WOODWARD

ProTech GII Software Upgrade Procedure
Math Enhanced Version

ProTech® GII Software Upgrade Procedure

Introduction

This publication provides owners/users of ProTech® GII models with the necessary hardware and software requirements and instructions to convert them in the field to Woodward's latest ProTech GII models. Refer to Woodward Product Change Notification 06946 for a list of all related product improvements.

The following files are needed to update the ProTech GII software to the math-enhanced version with voted input functionality. These files are loaded on the ProTech GII Software Upgrade Kit CD (BCD-85292).

- 5418-7349 (GII).wapp (ProTech GII application file)
- 9927-2637 (GII Defaults for 5418-7349).wset (factory settings file)
- 9927-1810_H.exe (ProTech Service Tool Installer)
- 9927-2146_C .exe. (Tool to clear the service tool password)
- 35086 (ProTech GII Product Manual)

⚠ WARNING	**Follow these instructions. The configurations settings of the device will be lost if the instructions are not followed.**

NOTICE	**Make sure your laptop PC is electrically isolated from earth ground, by either powering the laptop PC from its internal battery or by disconnecting the earth ground portion of the laptop PC's power cord.**

IMPORTANT	**This procedure simply converts software and settings based on the current device configuration. It does not enable or activate any new functionality. Refer to the Woodward Product Change Notification 06946 for changes from the previous release. Refer also to the Product Manual 35086 for details on configuration of the new features.**

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NOTICE	**Not all ProTech versions can be upgraded. See Part Number Conversion Table for part numbers and revisions that can be converted using this procedure. If not listed, additional hardware changes are required.**

Steps to Update the Software

1. Install the tools provided on the CD (9927-1810_H.exe and 9927-2146_C.exe).
2. Connect a regular serial cable (not a null modem cable) between the system Module A service port on the ProTech and the computer. Note: the system module must be tripped before you can load software.
3. Open/Run the ProTech GII Service Tool.
4. Establish communications with the ProTech by selecting the Connect icon. Chose the appropriate COM port and then select 'Auto Detection' for baud rate.

5. If the ProTech has been previously configured and you want to keep the settings, save the current device settings to a file. Otherwise, go to step six.
    a. Select the 'Save from Device to File' option from the Settings menu. These settings can then be restored at the end of this procedure. Follow the steps in this wizard to create the previous settings backup file. Once saved, it can be viewed using the 'Settings| Edit Settings File' menu option.
    b. Convert these previous settings for compatibility with this new firmware by selecting 'Associate Settings File with Application' from the Settings menu. Browse to the saved file.
    c. In the Application Selection window, chose 'ProTech GII 5418-7349- Version xx' for the Specification Name and click Next.
    d. In the New File Selection window, click Browse and create a new file name for the updated settings file. This is recommended, thereby retaining a copy of the previous settings.
    e. Any changes or updates made will be presented on the Conversion Information window. A screen capture is the best option for retaining this information. Each error must be addressed before proceeding. Errors typically indicate blocks or functions no longer available in the newer firmware. Each warning should be analyzed to ensure the action was appropriate. Warnings for missing settings are normal and can be ignored.
        Note: this conversion process simply converts the existing settings to similar values in the newer firmware. If utilization of new features is desired, the settings file(s) must be updated by the User.
6. Select "File| Load Application". Follow the screen prompts. Note that you must uncheck the 'Restore Settings' box. Browse to the .wapp file provided with the CD and select. Load the .wapp software on the ProTech.
    a. **Note:** after loading the .wapp file, the ProTech screen will display **PARAMETER ERROR.** This is normal.
    b. Select Disconnect then Connect. A security login screen will appear. Set Security Level to 'Config Level' and enter the password (default value is AAAAAA).
        Note: if the password is not accepted, this is an indication that the password handling is incompatible and that steps 11-12 need to be performed to rectify this issue. If the password is accepted, continue with step 7.
7. Select "Settings| Load Settings File to Device". If prompted, set Security Level to Config Level and enter the password (default value is AAAAAA). Follow the screen prompts selecting the default settings '9927-2637 rev- (GII Defaults for 5418-7349).wset' provided on the CD.
    Note: if the password is not accepted, this is an indication that the password handling is incompatible and that steps 11-12 need to be performed to rectify this issue. If the password is accepted and the settings file loads successfully, continue with step 8.
8. Select 'Disconnect' on the Service Tool. Cycle power on the Module. The ProTech front panel should display the Home screen.
9. Optionally load the settings from step 5 following these steps:
    a. Select Connect and log in with Config Level password.
    b. Select the 'View Configuration Error Log' button. This allows viewing of any warnings or errors detected.
    c. Select "Settings| Load Settings File to Device". Follow the screen prompts and select the file from step 5. Warning messages in the settings conversion window are normal and can be ignored. If the file fails to load due to a configuration error, then correct/edit the issues with the settings file and retry. The Configuration Error Log should be checked for warnings/errors.
        Note: If a message is displayed indicating some settings could not be loaded, then the settings load process has failed. The cause of the failure can be found by selecting the Diagnostic Log under the Help menu. The issue will need to be corrected and the file reloaded.
10. Repeat the steps above for system Modules B and C on the ProTech. When completed, go to step 12 below.

