AT10.1 / AT30 Series Battery Charger
FIRMWARE RELEASE NOTES

This document is a historical archive of major improvements to the control firmware for **AT10.1** & **AT30 Series** microprocessor-controlled float battery chargers. AT10.1 & AT30 battery chargers, and the firmware stored on the unit's Main Control Board (A1), are manufactured and controlled by HindlePower, Inc. - Easton, PA (www.hindlepowerinc.com).

Firmware for legacy AT10 product, shipped prior to 05/23/2001, is no longer under service by the manufacturer. Battery chargers of this vintage are upgradable to the current (07/2024) Main Control Board (A1), and therefore latest AT10.1 firmware.

To upgrade any ATevo model to the ***latest*** revision of the battery charger firmware, you must physically replace the Main Control Board (A1). Please contact your sales representative, and request ordering part number "**EN5002-00.**". New firmware will be supplied on the control board, along with user instructions (**JD5012-00**).

```
; CE5001.asm source file for AT Series Control Program
;
; Version 4.00 - Heavily modified to support AT10.1 and AT30
;
;
;
; Started 05/23/2001 wkb
;
; VERSION CONTROL
;----------------
; * Software files are controlled by a version number, rather than a
;   revision level. The pretest version is always '--.' The version number is
;   part of the subdirectory name containing the files.
; * Prerelease versions use lower case letters with an optional
;   single digit, e.g., a1. Released versions start with version 1.00.
;   Alpha test versions are 0.nn.
; * Filenames are limited to the 8.3 format.
; * Do not change filenames between versions.
; * Each successive version is contained within a single subdirectory,
;   with the name format 'CE5001vnnn,' where nnn is the version number, read as n.nn.
;   All files are contained in the version subdirectory.
;
;**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**##
;**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**##
; * Update the version number in header.asm under 'Useful Constants.' The version number
;   is displayed for 2 seconds whenever the lamp test key is released.
;**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**##
;**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**###**##
;
; * The microntroller (or the board) must be marked with the version number.
;
```


1075 Saint John Street • Easton, PA 18042-6661
P: 610.330.9000 • **F:** 610.330.8510 • **W:** hindlepowerinc.com

JD0067-01

```
; REVISION RECORD:
;-----------------
;          |      |     | Changes  | Shipping |
; Date     |  Ver | By  | Started  | Started  |Notes
;----------+------+-----+----------+----------+-----------------------------------------------
; 05/23/01 | ---- | wkb | 05/23/01 | 00/00/00 | Pretest version
;----------+------+-----+----------+----------+-----------------------------------------------
; 08/22/01 |   a  | wkb |  ------  |  ------  | Release first test version
;----------+------+-----+----------+----------+-----------------------------------------------
; 09/13/01 |   b  | wkb | 09/04/01 |          | Added chgr rating procedure to Initial.asm
;----------+------+-----+----------+----------+-----------------------------------------------
; 09/14/01 |   c  | wkb | 09/14/01 |          | Added hWriteDigit, hWriteIndicators
;----------+------+-----+----------+----------+-----------------------------------------------
; 09/24/01 |   d  | wkb | 09/24/01 |          | Rewrote mputee as sub; fixed calls in
;          |      |     |          |          | hNewRating
;----------+------+-----+----------+----------+-----------------------------------------------
; 09/28/01 |   d  | wkb |          |          | Restored initialize of hAlphaMaxL/H
;----------+------+-----+----------+----------+-----------------------------------------------
; 10/26/01 |   e  | wkb | 10/26/01 |          | Includes all ongoing changes to ver. d
;----------+------+-----+----------+----------+-----------------------------------------------
; 11/02/01 | 0.10 | wkb | 11/02/01 |          | First beta test version
;----------+------+-----+----------+----------+-----------------------------------------------
; 11/06/01 | 0.11 | wkb | 11/06/01 |          | Set display brightness; changes to
;          |      |     |          |          | hCalcAlpha, Alarms
;----------+------+-----+----------+----------+-----------------------------------------------
; 11/12/01 | 0.12 | wkb | 11/12/01 |          |
;----------+------+-----+----------+----------+-----------------------------------------------
; 11/21/01 | 1.00 | wkb | 11/19/01 |          | Release for beta test
;----------+------+-----+----------+----------+-----------------------------------------------
; 11/26/01 | 1.01 | wkb | 11/26/01 |          | Revise tests for alpha max & min limits
;          |      |     |          |          | Change meter calib; hConvData
;----------+------+-----+----------+----------+-----------------------------------------------
; 11/28/01 | 1.02 | wkb | 11/28/01 |          | Tune PID for greater stability w/o battery
;----------+------+-----+----------+----------+-----------------------------------------------
; 11/29/01 | 1.10 | wkb | 11/29/01 |          | * Moved PID parameters to header for
;          |      |     |          |          |   convenience, increased scroll rate in edit;
;          |      |     |          |          | * Reduced int disable time in hPut_EE,
;          |      |     |          |          |   hPut_EEKeys and hEndEdit;
;----------+------+-----+----------+----------+-----------------------------------------------
; 12/03/01 | 1.20 | wkb | 12/03/01 |          | * Change voltmeter adjustment range
;          |      |     |          |          |   from 10 to 20;
;          |      |     |          |          | * Clear bSoftstart if overcurrent in hTestIdc
; 12/04/01 | 1.21 | wkb | 12/04/01 | 12/04/01 | * Add instructions to Startup to ensure that
;          |      |     |          |          |   DRV is low before calling Initial.
; 12/07/01 | 1.22 | wkb | 12/05/01 | 12/07/01 | * Raise IBAR trigger point (in hardware) to
;          |      |     |          |          |   133mV from 106mV; change proportional
;          |      |     |          |          |   coefficient to 1/4 from 3/8; change Idc
;          |      |     |          |          |   digital filter coefficient to 4 from 16.
;----------+------+-----+----------+----------+-----------------------------------------------
```


