Connecting UniOP to Parker EASI Controllers

This Technical Note contains all the information needed to connect UniOP to the Parker EASI stepper motor controller. The Parker EASI protocol is associated to the Designer file D32Uplc192.dll.

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1. Introduction

Connecting the UniOP operator panel to the Parker EASI controller, you will be able to provide friendly interface to the end user for handling the parameters of the controller.
You can configure the UniOP panels to meet your applications needs using the UniOP Designer software package.

2. Setting up the EASI Controller

The UniOP operator panel can be connected to controller via the RS-232 or via the RS-485 interface. Make sure to use appropriately wired cable for each case (the details will be introduced later in this document).

The EASI controller requires two settings:

- **Echo** must be disabled
- **Baud rate settings** must match the Designer project setting

Both settings can be done on the EASI controller using the dip-switches available on the front panel.

Refer to the EASI controller documentation for more information about the connection to the controller.

2.1 Connecting UniOP to the RS-232 Communication Port

For a point-to-point communication (UniOP connected to only one EASI controller), you will typically connect the PLC port of the UniOP to the controller's RS-232 communication port. For this connection, use the cable CA225.

Default communication parameters are:
- 8 data bits,
- 1 stop bit
- parity: none
- baud rate: 9600 or 19200

2.2 Connecting UniOP to the RS-485 Communication Port

The UniOP connection to more than one EASI controller is possible using the controller's RS-485 interface; UniOP can be connected to the RS-485 line using the cable CA224.

Default communication parameters are:
- 8 data bits,
- 1 stop bit
- parity: none
- baud rate: 9600 or 19200

3. Setting up the Panel

The UniOP panel must be properly configured, in order to communicate with the EASI controller,.

Only the EASI controller specific issues will be discussed here. Refer to the UniOP Designer documentation for general programming information.

3.1 Controller Setup

The Controller Setup dialog box is shown in the figure below.

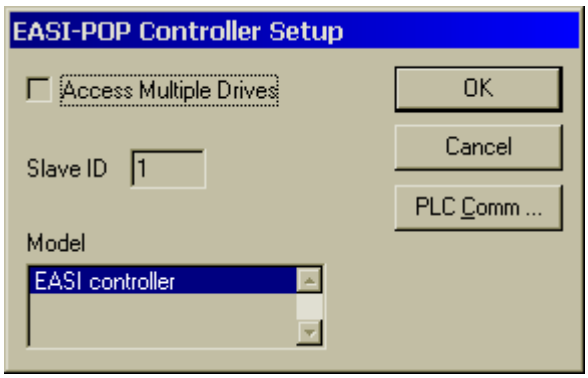

Figure 1 – Controller Setup Dialog Box

Communication parameters must match the settings in the drive. They can be adjusted by pressing button “PLC Comm…”.
Connection to more than one controller is enabled using the “Access Multiple Drives” option. The Controller Setup dialog will change as shown in the Figure below.

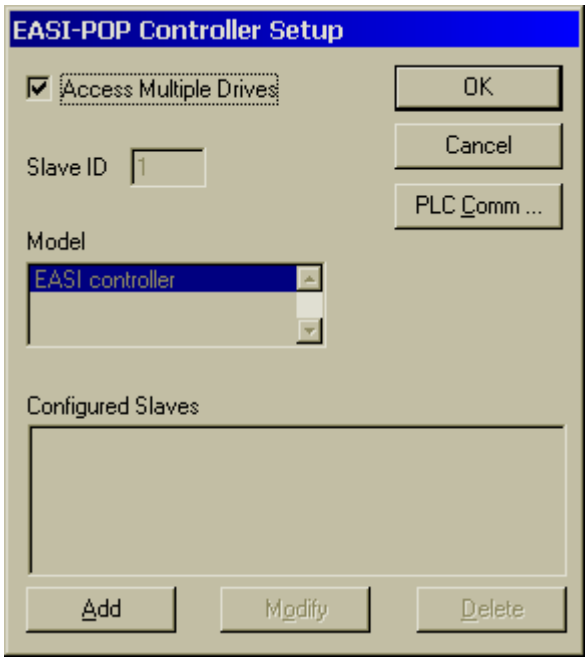

Figure 2 – Controller Setup Dialog Box for multiple controllers setup

Pressing the “Add” button a new EASI controller will be added as slave to the network. Unique Slave ID numbers must be assigned to each of the Configured Slaves.

3.2 The Define Field Dialog Box

The Define Field Dialog Box for the Parker EASI controller is shown on the figure below.

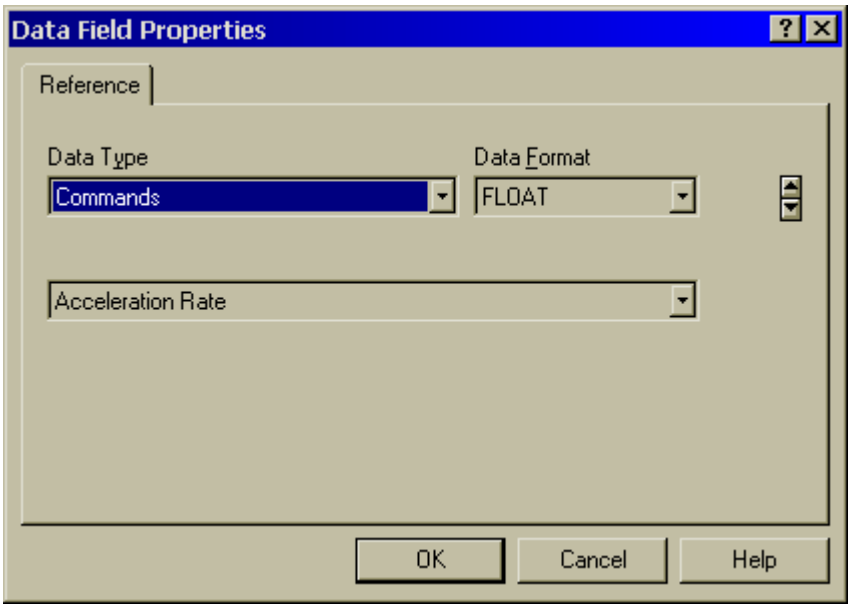

Figure 3 – Define Field Dialog Box

The "Data Type" Combo Box allows to select the Data Type. The Combo Box below the Data Type allows to specify the particular command, variable, etc… related to the selected Data Type.
For the meaning of the particular Data Type refer to EASI controller documentation.
Note that there is a Data Type "Internal Panel Memory" which is the memory area inside the UniOP panel available for general purpose applications such RDA, Alarms, etc.

Appendix A. Communication Error Codes

Current communication status is displayed in the System Menu of the UniOP.
A message and a numeric error code describe the error status.
The message reports the current communication status. The number shows the code of the current communication error or, if the communication is correct, the code of the last error encountered. When the error code 0 is shown, it means there have been no communication errors since this system start-up.

Code	Description	Notes
00	No error	There are no communication errors and there have been no errors since start-up.
05	Time out	No response received from the controller within the timeout period.
06	Buffer overrun	Received frame is too long.
07	General communication error	Internal software error (should never happen)
11	Line error	Wrong communication parameter: baud rate, parity, stop bit.

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