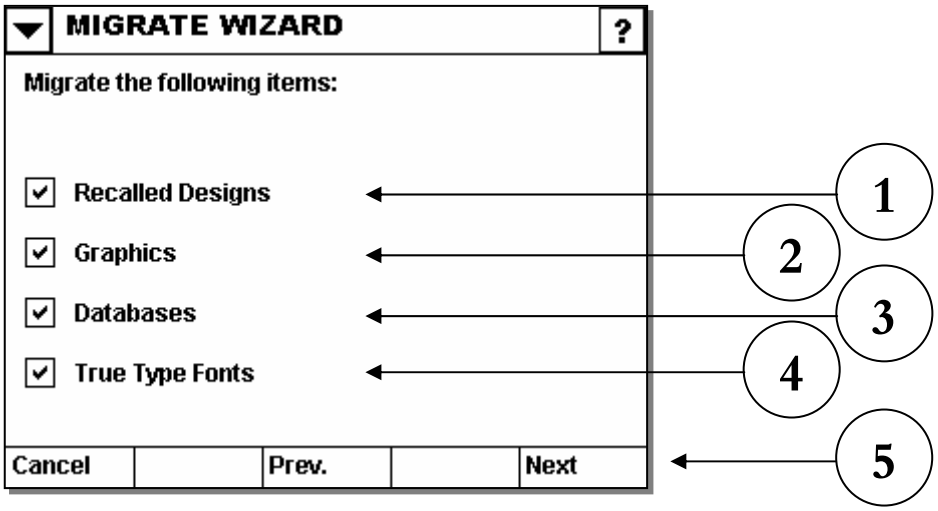
The wizard takes one step backwards.

Next

The wizard takes one step further.

Migrate wizard step three:

Select more items for migration.



(1) Recalled Designs

Old designs that are no longer used.

(2) Graphics

Graphics used within the designs.

(3) Databases

Any dBase file the user has stored on the internal memory card.

(4) True Type Fonts

Any user installed true type font.

(5) Previous

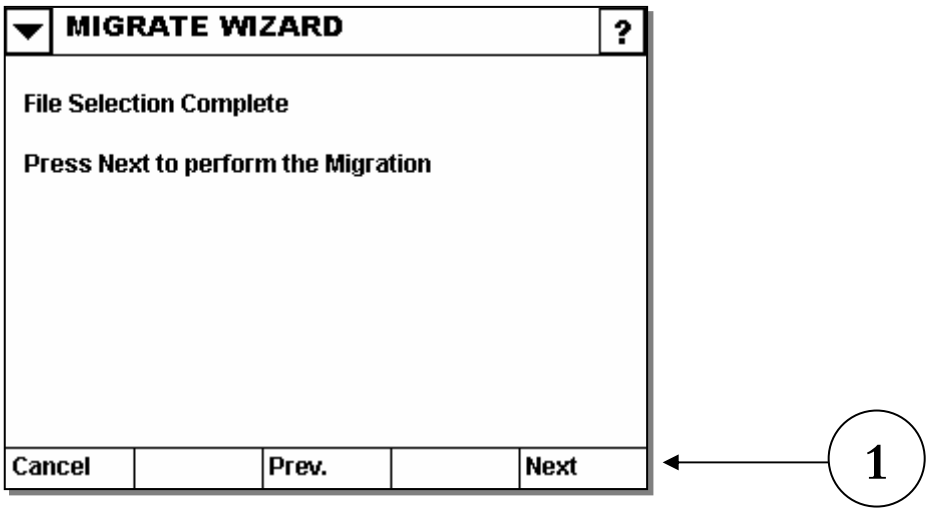
The wizard takes one step backwards.

Next

The wizard takes one step further.

Migrate wizard step four:

Ready to start.



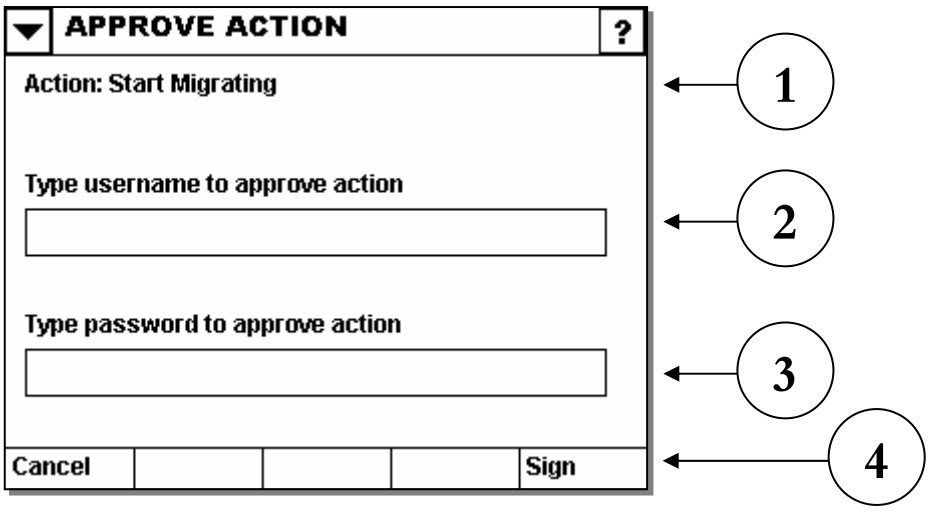
(1) Previous

The wizard takes one step backwards.

Next

The wizard takes one step further.

Signature required.



(1) Action

The name of the operation that requires a signature.

(2) Username

Type in the username of a user authorized to perform the operation.

(3) Password

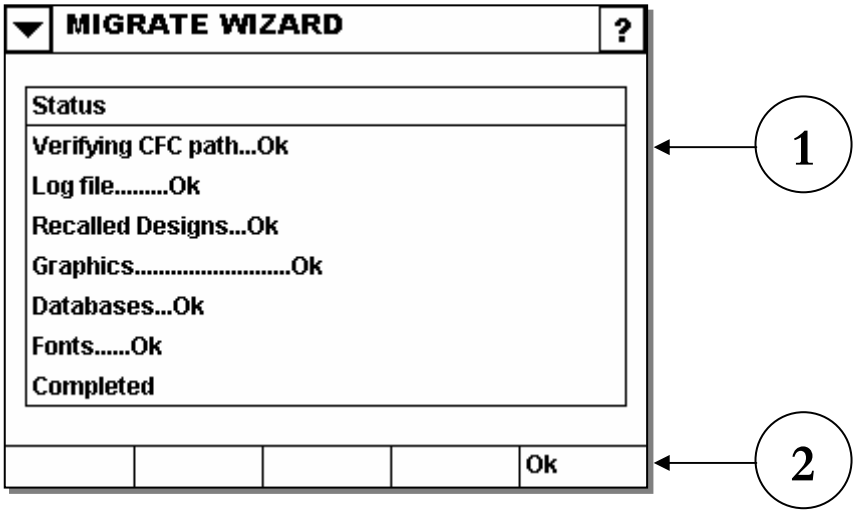
Type in the password for the user.

(4) Sign

Signs the operation and hence takes you one step further.

Migrate wizard step five:

Migration in progress.



(1) Status

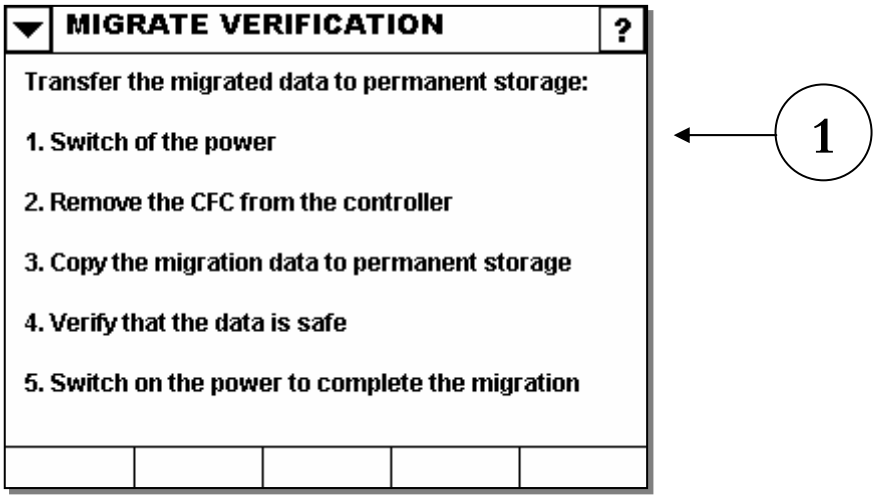
Shows the progress so far.

(2) Ok

The Ok button is hidden until the wizard has completed the operation.

Migrate wizard step six:

Migration verification.



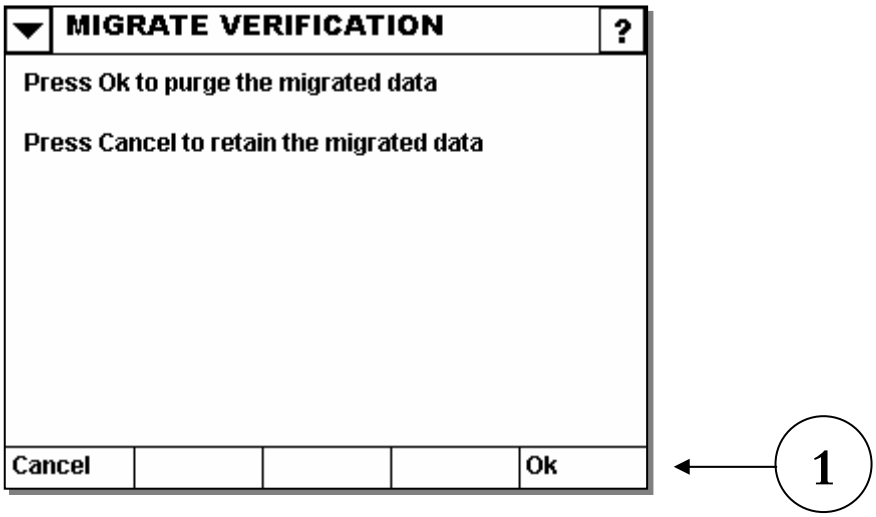
(1) Migrate Verification

Follow instructions on the screen.

You are forced to shut down the system to remove the memory card.

Migrate wizard step seven:

Migration completion.



(1) Cancel

Indicates to the system that the migration has failed and all data must be retained.

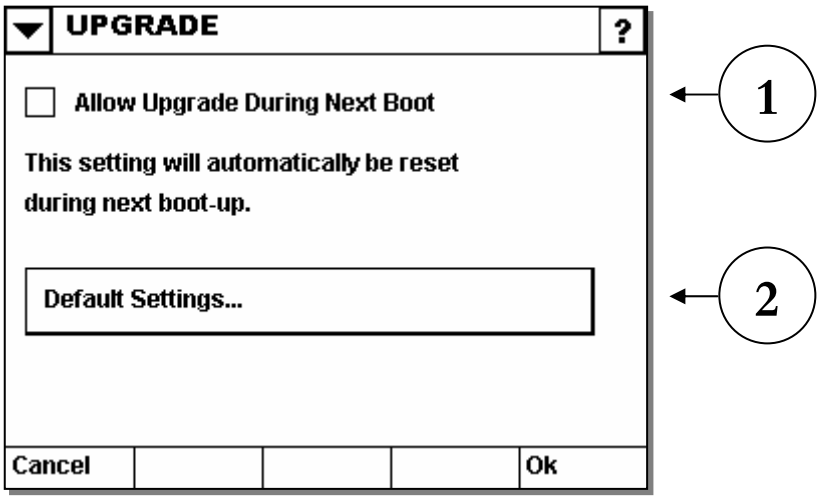
Ok

Indicates to the system that the migrated data is safely stored on permanent storage and therefore may be purged from the system.

Upgrade

Before the internal software can be upgraded to other versions, allow this to happen.

Next time the Control Box is restarted with a new flash card with the new versions, the program will be changed and all parameters will be updated in accordance to the new version.



(1) Allow Upgrade

Press the field on the screen that marks the field and allow upgrading to new software on the next restart.

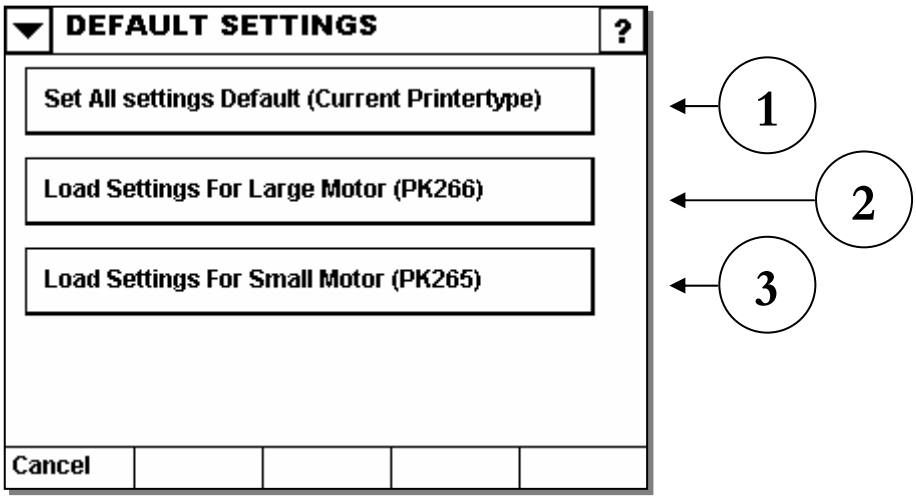
Then press Ok

Default Settings…

Displays a menu that allows the resetting of the system to factory defaults.

Entering the menu, will not cause any damage.

Default Settings



(1) Set All Settings Default

Resets ALL run settings to factory defaults.

You have the alternative to reset just a single run setting (which may sometimes be a better solution). Please see page 153.

(2) Load Settings for Large Motor

Enables the controller to use the stepper motor PK266.

This button is only required if the printer has been physically modified.

(3) Load Settings for Small Motor

Enables the controller to use the stepper motor PK265.

Use this button if the firmware has been updated AND the printer is equipped with the stepper motor PK265.

FAULT FINDING

Sensor test

Sometimes it is required to test the sensors of the printer unit.

To do so, go to the "Sensor Test" menu of the controller.

The "Sensor Test" menu can be reached from the "Main" menu by:

(1) Settings

(2) Hardware

(3) Diagnostics

(4) Sensor Test.

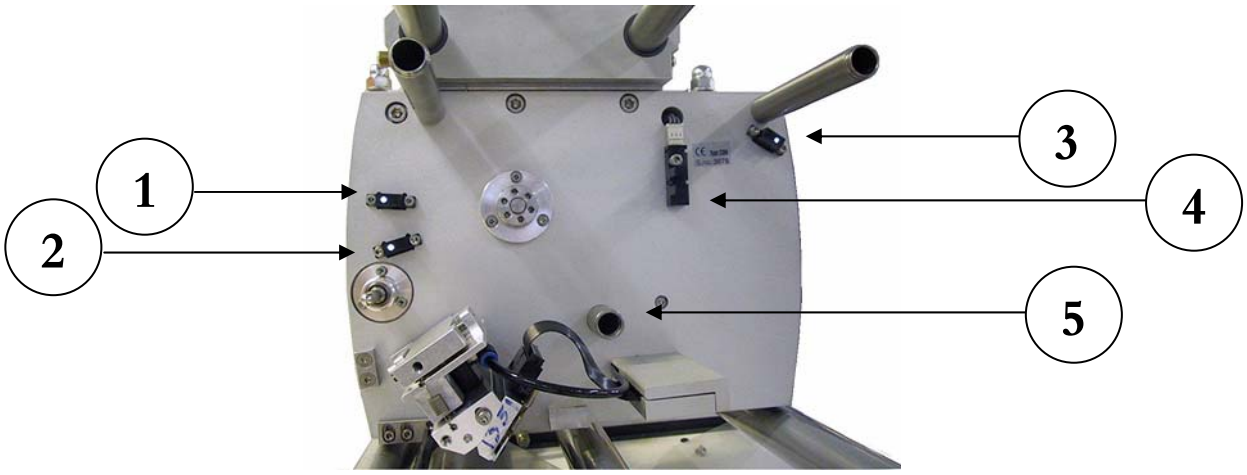
Activate the appropriate sensor and observe that the display switches between "On" and "Off".

Use the images on the next few pages to locate the sensors. Sensors may vary dependent on the actual printer model.

Reflective sensors can be activated by a blank piece of metal.

Fork sensors can be activated by inserting a thin piece of paper between the transmitter and receiver.

Sensor test on a V200



(1) Start Winder

When this sensor is activated by the dancer arm (in the casette) the winder motor is engaged. If this sensor fails, the ribbon will not be wound onto the used ribbon roll.

(2) Stop Winder

As the winder motor tensions the ribbon, the dancer arm moves down until the Stop Winder sensor is reached. If this sensor fails, the winder motor will continue to run and eventually time out.

(3) Ribbon Alarm

If the ribbon breaks, a dancer arm will activate the Ribbon Alarm sensor. A failing sensor results in a ribbon break not being detected immediately.

(4) Ribbon Warning

The Ribbon Warning sensor is used to measure the amount of unused ribbon.

