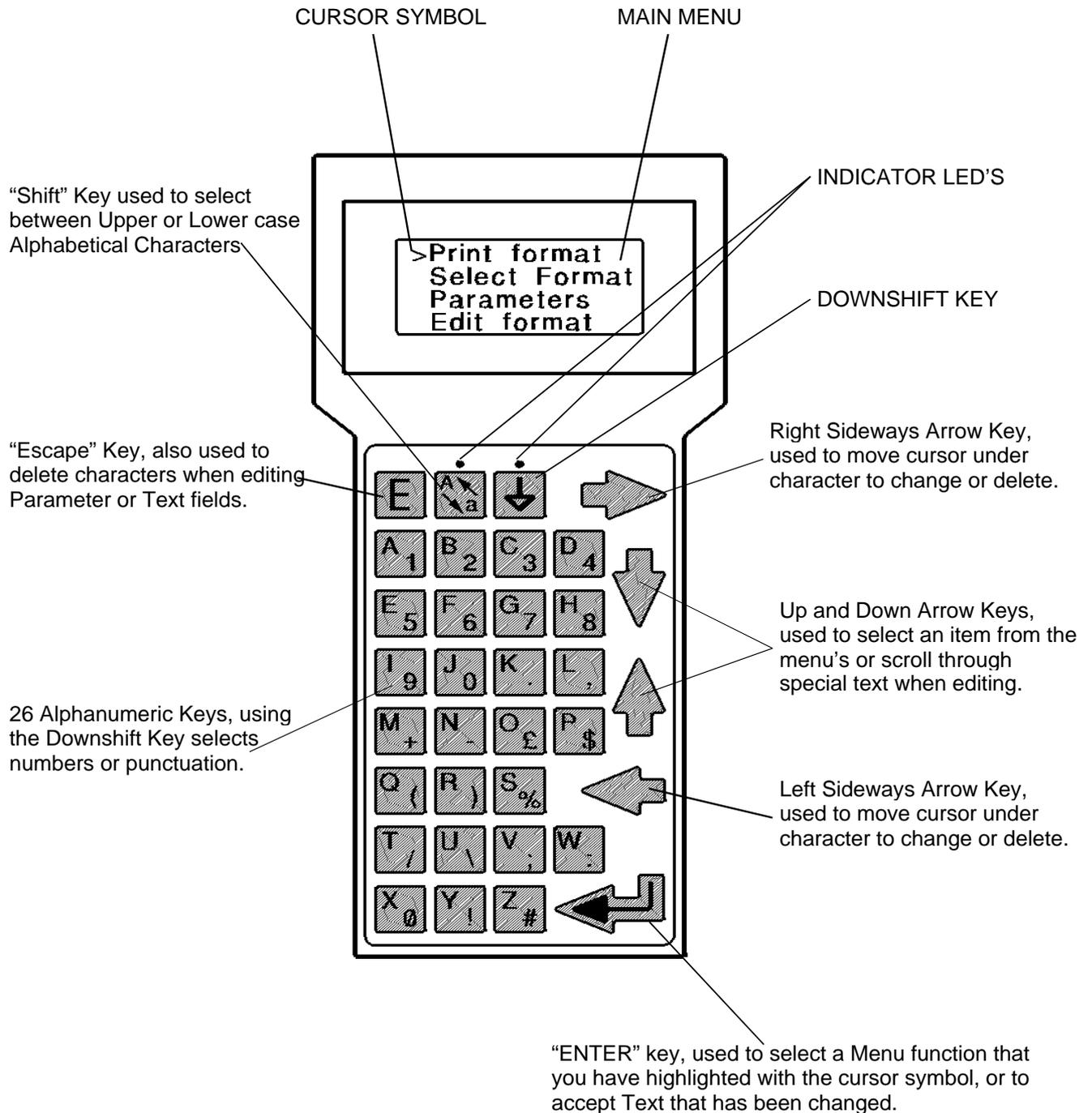


## THERMOCODE 5775

**Hand Held Terminal. Internal** (Software Version ODTNE78I.HEX)  
**Hand Held Terminal. PCMCIA Card** (Software Version ODTNE78C.HEX)

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## ALPHANUMERIC KEYPAD



1.00 **TECHNICAL SPECIFICATION**

Maximum Current	280 milliamps with Backlight
Height	210 millimetres
Width	100 millimetres
Depth	30 millimetres
Connector Details	9 Way "D" Connector, Cable attached
PIN No. 1	Not used
PIN No. 2	RXD
PIN No. 3	TXD
PIN No. 4	Not used
PIN No. 5	GROUND
PIN No. 6	Not used
PIN No. 7	RTS
PIN No. 8	CTS
PIN No. 9	+ 5 VOLT

1.10 **TERMINAL LOADER EPROM**

The Terminal must have an Eprom with the Version No. 1.11 or later installed.

The version number is the first one displayed when first switched on. If this is not correct, some functions may not operate correctly.

To have the Eprom changed, please contact your equipment supplier.

1.20 **PCMCIA TECHNICAL SPECIFICATION.**

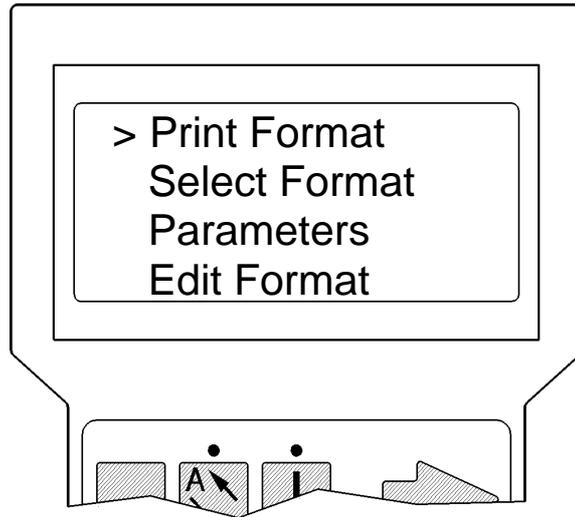
PCMCIA 68 PIN CARD, "S" RAM. **Load Program ODTNE78C.HEX**

CARD MEMORY	MAXIMUM FORMATS	OPEN DATE PART NUMBER
512K	346	CAR 755018
256K	130	-

2.00 **MAIN MENU FUNCTIONS**

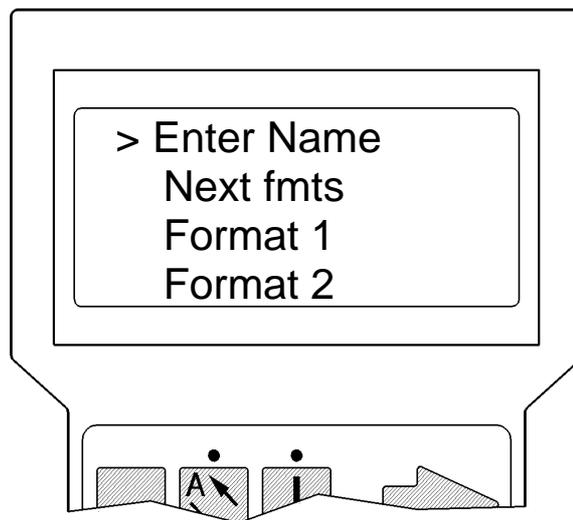
2.10 **PRINT FORMAT**

Selecting this function and then pressing the Enter Key will send the format printing information to the printer, provided you have selected a format first. If you do not select a format, an error message will be displayed (Select format first) indicating that you must select a format before you can send to the printer.



