Document Release Note	
From:	Custom Electronics, 57a London Road, Biggleswade, Beds.. SG18 8ED
Date:	14 Jan 2002
Document:	8834 EPC Controller Software. User Documentation - Issue 3.0
Works Reference:	8834 Custom Electronics

Reason for Release:

This is a formal release of the User Documentation prepared during the design phase of the project for the 8834 EPC Controller Software.

There are several aims in issuing this specification: -

To disseminate information about the EPC Controller Software;

To circulate the information to ensure the accuracy, especially of information relating to the operation of the system.

Accepted on behalf of Custom Electronics:

Signed: ..... Date: .....

EPC Controller Software.
User Documentation - Issue 3.0

Custom Electronics 8834 EPC Controller Software

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Status: Released
Client: Custom Electronics,
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Revision History

Issue	Date	Released	Status	Description
1.0	12.4.99	RSB	Draft	Released for client agreement
2.0	13.5.99	RSB	Draft	Released for client agreement
2.1	31.8.00	RSB	Issued	Included Siemens M20 Terminal details
2.2	20.10.00	RSB	Issued	Extend notes on installation procedure
3.0	14.1.02	CW	Issued	Revised Windows version

File

The present document is stored under the following file name:

Docs/docn/8834EPCSoftware.doc

Scope

The purpose of this document is to provide a reference for the operation, maintenance and application of the 8834 EPC Controller Software.

Table of Contents

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Related Documents

The following document(s) are related to this:

[1] Custom Electronics Data Sheet:8834 PylonEPC Controller

[2]

[3]

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1 Preamble

The Pylon system is a general purpose, graphic display system for operator inter-action and control of industrial plant. The EPC Controller is an embedded PC hardware platform for control applications. The 8834 EPC Controller Software package runs in an PylonEPC Controller and provides facilities for remote control of ENG central receive sites.

The purpose of this document is to provide a reference for the operation, maintenance and application of the 8834 PylonEPC Controller Software.

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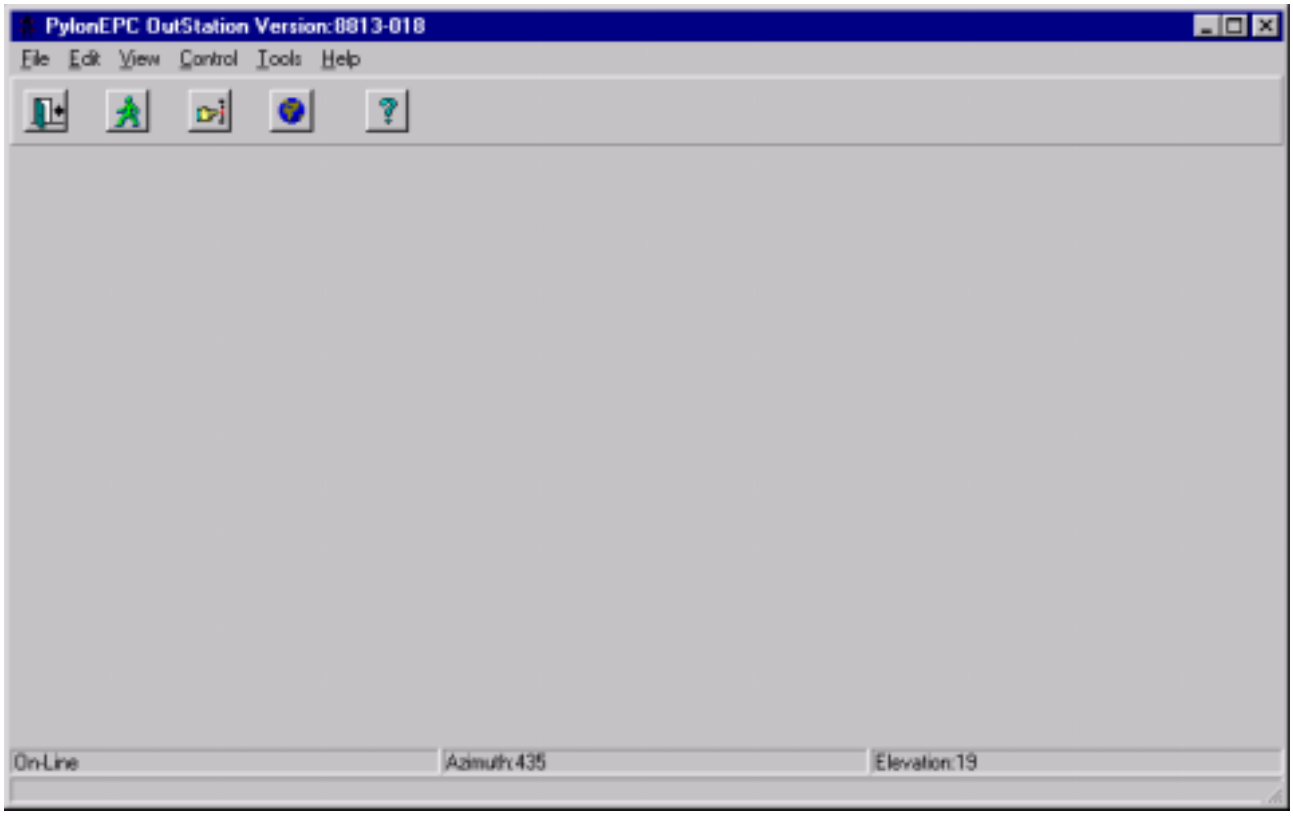
2 PylonEPC OutStation

