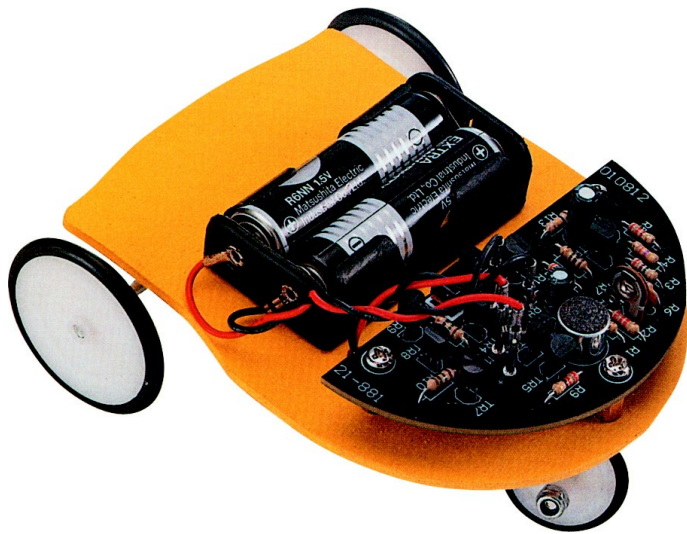
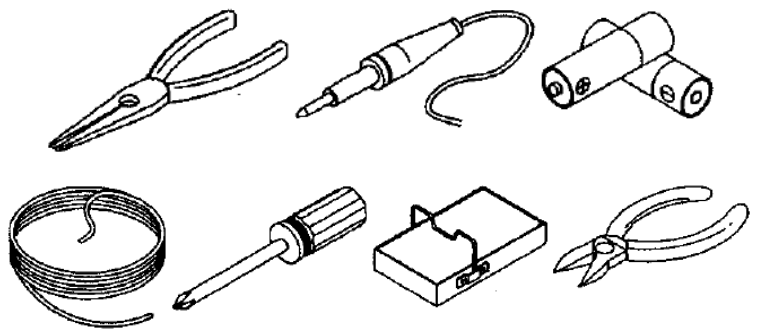


# cebekit



## ROBOT SOUND REVERSING CAR KIT C-9802

### TOOLS you'll need

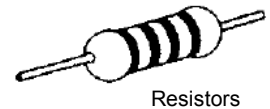


Alimentation  
2 batteries 1,5 V AA (not included)

You will find fun to learn electronics and mechanics assembling robot by reversing sound. This is a simple robot car voice control use a microphone as a detector. It moves as normal except when the microphone receives a signal like a slap, a cry, a whistle or physical contact. The car moves forward when activated, but when the microphone detects a noise the car was going backwards and left for a few seconds. Then follows forward until the microphone receives another signal again

### LIST OF ELECTRONIC COMPONENTS

220Ω (Red Red brown gold) 2 pcs.	22K (Red Red Orange Gold) 1 pc
15Ω (Brown Green Black Gold) 2 pcs.	47K (Yellow Red Orange Gold) 1 pc
2.2k (Red Red Red Gold) 1 pc.	100K (Brown Black Orange Gold) 1 pc.
1k (Brown Black Red Gold) 1 pc	1 M (Grown Black Yewoll Gold) 1 pc
3.3K (Orange Orange Red Gold) 2 pcs.	2.7 M (Red Lilac Green Gold) 1pc



Resistors



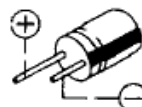
223 Ceramic Capacitor 1 pc



Transistor  
8050 : 2 pcs.  
8550 : 2 pcs.  
C945 (C1815) : 5 pcs.



Variable resistor  
110K : 1 pc



Electrolytic Capacitor  
47uF : 1 pc. - 1uF : 1pc.



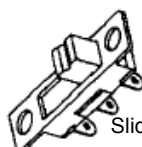
Battery Holder : 1 pc



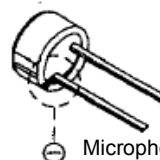
Pin de diat. 1.3 mm. : 4pcs.