2.20 **SELECT FORMAT**

Move the cursor symbol to Select format and press the Enter Key, a new screen menu will now be displayed as shown below: -



2.22 **Next fmts**

The Terminal listing of formats only allows 20 formats to be scrolled through each time, by selecting Next fmts the next list of up to 20 formats will be displayed. In this second page you will also see on the display screen Previous fmts, which allows you to return to the previous format listing.

2.23 **Format 1 & Format2**

Format 1 is an example of how the first format on the possible list of twenty might look like. By using the down arrow key you can scroll through the list until you find the format that you wish to edit or print, then press Enter.

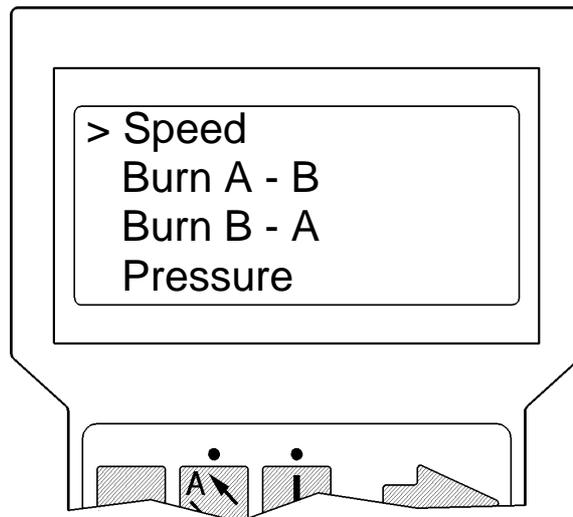
2.30 **PARAMETERS** (Normally Password Protected. Select your format first.)

Within this function you can change all printing parameters such as: -

Speed,  
Burn A--B  
Burn B--A  
Pressure  
Peel Height  
Home offset (for version TPHC5\_1.A21 & above.)  
Quantity

Normally to enter this function you have to enter a dedicated password that was installed when the machine was commissioned. We shall assume that we know the password and have entered in to the parameter function, in turn we will go through each subject to describe its functionality.

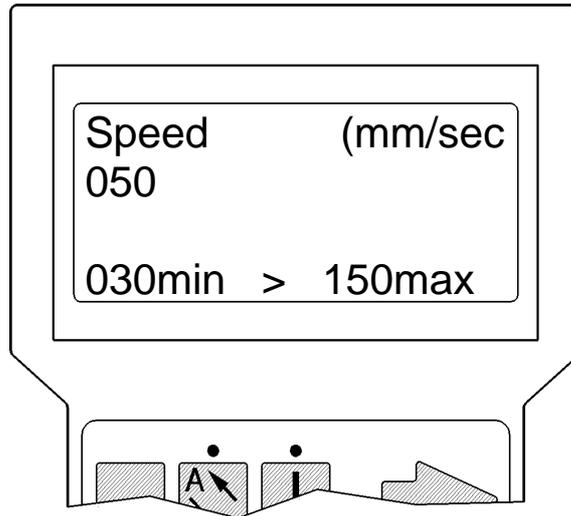
Any changes made to Speed, Burn, Pressure Peel height or Home offset should be noted down, so the original Format file can be up dated.



2.31 **Print Speed**

This is the linear speed in millimetres per second that the printhead travels across the substrate, on the display you will see three numerical digits representing the printing speed.

e.g. 050 represents 50 millimetres per second.  
030min > 150max, valid input ranges.



To change, utilise the sideways arrow keys to select the number to modify and then press the numerical key that represents the number that you require.

**NOTE**

Excessive speed changes will cause inferior printing quality and may even inhibit the printer from working as in the printer memory there are upper and lower limits.

2.32 **Burn A--B**

This is the actual time that each heater element is turned on for one printing line/pixel of linear travel. Looking at the front of the cassette you will see the markings of A and B, between these markings there are 885 possible printing lines. Burn A - B means it is the value of burn from direction A to B.

Values are in microseconds and are shown as three numerical digits.

These burn values will determine the temperature on the printhead edge that is in contact with the substrate. Care must be taken when adjusting as high values can burn through the ribbon or cause print elongation. Low burn values can mean unreadable print, unless you are confident in adjusting leave the values alone and contact your supervisor.

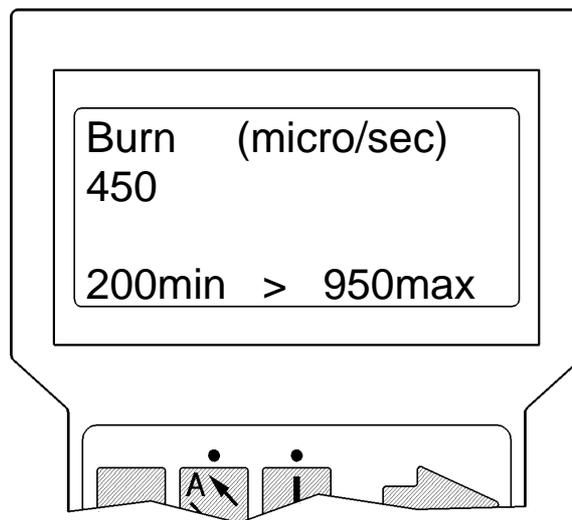
2.33 **Burn B--A**

This is the actual time that each heater element is turned on for one printing line/pixel of linear travel. Looking at the front of the cassette you will see the markings of A and B, between these markings there are 885 possible printing lines. Burn B - A means it is the value of burn from direction B to A.

Values are in microseconds and are shown as three numerical digits.

These burn values will determine the temperature on the printhead edge that is in contact with the substrate. Care must be taken when adjusting as high values can burn through the ribbon or cause print elongation. Low burn values can mean unreadable print. Unless you are confident in adjusting leave the values alone and contact your supervisor.

