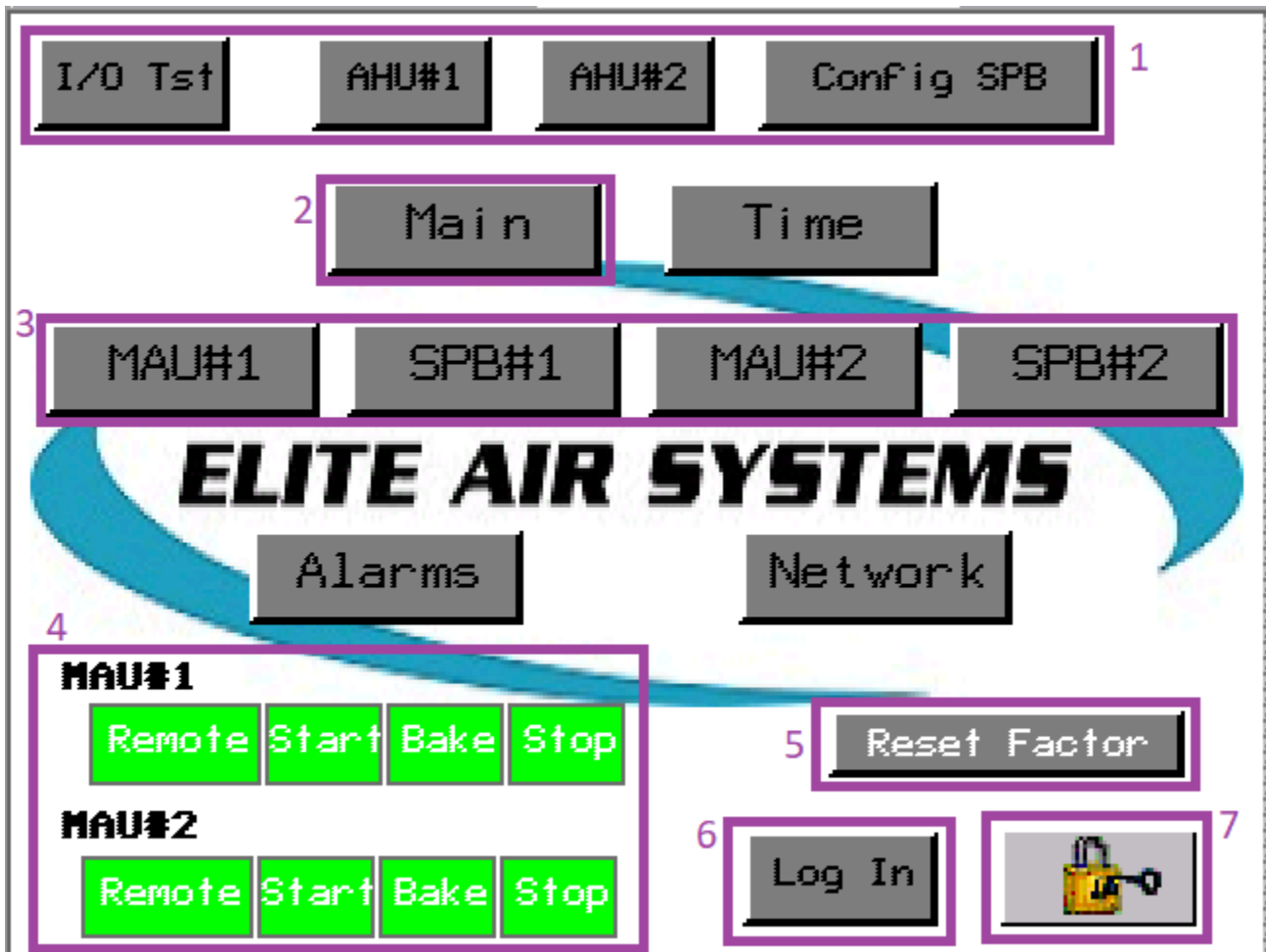


Start/Stop Instructions

1. To start the system, press and release the GREEN pushbutton located on the Control Panel door.
2. To stop the system at any time, press and release the RED pushbutton located on the Control Panel door.
3. To enter BAKE Mode:
 - a. Ensure that the system is running in SPRAY mode
 - b. Press and release Black Pushbutton labelled "Bake Mode" on Control Panel door.
4. To turn on/off lights, press and release the Black Pushbutton labelled "Lights".

