Specifications

1. Program Selection
2. Washing programs will be selected by three buttons
3. The selected program will be indicated by three program LEDs as a binary encoded number.
4. Washing Process
5. The processes are designed to be in the following order and last 3 hours.

(1). Filling in water for 3 minutes

(2). Heating water for 3 minutesfdhchffjfjgk

(3). Washing for 1.5 hours.

(4). Empty 3 minutes.

(5). Filling in water 3 minutes.

(6). Rinse for 30 minutes

(7). Empty for 3 minutes

(8). Spinning for 15 minutes

(9). Drying for 30 minutes

(10). Complete

b. Press ACCEPT button to start the washing program chosen.

c. Press CANCEL button will pause the system and can be continued by pressing the ACCEPT button.

d. Press CANCEL twice will reset the system to Program Selection.

3. Reservoir Door.

a. Door switch is indicated by a LED.

b. Program will not start unless the Reservoir Door is closed.

c. If the door is opened anytime during the washing process will cause the system to suspend and can be resumed when the door is closed again.

d. If the CANCEL button is pressed during suspension the system will be reset.

4. Advanced Functions.

a. A buzzer will generate sound for three seconds for warning when the system is interrupted (e.g. Reservoir Door is opened during the washing process.)

b. Press ACCEPT button during washing process will cause the program to skip the current stage to the next one.

c. A 7-segment display is used to indicate the current washing stage.

**Sate Diagram**

As the system starts, it runs into the Program Selection State which is distributed into several sub-states in order to select and detect the programs. In order to proceed to the next state, the system is conditioned by the reservoir door which stops the system if it is opened.

After selecting washing program, system is followed by the Washing Program State which also distributed into several sub-states. The sub-states are used to describe the washing stages, a timer is used to determine the time for each stage and reset itself when each stage completes. The Washing Program State will also be interrupted if either the reservoir door opens or Cancel button pressed. And the History Sign means the system can be restored and resumed from the interruption. Finally, if the Cancel Button is pressed during the interruption, the system will be reset to initial state.