SynQor MPS / MPPS Terminal Commands

The MPS external serial port uses 115.2kbaud, 8 data bits, no parity, and one stop bit. Commands can be sent, and output viewed, with any standard terminal emulator. To view user text, set the terminal emulator for local echo. All transmitted commands must be terminated with a line feed character (ASCII 10). The interface is not case sensitive.

The MPS will transmit a prompt "SynQor>" to the terminal after each command. To execute a command, simply transmit the required ASCII text, terminated by a line feed character.

Command Summary

Command	Description
?	Display list of available terminal commands.
ANALOG IN?	Display control board analog signal levels.
ASTART DISABLE	Disable auto-start mode (default factory setting).
ASTART ENABLE	Enable auto-start mode.
BAUDRATE x	Adjust baudrate of serial port.
BS OFF	Disable Battlemode.
BS ON	Enable Battlemode.
CODE?	Output code revision information for internal components.
DIGITAL IN?	Display state of internal digital inputs of MPS control board.
EMAIL RESTORE	Restore Email alert notifications to factory default settings.
FACTORY RESTORE	Restore communication board to factory default state.
FAN SERVICE	Execute fan service sequence immediately (cycles through fan speed settings).
FAN SET x	Manually set fan speed, x=0 to 4.
FAN STATUS?	Display inputs to fan controller.
FAND DISABLE	Disable execution of fan diagnostics every 24 hours.
FAND ENABLE	Enable execution of fan diagnostics every 24 hours (default factory setting).
FANS?	Display fan speeds and input voltage.
INPUTS?	Display status of inputs to MPS system.
MODEL?	Display MPS system model name.
NET RESTORE	Restore network configuration settings to factory defaults.
NETWORK?	Display Ethernet IP address and MAC address.
OUTPUT DISABLE	Shutdown output(s) of MPS system, reverting to standby.
OUTPUT ENABLE	Enable output(s) of MPS system.
OUTPUTS?	Display status of output(s) from MPS system.

SynQor MPS / MPPS Terminal Commands

Command	Description
RESTART x	Shutdown output immediately, re-enable output after *x* seconds.
RUNTEST x	Run internal built-in test routine.
SET ACINLIM x	Set input current limit.
SETDATE [yyyy-mm-dd]	Set internal datestamp for generation of a TLS Certificate.
SET IMAX x	[MPPS Only] Set user output current limit value in Amps.
SET VOUT x	[MPPS Only] Set output voltage level in millivolts.
SHUTDOWN x	Shutdown output after *x* seconds.
SNMP RESTORE	Restore SNMP configuration to factory defaults.
STARTUP x	Enable outputs after *x* seconds.
SYNCCON OFF	Disable synchronized start / stop / restart behavior.
SYNCCON ON	Enables synchronized start / stop / restart behavior (factory default).
SYNCFAULT OFF	Disables synchronized fault shutdown behavior (factory default).
SYNCFAULT ON	Enables synchronized fault shutdown behavior.
TEMPS?	Display reported temperatures for internal subsystems.
TRAP LOG	Output log of communication board bootup events.

Command Details

Command: ?
Description: Display list of available terminal commands.
Sample Output: `SynQor>`**?**
` ANALOG IN?`
` ASTART DISABLE`
` ASTART ENABLE`
` :`

` SynQor>`
Discussion: Output response format is a single row for each command available to the user.

Command: ANALOG IN?
Description: Display control board analog signal levels.
Sample Output: SynQor>**ANALOG IN?**
         5V Supply = 5.18 V
         DC Output Voltage = 32.0 V
         Cold-start Voltage = 0.0 V
         Fan Voltage = 12.1 V
         Motherboard Temperature = 24 C

         SynQor>
Discussion: Command displays translated values from ADC measurements on MPS control board. No user action based on these outputs should taken. Parameters displayed by MPPS module are different from that shown above.