Cable connector :  
Yellow 1 pc  
Green 1 pc  
(15cm)



Slide Switch : 1 pc

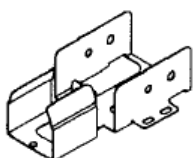


Microphone 1 pc

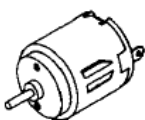


Printed circuit : 1pc

### List of mechanical components



P1 – Gearbox 1pc.



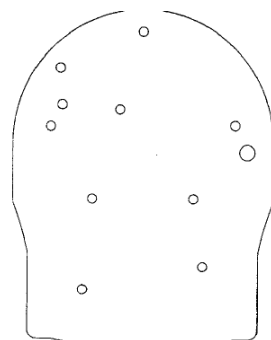
P2 – Engine 3V DC pcs.



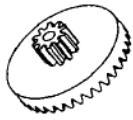
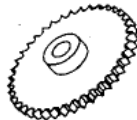
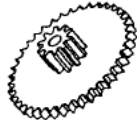
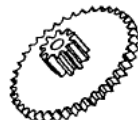
P3 - Metal rod diat. 2X40 mm 1 pcs



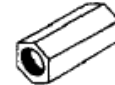
P4 - Metal rod diat. 3x90 mm 1pcs



Wood Badge

P5 – Pinion  
10d whiteP6 - Front Gear  
36d/14d whiteP7 – gear  
36d/0d whiteP8 – gear  
36d/14d RedP9 – gear  
36d/14d GreenP10 - Nylon bearing  
5,6x4,8x1,95P11 - Rubber gasket  
diat. 30X3 mm. 2pcs.P12 - Rubber gasket  
diat. 15x2,5mm.P13 - Front Wheel  
diat. 20 mm.P14 – Rear wheel diat.  
32X3,5 mm. 2pcs

P15 Spring

P16 Front  
wheel brakeP17 - nylon nut  
2pcP18 Round Separator  
diat. 3X2 mm.P19 – Washer  
2,6x6x0,5 mm. 2pcs.P20 – Washer  
3,2x10x0,5 mm. 2pcs.P21 – screws M  
2x10 mm.4 pcs.P22 – screws M  
3x5 mm. 5 pcs.P23 – screws M  
3x18 mm. 3 pcs.P24 – screws M  
3x20 mm.P25 – nut  
M2 4 pcs.P26 – nut  
M3 4 pcs.P27 - Hex Spacer  
M3x10 mm. 3pcs.P28 Round Separator  
diat. 3X6 mm.

