ASSEMBLY MANUAL

FOR

COMPUROBOT II KIT FORM
ASSEMBLES DESCRIPTIONS

A. Parts Identification
1. Polyfoam identification 3–10
2. Parts in polyfoam (A)
3. Parts in polyfoam (B)
4. Parts in polyfoam (C)
5. Plastic parts
6. Electrical parts
7. Metal parts
8. Panel parts
9. Manuals & tools

B. Assembled Remote Controller
10. Batteries & Battery door 11

C. Assemble Rear Body
11. Battery plate 12–14
12. Trapezoid Hole
13. Gear box

D. Assemble Front Body
14. Speaker & Positioner 15–21
15. Function light bulb
16. Function light panel
17. Eye light holder
18. Main PCB
19. Silver bars
20. Helmet & Brain PCB
E. Assemble the Arms

F. Connect Plugs & Sockets
24. Plugs & Sockets

G. Testings
25. Batteries & Battery door
26. Initial Test

H. Final Assembly
27. Front & Rear bodies
28. Bottom piece
29. External parts
A. PARTS IDENTIFICATION

1. Polyfoam Identification
2. Parts in polyfoam (A)

- Gear Box
- Steel Balls
- Elbow
- Computer Socket (optional)
- Eye Light Holder
- Main PCB
- Speaker
3. Parts in polyfoam (B)

Speaker Positioner 9
Arm Hinge 10
Sleeve 12
Right Silver Bar 13
Pen Holder 15
Name Plate 11
Arm Hinge 10
Sleeve 12
Left Silver Bar 14
Function Light Panel 8
4. Parts in polyfoam (C)

- Remote Controller
- Controller Holder

5. Plastic parts

- Front Body
- Rear Body
- Rear Body Battery Door
- Bottom Piece
21 Lower Right Arm
22 Upper Right Arm
23 Upper Left Arm
24 Lower Left Arm
25 Transparent Helmet
26 Goggles
27 Function Light Holder
6. Electrical parts

- **28** Brain PCB
- **29** Function Light Bulb
- **30** Silver Bar Wire
7. Metal parts

Screw A
(5 pcs) or
(7 pcs) for robot
with computer interface

Screw B
(2 pcs)

Screw D
(2 pcs)

Screw F
(12 pcs)

Screw G
(2 pcs)

Screw H
(4 pcs)

Battery Plate

Right Arm Spring

Left Arm Spring
8. Panel parts

9. Manuals & Tools

31 Voice Box Panel

32 Trapezoid Hole Panel for Compurobot II without computer interface (optional)

Personal File

Assembly Manual

How To Program me from your Personal Computer (optional)

Screwdriver
10. Batteries & Battery Door

Insert 4 pieces of UM-3 (size AA, 1.5 volt) batteries into battery compartment according to (+) (−) signs, close battery door.
C. ASSEMBLE REAR BODY

11. Battery Plate

Insert battery plate into slots at bottom end of battery compartment. Spring should face (−) sign.
12. Trapezoid Hole

a) With computer interface (optional)
Pass computer socket wires & plugs through the trapezoid hole, insert screws.

b) Without computer interface
13. Gear Box

Mount gear box on four thread standoffs behind battery compartment, insert screws.

(Position computer socket wires as shown)
D. ASSEMBLE FRONT BODY

14. Speaker & Positioner

Mount speaker on speaker frame, place speaker positioner against speaker resting on thread standoffs, insert screws.
15. Function Light Bulb

Pass function light bulb & wires through side opening next to speaker frame, and pull to outside of front body.
16. Function Light Panel

Push function light bulb into light holder, insert the bars on light holder into slot holes on function light panel. Snap panel unit into function light window.
17. Eye Light Holder

Attach goggles to eye light holder according to curvature, mount holder unit with goggles into the eye windows inside head portion of front body, insert screw.
18. Main PCB

Place main PCB inside front body, move PCB mounting holes to meet PCB thread standoffs, insert screws.
19. Silver Bars

Screw wire rings onto thread standoffs on left & right silver bars. Insert bars into slot brackets at shoulder portion of front body, as shown.
20. Helmet & Brain PCB

Put transparent helmet and brain PCB together as one unit, insert unit with position guides as shown into slot at head portion of front body.
21. Right Arm Assembly

(A) Snap lower and upper right arm together, insert screws.
(B) Insert end of right arm spring into spring guide in junction hole. Position arm hinge on top of spring, again inserting end of spring into spring guide. Insert screw as shown. Snap elbow piece into position.
22. Left Arm Assembly

(A) Snap lower and upper left arm together, insert screws.
(B) Insert end of left arm spring into spring guide in junction hole. Position arm hinge on top of spring, again inserting end of spring into spring guide. Insert screw as shown. Snap elbow piece into position.
23. Arms Mounting

Twist arm hinge of right arm counterclockwise perpendicular to right slot bracket, press arm hinge into bracket.

