ONBOARD XPERT HMI

Section 5

The Oasis Onboard XPert HMI [Human Machine Interface] has been designed for monitoring and controlling the Oasis XP Touchless Car Wash System. Most screens provide information about the Control System status, as well as being interactive, allowing input from the Operator. Although no special knowledge is required to operate the Onboard XPert, you should be familiar with some terms that relate to different parts of the machine.

Main Page. This is the first area of the Onboard XPert you need to familiarize yourself with. It is the default screen, which all screens return to. The Screen Selector at the bottom of the page will scroll up or down using the scroll keys on the lower right side of the display, allowing access to all other areas of the Onboard XPert [See Pages 5.3 & 5.4].

Total vend counts, as well as the number of vends by type can be seen at a glance. Also displayed on the Main Page is the 'Home' indicator for each section of the in-bay equipment...Bridge, Trolley, and the Adjustable Wand.

There are three (3) major areas of the Onboard XPert which can be reached from the Main Page:

Action Page. This screen will display when a vend is active, returning to the Main Page once the vend is completed. (The Operator may also select this screen from the Main Page scroll list, and then press the 'Enter' key.) This display informs the Operator, in pictorial form, the position of the Bridge, Trolley, and the Adjustable Wand in relation to the vehicle in the bay. The Action display indicates the Stop Station Switch status, as well as the Optic status. After the vend has started, the Vend Selection Number and Inlet Number being used are displayed in the upper right corner of the screen. Pages 5.10 through 5.13 show examples of various action screens.

Remote Function. Remote [manual] functions are controlled from this screen. As with any machine operation, CAUTION must be taken when using the Remote functions. Be sure the car wash bay is empty and no personnel are working on the equipment, either in the car wash bay or the equipment room, as pumps and compressors will start automatically.

Using the Screen Selector Options at the bottom of the display, scroll to the desired function and press the 'Enter' key. 'F2 Remote OFF' is displayed on the screen. Press F2 to activate Remote mode. The screen now flashes 'F2 Remote ON'. No remote functions can be started or stopped unless the F2 key is pressed and 'F2 Remote ON' is flashing on the screen. To return the system to Automatic, you must first turn off all functions and then press F2, which turns Remote mode "Off". *Caution: Never leave a function 'ON' when leaving Remote mode.*

When in Remote mode, any movement of the Bridge, Trolley or the Adjustable Wand is possible only as long as the Function key is depressed. All movement will stop when the Function key is released. (Remember that 'F2 Remote ON' must be flashing on the display before any Remote function is possible.) Remote actions such as Inlets, Presoaks, Triple Foam, etc. are held 'ON' until the Operator shuts the function 'OFF'. This gives the Operator time to inspect the function or troubleshoot as needed.

Wash vends may be written or changed in Remote mode only. It is possible to write a vend in full Pass functions, individual Sequences, or both. Only a trained Operator should write wash vends.

The XP Automatic will NOT accept a wash vend while in Remote mode. Be sure the bay is blocked or otherwise shut down before activating Remote mode.

Setup Mode. The XP Control System will accept changes during a wash vend; however, it is generally not advisable to attempt this, as it can cause unwanted results if the wrong setting is changed. Only a trained Operator should make changes to the XP Automatic's setup.

To recap, the Onboard XPert has been programmed to be interactive. Most screens provide information about the Automatic Control System status, as well as allowing input from the Operator. The scroll keys allow access to the desired function screen. Usually a simple press of a function key (F1, F2, etc.) is all that is required to change or start a machine function. The Action display informs the Operator of the position of the Bridge, Trolley, and the Adjustable Wand in the bay in relation to the vehicle. (Remember, this is only a pictorial.) From the Action screen the status of the Stop Pad Switches and the Optics may be seen. This can be used to troubleshoot these items at a glance. Remote functions are as easy as scrolling to the desired function and pressing the desired key. Operators may view the position of the Bridge, Trolley, or the Adjustable Wand from the Control Room when moving in Remote by watching the on-display counter.

IMPORTANT

When using the Onboard XPert, it is important to remember that <u>when a screen function displays "ON", the function is "ON"</u>. To turn the function "OFF", press the applicable Function ["F"] key. For example, if the screen displays "F2 Remote OFF", you are NOT in Remote Mode. Pressing the F2 key will turn Remote "ON", and the screen will display "Remote ON".

Program Version. In an effort to continually improve the XP, Oasis may, from time to time, make updates to the machine's programming. The current program version number will be posted on our website, www.oasiscarwashsystems.com, on the XP page in the Customer Resources section.

To determine the program version your equipment is currently running, go to the Home screen of the Onboard XPert and press 'Enter'. This should take you to the Bridge & Trolley Count Correction Screen. If your version number in the lower left corner does not match the version shown on the website, please call the Oasis Service Department. The technician will need the following information:

1) Serial number of the XP;
2) Site address of the car wash;
3) Type of communication package (must have Level 1 Package or ENI from the Level 2 Package);
4) The program number the machine is currently running.

If it is determined that a program upgrade for your machine is suitable, a date and time for such upgrade will be scheduled that will least impact both your business flow and ours.