## PRINTED CIRCUIT ASSEMBLY

The numbering of the pieces (ID) are silkscreened on the PCB

**Step 1:** We suggest you start with the minor components height and resistance

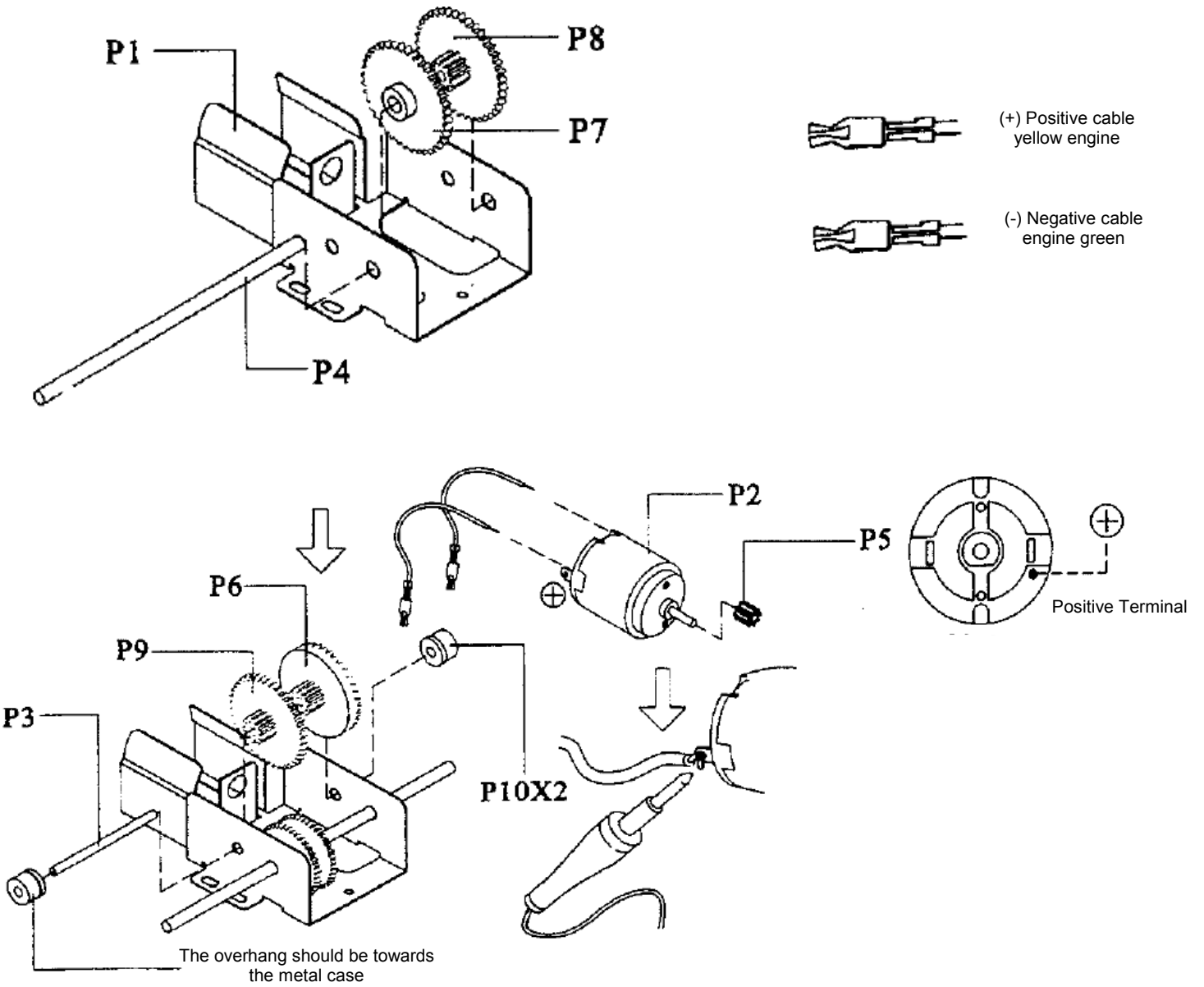
D	Description	Color Code	Units
R8/9	220 $\Omega$	Red Red Brown Gold	2
R10/11	15 $\Omega$	Brown Green Black Gold	2
R1	1 K	Brown Black Red Gold	1
R2	2.2 K	Red Red Red Gold	1
R5/12	3.3 K	Orange Orange Red Gold	2
R6	22 K	Red Red Orange Gold	1
R4	47 K	Yellow Lilac Orange Gold	1
R13	100 K	Orange Black Yellow Gold	1
R7	1 M	Brown Black Green Gold	1
R3	2.7 M	Red Lilac Green Gold	1

**Step 2:** Mount the capacitors VR, MIC, transistors, switches and pins sliding

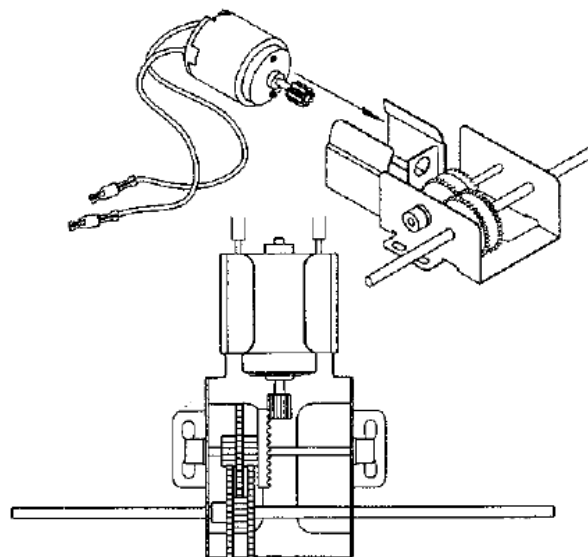
ID	Description	Units
C1	Ceramic Capacitor 223	1
C2	Electrolytic Capacitor 47uF	1
C3	Electrolytic Capacitor 1 uF	1
TR 4/8	Transistor 8050	2
TR 3/7	Transistor 8550	2
TR 1/2/5/6/9	Transistor C945 o (1815)	5
VR	Variable resistor	1
MIC	Microphone	1
SW	Slide Switch	1
M +	Pin de diat. 1.3 mm.	1
M -	Pin de diat. 1.3 mm.	1
+	Pin de diat. 1.3 mm.	1
-	Pin de diat. 1,3 mm.	1

