METAL SERIES

SWORD
METAL IDENTITY SOFTWARE

MDM2000

OPERATOR MANUAL

S.n.

Year

CIM
CARD IMAGING MASTER

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IMPORTANT: CIM SpA cannot be held responsable for any errors or damages caused by the use of supplies or spare parts not specifically approved or garanteed by CIM SpA.

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0.1 USING THE WORKSHOP MANUAL

0.1.1 Importance of the manual

This manual contains the instruction for putting into service, using and maintainance of the **METAL DOT MATRIX SERIES, AUTOMATIC** (**METAL DOT MATRIX 2000**) **and MANUAL** (**METAL DOT MATRIX 1000**) .

Before to install and put into service the machine we recommend that you carefoully read all the instructions in this manual, with particular reference to chapters 1 ,2 and 3, as the effectiveness of any servicing operation depends on the correct and methodical application of the information contained herein.

If you run into difficulties or setbacks, **CIM S.p.A. SERVICE DEPARTMENT** will be happy to provide you with the necessary advice and assistance.

CIM S.p.A. declines any liability for any injury or damage resulting from incorrect or unsuitable operations.

CIM S.p.A. reserves the right to make any modifications aimed at improving its products without prior notification.

Please ensure that any amendments or updates you may receive are kept with the original version of this manual.

0.1.2 Conserving the manual

Do not tear or remove pages from the manual, or overwrite any parts of the manual for any reason.

Keep the manual in safe place protected from excess heat and humidity.

0.1.3 Consultation the manual

This manual comprises:

- COVER PAGE IDENTIFYING THE TYPE OF PRODUCT
- TABLE OF CONTENTS
- INSTRUCTIONS AND/OR NOTES ON THE PRODUCT

The **INSTRUCTIONS AND/OR NOTES ON THE PRODUCT** define the safe working practices, correct procedures and skills required to service the machine correctly.

Please note that some of the illustrations in the manual, which are included to help you identify the parts described in the text, show standard engines and therefore may differ in some details with respects to the product in your possession.

0.1.4 Symbols used in the manual

The Safety symbols and notices shown below are used throughout this manual to draw the reader's attention to the hazards associated with particular procedures and operations which could result in damage to the machines or personal injury, or to indicate good working practices.

The same warning simbols are also placed on the machine to indicate dangerous areas.

MEANING OF THE SYMBOLS

GENERAL OPERATIONAL NOTE PAY ATTENTION TO THE SYMBOLS AND TO THE INSTRUCTIONS IN THE ADJACENT TEXT.

Safety notices (rectangular): you must use the protection shown in the notices when carrying out the operation in question to avoid risk of personal injury:

PROTECT YOUR HANDS (WEAR GLOVES)

PROTECT YOUR EYES (WEAR SAFETY GOGGLES)

PROTECT YOUR HEARING (HEAD PHONES)

Danger warning signs (triangular): General warning of risk of personal injury or damage to the product:

CAUTION ! GENERAL DANGER.

CAUTION ! HIGH TENSION.

CAUTION ! HIGH TEMPERATURE HAZARD

S00000104

CAUTION! RISK OF CRUSHING.

CAUTION! MOVING MACHINE COMPONENTS.

Prohibition notices (circular) denoting operations which are expressly prohibited to avoid risk of personal injury.

THE OPERATION INDICATED IN THE TEXT IS STRICTLY PROHIBITED

IT IS STRICTLY PROHIBITED TO CARRY OUT MAINTENANCE WORK IN THE PRESENCE OF MOVING PARTS.

IT IS STRICTLY FORBIDDEN TO REMOVE THE SAFETY PROTECTION. THESE SAFETY GUARDS SHOULD BE REMOVED ONLY BY SPECIALISED AND AUTHORISED TECHNICAL PERSONS WHO HAVE TAKEN CARE TO ADOPT ALL SECURITY MEASURES TO AVOID ANY RISK OF DANGER AND INJURY.

EARTHED CABLES THIS SYMBOL INDICATES GROUND REFERENCE POINT.

0.2 PROCEDURE FOR UPDATING MANUAL IN CASE OF MODIFICATIONS TO MACHINE

If the MACHINE or MANUAL are MODIFIED in any way, an UPDATE will be sent for insertion into the Manual.

0.3 ORDERING ORIGINAL REPLACEMENT PARTS

To help us provide a fast and efficient service, always specify the following information when ordering replacement parts:

- **METAL DOT MATRIX** type as indicated on nameplate;
- **Serial number** as indicated on nameplate and stamped on crankcase;
- **Quantity** of each item required.
- **Code** of required part.

1.0 GENERAL INFORMATION

METAL DOT MATRIX is an automatic feeder (**METAL DOT MATRIX 2000**) and manual feeder (**METAL DOT MATRIX 1000**) stamper unit which use and new punch technology to stamp special characters, symbols and also logos on a variety of metal plates, including stainless steel, aluminium, copper and brass (see chap. 1.5 for more details). The various functions are controlled by a microprocessor which manages the internal counters and the storing of data such as formats and texts in an on board CMOS memory. A small backup battery supplies the charge for the memory thus permitting all information to be saved and ready for subsequent use even if the machine has been switched off.

The **METAL DOT MATRIX** system consists in an stamper unit driven by a Personal Computer (not supplied) by means of the dedicated CIM software named SWORD.

The system may also run in offline mode, without software, to facilitate setting operations.

OPERATOR MODE (ON LINE)

With the on line standard mode the stamping's commands are transmitted by Host Computer with the serial interface **RS232** using CIM, XON/XOFF, STORED or MULTIEMBOSSER protocols. The layout is defined on the Host Computer with the Software supplied with the equipment (SWORD). Refers to chap. 5 and SW user's manual for details about using of the SW.

SETTING MODE (OFF-LINE)

The off line mode is intended for testing and setting purpose only in order to semplify settings and advanced operations (for expert operators or technical)

With this modality commands are transmitted by means of a keyboard connect to the rear panel DIN connector. This modality permits to expert operators to modify the setup parameters of the machine (Annex A) and to make pre-defined jobs (CARD TEST) in order to verify the correctness of settings and the functionality. Refers to Annex A for details.

UPGRADE FIRMWARE

A service port placed on the rear panel permits by few simply operations to upgrade the FW of the machine in each moment. Refers to Annex B to see how to upgrade the firmware.

1.1 ELECTRICAL SPECIFICATION

	METAL DOT MATRIX 1000 and 2000	
Power Supply	117V 60Hz	230V 50Hz
Power Absorbed	900 W	600 W
Current max	1 A	1 A
Fuses (2) 5x20 mm	T 2,5 A	T 2,5 A
Logic	Micropr. a 8 bit	
Backup Power	Lithium Battery 3.6 V	
PC Interface	RS 232 Asinc. Progr.	
Baud Rate	Progammable (Default 9600 Baud)	
Working Noise (*)	Lower than 75 dB (A)	

(*) Mesured during normal working use at a distance of 1 m from the surface of the machinery and at a height of 1,60 m from the floor.

1.2 EQUIPMENT CLASSIFICATION AND STANDARD REFERENCE

Installation category	II
IP Protection	IP 20
Standard reference	IEC EN 50081-1 IEC EN 50082-2 IEC EN 60950 ed. 4th

1.3 PHYSICAL ENVIRONMENT AND OPERATING CONDITIONS

Operating Temperature	+5°C ÷ +40°C
Operating Humidity	30% ÷ 90%
Operating altitude	1000 m
Transportation and storage temperature	-25°C ÷ 55°C

1.4 DIMENSIONS AND WEIGHT

	METAL DOT MATRIX 2000	METAL DOT MATRIX 1000
Height	385 mm	385 mm
Width	625 mm	625 mm
Depth	745 mm	745 mm
Weight	57 Kg	54 kg

1.5 STAMPING CAPACITY AND TECHNICAL FEATURES

MDM1000/MDM2000	
PERFORMANCE	Depending on font and size (e.g.: ht 6 mm = 1 character/4 seconds)
MARKETING SPEED	About 50 dots per second
DOT DENSITY	200 DPI
MARKETING FORCE IN KILOGRAMS	50 Kg
INPUT HOPPER CAPACITY	MDM1000: manual feeding MDM2000: 250 plates (0,4 mm) variable dimensions
OUTPUT HOPPER CAPACITY	MDM1000: manual feeding MDM2000: side eject or FIFO elevator (250 plates)
STAMPING AREA	Full plate except 1 mm from the top and left/right edges and 7 mm from the bottom edge. Avoid the edges in order to not damage the stylus
STAMPING PRESSURE	Adjustable depending on material stamped (see chap. 5.1.3)
FONTS	Standard Windows fonts including special characters and symbols
LOGOS	Up to 2 at a time, resident in equipment (see Annex B)
LOGO DIMENSIONS	Max area about 84 cm^2
STYLUS	Widia

1.6 CAUTIONS

WARNING!: THE MACHINE IS INTENDED NOT FOR CONTINUOUS USE (MAX 8-9 HOURS/DAY).

WARNING (FOR 117 VAC APPLICATIONS ONLY): This is a "CLASS A" equipment. In a domestic environment this product may cause radio interference in wich case the user may be required to take adeguate measures.

Certain industrial envirament charaterized by the presence of high level transient overvoltage (> 500 V) on the serial transmission, may cause malfunctioning to the system PC machine. In this case we suggest to use the overvoltage suppressor (supplied with the machine) to protect the serial line communication.

If the daily personal exposure of the operator to noise is likely to exceed 85db the operator must wear some form of efficient ear protection, in accordance with the 86/188/EEC standards.

1.7 ENVIRONMENTAL RECOMMENDATIONS

The machine should work in a closed room protected from dust and excessive humidity. The machine should be positioned in such a way that its distance from the walls, doors, windows, other machines or working positions garantees immediate access in the case of urgency, maintenance or reparation.

DO NOT INSTALL THIS MACHINE IN THE NEIGHBOURHOOD OF OTHER OPERATING MACHINES WHICH PRODUCE DUST SINCE DUST CAN DEPOSIT ITSELF INSIDE THE MACHINE AND CAUSE DAMAGE TO THE INTERNAL ELECTRIC DEVICES.

LIQUID SHOULD NOT BE PLACED ON THE MACHINE COVER SINCE IT HAS NOT BEEN WATER SEALED.IT IS PARTICULARY IMPORTANT TO AVOID OXIDATION WHICH WOULD ADD TO THE WEAR AND EROSION OF THE MECHANICAL PARTS.

The machine has been made with fire proof materials thus diminishing the risk of general fire. Short circuit protection has been implemented so that the power supply is immediately isolated thus avoiding unwanted current absorption from the external power line.

THE MACHINE GENERATES A WORKING NOISE LEVEL LESSER THAN 75DB (MEASURED AT A DISTANCE OF ONE METER AND AT THE HEIGHT OF 1.60 M FROM THE GROUND).
WORKING WITH CERTAIN TYPES OF STEEL PLATES OR WITH THE MACHINE PLACED ON A SUPPORT TABLE WHICH AMPLIFIES AIRBORNE NOISE OR WITH CARELESS MECHANICAL SETTING (SEE CHAP. 5.1.3), THIS VALUE MAY BE EXCEEDED. IF THE DAILY PERSONAL EXPOSURE OF THE OPERATOR TO NOISE IS LIKELY TO EXCEED 85DB THE OPERATOR MUST WEAR SOME FORM OF EFFICIENT EAR PROTECTION, IN ACCORDANCE WITH THE 86/188/CEE STANDARDS.

1.8 SAFETY INSTRUCTIONS

With "Operator Area" is intended the area that is accessible, during normal use, without the use of a tool or that the means of access is deliberately provided to the operator. Operator Area is also the area to which the Operator is instructed to enter regardless of whether or not tools are needed to gain access.

The Operator Area of New Metal is compliant with all the safety requirements of the main european and extra-european Standards. However we would recommend to read carefully the following pages. These instructions recall the warning symbols used in the Operator Area of the machine and show any possible dangerous situation with the precaution that you have to adopt.

Dangerous mechanical parts (straps, pulley, gripper to move the card) - Risk of crushing or entrapment.

Pay attention in introducing hands in processing card areas. Pay attention to the entrapment risks for your hair.

The machine is provided of mechanical protections (enclosures, shields or guards) and software protection systems to block any moving part when top cover is open and dangerous part become accessibles. Nevertheless, in case of damage of the safety systems, the machine can run also with the cover opened. In this case mechanical moving parts represents a possible danger for the safety of the Operator.

In case of demage of safety systems please, switch off the machine and call the service.

Warning: the machine may be driven also by remote control (Personal Computer). Pay maximum attention during access in dangerous areas (removal of blocked cards, errors restore or ordinary maintenance).

In case of necessity a safety mushroom pushbutton placed on the front panel permits an immediate arrest of the machine (see 4.1.2. for details).

High voltage parts - Risk of electric shock.

No high voltage parts are accessible into the Operator Area. All the high voltage circuits are contained into closed areas and are protected by fixed enclosures. To maximize the safety, covers and any metal accessible part are electrically connected to ground. The efficiency of the connection is tested on every sample by the internal quality check before putting the product on the market.

Do not remove or modify in any circumstances the enclosures and the internal protections. In case of necessity referes to the CIM Technical Service.

THE MACHINE IS FURNISHED WITH SPECIAL SAFETY GUARDS WHICH PROTECT THE OPERATOR FROM COMING INTO CONTACT WITH THE MECHANICAL AND ELECTRICAL PARTS INSIDE THE MACHINE. ONLY THOSE PERSONS WHO ARE SPECIALISED IN REPAIRS AND MAINTENANCE AND WHO HAVE BEEN AUTHORISED SHOULD HAVE ACCESS TO THE ABOVE MENTIONED PARTS. SIMPLE GENERAL MAINTENANCE CAN BE SAFELY PERFORMED BY THE OPERATOR SO LONG AS THE MACHINE HAS BEEN STOPPED AND THE ELECTRICAL POWER SUPPLY HAS BEEN DISCONNECTED.

CIM S.p.A. cannot be held responsible for the consequences of not abinding by these principles when using the machine. In case of breadown please call the technical assistance.

1.9 DECLARATIONS OF CONFORMITY

The manufacturer CIM S.p.A. - Via Serra, 2 - 40012 Calderara di Reno - Bologna - Italy, declares under sole responsability tha the products comply with the main intentional standards and regulations, and in particular:

CIM METAL DOT MATRIX 1000 and 2000

Comply with part 15 of the FCC regulations, Subpart A and B - sections 15.107 (b) (e) and 15.109 (b) (g) - for Class A digital devices

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

UL60950 approved (Safety of Information Technology Equipments)

File No. E203983

UL and FCC referes to 117V 60Hz equipments only.

The equipments comply with the following European Directives: 89/336/EEC, 98/37/EC, 72/23/EEC.

Please, contact us to have any original declaration.

1.10 DIRECTIVE WEEE

INFORMATION FOR USERS
Pursuant to art. 13 of Italian Legislative Decree n. 151 of 25 July 2005, "Implementation of Directives 2002/95/EC, 2002/96/EC and 2003/108/EC on the restriction of the use of hazardous substances in electrical and electronic equipment and the disposal of waste".

The crossed out waste bin symbol applied on the equipment or its package indicates that at the end of its useful life the product must be collected separately from other waste.

Separate collection of this equipment at the end of its life is organised and managed by the manufacturer. Any user who wishes to dispose of this equipment must therefore contact the manufacturer and abide by the system the latter has adopted to permit separate collection of end-of-life equipment.

Adequate separate collection aimed at subsequent recycling, treatment and environmentally compatible disposal of the dismantled equipment contributes to avoiding possible negative impacts on the environment and health and favours the reuse and/or recycling of the materials making up the equipment.

