

300 in one electronic project Part List

Resistor	QT	Marking
3.3Ω	5	Orange-Orange-Black-Silver
4.7Ω	5	Yellow-Violet-Black-Silver
33Ω	5	Orange-Orange-Black-Gold
68Ω	5	Blue-Gray-Black-Gold
100Ω	10	Brown-Black-Black-Black
270Ω	5	Red-Violet-Black-Black
470Ω	18	Yellow-Violet-Black-Black
680Ω	10	Blue-Gray-Black-Black
1kΩ	20	Brown-Black-Black-Brown
1,5kΩ	5	Brown-Green-Black-Brown
1.8kΩ	5	Brown-Gay-Black-Brown
2.18kΩ	1	Red-Brown-Gray-Brown
2.2kΩ	5	Red-Red-Black-Brown
2.45kΩ	1	Red-Yellow-Green-Brown
2.7kΩ (2.74)	5	Red-Violet-Black-Brown
3.3kΩ (3.27)	5	Orange-Orange-Black-Brown
3.67kΩ (3,61)	1	Orange-Blue-Brown-Brown
4.7kΩ	10	Yellow-Violet-Black-Brown
5.6kΩ	1	Vert-Blue-Red
6.8kΩ	10	Blue-Gray-Black-Brown
8.2kΩ	5	Gray-Red--Black-Brown
10kΩ	20	Brown-Black-Black-Red
12kΩ	5	Brown-Red-Black-Red
22kΩ	10	Red-Red-Black-Red
27kΩ	5	Red-Violet-Black-Red
33kΩ	10	Orange-Orange-Black-Red
47kΩ	5	Yellow-Violet--Black-Red
100kΩ	10	Brown-Black-Black-Orange
150kΩ	5	Brown-Green-Black-Orange
220kΩ	10	Red-Red-Yellow
330kΩ	5	Orange-Orange-Black-Orange
470kΩ	5	Yellow-Violet-Black-Orange
1MΩ	5	Brown-Black-Black-Yellow
1.5MΩ	5	Brown-Green-Black-Yellow
100 KΩ Pot	1	Trimer

Capacitor Ceramic	Marking	QT
10pF	10	5
30 pF (33)	30 (33)	5
100pF	101	5
470pF	471	5
0.001μF (1 nF)	102	5
0.0047μF (4.7 nF)	472	5
0.01μF (10 nF)	103	10
0.022μF (22 nF)	223	5
0.047μF (47 nF)	473	5
0.1μF	104	12

Capacitor Elec	QT
+Lead is longer	QT
0,47μF	2
1μF	5
3,3μF	2
10μF	10
100μF	5
470μF	5

Diode		QT
Germanium	LN60	2
Rectifier	1N4004	2
Silicon	1N4148	10
Zener	4,7V	2

Earphone ceramic	Piezoelectric	1
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Transistor		
2SA733 or (2N3906)	PNP	10
2SC945 or (2N3904)	NPN	10

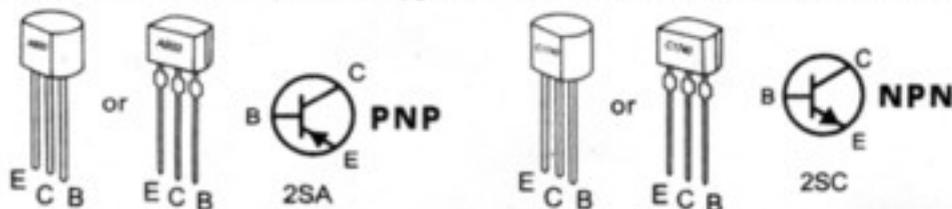
Wire	QT
5 cm White	50
10 cm Red	30
20 cm Blue	15
30 cm Yellow	10
50 cm Black	10
300 cm Green	2

IC	QT	Description
4001	2	Quad 2-Input NOR Gate
4011	2	Quad 2 Input Nand Gate
4029	2	Presetable Binary/Decade Up/Down Counter
4511	2	BCD-to-7-segment decoders/drivers Positif
4027	2	Dual JK Flip flops
BA546	1	Audio Power Amplifier
BA10324	1	Quad Operational Amplifier

CLARIFICATIONS TO YOUR MANUAL

MX-908 300-1 and MX-909 500-1 Electronic LABs:

1. It is recommended to start with project 7 and the next few, since these simple projects will make it easier to become familiar with the notations used.
2. The manual does not explain the transistor markings very clearly. The ones usually marked C1740 are the NPN type and the usually marked A933A are the PNP type. Also, the "flat" side is the side with the marking.