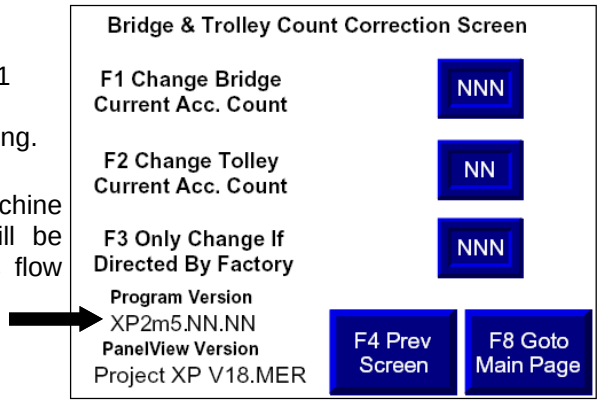
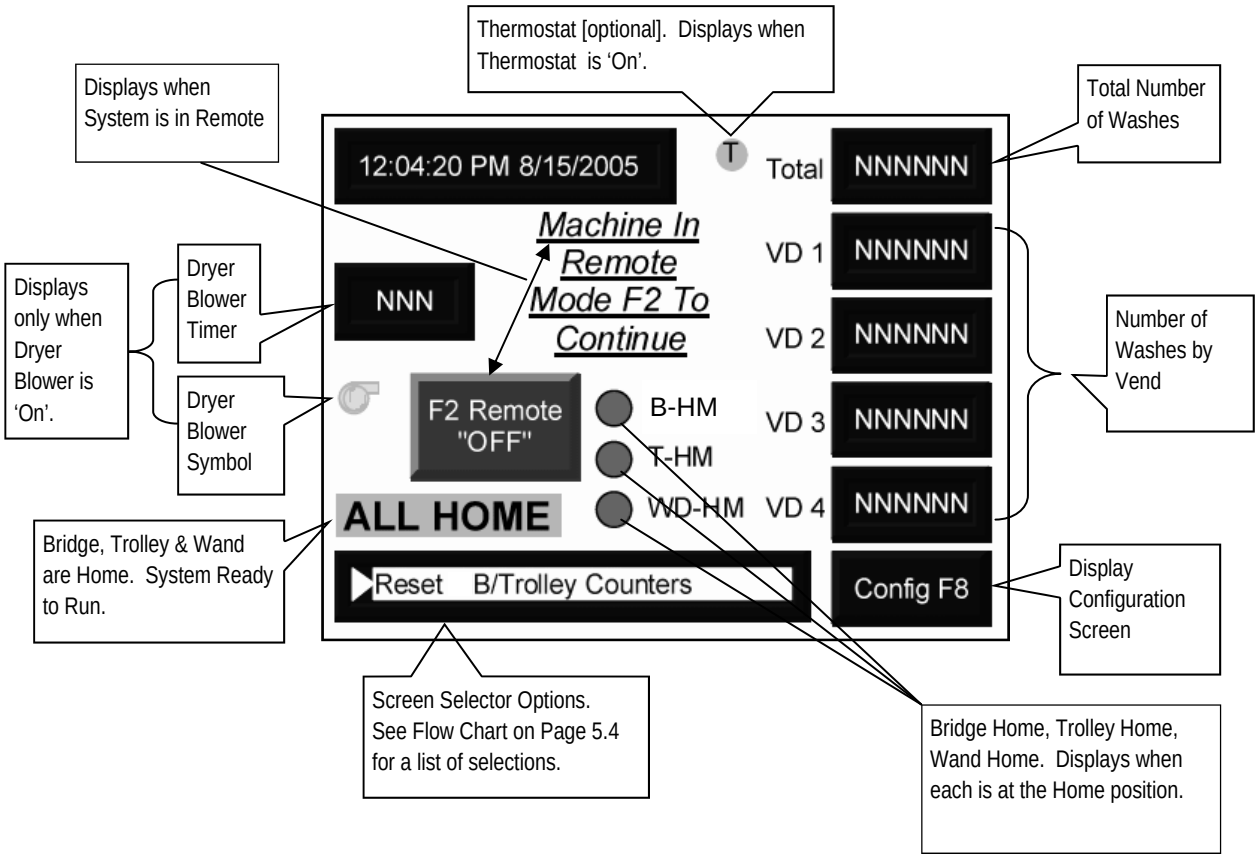


