

Alert Level: **CRITICAL**

Software Version: MMP 3.00 and earlier

Instrument: McLane Moored Profiler (MMP)

Subject: Watchdog Initialization

Summary: For proper MMP operation, the independent system watchdog circuit must be properly initialized. If the watchdog circuit is not properly initialized, the MMP will periodically receive a MASTER CLEAR signal that will re-boot the TT8 and restart the deployment in progress.

Potential Negative Effects: Data from any profile in progress at the time of the MASTER CLEAR will be lost. Corruption of the File Allocation Tables on the flash card may occur, making data recovery problematic.

Technical Details: The watchdog circuit is automatically initialized if the operator interrupts the 30-second countdown during power-up and asserts control of the system. Before applying power to the MMP, the operator must connect a computer running Crosscut to the MMP via RS-232 cable and take control of the MMP program within the 30-second countdown. If this procedure is followed, the watchdog will perform as intended and not send unwanted MASTER CLEAR signals during testing or deployment.

However, if the 30-second countdown expires before the operator asserts control, the software will respond as if an unattended reset, triggered by the watchdog, has occurred. Initiating such a reset at sea is the function of the watchdog. The first MASTER CLEAR will occur ~68 minutes after power-up (4096 seconds). Subsequent MASTER CLEAR signals will re-boot the system every ~132 minutes (8192 seconds) thereafter. These MASTER CLEAR signals will be sent regardless of the state of the system (low power sleep, deployment, bench tests, etc.). The first MASTER CLEAR will start an unattended deployment if the operator does not intervene. That deployment will be periodically interrupted thereafter.

Solution: To properly initialize the watchdog circuit after the countdown expires, the operator may execute any of the following procedures. **If the countdown has been allowed to expire, McLane strongly recommends executing a COLD RE-BOOT.**

- **Cold re-boot:** Disconnect the main battery for 5 to 10 seconds. Reconnect the battery and assert control normally during the 30-second countdown.
- **Warm re-boot:** At the Main Menu prompt type 'q' (no quotes), press [ENTER], type password "mclane" (no quotes, all lowercase), and press [ENTER]. At the TOM8> prompt type 'g' (no quotes) and press [ENTER]. Assert control normally during the 30-second countdown.
- **Watchdog initialization:** At the Main Menu prompt type 'w' (no quotes) and press [ENTER]. This will manually initialize the watchdog circuit.