Dynasonics

Hybrid Ultrasonic

DXN Portable Ultrasonic Measurement System

Badger Meter

HYB-PM-00095-EN-02 (May 2013)

Firmware Update Manual

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UPGRADING SOFTWARE

IMPORTANT *The Dynasonics USB Update Drive is formatted in FAT/FAT32. NTFS (New Technology File System) formats do not work.*

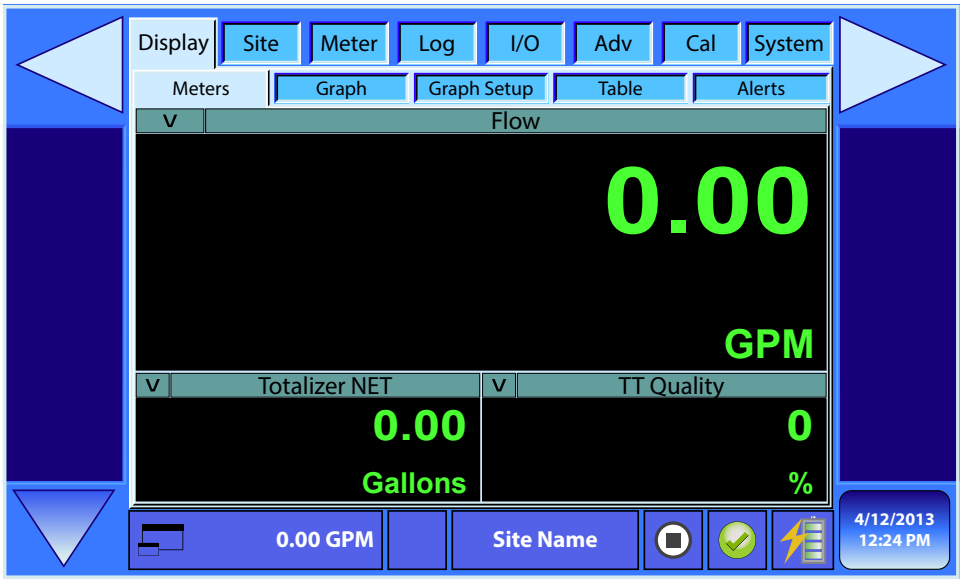
The upgrade is supplied as a self extracting zip file that you must extract on a PC before it can be loaded into the DXN.

1. Save the supplied **zip file** to a convenient place on your computer's hard drive.
2. Double-click on the **PortableFlowmeter_YYYYMMDD_RevX.zip file** to start the extraction process. The completed extraction should open the zip file and place the contents in a folder named *PortableFlowmeter* on your hard drive.

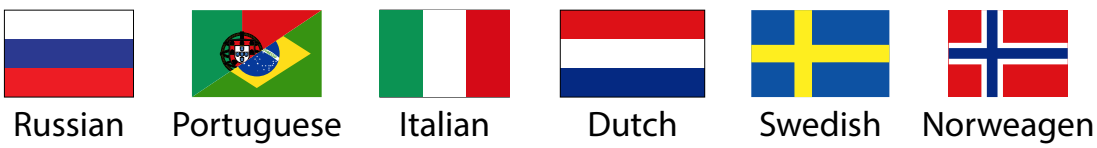
NOTE: The YYYYMMDD indicates the year, month, and day of the current revision. The *X* in the filename stands for the current revision letter.

Name ▲	Date modified	Type	Size
PortableFlowmeter	4/12/2013 12:20 PM	File Folder	

3. When the extraction process is complete, copy the entire **PortableFlowmeter folder** to the USB Update Drive.
4. Start the **DXN** and let it to get to the *Meters* (*Display* ► *Meters*) screen.