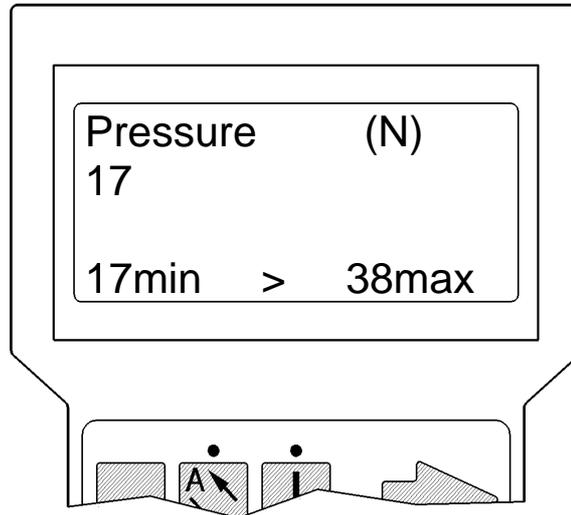
e.g. 450 represents 450 microseconds the heater element is switched on.  
200min > 950max, valid input ranges.



2.34 **Pressure**

These values determine the pressure of contact between the printhead and substrate to be printed. The units of pressure are in Newton's. Normally the pressure ranges are between 17 to 38, utilising values out of this range may cause printer malfunctions and is not recommended.

e.g. 20 represents 20 newtons or 2.0 Kg force.  
17min > 38max, valid input ranges.

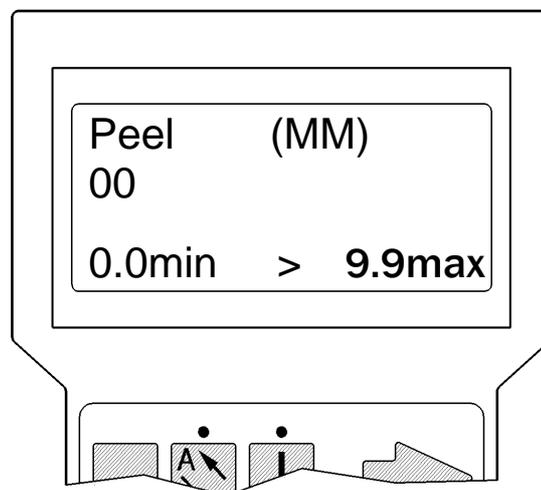


2.36 **Peel height**

This is a special feature that allows the printhead to lift up by a programmed amount and then return to the pre-print position after each print, allowing correct stripping of the ribbon from the product and releasing any build up of ribbon tension within the cassette. The amount of peel height depends upon the Pre-print position, the distance the printhead is away from the substrate when at rest. Units of Peel Height = 0.1mm

Ideally pre-programmed formats that include a value in the peel height should not be altered unless you are confident in what you are doing.

e.g. 40 represents 4mm Printhead lift and return.  
0.0min > 9.9max, valid input ranges. e.g.00 to 99

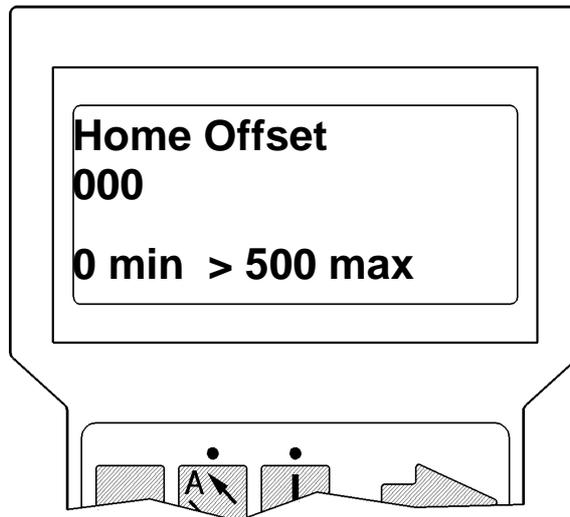


2.37 **Home offset**

This special feature allows the user to program a print start position offset from either Datum A or B, the values entered are the resolution of printing in dots. (where 12 dots = 1mm)

Normally this feature will only be used if the Printer cannot be Mechanically moved to the correct position for printing on the substrate.

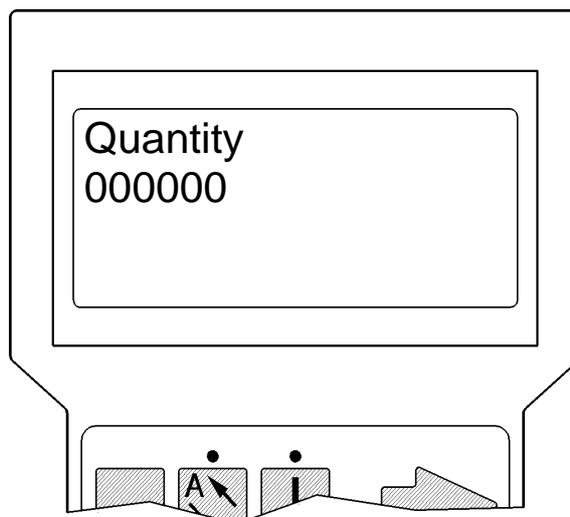
**Note:-** This feature only work with Printer Software version **TPHC5\_1.A21 or above.**



2.38 **Quantity** (Now 6 digits.)

Allows the user to specify the amount of prints required, normally this is set at "000000" representing continuous printing. You may if required specify a batch quantity. If a dedicated batch size is programmed, once the printer has reached the target count, the printer will stop printing and go into a "wait state". The yellow LED will flash, indicating that you have to either send a new print quantity command or load a new print format.

e.g. 000000 = continuous printing.



**NOTE** On Label Format designed before September 1999 may only have 5 digit quantity field, this will not effect normal operations.

2.40 **EDIT FORMAT** (Normally Password Protected)

This feature allows changing of text fields via the Hand Held Terminal, access to individual text lines must have been pre-programmed in the format design, before it was loaded to the Terminal.

1. Select the Format you wish to edit.
2. Move the cursor symbol to "EDIT FORMAT"
3. Press Enter.
4. The first line of variable text will automatically be displayed ready for editing.

2.41 **Additional Characters available:-**

Whilst in Editing mode, you may select additional characters. Although these are not displayed on the keypad, if you press the ESC or "E" key to delete the character shown on the display, and then use the UP and DOWN arrow keys to select the specific character required to print.

**é è ê ë à â ù û Ä Å È ä å Ö ö ô Ü ç î ß ü**

Once you have finished editing the text line press ENTER. If there are other variable lines they will automatically be displayed in sequence after you have pressed ENTER .

