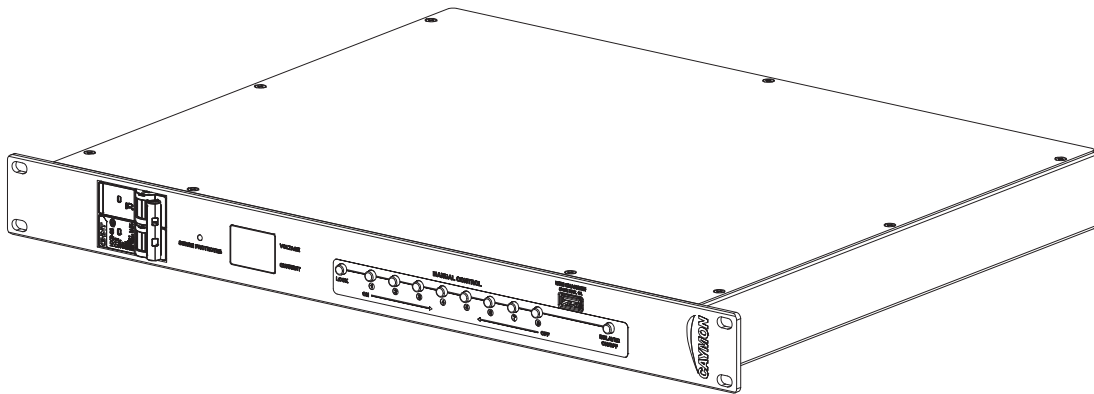


# PSQ108



#### ADDITIONAL INFORMATION

This manual is put together with much care, and is as complete as could be on the publication date. However, updates on the specifications, functionality or software may have occurred since publication. To obtain the latest version of both manual and software, please visit the CAYMON website @ [caymon.eu](http://caymon.eu).



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## Intelligent power sequencer

The PSQ108 is an intelligent power sequencer with 8 x IEC C13 outputs which can be remotely switched using AUDAC Touch™ via TCP/IP or RS-232 connection. It also features front controls for manual control. Several PSQ108 devices can be daisy chained together so that only one IP address is needed for controlling all units. The sequential power on/off function reduces the inrush current of the connected devices when power is turned on and by using the configurable delay times, the order in which the devices turn on can be set. Other features include short circuit and overcurrent protection by means of a 16A circuit breaker, voltage and current monitoring, surge protection with LED indicator and a front USB charging port (max 1000mA).

## Connections

### CONNECTION STANDARDS

The in- and output connections for CAYMON equipment are performed according to international wiring standards for professional audio equipment.

### RS232/485 port (RJ45)



Pin 1	White-Orange	RS232 RxD
Pin 2	Orange	RS232 TxD
Pin 3	White-Green	Not used
Pin 4	Blue	RS485 A
Pin 5	White-Blue	RS485 B
Pin 6	Green	GND
Pin 7	White-Brown	Not used
Pin 8	Brown	Not used

## Network settings

### STANDARD NETWORK SETTINGS

DHCP: **OFF**

IP Address: 192.168.0.181

Subnet Mask: 255.255.255.0

Gateway: 192.168.0.1

DNS 1: 8.8.4.4

DNS 2: 1.1.1.1

## Using the commands

The PSQ108 has 2 communication ports which all accept the same commands:

- RS232/485 port
- TCP/IP

The RS232/RS485 port must be configured with 19200 baud, 8 data bits, 1 stop bit, no parity.

The TCP/IP port accepts commands at port 5001. The PSQ108 accepts maximum 5 simultaneous TCP/IP connections.