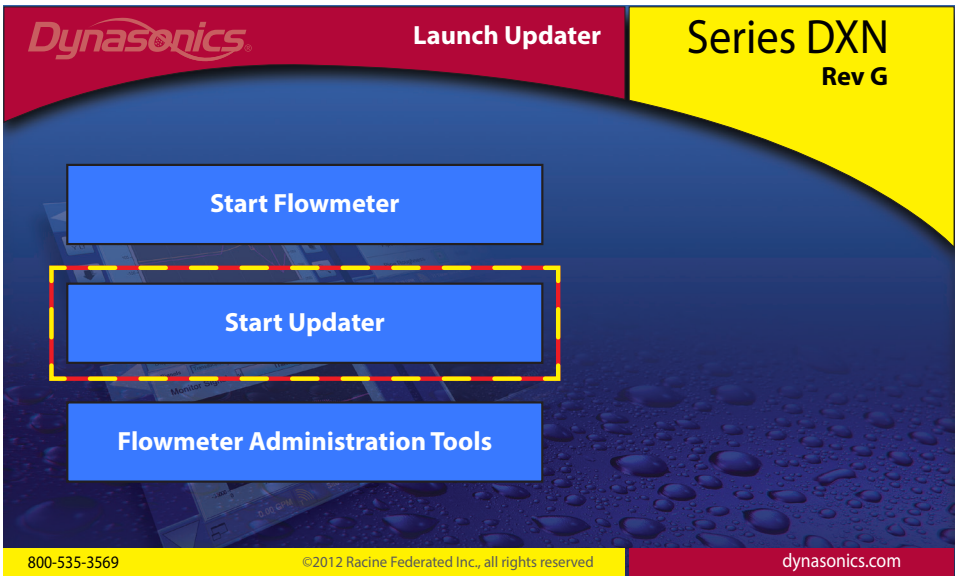
NOTE: Revision E and later of the DXN firmware has multi-language capabilities. To change the language displayed on the menu tabs, press the *language* button until the proper language is displayed on the screen.



5. Insert the **USB Update Drive** into the USB port on the rear of the DXN and wait 30 seconds for the DXN to recognize the USB Update Drive.
6. From the *Display* ► *Meters* screen, press the **System** tab on the far right of the display.
7. From the *System* screen, select **Update** (*System* ► *Update*).

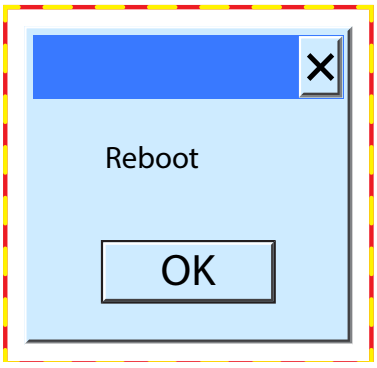
8. Press the **Quit Meter to Manage / Update** button.

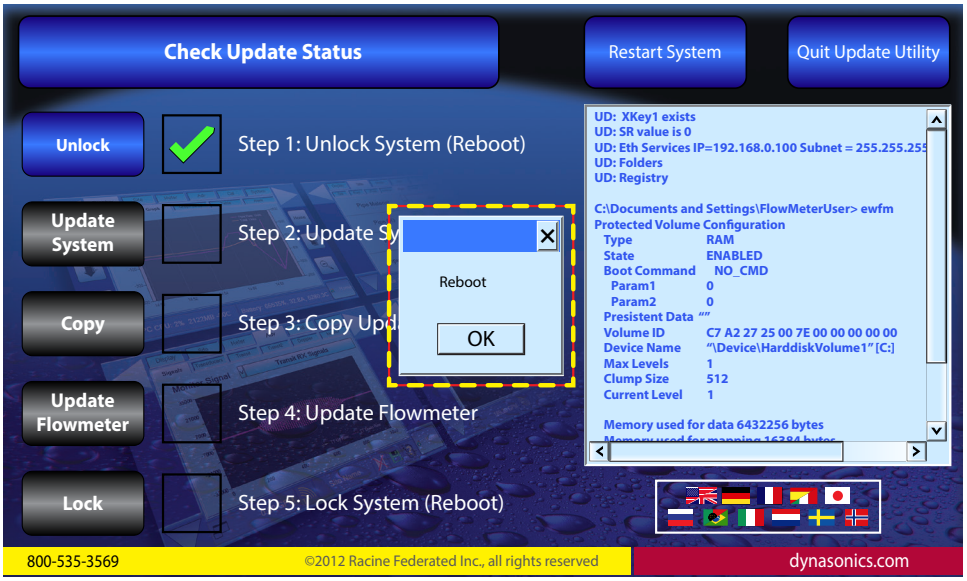
9. Press the **Start Updater** button.



