

# Production Board

## User Manual

### *Title Page*

© 2001 Data Display Ltd

No part of this document may be reproduced by any process without the prior written permission from Data Display Ltd.

The information in this document is provided for reference only. While every effort has been made to make sure it is accurate and complete, Data Display Ltd does not accept any liability arising out of the application or use of the information or products described herein. Moreover, Data Display Ltd reserves the right to alter specifications or procedures without notice.

This document may contain or refer to information or products protected by copyright or patents and does not convey any license under the patent rights of Data Display Ltd nor the rights of others.

All products referred herein are trademarks of their respective owners.

Publication details:

*Title:* Production Board User Manual

*Issue:* 1

*Issue Date:* 21-Feb-01

*Part Number:* DDJ02706001

Produced by:

Product Support Department

Data Display Ltd

Deerpark Industrial Estate

Ennistymon, Co. Clare

Ireland

Printed in Ireland

---

## Table of Contents

<b>1. INTRODUCTION</b> .....	<b>3</b>
1.1. SCOPE .....	3
1.2. PURPOSE .....	3
1.3. SYSTEM.....	3
<b>2. INSTALLATION</b> .....	<b>4</b>
2.1. UNPACKING.....	4
2.2. HARDWARE.....	4
2.3. SOFTWARE .....	4
<b>3. SETTING UP THE DISPLAY</b> .....	<b>5</b>
3.1. PARALLEL INTERFACE PIN CONNECTIONS .....	6
<b>4. PRODNDS SOFTWARE</b> .....	<b>7</b>
4.1. SENDING INFORMATION TO THE DISPLAY .....	7
4.2. SET THE TIME AND DATE .....	9
4.3. MESSAGE EDITOR .....	10
<b>5. MAINTENANCE</b> .....	<b>11</b>
5.1. MAINTENANCE INSTRUCTIONS .....	11
5.1.1. <i>Cleaning the Display</i> .....	11
5.1.2. <i>Preventative Maintenance</i> .....	11
5.1.3. <i>Corrective Maintenance</i> .....	11
5.1.4. <i>Special Measures following a Stoppage</i> .....	12
5.2. HANDLING EQUIPMENT .....	12
5.3. SPARE PARTS .....	12
5.4. RETURN OF EQUIPMENT .....	13
<b>6. PRODUCT SPECIFICATIONS</b> .....	<b>13</b>

## 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 the local network. The primary function of the Board is to show the comparison between actual production and target production and display general information.

The Board has two separate sections. The Databoard section shows the current Date, Week number, Time, *ACTUAL* and *TARGET* information.

The twenty character Dataline section at the bottom of the Board is used to display general text messages.

*ProdnSDS*, 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. 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' section of this manual.

### 2.2. Hardware

The Display Board should be located in a position where there is unrestricted viewing of the front face of the Board. Also avoid locations where the Board is subject to bright lights or direct sunlight. Mount the Board securely and connect the cables as shown in the Figure below. Connect the Serial Cable with the RJ45 connector to a spare node on the Network.