### Command overview

*Startsymbol | Destination | Source | Command | Argument(s) | Checksum | Return*

**Example:** Get the device IP address

**ASCII command:** #|C001|TOUC|GIP|0|U|return

**Argument:** None

**Answer:** dhcp^ip4.ip3.ip2.ip1^mask4.mask3.mask2.mask1^gw4.gw3.gw2.gw1^dns4.dns3.dns2.dns1^adns4.adns3.adns2.adns1

**dhcp:** dhcp OFF (0)

**ip:** IP4 address of the unit

**mask:** subnet mask

**gw:** address of gateway

**dns:** IP4 address of dns server 1

**adns :** IP4 address of dns server 2

**PSQ108 replies:** #|TOUC|C001|GIP|0^192.168.0.181^255.255.255.0^192.168.0.1^8.8.4.4^1.1.1.1|U|return

**Important:**

- The address of the PSQ108 is C001 by default and the range is 001-999.
- The address for broadcast commands is C000 or ALL.
- Source address has a maximum length of 4 characters and cannot contain “|” or “#”
- Return in ASCII is <CR><LF> (carriage return & line feed)
- Return in HEX is 0x0d 0x0a (carriage return & line feed)
- The checksum is CRC-16 excluding the ‘#’. You can replace the checksum with ‘U’, this is always accepted as checksum.

**Command flow**

1. The client (e.g. TOUC-AUDAC Touch) sends a command to the PSQ108
2. The PSQ108 acknowledges the command by returning the same command and a ‘+’ as Argument.
3. The PSQ108 updates all clients with the new information

## Configuration and setting commands

### SA - Set the device address

Device address range [1-999], C000 used for broadcast address. The device address C00x should be updated with C00y.

**Command:** #|C00x|TOUC|SA|id|U|return

**Argument:**

**id:** the new device address

**Answer:** +, acknowledge

**Example:** Set C001 device address to C002

**ASCII Command:** #|C001|TOUC|SA|2|U|return

**Answer:** #|TOUC|C001|SA|+|U|return

**Update:** #|ALL|C001|A|2|U|return

### GIP - Get IP address

Get the device IP address

**Command:** #|C001|TOUC|GIP|0|U|return

**Argument:** None

**Answer:** #|TOUC|C001|GIP|dhcp^ip4.ip3.ip2.ip1^mask4.mask3.mask2.mask1^gw4.gw3.gw2.gw1^dns4.dns3.dns2.dns1^adns4.adns3.adns2.adns1|U|return

**Example:** Get the device IP address from C001

**ASCII Command:** #|C001|TOUC|GIP|0|U|return

**Answer:** #|TOUC|C001|GIP|0^192.168.0.101^255.255.255.0^192.168.0.254^8.8.4.4^1.1.1.1|U|return



## SIP - Set IP address

Set the device IP address

**Command:** #|C001|TOUC|SIP|dhcp^ip4.ip3.ip2.ip1^mask4.mask3.mask2.mask1^gw4.gw3.gw2.gw1^dns4.dns3.dns2.dns1^adns4.adns3.adns2.adns1|U|return

### Argument:

**dhcp:** dhcp OFF (0)

**ip:** IP4 address of the unit

**mask:** subnet mask

**gw:** address of gateway

**dns:** IP4 address of dns server 1

**adns:** IP4 address of dns server 2

**Answer:** +, acknowledge

**Example:** IP address of C001 should be changed to 192.168.0.101

**ASCII Command:** #|C001|TOUC|SIP|0^192.168.0.101^255.255.255.0^192.168.0.254^8.8.4.4^1.1.1.1|U|return

**Answer:** #|TOUC|C001|SIP|^|U|return

**Update:** #|ALL|C001|IP|0^192.168.0.101^255.255.255.0^192.168.0.254^8.8.4.4^1.1.1.1|U|return

## Relay commands

### GRS - Get relay status

**Command:** #|C001|TOUC|GRS|0|U|return

**Argument:** None

**Answer:** #|TOUC|C001|SZSET|00rr|U|return

rr: Hexidecimal value of the binary relay status

**Example:** Request relay status from C001 and the answer is all relays are on, where the answer 00FF is 11111111 in 8 digit binary

The 8 bit hexadecimal representation is 00rr and bit0 is relay 1 and bit 7 relay 8. If bit value is 1 then relay is active.

**ASCII Command:** #|C001|TOUC|GRS|0|U|return

**Answer:** #|TOUC|C001|SZSET|00FF|U|return

## SRON - Set relay on

**Command:** #|C001|TOUC|SRON|000000rr|U|return

**Argument:** 00rr

**00rr:** The 8 bit hexadecimal representation where bit0 is relay 1 and bit7 relay 8. If bit value is 1 then relay is turned/kept on.