There are two variants of the 8834 Pylon EPC Controller software for the DOS and Windows operating systems in an EPC outstation. As the software is functionally identical in both and just the look and feel varies, the Windows verion will be used for the illustrations contained here.

Pylon EPC Controller Software is an SDI application as shown below:



The application contains a menu with the following structure:

File |

Exit

Edit |

Configuration

View |

Summary

Controls

Revertives

Analogs

Comms

Control |

Goto

Search

GPS

Tools |

Relays

Comms

Help |

About

There are five Speed Buttons on a toolbar that correspond to the File | Exit, Control | Goto, Control | Search, Control | GPS and Help | About menu options respectively.

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2.1 File | Exit

This exits the Application. It is a password protected menu option.

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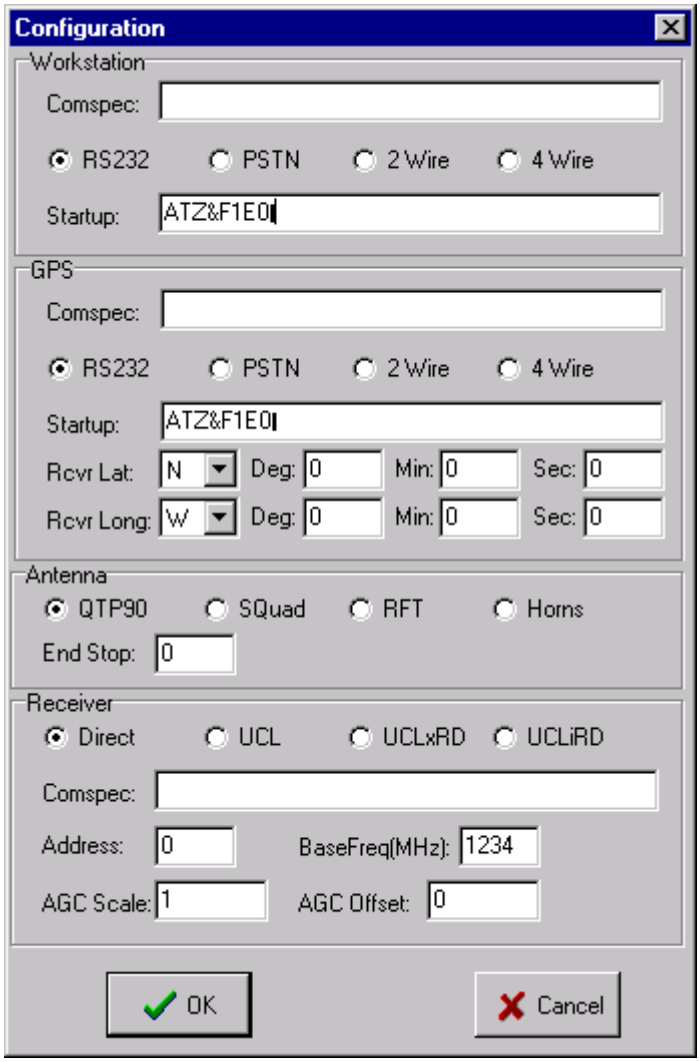
2.2 Edit | Configuration

