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## Ethernet to RS485 data converter **TCP/IP EtherNet-485**

**Connection details and general information**

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Ethernet 10/100 to RS485 converter

notes

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# Introduction

Please contact us if you need help, if you have a complaint, or if you have suggestions to help us improve our products or services for you.

If you contact us about a product you already have, please tell us the full model number and serial number, so that we can give you accurate and fast help.

This product has a 2 year warranty. We will put right or replace any item which is faulty because of bad workmanship or materials. This warranty does not cover damage caused by misuse or accident.

## **IMPORTANT**

If this equipment is important to your process, you may want to buy a spare to cover possible failure or accidental damage in the future.

This is because at some times, for example during our factory shutdown periods, you may have to wait several weeks for an equivalent replacement. Or, we may have no stock at the time you urgently need it.

You may also need to pay extra carriage charges if you want a fast, guaranteed courier service. Warranty repairs or replacements are normally returned with a standard courier service.

We do not offer any compensation for losses caused by failure of this instrument.

If you do not agree with these conditions, please return this item now, in unused, clean condition, in its original packaging and we will refund the purchase price, excluding any carriage paid.

We thought you'd prefer to know about possible delays and extra charges now, rather than during a panic.

We always try to improve our products and services, so these may change over time. You should keep this manual safely, because future manuals, for new designs, may not describe this product accurately.

We believe these instructions are accurate, and that we have competently designed and manufactured the product, but please let us know if you find any errors.



# Warnings

**Please carefully read all warnings and ONLY install the item when you are sure that you've covered all aspects.**

- \* Connect the equipment according to current IEE regulations and separate all wiring according to IEC1010.
  
- \* Power supplies to this equipment must have anti-surge (T) fuses rated at 1A for DC supplies in the range 11-30VDC.
  
- \* Check that the model number and supply voltage suit your application before you install the equipment.
  
- \* Don't touch any circuitry after you have connected the equipment, because there may be lethal voltages on the circuit board or connector terminals.
  
- \* Only adjust on-board switches or connections with the power turned off.
  
- \* Make sure all screw terminals are tight before you switch the equipment on.
  
- \* Only clean the equipment with a soft dry lint-free cloth. Do not use any solvents.

***Safety First .....Don't assume anything..... Always double check.  
If in doubt, ask someone who is QUALIFIED to help you in the subject.***

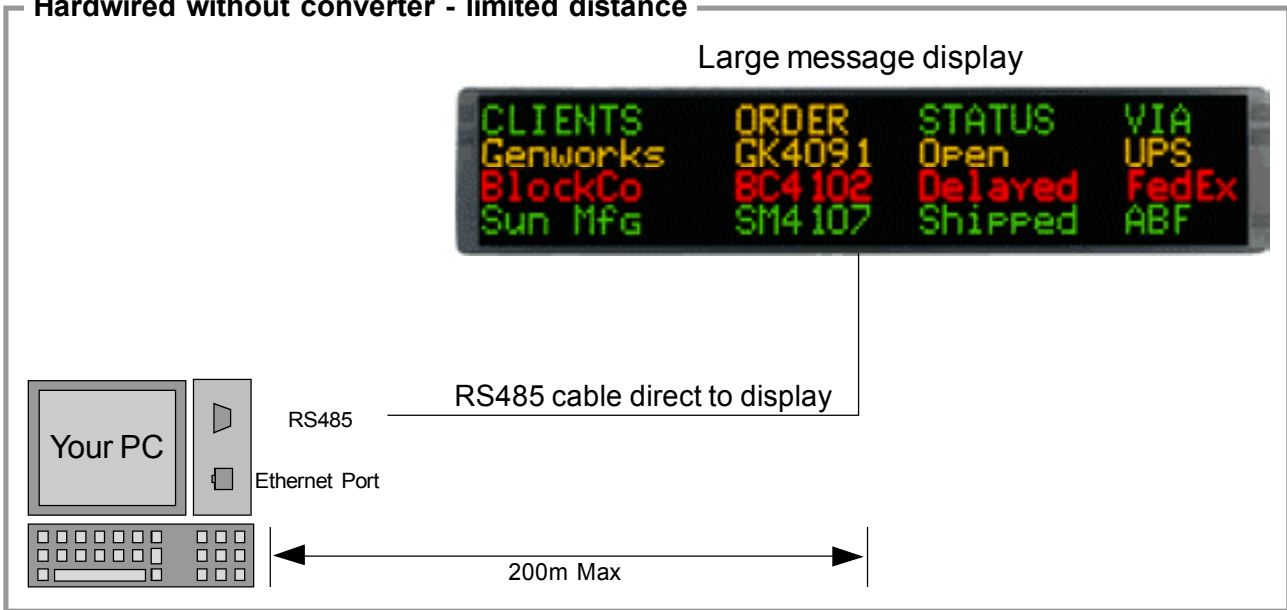
# Description

This device allows you to connect to RS485 equipment via a TCP/IP Ethernet network. This is ideal for such products as message displays, large numeric displays etc, which may be located far from your PC.