If you do not wish to change a line of text press ENTER

After the last line of variable text the Keypad will display:-

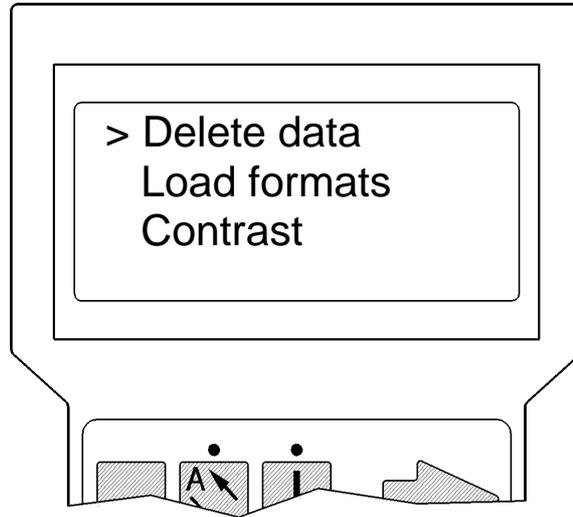
**"NO MORE FIELDS"**

Indicating that there are no more variable fields in the format you selected.

Once you have finished editing, the cursor symbols automatically is aligned to PRINT FORMAT. You can now send the modified format to the printer, by pressing ENTER if required.

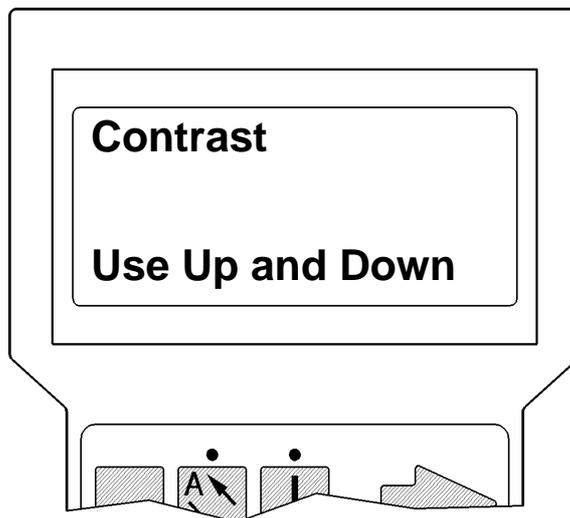
2.50 **MANAGEMENT** (Normally Password Protected)

This menu is primarily for managers, enabling the Terminal to be set up to suit the application and for adding or deleting formats from the memory. Normally this menu is password protected to stop operators accidentally erasing formats or selecting an incorrect mode of operation.



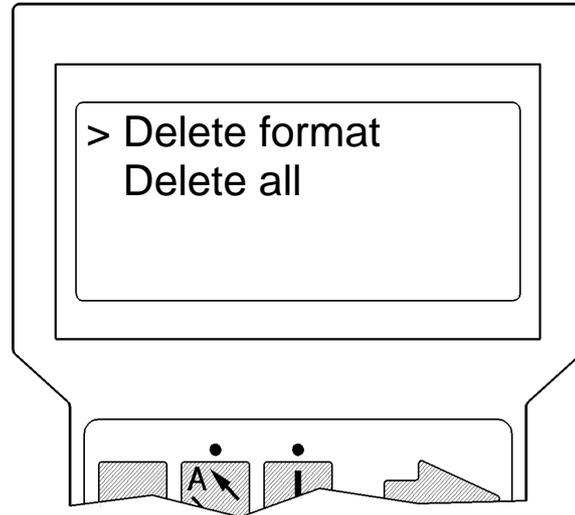
2.51 **Adjust Contrast**

Allows the user to alter the contrast of the Screen.  
Use the Up and Down Arrow Keys to change screen contrast



### 2.52 Delete data

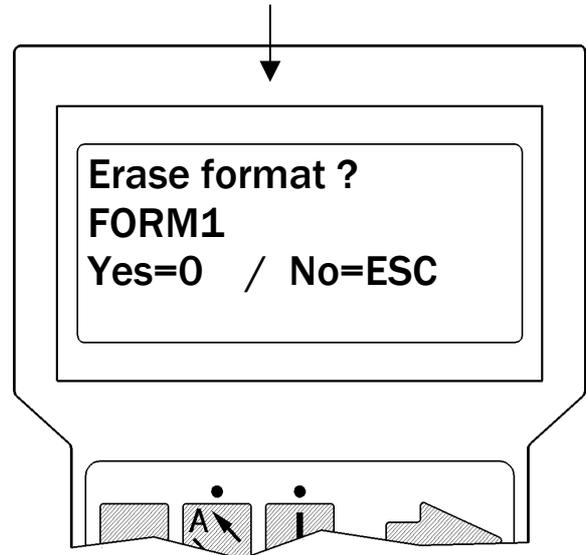
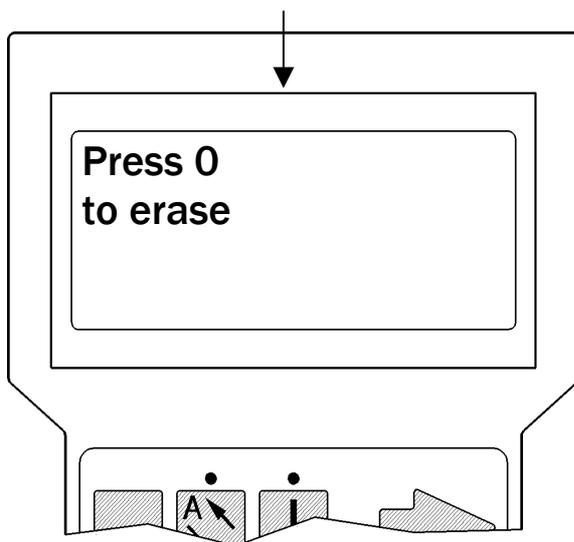
From this menu you can delete individual formats or delete all. If you wish to delete an individual format move the cursor to "Delete format" press Enter, a message will appear (Select format to delete) the list of all the formats in memory will be displayed. Select the format to be deleted. The display will now show the name of the format you wish to delete, and a choice to delete by pressing the "0" key or to leave within the memory by pressing the "ESC" key.



Selecting "**Delete all**" will bring up the request for the Service password, and the screen to the lower left of this page..

Pressing zero will erase all formats.  
With a PCMCIA card the screen display will read **Formatting Card**

Press zero to erase FORM1 being the Format name you wish to delete.