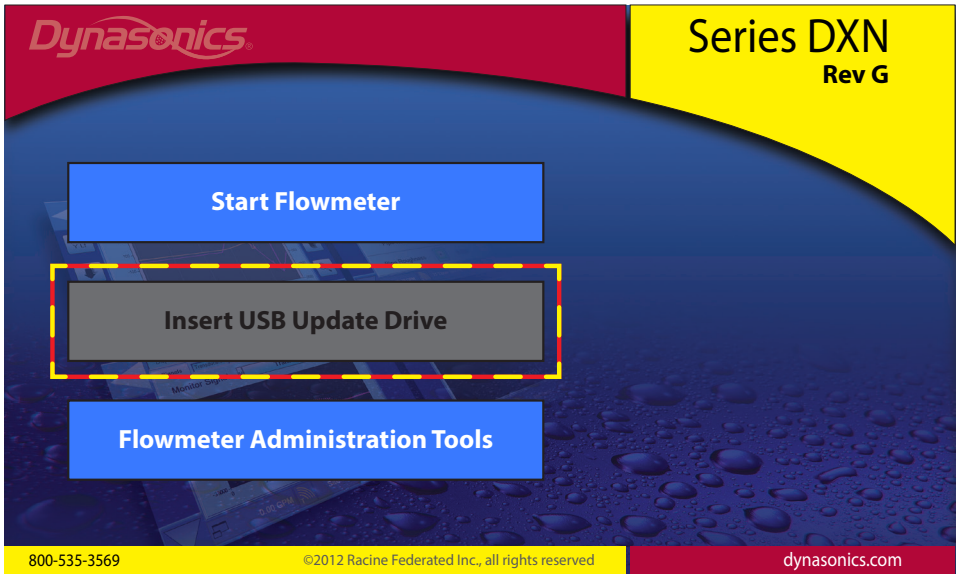
10. Press the **Unlock** button (Step 1: Unlock System (Reboot).

11. A small panel in the center of the screen asks if it is OK to reboot. Remove the **USB Update Drive** and then press the **OK** button.

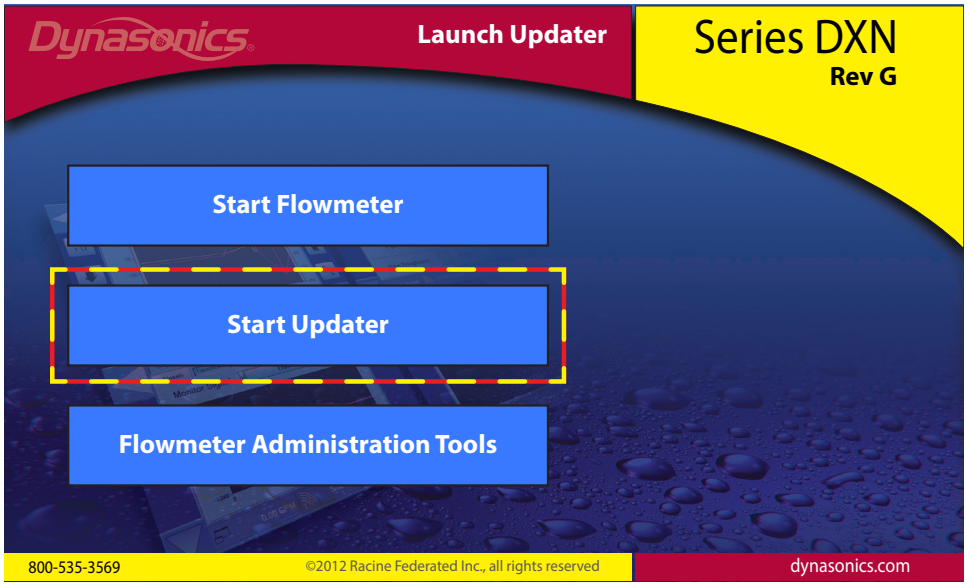




After the reboot a screen with a grayed out button that says *Insert USB Update Drive* appears.



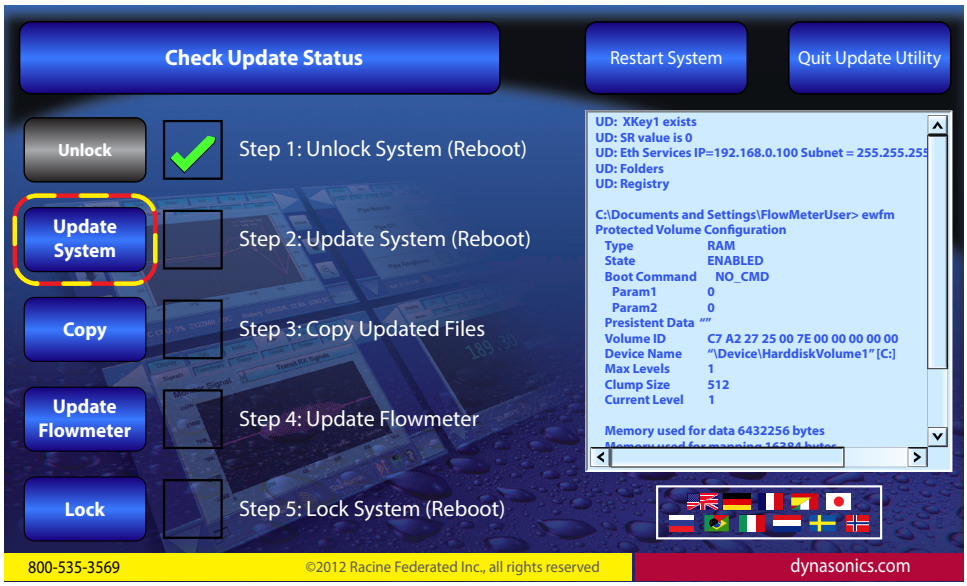
12. Insert the **USB Update Drive**. When the USB Update Drive containing the update is inserted the grayed out button changes to an active *Start Updater* button.