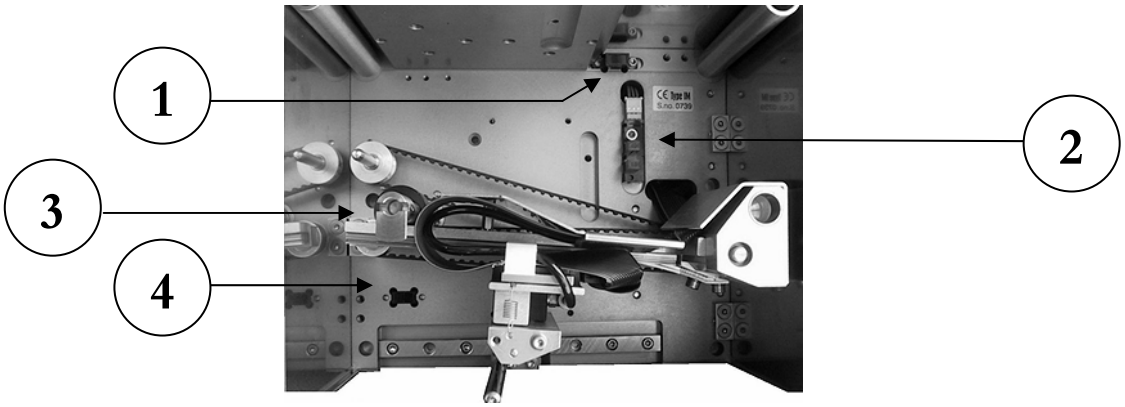
If this sensor fails, a ribbon error will be presented for every X prints, where X is determined by the actual printed message. Usually 2-6 prints.

(5) Cassette open

If this sensor fails the printer may report “Printer Open”.

Check the sensor by opening and closing the cassette.

Sensor test on a V100



(1) Ribbon Alarm

If the ribbon breaks, a dancer arm will activate the Ribbon Alarm sensor. A failing sensor results in a ribbon break not being detected immediately.

(2) Ribbon Warning

The Ribbon Warning sensor is used to measure the amount of unused ribbon.

If this sensor fails, you will get a ribbon error for every X prints, where X is determined by the actual message printed. Usually 2-6 prints.

(3) Cassette open

If this sensor fails, the printer may report “Printer Open”.

Check the sensor by opening and closing the cassette.

(4) Home sensor

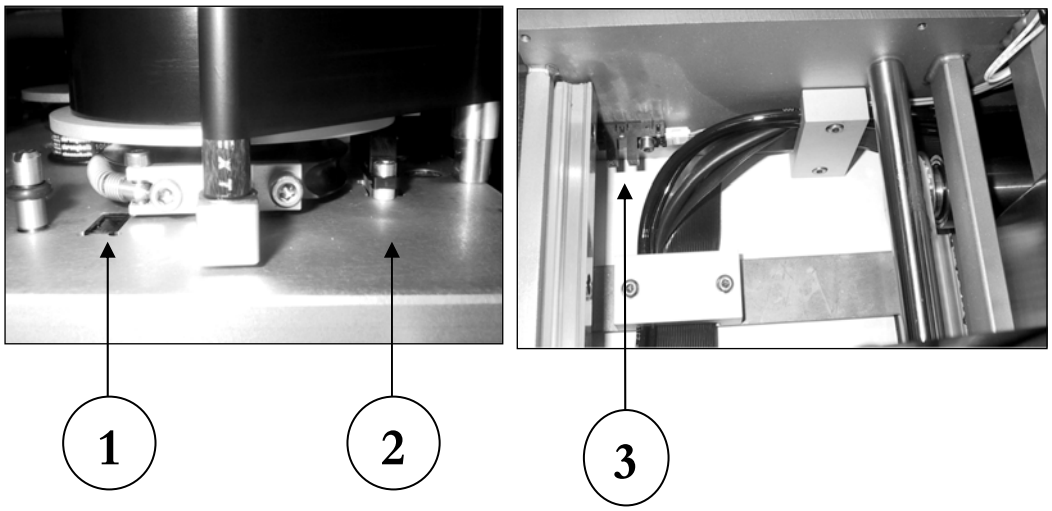
If this sensor fails, the printer cannot locate the home position for the print head carrier and will report Error 1.

Sensor test on a V400

(1) Magnetic sensors

Detect if the cover is removed. The magnetic sensors are connected in series so it is difficult to verify which one is faulty.

Print head carrier **Printer front (left side)**



(1) Ribbon Alarm

If the ribbon breaks, a dancer arm will activate the Ribbon Alarm sensor. A failing sensor results in a ribbon break not being detected immediately.

(2) Ribbon Warning

The Ribbon Warning sensor is used to measure the amount of unused ribbon.

If this sensor fails, a ribbon error will be presented for every X prints, where X is determined by the actual message printed. Usually 2-6 prints.

(3) Home sensor

If this sensor fails, the printer cannot locate the home position for the print head carrier and reports Error 1.

LIST OF ERRORS

Use this list for quick troubleshooting.

If any of the errors persist please contact qualified personnel.

Error No.	Error text	Action
1:	Error HomeSensor or Motor	Open the cassette. Verify that the controller is set up to the correct printer model. Close the cassette and verify that the motor can move the print head carrier. Use the diagnostic function to check the home sensor.
3:	Open while printing	The cassette has been opened during a printing operation.
4	LVDS data not ready	LVDS is the system used to send print information from the controller to the print unit. A poorly grounded cable may cause this error (especially when printing fast). Try lowering the print speed.
5	P/H interface not done	The print speed exceeds the limitations of the print head. Try lowering the print speed or enable Fastmode.
6	Label too long	The total print length (Y-offset + label) is longer than the supported print length. Use a lower Y-offset or shorten the label.
7	Still ready after eoc	Communication error between controller and print unit.
8	Event buffer overflow	To reduce ribbon consumption, the printer stops the ribbon motor if there is a section of white space in the print out. Too many sections of white space can cause this error. Redesign label.
9	Event data timeout	Communication error between controller and print unit.
10	Event data parity error	Communication error between controller and print unit.

Error No.	Error text	Action
11	Speed Too Low	The web speed is too slow to print. Ensure that the web speed is above 50 mm/sec during the entire print cycle.
12	Y-offset too short	The Y-offset it to short. Some parts of the print out may be missed. Increase the Y-offset or reduce speed.
13	Ribbon Alarm	The ribbon is broken or there is no more ribbon left. Check remaining ribbon. In some scenarios an excessive retraction (or mechanical miss adjustment) can cause the unwinding dancer arm to touch the ribbon alarm sensor. A ribbon alarm can also be triggered by the ribbon warning sensor. If the ribbon alarm comes in fixed intervals (like every 5 prints) the ribbon warning sensor may be damaged. Use diagnostics to check ribbon warning and ribbon alarm sensor. Check remaining ribbon.
20	Init: print head voltage	A security system measures the voltage to the print head. If the voltage is too high or to low this error comes up. Check for short cuts in the cable that end in the print head itself. DO NOT REPLACE ANYTHING YOURSELF - call for qualified personnel.
21	Init: Main power supply	The voltage supplied by the interval power supply is tested during start. If the voltage is out of specification (46V±6V) this error comes up. Check the power connection.
22:	Init: PWM valve	Reserved
23:	Init: VPP voltage	Reserved
28:	Empty Label	There is no field in the label or the field does not contain any data. Redesign the label.

Error No.	Error text	Action
101:	Start when controller not ready	A start pulse was detected while the controller was not ready to print. Either a job was not loaded. Controller was waiting for data. Controller was calculating label. Check the start pulse input signal
102:	Start when printer not ready	A start pulse was detected while the print unit was not ready to print. The printer is busy or cassette is opened.
103:	No acknowledge on start pulse	Communication error between controller and print unit.
104:	Step command timeout	Communication error between controller and print unit.
105:	No response	Communication error between controller and print unit.
106:	Printer Not Attached	There is no printer attached. Communication error between controller and print unit. Hardware failure. If there is no printer attached press Ignore to operate the controller without the print unit. DO NOT ATTACH A PRINTER WHILE THE POWER IS ON.
107:	Print pulse while delaying Start pulse	A print pulse was detected while the Start pulse delay system was active. Check the start pulse input signal and the start pulse offset value.
1001:	User Program Not Started	A part of the firmware in the controller was not started. Possible causes: Failed upgrade. Damaged firmware. Check the Versions screen.

Error No.	Error text	Action
1002:	Step User Program Not Started	"Step User Program" Step is the Stepper card located in the printer. The card contains monitor software that initialises the electronics. It also contains a User Program that drives the motors and performs the print process. If the step User Program does not start, the printer cannot operate. The error sometime occurs during an upgrade procedure.
1003:	Step Status undefined	The status of the print unit is currently undetermined. Possible causes: No printer is attached. Communication error. Damaged firmware. Check the Versions screen.
1004:	Step Programming Cancelled	The upgrading of the printer unit was abandoned due to an error. Possible causes: Print unit is not attached. Communication error. Damaged firmware. Check the Versions screen.
1005:	Main FPGA not Started	A part of the firmware in the controller was not started. Possible causes: Failed upgrade. Damaged firmware. Check the Versions screen.
1006:	Main FPGA still not loaded	A part of the firmware in the controller was not started. Possible causes: Failed upgrade. Damaged firmware. Check the Versions screen.
1007:	Main FPGA not loaded	A part of the firmware in the controller was not started. Possible causes: Failed upgrade. Damaged firmware. Check the Versions screen.
1021:	Burst Done Timeout	FPGA related.
1022:	Block Function Timeout	FPGA related.
1023:	Transfer still busy	Communication error between controller and print unit.

Error No.	Error text	Action
1024:	Transfer failed	Communication error between controller and print unit. Incompatible firmware. Check the Versions screen.
1025:	Not ready to transfer	Communication error between controller and print unit.
1026:	Ribbon Warning.	The remaining ribbon has reached the limit specified in the Error/Warning screen. On the same screen the event is set to cause an error. Check the Error/warning screen. Check the remaining ribbon.
1040:	Setting out of range	The setting is out of range. Please set to a correct range
1041:	Undefined Error	Reserved
1042:	Unknown Error	Reserved
1043:	Design Pointer Not Set	Reserved
1044:	Design Delete Timeout	Reserved
1045:	Label Size To Big	The label is too large. Edit the design and reduce the label size.
1046:	No Text Defined Yet	Reserved
1047:	Upgrade Failed	Upgrade failed. Check the Versions screen.
1048:	Special Action Not Found:	Error in firmware. Contact distributor and supply info on how the error occurred.
1049:	CRC Error	All files on the controller have a CRC checksum. The CRC checksum does not match. Either the file has been modified by an unauthorized person, or the file is damaged.
1051:	Error incompatible version	Only on non 21CFR_part 11 controllers: The design being loaded is to new (and hence the controller does not know how to handle it). Upgrade the controller to a newer version.

Error No.	Error text	Action
1052:	Error incompatible version	Only on part 11 controllers: The design being loaded is to new (and hence the controller does not know how to handle it) or to old (created without CRC checksum). Upgrade the controller to a newer version.
1053:	Error unknown log type	Problems with the log feature.
1054:	Error log id missing	Problems with the log feature.
1060:	File not found	A file is not found. Please check the filename.
1061:	No external flash detected	Some operations require an external flash card. No external flash card is detected. Abort the operation. If required insert a Compact Flash Card while the power is switched off.
1062:	Error Writing File	Error while writing a file to disk. Check for free space.
1063:	Low Space on System Disk	The system disk is running low on free space. Databases and images transferred to the controller can consume a lot of space. Lost fragments in the file system (i.e., if an upgrade fails due to power loss) can also be the case. Go to the "Explore" function. Select the system disk (Flashdisk2 or Flashdisk) and select "File" and properties. An info screen is shown. The Size + Free space should correspond to the Total space.(there is newer an exact match due to the nature of the file system). Delete/Migrate old user data or contact your distributor if you suspect lost fragments.
1064:	Critical Low Space on System Disk	The system disk is running critically low on free space - see above.
1065:	Not Enough Space on System Disk	Reserved
1066:	Not Enough Space	Reserved

Error No.	Error text	Action
1070:	Unable to open log file	The log file could not be accessed if the log is located on the LAN check access rights.
1071:	Unable to rename Log file	The log file could not be renamed; log is located on the LAN check access rights.
1072:	Unable to delete old Log file	The log file could not be deleted if the log is located on the LAN check access rights.
1074:	Maximum log size reached.	Reserved
1075:	Could not write to log because of this error:	See the remaining of the text on the display.
1076:	Unable to get file status	The log file could not be accessed if the log is located on the LAN check access rights.
1077:	Unable to create log sub dir	The log sub dir could not be created if the log is located on the LAN check access rights.
1078:	Unable to access Network log file	The log file could not be accessed if the log is located on the LAN check access rights.
1079:	Recursive log write, log disabled	Error in firmware. Contact distributor and supply info on how the error occurred.
1080:	Image not found	The image could not be found. Check the filename (If design is saved on network by EasyDesign check the Save to SRAM field). If the filename is generated by a variable check that the variable yields the correct path/name.
1081:	Image Not Monochrome	The controller only supports images with 1 bit per pixel (Black/white no grayscale).
1082:	Invalid Graphic File	Please check the file. It is either damaged or is not compatible with the controller.
1083:	Only BMP and PCX supported	The controller only supports BMP and PCX images. Use a paint program to convert any other formats to either BMP or PCX.

Error No.	Error text	Action
1084:	Error Reading Image	Please check the file. It is either damaged or is not compatible with the controller.
1090:	Help file not found	The help file for the currently selected language is not found. Select English.
1091:	Invalid Help Screen file	The help file is damaged.
1092:	Help text empty.	No help text is entered for a particular item
1093:	Help tag not found.	No help text is entered for a particular item
1100:	Circular Reference	A variable depends on another variable that in turn depends on the first variable. None of the variables can thus be evaluated. Check the variables dependencies
1101:	Out of range	The value typed in at the prompt is out of the range specified in the variable. Type in a number within the range, or modify the design to accept another range.
1102:	Invalid Value	The typed in value could not be interpreted.
1103:	Too many characters	The user has typed in more characters than specified by the variable. Type in fewer characters, or modify the design to accept more characters.
1104:	Only numeric characters allowed	Only numeric characters are allowed. Type in a number or modify the design to support standard text.
1105:	Variable Not Supported	A design containing a variable type that is no longer supported is loaded. The variable is removed. Use the original program to salvage the variable or save the design to permanently remove the variable.
1106:	Error writing continues sequence file	The sequence variable can be set to resume count. Check for access rights.
1107:	Error loading continues sequence file	The sequence variable can be set to resume count. Check for access rights.

Error No.	Error text	Action
1110:	Illegal destination variable.	A statement can be like this: Destination variable = Source Variable. A destination variable in a macro can be d0 to d19 (integer values) f0 to f19 (floating point values) s0 to s19 (string values) output (Keyword) Optionally {Name of a Macro out variable}
1111:	Illegal Source variable.	A statement can be like this: Destination variable = Source Variable. A source variable in a macro can be d0 to d19 (integer values) f0 to f19 (floating point values) s0 to s19 (string values) Optionally {Name of another variable}
1112:	"=" Expected	A "=" was expected during the syntax check of the macro.
1113:	Illegal compare	A variable is compared to anther variable using an unrecognized compare operator. Use one of the following compare operators: =, == !=, >=, <=, < or >.
1114:	Label Missing	Check the goto command. A goto command was found but the label to jump to where not found.
1115:	Error in if Statement	Check the 'if' statement. An if statement is build up like If (Test) then statement Example: If d0=0 then goto TheValueZero
1116:	Error in format definition	Error in format statement. See section concerning macro programming on page 138
1117:	Error in format var.	Error in format statement. See section concerning macro programming on page 138
1118:	" } " Expected	A "}" was expected during the syntax check of the macro.

Error No.	Error text	Action
1119:	" > " Expected	A “>” was expected during the syntax check of the macro.
1120:	Constant number or var. Expected	A constant or a variable was expected.
1121:	" " " Expected	A “ (quote) was expected during the syntax check of the macro.
1122:	Illegal operator	An unknown operator was found The following operators are supported +: Add two numbers (string concatenation) -: Subtract two numbers *: Multiply two numbers /: Division &: Logic AND |: Logic OR ^: Logic XOR %: Modulo
1123:	"then" Expected	A “then” was expected during the syntax check of the macro.
1124:	Illegal operator for strings	Operator does not support strings.
1125:	Illegal operator for float	An operator was used that does not support floating point values.
1126:	Illegal compare for strings	Use single or double equal (= or ==) to test if two strings are equal. Use exclamation mark equal (!=) to test if two strings are different.