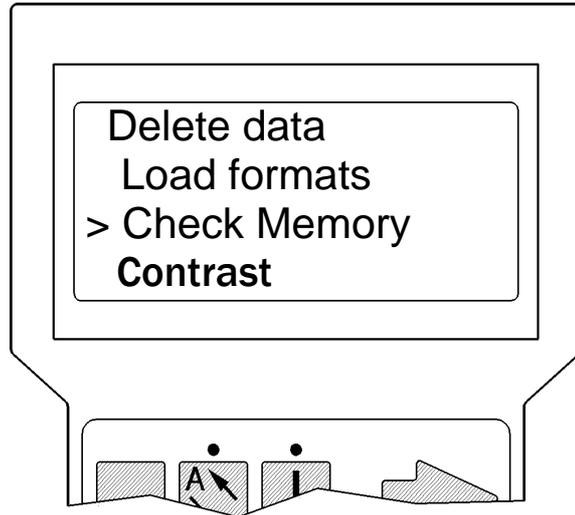
### 2.53 Load formats

Use this function to load format designs to the Terminal.  
If you accept this function by accident, no damage can occur. The program will time itself out after approximately 10 seconds. (See section 3.2)

## 2.54 PCMCIA Card

### Check Memory

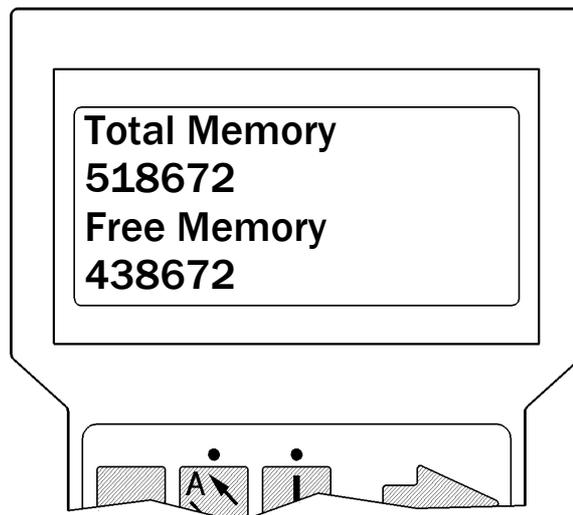
When using PCMCIA cards (Software ODTNE78C.HEX) there is an added function named "**Check Memory**". Informing you of the free space available on the card.



After formatting the card, the total and free memory available is shown.

The difference between the total and free memory is reserved for use when Editing or requesting Service from the printer.

The maximum number of formats you can load is 346 on a 512kb card and maximum of 130 on a 256KB

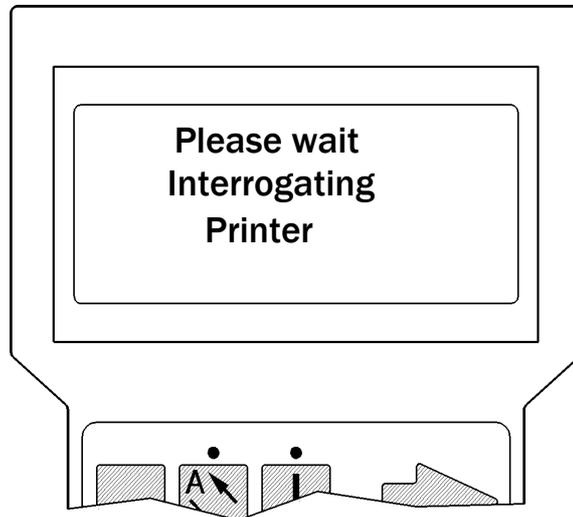


2.60 **SERVICE MENU** (Password Protected)

This menu allows changing of the following parameters via the Hand Held Terminal, this feature will save the customer having to connect a computer to change the following pre programmed printer parameters.

Send Service	(Sends new settings to machine)	Page 15
Resistance	(Edit head resistance) —————▶ Reset metres ?	Page 16
Date	(Changes the date in the printer)	Page 17
Time	(Changes the time in the printer)	Page 17
Pre-print	(Alters pre-print height)	Page 18
Core diameter	(Changes core diameter in millimetres)	Page 18
Ribbon length	(Edit ribbon length in metres)	Page 19
Ribbon thick	(Edit ribbon thickness in microns)	Page 19
Home position	( A to B or B to A. Usually A )	Page 20
Print direction	( One direction or Two directions)	Page 20

After entering the service password and pressing enter this message displayed.



While the above display is shown, the Terminal is collecting Service information from the Printer. This function may take about 30 seconds, and when finished will display the Service menu allowing the user to select the required function to change. (see following pages.)

Press the enter key in any of the menus will exit.( storing any changes made.)

After exiting out of Service menu, the data is deleted from the Terminal memory.

Any further changes to the Service menu, the user would have to re Interrogate the printer.

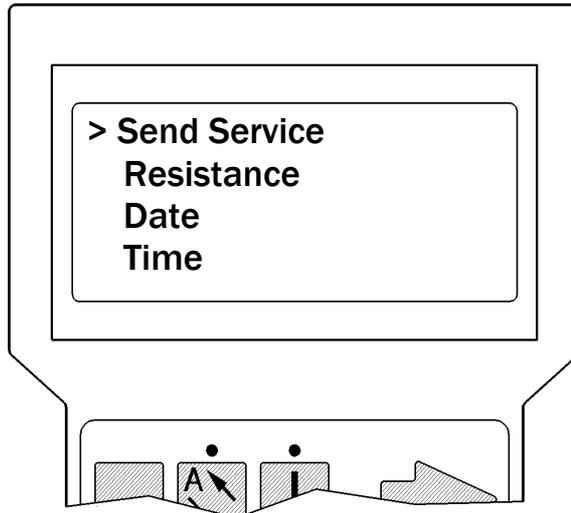
**Sending Service Data to the Printer**

Each of the Service Settings, can be edited and then sent to the printer Individually.

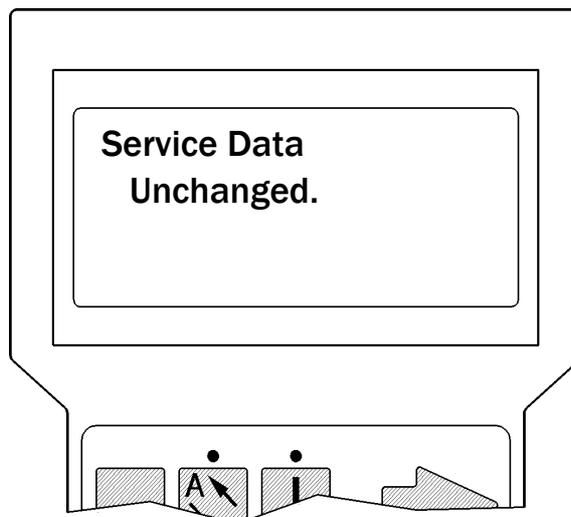
Trying to edit more than one setting at a time could cause malfunctions.

After changing one data field, pressing the Enter Key will send the new settings to the printer.

(This will not exit from the Service Menu.)



If no data has been changed, or you have edited two or more Data Fields and press the Enter Key the following Screen will appear.