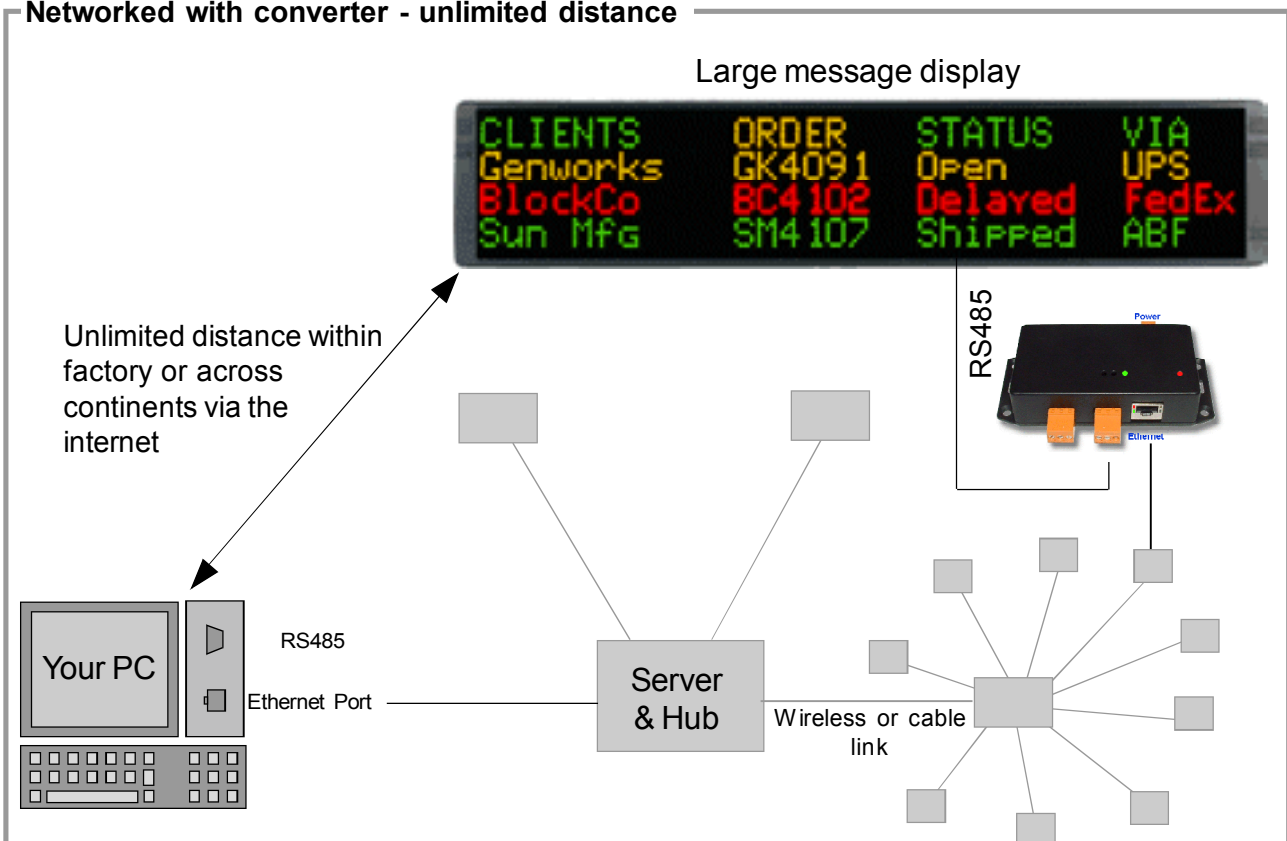
It creates a 'Virtual Serial Port' on your computer, which means you can use the standard application software for the RS485 device. You can then treat the device just as if it were connected directly to your PC.

The Ethernet converter will normally mount next to your RS485 device, but can be located up to 200m away

## Hardwired without converter - limited distance



## Networked with converter - unlimited distance



# What is included?

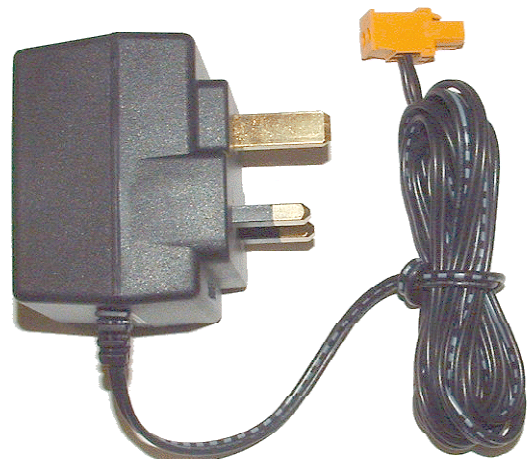
1 x Ethernet to Serial converter.



1 x PC Configuration software

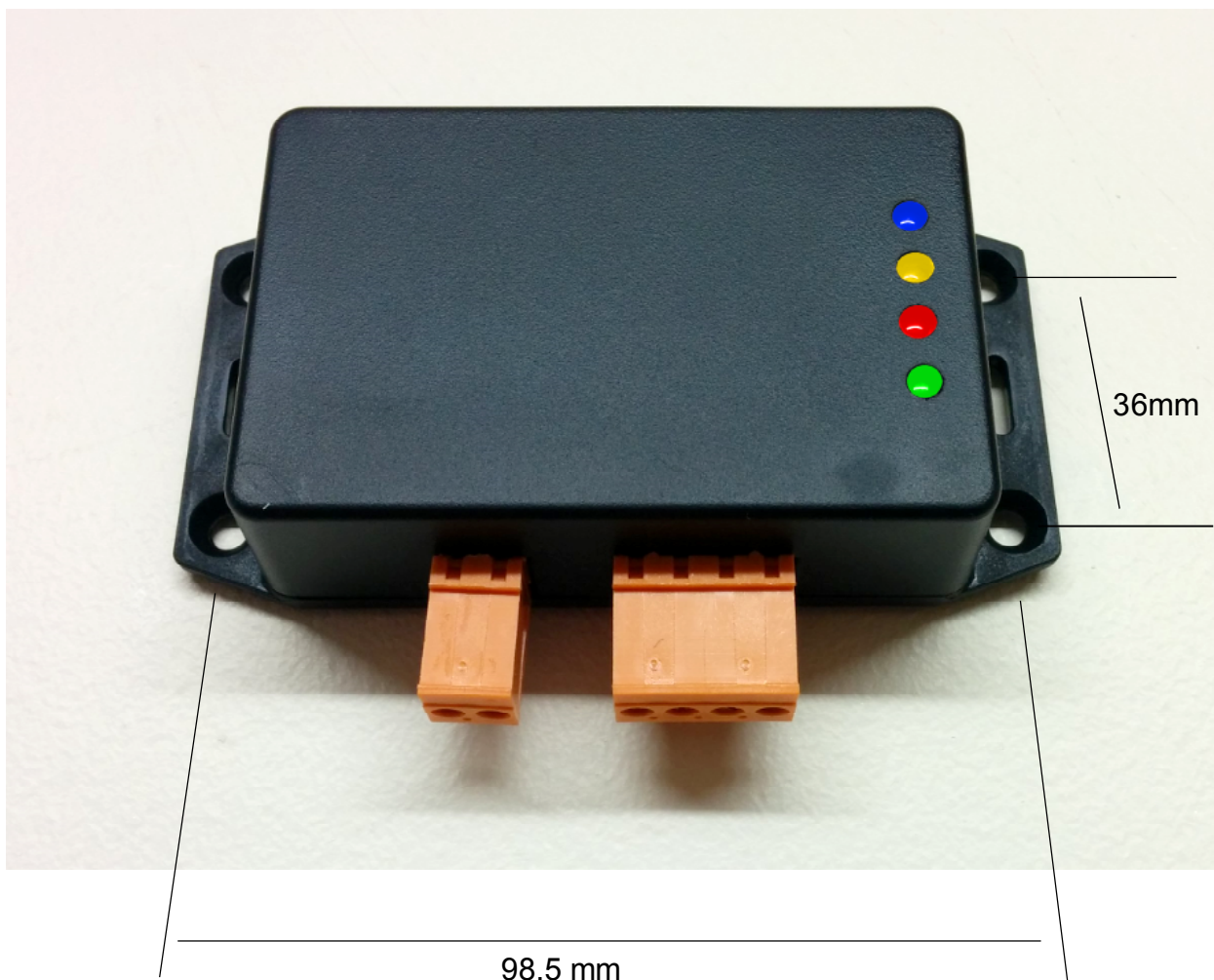


1 x 12V DC power supply  
(Only included if ordered)