This allows the user to edit a configuration (Password protected) as shown below:



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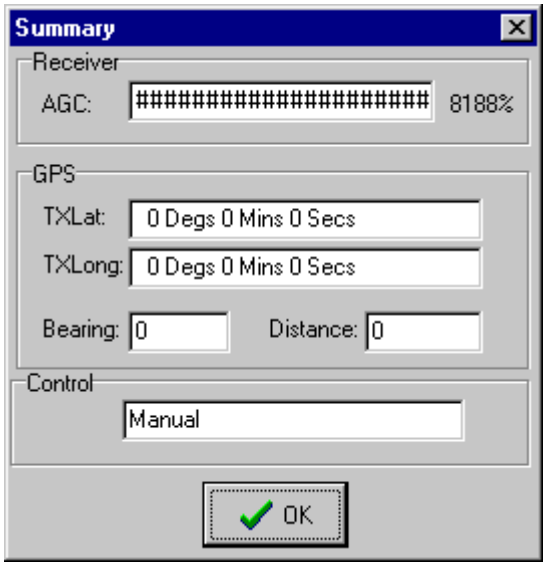
2.3 View | Summary

This allows the user to view the following information:



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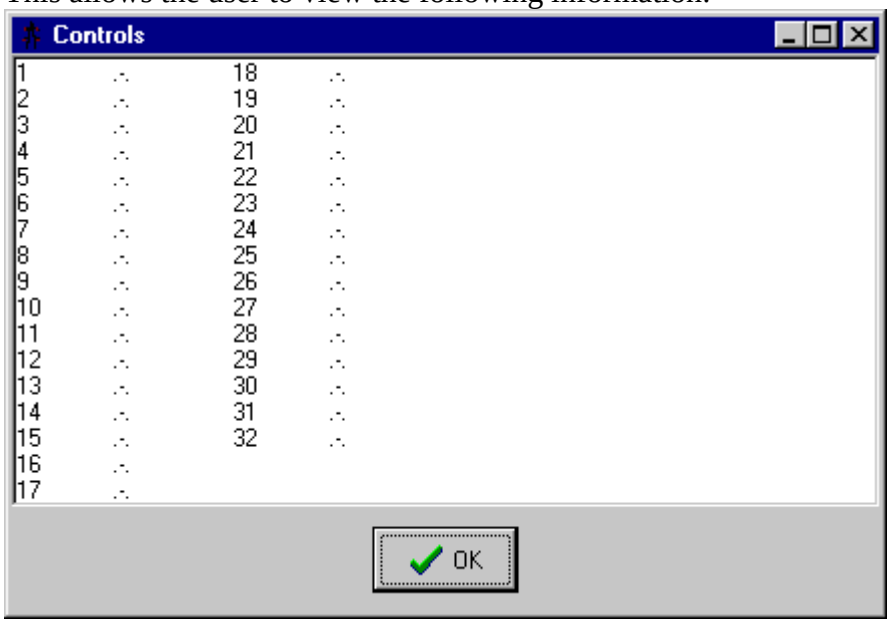
2.4 View | Controls

