

# Service Bulletin

<b>MODEL(S)</b>	TB20, TB30, TB40
<b>PART NUMBER(S)</b>	6430020-( ), 6430030-( ), 6430040-( )
<b>DESCRIPTION</b>	Advanced Lithium-ion Battery
<b>TOPIC</b>	Software Update Version 1.0.1
<b>PURPOSE</b>	Product and Performance Enhancements
<b>RELEASE DATE</b>	May 26, 2020

## APPLICABILITY

This Service Bulletin is applicable to the TBX Series of Advanced Lithium-ion Batteries, part numbers 6430020-( ), 6430030-( ), and 6430040-( ), manufactured by Mid-Continent Instrument Co., Inc. (dba True Blue Power and Mid-Continent Instruments and Avionics). These updates are to be performed ONLY by authorized personnel per the instructions as listed in this Service Bulletin. Units with this software upgrade are available for sales from the manufacturer.

## PURPOSE

The TBX software version 1.0.1 represents improvements to product functionality.

## EFFECTIVITY: RECOMMENDED

True Blue Power is recommending that all TB20, TB30 and TB40 units in the field be updated to Software Version 1.0.1 in order to take advantage of added features, enhancements and resolutions that improve the function and performance of the product.

Following the release date of this Service Bulletin, all TB20, TB30 and TB40 units manufactured or serviced by True Blue Power shall be installed with Software Version 1.0.1 or later.

## DESCRIPTION

The following list describes the added features, enhancements and resolutions incorporated in Software Version 1.0.1.

### ADDED FEATURES

1. Data logging feature now available that captures fault, failure, and performance events. Log file is stored internally and can be downloaded to a flash drive via the USB access port.
2. Push-To-Test feature temporarily sets all discrete outputs to active.
3. Custom configuration settings can be downloaded to verify values and software version.

### ENHANCEMENTS

1. Implement an automatic 'soft-start' charge current limit after the battery recovers from a full discharge, prior to enabling the programmed charge current limit or unlimited charge current.
2. Loadable configuration parameters file changed from binary to human readable format.
3. Added permanent fail condition if battery reaches extremely high internal temperatures.

### RESOLUTIONS

1. Ensure battery now enters sleep mode under all conditions when no charge or discharge current is present and battery is in a cold environment
2. SOC (State of Charge) data is maintained after exiting Control Mode.
3. Accept a wider variety of off-the-shelf USB flash drives for interfacing with the battery's USB Data Exchange Access port. (must be USB 2.0 compatible)
4. Allows battery to accept normal charge current if setting idle for a period after being fully discharged.

### **ESTIMATED MANPOWER**

Software can be downloaded and updated on fielded units in approximately 5 to 10 minutes.

### **WEIGHT AND BALANCE**

No change

### **ELECTRICAL LOAD DATA**

No change

### **CERTIFICATION**

This Service Bulletin represents a minor change to the previously approved Technical Standard Orders Authorization for the TBX series of Advanced Lithium-ion Batteries. Any changes to software have been completed in accordance with approved developmental and quality processes per the guidelines of RTCA document DO-178C.

### **OTHER PUBLICATIONS AFFECTED**

True Blue Power Installation Manual and Operating Instructions, part numbers 9019286 (for TB20), 9019287 (for TB30) and 9019288 (for TB40), Revision C or later, includes information associated with this Service Bulletin.

## ACCOMPLISHMENT INSTRUCTIONS

The action required by this Service Bulletin can be accomplished by returning the unit to True Blue Power or by performing the instructions as listed in this section.

### **If returning the TB20, TB30 or TB40 unit to True Blue Power:**

Call True Blue Power sales department for a Return Material Authorization (RMA) at 316-630-0101.

Return address:                      True Blue Power  
   9400 E. 34<sup>th</sup> Street N.  
   Wichita, KS 67226

### **If performing this update in the field:**

1. Download the approved software update file from <https://www.truebluepowerusa.com/software-updates/> to the root directory of a standard FAT formatted USB flash drive. The file name must remain "*update.mu#*".
2. Follow the instructions as listed on the website or Section 5 of the Install Manual.

#### Notes:

- Per the referenced instructions, the software update file must be loaded TWICE.
- Recharge the battery to 28.8VDC after performing the update in order to reset the SOC indication.

### **To verify software version (optional):**

1. Load the *getcfg.cmd* file to the root directory of a standard FAT formatted USB flash drive.
2. Follow the same instructions for updating the software as listed on the website or Section 5 of the Install Manual.  
Note: This process does not have to be completed twice.
3. The battery will write a standard text file, *installer.txt*, on the USB flash drive. It can be viewed with any text editor and will display the software version as well as the currently loaded custom configuration parameters.