# Specifications

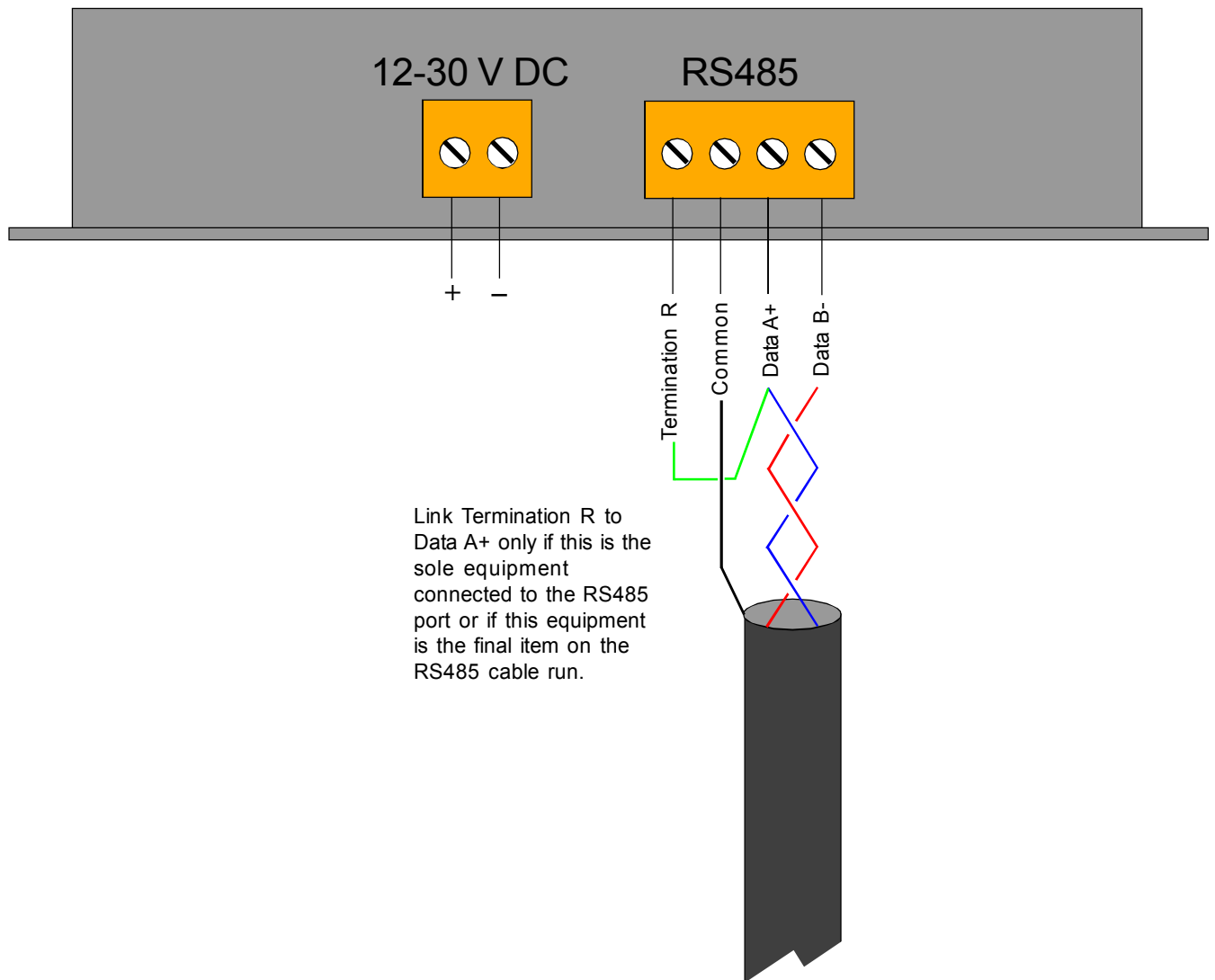
Case width	:	110.0 mm max
Case forward projection	:	27.0 mm
Case height	:	56.0 mm case only, 74.0mm including connectors
Typical weight	:	135 grams
Operating conditions	:	0 to 50 degrees C
Storage conditions	:	-20 to +70 degrees C
Case sealing	:	IP40
Case Material	:	PolyCARBONATE
Cable dimensions	:	Accepts cables up to 1.5mm diameter.
Flammability Class	:	V0 (UL94)
Power supply	:	12 to 30V DC, 2 watts max.
Isolation	:	Ethernet isolated from power and RS485 RS485 port not isolated from power.
Ethernet Connection	:	Standard base 10/100 RJ45
Serial Data ports	:	RS485. Baud rate set with PC based configuration software.



Mounting holes are countersunk, 4.2mm diameter  
Screws not supplied.



# Connections



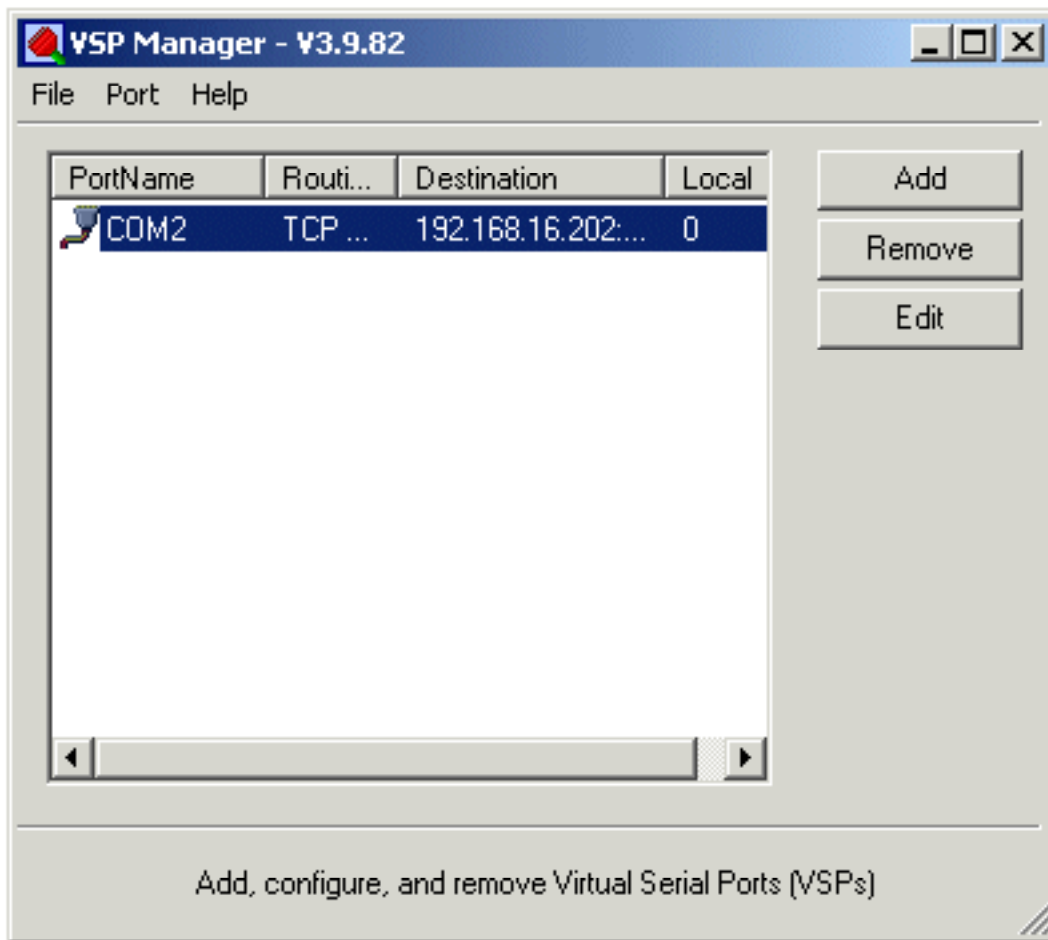
**Use twisted pair screened cable for the RS485 link. You can use CAT5 cable.**

