

# 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 an existing local network or directly to a PC via an RS232 connection.

The Production Board is a 6 line, 5 character Databoard with the current time displayed on the bottom right-hand corner. The primary function of the Board is to show the comparison between actual production and target production.

*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

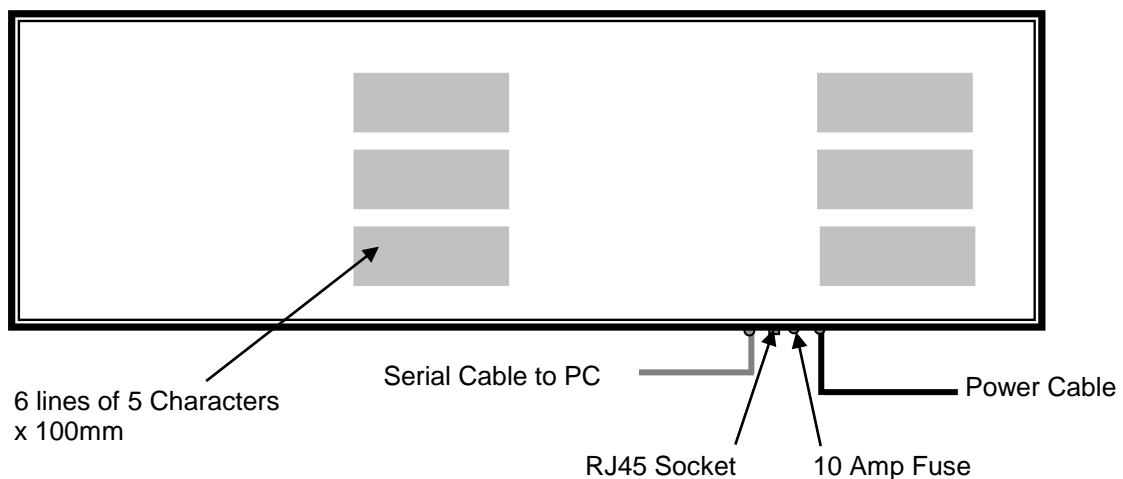
### 2.1. Unpacking

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* procedure 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.

An internal network card and an RJ45 socket installed in the Display enables the Display to connect to the Local Area Network (LAN). The Display becomes part of the network similar to the PCs and printers and must be given an IP address. For further details, please refer to the NetSDS section of this manual. Use a networked PC to control the display. The display may also be connected directly to the serial port of a PC, resident on the network. Mount the Board securely and connect the cables as shown in the Figure below.



*Figure 1 – System Configuration.*

### 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 and click on *Run*
3. Type 'A:\install' and click *OK*.

Add *ProdnSDS* to the Start menu by creating a short-cut as described in your Windows 95 User Manual.

### 3. Product Description

The Production Board has two sections, a Databoard and a clock. The three lines on the left hand side and the top two lines on the right hand side make up the Databoard section. This section of the display shows the *TARGET* and *ACTUAL* information. A clock displaying the time in 24 hour format is located on the bottom right-hand corner.

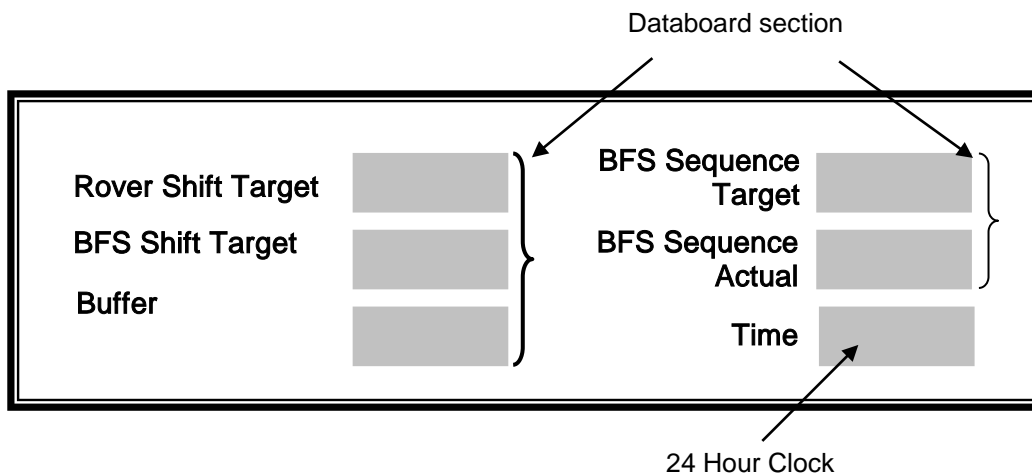


Figure 2 - Production Board.

