

# Sending ASCII message between XEC & Computer

## Introduction:

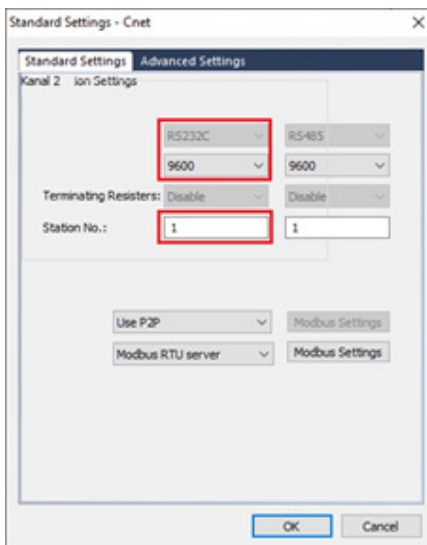
This tutorial will outline the steps needed to exchange ASCII data between XEC PLC and computer.

## Configuring the XEC :

\*Serial Port configuration. To configure the serial port, use these steps:

-On the XG5000 software, click on [BOSO Internal Cnet].

-On the Standard Settings-Cnet, configure the baud rate and the Station number.



-Click on Advanced settings to configure the baud rate, data bits, parity, and stop bits.



All serial settings must match the serial device being connected.

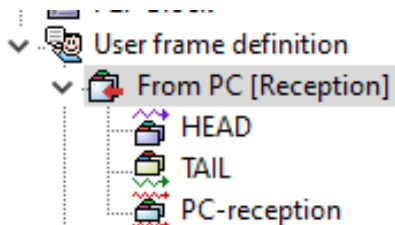
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## Setting up the ASCII message:

\*Configure the User Protocol: to configure the user protocol, use these steps.

-Right Click on the user frame definition to add a Group "Reception". The frame that reads data.

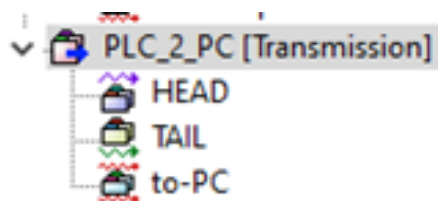
-Right Click on the "Reception" to add the reception groups ( Head, Tail, Body). The body's name is PC\_reception here.



-In this example the Body's frame is set to Variable sized variable.

| NewPLC P2P 01 Frame - From PC:PC-reception X    |         |                         |      |      |                                     |            |      |        |
|---|---------|-------------------------|------|------|-------------------------------------|------------|------|--------|
| <div>Up Down Add BCC Add Line Delete Line</div> |         |                         |      |      |                                     |            |      |        |
|   | Segment | Frame                   | Size | Data | Assign memory                       | Conversion | Swap | Memory |
|   | 00      | Variable sized variable |      |      | <input checked="" type="checkbox"/> | NONE       | NONE |        |

-Right Click on the user frame definition to add a Group "Transmission". The Frame that writes data to the computer.



-In the following example, we will always send variable sized data.

| NewPLC P2P 01 Frame - From PC:PC-reception X    |         |                         |      |      |                                     |            |      |        |
|---|---------|-------------------------|------|------|-------------------------------------|------------|------|--------|
| <div>Up Down Add BCC Add Line Delete Line</div> |         |                         |      |      |                                     |            |      |        |
|   | Segment | Frame                   | Size | Data | Assign memory                       | Conversion | Swap | Memory |
|   | 00      | Variable sized variable | 100  |      | <input checked="" type="checkbox"/> | NONE       | NONE |        |

\* Writing P2P transmission/reception block

- Right click on [BOS0 Internal Cnet] to add P2P communication

-Configure the P2P channel 1 as Use frame definition

| Channel Setting X |                   |                       |         |               |              |                    |
|-------------------|-------------------|-----------------------|---------|---------------|--------------|--------------------|
| Chann             | Operation Mode    | P2P Driver            | TCP/UDP | Client/Server | Partner Port | Partner IP address |
| 1                 | Use P2P           | User frame definition |         |               |              |                    |
| 2                 | Modbus RTU server |                       |         |               |              |                    |

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- Double-click P2P block of P2P 01.
- Input channel selected at the P2P channel (user frame definition).
- In case P2P function is a TX frame, select SEND. In the case of P2P function is RX, select RECEIVE.
- The conditional flag \_T10MS is activated when the P2P function is SEND.
- Click Setting of RX frame and set save area of current string and setting value.