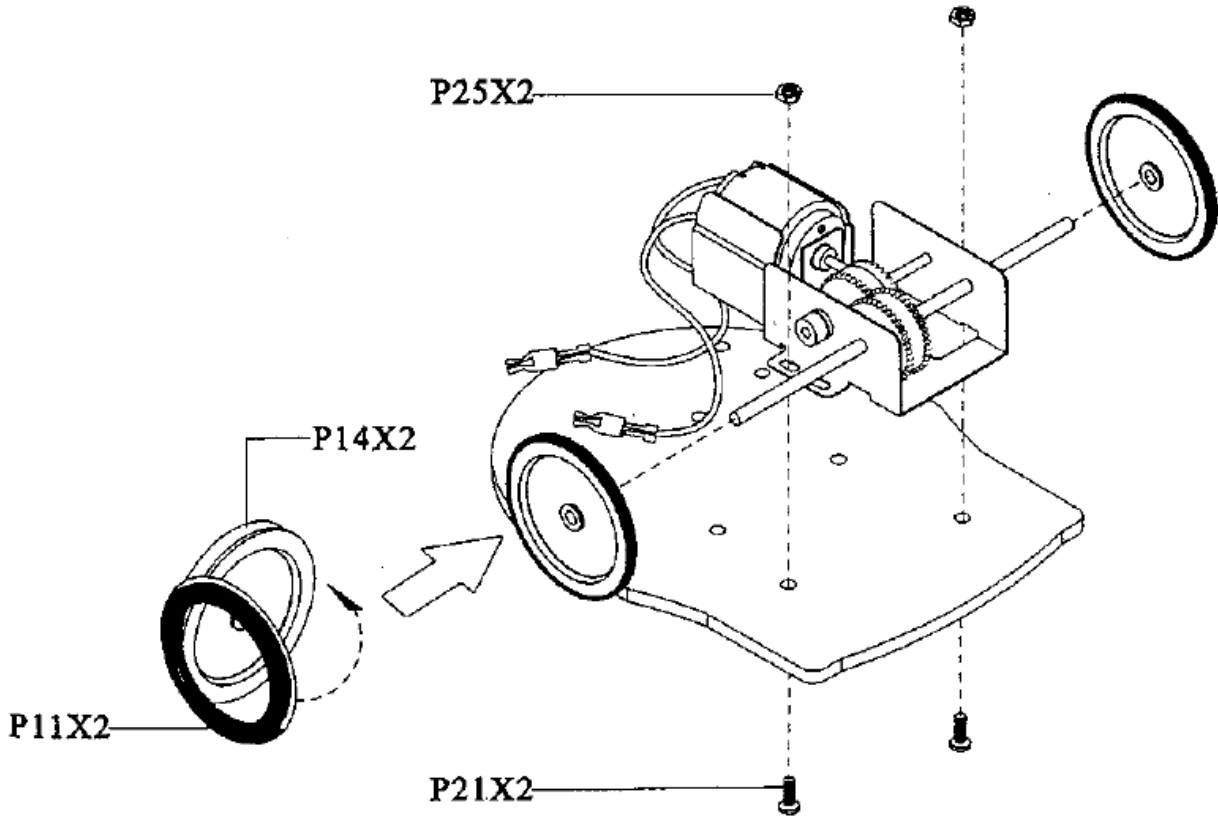
# MECHANICAL ASSEMBLY

## Housing Assembly Gear

