

# AutoPilot Quick Gate Controller™



## **Owner's Manual**

Sonny's Enterprises, Inc. 5605 Hiatus Road Tamarac, FL 33321 14v1



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### WARNING \*SAFETY REQUIREMENTS\* WARNING

- 1. All employees must be thoroughly trained in safe operation and standard maintenance practices. All employees must review this entire manual monthly.
- 2. Do not enter the wash tunnel when the equipment is operating. Death or dismemberment may occur.
- 3. Do not wear loose fitting clothing or jewelry around moving equipment. Do not allow any part of your body or other objects (including ladders, hoses or tools) to come in contact with moving equipment. Entanglement may result causing death or dismemberment.
- 4. Do not leave a ladder or any other items such as wash down hoses or tools in the wash tunnel while equipment is running. Vehicle damage and injury, including death, can occur.
- 5. Always exercise caution when walking (never run) through the wash tunnel as there may be slippery conditions. Be careful so you do not bump into or trip over equipment.
- 6. Only those employees specifically instructed and trained by the location management are permitted to enter the wash tunnel to perform inspections or maintenance. At least two qualified maintenance people must be present when performing equipment repairs or preventive maintenance.
- 7. Do not perform any maintenance or work on equipment unless you first perform Lock-Out Safety Precautions. All electrically powered equipment must have manually operated disconnects capable of being locked in the "OFF" position. Equipment that has been "locked out" for any reason must be restarted only by the person who performed the "lock out" operation.
- 8. When working on any equipment that is higher than your shoulders, always use a fiberglass ladder that is in good condition.
- 9. Do not attempt to repair or adjust any pressurized liquid or pneumatic part, hose, pipe or fitting while that equipment is in operation.
- 10. Electrical connections and repairs must be performed by a Licensed Electrician Only.
- 11. Emergency "STOP" buttons must be well marked and their location and proper use reviewed with all personnel. Any activated "STOP" button must be reset only by the person who activated it. Clear the wash tunnel of any people, ladders, hoses, tools and other loose items before restarting the equipment. An audible device must sound to warn people that the equipment is starting.

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- 12. Do not operate any piece of equipment that requires safety covers with those covers removed or improperly installed. Do not operate any piece of equipment if any component of that piece is suspected to be defective or malfunctioning.
- 13. Store all cleaning and washing solutions and oils in a well-ventilated area. Clean up fluid spills immediately to prevent hazardous safety conditions. Be certain to follow all safety procedures on MSDS Sheets for each chemical product used.
- 14. All hydraulic and electric systems in the wash tunnel equipped with a torque relief or overload should be checked and set at the minimum amount that will allow for proper functionality under normal washing conditions.
- 15.No unauthorized people should ever be permitted in the wash tunnel or near the equipment at any time.

\* \* \*

#### **!! CAUTION !!**

When a piece of equipment must be in operation during inspection or maintenance, one qualified technician must stay at the power disconnect switch while another qualified technician performs the inspection or maintenance.



### \*INTRODUCTION \*

This Owner's Manual contains information that is vital to the successful installation, operation and maintenance of your SONNY'S AutoPilot vehicular control equipment.

Please read, and understand, the full contents of this manual before installation and operation of the equipment. Keep this booklet in a location where it may be used for ongoing reference.

Should you have any questions on the operation or servicing of this equipment please contact

AUTOPILOT CARWASH CONTROL SYSTEMS SONNY'S ENTERPRISES INC. 5605 Hiatus Road TAMARAC, FLORIDA 33321 TELEPHONE: 800-876-3900 FAX: 954-721-7677

THANK YOU FOR YOUR CONFIDENCE IN SONNY'S !!!!!



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### \*GENERAL OVERVIEW\*

#### **OVERVIEW**

The Gate Controller System's intended use is to control up to 3 kiosk-gate barrier configuration

#### FEATURES

- Automatically queue cars in order
- Controls up to 3 kiosk gated barriers
- Gate status LED display
- UL Listed
- Built-in alarm display functionality for troubleshooting purposes
- Provisions for a merge loop
- Graphic User interface to override outputs in manual mode and monitor input status.
- Configurable options:
  - Gate specific settings
    - On-time to open the gate
    - Delay for wash in use signal
  - Global settings:
    - Time out for vehicles to reach the merge loop
    - De-bounce for all wash inputs
    - Compatible with all wash in use signal types (active/passive)
    - Time out to close gate.



### \*INSTALLATION\*

#### INSTALLATION

The AP Gate Controller system is intended to be mounted inside the equipment room. Locate the system in a stable wall with sufficient access to it.

