

APPLICATION NOTE

RC900

Unable to write new set points from the remote communications interface

This application note covers both EIA 232 and IEEE-488 GPIB interfaces

Description of Problem

When using the remote EIA-232 or IEEE-488 GPIB communications interface it is not possible to write new set points to the RC900. All other commands can be written successfully.

Background

The RC900 uses an E²PROM to store settable parameters. The E²PROM is good for about 10,000 writes. When a new set point is sent from the remote communication interface, both EIA-232 and IEEE-488 GPIB, the new set point value is written to the E²PROM. If numerous new set points will be written to the RC900 via the communications interface from a ramp and soak profile program running on the host computer, then the RC900 operation manual recommends disabling the write to E²PROM function. This is done to give the E²PROM a satisfactory life expectancy. To disable the write to E²PROM function the operations manual instructs the programmer to use the “**SPEE**” command. The “**SPEE**” command is used to enable or disable the write to E²PROM function.

To disable the write remote set point to E²PROM function use the following command:

= SPEE 1

To enable the write remote set point to E²PROM function use the following command:

= SPEE 0

Probable Cause

When the write to E²PROM function is disabled (= **SPEE 1**), and the ramp to set point feature is enabled (= **RP 2**) there is a firmware problem that will prevent a new set point being written from the remote communication interface. This problem occurs on RC900 controllers with firmware versions up to “43 D”. You

can check your firmware version either from the front panel of the RC900 or from the remote communications interface. To check the firmware version from the front panel use the following steps:

- ✓ Press both the UP and DOWN arrow key simultaneously for about 6 seconds. Note: After about 3 seconds you will see the display change but keep holding the keys down for the full 6 seconds or until you see **PLOC** in the upper display and **FctY** in the lower display.
- ✓ Press the UP arrow key until you see **diAG** in the upper display.
- ✓ Press the MENU key until you see **SOFT** in the lower display. The firmware revision will be shown in the upper display. The firmware is version 43 followed by the revision letter. The current revision letter is "E". Any earlier revisions should be replaced with the current revision to resolve the remote communication set point problem.
- ✓ To leave the Diagnostics menu and return to the Operational display press the VIEW key.

To check the firmware version from the remote communications interface use the following command:

? SOFT

The controller should respond with a number between 0 and 4. Use the following table to determine the revision letter:

Number	Revision
0	A
1	B
2	C
3	D
4	E

The current revision letter is "E". Any earlier revisions should be replaced with the current revision to resolve the remote communication set point problem.

If you need to have your firmware revision updated please contact the factory to receive a Return Merchandise Authorization (RMA) number. The RC900 will need to be returned to the factory because upgrades require replacing of the firmware EPROM.