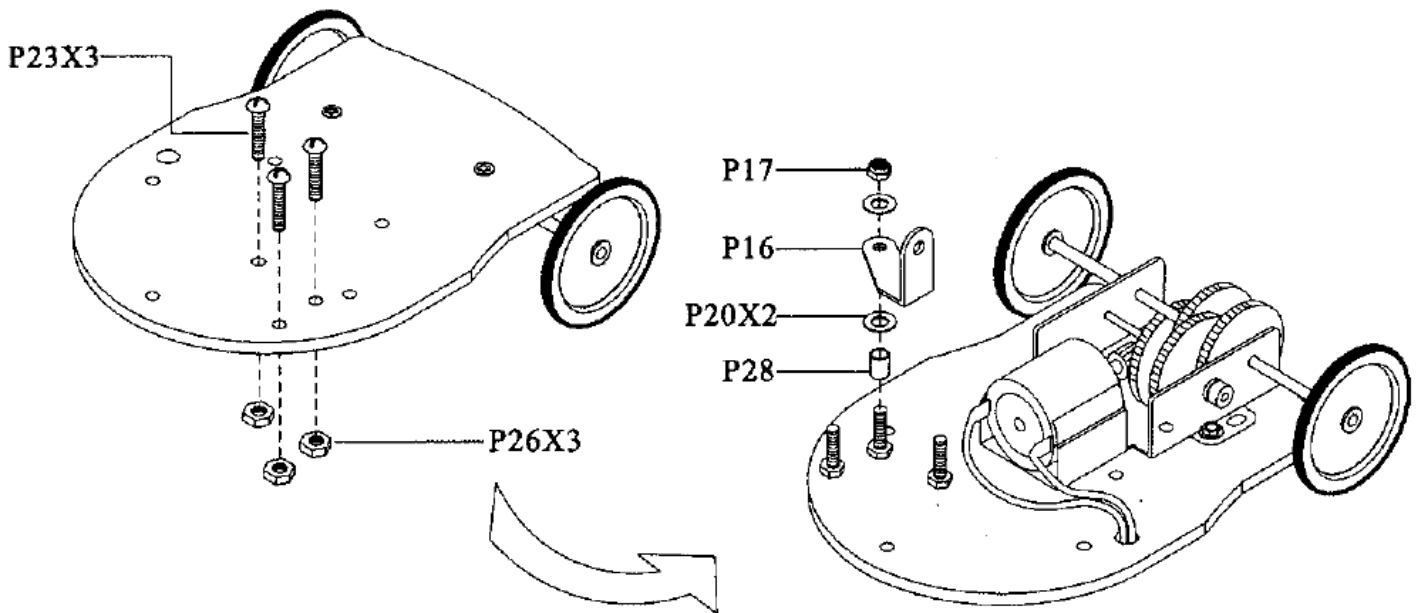


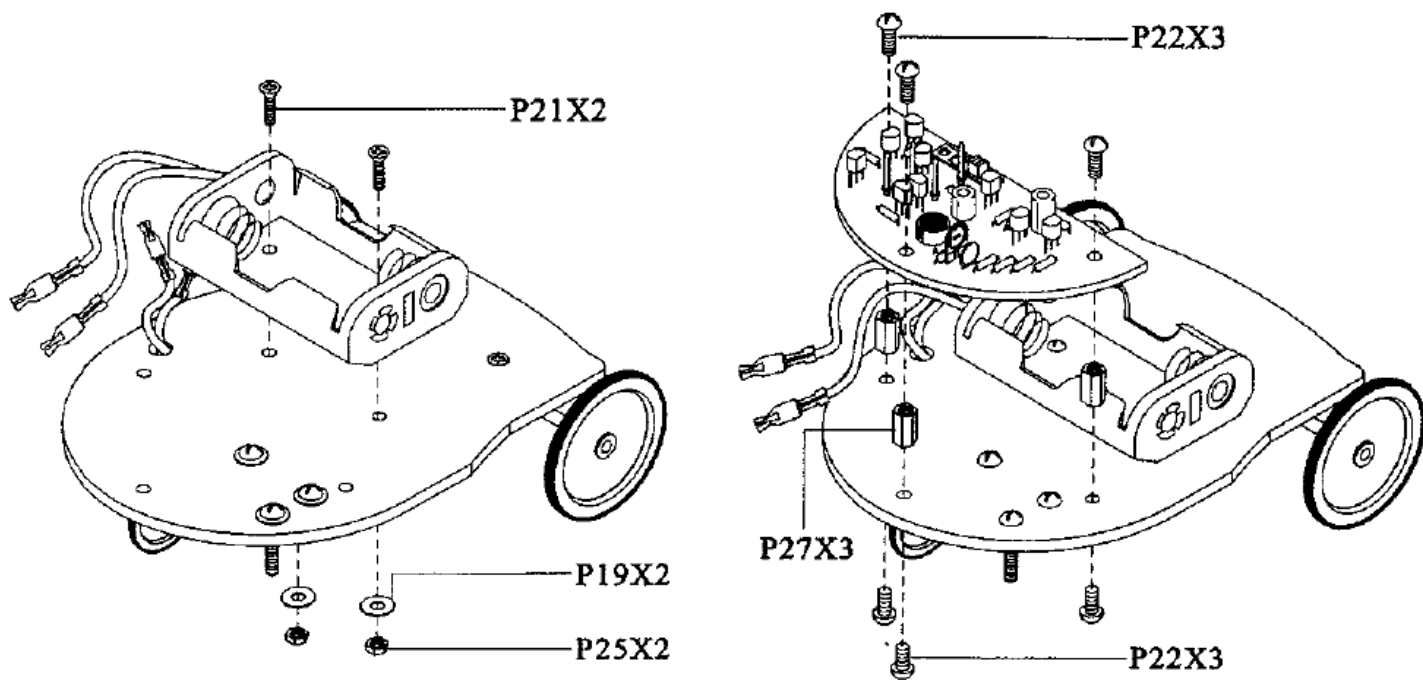
## Housing Assembly Gear