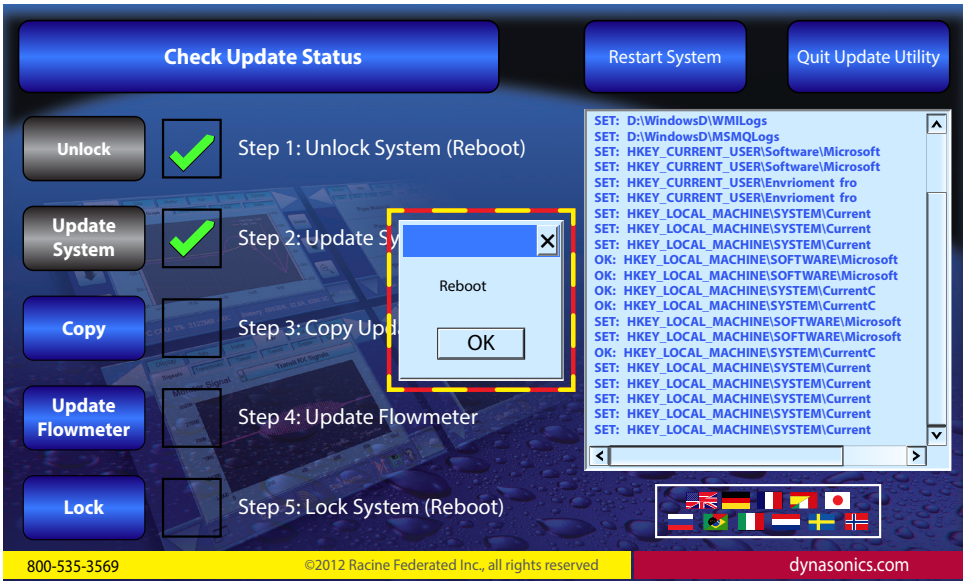
13. Press the **Start Updater** button.

14. The meter should now be back on the *Update* screen. Press **Update System** button Step 2: Update System (Reboot).

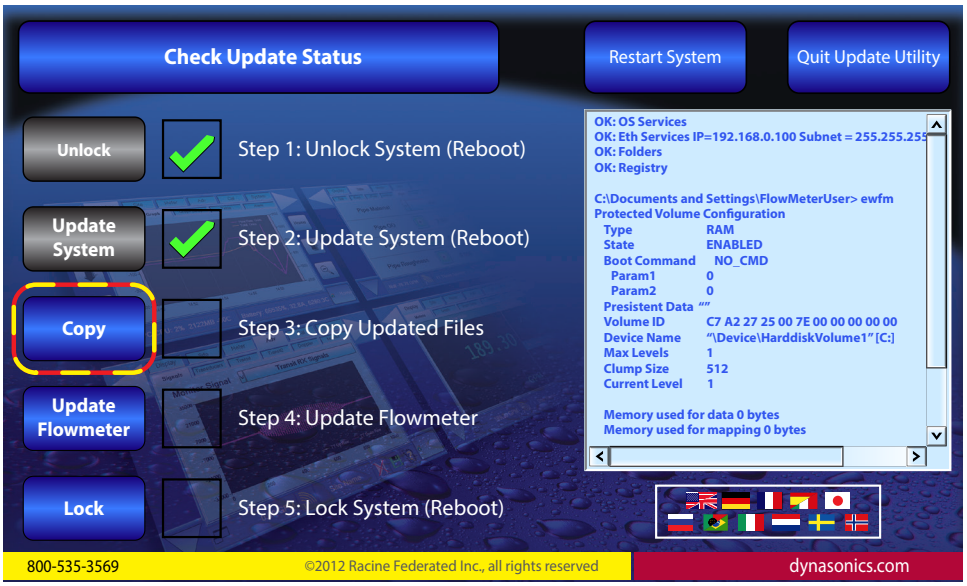
NOTE: If this step was completed in a previous system update the update utility may skip this step and go directly to step 3.