Error No.	Error text	Action
1127:	Can't compare string and number	A string can't be compared to a number. If needed, first convert one type to another type using a temporary variable. If needed to compare d0 and s0, do one of the following: Compare as strings (using s1 as temp): s1 = d0 If s1==s0 then… OR Compare as numbers (d1 as temp) d1=s0 If d1==d0 then…
1128:	Max Loop Count	If any of the statements in the macro is executed more than 1000 times and a result is not yet achieved, the macro is considered to have entered a deadlock. The error comes up to prevent a faulty macro to halt the entire unit. Check for endless loops.
1129:	Variable Not Found	A reference is made to another variable using the {Variable Name} syntax. Check that the referenced variable exists
1130:	"output" Expected	The keyword output was expected. Check for syntax errors.
1131:	Variable or Const Expected	A variable or a constant (number or text) was expected. Check for syntax errors.
1133:	Unknown System Var	A reference is made to a system variable using the <Variable Name> syntax. Check the name.
1134:	Macro Value Overwritten	Not used
1135:	Variable index out of range	A local variable is indexed out of range. Range is from 0 to 19 (i.e. d0-d19)

Error No.	Error text	Action
1136:	Label not found	The label referred to by a goto statement was not found. Check syntax
1137:	String Value overflow	The maximum length of a string variable is 0x7FFF (32767) characters. Check the macro. There may be a programming error that causes the strings maximum length to be exceeded.
1138:	Floating point Value overflow	A floating point value has exceeded its maximum value. Check the macro. There may be a programming error that causes this error
1139:	Division by zero	You can't divide with zero. Check the macro. There may be a programming error that causes this error
1140:	Unreferenced Macro Output variable	A macro output variable is inserted into a field (example: a text field), but is not updated by a macro variable. Check the macro and the macro output variable for any inconsistency (You can't have a macro output variable on its own: It needs a macro to calculate its value).
1141:	Macro Out Variable already ref.	A macro output variable can only be updated by one macro. This error is raised if multiple macros try to access the same macro output variable.
1142:	Read only destination var.	The destination variable is read only.
1143:	To Few Parameters	The function used needs more parameters
1144:	To Many Parameters	The function used needs fewer parameters

Error No.	Error text	Action
1170:	Database File not found	The database file could not be found. Please check the filename. Usually this can happen if the design is simply stored by the design software on a network drive.
1171:	Database Key not found	The key was not found. Check the database and / or the key.
1172:	CodePage file not found	The codepage specified by the variable could not be found. Please check the codepage selection.
1173:	Interrupt Not Initialized	A part of the printing software was not started correctly. Restart unit.
1174:	No columns in file	No columns are found in the database file. Check filename and integrity of database.
1175:	Database Row Not Found	A search in the database for a particular row failed. Check filename and integrity of database. Verify the search key.
1176:	ODBC Server not licensed	The ODBC server application cannot supply data as it could not find the license. Check license on computer.
1177:	ODBC Server not initialized	The ODBC server is not started. Check ODBC server.
1178:	ODBC Server not available	Could not connect to the ODBC server. Check ODBC settings (IP address).
1179:	ODBC Request is not acceptable	Connection error.
1180:	ODBC Connection id not found	Connection error.
1181:	ODBC Database not found	The database requested was not found by the ODBC server. Check ODBC server.
1182:	ODBC Database not prepared	The ODBC server needs to prepare the database. Check ODBC server.
1183:	ODBC Unknown error	Unknown error.
1184:	ODBC table or column not found	The table or column was not found. Check database and input data.

Error No.	Error text	Action
1185:	ODBC error while executing sql	The ODBC server failed while executing an SQL statement. Check ODBC server.
1186:	ODBC database not open	The database was not opened. Check ODBC server.
1187:	ODBC not activated	The checkmark "ODBC Active" is not enabled.
1200:	Serial variables buffer overflow	The serial variables input buffer was overflowed. Check the device that fills info into the buffer
1201:	No active serial variables named:	An external device tries to access a serial variable that does not exist. Check design and the external device.
1202:	No active serial design	A variable definition was transferred out of scope. Check the transmission.
1203:	Error in input definition	Syntax error in the input definition
1220:	Error Creating Design Item	The item could not be created.
1221:	Error Creating Variable	The variable could not be created.
1222:	Unknown Barcode Type	The barcode item contains info about a type currently not known. Check the design.
1223:	Bad Label Design Version	The design version could not be read correctly. Design could be damaged. Check design.
1224:	Error Reading Design	The design could not be loaded. Design could be damaged. Check design. Possibly an incorrect filename was specified. Check filename.
1225:	Unable to start printing due to an error	At least one error was encountered during the loading of the design. A print cannot be printed in this case. Check the preceding errors.
1226:	Printing halted due to an error	An error was encountered in the printing process that has halted the print. Check the preceding errors.
1227:	Error Reading Design	One (or more) fields could not be read. Design could be damaged. Check design.
1228:	Unknown error while reading design	Design could be damaged. Check design.

Error No.	Error text	Action
1229:	Unable to print. System log failed	On a CFR21 Part 11 compliant system printing cannot start if the system log fails. Check free space.
1230:	Invalid anchor point	The anchor point setting could not be set. Check transmission.
1231:	Error receiving design item	Error encountered while receiving a label. Check transmission.
1232:	Item Did Not Fit Label	The item could not be inside the label border. Check the field.
1241:	Text Did Not Fit Block	The text typed in could not be inside the rectangle specified. Check the design item.
1242:	Word Did Not Fit Max Width	A word was longer than the line length. Check the field size and the text.
1243:	Block Did Not Fit Label	The enveloping rectangle around the field cannot fit the label. Check the size of the field and the data.
1244:	Text Did Not Fit Label	Too much text is typed in to fit the label. Check the field.
1245:	Xpos Greater Than Label Width	The x position is set outside the label border. Check the field.
1246:	Ypos Greater Than Label Height	The y position is set outside the label border. Check the field.
1261:	Access to network denied.	Check user name / password of the network shortcut. Consult the network administrator.
1262:	Already connected to network.	The network thinks connection has already been made.
1263:	Shortcut name is invalid.	The name of the network short cut is invalid. Please check the name.
1264/1265:	Network path not acceptable/invalid, or cannot be located.	Problem with the network path. A network path syntax is: "\\ServerName\ShareName"
1266:	Network busy. Try later.	Try again later.
1267:	Network connection was cancelled.	Cancel was pressed before the connection was established.
1268:	Device is already remembered.	The network thinks you are already connected.
1269:	The specified password is invalid.	Check the password.

Error No.	Error text	Action
1270/1271	Shortcut not connected, or could not be handled.	The shortcut is currently not connected. Check status of the shortcut.
1272:	There is no network present.	The network is no longer available. Check the cable.
1273:	Bad network path.	Problem with the network path. A network path syntax is: "\\ServerName\ShareName"
1274:	Shortcut is no longer available.	The network is no longer available. Check the cable.
1275:	CRITICAL: More entries are available.	General network error.
1276:	CRITICAL: The handle is not valid.	General network error.
1277:	CRITICAL: Parameters contain invalid values.	General network error.
1278:	CRITICAL: Does not point to a container.	General network error.
1279:	A network error occurred	General network error.
1280/1281:	Shortcut has files open or requests pending.	The connection cannot be closed because a file is not closed yet. Close all files and try again.
1282/1283	An unexpected network error occurred.	General network error.
1284:	Network connection Timeout	The network connection timed out. Try again
1290:	Invalid IP Address	Check the IP address.
1291:	IP Conflict!	Check the IP address or use DHCP
1292:	Unable to register host name	Check the host name.
1293:	Disconnection Failed	Try again.
1294:	Error Disable Network Thread	Switch off unit
1400:	Windows Socket Init Failed	Could not initialize networking features. Reboot unit.
1401:	Unknown Error	Unknown protocol error.
1402:	Unknown Receive Id	The information received was not recognized. Check transmission.

Error No.	Error text	Action
1403:	Unknown Send Id	The information to send is not recognized by the protocol. Check transmission.
1404:	ETB Missing	A control character is missing. Check transmission.
1405:	Unable to start receive thread	Could not initialize networking features. Reboot unit.
1406:	Init Serial port	Could not open serial port. Try to reopen the port by switching baud rate.
1407:	Read Timeout	The start of a command was read, but the remainder of the command was not received within a period of time. Check the sending device.
1408:	Memory Allocation Failed	Could not allocate enough memory.
1409:	Write Timeout	The receiver does not accept data. Check cable.
1410:	Invalid Handle	The internal handle used for the transmission is invalid. Either the port was not opened properly or another device is blocking the port.
1411:	Error Creating send block	Any transmission is sent in blocks. One such block could not be created. Check transmission.
1412:	Error Reading String	A string was supposedly sent but the receiver could not recognize the format. Check transmission. Lower the baud rate. Enable Hardware handshake.
1413:	Error Reading Integer	An integer was supposedly sent but the receiver could not recognize the format. Check transmission. Lower the baud rate. Enable Hardware handshake.
1414:	Error Reading Double	A floating point number was supposedly sent but the receiver could not recognize the format. Check transmission. Lower the baud rate. Enable Hardware handshake.

Error No.	Error text	Action
1415:	Error Reading data	A block of raw data was supposedly sent but the receiver could not recognize the format. Check transmission. Lower the baud rate. Enable Hardware handshake.
1416:	Version Conflict	The software in the unit or the external device is to old.
1417:	Unexpected Answer	Communication error. Try again.
1418:	Failed To Receive Command	Check cable.
1419:	Error Parsing Block Buffer	Check transmission.
1420:	Invalid Socket Data Block	Check transmission.
1421:	Failed To Send Command	Check cable.
1422:	Handshake failed closing connection	Check cable.
1423:	Socket ident is not valid	The internal handle used for the transmission is invalid. Either the port was not opened properly or another device is blocking the port
1424:	Client protocol is too old	Check versions. Upgrade external device if required.
1425:	The socket is already in use	Try later
1426:	Invalid host address	No unit with the specified name or address could be found. Check name and network connection.
1427:	Unable to create new socket	Try again. Reboot unit.
1428:	Unable to connect socket	Try again. Reboot unit.
1429:	The socket is not connected	Try again. Reboot unit.
1430:	Invalid socket package	Try again. Reboot unit.
1431:	Unable to start listen thread	Reboot unit.
1432:	Error terminating listen thread	Reboot unit.
1433:	Unable to accept socket	Not used
1434:	Printer protocol is too old	Check versions. Upgrade unit if required.
1435:	Error starting network socket	Reboot unit.
1436:	Unknown Setting Id	Check transmission
1437:	Failed to allocate socket command data block	Could not allocate enough memory. Try again. Reboot unit.

Error No.	Error text	Action
1438:	Command is not supported by actual version	An attempt to send data not supported by the actual version used. Check capabilities of used version. Upgrade if required or modify the transmission.
1439:	Id not supported for this array	An attempt to send data not supported by the actual version used. Check capabilities of used version. Upgrade if required or modify the transmission.
1440:	Failed to save command to file	Check data to store. Check file-access rights.
1441:	Failed to read command from file	Check data to read. Check file-access rights.
1442:	Socket may not be connected while file operation	Close any connections and try again.
1443:	Error receiving format specific server	An error was detected in the data that was received and was supposed to go to a serial variable with a specific input definition. Check the serial variable and the data sent by the external device.

ELECTRICAL

Problem	Action
No light showing in display on power up	The power switch must be in the ON position. This switch is located at the rear of the Controller. Check that the mains cable is correctly inserted into the mains connector below the switch. Check that the mains fuse on the fuse selector is okay and replace if necessary. The fuse is 3.15AT for 230VAC and 6,30AT for 115VAC Check the mains supply to the V SERIES CONTROLLER. There may be another fuse installed to protect the Mains Cable at source. 8 A fuse defect on power supply.
The Controller is functioning but there is no print reaction	Incorrect printer selection. Go to settings in the menu, click hardware, click printer type and chose the correct printer.

PRINT QUALITY AND PRINT HEAD

Problem	Action
No Information is Printed	If the printer appears to be operating correctly but no data is printed, check the following: Is a valid layout selected? Check the print speed and darkness values are at appropriate levels for the thermal ribbon and substrate. Is the print head coming into full contact with the print platen / roller across its full width? Is the correct ribbon loaded with the inked surface away from the print head and is it driving correctly? Check the air supply is at the appropriate pressure. On continuous printers the encoder signal may not be providing the correct speed information. The print head may be faulty.

Problem	Action
Poor Print Quality	The most common causes of poor print quality are: A dirty print head. Clean the print head using the Domino "Cleaning kit" Wipes and try again. Take care not to damage the print head during cleaning. Always allow the print head to cool prior to cleaning. A dirty, worn or badly misaligned print platen / roller. Produce a full size test print to establish the quality of the print. The ribbon is not driving correctly. Clean the ribbon rollers and check that the ribbon is loaded correctly. Excessive vibration of the packaging machine. Improve the mounting of the printer. If possible increase the print delay so that vibration has reduced by the time printing starts. On I/5 printers, the substrate is still moving when printing starts. Increase the print delay. On V200 & CM printers, the speed encoder is not providing an accurate measurement of the speed of the substrate. The matching of the ribbon used to the substrate is very important. An incorrect match will not give good print quality. Contact your local Domino distributor for further details. Check the air supply is at the appropriate pressure. If lines of dots are not printing and cleaning the print head and platen / roller does not resolve the problem, replace the print head.

Problem	Action
Air pressure settings	Make sure that the air is connected on the back side of the printer body. Check that the air pressure regulator is set to the required pressure: Typically 2-4 bar always a little higher on the 5 inch printers. The regulator setting required depends upon the print head gap; the distance between the print head, in it's home position, and the print platen, or print roller. Exceeding the stated pressure will overstress the print head. The setting of the air pressure is critical to the performance of the print head. Too little pressure will result in poor quality or no print. Too much pressure may result in increased physical wear on the print head and platen. The substrate is marked where the print head has dug in. To get the optimum air pressure for the application, it is recommended that the print head to substrate gap is set between 0.2 and 1.0 mm. The air pressure should then be increased until a good quality print is apparent. As a rough guide this should be between 2.5 - 4 bars. The operation of the solenoid may be tested by toggling the output on the "I/O test" in "Diagnostic" on the screen.

Problem	Action
Print darkness	Print contrast levels should be set in relation to the print speed. For example, if the print speed is high, the print contrast may have to be raised to achieve good print quality. If the print speed is lowered the print contrast should be reduced accordingly. As a general rule contrast levels should be kept as low as the line speed and print quality requirements will allow. This will ensure that the print-head life will be used to its optimum. Contrast levels that are too high may also contribute to poor print quality or ribbon breakage (especially when printing bar-codes or horizontal lines). The maximum contrast level for any print speed is 120%. If a print head dot has become damaged and no replacement is readily available, raising the contrast level may be enough to spread the heat to effectively close the gap. This would allow the printer to be used while a new print head arrived.

Problem	Action
Faded print	Print quality is dependent on the following: Quality of the substrate and ribbon being used, Print contrast Air pressure and print speed combination Condition of the machine being used to print The age and storage conditions of the ribbon can also affect the print quality. The print head should be kept clean by using Domino cleaning kit. It should never be touched with any abrasive material or metallic objects. Recommendations: Clean the print head and platen Increase the air pressure Increase the contrast Reduce the print speed Reduce print ratio. Review ribbon.
Faded on one side	This is generally due to a misalignment of the printer to the platen roller/ pad. The print head will move down to print on the substrate, and will hit one side of the roller/ pad first. Recommendations: Check that the print head / not loose, especially if it has just been replaced. Align the printer correctly.

Problem	Action
Print rubs off	This can be for a number of reasons: There is not enough energy going to the head. This is more apparent in cold environments. Increasing the Darkness and in extreme conditions, the background energy levels of the head can make a difference to the permeability. In environments of high temperature and humidity, the applied ribbon may still be warm and could rub off. Trying a different ribbon grade could be the solution. Mismatch in ribbon/ substrate. Some substrate has coatings that make it very difficult to adhere to. The coatings may be, for example, a wax/ resin mix similar to the actual ribbon. If this is the case, then trying another ribbon grade is the best recommendation. Ask your local Domino distributor for ribbon advises.
Ribbon Creasing	Ribbon creasing is generally due to the ribbon attempting to 'track' across the print head. The most common causes are: Bent ribbon guide pins. This may occur if the cassette is dropped. It is not usually possible to bend a pin back into position. Remove and replace the guide pin. A bent peel off roller. Remove and replace the peel bar. Poor print platen / roller alignment can in some cases cause ribbon creasing as the substrate tries to pull the ribbon across the print head.
Print roller/ platen	If the print roller has become damaged this will cause print quality problems. A flat spot on the roller will appear as a repeated blank area on the Test pattern.

Problem	Action
Encoder	Check that the encoder is rotating freely. The V200 & CM will not print unless the encoder is moving. Check that the encoder signal is sending a signal back to the V SERIES CONTROLLER using the "Diagnostic"-"sensor test"
Ribbon Drive Problems	If the print darkness is too high or the print Speed too low, the ribbon can be weakened and break. This can be eliminated by *reducing the darkness* or *increasing the speed*. The ribbon rewind is not taking up the waste ribbon correctly. Check that there is no interference between the accumulated wasted ribbon and any other part of the printer body. Ensure that the waste ribbon spool is gripping the core firmly.
Missing front edge of the print out	Head down time is too short. Increase the head down time step by step in 'run settings' until the front edge is included. Should the controller report that the Y-offset is to short please increase its value. The reaction length is too long creating an overlap between two prints on the used ribbon. If the driver roller is greasy the reaction length will be showing an incorrect image of how much the ribbon is being pulled back as it will slide of the spool.
Rear edge of print out is missing	Head up time is too long. Decrease the time in run settings.

Problem	Action
There are unprinted lines in the print	Clean the print head. Dirt can be difficult to remove and we recommend a thorough cleaning Any scratches on the rubber platen or rubber roller will effect the print out. Please move the printer to another position with no scratches. It might be necessary to change the counter pressure platen or roller or simply clean it. You have one or more defect print dots. Try and move the design in position x to an area where the defect dot is not being used. If not possible please change the print head.
Printout is periodically missing and the printer creates a flopping sound while printing	The air pressure is too powerful and air regulation must be reduced. It is important not to lower the air pressure so much that the print head is out of contact with the counter pressure platen/roller as this can result in a more rapid burn out off the print head.

Problem	Action
Unclear or non existent print out.	The air pressure is too weak and air regulation must be increased. It is important not to lower the air pressure so much that the print head is out of contact with the counter pressure platen/roller as this can result in a more rapid burn out off the print head. Should this appear to be a periodic error, it can be caused by an unstable air supply. The contrast is too weak or non existent. Control that the contrast is increasing step by step in 'run settings' until a satisfying quality has been achieved. Always try and obtain a satisfying print quality using as low a contrast as possible. Incorrect ribbon on packaging material. This is a common error when using other ribbon than Domino ribbon. Incorrect typing of print head resistance on change of print head. When changing the print head it is important to type in a new resistance value. Do so by going to settings, click hardware and choose printer type. The print head cable is incorrectly installed after changing of the print head. Ensure all power is off when controlling this. The print head is worn out.
Print does not stick to the material and is not resistant to soft scratching	The air pressure is too weak and needs to be increased on the air regulator (max. 5 bar) Incorrect adjustment of the contrast. Incorrect ribbon is being used on packaging materiel It is not uncommon for the printout to be affected by heat or cold later in the process after a complete print job. Should an incorrect ribbon have been used this will have a negative effect on the print resistance.