1075 Saint John Street • Easton, PA 18042-6661

P: 610.330.9000 • **F:** 610.330.8510 • **W:** hindlepowerinc.com

```
;----------+------+-----+----------+----------+-----------------------------------------------
; 12/11/01 | 1.30 | wkb | 12/06/01 |          | NEANDERTHAL - NEVER IMPLEMENTED
;          |      |     |          |          | * Added output short circuit protection (Zip
;          |      |     |          |          |   flag)
;          |      |     |          |          | * Changed run interval for alarms and errors
;          |      |     |          |          |   from 4 seconds to 1/2 second for each
;          |      |     |          |          |   module
;          |      |     |          |          | * Added Vint override for voltage regulation
;          |      |     |          |          |   in case of startup with dc bkr open
;          |      |     |          |          | * Refined test values for ac failure (again)
;          |      |     |          |          | * Added Vint crowbar in hConvertData1A
;          |      |     |          |          | * Fixed erroneous relay transfer in hGetKey
;----------+------+-----+----------+----------+-----------------------------------------------
; 12/13/01 | 1.23 | wkb | 12/07/01 | 12/13/01 | * In Initial, Keyboard & Alarms, fix bug that
;          |      |     |          |          |   allowed aux relays to toggle during calib.
;          |      |     |          |          | * Add Voltage crowbar in Arith.
;          |      |     |          |          | * In Alarms, decrease ac failure test values.
;----------+------+-----+----------+----------+-----------------------------------------------
; 01/28/02 | 1.24 | twh | 01/28/02 | 01/31/02 | * Fixed display blanking issue when Vcc
;          |      |     |          |          |   recovers from a low voltage.
;----------+------+-----+----------+----------+-----------------------------------------------
; 03/28/02 | 1.25 | wkb | 03/28/02 | 04/15/02 | * Fix logic bug in Error 10 calculation in
;          |      |     |          |          |   Alarms.asm. (2) boards shipped to Gary
;          |      |     |          |          |   Bowler at site in Duluth, MN 03/28/02.
;----------+------+-----+----------+----------+-----------------------------------------------
; 03/12/02 | 2.00 | wkb | 03/12/02 | 09/03/02 | MADE FROM v1.25 (NOT 1.30)
;          |      |     |          |          | * Add separate multiplier for calculating
;          |      |     |          |          |   Vint values (hVM_MulInt L/H)
;          |      |     |          |          | * Add temperature compensation via external
;          |      |     |          |          |   thermistor, with auto detection, user
;          |      |     |          |          |   choice of battery type
;----------+------+-----+----------+----------+-----------------------------------------------
; 09/05/02 | 2.01 | twh | 09/05/02 | 09/05/02 | Fixed softstart issue for group II.
;----------+------+-----+----------+----------+-----------------------------------------------
; 10/31/02 | 2.02 | wkb | 10/31/02 | 10/31/02 | * In Keyboard.asm, changed hTestLimit to fix
;          |      |     |          |          |   bug in current limit adjustment (group 2).
;          |      |     |          |          |
;----------+------+-----+----------+----------+-----------------------------------------------
; 04/17/03 | 2.03 | twh | 04/17/03 | 04/21/03 | * Fixed A02 messaging problem - watchdog would
;          |      |     |          |          |   reset micro.
;          |      |     |          |          | * Fixed random E08 - problem was with tight
;          |      |     |          |          |   tolerance detecting no probe.
;----------+------+-----+----------+----------+-----------------------------------------------
; 04/30/03 | 2.04 | twh | 04/30/03 | 05/05/03 | * Added a 1 second start delay to allow voltage
;          |      |     |          |          |   to settle before reading R2.
;----------+------+-----+----------+----------+-----------------------------------------------
; 11/04/02 | 3.00 | twh | 11/04/02 |          | * Added support for communications option.
;          |      |     |          |          | * Added code to store actual temperature.
;----------+------+-----+----------+----------+-----------------------------------------------
; 07/29/03 | 4.00 | twh | 07/29/03 |          | * Supporting new processor EN5002-00 Rev 4
;          |      |     |          |          | * Will NOT support earilier Revs of EN5002 !!!!!
;          |      |     |          |          | * Support for AT30
;          |      |     |          |          | * Major changes to all files to support new processor
;          |      |     |          |          |   and AT30
;----------+------+-----+----------+----------+-----------------------------------------------
; 03/22/04 | 4.01 | twh | 03/22/04 |          | * Supporting board EN5002-00 Rev 5.  Changed
;          |      |     |          |          |   SEL_DISPLAY line.
;          |      |     |          |          | * ZeroX loss detection logic.  Turns off SCR
;----------+------+-----+----------+----------+-----------------------------------------------
```


