5000SP Manual 18/03/2004



# **MODEL 5000SP**

OPERATOR INSTRUCTIONS
PARTS LISTING
CIRCUIT DIAGRAMS
INSTALLATION DETAILS

Designed and manufactured by:

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# **EC DECLARATION OF CONFORMITY**

| safety requirements of the M   | Machinery Directive 89/392/EEC, 91/368/EEC and United Kingdom by the Supply of Machinery (Safety) |  |  |  |  |
|--|---|--|--|--|--|
| Machine Description Model Type   | Hot Foil Printer Model 5000SP   |  |  |  |  |
| Serial number  | Ones Data Favinment Limited   |  |  |  |  |
| Manufactured by  | Open Date Equipment Limited.  |  |  |  |  |
| Address  | Units 8 & 9, Puma Trade Park, 145 Mordal Road, Mitcham, Surrey, CR4 4DG. United Kingsom.          |  |  |  |  |
| This machinery has been at transposed harmonised Eur   | nd manufactured in accordance with the wing ropean standards.                                     |  |  |  |  |
| EN292: parts 1 and 2, 1991 design.   | . Safety of Machiners - the correct s, governal principles of                                     |  |  |  |  |
| EN294: 1992. Safety of Machinery - Safety of |   |  |  |  |  |
| EN60204: part 1993. Safe of Michael Control equipment of machines - Specification for the part 1994 of the same of |   |  |  |  |  |
| EN50081: part 1, 199 F correct compatibility - Generic emission standard.  |   |  |  |  |  |
| EN50082: part 2, 99 E  | compatibility - Generic immunity standard.  |  |  |  |  |
| In addition, this nechile  | nas been designed and manufactured in accordance with   |  |  |  |  |
| British Standard 5304: 19  | 988, Safety of Machinery.   |  |  |  |  |
| A technical construction file  | for this machinery is retained at the above address.  |  |  |  |  |
| Signed   | Date  |  |  |  |  |
| NameK.F. Wingfield.  | Position General Manager  |  |  |  |  |
| Being the responsible personal   | on appointed by Open Date Equipment Limited.  |  |  |  |  |
| This Declaration of Conform (Safety) Regulations 1992.   | nity complies with Regulation 22 of The Supply of Machinery                                       |  |  |  |  |

#### IMPORTANT SAFETY INSTRUCTIONS

- 1. Read these instructions carefully. Follow all warnings and instructions marked on the product.
- 2. Always disconnect the printhead and controller from the mains electricity and air supply before attempting to clean or service it.
- 3. Never operate the printhead unless it is installed within the mounting frame supplied. When installed correctly the gap between the printer and print base should not be greater than 4mm (see page 29).
- 4. Do not use the product near water. Never spill liquid of any kind on to the product.
- 5. Do not place this product on an unstable stand, table or machine. It may fall causing serious damage to the product or injury to the operator.
- 6. Never insert objects of any kind into this product through any openings or gaps as they may touch dangerous voltage points or short circuit parts that could result in fire or electric shock.
- 7. This product should only be operated from the type of electrical supply as indicated on the rear of the printhead control unit (see page 6).
- 8. Ensure that the printhead connection cable is fully secured to the printhead with the screws attached to the "D" connector cover. Failure to do this will result in the machine not being properly earthed.
- 9. Use only the power cable supplied with the product. The cable supplied is three core mains cable, utilising one wire as a grounding conductor. This must be connected to a suitable earth point at the electrical supply. This is a safety feature. If any doubt arises in trying to connect the power cable, please contact the manufacturer or agent who supplied the product.
- Do not allow anything to rest on the power cable. Do not locate the product where persons will walk on the cable.
- 11. If an extension cable is used with this product, make sure that the total ampere ratings of the equipment plugged into the extension cable does not exceed the extension cable ampere rating. Also make sure that the total rating does not exceed the fuse rating.
- 12. Do not service this product yourself as opening or removing guards may expose you to dangerous voltage points, major burns and other risks. Refer all servicing to qualified personnel.
- 13. Do not attempt to use to use this product in areas where explosive gases or substances are present.
- 14. Once the product is under normal working conditions, care must be taken when removing the type holder as you can easily burn yourself. There is a yellow warning sign on the type holder access door indicating a danger. Open the door by gripping it at the side. The type holder can get very hot, it should only be held by its plastic handle. Never touch the metallic parts, as temperatures could be as high as 220 degrees C.
- 15. Disconnect the product from the electrical and air supply, referring to servicing by qualified personnel under the following conditions.
  - a. If the power cable is damaged or frayed.
  - b. If the air pipes are damaged in any way.
  - c. If liquid has been spilled into or if the product has been exposed to rain or water.
  - d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the instructions. Improper adjustment may result an damage needing qualified technicians to restore the product to normal operating conditions.

### **OPERATING INSTRUCTIONS**

#### **ELECTRONIC CONTROL UNIT** (refer to page 5)

**PRINT** switch Switches on the print cycle. Switch off to silence the audible alarm.

**POWER/HEAT** Doubles as the main power switch (does not isolate the internal

switch circuitry). Leave on to maintain operating temperature. Four to five minutes should be allowed for the printhead to warm up

from cold.

**PRINT TIMER** Adjusts the dwell time, ie. the period of time that the type/die face

is control in contact with the substrate. Higher numbers indicate

longer dwell time. Range is 12 to 650 milli-seconds.

**TEMPERATURE** Adjusts the head temperature. Higher numbers indicate higher

control temperature. Range is 75 to 220 degrees C.

(see page 16).

**TEST** button Manually operates the printhead.

**LED 1** (green) Indicates that the solenoid valve circuit is in order. Switches off

during the print cycle, when the foil alarm sounds and when the

type/die holder door is open.

**LED 2** (red) Lights when the printhead is heating.

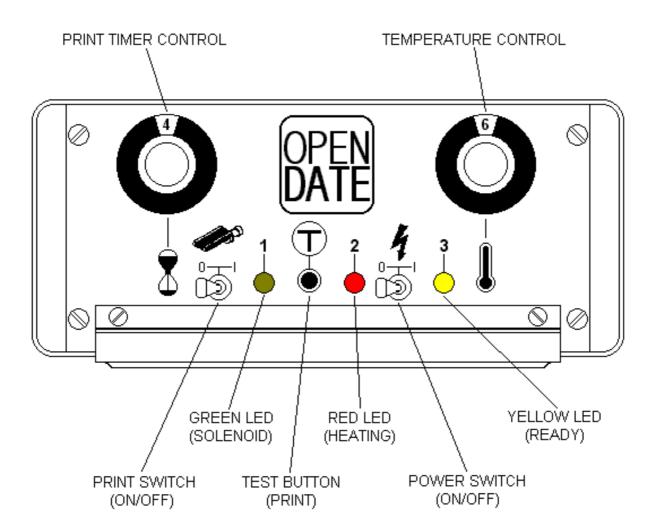
**LED 3** (amber) Indicates that the printhead is at operating temperature.

