GENESIS CONTROL BOARD

OVERVIEW: The Genesis board has a 4 line 20 characters per line LCD backlit screen. At power up, the display will show the AutoGate and Genesis branding, along with the program version number and the current time. After 5 or 6 seconds, this will then shift to the HOME screen, or base operational data shown below under MAIN SCREEN.

```
AutoGate    Ver.7.3
GENESIS     01:22am
```

TITLE SCREEN

```
Line Voltage 25.39*
Batt Voltage 26.67
Motor  0.00 Amp
Cycles 0        T=00
```

MAIN SCREEN

```
 Open Time:   10
 Close Time:  10
>Auto Close: Off
 Auto Delay:  03
```

Example 1

```
Open Time:   10
Close Time:  10
Auto Close: Off<
Auto Delay:  03
```

Example 2

JOG/SELECT Control Knob: The screens are accessed and modified by a JOG/SELECT control knob. Turning the Jog/Select dial will scroll through the sub-menu selections. When a Sub Menu is showing, a quick momentary press of the Jog/Select knob will display the first screen in that sub menu. Turning the Jog/Select knob will move the cursor (>) through the adjustable parameters.

JOG/SELECT Knob

SCROLLING: Rotating the Jog/Select knob clockwise will scroll through the adjustments on that screen. If there is another screen in that sub-section, continue to scroll after the last character, the screen will automatically change to the next screen. When at the last screen of a sub-section, a long push, (approx. 1 second), of the Jog/Select knob will return to the Sub-Section main screen. Sub Sections can be scrolled in either direction by turning the Jog/Select knob clockwise or counter-clockwise.

JOG/SELECT ACTIONS: Two different actions can occur on the screens:

1) If the cursor is pointed to a descriptive phrase (Example #1), then a momentary push of the Jog/Select knob will move the cursor to the adjustable parameter. Then turning the Jog/Select knob will change the value.

2) When the cursor is pointed to left side of a value or parameter to be changed, (example #2), use quick momentary push of the Jog/Select knob to move the cursor. The cursor will move to the right side of the value (<). Turning the Jog/Select knob will change the value. When done, again, a quick momentary push of the Jog/Select knob moves the cursor back to the left.

Note: Gate will not be operational while in programming mode. When in programming mode there will be a series of flashing lights at all times above the LCD screen.

Note: Screens in ORANGE are ***WARNING*** screens that will appear when there is an issue.

SCREEN MENUS

MAIN SCREEN

```
Line Voltage 25.39*
Batt Voltage 26.67
Motor 0.00 Amps
Cycles 0        T-00
```

Line voltage: From the Power supply. (Normal voltage will be 26 to 27, Preset to 26.5Vdc)
Battery voltage: When AC present: Charging Voltage to batteries, When on DC only: Actual battery voltage. (Normal voltage is 26.4 to 26.8)
Motor: Displays actual motor amperage during cycling
Cycles: A cycle count is considered a complete **OPEN & CLOSE**
T=00: Operation count in seconds for both open and close cycles and also counts down the *"Timer to Close"* (**CLOSE TIME**) time.

CALENDAR/TIME

```
Calendar/Time
```

Set the time, date and day of the week.

GENESIS CONTROL BOARD

CALENDAR/TIME (cont.)

```
>01:14:58 am
 03/21/19 Th
```

Set the time, date and day of the week.

TIMER SETTINGS

```
Timer Settings
```

TIMER SETTINGS: 4 Sub Menus to set OPEN & CLOSE times, Motion ALARM times and 7-DAY TIMERS

```
>Open time:   10
 Close Time:  10
 Auto Close: off
 Auto Delay:  03
```

OPEN/CLOSE TIME: Full Speed Run Time, Set this when the slow down is to start. Slows down after time value expires. ***This option is only active when LIMIT SWITCHES are used.***
AUTO CLOSE TIME: Default is **ON** from 1 to 90 seconds, **OFF** requires a **CLOSE** command.
CLOSE TIME DELAY: Timer to close after all inputs are clear. Settable from 1 to 90 seconds.

```
>Motion Alarm:  On
 Pre-Op Alarm:   0
 Pre-Cl Alarm:   0
```