### 4. Operating Instructions

Use the *ProdnSDS* software to control the information for the Display Board.

#### 4.1. Displaying Text on the Databoard

The *TARGET* and *ACTUAL* information shown on the Databoard section of the Production Board is entered manually using the *ProdnSDS* software package supplied with the Board. At any time, each field except the *BFS Sequence Actual* field may be edited individually and the values sent to the Board by clicking on the *Send* button.

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

1. Run the *ProdnSDS* software
2. Enter the values in each line
3. Click the *Send* button.

To edit the *BFS Sequence Actual* field:

1. Open the *SDDRVRF.txt* file

2. Enter the values on the 0004 line of the [TEXTS] section of the file,  
e.g. To display 12345, enter 0004= **12345**
3. Close and Save the file.



Figure 2 - ProdnSDS Software Interface.

#### 4.2. 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.

#### 4.3. Fault Detection

Fault	Probable Cause	Action
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.

## 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

#### 5.1.3. Corrective Maintenance

Replacing a defective LED:

1. Remove the side bracket and lens of the display unit
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 unit
2. Loosen the attaching screws on the display panel
3. Disconnect wiring and remove the display panel
4. Remove the logic board by unscrewing the attaching nuts
5. Replace the logic board and connect all wiring
6. Slide in the lens and attach the side bracket.

Replacing a defective Fuse:

1. Open the Fuse holder at the side 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.

#### 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. *Special Tools*

There are no special tools required.

### 5.4. *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.

### 5.5. *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.

## 6. Product Specifications

CHARACTERISTIC	VALUE
<b><i>Display Features</i></b>	
Display Type	Target/Actual Production Board
No. of Lines per Board	6
No. of Characters per Line	5
Character Size	100mm
LED Colour	Standard Bright Red
<b><i>Communication</i></b>	
Protocol	DB WinNT
<b><i>Electrical</i></b>	
Fuse Value	10 Amp
Main Power Supply	230 Volts
Frequency	50 Hz
<b><i>Housing</i></b>	
Dimensions (HxLxD)	665mm x 2964mm 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.**

## 7. NetSDS

This section gives an overview of the NetSDS systems and their installation.

### 7.1. Product Description

The NetSDS application is the network version of the Data Display Standard Display Software (SDS) with the following network features:

- Multiple users (a maximum of 10 at any one time)
- User authorisation setup (see System|Setup|Authorisation)
- Display and Database auto-locking
- Master mode for configuration purposes
- 'Netprint' (networked) ports

### 7.2. Software Installation

**Note:** The examples shown are for networks using the Windows 95 operating system.

Refer to the PrinterLinker manual supplied with your system for further details.

Install the NPm95.DLL from the InterLink CD-ROM. There are two types of 'Netprint' ports:

- PrinterLinker Netprint/Netpod ports
- Shared COMn: ports on a PC

### 7.3. Printer-Linker Netprint Port

#### 7.3.1. Description

These are physical devices supplied with NetSDS or built into Display units to make it possible to attach a display to a specific independent node on the Network. To use these devices you must first install the software driver supplied with them for the particular operating system being used, then install a printer driver so they can be accessed from NetSDS.

### 7.3.2. Install Printer Driver

The Netprint printer driver should be installed on the server as follows:

1. On the Windows Start menu, point to Settings, and then click Printers.
2. Double-click the Add Printer icon.
3. Click Next >, select local printer and click Next >.
4. Scroll down the manufacturers list and click on generic, click Next >.
5. Keep the existing driver if asked and choose no for '...print test page...'
6. Click on 'Next>' until asked for a name for the printer
7. Names of the format 'Netprint COMn' must be used  
(Where: 'n' is the number of the Netprint/Netpod being added, in the range 1 to 15)

### 7.3.3. Configure a Port

Configure a port for this driver as follows:

1. Right click on the 'Netprint COMn' Icon just added
2. Choose the Properties|Details|Add port dialog
3. Click on 'Other port' on the 'Add port' dialog that pops-up
4. Click on the 'NPm95' list item and then click on OK
5. Enter the name of the Netprint device being added (E.g. PN000B1F)
6. Enter a free IP address (E.g. 194.122.122.31 or 10.0.0.X) and click on 'Configure'
7. If you get a 'Netprint not found!' message box then make sure your name and IP address is correct or try powering down the display containing the Netprint device
8. Once configured, a list box will appear under the IP address with an icon in it
9. Click on this icon to expand it's branches and click on the second branch to choose

## 7.4. *Shared COMn: ports on a PC:*

### 7.4.1. Description

This type of port is equivalent to the above except no external hardware device is required. Once you have a Networked PC with a free communications port available to be shared across your Network, this solution can be used to connect your Displays to the Network.