Problem	Action
A large part or parts of the print out is missing.	The ribbon is double layered. Remove the cartridge and make sure there are no folds on the ribbon. There are more defect dots in the print head
There is shading/smudging on the first part of print out	Head down time is too long. Reduce this in 'run settings' until the front edge is clean Should the smudging still appear please increase the 'Motor start off set' step by step until a satisfying result is obtained.
There is shading/smudging on the last part of print out	Head up time is too short. Increase this in 'run settings' until the rear edge is clean Should the smudging still appear, increase the 'Motor stop off set' step by step until a satisfying result is obtained.
Display shows 'print head interface not done'	The print speed is above 1000 mm/sec and it is necessary to activate the fastmode. Please do this by 'run settings' - 'Quality'
The ribbon is breaking	The air pressure is too powerful and will need to be reduced on the air regulator. The air pressure is too powerful after activating the ribbon economy whilst not reducing the air pressure. This is very important. The ribbon spool is damaged The contrast is too high The ribbon economy has been reduced but the contrast has not. It is very important to follow this through when activating the ribbon economy functionality.
The packaging machine is signalling print	Incorrect connection of the print signal.

Problem	Action
go but nothing happens	Control the colours in the I/O cable There is no closed contact from the packaging machine on print signal. Control the packaging machine signal. The I/O is set on continuous settings on the V SERIES CONTROLLER
The packaging machine continues running on ribbon error	The ready signal or the error signal from the V SERIES CONTROLLER is not connected correctly. Test from the diagnostic menu on the V SERIES CONTROLLER The packaging machine is expecting a different signal than the closed contact.
The display is showing 'Printer not ready'	The packaging machine is signalling start before the printer is ready. Use the 'start pulse offset' to position the print. Test from the diagnostic menu on the V SERIES CONTROLLER The packaging machine is signalling more than one start signal. Please check for advice in the packaging machine manual.
Display shows "Printer open"	The V SERIES CONTROLLER detects if the ribbon cassette is not locked. A microswitch inside the printer checks the position of the locking bar. To clear this fault, ensure that the ribbon cassette is inserted correctly and that the locking lever is holding the cassette in place.
Display shows “Ribbon error”	A sensor within the printer body checks if the ribbon is used (no more ribbon). If this error is displayed when the ribbon is loaded in the cassette, check the ribbon path. Check any slack in the ribbon. Check that the ribbon core is not slipping on the re-winder. Check the air pressure if it is too high for the ribbon, the Print head may burn through the ribbon.

Problem	Action
Display shows "Temperature too low"	The print head thermistor detects an unusually low print head temperature. This indicates that the print head thermistor is faulty or that there is a fault with the print head cable or one of the connectors. It will also occur if the print head heater is activated but the heater is defective. The V SERIES CONTROLLER will not allow the system to work before the chosen temperature has been reached.
Display shows "ribbon warning"	The V SERIES CONTROLLER detects when the ribbon is running low. The "Ribbon warning" will come up when the value in "remaining ribbon" has been reached. This does not stop the normal operation.

NETWORK

Problem	Action
There is no network connection	An incorrect IP address has been selected. Check network settings or contact network administrator. Check all cables and plugs

SERIAL COMMUNICATION

Problem	Action
No PC communication	Incorrect serial port settings. Control settings. Ensure hardware hand shake usage. Check all cables and plugs

UPGRADING

Problem	Action
No system upgrade from the CFC card	The 'allow upgrade' has been deactivated. Re set in 'Admin - setting upgrade' Control contents of CFC.

PRINTER

Problem	Action
Printer constantly shows ribbon error	Brake is too loose and needs tightening. ONLY ON IM, CM and V400. Not applicable on V200. Ribbon core has incorrect specs. Ensure that you use original Domino ribbon. Ribbon warning sensor may be defect. Verify the sensors using the sensor test located in the diagnostics menu.

Print head does not move up and down	Air pressure not connected or misadjusted. Verify that the air tube is free from bends.
Ribbon tension incorrect. Only CM, IM and V400	Ribbon drive problems can occur if the print ribbon supply tension is not correct. Check the clutch is set to the correct tension using the description under the specific printer model in the manual. If the cork washer is dry it needs Domino's lubrication. If the cork washer is damaged then replace. Please find the specific part number in the spare part manual.
Worn peel off roller	If the peel off roller is difficult to spin due to a build up of material debris between the inner roller body and shaft, change the roller. If the peel roller is much worn and running loose on the shaft, change the roller. Ensure that all ribbon guide pins are square to the base plate.
Print head does not move out	The print head in / out motion is driven by a small pneumatic solenoid. If the head does not move out, use manual the "test button" on the screen and check the following: Check the air supply pressure and the tubes between the components. Check that the head is free to rotate in its mounting. Check the solenoid wiring. Replace the solenoid and / or the air cylinder as required. If the fault persists, replacing the stepper motor board EY0031 may be required.

The print head carries does not move Only IM5	A stepper motor, drive belt and linear slide are used to move the Print head. If the head does not drive, check the following: Check the condition of the drive belt and drive pulleys. Are the stepper motor connections correct? Check the condition of the linear slide. With the power to the unit turned off, is the Print head free to move along the slide? If the fault persists, replacement the stepper board VEY0031 may be required.
Cassette rollers alignment	Pick up the cassette and rotate the ribbon by hand by winding on the rewind spool. Look at the ribbon that goes around the rollers and visually note whether the ribbon is pulling to one side. If this is the case it is probably the cassette rollers that are out of alignment. If alignment is only slightly out, you may be able to gently knock the roller back into alignment. Otherwise the cassette roller will need to be replaced. This is better done at DOMINO repair department.

RIBBON BREAKS

Problem	Action
Ribbon breaks may be caused by one of the following issues.	Check that the cassette brake is not set too tight. This can cause the ribbon to stretch, and eventually break. See how to adjust the break under the specific printer (p. 167). ONLY CM, IM & V400 Check that the encoder is matching the substrate speed correctly, otherwise the ribbon may be dragged out of the printer and eventually break. ONLY CM & V200 Check that the Domino printer is printing whilst the substrate is stationary. ONLY IM5 & V400 Check that the energy to the print head is not too high.

APPENDIX A :TECHNICAL REFERENCE

MACHINE DATA

CONTROLLERS

	FHE	STD
Weight (kg)	8.0	5.0
Electrical supply voltage	230V, optional 115V	230V, optional 115V
Electrical supply frequency	50Hz, optional 60 Hz	50Hz, optional 60 Hz
Fuses	2x 8A VEY9518 1x 2.5A VEY9510-1 1x 4A VEY9514 (115V) or 1x 2A VEY9510 (230V)	2x 8A VEY9518 1x 2.5A VEY9510-1 1x 4A VEY9514 (115V) or 1x 2A VEY9510 (230V)
Operating Temp (celsius)	5° – 45°	5° – 45°
Storage	Internal 64 MB Compact Flash Card (Shared with system, approx 30MB free) External Compact Flash Card up to 512MB	
Serial Interface	RS232 up to 115000 Baud with Hardware handshake	
Network Interface	Ethernet 10/100 base TX	

PRINTER UNITS

	V200	V100	V400
Left hand model	√		
Right hand model	√	√	
2" model	√	√	√
5" model			√
Weight (Kg)	5.7	5.7	35.0
Electrical supply (from controller)	46V DC	46V DC	46V DC
Fuses	None	None	None
Compressed Air Inlet Max	6 Bar	6 Bar	6 Bar
Compressed Air Inlet Normal	6 Bar	2-3 Bar	2-3 Bar
Compressed Air regulated	2-3 Bar	2-3 Bar	2-3 Bar
Compressed Air Flow rate	10 litres /minute	10 litres /minute	10 litres /minute
Operating Temperature (Celsius)	5° – 45°	5° – 45°	5° – 45°
Print speed, normal mode (mm/s)	50 – 800	50 – 600	50 – 600
Print speed, fast mode (mm/s)	500 – 1400	50 – 600	50 – 800
Max Ribbon length	1400 m	450 m	650 m

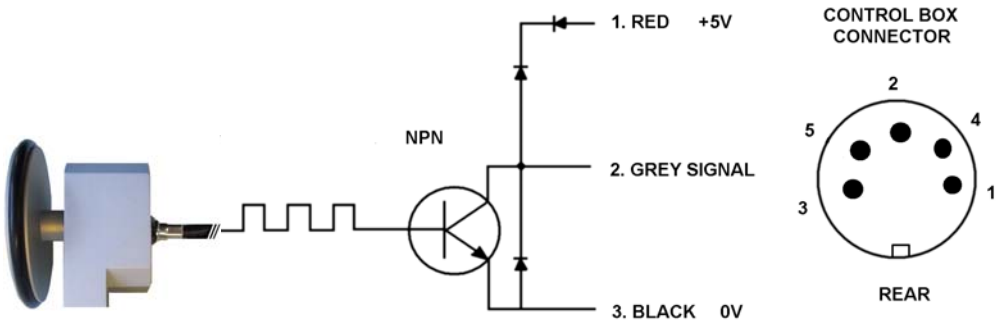
PRINTING DATA

Max Print area 2" model	53 x 106 mm
Max Print area 5" model	(V200 128 x 2700 mm) (V400 128x580)
Material	PE – PP – PA – PET – paper, Tyvek™, cellophane, etc
Print resolution	Normal mode: 12 x 12 dots / mm = 300 x 300 dpi Fast Mode: 6 x 12 dots / mm = 150 x 300 dpi
Truetype Fonts	Arial, Arial black, Arial Narrow, Comic Sans MS, Courier New, Gautami, Georgia, Gulim, Impact, Kino MT, Latha, Microsoft Logo, MS Gothic, MS PGothic, Mangal, NSimSun, Raavi, Shruti, SimSun, Symbol, Tahoma, Times New Roman, Trebuchet MS, Tunga, Veranda, Webdings, Windings; The fonts MRV OCRA I, MRV OCRA III, MRV OCRA IV, MRV OCRB I, MRV OCRB III, MRV OCRB IV, OCR A and OCR B are distributed under a licensing agreement with Morovia Software Inc.
Barcodes	Codabar, Code 128, Code 39, DataMatrix, DUN 14, EAN 128, EAN 13, EAN 8, EAN Add on, Interleaved 2 of 5, ITF 14, ITF SCC 14, GS1 DATABAR , GS1 DATABAR Truncated, GS1 DATABAR Stacked, GS1 DATABAR Stacked Omni directional, GS1 DATABAR Limited, GS1 DATABAR Expanded, UPC A, UPC E.

ENCODER CONNECTION

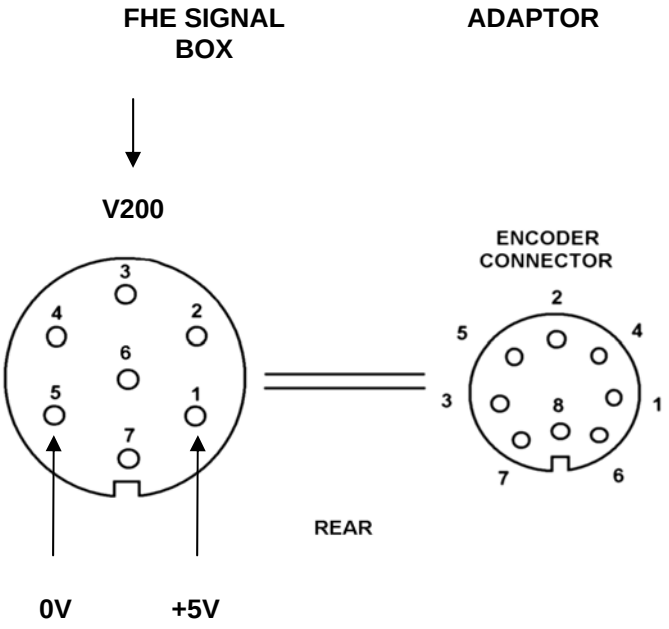
Encoder connection for STD controller

VAS6005



Encoder adaptor for FHE controller

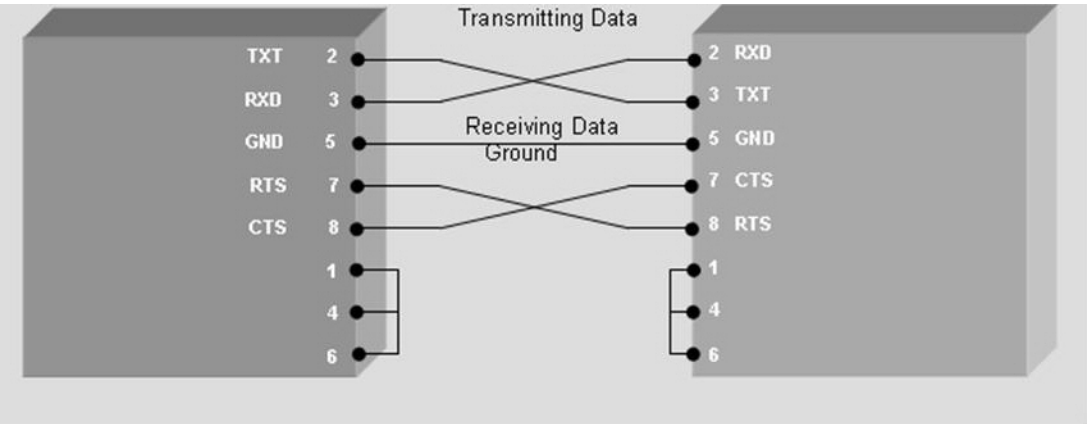
VEY1197



SERIAL INTERFACE

Serial cable for STD controller

VEY1191



Printer - 9 Pole D
Female

PC - 9 Pole D
Female

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APPENDIX B : EASYDESIGN MANUAL