**Ensure Data A+ and Data B- are a pair of twisted wires.**

**You must use the common connection in order to get good noise immunity.**

# PC Configuration

To add a port, click the Add button



Settings shown are examples only.  
You will need to choose your own settings to suit your network.

# PC Configuration

Choose a COM port and IP address...

Properties: new VSP - V3.9.82

General properties | Control lines | Default serial settings

VSP name: COM4

Networking

Use WinSock for transport

Transport protocol: TCP      Routing mode: Client

On-the-fly commands: Out-of-Band      Connection mode: On data

Connection timeout: 5      Listening port: 0

Destination

Destination mode: Single destination

Specify by: IP-address

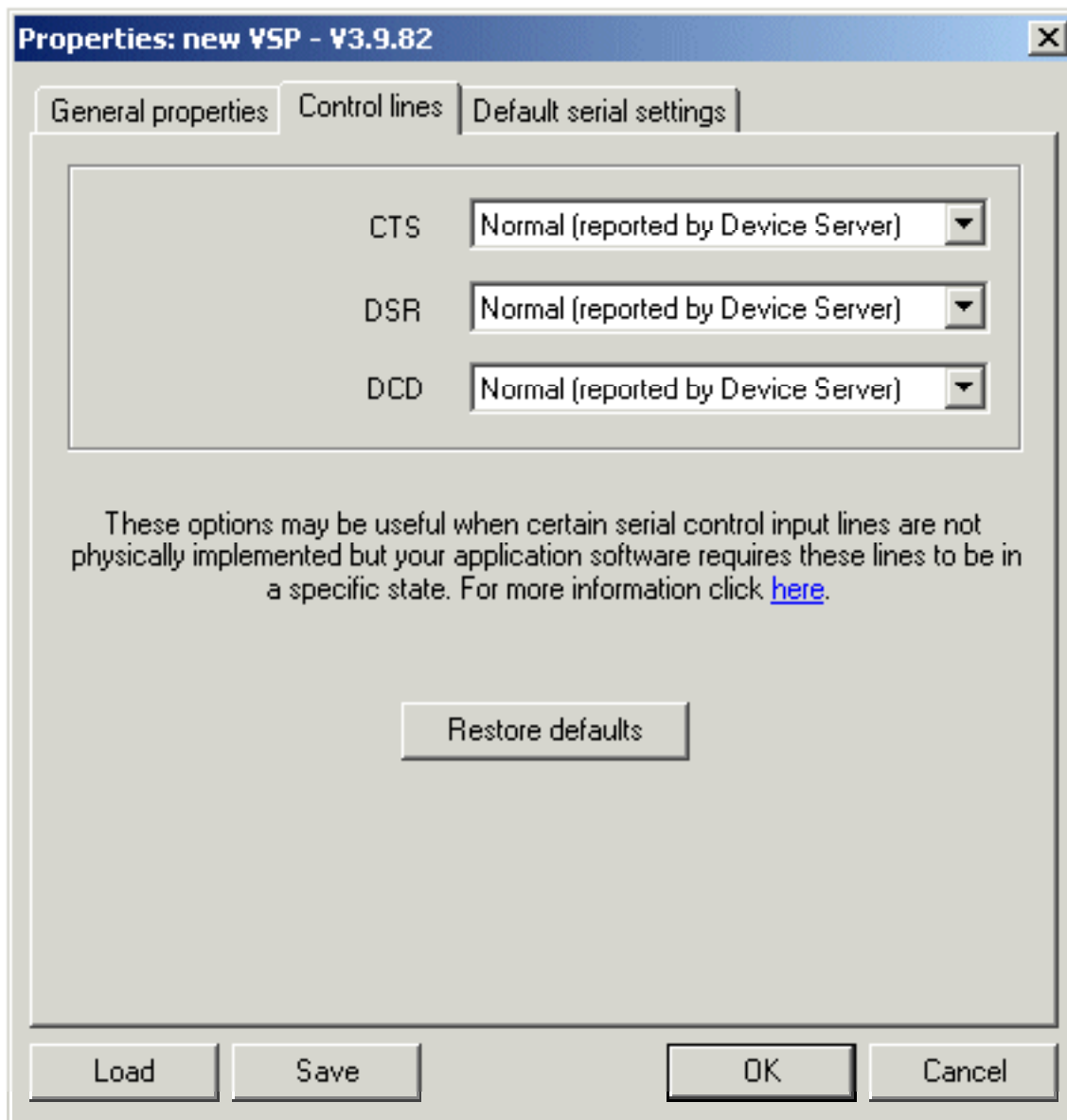
IP-address: 127 . 0 . 0 . 1      Port: 1001

Select Device Server from the list...