**NOTE.** It is normal for the red and amber LED's (lights) to alternate every

minute or so. This indicates that the operating temperature is

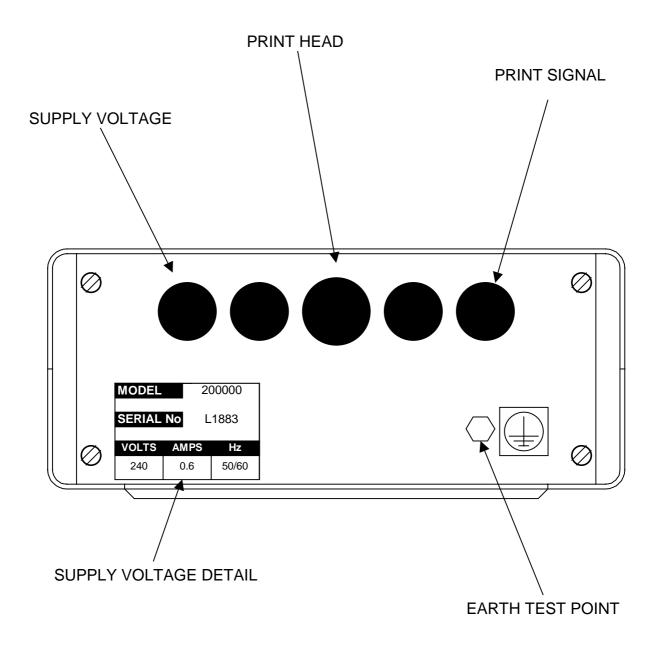
being maintained.

# ELECTRONIC CONTROL UNIT FRONT PANEL LAYOUT



# ELECTRONIC CONTROL UNIT REAR PANEL

(Cables omitted for clarity)



### **OPERATING INSTRUCTIONS**

#### FITTING TYPE/DIE HOLDER

Screw the handle into the type/die holder end plate. Hold by the handle only, **NEVER ASSUME THAT A TYPE/DIE HOLDER IS COLD.** Open the type holder access door, the printer will not operate with this open. Align the type/die holder within the two side locators and slide in until the magnet catches on the keep plate. Remove the handle and close the door.

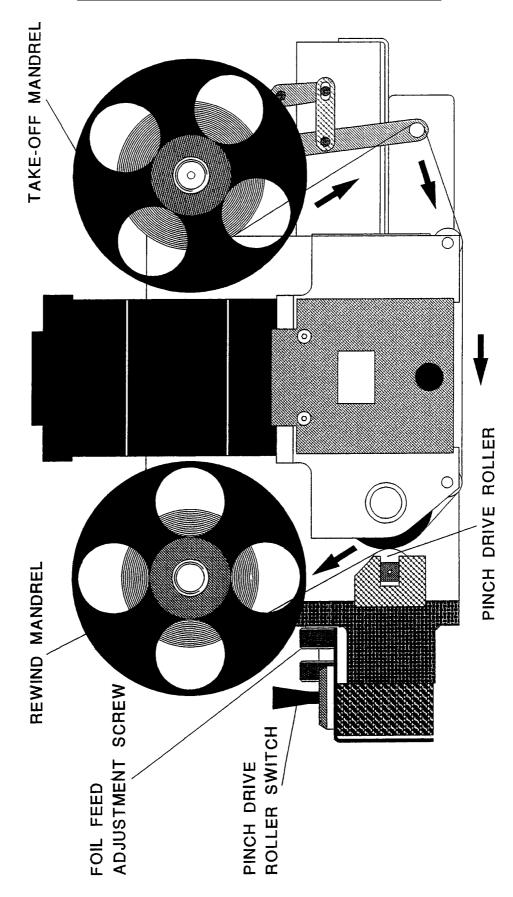
#### FOIL FEED ADJUSTING SCREW

This adjusts the amount of foil used per print and is located at the rear of the printer near to the pinch drive roller. Winding in reduces the foil pull. Ensure that the locking nut is fully tightened after adjustment. A gap of 1 or 2mm is recommended between each portion of used foil. See also page 3.5 for instructions on setting the foil feed air flow restrictors.

#### **FOIL THREADING** (refer to page 8)

- 1. Fit an empty foil core onto the rewind mandrel.
- 2. Disengage pinch drive roller.
- 3. Remove label from new roll of foil.
- 4. Fit new roll of foil onto take-off mandrel. The foil un-winds in an anticlockwise direction.
- 5. Thread foil around all rollers as shown on threading diagram below.
- 6. Attach end of the foil to the empty core on rewind mandrel, gloss side facing inwards. The foil rewinds in a clockwise direction.
- 7. Wind foil on a few turns to track and tension it.
- 8. Engage pinch drive roller.

# 5000 Series Foil Threading Diagram



## **INITIAL SETTING PROCEDURE**

- (1) Ensure that printing foil and substrate are compatible. If in doubt, contact foil supplier for assistance.
- (2) Remove type holder from printhead.
- (3) Ensure that rubber print base is clean, undamaged and securely retained in position under printer.
- (4) Set air pressure regulator. 4 to 7 Bar is recommended (60 to 100 PSI).
- (5) Set **PRINT** control to 3 and **HEAT** control to 5.
- (6) Switch **HEAT** on, leave **PRINT** off. 3 to 4 minutes should be allowed for printer to reach working temperature.
- (7) Load type or die into holder, centrally if possible and fasten securely. Make sure that type face is clean.
- (8) Load type/die holder into printer and close door. If cold, allow 3 to 4 minutes for holder to heat up before printing.
- (9) Load foil as detailed on page 7.
- (10) Turn on **PRINT** switch.
- (11) Place a sample of substrate material under printer and press **TEST** button. Inspect resulting print.
- (12) Adjust print levelling screws until a light, uniform print impression is achieved. Lock levelling screws.
- (13) Adjust foil metering screw for economic foil use as detailed previously and tighten thumb nut.