**Answer:** +, acknowledge

**Example:** Set the relay 1 on

**ASCII Command:** #|C001|TOUC|SRON|0001|U|return

**Answer:** #|TOUC|C001|SRON|+|U|return

**Update:** #|ALL|C001|SZSET| 0000001|U|return

## SROFF - Set relay off

**Command:** #|C001|TOUC|SROFF|000000rr|U|return

**Argument:** 00rr

**00rr:** The 8 bit hexadecimal representation where bit0 is relay 1 and bit7 relay 8. If bit value is 1 then relay is turned /kept off.

**Answer:** +, acknowledge

**Example:** Set the relay 1 off

**ASCII Command:** #|C001|TOUC|SROFF|00000001|U|return

**Answer:** #|TOUC|C001|SROFF|+|U|return

**Update:** #|ALL|C001|SZSET|00FE|U|return

## GDELONE - Get delay on enable

**Command:** #|C001|TOUC|GDELONE|0|U|return

**Argument:** None

**Answer:** #|TOUC|C001|DELONE|relay1^relay2^relay3^relay4^relay5^relay6^relay7^relay8|U|return

**Example:** Request delayed power on status for C001 relays

**ASCII Command:** #|C001|TOUC|GDELONE|0|U|return

**Answer:** #|TOUC|C001|DELONE|1^1^1^1^1^1^1^1|U|return

## SDELONE - Set delay on status

**Command:** #|C001|TOUC|SDELONE|relay1^relay2^relay3^relay4^relay5^relay6^relay7^relay8|U|return

**Argument:** relay

**relay:** relay status

0=Disabled

1=Enabled

2=Last state (before DELOFF or power interruption)

**Answer:** +, acknowledge

**Example:** Set delayed power on status for C001 relays, relay 2 is set for last state and relay 3 is disabled

**ASCII Command:** #|C001|TOUC|SDELONE|1^2^0^1^1^1^1^1|U|return

**Answer:** #|TOUC|C001|SDELONE|+|U|return

**Update:** #|ALL|C001|DELONE|1^2^0^1^1^1^1^1|U|return

## GDELONT - Get power on delay time

**Command:** #|C001|TOUC|GDELONT|0|U|return

**Argument:** None

**Answer:** #|TOUC|C001|DELONT|delay1^delay2^delay3^delay4^delay5^delay6^delay7  
^delay8|U|return

delay: delay on time (in seconds)

**Example:** Request power on delay time from C001 where the delayed on time for relay 1 is 1 second, for relay 2 is 2 seconds, for relay 3 is 3 seconds etc...

**ASCII Command:** #|C001|TOUC|GDELONT|0|U|return

**Answer:** #|TOUC|C001|DELONT|1^2^3^4^5^6^7^8|U|return

## SDELONT - Set power on delay time

**Command:** #|C001|TOUC|SDELONT| delay1^delay2^delay3^delay4^delay5^delay6^delay7  
^delay8 |U|return

**Argument:** delay

delay: delay on time (in seconds, range 0s - 9999s)

**Answer:** +, acknowledge

**Example:** Set power on delay time from C001 where the delayed on time for relay 1 is 1 second, for relay 2 is 2 seconds, for relay 3 is 3 seconds etc...

