OJ436-6 UPGRADE FOR SMARTTONNES

This document applies to software version 7.1.x

CONTENTS

1 Introduction

1.1 Overview

The upgrade kit for the OJ436-6 Belt Weigher Indicator includes an Ethernet interface board and a software upgrade to support the connection to the smartTONNES server.

It is supplied in kit form to be fitted to an existing indicator.

The Ethernet interface provides the facility to connect the OJ436-6 to an Ethernet network for communication with the smartTONNES server for logging of status and production totals.

The new software also allows material names to be entered. The currently selected material is then sent to the smartTONNES server to be logged with the production data.

This manual provides details of how to install the interface board, configure the network settings and select a material name.

For further information relating to the general operation of the indicator refer to the OJ436-6 Belt Weigher Indicator user manual.

2   Installation

2.1   Ethernet Interface Board

Note: Anti-static precautions should be taken when handling the circuit boards.

1. Power off.

2. Unplug all rear connectors.

3. Remove the 4 x 6mm screws located in the corners of the rear panel and then remove the rear panel.

4. Note the slots in which the main circuit board is located (ready for refitting). Grip one of the green connectors and slide out the main board together with the additional interface board.

5. Remove the interface board from the main microprocessor board by removing the screws, nuts and spacers holding the two boards together.

Refer to the installation diagram on page 6 in conjunction with instructions 6 – 10.

6. Fit an M3x15mm spacer to the main board to the hole near the power connector and secure using an M3x10mm spacer.

7. Fit an M3x15mm spacer to the main board to the hole near the interface connector CON3 and secure using an M3x6mm screw and shakeproof washer.

8. Re-fit the interface board using the spacers, screws and nyloc nuts retained from earlier. For the fixing point nearest the power connector, secure using an M3x6mm screw and shakeproof washer.

9. Carefully align the D440E Ethernet interface board connector CON2 with connector CON3 on the indicators main board and gently push down to seat the interface board in the main board connector.

10. Use the M3 nyloc nuts provided in the kit to secure the interface board to the threaded spacers on the indicators main board.

11. Refit the circuit boards into the correct slots previously noted and gently push them in until the connector on the leading edge locates with its mate on the front circuit board. Push fully home only when this connector is aligned.

12. Fit the replacement rear panel provided in the kit using the original screws.

13. Refit all rear connectors.

2.1.1 Kit Contents

The supplied kit contains the following items.

- D440E Ethernet interface board
- 2 x M3 nyloc nuts
- 2 x M3x6mm screw
- 2 x M3 shakeproof washer
- 1 x M3x10mm threaded spacer
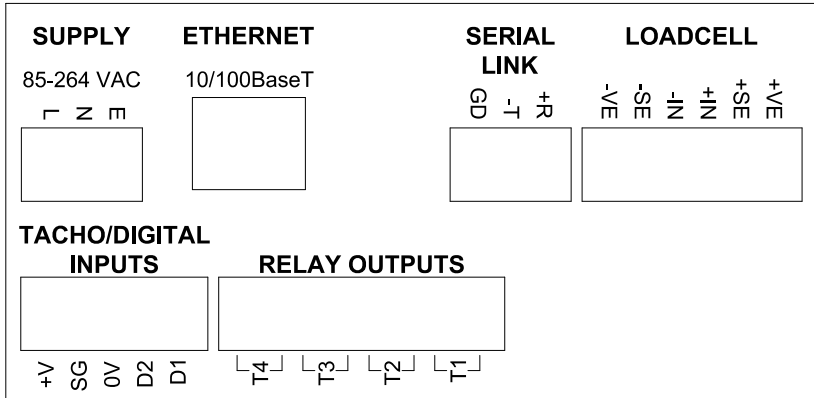- 2 x M3x15mm spacers
- Replacement rear panel