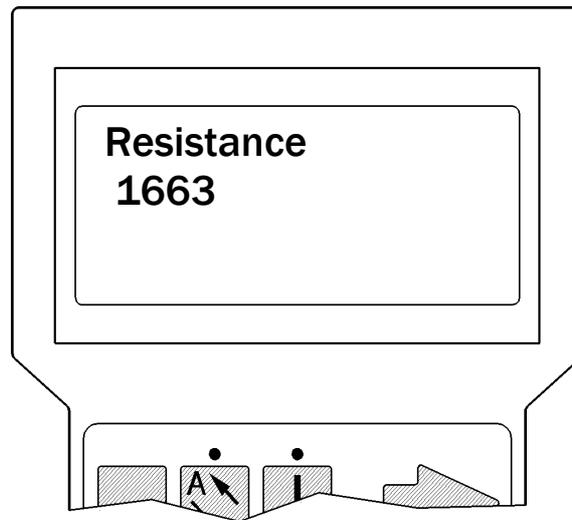


## Resistance

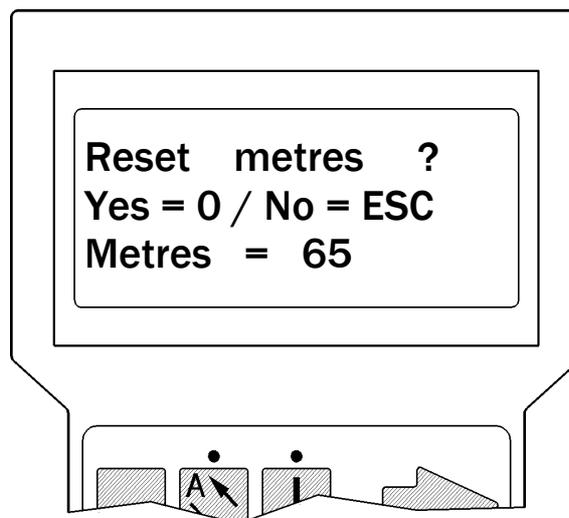
Once you have changed the Printhead resistance and pressed enter you will be given the opportunity to reset the printhead counter. Obviously if it is a new printhead you must reset the counter to recall accurate information on how many metres the printhead has been working for.

**Warning, problems can occur if you are changing printhead resistance values on an existing printhead, accidentally you may reset the counter that records how many metres have been printed to date, thereby affecting your warranty rights.**

**The resistance value can be obtained by removing the foil cassette & printer guard ( four screws ). The value R = xxxx on the printhead. (Range 1350 to 2100)**

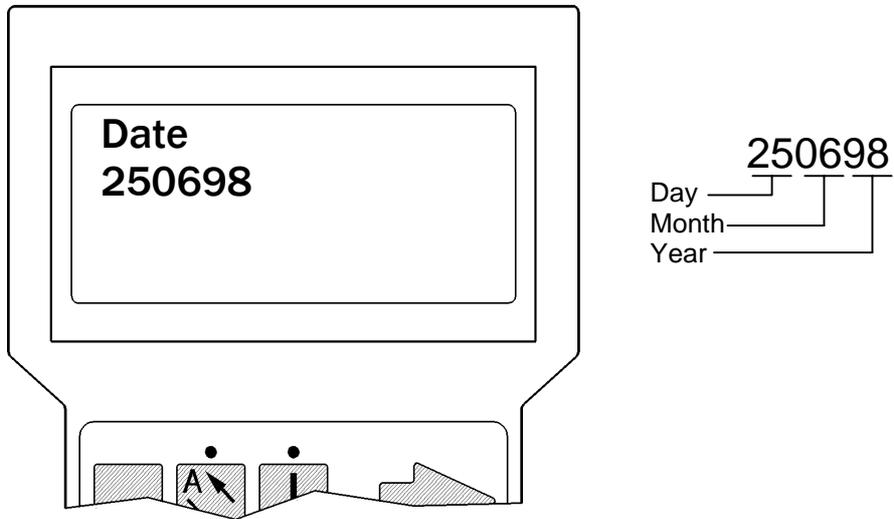


Next menu displayed on pressing enter as below.



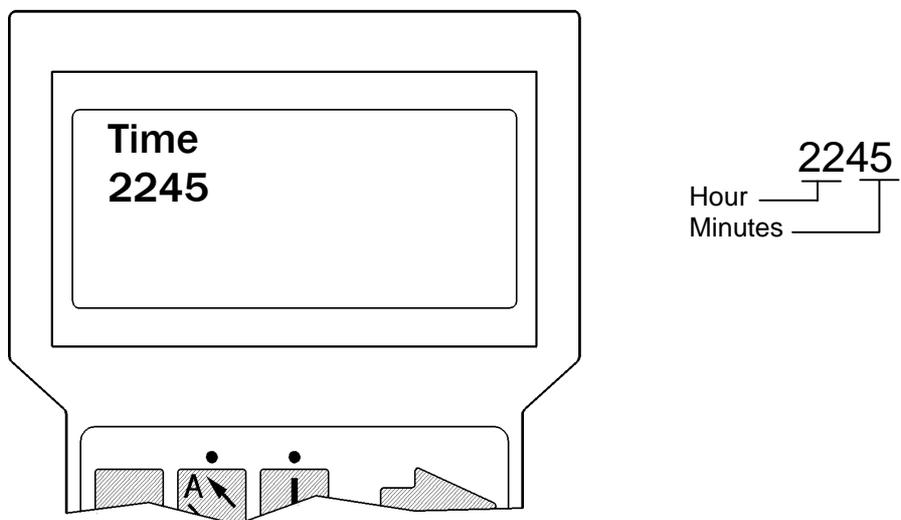
**Date**

Changes the date to the printer. Press the enter key to exit.



**Time**

Changes the time to the printer after sending service. Press the enter key to exit



**Pre – print**

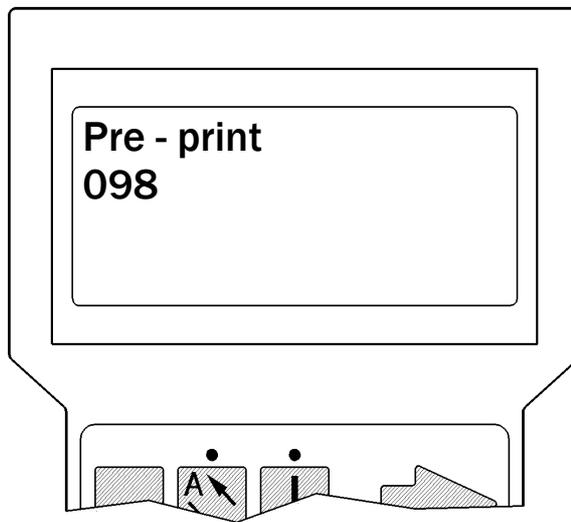
Pre print is the physical height the Printhead moves vertically down from Vertical Home position before printing.

This setting determines the distance the Printhead has clearance from the substrate before printing.

