

# Production Board

# User Manual

## *Title Page*

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## 1. Introduction

### 1.1. Scope

The scope of this document covers the Production Display Board.

### 1.2. Purpose

The purpose of the document is to provide the relevant information to enable the user to operate and maintain the Display Board correctly.

### 1.3. System

The system consists of a Production Display Board connected to a PC via an RS232 connection.

The Production Board is a 10 line, 30 character multicolour databoard display with a 30 character scrolling dataline on the bottom. The primary function of the Board is to show the comparison between actual production and target production in both numerical values and percentage efficiency.

SDS, a windows based software package is used to edit and send data to the Board.

**Warning**

**Only trained and authorised personnel should do tests and maintenance on this Display Board System.**

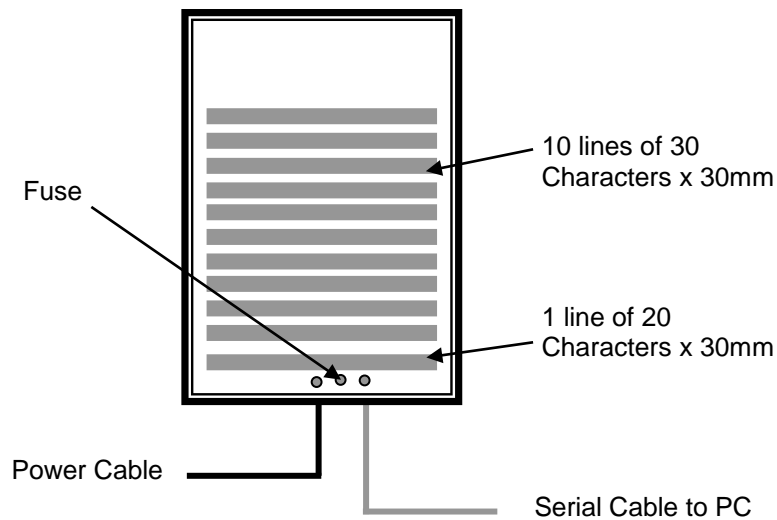
## 2. Hardware Installation

### 2.1. Unpacking

Carefully remove the items from their package and store the packaging safely. After unpacking, inspect the contents for any damage that may have occurred during shipment. In the event of damage, refer to the Return of Equipment procedure section of this manual.

### 2.2. System Configuration

The Display Boards should be located in a position where there is unrestricted viewing of the front face of the Board. Also locations where the Board is subject to bright lights or direct sunlight should be avoided. Mount the Board securely and connect the cables as shown in the figure below.



*Figure 1 – Display Board Configuration.*

### 3. Operating Instructions

#### 3.1. Initial Start Up

After power-up, the last message sent to the Display Board will be shown. If no message has been sent to the Display, a dot will flash on the bottom right-hand corner of the Display.

#### 3.2. Installing SDS software

To install the *SDS* software using Windows 95, do the following steps:

1. Insert the diskette in the floppy (A) drive,
2. Click the *Start* button
3. Select *Settings* and click on *Control Panel*
4. Double click the *Add/Remove Programs* icon and follow the instructions displayed the on screen.

Add *SDS* to the Start menu by creating a short-cut as described in your Windows 95 User Manual. For further details on the *SDS* software, refer to the *SDS* User Manual.

#### 3.3. Editing

Double-click on the *SDS* icon (*SDS.exe* program) to open the main editing window. While the Display Board is configured as an 11 line, 30 character databoard, each line consists of four separate sections and only the 10 lines with the highest percentage values are displayed. The line with the highest percentage value is displayed on top followed by the next highest etc. Refer to Figure 2 for details of each section. Enter the data for each line and click on the *SEND* button. When all 10 lines are full, enter new data on line 11 and click on the *SEND* button.

**Note:** Press the '*Insert*' key on your PC keyboard before entering text.

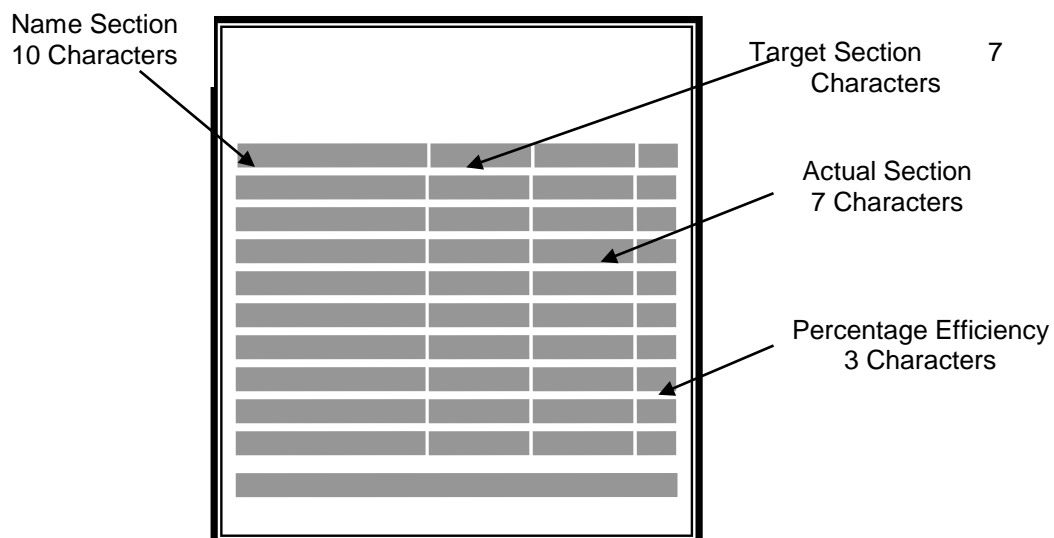


Figure 2 – Layout of Display.

