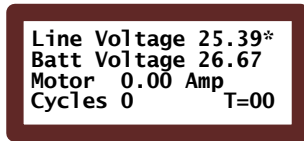


GENESIS CONTROL BOARD

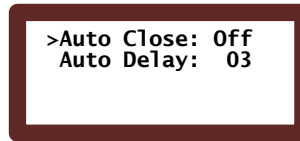
OVERVIEW: The **GENESIS** board has a 4 line 20 characters per line **LCD** backlit screen. At power up, the display will show the AutoGate and **GENESIS** branding, along with the program version number and the current time. After 5 or 6 seconds, this will then shift to the HOME screen, or base operational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



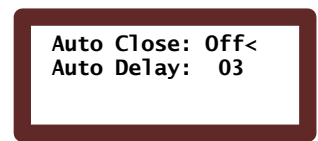
TITLE Screen



MAIN Screen



Example 1



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:

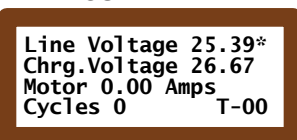
- 1) If the cursor is pointed to a descriptive phrase (Example #1), then a momentary push of the Jog/Select knob will move the cursor to the adjustable parameter. Then turning the Jog/Select knob will change the value.
- 2) When the cursor is pointed to left side of a value or parameter to be changed, (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: From the Power supply. (Normal voltage will be 26 to 27, Preset to 26.5Vdc)

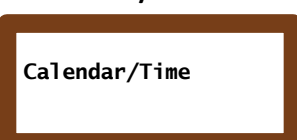
Charge/Battery voltage: When AC present: Charging Voltage to batteries, When on DC only: Actual battery voltage. (Normal voltage is 26.4 to 26.8) **Note: * Indicates CURRENT POWER source**

Motor: Displays actual motor amperage during cycling

Cycles/Position: A cycle count is considered a complete **OPEN & CLOSE**. Hold the Jog/Select button down and the Cycles will change and show the gate position "0" being **CLOSED** and "90" being full **OPEN**.

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



Set the time, date and day of the week. This is an important feature. It will affect the data in all **FAULT** and **OPERATION** logs as well as any **TIME** functions to hold the gate open on any given day(s).

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**

Auto Close: off
Auto Delay: 03

AUTO CLOSE TIME: Default is **ON** from 1 to 120 seconds, **OFF** requires a **CLOSE** command.

CLOSE TIME DELAY: Timer to close after all inputs are clear. Settable from 1 to 120 seconds.

(Note: If using the "Auto Close" in a **PRIMARY/SECONDARY** gate system, *only set the PRIMARY "Auto Close" to on, leave the Secondary off*).

OPEN/CLOSE TIME (*This option is only active when LIMIT SWITCHES are used*): Full Speed Run Time, Set this when the slow down is to start. Slows down after time value expires.

>Motion Alarm: On
Pre-Op Alarm: 0
Pre-Close 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

OPERATOR CONTROL

Operator Control

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

- If using the "Auto Close", only set the PRIMARY "Auto Close" to on, leave the Secondary off
- Make sure both gates are powered up, otherwise you receive a "communication" error message (see yellow message below)

Gate set in DUAL
Mode: Primary or
Secondary not
detected

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

Note: *Gates will not operate in DUAL gate mode unless BOTH are powered up and connected.*

>Gate Opening Speed:
100%
Gate Closing Speed:
100%

GATE SPEED: Default 100%, any percentage less than 100% down to 75% will slow the gate opening and closing down accordingly. Downward speed too fast will cause a **FAULT: SPEED OVER-RUN** (see below).

>Limit Switches:
Not Used

LIMIT SWITCHES: (REQUIRES SECURITY CODE TO ACCESS) 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 certain barrier gate operators.

>Open Decel: 10
Close Decel: 10

DECEL SPEED: Sets the time value on setting the gate speed from full speed to slow speed. The scale is 7 to 20, with 7 being the fastest and 20 being the slowest.

WARNING! No Limit
Position Sensor
detected! Gate will
not operate!

WARNING! Downward
Speed too fast.

>Const Press Mode:
Off
Stop Input Mode:
Normally Open

CONSTANT PRESSURE (CP) MODE (CLASS IV): In the CP mode, the **OPEN 1, OPEN 2 & CLOSE** 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. Default is **OFF**.
STOP INPUT MODE: Either Normally **OPEN** or Normally **CLOSED**

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.

GENESIS CONTROL BOARD

MONITORED INPUT SETTINGS

Monitored Input Options

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).

WARNING Monitored Input missing See LED indicators For Monitored

Board is programmed for a Monitored Input. If it is missing, gate will not operate until the **monitored** input is installed or restored.

