

# Production Board

## User Manual

### *Title Page*

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### **Publication details:**

*Title:* Production Board User Manual

*Issue:* 1

*Issue Date:* 19-Jan-00

*Part Number:* DD12460

### **Produced by:**

Product Support Department

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Deerpark Industrial Estate

Ennistymon, Co. Clare

Ireland

Printed in Ireland

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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/RS485 connection.

The primary function of the Board is to show the comparison between actual production and target production in numerical values. The Board is made up of a Clock, a Dataline section and a Databoard section. General messages may be displayed on the 15 character Dataline while the *Target v Actual* information is shown on the Databoard section. The characters are 2" (10cm) high and are high-bright red in colour.

The Board is operated using *ProdnSDS*, a windows based software package.

**Warning**

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

## 2. 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. Hardware

The Production Board 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.

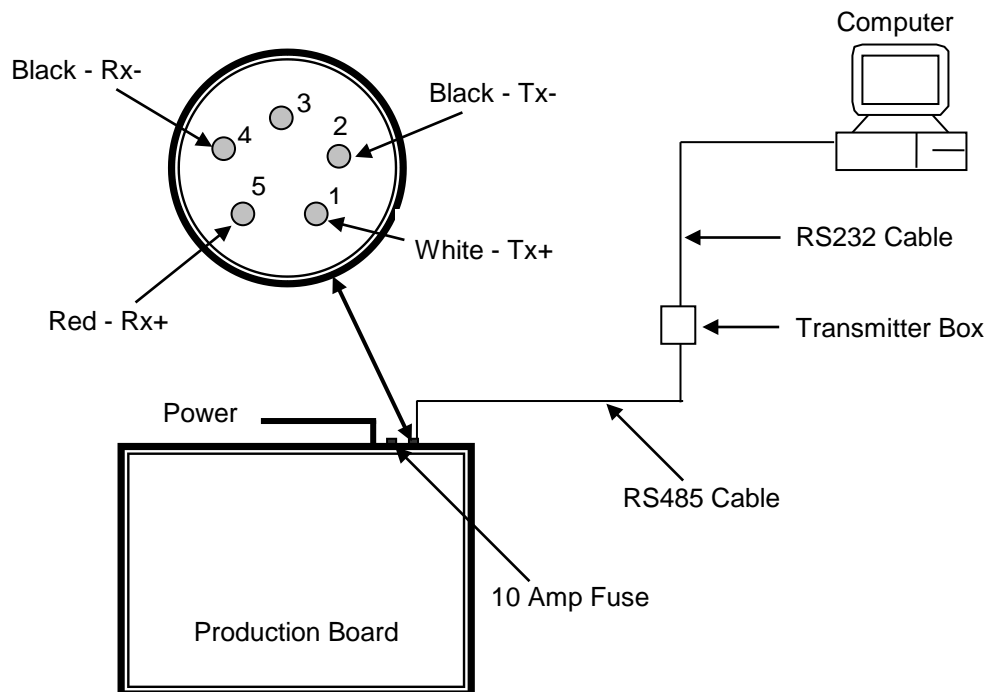


Figure 1 – System Configuration with a Typical 5 Pin Maplin Connection.

### 2.3. Software

The ProdnSDS software package is supplied in floppy disk format. Using MS Dos, type 'A:\install' at the prompt command. To install the ProdnSDS software from the floppy disk using Windows 95, do the following:

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

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

### 3. Product Description

The Production Board has three sections, a clock, a Dataline and a Databoard. A 2" high, five character clock displaying the time in 24 hour format is located on the top right-hand corner. The next line down is a 2" high, 15 character scrolling Dataline used to display general messages. The next six lines of 5 x 2" inch characters make up the Databoard section. This section of the Board shows the *Target v Actual* information.

