|  |  |  |
| --- | --- | --- |
|  | Input | Output |
| Cases | MS | CAR |
| A | 000 | 0 |
| B | 001 | 1 |
| C | 010 | C Flag |
| D | 011 | V Flag |
| E | 100 | Z Flag |
| F | 101 | N Flag |
| G | 110 | Not C Flag |
| H | 111 | Not Z Flag |

The Mux S takes in the MS signal and based on that, outputs one of the four flags, the inverse of the C flag or the Z flag or outputs 0 or 1, which is then inputted into the CAR/.