#### POWER REQUIREMENTS

The system requires a dedicated 120 VAC (15 A) Branch Circuit Protection provided by the customer.

The system output relays contacts are UL rated 6 A / 250 VAC.

#### INPUTS

The **120 VAC input** power is connected to a 24 VDC power supply to power the system Source Controller.

All inputs are wired N/O Circuit.

#### OUTPUTS

Each output can be wired independently through an N/O circuit.

#### FIELD WIRING

Input wiring connections are done to the specifically labeled Terminal Blocks.

Output wiring connections are done to the specifically labeled **Terminal Blocks**.



### \*INTERFACE & PROGRAMMING\*

Important Note: The system will reboot and default to AUTO Mode, in case of a power loss.

#### **MAIN SCREEN**

This is the **MAIN** screen that will display when the unit is powered up.



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#### **OPTION SETUP SCREEN**

The **OPTION SETUP** screen allows you to travel throughout the other system screens.

| Step | Action   | Screen Display   |
|------|--|--|
| 1    | To gain access to the option<br>Setup Screen, press the GATE<br>Button.  | GATE<br>SORNEY'S<br>AutoPilot Controls<br>APGCC-V1.00                                    |
| 2    | <ul> <li>Option Setup Screen offers 5<br/>Screen Options:</li> <li>1. KIOSK QUEUE: Kiosk<br/>Queue, Wash In Use<br/>Signals</li> <li>2. GATE STATUS: Gate<br/>Barrier Status</li> <li>3. SETTING: System Settings<br/>Screen</li> <li>4. TEST I/O: Test the Output<br/>Functions</li> <li>5. I/O DISPLAY: Input and<br/>Output Screen</li> <li>MAIN Button: Returns to the<br/>Main Screen.</li> </ul> | OPTION SETUP<br>KIOSK QUEUE<br>GATE STATUS<br>SETTING<br>TEST I/O<br>I/O DISPLAY<br>MAIN |



#### **KIOSK QUEUE SCREEN**

The **KIOSK QUEUE** screen allows the user to monitor the kiosks in process.

| 1 | Press <b>KIOSK QUEUE</b><br><b>Button</b> on screen.  | 0                   | PTION SETU  | P                  |
|---|---|---------------------|---|--------------------|
|   | KIOSK QUEUE   | K                   | (IOSK QUEUE                                       |                    |
|   | Main Button: Returns to the Main Screen.              |                     | GATE STATUS<br>SETTING<br>TEST I/O<br>I/O DISPLAY |                    |
| 2 | ARROW LEFT<br>Button: Move to                         | PROG                | (IOSK QUEUE                                       | RST                |
|   | Option Setup Screen.                                  | QUEUE               | VIU   | VEND               |
|   | ARROW RIGTH<br>Button: Move to Gate<br>Status Screen. | FIRST               | KIOSK 1 OFF                                       | KIOSK 1            |
|   | SETUP Button:<br>Returns to the Option                | SECOND 0<br>THIRD 0 | KIOSK 3 OFF                                       | KIOSK 2<br>KIOSK 3 |
|   | Setup Screen.   |                     | SEC NIMZ  | 0.0 SEC            |

| QUEUE (Kiosk Queue)             |                       |  |
|---------------------------------|-----------------------|--|
| FIRST                           | First Kiosk in Queue  |  |
| SECOND                          | Second Kiosk in Queue |  |
| THIRD                           | Third Kiosk in Queue  |  |
| WIU (Kiosk Wash In Use Signals) |                       |  |

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| Kiosk 1 | <b>On/Off</b> status of the WIU Signal. <b>Kiosk 1</b> will flash if it is being processed.                          |  |
|---------|--|--|
| Kiosk 2 | <b>On/Off</b> status of the WIU Signal. <b>Kiosk 2</b> will flash if it is being processed.                          |  |
| Kiosk 3 | <b>On/Off</b> status of the WIU Signal. <b>Kiosk 3</b> will flash if it is being processed.                          |  |
|         | VEND (Simulate Vending Signal for Kiosk)   |  |
| Kiosk 1 | Kiosk 1 button will appear if vend signal override is <b>ON</b> (See Watchdog Section)                               |  |
| Kiosk 2 | Kiosk 2 button will appear if vend signal override is <b>ON</b> (See Watchdog Section)                               |  |
| Kiosk 3 | Kiosk 3 button will appear if vend signal override is <b>ON</b> (See Watchdog Section)                               |  |
|         | TIMERS (Safety Timers)   |  |
| TGNC    | Elapsed time for the gate being processed to close   |  |
| NIMZ    | Elapsed time for the vehicle to get into the merge zone. Background will flash if vehicle is inside merge loop zone. |  |
| OTHERS  |  |  |
| 1       | Kiosk being processed  |  |
| PROG    | Program - Auto Button  |  |
| RST     | Reset the system in case of an Alarm   |  |



