

Ducted Systems Technical Services: Service Tips Letter

Letter: ST-010-23

Date: May 2, 2023

To: S1 HVAC Branch and Distributor Principal, Sales Manager, Service Manager, Parts Manager, Warranty Manager, Training Manager, Delegated Administrator.
Ducted Systems Technical Services, DS Parts/S1, ES Americas, ADTI Channel, Account Representatives, Marketing, Sales, Warranty teams.

Subject: **Smart Equipment Controllers Unit Control Board Intermittent Issues**

Product/s: Simplicity Smart Equipment (SSE) using a Unit Control Board (UCB) (Norman Manufactured)

Summary: Johnson Controls would like to have direct customer feedback on certain reported concerns to gather data for review. (Request For Information)

Dear valued customer:

Johnson Controls has received some field-observation reports from customers regarding SSE firmware. We would also like to inform customers that some of these are very rare instances that most equipment will not be affected by. These items below are outlined with the information we wish to have the field provide us so that we may better understand these concerns. With this collected information we will be able to identify any potentially affected customers, products, or firmware versions while working actively to provide resolutions with these sites.

If you wish to report occurrences of events listed below to support data tracking of concerns. Please email Commercial Technical Services for a review of your information.

In the event immediate assistance is required please call technical services for direct assistance.

Technical Services Contact Information:

1-877-874-7378

Cq-upgtechsupport@jci.com

Warm regards,

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Reported Instance 1

SSE Firmware Does Not Match Error Code

Customer Occurrence: Routine

Firmware Operational Updates:

When a customer replaces an economizer module or installs an economizer in the field to packaged rooftop unit. There is a potential that the module will have a newer firmware version present. In most cases, UCB's built with a FWV of 3.1 or higher will recognize this difference and push an update to bring the module to the same firmware version as itself (This does cancel after 5 failed attempts). On older models that do not have this update package feature, the economizer module should allow the economizer to fully function. This is due to all versions of firmware packages still have the same functionality items for economizer control. The error persists due to the fact it is just reporting that the economizer module is providing information that the UCB does not recognize in addition to what has been present since the 3.0 FWV's. In the event customers are attempting to update 3.0 FWV boards (4MB) it is required to leave the USB drive in until the process is fully complete.

Reported Concern:

Some customers have reported that 4.x FWV's no longer allow older FWV's 3.0 to 3.4) to push an upgrade to downgrade the module and in some cases the economizer not being functional at all.

To correct this, it is advised when replacing a module or installing an economizer assembly that a technician has a USB thumb drive available with the most current FWV to ensure if this occurs that the entire control platform be updated.

If you wish to report occurrences of events, please provide the following information.

1. Email Subject Contains: (Customer Name – Serial Number – Econ RFI)
2. Serial Number
3. Economizer part or assembly number
4. UCB FWV
5. Identified Fault (Econ inoperable, failure to update, UCB failure after update, etc.)
6. How it was corrected
7. System backup and trend file during occurrence

Reported Instance 2

4.3 Dictionary Failure After Update

Customer Occurrence: Rare

Reported Concern:

Some customers have reported when updating 4.0xxx FWV boards to 4.3 the dictionary becomes corrupted and results in only Menu two structures being available “Alarms and Update”. When this occurs, it is due to the update process has failed and those to menu functions are present in the boards origin coding and are not wiped and reloaded during a FW package update. In most cases it is only required to 4.1.2.3 then upgrade again to the current version but in the event that results in a failure:

It is then advised to perform multiple upgrades in sequence (In the following) FWV's. 4.1.2.3 > 4.2.0.71 > 4.3.0.15 > 4.3.1.24 > To most recent version published on Navigator.

Firmware can be provided by Technical Services if required.

If you wish to report occurrences of events, please provide the following information.

1. Email Subject Contains: (Customer Name – Serial Number – Update Failure)
2. Serial Number
3. Photo of the Boards serial stickers
4. Identified Fault (Dictionary failure, failure to update, UCB hardware failure after update, etc.)
5. How it was corrected

Requested Photo of Stickers Example: (May need to remove communication card)



Reported Instance 3

Evaporator/Supply Fan shuts off during active heating call or fan off delay terminates too soon

Customer Occurrence: Very Rare (3 to 6 tons reported only)

Reported Concern:

Some Customers have reported on thermostat operated equipment with 4.x.x.xx FWV's that the supply fan shuts down while the SSE still displays "heating" and is actively outputting on H1 or H2 terminals of the P3 plug. If this occurs, please contact Technical Services via phone call for immediate support.

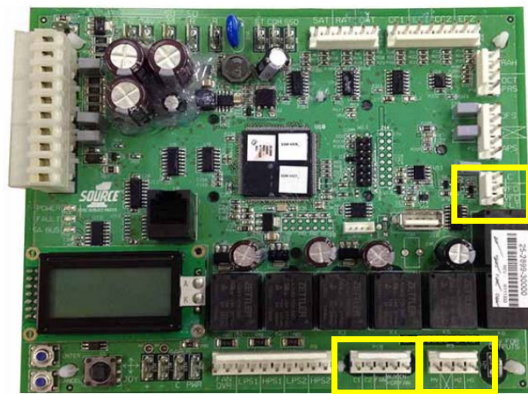
Current suggested corrections for this occurrence while it is under our review, is that you raise the fan off delay timer to 255 seconds and update the firmware to 4.3.1.24.

Details > Fan > Setup > Fan Off Delay Heating > 255 Seconds

We believe that this is occurring when customers are unaware of a VFD fault and resetting the equipment before confirming. But this item is still under investigation.

If you wish to report occurrences of events, please provide the following information.

1. Email/Case Subject Contains: (Customer Name – Serial Number – Blower Delay Failure)
2. UCB FWV
3. Identified Fault (Aux limit tripped, high limit lockout, etc.)
4. Did the above recommendation correct it? (Yes/No)
5. System backup and trend file during occurrence (critical item)
6. Was voltage present at H1/H2 on p3 plug with Fan off
7. P10 Fan to Common = XX.X VAC
8. P5 VFD to Common = XX.X VDC
9. P5 VFD FLT to Common = XX.X VAC
10. Is there an active alarm at the VFD when this occurs?
11. If no voltage at H1/H2 is IGN controller still outputting with no "W" call?
12. Verify all low voltage wiring is correct and photos of any discrepancies and wire #'s



Reported Instance 4

Heating does not terminate during unoccupied heating operation

Customer Occurrence: Very Rare (3 to 6 tons reported only)

Reported Concern:

It has been reported on a site that equipment has been running heat for extended periods of time when running off return air temperature sensor with a Schedule Mode “active” during their unoccupied heating calls. It has been found in some cases the unoccupied heat will continue to run for 10min regardless of Return Air Sensor Temperature Reporting. This is a rare occurrence that we are requesting information on. If a site is suspected of this occurring, please contact Technical Services for a review.

Commission > Standard > Occ Mode > Schedule

Commission > Standard > Thermostat Only > No

If you wish to report occurrences of events, please provide the following information.

1. Email/Case Subject Contains: (Customer Name – Serial Number – Excessive Heating of Space)
2. Serial Number
3. UCB FWV
4. Identified Fault (Aux limit tripped, high limit lockout, unoccupied heating will not terminate, etc.)
5. System backup and trend file during occurrence (critical item)
6. Verify all low voltage wiring is correct and photos of any discrepancies and wire #'s
7. Photo of the Boards serial stickers

Requested Photo of Stickers Example: (May need to remove communication card)