Load      Save      OK      Cancel

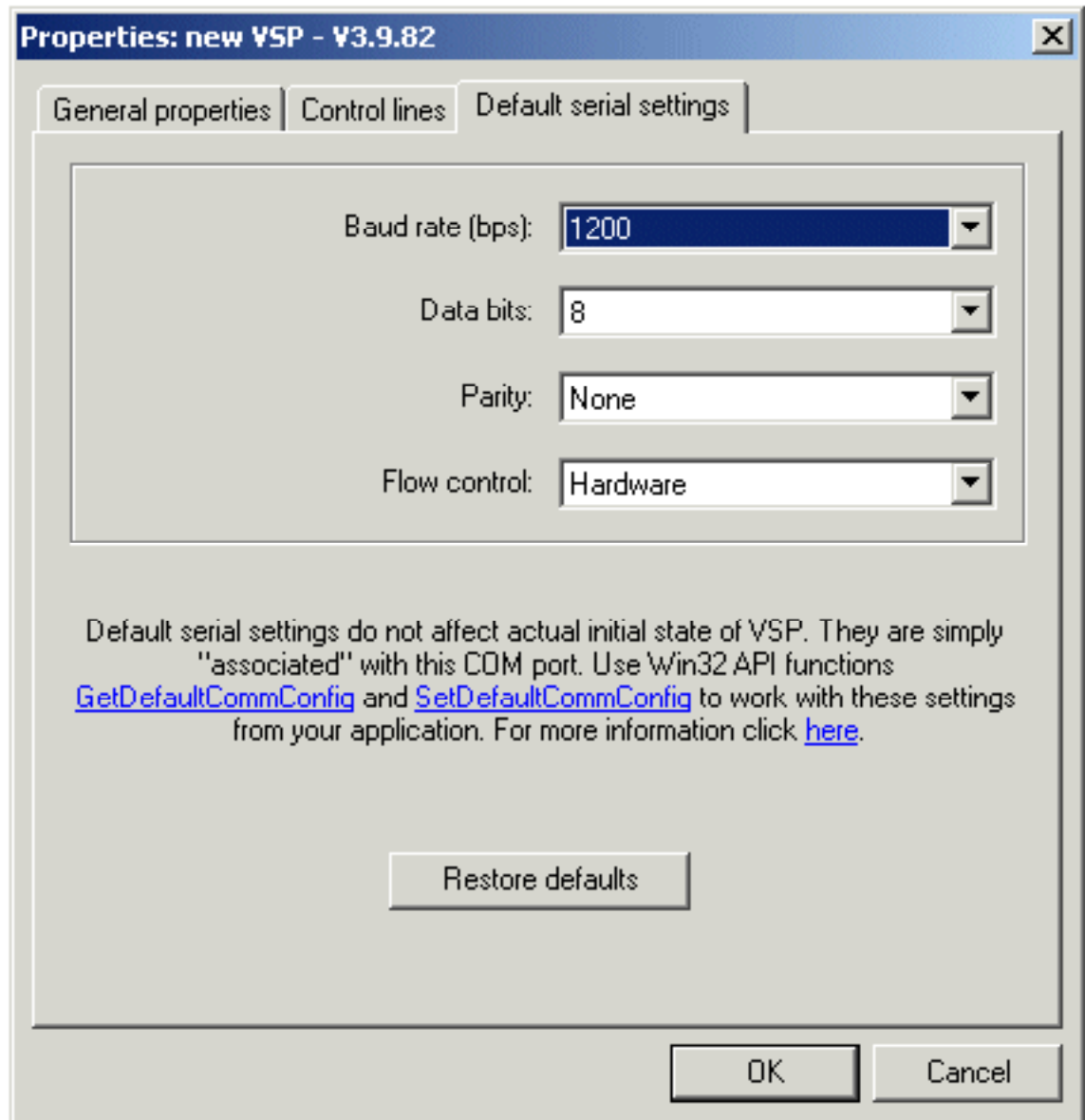
Settings shown are examples only.  
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# PC Configuration



Settings shown are examples only.  
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# PC Configuration



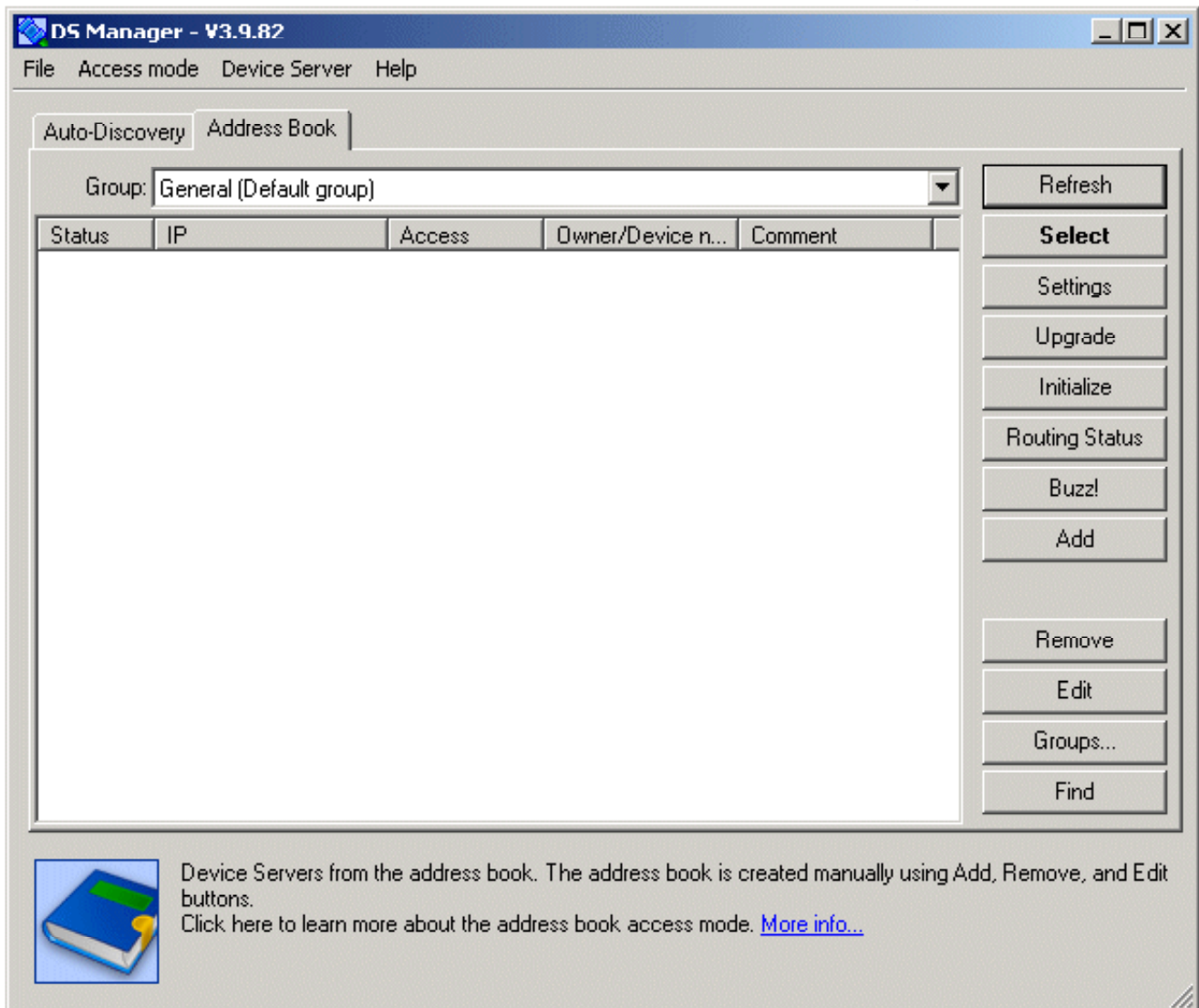
Settings shown are examples only.