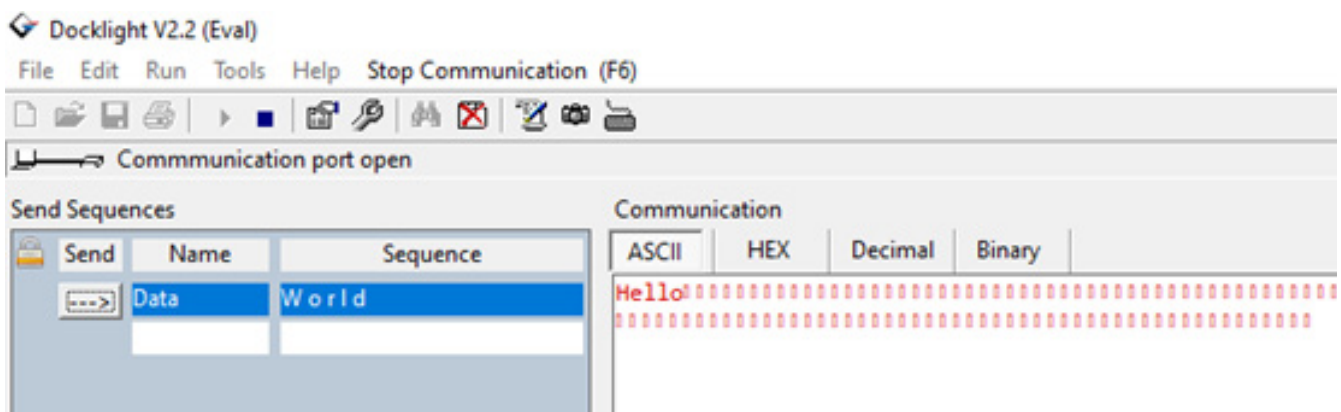
| Index | Ch | Driver Setting        | P2P function | Conditional flag | Comm and type | Data type | No. of variables | Data size | Destination station | Destination station number | Frame                | Setting | Variable setting contents          |
|-------|----|-----------------------|--------------|------------------|---------------|-----------|------------------|-----------|---------------------|----------------------------|----------------------|---------|------------------------------------|
| 0     | 1  | User frame definition | SEND         | _T10S            |               |           |                  |           |                     |                            | PLC_2_PC.to-PC       | Setting | Number:1<br>READ1:%MB200,SIZE1:100 |
| 1     | 1  | User frame definition | RECEIVE      |                  |               |           |                  |           |                     |                            | From PC,PC-reception | Setting | Number:1<br>SAVE1:%MB0             |

## Sending data to PC :

- open any simulation software for the serial communication protocols via COM to test the program such Docklight.
- We will send the string "Hello " every 10MS.

|        |           |
|--------|-----------|
| %MB160 |           |
| %MB168 |           |
| %MB176 |           |
| %MB184 |           |
| %MB192 |           |
| %MB200 | H e l l o |
| %MB208 |           |