### 7.4.2. Install Printer Driver

1. Double left click on the START|Settings|Printers|Add Printer Icon
2. Click on the 'Next>' button and choose 'Local Printer' and click on 'Next>' again
3. Choose the 'Generic' printer type and click on 'Next>'
4. Keep the existing driver if asked and choose no for '...print test page...'
5. Click on 'Next>' and click on the COMn: port you want to use from the 'Avail ports list:'

### 7.4.3. Configure a Port

Next, add a port for the printer driver as follows:

1. Click on the 'Configure Port...' button and setup the communications parameters that match your Display
2. Click on 'Next>' until asked for a name for the printer Names of the format 'Netprint COMn' must be used (Where: 'n' is the number of the communications port you choose (COMn:) in the range 1 to 4)
3. Click on the 'Netprint COMn Properties|Sharing' dialog option
4. Click on 'Shared As' and enter 'Netprint COMn' as the 'Share Name:' plus make sure that all your intended client/user PCs will have access to this shared device
5. Click on OK to finish your 'Netprint' device setup.

A printer driver must be installed on the server/host PC for each 'Netprint' port and also given a share name so that client PCs can also have access to each 'Netprint' port.

Once you have added all the 'Netprint' drivers you should set them up on all your intended client/user PCs as Network Printers in the same order as they appear on the Server PC. This process will be very similar to the above process except that you must choose 'Network Printer' instead of 'Local Printer', you must 'browse' your Network to select the particular printer and you don't need to follow the 'Netprint COMn Properties|Add Port' or 'Netprint COMn Properties|Sharing' steps.

#### **NOTE:**

- You must copy the C:\WINDOWS\TTY.DAT file from the server to all the clients.
- If a client doesn't have write access to the server drive, the NetSDS software will crash.
- If the Network fails all displays must be powered off and on again.

## 7.5. NetSDS Setup

To setup a NetSDS system, install the software on your Network Server PC and make sure all client PCs have access to your Servers hard disk.

To configure your system, 'Log on' as a Master user. Enter the User name and Password as shown below:

User name: SERVER

Password: T-SET

Configuration consists of:

- Adding or deleting a display
- Changing the communications settings
- Changing the system authorisation settings
- Doing backups.

### 7.5.1. Displays

Adding or deleting displays is documented in the SDS user manual, however to choose a 'Netprint' port, do the following:

1. Choose the Setup mouse pointer the Fist Icon (click on the Configuration|Setup menu option)
2. Right-click on the Display Icon in question and select 'Port:Netprint'
3. Click on the 'NETPRINT' button and select the Netprint port you want
4. Click on OK until you are back to the main Icon screen

### 7.5.2. Authorisation

To setup a list of NetSDS usernames and passwords click on the 'System|Setup|Authorisation' menu option and setup a list of up to 10 usernames and passwords. Use the PREV/NEXT buttons to scroll through the list of authorised users.

For 'Privileged/Unprivileged' users you can define what Displays or Groups they have access to by highlighting these symbols in the 'Access to:' list provided. However this list must be edited again or at least double-checked if you add/delete a Display or Group

**Note:** - If you set the first Username to "AUTO", NetSDS will run without the Authorisation Check dialog.

- You can append the Username and Password to the command line Eg. NetSDS Username,Password

- Make sure there is only one Username and Password setup, otherwise the 'Polling all users dialog!' will appear.

### 7.5.3. Users

To check the status of NetSDS users, click on the 'System|Setup|Users' menu option.

#### 7.5.4. INI Settings

To fine tune the delays required when using a 'Netprint' port, you can modify the following .INI setting before running the NetSDS software:

[Variables]

NetprintSpoolerWait = X (where X is a value in milliseconds and defaults to 5000 which may be too high)

RefreshRate=Y (where Y is a value in seconds which sets how often an automatic refresh of all Displays is performed regardless of whether any files or settings have changed, a value of zero disables this feature)

This delay is required to prevent the NetSDS S/W from locking up the Netprint spooler.