



PHOTO 12



PHOTO 11

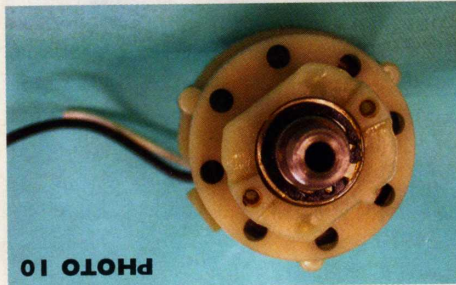


PHOTO 10



PHOTO 9



PHOTO 8



PHOTO 7



PHOTO 13

The motor/gearbox is now ready for use in your robot. It can easily be mounted by cutting a hole in the side wall of your chassis that matches the front block of the gearbox and a support that fits around the motor itself (see Photo 14). You can get wheels that fit directly onto the shafts from www.cnboatparts.com (look under Handihubs) and are secured by the left-hand threaded screw. **SV**

To allow the gearbox to transmit power from the motor to the output shaft, it is necessary to stop the outer ring from moving. This is done by adding 10-24 by 3/16" setscrews (see Photo 12) into every second opening (see Photo 13). The setscrews self-tap into the holes and you should ensure that they engage the gaps between the bumps on the outer ring. Do not over-tighten the screws as you are likely to distort the gearbox and cause premature wear or failure. All that is required is that the outer ring is stopped from rotating.

cut and everything else (apart from that left-hand screw) can be discarded. There are eight openings around the front face of the gearbox (see Photo 10). These are used by the torque adjustment mechanism and we will now use them to lock the outer ring of the gearbox. The outer ring (see Photo 11) has a series of bumps around one end. If you look into the holes at the end of the gearbox and slowly rotate the shaft, you can see them pass by.



PHOTO 6

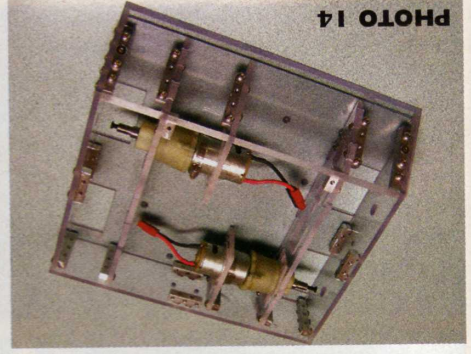


PHOTO 14

able to reach the screw (see Photo 4). Set the driver to turn clockwise and with the chuck held securely in a vice, give the back of the driver a sharp tap (or two) with a hammer and the screw will be loose enough to easily remove. Keep the screw (see Photo 5) for later use. The chuck is threaded onto the gearbox using a conventional right-hand thread. This will usually be too tight to remove by hand, but there is an easy way to remove it. Fit the newly charged battery into the drill and place a large hex key (see Photo 6) in the chuck. Set the drill in reverse, spin it up, and then allow the end of the hex key to strike a solid object (like a vice or workbench). The shock will loosen the chuck and it will come off easily. I would advise the use of safety glasses and an absence of spectators for the above procedure and don't do it next to anything breakable!

There are two screws on the front face of the drill under where the chuck was attached. Remove these screws and then the adjustable torque mechanism can be removed (see Photo 7). The device varies on the make and model of drill, but all the parts can be discarded. Next, remove the screws that hold the two halves of the drill together and lift off the top half (see Photo 8). The motor and gearbox (see Photo 9) can then be lifted out of the other half of the case. The wires can be

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PHOTO 5

to be lock- will part drill the hand the to: pact the drill lam- drill this out nd it d by the use will ght. and ber : #2 ally nuck left- The 2) will