#### PRINT ORIENTATION

To rotate the printer and therefore turn the overprint through 90 degrees, remove the foil magazine (if applicable), unscrew the clamping handle until the location square on top of the printhead is clear of the top rails, turn it to the required position, tighten the clamping handle and replace the magazine.

#### **TEMPERATURE ADJUSTMENT** (refer to page 5)

- Normal setting is about 5.
- Should the print not fully adhere to the substrate a higher setting may be used.
- Small, fine detail print generally requires a lower temperature.
- Thermoplastic films and especially polyethylene generally require a lower temperature.
- Aluminium foils, paper and untreated polyester require a higher temperature.

## **INITIAL SETTING PROCEDURE**

#### **PRINT TIMER ADJUSTMENT** (refer to page 5)

- Normal setting is about 4.
- Generally, the larger the print, the higher the setting.
- Should the print not adhere fully to the substrate, a higher setting may be used.
- Remember, the printhead can only operate during the stationary cycle of the web, if the print time is longer than this the web may break.
- Should the dwell time have to be decreased to accommodate higher production speeds, it may be necessary to compensate by increasing the temperature setting.

#### FOIL FEED AIR FLOW RESTRICTORS

The air flow restrictors govern the speed at which the foil feed mechanism operates. They are fitted to both lower ports of the manifold block behind the rear cover or into the ports of the foil drive cylinder. They work by regulating the speed at which air is exhausted from the air cylinder.

Turning the adjusting screws will alter the exhaust air flow and consequently the speed of the foil feed, it will also affect noise levels.

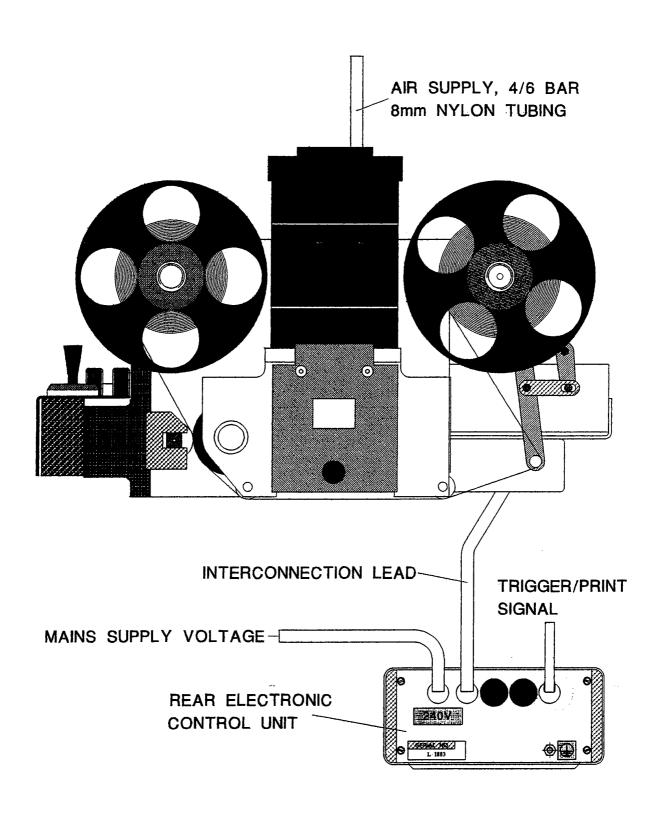
The forward stroke of the air cylinder drives the piston forward to the foil adjusting screw. The restrictor for this is located nearest to the foil feed adjusting screw. To set the speed of this stroke the print dwell must be already set (see previous page). Adjust the restrictor so that the ram strikes the adjusting screw with the minimum velocity and consequently, noise.

The drive for the printing foil is taken from the return stroke of the foil feed cylinder. The restrictor for this is located nearest the cable socket entry. Increasing the exhaust air flow will speed up the foil feed. To ensure efficient foil feeding, the return stroke should be as gentle as possible.

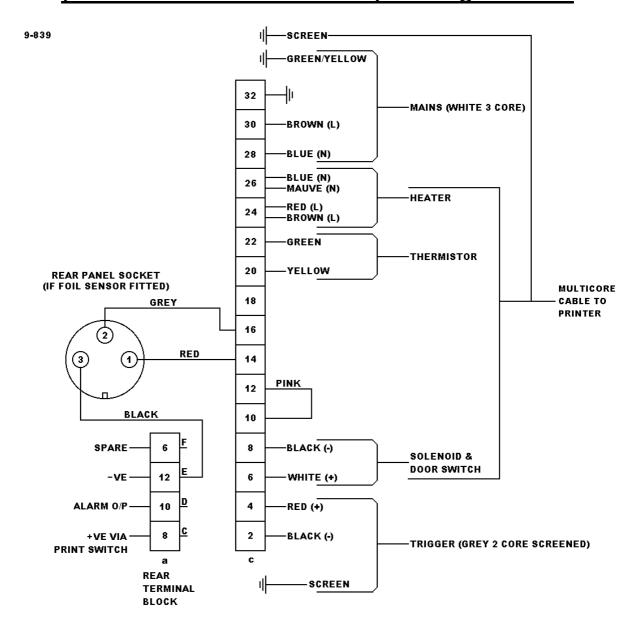
For higher speed operation, the exhaust air flow from both the forward and return strokes will have to be increased.

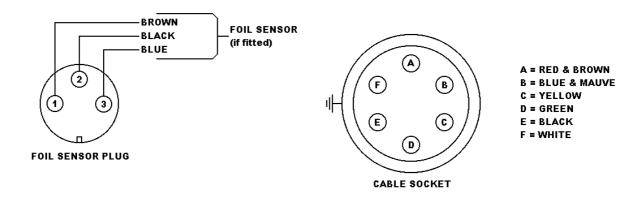
Note, it is very important that the foil drive piston returns fully before the next print cycle commences.