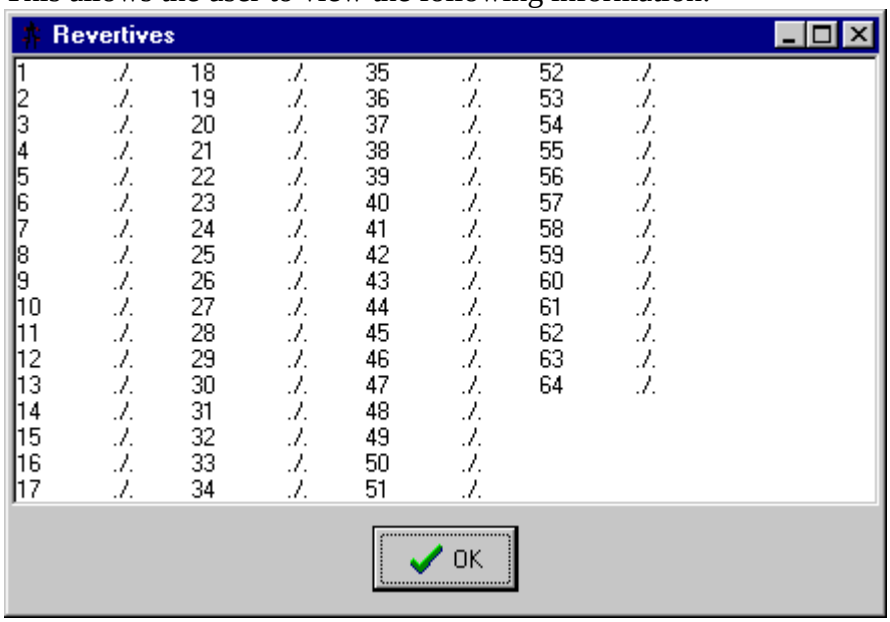
This allows the user to view the following information:



****

2.5 View | Revertives

This allows the user to view the following information:



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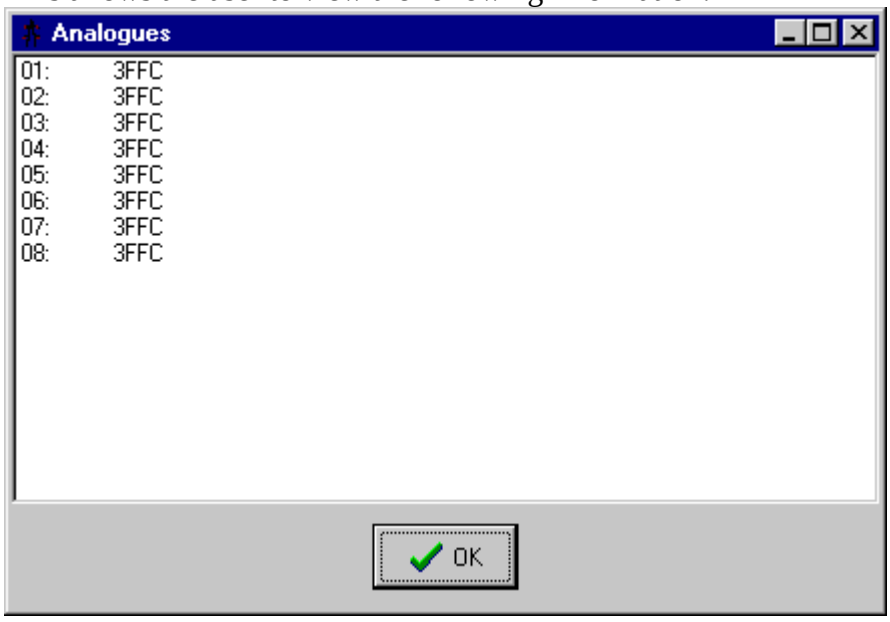
2.6 View | Analogs

This allows the user to view the following information:



