Will-Burt Product Service Bulletin

Night Scan Product Line
Software Update 7.3

Bulletin #0106
June 9, 2014

Product Market Segment	Product Line	Models Affected
Commercial	Lighting	Night Scan and Inflexion Plus

Description of the changes:

Software update 7.3 will be released soon for all Night Scan and Inflexion Plus models. This update improves functionality and performance and fixes known bugs.

1) **Soft-start actuator and compressor**

This limits the inrush current drawn by the actuator. With long / undersized DC power runs, the DC voltage at the board would fall below 8 volts for more than 15mS causing the board to shut down. That is why we went from 12 to 10 gauge and put a maximum length on the cable – to minimize the voltage drop to the unit. With the soft-start, you could use a longer run, but remember – the actuator still draws 10-13 amps during its initial incline from horizontal.

Doing the same for the compressor output allows direct connection to an internal 12VDC compressor that caused the same problem for the same reason.

2) **Time for sensor switching was 100mS now 250mS**

The main three sensors (near zero, at 90 and mast up) are single pole double throw reed switches. The software was expecting the reed switch to change states within 100mS. In theory, this works because the reed switches instantly. In reality, with the magnet proximity and movement, it may be "in the middle" for 100mS, but the switch still functions as the magnet moves. This will reduce the 1,02 1,12, and 1,14 "bad sensor" output errors.

3) **Remove CE mode**

The hidden and unused "CE Mode" function disabled the auto-up and auto-stow features. We have not and do not use this. It is activated by a certain key combination on the HHRC that has occurred accidentally without the operator's knowledge.

4) **1/4 second differential for light power relays**

This is an attempt to address recent complaints about light bulbs blowing out on generator-powered vehicles. The theory is instead of going no load to full load when the lights are turned on, it will only be a half load step on the generator giving it time to stabilize, then half load to full load. This will lessen the transient response overshoot of the generator.

5) **Additional raise time before RCP becomes active (vertical masts) sw8, 9**

Due to more equipment on the vehicles and tighter packing of systems, it is necessary to ensure that the vertical light heads clear all obstructions before becoming active. Even with the upper mag switch as high as it can be placed, there is still a possibility of interference. We have enabled SW1-8 and SW1-9 on the base board to act as 5 and 10 second timers (respectively) that start after the upper mag switch is cleared. If used, the RCP will not become active until the upper mag switch is cleared and the UP button is held for an additional 5, 10, or 15 seconds. This will allow enough time to clear the vehicle.

6) **Stow before lower support (vertical masts)**

With the additional deployment time from above, using the upper mag switch to home the RCP is not sufficient. Autostow would home the RCP before releasing air from the mast, but pressing the DOWN button would exhaust air as the RCP homed. Now any DOWN command homes the RCP before lowering the mast.

7) **Err 1,14 time was 8 seconds, now 15 seconds**

This was the wait time allowed from pressing the UP button until the lower mag switch activated (mast up). This was extended to 15 seconds – some bigger masts / bigger payloads could not fully deploy in 8 seconds.