Illegal disposal of the product by the owner shall be subject to the administrative sanctions provided for under current laws and regulations.

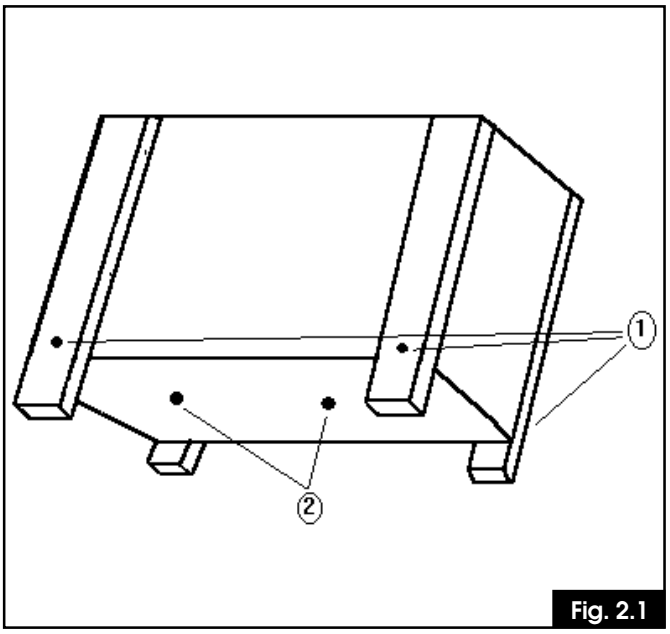

Fig. 2.1

2.0 UNPACKING

The machine is delivered in a wooden packing case. This is due to its dimensions and weight and avoids the risk of dammage to the machine. All displacements should be done by a forklift or therefore always by two **persons because the gross weight is about 100 kg. for version METAL DOT MATRIX 2000** (**METAL DOT MATRIX 1000 90 KG.**)

To unpack the machine as shown in figure please follow the instructions below.

- Remove the four side screws (1) with a 10 mm wrench (es. UNI 6736) and remove the cover.
- Take the 19 mm fork wrench (es. UNI 6736) which fixed on top of the machine by an adhesive band.
- Remove the screws from the bottom of the case (2) with the 19 mm wrench included in the package.
- Having removed the screws the machine can be lifted up and placed on the work table. This operation should be done with two persons.
- Once the machine has been finally positioned, the cellophane can be removed. Open the envelope which contains the cd of manual and software and the key for the front cover
- Remove the keyboard and with the above mentioned key open the front lid and remove the elastic bands which hold the pincer.
- Please refer to the next paragraph in order to check all the accessories.

Fig. 3.1

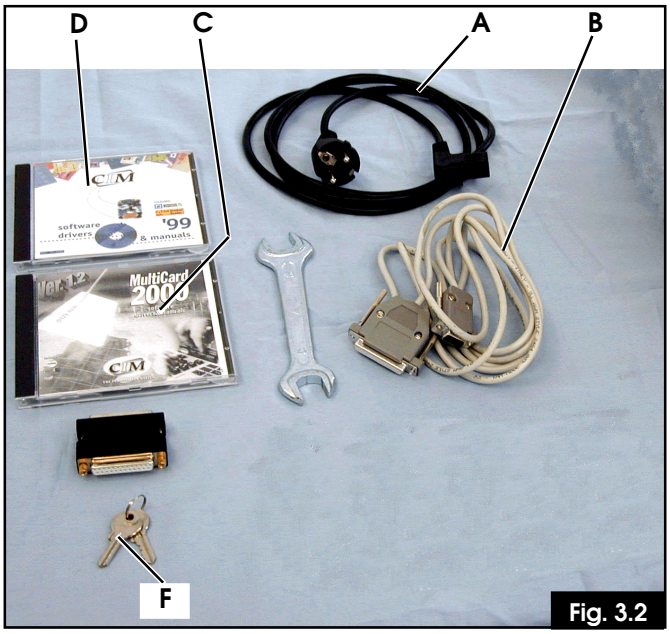

Fig. 3.2

3.1 CHECKING THE ACCESSORIES

Before installing the machine the operator is advised to check that all the accessories are present and that none have been damaged during the transport.

If any single element has been damaged the general working of the machine can be compromised.

The following accessories are supplied with the Stamper:

A) 1 POWER SUPPLY CABLE + PLUG TYPE PA80
B) 1 SERIAL CABLE
C) MANUAL ON CD
D) SOFTWARE ON CD
E) 2 KEY LOCK TO OPEN FRONT PANEL
F) SOFTWARE HARDWARE KEY

WARNING ! THE STAMPING MACHINE WEIGHS ABOUT 60 KG. ALL DISPLACEMENTS MUST BE DONE WITH 2 PERSONS.

WARNING! USE ONLY LISTED DETACHABLE POWER SUPPLY CORD NOT EXCEEDING 4.6 M LENGHT, TYPE SVT OR SJT, 3X18 AWG, WITH A MOLDED-ON CORD CONNECTION BODY AND A LISTED PLUG CAP RATED 10A, 125 V.

3.2 ELECTRICAL CONNECTIONS

The installation of the **METAL DOT MATRIX** system is easily done. Examine the rear control panel of the cover, (Ref figure 3.3) there are all the sockets for the various connections. Continue as follows:

- Connect the serial cable between the Computer and the Stamper
- Connect the power supply cable to the PA 80 socket.

WARNING: TO AVOID ELECTRIC SHOCK THE POWER CARD PROTECTIVE GROUNDING CONDUCTOR MUST BE CONNECTED TO A GROUND CIRCUIT CONFORMS TO THE NATIONAL STANDARD.

WARNING: REMEMBER TO CONNECT THE SERIAL CABLE TO THE MACHINE WHILE IT IS SWITCHED OFF TO AVOID DAMAGING THE CIRCUITS.

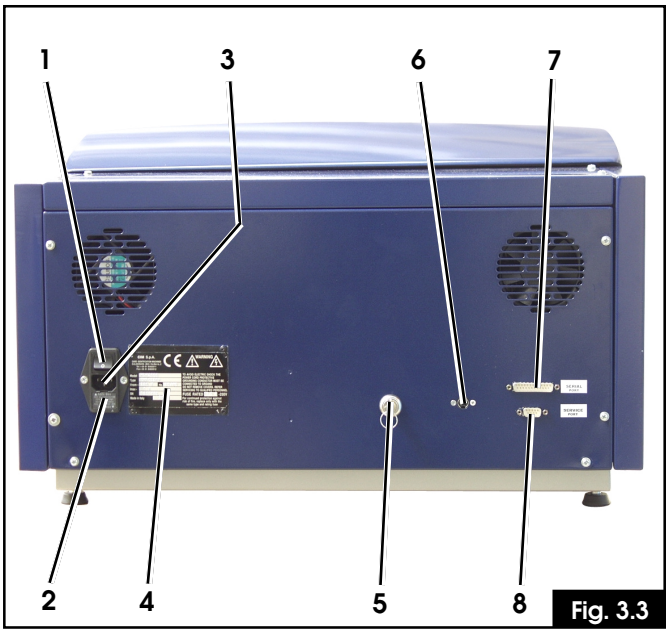

Fig. 3.3

1. MAIN SWITCH
2. FUSE
3. SOCKET PA80 FOR MAIN POWER SUPPLY
4. IDENTIFICATION PLATE
5. KEY SELECTOR (FOR TECHNICAL USE ONLY)
6. SOCKET TYPE 5 POLE DIN FOR KEYBOARD
7. SERIAL SOCKET FOR PC 25 PIN MALE
8. SERIAL SERVICE PORT

The CIM SpA cannot be held responsabile for the consequences of not abiding by these principles when using the machine thus in the case of breadown please call the Technical Assistance.

3.3 CHOOSING THE WORKING PLACE

Install the machine at least 0,6 m of height. Take care that the place where you install the machine is conform to the environmental requirments of cap. 1.8. Leave at least 0,3 m of distance from each side of the machine and the closer wallsor barriers in order to permits the better access to connectors and the proper air conditioning. The opening of the covers require 0,4 m freespace also above the cover. Take care that the support where you put the machine dosen't amplify the noise level over the allow level (see cap. 1.8) and that the work station's strenght is suitable to support the machine (60 kg). Do not install the machine on unstable surfaces.

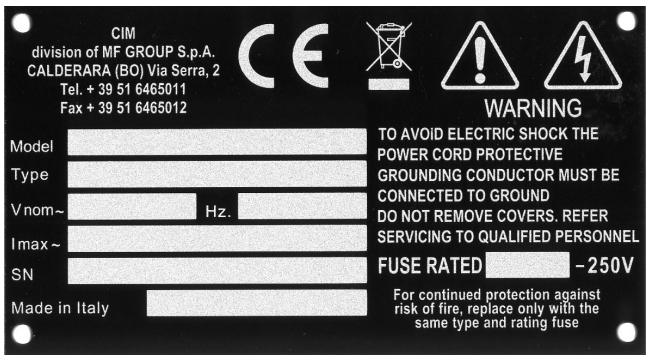

Fig. 3.4

3.4 ADVISE AND CARE DURING THE INSTALLATION

- The Identification plate attached to the rear panel contains information about the serial number, the type of machine, the necessary power supply and the absorbed current.
- Before switching the machine on be sure that all the cables have been connected correctly and that the local power supply corrisponds to that stated on the plate. The plate layout is as follows: (ref. figure 3.4).

After the Trade name the plate has 6 embossed fields as shown below:

Model : Machine model
Type: Type of machine
Vnom: Power Supply
Hz: Frequency supply
Imax: Power absorbed
SN: Serial Number

- If the tension of the power supply should exceed a 20% increase of the base tension the safety fast-blow fuses could open. In order to substitute it take a flat blade screw driver, remove the power plug and place the blade in the nitch at the bottom of the plug entrance just above the signed area for the fuse. Gently lever the Fuse Block until it can be removed by hand

REPLACE ONLY WITH FUSE OF THE SAME TYPE AND RATED

- In order to garantee a correct functioning of the machine and offer a valid safety level to the operator the machine must be **earthed**. Please ensure that the Stamper is connected to a power supply that has a good earthing and that the computer is also connected to the same line.

WARNING! USE ONLY LISTED DETACHABLE POWER SUPPLY CORD NOT EXCEEDING 4.6 M LENGHT, 18 AWG RATED 10 A PROVIDED WITH EARTH PROTECTIVE CONDUCTOR.

- The electrolock enables the working mode for the Technician and should be used only by those specialised persons who have been authorised to deal with the maintenance and the reparations. Connect the appropriate cable with the plug type Cannon 25/9 pin to the serial socket of the computer and control the conection to the serial ports **COM1**, **COM2** in order to report the correct information when configuring the Software.

NOTE: CONNECT THIS CABLE WHEN THE STAMPER HAS BEEN SWITCHED OFF.

3.5 SWITCHING ON AND CONTROLLING THE DISPLAY

Once installed the machine can be switched on with main switch. After few seconds, necessary to perform a graphics initializzation (shown by a progress bar), on the display will appear the following message:

E-00 POWER ON STAND BY STATUS - PRESS START

Press the START key on right side of the front panel beside the display. This activates a general reset which, when completed, will leave another message on the display to indicate the Ready State of the machine.

METAL DOT MATRIX 2000 V.Y.YY READY

If the machine does not start control that the power supply is correctly set and that the main fuses have not been opened.

For other breakdowns please refer to the Chapter "Error Messages and Problem Solving.

NOTE: If the display is turned on but nothing appears on the screen switch the machine off and call the Technical Assistance.

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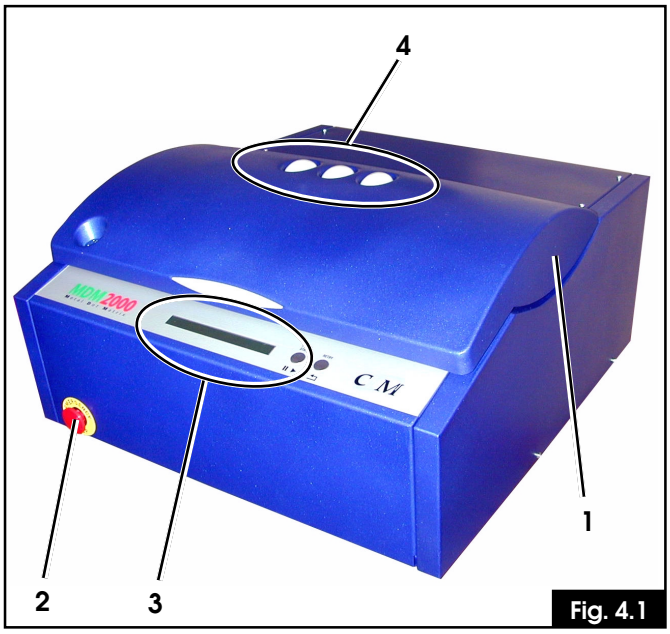


Fig. 4.1

4.1 OVERALL PARTS DESCRIPTIONS

Components of the machine.

In Fig. 4.1 are showed the main conponents of the machine:

1. Top Door
2. Safety mushroom pushbutton
3. Operator Console
4. Status lamps

4.1.1 THE TOP DOOR

The TOP DOOR (fig. 4.1 (1)) prevents any contact of the Operator with the dangerous moving parts of the machine and should be closed during work. A mechanical switch with a firmware protection stop the machine each time the cover is not well closed.

In case of damage or malfunctioning of this safety function, please switch off the machine and call immediately the service.

4.1.2 SAFETY MUSHROOM PUSHBUTTON (EMERGENCY STOP)

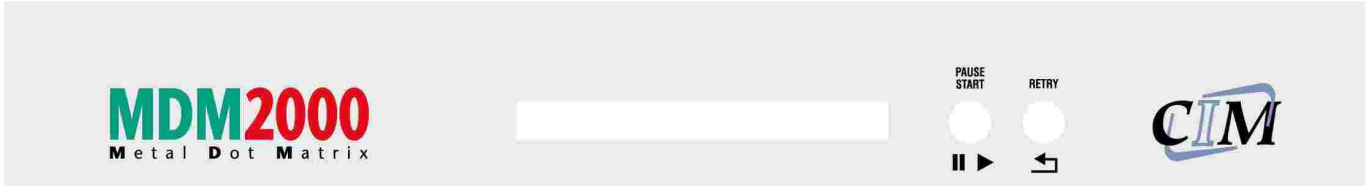
The red MUSHROOM PUSHBUTTON (fig. 4.1 (2)) is a mantained safety button with turn to reset head. If any emergency situations occours the safety mushroom button permits the fastest arrest of the machine.

The pushbutton doesn't switch off the machine but stops the mechanical moving part and remove the power from the motors.

Press the mushroom button to stop the machine and turn it clockwise to come back to the operating mode. Then press start to reset the machine and resume the job.

4.1.3 THE CONSOLE

The console of the METAL DOT MATRIX series has a very simple front control panel with a display and two buttons.



- The LCD display (2 rows with 40 characters per row) is used to indicate the operating states of the machine.
- The 

button is used to switch between normal operating mode and pause status and to reset any error.
- The 

button is user to retry the last operation after an error.

4.1.4 THE INDICATOR LAMPS

On the top door there is a segnaletic semaphore with three coloured light that show in each moment the status of the machine (fig. 4.2). The meanings of the light are the following:


GREEN light: READY status (power supply ON)


RED light (flashing): ERROR status (with buzzer acoustic alarm)


YELLOW light (flashing): WARNING status (Loader EMPTY or Unloader FULL

In normal use the green light is always on. The other light can be switched on during the functioning. Uses the PAUSE/START and RETRY buttons to resume the job.