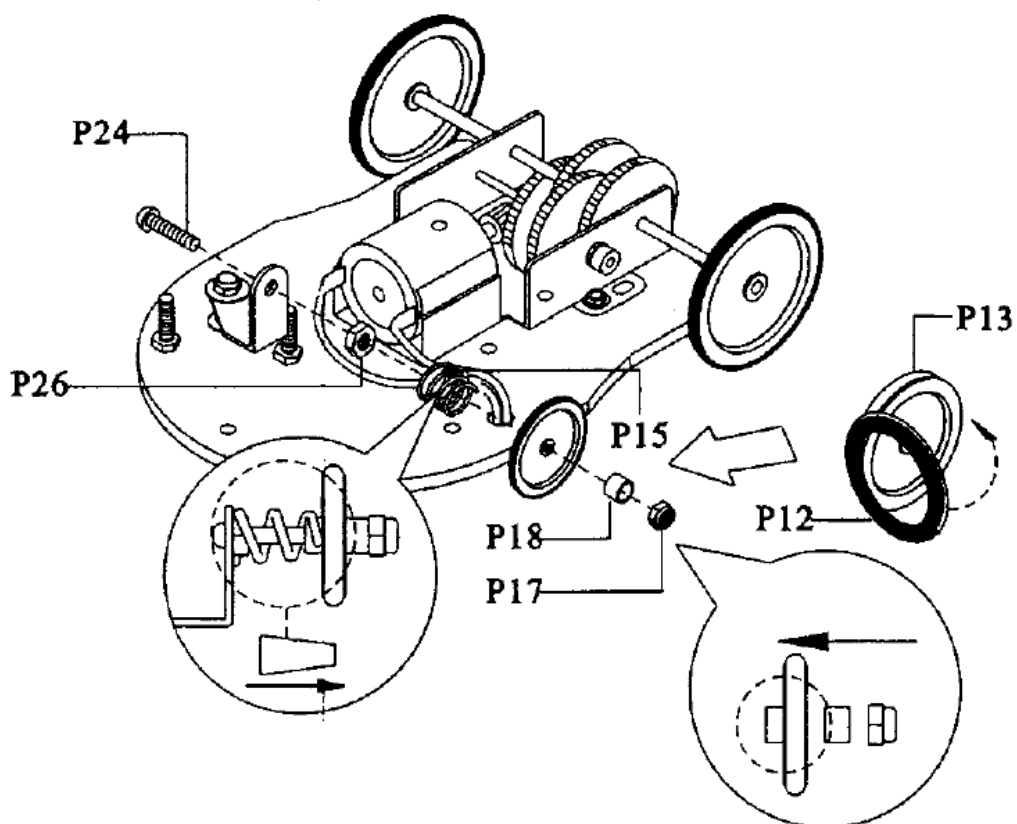


Assemble the front wheel support

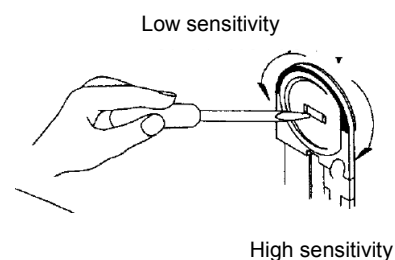