Fig 1. Diagram of the XPert Interface

Fig 2. Exploded View of a Screen



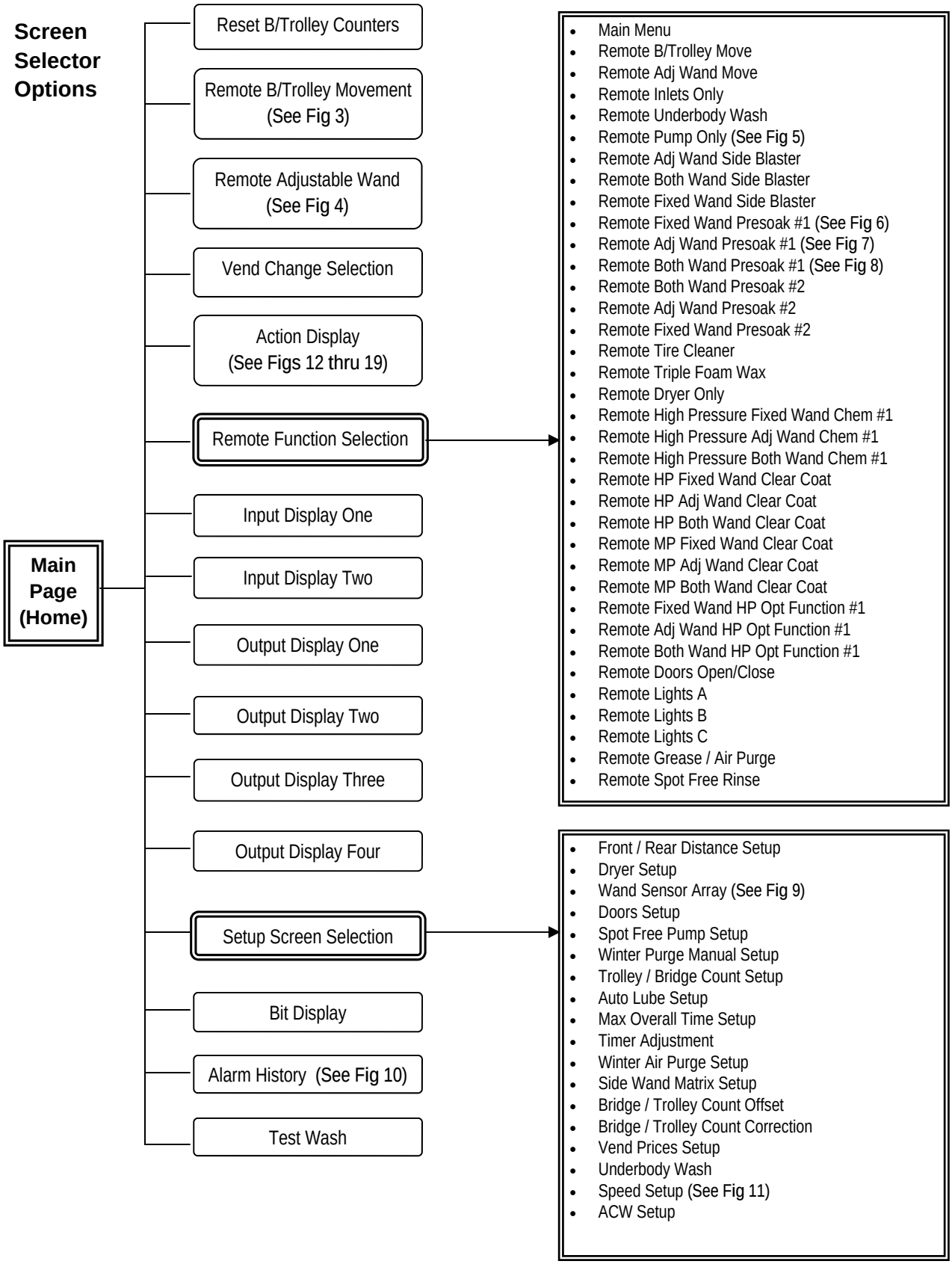

Screen Selector Options
Main Page (Home)
Reset B/Trolley Counters
Remote B/Trolley Movement (See Fig 3)
Remote Adjustable Wand (See Fig 4)
Vend Change Selection
Action Display (See Figs 12 thru 19)
Remote Function Selection
Input Display One
Input Display Two
Output Display One
Output Display Two
Output Display Three
Output Display Four
Setup Screen Selection
Bit Display
Alarm History (See Fig 10)
Test Wash
Main Menu
Remote B/Trolley Move
Remote Adj Wand Move
Remote Inlets Only
Remote Underbody Wash
Remote Pump Only (See Fig 5)
Remote Adj Wand Side Blaster
Remote Both Wand Side Blaster
Remote Fixed Wand Side Blaster
Remote Fixed Wand Presoak #1 (See Fig 6)
Remote Adj Wand Presoak #1 (See Fig 7)
Remote Both Wand Presoak #1 (See Fig 8)
Remote Both Wand Presoak #2
Remote Adj Wand Presoak #2
Remote Fixed Wand Presoak #2
Remote Tire Cleaner
Remote Triple Foam Wax
Remote Dryer Only
Remote High Pressure Fixed Wand Chem #1
Remote High Pressure Adj Wand Chem #1
Remote High Pressure Both Wand Chem #1
Remote HP Fixed Wand Clear Coat
Remote HP Adj Wand Clear Coat
Remote HP Both Wand Clear Coat
Remote MP Fixed Wand Clear Coat
Remote MP Adj Wand Clear Coat
Remote MP Both Wand Clear Coat
Remote Fixed Wand HP Opt Function #1
Remote Adj Wand HP Opt Function #1
Remote Both Wand HP Opt Function #1
Remote Doors Open/Close
Remote Lights A
Remote Lights B
Remote Lights C
Remote Grease / Air Purge
Remote Spot Free Rinse
Front / Rear Distance Setup
Dryer Setup
Wand Sensor Array (See Fig 9)
Doors Setup
Spot Free Pump Setup
Winter Purge Manual Setup
Trolley / Bridge Count Setup
Auto Lube Setup
Max Overall Time Setup
Timer Adjustment
Winter Air Purge Setup
Side Wand Matrix Setup
Bridge / Trolley Count Offset
Bridge / Trolley Count Correction
Vend Prices Setup
Underbody Wash
Speed Setup (See Fig 11)
ACW Setup