1075 Saint John Street • Easton, PA 18042-6661

P: 610.330.9000 • **F:** 610.330.8510 • **W:** hindlepowerinc.com

04/23/04	4.02	twh	04/23/04	04/26/04	* Fixed unfiltered slow oscillation problem (search 22030430)
05/21/04	4.03	twh	05/21/04	05/28/04	* Supporting AT30 communications option. * Fixed reading battery temperature.
06/01/04	5.00	twh	06/01/04	06/14/04	* Now supports both AT10 and AT30. * Fixed limits for edit in the table. Some values were off by one. Ex. 20.1 should have gone to 20.0. * Up key on powerup resets to factory values
08/09/04	5.02	twh	08/09/04	08/10/04	* Supports SCR thermostats. * Added CAR for E08 Defective battery temperature probe
08/18/04	5.03	twh	08/18/04	08/18/04	* Removed the timer function from softstart. Softstart ends if it gets to voltage setpoint or current limit.
03/28/05	5.10	twh	03/28/05		* Removed the timer function from softstart. 5.03. * Error codes have 30 second delay for CAR. * Production quick testing using pTest1. No delay for alarm relays. Jumper J15-1 to J15-3. * Simplified E07 detection.
	5.11				* DEMO Version for Demo Box
08/09/05	5.12	twh	08/09/05		* Fixed definition address of bZeroX
07/20/05	6.00	twh	07/20/05		* FLS (Forced Load Share)
03/28/06	6.20	twh	03/28/06		* Expanded voltage ranges for edit table * 50/60 Hz auto select
05/30/06	6.21	twh	05/30/06		* Added debounce for ZeroX interrupt
06/02/06	6.22	twh	06/02/06		* Changed short circuit detection threshold
06/28/06	6.23	twh	06/28/06		* Enhanced the performance of force load share
07/18/06	6.24	twh	07/18/06		* Changed 48 volt rating from 2 decimal places to 1 decimal place (48.0). This fixes instability problem. Changes does not require communication board changes.
09/14/06	6.25	twh	09/14/06		* Fixed missing code for E09
09/14/06	6.26	twh	09/14/06		* Changed 24 volt rating from 2 decimal places to 1 decimal place (24.0). This fixes instability problem. Changes does not require communication board changes.
12/06/06	6.27	wkb	12/06/06		* Expanded A/D filter from 8 to 16 samples to reduce voltage drift on 24Vdc. * Changed voltage drop detection on 12, 24Vdc units - now skip if in softstart.