Fig. 4.2

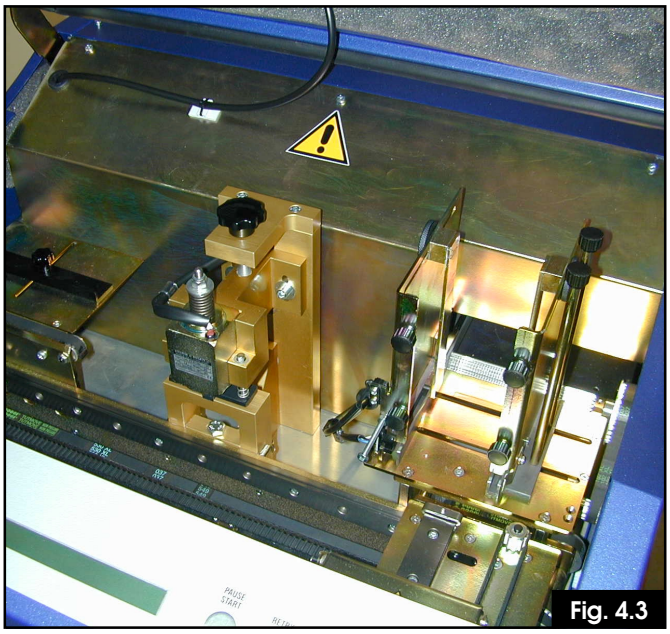


Fig. 4.3

4.2 DIFFERENCES BETWEEN MANUAL (1000) AND AUTOMATIC (2000) MODELS

The METAL DOT MATRIX 2000 has a loader unit (right to the stamper unit) that contains up to 200 metal plates, and an unloader magazine (on the left) to deposit the personalized plates (fig. 4.3).

Two alarms are provided in case of LOADER EMPTY or UNLOADER FULL.

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Fig. 4.4

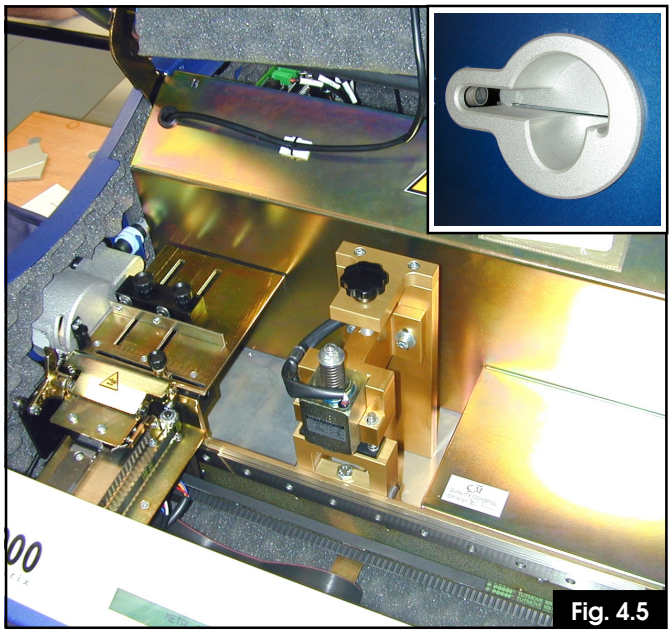

Fig. 4.5

The MDM1000 version doesn't have magazine of metal plates (see fig. 4.4), so it can personalize only 1 plate at time.

On the left enclosure side there is an opening that will permit to insert and remove the plate (fig. 4.5).

Use this opening to put a new plate and to remove it when the cicle of personalization is finish. Remove the old plate before to start a new cicle.

A photocell will stop the unloading movements each time you put your hand in the hole.

4.3 STORED CONFIGURATION AND REPLACING LITHIUM BATTERY

The LCD EDIT format and the SETUP configuration parameters (see Annex A and B) are stored into a memory provided of a lithium backup battery. When the battery level is down the machine may lost the configuration and the LCD Edit formats. Before this critical level is reached, the display will show the alarm "BATT LOW" (see Figure) and the red lamp will flash for 5 seconds.

In this case call the service in order to replace the battery.

CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISPOSE OF USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS

Fig. 4.6

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5.0 HOW TO PRODUCE ONE CARD

Before to start with your first card you have to set the machine, switch on the machine and run the SWORD software.

5.1 SETTING THE MACHINE

Before to start with the production it need to adjust the internal devices to the plates sizes to product.

The quality and quantity of the produced plates depend on the correct adjusting of the mechanical units.

- Loader
- Unloader
- Stamper

Open the front panel (after input the key supplied) the METAL DOT MATRIX as shown in figure 5.1.

1. PLATES LOADER
2. STAMPING DEVICE
3. PLATES UNLOADER

It should control the state of the above mentioned units at the begining of every work cycle.The machine should be switched off and the power supply should be disconnected when it is necessary to access any of the internal parts of the machine. The safety protection devices have been constructed to block the machine cyle during the adjusting phase if the preceding standards are not respected.

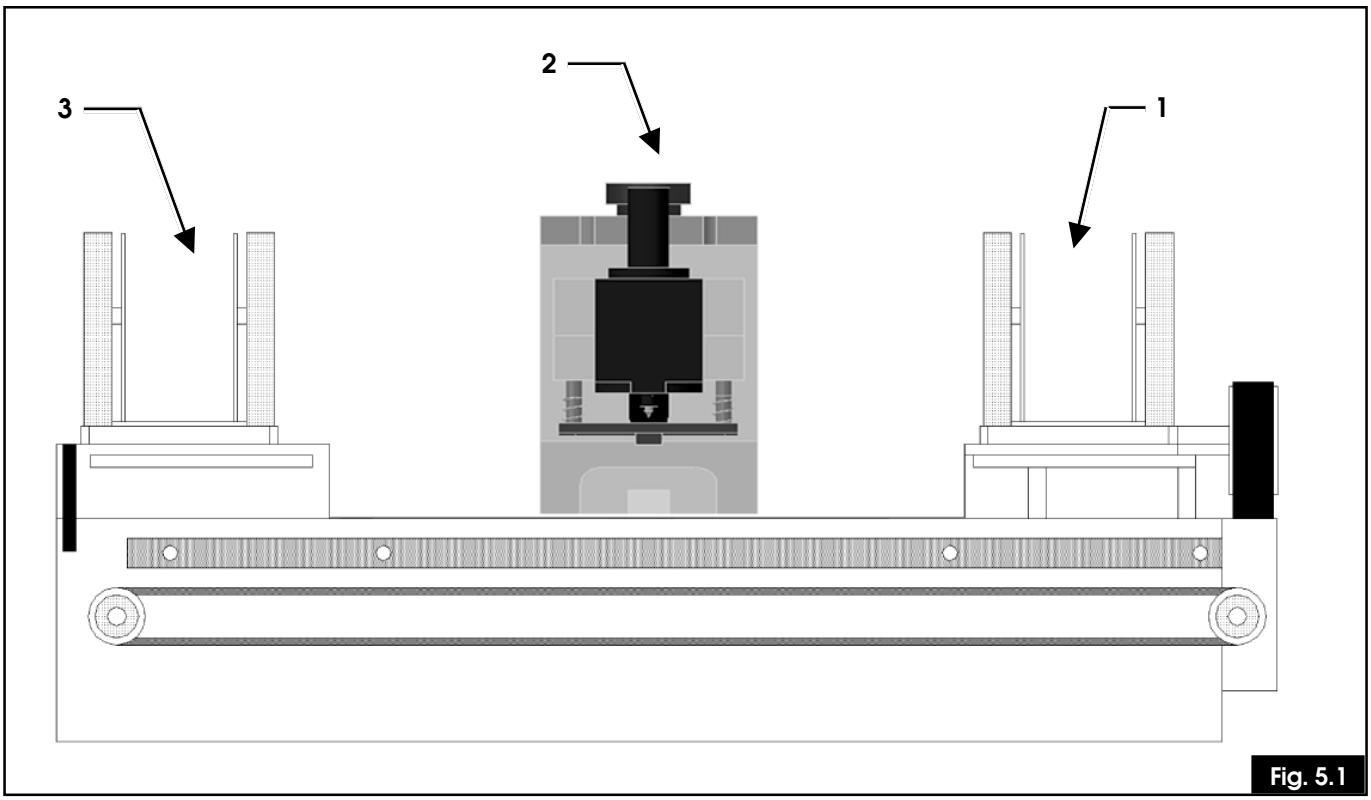

Fig. 5.1

5.1.1 AUTOMATIC (2000) VERSION

5.1.1.1 LOADER ADJUSTEMENT

The Loader unit for the metallic plates (fig. 5.2) is located on the right side of the Stamper and can be adjusted to the dimensions of the plates.

To adjust the Loader do as follows:

- Open the front cover.
- Loosen the black knobs (1) on the right side of the Loader.
- Bring the right support closer to the plate to be embossed leaving a tolerance of about 1 mm and then tighten the knobs.
- Loosen the wings knobs (1) of the rear supports (2), slide them to a distance of about 5 mm from the plate and tighten the knobs.
- Loosen the four knobs (3) to adjust the plate thickness, pull the plate towards the outside, set the supports 0.5 mm higher and tighten the knobs.

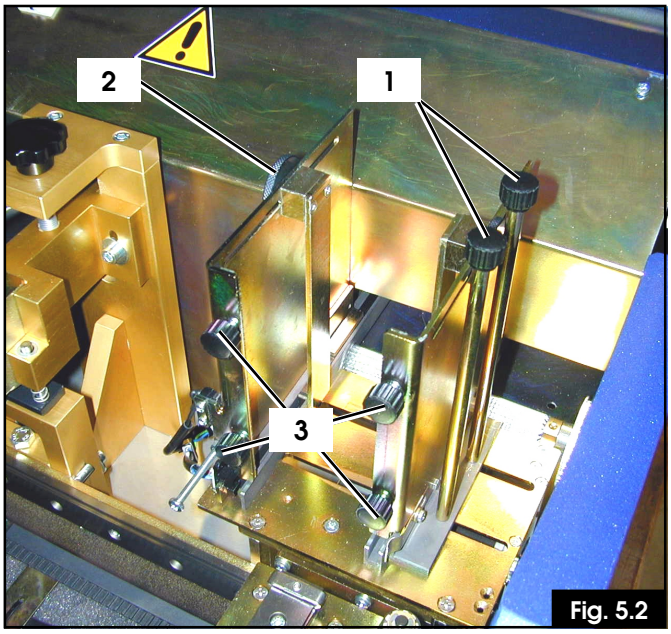

Fig. 5.2

5.1.1.2 UNLOADER ADJUSTEMENT

The Unloading unit is located on the left side of the Stamper. There are two different adjustment solutions depending the type of plate and end use:

- Unloader with Lift (5.1.1.3)
- Unloader with Ejector (5.1.1.4)

The first permits a progressive stacking of the plates inside the Metal Dot Matrix and the second ejects the plates out of the Stamper.

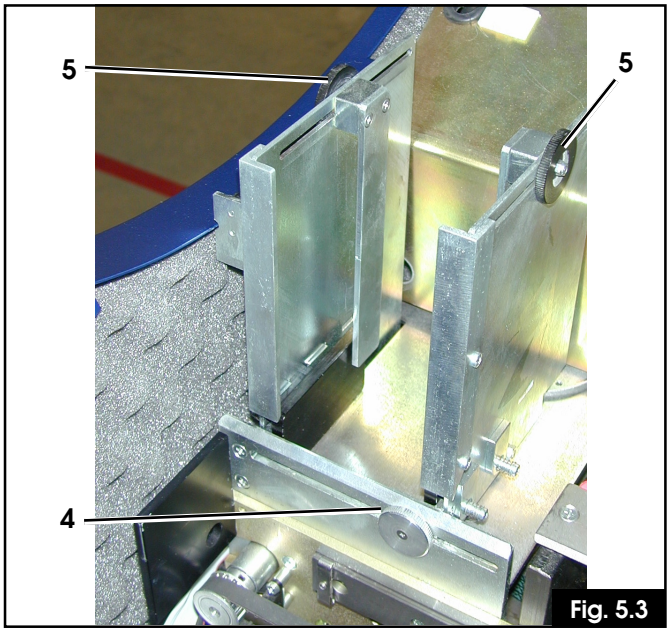

Fig. 5.3

5.1.1.3 UNLOADER LIFT ADJUSTEMENT

To adjust the unloading support refer to figure 5.3 and follow the instructions below:

- Open the front cover.
- Loosen the knob on the bottom of the support (4).
- Place the plate on the spring support.
- Shift the right support towards the plate until there is a gap of about 1 mm
- Tighten the knobs .
- Loosen the knobs (5) and repeat the process mentioned in the Loader section.

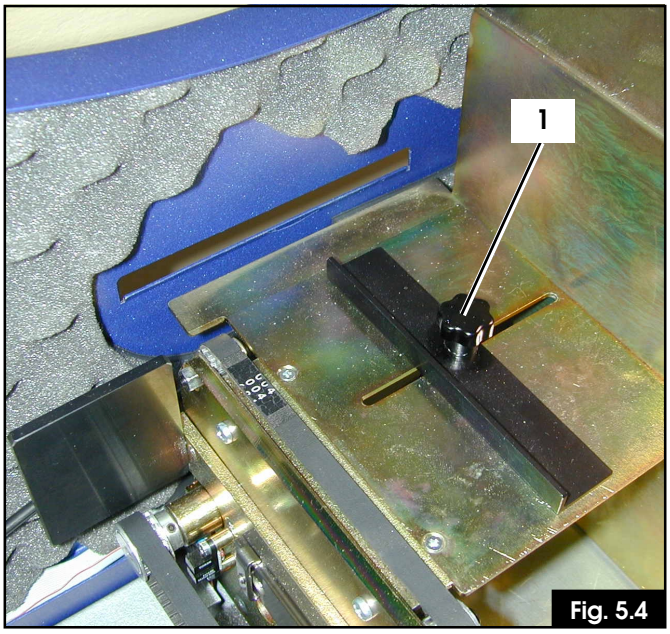

Fig. 5.4

5.1.1.4 UNLOADER EJECTOR ADJUSTEMENT

In the machines with unloading ejectors (fig. 5.4) there is only one adjustment:

- Loosen the black knob (1) (cilindric nut UNI 5723-67/4A)
- Place a plate on the ejector plane.
- Shift the bracket towards the plate. Leave a gap of a few millimeters between the two.
- Tighten the black knob.

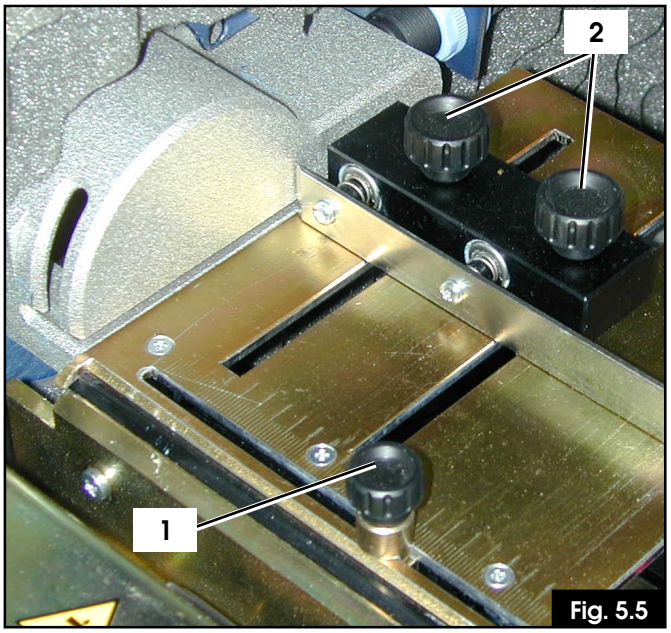

Fig. 5.5

5.1.2 MANUAL (1000) VERSION

5.1.2.1 LOADER/UNLOADER ADJUSTMENT

To adjust the loading/unloading (fig. 5.5) do as follows:

- Open the front cover.
- Loosen the black knob on the right side of the loader (1) and slide it closer to the plate to be embossed leaving a tolerance of about 1mm and then tighten the knob.
- Loosen the knobs of the reart support (2).
- Bring the rear support to a distance of about 5mm from the plate and tighten the knobs.