Fig 3. Remote: Bridge/Trolley

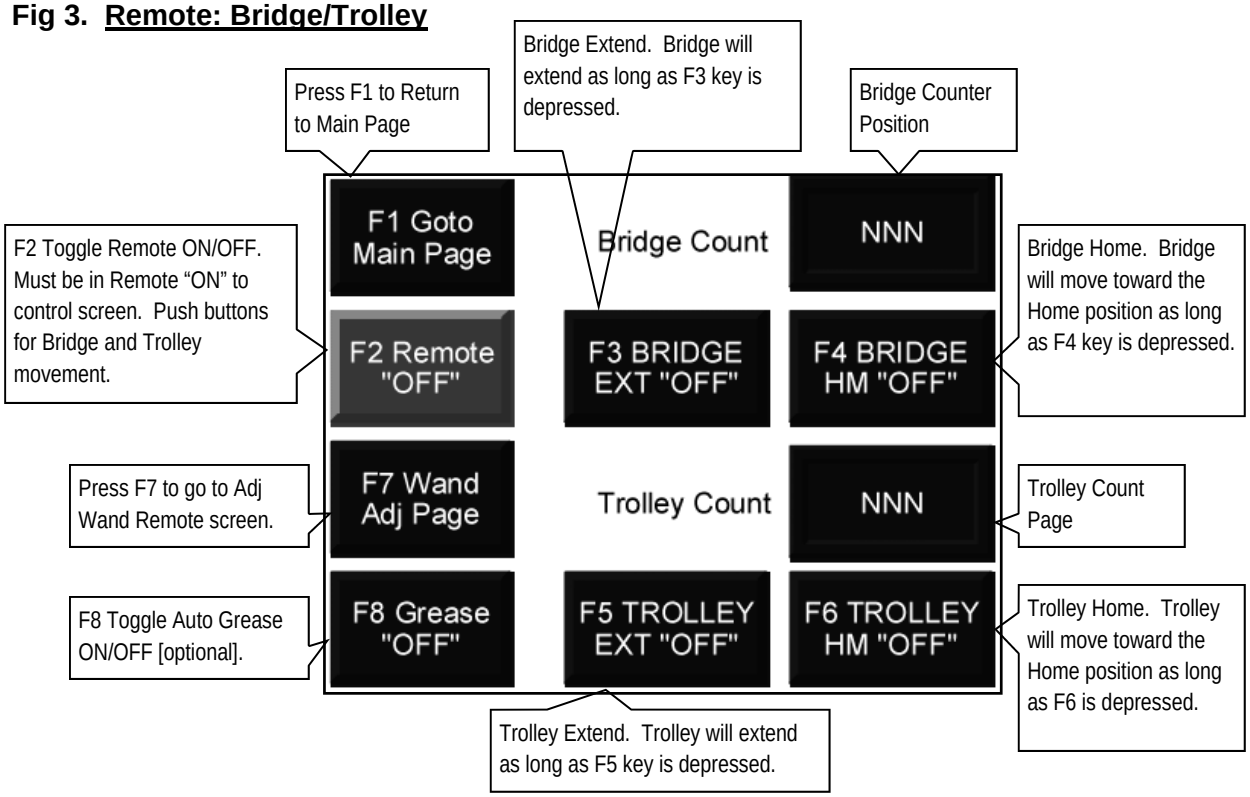


Fig 4. Remote: Adjustable Wand

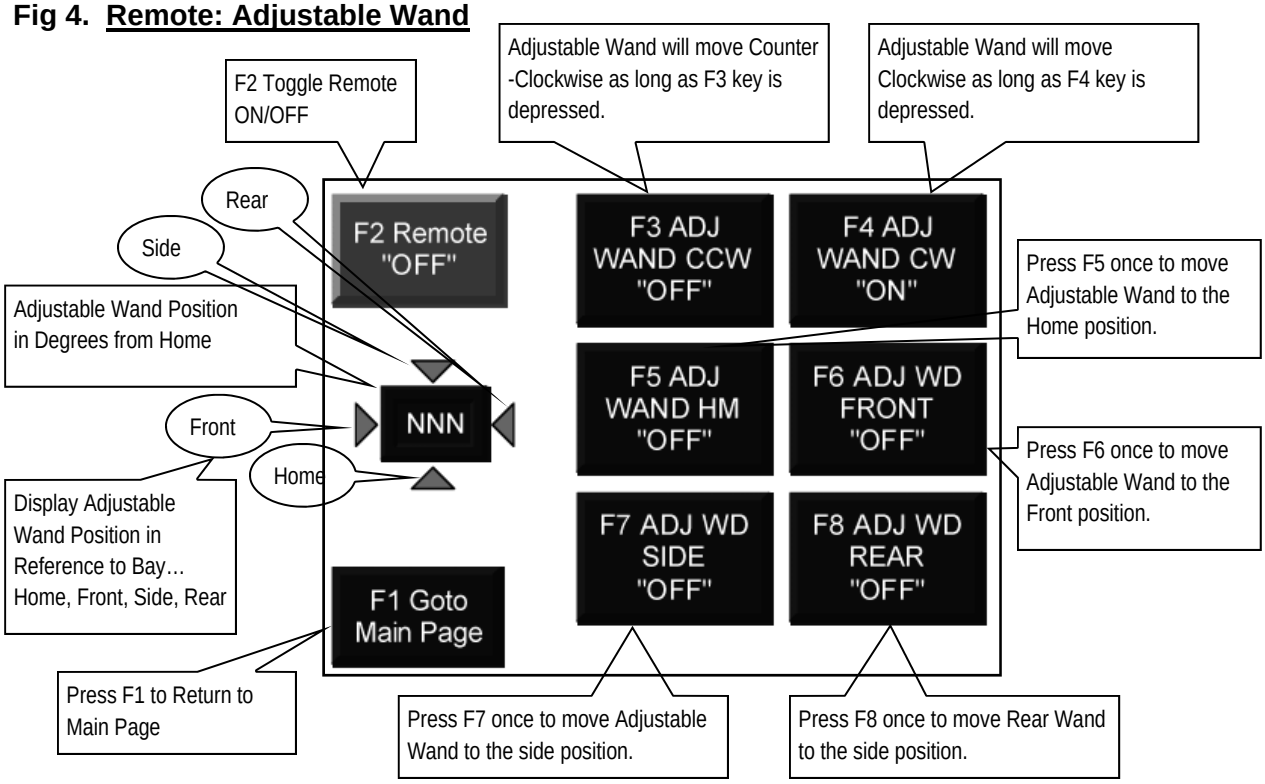


Fig 5. Remote: Pump Only

Caution: Don't run pump dry. Fill tank before running pump. Turn F4 [ByPass] "ON" before running pump. Remember, functions stay "ON" until turned "OFF".

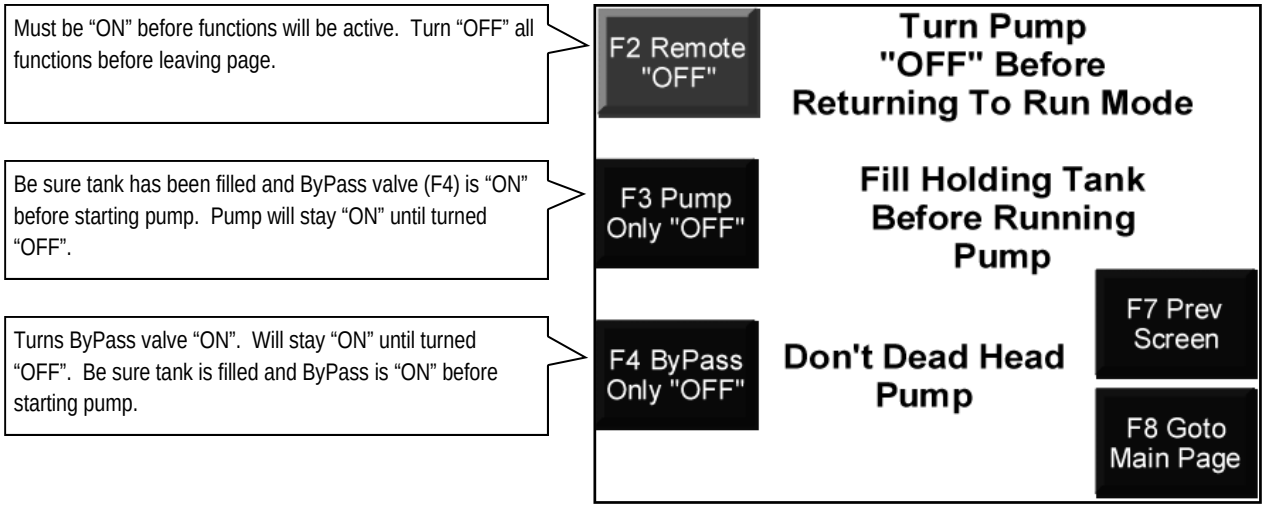


Fig 6. Remote: Fixed Wand Presoak #1

Caution: Functions stay "ON" until turned "OFF".

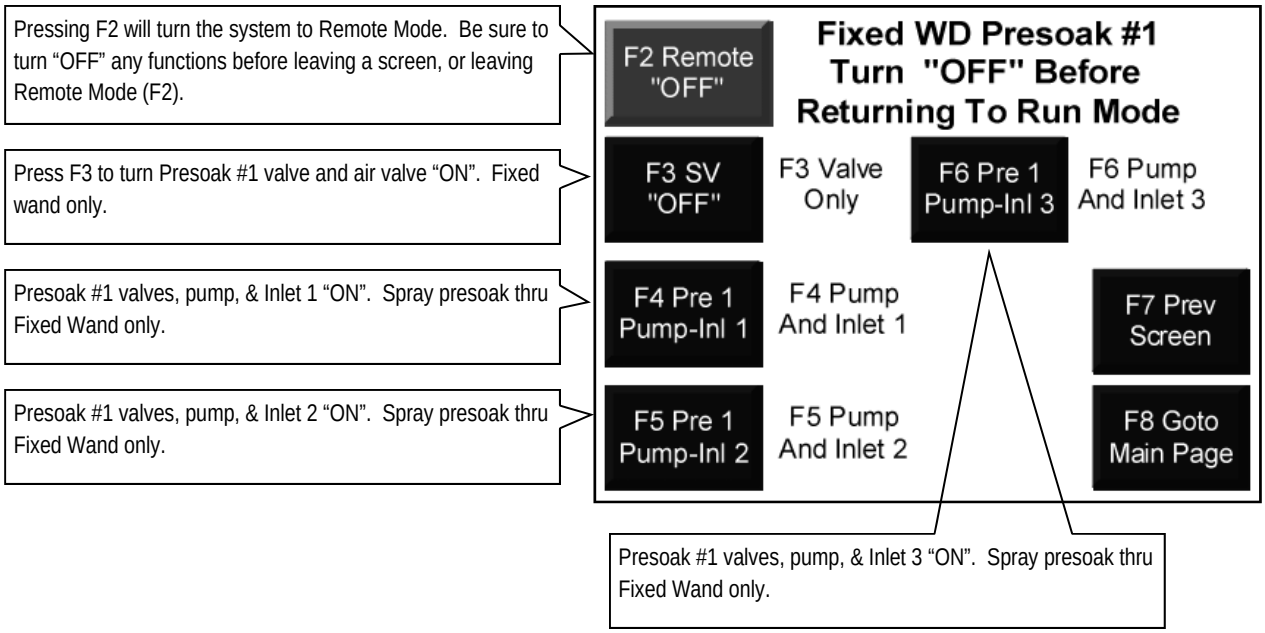


Fig 7. Remote: Adjustable Wand Presoak #1

Caution: Functions stay “ON” until turned “OFF”.