All text in each section may be shown in red (F1), amber (F2) or green (F3) except for the Percentage Efficiency. When the Target and Actual figures are entered and sent to the Display, the software calculates the percentage efficiencies. The colour of the text shown on the Percentage Efficiency section depends on the percentage figure as shown in the table below.

<b>Efficiency Value</b>	<b>Colour</b>
Below 75%	Red
Between 75% and 85%	Amber
Above 85%	Green

*Table 1 - Colour of Percentage Efficiencies.*

## 4. Maintenance

*Warning: Disconnect the power supply before you do any maintenance tasks. Make sure the work area is clean and clear of tools and miscellaneous items of equipment after maintenance.*

### 4.1. Maintenance Instructions

#### 4.1.1. Cleaning the Display

Routine cleaning of the Display Board is at the discretion of the operator and subject to local conditions. Use damp non-abrasive materials such as a sponge, or lint-free cloth and a soft detergent (washing-up liquid) to clean the Display. Remove difficult stains or marks with a suitable solvent. **DO NOT USE** sharp or metal objects.

#### 4.1.2. Preventative Maintenance

Inspect the display for defects before each operation. Do a visual check for the following:

- Cracked or soiled Lens
- Defective LEDs

#### 4.1.3. Corrective Maintenance

To do maintenance tasks on the Display Board, carefully remove the side bracket of the Display by unscrewing the three screws and slide the lens outwards.

Replacing a defective LEDs:

1. Disconnect wiring and remove the display panel
2. Remove solder from the rear of the defective LED
3. Replace the LED
4. Apply solder and wait to dry
5. Connect the wiring and attach the display panel

Replacing a defective Display Panel:

1. Unscrew the attaching nuts and disconnect all relevant wiring
2. Replace the Display Panel and connect all wiring

Replacing a defective Logic Board:

1. Unscrew the relevant Display Panel and disconnect all relevant wiring
2. Unscrew the attaching nuts on the Logic and disconnect all relevant wiring
3. Replace the Logic board and connect all wiring
4. Attach the Display Panel.

Replacing a defective Fuse:

The fuse holder is located at the rear of the Display between the two cable glands.

1. To open the Fuse Holder, use a flat-head screwdriver to turn the cap
2. Replace the defective Fuse
3. Close the Fuse Holder

Slide in the lens and attach the side bracket. Clean the display with a damp cloth and make sure the unit is mounted securely and watertight after all maintenance.

#### 4.1.4. Special Measures following a Stoppage

If the display is out of service for a long period of time, carefully remove the display and store it in a cool dry place.

### **4.2. Handling Equipment**

- One working platform
- Standard tool kit

### **4.3. Special Tools**

There are no special tools required.

### **4.4. Spare Parts**

For spare parts, contact your nearest Data Display Customer Service Department.

**Make sure to quote the Serial Number of the display.**



#### **4.5. Return of Equipment**

Follow the procedures listed below when returning a display:

1. Disconnect all cables and carefully remove the display from the mounting
2. Pack the display in the original packing.
3. If the original container is not available, pack the display in a wooden carton. Use cardboard and polystyrene wedges to protect and cushion the display.
4. Mark carton(s) "THIS SIDE UP", "THIS SIDE DOWN" and "FRAGILE", where appropriate.
5. Make sure to include with the display the following information:

NAME

ADDRESS

TELEPHONE NUMBER

SERIAL NUMBER OF DISPLAY

DESCRIPTION OF THE PROBLEM

(A short description is sufficient)

Contact your nearest Data Display Customer Service Department and a suitable collection date and time will be arranged.

## 5. Product Specifications

CHARACTERISTIC	VALUE
<b><i>Display Features</i></b>	
Model	DB103003MK
Display Type	Production Board
No. of Lines per Board	11, (10 Databord, 1 Dataline)
No. of Characters per Line	30
Character Size	3cm
LED Colour	Multicolour
<b><i>Communication</i></b>	
EPROM	1030UKY5IC-1, 1030UKY5IC-1, Eng-30 Colour D4.0
Protocol	DB Win
Baud Rate	9600
Addressing	P103 for Databoard, 21H Dip Switch for Dataline, 01H
Data Format	8 bit, 1 stop bit, no parity
Character Set	Extended ASCII set
<b><i>Electrical</i></b>	
Fuse Value	10 Amp
Main Power Supply	230 Volts
Frequency	50 Hz
<b><i>Housing</i></b>	
Dimensions (HxLxD)	1230mm x 875mm x 75mm
Housing Material	Aluminium
Housing Colour	Black
<b><i>Environmental Conditions</i></b>	
Temperature Range	-5°C to 65°C
Humidity Range	5% to 80% without condensation

**Table 2 - Product Specifications.**