# **5000SP Interconnection Details**

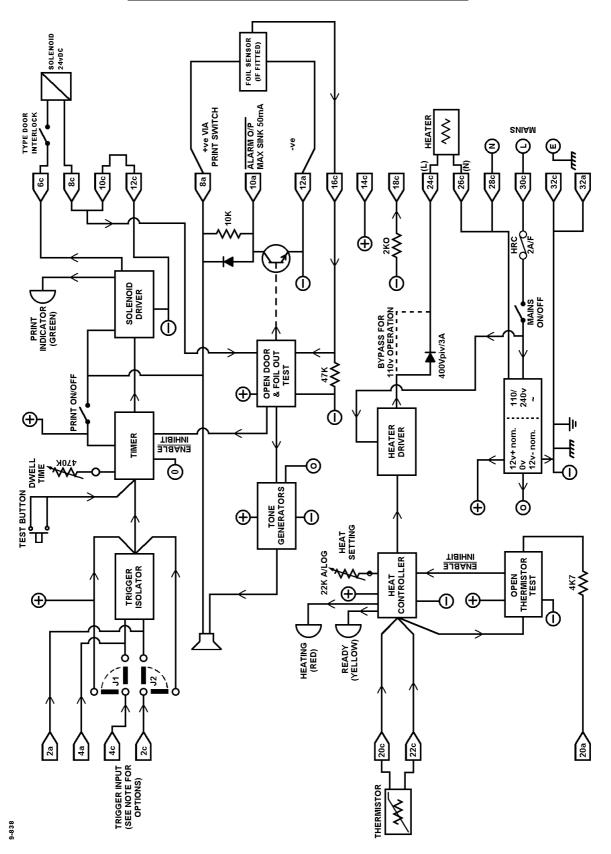


# 5000SP SERIES INTERNAL WIRING DIAGRAM (ELECTRONIC CONTROL UNIT) Drawing No. 9-839





# BLOCK DIAGRAM FOR 5000SP CONTROLLER Drawing No. 9-838



### TRIGGER SIGNAL SELECTION

The trigger signal which initiates the print cycle can be either a DC voltage or taken from a pair of normally open contacts. The option is selected by moving the blue jumpers at the rear of the main printer control card. When supplied, the board is configured to accept a DC print signal.

- 1. Horizontally mounted boards are normally configured to accept a DC print signal within the range 10 to 50 volts (polarity unimportant), and the blue selector jumpers are pegged north-south i.e. sitting parallel to each other, see figure 1.
- 2. For triggering from a normally open contact source such as a relay, microswitch or foot switch, the selector jumpers should be set east/west i.e. in line with each other, see figure 2.

N.B. Vertically mounted boards for use in DIN41494 ("Eurocard") enclosures are pegged east-west. Both print signal options are then available and can be selected by suitable wiring to the PCB connector within the enclosure.

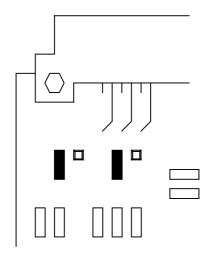


Figure 1.
Jumpers set for 10 to 50 volts DC print signal.

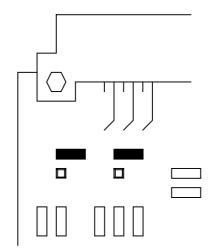
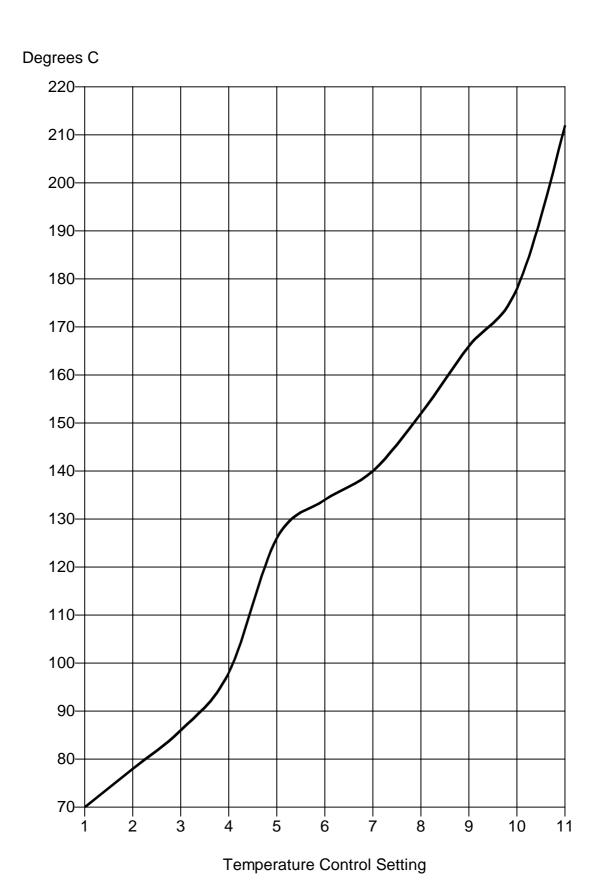


Figure 2.
Jumpers set for normally open print signal.

# Printhead Temperature Relative to Settings (nominal).



# **5000SP ELECTRONIC FAULT FINDING**

| FAULT  | POSSIBLE CAUSE   |
|--|--|
| No lights when control unit is switched on.  | No power to control unit. Fuse blown on PCB.   |
| Control panel lights, including green, are illuminated but printer will not operate either by remote trigger signal or TEST button.        | Type Holder access door is open. Safety Microswitch failure. No air. Fault on PCB.   |
| Control panel lights, except green, are illuminated and printer will not operate either by remote trigger signal or TEST button.           | Solenoid valve failure. Solenoid valve disconnected.  PRINT switch off.  Printer plug not properly mated.  |
| Alarm sounds continually.  | No foil present (if foil alarm is fitted). Foil not positioned over sensor (if fitted). Foil sensor misaligned (if fitted). Foil sensor failure (if fitted). |
| Printer does not heat, red L.E.D. is illuminated.  | Heater failure. Broken wire between heater and socket. Fault on PCB.   |
| Printer does not heat, yellow L.E.D. is illuminated. In extreme cold conditions press and hold down <b>TEST</b> button for 5 - 10 seconds. | Plug/socket disconnected. Thermistor failed open/short circuit. Fault on PCB.  |
| Heater fails to switch off, yellow L.E.D. stays on.  | Fault on PCB.  |
| Heater fails to switch off, red L.E.D. stays on.   | Fault on PCB. Thermistor probe loose in housing.   |