CONTENTS

Amendment Record

Issue 1 March 2007

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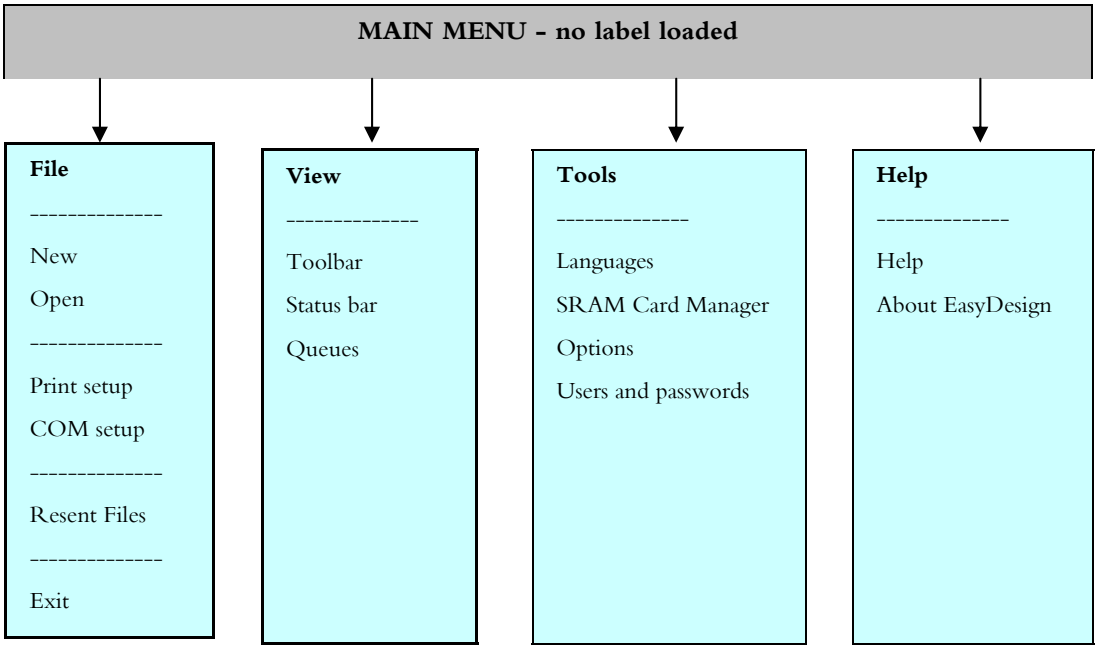
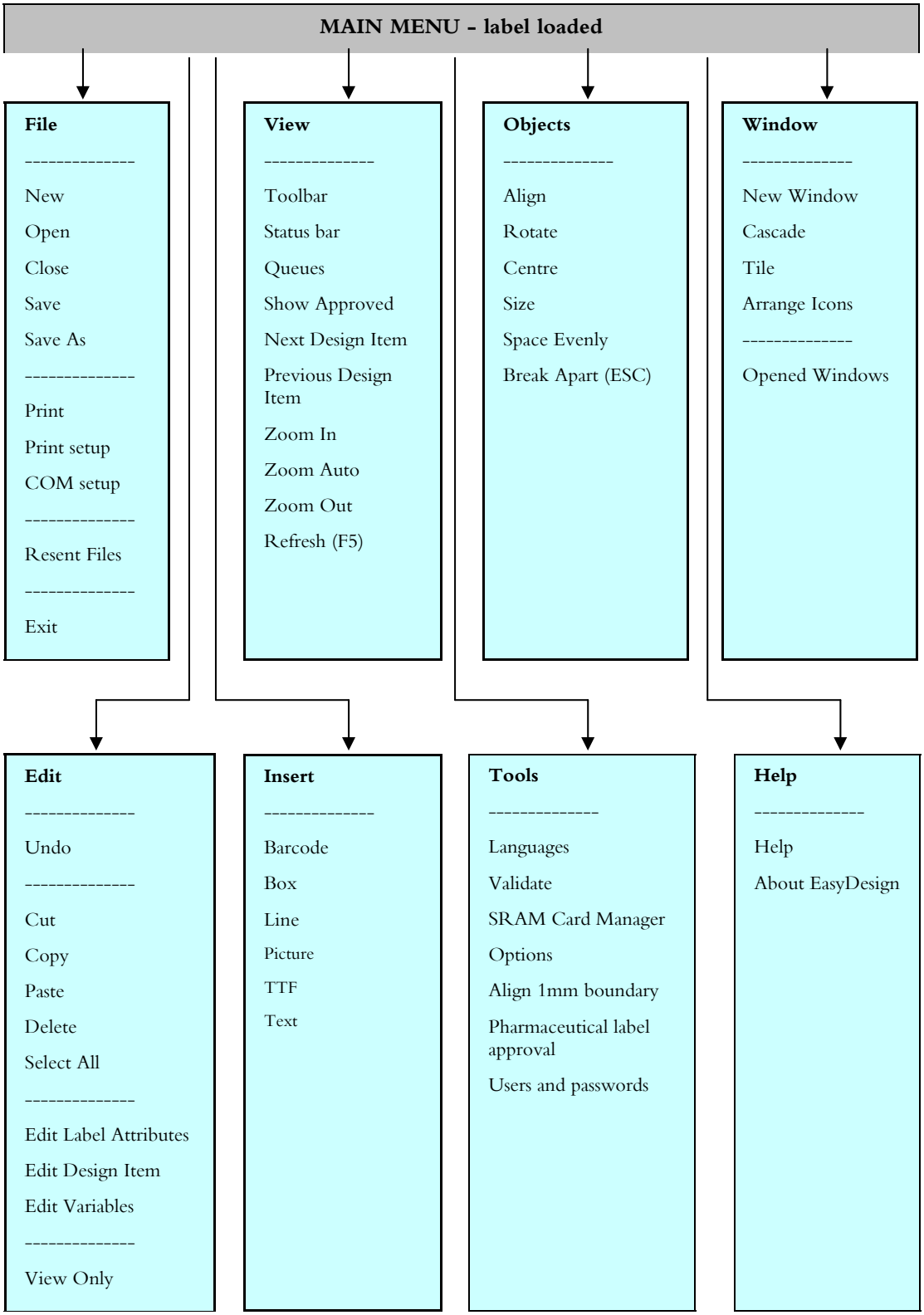
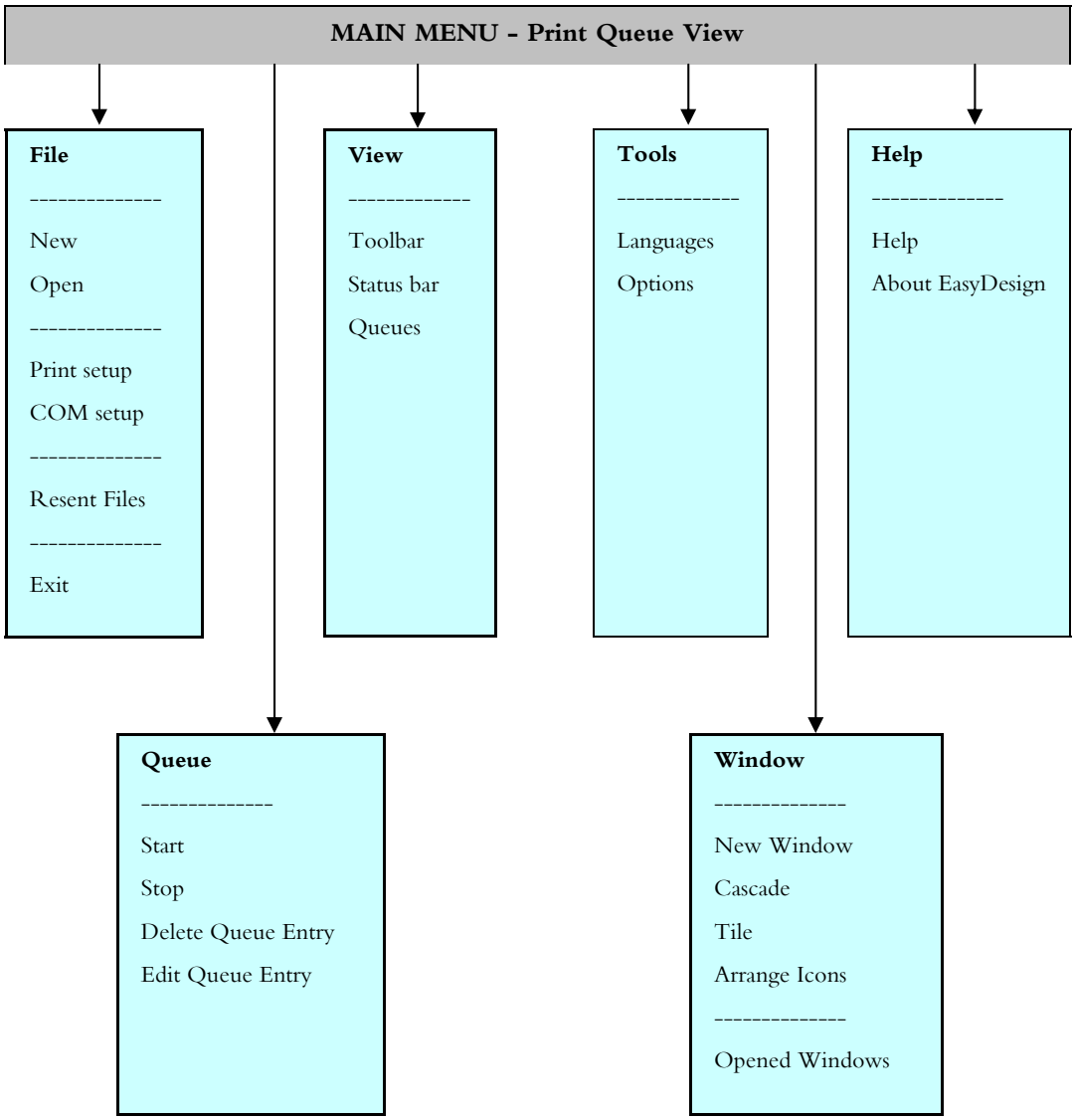
MENU MAP

It is advised to familiarise oneself with the following menus as certain pages in this manual assumes knowledge of the menu structure.

The menu map changes depending on the actual situation




MAIN MENU - label loaded
File
New
Open
Close
Save
Save As
Print
Print setup
COM setup
Resent Files
Exit
View
Toolbar
Status bar
Queues
Show Approved
Next Design Item
Previous Design Item
Zoom In
Zoom Auto
Zoom Out
Refresh (F5)
Objects
Align
Rotate
Centre
Size
Space Evenly
Break Apart (ESC)
Window
New Window
Cascade
Tile
Arrange Icons
Opened Windows
Edit
Undo
Cut
Copy
Paste
Delete
Select All
Edit Label Attributes
Edit Design Item
Edit Variables
View Only
Insert
Barcode
Box
Line
Picture
TTF
Text
Tools
Languages
Validate
SRAM Card Manager
Options
Align 1mm boundary
Pharmaceutical label approval
Users and passwords
Help
Help
About EasyDesign


MAIN MENU - Print Queue View
File
New
Open
Print setup
COM setup
Resent Files
Exit
View
Toolbar
Status bar
Queues
Tools
Languages
Options
Help
Help
About EasyDesign
Queue
Start
Stop
Delete Queue Entry
Edit Queue Entry
Window
New Window
Cascade
Tile
Arrange Icons
Opened Windows

INSTALLATION

To install EasyDesign on a computer simply run the Setup.exe, indicated by the following icon:

EasyDesign Setup program

Follow the instructions on the screen to complete the installation.

To handle the licence of EasyDesign a separate program, WIBU-KEY, is also installed.

The WIBU-KEY is accessible in the control panel:

WIBU-KEY Icon

Uninstalling EasyDesign

To uninstall EasyDesign do one of the following:

- Run the Setup.exe again and select "Remove".

EasyDesign Setup program

- Go to the control panel and select "Add/Remove programs". Select the EasyDesign icon. Press "Edit/Remove". Select "Remove" in the uninstaller.

EasyDesign Icon

Uninstalling EasyDesign will not remove the following items:

WIBU-KEY

- User generated Designs
- User generated Templates
- User installed printer drivers

Upgrading EasyDesign

To upgrade EasyDesign, uninstall the old version first.

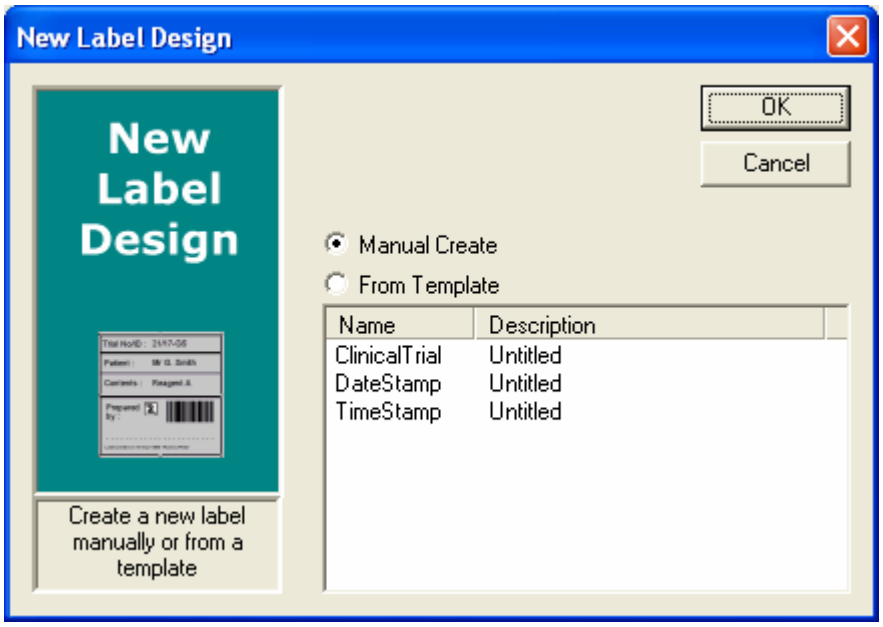
Once this has been uninstalled, the newer version can be installed.

USING EASYDESIGN

Creating a New Design

To create a new design press the "File | New" button.

EasyDesign allows you to select from a template or create a blank design.



Opening a Design

To open a previously saved design press the "File | Open" button. EasyDesign will open an Explorer window to locate the desired design.

Saving a Design

When changes have been made to your design, you may wish to save your changes.

Press the "File | Save" button to save the changes. If the design has not yet been assigned a name, use the "Save As" function instead.

When wishing to save the design using another name use the "File | Save As". EasyDesign will prompt for a file name and path for the new design.

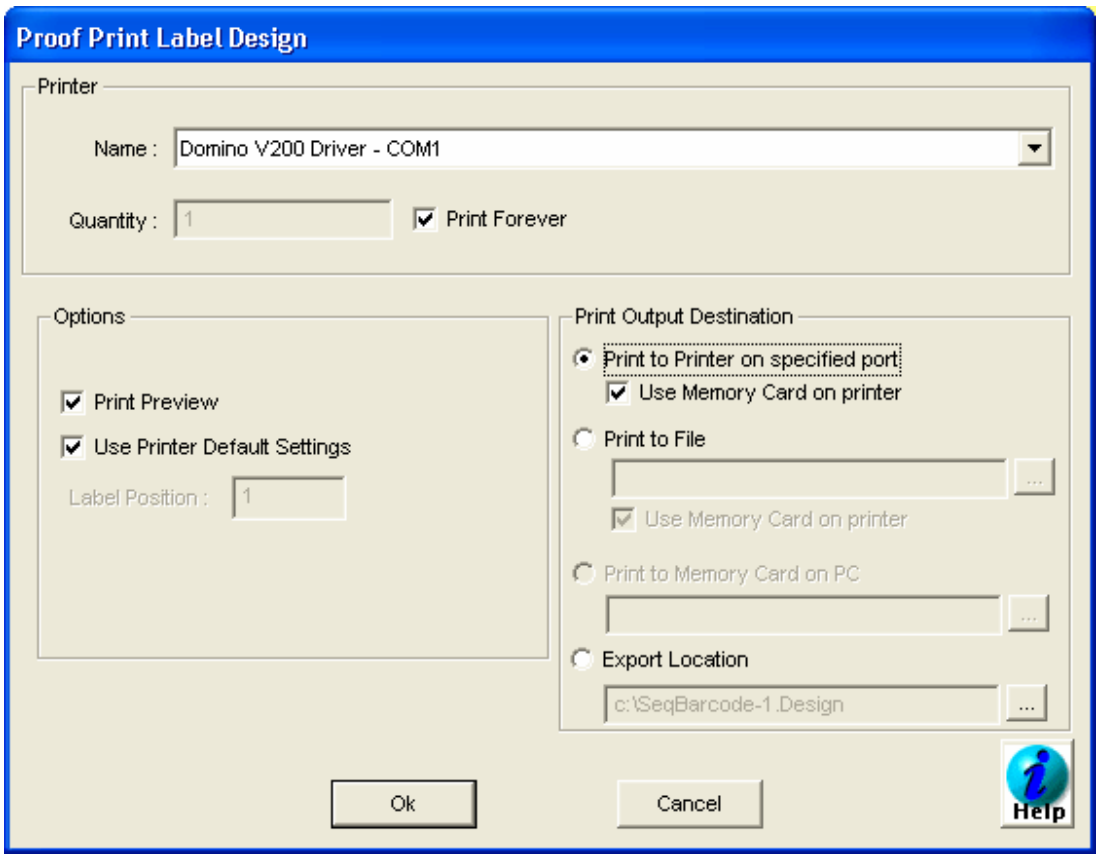
Printing

Press the "File | Print" menu to open the print dialog.

The top section of the print dialog shows a list (Name) of available printer queues to select from. The list is made up of all the installed drivers filtered with the driver the current design is created for. If the design is made for a V100 and you have installed a V200 on a com port and a V100 on a com port only, the V200 queue will appear in the list.

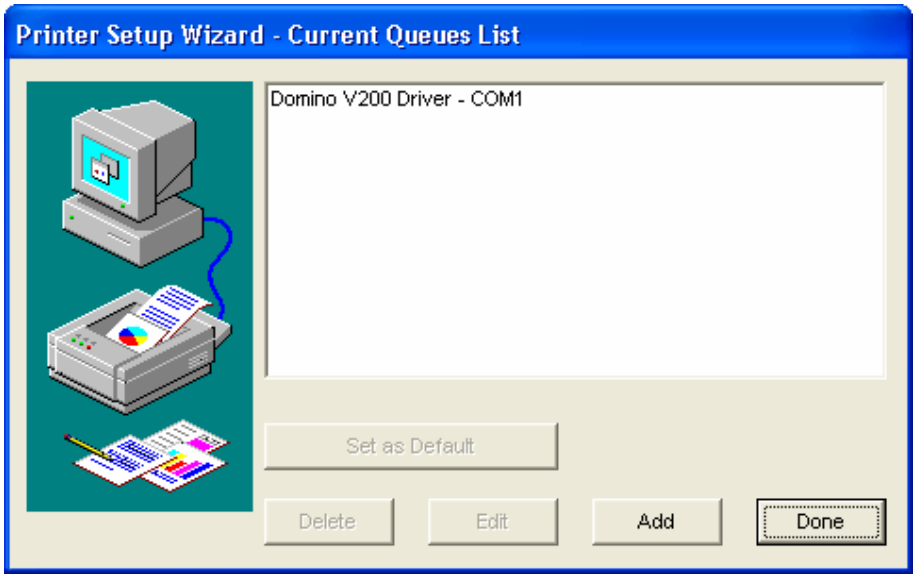
The normal procedure is to "Print to printer on specified port". This will transfer the design to the printer and initiate the print mode.

Use the Export function if you plan to store the design on a Compact Flash Card.



Setting up a Printer Driver

When opening up the Print Setup dialog, the dialog below will be shown.



The buttons "Set as Default", "Delete" and Edit is only enabled when a queue is selected.

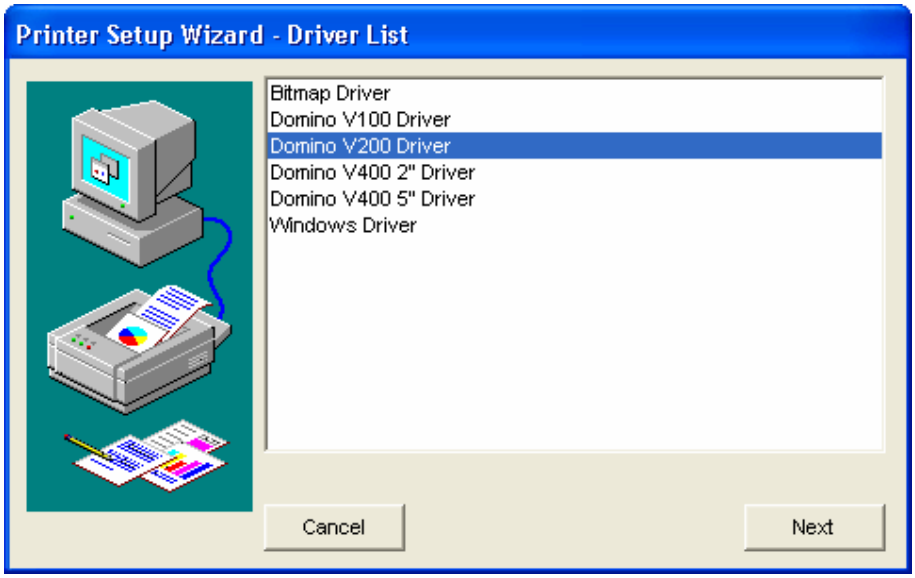
The "Set as Default" makes any new design use the selected queue as the target driver.