"Monitored" device is enabled and the req'd feedback (10K-Pulse) is missing

Board is programmed for a Monitored Input. If it is enabled and the required feedback is missing you will get these **FAULTS: CLOSE BEAM MISSING, OPEN BEAM MISSING, CLOSE EDGE MISSING, OPEN EDGE MISSING. PGM INPUT 1 MISSING, PGM. INPUT 2 MISSING.** You will need to re-establish the monitored device.

WARNING! Obstruction An intended Input or manual reset req'd. to restore use.

If your gate has a monitored UL Event and either "locks" open or goes "closed", this warning screen will appear as well as the **FAULT** light will flash. Any intended **INPUT** will reset the gate to normal operation. Providing the obstruction is no longer present. You can also "manually" reset the board.

Open Obstruction:
>OB1:Edge 10K
OB2:Beam 10K

OPEN OBSTRUCTION: Either an **EDGE** or **BEAM** will work on either OB1 or OB2. 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.

WARNING! Obstruction An intended Input or manual reset req'd. to restore use.

If your gate had an **OPEN OBSTRUCTION** event, the gate will stop and reverse to full close until the obstruction is cleared and an **INTENDED 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:
>Edge: Off
Beam: 10K

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 latest edition. **CLOSE OBSTRUCTION DEVICES** are approved Beams and Edges only! **NEVER HOOK A BEAM TO THE EDGE INPUT!**

WARNING! DOUBLE DEFAULT! Push RED STOP or RESET button to restore use.

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 **INTENDED 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.

Prog Mon Input 1:
>Open Edge 10K
Prog Mon Input 2:
Close Beam 10K

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.

WARNING! Obstruction An intended Input or manual reset req'd. to restore use.

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 **INTENDED INPUT** (Access Control Input, Loop Reset, other) or a **MANUAL INPUT** on the control board will reset your gate back to normal operation.

WARNING Double Fault Red Stop input or manual reset req'd to restore use.

If your gate had a **DOUBLE FAULT**, it will be shut down. To restore normal activity, check for obstructions and if clear, hit the **RED STOP** button, do a manual reset or power the system down and back on again.

GENESIS CONTROL BOARD

INPUT OPTIONS

Input Options

OPTIONS: INPUT 1 & 2

All of the **INPUTS** will require a momentary pulse from a remote source such as a Pushbutton, Toggle Switch, etc.

>Input 1 Mode:
Off
Input 2 Mode:
Off

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, requires security access code*)

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

WARNING! FIRE SWITCH IS ENABLED. Hold Stop and press Joq/select to clear

WARNING! HOLD OPEN IS ENABLED, gate will not close until released

WARNING! EMERGENCY SECURE is enabled. Gate will not OPEN until released

>Aux Input 1 Delay
5 Seconds
Aux Input 2 Delay
0 Seconds

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

>Open/Close Pgm In:
Off

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

AUXILARY OUTPUT OPTIONS

Aux Output Options

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

AUX RELAYS will switch contact between **NORMALLY OPEN** and **NORMAMLLY CLOSED** from a common input.

AUX OUTPUTS physically switch **24VDC ON** or **OFF**

>Output 1 Quick Set:
Always Flashing
Output 2 Quick Set:
Flashing Closed

OUTPUT QUICK SET OUTPUT 1 & 2: 4 Quick Set options for flashing lights:

Choices are:

No Preset: Off

Always Flashing: Light Flash 24/7

Closed & Motion 1: Always flashes except on solid on full open

Closed and Motion 2: Always flashes except off on full open

Flashing Closed: Lights flash when the gate is closed only

GENESIS CONTROL BOARD

AUXILIARY OUTPUT OPTIONS (cont.)

>Relay A Mode:
Off
Relay B Mode:

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

Note: When installing an accessory item (traffic light, siren, etc), you need to run the COMMON down to our **POWER TERMINAL** (common) and then take a wire from the **24vdc** up to the RELAY A or B COMMON. This will provide power to your unit.

>Output 1 Mode:
Hold on Aux 2
Output 2 Mode:
Off

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
Hold Always
Pulse Always
Hold Not Open Limit
Pulse Not Open Limit
Hold Not Close Limit
Pulse Not Close Limit
Hold Not Opening
Pulse Not Opening
Hold Not Closing
Pulse Not Closing
Pulse On Motor Run

Note: For all accessories (lights, alarms, etc.), check on www.autogate.com for technical data or refer to the manufacturer's technical data and installation sheets.

>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.

AUX OUTPUT STATES:

Out 1 N-O, Out 2 N-O: Normally OPEN, Normally OPEN
Out 1 N-C, Out 2 N-C : Normally CLOSED, Normally CLOSED
Out 1 N-C, Out 2 N-O: Normally CLOSED, Normally OPEN
Out 1 N-O, Out 2 N-C: Normally OPEN, Normally CLOSED

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

OUTPUT PULSE RATE: Controls the time sequence of the pulse

Options: ¼ Second, ½ Second, 1 Second, 2 Seconds

Options: 1 Second Single

MAINTENANCE

Maintenance

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

GENESIS CONTROL BOARD

MAINTENANCE (cont.)