11. If the previous firmware was older than version 5418-7000 (i.e. a smaller number), then additional steps must be performed to make the password handling compatible. Connect to each module and use the ProTech Password Clearing Tool to reset all the passwords on the unit. Note that both passwords (Configuration password and Test password) will be reset. There is no option for resetting just one password.
    a. Open the Password Clearing Tool; the initial screen will appear.

    b. Press the "Connect" button on the tool. The following screen will appear.
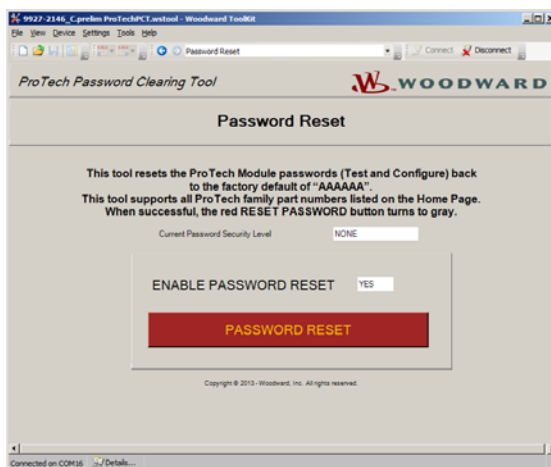
The Current Password Security Level should read NONE, indicating that the ProTech is not in Configuration mode. This is the correct reading for resetting the ProTech passwords.
    c. To reset the passwords, select "YES" for ENABLE PASSWORD RESET.
    d. The "PASSWORD RESET" button will change from gray to red.
    e. Click on the "PASSWORD RESET" button. After the passwords have been reset, the button will turn from red to gray.
    f. Select 'Disconnect' to free up the COM port. Note this tool will be needed to clear all three ProTech Modules.
12. On the ProTech GII Service Tool, establish communications with the ProTech by selecting the 'Connect' icon. Set Security Level to 'Config Level' and enter the password (default value is AAAAAA). After successful connection, go back to step seven and continue from there.
13. After the setting file has been loaded into all three modules, power cycle all modules. The ProTech should go into normal operation. Check the module information under the monitor menu and verify that each module is at software part number 5418-7349.
14. Lastly update/change device settings to utilize the new functionality following the product manual. At this point, the device has been converted to the new firmware with the same settings as before, or default values, depending on what was loaded. The new features need to be added to the configuration and loaded into the device before they will become active.

> **IMPORTANT** A functional test of the ProTech GII is required after making any changes that affect the safety system. Follow the Safety Management procedures in the product manual (35086).

Update the Identification Labels

As part of the software upgrade process, Woodward has recorded the serial number of the ProTech(s) to which the software is being upgraded. In this instance, that also means that the part numbers of the system modules and the ProTech itself have been changed. To keep all records accurate and up to date, it is very important that the Identification labels on the system modules and the ProTech itself be changed. The upgrade kit contains four labels, one for each system module and one for the ProTech.

System Modules Identification Labels
These labels have the serial number of the existing system modules in addition to the new system module part number printed on them. When the old system module Identification labels are replaced, it is very important that the serial number of the old module and the serial number of the new module are the same. When replacing these labels, check that the serial numbers match. The identification labels are located on the right side of each system module.

ProTech Identification Label
This label has the serial number of the existing ProTech in addition to the new ProTech model part number printed on it. When replacing this label, check that the serial numbers match.
- For ProTech panel-mount units, the Identification label is on the back of the front panel.
- For bulkhead mount ProTech units, the Identification label is on the lower left mounting leg of the unit.

Table 1. Part Number Conversion Table

ProTech Part Number		System Module Part number	
From	**To**	**From**	**To**
8237-1244 Rev D or Newer or 8237-1594	8237-2594	5437-1121 or 5437-1126	5437-2126
8237-1245 Rev D or Newer or 8237-1595	8237-2595	5437-1122 or 5437-1127	5437-2127
8237-1246 Rev D or Newer or 8237-1596	8237-2596	5437-1119 or 5437-1124	5437-2124
8237-1247 Rev D or Newer or 8237-1597	8237-2597	5437-1120 or 5437-1125	5437-2125
8237-1367 Rev D or Newer or 8237-1598	8237-2598	5437-1121 or 5437-1126	5437-2126
8237-1368 Rev D or Newer or 8237-1599	8237-2599	5437-1122 or 5437-1127	5437-2127
8237-1369 Rev D or Newer or 8237-1600	8237-2600	5437-1119 or 5437-1124	5437-2124
8237-1370 Rev D or Newer or 8237-1601	8237-2601	5437-1120 or 5437-1125	5437-2125

Appendix.
ProTech Software Upgrade Form

** Customer is required to affix new identification labels sent with the upgrade kit. Please fill out the new information below and send to your respective Customer Support Representative when completed.

Four blank identification labels will be sent; one for the ProTech and one for each of the three modules.

Customer Name:　　　　　　　_____

Contact information:　　　　　　_____

Customer Address:　　　　　　_____

PO Number:　　　　　　　_____

Current Woodward P/N of ProTech:　　　_____

Current Rev of ProTech:　　　　　_____

Serial Number of ProTech:　　　　_____

Current Woodward P/N for three modules:　　_____

Current Rev of three modules:　　　　_____

Serial Numbers of three modules:　　　_____

　　　　　　　　　　　　_____

　　　　　　　　　　　　_____

New Woodward P/N of ProTech:　　　_____

New Rev of ProTech:　　　　　_____

New Woodward P/N for three modules:　　_____

　　　　　　　　　　　　　　_____

New Rev of three modules:

Date identification labels applied:　　　_____

We appreciate your comments about the content of our publications.

Send comments to: icinfo@woodward.com

Please reference publication 51582.

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