When the update process is complete a green ✓ appears in the *Update System* (Reboot) box. The screen now also indicates Reboot. Remove the **USB Update Drive** and then press the **OK** button.

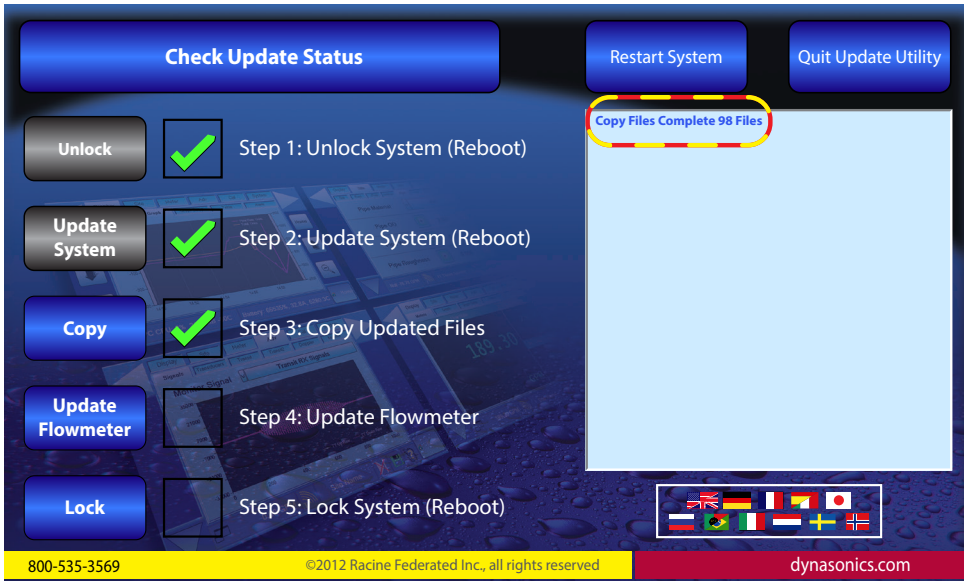


15. When the opening screen reappears, insert the **USB Update Drive**. The *Insert USB Update Drive* button changes to a *Start Updater* button.
16. Press the **Start Updater** button.
17. Press the **Copy** button (Step 3: Copy Updated Files). The text area to the right shows a series of status messages that ends with "Copying Files Complete 98 Files".

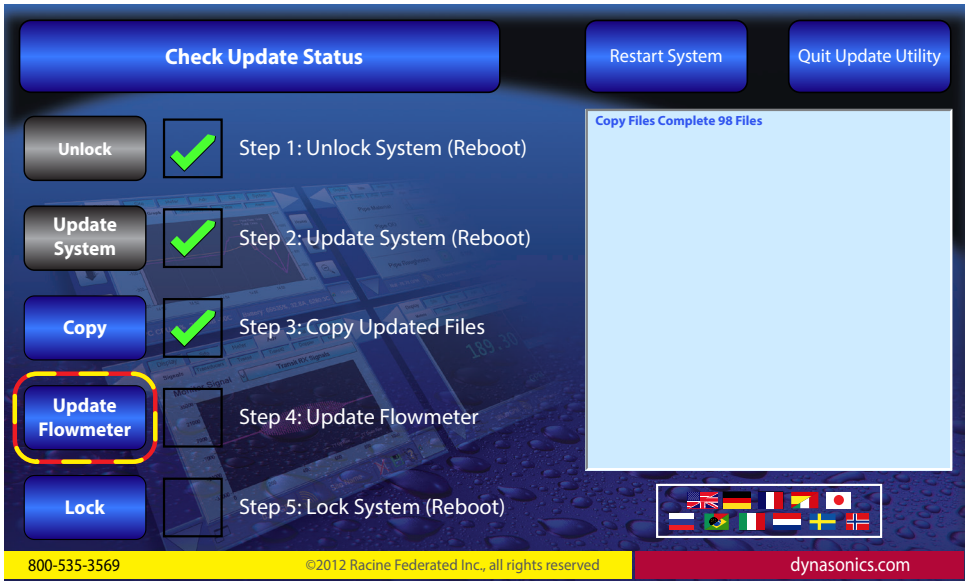


NOTE: If the process hangs-up, press the **Restart System** button which should clear the hang.

