WOODWARD

Application Note 51211
(Revision NEW, 4/2003)

Original Instructions

EGCP-2

Software Upgrade Kit Instructions for field conversion of EGCP-2 controls: 8406-120 A or B to 8406-120 C 8406-121 A or B to 8406-121 C

EGCP-2 Software Upgrade Kit

Download the latest software for controls 8406-120, -121

Woodward is releasing application software, 5418-149 C, to upgrade the EGCP-2 due to issues explained in Service Bulletin 01244. This application note explains how to download the software and describes all the changes made in the software.

The software can be used to upgrade only these existing controls.

- 8406-120 A or B can be upgraded to 8406-120 C (this converts software 5418-149 A or B to 5418-149 C).
- 8406-121 A or B can be upgraded to 8406-121 C (this converts software 5418-149 A or B to 5418-149 C).

Woodward is supplying this software kit to allow you to upgrade units in the field.

Woodward recommends that all existing stock be upgraded.

A Communication Cable, Woodward part number 5417-551, can be used to download the new software.

New EGCP-2 Part Numbers	Description	Installation & Operation Manual	Application Manual	Communications Manual	Security Levels Manual
8406-120	150–300 Vac PT	26174	26175	26181	26108
8406-121	50–150 Vac PT	26174	26175	26181	26108

Description of Software Changes

1. Voltage Matching

- Present software:

  Single unit mode, Close Mains Breaker action.

  Voltage matching does not work if the mains voltage is greater than the generator voltage.
- New software:

  Single unit mode, Close Mains Breaker action.

  Voltage matching works in all situations.

2. Assuming the Master role

- Present software:

  May open the generator breaker of the previous Master and all slave units on the network when the Master role is assumed by a slave unit. The conditions for this situation are explained further in Service Bulletin #01244.
- New software:

  Unit will now assume the Master role with no disruption to the system.

3. Closing Mains Breaker

- Present software:

  If another unit has assumed the Master after a LOMs start or a soft transfer application, when synchronizing the system back to the mains, the slave unit(s) could be in the Open Gen Breaker mode (soft unloading) while the Master is in the Close Mains Breaker mode.

- New software:

  The Master unit will keep the system in the right operational mode when closing back to the Mains. The Master role can be transferred to any unit on the network and still function correctly.

4. Ramping a unit on to an Isolated system

- New software:

  This change affects the ramping of another unit onto an isolated bus. The overall effect will be that the units will ramp into isochronous load sharing smoothly.

5. Close Mains Breaker

- New software:

  Provides a smoother transition from the In Sync mode to the Close Mains Breaker mode.

6. Idle Timer

- Present software:

  The Idle timer starts when the Crank timer is started.

- New software:

  The Idle Timer now starts after the engine speed reaches the Idle Speed setpoint.

7. Speed Bias output

- New software:

  Limits the 0.5–4.5 Vdc output to a maximum of 4.45 Vdc and a minimum of 0.55 Vdc.

8. Mains Breaker Trip output

- Present software:

  The Mains Breaker Trip output, when triggered, will stay energized until the generator is stable. If the generator set did not start, the output stays energized, preventing the mains breaker from being closed manually when the mains returns.

- New software:

  The Mains Breaker Trip output, when triggered, will stay energized until:

  ❖ Generator is Stable
  ❖ Crank Fail Alarm
  ❖ Switching from Auto to Manual mode

9. Resetting the Mains/ Bus PT input

- Present software:

  The Mains/Bus PT input is switched from looking at the Mains PT to monitoring the Bus PT when starting the generator. This allows the EGCP-2 to synchronize and close the generator breaker. If the generator set does not start or receives a shutdown before synchronizing, this output does not reset back to the Mains PT. To reset this output, you must switch from Auto to Manual, then back to Auto.

- New software:

  The Mains/ Bus PT input will reset if:

  ❖ A Crank Fail Alarm is received
  ❖ Switching from Auto to Manual

Compatibility with Existing Controls

The new software, 5418-149 C, will operate with all existing EGCP-2 and EGCP-1 controls.

Download Instructions

This section provides instructions for downloading 5418-149 C software needed to upgrade the 8406-120 or -121 controls.

Loading the software will not affect any Configuration or Calibration setpoints.

