

# Comba Battery Backup Unit

CPBBUV1-48055-UL

## V8E01 Firmware Update Guide

Version: 1.1

**THIS FIRMWARE UPDATE GUIDE IS FOR VERSION V8E01.**

### **IMPORTANT! READ BELOW**

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**This manual is strictly for the purpose of updating firmware and assumes the “Public Safety BUB QIG 1-1-2” manual has been read. All steps below must be taken to ensure a clean upgrade from previous firmware. Not following the steps below will cause faulty alarms and batteries to improperly drain!**

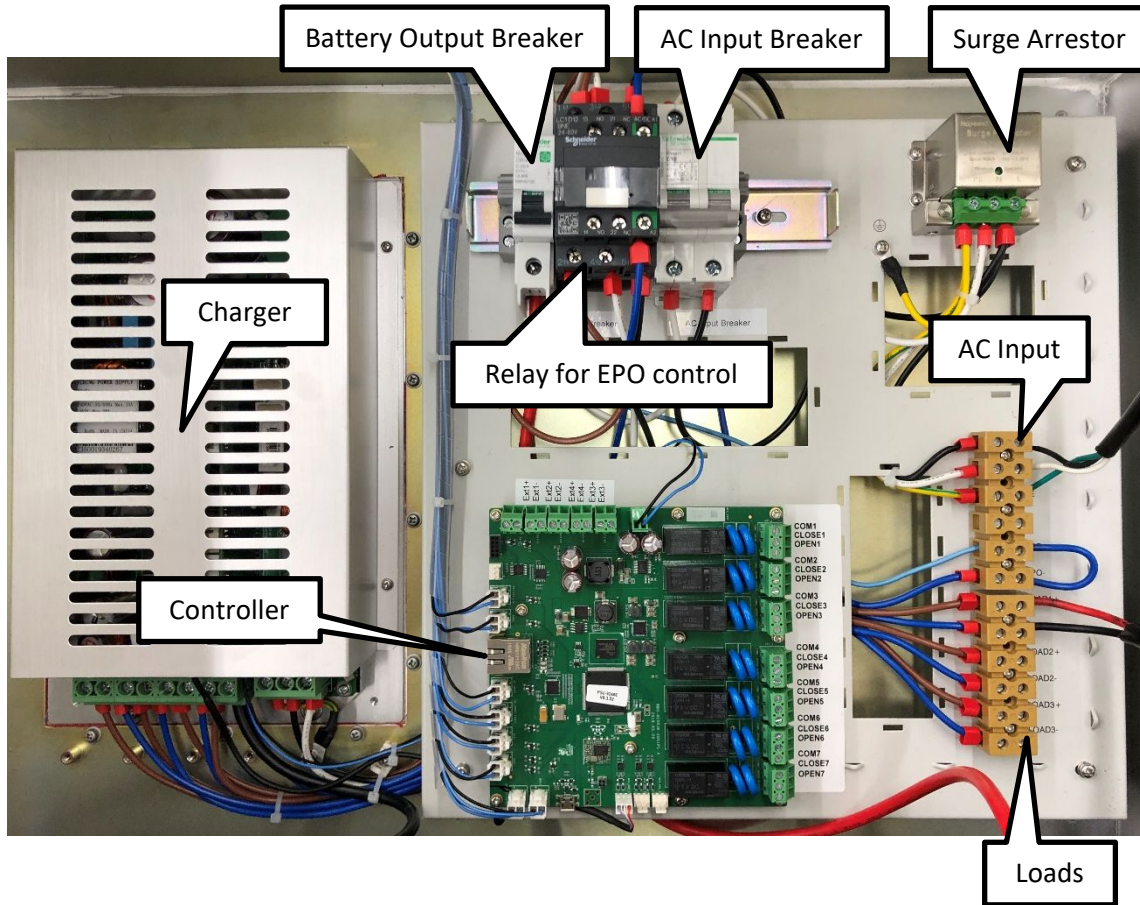
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**COMBA TECHNICAL SUPPORT: (408) 526-0180, Ext 3**