You will need to choose your own settings to suit your network.

If connecting to our message displays, you will need to choose 9600 baud by default.

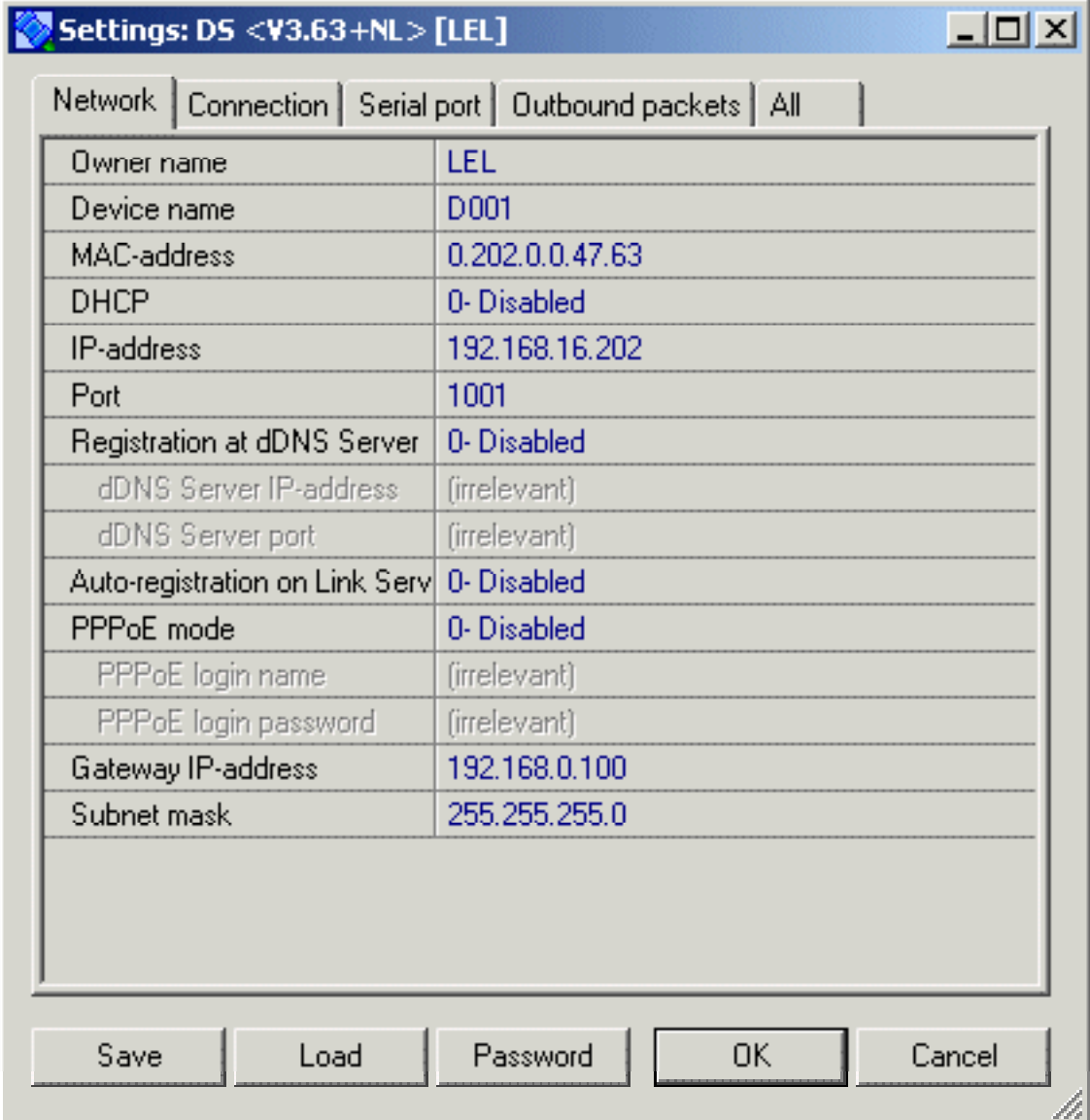
# PC Configuration

You may need to turn off your firewall during auto discovery.



The screenshot shows the DS Manager v3.9.82 application window. The title bar reads "DS Manager - v3.9.82" and the menu bar includes "File", "Access mode", "Device Server", and "Help". The "Address Book" tab is selected, showing a "Group:" dropdown menu set to "General (Default group)". Below this is a table with columns: "Status", "IP", "Access", "Owner/Device n...", and "Comment". The table is currently empty. To the right of the table is a vertical stack of buttons: "Refresh", "Select", "Settings", "Upgrade", "Initialize", "Routing Status", "Buzz!", "Add", "Remove", "Edit", "Groups...", and "Find". At the bottom left, there is a blue book icon with a yellow ribbon. To its right, text reads: "Device Servers from the address book. The address book is created manually using Add, Remove, and Edit buttons. Click here to learn more about the address book access mode. [More info...](#)"