Command: ASTART DISABLE
Description: Disable auto-start mode (default factory setting).
Sample Output: SynQor>**ASTART DISABLE**
         Flash Updated.

         SynQor>
Discussion: Command disables auto-start mode. This is the default factory configuration. With auto-start disabled, when the MPS receives AC input power, it will enter standby mode. In standby mode, the terminal interface is active, but the output will not enable until the user takes action to enable the output, either through a terminal command, the front panel switch, or a rear panel I/O signal.

Command: ASTART ENABLE
Description: Enable auto-start mode.
Sample Output: SynQor>**ASTART ENABLE**
         Flash Updated.

         SynQor>
Discussion: Command enables auto-start mode. In auto-start mode, when the MPS first receives AC input power from an off state, it will automatically enable the output after a brief delay. This is not the default factory setting. Once the autostart mode is set, it will persist until disabled with the "ASTART DISABLE" command. Note that autostart will only enable the output from a powered down state; if the output disables due to a fault or user action, but input power is still present, the output will not automatically re-enable.

Command: BAUDRATE x
Description: Adjust baudrate of serial port.
Sample Output: SynQor>**BAUDRATE 2400**
Baud rate updated to <2400>, Power cycle required to apply change.

SynQor>

Discussion: Baudrate setting for the terminal interface can be modified; note that the setting does not take effect until input power is removed from the MPS and there is a complete power-on reset. The valid range of baud rates is as follows:
1200, 2400, 4800, 9600, 14400, 19200, 28800, 38400, 57600, or 115200.

Command: BS OFF
Description: Disable Battlemode.
Sample Output: SynQor>**BS OFF**
Battlemode Disengaged.

SynQor>

Discussion: Disengages the software battle-mode, reversing the effect of "BS ON" command. If battle-mode is enabled via the digital input pull-down on the rear panel, it cannot be disabled via this command.

Command: BS ON
Description: Enable Battlemode.
Sample Output: SynQor>**BS ON**
Battlemode Engaged.

SynQor>

Discussion: Engages the software battle-mode. Battle-mode disables over-temperature shutdown features of internal modules. Disengage battle-mode with the "BS OFF" command.

Command: CODE?
Description: Output code revision information for internal components.
Sample Output: SynQor>**CODE?**
AC/DC Rev 1:A = &H0313
AC/DC Rev 1:B = &H0313
AC/DC Rev 1:C = &H0313
AC/DC Rev 2:A = &H0083
AC/DC Rev 2:B = &H0083
AC/DC Rev 2:C = &H0083
Control Rev = 7, 8
Comm Code Rev = 4, 6

SynQor>

Discussion: Outputs reported code revision of internal modules.

Command: DIGITAL IN?
Description: Display state of internal digital inputs of MPS control board.
Sample Output: SynQor>**DIGITAL IN?**
          DC Out 0 Fault = High
          DC Out 1 Fault = Low
          AC input Alarm = Low
          DC Bad Alarm = Low
          Front Switch UP = Low
          Remote Start = Low
          Front Switch DOWN = Low

          SynQor>
Discussion: Command displays translated values from digital inputs MPS control board. No user action based on these outputs should taken. Note that the presence of DC Out 0 & DC Out 1 inputs does not imply that DC outputs are or are not available on a given system.

Command: EMAIL RESTORE
Description: Restore Email alert notifications to factory default settings.
Sample Output: SynQor>**EMAIL RESTORE**
          Factory Email Defaults Restored.

          SynQor>
Discussion: Command restores settings for Email alerts to factory defaults (no alerts transmitted). [This command is only available with the Ethernet Option installed.]

Command: FACTORY RESTORE
Description: Restore communication board to factory default state.
Sample Output: SynQor>**FACTORY RESTORE**

          . Factory defaults loaded to user configuration.
          . Updated network settings applied.
          . Certificate memory erased.
          . Launched certificate rebuild task.
          . Bootloader image memory erased.
          . Bootloader configuration memory erased.
          . Trap log memory erased.
          Factory Restore Complete.