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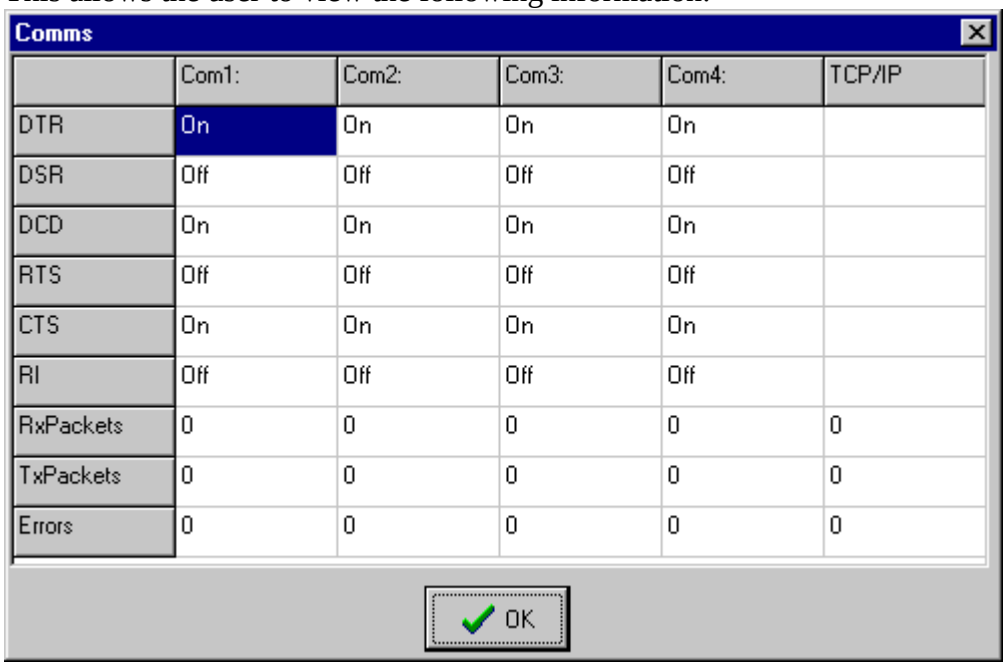
2.7 View | Comms

This allows the user to view the following information:



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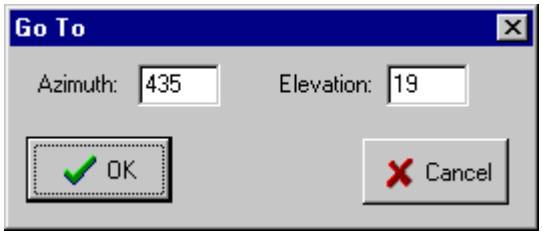
2.8 Control | Goto

This allows the user to turn around to a user-defined Azimuth and Elevation as shown below:



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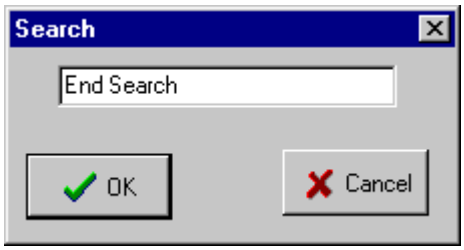
2.9 Control | Search

This allows the user to do the following:



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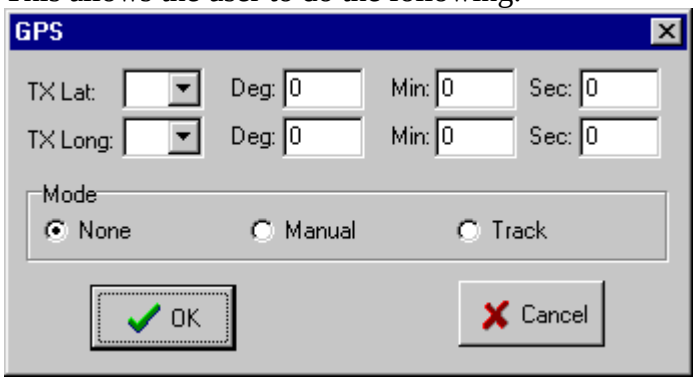
2.10 Control | GPS

This allows the user to do the following:



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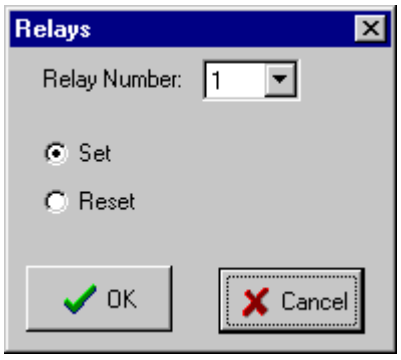
2.11 Tools | Relays

This allows the user to do the following:



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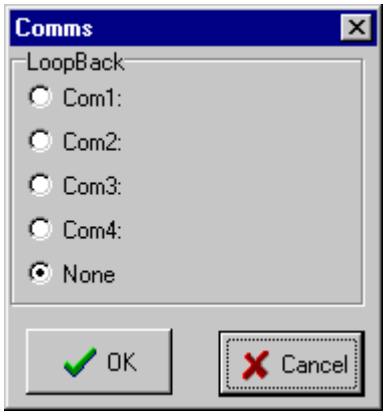
2.12 Tools | Comms

This allows the user to do the following:



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2.13 Help | About

This allows the user to view information of this product as shown below:

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3 Getting Started

3.1 System Requirements

- 8834 Pylon EPC Outstation
- 1MB of free mass storage

3.2 Installation

The application comes pre-installed from the factory.

The build defaults are for a configuration that includes:

RS232 Workstation comms on COM1:9600,N,8,1

QPT90 Rotator

Direct generic receiver

If this configuration is not suitable for your installation, the configuration can be modified by powering the controller up with a VGA monitor and a PS/2 keyboard connected, using the following procedure:

1. Check that the configuration has not be re-arranged to suit during factory system testing
2. Use the menu to access the configuration form (Edit | Configuration).
3. Enter the password: “jensen” and Tab to the OK button and press the space bar. (or use a mouse).
4. Use the Tab key to move around the configuration form and enter the settings you need. If you don’t have a mouse connected – use the spacebar to ‘click’ in fields.
5. Tab to the OK button and ‘click’
6. Use the menu to exit the application (File | Exit).
7. Enter the password: “custom” and Tab to the OK button and ‘click’.
8. Restart the system with the new settings, by typing the command OUTSTAT

Common Examples:

Direct PC Connection – RS232, com1:9600,n,8,1, no modem startup string.

Modem PC Connection – PSTN, com1:9600,n,8,1, startup=ATZ0.

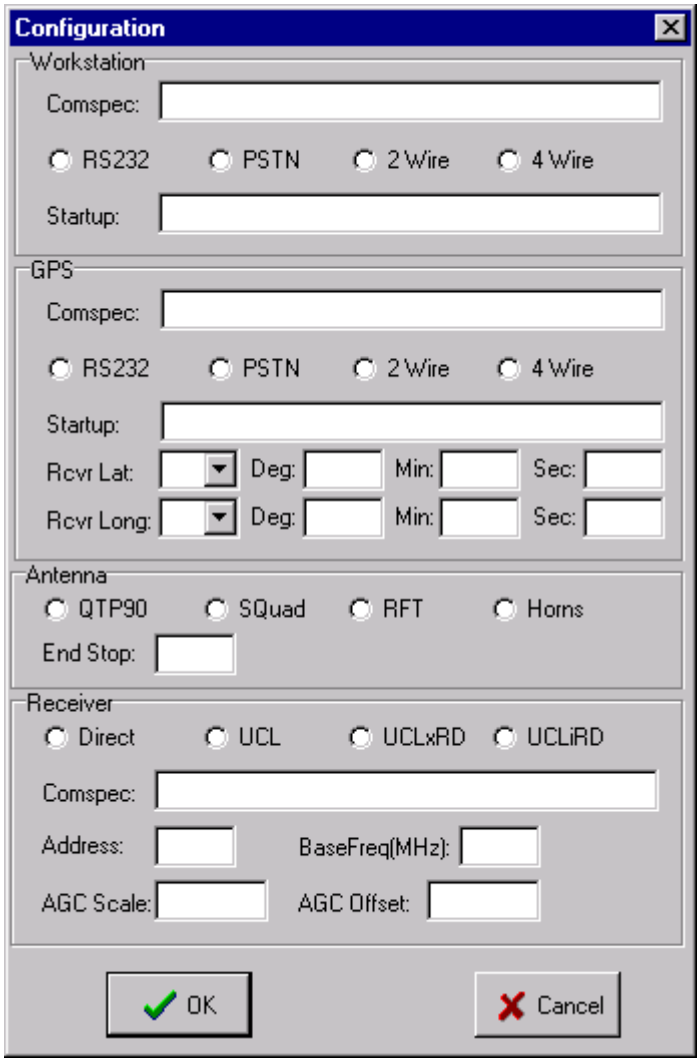
GPS (Autopod) – RS232, com2:4800,n,8,1, no modem startup string.

