



| State    | Ouputs |          |      |           |
|----------|--------|----------|------|-----------|
|          | Ready  | Dispense | Bill | ReturnTen |
| RESET    | 0      | 0        | 0    | 0         |
| RDY      | 1      | 0        | 0    | 0         |
| COLLECT  | 0      | 0        | 1    | 0         |
| RETEN    | 0      | 0        | 0    | 1         |
| DISPENSE | 0      | 1        | 0    | 0         |

| Reset | State Transition Table |              |           |
|-------|------------------------|--------------|-----------|
|       | Total                  | PresentState | NextState |
| 1     |                        | RESET        | RDY       |
| 1     | Total = 0              | RDY          | RDY       |
| 1     | Total<0                | RDY          | COLLECT   |
| 1     | Total<cost             | COLLECT      | COLLECT   |
| 1     | Total==cost            | COLLECT      | DISPENSE  |
| 1     | total==costplus        | COLLECT      | RETEN     |
| 1     |                        | RETEN        | DISPENSE  |
| 1     |                        | DISPENSE     | RDY       |
| 0     |                        | ANYSTATE     | RESET     |

| Total Calculation Table |     |        |               |           |
|-------------------------|-----|--------|---------------|-----------|
| Reset                   | Ten | Twenty | Present Total | New Total |
| 0                       | x   | x      | x             | 0         |
| 1                       | 1   | 0      | Total<cost    | Total+10  |
| 1                       | 0   | 1      | Total<cost    | Total+20  |
| 1                       | x   | x      | total>=cost   | 0         |