Printhead Maximum movement when in Standard Frame = 12.5mm, if a pre-print of 9.8mm (098) is entered. The printhead clearance from the substrate will be the difference between 12.5mm and the pre-print value of 9.8 = 2.7mm from the substrate.

Printhead pre print position is usually set at 098. Valid input range = 030 to 110

Press the enter key to exit.



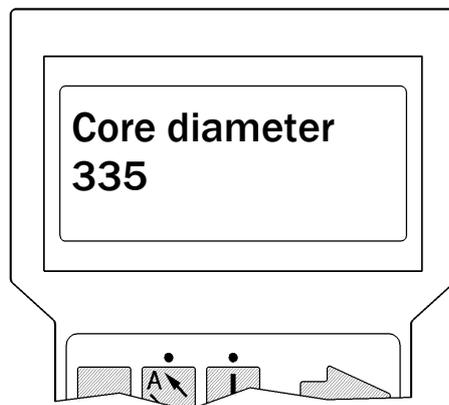
**Core diameter**

The diameter of the Cassette rewind cardboard core in millimetres.

Measure rewind empty cardboard core outside diameter and input value.

e.g. 335 = 33.5mm. Valid input range = 280 to 400

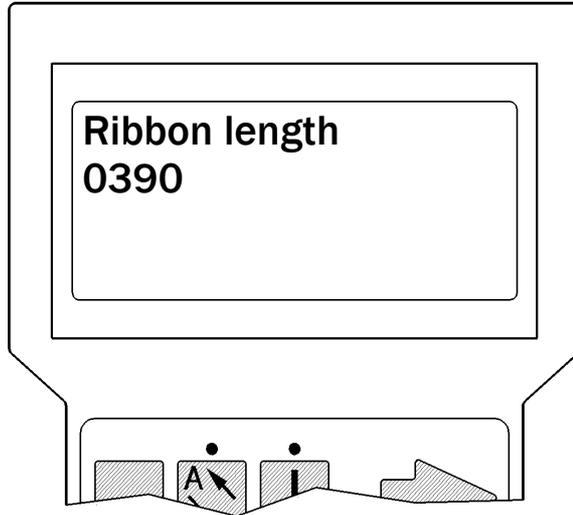
Press the enter key to exit.



**Ribbon Length**

Ribbon reel length in metres. Change the value to suit the Thermal ribbon being used.  
Valid input range is 0100 to 0500

Press the enter key to exit.

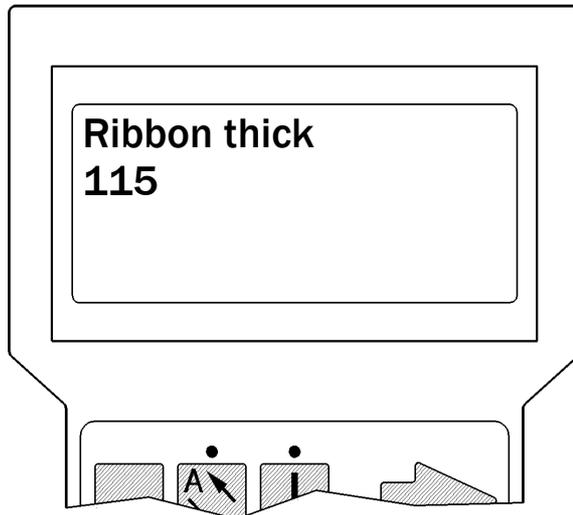


**Ribbon Thickness**

The thickness of the ribbon in microns. Change the value to suit the Thermal ribbon being used.

e.g. 115 = 11.5micron. Valid input range is 060 to 150

Press the enter key to exit.



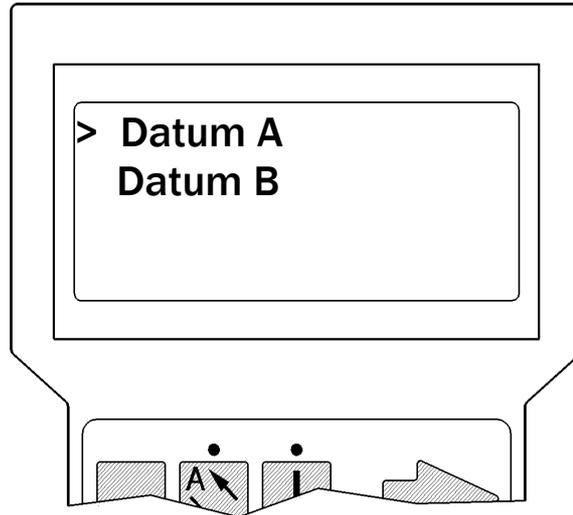
### Home Position

The home position of the printhead.

Datum A :- Prints from A to B

Datum B :- Prints from B to A

Press the enter key to exit.



### Print Direction

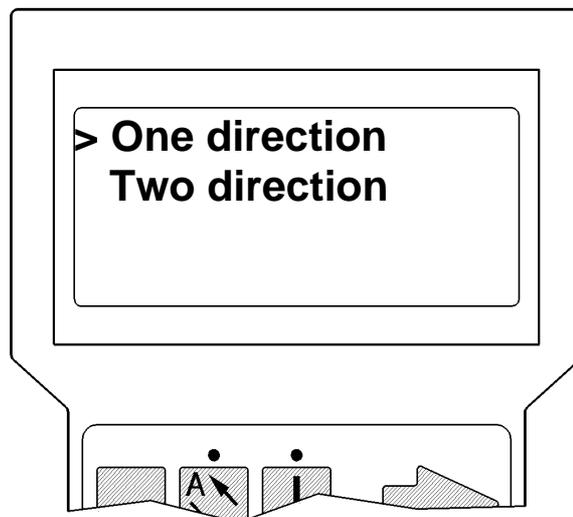
One direction:-

On a print signal the printer will print outward from the home position and returns at a maximum speed of 150mm per second. (Format dependent.)

Two direction:-

On a print signal the printer will print outward from the home position. e.g. A towards B.  
On a second print signal the printer will print as it returns to the home position and stop.

Press the enter key to exit.