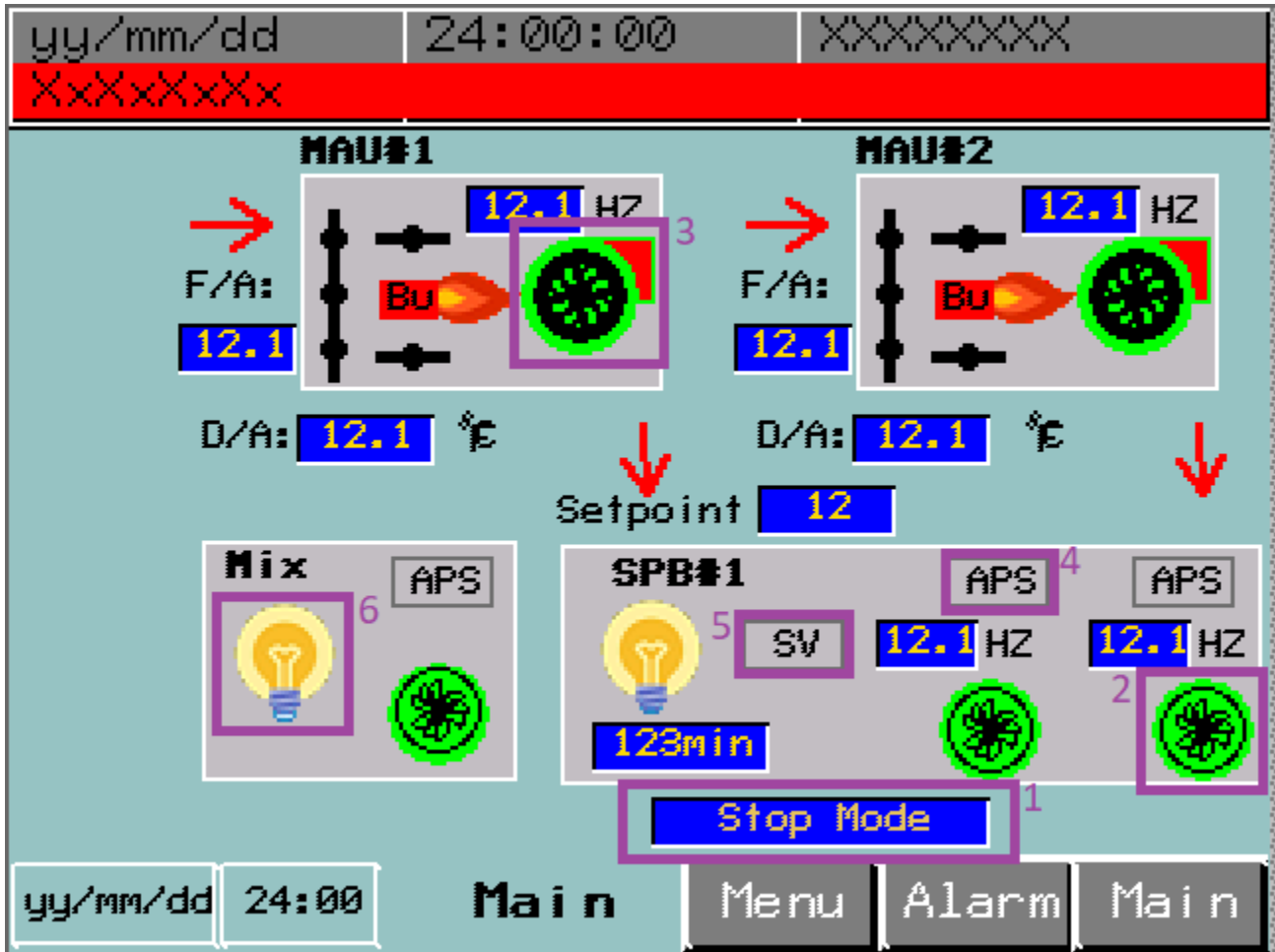
HMI Menu Page



1. Available during EAS startup/configuration.
2. **Main:** Click to access "Main" page.
3. **MAU/SPB Page(s):** Click to access detailed information on each Spray Booth or MAU.
4. Available during EAS startup/configuration.
5. **Factory Reset:** Available to EAS users only.

6. **Log In:** Click to log in as “Supervisor”
 - a. Username: SUP
 - b. Password: 1234
7. **Log Out:** Click to log out of Supervisor account. Ensures that Operators do not change settings by mistake,

General Machine Feedback



1. Mode Display:

- a. Stop Mode: Machine is not running. Awaiting user input via Start/stop Buttons
- b. Spray Mode: Machine is running in SPRAY MODE.
 - i. Exhaust fan will be operating at the speed chosen on the “SPB” page.
- c. Flash Mode: Machine is running in FLASH-OFF MODE.
 - i. Flash-off mode is the intermediate mode between Spray and Bake. It is useful to allow paints to off-gas prior to raising temperature in the bake mode.
 - ii. Flash-off times vary depending on finish being used. Refer to paint manufacturers documentation for more information.
- d. Bake Mode: Machine is running in BAKE MODE.
 - i. Machine will discharge at an elevated temperature.
 - ii. Bake temperature can be set on the “MAU” Page.
 - iii. Bake time can be set on the “SPB” Page.
- e. Cooldown Mode: Machine is running in COOLDOWN MODE. At the end of this cycle, the machine will shut down.

2. Exhaust Fan Operation Feedback

- a. Green/Spinning: Exhaust Fan is Operating
- b. Red/Not spinning: Exhaust Fan Not Running

3. MAU Blower Operation Feedback

- a. Green/Spinning: Blower is Operating
- b. Red/Not spinning: Blower Not Running

4. Air Proving Switch Feedback

- a. Green: Air Proving Switch is closed.
 - i. When the machine is running, the APS symbol should be highlighted Green.
- b. Grey: Air Proving Switch is Open.
 - i. APS should be Grey/Open when the Machine is not operating.
 - ii. If the machine is operating and APS is Grey, there is a potential issue with the Air Proving Switch. Service may be required.

