

**Bill Of Materials For RAM & MAR**

**Design Title** : RAM & MAR  
**Author** : <NONE>  
**Revision** : <NONE>  
**Design Created** : terça-feira, 15 de agosto de 2017  
**Design Last Modified** : terça-feira, 31 de outubro de 2017  
**Total Parts In Design** : 61

**19 Resistors**

<u>Quantity:</u>	<u>References</u>	<u>Value</u>	<u>Order Code</u>
10	R1-R10	470	
2	R11, R13	10k	
3	R12, R18, R19	1k	
4	R14-R17	150	

**12 Capacitors**

<u>Quantity:</u>	<u>References</u>	<u>Value</u>	<u>Order Code</u>
11	C1-C5, C7, C8, C13-C16	100nF	
1	C6	1nF	

**12 Integrated Circuits**

<u>Quantity:</u>	<u>References</u>	<u>Value</u>	<u>Order Code</u>
2	U1, U2	74S189	
2	U3, U4	74LS04	
1	U5	74LS245	
1	U6	74LS173	
4	U7-U10	74LS157	
1	U11	74LS00	
1	U12	555	

**14 Diodes**

<u>Quantity:</u>	<u>References</u>	<u>Value</u>	<u>Order Code</u>
14	D1-D14	LED	

**4 Miscellaneous**

<u>Quantity:</u>	<u>References</u>	<u>Value</u>	<u>Order Code</u>
1	/ \$PGR\$, RUN	SW-SPDT	
1	DSW1	DIPSW_4	
1	DSW2	DIPSW_8	
1	PROG_BT	button	

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