NOTE: The number of files copied may vary from 98.



18. Press the **Update Flowmeter** button (Step 4: Update Flowmeter). A short process runs again indicated by text filling the text area.

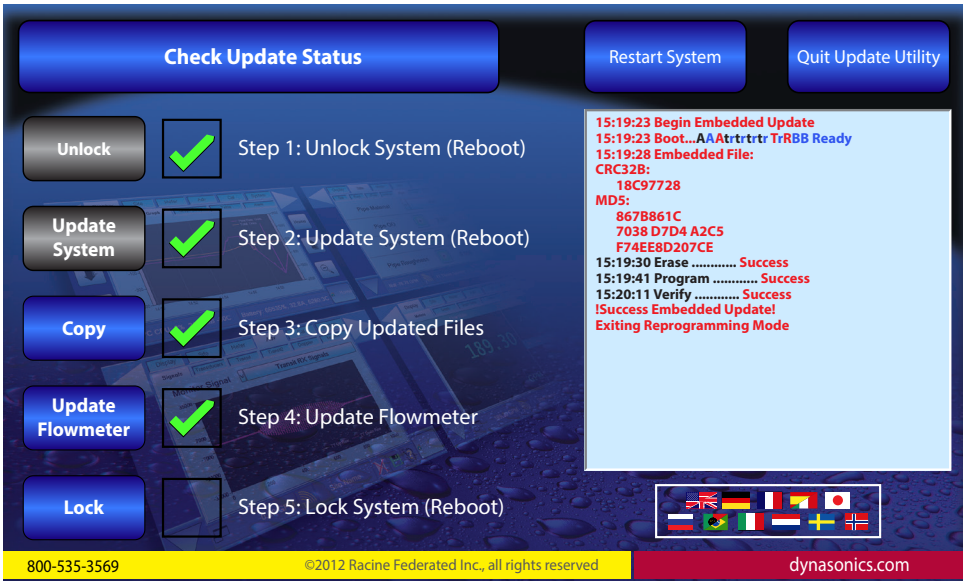


At the end of the Update Flowmeter process the last lines of text should say:

"!Successful Embedded Update!"

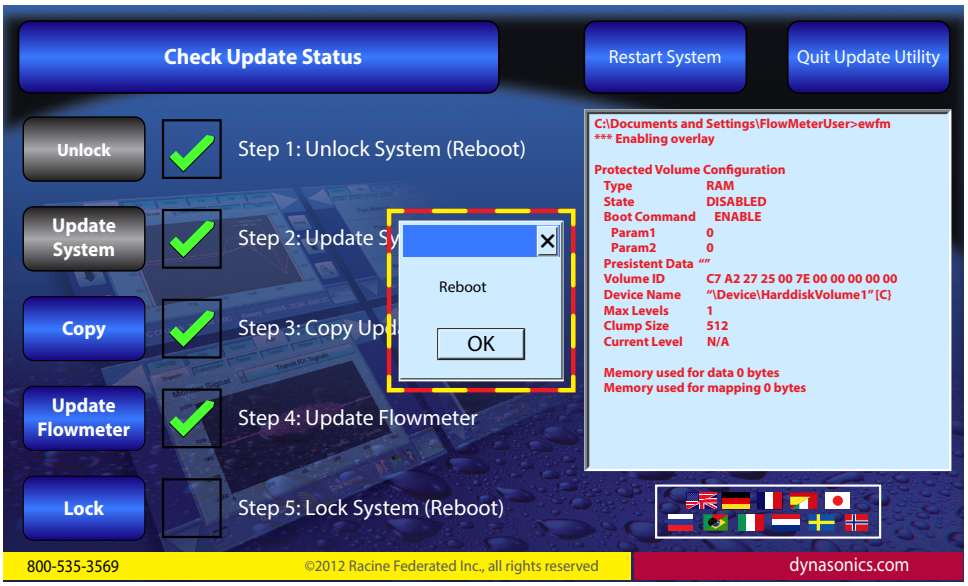
"Exiting Reprogramming Mode"

At this point a green check mark appears in the *Step 4: Update Flowmeter* box.