# **5000SP MECHANICAL FAULT FINDING**

| FAULT  | POSSIBLE CAUSE  |
|--|---|
| Insufficient foil pull.  | Foil adjusting screw wound in too far. Pinch roller not engaged. Foil feed air flow restrictors incorrectly set. Clutch bearing failure in gear or body. Drive roller damaged or dirty. |
| Solenoid operates but printer does not.                            | No air.<br>Air pipe damaged.  |
| Printer operates but does not print, i.e. impression but no print. | Printing foil exhausted. Printing foil not being driven through. Printing foil not suitable for substrate. Little or no heat.   |
| Printing foil tracks over to one side.                             | Brake arm loose. Pinch roller misaligned with drive roller.   |
| Foil rewind is loose.  | Green Drive Belt worn out or dirty. Foil feed too rapid (slow down return stroke of piston, see page 3.5). Foil retaining discs mis-aligned.  |
| Printer is sluggish.   | Insufficient air pressure. Faulty valve.  |

# 5000SP PRINT QUALITY DETERIORATION.

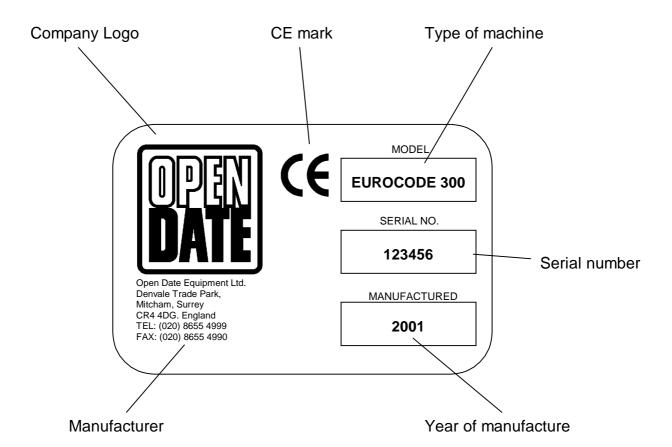
Print quality deterioration can be attributed to any of the following causes;

| POSSIBLE CAUSE                                     | CURE  |
|--|---|
| Insufficient foil pull                             | See pages 8 and 27  |
| Insufficient air pressure.                         | Check pressure regulator setting. See that pipes are not damaged.       |
| Printer not level with print base.                 | Adjust levelling screws.  |
| Too much or too little heat.                       | Check that settings are correct.  |
| Dirty, worn or damaged dies or type.               | Clean or replace.   |
| Damaged or out of position print base rubber.      | Replace or re-position.   |
| Printing foil not compatible with substrate.       | Contact foil supplier.  |
| Substrate surface altered, i.e. different coating. | Contact substrate or foil supplier.                                     |
| Print ram not completing full stroke.              | Open forward flow restrictor (where fitted). Increase print dwell time. |
| Substrate moving before print head is clear.       | Reduce print dwell time.  |
| Print Dwell incorrectly set.                       | Adjust as necessary.  |

# MACHINE SERIAL NUMBER IDENTIFICATION

The identification label can be found on the outside of the printer, usually on the rear guard.

Always quote the model and serial number when ordering spare parts.



# **RECOMMENDED SPARES LIST**

Covering:

# **MODEL 5000 SP**

| MECH      | HANIC/                                 | <u>AL</u>  | STOCK REF  |
|-----------|--|--|--|
| <u>or</u> | 1.<br>2.<br>3.<br>4.<br>5.<br>6.<br>7. | Drive Belt Drive Roller Main Cylinder Seal Kit Rewind Cylinder Seal Kit Solenoid Valve Solenoid Valve Seal Kit Grey Self Adhesive Print Base | DRI140038<br>DRI141003<br>SEA512029<br>SEA512046<br>VAL510507<br>SEA512023<br>SABASE |
| <u>or</u> | 8.                                     | 300 x 450mm sheet<br>White Silicone Rubber Print Base<br>300 x 300 x 3mm thick sheet   | SRBASE   |
| ELEC      | TRICA                                  | <u>L</u>   |  |
|           | 1.<br>2.<br>3.<br>4.                   | Cartridge Heater (240v) Thermistor Probe Plug-In Control Card (240v) Pack of Fuses (5)   | HEA501505<br>THE500501<br>CPC290500<br>FUS393500                                     |

This list covers machines supplied after 1 January 1993 for the first two years of operation only.

# **MODEL 5000SP MECHANICAL PARTS LIST**

#### **MECHANICAL**

Item numbers refer to those on the assembly drawing. When ordering spare parts please use the Stock Reference.

| <u>ITEM</u> | DESCRIPTION              | STOCK REF.  | QTY | <u>NOTES</u>             |
|-------------|--------------------------|-------------|-----|--------------------------|
| 1           | Main Body                | N/A         | 1   |                          |
| 2           | Rear End Cap             | CAP142317   | 1   |                          |
| 3           | Roller Mounting Bracket  | BRA142003   | 1   |                          |
| 4           | Rack                     | RAC142004   | 1   |                          |
| 5           | Pivot Plate              | PIV142005   | 1   |                          |
| 6           | Wear Pad                 | EA142006    | 1   |                          |
| 7           | Pivot Block              | HIN142007   | 1   |                          |
| 8           | Door                     | DOO142007   | 1   |                          |
| 9           | Bearing Carrier Assembly | PLA142336   | 1   | Including items 83 & 85. |
| 9<br>10     | Cover Plate              | COV142010   | 1   | including items os & os. |
|             |                          |             |     |                          |
| 11          | Pulley                   | PUL142011   | 1   |                          |
| 12          | Lock Nut                 | OC142012    | 1   |                          |
| 13          | Stub Shaft               | SHA142013   | 1   |                          |
| 14          | Spur Gear                | GEA142014   | 1   |                          |
| 15          | Spur Gear                | GEA142015   | 1   |                          |
| 16          | Spur Gear Assembly       | GEA142347   | 1   | Including item 83.       |
| 17          | Seal Retainer            | RET142017   | 1   |                          |
| 18          | Drive Roller Shaft       | SHA142018   | 1   |                          |
| 19          | Back Guard               | GUA142019   | 1   |                          |
| 20          | Mounting Plate           | PLA142020   | 1   |                          |
| 21          | Insulator Pad            | INS142021   | 1   |                          |
| 22          | Heater Block             | HEA142022   | 1   |                          |
| 23          | Magnet Clamp             | CLA140046   | 1   |                          |
| 24          | Socket Housing Bracket   | BRA142023   | 1   |                          |
| 25          | Manifold Assembly        | MAN142362   | 1   |                          |
| 26          | ,                        |             | 1   |                          |
|             | Main Valve               | VAL510507   |     |                          |
| 27          | Air Switch               | AIR510503   | 1   |                          |
| 33          | Thumb Screw              | ADJ531502   | 1   |                          |
| 34          | Thumb Nut                | THU531503   | 1   |                          |
| 35          | Lock Nut                 |             | 1   | M12                      |
| 36          | Cap Screw                |             | 4   | M6x30                    |
| 37          | Oilite Bearing           | BEA520005   | 6   |                          |
| 38          | Button Head Screw        |             | 2   | M5x20                    |
| 39          | Button Head Screw        |             | 2   | M4x10                    |
| 40          | Dowel                    |             | 2   | 5 dia x 30               |
| 41          | Cap Screw                |             | 4   | M5x40                    |
| 42          | Extension Spring         | SPR530014   | 1   | -                        |
| 43          | Cap Screw                |             | 1   | M3x10                    |
| 44          | Extension Spring         | SPR530013   | 1   |                          |
| 45          | Dowel                    | G1 11000010 | 2   | 5 dia x 12               |
| 45<br>46    | Button Head Screw        |             | 6   | M3x8                     |
|             |                          | MAC524004   | 1   | IVIOAU                   |
| 47          | Door Magnet              | MAG531004   |     | May4a                    |
| 48          | Cap Screw                |             | 2   | M3x12                    |
| 49          | Cap Screw                |             | 6   | M6x35                    |
| 50          | Cap Screw                |             | 4   | M6x60                    |
| 51          | Button Head Screw        |             | 2   | M5x8                     |
| 52          | Cap Screw                |             | 4   | M12x175                  |
| 53          | Microswitch              | MIC505006   | 1   |                          |
| 54          | Cap Screw                |             | 2   | M3x16                    |
| 55          | C'SK Screw               |             | 2   | M3x6                     |
| 56          | Door Handle              | HAN530502   | 1   |                          |
| 57          | Button Head Screw        |             | 3   | M5x10                    |
| 58          | Pot Magnet               | MAG531002   | 1   |                          |
| 59          | Oilite Bearing           | BEA520002   | 1   |                          |
|             | Unite Dearing            |             |     |                          |