5.1.3 STYLUS ADJUSTMENT

The machine is configured by the constructor in the final testing phase for the production of alluminium plates of thickness 0,5mm.

For steel plates or for plates of greater thickness it is necessary to modify the height of the stylus (3).

To registry the stylus refers to fig. 5.6 and do as follow:

- Switch off the machine and lift the front cover.
- Loosen the allen screws (1).
- Turn the black knob (2) clockwise or counterclockwise in order to increase or decrease respectively the height of the stylus.
- Tighten the allen screws (1).

To reach the best calibration we suggest to carefully attend to the following steps:

1. Loose the allen screws (1);
2. By using the knob (2) increase the height of the stylus in order to insure the passage of the plate;
3. Put the plate in the clamp and manually move the clamp until the plate is in the working position (under the stylus);
4. By keeping lower the solenoid with your finger, turn the knob (2) until the stylus goes in contact with the surface of the plate (don't press the surface).
5. Tighten the allen screws (1).
6. Close the cover, switch-on the machine and start the Card-Test Nr. 1 (see annex A.10);
7. Looking the resulting plate you can see if you need more pressure.
8. To increase the pressure loose the allen screws, turn the knob counterclockwhise of about 10-15° (1 complete turn= 1,25 mm height), tighten the screws and repeat the card test.
9. If necessary repeat steps 7 and 8 until the result is acceptable.

Remarks: the Stylus Adjustment is a delicate operation. Do it only when tightly necessary or when the printing of your MDM is not satisfying. After each regulation of the knob set free the solenoid and verify that the plate is free to pass under the stylus. Remember that careless or wrong settings may cause serious damage to the structure of the stamper.

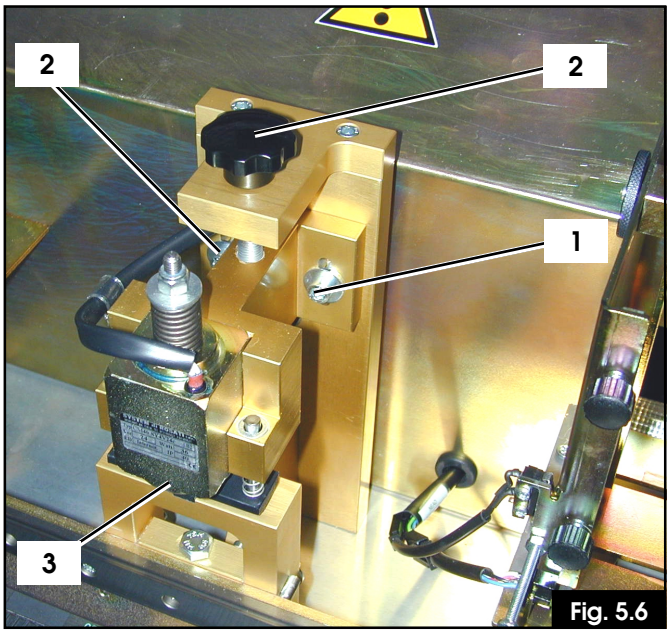

Fig. 5.6

Fig. 5.7

Fig. 5.8

5.2 SWICHING ON THE MACHINE

Connect the serial cable to the PC with the Sword software then switch on the machine (see chapter 3 "Installation" fig. 3.2).

If the machine does not start (verify display light and fans) controle that the power supply is correctly setted and that the main fuse has not opened.

When the machine is switched on after the initialization control that the display show as in figure 5.7.

Press the 

key on front panel to make a general reset. If the machine does not start and the display message does not change please verify that the top cover is closed and the red mushroom pushbutton is not pressed, then retry.

The machine will make a reset cycle and the display will show the model of the machine, the Fw release with the READY status (as show in fig. 5.8) (the model will be "METAL DOT MATRIX 1000" if you have the manual version).

NOTE: IF THE DISPLAY IS TURNED ON BUT NOTHING APPEARS ON THE SCREEN SWITCH THE MACHINE OFF AND CALL THE TECHNICAL ASSISTANCE.

For other breackdowns please refer to the appropriate chapter 7 "TROUBLE SHOOTING".

The machine is now ready to run. If the Software SWORD has already been installed on the PC, the machine can start the production immediately. If however another Software is used it is necessary to control the relative parameters for the communications protocol. To do this one enables the Machine Setup from the console (refers to advanced chapter for details).

5.3 INSTALL THE SOFTWARE "SWORD"

Close all current applications and insert the SWORD CD-ROM on your PC.

The Setup windows will appear after few moments (fig. 5.9):

Close any applications and press OK to continue.

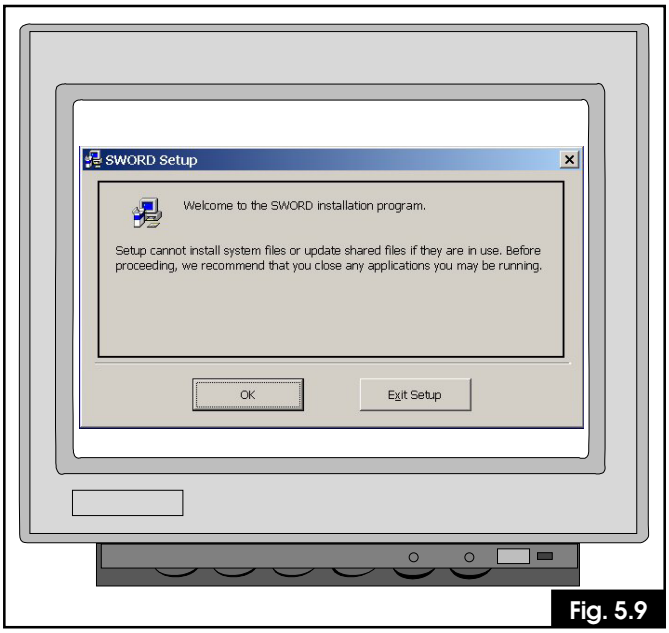

Fig. 5.9

If necessary chose your favorite folder to install (Change Folder) and press the button on the left to start the setup (fig. 5.10).

Press Continue until the installation is finished.

For more details about installation and setting please refere to the SWORD USER'S MANUAL.

Fig. 5.10

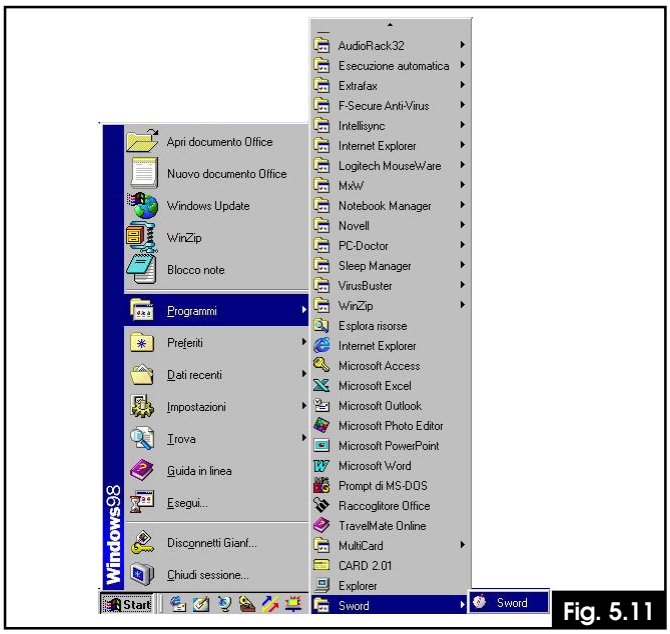

Fig. 5.11

5.4 RUN THE PROGRAM AND PRODUCE ONE CARD

As soon as the stamper , the Software and the serial connection to the Host computer have been succesfully installed, card production can be started.

Switch on the machine and press the START key on the front panel when ready.

Load an appropriate number of plate in the loader (max. 200 for 2000 model) or put the plate in the right side load opening (1000 model) and close the top door.

Select the shortcut from the Program menu of your PC to run SWORD (fig. 5-11).

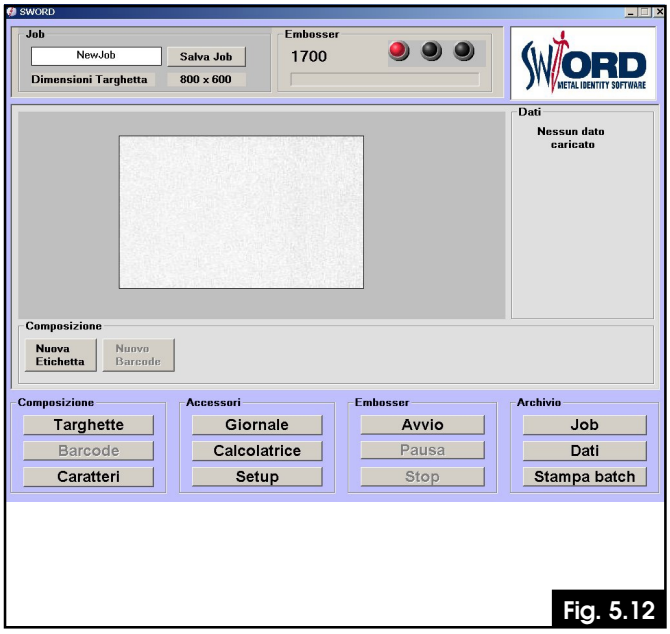

Fig. 5.12

The windows shown in fig. 5.12 will appear on your PC.

The square in center of the windows represents the layout of your plate.

To modify the dimensions of the plate press the "TARGHETTE" button.

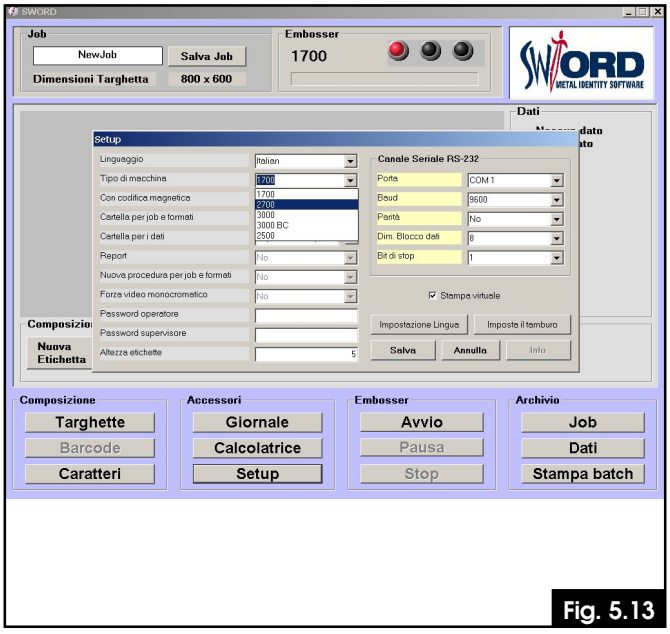

Fig. 5.13

To set the the software in order to use your METAL DOT MATRIX press the SETUP button and OK in the following Password window (fig. 5.13).

Select TIPO DI MACCHINA= METAL DOT MATRIX and press "Salva".

To define a layout do the following steps:

Press the "Nuova Etichetta" button on the main box and double click in the yellow box will appear. Type a symbolic text (i.e. "METAL DOT MATRIX 2000" in the example) and press Enter.

Add the text boxes you need by repeating the last steps. You can move each box by drug&drop or writing the coordinates in the "Posizione X", "Posizione Y" and "Lunghezza" boxes.

Type the name of the new job in the Job box (i.e. "METAL DOT MATRIX 2000") and press "Salva Job".

The windows will appear as shown in fig. 5.14.

Now you can recall the job by means of the JOB button in the archivio box on the right.

After these steps you are ready to print your first plate. Press the AVVIO button to start the production.

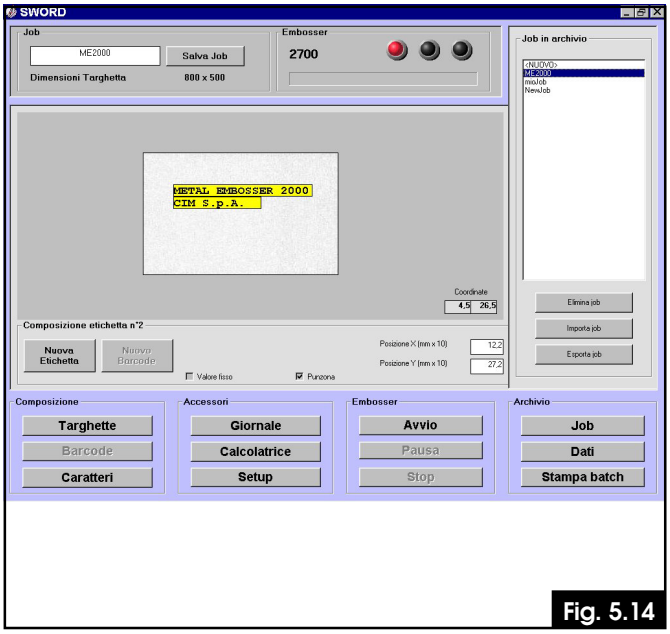

Fig. 5.14

Press "Stampa subito" on the following box.

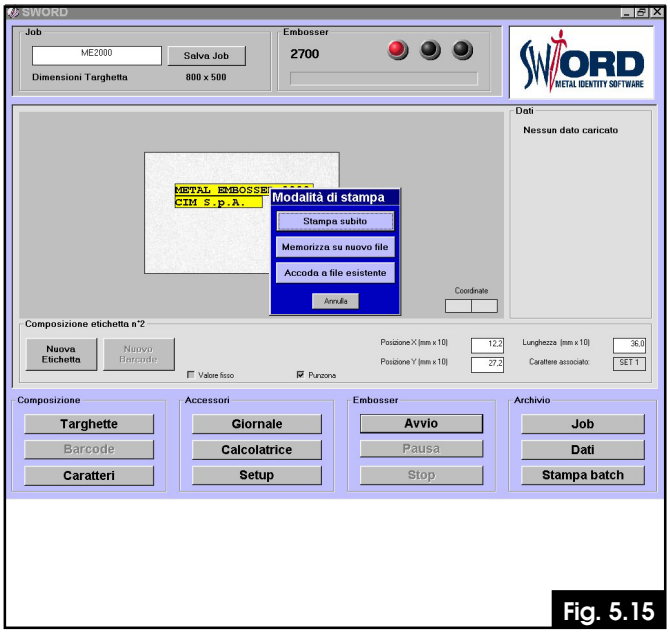

Fig. 5.15

In the next window you can type the number of card you want to print. Then press OK (fig. 5.16).

The machine will print the specified number of plates with the current job text layout.

If errors don't have occurred the MDM2000 stop the work and go to READY status.

If errors have occurred during the working cycle the Stamper will indicate the error codes on the LCD display. Please refer to the chapter 7 "Trouble Shooting" for a description of the errors.

Open the top door and remove the plate just personalized from the unloader magazine on the left of the stamping unit.