The "Delete" removes the selected queue from the system.

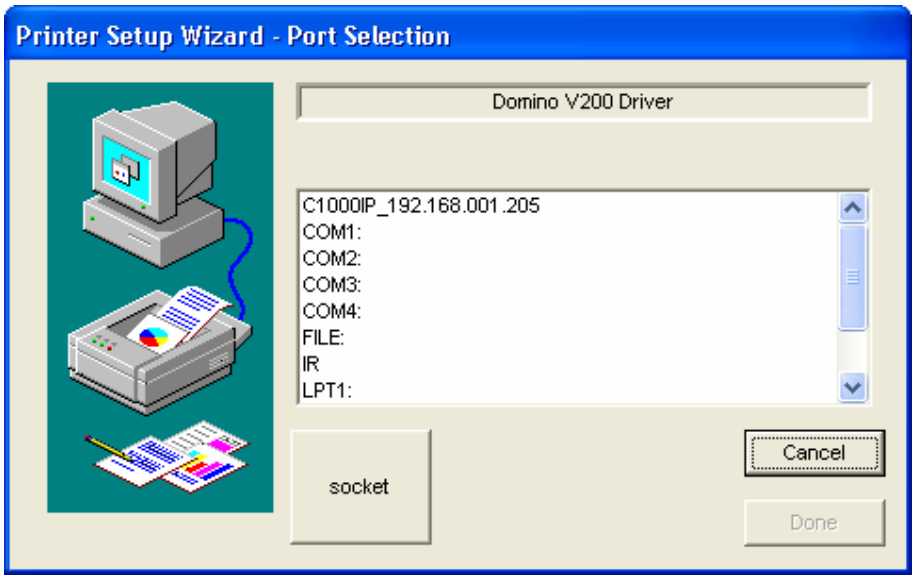
The "Edit" button allows the changing of any setting associated with the selected queue.

The Add button adds a new queue to the system.

After pressing the Add button, select the driver that matches your printer.



Press the "Next" button and select the port on which the printer is attached.

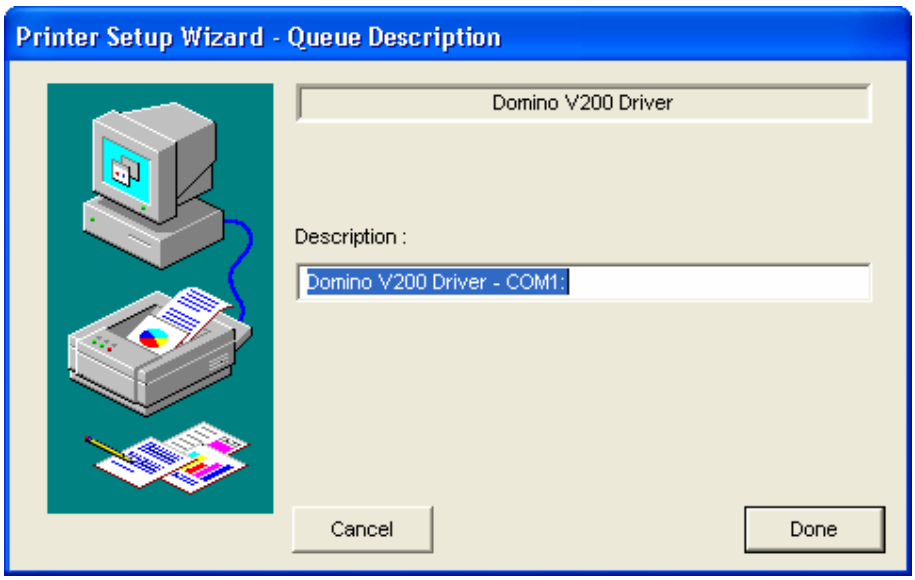


If the printer is attached using LAN, select the "socket" button, otherwise select the port from the list.

If the socket button is pressed, type in the IP address of the printer (alternatively you can use the Host name of the printer if one is assigned to it).

EasyDesign will suggest a name for the queue.

Modify as required and complete with the "Done" button.



Setting up the Serial Ports

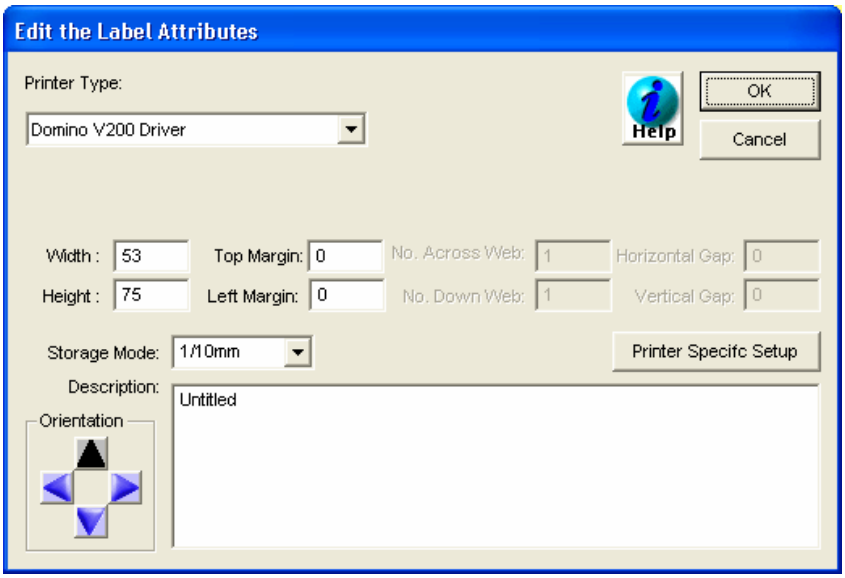
To make sure the serial port settings match the settings of the printer, you may need to verify the settings in the "File - V200 setup" menu.

EDITING A DESIGN

Editing Label Attributes

The label attributes dialog enables you to set which driver the design is made for.

Further options include label size and run settings.



Editing a Design Item

To modify one of the design items on the label, mark the item with the mouse or use the TAB key to select the next item.

If an item is obstructed by an overlaying item, press and hold the shift key while selecting with the mouse.

If the edit window is closed it can be opened by double clicking the item or by selecting the "Edit | Edit Design Item" menu.

The layout of the "Edit window" depends on the actual item type.

Editing Variables

In the "Edit | Edit Variables" menu creation and editing of variables is possible in the design.

Design includes Time/Date variables, counter variables, and user prompted variables etc.

Insert a variable into a design item when the information to print is not determined at the time the label is created.

View Only

The View Only option is set if you do not have privileges to modify the design. Please see section concerning Users and Passwords.

Show Approved

A design can (but is not required to) contain both an approved design and a design to be modified.

When editing the design, modification of the non approved design takes place. When required to print the approved design is printed.

The "View Approved" function allows the inspection of the approved design before printing.

Note: In standard mode the approving functions are not used and the function is therefore not relevant for some users.

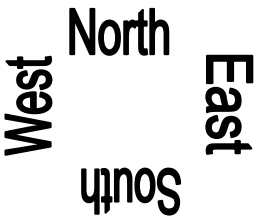
DESIGN ITEMS

General Settings for Design Items

Certain settings are common for most design items. These common settings are briefly explained before getting to the individual Design Items.

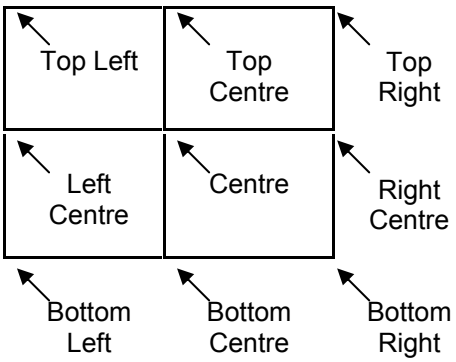
Rotation

A design item can be rotated to 0, 90,180 and 270 degrees. Directions are stated as North, South, East and West. By pressing on a direction a dropdown menu will appear, and the user can then select the desired rotation. In combination with the anchor point the field can be rotated as required.



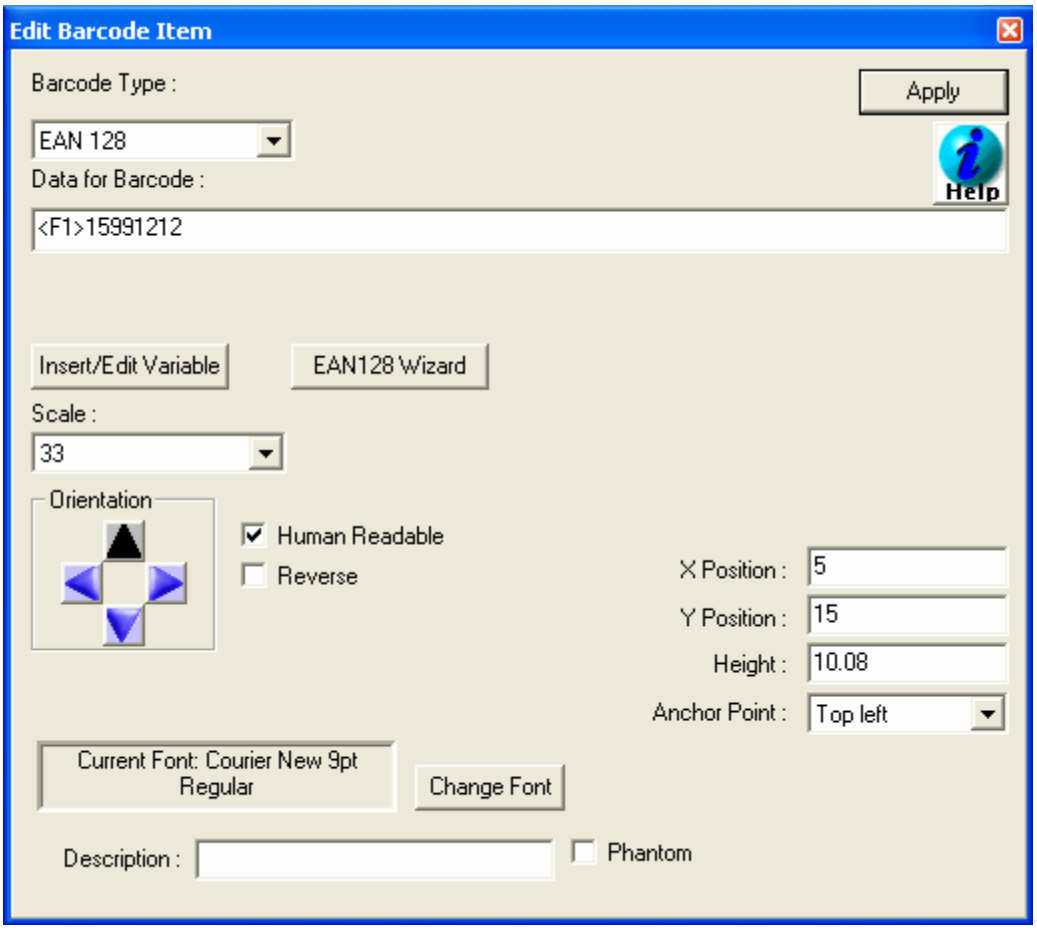
Anchor Point

Every field is surrounded by a virtual rectangle. The anchor point determines where the x and y coordinate touches this rectangle. The anchor point is also used as the point of rotation. The default is Top Left.



Inserting a Barcode Item

When this function is selected, a barcode is inserted into the design.



Special Functions:

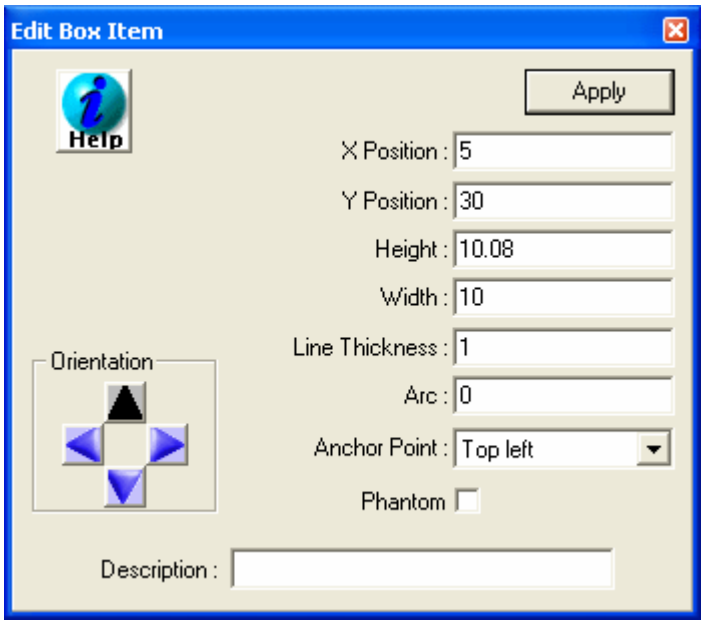
- <F1>: Insert a <F1> for Function 1. This one is required as the first item in an EAN 128 code.
  A <F1> must also be used to separate a variable length AI with the next AI.
  Example:

  The AI 10 is variable length.

  <F1>1599121210LOT<F1>0112345678901231
- <A>, <B> and <C>: Change the encoding type of the Code/EAN 128 barcode. If none is selected, EasyDesign will select the encoding that generates the shortest code.
- | (Pipe): Used to separate primary and secondary data for an GS1 DATABAR barcode.

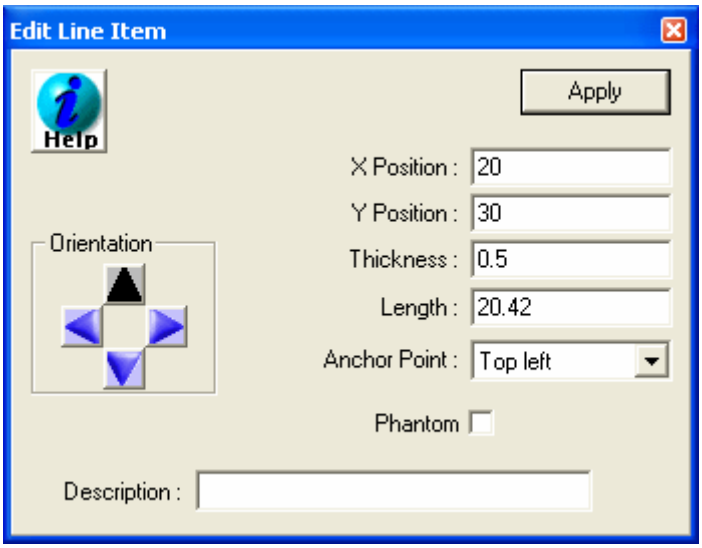
Inserting a Box Item

When this function is selected, a box is inserted into the design.



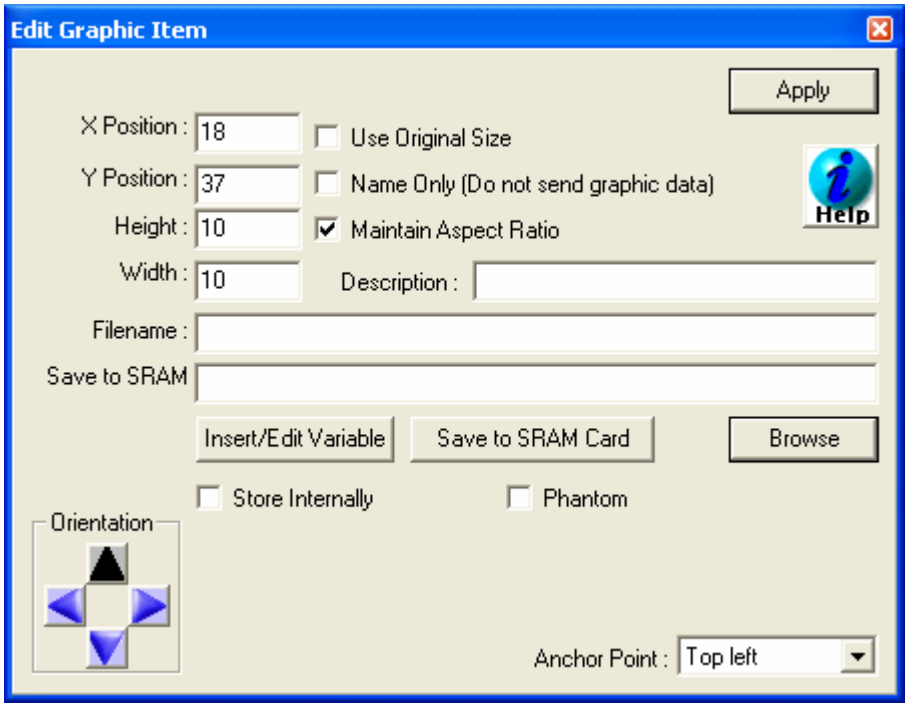
Inserting a Line Item

When this function is selected, a line (horizontal or vertical) is inserted into the design.



Inserting a Picture Item

When this function is selected, a picture is inserted into the design.