# MODEL 5000SP, MECHANICAL PARTS LIST (page 2)

| <u>ITEM</u> | DESCRIPTION                         | STOCK REF. | <u>QTY.</u> | <u>NOTES</u>                     |
|-------------|-------------------------------------|------------|-------------|----------------------------------|
| 60          | Oilite Bearing                      | BEA520006  | 1           |                                  |
| 61          | Shoulder Screw                      |            | 1           | 8 dia x 16                       |
| 62          | Roll Pin                            |            | 2           | 3/32 dia x 1/2"                  |
| 63          | Socket C'SK Screw                   |            | 3           | M4x10                            |
| 64          | Rewind Cylinder                     | CYL510004  | 1           |                                  |
| 65          | Cap Screw                           |            | 4           | M5x20                            |
| 66          | Heater Assembly                     | SOC149504  | 1           |                                  |
| 68          | C'SK Screw                          |            | 2           | M5x10                            |
| 69          | Hex Nut                             |            | 2           | M5                               |
| 70          | C'SK Screw                          |            | 1           | M4x8                             |
| 71          | Cap Screw                           |            | 4           | M8x60                            |
| 72          | Cap Screw                           |            | 4           | M6x20                            |
| 73          | •                                   |            |             |                                  |
|             | Dowel                               |            | 2           | 8 dia x 40                       |
| 75<br>70    | Cap Screw                           | DDI4.40000 | 1           | M6 x 40                          |
| 76<br>77    | Drive Belt                          | DRI140038  | 1           |                                  |
| 77          | Oilite Bearing                      | BEA520005  | 6           |                                  |
| 78          | Cone Pt Grub Screw                  |            | 2           | M5x10                            |
| 79          | C'SK Screw                          |            | 12          | M3x5                             |
| 82          | Needle Bearing                      | BEA521002  | 3           |                                  |
| 83          | Clutch Bearing                      | BEA521502  | 2           |                                  |
| 84          | Cap Screw                           |            | 2           | M4x40                            |
| 85          | Needle Bearing                      | BEA521003  | 1           |                                  |
| 86          | Key                                 | KEY142025  | 1           |                                  |
| 87          | Cone Pt Grub Screw                  |            | 2           | M5x6                             |
| 88          | Ball Bearing                        | BEA520501  | 4           |                                  |
| 89          | Grub Screw                          |            | 2           | M6x8                             |
| 90          | Needle Bearing                      | BEA521004  | 2           |                                  |
| 91          | Cap Screw                           |            | 2           | M3x20                            |
| 93          | Dowel                               |            | 2           | 6 dia x 25                       |
| 94          | Piston Seal                         | SEA512012  | 2           | o dia x 20                       |
| 95          | Compression Spring                  | SPR530015  | 2           |                                  |
| 96          | Front End Cap                       | CAP142026  | 1           |                                  |
| 97          |                                     |            | 1           |                                  |
|             | Main Cylinder Barrel<br>Main Piston | BAR142027  | 1           |                                  |
| 98          |                                     | PIS142028  |             |                                  |
| 99          | Main Piston Rod                     | PIS142029  | 1           | Dout of realis audio day and bit |
| 100         | Main Piston Seal                    | SEA512020  | 2           | Part of main cylinder seal kit.  |
| 101         | Wiper Seal                          | SEA512021  | 1           | Part of main cylinder seal kit.  |
| 102         | Piston Rod O-Ring                   | O-R512022  | 1           | Part of main cylinder seal kit.  |
| 103         | Main Nose Seal                      | SEA512018  | 1           | Part of main cylinder seal kit.  |
| 104         | Nose Bearing                        | BEA520010  | 1           |                                  |
| 105         | O-Ring                              | O-R512019  | 2           | Part of main cylinder seal kit.  |
| 106         | Nyloc Nut                           |            | 1           | M16                              |
| 107         | Cylinder Mounting Bracket           | BRA140002  | 1           |                                  |
| 108         | Guide Block                         | GUI140004  | 2           |                                  |
| 109         | End Cap                             | END140042  | 1           |                                  |
| 110         | Brake Disc                          | BRA140009  | 1           |                                  |
| 111         | Brake Arm                           | BRA140010  | 1           |                                  |
| 112         | Brake Pad                           | BRA490003  | 1           | Pack of 5.                       |
| 113         | Link                                | LIN140011  | 1           |                                  |
| 114         | Link                                | LIN140012  | 1           |                                  |
| 115         | Dancing Arm                         | DAN140013  | 1           |                                  |
| 116         | Pulley                              | PUL140013  | 1           |                                  |
| 117         | Guide Pin                           | GUI140017  | 1           |                                  |
| 117         |                                     | DRI141003  | 1           |                                  |
|             |                                     |            | 2           |                                  |
| 120         | Piston                              | PIS140020  |             |                                  |
| 121         | Pinch Roller Shaft                  | SHA141005  | 1           | Including item 00                |
| 122         | Pinch Roller Assembly               | ROL142387  | 1           | Including item 90.               |
| 123         | Dancing Bar                         | DAN141007  | 1           |                                  |
| 124         | Bearing Spacer                      | SPA140025  | 2           |                                  |
|             | Inner Boss                          | BOS140024  | 2           |                                  |
| 126         | Roller Spindle                      | SPI141008  | 2           |                                  |
| 127         | Foil Roller Assembly                | ROL142386  | 2           | Including item 77.               |
| 128         | Side Locator                        | SID141013  | 2           |                                  |
| 129         | Foil Spindle                        | SPI141014  | 2           |                                  |
|             | <u> </u>                            |            |             |                                  |

