

OPERATION NOTES

When Exhaust Fan is on, red indicators on 3 remote stations are on steady, as are the two top indicators on the Paint Booth Control Panel.

When all fans are off, all lights are off (with possible exception of the door ajar indicators which are controlled strictly by the doors). The door ajar indicators are driven directly by the door ajar switches since we are already using all the PLC outputs.

When Outside Door Request Entry/Exit button is pressed and the exhaust fan is on, bright red call indication in booth flashes, as do red indicators on outside door stations and the call indicator on the Paint Booth Control Panel. The booth operator may press the Outside Door Passage button when he is ready. If the exhaust fan is off when the Request Entry/Exit pushbutton is pressed, then the Lobby Intake Fan starts automatically. After a brief period, the green indicators at the Outside Door Stations light. Devices remain in this state until Outside Door is opened and closed. All fans will then be off.

Similarly, when Booth Door Request Entry button is pressed, the bright red call indication in booth flashes, as does the red indicator on the booth door remote station and the call indicator on the Paint Booth Control Panel. The booth operator may press the Booth Door Passage pushbutton when he is ready. If the exhaust fan is off when the Request Entry button is pressed, then the Booth Intake Fan starts automatically. After a brief period, the green indicator at the Booth Door Station lights. Devices remain in this state until Booth Door is opened and closed. All fans will then be off.

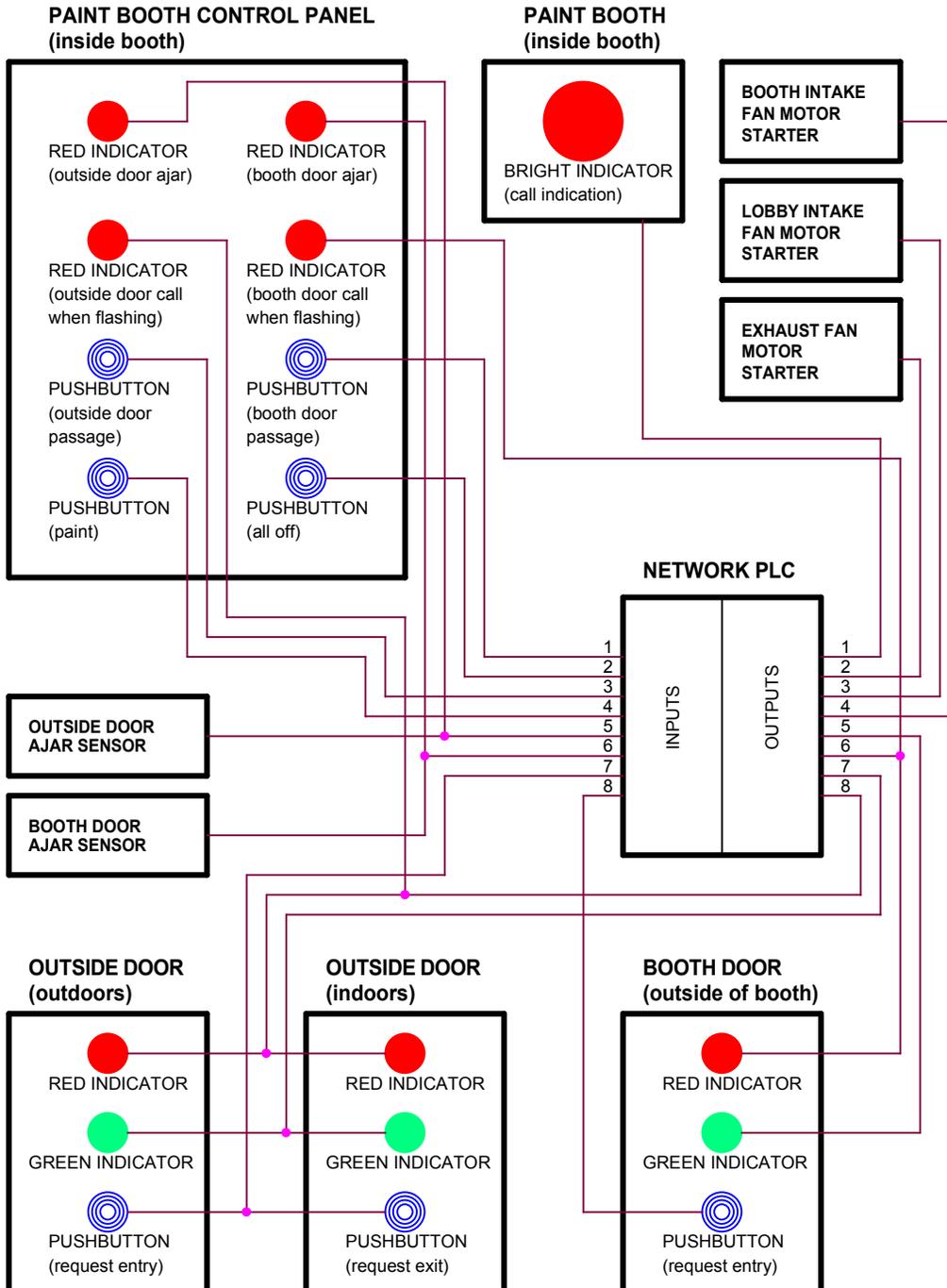
When booth operator presses Outside Door Passage Pushbutton, the Lobby Intake Fan starts and the Exhaust Fan stops. After a short time, at the Outside Door Stations the red indicators go out and the green indicators light. Devices remain in this state until the outside door is opened and closed or the booth operator selects another function.

Similarly, when booth operator presses Booth Door Passage Pushbutton, the Booth Intake Fan starts and the Exhaust Fan stops. After a short time, at the Booth Door Station the red indicator goes out and the green indicator lights. Devices remain in this state until the Booth Door is opened and closed or the booth operator selects another function.

Exhaust fan cannot be started if any door is ajar. A running exhaust fan will be stopped by a door ajar indication. Exhaust fan never starts automatically, always requires booth operator to press the Paint button.

All pushbuttons, door sensors, and indicators operate at 12 VDC with the possible exception of the bright red indicator in the paint booth which we may want to operate at 120 VAC in order to have something that is quite noticeable in a bright environment. The motor starter controls will operate at the control voltage of the motor starter, probably 120 VAC.

As an alternative to the bright call indicator in the paint booth, the PLC output could be used to blink the overhead lights in the paint booth to get the operator's attention. The operator could then determine the source of the call by checking the indicators on the Paint Booth Control Panel. This would save purchasing the bright indicator and would positively get the operators' attention.



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Paint Booth Airflow Control, Project #3433			0
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