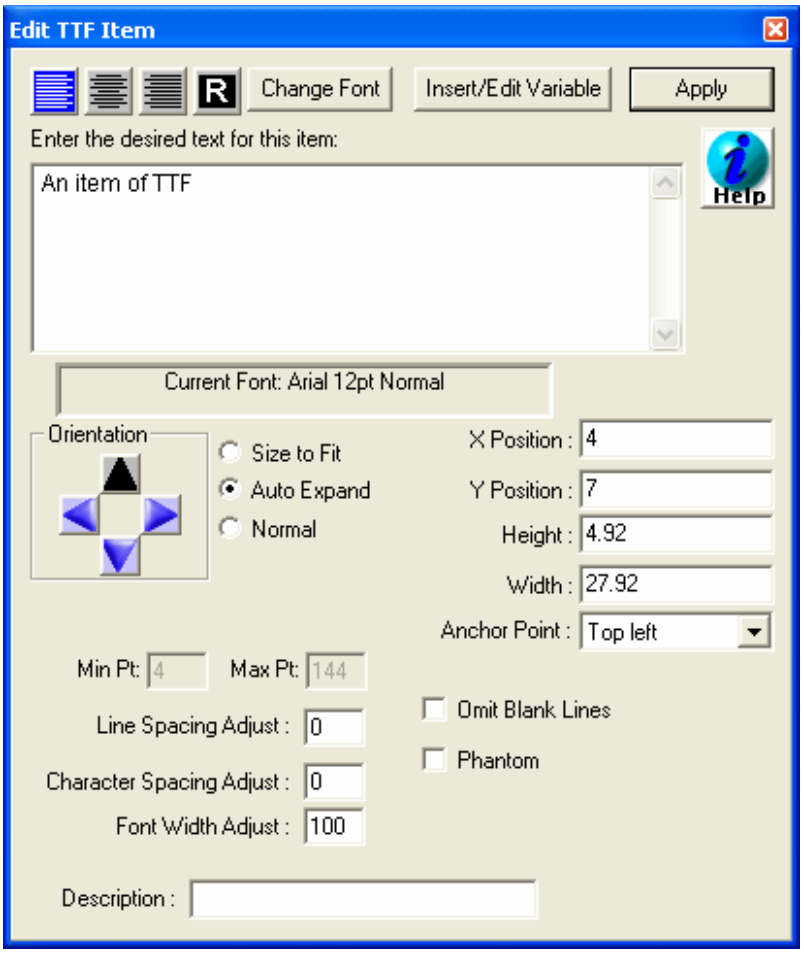


When the "Store Internally" checkmark is activated a snapshot is taken of the currently shown picture (with the current scaling as well). The snapshot is stored internally in the Design file.

Doing so has a few benefits: There are fewer files after a 'print to a printer' is completed. You can easily copy the design afterwards as you do not need to worry about links to pictures. Modifications are easy to see in EasyDesign before the image is ready to be printed.

Inserting a TTF Item

When this function is selected, a True Type Font text item is inserted into the design.



The TTF item has three different ways of controlling the enveloping rectangle in which the text is displayed.

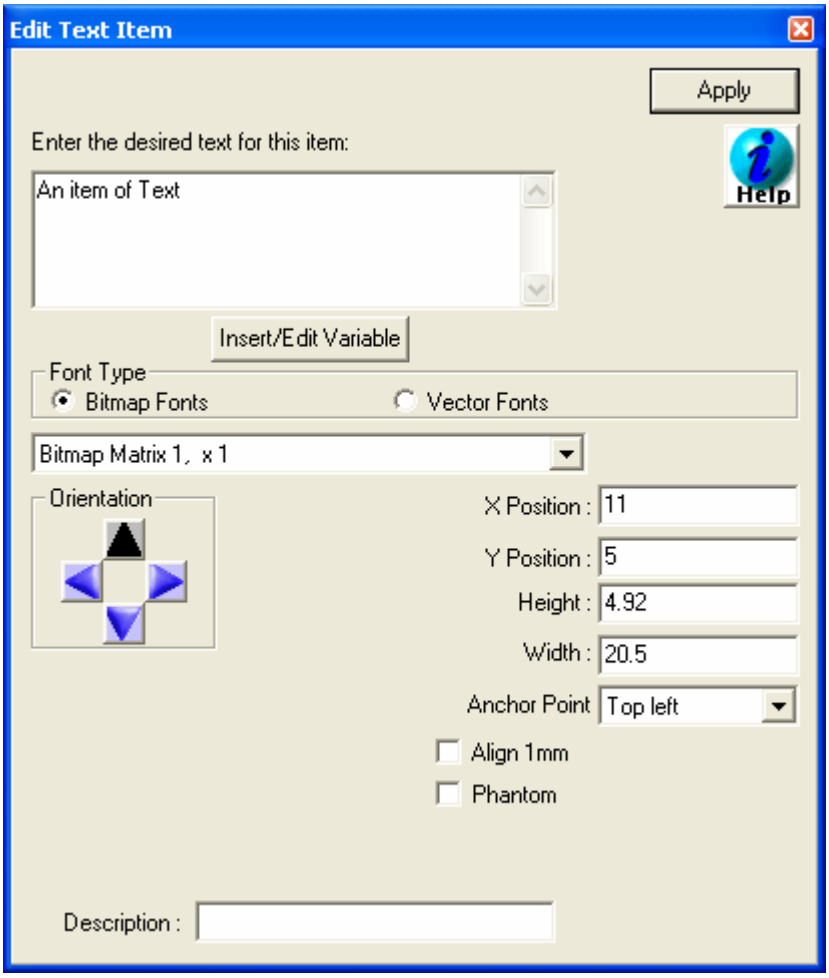
- Size to fit: The font size is adjusted to fit the width and height of the field. The minimum and maximum font size can be specified by the "Min Pt" and "Max Pt"
- Auto Expand: The width and height of the TTF items increase automatically when required.
- Normal: The height and width of the field is fixed.

If, for some reason, there is not enough space in the field to display the desired text then the field is show in red color.

TTF item have furthermore the option of adjusting the distance (in pixels) between the individual characters as well as stretching or compressing the font (Font Width Adjust in percent).

Inserting a Text Item

When this function is selected, an ABC text item is inserted into the design.



An ABC Text item uses the printers built in fonts. The appropriate font (Bitmap or Vector) is selectable in the dialog.

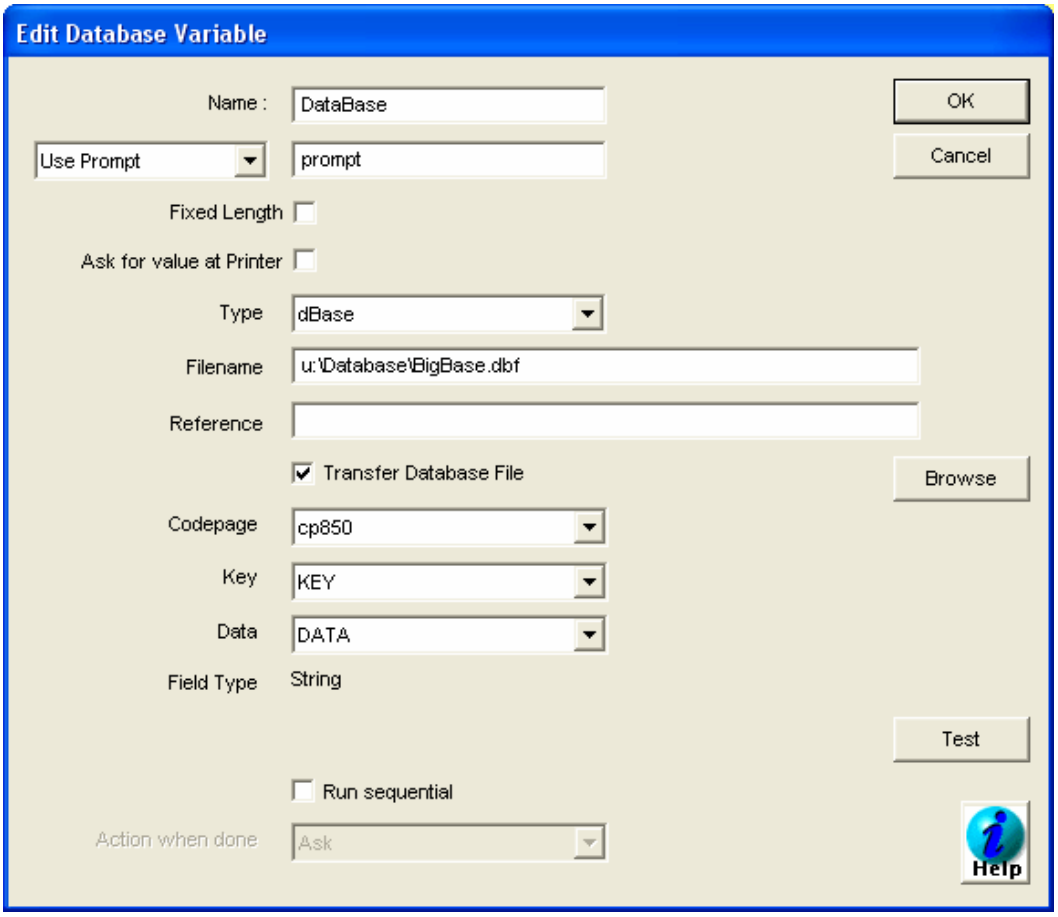
Note that V Series based thermal coders uses True Type fonts and does not have any specific built in fonts, and ABC Text items is therefore not supported by V series coders.

DESIGN VARIABLES

Use a variable in the design when the printed information cannot be determined when the label is created. This can include (but is not limited to) date/time, prompted variables and databases.

All variables have a name that is used to link the variable into a design item.

Database



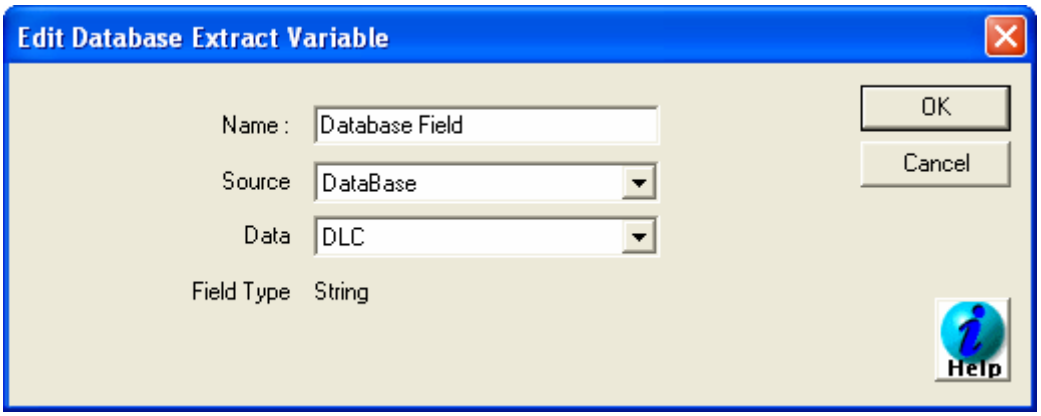
Normally use this variable when real time updatable database functionality is required or if it is required that the thermal coder is to handle the database handling.

The "Ask for Value at Printer" determines whether the V Series Controller or EasyDesign should calculate the database variables result.

The "Transfer Database file" checkmark makes EasyDesign send the database file together with the design. Uncheck this one if the V Series Controller has access to the database file (either over the network or because the database is already located on the V Series Controller).

If needing to print all the entries in the database, select the "Run sequential" checkmark. When this is checked, all entries will be printed starting with the row determined by the operator.

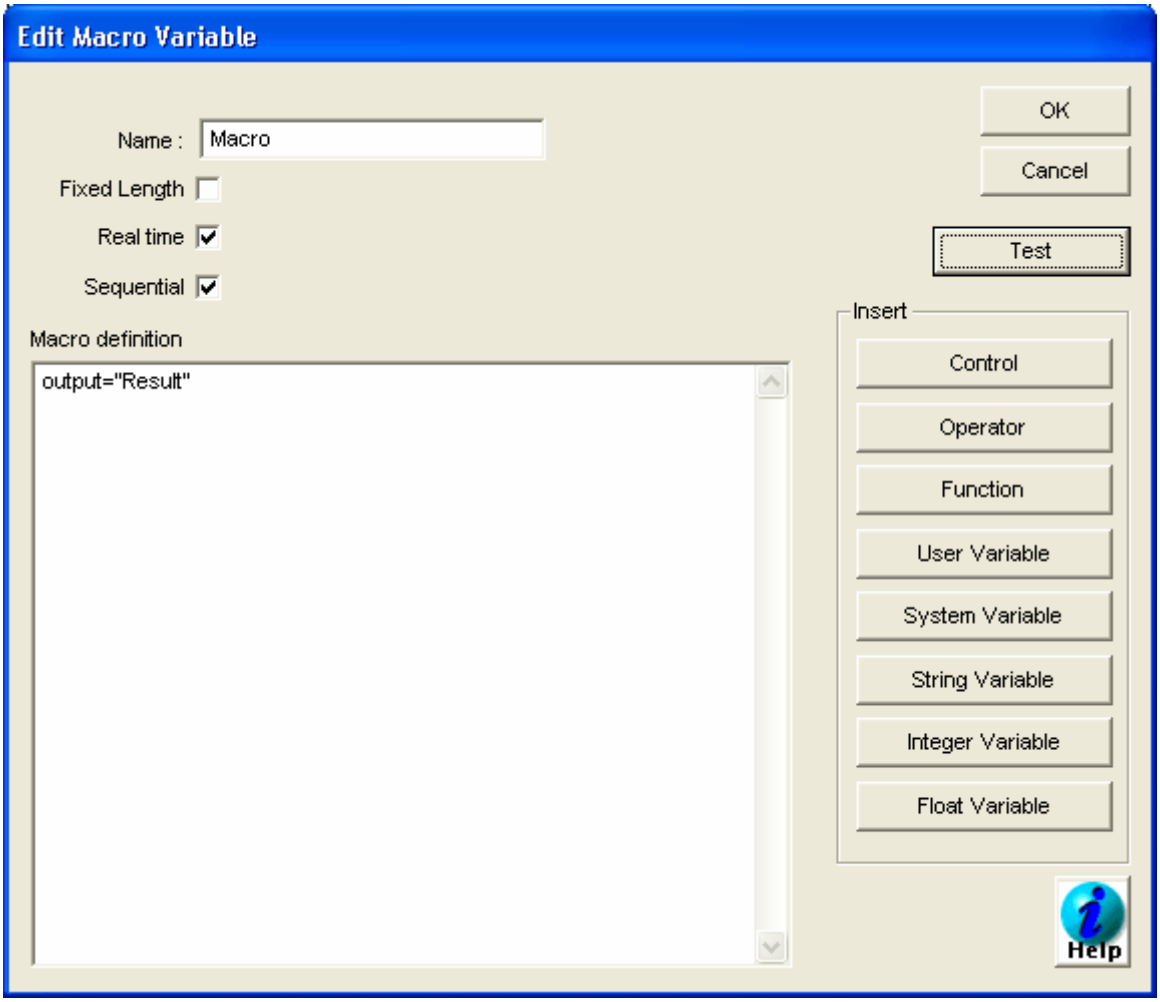
Database Field



The Database field is used for quick and easy printing of additional columns of a database.

This variable requires that a regular V200 Database is created first.

Macro

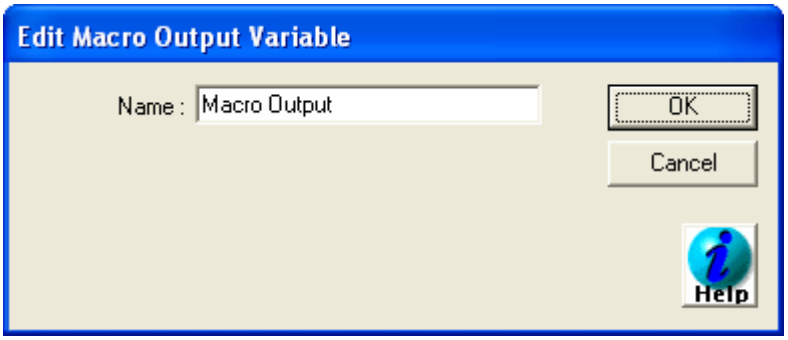


The macro variable is a small programming language in itself. The macro is commonly used when an advanced variable is required. Macros can be used to calculate specific checksums, convert from one kind of input to another more desired format to print.

After typing in the macro, you can test the macro by pressing the test button. The macro is now checked for correct syntax and the macro is evaluated. Note that if the macro depends on other variables these are not evaluated first.

Macro Output

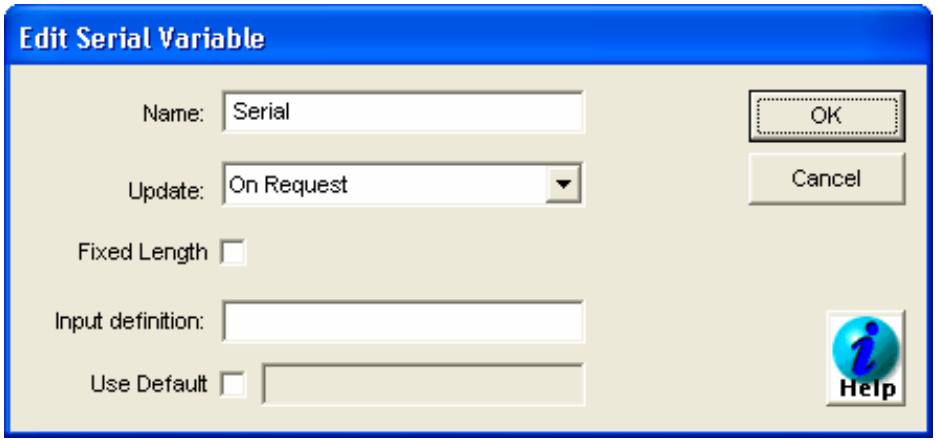
If a macro to produce more than one result is required, you need to use the Macro output variable type.