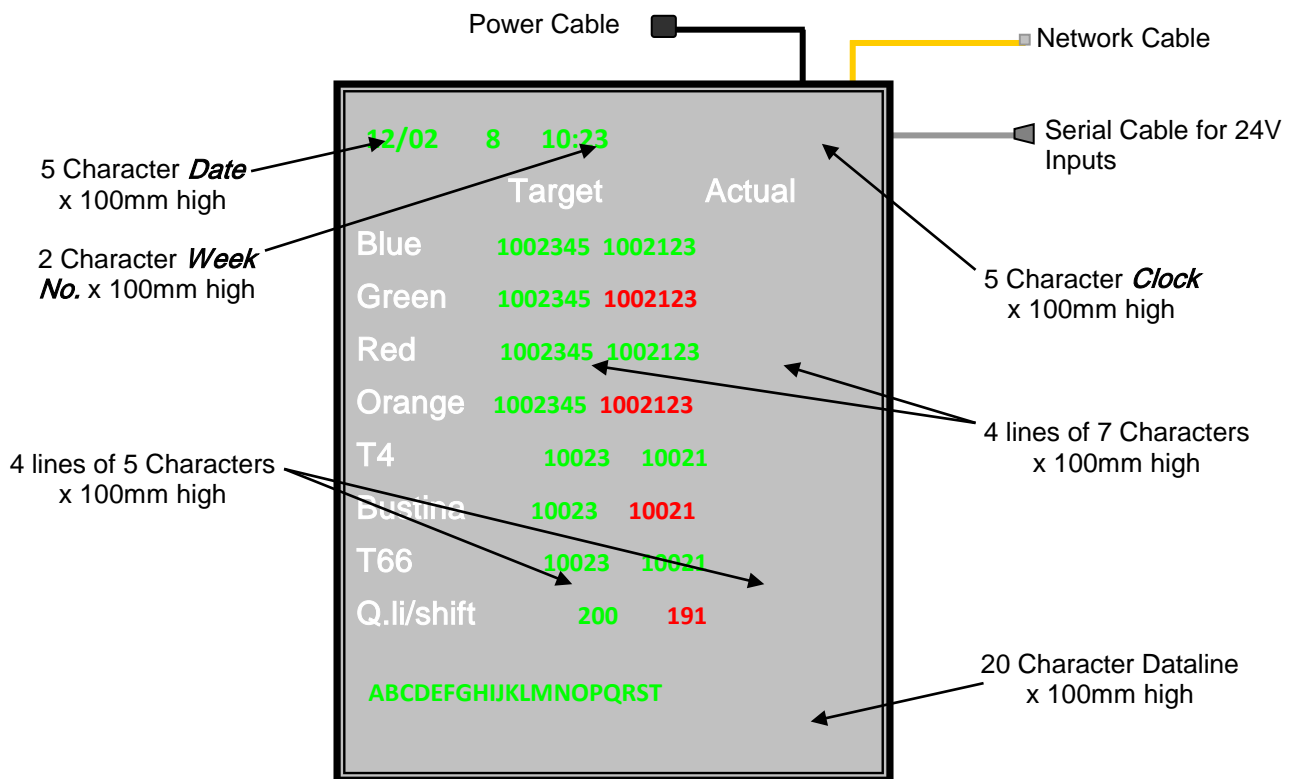


Figure 1 – System Configuration.

### 2.3. Software

The *ProdnDS* 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 95/98, do the following:

1. Insert the disk in the floppy drive
2. Click the *Start* button and click on *Run*
3. Type 'A:\install' and click *OK*.

Add *ProdnSDS* to the Start menu or Desktop by creating a short-cut as described in your Windows User Manual.

---

### 3. Setting up the Display

A Lantronix network device is installed in the Display Board. This device allows the Display to be networked similar to a PC or Printer on the Local Network. For this purpose, an IP Address must be assigned and the device must be configured.

**Note:** Consult your Network Administrator before doing the following steps.

1. Power up the Display
2. Run the MS DOS software on your PC and go to the root directory, C:\
3. Type *arp -s -[IP Address] 00-20-4A-64-20-3C [Enter]*

**Note:** Your Network Administrator will assign a new IP Address for this procedure. The IP Address in the above command is followed by the Hardware Address of the Lantronix device that is printed on the rear of the device.
4. Type *arp -a [Enter]*
5. Ping another address on the network, Type *ping [IP Address] [Enter]*
6. Type *arp -a [Enter]*
7. Type *telnet [IP Address] 1 [Enter]*, a dialog box will appear stating that the connection has failed, Click on the *OK* button and *Exit*
8. Type *telnet [IP Address] 9999 [Enter]*, a setup dialog box will appear
9. Press the *[Enter]* key to go to Setup Mode

**Note:** When the Set up Mode screen appears, press the *[Enter]* key quickly or you will lose the connection. If you lose the connection, go back to step 7.
10. Type *0* and press *[Enter]* to go to Server Configuration
11. Type *[IP Address]* and press *[Enter]*, ignore IP Numbers in brackets
12. Type *[Gateway Address]* and press *Y*, if you do not know your Gateway Address, please consult your Network Administrator.
13. Type *9* and press *[Enter]* to save the configuration and exit Setup Mode
14. Exit MS DOS.

Also supplied on disk is the Redirector Software. This software creates a virtual COM Port, takes the output from that Port and translates it in to Network Protocol. To configure the Port, do the following steps:

1. Install the Redirector software
2. In the Redirectors configuration screen, select *Port Setup* and add a COM port
3. Click on the *Add IP* button and type the *[IP Address]* you wish to assign to that port  
This must be a number between *3000* and *3009 (TCP Port)*
4. Save the configuration and exit the Software
5. Reboot your PC.