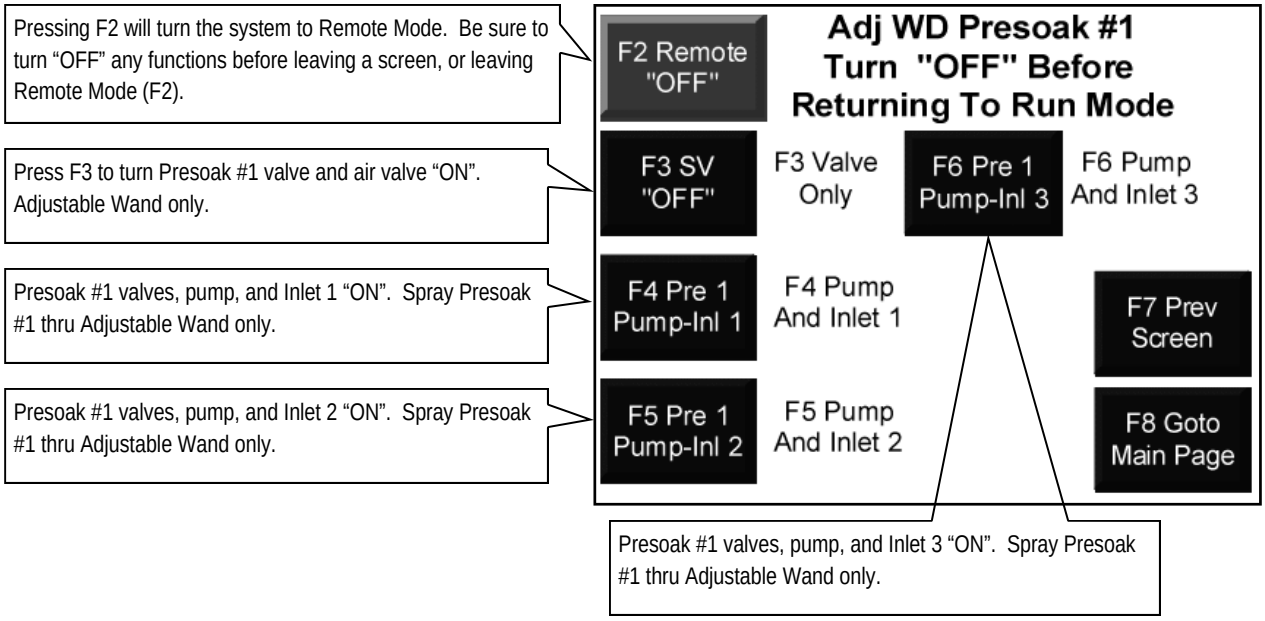


Fig 8. Remote: Both Wands Presoak #1

Caution: Functions stay “ON” until turned “OFF”.

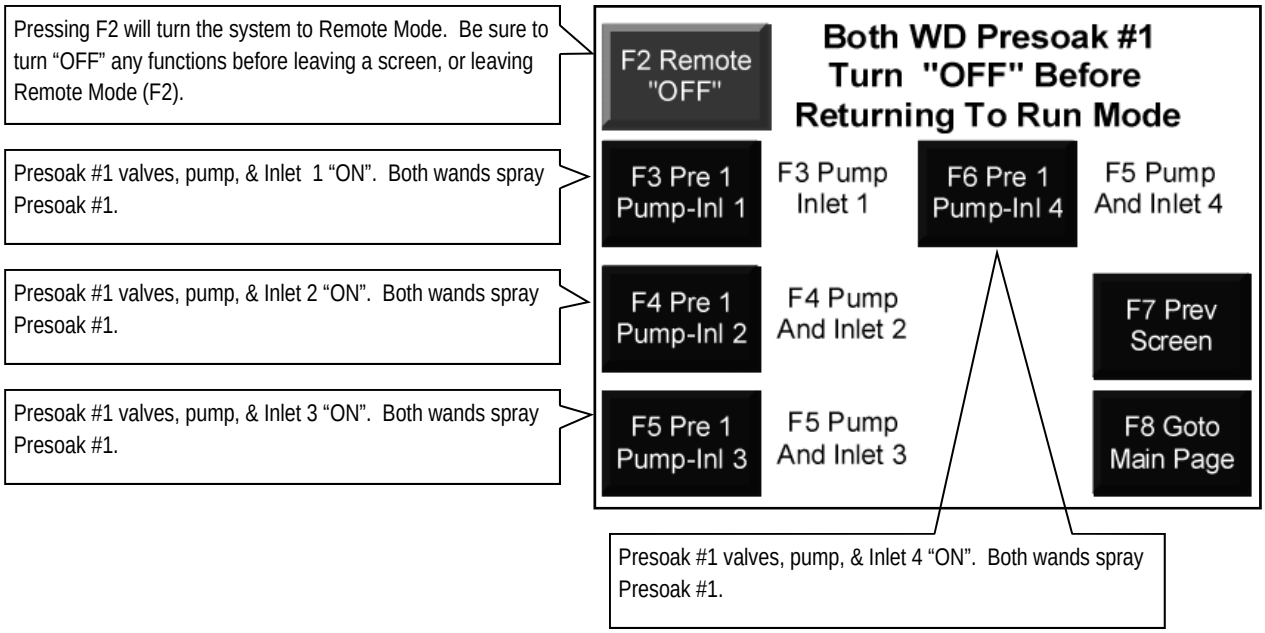


Fig 9. Wand Sensor Array

Brake Time is shown in .001 seconds [250 is ¼ second]. Factory setting is 50 [.050 second].

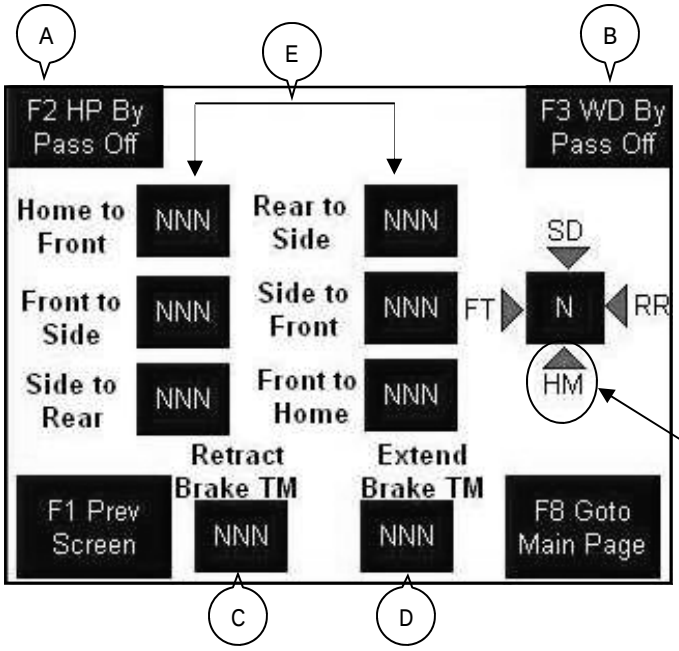
A. Adj Wand high pressure bypass at corners.

B. Adj Wand medium pressure bypass at corners.

C. Time Brake is applied when retracting. [50]

D. Time Brake is applied when extending. [50]

E. If wand under-rotates, increase this number. If wand over-rotates, decrease this number (number must be at least 1).



Adjustable Wand Positions:
HM [Home] = 1
FT [Front] = 2
SD [Side] = 3
RR [Rear] = 4

Arrow will display only in the quadrant the wand is currently in. If no arrow is displayed, wand is outside of limits or proximity switch failure may have occurred.