2.1.2   Installation Diagram
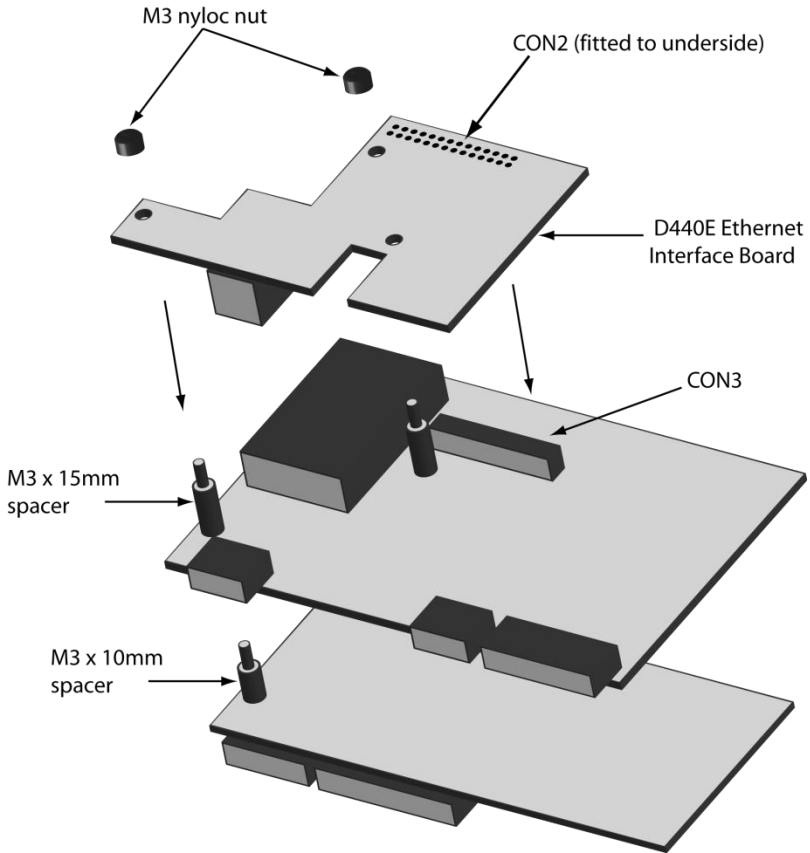
D440E Ethernet Interface Board Installation

2.2 Connection Layout

An RJ45 socket on the rear of the unit provides the Ethernet network connection, as shown below.

```
SUPPLY      ETHERNET              SERIAL        LOADCELL
                                   LINK
85-264 VAC   10/100BaseT
                              GD  -T  +R    -VE -SE -IN +IN +SE +VE
  L   N   E

TACHO/DIGITAL
   INPUTS              RELAY OUTPUTS


  +V  SG  0V  D2  D1    T4    T3    T2    T1
```

2.3 Software Upgrade

Refer to the "Firmware Update" section of the OJ436-6 user manual for details on how to upgrade the software.

3   Network Configuration (Passcode 5)

Once the Ethernet interface has been installed and the software upgraded, the network configuration should be performed as detailed below.

The network configuration settings are accessed by default in passcode protected area 5.

Parameter	Range	Definition	Factory Setting
HOUR	0-23	**Hours**	
MIN	0-59	**Minutes**	
SEC	0-59	**Seconds**	
DAY	1-7	**Day Of Week**	
DATE	1-31	**Day Of Month**	
MONTH	1-12	**Month**	
YR	2000-2099	**Year**	
NET	NONE / ENET	**Network Interface** This should be set to **ENET** to match the installed network interface option. Note that before displaying the following parameter (DHCP), there may be a slight delay while the IP network configuration parameters are obtained. During this time, "LOADING" will appear on the display.	ENET
DHCP	NO / YES	**Use DHCP** Determines whether the OJ436-6 requests the network settings below from a DHCP server i.e. Use DHCP = Yes, or uses the settings configured by the user i.e. Use DHCP = No. See section 3.1 for further details.	YES

OJ436-6 UPGRADE FOR SMARTTONNES

Parameter	Range	Definition	Factory Setting
IP1	0-255	**IP Address** The IP address of the OJ436-6 on the local Ethernet network, shown as octets 1 to 4. If Use DHCP = Yes this will be the IP address assigned by the DHCP server. If Use DHCP = No this will be the static IP address configured by the user.	192
IP2	0-255		168
IP3	0-255		127
IP4	0-255		254
SM1	0-255	**Subnet Mask** The local Ethernet network Subnet Mask, shown as octets 1 to 4. If Use DHCP = Yes this will be the Subnet Mask assigned by the DHCP server.	255
SM2	0-255		255
SM3	0-255		255
SM4	0-255		0
GW1	0-255	**Gateway** The local Ethernet network Gateway, shown as octets 1 to 4. If Use DHCP = Yes this will be the Gateway assigned by the DHCP server.	255
GW2	0-255		255
GW3	0-255		255
GW4	0-255		255
SI1	0-255	**Server IP Address** The server IP address for the smartTONNES server, shown as octets 1 to 4.	95
SI2	0-255		215
SI3	0-255		226
SI4	0-255		179
CSP	0-65535	**Server Port** The server port number for the smartTONNES server.	6211
CLRLOG	0-1	**Clear Logged Data** Setting this to '1' will clear all logged and buffered data which is waiting to be sent to the smartTONNES server. Once the data has been cleared, the 1 will change back to 0.	