UCL receiver RS485 – com2:9600,e,7,2 Addr:49 Scale 0.78.

3.3 Configuration Record

The cofiguration information is held in the Config.bin file. A record of the configuration should be kept on the following record sheet:

Project:_____ Date:_____



4 Getting Support

To offer the best level of support, Custom Electronics recommend the following:

1. First refer to the FAQ section of this manual for answers to frequently asked questions.

2. Next refer to the latest Pylon 3384 EPC FAQS in the tech support section of our website at the following address: HTTP://www.customelectronic.demon.co.uk. Unanswered questions can be referred to us by either of the following:

- E-mail to: support@customelectronic.demon.co.uk. This will be answered by E-mail at the earliest opportunity and is provided free of charge to all registered users.
- Telephone to Pylon ENG Technical Support at +44 1767 313167. This service is chargeable per minute and available at reduced rates to holders of the relevant support contracts.

5 Frequently Asked Questions (FAQ's)

5.1 How do I install a software update?

If your EPC controller system is fitted with the floppy disk drive option, simply exit the software application using the File | Exit option and copy the file from A: to C:

Otherwise connect a PC to the EPC controller via Com1: using a file transfer (cross-over) cable and use the PylonXFR utility. (See 5.2)

5.2 How Do I Use the PylonXFR Utility?

PylonXFR is a utility which allows terminal emulation and file transfer to and from the EPC outstation Com: ports. It has several versatile modes of operation which allow it to be used in command line or interactive modes, at both the EPC and PC ends, and both with or without a display monitor.

The command line useage is:

PylonXFR [comspec] [filespec]

The default comspec is COM1:38400,n,8,1

If a [filespec] is given, PylonXFR will SEND the file(s) specified using the Zmodem protocol.

If a [Filespec] is not given, PylonXFR will check the EPC front panel "Enter" pushbutton, - if the button is pressed PylonXFR will enter Zmodem receive mode and attempt to start a transfer for 60 seconds before leaving.

If the EPC front panel "Menu" pushbutton is pressed when PylonXFR is run, it will go into interactive mode, allowing operation from the keyboard and display. The menu options given include 1) Setting the comspec, 2) File Receive, 3) File Send, 4) TTY emulation.

At the PC end, PylonXFR can also be used for sending the file updates, as can any other Zmodem compatible software (such as Windows Hyperterminal or Procomm).

Proceedures for EPC file update without Keyboard/Monitor/Floppy drive:

This first proceedure assumes you have PylonXFR included in the EPC autoexec.bat and Windows Hyperterminal on a PC.

1) Connect a PC Com1: to the EPC Com1: port using a standard cross-over cable.
2) On the PC run Windows Hyperterminal and configure for Com1:38400,n,8,1 and no flow control.
3) Hold in the EPC “Enter“ pushbutton and switch on the EPC power. Keep the pushbutton pressed for 10 seconds, or untill a PylonXFR signon message is seen on the PC.
4) On the PC in Hyperterminal use the Transfer | Send File menu option to select Zmodem protocol and the Filename you want to upload.
5) When the transfer is complete, exit Hyperterminal and restart the EPC controller.

This alternative proceedure assumes you have PylonXFR included in the EPC autoexec.bat and PylonXFR and the file(s) to update on a PC floppy disk.

1) Connect a PC Com1: to the EPC Com1: port using a standard cross-over cable.
2) On the PC insert the floppy disk, open a MSDos command prompt window and log onto A:
3) Hold in the EPC “Enter“ pushbutton and switch on the EPC power. Keep the pushbutton pressed for 10 seconds.
4) On the PC invoke PylonXFR to send the required files using “PYLONXFR *.EXE“
5) When the transfer is complete, exit the MSDos window, and restart the EPC controller.