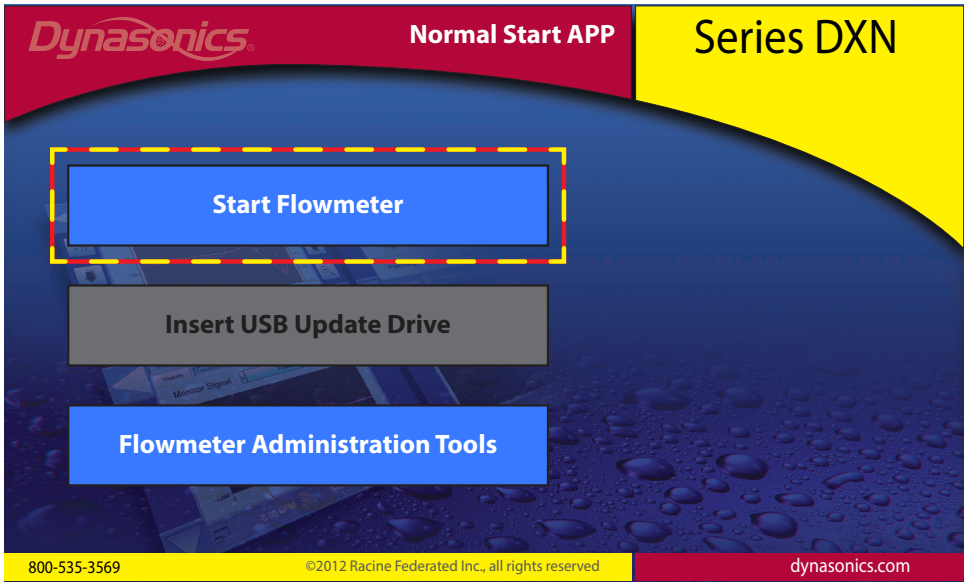
19. Press the ***Lock*** button and then remove the **USB Update Drive**.

    When the *Lock* button is pressed more code appears in the progress screen. When the process is complete a request to *reboot* appears in the middle of the screen.



20. Press the **OK** button to reboot the system.

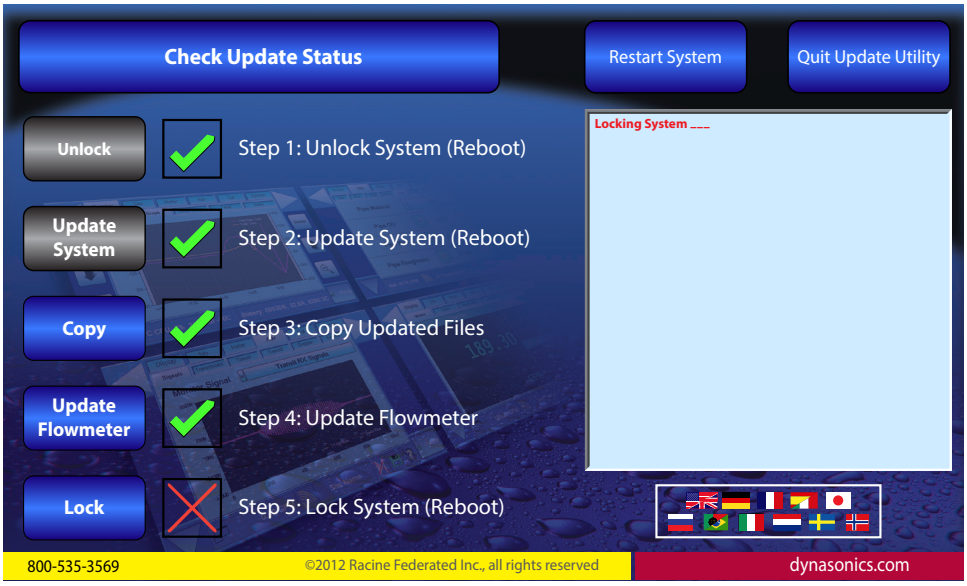
    The DXN reboots ending up at the *Start* screen. This reboot uses a more Window's like process and requires more time for completion. When the reboot is complete the meter should return to the *Start Screen*.



21. Press the **Start Flowmeter** button to begin normal operations.

NOTE: If the USB Update Drive is not removed before the *OK* button is pressed, the unit may lock-up. The error message "Lock EWF Fail" may also appear in the text area. Remove the **USB Update Drive**. When the meter returns to the screen that had the grayed out *Insert USB Update Drive* press the **Start Flow Meter** button to resume normal operations.

The meter may also hang with the text in the text area saying "Locking System _ _ _". There may also be a large red **X** in the *Lock* box instead of a green arrow. If this condition occurs press the **Restart System** button found in the upper right portion of the screen.



NOTE: See below for an additional instructions on clearing a lock-up with a hard reboot.

When the USB Update Drive is removed the DXN may continue on to a system reboot but hang at the *Dynasonics* splash screen.