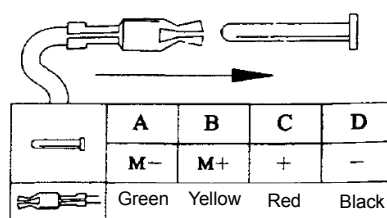
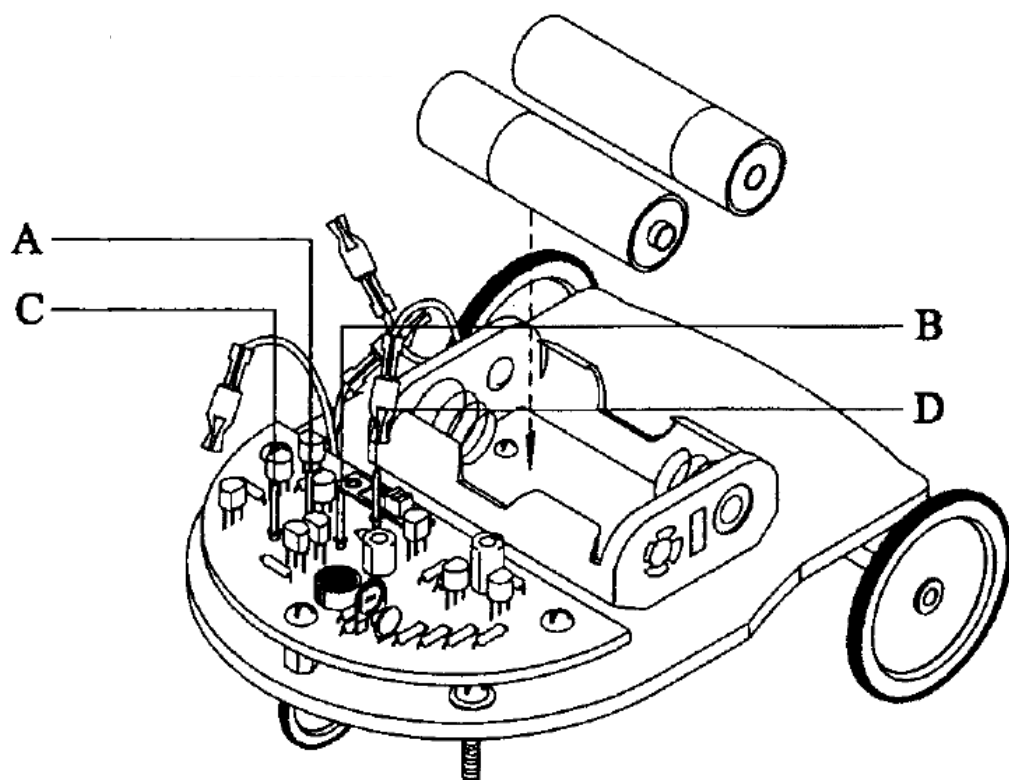