# PC Configuration

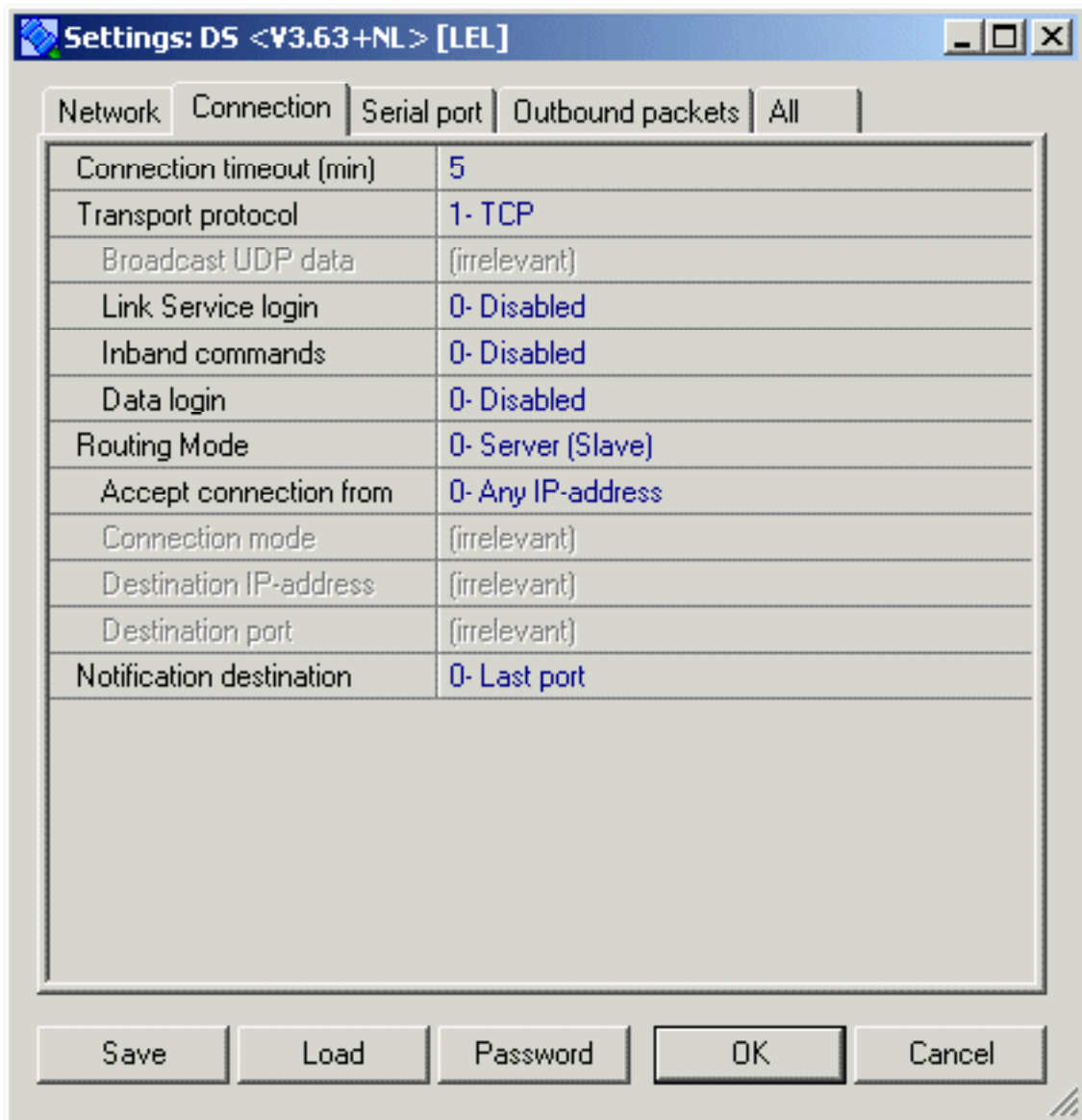


The screenshot shows a configuration window with the following settings:

Network	Connection	Serial port	Outbound packets	All
Owner name	LEL			
Device name	D001			
MAC-address	0.202.0.0.47.63			
DHCP	0- Disabled			
IP-address	192.168.16.202			
Port	1001			
Registration at dDNS Server	0- Disabled			
dDNS Server IP-address	(irrelevant)			
dDNS Server port	(irrelevant)			
Auto-registration on Link Serv	0- Disabled			
PPPoE mode	0- Disabled			
PPPoE login name	(irrelevant)			
PPPoE login password	(irrelevant)			
Gateway IP-address	192.168.0.100			
Subnet mask	255.255.255.0			

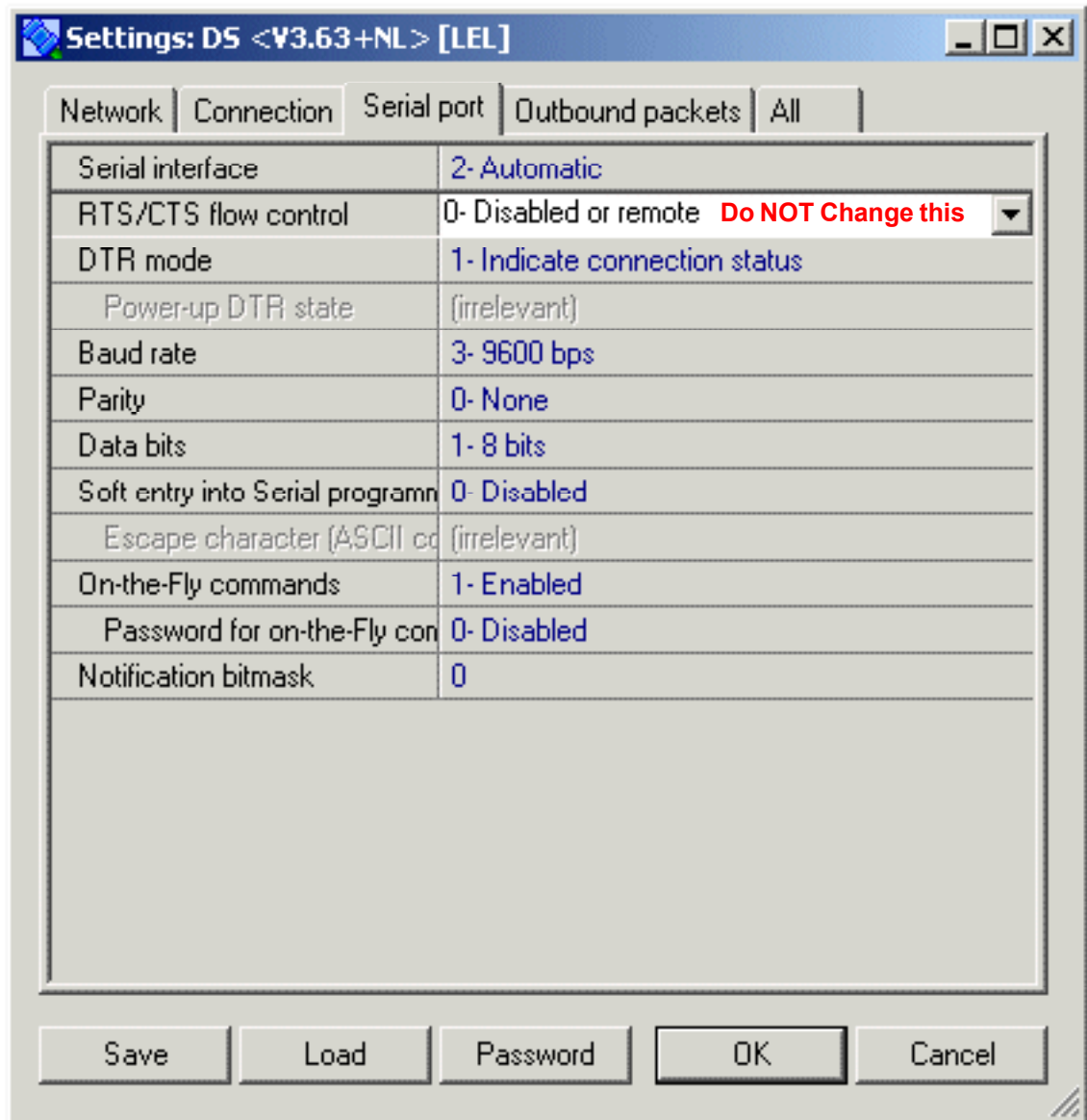
Buttons at the bottom: Save, Load, Password, OK, Cancel