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**System Diagram:**



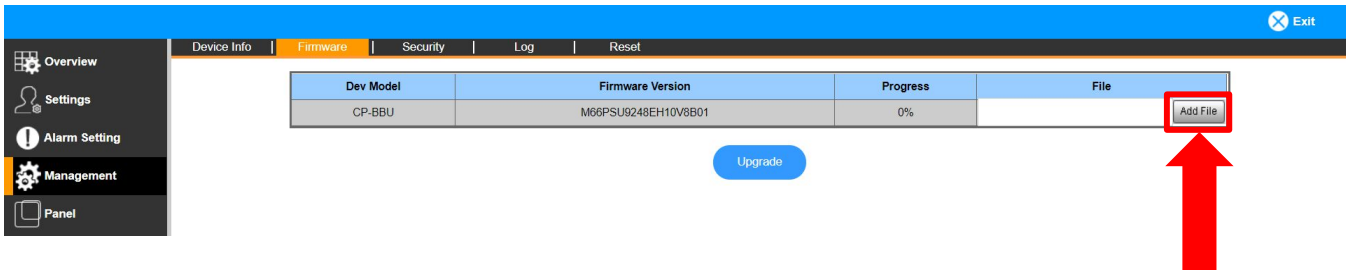
**Before Starting:**

***Before upgrading, check the batteries and chassis for any damage. If there are any signs of battery acid, cracked plastic around the batteries, or other deformities, contact Comba technical support for assistance.***

***Check the voltage of the batteries before upgrading. All batteries should be above 12.5V. If the voltage of any battery is below 12.5V,  $\pm 0.3V$ , contact Comba technical support for assistance.***

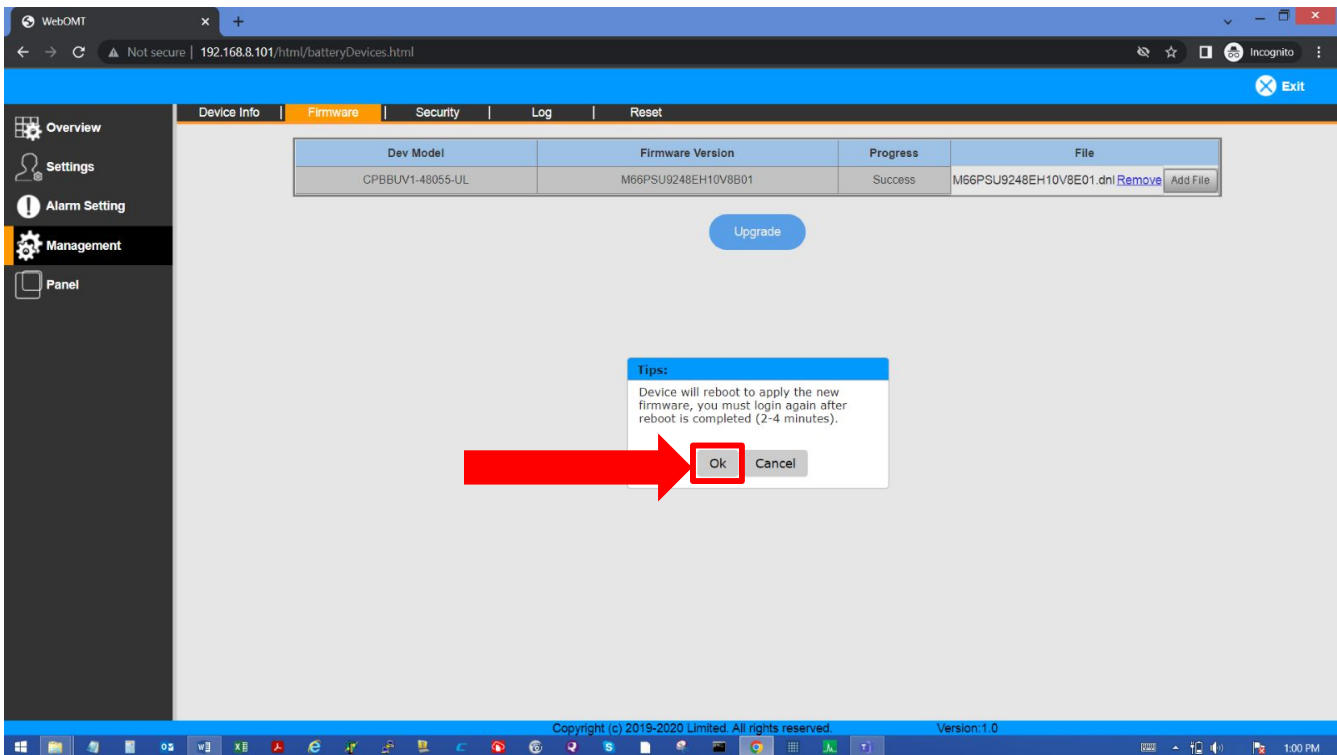
## Firmware V8E01 Update:

- Click [Management] -> {Firmware}
  - Add firmware by clicking “Add File” button.
    - Firmware must be extracted from zip file. File type is “.dnl”.
  - Click “Upgrade”.



BBU will need to reboot after firmware has been upgraded.