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

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

Voltage not
detected at the AC
Input

Voltage at the AC
Input measured over
30V in normal mode

Motor current went
above set point

>Low Battery Action
No Action
No Main Power Act.:
Run on Batteries

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 warning screen)*

NO MAIN AC POWER ACTION:

Options are:

RUN ON BATTERIES: If you lose AC power, your gate will continue to run on battery power

HOLD OPEN: If you lose AC power, your gate will lock up in the OPEN mode

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

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

>Low Battery Level
*Note: this screen
not viewable.
Requires passcode*

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)*

WARNING! LOW BATTERY
Check charge
circuit, charge or
replace Batteries

OTHER FAULT CODES:

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

FORCED OPEN DETECT: The gate was attempted to be opened and moved off the CLOSED limit without a command from the GENESIS board.

INTERNAL EEPROM & MISSING EEPROM: Internal EEPROM missing or defective

Gate has been moved
off the CLOSE limit
w/o a command from
the GENESIS board

Internal EEPROM
fault detected

EEPROM chip not
detected

GENESIS CONTROL BOARD

>Over-Current Level:
20 Amps

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. Other options are hit the **RESET** button or cycle all power off and on.

LOCKED
Key: EB60F3CA
- - - - -

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.

FAULT/LOGS/ALERTS

Fault/Logs/Alerts

OPTIONS: Fault log, Operation Log, Maintenance Alerts

Fault Log
>25 10:34p 04/20/18
Gate Angle Sensor

FAULT LOG: Running list of faults, stored for reference for diagnostic troubleshooting. The last 99 Faults are stored. The newest Fault 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
#06< 02:55p
06/29/18
Local Open

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

>Maintenance Alerts
50K Cycles
Next due at 80,000

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.

>Maintenance
Required, Hold Stop
button & Press Jog
to clear.

MAINTENANCE ALERT: You have reached your predetermined number of cycles to perform general maintenance. Hold the **STOP** button and press the **JOG/Select** button to clear.

GENESIS CONTROL BOARD

FAULT LOG ENTRY	FAULT MENU DISPLAY
AC MISSING	Voltage not detected at the AC input
BATTERY LOW CHARGE	WARNING! Battery low, check battery charge voltage
CLOSE BEAM MISSING	If your “monitored” device is enabled and the required feedback (10K or Pulse) is missing
CLOSE EDGE MISSING	If your “monitored” device is enabled and the required feedback (10K or Pulse) is missing
DUAL GATE COMM. LOST	Gate set in DUAL mode: Primary or Secondary not detected
EMERGENCY SECURE	WARNING! EMERGENCY SECURE is enabled, gate will not OPEN until released
FAIL SAFE OPEN	WARNING! Fail Safe gate held open due to critical battery voltage
FAIL SECURE CLOSE	WARNING! Fail Secure gate held close due to critical battery voltage
FIRE HOLD ENABLED	WARNING! FIRE SWITCH IS ENABLED. Hold Stop and press Jog/select to clear
FORCED OPEN DETECT	Gate has been moved off the CLOSE limit position without a command from the GENESIS board
HOLD OPEN	WARNING! HOLD OPEN is enabled, gate will not close until released
INTERNAL EEPROM	Internal EEPROM fault detected
LPS SENSOR NOT DETECTED	LPS Sensor is not detected by the GENESIS board (not applicable in LIMIT SWITCH mode)
MAINTENANCE REQ'D.	Maintenance required, hold stop button and press Jog/Select to clear
MISSING EEPROM CHIP	EEPROM chip not detected
MONIT. INPUT MISSING	WARNING! Monitored input missing, see LED indicators for monitored inputs
MOTOR OVER-CURRENT	Motor current went above set point
NO CHARGE IN 24 HRS	WARNING! Charging source not detected in the last 24 hours
OPEN BEAM MISSING	If your “monitored” device is enabled and the required feedback (10K or Pulse) is missing
OPEN EDGE MISSING	If your “monitored” device is enabled and the required feedback (10K or Pulse) is missing
OVER VOLTAGE	Voltage at AC input measured over 30V in normal power mode
PGM. INPUT 1 MISSING	If your “monitored” device is enabled and the required feedback (10K or Pulse) is missing
PGM. INPUT 2 MISSING	If your “monitored” device is enabled and the required feedback (10K or Pulse) is missing
SPEED OVER-RUN	Downward speed was too fast
UL FAULT CONDITION	WARNING! DOUBLE DEFAULT. Push RED stop button or RESET button to restore to use
UL FAULT CONDITION	WARNING! OBSTRUCTION DETECTED! An intended input or RESET required to restore use