TruthTable

Example Use [* = *and* + = *or* ' = *not*] or [& = *and* | = *or* ¬ = *not*] in a string

$Green := P' \cdot L' \cdot T'$

$PRed := P \cdot T' + P \cdot L' \cdot T$

$TRed := P' \cdot T + P \cdot L' \cdot T$

$LRed := P' \cdot L + P \cdot L \cdot T'$

$Alarm := P \cdot L \cdot T' + P \cdot L' \cdot T + P' \cdot L \cdot T$

$Siren := P \cdot L \cdot T$

$$T := TruthTables\left(\begin{bmatrix} \text{"Green"} \\ \text{"PRed"} \\ \text{"TRed"} \\ \text{"LRed"} \\ \text{"Alarm"} \\ \text{"Siren"} \end{bmatrix}\right) = \begin{bmatrix} \text{"L"} & \text{"P"} & \text{"T"} & \text{"Green"} & \text{"PRed"} & \text{"TRed"} & \text{"LRed"} & \text{"Alarm"} & \text{"Siren"} \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 1 & 0 & 1 & 1 & 0 & 1 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 \\ 1 & 0 & 1 & 0 & 0 & 1 & 1 & 1 & 0 \\ 1 & 1 & 0 & 0 & 1 & 0 & 1 & 1 & 0 \\ 1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 1 \end{bmatrix}$$

Not in the same order, but with same output.

State Table for the Inputs

TS	LS	PS
0	0	0
0	0	1
0	1	0
0	1	1
1	0	0
1	0	1
1	1	0
1	1	1

Output Table

Green Light	PRed	TRed	LRed	Alarm	Siren
1	0	0	0	0	0
0	1	0	0	0	0
0	0	0	1	0	0
0	1	0	1	1	0
0	0	1	0	0	0
0	1	1	0	1	0
0	0	1	1	1	0
0	0	0	0	0	1

Alvaro