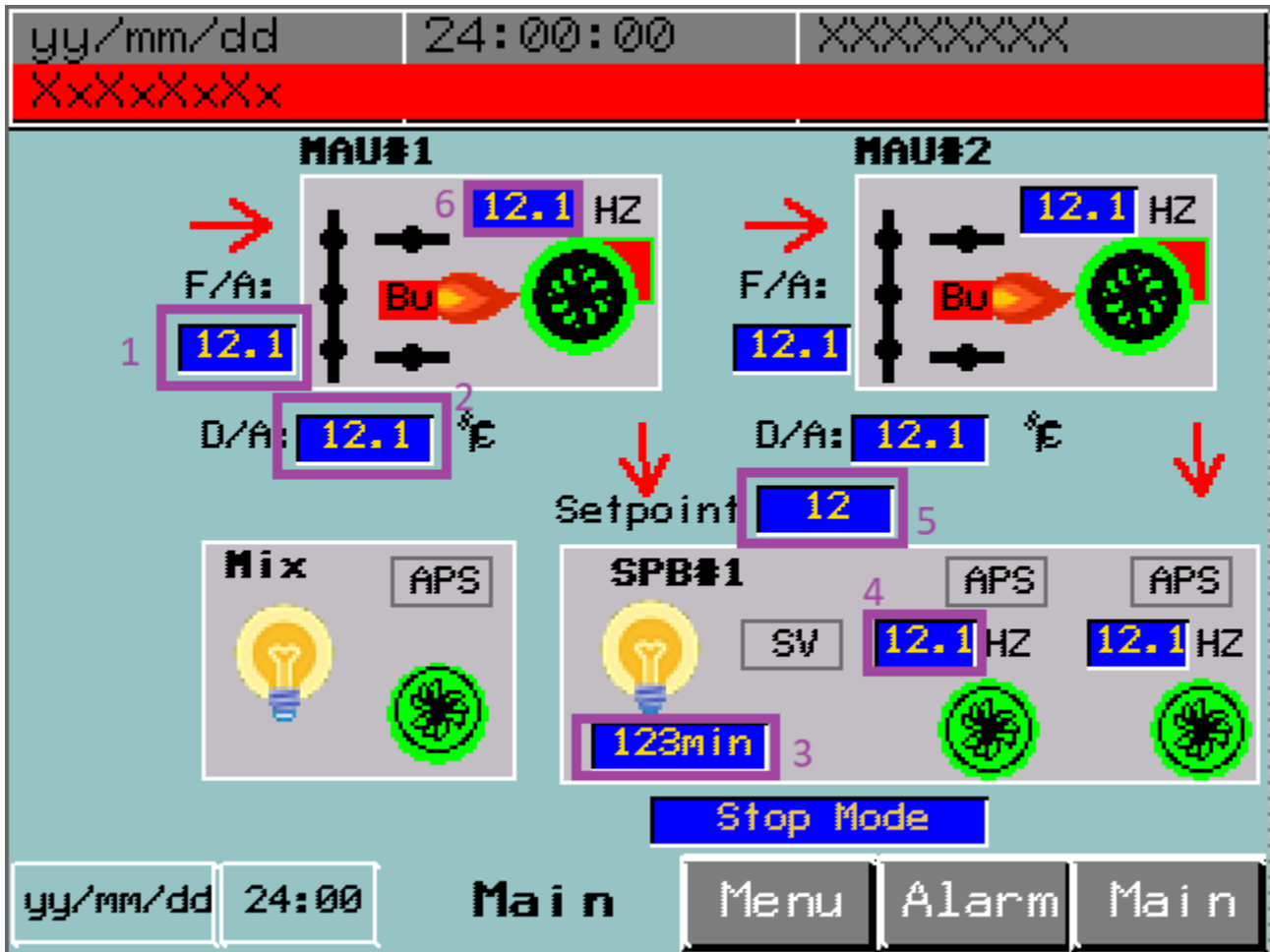
5. Solenoid Valve Output Notification

- a. Green: Solenoid Valve should be energized.
 - i. Spray Gun should be operational
- b. Grey: Solenoid Valve is not energized.
 - i. Spray Gun should not be operational.

6. Lighting Output Notification

- a. Yellow/Lit: Lighting output has been energized. Lights on the paint booth should be ON.
- b. Greyed Out: Light output is de-energized. Lights on the Enclosure should be OFF.

