**Refrigerator State Transition Diagram**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Open fridge door** | **Close fridge door** | **Open freezer door** | **Close freezer door** | **Set room temp** | **Set fridge temp** | **Set freezer temp** |
| **Fridge door open; Freezer door open** | Fridge door open; Freezer door open | Fridge door closed; Freezer door open | Fridge door open; Freezer door open | Fridge door open; Freezer door closed | Fridge door open; Freezer door open | Fridge door open; Freezer door open | Fridge door open; Freezer door open |
| **Fridge door closed; Freezer door open** | Fridge door open; Freezer door open | Fridge door closed; Freezer door open | Fridge door closed; Freezer door open | Fridge door closed; Freezer door closed | Fridge door closed; Freezer door open | Fridge door closed; Freezer door open | Fridge door closed; Freezer door open |
| **Fridge door open; Freezer door closed** | Fridge door open; Freezer door closed | Fridge door closed; Freezer door closed | Fridge door open; Freezer door open | Fridge door open; Freezer door closed | Fridge door open; Freezer door closed | Fridge door open; Freezer door closed | Fridge door open; Freezer door closed |
| **Fridge door closed; Freezer door closed** | Fridge door open; Freezer door closed | Fridge door closed; Freezer door closed | Fridge door closed; Freezer door open | Fridge door closed; Freezer door closed | Fridge door closed; Freezer door closed | Fridge door closed; Freezer door closed | Fridge door closed; Freezer door closed |
| **Fridge light on** | Fridge light on | Fridge light off | Fridge light off | Fridge light off | Fridge light on | Fridge light on | Fridge light on |
| **Fridge light off** | Fridge light on | Fridge light off | Fridge light off | Fridge light off | Fridge light off | Fridge light off | Fridge light off |
| **Freezer light on** | Freezer light off | Freezer light off | Freezer light on | Freezer light off | Freezer light on | Freezer light on | Freezer light on |
| **Fridge light off** | Freezer light off | Freezer light off | Freezer light on | Freezer light off | Freezer light off | Freezer light off | Freezer light off |
| **Fridge cooling** | Fridge cooling | Fridge cooling | Fridge cooling | Fridge cooling | Fridge cooling | Fridge cooling | Fridge cooling |
| **Fridge idle** | Fridge idle | Fridge idle | Fridge idle | Fridge idle | Fridge idle | Fridge idle | Fridge idle |
| **Freezer cooling** | Freezer cooling | Freezer cooling | Freezer cooling | Freezer cooling | Freezer cooling | Freezer cooling | Freezer cooling |
| **Freezer idle** | Freezer idle | Freezer idle | Freezer idle | Freezer idle | Freezer idle | Freezer idle | Freezer idle |