The next procedure is to configure the Port on the Lantronix device.

1. Run the MS DOS software on your PC and go to the root directory, C:\
2. Type *telnet [IP Address] 9999 [Enter]* , a setup dialog box will appear
3. Press the *[Enter]* key to go to Setup Mode  
**Note:** When the Set up Mode screen appears, press the *[Enter]* key quickly or you will lose the connection. If you lose the connection, go back to step 2
4. Type *1* and press *[Enter]* to go to Channel 1 Configuration
5. Set the Channel 1 Port Number to a value that is exactly 11000 higher than your TCP Port number. E.g. If you have set your TCP Port number to 3002, your Channel 1 Port Number should be 14002  
**Note:** Other parameters such as Baud Rate, I/F Mode, Flow etc will appear, press the *[Enter]* to ignore the settings.
6. Save the configuration and exit Setup Mode.

This completes the configuration procedures for the Lantronix device. To check that the installation and configuration is correct do the following:

1. Run the *ProdnSDS* software
2. Go to *Systems > Ports*
3. Click on COM3, Click on *Settings*
4. Select *Open* from the *State* drop down list
5. Click on *OK*

### **3.1. Parallel Interface Pin Connections**

To operate the Display using the Parallel Interface, a volt-free contact is needed. Making contact with Ground and the relevant Pin on the 15-way connector results in the following:

- Pin 1 - Brown - Increments the *'Blue'* value
- Pin 2 - Red - Increments the *'Green'* value
- Pin 3 - Yellow - Increments the *'Red'* value
- Pin 4 - Orange - Increments the *'Orange'* value
- Pin 5 - Green - Increments the *'T4'* value
- Pin 6 - Blue - Increments the *'Bustina'* value
- Pin 7 - Violet - Increments the *'T66'* value
- Pins 8 to 15 - Black - Ground

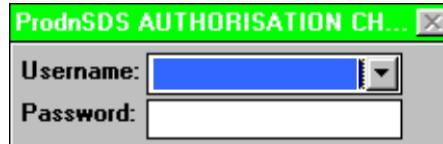
## 4. ProdnSDS Software

The *ProdnSDS* software is a user interactive software package designed to receive and send real time production information to the Display Board. It contains features such as:

- Changeable Shift and Break Start/Stop times
- Calculates and displays Shift Efficiencies
- Incorporates Message Editor for Dataline

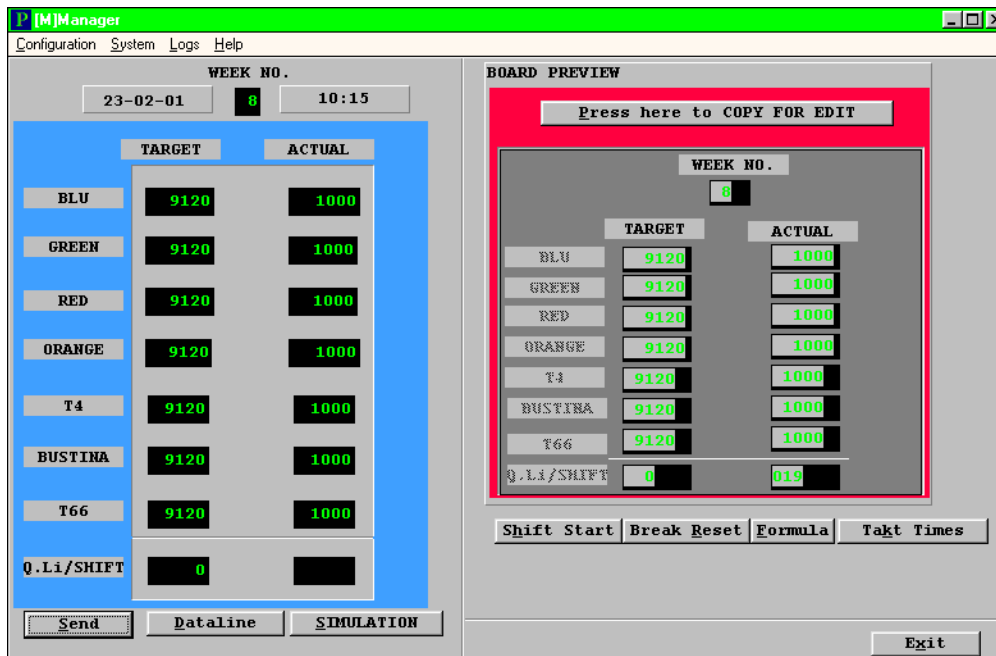
Double-click on the *ProdnSDS* icon to run the program, *ProdnSDS.exe*. The software is password protected. When the Password dialog box appears, do the following:

1. For the *Username*, click on *SERVER*
2. For the *Password*, enter **T-SET** and press the *Enter* key.



### 4.1. Sending information to the Display

The User Interface consists of the Menu Bar, a Display Interface and a Board Preview section. For further information on the commands on the Menu Bar, refer to the SDS User Manual.