MOTION ALARM: Turns ON and OFF an alarm or Strobe Light.
PRE-OPEN ALARM: Turns on the alarm from 1 to 5 seconds *before* the gate opens.
PRE-CLOSE ALARM: Turns on the alarm from 1 to 5 seconds *before* the gate closes.
***Note:** This time value must be equal to or shorter than the AUTO CLOSE TIME value.

```
>Automatic Schedule:
   Off
```

AUTOMATIC SCHEDULE: Sets the gate to lock OPEN and CLOSE daily, 7 Days a week, Monday thru Friday or Saturday & Sunday only

```
Automatic Schedule:
>7 days a week
```

```
Automatic Schedule:
>Mon-Fri only
```

```
Automatic Schedule:
>Sat & Sun only
```

```
Automatic Schedule:
>Custom-Daily
```

Set the time, date and day of the week individually. Two complete options for each day: SUNDAY to SATURDAY and SUNDAY 2 to SATURDAY 2.

```
      Monday
>On
 Open:  08:00 am
 Close: 06:00 pm
```

Each day has the ability to set a HOLD OPEN and CLOSE time.

```
    Thursday 2
 OFF<
 Open:  06:00 am
 Close: 05:00 pm
```

(Same as above) Each day has the ability to set a ***second*** HOLD OPEN and CLOSE time.

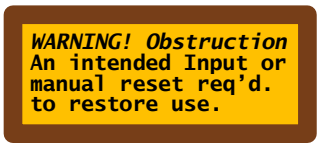
GENESIS CONTROL BOARD

MONITORED INPUT SETTINGS

OPTIONS: OPEN OBSTRUCTION, CLOSE OBSTRUCTION, PROGRAMMED MONITORED INPUTS:
Choices are: 10K (10,000 Ohms Resistance) or 2-Wire.
(The Genesis board supports a maximum number of (2) OPEN, (2) CLOSED & (2) programmable inputs. Contact AutoGate if additional inputs are required).

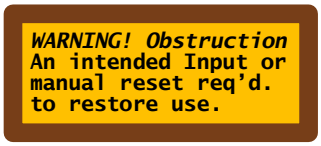
Board is programmed for a "Monitored" Input and it is missing, gate will not operate until the monitored input is restored.

OPEN OBSTRUCTION: You have (3) choices: **OFF, 10K** or **2-WIRE**. You must have a minimum of (1) programmed at all times for UL325 Rev. 6 and up.



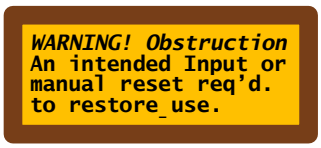
If your gate had an OPEN OBSTRUCTION event, the gate will stop and reverse to full close until the obstruction is cleared and an INTENTED INPUT (Access Control Input, Loop Reset, etc., but *NOT* the CLOSE TIMER) or a MANUAL INPUT on the control board resets your gate back to normal operation.

CLOSE OBSTRUCTION: You have (3) choices: **OFF, 10K** or **2-WIRE**. You must have a minimum of (1) installed and programmed at all times per UL325 Rev. 6 through latest editions. **CLOSE OBSTRUTION DEVICES** are approved Beams and Edges only!



If your gate had a ***DOUBLE CLOSED EDGE OBSTRUCTION*** event, the gate will shut down in the OPEN position until the obstruction is cleared and an INTENTED INPUT (Access Control Input, Loop Reset, etc., but *NOT* the CLOSE TIMER) or a MANUAL INPUT on the control board resets your gate back to normal operation.

PROGRAM MONITORED INPUTS: Additional INPUTS for additional monitored devices. Choices are: **OFF**, **10K:** OPEN EDGE, OPEN BEAM, CLOSE EDGE & CLOSE BEAM
2-WIRE: OPEN EDGE, OPEN BEAM, CLOSE EDGE & CLOSE BEAM.



