Troubleshooting

This page provides troubleshooting steps for dealing with errors and other issues that could possibly occur when working with or setting up the various parts of the motoman_driver (/motoman_driver) package. The *Solution* subsections list steps to resolve the issues.

If you have a specific issue that is not listed on this page or the provided solution does not seem to work, please contact the developers by sending an email to the ROS-Industrial (https://groups.google.com/forum/?fromgroups#!forum/swri-ros-pkg-dev) mailing list (direct mail: ROS-Industrial (mailto:swri-ros-pkg-dev@googlegroups.com)).

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1. Installation

1.1 ERROR 3200: NOP or END instruction not found

The robot controller requires all files use Windows-style end-of-line terminator. This is `<carriage return><line feed>`. Many common text editors in the Linux environment will automatically standardize all EOL terminators to be Unix-style; this removes the `<carriage return>`, resulting in the error message.

Solution: Open this job file in a text editor that allows you to use Windows-style EOL (`<0xD><0xA>` or `<CR><LF>`) or, given that the job is relatively small, manually recreate the job using the programming pendant. Another alternative is to copy the `.jbi` and `.dat` files under Windows.

2. Runtime

2.1 Alarm: 8001[0]

Example:

```
ALARM 8001
 WARNING: Too many groups for ROS
[0]
```

Solution: The MotoROS driver can support up to 4 control-groups on FS100, DX200, and YRC1000 controllers. The DX100 can support up to 2 control-groups. This alarm indicates that your controller is setup with more groups than what is supported. This is a warning to notify you that the additional groups will not be controlled by the MotoROS driver. They will remain stationary during operation.

2.2 Alarm: 8003[100 - 111]

Example:

```
ALARM 8003
 MotoROS: Controller cfg invalid
[100]
```

Solution: Your robot controller requires internal configuration changes to support the MotoROS driver.

For DX100 and FS100: Please contact your local Yaskawa Motoman office to order the MotoROS runtime. In North/South America, the part numbers for this configuration are `180014-1` (DX100) and `180015-1` (FS100). In Europe, the part number for this configuration is `171403`

For DX200 and YRC1000: Ensure your controller is updated to at least DN2.21.00-00 or YAS1.11.00-00 system software. If your controller is below this, please contact Yaskawa Motoman for assistance with upgrading the controller. Then boot the controller into Maintenance mode by holding {Main Menu} on the keypad. Touch [System Info] > [Security] and upgrade to MANAGEMENT security level. Touch [System Info] > [Setup] > select OPTION FUNCTION. Cursor down to MOTOMAN DRIVER and set this to USED. Then reboot your robot controller.

2.3 Alarm: 8003[1]

Example:

```
ALARM 8003
 MotoROS Cfg: Set RS000=2
[1]
```

Solution: An internal parameter is not set properly in the robot controller. Touch [System Info] > [Security] and upgrade to MANAGEMENT security level. Then touch [Parameter] > [RS] and set the value of `RS000 = 2`. Then reboot your robot controller.

2.4 Alarm: 8003[2]

Example:

```
ALARM 8003
 MotoROS Cfg: Set S2C541=0
[2]
```

Solution: An internal parameter is not set properly in the robot controller. Touch [System Info] > [Security] and upgrade to MANAGEMENT security level. Then touch [Parameter] > [S2C] and set the value of `S2C541 = 0`. Then reboot your robot controller.

2.5 Alarm: 8003[3]

Example:

```
ALARM 8003
 MotoROS Cfg: Set S2C542=0
[3]
```

Solution: An internal parameter is not set properly in the robot controller. Touch [System Info] > [Security] and upgrade to MANAGEMENT security level. Then touch [Parameter] > [S2C] and set the value of `S2C542 = 0`. Then reboot your robot controller.

2.6 Alarm: 8003[4]

Example:

```
ALARM 8003
 MotoROS Cfg: Set S2C1100=1
[4]
```

Solution: An internal parameter is not set properly in the robot controller. Touch [System Info] > [Security] and upgrade to MANAGEMENT security level. Then touch [Parameter] > [S2C] and set the value of `S2C1100 = 1`. Then reboot your robot controller.

2.7 Alarm: 8003[5]

Example:

```
ALARM 8003
 MotoROS Cfg: Set S2C1103=2
[5]
```

Solution: An internal parameter is not set properly in the robot controller. Touch [System Info] > [Security] and upgrade to MANAGEMENT security level. Then touch [Parameter] > [S2C] and set the value of `S2C1103 = 2`. Then reboot your robot controller.

2.8 Alarm: 8003[6]

Example:

```
ALARM 8003
 MotoROS Cfg: Set S2C1117=1
[6]
```

Solution: An internal parameter is not set properly in the robot controller. Touch [System Info] > [Security] and upgrade to MANAGEMENT security level. Then touch [Parameter] > [S2C] and set the value of `S2C1117 = 1`. Then reboot your robot controller.

2.9 Alarm: 8003[7]

Example:

```
ALARM 8003
 MotoROS Cfg: Set S2C1119=0 or 2
[7]
```

Solution: An internal parameter is not set properly in the robot controller. Touch [System Info] > [Security] and upgrade to MANAGEMENT security level. Then touch [Parameter] > [S2C] and set the value of `S2C1119`. A value of `2` will enable the telnet option to see any output messages from the MotoROS driver. A value of `0` will disable the telnet option. Reboot your robot controller after changing this parameter.

2.10 Alarm: 8003[8]

Example:

```
ALARM 8003
 MotoROS not compatible with PFL
[8]
```

Solution: The MotoROS driver is not compatible with the human-collaborative features of the HC robots. Reboot the robot controller while holding {Main Menu} on the keypad to enter Maintenance mode. Touch [System Info] > [Security] and upgrade to MANAGEMENT security level. Then touch [MotoPlus (/MotoPlus) Apl] > [Delete]. Select PLF.out and press {Enter} to confirm removal of the PFL driver.

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