# MODEL 5000SP, MECHANICAL PARTS LIST (page 3)

| <u>ITEM</u> | DESCRIPTION        | STOCK REF. | <u>QTY.</u> | <u>NOTES</u> |  |
|-------------|--------------------|------------|-------------|--------------|--|
| 130         | Shaft              | SHA140034  | 1           |              |  |
| 131         | Side Cover         | COV141015  | 1           |              |  |
| 132         | Disc               | DIS140040  | 4           |              |  |
| 133         | Outer Boss         | BOS140041  | 2           |              |  |
| 134         | End Cap            | END140005  | 1           |              |  |
| 135         | Lock Nut           | LOC140043  | 2           |              |  |
| 136         | Anchor             | ANC140048  | 1           |              |  |
| 137         | Spring Post        | SPR140049  | 1           |              |  |
| 138         | Cover Plate        | COV142030  | 1           |              |  |
| 139         | Magnet Catch Plate | PLA140039  | 1           |              |  |

# **ADDITIONAL SPARE PARTS AND REPAIR KITS**

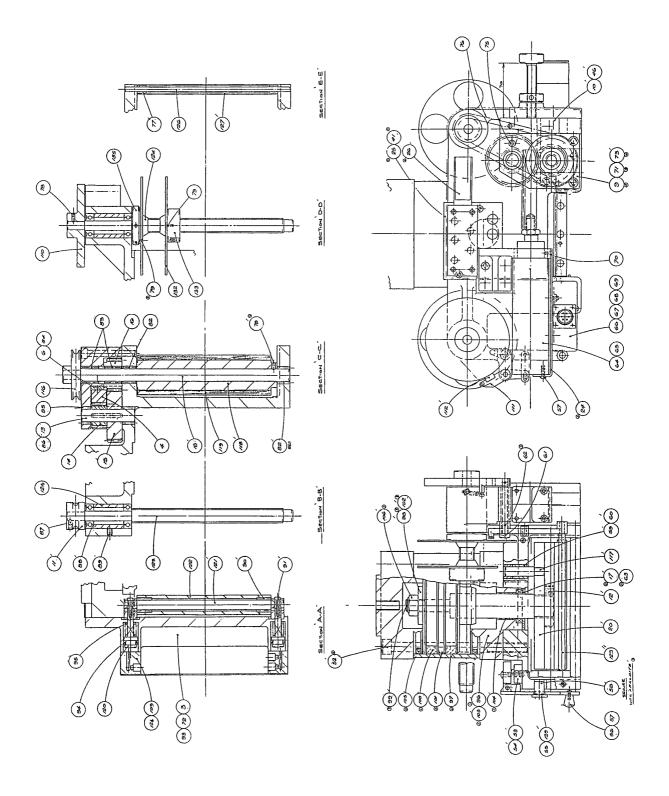
| PNE | <b>JMATIC</b> |
|-----|---------------|
|-----|---------------|

Main Valve Seal KitSEA512023Rewind Cylinder Seal KitSEA512025Main Cylinder Seal KitSEA512029

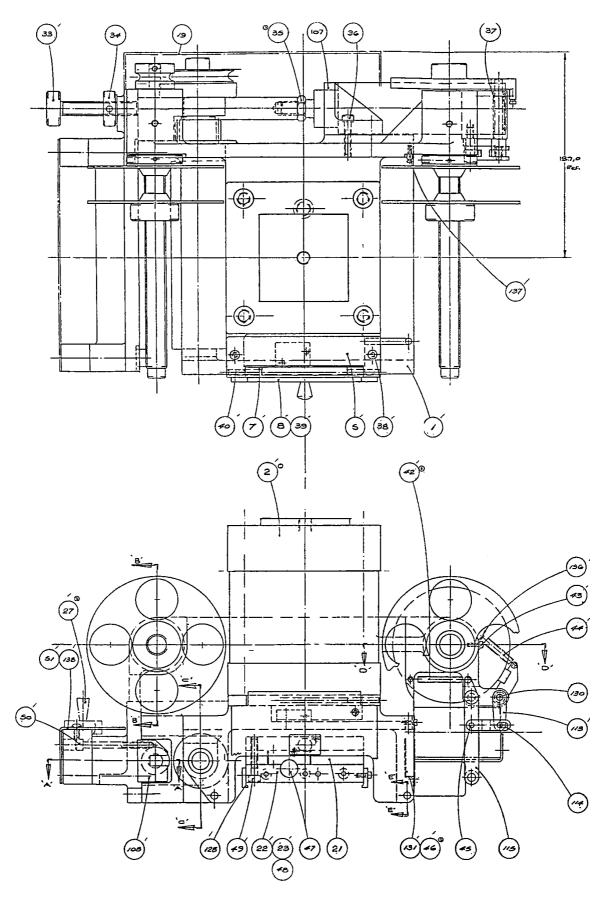
#### **ELECTRONIC**

Cartridge Heater, 240v HEA501505
Thermistor Probe THE500501
End of Foil Sensor (if fitted) PHO505612
Plug-In Printer Control Card, 240v, Box Mount (horizontal) CPC290500
For other control card variants, please contact the sales office.

