ServoPod FORTH Firmware Recovery

It is possible to render the Pronto4 SVP inoperable with improper loading of the FORTH program text. The recovery from this can happen one of three ways depending on the version and series of the Pronto4 you have.

1. Send the Pronto4 or Service Module back to Kairos Autonomi for assistance in recovery
2. On Pronto4 Series3 and older Series4's there is a pin that must be shorted to ground upon system bootup. This erases the memory and results in the Pronto4 ignoring any loaded program. Unfortunately, this pin is internal and requires that the service module be opened up to short the pin to ground manually.
3. On new Series4 systems, the recovery pin has been brought out to pin 9 of the Radio/Estop connector (i.e. P206) of the Service Module.

**Internal Recovery Procedure (all Pronto4 Series 3 and older Series 4)**

Holding the PE4 pin to ground, and powering on the system clears any programs and allows ServoPod FORTH firmware be reloaded normally.

PE4 is located on pin 4 of the J3 connector of the service module. Pin 2 of that same connector, J3, is ground. Simply shorting between Pin 2 and Pin 4 and then powering on the system, then removing that short will erase the program.

CAUTION
This procedure requires partial disassembly *and* electronics work that can result in serious damage to the Pronto4 unit. Appropriate care should be taken.

1. Ensure the Pronto4 is powered down and all cable are disconnected.
2. Use a #2 Phillips to remove the Service Module from the Pronto4 Frame.
3. Use a 9/64" hex driver to open the Service Module.
4. Connect the Vehicle Integration Module (VIM) via CBL-081 to P207.
5. Ensure the VIM's "On"/"Off" toggle

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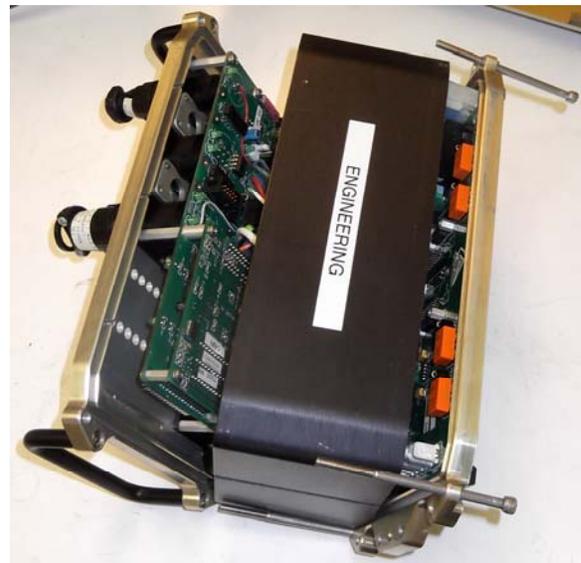
switch is in the "Off" position.

6. With the VIM in the "Off" position, connect power via CBL-001-01 to P210.

7. Locate and identify the pins to be shorted, noting the proximity to other pins.

8. Short the pins and boot up the system using one of the following methods:

   • Permanent
     a. Solder a small switch to the identified pins.
     b. Set the installed pin to the shorting position.
     c. Switch the VIM's "On"/"Off" switch to the "On" position.

   • Temporary
     a. While one person carefully and firmly maintains a short-inducing connection between the identified pins (e.g., a small flathead screwdriver as illustrated), a second person toggles the VIM's "On"/"Off" switch to the "On" position.

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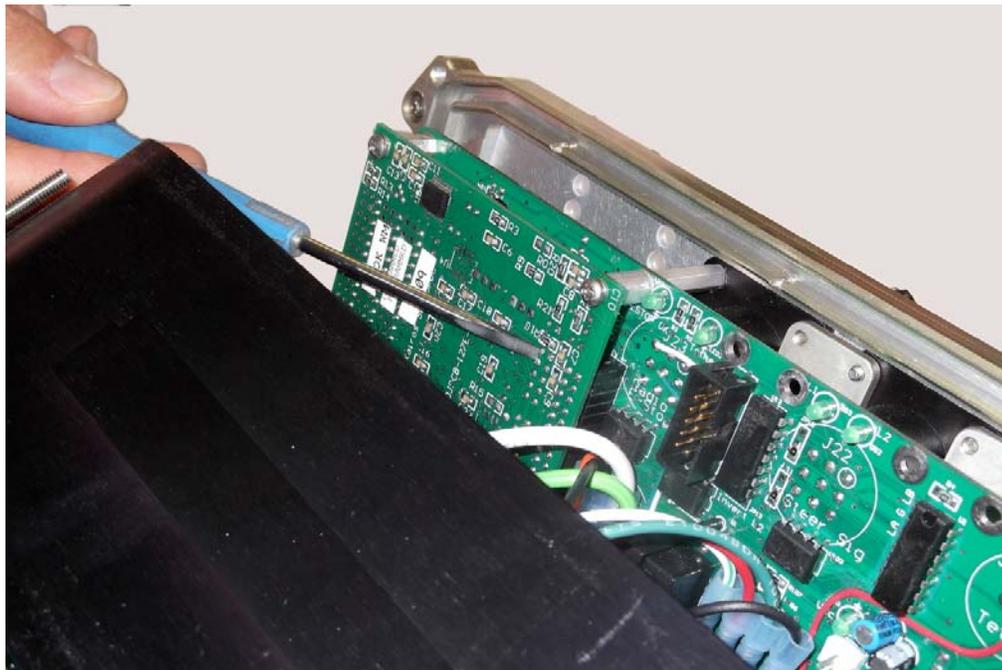
9. Approximately 5 seconds after switching the VIM the short should be removed or switched off.
10. Allow the system to fully boot, then switch the VIM's "On"/"Off" switch to the "Off" position.
11. Remove power from the system.
12. Ensuring no cables are pinched, close the Service Module and re-secure the module with the screws removed in step 3.
13. Ensuring the Service Module is oriented properly, re-secure it to the Pronto4 Frame with the screws removed in step 1.

CAUTION
The Service Module can be connected to the Pronto4 Frame in an upside-down orientation. Doing so may damage the unit.

14. Follow the ServoPod FORTH Firmware documentation to update the FORTH Firmware.

External Recovery (recent Pronto 4 Series 4)

Since the PE4 pin is brought out to external port P206 on later systems, connecting Pin 9 of J206 to Pin 2 of P206 performs the same function.

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