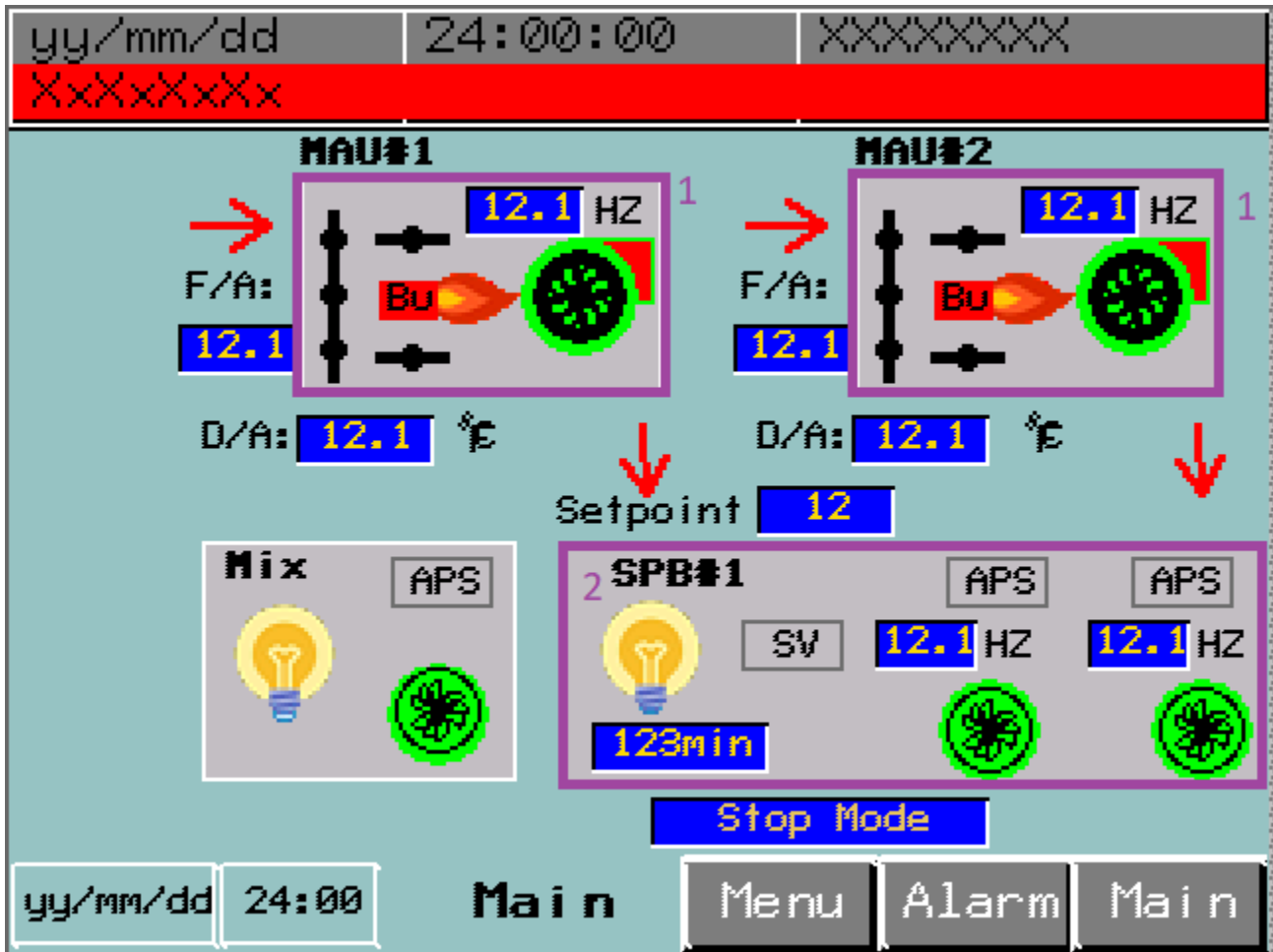
Machine Operational Feedback



1. **F/A:** Incoming air temperature. Measured upstream of the Burner (in the filter area of the MAU).
2. **D/A:** Discharge air temperature of the MAU. This temperature is measured at the discharge of the blower.
 - a. Note that the temperature here may be higher than the actual temperature inside the booth. This is due to temperature losses to ambient air. To minimize these losses, all ducting and paint booth panels should be insulated with a minimum of 2" insulation.
3. **Mode Timer Countdown:** This field shows a countdown of the current mode (Only applies to Flash, Bake, and Cooldown modes)
4. **Exhaust Fan Hz:** The speed of the Exhaust Fan in Hz. This refers to the speed as set on the VFD.
 - a. Adjustments can be made to this by entering the "SPB" page.