Fig 10. Alarm History

This screen gives the history of all alarms. Some faults will cause 2 or 3 alarm messages to be displayed.

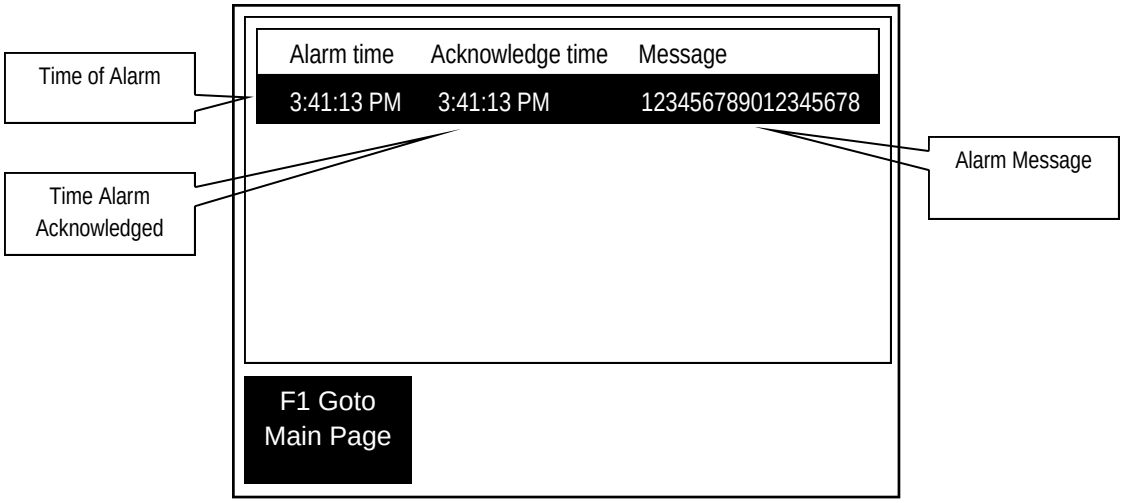


Fig 11. Speed Setup

Screen may be accessed from the Setup screen only.
Speed adjustments should be made in increments of +/- 200 until desired speed has been reached.

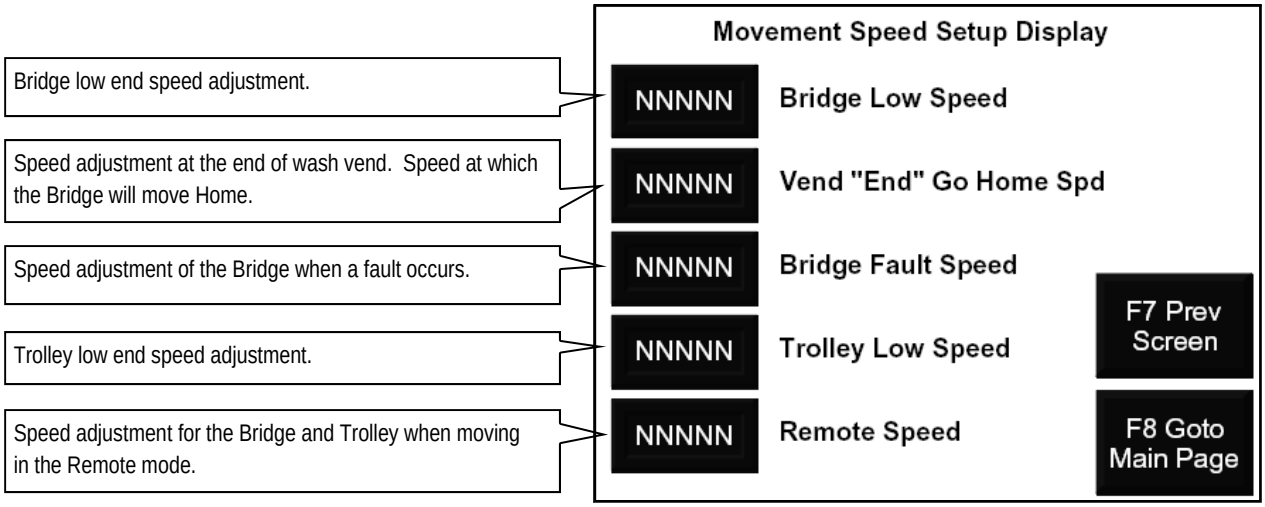
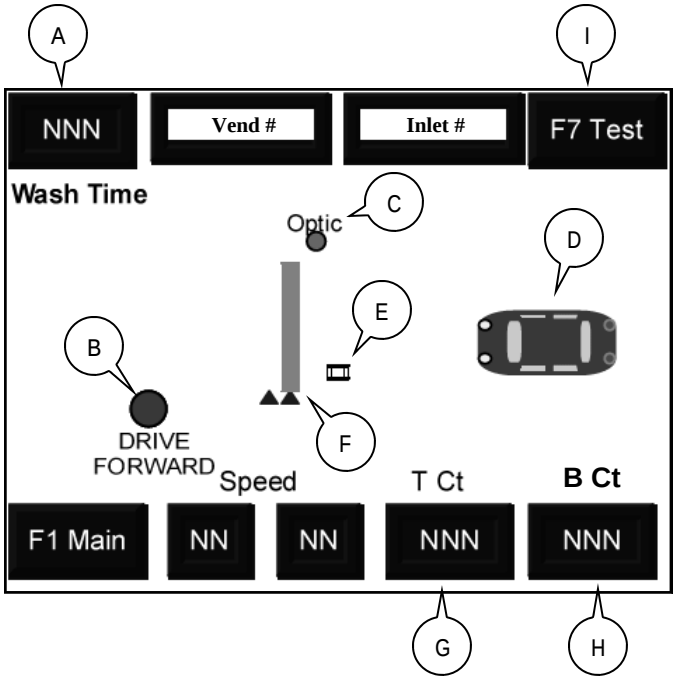