#### **GATE STATUS SCREEN**

The GATE STATUS screen allows the user to monitor the status of the gate-barriers.

| Step | Action  | Screen Display   |
|------|---|--|
| 1    | Press GATE STATUS<br>Button on screen.<br>GATE STATUS<br>Main Button: Returns to<br>the Main Screen.  | OPTION SETUP<br>KIOSK QUEUE<br>GATE STATUS<br>SETTING<br>TEST I/O<br>I/O DISPLAY<br>MAIN   |
| 2    | ARROW LEFT Button:<br>Move to Option Setup<br>Screen.<br>ARROW RIGTH<br>Button: Move to Kiosk<br>Queue Screen.<br>SETUP Button: Returns<br>to the Option Setup<br>Screen. | PROG       GATE STATUS       RST         OPEN       CLOSE         GATE BARRIER-1       OFF       OFF         GATE BARRIER-2       OFF       OFF         GATE BARRIER-3       OFF       OFF         V       SETUF       Image: Comparison of the setup of the |

| OPEN (Open Gate Output Signal Status)                                  |  |  |
|--|--|--|
| GATE BARRIER-1 ON/OFF status of the open gate output signal for Gate 1 |  |  |
| GATE BARRIER- 2  | <b>ON/OFF</b> status of the open gate output signal for Gate 2 |  |
| GATE BARRIER- 3  | <b>ON/OFF</b> status of the open gate output signal for Gate 3 |  |
| CLOSE (Close Gate Input Signal Status)                                 |  |  |

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| GATE BARRIER-1  | <b>ON/OFF</b> status of the close gate input signal for Gate 1 |  |
|-----------------|--|--|
| GATE BARRIER- 2 | <b>ON/OFF</b> status of the close gate input signal for Gate 2 |  |
| GATE BARRIER- 3 | <b>ON/OFF</b> status of the close gate input signal for Gate 3 |  |
| OTHERS          |  |  |
| 1               | Kiosk being processed  |  |
| PROG            | Program - Auto Button  |  |
| RST             | Reset the system in case of an Alarm                           |  |

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#### **SETTINGS SCREEN**

The following screens will assist the user in configuring the setting for the system.

| Step | Action   | Screen Display   |
|------|--|--|
| 1    | Press SETTING Button<br>on screen.<br>SETTING<br>Main Button: Returns to<br>the Main Screen.   | OPTION SETUP<br>KIOSK QUEUE<br>GATE STATUS<br>SETTING<br>TEST I/O<br>I/O DISPLAY<br>MAIN |
| 2    | DEB-TIME: Move to the<br>DEB-TIME Screen.<br>EQUIP-SET: Move to<br>the EQUIP-SET Screen<br>GATE-POS: Move to<br>the GATE-POS Screen<br>WATCHDOG: Move to<br>the WATCHDOG<br>Screen<br>WIU SIGNAL: Move to<br>the WIU SIGNAL Screen | SETTINGS<br>DEB-TIME<br>EQUIP-SET<br>GATE-POS<br>WATCHDOG<br>WIU SIGNAL                  |

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#### **DEBOUNCE TIME SCREEN**

The following screen will allow the user to set the debounce time for inputs.