**If you are using PCMCIA Card Load Program ODTNE78C.HEX  
Otherwise load Program ODTN78I.HEX**

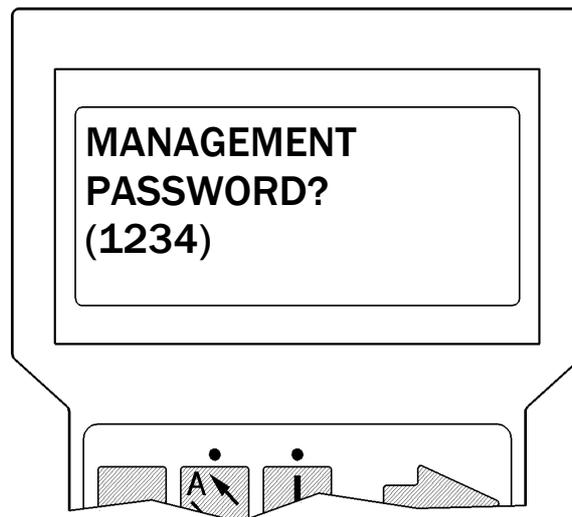
**3.00 HAND HELD TERMINAL (Loading Operational Software)**

1. Connect up the DOS programming lead, to the computer, hand held terminal and 5 volt supply.
2. Switch on the computer, once in "DOS" type the command:- **MODE COM1: 96,n,8,1,p**  
This sets up the serial port COM1 with the correct settings to talk to the printer or hand held terminal, if you are using COM2 change the above DOS command accordingly.
3. Now access the directory with the program (ODTNE622.HEX) that you wish to load to the hand held terminal, and type the command:- **COPY ODTNE78C.HEX COM1**

Where:- COPY = Dos command to copy a file.  
ODTNE78C.HEX = Hand Held Terminal Software.  
COM1: = The Serial port of the Computer you are using.

Note. There must be a space character between COPY and ODTNE78C.HEX, and also between ODTNE78C.HEX an COM1:.  
Correct the above commands if you are using COM2.

4. Do not press ENTER on the computer.
5. Whilst holding down the **ESCAPE (E)** key on the Hand Held Terminal, switch on the 5 volt power supply.
6. Release the **ESCAPE (E)** key, the Hand Held Terminal will now display "PLEASE LOAD"
7. Now press ENTER on the computer, the program automatically loads to the Hand Held Terminal overwriting any previous version.
8. It takes about 1¼ minutes to load the program, once done you will be prompted on the display to input the password for the following menu:-



This is the management password display, Enter the password as shown as defaults. Or you may now input a password of your own choice, minimum of two up to a maximum of eight numeric characters with no leading zero.(12345678)

Passwords can be between two and eight numerical characters long, and can be the same for each menu if so required. Generally customers will require the Edit Password for the line operators, the Parameters password for the line mechanics, and the Management Password to be the highest level so that operators or mechanics cannot change the operation of the Terminal or delete formats by mistake.

9. After keying in your management password, press Enter. Next the display will show EDIT PASSWORD,

Once you have entered the required number and pressed ENTER you will be asked for the PARAMETER PASSWORD and SERVICE PASSWORD just repeat the above instruction.

10. Once this sequence has finished you will be asked to select the mode in which the Terminal is to work, whether Internal or Card.
11. Move the Cursor to the required mode of operation and press enter.

### **3.20 HAND HELD TERMINAL (Loading a new format)**

1. Connect up the DOS programming lead, to the computer, hand held terminal and 5 volt supply.
2. Switch on the computer, once in DOS type the command:-

**MODE COM1:96,n,8,1,p**

This sets up the serial port with the correct settings to talk to the printer or hand held terminal, if you are using COM2 change the above DOS command accordingly.

3. Now access the directory with the TLOAD6.EXE program and the formats that you wish to load to the hand held terminal.
4. Type TLOAD6 0, (there must be a space between TLOAD6 and the zero).

Note if you are using COM2 communications port for programming you must type TLOAD6 2.

5. At the prompt of three dots ... type the name of the data file (format) that you wish to load to the hand held terminal. (never load fonts to the Hand Held Terminal)

**6. Do not press ENTER on the computer.**

7. On the Hand held terminal access the management menu, enter the four digit password normally (1234), and press enter.
8. Move the cursor symbol to LOAD FORMATS and press ENTER.
9. Within the next few seconds press the ENTER ON THE COMPUTER.
10. You should now see the format scroll on the computer screen as it is loading to the Hand held terminal.
11. Once finished loading, press the ESC key on the terminal, then select a format to print. The format you have just loaded should now be at the top of the list. You can load to the Hand held terminal one or more formats at a time if they are in the same file.

**3.30 Checking Loaded Formats** (Windows 3.11)

Checking that formats have been loaded from your computer to the Hand Held Terminal, and that the format design data is correct is a relatively simple task. Please follow the instructions shown below:-

1. Access the Accessories group within Windows version 3.11
2. Double click with the mouse or select the TERMINAL icon.
3. You now have to create a NEW file .
4. Once in the new file access the setting menu, and select the communications item.
5. You are now shown a dialogue box, select the COM port that your computer is using first, then set all the other parameters as shown below.

Baud rate:-	9600
Data Bits:-	8
Parity:-	None
Stop Bits:-	1
Flow Control:-	Hardware

6. Now save this file as TERMCHEK.TRM

You can now send formats from the terminal to the computer and see the data being sent while in the TERMCHEK file.

Please remember to utilise the Windows and Dos programming lead as you used to program the Terminal.

**NOTE!**

The first character of each line will be missing, so you will not actually see the "T" for a text field for example.

**3.31 Checking Loaded Formats** (Windows 95 "Hyperterminal ")

1. Create a new blank text file using a Windows word processor or within DOS ( Edit.Com ). Name the file "**Termchk.txt**". Save the file and exit it.

Make a note of the location of where this file is stored. e.g - C:\TPHC

2. Load Windows 95 and press the **START** button. Select **Programs** and then **Accessories**. From the Accessories list select **HyperTerminal**.
3. Double click on the HyperTerminal icon.
4. You will now be prompted to enter a name and select an icon. Type **TERMCHEK** and choose the default icon shown. Click O.K when done.
5. Within the next screen "**Phone Number**" Select the **Connect using**. Click on the down arrow and select the appropriate com port. e.g - Direct to com2

Click O.K when done.

6. You now have to set-up your communication settings.

Baud rate = 9600  
Data bits = 8  
Parity = None  
Stop bits = 1  
Flow control = Hardware ( RTS / CTS )

Click O.K when done.

You will now have a blank screen. Click on "Transfer" and select "Capture Text" option at the top of the screen. You will now be prompted to type in a name and location of a text file to store the formats.

e.g - C:\TPHC\termchk.txt

## CHANGING PASSWORDS

1. Power up the Terminal whilst holding down the zero (0) key.
2. Release the zero (0) key for about two seconds.
3. Press the zero (0) again for about five seconds.
4. Release the zero (0) key, the display will now show

### BACKDOOR PASSWORD ?

5. Key in the number 688065, this is the backdoor or access code.
6. Press Enter.
7. The name of the menu that is password protected will now be displayed along with it's current password.  
You can now either press Enter to accept the original password, or type in a new password number and press Enter.
8. Once this sequence has finished you will be asked to select the mode in which the Terminal is to work, whether Internal or Card.
9. Move the Cursor to the required mode of operation and press enter.

This method of changing or accessing passwords will prove invaluable for service engineers or for customers who have staffing problems.