To set the Shift Start and Stop Times, click on the *Shift Start* button. Enter each Shift Start and Stop Time in the appropriate fields. Up to six shift times may be entered.

To set the Break Start and Stop Times, click on the *Break Reset* button. Enter each Break Start and Stop Time in the appropriate fields.

The TAKT Time value is set to provide a moving target to which the current production level may be monitored. This is set at the operators discretion and increments the Display by 1 for that time period. To set the TAKT Time value and Levels, do the following steps:

1. Click on the '*Takt Times*' button on the User Interface
2. Enter the Takt value, 010 will increment the Display by 1 every ten seconds
3. Click on the '*OK*' button.



This screen shows the formula used to calculate the Qi Shift actual. The red section shows the formula default values and the yellow section shows the editable formula values. To use the default values, click on the Enable Default checkbox.

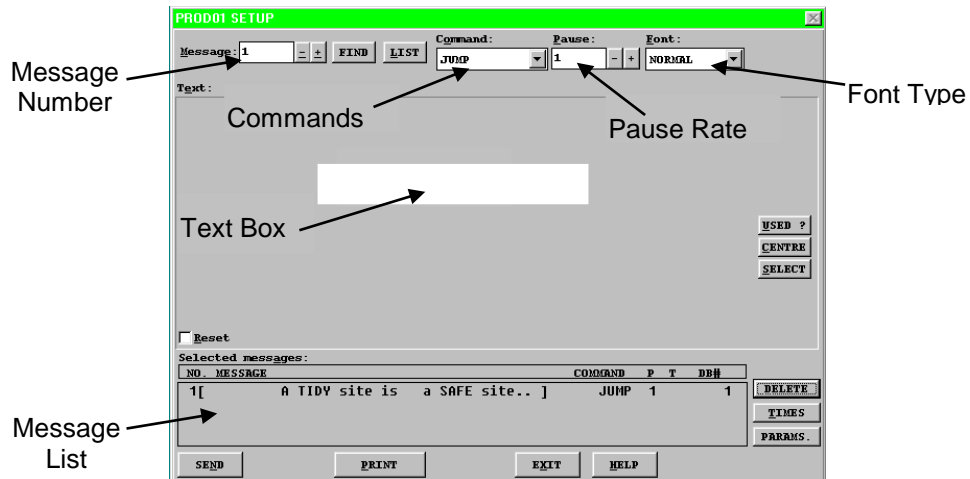
The percentage for Actual figure calculates the figure of the Actual relevant to the Target. If this percentage is less than the percentage specified then the Actual values will appear in red. If this percentage is greater than the percentage specified then the Actual values will appear in amber.

#### 4.2. Set the Time and Date

The clock shows the *Time* in a HH:MM format and the *Date* in DD/MM format. These values are taken from the host PC, so make sure the PC is set to the correct time and date. The current *Week No.* is automatically set on the Display.

### 4.3. Message Editor

To send text to the 20 character Databoard section of the Display, click on the 'Dataline' button to open the Message Editor Interface. Enter your text message in the text box and click on the 'SELECT' button. The message is now added to the message list at the bottom.



Click on the 'SEND' button twice to send the new text message to the Display

To edit a text message, click the message number (+/-) to show the message in the text box. Make the changes to the text message and click on the 'SEND' button. The changes to the message are shown in the message list. Click on the 'SEND' button again to send the new changes to the Display.

Various Commands, Pause Rates and Font Types can be selected from the drop down lists to give your message more effect.

When messages are sent to the Display, click on the 'SIMULATION' button to view the text message currently being shown on the Display.