| 1 | Press DEB-TIME<br>Button on screen  | SETTINGS   |
|---|---|--|
|   | DEB-TIME  | DEB-TIME   |
|   | <b>SETUP Button:</b> Returns to the Option Setup Screen.  | GATE-POS   |
|   |   | WATCHDOG<br>WIU SIGNAL   |
|   |   | SETUP  |
|   |   |  |
| 2 | ARROW RIGHT<br>Button: Move to next   | DEB TIME   |
| 2 | ARROW RIGHT<br>Button: Move to next<br>DEB TIME Screen.   | DEB TIME<br>KIOSK-1 VEND SIGNAL 0.1 SEC  |
| 2 | ARROW RIGHT<br>Button: Move to next<br>DEB TIME Screen.<br>ARROW LEFT Button:<br>Move to the previous   | DEB TIME<br>KIOSK-1 VEND SIGNAL 0.1 SEC<br>KIOSK-2 VEND SIGNAL 0.1 SEC   |
| 2 | ARROW RIGHT<br>Button: Move to next<br>DEB TIME Screen.<br>ARROW LEFT Button:<br>Move to the previous<br>screen.  | DEB TIME<br>KIOSK-1 VEND SIGNAL 0.1 SEC<br>KIOSK-2 VEND SIGNAL 0.1 SEC<br>KIOSK-3 VEND SIGNAL 0.1 SEC  |
| 2 | ARROW RIGHT<br>Button: Move to next<br>DEB TIME Screen.<br>ARROW LEFT Button:<br>Move to the previous<br>screen.<br>SETUP Button: Returns                                   | DEB TIME<br>KIOSK-1 VEND SIGNAL Ø.1 SEC<br>KIOSK-2 VEND SIGNAL Ø.1 SEC<br>KIOSK-3 VEND SIGNAL Ø.1 SEC<br>GATE-1 CLOSE SIGNAL 1.0 SEC                                 |
| 2 | ARROW RIGHT<br>Button: Move to next<br>DEB TIME Screen.<br>ARROW LEFT Button:<br>Move to the previous<br>screen.<br>SETUP Button: Returns<br>to the Option Setup<br>Screen  | DEB TIME<br>KIOSK-1 VEND SIGNAL Ø.1 SEC<br>KIOSK-2 VEND SIGNAL Ø.1 SEC<br>KIOSK-3 VEND SIGNAL Ø.1 SEC<br>GATE-1 CLOSE SIGNAL 1.0 SEC<br>GATE-2 CLOSE SIGNAL 1.0 SEC  |
| 2 | ARROW RIGHT<br>Button: Move to next<br>DEB TIME Screen.<br>ARROW LEFT Button:<br>Move to the previous<br>screen.<br>SETUP Button: Returns<br>to the Option Setup<br>Screen. | DEB TIMEKIOSK-1 VEND SIGNALØ.1 SECKIOSK-2 VEND SIGNALØ.1 SECKIOSK-3 VEND SIGNALØ.1 SECGATE-1 CLOSE SIGNAL1.0 SECGATE-2 CLOSE SIGNAL1.0 SECGATE-3 CLOSE SIGNAL1.0 SEC |

| KIOSK-1 VEND SIGNAL | Debounce Time for the Kiosk 1 vending input signal |
|---------------------|--|
| KIOSK-2 VEND SIGNAL | Debounce Time for the Kiosk 2 vending input signal |
| KIOSK-3 VEND SIGNAL | Debounce Time for the Kiosk 3 vending input signal |
| GATE-1 CLOSE SIGNAL | Debounce Time for the Gate 1 closed signal input   |
| GATE-2 CLOSE SIGNAL | Debounce Time for the Gate 2 closed signal input   |
| GATE-3 CLOSE SIGNAL | Debounce Time for the Gate 3 closed signal input   |

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| 3 | ARROW LEFT Button:<br>Move to the previous                     | DEB.TIME                         |
|---|--|----------------------------------|
|   | screen.  | MERGE LOOP SENSOR SIGNAL 1.0 SEC |
|   | <b>SETUP Button:</b> Returns<br>to the Option Setup<br>Screen. | SETUP                            |

| MERGE LOOP SENSOR SIGNAL | Debounce Time for the merge loop input signal |
|--------------------------|---|



#### EQUIPMENT SETUP SCREEN

The following screen allows the user to configure the AP Gate Controller System.

| 1 | Press EQUIP-SET<br>Button on screen.                                   | SETTINGS  |          |
|---|--|---|----------|
|   | EQUIP-SET<br>SETUP Button: Returns<br>to the Option Setup<br>Screen.   | DEB-TIME<br>EQUIP-SET<br>GATE-POS<br>WATCHDOG<br>WIU SIGNAL                             |          |
| 2 | ARROW LEFT Button:   | EQUIP. SET  | •        |
|   | SETUP Screen   |   |          |
|   | SETUP Screen   | NUMBER OF KIOSKS  | 2        |
|   | SETUP Screen<br>SETUP Button: Returns<br>to the Option Setup           | NUMBER OF KIOSKS<br>Merge Loop Sensor   | 2<br>NO  |
|   | SETUP Screen<br>SETUP Button: Returns<br>to the Option Setup<br>Screen | NUMBER OF KIOSKS<br>MERGE LOOP SENSOR<br>GATES CLOSE BY TIME                            | NO<br>NO |
|   | SETUP Screen<br>SETUP Button: Returns<br>to the Option Setup<br>Screen | NUMBER OF KIOSKS<br>MERGE LOOP SENSOR<br>GATES CLOSE BY TIME<br>FLASH LIGHT MANUAL MODE |          |

| NUMBER OF KIOSK             | Number of kiosk to be controlled          |
|-----------------------------|---|
| MERGE LOOP SENSOR           | Merge loop sensor activated               |
| GATES CLOSE BY TIME         | Monitor closing of gate in period of time |
| FLASH LIGTHS<br>MANUAL MODE | Activate flashing lights in Manual Mode   |