1075 Saint John Street • Easton, PA 18042-6661

P: 610.330.9000 • **F:** 610.330.8510 • **W:** hindlepowerinc.com

```
;----------+------+-----+----------+----------+-----------------------------------------------
; 09/27/07 | 6.28 | rdb | 09/27/07 |          | * Added strobe for external watchdog on new
;          |      |     |          |          |   new REV7 EN5002 prototype
;----------+------+-----+----------+----------+-----------------------------------------------
; 10/19/07 | 6.29 | rdb | 10/19/07 |          | * Fixed bug introduced in version 6.28 that
;          |      |     |          |          |   disabled SCR_EN (AT30 wouldn't turn on SCRs)
;----------+------+-----+----------+----------+-----------------------------------------------
; 12/04/07 | 6.30 | rdb | 12/04/07 |          | * Changed Vext MULT to account for Low Level
;          |      |     |          |          |   Detect Circuit input impedance
;----------+------+-----+----------+----------+-----------------------------------------------
; 02/05/08 | 6.31 | rdb | 02/06/08 | 02/11/08 | * Fixed timing contention on relay buffer,
;          |      |     |          |          |   added support for new SPI AUX relay interface,
;          |      |     |          |          |   changed (raised) LVDC maximum setpoint
;----------+------+-----+----------+----------+-----------------------------------------------
; 04/03/08 | 6.32 | rdb | 04/03/08 | 04/10/08 | * Changed some equalize and float set points
;          |      |     |          |          |   limits to meet NEMA specifications
;----------+------+-----+----------+----------+-----------------------------------------------
; 04/28/08 | 6.33 | rdb | 04/28/08 |          | * fixed Bug in load share code when AC power
;          |      |     |          |          |   turned off on master, slave sometimes dropped
;          |      |     |          |          |   DC output (current limit value corrupted)
;----------+------+-----+----------+----------+-----------------------------------------------
; 04/30/08 | 6.34 | rdb | 04/30/08 | 05/28/08 | * Improved voltage response (reduced drop out)
;          |      |     |          |          |   when in load share and master AC cycled or
;          |      |     |          |          |   step load change occurs (with no battery)
;----------+------+-----+----------+----------+-----------------------------------------------
; 05/29/08 | 6.35 | rdb | 05/20/08 | 07/01/08 | * added support for latching relays/alarms
;          |      |     |          |          | * reduced AC FAIL thresholds (alarm/inhibit)
;          |      |     |          |          |   from 87.5%/75% to 75%/65% per wkb request
;          |      |     |          |          | * added individual timers for each AUX alarm
;----------+------+-----+----------+----------+-----------------------------------------------
; 08/01/08 | 6.36 | rdb | 08/04/08 | 08/04/08 | * added patch to check if set points stored
;          |      |     |          |          |   in EEPROM are out of range, if they are
;          |      |     |          |          |   the patch writes the chargers default
;          |      |     |          |          |   settings to EEPROM
;----------+------+-----+----------+----------+-----------------------------------------------
; 08/22/08 | 6.37 | rdb | 08/22/08 | 08/22/08 | * New DEMO Box code version
;          | DEMO |     |          |          | * Version compiled from v6.36 source code
;          | ONLY |     |          |          |   with DEMO compile switch set to TRUE
;----------+------+-----+----------+----------+-----------------------------------------------
; 09/11/08 | 6.38 | rdb | 09/11/08 | 09/11/08 | * Fix for DC spike on short duration
;          |      |     |          | (RusElec)|   VAC outage
;          |      |     |          |          |
;----------+------+-----+----------+----------+-----------------------------------------------
; 10/01/08 | 6.39 | rdb | 09/01/08 | 10/27/08 | * Enhancements added to protect EEPROM
;          |      |     |          |          |   and detect EEPROM corruptions
;          |      |     |          |          |   (see AT_EE_revisions.doc for all revisions)
;----------+------+-----+----------+----------+-----------------------------------------------
; 11/01/08 | 6.40 | rdb | 11/01/08 | 12/xx/08 | * Fixed bug in comm.asm that set wrong bit
;          |      |     |          |          |   in EEPROM when equalize mode changed
;          |      |     |          |          |
;----------+------+-----+----------+----------+-----------------------------------------------
; 11/01/08 | 6.41 | rdb | 12/10/08 | 12/10/08 | * SPECIAL FOR PRATT & WHITNEY
;          |      |     |          |          |   This is not a production release.  v6.41 has
;          |      |     |          |          |   a more aggressive KPropMul control loop
;          |      |     |          |          |   constant that gets switched in when
;          |      |     |          |          |   (Vext - Vset) > 2.0 volts
;----------+------+-----+----------+----------+-----------------------------------------------
```