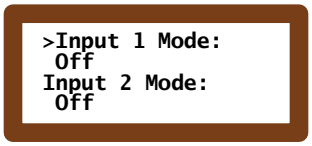
If your gate had an OBSTRUCTION event, depending on the monitored device, the gate will shut down either in the OPEN or CLOSED position until the obstruction is cleared and an INTENTED INPUT (Access Control Input, Loop Reset, other) or a MANUAL INPUT on the control board will reset your gate back to normal operation.

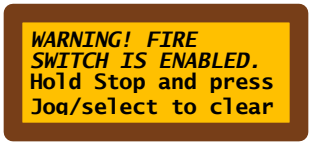
INPUT OPTIONS

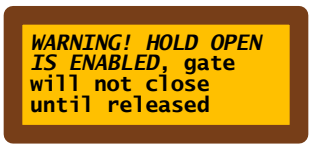
OPTIONS: INPUT 1 & 2

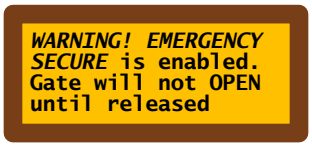
GENESIS CONTROL BOARD

INPUT OPTIONS (cont.)

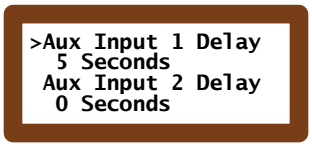




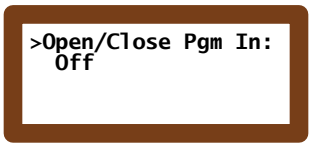




INPUT (1 & 2) MODES:
OFF
OPEN-Open command
CLOSE-Close command
Single Button-Open-Stop-Close-Stop
Reverse-Reverse command
Fire-Holds the gate Open ***(will cause a FLASHING ALERT warning screen)***
Shadow-Shadow Loop input
Auto Open: Default is OFF-Skips the next days 7-Day Timer cycle commands
Hold Open-Opens gate: Holds open until Input removed ***(will cause a FLASHING ALERT warning screen)***
Emergency Secure-Gate will NOT open ***(will cause a FLASHING ALERT warning screen)***
Emergency Close-(Custom programmed, contact AutoGate for this option)
Aux 1 Pulse-Pulses Auxiliary 1 contacts
Aux 1 Hold-Holds Auxiliary 1 contacts until triggered
Aux 2 Pulse-Same as Pulse 1
Aux 2 Hold-Same as Hold 1



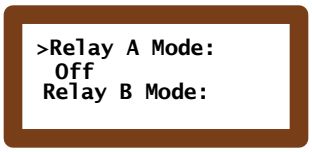
AUXILLARY INPUT 1 & 2 DELAY: Option to delay the INPUT from firing and opening the gate. Settable from 1 to 20 seconds



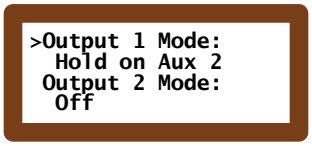
Open/Close Program: Programs the OP/CL PRM Input under P2 on the board to either and OPEN/CLOSE Input or an OPEN only.

AUXILARY OUTPUT OPTIONS

OPTIONS: AUXILIARY RELAYS (A & B), OUPUT (1 & 2), PROGRAMMABLE LOCK



AUXILIARY RELAYS (A & B): Either relay can be set for a variety of functions:
OFF
Pulse on Open Limit
Pulse on Close Limit
Hold on Open Limit
Hold on Close Limit
Pulse on Motor Open
Pulse on Motor Close
Hold on Motor Open
Hold on Motor Close



OUTPUT (1 & 2): Either relay can be set for a variety of functions and provides 24vdc power
OFF
Pulse on Open Limit
Pulse on Close Limit
Hold on Open Limit
Hold on Close Limit
Pulse on Motor Open
Pulse on Motor Close
Hold on Motor Open
Hold on Motor Close
Hold on UL Alarm
Hold on Motor Run