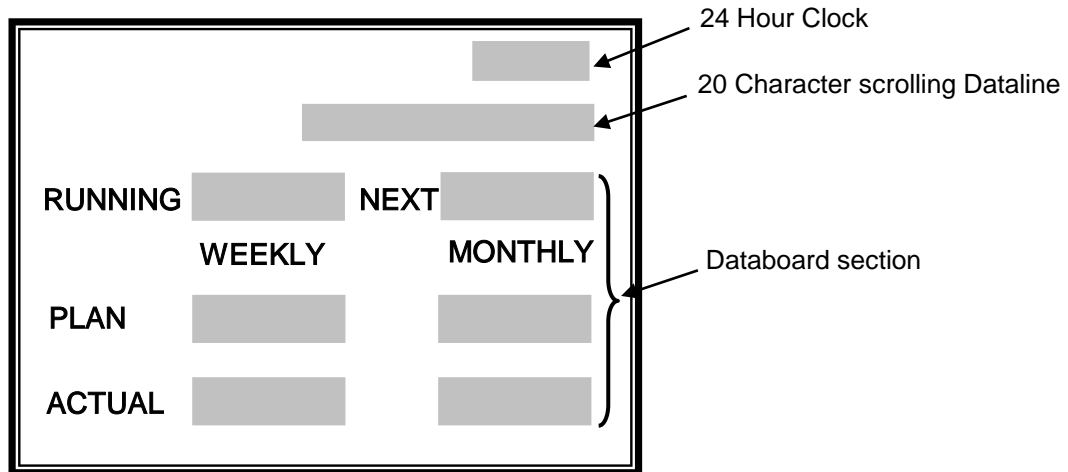


Figure 2 - Production Board.

### 4. Hardware Address

#### 4.1. Board and Section Address

The Display Board has a Databoard section and a Dataline section, a separate address is required for each section. The address for each section is as follows:

Databoard = Address 21H

Dataline = Address 01H

## 5. Operating Instructions

### 5.1. Displaying Text on the Board

The *Target v Actual* and general information shown on the Databoard and Dataline sections of the Production Board is entered manually using the ProdnSDS software package supplied with the Board. At any time, each field may be edited individually and the values sent to the Board by editing the [TEXTS] section of the text file SDSDRVRF.txt. As the text file is in ASCII format, Notepad.exe or a similar program must be installed to edit the file.

To send values to the Databoard section, do the following steps:

1. Run the ProdnSDS software
2. Click on the *System* menu and click on *Setup*
3. In the *System Setup* box, click on *Driver File*
4. Enter J.R. in the *Setup Password* dialog box and press the *Enter* key
5. Click on the *View File* button

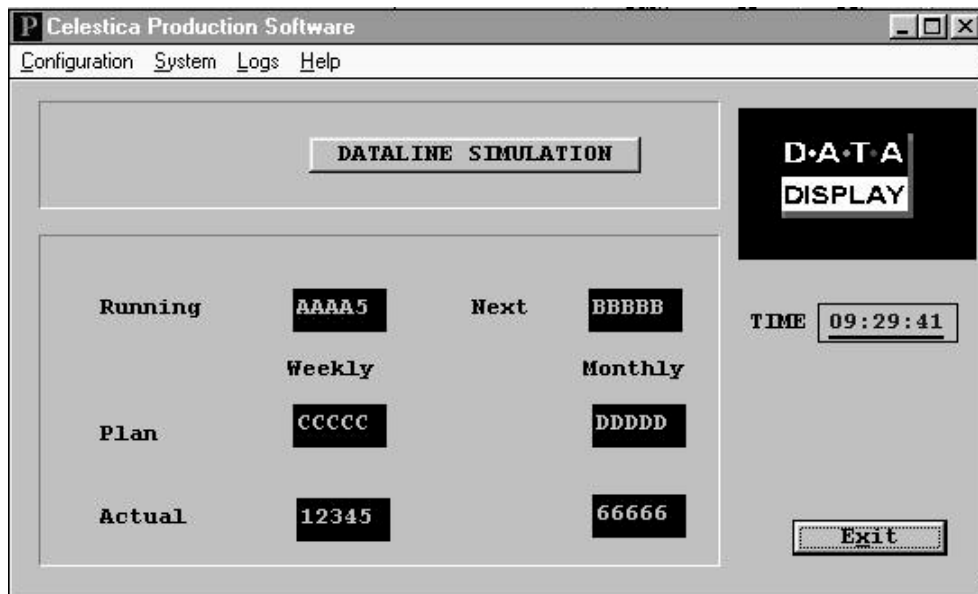


Figure 3 - ProdnSDS Software User Interface.