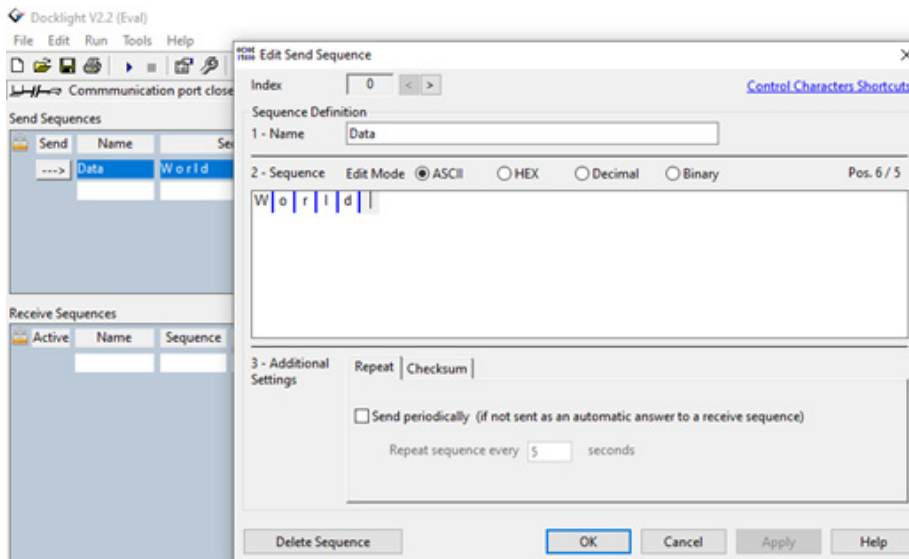
- The string "Hello" was successfully sent to the computer as shown in the picture below.



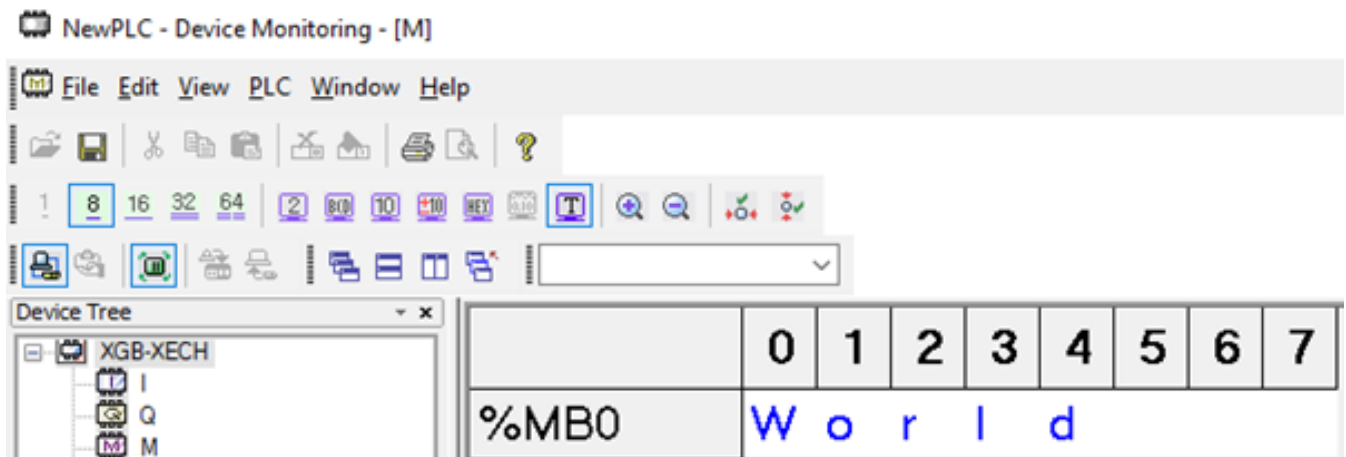
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## Receiving data from the computer :

-In the docklight software define the string which you want to send



-In XG5000 open the device monitoring to check to the received message.



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## IMO Precision Controls Ltd

Unit 3, The Interchange, Frobisher Way  
Hatfield, Hertfordshire AL10 9TG UK

Tel: +44 (0)1707 414 444  
Fax: +44 (0)1707 414 445

Email: [sales@imopc.com](mailto:sales@imopc.com)  
Web: [www.imopc.com](http://www.imopc.com)



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