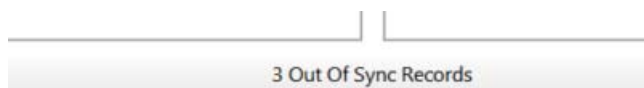# MSA Link™ **Pro Software:**
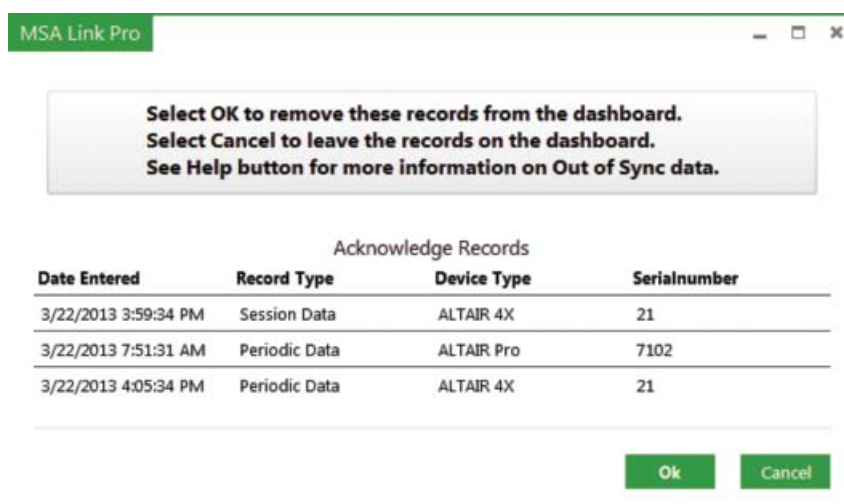
Understanding Data Log Out of Sync (Synchronization)

*This paper is intended to aid MSA Link Pro Software users as to the purpose of the **Out of Sync** banner that may display on the dashboard page.*

What is Out of Sync Data?

If a gas detector has periodic or session data that is out of time sequence order or is in advance of the current system time, this data is considered to be *out of sync* (synchronization) and *will not be written to the database*. This procedure avoids corrupted data from being entered and used. If a data log is detected with out of sync data, the following information will appear on the dashboard:

3 Out Of Sync Records

Selecting the **Out of Sync Records** banner will bring up additional details to describe which instruments have data that falls into this category:

MSA Link Pro   — ☐ ✕

Select OK to remove these records from the dashboard.
Select Cancel to leave the records on the dashboard.
See Help button for more information on Out of Sync data.

Acknowledge Records

Date Entered	Record Type	Device Type	Serialnumber
3/22/2013 3:59:34 PM	Session Data	ALTAIR 4X	21
3/22/2013 7:51:31 AM	Periodic Data	ALTAIR Pro	7102
3/22/2013 4:05:34 PM	Periodic Data	ALTAIR 4X	21

Ok   Cancel

*Once you select the **OK** button, the window and banner disappear until the next occurrence of out of sync data is received.* To keep this list active, simply click on the **Cancel** button to close this window while still retaining the data for subsequent viewing.

Why won't my periodic or session logs appear in MSA Link Pro Software?

As long as the connection among your test stands and MSA Link Pro Software is good, it's likely that the gas detector is identified as having out of sync data and that data has not been written to the database. Always check the Out of Sync banner on the dashboard to determine if out of sync records have been identified.

What determines if data is out of sync?

As background, all data records from gas detectors are inserted into the database in Universal Time Code (UTC) format that standardizes all time to one reference. This standardization avoids issues with data that is generated in one time zone and is sent to a database that may be located in a different time zone (such as distributed GALAXY® GX2 Test System banks that are located in different geographical regions).

Additional background information is that data logs are transmitted starting with data collected from the buffer's oldest point. Once the data log begins transmission, the buffer is transferred in sequential order. No consideration to the timestamp is given when the data log is transmitted.

*Because every life has a **purpose...***

Out of sync criteria comprise:

1. Any entry in a periodic or session log that is found to be at least *two hours in advance of the current computer time* is considered to be out of sync; all data log entries recorded after this point are not stored to the database.

2. A data log that starts with time sequential data and then experiences a jump backwards in time of more than two hours will be considered to have out of sync data. All valid time sequential data prior to the backwards jump is stored to the database; any data after this point is not stored. Shown at right is a pictorial representation:

Timestamp	
3/23/2013	19:01
3/23/2013	19:04
3/23/2013	19:07
3/23/2013	19:10
3/23/2013	19:13
3/23/2013	19:16
3/23/2013	15:00
3/23/2013	15:03
3/23/2013	15:06
3/23/2013	15:09
3/23/2013	15:12
3/23/2013	15:15
3/23/2013	15:18

Good data, sent to the database.

Out of sync data, not written to the database. Use MSA Link Software to save and delete.

How does out of synchronization data occur?

The most common way in which gas detector time becomes out of synchronization is due to a completely drained battery. With ALTAIR® 4 and 4X Multigas Detectors, if batteries are completely drained, their clocks revert to January 1, 2008 or 2011, depending upon software version. After charging and turn on, users are prompted to enter the current date and time. If this information is not entered, the gas detector uses the default dates listed above.

A gas detector can also record incorrect data if users enter incorrect date- or time-related information.

A properly maintained gas detector should never record out of sync data. The GALAXY GX2 System test stand always sends current test stand time to the gas detector at each test's conclusion. However, once a bad timestamp is stored in the gas detector data log, that data and everything that follows will not be sent to the MSA Link Pro Software database.

Will the GALAXY GX2 System test stand erase data logs?

If the test stand is set to erase data logs and is connected to the MSA Link Pro database, the test stand waits for confirmation from the database that no out of sync records were detected. If this information is true, then the data log is erased. If the database detects out of sync records, it will not delete the data log!

What should I do if I have out of sync records displayed on the dashboard?

Any gas detector identified as having out of sync records must have the data log erased before inserting that detector into a test stand for future testing. Users must use the free MSA Link Software that is offered on the MSA website (*http://media.msanet.com/na/usa/portableinstruments/softwaredownloads/MSA_Link_v1.0.5.2.zip*) to:

1. Download the data logs.
2. Save if required.
3. Delete the data logs.
4. Verify that gas detector time and date is correct. If not, set the correct time and date and repeat steps 1-4.

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