          SynQor>
Discussion: The factory restore sets all user configuration settings in the communication board to their factory default states, and also erases non-volatile memory pages which can be updated during the operation of the board. This command does not reset system settings not related to the communication board, for example Auto-Start behavior. [This command is only available in Communication Board Code Rev 6.6 and later.]

Command: FAN SERVICE

Description: Execute fan service sequence immediately (cycles through fan speed settings).

Sample Output: SynQor>**FAN SERVICE**
Fan service initiated.

SynQor>

Discussion: The fan service sequence cycles the fans through their different speed ranges, and compares the measured fan RPM to the factory-new levels. Significant speed degradation will be indicated by a "fan service required" LED on the front panel. Note that the fan service sequence will not slow the fans down below the speed dictated by the internal temperatures. The fan service sequence normally runs automatically after every 24 hours of continuous operation, or more frequently if a fan speed degradation condition is detected. Fan service sequence will not run if the output is disabled.

Command: FAN SET x

Description: Manually set fan speed, x=0 to 4.

Sample Output: SynQor>**FAN SET 1**
Fan speed set.

SynQor>

Discussion: Manually increase the fan speed. Fans will not slow to a speed below that dictated by internal temperatures. Manually setting a higher fan speed will modify the MPS Cooling System Indicator LED as indicated in the User Guide. Fans will not run with the output disabled.

Command: FAN STATUS?

Description: Display inputs to fan controller.

Sample Output: SynQor>**FAN STATUS?**
Current Speed: 1
Last Trigger Up: Diag Timer
Decel Timer: &H0000 &H0000
Var: value / thresh_down / thresh_up / type
Manual Control: &H0001 / &H0001 / &H0001 / higher value -> speed up
Diag Timer: &H0000 / &H4382 / &H4381 / higher value -> speed up
AC/DC:A Prim: &H010C / &H011D / &H0164 / higher value -> speed up
AC/DC:A Sec: &H00F8 / &H011D / &H0164 / higher value -> speed up
AC/DC:B Prim: &H00F3 / &H011D / &H0164 / higher value -> speed up
AC/DC:B Sec: &H00F9 / &H011D / &H0164 / higher value -> speed up
AC/DC:C Prim: &H0107 / &H011D / &H0164 / higher value -> speed up
AC/DC:C Sec: &H00FA / &H011D / &H0164 / higher value -> speed up
Control PCB: &H013C / &H0170 / &H01D6 / higher value -> speed up

SynQor>

Discussion: Displays inputs and status of the fan speed controller. The Last Trigger Up reflects which input to the controller last caused an increase in the fan speed. The list of fan controller inputs indicates which modules are online and providing triggers to control the fan speed. For each input, the present value is listed, as well as the thresholds applied to that value to cause a trigger to a higher or lower fan speed. Manual Control is the terminal interface and Diag Timer is the interval counter for the fan service sequence. Some inputs may be omitted from the list. For example, if there is no AC input power present on a single phase, then the corresponding input may not display

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Command: FAND DISABLE
Description: Disable execution of fan diagnostics every 24 hours.

Sample Output: SynQor>**FAND DISABLE**
Flash Updated.

SynQor>
Discussion: Disables automatic execution of the fan diagnostic sequence after every 24 hours of operation. If the fan diagositic sequence is disabled, a transient fan speed fault may not be cleared automatically.

Command: FAND ENABLE
Description: Enable execution of fan diagnostics every 24 hours (default factory setting).
Sample Output: SynQor>**FAND ENABLE**
Flash Updated.

SynQor>
Discussion: Allows execution of the fan diagnostics automatically based on internal timing intervals. The fan diagnostics cycle the fan through the various speeds and compares detected fan RPM to factory-new values.