Parameter	Range	Definition	Factory Setting
PSET	0-999	**Passcode Set** This determines the passcode for access to the network configuration.	5
EXIT	-	**Exit** This allows the user to exit the configuration and return to normal display mode upon operation of ENTER, otherwise SELECT will cycle around to HOUR again.	

3.1 Dynamic Host Configuration Protocol (DHCP)

If DHCP is enabled, by setting the DHCP parameter to Yes, the OJ436-6 will request the IP Address, Subnet Mask and Gateway from the DHCP server.

Therefore, the IP Address could change each time it is assigned by the DHCP server.

The values assigned by the DHCP server will be displayed within the network configuration parameters.

If the OJ436-6 is unable to communicate with the DHCP server the following default values will be displayed within the network configuration parameters.

    IP Address   : 192.168.127.254

    Subnet Mask   : 255.255.255.0

    Gateway   : 255.255.255.255

If DHCP is disabled, by setting the DHCP parameter to No, the IP Address, Subnet Mask and Gateway should be configured manually through the network configuration parameters.

3.2   Network Activity

When viewed from the rear of the enclosure, the function of the Ethernet connector LEDs are as shown below.

100BASE-TX network activity (green)   10BASE-T network activity (orange)
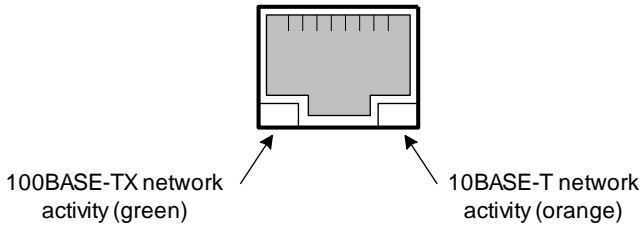
The LEDs will light steady when a link is established and will flicker to show activity.

4 Materials

4.1 Editing Material Names (Passcode 6)

Up to 12 material names can be entered in the OJ436-6, each with a maximum of 8 characters.

The following configuration data is passcode protected. To gain access to this data a valid passcode must be entered (default 6).

Parameter	Range	Definition	Factory Setting
		Material Name A list of up to 12 material names is shown on this line. A blank line is represented with a single hyphen (-) character. Only one blank line will be shown. The next/previous material name can be selected using the UP and DOWN arrow keys. To change a material name, operate the ENTER key. The first character will start flashing. The character is then changed by operating the UP and DOWN arrow keys. The next character to the right is selected by operating the SELECT key. The character to the left is selected by operating the LEFT arrow key. To save the new material name, operate the ENTER key to stop the flashing cursor.	-

OJ436-6 UPGRADE FOR SMARTTONNES

Parameter	Range	Definition	Factory Setting
PSET	0-999	**Passcode Set** This determines the passcode for access to the material name configuration.	6
EXIT	-	**Exit** This allows the user to exit the configuration and return to normal display mode upon operation of ENTER, otherwise SELECT will cycle around to the first material name again.	

4.2 Selecting a Material

The currently selected material is shown on one of the main operating lines of the display which can be cycled through using the SELECT key, as shown below.

> Flow rate
> ↓
> Non-resettable Total
> ↓
> Belt Speed
> ↓
> Belt Load %
> ↓
> Material Name
> ↓
> Passcode Entry

Once on the material line, operate the ENTER key to start the material name flashing. Then operate the UP or DOWN keys to select one of the configured materials. Operate ENTER again to stop the material name flashing.

5   Specification

Ethernet Network
Interface   : 10/100Base-T with RJ45 connector.

Environment
Operating   : 0 to +50°C, 20 to 80% RH. Non-condensing.
Storage   : -40 to + 80°C.