1075 Saint John Street • Easton, PA 18042-6661

P: 610.330.9000 • **F:** 610.330.8510 • **W:** hindlepowerinc.com

```
;----------+------+-----+----------+----------+-----------------------------------------------
; 02/17/09 | 6.42 | jab | 02/17/09 | 02/XX/09 | * Reintroduced DEMO switch on 50A shunt for Demo Box
;          |      |     |          |          | * Added test in hTestIdc to keep Slave in Current Limit
;          |      |     |          |          |   at low CL values.  This prevents the Slave from
;          |      |     |          |          |   causing the battery voltage to creep with no load on
;          |      |     |          |          |   battery
;----------+------+-----+----------+----------+-----------------------------------------------
; 03/04/09 | 6.43 | jab | 03/02/09 | 03/XX/09 | * Added check in hSlvILoadSet to prevent Non zero
;          |      |     |          |          |   Slave CL when Master and Slave are equal and zero
;          |      |     |          |          |   (Max Equalize problem)
;          |      |     |          |          | * Added patch (not implemented) to fix Slave that is
;          |      |     |          |          |   powered before cable connected thinks it is Master
;----------+------+-----+----------+----------+-----------------------------------------------
; 04/07/09 | 6.44 | jab | 03/20/09 | 04/08/09 | * Added check in hTestIdc to terminate softstart
;          |      |     |          |          |   when Idc reaches 6% of Ilimit.  This is for
;          |      |     |          |          |   generator startup, prevent large load step when
;          |      |     |          |          |   output voltage hits battery voltage on softstart
;          |      |     |          |          |   BETA tested at Frontier Technology
;----------+------+-----+----------+----------+-----------------------------------------------
; 03/04/09 | 6.45 | rdb | 07/01/09 | 03/XX/09 | * Built from ver 6.43
;          |      |     |          |          | * Fixed bug that prevented ErrCode 2 (HVDC shutdown)
;          |      |     |          |          |   from displaying (not sent in protocols either)
;          |      |     |          |          | * Fixed bug in load share
;          |      |     |          |          |   where Vset set point sent to slave instead of Vfloat
;----------+------+-----+----------+----------+-----------------------------------------------
; 04/27/10 | 6.46 | rdb | 04/17/10 | 05/XX/10 | * Built from ver 6.45
;          |      |     |          |          | * Fixed voltage creep that can happen when in loadshare
;          |      |     |          |          |   due to slave Vset equal to VeqMAX. (now Vset + 3%)
;          |      |     |          |          | * Changed "freeze alpha" qualifier to Im < Is/4 instead
;          |      |     |          |          |   of Im < Is to speed up over voltage response
;          |      |     |          |          | * Implemented method to send float/equalize status in LS
;          |      |     |          |          | * Slave status LEDs now correctly indicate equalize mode
;          |      |     |          |          | * CFA (relay) now delayed (90 sec) in slave during
;          |      |     |          |          |   transistion to equalize mode
;          |      |     |          |          | * CFARelay no longer causes CommFAIL when slave (at
;          |      |     |          |          |   start of hInitLoadShare) to prevent slave lockout
;          |      |     |          |          | * Prototypes send to BPA but NEVER RELEASED
;----------+------+-----+----------+----------+-----------------------------------------------
; 06/24/10 | 6.47 | rdb | 06/24/10 | 06/28/10 | * Built from ver 6.46
;          |      |     |          |          | * changed SPI port configuration for COM and AUX RELAY
;          |      |     |          |          |   BOARD to shift out data on falling edge of clock
;          |      |     |          |          |  (Comment in code was correct but code was wrong)
;          |      |     |          |          | * data now changes on rising edge, sampled on falling
;----------+------+-----+----------+----------+-----------------------------------------------
; 06/28/10 | 6.48 | jab | 06/28/10 | 06/xx/10 | * Added check in hTestIdc to terminate softstart
;          |      |     |          |          |   when Idc reaches 6% of Ilimit.  This is for
;          |      |     |          |          |   generator startup, prevent large load step when
;          |      |     |          |          |   output voltage hits battery voltage on softstart
;          |      |     |          |          |   This is 6.44 changes inported to 6.47
;          |      |     |          |          |   First used at Robert Moses Plant Niagara NYPA
;----------+------+-----+----------+----------+-----------------------------------------------
```