**ASCII Command:** #|C001|TOUC|SDELONT| 1^2^3^4^5^6^7^8 |U|return

**Answer:** #|TOUC|C001|SDELONT|+|U|return

**Update:** #|ALL|C001|DELONT| 1^2^3^4^5^6^7^8|U|return

## GDELOFFE - Get power off delay enable

**Command:** #|C001|TOUC|GDELOFFE|0|U|return

**Argument:** None

**Answer:** #|TOUC|C001|DELOFFE|relay1^relay2^relay3^relay4^relay5^relay6^relay7^relay8|U|return

**Example:** Request delayed power off status for C001 relays

**ASCII Command:** #|C001|TOUC|GDELOFFE|0|U|return

**Answer:** #|TOUC|C001|DELOFFE|1^1^1^1^1^1^1^1|U|return

## SDELOFFE - Set power off delay enable

**Command:** #|C001|TOUC|SDELOFFE|relay1^relay2^relay3^relay4^relay5^relay6^relay7^relay8|U|return

**Argument:** relay

**relay:** relay status

0=Disabled, Relay is not turned off during delayed off

1=Enabled, Relay is turned off during delayed off

**Answer:** +, acknowledge

**Example:** Set power off delay enable for all relays

**ASCII Command:** #|C001|TOUC|SDELOFFE|1^1^1^1^1^1^1^1|U|return

**Answer:** #|TOUC|C001|SDELOFFE|+|U|return

**Update:** #|ALL|C001|DELOFFE| 1^1^1^1^1^1^1^1|U|return

## GDELOFFT - Get power off delay time

**Command:** #|C001|TOUC|GDELOFFT|0|U|return

**Argument:** None

**Answer:** #|TOUC|C001|DELOFFT|delay1^delay2^delay3^delay4^delay5^delay6^delay7  
^delay8|U|return

delay: delay off time (in seconds)

**Example:** Request power off delay time from C001 where the delayed off time for relay 1 is 8 second, for relay 2 is 7 seconds, for relay 3 is 6 seconds etc...

**ASCII Command:** #|C001|TOUC|GDELOFFT|0|U|return

**Answer:** #|TOUC|C001|DELOFFT|8^7^6^5^4^3^2^1|U|return

## SDELOFFT - Set power off delay time

**Command:** #|C001|TOUC|SDELOFFT|delay1^delay2^delay3^delay4^delay5^delay6^delay7  
^delay8 |U|return

**Argument:** delay

delay: delay off time (in seconds, range 0s - 9999s)

**Answer:** +, acknowledge

**Example:** Set power off delay time from C001 where the delayed off time for relay 1 is 8 second, for relay 2 is 7 seconds, for relay 3 is 6 seconds etc...

**ASCII Command:** #|C001|TOUC|SDELOFFT| 8^7^6^5^4^3^2^1 |U|return

**Answer:** #|TOUC|C001|SDELOFFT|+|U|return

**Update:** #|ALL|C001|DELOFFT| 8^7^6^5^4^3^2^1|U|return

## GPWRON - Get power on setting

**Command:** #|C001|TOUC|GPWRON|0|U|return

**Argument:** None

**Answer:** #|TOUC|C001|PWRON|1|U|return

**Example:** Request power on setting for C001

**ASCII Command:** #|C001|TOUC|GPWRON|0|U|return

**Answer:** #|TOUC|C001|PWRON|1|U|return

## SPWRON - Set power on setting

**Command:** #|C001|TOUC|SPWRON|power|U|return

**Argument:** power

**power:** power on setting

If argument is 0, device does not initiate delay on sequence after power is turned on. If argument is 1, device does initiate delay on sequence after power is turned on.

**Answer:** +, acknowledge

**Example:** Set power on setting for C001

**ASCII Command:** #|C001|TOUC|SPWRON|0|U|return

**Answer:** #|TOUC|C001|SPWRON|+|U|return

**Update:** #|ALL|C001|PWRON|0|U|return

## DELON - Delayed power on

**Command:** #|C001|TOUC|DELON|0|U|return

**Argument:** None

**Answer:** +, acknowledge

**Example:** Execute delayed power on for C001

**ASCII Command:** #|C001|TOUC|DELON|0|U|return

**Answer:** #|TOUC|C001|DELON|+|U|return

**Update:** #|ALL|C001|SZSET|0001|U|return  
 #|ALL|C001|SZSET|0003|U|return  
 #|ALL|C001|SZSET|0007|U|return  
 #|ALL|C001|SZSET|000F|U|return  
 #|ALL|C001|SZSET|001F|U|return  
 #|ALL|C001|SZSET|003F|U|return  
 #|ALL|C001|SZSET|007F|U|return  
 #|ALL|C001|SZSET|00FF|U|return

The 8 bit hexadecimal representation is 00rr and bit 1 is relay 1 and bit 7 relay 8. If bit value is 1 then relay is active.

