

# IEC 870-5-104 Protocol Differences

## ASE2000 Release 1.46

### Tech Note

January 14, 2008

## Overview

Release 1.46 of the ASE2000 Communication Test set contained significant internal changes for processing IEC 870-5-104 protocol. For many customers, transition to this release from the prior release (1.44) will proceed without issue. Others may experience one or both of the following problems:

- The ASE2000 aborts when communication is started, and
- Values in the Points List data base are not associated with the correct RTU

This document describes procedures to resolve both of these issues.

## ASE2000 Aborts

Aborts in ASE2000 release 1.46 are due to slight differences in the configuration file (.MON) between releases 1.44 and 1.46. The exact difference causing this problem has not been identified and ASE has been unable to generate an ASE2000 abort at its facilities. ASE has received reports of this problem and the procedure described below has corrected the issue in all cases<sup>1</sup>.

The procedure requires that all knowledge of the ASE2000 be removed from your system before installing 1.46.

1. Remove the ASE2000 from Control Panel and Add or Remove Programs
2. Go to the ASE2000 installation folder and delete all files. This folder is most likely c:\program files\ASE\ASE2000 Comm Test Set. If you want to keep some of the files, you can move them to a temporary directory. But, do not allow the ASE2000 access to any of these files until release 1.46 is working on your system.
3. Edit the registry to remove certain significant information about the prior ASE2000 installation.
  - Run regedt32 from an account with administrative privileges
  - Select HKEY\_CURRENT\_USER
  - Select Software, Applied Systems Engineering, and ASE2000 Communication Test Set
  - Highlight the Workspace node and select Edit and Delete
  - Highlight the Recent File List node and select Edit and Delete
4. Re-install the ASE2000 from our web site  
[http://www.ase-systems.com/protect/ase2000\\_standard.asp](http://www.ase-systems.com/protect/ase2000_standard.asp)
5. Run the ASE2000 using ALL NEW FILES. Do not use any files you might have saved.
6. After this has been proven to work, you can try to move your old files back one at a time. If you ever encounter a restored file that results in an ASE2000 crash, please send it to ASE as discussed.

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<sup>1</sup> If you are experiencing this problem, ASE would appreciate being sent your current IEC 870-5-104 MON files so they can attempt to duplicate the problem and isolate the cause. Please send files to [support@ase-systems.com](mailto:support@ase-systems.com) identifying them as IEC 870-5-104 problem files.



## **Points Data Base**

IEC 870-5-104 protocol messages do not include an RTU Address component, such as the Data Link address used by IEC 870-5-101. Since the Points Data Base is accessed by RTU Address number, the ASE2000 needs to assign an arbitrary Address number to all IEC 870-5-104 devices. Prior ASE2000 releases used address '0'. The RTU Address value for all IEC 870-5-104 devices created in prior ASE2000 releases would have been 0. ASE2000 release 1.46 uses "-2147483648", which is the decimal equivalent of 0x80000000. (This will be changed in future releases.) In order to be able to use the Points Data Base for IEC 870-5-104 devices in ASE2000 release 1.46, proceed as follows:

- Exit the ASE2000
- Locate file **PointList.mdb** in the ASE2000 installation folder
- Open the file with Microsoft Access
- Locate table RTUNames
- Find all entries for IEC 60870-5-104 RTUs and change the Id field to -2147483648. You cannot do this from inside the ASE2000
- Exit Microsoft Access