Command: FANS?
Description: Display fan speeds and input voltage.
Sample Output: SynQor>**FANS?**
Fan0 RPM = 10901
Fan1 RPM = 11244
Fan Voltage = 12.0 V
Fan Status / State = &H2400
Fan Diag Timer = 23:59

SynQor>

Discussion: Reports measure fan speed and applied voltage. The Fan Status / State variable provides additional information about the fan status. Fan Status bit decoding:
b15-13: Fan speed value from 0-4. In sample, speed b15-13=001, indicating speed 1
b11: Machine status is Faulted
b10: Machine status is Running (indicated in sample)
b9: Machine status is Starting
b8: Machine status is Standby
b7: Fan service is required
b6: Fan diagnostics mode active

The Fan Diag Timer variable displays the time until the next scheduled fan diagnostics routine.

Command: INPUTS?
Description: Display status of inputs to MPS system.

Sample Output: SynQor>**INPUTS?**
AC In Voltage:A = 195 V
AC In Voltage:B = 196 V
AC In Voltage:C = 195 V
AC In Current:A = 460 mA
AC In Current:B = 0 mA
AC In Current:C = 220 mA
AC In Power = 132 W
AC In Frequency = 60.1 Hz
Fault Register = &H00A0
Non-Volatile Config = &H1C10
Input Current Limit = 27.00 A

SynQor>

Discussion: Reports status of inputs to UPS system. The Fault Register decoding is as follows:
b14: Remote Shutdown requested from back panel
b13: Remote start requested from back panel
b12: Front panel switch pressed down (off)
b10: Software Disable Command
b9: Software Enable Command
b8: DCOUT2 Fault
b6: Output Bus High
b5: Output Bus Low
b4: Front panel switch pressed up (on)
b3: Internal 5V supply High
b2: Internal 5V supply Low
b1: Over-temperature Warning
b0: Over-temperature condition

The Non-volatile Config register gives the FLASH memory options as follows:
b11: DC2 Output Active
b7: DC2 Output Option Installed
b5: Autostart Enabled
b4: DC1 Output Present
b3: Fan Diagnostics Disabled

Command: `MODEL?`
Description: Display MPS system model name.
Sample Output: `SynQor>`**`MODEL?`**
`MPS-4000-1U-3W2ES00-E00`

`SynQor>`
Discussion: Command displays the complete model name of the system.

Command: `NET RESTORE`
Description: Restore network configuration settings to factory defaults.
Sample Output: `SynQor>`**`NET RESTORE`**
`Factory Networking Defaults Restored.`

`SynQor>`
Discussion: Command restores settings for network configuration to factory defaults. [This command is only available with the Ethernet Option installed.]

Command: NETWORK?
Description: Display Ethernet IP address and MAC address.
Sample Output: SynQor>**NETWORK?**
IP Address = 10.2.8.49
MAC Address = 00:04:A3:B5:63:DF
CAN Box ID = 255

SynQor>

Discussion: Command displays the device pre-set MAC address and currently active IP address. [This command is only available with the Ethernet Option installed.] The CAN Box ID is relevant for MPPS modules current sharing via the CONFIG port.

Command: OUTPUT DISABLE
Description: Shutdown output(s) of MPS system, reverting to standby.
Sample Output: SynQor>**OUTPUT DISABLE**
Output Disabled.

SynQor>

Discussion: Disables output(s) if currently active. This terminal command is equivalent to holding down the front panel switch.

Command: OUTPUT ENABLE
Description: Enable output(s) of MPS system.
Sample Output: SynQor>**OUTPUT ENABLE**
Output Enabled.

SynQor>

Discussion: Enables output(s). This terminal command is equivalent to pushing the front panel switch upwards.