5.3 How Do I Check the PSTN Modem?

PylonXFR is a utility which allows terminal emulation and file transfer to and from the EPC outstation Com: ports.

Run this on the EPC controller in interactive mode (i.e. hold in the MENU pushbutton when it runs) and set the comspec to COM4:9600,n,8,1.

Use the TTY option check the modem:

ATZ<enter> will reset the modem and should prompt OK

AT&V<enter> will display the modems configuration.

ATS0=1<enter> will configure the modem to auto-answer after 1 ring.

Telephone the modem from another phone line and check that RING is displayed when the number is rung and that the modem answers.

ATDT<number><enter> will cause the modem to tone dial the <number> given.

The modem settings can be re-configured as follows:

AT&F0<enter> will reset the modem to factory defaults and should prompt OK

AT&K0<enter>

AT&Q0<enter>

AT&Y0<enter>

AT\N3<enter>

ATS0=1<enter>

AT&W0<enter> store profile as number 0.

This will save the desired operating parameters away in the modem and allow “ATZ0” to be used as the modem start-up string in the configuration.

5.4 How Do I Setup The Multitech Modems (MT2834BLK)?

5.4.1 For 4 Wire Leased Line:

1) Use PC and Hyperterminal set for 9600,n,8,1 connected to modem
2) Ensure the private/leased line is disconnected
3) Set modem switches 1,3,7,8,9,12,13,14,16 down, others up.
4) Power up the modem
5) Enter the following commands and verify an OK prompt is given.

   ATZ <enter>

   AT&F <enter>

   AT$SB9600 <enter>

   AT&W <enter>
6) Power off the modem and set switches 1,3,6,7,9,10,12,13,14,16 down, others up.
7) On the Answering modem (outstation end) set switch 5=up, on the Originating modem 5=down.
8) Connect the private/leased line 4 wire: 1&6=Tx, 2&5=Rx, (2 wire=1&6, switch 16=up)
9) Configure ATZ as the modem start-up string

5.4.2 For PSTN Dial-up:

1) Use PC and Hyperterminal set for 9600,n,8,1 connected to modem
2) Ensure the PSTN line is disconnected
3) Set modem switches 1,3,7,8,9,12,13,14,16 down, others up.
4) Power up the modem
5) Enter the following commands and verify an OK prompt is given.

   ATZ <enter>

   AT&F <enter>

   AT$SB9600 <enter>

   ATS0=1 <enter>

   AT&W <enter>
6) Power off the modem and set switches 1,3,6,7,8,9,12,13,14,16 down, others up.
7) On the Answering modem (outstation end) set switch 5=up, on the Originating modem 5=down.
8) Connect the PSTN line
9) Configure ATZ as the modem start-up string

5.5 How Do I Setup The Siemens GSM Modems (M20 Terminal)?

5.5.1 First Time Configuration:

The M20 terminal emulates a Hayes compatible pstn modem, but does not autobaud. The factory defaults can be modified to suit the PylonEPC controller and saved to the user profile as follows:

1) Use PC and Hyperterminal set for 19200,n,8,1 connected to the modem by a pin-pin D9 cable.

2) Power up the modem

3) Enter the following commands and verify an OK prompt is given.

AT&F <enter>

ATS0=1 <enter>

AT+IFC=0,0 <enter>

AT+IPR=9600 <enter>

4) Change hyperterminal to 9600 baud as follows:

Call | Disconnect

File | Properties | Configure | 9600 | OK | OK

Call | Connect

5) Enter the following commands and verify an OK prompt is given.

AT&W0 <enter>

6) Monitor the signal quality when idle with hyperterm using

AT^MONI=1 <enter>

(any key terminates the display)

7) Test you can dial the remote end:

ATDT<cellphone data number>

8) Hang up the call:

+++ <wait for ok>

ATH0<enter>

9) Close Hyperterminal.

10) Configure ATZ as the modem start-up string and ATDT as the dial string in PylonEPC/ENG3.

5.5.2 For Re-Configuration:

Use PC and Hyperterminal set for 9600,n,8,1 connected to modem then proceed from 2 above.