GENESIS CONTROL BOARD

AUXILARY OUTPUT OPTIONS (cont.)

```
>Programmable lock:
  Magnetic
 Aux Output states:
  Out1 N-O, Out2 N-O
```

PROGRAMMABLE LOCK: Output to control Maglocks or Solenoid Locks. The Maglock will be powered all the time and turn off prior to gate motion. The Solenoid mode will power a 24VDC output prior to gate motion.

```
>Output 1 Pulse Rate
  2 Seconds
 Output 2 Pulse Rate
  ¼ Seconds
```

OUTPUT PULSE RATE:

MAINTENANCE

```
Maintenance
```

GATE ORIENTATION, BATTERY STATUS, SOLAR, BATTERY CHECK, BATTERY LEVEL, OVER CURRENT LEVEL, CONSTANT PRESSURE MODE, DUAL GATE MODE & CUSTOM SETTINGS

```
>Gate Orientation:
    Right
```

GATE ORIENTATION: Set for LEFT or RIGHT hand gate. The hand is always determined from the INSIDE or PRIVATE side of the gate system. If the operator is located on the right-RIGHTHAND, left-LEFTHAND.

```
>Dual Gate Mode:
  >Off
     Status
   Disconnected
```

DUAL GATE MODE: Turn "ON" when you have (2) gates opening at the same time.
Options: OFF, Primary or Secondary. If "ON", then each gate needs to be set accordingly
STATUS: Disconnected or Connected

```
 Dual Gate Mode
Communication lost
```

In a PRIMARY/SECONDARY or DUAL gate mode system, if you lose communication between the two operators you will get this message.

```
Batt: Float Charge
>PWR SUPPLY: Normal
 Batt V Check Freq:
  50 Cycles
```

BATTERY STATUS: Indicates the charging status:
FLOAT: When battery is FULL voltage and not being charged
BULK: Battery is in charging mode
ABSORBTION: Batteries are low, switches to charging
POWER SUPPLY VOLTAGE:
NORMAL (Default): Standard power supply
CHARGE: For retrofitting older systems only and replaces the original factory transformer
SOLAR: Used when you have Solar Panels

```
WARNING! Charging
source NOT detected
in the last 24
hours!
```

WARNING! If Solar is set to ON, and AC voltage is present, the AC voltage will not be connected and you will still be operating off batteries only!

Loss of **SOLAR** or **Power Supply** connection for 24 hours ***(will cause a FLASHING ALERT warning screen)***

BATTERY V CHECK: How often the board will test the batteries under load. The factory pre-set is every 50 cycles. (Pass code required to change cycle frequency)

```
>Low Battery Action
    No Action
```

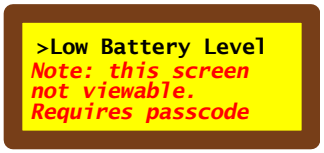
LOW BATTERY ACTION: Default is No Action
Options are:
FAIL SAFE: Gate will fail OPEN ***(will cause a FLASHING ALERT warning screen)***
FAIL SECURE: Gate will fail CLOSED. ***(will cause a FLASHING ALERT warnina screen)***

```
WARNING! FAIL SAFE!
Gate held OPEN due
to critical low
battery voltage
```

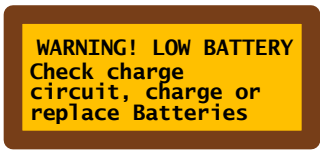
```
WARNING! FAIL SECURE
Gate held CLOSED due
to critical low
battery voltage
```

GENESIS CONTROL BOARD

MAINTENANCE (cont.)

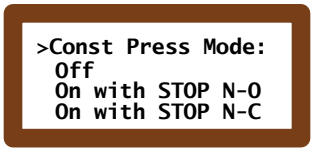


BATTERY LEVEL: During battery test, if the battery level falls below the level set, it will turn on the **FAULT LIGHT** and issue a **FAULT CODE**. (Passcode required to change). ***(will cause a FLASHING ALERT warning screen)***



Battery issue: Check the charge voltage, check the Batteries or replaced if necessary.