Command: OUTPUTS?
Description: Display status of output(s) from MPS system.
Sample Output: SynQor>**OUTPUTS?**
DC Out Power = 0 W
DC Output Voltage = 32045 mV
DC Output Current = 0.00 A
Nominal Setpoint = 30.000 V
Fan Status / State = &H2400
BIT Result = <n/a>
Aux Status = &H0014

SynQor>

Discussion: Reports telemetry data on output(s). The "FANS?" Command description details the Fan Status / State register. The BIT Result variable displays the last result from a built-in test routine, if applicable. The *Aux Status* register decoding is as follows:
b9: [MPPS Only] Open fuse detected in output bank.
b8: [MPPS Only] Open fuse detected in regulation stage input bank
b4: Battle-mode active
b3: RS232 Interface active
b2: Ethernet link active
b1: DC Output fault indicated
b0: AC Input fault indicated

Parameters displayed by MPPS module are different from that shown above.

Command: RESTART x
Description: Shutdown output immediately, re-enable output after x seconds.
Sample Output: SynQor>**RESTART 1**
Timed reboot started.

SynQor>
Discussion: If outputs are enabled, they will be immediately disabled. After the requested delay, outputs will enable. Outputs will enable whether or not they were in an enabled state when the command was first issued. Maximum permissible value for restart time is 10,737,418 seconds, approximately 4 months.

Command: RUNTEST x
Description: Run internal built-in test routine.
Sample Output: SynQor>**RUNTEST 1**
Test already running.

SynQor>
Discussion: Runs internal built-in test routine. Legal values for x:
x=0 or 2 : Abort test in progress.
x=3 : Run General Systems Test; verifies internal bias voltages, fans, voltage inputs and outputs.
x=6 : Run factory communications board test; requires CONFIG port connection to external hardware.

Command: SET ACINLIM x
Description: Set input current limit.
Sample Output: SynQor>**SET ACINLIM 23.0**
Flash Updated.

SynQor>
Discussion: Sets user input current limit value. The default value is 27A, which means that in normal operation or overload, the electronic input limiting will not trip a 30A breaker on the 3-phase input power. If a lower rated input breaker is allowed, the input current limit value can be set to a lower value, down to 17A. This setting is stored in non-volatile memory.

Command: SETDATE [yyyy-mm-dd]
Description: Set internal datestamp for generation of a TLS Certificate.
Sample Output: SynQor>**SETDATE 2025-06-10**
Date set.

SynQor>
Discussion:

Normally an Ethernet-connected device will receive a network timestamp from NTP services. A network timestamp is required for generation of a SSL/TLS certificate for the certificate generation & expiration date. If a device is not connected to an NTP service, the SETDATE command can be used to allow generation of the certificate. Certificates are non-volatile and only need to be generated if certain network configuration settings have changed. [This command is only available in Communication Board Code Rev 6.2 and later.]

Command: `SET IMAX x`
Description: [MPPS Only] Set user output current limit value in Amps.
Sample Output: SynQor>**`SET IMAX 50`**
`DAC Set. Flash Updated.`

`SynQor>`
Discussion: Sets user current limit value for MPPS DC output.   An illegal value will result in an "out of range" message, and the current limit setting will not be modified. The reported "Rated Output Power" is set to the 0.85 × current limit setting × nominal setpoint voltage. Note that in some cases the user setpoint current will correspond to an output power above the rating of device, and the actual current limit value will be less than the user setpoint.

Command: `SET VOUT x`
Description: [MPPS Only] Set output voltage level in millivolts.
Sample Output: SynQor>**`SET VOUT 45000`**
`DAC Set.  Flash Updated.`

`SynQor>`
Discussion: For MPPS modules, this command sets the output voltage of the device. An illegal value will result in an "out of range" message, and the current limit setting will not be modified. The module is controlled by both a maximum output power and a maximum output current. Therefore, reducing the output voltage setpoint may reduce the available output power, when the maximum output current becomes the limiting factor.

Command: `SHUTDOWN x`
Description: Shutdown output after x seconds.
Sample Output: SynQor>**`SHUTDOWN 1`**
`Timed shutdown started.`

`SynQor>`
Discussion: Outputs will be disabled after the requested delay time. Maximum permissible value for shutdown delay is 10,737,418 seconds, approximately 4 months.