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#### **GATE-KIOSK SCREEN**

The following screen allows the user to configure the AP Gate Controller System

| 1 | Press GATE-POS   | SETTINGS   |
|---|--|--|
|   | Button on screen.  | JETTINGS   |
|   | GATE-POS   | DEB-TIME   |
|   | SETUP Button: Returns  | EQUIP-SET  |
|   | to the Option Setup  | GATE-POS   |
|   |  | WATCHDOG   |
|   |  | VIU SIGNAL   |
|   |  | SETUP  |
| 2 |  |  |
| 2 |  |  |
|   | Move to SETTINGS   | GATE-KIUSK   |
|   | Move to SETTINGS<br>Screen   | GATE-KIUSK<br>OPEN GATE-1 ONTIME 1.0 SEC   |
|   | Move to SETTINGS<br>Screen<br>SETUP Button: Returns                                  | GATE-KIUSK<br>OPEN GATE-1 ONTIME 1.0 SEC<br>OPEN GATE-2 ONTIME 1.0 SEC   |
|   | Move to SETTINGS<br>Screen<br>SETUP Button: Returns<br>to the Option Setup<br>Screen | GATE-KIUSK<br>OPEN GATE-1 ONTIME 1.0 SEC<br>OPEN GATE-2 ONTIME 1.0 SEC<br>OPEN GATE-3 ONTIME 1.0 SEC   |
|   | Move to SETTINGS<br>Screen<br>SETUP Button: Returns<br>to the Option Setup<br>Screen | GATE-KIUSK         OPEN GATE-1 ONTIME       1.0 SEC         OPEN GATE-2 ONTIME       1.0 SEC         OPEN GATE-3 ONTIME       1.0 SEC         KIOSK-1 HIU DELAY SIGNAL       3.0 SEC |
|   | Move to SETTINGS<br>Screen<br>SETUP Button: Returns<br>to the Option Setup<br>Screen | GATE-KIUSKOPEN GATE-1 ONTIME1.0 SECOPEN GATE-2 ONTIME1.0 SECOPEN GATE-3 ONTIME1.0 SECKIOSK-1 HIU DELAY SIGNAL3.0 SECKIOSK-2 HIU DELAY SIGNAL3.0 SEC                                  |
|   | Move to SETTINGS<br>Screen<br>SETUP Button: Returns<br>to the Option Setup<br>Screen | GATE - KIUSKOPEN GATE-1 ONTIME1.0 SECOPEN GATE-2 ONTIME1.0 SECOPEN GATE-3 ONTIME1.0 SECKIOSK-1 HIU DELAY SIGNAL3.0 SECKIOSK-2 HIU DELAY SIGNAL3.0 SECKIOSK-3 HIU DELAY SIGNAL3.0 SEC |

| NUMBER OF KIOSK             | Number of kiosk to be controlled          |
|-----------------------------|---|
| MERGE LOOP SENSOR           | Merge loop sensor activated               |
| GATES CLOSE BY TIME         | Monitor closing of gate in period of time |
| FLASH LIGTHS<br>MANUAL MODE | Activate flashing lights in Manual Mode   |

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#### WATCHDOG SCREEN

The following screen allows the user to configure the AP Gate Controller System

| 1 | Press WATCHDOG<br>Button on screen   | SETTINGS   |
|---|--|--|
|   | VATCHDOG<br>SETUP Button: Returns<br>to the Option Setup<br>Screen.  | DEB-TIME<br>EQUIP-SET<br>GATE-POS<br>WATCHDOG<br>WIU SIGNAL<br>SETUP                                       |
| 2 | ARROW LEFT Button:<br>Move to SETTINGS<br>Screen<br>SETUP Button: Returns<br>to the Option Setup<br>Screen | VATCHDOG<br>TIME TO REACH MERGE ZONE 300.0 SEC<br>TIME TO CLOSE GATE 200.0 SEC<br>VENDS OVERRIDE CODE 5605 |

| TIME TO REACH MERGE ZONE | Time required for vehicle to enter into the merge zone before fault |
|--------------------------|---|
| TIME TO CLOSE GATE       | Time required for gate barrier to close before fault                |
| VENDS OVERRIDE CODE      | If code match, vends can be simulated from<br>KIOSK QUEUE Screen    |