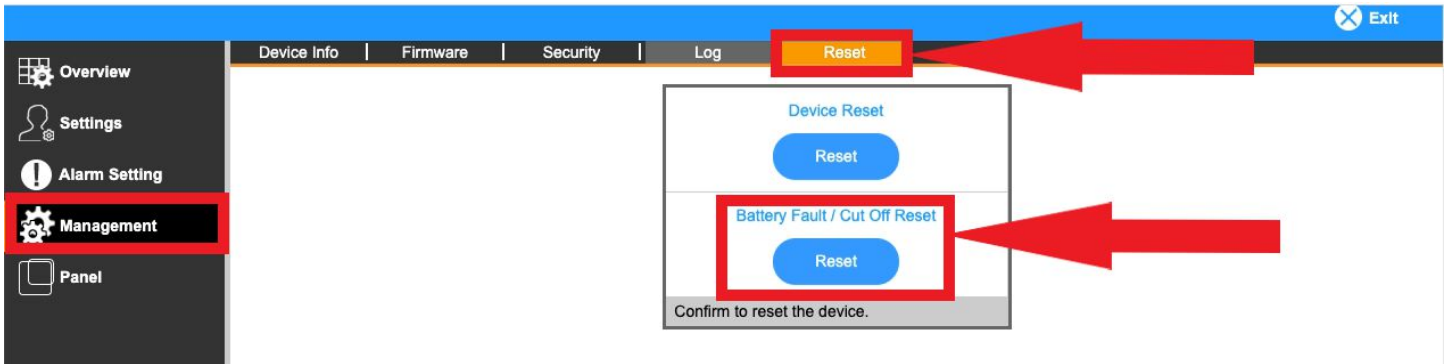
- Click “Ok” in the “Tips” popup window
  - BBU will power cycle after clicking



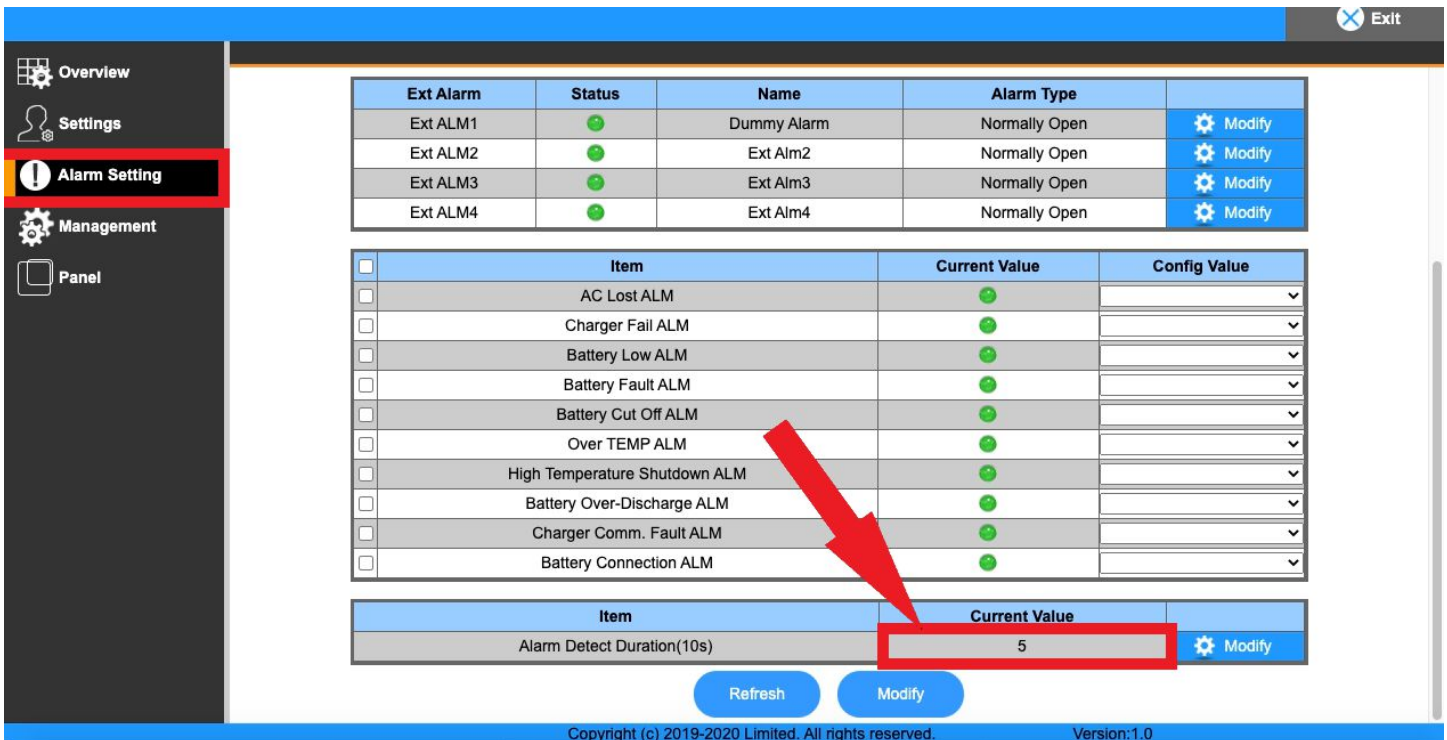
After firmware on the BBU is updated to V8E01 the following steps are needed to be performed to ensure the unit functions properly.