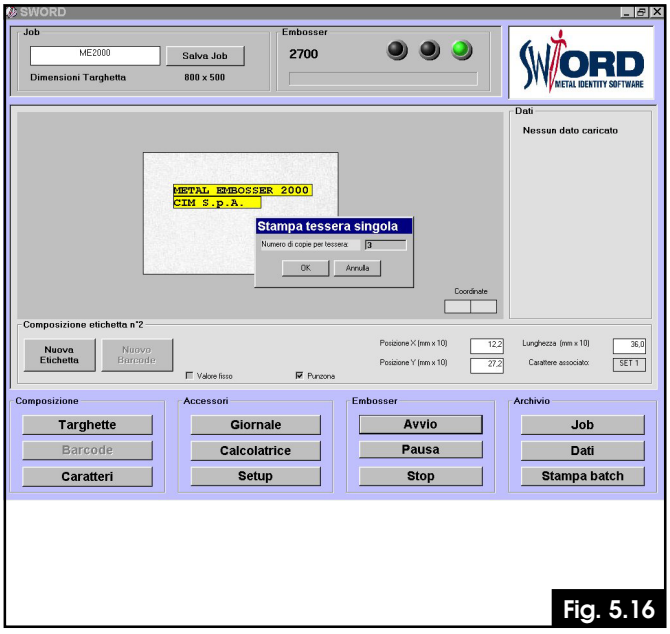

Fig. 5.16

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6.1 SCHEDULED LUBRICATION

This section describes the operations to be carried out at regular intervals to ensure correct machine functioning.

THE MAINTENANCE OPERATIONS DESCRIBED IN THIS SECTION MUST BE CARRIED OUT RIGOROUSLY TO ENSURE CORRECT FUNCTIONING AND LONG LIFE FOR YOUR MACHINE.

IF THE MAINTENANCE OPERATIONS ARE NOT CARRIED OUT IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED, CIM IS NOT RESPONSIBLE IN ANY WAY FOR MACHINE PROBLEMS AND MALFUNCTIONS.

The following table indicates the maintenance program recommended by CIM.

GROUP and/or UNIT	REGULARITY
Load and unload unit	every 100 hours
Carriage unit	every 100 hours

IT IS FORBIDDEN TO REMOVE THE COVER AND THE PROTECTIONS PRESENT INSIDE THE STAMPER.

Fig. 6.1

6.2 RECOMMENDED LUBRICANTS

A) RECOMMENDED OIL

TYPE: PPX INDUSTRIAL
MODEL: IX70/50 FRICTION REDUCER
MANUFACTURER: PPX ITALIA

B) RECOMMENDED GREASE

TYPE: PPX INDUSTRIAL
MODEL: LITHIUM COMPLEX GREASE
MANUFACTURER: PPX ITALIA

6.3 GENERAL MAINTENANCE BY THE OPERATOR

The operator should make a habit of doing general maintenance on the Stamper so as to ensure a correct and long lasting functioning of the system. The operations are simple but for maintenance inside the machine it is necessary to call the Technical Assistance. Thus it is absolutelyThe routine maintenance is as follows:

6.3.1 TROLLEY-TRUCK OILING

The oiling of the trolley truck should be done every six month, if the machine works 8 hours/day, using vaseline oil:

- Oil the clamp's trolley guide (1) top and bottom moving the trolley by hand back and forth to assure an even distribution of the oil and to control the fluidity of the movement.
- Oil the clamp guide (2) in the same way as above moving the clamp by hand and controlling for unhindered movement. In case of friction or jamming which persists call the Technical Assistance
- Remove any excess oil.
- Oil the camshaft (3).

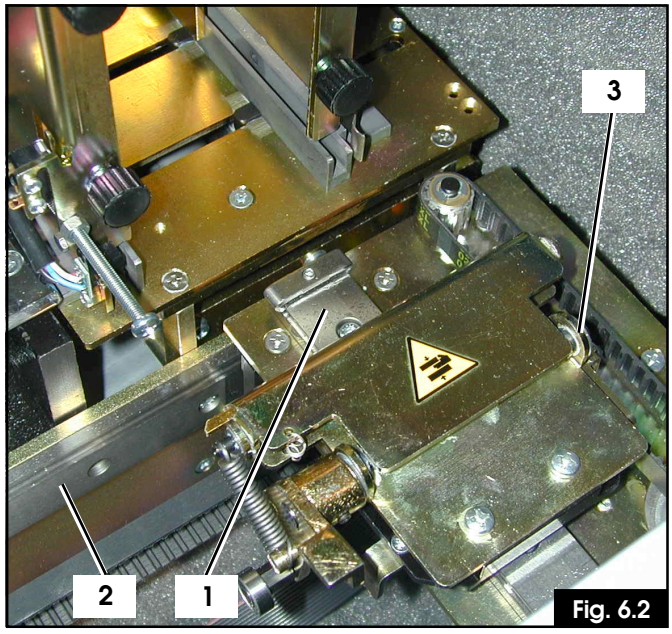

Fig. 6.2

6.3.2 PLATE LOADER OILING

- Oil the holes of the plate loader group shown in the figure.

Repeat this operation every 20 days or every 1500 produced plates.

Every 6 months the internal mechanical parts should receive a general oiling. This can be done however only by a specialised person.

When the general maintenance is finished switch the stamper on and control that the front cover blocks all operations. If this not the case call the Technical Assistance because one or more safety devices could be dammaged.

Oil with vaseline the guide of the pushers (1).

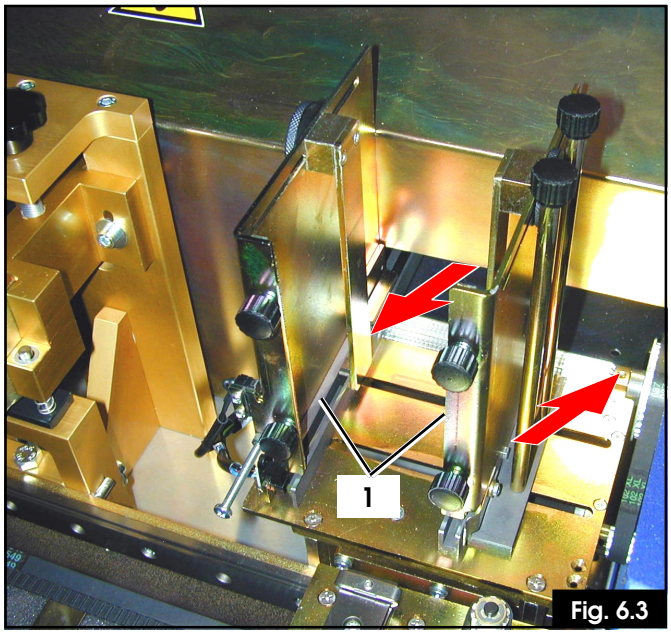

Fig. 6.3

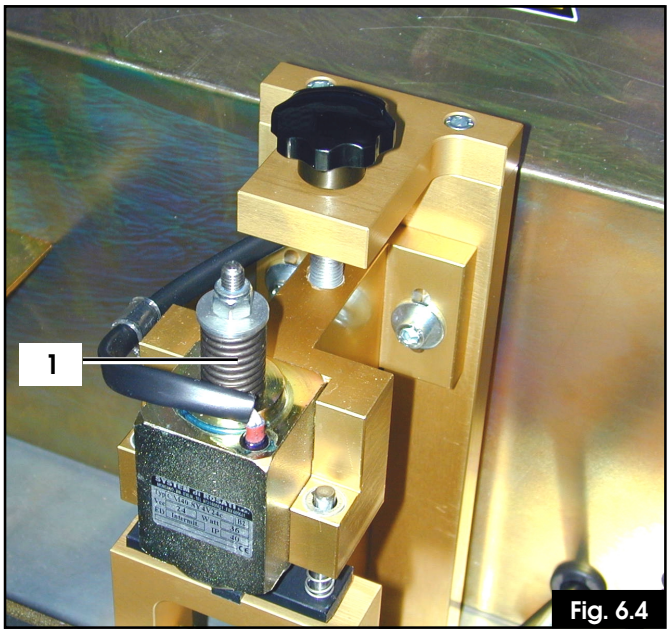

Fig. 6.4

6.3.3 STAMPING UNIT

NEVER USE OIL OR OTHER KIND OF LUBRICANTS ON THE PIN (1) OF THE SOLENOID

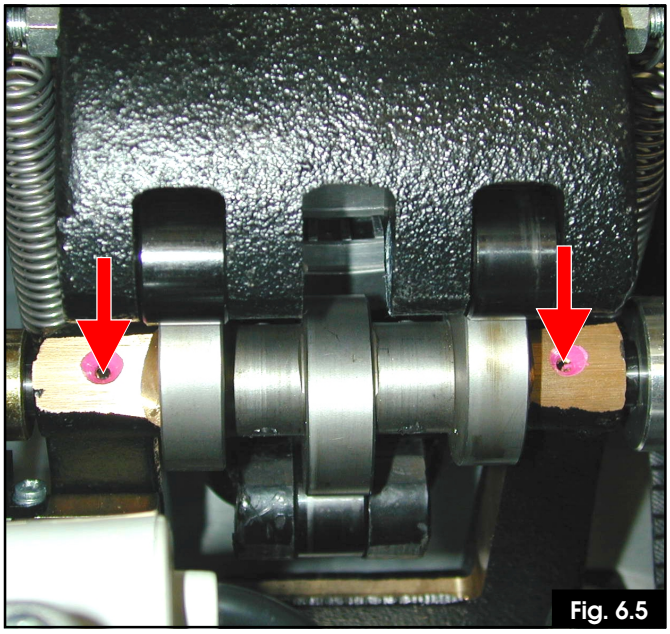
Fig. 6.5

6.4 UNLOADER LIFTER

Oil with vaseline the unloader lifter's vertical guide.

6.5 SAFETY INTERLOCK SWITCH FUNCTIONAL TEST

To work in safe condition it is necessary that the interlock switch of the cover works properly.

Before to start the work session (at least one time per day) open the top cover and verify tha the machine switch in PAUSE mode. Then close the covers and press start to resume the job. If the machine dosen't switch in PAUSE status it means that the interlock switch is demaged. In this case please switch off the machine and call the service.

7.1 ERROR MESSAGES AND PROBLEM SOLVING

In case of breakdown or operator error the machine will show on the display a message starting the cause of the cycle interruption. The error signal is shown by an error code followed by the corrisponding message. Please consult the table for more information in order to resolve the problem.

After having corrected the error condition press the START key on the machine in order to restore the working state of the Stamper

CODE	MSG	POSSIBLE SOLUTION
E-00	POWER ON STAND BY STATUS - PRESS START	Machine expecting the RESET command. Press START.
E-01	OUT OF CARDS - PRESS START OR RETRY	Loader empty. Add plate into the Loader.
E-02	CARD MISFEED - PRESS START OR RETRY	The clamp has not keep the plate. Press Feed once more or check the loader.
E-05	X MOTOR ERR-CHECK CARD/PRESS START	The trolley clamp has struck during the work cicle. Check the defects on the plates.
E-06	Y MOTOR ERR-CHECK CARD/PRESS START	Clamp error. Check the defects on the plates.
E-09	EMERGENCY STOP-PRESS START	The emergency stop button has been pressed. Turn the mushroom button clockwise and press start to come back to the operating mode.
E-10	PAUSE STAMPING - PRESS START	Lost Mask. Call the technical assistance.
E-13	PUSHER MOTOR ERROR - PRESS START	The pusher motor do not return in home position. Check the plate loader is jammed.
E-16	USER REJECTED CARD-PRESS/START	The user has press the ABORT key while the machine stamps. Press START.
E-28	LOST SEMIPERMANENT DATA - PRESS START	Lost data on Main Logic Board. Call the technical assistance.
E-30	LOGOS DISABLED - PRESS START	Request of stamping logo but logo disabled. If necessary enable the print of the logos from setup (see "stamping configuration" menu).
E-31	LOGO 1 LOST-PRESS START	Logo 1 damaged in the equipment memory. Repeat the download of the resident logo 1.
E-32	LOGO 2 LOST-PRESS START	Logo 2 damaged in the equipment memory. Repeat the download of the resident logo 2.
E-33	LOGO 1 BLANK-PRESS START	Logo 1 absent in the equipment memory. Repeat the download of the resident logo 1.
E-34	LOGO 2 BLANK-PRESS START	Logo 2 absent in the equipment memory. Repeat the download of the resident logo 2.

CODE	MSG	POSSIBLE SOLUTION
E-35	LOGO 1 OUT BOUND AREA-PRESS START	Logo 1 positioned out of stamping area. Reposition the logo 1 by SETUP or repeat the download of the logo 1.
E-36	LOGO 2 OUT BOUND AREA-PRESS START	Logo 2 positioned out of stamping area. Reposition the logo 2 by SETUP or repeat the download of the logo 2.
E-37	TEXT OUTSIDE BOUND AREA-PRESS START	Text positioned out of stamping area. Check the format.
E-38	CONFIG.LOST- PRESS START	Lost data configuration machine. Call the technical assistance.
E-39	NO CONFIGURATION- PR START AND CHECK	Lost data configuration machine. Call the technical assistance.
E-40	NOT ENOUGH MEM FOR INIT-PRESS START	Not enough memory available. Reduce the amount of data (font size, logos, multibuffer, text).
E-41	FONT LOST - PRESS START	Font danneggiato in flash. Ripetere la procedura di download
E-42	NOT ENOUGH MEM FOR LOGOS-PRESS START	Not enough memory available. Reduce the amount of data (font size, logos, multibuffer, text).
E-43	NOT ENOUGH MEM FOR MULTIB-PRESS START	Not enough memory available. Reduce the amount of data (font size, logos, multibuffer, text).
E-44	NOT ENOUGH MEM FOR LOGO 1-PRESS START	Not enough memory available. Reduce the amount of data (font size, logos, multibuffer, text).
E-45	NOT ENOUGH MEM FOR LOGO 2-PRESS START	Not enough memory available. Reduce the amount of data (font size, logos, multibuffer, text).
E-46	NOT ENOUGH MEM FOR CARD-PRESS START	Not enough memory available. Reduce the amount of data (font size, logos, multibuffer, text).
E-47	PAUSE LOADING - PRESS START	The machine is in pause while load one plate. Press START.
E-50	PAUSE IMMEDIATE - PRESS START	The front is open. Close the front cover and press START.
E-51	UNLOADER FULL-PRESS START	Unloader full. Remove the cards from the unloader unit and press START.

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WARNING!:

This annex contains instruction for expert operation, in order to modify some functional parameters and for testing or setting adjustments. The use of these functions is intended for expert operators or technical service only.

Please, take care that a wrong setting of the parameters may compromise the good functioning of the machine.

Fig. A.1

A.0 SETUP PROCEDURE

The machine is configured by accessing the setup routine and setting or modifying various parameters which are then saved permanently in a CMOS memory inside the machine. To access the setup routine connect a standard PC keyboard to the DIN connector on the rear panel of the machine.

Please, take care that a wrong setting of the parameters may compromise the good functioning of the machine.

In case of necessity, please refers to chapter A.11 to see how to restore the default value for each parameter.

In case of impossibility in restoring or modify the parameters, please call the service.

A.1 KEYBOARD DESCRIPTION

The following list describes the function keys and their actions.

F10: This key is used to access the programming menu or other internal functions of the machine. A Password enables this command.

F3: This key enables the production of test cards with a pre determined format. It is done without the aid of the computer. Type in the number between 0 and 7 which corrisponds to the card tests desired and then press ENTER to produce the card.The list below describes the card tests available.