3. It is not very clear which diode is the Germanium and which is the zener. The manual says the Germanium is larger but sometimes the parts are the same size. If the parts are the same size then the Germanium is the blue one, or the one with two black bands.
4. When a wire and the earphone connect to terminals T1 & T2, the earphone wires may not make contact since they are so much thinner than the other wire; it may not be apparent that this is happening. It is recommended to use 2 unused springs instead of the terminals, such as 62 & 64 in the 300-1 or 88 & 90 in the 500-1.
5. The marking codes for the resistors and capacitors are VERY important but are not explained clearly. This list explains the marking:

Resistor	Marking	Capacitors Disc	Marking
3.3Ωw 5% 1/4W	Orange-orange-gold-gold	10pF w 5% (500-1 only)	10
4.7Ωw 5% 1/4W	Yellow-violet-gold-gold	33pF w 5%	33
33Ωw 5% 1/4W (500-1 only)	Orange-orange-black-gold	100pF w 5%	101
68Ωw 5% 1/4W	Blue-gray-black-gold	470pF w 5%	471
100Ωw 5% 1/4W	Brown-black-brown-gold	0.001μF w 10% B	102
270Ωw 5% 1/4W	Red-violet-brown-gold	0.0047μF w 10% B	472
470Ωw 5% 1/4W	Yellow-violet--brown-gold	0.01μF w 20%	103
680Ωw 5% 1/4W	Blue-gray-brown-gold	0.022μF +80-20%	223
1kΩw 5% 1/4W	Brown-black-red-gold	0.047μF +80-20%	473
1.8kΩw 5% 1/4W	Brown-gray-red-gold	0.1μF +80-20%	104
2.2kΩw 5% 1/4W	Red-red-red-gold		
2.7kΩw 5% 1/4W	Red-violet-red-gold	Capacitors Electrolytic	
3.3kΩw 5% 1/4W	Orange-orange-red-gold	0.47μF 50V	(+) lead is longer
4.7kΩw 5% 1/4W	Yellow-violet-red-gold	1μF 50V	(+) lead is longer
5.6kΩw 5% 1/4W	Green-blue-red-gold	3.3μF 50V	(+) lead is longer
6.8kΩw 5% 1/4W	Blue-gray-red-gold	10μF 16V	(+) lead is longer
8.2kΩw 5% 1/4W	Gray-red-red-gold	100μF 10V	(+) lead is longer
10kΩw 5% 1/4W	Brown-black-orange-gold	470μF 10V	(+) lead is longer
12kΩw 5% 1/4W	Brown-red-orange-gold		
22kΩw 5% 1/4W	Red-red-orange-gold	Diodes	
27kΩw 5% 1/4W	Red-violet-orange-gold	Germanium (point contact)	Much larger or blue
33kΩw 5% 1/4W	Orange-orange-orange-gold		or two black bands
47kΩw 5% 1/4W	Yellow-violet-orange-gold	Rectifier (1N4001 or equivalent)	
100kΩw 5% 1/4W	Brown-black-yellow-gold	Silicon (2S2473 or equivalent)	
150kΩw 5% 1/4W	Brown-green-yellow-gold	Zener (RD4.7JSB1,B2 or equivalent)	
220kΩw 5% 1/4W	Red-red-yellow-gold		
330kΩw 5% 1/4W	Orange-orange-yellow-gold	Transistors	
470kΩw 5% 1/4W	Yellow-violet-yellow-gold	2SA933A or equivalent PNP	A933 or 2SA
1MΩw 5% 1/4W	Brown-black-green-gold	2SC1740 or equivalent NPN	C1740 or 2SC
1.5MΩw 5% 1/4W	Brown-green-green-gold		
1kΩw 2% 1/4W	Brown-black-black-brown-red		
1.5kΩw 2% 1/4W	Brown-green-black-brown-red		
2.18kΩw 2% 1/4W	Red-brown-gray-brown-red		
2.45kΩw 2% 1/4W	Red-yellow-green-brown-red		
2.74kΩw 2% 1/4W	Red-violet-yellow-brown-red		
3.27kΩw 2% 1/4W	Orange-red-violet--brown-red		
3.67kΩw 2% 1/4W	Orange-blue-violet-brown-red		
100k pot			