## 5. 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.***

### 5.1. Maintenance Instructions

#### 5.1.1. 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.

#### 5.1.2. Preventative Maintenance

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

- Damaged or dirty Lens
- Defective LEDs
- Loose cables

#### 5.1.3. Corrective Maintenance

To do maintenance tasks, unscrew the screws at the side of the Display and remove the Side Profile. Remove the Lens carefully and put in a safe place.

Replacing a defective Display Panel:

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

Replacing a defective Logic Board:

1. Unscrew the attaching nuts and disconnect all relevant wiring
2. Replace the Logic Board and connect all wiring.

Carefully slide the Lens back on the Display and attach the Side Profile. Clean the Display with a damp cloth and make sure the unit is watertight after all maintenance.

Replacing a defective Fuse:

1. Use a flat-head screwdriver to open the Fuse holder on the Display
2. Replace the Fuse
3. Close the Fuse Holder.

### 5.1.4. 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.

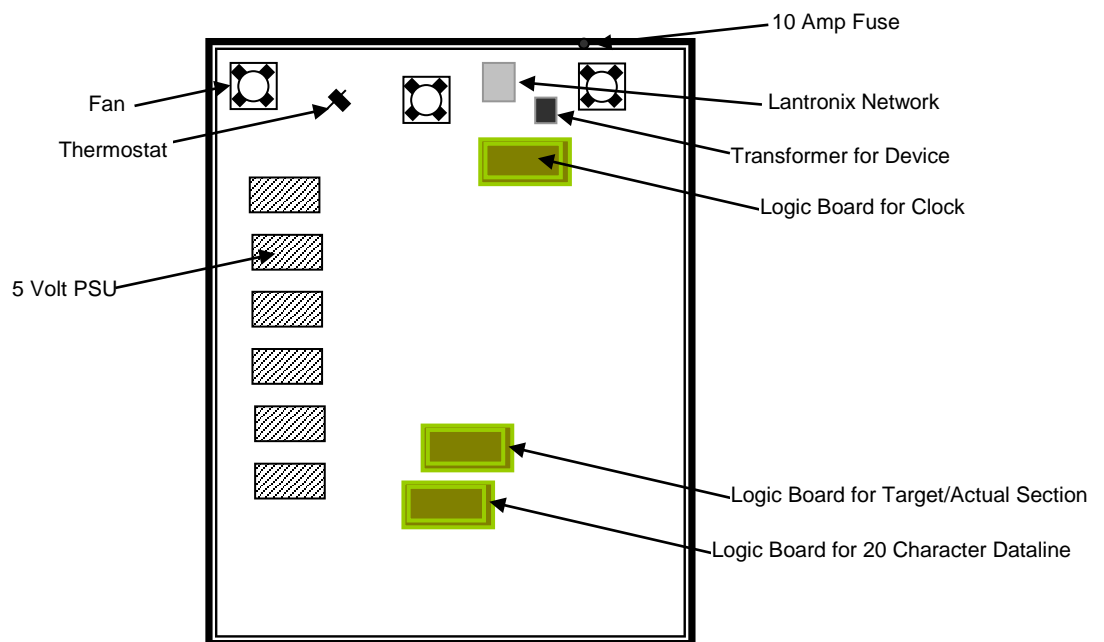
### 5.2. Handling Equipment

- One working platform
- Standard tool kit

### 5.3. 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.



Part Number	Description
DL405G	Display Panel
DL405MC	Display Panel
AUTOLOGIC2000	Logic Board, 2000
D00-2217	PSU, 5 Volt
D00-453202	Fan
D00-1670	Filter
D00-3324	Fuse, 10 Amp

**Table 1 - Replaceable Parts for Display Board.**

## 5.4. 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.

## 6. Product Specifications

CHARACTERISTIC	VALUE
<b>Display Features</b>	
Display Type	Production Board System
Data Display Ref. No.	J02706001
LED Colour	Standard-Bright Green and Multicolour
<b>Communication</b>	
EPROM	N/A
Protocol	D4.0
Baud Rate	9600
Addressing	Dip Switch
Data Format	8 bit, 1 stop bit, no parity
<b>Electrical</b>	
Fuse Value	10 Amp
Main Power Supply	220 Volts AC
<b>Housing</b>	
Housing	Aluminium, Black, Grey Lens
<b>Environmental Conditions</b>	
Temperature Range	-5°C to 65°C
Humidity Range	5% to 80% without condensation
<b>Lantronix Device</b>	
Model	UDS-10
Hardware Address	00-20-4A-64-20-3C

**Table 2 - Product Specifications.**