Fig 12. Action: Drive Forward



A. No wash time displayed. Vend has not started.

B. Drive Forward light displays.

C. Optic symbol displays. Optics not blocked.

D. Vehicle displays when money has been received at the Autocashier.

E. Stop Station symbol displays until vehicle is in position on the Treadle.

F. Bridge, Trolley, and Adjustable Wand shown at 'Home' position.

G. Trolley Counter value changes when Trolley moves.

H. Bridge Counter value changes when Bridge moves.

I. Go to Test Vend page.

Fig 13. Action: Back Up

A. No wash time displayed. Vend has not started.

B. Back Up Lite symbol displays. Vehicle forward of the Stop Station.

C. Vehicle shown forward of the Stop Station.

D. Exit Stop Switch symbol may or may not be displayed, depending on position of vehicle in bay.

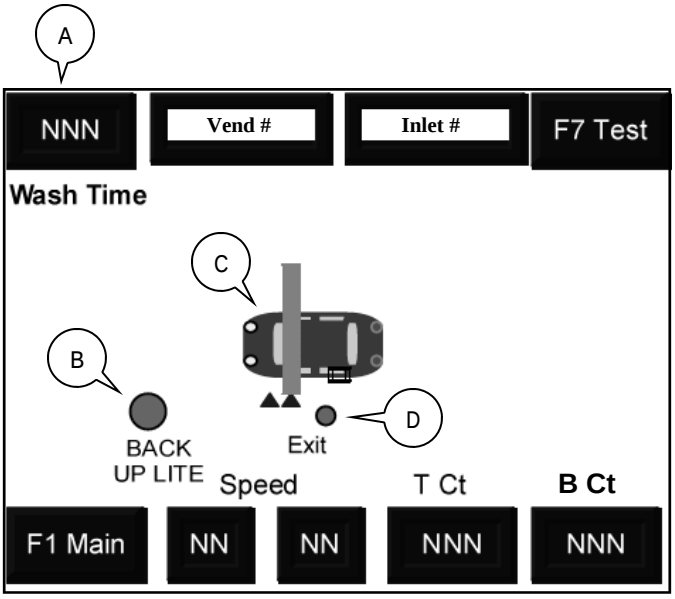
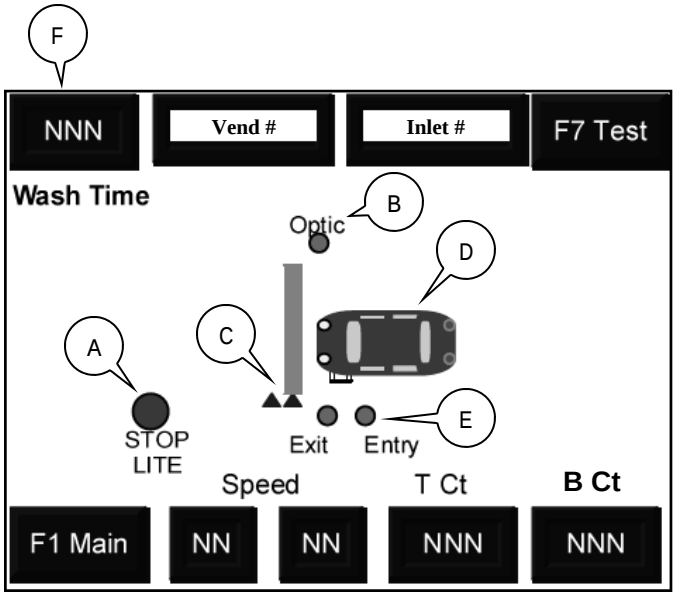


Fig 14. Action: Vehicle in Position



A. Stop Lite symbol displays.

B. Optic symbol displays. If Optic symbol is not displayed and the Exit and Entry switch symbols are displayed [E], the wash will not start. Check Optic alignment.

C. Bridge, Trolley, and Adjustable Wand shown at 'Home' position.

D. Vehicle is shown in the start position when both Stop Station switches [E] are displayed.

E. Vehicle is resting on both Stop Station switches. Vehicle must stay on both switches until selected vend starts. After wash has started, one switch may go off if vehicle rocks during wash. If both go off, system will fault.

F. Wash Time will display when selected vend has started.

Fig 15. Action: Adjustable Wand Front

A. Optic symbol displays.

B. Adjustable Wand symbol is displayed in the front position, spraying front of the vehicle.

C. Wash Time displays vend cycle time.

D. Trolley Counter value will reflect the counts up or down [extending or traveling 'Home'].

E. One or both Stop Station switches may be displayed.

F. Stop Lite symbol displays, indicating vehicle is in position on the Treadle.

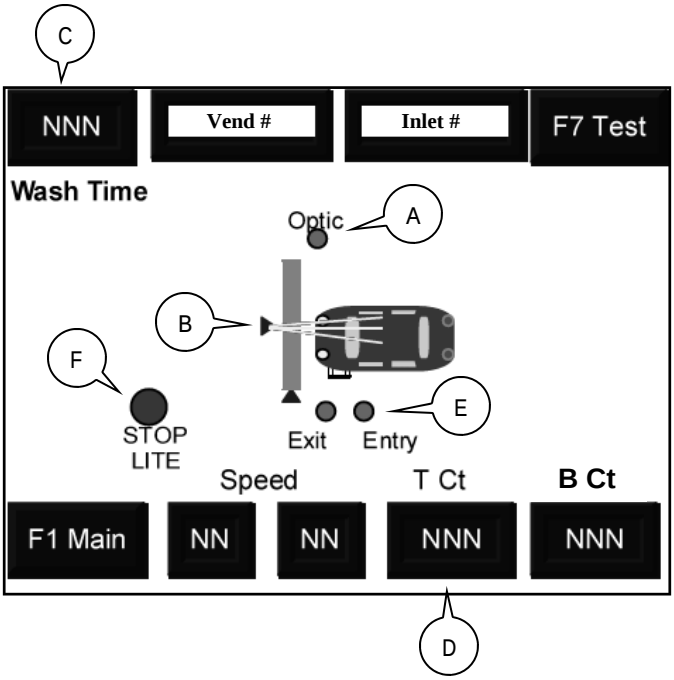
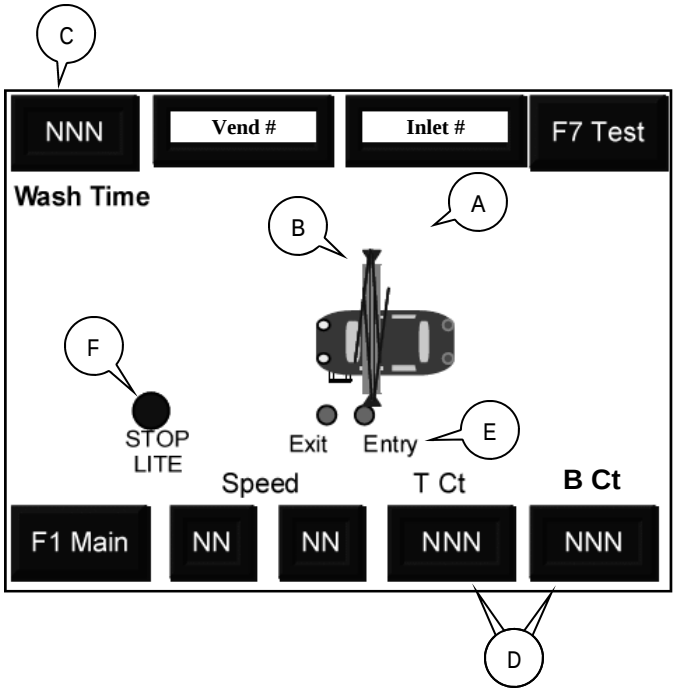


Fig 16. Action: Side Spray



A. Optic symbol will display when not blocked by the vehicle.

B. Adjustable Wand symbol is displayed in the side position, spraying side of vehicle. Bridge symbol will move over the vehicle.

C. Wash Time displays vend cycle time.

D. Trolley Counter values should not change when Bridge is extending or traveling home. Bridge Counter values change as Bridge is extending or traveling 'Home'.