5. **D/A Setpoint:** Discharge Air Temperature Setpoint. Can be changed by going to "MAU" page.
6. **MAU Blower Hz:** The speed of the MAU Blower in Hz. This refers to the speed as set on the VFD.
 - a. Adjustments can be made to this by entering the "MAU" page.
7. **Burner Visual Feedback**
 - a. **Bu** = Flame Safeguard is de-energized. There is no 'Call for Heat'
 - b. **Bu** = Flame Safeguard is energized. There has been a 'Call for Heat'. Burner will attempt to ignite.
 - c. **Bu** with Flame Illustration = Burner is ON.

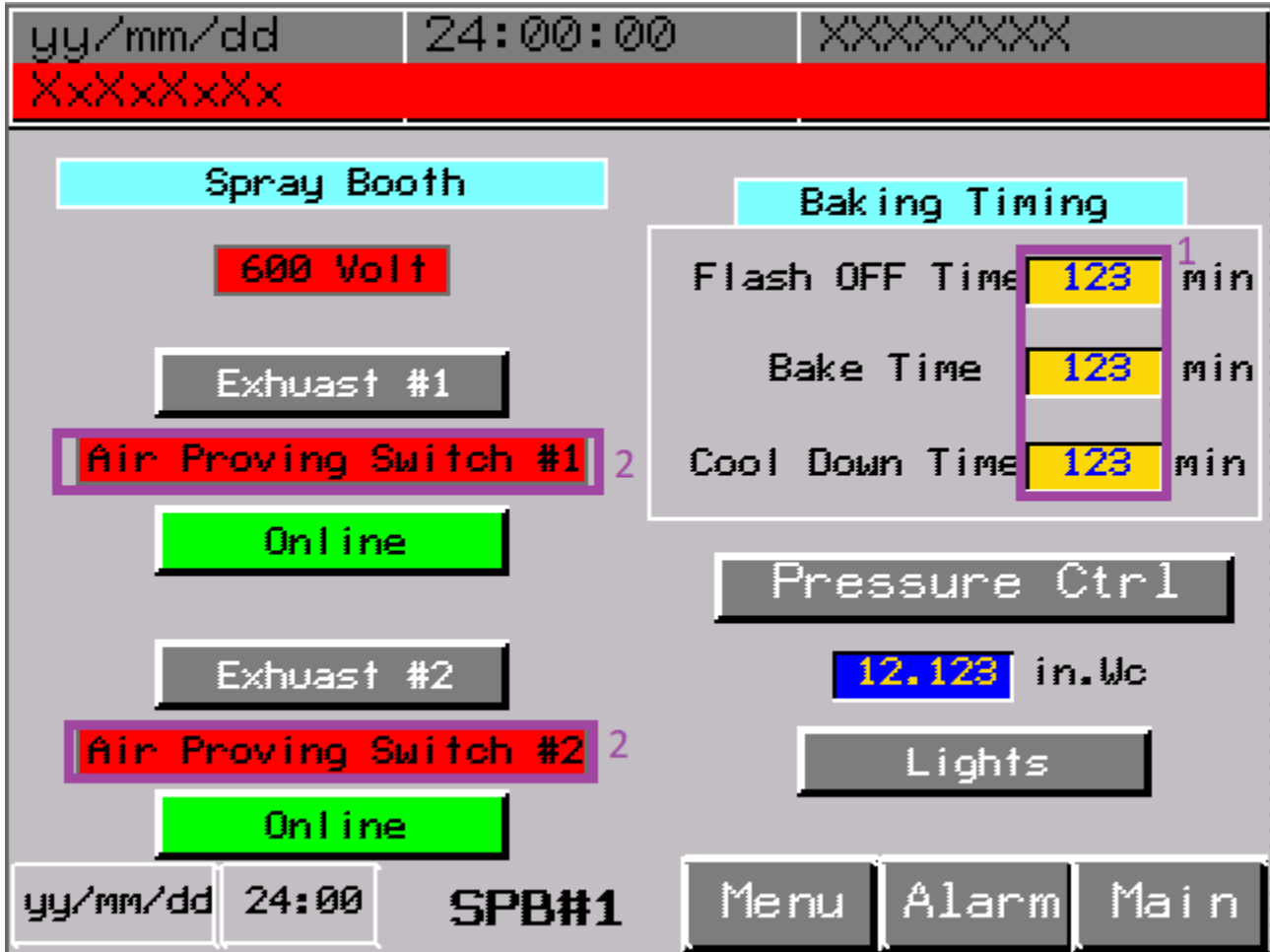
- 8. Inlet Damper Feedback:** Provides visual indication of the Inlet Air Damper. This is a measured value from the Damper Actuator.
- a. When all 'blades' are vertical this would be 0% open.
 - b. All 'blades' horizontal (90 degrees) would indicate the inlet air damper was 100% open.