# PC Configuration

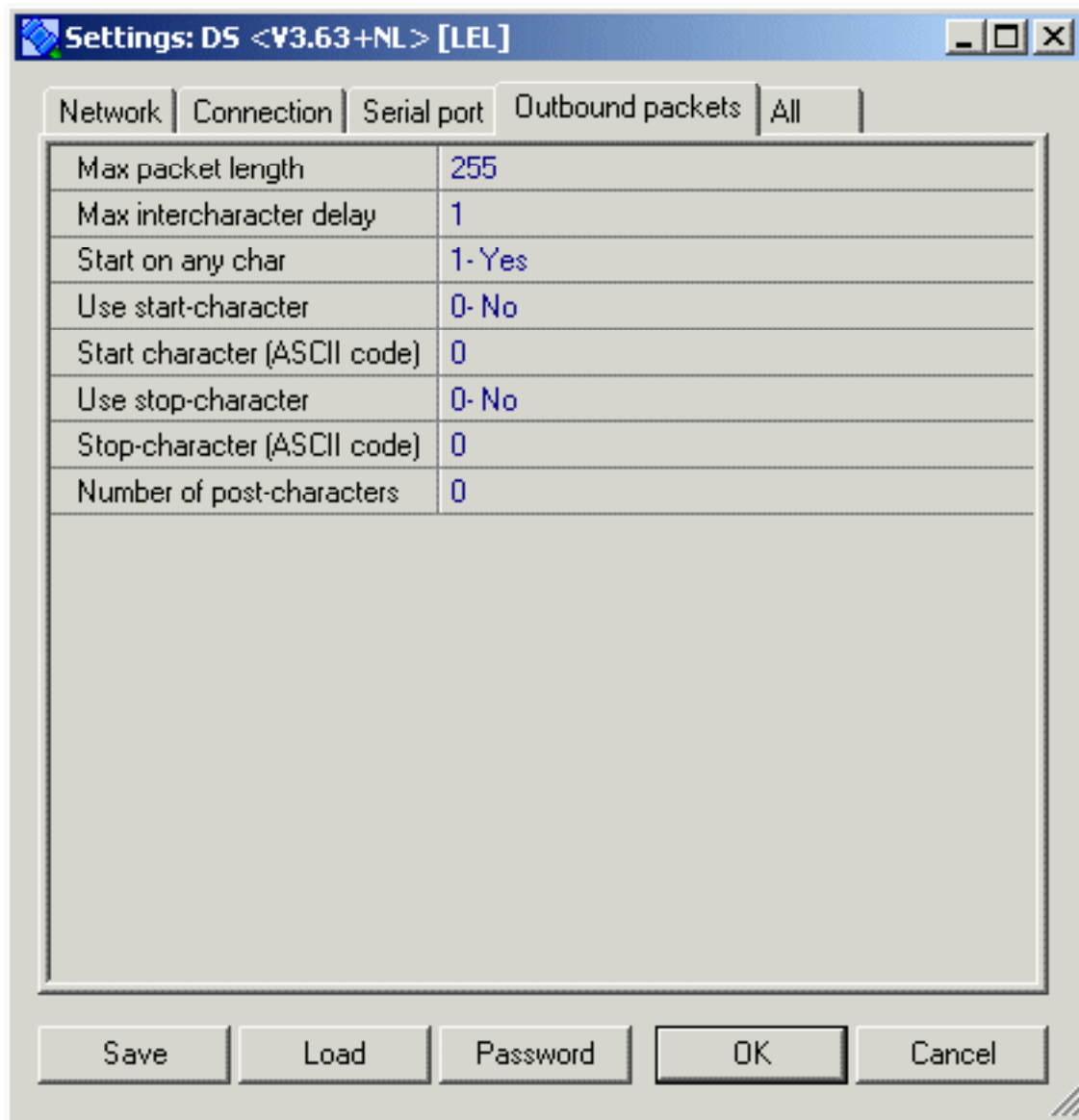




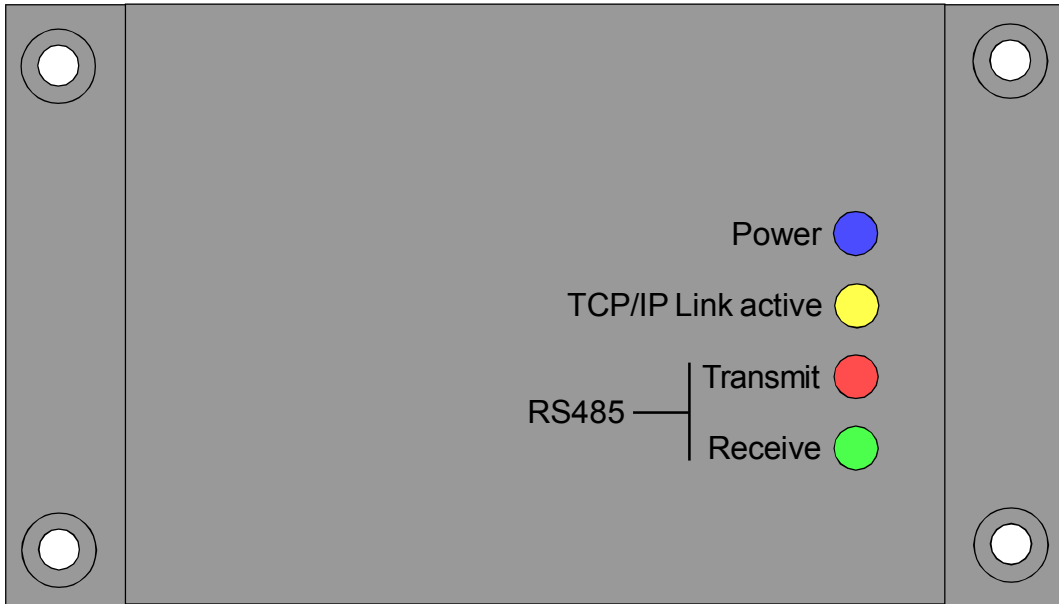
# PC Configuration



# PC Configuration



# LED Functions



# Connections to a message display