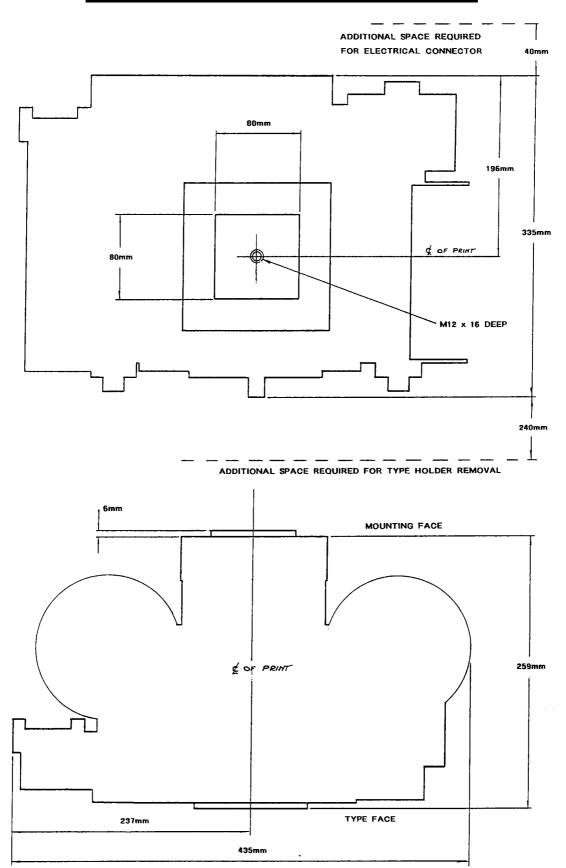
# **Model 5000SP Assembly Details (1 of 2)**



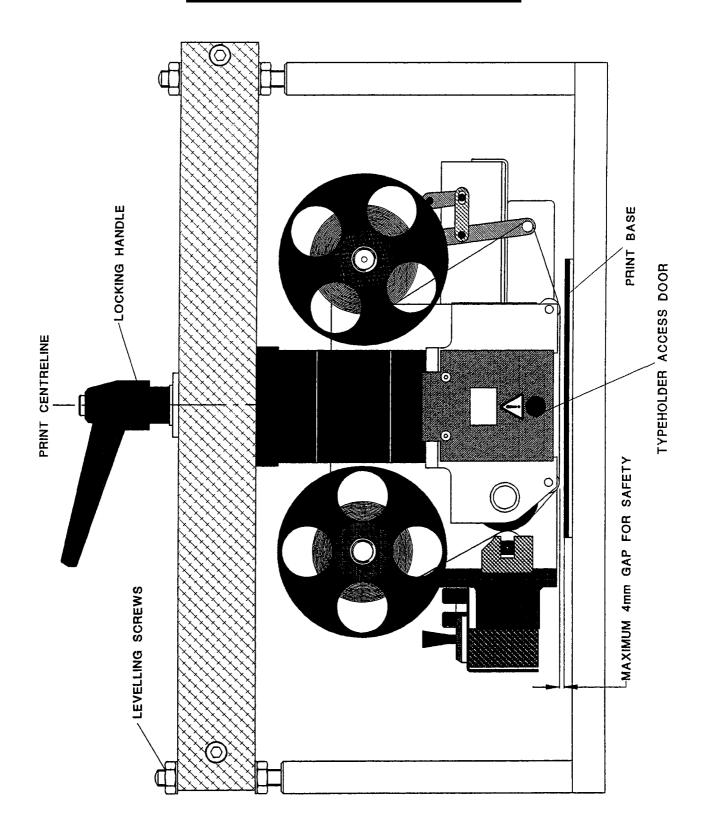
# Model 5000SP Assembly Details (2 of 2)



# **Model 5000SP Installation Dimensions**



# **Model 5000SP Frame Installation**



# **5000SP AIRBORNE NOISE EMISSIONS**

Comprehensive tests have been carried out with the machine fitted in a standard printer frame and mounted onto a typical label applicator. Measurements were taken at 1.6 metres above floor level and approximately 1 metre away from the printer in all directions.

The measuring equipment used for conducting the tests was a Digital Sound Level Meter, type d-1405E supplied by Lucas CEL. Before the tests were carried out the instrument was calibrated and fitted with a foam windshield.

The results shown below are based upon a standard type installation for the printer, the operating air pressure was set at 6 bar and the air flow restrictors correctly adjusted.

The noise levels shown below are the equivalent continuous "A-weighted" sound pressure levels in decibels "dB(A)".

| PRINTS PER MINUTE | NOISE LEVEL -<br>DECIBELS (dB) |
|-------------------|--------------------------------|
| 50                | 74                             |
| 100               | 76                             |
| 125               | 77                             |
| 150               | 77                             |

#### STANDARD WARRANTY TERMS AND CONDITIONS – HOT FOIL PRINTERS

All Open Date Hot Foil Printers Carry a twelve (12) month return to base (at our discretion) warranty.

Open Date printers should be installed and operated according to the instructions given in the operating manual. No liability will be accepted for faults caused by incorrect installation or operation of the equipment or if the product has been altered or subjected to unreasonable use.

The following components are not covered by the warranty as they will be subject to wear and tear: -

- 1. Print base rubber.
- 2. Hardened steel type.

Should you have cause to claim for repair under warranty then please contact our service department stating the model, serial number of the product and the nature of the problems or faults.

We reserve the right to charge for components replaced during the warranty period, which are subsequently found to be damaged due to any of the above conditions not being followed.

Any items repaired or replaced under warranty will carry the balance of the original warranty period only.

#### **OPEN DATE GROUP COMPANIES**

#### **FRANCE**

#### **OPEN DATE FRANCE**

Z.I. D'Attichy No.8, Voie Industrielle 60350 Attichy.

Local Tel:- 03 44 42 94 43 Local Fax:- 03 44 42 17 17

International Tel:- 0033 3 44.42.94.43 International Fax:- 0033 3 44.42.17.17

#### **GERMANY**

#### **OPEN DATE GmbH**

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International Tel:- 0049 9369 9824 0 International Fax:- 0049 9369 9824 24

#### U.S.A.

#### OPEN DATE SYSTEMS INC.

Springfield Road PO Box 538 Georges Mills NH 03751-0538.

Local Tel:- 603 763 3444 Local Fax:- 603 763 4222

International Tel:- 001 603 763 3444 International Fax:- 001 603 763 4222

#### **INTERNATIONAL AGENTS & DISTRIBUTORS**

Please visit:

# www.opendate.co.uk

for a list of international agents & distributors.