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#### WIU SIGNAL SCREEN

The following screen allows the user to configure the AP Gate Controller System

| 1 | Press WIU SIGNAL<br>Button on screen                    | SETTINGS  |
|---|---|---|
|   | Setton on screen.                                       | DEB-TIME<br>EQUIP-SET<br>GATE-POS<br>WATCHDOG<br>WIU SIGNAL |
|   |   |   |
| 2 | ARROW LEFT Button:<br>Move to SETTINGS<br>Screen        | VIU SIGNAL  |
|   | ARROW LEFT Button:<br>Move to SETTINGS<br>Screen        | NIU SIGNAL KIOSK-1 PASSIVE                                  |
|   | <b>SETUP Button:</b> Returns to the Option Setup Screen | NIU SIGNAL KIOSK-3 PASSIVE                                  |
|   |   |   |

| WILL SIGNAL KIOSK 1 | PASSIVE: Signal will be <b>ON</b> while the vehicle is being processed. |  |
|---------------------|---|--|
| WIU SIGNAL KIOSK-1  | ACTIVE: Signal will be <b>OFF</b> while the vehicle is being processed. |  |
| WIU SIGNAL KIOSK-2  | PASSIVE: Signal will be <b>ON</b> while the vehicle is being processed. |  |
|                     | ACTIVE: Signal will be <b>OFF</b> while the vehicle is being            |  |

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|                     | processed.  |
|---------------------|---|
| WILL SIGNAL KIOSK 3 | PASSIVE: Signal will be <b>ON</b> while the vehicle is being processed. |
| WIO SIGNAL KIOSK-S  | ACTIVE: Signal will be <b>OFF</b> while the vehicle is being processed. |



NOTE: in order to reset the values the system needs to be in Programming Mode



#### **TEST I/O SCREEN**

The TEST OUTPUTS Screen allows the user to override the Output of the System.

| Step | Action  | Screen Display   |
|------|---|--|
| 1    | Press <b>TEST I/O</b><br><b>Button</b> on screen.<br>TEST I/O<br><b>Main Button:</b> Returns<br>to the Main Screen. | OPTION SETUP<br>KIOSK QUEUE<br>GATE STATUS<br>SETTING<br>TEST I/O<br>I/O DISPLAY<br>MAIN   |
| 2    | System needs to be on<br>PROGRAM Mode.  | PROG TEST OUTPUTS   OPEN GATE 1 POS 3 BUSY   OPEN GATE 2 POS 1 LIGHT   OPEN GATE 3 POS 2 LIGHT   POS 1 BUSY POS 3 LIGHT   POS 2 BUSY SETUP |



#### **I/O DISPLAY SCREEN**

The I/O Screen allows the user to check the status of the system inputs and outputs.

| Step | Action   | Screen Display   |  |  |
|------|--|--|--|--|
| 1    | Press I/O DISPLAY<br>Button on screen.<br>I/O DISPLAY<br>Main Button: Returns<br>to the Main Screen. | OPTION SETUP<br>KIOSK QUEUE<br>GATE STATUS<br>SETTING<br>TEST I/O<br>I/O DISPLAY |  |  |
|      |  | MAIN   |  |  |
| 2    | ARROW RIGTH<br>Button: Go to the Next  | I/Ø SCREEN   |  |  |
|      | I/O Screen   | INPUTS OUTPUTS   |  |  |
|      | ARROW LEFT   | VEND KIOSK-1 💽 OPEN GATE 1 💽   |  |  |
|      | Button: Returns to the   | VEND KIOSK-2 💽 OPEN GATE 2 💽   |  |  |
|      | Option Setup Screen.   | VEND KIOSK-3 💽 🛛 OPEN GATE 3 💽   |  |  |
|      |  | MERGE LOOP 💽 KIOSK-1 IN USE 💽  |  |  |
|      |  | GATE 1 CLOSED 💽 KIOSK-2 IN USE 💽   |  |  |
|      |  | GATE 2 CLOSED 💽 KIOSK-3 IN USE 💽   |  |  |
|      |  |  |  |  |

