Assembly Sequence

1. First, assemble 2 off mobility assemblies (6), following the separate instructions.
2. Assemble two mobility assemblies to bottom plate (1) using 6 off M3x8 screws (3), as follows. Insert all screws and tighten until snug, yet mobility units can be moved slightly. Align motors with each other using a straight-edge. Tighten all screws.
3. Fit stiffener (2) using 3 off M3x8 screws (3), 3 off washers (4) and 3 off nuts (5); tighten fasteners.
4. Fit the ball caster (14) using 3 off M3x16 screws (16), washers (17) and nuts (15). Be careful not to overtighten the screws.
5. Fit 2 off M3x10 F-F standoffs and 2 off M3x10 F-M standoffs to the bottom plate using M3x10 screws. The F-M standoffs go in the positions near the robot centre line. Fit the power supply board (19) using 2 off M3x6 screws and 2 off M3x10 F-M standoffs. Tighten the bottom plate screws and then the circuit board screws/standoffs. Fit the motor leads to the blue screw terminals on the circuit board, with the red lead to the +terminal. Plug the encoder leads into the two KK connectors at the end of the power supply board.
6. Fit 7 off red 80mm standoffs (12) to the bottom plate with M3x10 screws. Do not tighten yet. Secure the top plate (28) with 7 off M3x10 screws. Tighten all 14 screws.
7. Invert the robot to rest on the top plate. Removing one bottom plate screw at a time, put 1 drop of Loctite 222 on the screw, re-fit and tighten. Loctite the bottom screws to the 80 mm standoffs (7) and the motor mount brackets.
8. Remove the top plate.
9. Fit 8 off M3x10 F-F standoffs to the PIC18F4520 Minimal Board (30) and XBee Explorer Regulated (35) mounting positions using 8 off M3x6 screws. Do not tighten yet.
10. Fit the PIC18F4520 Minimal Board (30) and the XBee Explorer Regulated (35) using 8 off M3x6 screws. Tighten the screws to the top plate then to the boards.
11. Re-fit the top plate to the 80 mm standoffs, capturing the front guard (29) with two of the screws.