WARNING **An unsafe condition could occur with improper use of these software tools. Only trained personnel should have access to these tools.**

Downloading the 5418-149 C Software

Requirements

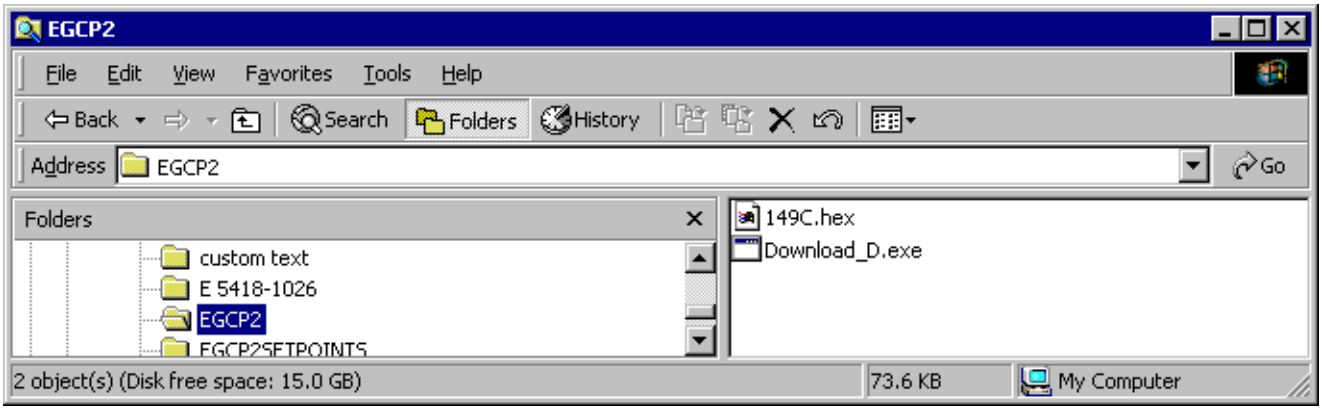
- EGCP Download Cable, Woodward part number 5417-551 (includes RS-232—RS-422 converter) or equivalent
- Download_D.exe, part number 9926-113 Rev B or greater (Download_D is a DOS-based freeware program that can upload and download configuration files through the RS-422 serial port on the EGCP-2. This program is available on the Woodward website at **www.woodward.com/ic/software**).

Select **EGCP-2 Tools** and then select **EGCP Download Program**.

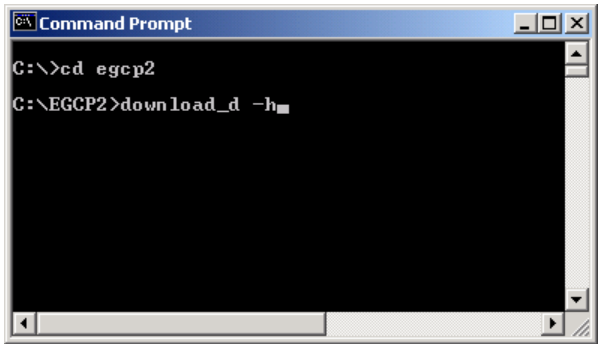
Instructions

Save the Download_D.exe file to the computer. In the following example, this file is saved in a directory called EGCP2 on the C:\ drive. Store the EGCP-2 software files in the same location.

Software – **149C.hex**



Then using a DOS command prompt, go to the directory where the Download_D.exe file is stored and type "**download_d –h"** (or **–?**) for a complete list of the command-line options (see below).



Establishing a Connection:

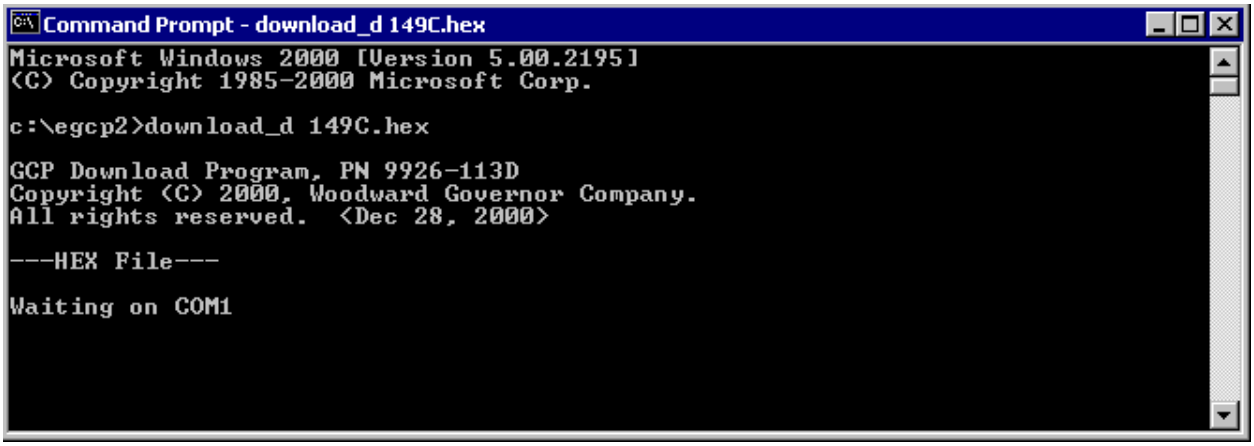
Connect the RS-232 / RS-422 cable between the EGCP-2 and the computer.

IMPORTANT

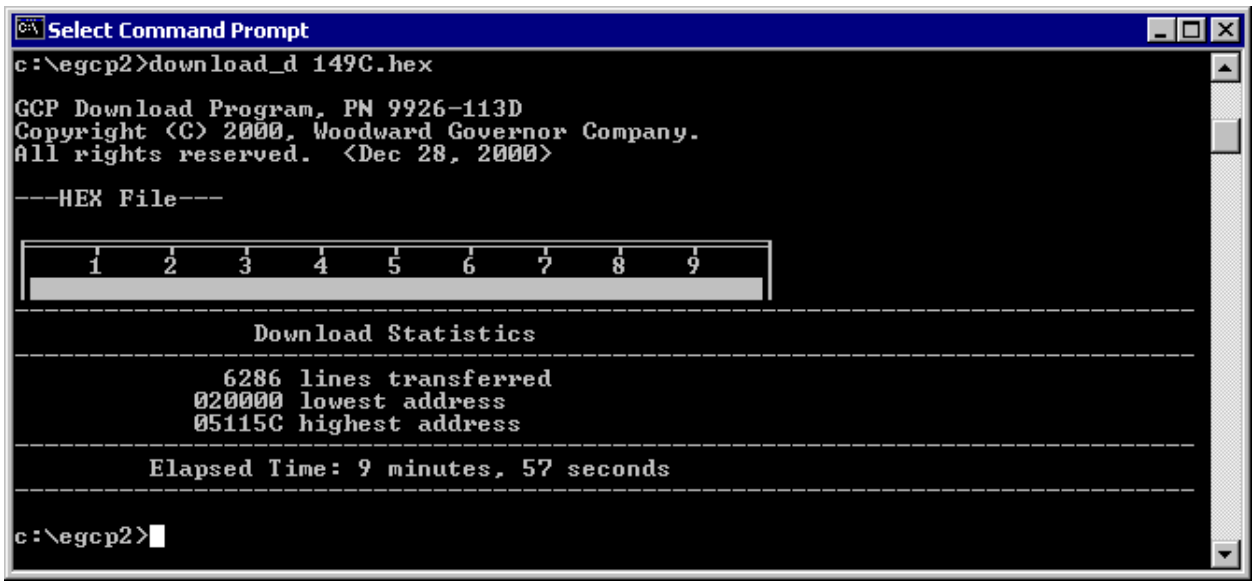
Only one EGCP-2 can be connected to the RS-422 communication network when uploading or downloading setpoints. If a multidrop network has been set up (linking more than one EGCP-2 on the RS-422 communication port network), it will be necessary to separate the control from the network in order to upload or download.

Downloading 149C.hex file from the Computer to the Control:

Using a DOS command prompt, go to the directory where the Download_D.exe file is stored and type "**download_d 149C.hex**" at the DOS command prompt (see below).



1. Cycle power to the EGCP-2.
2. When the power is restored to the control, the download will begin.
3. On the EGCP-2 screen the text “APPLICATION” will be displayed.
4. A scroll bar will appear on the computer screen showing the progress of the download (see below).



5. After the download is complete, the control is ready to operate. The setpoints and calibration adjustments do not change.

We appreciate your comments about the content of our publications.

Send comments to: icinfo@woodward.com

Please reference publication 51211.

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