Accessing MAU & Spray Booth details



1. MAU #1 & #2 - "MAU" page
 - a. Click inside the box to access further MAU Configuration/Feedback options
2. SPB #1 - "SPB" page
 - a. Click inside the box to access further Spray Booth Configuration options

“SPB Page” - Additional Spray Booth Configuration/Feedback



1. Timer Setpoints

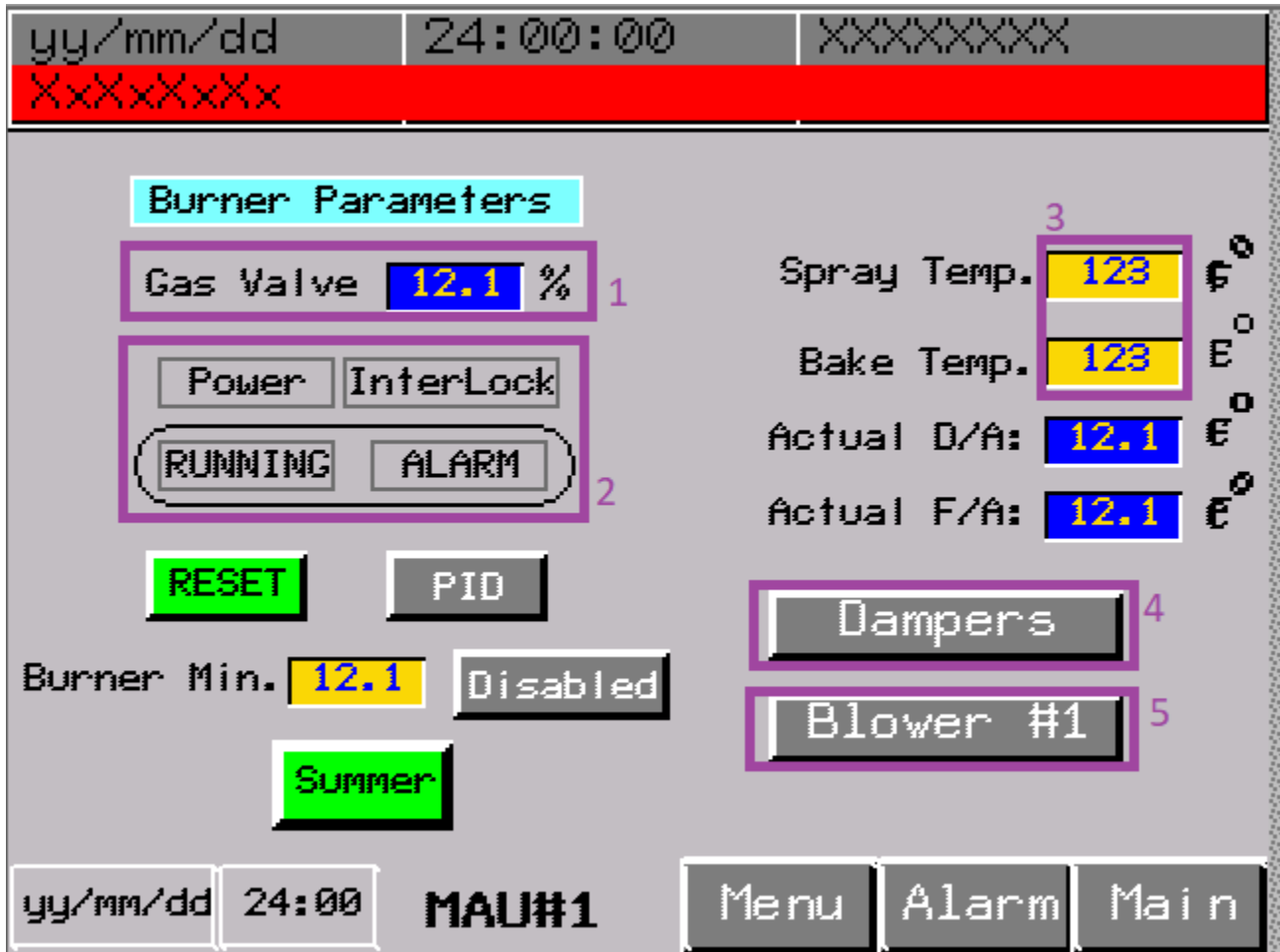
- Click the yellow boxes to configure the individual countdown timer for Flash-Off, Bake, and Cooldown Modes.
- Note: requires “SUP” (Supervisor) access privileges to make changes

