



Firmware Release Notes

3000 Series TS-2/Protocol-90 Firmware v3.3.6

Peek is pleased to announce the release of Version 3.3.6 of the NEMA TS2/Protocol-90 compatible firmware for the 3000 Series Traffic Signal Controllers. This update provides fixes to a couple of minor issues that existed in the v3.3.5 release.

Product TS2/Protocol-90 Firmware for 3000 Series Traffic Controllers

Version.....Version 3.3.6

Release Date 10/24/03

Importance of This Update

This is an optional update for TS2/Protocol-90 3000 Series Traffic Signal Controllers. It provides several minor fixes to the firmware that were discovered in v3.3.5.

Product Compatibility

This firmware is designated part number 8216F Version 3.3.6, and is released for use in all field and production 3000 and 3000E Traffic Controllers that have been designated NEMA TS2/Protocol-90 units. It should not be installed in units selected to run as simple NEMA TS1 or TS2 units, nor those that communicate via the NTCIP protocol.

Controllers that run this firmware have limited compatible with *CLMATS*[®], Peek’s central control software package, but only if the controller is specified to be a TS2 controller (8216A) in the software. TS2/Protocol-90 controllers will not work with the *SmartWays*[®] software.

Table 1 – Proper checksums for the v3.3.6 TS2/Protocol-90 3000 Series firmware

EPROM	Checksum value (hex)
0	1A07
1	F6BB

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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 **ts22-0.bin** onto it. Label it '**EPROM 0**'.
5. Insert the other blank EPROM into the burner and burn the firmware file named **ts22-1.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 **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.
16. 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/Protocol-90 Firmware which have been rectified in Version 3.3.6:

Table 2 — Issues fixed in this release

Issue	Resolution	Issue ID (SCR#)
After a short power interruption, a Cycle/Offset/Split to Lead Lag operational shift can stick and never restore the proper phase rotation	The firmware now sets a flag after a power interruption occurs. This flag tells the controller algorithm to recalculate Lead/Lag patterns. This change repairs the issue.	466
Downloading the entire 'Controller' section of the controller's database from CLMATS to the version 3.3.5 firmware (builds 154 to 157) occasionally resulted in faulty data in the Lead/Lag configuration screens.	The receive buffer size was increased to accommodate the slow inflation of the Controller database section that has occurred over the last few firmware releases. All data is now received and transferred to memory correctly when the Controller section is downloaded from CLMATS.	468

Known Issues in this Release

The following issue is known to still exist in the Version 3.3.6 firmware.

Table 3 — Issues remaining in this release

Issue	Workaround	Issue ID (SCR#)
Loading Manual Permissives via "Load Perms & Forces with Check" command not working.	An operator can load the Manual Force Offs and Manual Permissives manually using the keyboard.	334

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 Series controllers and other products often used with them:

Document	Part Number
3000 Series Operating Manual.....	8204C
3000 Series TS1 Firmware (8216B) Release Notes.....	99-331
3000 Series TS2 Firmware (8216A) Release Notes.....	99-332
3000 Series NTCIP Firmware (8216C) Release Notes.....	99-333
CLMATS Installation Manual.....	81-858
CLMATS Operating Manual.....	81-883
CLMATS Release Notes.....	99-275
CLMATS Preemption Management Module Release Notes.....	99-365
Double Diamond MMU Operating Manual.....	8314B
M3000 Operating Manual.....	5928
M3000 Firmware Release Notes.....	99-329

Some information is also available at the Peek website: <http://www.peaktrafficinc.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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