1075 Saint John Street • Easton, PA 18042-6661

P: 610.330.9000 • **F:** 610.330.8510 • **W:** hindlepowerinc.com

09/13/10	6.49	jab	08/31/10	10/18/10 to 10/22/10 1 week trial	* Modified test for E06 (Open Ext Feedback loop) from VExt<2volts to Vint-Vext < DeltaV (DeltaV depends on charger rating). Idc must be >2% Rating * Eliminated Error E09 Misadjusted Current Limit * Added warning A05 Charger in Current limit * Added warning A01 Charger in Manual Equalize > 24hrs * Added warning A04 VM Adjust inhibited with Temp Comp * Corrected display of remaining time when switching to manual equalize from manual timer * Moved hOneHour prescaler from free running to eliminate -1/+0 hour error on Equalize time
11/03/10	6.50	rdb	11/03/10	11/03/10	* SPECIAL FOR PRATT & WHITNEY This is not a production release. v6.50 has a more aggressive KPropMul control loop constant (same as v6.41) that gets switched in when (Vext - Vset) > 2.0 volts. This code is built off of version v6.49
01/14/11	6.51	jab	01/14/11	never shipped	* Modified LoadShare code to prevent Slave "pop" during an AC powerup. Slave voltage elevated prematurely causing the Slave to supply more current. Master and Slave to a longer time to establish equal sharing.
02/08/11	6.52	jab	02/08/11	never shipped	* Added J30 jumper option to use/display uncompensated external DC voltage. Also displays nicd or Pb as long as temp probe is connected.
03/17/11	6.53	jab	03/17/11	10/31/12	* Modified CLReset to prevent current oscillations at low CL setting and or low voltage strings and or short circuit on output
04/25/11	6.54 DEMO ONLY	jab	04/25/11	04/25/11	* New DEMO Box code version * Version compiled from v6.53 source code with DEMO compile switch set to TRUE
10/29/13	96.55	jab	10/29/13		* Battery Open Alarm * compiled from v6.53
02/26/14	96.55	jab	10/29/13	02/26/14	* Added Battery Open Alarm E15 enabled with J31 Original functionality 3 minute test every 2 weeks Sent to AEP as Beta also Demo version * compiled from v6.53
09/04/14	6.55	jab	10/29/13	09/09/14	* Added Battery Open Alarm E15 enabled with J31 added Aux Relay '6' for dedicated BOA relay if enabled added manual test after alarm relay test 3 minute test every 90 days
09/25/14	6.56	jab	09/25/14	03/09/15	* Added Remote Shutdown through TB1 on EN5002 rev10 Gives error code E16 * Fixes oscillation on open external sense lead

1075 Saint John Street • Easton, PA 18042-6661

P: 610.330.9000 • **F:** 610.330.8510 • **W:** hindlepowerinc.com

```
;----------+------+-----+----------+-------------------------------------------------------------
; 05/18/15 | 6.57 | jab | 05/18/15 | 1/25/16  | * Fixed slow start-up of Master in load share
;          |      |     |          |  approx  |   when Master AC is cycled
;          |      |     |          |          | *
;----------+------+-----+----------+-------------------------------------------------------------
; 05/18/15 |96.58 | jab | 05/25/16 |          | * Fix for PPL loadshare oscillation
;          |      |     |          |          |
;          |      |     |          |          | *
;----------+------+-----+----------+-------------------------------------------------------------
; 11/13/17 | 6.58 | jab | 11/13/17 | 11/14/17 | * Fix for loadshare oscillation
;          |      |     |          |          | * Trial production version
;          |      |     |          |          | *
;----------+------+-----+----------+-------------------------------------------------------------
; 07/06/22 |97.00 | jab | 07/06/22 |          | * Modify code for PIC18F6622 processor
;          |      |     |          |          | * changed Main.asm, Alarms.asm, Comm.asm and
;          |      |     |          |          | * Display.asm for SPI issues
;          |      |     |          |          | * Changed Configs for 18F6622 processor
;----------+------+-----+----------+-------------------------------------------------------------
;   8/2/22 | 6.59 | jab |  8/2/22  |          | * Mod CONFIGs for 18F6621
;          |      |     |          |          | * This was based off of 6.58, and is a separate code
;          |      |     |          |          |   branch that was made after 97.00
;----------+------+-----+----------+-------------------------------------------------------------
;   4/3/23 | 6.60 | jab |  4/2/23  |          | * Changed 97.00 to 6.60 for production release
;          |      |     |          |          | * This was based off of 6.58, and is for PIC18F6622
;          |      |     |          |          | * All 97.00 references changed to 6.60
;----------+------+-----+----------+-------------------------------------------------------------
```


1075 Saint John Street • Easton, PA 18042-6661

P: 610.330.9000 • **F:** 610.330.8510 • **W:** hindlepowerinc.com