



Firmware Release Notes

3000 Series TS2 Firmware v3.1.1

Peek is pleased to announce the release of Version 3.1.1 of the NEMA TS2 compatible firmware for the 3000 Series Traffic Signal Controllers. This update addresses some issues previously reported by customers.

Product **TS2 Firmware for the 3000 Series Traffic Signal Controllers**

Version.....**Version 3.1.1**

Release Date**6/13/03**

Importance of This Update:

This is an optional update for TS2 3000 Series Traffic Signal Controllers. It provides significant, although not vital, improvements to the operation of a TS2 3000 Series controller.

Product Compatibility:

This firmware is designated part number 8216A version 3.1.1, and is released for use in all field and production 3000 and 3000E Traffic Controllers that have been designated NEMA TS2 units. It should not be installed in units selected to run as NEMA TS1 units, or those that communicate via the NTCIP protocol. It can be used to update either series 8216A or 5921 firmware.



Note If this update is used to replace 5921 firmware, the controller will no longer be compatible with the Smartways software. And when upgrading from the 5921 firmware on 3000 Series controllers, all Special and Restricted Menu settings must be cleared.

This release is compatible with version 2.0.2 or higher of *CL-MATS*[®], but version 2.1.4 or higher is recommended if you are planning to use the new Double Diamond[™] monitoring features. The firmware should not be used with versions of CL-MATS older than v2.0.2, and it is not compatible with *Smartways*[®].

Table 1 – Proper checksums for the v3.1.1 TS2 3000 Series firmware

EPROM	Checksum value (hex)
0	21E8
1	0FAE

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Upgrading the Firmware of a 3000 Series Traffic Controller

To upgrade a 3000 or 3000E Traffic Controller in the field, follow these instructions:

1. If you ordered updated EPROMS from Peek rather than just the firmware files, skip down to step 6.
2. Locate the following items in order to burn the updated firmware to EPROMS:
 - Two 4MB EPROMs (28 pin DIP package), these may be recycled out of field units
 - an EPROM burner capable of holding a 4MB EPROM
 - EPROM burning software
 - the two binary files containing the updated 3000E firmware
3. If the EPROMs were used previously, erase them.
4. Insert one of these blank EPROMs into the burner and burn the firmware file named **v311-0.bin** onto it. Label it '**EPROM 0**'.
5. Insert the other blank EPROM into the burner and burn the firmware file named **v311-1.bin** onto it. Label it '**EPROM 1**'.
6. Observing all safety and other municipal ordinances, place the intersection to be updated into flash.
7. Power down the 3000 Series Traffic Controller.
8. Open the front panel and remove the two EPROMs that are currently installed in the unit. Replace them with your updated versions, being sure to place the properly labeled EPROM in each socket.
9. Restore power to the unit.
10. Next, you'll need to verify that the controller is functioning correctly. Press the **SHIFT** and **MENU** buttons simultaneously to get to the Main Menu.
11. Press **1** for Dynamic Displays.
12. Press **1** for Controller Func(tions).
13. Examine the Normal Status screen for proper operation and cycling.
14. Press the **MENU** button once, and select **9.Checksum Status**. If a Checksum is present, follow the screen instructions to clear the Checksum. Checksums are latched failures; so you will need to restart the Controller to release the latched failure.
15. Press the **MENU** button once, and select **10.Comm.** (10 is selected by pressing **Shift** and **0** simultaneously.)
If 'Overrides Active' appears on the bottom line of the Controller-Master-Comm Dynamics screen, then follow the instructions on the screen to clear the error by pressing the **1** button. The screen should now state "No Overrides Active."
16. Press the **MENU** button once, and select **1**. Examine the top line and the bottom line of the Normal Status screen for the words "ERROR" or "FAILURE." If they occur, try shutting off the unit, reseating the EPROMS, and retrying the above steps. If the error message still appears, contact your Peek customer service representative, as listed on page 4, for assistance.

If these words are not present, then consider the 3000 Series unit to be a healthy, functioning controller.
17. Return the intersection to normal operation.

Issues Addressed in this Release

The following are issues that existed in previous releases of the 3000 Series Traffic Signal Controllers TS2 Firmware which have been rectified in the 3.1.1 version:

Table 2 — Issues fixed in this release

Issue	Resolution	Issue IDs Resolved
Preemption performance	The performance of preemption processing in the 3000 Series controllers has been dramatically improved in the 3.1.1 release.	PR2003-6014-448 IRA31 PR2003-6134-457 PR2003-6123-453 PR2003-6137-458 PR2003-6211 PR2003-6122-452 PR2003-6109-451 PR2003-5290 PR2003-5716
Double Clearing Overlaps	As with preemption, the section of the firmware dealing with double clearing overlaps was investigated thoroughly and cleared of a number of recently uncovered issues.	PR2003-6123-455 PR2003-6197-463 PR2003-6133-456
Improved reliability of side-street servicing during coordination	Rare combinations of events sometimes caused side street servicing to be skipped. Side street servicing has been improved so it is now ensured at the end of coordinated servicing.	PR2003-6155-461 PR2002-4794-363
Improved Coordination plan checking	This issue only occurred when a non-running 3-cophase coordination plan with faulty phase timings was tested while a different coordination plan was actually operating the controller. The coordination plan test routine has been repaired so it properly knows which plan to test.	PR2003-6237

Known Issues in this Release

The following issue is known to exist in the Version 3.1.1 firmware:



Important When the controller is programmed for Lead-Lag phasing with CNA Coordinated phases and an active Walk Rest Modifier (WRM), the Walk Rest parameter must also be set ON. (Keep in mind that the Walk Rest parameter is not the same thing as the WRM.) Walk Rest can be accessed by going to Main menu > Change Data > Controller > Phase Recalls/Modes and then paging down. (or, in other words:
MM>3>1>2>PGDN)

If Walk Rest is not required for Free running mode, Timing Plan 2 can be used (with wildcard values) for Coordinated operation. In this case, Timing Plan 1 should be identical to Timing Plan 2 except for the Walk Rest enabled phases, and could then be used in Free mode.

Additional Guidance on the 3000 Series Traffic Signal Controllers

These are some other sources of information on Peek's 3000 Series of Traffic Controllers.

Additional Documentation

These documents provide useful information about 3000 controllers and other products often used with them:

Document	Part Number
<i>3000 Series Operating Manual</i>	8204C
<i>3000 Series TS1 Firmware Release Notes</i>	99-331
<i>3000 Series NTCIP Firmware Release Notes</i>	99-333
<i>CL-MATS Installation Manual</i>	81-858
<i>CL-MATS Operating Manual</i>	81-883
<i>Double Diamond MMU Operating Manual</i>	8314B
<i>M3000 Operating Manual</i>	5928
<i>M3000 Firmware Release Notes</i>	99-329

Some information is also available at the Peek website: <http://www.peekglobal.com/>.

Technical Support

All of these phone numbers and email addresses will connect you with Peek Corporation, however we recommend that you contact the United States office first if you require additional help concerning 3000 Series Traffic Controllers in general, or this firmware update in particular.

Primary Customer Service Center

Traffic Signal Controllers

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