Twist arm hinge of left arm clockwise perpendicular to left slot bracket, press arm hinge into bracket.
24. Plugs & Sockets

Hold front and rear bodies vertically. Note that each plug is identified by a letter, i.e. Brain PCB plug is identified as A.

- Brain PCB Plug (A)
- Eyes Plug (F)
- Silver Bar Plug (B)
- Speaker Plug (E)
- Function Light Plug (C)
- Front Body (17)
- Battery Box Plug (J)
- Gear Box Plug (H)
- Rear Body (18)
- Computer Plug (Optional) (G)
Connect plug A to socket A on main PCB, plug B to socket B etc., and so on.

MAKE SURE ALL PLUGS ARE CORRECTLY INSERTED BEFORE TESTING.
G. TESTINGS

25. Batteries & Battery Door

Insert 4 pieces of UM-2 (size C, 1.5 volt) batteries into battery compartment according to (+) (-) signs, close battery door.
26. INITIAL TEST

1) Insert 4 pieces of size C, 1.5 Volt batteries into the battery compartment of the near cabinet according to (+) (-) sign, close battery door. Position the robot with the front cabinet facing upwards. Touch silver bars on both shoulders.
A) **RED LED SHOULD LIGHT UP**  If not,
   a) check if any wires connecting LEDs are broken.
   b) checked if the LED socket is correctly plugged.
   c) check if any wires connecting the battery box are broken.
   d) check if the battery box socket is correctly plugged.
   e) check if batteries are correctly positioned.
   f) check if batteries and battery plates have good contacts.
   g) check if any wires connecting bath silver bars are broken.

   If a) to g) are all O.K., the main P.C.B. or LEDs may be faulty.

B) **VOICE BOX SHOULD SOUND**  If not,
   a) check if any wires connecting the speaker are broken.
   b) check if the speaker socket is properly plugged.

   If a) to b) are all O.K., the main P.C.B. or the speaker may be faulty.

C) **FUNCTION LIGHT SHOULD FLASH**  If not,
   check if the function light socket is properly plugged.
   If O.K., the light bulb or the main P.C.B. may be faulty.

   If A) to B) are all O.K., continue with test 2).
2) Press \( \Delta \) FORWARD key on the remote controller.
Wheels on gear box should move forward. If not,
   a) check if any wires connecting motors are broken.
   b) check if the gear box socket is correctly plugged.
   c) check if any wires connecting brain P.C.B. are broken.
   d) check if the brain P.C.B. socket is correctly plugged.
If a) to b) are all O.K., continue with test 3). Otherwise the brain or main P.C.B. may be faulty.

3) Press \( \leftrightarrow \) RECEIVE key on the remote controller.
The moving wheels from test 2) should stop and both green headlights light up (for robot with computer interface, one green and one yellow headlights should light up).
If not,
a) check if any wire connecting headlights are broken.
b) check if headlight socket is correctly plugged.
If a) to b) are all O.K., the headlights or main P.B.C. may be faulty.

4) This test is only for robot with computer interface,
a) check if wires soldered at the RS232 interface are broken.
b) check if the RS232 interface is correctly plugged.
If tests 1) to 4) are all O.K., continue your robot assembly. Otherwise consult your dealer.
H. FINAL ASSEMBLY

27. Front & Rear Bodies

Snap front and rear bodies together, make sure no wires are jammed in joining gaps, insert screws.
28. **Bottom Piece**

Place the steel ball bearings into the hole cavities. Mount body unit on bottom piece, hold tightly together and turn upside down, insert screws.
29. External Parts

Peel off protective paper from voice box panel, adhere panel to voice box. Snap name plate into name plate window. Snap two sleeves into sleeve holes. Snap pen holder into center hole at bottom piece.

Assembly is complete