Front wheel assembly



Cabling

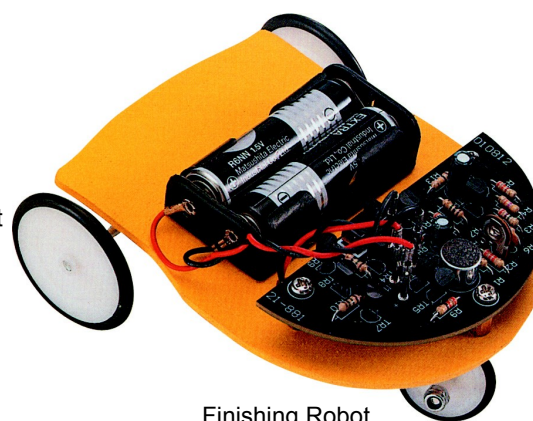


OPERATION

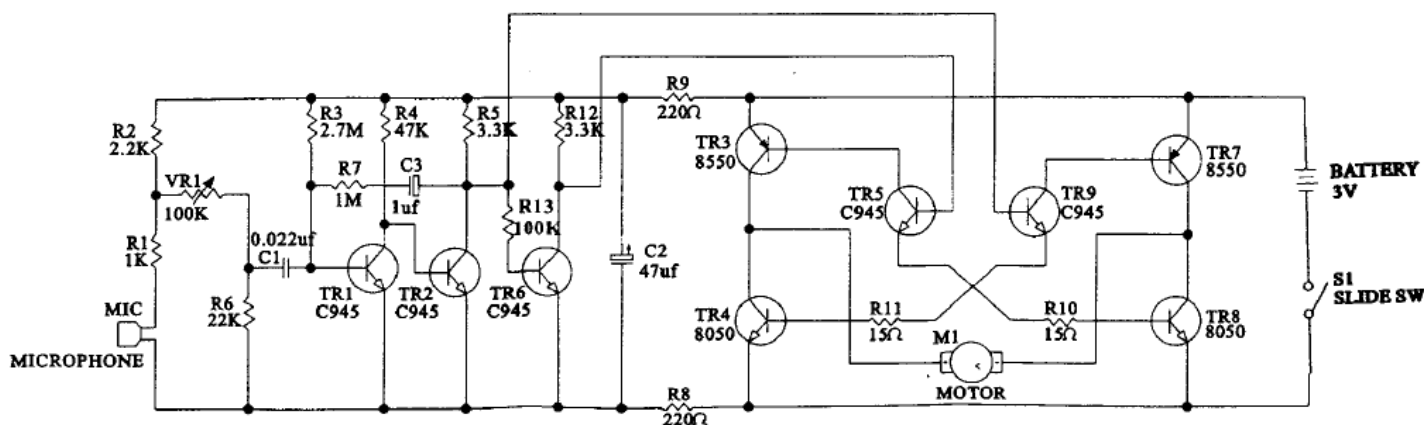
- 1- Turn the switch ON position
- 2 - Place the robot on the floor and see if it goes forward slowly.
- 3 - Slap and see if it goes back and to the left side and then goes forward again.
- 4 - Adjust the variable resistor "VR" to change the microphone sensitivity

POSSIBLE PROBLEMS

- 1 - Check that all components are correctly placed on the plate and in particular that the polarity of microphone, transistors and capacitors is correct.
- 2 - Check that the wiring is the same as indicated in the wiring plan.
- 3 - If the car is to the left, try to adjust the nut on the front wheel P17 P13, push the muelley tighten until you go forward slowly.
- 4 - noise coming from the gearbox can interfere with the signal received by microphone. Putting fat between P6 front gear and the rod of 2 mm. P3, reduce noise.
- 5 - **NOTE.** DO NOT place any lubricant between the rod of 3 mm. and gears P7 and P8.



THEORETICAL OUTLINE



**NOTE.** This kit is recommended for children aged 14 years, always escorted by an adult



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