2. Air Proving Switch Feedback

- Red: Air Proving switch is OPEN. If red during operation of the system, maintenance may be required.
 - Solenoid Valve and Burner will NOT operate if the Air Proving Switch is OPEN during Spray Mode.
- Green: Air Proving Switch is CLOSED. System is functioning as intended.

Notes: All other items are for EAS reference during configuration/startup of the booth. Manipulation of these items is not recommended.

“MAU Page” - Additional MAU Configuration & Feedback Options



1. **Gas Valve Percentage:** Identifies the current output setting of the Machine to the Modulating Gas Valve.
 - a. Range 0-99%. Higher percentage indicates more fuel being required/consumed.
2. **Burner Feedback:**
 - a. **Power:** Indicates flame safeguard has been energized. Signifies a ‘Call for Heat’
 - b. **Interlock:** Indicates safety loop has been closed.
 - i. Indicates all electrical feedbacks are OK. Burner should ignite.
 - c. **Interlock:** Indicates safety loop is currently Open. Check the following items for proper function. May require technical assistance by an HVAC technician for diagnosis.
 - i. MAU High Pressure Air Proving Switch
 - ii. MAU Low Pressure Air Proving Switch
 - iii. MAU High Temperature Limit Switch
 - iv. MAU/Exhaust Fan VFD Faults
 - v. Paint Booth Exhaust Fan Air Proving Switch
 - d. **RUNNING:** Burner has ignited. System is operating as intended.
 - e. **ALARM:** Flame Safeguard has locked out. Requires manual reset of Flame Safeguard.
 - i. To Reset:
 1. Go to MAU Flame Safeguard.

2. Make note of Lockout Code.
 3. Press and Hold “Info” button for 2-3 seconds, then release.
 4. If problem persists, reach out to a Certified Gas Technician for assistance.
- 3. Spray/Bake Temps:**
- a. Click inside the Yellow Rectangle to change the discharge temperature setpoint for its respective mode.
 - i. Flash-Off and Cooldown modes will use the “Spray Temp” setpoint.
- 4. Dampers:** click to access numeric feedback data from Inlet Air and Burner Profile dampers.
- 5. Blower #1:** click to access VFD setpoint and feedback data from Blower VFD(s)