0 Stamping all characters on the drum

1 Stamping an "L" in each angle of the card

5 Stamping a plate with all the machine setup

6 Stamping a text of type 1

7 Stamping of enabled logos

ESC: If this key is pressed the current operating cycle will be halted and the card will be unloaded.DUP If this key is pressed during a READY state and it is followed by ENTER the machine will repeat the last card made.

PAUSE: If this key is pressed the current operating cycle is blocked. Press START to continue.

START: Clears any error condition which may have occurred during the current operating cycle and do not repeat the card.

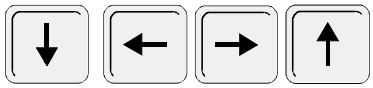
RETRY in case of error if it is pressed the machine repeat the card.

ENTER: Execute the data

F5: This key selects the operational mode of the inserting cycle. It is used for tests and there are 8 choices based on the combinations of the following 3 modes.

- CONTINUOUS: METAL DOT MATRIX repeats the last processed card continuously.
- WITHOUT CARD: METAL DOT MATRIX runs the operating cycle without controlling for the presence of a card.
- PAUSE: METAL DOT MATRIX executes each operation in response to the user input The key to activate each movement is START.

1. CONTINOUS
2. WITHOUT CARD
3. WITHOUT CARD & CONTINOUS
4. PAUSE
5. CONTINOUS & PAUSE
6. WITHOUT CARD & PAUSE
7. WITHOUT CARD - CONTINOUS & PAUSE
8. READY

The direction keys  are using to move the cursor in the menu.

A.2 MENU DESCRIPTION

Press F10 while in the READY state and type in the password. Contact the local dealer for information about the setup password.

A 7 row menu will appear on the display:

1. **CONFIGURATION PARAMETERS**
2. **SERIAL INTERFACE**
3. **MECHANICAL PARAMETERS**
4. **PROTOCOLS**
5. **PASSWORD**
6. **STAMPING CONFIGURATION**
7. **KEYPAD LCD**

The menu items can be selected using the arrow keys ↑ and ↓.

The ENTER key confirms the choice and enters into the selected item's own menu.

The ESC key returns the operator to the preceding menu.

Pressing ESC a second time terminates the configuring of the machine. The machine leave the setup and after few seconds come back in power-on stand-by status.

An item can be modified by selecting it with the numeric keys and confirming the choice with ENTER.

To exit from the setup mode press ESC key untill the machine make a reset cycle and come back to the ready state.

A.2.1 MODIFYING THE PARAMETERS

The typical parameter display screen is as follows:

CHOICE OF THE BAUD RATE	
(**11,15,3,6,12,24,48,96**)	(**4800**)

where:

CHOICE OF THE BAUD RATE = name of the parameter

(11,15,3,6,12,24,48,96) = possible values

(4800) = current value

To modify the value of the parameter displayed, on the keypad, press the number corresponding to the position to the left of the value required (the corresponding selection is displayed on the left of the display unit beside the current value) and then press 'Enter'.

Example: modifying the Baud rate in the Protocols menu

To set a Baud Rate of 9600, do the following:

- Press key 8 corresponding to the eighth possible value (96), namely 9600. The left of the display unit will display the corresponding selection:

CHOICE OF THE BAUD RATE		
(11,15,3,6,12,24,48,96)	(4800)	9600

- Then press ENTER to save the new value.
- Press ESC twice to quit set-up and apply the modifications.

For parameters for which you can enter number values, only the actual possible values are indicated. In this case, on the keypad, type the new value, making sure you specify the sign, if required.

Specify the sign, if required, by typing

1 for +

and 2 for -.

Example: modifying a mechanical parameter

To set a value of +04, do the following:

X TOTAL ADJ		
(-99/+99)	(+/- = 1/2)	(00)

- Press 1, 0 4.

The display unit will display the new value.

X TOTAL ADJ			
(-99/+99)	(+/- = 1/2)	(00)	+04

- Press ENTER to confirm.

A.3 GENERAL PROGRAMMING OF THE MACHINE

The structure of the main setup menu is described below. To enter in setup mode do as follow:
From the initial state of the display

METAL DOT MATRIX 2000 V.Y.YY READY

Press F10

SETUP STAMPER PASSWORD ?

Type the password and press ENTER .

By up and down arrow you can switch between the following menu (refers to chapters A4-A10 for the description of each of them):

CONFIGURATION PARAMETERS

Press the key ↓

SERIAL INTERFACE

Press the key ↓

MECHANICAL PARAMETERS

Press the key ↓

PROTOCOLS

Press the key ↓

PASSWORD

Press the key ↓

STAMPING CONFIGURATION

Press the key 

KEYPAD LCD

This is the last menu; to select another use the direction keys 

To enter the menu items selected press  .

To exit the setup press 

NOTE: The Setup program includes a keyboard Timeout. After 2 minutes the machine will exit from the setup menu and returns to the READY state.

A.4 CONFIGURATION PARAMETERS

The configuration parameters menu enables the setting of the following general parameters of the machine.

The parameters of the menu are described below:

Choose this menu.

CONFIGURATION PARAMETERS

Press ENTER

UNLOADER FULL ALARM (YES/NO)

YES: selection cause the block of the machine when the unloader unit is full.

Press ↓

PUSHER HOME (YES/NO)

YES: after each feed of the card the pusher come back to the home position.

Press ↓

CARD ERROR REPETITION (0-9) (0)

Number of retry in reproducing the card in case of errors.

Press ESC twice to terminate the setup and to return to the READY state.

A.5 SERIAL PORT PROGRAMMING

The Serial Interface menu enables the configuring of the machine's serial port.

Choose the desided menu:

SERIAL INTERFACE

Press ENTER

BITS PER CHARACTER (7,8) (7)

1 Selects 7 bit for chars
2 Selects 8 bit for chars

Press ↓

PARITY (NO,OD,EV) (EV)

1.	NO	Selects	No Parity
2.	OD	Selects	Odd Parity
3.	EV	Selects	Even Parity

Press ↓

CHOICE OF THE BAUD RATE (11,15,3,6,12,24,48,96) (4800)

1	Selects	110	Baud Rate.
2	Selects	150	Baud Rate.
3	Selects	300	Baud Rate.
4	Selects	600	Baud Rate.
5	Selects	1200	Baud Rate.
6	Selects	2400	Baud Rate.
7	Selects	4800	Baud Rate.
8	Selects	9600	Baud Rate.

Press ESC twice to terminate the setup and to return to the READY state.

A.6 MECHANICAL PARAMETERS ADJUSTMENT

This menu permits to adjust some mechanical parameters of the machine. The value are setted by the CIM quality control check before putting the product on the market.

The parameters of the menu are described below:

Choose this menu:

MECHANICAL PARAMETERS

Press ENTER

X TOTAL ADJ	
(- 99 / + 99)	(00)

Press ↓

X STAMP ADJ	
(- 99 / + 99)	(00)

Press ↓

Y STAMP ADJ	
(- 99 / + 99)	(00)

Press ↓

Y LOAD ADJ	
(- 99 / + 99)	(00)

Press ENTER

Y UNLOAD ADJ	
(- 99 / + 99)	(00)

Press ↓

Y PUSHER LOAD ADJ	
(- 99 / + 99)	(00)

Press ↓

X UNLOADER ADJ	
(- 99 / + 99)	(00)

Press ESC twice to terminate the setup and to return to the READY state.

A.7 PROTOCOLS SETTINGS

This menu permits to customize the value of the typical parameters of the comunication between machine and pc. in particular, if a comunication protocol which differs from the default is to be used, it will be necessary to modify this setup.
The parameters of the menu are described below:

Choose this menu.

PROTOCOLS

Press 

The following list of Protocols are displayed.

CHOISE OF THE PROTOCOL (CIM) **(CIM, XON, MUL)**

Using the numeric keys and choose the corrisponding Protocols

1 selects the protocol **CIM**
2 selects the protocol **XON-XOFF**
3 selects the protocol **MULTI EMBOSSER**

Press 

START OF THE TEXT **SELECTION (000-121)** **(002)** **STX**

the value **of Start of Text** (**002-STX-Start of Text**).

Press 

END OF TEXT **SELECTION (000-121)** **(003)** **ETX**

the value **of End of Text** (**003-ETX-End of Text**).

Press 

FIELD SEPARATOR		
SELECTION (000-121)	(013)	CR

the value **of Field Separator (013-0D hex-CR-Carriage Return).**

Press ↓

US PROTOCOL OCR OPENER		
SELECTION (000-121)	(040)	(

the value **us protocol OCR opener used on protocols USA only.**

Press ↓

US PROTOCOL OCR CLOSER		
SELECTION (000-121)	(041)	)

the value **us protocol OCR closer used on protocols USA only.**

Press ↓

MULTILOAD OPENER		
SELECTION (000-121)	(014)	S0

the value of **multiload.**

Press ↓

MULTI ADDRESS	
SELECTION (00-88)	(31)

the value of **multi address**

Press ↓

NORM/BLOC	
SELECTION (1/2)	(NORM)

NORM With XON/XOFF protocol the interchar and interline spacing are fixed to the default in firmaware value.

BLOC The interline and intercharacter spacing may be changed by means of "bloc char spacing" and "bloc line spacing" parameters

Press ↓

BLOC CHAR SPACING
SELECTION (015-058) **(32)**

This parameter permits to modify the interchar spacing used by XON/XOFF protocol and card test. The value represunts the number of step of the motor.

Active only when NORM/BLOC is setted as BLOC.

Press 

BLOC LINE SPACING
SELECTION (016-080) **(48)**

This parameter permits to modify the interline spacing used by XON/XOFF protocol and card test. The value represunts the number of step of the motor.

Active only when NORM/BLOC is setted as BLOC

Press 

PLATE HEIGHT (MM)
SELECTION (020-090) **(054)**

Press 

CIMLIKE FUNCTION
SELECTION (000-127) **(NO)**

The value of the **Opener Format** in the **CIMLIKE** protocol. The value **000** (NO) for protocol **CIM** Standard

Press 

CIM MULTIBUFFER
(ON/OFF) **(OFF)**

Enable "spooling" mode:

with multibuffer= on all the date of the plate you have to print sholud be sent fron the PC to the machine before the execution of the first card (not available with software Sword)

Press 

PRESENCE LINE FEED		
(YES/NO)	(NO)	

YES: filed separator = CRLF (if field separator = CR)

NO: field separator = CR (if field separator = CR)

Press 

XON		
SELECTION (000 - 127)	(017)	XON

Set the character with meaning af XOFF

Press 

XOFF		
SELECTION (000 - 127)	(019)	XOFF

Setting of character with meaning of XOFF

Press 

twice to terminate the setup and to return to the READY state.

A.8 PASSWORD

Choose this menu

PASSWORD

Press ENTER

PASSWORD ENABLE	
(ON/OFF)	OFF

Select ON to define a password for setup access.

Press ↓

USER PASSWORD	(????)
NEW VALUE:	

(only if password enabed = ON)
Enter the password (only numeric characters)

Press ↓

SERIAL NUMBER	(DEFAUL VALUE)
NEW VALUE:	

Enter new serial number.

Press ESC twice to terminate the setup and to return to the READY state.

A.9 STAMPING CONFIGURATION

Choose this menu

STAMPING CONFIGURATION

and press ENTER

The following parameters are displayed

COORDINATES OF STAMPING	
(INCHS/MILLM)	(MILLM)

Format coordinate selection

Press 

FONT SIZE	
(010%-300%)	(100%)

Size adjustment of the stamped font referred to the size of the resident font

Press 

LOGO ENABLE	
(BOTH,LOGO1, LOGO2, NONE)	(NONE)

Enabled logos for stamping

Press 

LOGOS COORDINATES ACQUISITION	
(LOGO/SETUP)	(LOGO)

Set the logo's coordinates data source from logo (bitmap) or setup (from lower - left corner)

Press 

LOGO 1 X COORDINATE	
(0000-1220)	(0000)

Set the X coordinate of logo 1 (1=0,1 mm). Available only if the "LOGOS COORDINATES ACQUISITION" parameter is set as "SETUP"

Press 

LOGO 1 Y COORDINATE	
(0060-0880)	(0060)

Set the Y coordinate of logo 1 (1=0,1 mm). Available only if the "LOGOS COORDINATES ACQUISITION" parameter is set as "SETUP"

Press 

LOGO 2 X COORDINATE	
(**0060-0880**)	(**0060**)

Set the X coordinate of logo 2 (1=0,1 mm). Available only if the "LOGOS COORDINATES ACQUISITION" parameter is set as "SETUP"

Press 

LOGO 2 Y COORDINATE	
(**0060-0880**)	(**0060**)

Set the Y coordinate of logo 2 (1=0,1 mm). Available only if the "LOGOS COORDINATES ACQUISITION" parameter is set as "SETUP"

Press 

LOGO ROTATION	
(**0-90-180-270**)	(**0**)

Set the logo rotation in degrees

Press 

STAMPING FORCE	
(**050-090**)	(**065**)

Frequency of stylus vibration.
Don't modify the default value

Press  twice to terminate the setup and to return to the READY state.

A.10 KEYPAD LCD SETTING

This menu permits to enable or disable some keys of the keyboard in order to inhibit some function to the operator. Please note that inhibit of some key may cause the impossibility to restore old values.

Choose this menu

KEYPAD LCD

Press 

ENABLE KEY RETRY (ON/OFF) (ON)

Press 

ENABLE KEY START (ON/OFF) (ON)

Press 

ENABLE KEY DUP (ON/OFF) (ON)

Press 

ENABLE KEY ENTER (ON/OFF) (ON)

Press 

ENABLE KEY ABORT (ON/OFF) (ON)

Press 

ENABLE KEY CARD TEST (ON/OFF) (ON)

Press 

ENABLE KEY STAMP MODE (ON/OFF) (ON)

Press 

ENABLE KEY PAUSE	
(ON/OFF)	(ON)

Press 

FUNCTION OF KEY START AFTER ERROR	
(ABORT/RECOVERY)	(ABORT)

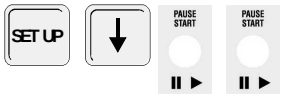
Press 

twice to terminate the setup and to return to the READY state.

A.11 RESET OF PARAMETERS

Sometimes electrical disturbs could modify the value of critical parameters causing errors and malfunctions of the machine.

Following this procedure all the parameters are resetted to the default values and many broblems could be solved.

Type 

in sequence

to reset all the setup.

Type 

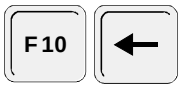
in sequence

to reset the configuration parameters.

ATTENTION: After this operation you have to manually restore all the paremeters that you can find in the sample cards attached to the machine (see chap. A4-A10 to know how to modify the parameters).

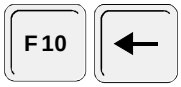
A.12 DISPLAYING THE COUNTERS

The statistical data of the production is available in the partial and total counters. The latter cannot be modified. The values indicate the total number of operating cycles without error.

Running the command sequence 

METAL DOT MATRIX 2000	V.Y.YYY
CNT=0000000001	TOTAL=0000000001

- The left value is the partial counter for the operator.
- The right value is the total counter

Running the command sequence 

The partial counter is Reset.

A.13 CARD TEST LIST

To make a card test connect the keyboard to the rear DIN connector and select the mode (continous, without card, ...) by means of the F5 key.

Then press the key F3 and the number of the card test (see the list below) and press Enter.

The card test presently available for METAL DOT MATRIX models are shown in the following table.

0 Stamp all characters

1 Stamp an "L" in each angle of the card

5 Stamp a plate with all the machine setup

6 Stamp a CIM fixed text

7 Stamp enabled logos (see the STAMPING CONFIGURATION menu to see how to enable the logos for stamping)

Note: with regard to the Card Tests 0, 5 and 6, the intercharacter and interline spaces depend to the value of the setup parameters BLOC CHAR SPACING and BLOC LINE SPACING of the protocol menu.

