## 13.3  Firmware Upgrade

If necessary, your controller can have the firmware upgraded. Firmware is a set of instructions which tell the controller CPU how to operate. Firmware is not your 'program configuration' which determines which relay operates when and how. The program configuration can be saved and if needed, re-loaded, or copied to another controller. See section, **13.2  Save or Load the Program Configuration**
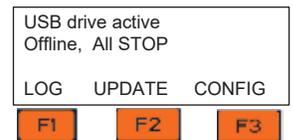
---

### ⓘ  1 File Please

To avoid accidents and confusion with this important process, please remove all files from the USB drive prior to adding the .hex file. The controller will only allow you to view one file. Be sure you copy the correct file to the USB. If you have more than one, you may load the wrong file.
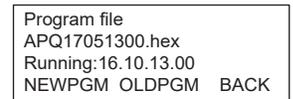
---

1- Obtain the hex file from ProMinent and insert thumb drive with the new file into the USB port located behind the Communication panel. See section **13.1 Capturing Data**.

2- Press F2, UPDATE

3- The display shows the one file from the USB drive; APQ17060500.hex and the current hex file in use; Running:16.10.13.00. NOTE: These numbers are date codes, year, month and day. '00' indicates they come from the USB drive.
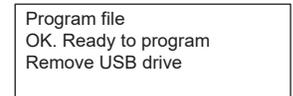
   F2 "OLDPGM" is a list of hex programs on the controller. If OLDPGM is not a choice, there are no other backup hex files in the controller memory. You can load a previous program from this list.
   .

```
USB drive active
Offline,  All STOP


LOG     UPDATE    CONFIG
 F1        F2        F3
```

```
Program file
APQ17051300.hex
Running:16.10.13.00
NEWPGM  OLDPGM   BACK
```

4- **If the file on line 2 is the new firmware file**, press F1 NEWPGM to select the new hex file. Press F1, Load to install the new hex file.
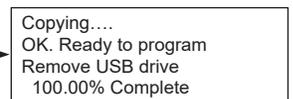
```
Program file
AP17051300.hex
Running:16.10.13.00
LOAD      NEXT       BACK
```

5- Remove the USB drive when prompted.

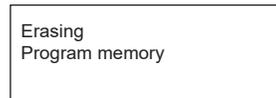   NOTE: OLDER FIRMWARE VERSIONS USE STEP 6.

```
Program file
OK. Ready to program
Remove USB drive
```

6- The firmware is copied to the controller.  When complete, the controller will notify you to remove the USB drive.

```
Copying….
Program file
AP17051300.hex
   0.02% Complete
```
→
```
Copying….
OK. Ready to program
Remove USB drive
  100.00% Complete
```

7- After you remove the drive, the controller will erase the existing firmware and install the new one.

```
Erasing
Program memory
```
→
```
Loading
AP17051300.hex
Record#  0
```

8- Once the new firmware is installed, the controller will restart.

```
Hardware startup
Now…………..
```

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