In the macro definition enter:

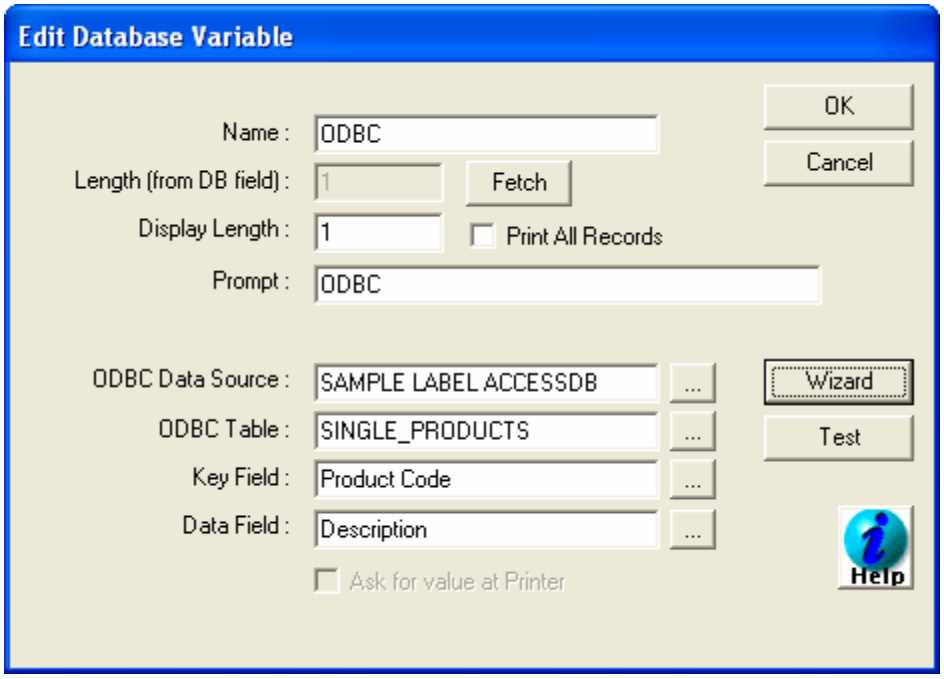
{Macro Output}="The result"

Serial



Use a serial variable when the V Series Controller is connected to external equipment (such as a scale) that transmits print data to the V Series Controller during a job.

Database

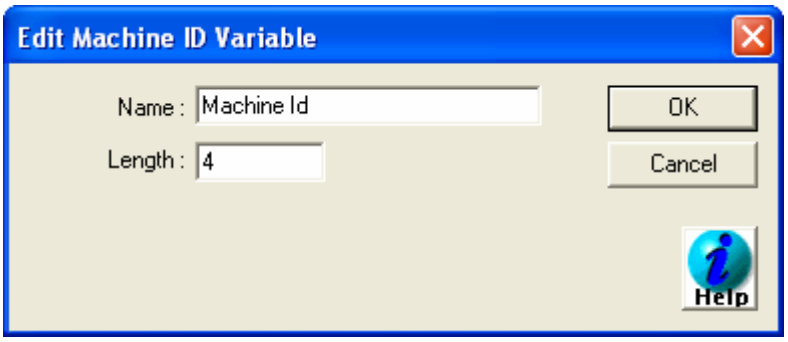


The normal Database variable is handled exclusively by EasyDesign. When a design with this variable is printed the result of the database lookup is replacing the actual variable before the design is transmitted.

This means that time updatable information cannot be used with this variable.

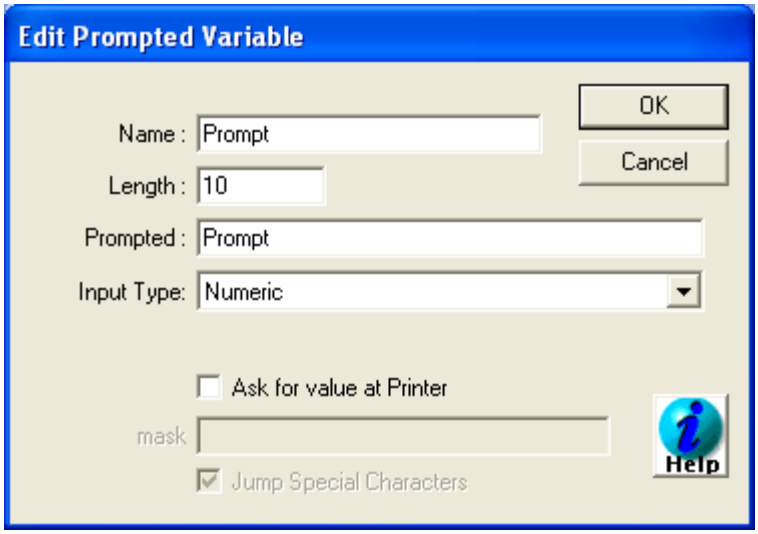
Any ODBC database can be used.

Machine ID



All V Series Controllers can be assigned a Machine ID. When a design with a Machine ID is printed, the printers machine ID is used.

Prompted

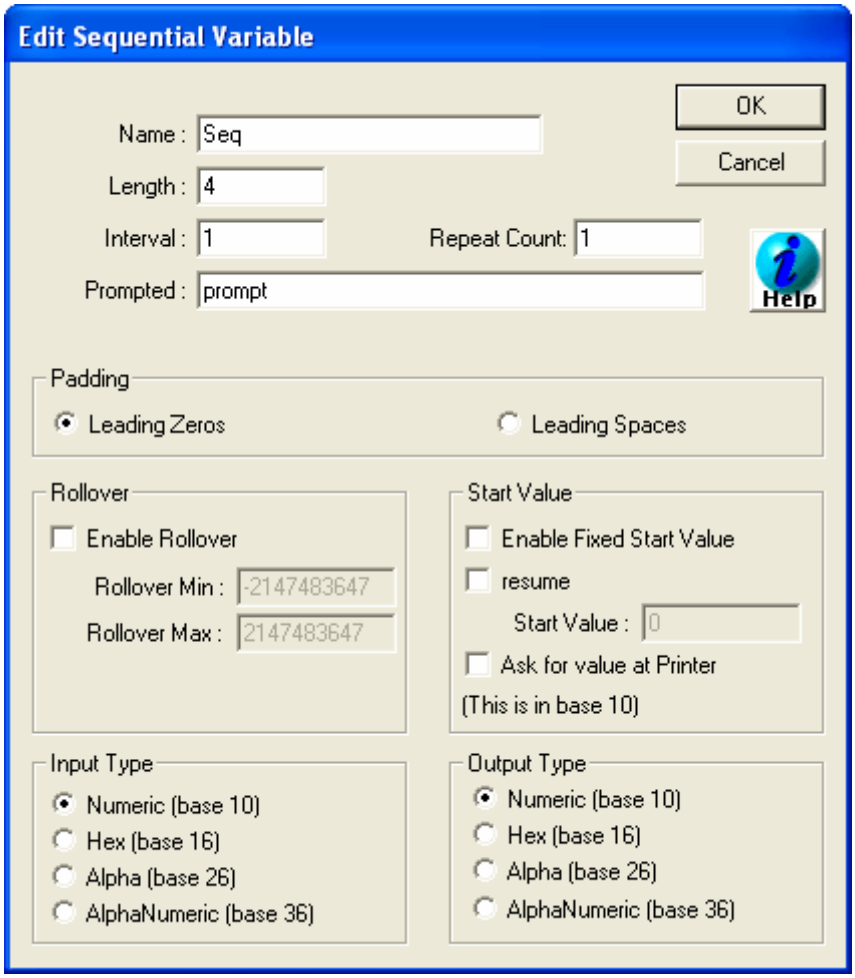


A prompted variable is a variable where the operator types in the information to be printed.

This can be done either in EasyDesign just before the design is transmitted or directly on the controller every time the job is started.

The check box "Ask for value at printer" determines whether EasyDesign or the printer should prompt for the info.

Sequential

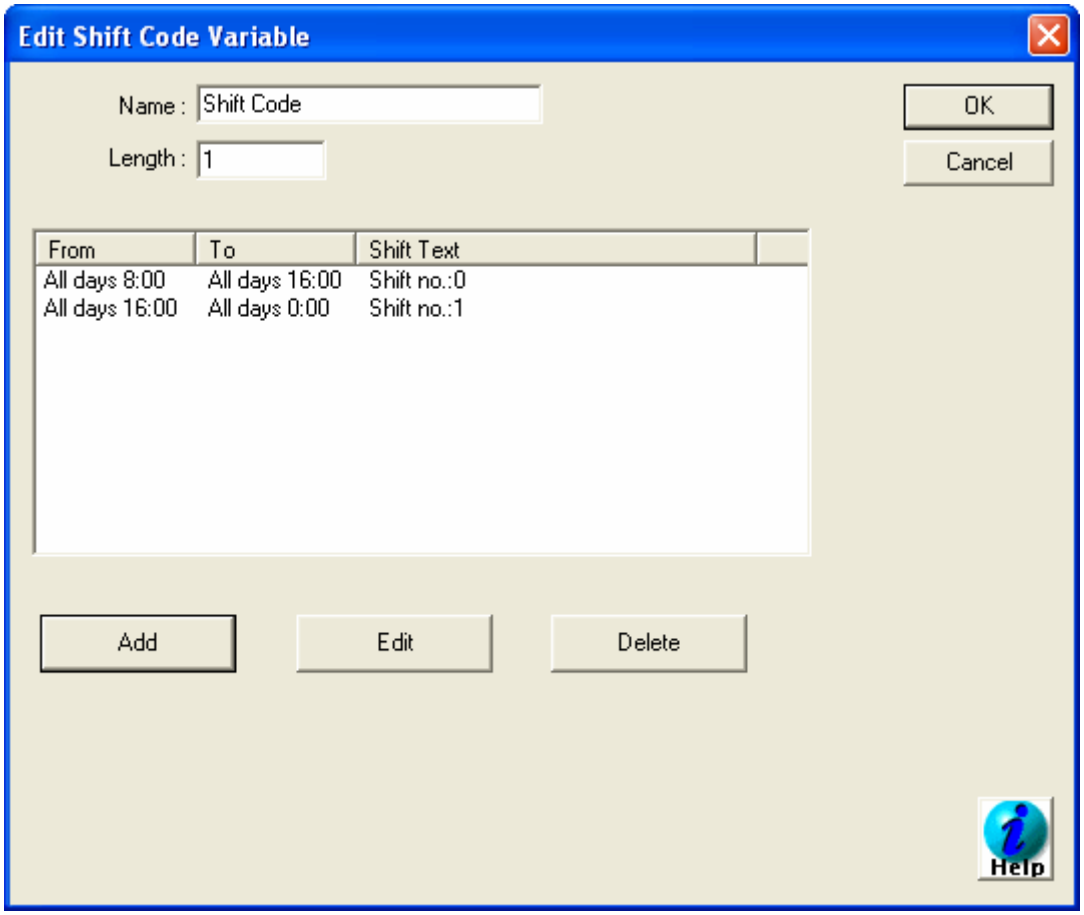


The sequential variable is used as a counter.

The "Rollover" section determines the interval in which the variable counts.

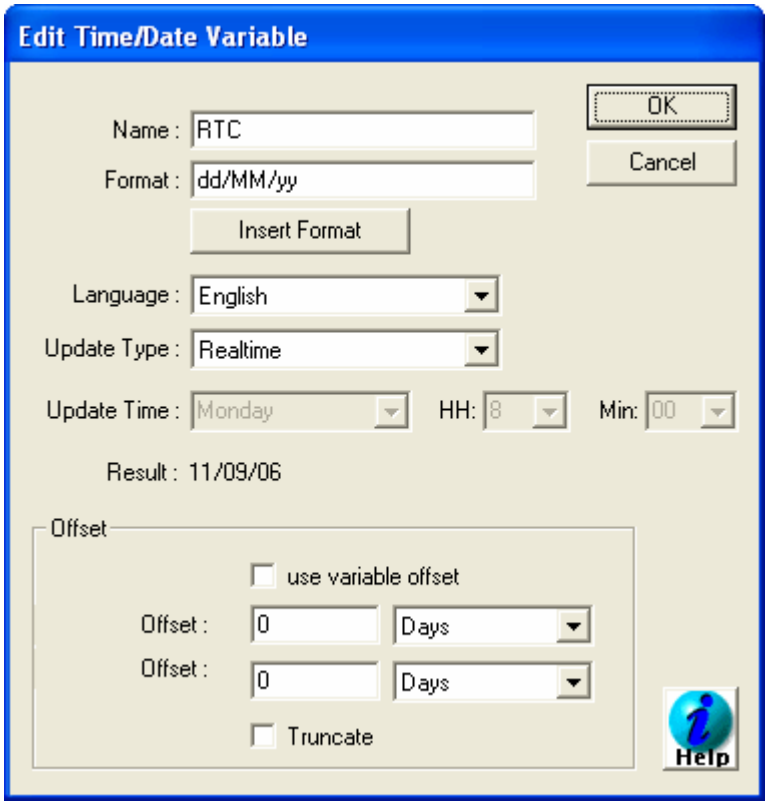
The "Start Value" section determines the counters start value.

Shift Code



In the shift code variable, a set of time slots is defined. During printing the V Series Controller selects the "Shift Text" that matches the current time slot and then prints that text.

Time/Date



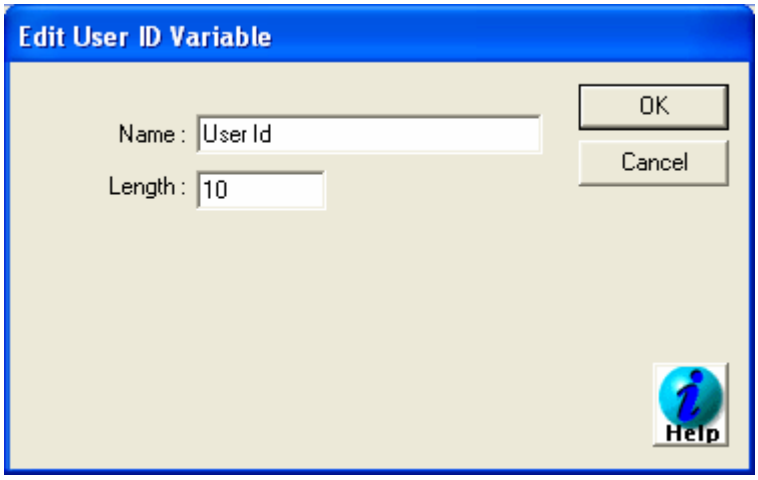
The Time/Date variable is normally used to print expiry dates.

Type in the desired format or use the "Insert format" button.

The language is only used with certain formats (such as short day).

In the "Update Type" select when the variable is updated: "Realtime", "On Job start", "Use PC Clock" or "At specified time".

User ID



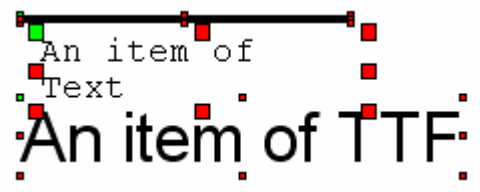
When a design with a "User ID" variable is printed, the thermal coder will use the log in of the current user logged in.

Selecting Multiple Items

To select multiple items you can either:

- Drag with the mouse.
- Ctrl + left click to add or remove an item to your current selection of items.

Notice that the master element has bigger item trackers than the remaining selected items.



In this example the ABC Text item is the master element.

To select another master element left click on the item or press the TAB key.

Aligning Items

Select the items to be aligned.

Either select the appropriate function from the menu or press the corresponding icon in the toolbar:

: Left aligns all elements.

: Centre all elements horizontally.

: Right aligns all elements.

: Top aligns all elements.

: Centre all elements vertically

: Bottom aligns all elements

Rotating Items

Select the items to be rotated.

Either select the appropriate function from the menu or press the corresponding icon in the toolbar:

: Rotate counter clock wise

: Rotate clock wise

: Rotate 180 degrees

Centre Items

Select the items to be centred.

Either select the appropriate function from the menu or press the corresponding icon in the toolbar:

 : Centre horizontally on the label

 : Centre vertically on the label

Size Items

Select the items to be sized

Either select the appropriate function from the menu or press the corresponding icon in the toolbar:

 : Makes all selected items the same width as the master element.

 : Makes all selected item the same height as the master element.

 : Makes all selected items have the same size as the master element.

Space Items

Select the items to be spaced.

Either select the appropriate function from the menu or press the corresponding icon in the toolbar:

 : Evenly spaces the selected items horizontally.

 : Evenly spaces the selected items vertically.

MISCELLANEOUS

A series of miscellaneous items is located in the tools menu. This includes general options and the possibility to change the language.

Changing Language

In the "Tools | Language" menu you can change the language in which EasyDesigns menus is displayed can be changed. When the language has been changed, restart EasyDesign for the changes to take effect.

Validate

The validate function runs through the design and displays any inconsistency.

Changing Options

The "Tools | Options" menu is divided into several categories.

- Label Defaults - allows the setting of default settings for new designs
- Barcode Defaults - allows the setting of default barcode type and data
- Production Log: - allows you to set up an optional log feature
- General - including the default driver to use for new designs
- Grid: - options for controlling the grid feature
- TTF: - changes the font used in the "Edit TTF Item" dialog
- ODBC Server Setup - when used with the ODBC Server option use this page to specify the server IP address and port.

Approval

The approval functions are mostly used when the software is used as part of a CFR21 Part 11 installation. Combining with "Users and Passwords" allows the creation of a system where the standard operator can only load labels that have been approved.

Setting up Users and Passwords

The users and passwords menu enables the creation of different user types and users to operate EasyDesign.

This can be used to create users that may modify designs and users only allowed to print designs.

Version Information

In the "Help | About" menu it can be seen which version of EasyDesign is installed.

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