A.14 RESET OF THE MACHINE

To reset the machine in each moment press the following key sequence:

B.1 INTRODUCTION

The new METAL DOT MATRIX and Metal Dot Matrix series permits to easy upgrade the fw in order to give to the customers a product always adjourned.

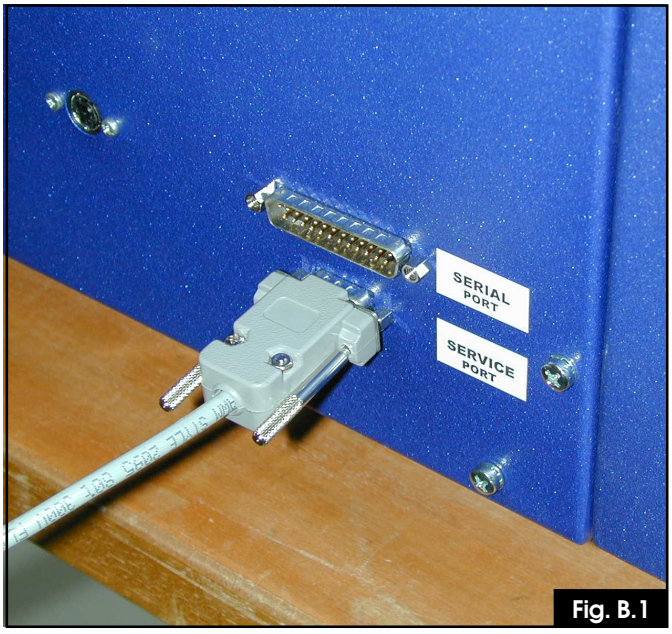


Fig. B.1

B.2 CONNECTION PROCEDURE

If you have to update the "FIRMWARE" for the machine, do the following:

Connect the serial cable of your PC to the "SERVICE PORT" of the machine.

B.3 SOFTWARE

The "CIM_BIOS.EXE" DOS utility, available on the manual CD-ROM in the "Tools" directory, handles the communication with the BIOS for programming the Flash.

Launch the "CIM_BIOS" command without parameters to access a "help" section for the utility.

NOTE: CIM_BIOS.EXE REQUIRES A PC WITH WIN 95, WIN 98 OR WIN MILLENNIUM OPERATING SYSTEMS. IF THE OPERATING SYSTEM IS DIFFERENT, USE A DOS BOOT DISK TO RUN THE PC IN DOS MODE.

The command line for the call is as follows:

CIM_BIOS FileName Port TransmissionType BaudRate.

FileName: Specifies the name of the source file containing the data to be transferred to the machine.

Port: Specifies the a serial port on the PC used for the connection(COM1, COM2, ...).

TransmissionType: Letter which specifies the type of function required.

U: Machine code updating ..... (new firmware)
B: Machine Bios updating ..... (Do not use)
E: Flash FW and Data deletion .... (Do not use)
P: Machine Parameter Sending .. (Do not use)
J: Internal Layout Sending ..... (Do not use)
Q: Machine parameter file request ..... (Do not use)
L: Front side Logo sending ..... (New resident Logo1 see B.5)
M: Back side Logo sending ..... (New resident Logo2)
F: Font 1 sending ..... (Do not use)
G: Font 2 sending ..... (Not implemented)
H: Font 3 sending ..... (Not implemented)
I: Font 4 sending ..... (Not implemented)

BaudRate: number between 1 and 5 which specifies the transmission speed (always use 4, which corresponds to a transmission speed of 57600 Baud).

B.4 FIRMWARE UPDATING PROCEDURE

- Copy the CIM_BIOS.EXE program and the firmware file (e.g. V4010601.hex) into a single directory (or to the floppy disk root).
- Run the PC in DOS mode or use the Windows command "Prompt".
- With the machine OFF, at the DOS "prompt", type the command line with the required parameters (e.g.: cim_bios V4010601.hex com1 U 4). The program will wait for a synchronism character.
- While cim_bios is waiting for a synchronism character, turn ON the machine: the "download" will start automatically. The PC will display the progress of the "download".
- When the "download" is complete, the new firmware can be used immediately.
- Look at the number of the FW version shown on the display to verify that the update is complete. If required, turn the machine OFF and back ON again.

N.B. DO NOT TURN OFF THE MACHINE DURING THE DOWNLOAD.

B.5 CHANGE RESIDENT LOGOS AND FONT PROCEDURE

To know how to change resident logos and fonts refers to the software SWORD application manual.

C.1 LCD EDIT AVAILABILITY

Stampers equipped with an external keyboard have an off-line stamping capaiblity ('LCD Edit') i.e. the stamping data is entered from that keyboard and does not come from a connected computer. The operator may create and store formats and enter card data using the keyboard.

The formatting procedure is discussed in Section 2.

The LCD edit (off-line) mode does not depend on a Host Computer connection.

A format must be created and stored before data entry is possible. See Section 2 on LCD edit format creation and storage. All formats can be given a name of up to 8 characters in length. The first format (primary format) '01' is a default format. This format will be selected automatically when the LCD edit function is requested for the first time after switching on by pressing the F7 key. Any format can be selected by using the F4 key followed by the format #, followed by the Enter key two times.

C.2 ENABLING THE OFF-LINE MODE

An stamper, which is ready for off-line data, will show the folllowing message on the LCD display:

V X.XX **READY**

To enable the off-line option, press F7.

The LCD messages will be displayed:

FORMAT: 01 NAME: ADMIT F7 TO ON-LINE **ACCT #: ■**

Data can be entered to the first field of the format 01.

Detailed information is given on Page 4, Reference: Stamp Data Entry.

C.3 FORMAT MENU

The twenty formats stored in the stamper are assigned a two digit number, 00 - 19. Each format can be assigned a name of up to 8 digits during the formatting procedure.

A format menu can be displayed on the LCD by pressing F2.

Press F2.

FM: 00	NAME: ADMIT	FM: 01	NAME: EMER
FM: 02	NAME: EMPLOY	FM: 03	NAME: OPEN

Use the ENTER key to move the cursor to the next format.

Use the TAB key to skip to the next line.

Use SHIFT - TAB to return to the last formatted line.

Press F2 to return to the main menu.

C.4 FORMAT CHANGE

S=SELECT	E=EDIT	D=DELETE
FORM NO:00	FORM NAME:ADMIT	SELECT:S

Press F4, Format # desired and Enter.

Example:

Select format 01

Press 01, ENTER

S=SELECT	E=EDIT	D=DELETE
FORM NO:01	FORM NAME:ADMIT	SELECT:S■

The cursor is now on the function 'SELECT '. See Figure LCD-6

Pressing ENTER will select the format.

Press ENTER

One of the following two screens will be displayed:

FORMAT:01	FORMAT NAME: EMER	F7 TO ON-LINE
ACCT#: ■		

C.5 STAMP DATA ENTRY

Data can be entered for the first field. When completed, press ENTER.

Example: 123456-7, ENTER.

```
ACCT#: 123456-7
NAME#: ■
```

Data can be entered for the second field, for the third field etc.

The format may have fields programmed with a counter or protective data. Data cannot be entered into these fields, however the Enter must be pressed to go to the next field.

```
NAME#:BOZZIEN  GABRIELLE
HOSP#:BROOKDALE HOSP ■
```

Press ENTER or TAB for the next field.

Press SHIFT TAB to return to the last field.

F10 can be pressed at anytime to emboss.

If Enter or Tab is pressed when in the last field the LCD will display the following:

```
THE LAST FIELD WAS COMPLETED      PRESS:
F10 TO EMBOSS OR SHIFT TAB TO COME BACK
```

Function Key Summary:

KEY PRESSED	CONSEQUENT ACTION
ENTER	GO TO NEXT FIELD
TAB	GO TO NEXT FIELD
F7	EXITS THE LCD EDIT FUNCTION
SHIFT TAB	RETURNS TO THE LAST FIELD (F5)
F1	RECALLS THE LAST EMBOSSED CARD
F2	THE FORMAT MENU
F4	OTHER FORMATS
F10	EMBOSS
⇐	MOVE CURSOR LEFT
⇒	MOVE CURSOR RIGHT
DO NOT USE END, PG-DN, PG-UP, HOME OR INS KEYS.	

Press F10 to emboss

FORMAT: 01 FORMAT NAME: EMER F7 TO ON-LINE
ACCT#: ■

The card will be embossed.

C.6 EDIT STAMPED CARDS

The data of the last card embossed can be recalled by pressing F1. New data can overwrite the previous data. This includes all fields even if the fields have protected data.

The data of the last card of all the formats is saved. The data of the last card embossed of any format can be recalled by pressing F4, Format #, F1.

Data can be changed, this includes any protected data. This edited card can then be embossed by pressing F10. The second time F1 is pressed or the stamping of the edited message, will return the system back to the original off-line data entry mode.

If an error condition occurs the stamper' s LCD will display the problem and the action to be taken by the operator. The section on display messages and keypad operations in Section 2 of this manual will give further information on messages and operator intervention.

C.7 FORMATS - GENERAL

Stampers can store in resident memory up to 20 formats with up to 26 fields of information in each format. Data is entered to these formats using a keyboard for off-line stamping

- described in Section 1 of this manual - and / or through the RS232 line using the Stored Format

Protocols as described in Section IX of the 2500 Technical Operators Manual.

Format Variables

Formats can be designed and programmed by the operator. Every format can be designed individually with many options. it is important to lay out these options before creating any format.

The options and variables for formatting are:

A Selection of 1 to 26 fields of information.

B Selection of character spacing for each field.

C Selection of the location of the fields on the card (X and Y coordinates).

D Selection of type of numeric character (Standard or OCR).

E Selection of incremental counters.

Up to 4 different counters per format. (Increment or Decrement of steps of 1 to 9).

F Selection of incremental counters for duplicated cards and duplicated fields.

G There are three modulus check digit algotithms, Mod 10 Luhn, Mod 11 Continuous, and Mod 11 Non-continuous for both on-line and off-line modes. An on-line check digit is calculated and entered by the stamper. Off-line (LCD Edit), the operator must enter the proper check digit.

H Programming of protected data which will always be in the format. This is fixed repetitive information.

I Field duplication: This eliminates the need to re-enter the same data when it is repeated elsewhere on the card.

L Selection of the number of duplicate cards to be embossed copies (1 to 999 copies).

Card Stamping Area.

The card can be laid out in inches or metric measurements. The operator can select the measurements to be used.

The card Card Stamping Area and stamping specifications are as follows:

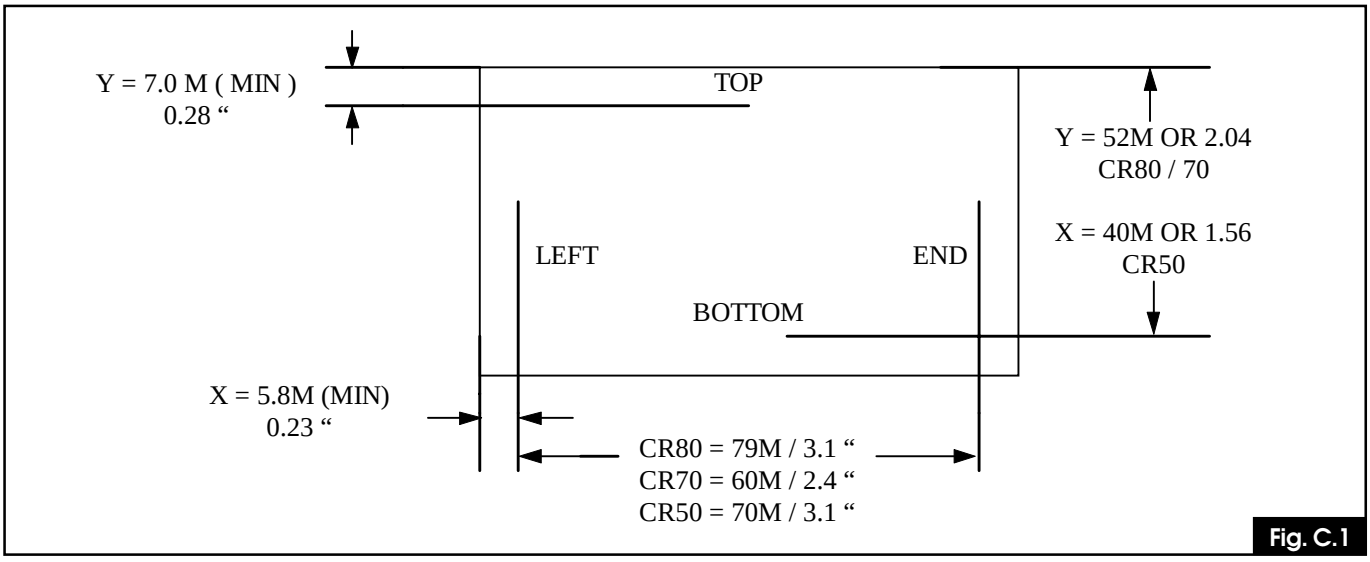


Fig. C.1

A The standard space between each standard line is 0.16 inches (40 mm).

B The space to an OCR line (top and bottom) is 0.24 inches (6.0 mm).

C The standard character space is 0.10 inches (2.5 mm)

The "Cost of 07" produces embossing of 10 characters per inch.

D The OCR character spacing is 0.142 inches (3.6 mm)

The "Cost of 10" produces embossing of 7 characters per inch.

NOTE: The character spaceing is acheived by the number of motor steps used to move the card from one character to the adjacent character.

Motor Steps are shown as "Cost".

The " Cost of 07 " produces a standard character space. (10 cpi).

The " Cost of 10 " produces an OCR character space. (7 cpi).

Each motor step (cost of 01) is transalated to a distance of 0.36 mm (0.0142 ")

The following table can be used to determine the cost requirement of the specific character spacing:

COST SPACING TABLE		
COST	CHAR/INCH	CHAR/DECIMETER
05	14.40	5.56
06	11.70	4.61
07	10.00	3.96
08	8.80	3.47
09	7.82	3.08
10	7.04	2.87
11	6.40	2.52
12	5.87	2.31
13	5.42	2.14
14	5.03	1.98

DEFINITIONS:

X : Horizontal Axis - Left to Right on the Card.

Y : Vertical Axis - Top to Bottom on the Card.

Cost : Number of Motor Steps between character (left to right)

OCR : Optical Character Recognition - Identical to the large embossed numbers on a Credit Card.

Field : A preset number of character spaces for the operator to enter data, in a special area of the card.

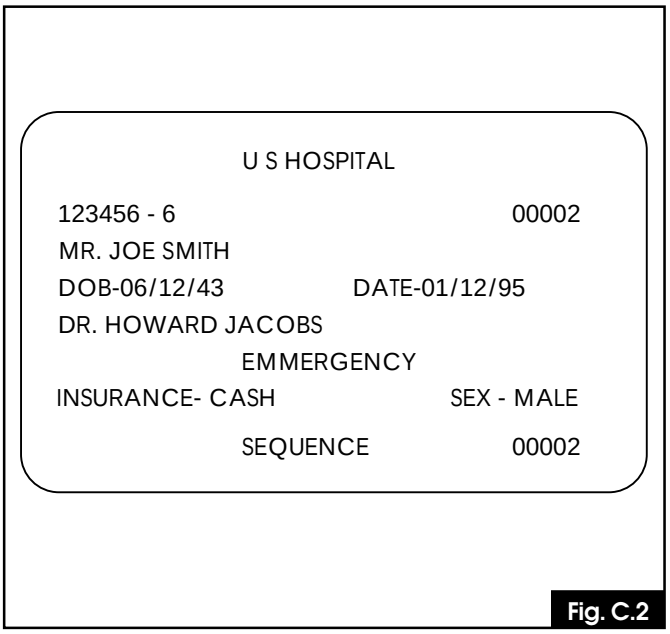


Fig. C.2

Card Layout (Preformatting)

It is recommended to make a layout of the card to be formatted with all the special parameters, such as mod checks, character size, number of fields, field position, etc.. before starting the formatting procedure.