OVER-CURRENT LEVEL: Adjusts the Internal Inherent Amp current level for the motor. On model 2490 systems with the GENESIS board and the **LPS SENSOR**, this will not be in effect. When using **LIMIT SWITCHES,** the **OVER-CURRENT LEVEL** must be set for obstruction/entrapment sensing. If the board senses an OVER-CURRENT it will reverse the gate on the first activation. On a sequential activation, this will stop the gate and turn on the UL Alarm. To reset…. Check for any obstructions, if none, Press the STOP button on the board or if you have an accessory STOP button wired to the STOP input. The third option is to hit the RESET button.



CONSTANT PRESSURE (CP) MODE (CLASS IV): In the CP mode, the **OPEN 1 & CLOSE 1** inputs can be wired to a push button station for gate control. In a CP mode, these inputs will override the Entrapment **STOP/ALARM** condition. Status is **ON** or **OFF** only.

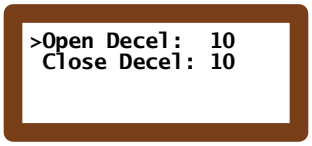
WARNING! Use caution when using these inputs. Always have direct line of site to the gate at all times to avoid pedestrian injuries or equipment/vehicle damage.

CUSTOM SETTINGS: For advanced features. Requires a "PASSCODE" available from AutoGate only. Code is active for 24 hours only. After 24 hours a new code is required.

MOTOR CONTROL

OPTIONS: GATE SPEED, LIMIT SWITCHES, HALL (A & B), OPEN/CLOSE, POSITION SETTINGS

GATE SPEED: Default 100%, any percentage less than 100% down to 80% will slow the gate opening and closing down accordingly.

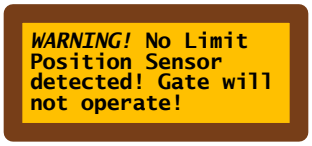


DECEL SPEED: Sets the time value on setting the gate speed from full speed to slow speed. The scale is 1 to 20, with 20 being the slowest.

GENESIS CONTROL BOARD

MOTOR CONTROL (cont.)

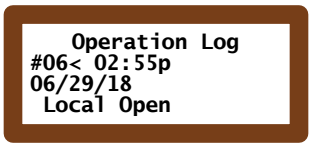
LIMIT SWITCHES: Default is "NOT USED". Model VPG 2490 systems are equipped with a **Limit Position Sensor (LPS)**. *If no sensor is present, then a fault code is generated and the gate will not move.* Choices are: **NORMALLY OPEN, NORMALLY CLOSED, HALL & HALL B**. Normally open & close will choose the type of wired Limit Switch to be used.
HALL A & HALL B: Only used on direct replacements on ***LIFTMASTER/MEGA ARM*** operators.



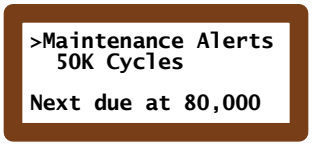
FAULT/LOGS/ALERTS

OPTIONS: Fault log, Operation Log, Maintenance Alerts

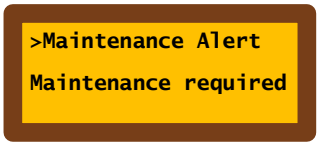
FAULT LOG: Running list of faults, stored for reference for diagnostic troubleshooting. The last 99 codes are stored. The newest code will always be the first one shown. Any fault in the system will also turn on the **FAULT LIGHT** on the outside of the cabinet.



OPERATION LOG: All normal "operations" are recorded up to 99 events. (i.e. entry Inputs, loop detections, & photoelectric sensors/beam detections, traffic lights, etc. are examples of normal "operation" events logged.)



MAINTENANCE ALERT: Alerts the owner that maintenance is due after a selected number of cycles. This can be set by the installer for 10K, 20K or 50,000 cycles. The screen will show how long until the next alert will show. ***NOTE: WILL THERE BE SCREEN FLASHING TO ALERT FOR MAINTENANCE?***



MAINTENANCE ALERT: You have reached your predetermined number of cycles to perform general maintenance.