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| 3 | ARROW LEFT<br>Button: Returns to the | I/Ø SCREEN      |                 |  |
|---|--------------------------------------|-----------------|-----------------|--|
|   | Previous Screen.                     | INPUTS          | OUTPUTS         |  |
|   |                                      | GATE 3 CLOSED 💽 | KIOSK-1 LIGHT 💽 |  |
|   |                                      |                 | KIOSK-2 LIGTH 🧿 |  |
|   |                                      |                 | кІОЅК-З LІGTH 🧿 |  |
|   |                                      |                 |                 |  |
|   |                                      |                 |                 |  |
|   |                                      |                 |                 |  |
|   |                                      |                 |                 |  |
|   |                                      |                 |                 |  |

| INPUTS:        |  |
|----------------|--|
| VEND KIOSK-1   | Allows to monitor the status of the vending signal             |
| VEND KIOSK-2   | Allows to monitor the status of the vending signal             |
| VEND KIOSK-3   | Allows to monitor the status of the vending signal             |
| MERGE LOOP     | Allows to monitor the status of the merge loop sensor          |
| GATE 1 CLOSED  | Allows to monitor the status of the Gate Barrier Closed signal |
| GATE 2 CLOSED  | Allows to monitor the status of the Gate Barrier Closed signal |
| GATE 3 CLOSED  | Allows to monitor the status of the Gate Barrier Closed signal |
| OUTPUTS        |  |
| OPEN GATE 1    | Allows to monitor the status of the Open Gate signal           |
| OPEN GATE 2    | Allows to monitor the status of the Open Gate signal           |
| OPEN GATE 3    | Allows to monitor the status of the Open Gate signal           |
| KIOSK-1 IN USE | Allows to monitor the status of the Wash In Use signal         |
| KIOSK-2 IN USE | Allows to monitor the status of the Wash In Use signal         |
| KIOSK-3 IN USE | Allows to monitor the status of the Wash In Use signal         |
| KIOSK-1 LIGTH  | Allows to monitor the status of the Blue Panel Light signal    |
| KIOSK-2 LIGTH  | Allows to monitor the status of the Red Panel Light signal     |
| KIOSK-3 LIGTH  | Allows to monitor the status of the Yellow Panel Light signal  |

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### \*REPLACEMENT PARTS\*

| QTY | P/N      | DESCRIPTION                    | PICTURE |
|-----|----------|--------------------------------|---------|
| 1   | 10010290 | XBTGC SCREEN PROCESSOR UNIT    |         |
| 1   | 10011236 | EXPANSION, 8 OUT RELAY, RM TBK |         |
| 1   | 10010298 | POWER SUPPLY 200VAC – 24VDC    |         |
| 12  | 10010411 | 24 VAC/DC THIN RELAY W/SOCKET  |         |



| 1 | 10010849 | ENCLOSURE IP66 16"X12"X8"          |  |
|---|----------|------------------------------------|--|
| 1 | 10010850 | GALVANIZED PANEL FOR 4320          |  |
| 3 | 10011255 | MOUNTING, COLLAR + LIGHT<br>MODULE |  |
| 1 | 10011252 | LIGHT, RED PILOT HEAD              |  |



| 1 | 10011253 | LIGHT, YELLOW PILOT HEAD                  |  |
|---|----------|---|--|
| 1 | 10011254 | LIGHT, BLUE PILOT HEAD                    |  |
| 3 | 10011250 | BULB, INCANDESCENT 24VAC/VDC,<br>2W, BA9s |  |



### \*SYSTEM ALARM\*

This is a list of the SYSTEM alarms that can be displayed.

| No. | DESCRIPTION                                   | CAUSE   | REMEDY   |
|-----|---|---|--|
| 1   | Time to close gate expired                    | Time to reach merge zone was done                       | <ul> <li>Check merge zone<br/>loop</li> <li>Adjust time in the<br/>WATCHDOG section</li> </ul>                                 |
| 2   | Time for vehicle to get to Merge Zone expired | Time to close was done                                  | <ul> <li>Check the gate-barrier<br/>output when gate is<br/>closed</li> <li>Adjust time in the<br/>WATCHDOG section</li> </ul> |
| 3   | Kiosk 1 vended with the queue full            | Kiosk 1 vended a wash<br>package with the queue<br>full | <ul> <li>Check WIU signal is activated</li> <li>Check setting in Kiosk to hold wash</li> </ul>                                 |
| 4   | Kiosk 2 vended with the queue full            | Kiosk 2 vended a wash<br>package with the queue<br>full | <ul> <li>Check WIU signal is activated</li> <li>Check setting in Kiosk to hold wash</li> </ul>                                 |
| 5   | Kiosk 3 vended with the queue full            | Kiosk 3 vended a wash<br>package with the queue<br>full | <ul> <li>Check if WIU signal is activated</li> <li>Check setting in Kiosk to hold wash</li> </ul>                              |

Note: to reset any of these alarms press the RST button.