Command: `SNMP RESTORE`
Description: Restore SNMP configuration to factory defaults.
Sample Output: SynQor>**`SNMP RESTORE`**
`Factory SNMP Defaults Restored.`

`SynQor>`
Discussion: Command restores SNMP configuration to factory defaults (SNMP disabled). [This command is only available with the Ethernet Option installed.]

Command: STARTUP x
Description: Enable outputs after x seconds.
Sample Output: SynQor>**STARTUP 1**
             `Timed startup begun.`

             `SynQor>`
Discussion: Outputs will be enabled after the requested delay time. Maximum permissible value for enable delay is 10,737,418 seconds, approximately 4 months.

Command: SYNCCON OFF
Description: Disable synchronized start / stop / restart behavior.
Sample Output: Synqor>**SYNCCON OFF**
             `Module will not synchronize On/Off/Restart via CONFIG port.`

             `SynQor>`
Discussion: Disables synchronized start, stop, and restart behavior between multiple MPS devices interconnected via the CONFIG port.

Command: SYNCCON ON
Description: Enables synchronized start / stop / restart behavior (factory default).
Sample Output: SynQor>**SYNCCON ON**
             `Module will synchronize On/Off/Restart via CONFIG port.`

             `SynQor>`
Discussion: Enables synchronized start, stop, and restart behavior between multiple MPS devices interconnected via the CONFIG port. This is the factory default condition. This setting can be overridden either by the "SYNCCON OFF" command, or an external jumper on a CONFIG port pin.

Command: SYNCFAULT OFF
Description: Disables synchronized fault shutdown behavior (factory default).
Sample Output: Synqor>**SYNCFAULT OFF**
             `Module will not synchronize fault shutdown via CONFIG port.`

             `SynQor>`
Discussion: Disables synchronized fault shutdown behavior between multiple MPS devices interconnected via the CONFIG port. This is the factory default condition. This setting can be overridden either by the "SYNCFAULT ON" command, or an external jumper on a CONFIG port pin.

Command: SYNCFAULT ON
Description: Enables synchronized fault shutdown behavior.
Sample Output: Synqor>**SYNCFAULT ON**
　　　　　　Module will synchronize fault shutdown via CONFIG port.

　　　　　　SynQor>
Discussion: Enables synchronized fault shutdown behavior between multiple MPS devices interconnected via the CONFIG port.

Command: TEMPS?
Description: Display reported temperatures for internal subsystems.
Sample Output: SynQor>**TEMPS?**
　　　　　　AC/DC Temperature 1:A = 37 C
　　　　　　AC/DC Temperature 1:B = 29 C
　　　　　　AC/DC Temperature 1:C = 35 C
　　　　　　AC/DC Temperature 2:A = 30 C
　　　　　　AC/DC Temperature 2:B = 31 C
　　　　　　AC/DC Temperature 2:C = 31 C
　　　　　　Control Brd Temp = 28 C

　　　　　　SynQor>
Discussion: Displays measured temperature for installed components, with a resolution of 1 °C.

Command: TRAP LOG
Description: Output log of communication board bootup events.
Sample Output: SynQor>**TRAP LOG**
　　　　　　Bootup, RCON: &H0081 Addr: &H00000000 Time: Jan 01, 1970 00:00:10 UTC
　　　　　　Bootup, RCON: &H0083 Addr: &H90EC2DC6 Time: Jan 01, 1970 00:00:10 UTC
　　　　　　Bootup, RCON: &H0083 Addr: &H90EC21C6 Time: Jan 01, 1970 00:00:10 UTC

　　　　　　SynQor>
Discussion: Displays a list of bootup or reset events on the MPS/MPPS Ethernet communication board. The displayed timestamp relies on an SNTP time being available within 10 seconds of the boot event; if it is not available, 1/1/1970 will be displayed, as above. The boot log is only provided for factory debugging of potential issues.

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