The file SDSDRVRF.txt should now open. The [TEXTS] section of the file has seven lines, 0001 to 0007. Lines 0001 to 0006 are the Databoard section of the Display, and line 0007 is the Dataline. To set the Running value to 12345, enter 12345 after the '=' sign on Line 0001. Edit lines 0002 to 0006 similarly. To add 'General Message' to the Dataline, enter 'General Message' after the '=' sign on Line 0007. *Close* and *Save* the text file and click on the OK button on the Driver File Setup box. Within 15 seconds the changes to the text file will be displayed on the Board and the new values are shown on the User Interface.

To view the message currently shown on the Dataline, click on the *DATALINE SIMULATION* button on the User Interface.

## 5.2. Clock

The clock displays the time in a 24 hour format, and will display the same time that is shown on the PC connected to the Production Board. Make sure the PC is set to display the correct time.

## 5.3. Fault Detection

| <b>Fault</b>                     | <b>Probable Cause</b>          | <b>Action</b>                       |
|----------------------------------|--------------------------------|-------------------------------------|
| Message is not displayed         | The Display is not switched on | Check that Power Cable is connected |
| Message is not displayed         | Fuse is defective              | Replace defective Fuse              |
| Message is not displayed         | Logic Board is defective       | Replace defective Logic Board       |
| Part of Message is not displayed | LEDs are defective             | Replace defective LEDs              |

*Table 1 – Fault Detection.*

## 6. Maintenance

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

### 6.1. Maintenance Instructions

#### 6.1.1. 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.

#### 6.1.2. Preventative Maintenance

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

- Damaged or dirty Lens
- Defective LEDs

#### 6.1.3. Corrective Maintenance

Replacing a defective LED:

1. Remove the side bracket and Lens of the Display Board
2. Loosen the attaching screws on the Display Panel
3. Disconnect wiring and remove the Display Panel
4. Remove solder from the rear of the defective LED
5. Replace the LED
6. Apply solder and wait to dry
7. Connect the wiring and attach the Display Panel
8. Slide in the Lens and attach the side bracket.

Replacing a defective Logic Board:

1. Remove the side bracket and lens of the Display Board
2. Disconnect wiring on the Logic Board
3. Remove the Logic Board by unscrewing the attaching nuts
4. Replace the Logic Board and connect all wiring
5. Slide in the Lens and attach the side bracket.



Replacing a defective Fuse:

1. Use a flat-head screwdriver to open the Fuse holder at the top of the display
2. Replace the Fuse
3. Close the Fuse Holder.

Clean the Display with a damp cloth and make sure the unit is watertight after all maintenance.

#### 6.1.4. 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.

### 6.2. *Handling Equipment*

- One working platform
- Standard tool kit

### 6.3. *Special Tools*

There are no special tools required.

### 6.4. *Spare Parts*

For spare parts, contact your nearest Data Display Customer Service Department. Make sure to quote the Data Display No. in the Product Specifications section of this Manual and the Serial No. of the Display.

### 6.5. *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)

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

## 7. Product Specifications

| CHARACTERISTIC                         | VALUE  |
|--|--|
| <b><i>Display Features</i></b>         |  |
| Data Display No.                       | DD12460  |
| Display Type                           | Production Board. The Board consists of 5 character 2" high Databoards, a 15 character 2" high scrolling Dataline and a 5 character 2" high clock. |
| Display Panel Type                     | DL210 HBR 10 Character (1 off), DL205 HBR 5 Character (8 off)  |
| LED Diameter                           | 5mm  |
| LED Colour                             | High-bright Red  |
| <b><i>Communication</i></b>            |  |
| EPROM                                  | DB310Y5IDS, 5CHRCLKY.OBJ, ENGLISH-15   |
| Protocol                               | DB Win   |
| Baud Rate                              | 9600   |
| Addressing                             | Dip Switch   |
| 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                      | 240 Volts  |
| <b><i>Housing</i></b>                  |  |
| Dimensions (HxLxD)                     | 700mm x 1160mm x 50mm  |
| Housing Material                       | Aluminium  |
| Housing Colour                         | Silver   |
| <b><i>Environmental Conditions</i></b> |  |
| Temperature Range                      | -5°C to 65°C   |
| Humidity Range                         | 5% to 80% without condensation   |

***Table 2 - Product Specifications.***