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## \*ELECTRICAL SCHEMATICS\*

Customer to supply and install incoming service disconnect and over-current protection in the form of an inverse-time breaker rated for 120 VAC, 1 Phase, 60Hz.

Customer must supply a UL listed 20 AMPS feeder breaker @ 5 KAIC or higher to maintain interrupt rating of MCC and in accordance with local code and National Safety Standard Code (N.E.C.)

All internal power wires are #14 AWG / THHN / 600V

All internal control wires are #22 AWG / MTW / 600V

Filed wires to components must be #14 AWG or greater

| Control Terminals<br>Recommended Tightening Torque |      | Ground Terminals<br>Recommended Tightening Torque |                      |           |
|--|------|---|----------------------|-----------|
| Terminal   |      | Torque  | Terminal             | Torque    |
| Size 3.0   |      | 7 lbf-in  | Size 3.0             | 7 lbf-in  |
| Size 3.5   |      | 8 lbf-in  | Size 5.0             | 18 lbf-in |
| Size 5.0   |      | 18 lbf-in   |                      |           |
| Time Delay (5x2                                    |      |   | 0mm) UL Fuses        |           |
| Fuse#  | AMPS |   | Interrupt-Current Ra | ating     |
| FU1  | 1.0A |   | 35A@250VAC           |           |
| FU2  | 0.5A |   | 35A@250VAC           |           |
| FU3 0.5A   |      | 35A@250VAC  |                      |           |



#### **PLC Circuit**

Total panel FLA = 1.2 AMPS

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#### **Relay Circuit**

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#### **Field Wiring**



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## \*WARRANTY & REPAIR\*

#### SONNY'S AutoPilot CarWash Control Systems

- Telephone technical support at (800) 876–3900 Ext. 251.
- Replacement on parts manufactured by AutoPilot for one (1) year after delivery.
- Replacement on parts **NOT** manufactured by AutoPilot (i.e. printers, monitors, routers, scanners, cash drawers, etc.) for ninety (90) days after delivery.

AutoPilot warrants all equipment, which it manufactures to be free from defects in material or workmanship under normal use and service for a period of one (1) year from the date of delivery. Any defect reported within one (1) year will be replaced by AutoPilot pending a technician's evaluation and all charges for labor and material will be borne by AutoPilot. Shipping costs will be assumed by the Buyer.

For all items being sent back to AutoPilot for replacement or repair, a Return Merchandise Authorization (RMA) number is required prior to shipping. Merchandise received without an RMA# will be returned to sender. If it is determined that either no fault exists in Company, or the damage to be repaired was caused by negligence of Buyer, its agents, employees or customers, Buyer agrees to pay all charges associated with each such repair. Any tampering, misuse or negligence in handling, installation or use of Equipment renders the warranty void.

Further, the warranty is void if, at any time, Buyer attempts to make any internal changes to any of the components of the Equipment; if at any time and for any reason the power supplied to any part of the Equipment exceeds the rated tolerance; if any external device attached by Buyer creates conditions exceeding the tolerance of the Equipment; or if at any time the serial number plate is removed or defaced.

THIS CONSTITUTES THE SOLE WARRANTY MADE BY COMPANY EITHER EXPRESSED OR IMPLIED. IN NO EVENT SHALL COMPANY BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AND BUYER'S REMEDIES SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF NONCONFORMING UNITS OR PARTS.

#### Repair

AutoPilot has a service and support department dedicated to analyzing, repairing and testing any WashPilot<sup>™</sup> component in need of such services. In the event a component needs to be sent to AutoPilot for warranty replacement or repair, an evaluation must first be made over the telephone by an AutoPilot technician.

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### \*CUSTOMER SERVICE\*

Please contact SONNY'S AutoPilot CarWash Control Systems for installation and/or operational questions regarding this piece of equipment.

Please refer to the Parts list in this manual or the SONNY'S Parts Catalog and contact SONNY'S Customer Service Order Entry Department for any replacement parts for this piece of equipment.

This manual is available on Sonny's The CarWash Factory website (<u>www.sonnysdirect.com</u>) on the Product Manuals/Support page.

**DEPARTMENT** Toll Free Main Line Equipment Department **PHONE NUMBERS** 800-876-3900 954-720-4100 **FAX NUMBERS** 954-721-7677 800-495-4049

Or you can email us at autopilotsupport@sonnysdirect.com

Thank you for being a SONNY'S AutoPilot CarWash Controls equipment owner!

From all of us here at



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