## DELOFF - Delayed power off

**Command:** #|C001|TOUC|DELOFF|0|U|return

**Argument:** None

**Answer:** +, acknowledge

**Example:** Execute delayed power off for C001

**ASCII Command:** #|C001|TOUC|DELOFF|0|U|return

**Answer:** #|TOUC|C001|DELOFF|+|U|return

**Update:** #|ALL|C001|SZSET|007F|U|return  
 #|ALL|C001|SZSET|003F|U|return  
 #|ALL|C001|SZSET|001F|U|return  
 #|ALL|C001|SZSET|000F|U|return  
 #|ALL|C001|SZSET|0007|U|return  
 #|ALL|C001|SZSET|0003|U|return  
 #|ALL|C001|SZSET|0001|U|return  
 #|ALL|C001|SZSET|0000|U|return

The 8 bit hexadecimal representation is 00rr and bit 1 is relay 1 and bit 7 relay 8. Relay is turned off during delayed off sequence.



## Monitoring commands

### GVAM - Get voltage and current

**Command:** #|C001|TOUC|GVAM|0|U|return

**Argument:** None

**Answer:** #|TOUC|C001|VAM|V^A|U|return

**V:** Voltage reading in Volts

**A:** Current reading in mA

**Example:** Request voltage and current information for C001

**ASCII Command:** #|C001|TOUC|GVAM|0|U|return

**Answer:** #|TOUC|C001|VAM|240^200|U|return

240V, 200mA

### GSPD- Get surge protection (SPD) status

**Command:** #|C001|TOUC|GSPD|0|U|return

**Argument:** None

**Answer:** #|TOUC|C001|SPD|1|U|return

**SPD:** Surge protection status.

0=Disabled

Device is not protected against surges and should be inspected by qualified technician.

1=Enabled

Device is protected against electrical surges.

**Example:** Request SPD status for C001

**ASCII Command:** #|C001|TOUC|GSPD|0|U|return

**Answer:** #|TOUC|C001|SPD|1|U|return

## GMORE - Get voltage, current, surge protection status and relay status

**Command:** #|C001|TOUC|GMORE|0|U|return

**Argument:** None

**Answer:** #|TOUC|C001|MORE|V^A^SPD^RS|U|return

**RS:** Relay status in hexadecimal.

**Example:** Request voltage, current, surge protection status and relay status for C001

**ASCII Command:** #|C001|TOUC|GMORE|0|U|return

**Answer:** #|TOUC|C001|MORE|240^200^1^FF|U|return

Normally this information is broadcasted every three seconds.

## Factory reset commands

### RESET - Restart device

**Command:** #|C001|TOUC|RESET|0|U|return

**Argument:** None

**Answer:** None

**Example:** Restart C001

**ASCII Command:** #|C001|TOUC|RESET|0|U|return

**Answer:** None

This command restarts the device by the user.

### DEF - Reset to factory defaults

**Command:** #|C001|TOUC|DEF|reset|U|return

**Argument:** reset

0=Reset address, relays off, DELONT, DELONE, DELOFFT, DELOFFE, PWRON

1=Reset address, relays off, DELONT, DELONE, DELOFFT, DELOFFE, PWRON + **IP**

**Answer:** +, acknowledge

**Example:** Reset C001 without resetting IP

**ASCII Command:** #|C001|TOUC|DEF|0|U|return

**Answer:** #|TOUC|C001|DEF|+|U|return

**Update:** Address: C001|return

TCP/IP: IP setting DO NOT change after a factory reset|return

Relay: all relays go to OFF|return

Delay on time: 1^2^3^4^5^6^7^8|return

Delay off time: 8^7^6^5^4^3^2^1|return

Delay on enable: 1^1^1^1^1^1^1|return

Delay off enable: 1^1^1^1^1^1^1|return

Power on: 1 (delayed power on on startup)|return

## Misc commands

### GSV - Get device software version

Get installed software version

**Command:** #|C001|TOUC|GSV|0|U| return

**Argument:** None

**Answer:** #|TOUC|C001|SV|SV|U|return

**SV:** Software version

**Example:** Request software version from C001

**ASCII Command:** #|C001|TOUC|GSV|0|U|return

**Answer:** #|TOUC|C001|SV|1.2|U|return



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