This condition requires a hard reboot by pressing and holding the **main power button** until the unit turns off. When the power button is pressed again the meter should start normally.

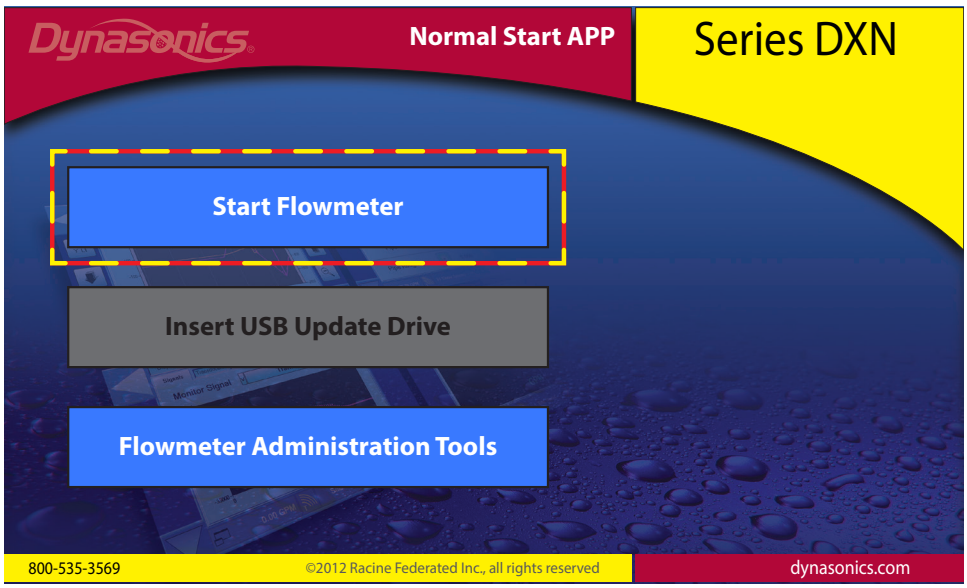
A successful update is verified by noting the revision letter in the upper right hand corner of the *Start* screen. It should match the revision letter noted when the updater zip file was extracted.

QUICK BOOT

It is highly recommended to configure the DXN to use the Quick Boot process as described in the following.

To enable Quick Boot from the main screen select **Update** (*System* ► *Update*) and then press the **Set Up Quick Boot** button.

The application reverts to the *Normal Start APP* screen. Press the **Start Flow Meter** button. The DXN enters a short hibernation process and then shuts down.



On the next power up, the unit starts in Quick Boot mode.

Badger Meter Warranty

DXN Updater

PRODUCTS COVERED

The Badger Meter warranty shall apply to the Dynasonics Flow Meter ("Product").

MATERIALS AND WORKMANSHIP

Badger Meter warrants the Product to be free from defects in materials and workmanship for a period of 12 months from the original purchase date.

PRODUCT RETURNS

Product failures must be proven and verified to the satisfaction of Badger Meter. The Badger Meter obligation hereunder shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any asserted defect within 10 (ten) days after its discovery. If the defect arises and a valid claim is received within the Warranty Period, at its option, Badger Meter will either (1) exchange the Product with a new, used or refurbished Product that is at least functionally equivalent to the original Product, or (2) refund the purchase price of the Product. DO NOT RETURN ANY PRODUCT UNTIL YOU HAVE CALLED THE BADGER METER CUSTOMER SERVICE DEPARTMENT AND OBTAINED A RETURN AUTHORIZATION.

Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing the original Product and reinstalling the repaired or replacement Product. A replacement Product assumes the remaining warranty of the original Product or ninety (90) days from the date of replacement, whichever provides longer coverage.

LIMITS OF LIABILITY

This warranty shall not apply to any Product repaired or altered by any Party other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with Badger Meter instructions. The warranty shall not apply and shall be void with respect to a Product exposed to conditions other than those detailed in applicable technical literature and Installation and Operation Manuals (IOMs) or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration, or other circumstances which are beyond the reasonable control of Badger Meter.

With respect to products not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of title).

Any description of a Product, whether in writing or made orally by Badger Meter or its agents, specifications, samples, models, bulletins, drawings, diagrams, engineering sheets or similar materials used in connection with any Customer's order are for the sole purpose of identifying the Product and shall not be construed as an express warranty. Any suggestions by Badger Meter or its agents regarding use, application or suitability of the Product shall not be construed as an express warranty unless confirmed to be such, in writing, by Badger Meter.

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