

Readme: B3000-B Brain Firmware

The B3000-B is a mystic serial brain designed as a modern drop-in replacement for the B3000. The B3000-B has the same functionality as the B3000, except that it does not support the Optomux protocol. For readme information on the B3000, go to the [Serial B3000B Firmware README](#).

NOTE: In Opto 22 software and on the Opto 22 web site, the B3000-B firmware version may be represented in slightly different ways. For example, PAC Control will show firmware R3.7a as 83.07. Use the examples in the following chart to see how a version might be represented differently. Other firmware versions not shown here follow the same pattern.

83.07 = 3.07 = R3.7a

83.06 = 3.06 = R3.6a

83.05 = 3.05 = R3.5a

R3.7c

April 2, 2018

Effective April 2, 2018, B3000-B brains have new flash components. B3000-B firmware versions R3.7a and lower are not compatible with the new component.

If you inadvertently install firmware R3.7a or lower on one of these units, you can recover by using the Failsafe Bootloader Mode to install firmware R3.7c or higher.

For details on Failsafe Bootloader Mode, see "Loading New Firmware" in the [B3000-B Serial Brains User's Guide, form 1781](#). *NOTE: Opto 22 recommends that you always use the most recent release of PAC Manager.*

R3.7

July 13, 2012

Bug Fixes

KB82108 When operating in ASCII Checksum-256 or ASCII CRC16 CRC modes, a malformed message (more than 256 characters without a carriage return) may cause the brain to stop responding.

KB82109 When an ASCII message is received that is too short to be a valid message, the B3000-B replies with a "N02" or (CRC error) rather than not responding.

KB82111 When the B3000-B in ASCII mode receives a partial command (one without a carriage return) followed by a complete and valid command until the next character is received, this can result in a delayed response and the possibility that two brains will send responses at the same time, which would result in a garbled response.

KB82132 When in ASCII mode and the brain receives a non-hexadecimal address value, it treats the invalid address improperly and in some cases replies to the command as if it were the correct address for that B3000-B.

R3.6

Not released.

R3.5

July 30, 2010

Bug Fix

[KB81031](#) B3000-B does not support request for TPO information from OptoDisplay.

R3.4a

May 27, 2010

Bug Fixes

The following problems have been corrected:

- * [KB80953](#) Enabling or disabling all Events on a B3000-B causes error 10 on digital I/O addresses.
- * [KB80951](#) Clear All Event Latches command resets B3000-B digital addresses.
- * [KB80933](#) EventOccurring? command always returns False from B3000-B.
- * [KB80931](#) B3000-B MOMO Match Event behavior differs from B3000.

R3.2a

May 7, 2010

Bug Fixes

The following problems have been corrected:

- * [KB80913](#) Fixed a timeout problem with the Universal Local Area Network Controller, Com20020, on brainboard. The timeout occurred if a transaction occurred during a global clock rollover.
- * [KB80910](#) Fixed the expected command response length tests for the "Read and Clear Event Latch" (zA), "Clear Interrupt" (zB), and "Get Event/Reaction Status" (zC) commands.
- * [KB80899](#) Fixed support for PIDs when the output of a PID is sent to a module position that does not actually have an analog module installed (referred to as a "phantom output").

R3.0 and R3.1

Internal releases

R2.9a

January 6, 2010

Bug Fixes

The following problems have been corrected:

- * [KB80659](#) - Cleared value resulting from the digital firmware command LastClearCounterValue.
- * [KB80703](#) - Fixed Read and Clear instructions for quadrature counters.

R2.8a

February 18, 2009

Bug Fixes

The following problems have been corrected:

* [KB80507](#) - Fixed "Read Module Configuration" command (Y) so that the command returns data from the highest channel number to the lowest channel number.

R2.7

January 27, 2009

Bug Fix

The following problems have been corrected:

* [KB80489](#) - Fixed "Get & Restart Pulse Period Measurement" command (r) to restart the pulse period measurement after the current data is read.

R2.6

October 20, 2008

Bug Fix

* [KB80428](#) - Fixed "Start Continuous Square Wave" command (h) to restart an existing square wave.