E. One or both Stop Station switches will be displayed. One switch may go off if vehicle rocks during wash. If both go off, system will fault.

F. Stop Lite symbol displays, indicating vehicle is in position on the Treadle.

Fig 17. Action: Rear Spray

A. Optic symbol will display when Optics not blocked by Adjustable Wand travel.

B. Adjustable Wand symbol is displayed in the rear position, spraying rear of vehicle.

C. Wash Time displays vend cycle time.

D. Bridge Counter values should not change when Trolley is extending or traveling home. Trolley Counter values change as Trolley is extending or traveling 'Home'.

E. One or both Stop Station switches will be displayed. One switch may go off if vehicle rocks during wash. If both go off, system will fault.

F. Stop Lite symbol will display, indicating vehicle is in position on the Treadle.

G. Bridge shown at rear of car.

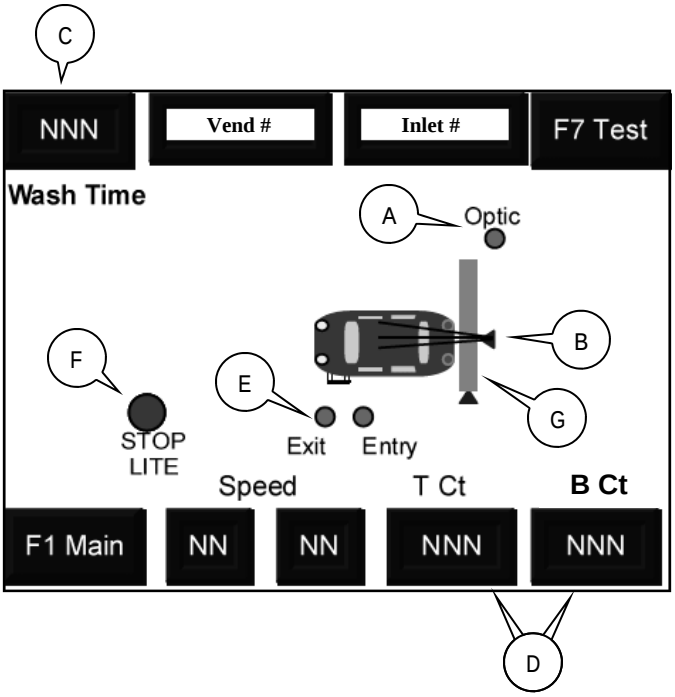
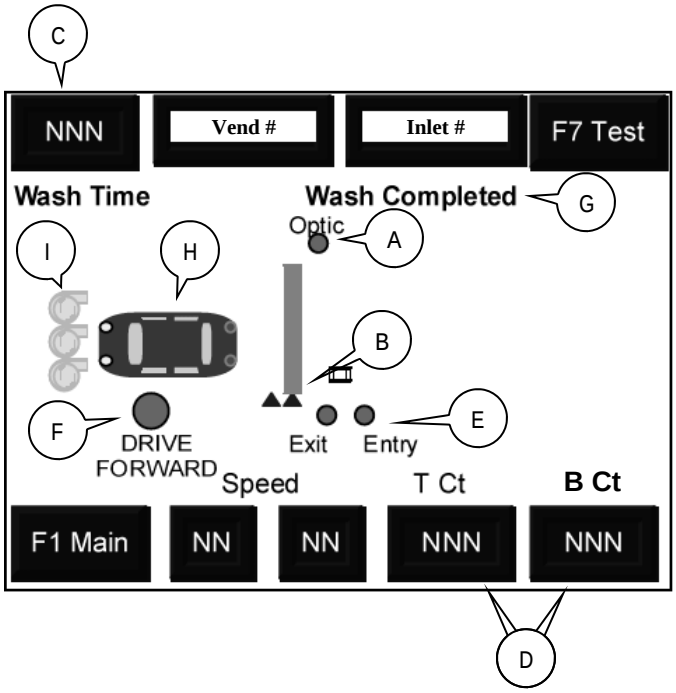


Fig 18. Action: Vehicle Exiting, w/Bridge in Front Position



A. Optic symbol will display when Optics not blocked by vehicle leaving the bay.

B. Bridge, Trolley, and Adjustable Wand are shown in the start or 'Home' position.

C. Wash Time is displayed until vehicle exits the bay.

D. Bridge and Trolley Counter values should display '0' [Home].

E. One or both Stop Station switches will flash 'On' as vehicle leaves the Treadle on exiting the bay.

F. Drive Forward light will display until vehicle has cleared the bay.

G. Wash Completed is displayed as soon as vehicle has cleared the bay.

H. Vehicle symbol displays as vehicle exits the Stop Station.

I. Dryer symbols display as the blowers are started. Some wash vends will not have a Dryer on exit.

Fig 19. Action: Vehicle Exiting, w/Bridge in Rear Position

A. Optic symbol will display when Optics not blocked by vehicle leaving the bay.

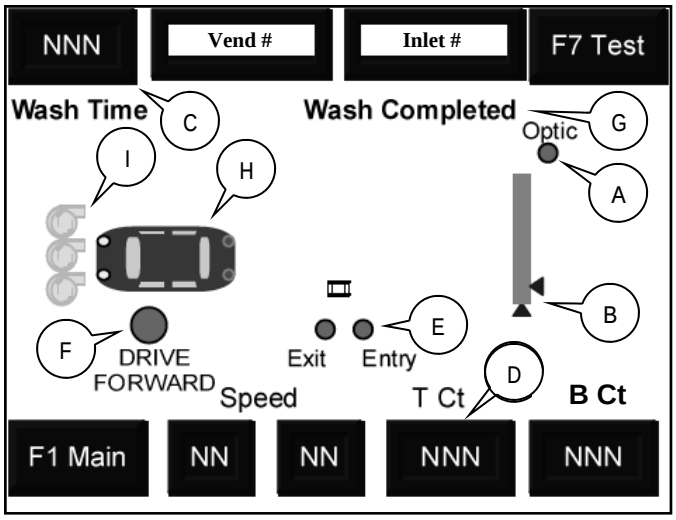
B. Bridge/Fixed Wand and Trolley/Adjustable Wand are shown at the rear of bay storage position. After reaching this position, the Adjustable Wand will rotate 180° to the front position, allowing the Trolley to move to the rear 'Home' position. After the vehicle has exited the bay, the Bridge and Trolley will then travel to the front 'Home' position.

C. Wash Time display is zeroed. Wash ended at rear.

D. Bridge Counter values will display the rear storage position. Trolley Counter values will display the rear storage position.

E. One or both Stop Station switches will flash 'On' as vehicle leaves the Treadle on exiting the bay.

F. The Drive Forward light will display until the vehicle has cleared the bay. It will change to the Stop Lite after the vehicle has left the bay, and stays on until the Bridge and Trolley have traveled to the front 'Home' position.



G. Wash Completed displays as soon as the vend has completed and the Bridge, Trolley, and Adjustable Wand have moved to the rear storage position.

H. Vehicle is shown exiting the bay.

I. Dryer symbols display as the blowers are started. Some vends will not have a Dryer on exit.

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