What to do before programming a new format :

1. Layout a card as desired or use a similar existing embossed card. There is a formatting template at the back of this manual.
2. Make a table for the necessary programming reqiurements.

There are blank forms at the back of this manual.

The following card format will be used as a programming example in describing the formatting functions in this section.

Example of a Formatted Card.

Format Layout

A specification sheet should be completed for every format. The following is an example sheet written in order to help in the preparation for the formatting of the Card in Figure C.2. The template at the end of this manual can be used in determining the X and Y co-ordinates. The forms at the end of this manual can be used to record the necessary programming values.

CARD FORMATTING SPECIFICATION SHEET

FORMAT No.14 FORMAT NAME TEST

FLD #	FIELD NAME	X	Y	COST	OCR	# OF CHAR	FIELD TYPE *
1	HOSP	100	057	07	N	12	P
2	ACCT #	023	082	10	Y	7	M-2
3	SEQ #	245	082	07	N	5	C00002
4	NAME	023	102	07	N	31	V
5	D.O.B (P)	023	118	07	N	31	P
6	D.O.B (V)	064	118	07	N	10	V
7	DATE	220	118	07	N	10	V
8	DOCTOR	023	154	07	N	31	V
9	TYPE	130	154	07	N	15	V
10	INS/SEX	023	174	07	N	31	V
11	INSURANCE	125	174	07	N	7	V
12	SEX	250	174	07	N	7	V
13	SEQUENCE	130	194	07	N	12	P
14	SEQ #	240	194	-	-	-	F-03
15							

* V = VARIABLE, M = MOD CHECK, C = COUNTER, P = PROTECTED, F = FIELD DUPLICATE

TIPPER N INFIL N

PROTECTED DATA FIELDS

FLD #

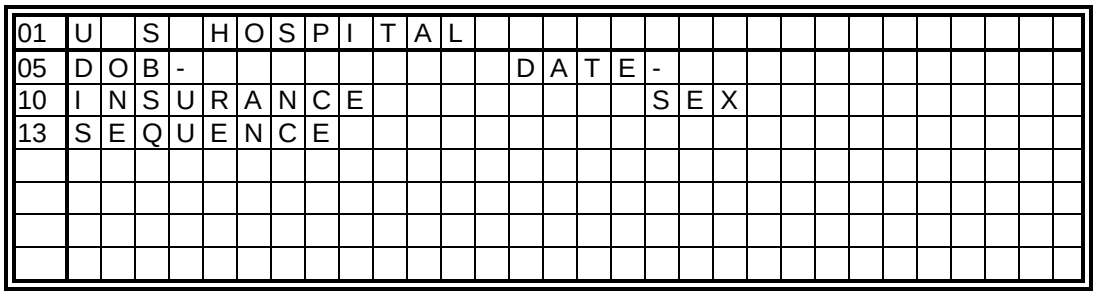


Fig. C.3

C.8 SETTING UP A FORMAT

Note: While in the formatting mode, pressing the F7 . key , will exit the LCD Edit Function.

Step-1: Switching On.

METAL DOT MATRIX	**V X.XX**
READY	

Step-2: Format Location Selection.

If the format is going to be the primary format, (the format that is used most often), it should be placed in location " 00 ". If it is not the primary format, select any available format number between 01 and 19 inclusively.

A Host Computer can send data to these formats, thus if the format to be designed will be used by the Host, data processing must be notified to determine the number to be given to the format.

Step-3: Format Selection

An example test format will be programmed in format No. 14.

Refer to page 80 for the layout of the text.

Format 14 was selected because when the menu was scanned by pressing ESC, F2 and then tabbing through the fields, Format 14 had a default name of "OPEN". All open formats will be named "OPEN".

An open format will have a default format in it.

```
FM:12   NAME: ABC      FM: 13   NAME: WXY
FM:14   NAME: OPEN     FM: 15   NAME: OPEN
```

Select Format 14 by pressing [F4], [14], [ENTER].

```
S=SELECT          E=EDIT          D=DELETE
FORMAT NO:14  FORMAT NAME:    OPEN SELECT:S■
```

As shown in Figure, there is a new format in location 14 named "OPEN". The aim is to program a new format in this location. Thus an ' E ' must be entered to change this

"OPEN" format.

Press E (For Editing / New Format).

```
S=SELECT          E=EDIT          D=DELETE
FORMAT NO:14  FORMAT NAME: ■OPEN   SELECT:E
```

Step-4: Naming the new Format

The cursor is at the name location. Type in a new name, in this case " TEST ".

```
S=SELECT          E=EDIT          D=DELETE
FORMAT NO:14  FORMAT NAME: ■TEST   SELECT:E
```

Step-5: Requesting Format Options

The programmer can now define the various options required in the format. All the special options are defaulted to 'N' (NO), so to select that option the operator must press 'Y' (YES). Most of the special options pertain to the individual fields within the format. Therefore they will appear as each field is programmed. A example format sheet has been completed to demonstrate the procedure to be used for programming. The test format will be programmed as format 14

Press [ENTER].

```
NO. OF DUPS: ■00          - INC. CTRS WITH DUP: N
CHANGE COUNTER VALUE: N  (Y/N)
```

Number of duplicate cards desired.

NO. OF DUPS: 000

The value entered in this location will program the format to duplicate the message by the number in this location.

000 = 1 original

002 = 1 original + 2 copies

999 = 1 original + 999 copies

Press ENTER.

NO. OF DUPS: 000 - INC. CTRS WITH DUP: ■ N
CHANGE COUNTER VALUE: N (Y/N)

Increment counter when duplicating.

INC. CTRS WITH DUP: N

There is an option when cards are being duplicated that allow the incremental counters to advance for every card embossed or only advance between sets of duplicated cards.

Example 1: Sent two messages with
NO.OF DUPS: set to 001 and
INC.CTRS WITH DUP: set to N.

card 1 = count 001
---- First message
card 2 = count 001

card 3 = count 002
---- Second message
card 4 = count 002

Example 2: Sent two messages with
NO.OF DUPS: set to 001 and
INC.CTRS WITH DUP: set to Y.

card 1 = count 001
---- First message
card 2 = count 002

card 3 = count 003
---- Second message
card 4 = count 004

Press ENTER.

NO. OF DUPS: 000 - INC. CTRS WITH DUP: N
CHANGE COUNTER VALUE: ■ N (Y/N)

Set Incremental Counters

CHANGE COUNTER VALUE: N (Y/N)

There are four counters which can be programmed into each format. An 'N' will advance the programming to screen LCD-14. All counters remain as previously set. A 'Y' permits changes to the counter values and other counter parameters.

Press ENTER to go Step-6: Field Option Selection.

Press Y to program the incremental counters.

```
CT-1 (10 MAX) : ■ 0
SEQ.STEP:1
INCR.: Y
```

Set Incremental Counter No: 1

CT-1 (10 MAX) : 0

The number displayed will be the counter value embossed on the next card.

Enter the new counter starting value which is shown in field 3 of the specification sheet on page 11 of this section.

Type in 00002 and press ENTER .

```
CT-1 (10 MAX) : 00002
SEQ.STEP:1
INCR.: Y
```

Select the stepping value of the counter

SEQ.STEP: 1

The programmer can select the step value of the sequential counter. The counter can be programmed to step sequentially in increments of 1 to 9.

Steps of 1 = 1-2-3-4-5-6-7-8-9

Steps of 2 = 2-4-6-8-10-12-14-16

Steps of 3 = 3-6-9-12-15-18-21-24

Steps of 4 = 4-8-12-16-20-24-28-32

Steps of 9 = 9-18-27-36-45-54-63-72-81

The step value of 1 will be used in the test example.

Press 1 and ENTER .

```
CT-1 ( 10 MAX ) : 00002        JUST.: (R/L) R
MSD = 0 : Y      SEQ.STEP: 1   INCR.: ■ Y
```

Counter Setting (+ / -)

INCR.: Y

The counters can be set to count upward (increment) or downward (decrement).

INCR.: Y	INCR.: N
99	99
100	98
101	97
102	96

Incrementing will be selected for the test example.

Press Y and ENTER .

The LCD will now shift to the next counter to be programmed. It is the same as LCD-9 except it will display the next counter. Ii the last counter programmed was counter 4 or if the tab key is pressed the LCD display will shift to LCD-14.

Y/N MOD: ■ N CTRS: N FLD DUP: N PROTECTED: N
FIELD NUMBER: 26

Step-6: Field Option Selection

The various options required to program the format are shown in LCD-14. This example format requires all the options shown above in line 1 of LCD-14. Enter 'Y' in each of the locations. The 'Y' will enable the programming of the selected options in each field. Details for the variable options are covered in this section.

Press 'Y' for Mod Check

Press 'Y' for CTRS

Press 'Y' for Field Dup

Press 'Y' for Protected Fields

Selecting the number of the fields to be programmed

Field Number: 26

Enter the number of fields to be programmed into the format. A maximum of 26 fields can be entered.

Press 14 and ENTER .

NAME: ■ AA Y:028 X:023 COST OF : 07
NO OF CHAR:(MAX. 31) : 31 FONT (0-1) NORMAL

C.9 DESIGNING INDIVIDUAL FIELDS

LCD-15 will be displayed independently of any 'Y' selected options in the top line of LCD-14 .

Step-1: Naming a Field

NAME: AA

Type in the name (HOSP) and Enter

Eight digits maximum and overwrite any existing letters of the previous name that may be longer than the new name.

Step-2: Entering the Y Coordinate of the field.

Y: 028

The Y Coordinate is defined as the distance of the bottom of the field to the top of the card. The stamper can be set up for either inches or metric measurements.

Examples: 1.5 inches = 150, 0.75 inches = 075, 0.3 inches = 030

Type in the three digit value and press ENTER .

Step-3: Entering the X Coordinate of the field.

X: 023

The X coordinate is defined as the distance of the left most character in the field from the left margin of the card. The stamper can be set up for either inches or metric meaurements.

Examples: 3 inches = 300, 2.25 inches = 225, 0.7 inches = 070

Type in the three digit value and press ENTER .

Step-4: Enter Character Spacing Required

COST: 07

Character spacing is defined on pages 9 and 10 of this manual. The normal standard spacing is set at cost of 07 for 10 characters per inch. The OCR spacing is set at cost of 10 for 7 characters per inch.

Enter cost value and press ENTER .

Step-5: Enter Maximum Field Length

No. OF CHAR : 31

The programmer can limit the number of characters that will be accepted by the stamper. The maximum limit is determined by the value displayed at the end of the second line of the LCD.

Type in the desired value and press ENTER .

Step-6: Font Type

There are two selectable types of font. The selection of the type of font is determined by the stamping wheel configuration. The selections possible for any stamper are given during the initial installation.

CODE	FONT TYPE
0	Normal (Standard Characters)
1	OCR Characters

Enter font type and press ENTER .

The following options are now available.

A Branch to the programming of the next field if this was not the last field to be programmed and none of the field options in LCD-14 were selected.

B Branch to options for fields if one or more of the fields options in LCD-14 were selected.

C Branch to storing format, if this was the last field.

In the case of the example text card above, the branch would go to options for fields.

Options for Fields

NAME: DOCTOR TYPE: (V-M-P-C-F) ■ VARIABLE

V = Variable Data, M = Mod Check Field, P = Protected Data,

C = Sequential Counter Field, F = Field Duplicated.

LCD-16 will be displayed if:

A One or more of the Field Options were selected.

B The design data for this field has been completed.

Step-1: Selecting The Variable Data Field.

Selecting this field as a variable will permit the operator to enter data to this field when stamping with the LCD Edit or on line when in a stored format protcol.

Press V or ENTER .

The following options are now available.

A Branch to options for fields if one or more of the fields options in LCD-14 were selected.

B Branch to storing format, if this was the last field.

Step-2: Mod Check Field.

A Mod Check Field is a numeric check field in which the numeric data must satisfy a specfiic algorithm. This procedure is used to reduce the chance of wrong entry of numbers in a seies of numbers that must be correct (Account #, Patient #, etc..). For the algorithm and the series of numbers satisfying the algorithms refers to the manual of platic embosser machines

Press M.

NAME: ACCT #	**TYPE: (V-M-P-C-F)**	**MOD CK**
AUTO MOD (Y/N)	**N REDUNDANCY: N**	**TYPE: 0**

Selection of the Auto Mod Check (innactive at this time)

AUTO MOD-CK (Y/N): N

A 'Y' will enable the on-line Mod Check. This will allow the on-line transmission of a number withoutn a check digit and the stamper will calculate the check digit and enter it to the end of the transmitted set of numbers.

A 'N' will not enable the on-line Mod Check.

Selection of Mod Check Type

TYPE: 00

0 = MOD 11 Non Consecutive Algorithm

1 = MOD 11 Consecutive Algorithm

2 = MOD 10 LUHN Algorithm

Details on the types of algorithms are given in the Manual METAL DOT MATRIX.

Press Mod Type and Return.

The following options are now available.

A Branch to options for fields if one or more of the fields options in LCD-14 were selected

B Branch to storing format, if this was the last field.

Step-3: Protected Fields.

A Protected field is a field where the data is entered into the format during the programming or the editing of the format. The operator will not need to enter this data during data entry. Data such as Department Name, field headings such as DOB, SEX can be entered as protected data.

Press P

NAME: HOSP TYPE: (V-M-P-C-F) PROTECTED
DATA: U S HOSPITAL

Type in the desired protected data following Data: in LCD-18

Press ENTER

The following options are now available.

A Branch to options for fields if one or more of the fields options in LCD-14 were selected

B Branch to storing format, if this was the last field.

Step-4: Counters.

The counters selected in the section on the setting up of the formats can now be entered into the fields designated for the counters.

Press C

NAME: SEQ TYPE: (V-M-P-C-F) COUNTERS
COUNTER NO: ■ 1

Enter the counter number that was programmed for this field when the format was set up.

Press counternumber and Enter

The following options are now available.

A Branch to options for fields if one or more of the fields options in LCD-14 were selected.

B Branch to storing format, if this was the last field.

Step-5: Field Duplication.

The field duplication allows the transfer of data from one field to another automatically. The programmer must identify the field to be duplicated. In fields that have an incremental counter, the programmer has the option of duplicating the number or having the number in the duplicated field incremented or decremented.

This fuction is used when the field being programmed is exactly the same as one of the previous fields in all characteristics except for the X and y coordinates and the sequential counter value.

Press F

NAME: SEQ	**TYPE: (V-M-P-C-F)**	**FIELD DUP**
FIELD DUPED: 01	**Y:028 X:023**	**CTRS ADV: N**

Enter the field to be duplicated

FIELD DUPED: 03

Enter the number of the field to be duplicated.

The TEST example has field #14 a dup of field #3. In the example case enter 03 and press Enter.

Select the sequential counter operation

CTRS ADV: N

An Y forces the updating of the duped counter

An N dosen't foice any update of the duped counter

The following options are now available.

A Branch to options for fields if one or more of the fields options in LCD-14 were selected.

B Branch to storing format, if this was the last field.

C.10 STORING THE FORMAT

THE LAST FIELD IS COMPLETED-PRESS F10 TO SAVE THE FORMAT OR SHIFT TAB TO COME BACK

Press F 10

The format will be stored.

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