After the BBU has restarted:

- Click [Management] -> {Reset} -> Battery Fault/ Cut off Reset



- Click [Alarm Settings] and adjust “Alarm Detection Duration” is 3 or greater. V8E01 firmware no longer supports shorter durations.



- Click [Settings] and ensure the correct battery type of “Lead-acid battery” is selected.

Item	Current Value	Config Value
Battery Type	Lead-acid Battery	
Low Voltage TH	47.3V	
Cut Off TH	44.0V	
Battery Connection Detection	Once per day	
Panel NO.	0	

- Click [Overview] and ensure no alarms are present and “Battery Status” is “Cycle” or “Float” Charging.
  - Power cycle BBU if alarms are present.

This is firmware version M66PSU9248EH10V8E01  
Please always update to the latest firmware!  
Check [www.combausa.com](http://www.combausa.com) or contact Comba Technical Support at 1-866-802-7961 Ext. 4

Item	Current Value
System Status	Normal
Output Voltage	53.4V
Charging Current	0.1A
Load Current	0.1A
Battery Status	Floating Charging
Battery Voltage	53.5V
Overall ALM	●
AC Lost ALM	●
Charger Fail ALM	●
Battery Low ALM	●
Battery Over-Discharge ALM	●
Battery Connection ALM	●
Battery Fault ALM	●
Battery Cut Off ALM	●
High Temperature Shutdown ALM	●
Over TEMP ALM	●
Charger Comm. Fault ALM	●
Ext ALM1	●

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## Appendix - Alarms:

The following table shows the alarms that may be present in the WEBOMT software and what triggers them. The alarm configuration for required alarms (and LED lights) is configurable to include any of the following:

Alarms	Causes
Overall	Any of alarms trigger
AC Lost	Triggers when AC is lost and on system shutdown
Charger Fail	Triggers when the charger module fails (Output Voltage High, Output Voltage Low, Current High, Temperature High, Circuit Short Protection Mode)
Battery Low	Triggers when battery voltage is lower than the Low Voltage TH threshold. May also trigger when batteries are in cut off status due to high temperature, bad batteries, or full depletion.  To recover: Recharge batteries or contact Comba technical support for assistance if batteries are in cut off status.
Over TEMP	Triggers when the temperature of the BBU is higher than the threshold
Battery Over-Discharge	Triggers when the charger fails to charge the battery (Charger will still try to charge even when battery voltage is lower than 40V at first, but if it still fails after the attempts, system will stop trying to charge anymore and trigger the alarm)

## Appendix A – Firmware Version Control:

FW Version	Release Notes
M66PSU9248EH10V8E01 (Latest Version)	1. Fixed false alarms generated by internal cycle clock
M66PSU9248EH10V8B01	1. Fixed battery cut off settings – will give 48 hour notice before removing batteries from service 2. Added end-of-life method for batteries
M66PSU9248EH10V8901	1. Updated charging method 2. Added “Cut Off” battery status 3. Added reset methods in WEBOMT 4. Removed user control of voltage and max current
M66PSU9248EH10V8801	1. Bug Fix: Alarms from Slave Modules will be saved during power lost 2. Bug Fix: Alarms will be kept status during 24H reboot 3. Added 0x0A4A Load Detection Current Threshold 0x0A49 Battery Detection Delta Voltage 0x0A44 Battery Detection Current Threshold in WEB DEBUG Mode 4. Optimized Battery Detection, detects battery status with and without load 5. On system bootup, when Charging Status = No battery, will conclude "batteries not connected"
M66PSU9248EH10V8705	1: Removed all Battery Detection options except “Every 24 hours”
M66PSU9248EH10V8601	<u>Improvements</u> 1.Added ‘Communication Fault Alarm’ which monitors the communication link between the BBU controller and the Charger Module. 2.Separated Battery Detection Alarm from Battery Low Alarm, the Battery Detection Alarm can be individually triggered. <u>Bug Fixes</u> 1.Minor bugs fixed
M66PSU9248EH10V8404	<u>Improvements</u> 1. Added ‘Battery Connection Status’ Alarm <u>Bug Fixes</u> 1. Fixed daily alarm issue from 8302
M66PSU9248EH10V8302	Known bug: Each day, all 7 alarms on unit will “test” and be sent to FACP