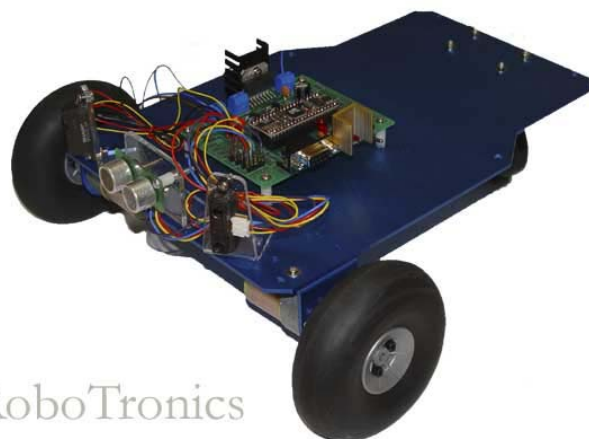


XRDB Kit User Assembly Guide & Manual



The base for the kit is designed so you will be able to stack extra layers to it as your robot grows. You will be able to order the individual levels in a matching colour along with all the mount parts. The XRDB is made from 2.5mm aluminium to offer a strong base to allow for handling weight that it may carry.

There are mounting holes located on the base for the following:

1. The Sensor Mounts. Each has a 20mm hole spacing. These mounting holes are located at the front with the two located on the right and left having either a straight forward facing option or a slightly angled option for detecting objects in front of the wheels.
2. There are four larger holes for mounting the second layer with these holes are located at the exterior of the base.
3. The four holes in the middle of the base are for mounting the controller unit.
4. The six holes located on the right and left are for the wheel brackets. These holes allow for the wheels to be adjusted inward or outward depending on the wheels used and stability that is required.

Parts List for XRDB MKII

- 1) 1 x Base plate
- 2) 2 x Motor brackets
- 3) 1 x Adaptor plate for castor wheel
- 4) 1 x Castor wheel
- 5) 2 x Gearhead motors
- 6) 2 x Aluminium wheel hub
- 7) 2 x grub screw for fixing hub to motor shaft
- 8) 2 x wheels (acetal or plastic)
- 9) 1 x hex wrenches
- 10) 4 x 3mm by 25mm plastic screws
- 11) 8 x 5-40 by 1-inch screws
- 12) 6 x 3mm by 8mm screws
- 13) 16 x 3mm by 12mm screws
- 14) 4 x 12mm spacers
- 15) 20 x 3mm washers
- 16) 16 x 3mm nuts
- 17) 16 x 3mm lock type washers

(You will probably find that there are extra of some of the screws or nuts in case items fall under the dining table.)

Assembly Instructions for the Base

Step-by-Step Assembly



Screw the castor wheel to the adaptor plate with the 25mm screws facing up.



Attach the plate and the castor wheel with the 12mm screws.



Attach the motor brackets to the base plate with the 12mm screws washers and nuts. Do not tighten these too much as you will need to align the brackets after the motor and wheel has been attached.

Mount the motors to the brackets with the 8mm screws. (If you are going to attach the bumper switches to the base then you will need to attach them below the motor brackets with the same screws that mount the brackets.)





Attach the hubs to the motors and tighten. (If you chose the acetal option then the hub should face inwards. If you went for the flat face will be on the outside.)

Place the metal spacers on the screws then the washers on top of the spacers. You are now able to attach the caster wheel to the base.



Attach the wheels with the 5-40 gauge screws. (1 inch for the plastic wheels and $\frac{1}{4}$ inch for the acetal.)

Once you have finished assembly of the base place it upside down to solder the wires to the motors if you haven't already.